



**AGENDA**  
**PLANNING AND ZONING COMMISSION MEETING**  
**CITY OF CREVE COEUR, MISSOURI**  
**MONDAY, DECEMBER 18, 2017**  
**6:30 PM**

Pursuant to Section 610.022 RSMo, the Planning and Zoning Commission could, at any time during the meeting, vote to close the public meeting and move to closed session to discuss matters relating to litigation, legal actions and/or communications from the City Attorney as provided under Section 610.021(1) RSMo. and/or personnel matters under Section 610.021(13) RSMo. and/or employee matters under Section 610.021(3) RSMo. and/or real estate matters under Section 610.021(2) or other matters as permitted by Chapter 610.

Reports, documents, plans, and related materials are available for examination at the Creve Coeur Government Center, 300 North New Ballas Road, prior to the meeting.

*Special disabled service may be arranged by contacting the Office of the City Administrator in advance.*

**CALL TO ORDER**

**ROLL CALL**

Ms. Beth Kistner (Chair)  
Mr. Tim Carney  
Ms. Muriel Hall  
Mr. Don Magruder  
Mr. Gene Rovak  
Ms. Heather Silverman  
Mr. Matthew Schuh  
Mr. Carl Lumley, City Attorney  
Mr. Jason Jaggi, Director of Community Development  
Ms. Whitney Kelly, City Planner  
Ms. Jessica Stutte, Planning Assistant/Recording Secretary

**ACCEPTANCE OF THE AGENDA**

**APPROVAL OF MINUTES**

- 1. December 4, 2017 Planning and Zoning Commission Draft Meeting Minutes**



**PUBLIC COMMENT**

An opportunity for members of the public to address the Planning and Zoning Commission regarding issues or concerns not already on the agenda for this meeting. Those wishing to speak will be asked to limit comments to three minutes and to complete a speaker card.

**UNFINISHED BUSINESS**

1. **PUBLIC HEARING. Application #16-031: Rezoning, Conditional Use Permit, and Site Development Plan and Boundary Adjustment Approval of a Mobil on the Run Convenience Store with Gas Pumps and Briteworx Car Wash Facility Located at 11109-11141 Olive Boulevard & 11100-11114 Oak Lake Court, Currently Zoned GC General Commercial and C Single Family Residential. Postponed Until the January 16, 2017 Meeting**

Kevin Kamp, of Civil & Environmental Consultants, Inc. has submitted revised drawings and information on behalf of Wallis Companies (Arch Energy, LLC), for the rezoning of 11127, 11135 & 11141 Olive Boulevard, from C-Single Family Residential District to GC-General Commercial District for the portions of these properties located within the city limits of Creve Coeur. A revised Conditional Use Permit and Site Development Plan application for a new Mobil-on-the-Run convenience store with gas pumps and BriteWorx Car Wash facility has been submitted encompassing 11109-11135 Olive Boulevard and portions of 11100, 11108, 11114 Oak Lake Court located within the city limits of Creve Coeur. The original proposal was reviewed by the Planning and Zoning Commission on December 5, 2016. The City Council reviewed the proposal and referred it back to the Planning and Zoning Commission at its meeting on April 24, 2017. The Applicant has requested that the item be postponed until the January 16th Planning and Zoning Commission meeting to allow for time to address the Commission's comments and concerns from the December 4, 2017 meeting. A motion to continue the item until that time is necessary.

2. **Application #17-028: the Rezoning of 11318 Olive Boulevard to Planned Commercial Development District for the Renovation of the Existing Building into a 260 Room Hotel, with a Free Standing Restaurant and Commercial/Retail Buildings. Request to Un-Table and Schedule for Review at the January 16, 2017 Planning and Zoning Commission Meeting**

Fred Kummer, of Kummer Hotel Development, LLC has submitted an application to rezone the property at 11318 Olive Boulevard to the PCD-Planned Commercial Development District for a new 260 room hotel, a 20,000 square foot multi-tenant retail/commercial building, and a 7,000 square foot freestanding restaurant. The proposal also includes application #17-029 to amend Section 405.390(D)(2)(b)(1) of the planned commercial development requirements to allow for secondary access to an arterial road (Mosley Road), with primary access from Olive Boulevard. The item was tabled at the November 6th Planning and Zoning Commission for revisions. The Applicants are requesting to un-table the item and schedule it for review at the Tuesday, January 16th Planning and Zoning Commission meeting. A motion to un-table the item and place it on the January 16th agenda will be necessary.

3. **Application #17-040: Minor Site Plan Approval for New Exterior Painting and Awnings for the Post II Sports Bar and Grill at 763 Old Ballas Road**

Shannon Brown, DeSIGNery, on behalf of the Post Sports Bar and Grill at 763 Old Ballas Road, has submitted for a minor site plan, revised to allow for new blue awnings and blue striping.

**NEW BUSINESS****1. PUBLIC HEARING. Application #17-043: Conditional Use Permit for a Use Car Dealer, Can-Am Cars LTC at 10665 Baur Boulevard**

Jeff Downes, of Can-Am Cars LTD, has submitted an application for a conditional use permit for the warehousing and sale of vintage race cars and parts at 10665 Baur Boulevard, Creve Coeur, MO 63141 in the City's LI-Light Industrial District. The vehicles are not for street use, and the business is not open to the public; conducted by appointment only. Used Car Sales (NAICS 441120) are permitted as conditional uses with review and approval by the City Council upon the recommendation of the Planning and Zoning Commission in the LI-Light Industrial District, provided that all business operations (including, but not limited to, vehicle service, cleaning and storage) will take place indoors, and at no time will any vehicle that is on the premises for sale or service be parked or displayed outdoors.

**2. PUBLIC HEARING. Application #17-044: Rezoning from "A" Single Family Residential to "B" Single Family Residential with RDD-Residential Designed Development Designation for 105 and 157 N. New Ballas Road, 1 Santino Court, and 11921 Ladue Road**

Brent Crittenden, of Urban Improvement Company, LLC, has submitted a request for the rezoning and preliminary plat approval of 4.732 acres at 105 and 157 N. New Ballas Road, 1 Santino Court, and 11921 Ladue Road, Creve Coeur, MO from A Single Family Residential to B Single Family Residential with RDD-Residential Design Development designation to allow for the development of a 9 single family home subdivision with an average lot size of 19817.67 square feet.

**WORK AGENDA**

None

**DEPARTMENT REPORTS**

Director of Community Development

**ADJOURNMENT**

Posted: \_\_\_\_\_  
Jason W. Jaggi  
Director of Community Development



**DRAFT MINUTES**  
**PLANNING AND ZONING COMMISSION MEETING**  
**CITY OF CREVE COEUR, MISSOURI**  
**MONDAY, DECEMBER 4, 2017**  
**6:30 PM**

**CALL TO ORDER**

**ROLL CALL**

|                   |                   |          |
|-------------------|-------------------|----------|
| Beth Kistner      | Commission Chair  |          |
| Tim Carney        | Commission Member |          |
| Gene Rovak        | Commission Member | (Absent) |
| Muriel Hall       | Commission Member |          |
| Don Magruder      | Commission Member |          |
| Heather Silverman | Commission Member |          |
| Matthew Schuh     | Commission Member |          |

The following staff were also present: Carl Lumley, City Attorney; Jason Jaggi, Director of Community Development; Whitney Kelly, City Planner; and, Jessica Stutte, Planning Assistant/ Recording Secretary.

**ACCEPTANCE OF THE AGENDA**

Ms. Silverman made a motion to approve with the modification of moving item 17-038 and item 17-44 to the beginning of the agenda. Mr. Schuh seconded. All aye.

**APPROVAL OF MINUTES**

**1. November 20, 2017 Planning and Zoning Commission Draft Meeting Minutes**

Ms. Silverman made a motion to approve, Mr. Carney Seconded. All aye.

**PUBLIC COMMENT**

None

**UNFINISHED BUSINESS**

**1. Public Hearing. Application #16-031: Rezoning, Conditional Use Permit, and Site Development Plan and Boundary Adjustment Approval of a Mobil on the Run Convenience Store with Gas Pumps and Briteworx Car Wash Facility Located at 11109-11141 Olive Boulevard & 11100-11114 Oak Lake Court, Currently Zoned GC General Commercial and C Single Family Residential**

Those speaking to the request were sworn in.

Mr. Kevin Kamp, a Civil & Environmental Consultant, presented the revised plan to the Commission. He thanked staff for their time and efforts to help them get where they are today.

He said the number of pumps and vacuum were reduced and circulation improved. He said curb cuts were reduced and access to Schulte aligned with the Shell station. He said left turns would be limited off Schulte. He said landscaping and the streetscape increase the buffer zone to the residential area behind the proposed plan.

He said in the past year he has met with neighbors and staff numerous times to try to address the concerns of neighbors and the Commission. He said the wash area was reduced and lot to the left was eliminated. He said the length of the wash is smaller as well as the entire footprint. He said the trash enclosure was moved further south to be further away from residents.

Mr. Stuart McGregor, the architect, said the architectural elements were intended to have a connection through materials and design. He said the brick was residential size brick. He said the project is energy conscious.

Ms. Kistner asked how much of the corporate blue is on the building.

Mr. McGregor said they are getting away from the corporate blue. He said blue would be about 10%.

Ms. Kistner asked about the canopy.

Mr. McGregor said they are putting panels on the canopy that will be tan with an x pattern.

Mr. Carney asked if they saw staffs recommendation about the columns.

Mr. McGregor said that the convenience store staff need to be able to see out and the columns would impede view.

Mr. Carney asked how far out the awnings go.

Mr. McGregor said about 4 feet.

Ms. Kistner said there is a portion elsewhere that looked like the x pattern. She asked if it was the same.

Mr. Kamp said it was not due to weight.

Ms. Silverman asked about noise.

Mr. Kamp said each vacuum location is not a point source of noise, the central vacuum would be in the building.

Ms. Kistner asked if they had a new noise study.

Mr. Kamp said the noise study didn't include the centralized vacuum because it was only the first or second of it's kind with the centralized vacuum.

Ms. Hall asked if they had a full drawing.

Mr. Kamp said they did not.

Ms. Hall asked how many vacuums were being proposed since the reduction of the site.

Mr. Kamp said 17 were proposed in the first proposal, but this proposal contains 11 vacuums.

Ms. Hall asked how many property owners would be directly impacted by the plan.

Mr. Kamp said to the north of the property were county residents and they are intending to leave as much vegetation as possible with a wall. He said to the west they had a wide buffer.

Mr. Magruder asked about property 11141 Olive and what would be done with it.

Mr. Kamp said the intent is to do nothing with it. He said it is part of the deal, but not part of the project.

Mr. Magruder asked if the house would be razed.

Mr. Kamp said they wouldn't mind if the house stayed and a tenant moved in, but understands there may be zoning issues.

Ms. Kistner asked if they would consider it to be left as residential.

Mr. Kamp said that it was not ideal.

Mr. Lumley pointed out if it were left residential it would present a problem with the zoning and car wash door.

Mr. Kamp said the trash enclosure backs up to the cementitious wall. He said they think it will blend in with the wall better if it is the same material. Mr. Kamp said he would like to leave the house on the lot on number 2. He said he would like to explore options with the Board of Adjustment.

Ms. Silverman asked if the space was currently in use.

Mr. Kamp said it was. Mr. Kamp said that on #6 the knee wall may have some limitations. He said he was asking for flexibility to work with staff in regards to the knee wall and landscaping.

Mr. Lumley said he wanted to be sure they understand the draft ordinance states maximum coverage would be 63%.

Mr. Magruder said stamped concrete is very uncomfortable for handicapped people.

Mr. Carney asked if they had plans to maintain the landscaping.

Mr. Kamp said they did.

Mr. Jaggi showed a summary of how the project has changed in the past year. He said there have been significant changes and reductions in the scale. He said the scale has been brought in to be more respectful of existing conditions. He compared the proposal to existing gas stations in the area.

Ms. Kistner asked if the convenience store in Olivette was the same as the proposed.

Mr. Kamp determined it was slightly larger.

Mr. Jaggi said there are challenges in the East Olive corridor. He said scale and use are very important. He said the design elements have improved and the applicant was flexible in the removal of the corporate blue. He said staff was concerned with the amount of blue. He said he thought the use of brick could be increased.

Ms. Kistner asked about increasing brick where there was EIFS.

Mr. Jaggi said they also thought the EIFS could be brick. Mr. Jaggi said the landscape was well developed. He said they would like to see the wall move back and they would like to see more landscaping on Schulte. Mr. Jaggi gave his thoughts regarding the zoning compliance. Mr. Jaggi said staff suggested the building at 11141 Olive be removed as typical with rezoning.

Ms. Kistner asked if the building were removed would they be able to rebuild.

Mr. Jaggi said it would not under current zoning. He said when the sound study was done they did not know the vacuums would be inside. He said the Traffic Impact Study did not recommend many changes to that intersection. Mr. Jaggi went over the boundary adjustment plat and how St. Louis County would need to review the project as well.

Ms. Kistner asked about the canopy and the reduction in size.

Ms. Kelly said it was approximately a 40 foot reduction.

Ms. Kistner asked if it was comparable in height to Walgreens.

Mr. Jaggi said he thought it was comparable to Scotsman Jewelry.

Mr. Schuh asked what percentage of the East Olive Corridor this project would occupy.

Mr. Jaggi showed the map to give an idea of how much of the corridor it would occupy.

Ms. Marcene Darby spoke on behalf of her mother Joane. She said she was concerned about traffic using her street as a turn-around.

Ms. Cheryl Richards said she was concerned about traffic and left turns. She said she was concerned about 3 gas stations in such close proximity on Olive.

Mr. Jaggi said the plan does not get into detail about how many gas stations are permitted. He also said that Waterway had withdrawn their application. Mr. Jaggi also spoke to the concern of the left turn. He said it would be limited and restricted so as to eliminate back-ups.

Ms. Johanna Sutterfield said her concern was the number of accidents at the intersection of Olive and Schulte.

Ms. Linda Rezny asked if it would be possible to have a dedicated left turn lane. She said the sound wall is only 6 feet tall. She said the Walgreens wall was 6 feet and on a berm. She suggested making the wall as long as possible. She suggested leaving the existing building at 11141 Olive to help decrease noise.

Mr. Mark Huck said he has the same concerns as before. He said traffic is a concern. He suggested changing the times at the light to allow time for residents trying to get out of the neighborhood.

Mr. Michael Thomas, a Ladue Estates Trustee, said he is in support of the project. He said he thought it was an improvement for the depressed area. He said he thought it would benefit Creve Coeur.

Ms. Kistner asked if he was speaking on behalf of Ladue Estates.

Mr. Thomas said other residents were in support.

Ms. Julie McCollum said she is concerned the site is still too large. She suggested less vacuums. She said it is near impossible to get out at lunch.

Mr. Lumley offered the exhibits into the record and the public hearing was closed.

Ms. Kistner said the East Olive Corridor is a challenging area to redevelop.

Ms. Silverman said she agreed with Ms. Kistner but that the scale is still large.

Ms. Kistner asked what the appropriate scale would be.

Mr. Magruder said the Comprehensive Plan said it should be small scale and walk-able. He said this project doesn't meet the vision. He said he didn't like the frontage space it takes up.

Mr. Kamp said the development is quite similar with the Shell station.

Ms. Silverman said the buffer with the residents is appreciated. She said she would like to see less pumps. She said she didn't think she wanted the gas station to be the anchor for the corridor.

Mr. Carney said it was an improvement over the original proposal. He said the facility has to be fairly large to pay for the investment. He said he would like to see some cross access to benefit the residents.

Mr. Schuh said he also finds the site to be too large. He said that he does think something needs to be done to spur development in the area.

Ms. Hall said she agreed with Mr. Schuh.

Ms. Kistner said there are a lot of positives with this project. She said it is enormous. She said for this area it is large. She said she likes the design and landscaping but would like to see it reduced another 20-30%.

Mr. Kamp said the Olivette store is quite similar in zoning to the location. He said he has been working with this site for 14 years. He said it is the most expensive corridor in St. Louis and yet this project will have 50% greenspace. He said small boutiques and restaurants will negatively affect the area more than the proposal. He said the area doesn't have a way to address parking for the suggested small businesses in the Comprehensive Plan. He said a major reduction in scale is really not practical.

Ms. Kistner said she would be open to a reduction in size of the convenience store to be comparable to the Olivette store as well as a reduction in the number of vacuums.

Mr. Carney said he thought that was a fair compromise.

Mr. Magruder asked how many properties west it would take to make it smaller.

Ms. Kistner said it would be the same number as it is now. She said they may want to continue the discussion to allow for making some changes.

Mr. Schuh said it is going to be very difficult to make it fit in the Comprehensive Plan and asked if it was possible to change the Comprehensive Plan.

Mr. Lumley said they would have to amend the plan and re-look at the district. He said it would be a minimum 6 month process to make any changes.

Ms. Kistner said the Comprehensive Plan is a vision for the area. She said the wording is broad enough that it is up to the Commission determine if it would match it well enough.

Mr. Carney asked if the current use should be considered.

Mr. Jaggi said he would not entertain a revision of the Comprehensive Plan. He said he agrees with the Chair that it is open to interpretation as to what is appropriate as far as scale. He said sometimes proposals do not match 100%. He said the East Olive Corridor is a neighborhood service area and the use is not incompatible.

Ms. Kistner asked the applicant to prepare some comprehensive drawings for the next meeting.

Mr. Schuh said he is open to hearing more from the applicant and from staff.

Mr. Jaggi said there is more analysis that could be done to make the Commission feel more comfortable.

Ms. Silverman said she would appreciate that.

|                  |                                                   |                                 |
|------------------|---------------------------------------------------|---------------------------------|
| <b>RESULT:</b>   | <b>CONTINUED [UNANIMOUS]</b>                      | <b>Next: 12/18/2017 6:30 PM</b> |
| <b>MOVER:</b>    | Heather Silverman, Commission Member              |                                 |
| <b>SECONDER:</b> | Matthew Schuh, Commission Member                  |                                 |
| <b>AYES:</b>     | Kistner, Carney, Hall, Magruder, Silverman, Schuh |                                 |
| <b>ABSENT:</b>   | Rovak                                             |                                 |

## **2. PUBLIC HEARING. Application #17-027: Text Amendments to Various Sections of the City's Zoning Ordinance Regarding Residential Development**

Those speaking to the request were sworn in.

Ms. Kelly did a brief review of the previous discussions. She said there were some changes and clarifications made to the side yard section. She went over the revisions made regarding fences and sports courts.

Ms. Silverman asked about the permitted colors of fencing.

Ms. Kelly said the requirement was to have dark colors.

Ms. Silverman made a motion to approve to correct the typo in section 5, Mr. Schuh seconded. All aye.

|                  |                                                   |
|------------------|---------------------------------------------------|
| <b>RESULT:</b>   | <b>APPROVED [UNANIMOUS]</b>                       |
| <b>MOVER:</b>    | Don Magruder, Commission Member                   |
| <b>SECONDER:</b> | Matthew Schuh, Commission Member                  |
| <b>AYES:</b>     | Kistner, Carney, Hall, Magruder, Silverman, Schuh |
| <b>ABSENT:</b>   | Rovak                                             |

## **NEW BUSINESS**

### **1. PUBLIC HEARING. Application #17-033: FOR AN AMENDMENT TO THE CITYPLACE CAMPUS MASTER SIGN PLAN TO ALLOW a FREESTANDING LEASE INFORMATION SIGN**

Ms. Chris Woods, of Redico, said they have vacancy and they would only leave the leasing sign up while the space was vacant.

Ms. Kistner asked how much the signage was used and how many other leasing signs they have. She inquired as to whether an online site was used to find retail space.



Ms. Woods said an online search was common for office space, but not as much for retail space. She said the current signage was determined when there was only one owner. Now there are several owners.

Mr. Magruder asked how long they thought the sign would be up. Ms. Woods said they hoped around 12 months.

Mr. Magruder suggested a time limit.

Mr. Schuh asked the dimensions of the sign.

Ms. Kelly said she could give them. She said the City Place Master Sign Plan was done in 1999. She said there have been 7 ordinances since that time. She said Fresh Market did not want a ground sign and instead chose a larger wall sign. The requested sign would be 100 feet from another sign when the requirement is 150 feet. Ms. Kelly said she did not recommend imposing a time limit.

Mr. Carney asked if they were before the Commission because they had a Master Sign Plan.

Ms. Kelly said it was correct.

Mr. Carney asked if they could put up leasing information over the tenant space.

Ms. Kelly said that was suggested as an option.

Mr. Schuh asked if there were standards for the sign materials.

Ms. Kelly said they recommended black and white signs for continuity. She said the windows could contain leasing information as well.

Mr. Lumley entered the exhibits into the record and the public hearing was closed.

Mr. Magruder asked which sign they could add this to keep the area less cluttered.

Mr. Carney said he tended to agree.

Ms. Kistner said this is focused on the Olive frontage and there are other options for leasing sign placements in the existing monument signs. She said when the Master Sign Plan was made they made the choice to forfeit the right to have a leasing sign.

Mr. Lumley asked for clarification regarding the elimination of the Fresh Market sign.

Ms. Kelly said there would still be a limited number of signs for the entire campus and the Fresh Market sign would be eliminated.

Ms. Silverman asked if they would be seeing more applications.

Mr. Jaggi said yes. He said the problem is the Fresh Market building is owned by a different owner than the rest of CityPlace.

|                  |                                                   |
|------------------|---------------------------------------------------|
| <b>RESULT:</b>   | <b>APPROVED [UNANIMOUS]</b>                       |
| <b>MOVER:</b>    | Don Magruder, Commission Member                   |
| <b>SECONDER:</b> | Heather Silverman, Commission Member              |
| <b>AYES:</b>     | Kistner, Carney, Hall, Magruder, Silverman, Schuh |
| <b>ABSENT:</b>   | Rovak                                             |

**2. Public Hearing. Application #17-038: CONDITIONAL USE PERMIT AND SITE DEVELOPMENT PLAN FOR MODIFICATION TO THE EXTERIOR OF THE EXISTING BUILDING FOR LOU FUSZ MAZDA FRANCHISE AT 925 NORTH LINDBERGH BOULEVARD. MOTION TO CONTINUE THE ITEM TO THE JANUARY 16th MEETING**

|                  |                                                   |                                |
|------------------|---------------------------------------------------|--------------------------------|
| <b>RESULT:</b>   | <b>CONTINUED [UNANIMOUS]</b>                      | <b>Next: 1/16/2018 6:30 PM</b> |
| <b>MOVER:</b>    | Heather Silverman, Commission Member              |                                |
| <b>SECONDER:</b> | Matthew Schuh, Commission Member                  |                                |
| <b>AYES:</b>     | Kistner, Carney, Hall, Magruder, Silverman, Schuh |                                |
| <b>ABSENT:</b>   | Rovak                                             |                                |

**3. Application #17-040: Minor Site Plan Approval for New Exterior Painting and LED Lighting for the Post II Sports Bar and Grill at 763 Old Ballas Road**

Mr. Shannon Brown, of DeSIGNery, explained why they would like their application to be considered. He said the facade lacks approachability and the trees block the view.

Mr. Adrian Glass, the owner, said the location is difficult as far as visibility. He asked the commission to allow them to put awnings up and signage over the awnings instead of the original request.

Ms. Silverman said the sign is so high it would lead people to think they are up on top.

Ms. Kelly said she understands the applicants need for the visibility. She said the signage up top would not be permitted as that space is AT&T's space. She suggested lightening the windows to let more light through. She said staff was amicable to a blue stripe further up to match the awning.

Ms. Kistner asked why they couldn't have the sign higher.

Ms. Kelly said it wasn't their space and the code for signage that is high identifies the building not the tenants.

Ms. Kistner said she likes the idea of the awning with the sign above.

Ms. Silverman said she understands the regulations, but he needs visibility.

Mr. Carney said he is so far below grade an exception could be made.

Ms. Kistner said she agreed with Ms. Kelly that ground lightning and brightening the windows would help. She said she likes the awnings with the sign above. She said she didn't think AT&T is relevant to the request.

Mr. Lumley said it is a standard and if the standard isn't honored it creates a potential problem.

Ms. Kelly said the signage is not up for approval. She said the awnings and LED lighting are what are up for review.

Ms. Kelly said they could approve the awnings and the LED but not the signage at this point.

|                  |                                                   |                                 |
|------------------|---------------------------------------------------|---------------------------------|
| <b>RESULT:</b>   | <b>CONTINUED [UNANIMOUS]</b>                      | <b>Next: 12/18/2017 6:30 PM</b> |
| <b>MOVER:</b>    | Matthew Schuh, Commission Member                  |                                 |
| <b>SECONDER:</b> | Heather Silverman, Commission Member              |                                 |
| <b>AYES:</b>     | Kistner, Carney, Hall, Magruder, Silverman, Schuh |                                 |
| <b>ABSENT:</b>   | Rovak                                             |                                 |

#### **4. Application #17-044: 845 North New Ballas Court Easement Vacation (Part of Lot 13 Cityplace Subdivision)**

Ms. Colleen Ruiz, an attorney, gave a brief history of the area and requested the Commission approve the vacation easement.

|                  |                                                   |
|------------------|---------------------------------------------------|
| <b>RESULT:</b>   | <b>APPROVED [UNANIMOUS]</b>                       |
| <b>MOVER:</b>    | Don Magruder, Commission Member                   |
| <b>SECONDER:</b> | Heather Silverman, Commission Member              |
| <b>AYES:</b>     | Kistner, Carney, Hall, Magruder, Silverman, Schuh |
| <b>ABSENT:</b>   | Rovak                                             |

### **WORK AGENDA**

### **DEPARTMENT REPORTS**

Mr. Jaggi said HBE is still making revisions.

### **ADJOURNMENT**

9:37 PM



300 North New Ballas Road • Creve Coeur, Missouri 63141  
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966  
www.creve-coeur.org

**APPLICATION TO PLANNING AND ZONING COMMISSION  
#16-031 FOR THE REZONING, CONDITIONAL USE PERMIT, AND SITE  
DEVELOPMENT PLAN AND BOUNDARY ADJUSTMENT APPROVAL OF A  
MOBIL ON THE RUN CONVENIENCE STORE WITH GAS PUMPS AND  
BRITWORX CAR WASH FACILITY LOCATED AT 11109-11141 OLIVE  
BOULEVARD & 11100-11114 OAK LAKE COURT, CURRENTLY ZONED GC  
GENERAL COMMERCIAL AND C SINGLE FAMILY RESIDENTIAL**

**FOR THE MEETING OF:** Monday, December 4, 2017

**LOCATION:** 11109 – 11141 Olive Boulevard, and 11100, 11108, and 11114 Oak Lake Court, including portions of unincorporated St. Louis County, at the northwest corner of Schulte Road, and Olive Boulevard.

**REQUEST:** Kevin Kamp, of Civil & Environmental Consultants, Inc. has submitted an application on behalf of Wallis Companies (Arch Energy, LLC), for the rezoning of 11127, 11135 & 11141 Olive Boulevard, from C-Single Family Residential District to GC-General Commercial District, and for a Conditional Use Permit, Site Development Plan and Boundary Adjustment for a new Mobil on the Run convenience store with gas pumps and BriteWorx Car Wash facility encompassing 11109-11135 Olive Boulevard and 11100-11114 Oak Lake Court.

**ADDITIONAL INFORMATION:** The original proposal was reviewed by the Planning and Zoning Commission on December 5, 2016. The City Council reviewed the proposal and referred it back to the Planning and Zoning Commission at its meeting on April 24, 2017. Section 405.360 GC- General Commercial District generally requires a minimum area of five acres, but not if expanding an existing GC District, and the existing Mobil Station at 11109 Olive Boulevard is already zoned GC-General Commercial. The proposal is 3.92 acres and is adjacent to an existing property zoned GC District. Gasoline Stations with Convenience Stores (NAICS #447110) and Car Wash Facilities (NAICS #811192) are conditional uses in the GC District. The existing Mobil was originally developed in 1984.

**Key Issues:**

- Does the request integrate with the existing surrounding uses?
- Does the request further the goals and/or implement the Comprehensive Plan?
- Does the request meet with the minimum standards of the proposed GC-General Commercial?
- Is the request consistent with the required findings for a conditional use permit?

**Creve Coeur 2030**

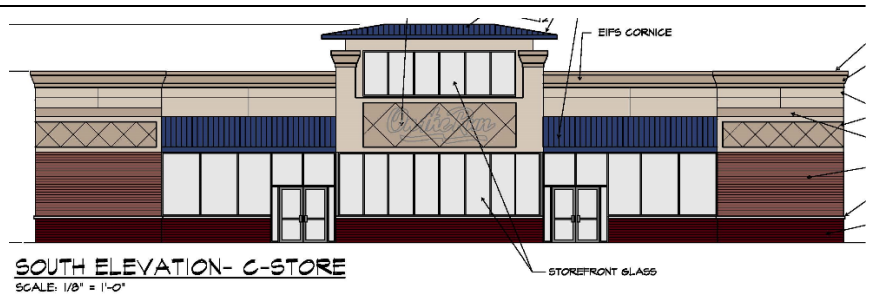
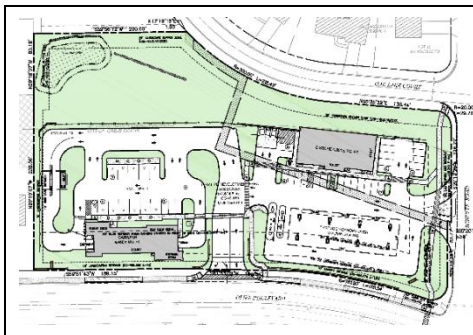
- East Olive Corridor Neighborhood Commercial District
- Objectives and Strategies

**Zoning Code References**

- Section 405.210: Regulation of Uses, Table A
- Section 405.360 GC-General Commercial District
- Section 405.470 Conditional Uses
- Section 405.1060 Zoning Changes and Text Amendments

**APPLICANT:** Kevin Kamp  
Civil & Environmental Consultants, Inc.  
4848 Park 370 Boulevard, Suite F  
Hazelwood, MO 63042

**PROPERTY** Wallis Companies (Arch Energy, LLC)  
**OWNER:** 106 East Washington  
Cuba, MO 65453



**REPORT PREPARED BY:** Jason Jaggi, AICP, Director of Community Development; Whitney Kelly, AICP, City Planner  
**DATE:** 12/1/2017  
**ATTACHMENTS:** Applicant's Revised Materials received November 27, 2017  
Draft Ordinance  
Public Comments received



## SUMMARY OF PROPOSAL AND CHANGES SINCE THE PREVIOUS REVIEW

Kevin Kamp, of Civil & Environmental Consultants, Inc., on behalf of Wallis Companies, has submitted a request for the following:

- Rezone the 11127, 11135 & 11141 Olive Boulevard properties in the City of Creve Coeur from C-Single Family Residential District to GC-General Commercial District.
- Conditional Use and Site Development Plan approval for a 4,800 square foot 24-hour Mobil on the Run Convenience Store located on the former Oak Lake Court parcels, with 16 pumps (down from 20 with the canopy structure reduced from the 50' x 184' to a 48' x 144' configuration) gas station on the existing 11109 Olive Boulevard gas station site and a 4,460± square foot BriteWorx Car Wash, with 11 outdoor vacuum stations (reduced from a 5,128 sq. ft. facility with 17 outdoor vacuum stations) on the 11127 and 11135 Olive Boulevard properties that has proposed hours of operation of 7 AM to 9 PM. The Car Wash facility has been relocated along Olive Boulevard, with the vacuums and stacking lane north of the structure. The shown stacking lane for the Car Wash has been reduced from 27 cars to 10 cars.
- 11141 Olive Boulevard will be rezoned for the proposed development but left undeveloped at this time so that the service bay door of the Car Wash facility does not face a residentially zoned property in order to comply with Section 405.470(13)(c) Gasoline Service Stations of the Zoning Ordinance and to reduce its size.
- Total site coverage for the portion that is in Creve Coeur is 71.5%, while the overall site coverage is 50.2%
- Boundary adjustment approval to consolidate 11109 – 11135 Olive Boulevard, and 11100, 11108, and 11114 Oak Lake Court into one 3.389 acre parcel. The home at 11141 Olive Boulevard will remain as a separate lot.

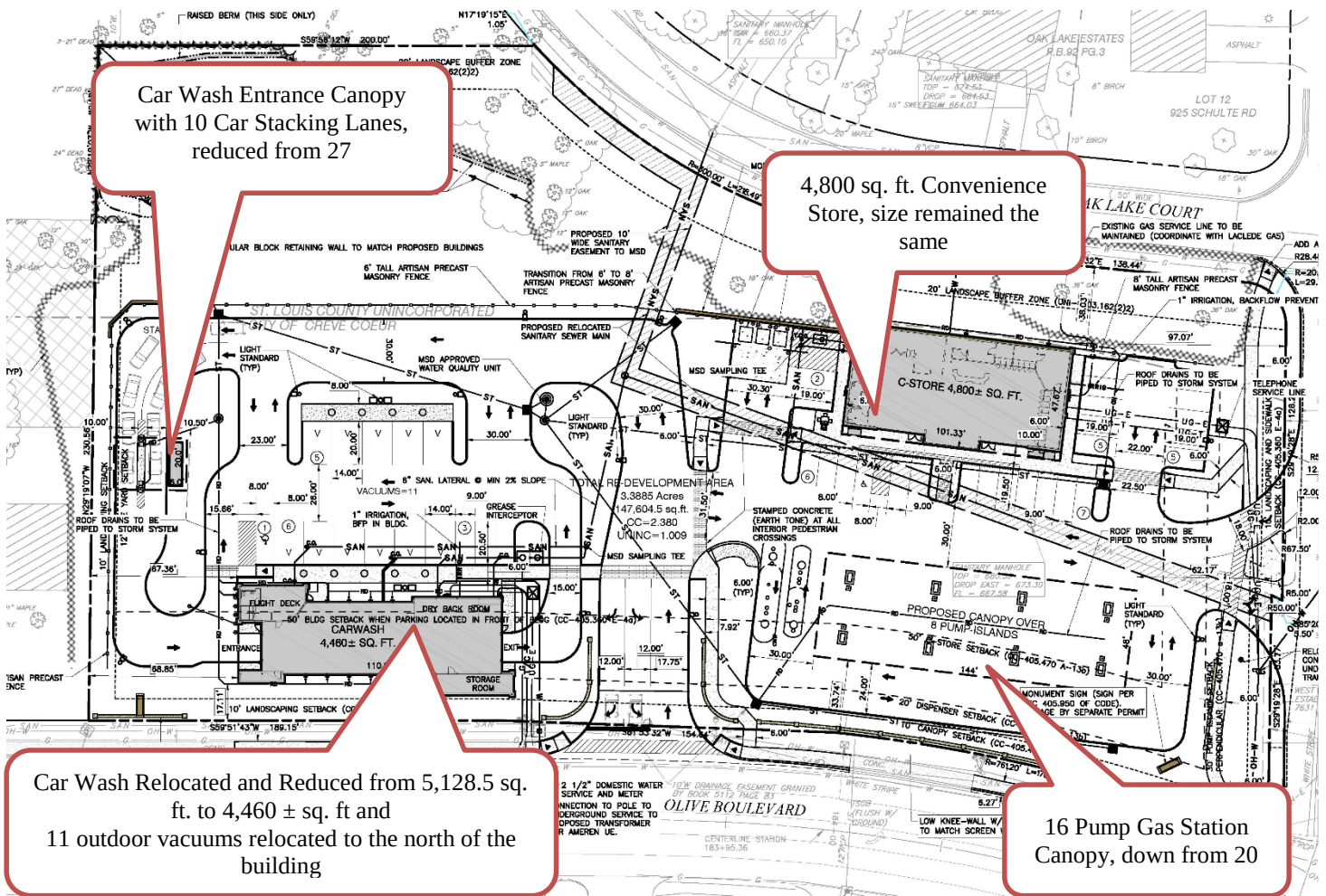


Figure 1: Close-up of the Applicant's Revised Site Development Plan

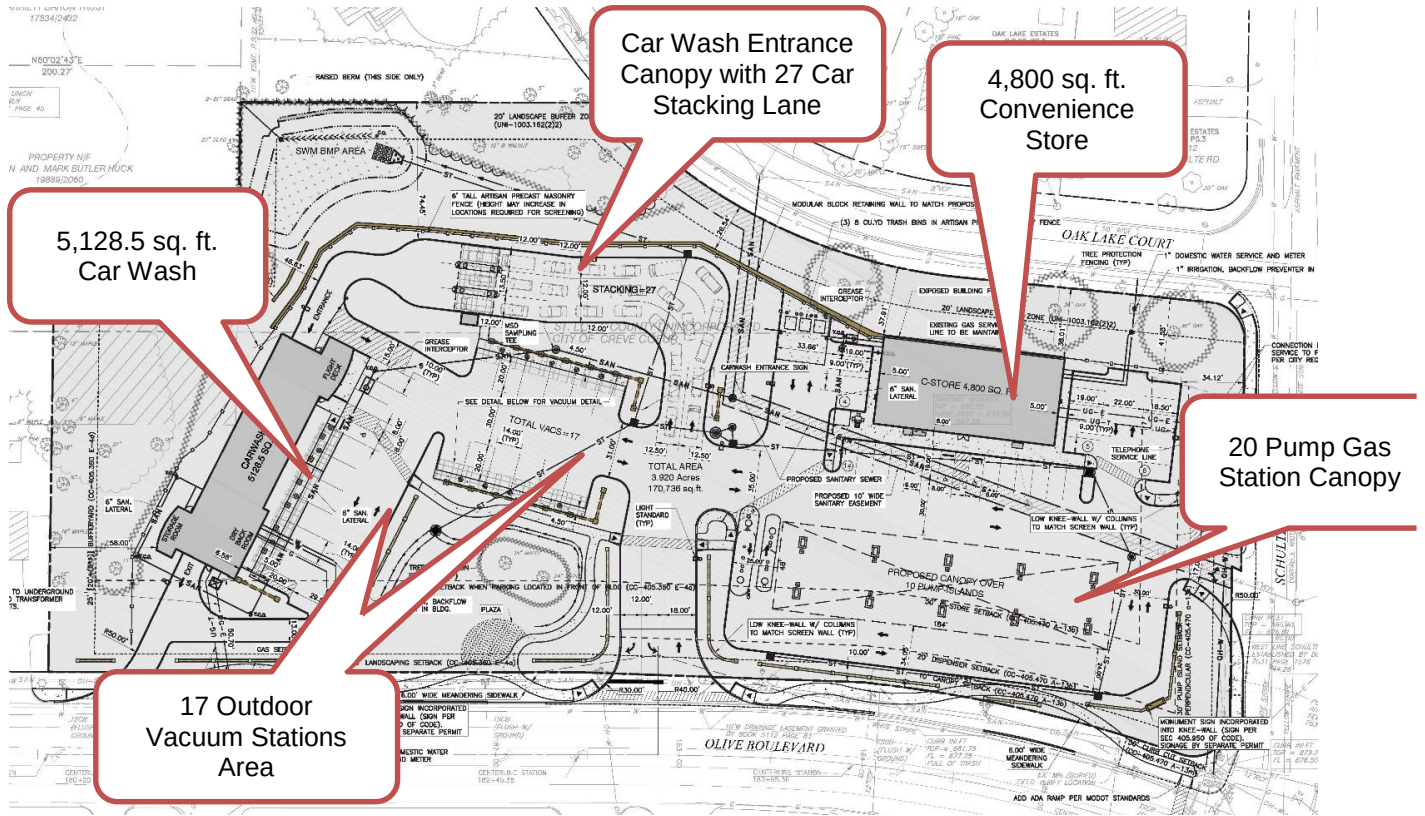


Figure 2: Close-up of the Site Plan from the December 5, 2016 Staff Report



Figure 3: South Elevation of the Convenience Store

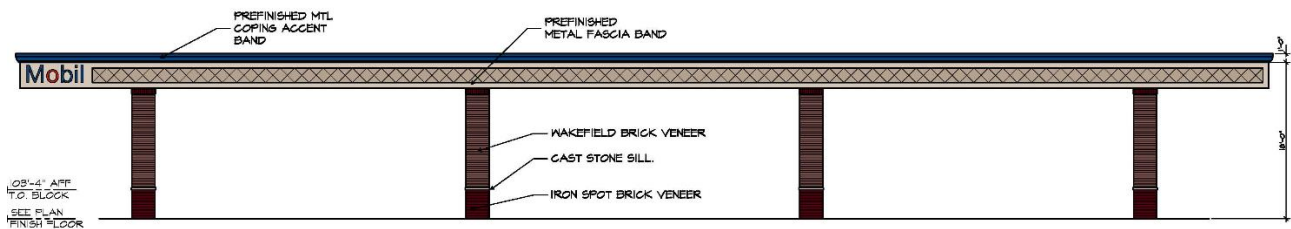


Figure 4: South Elevation of the Gas Pumps Canopy





Figure 5: South and East Elevations of the Car Wash Facility



Figure 6: East and South Elevation of the Car Wash Canopy

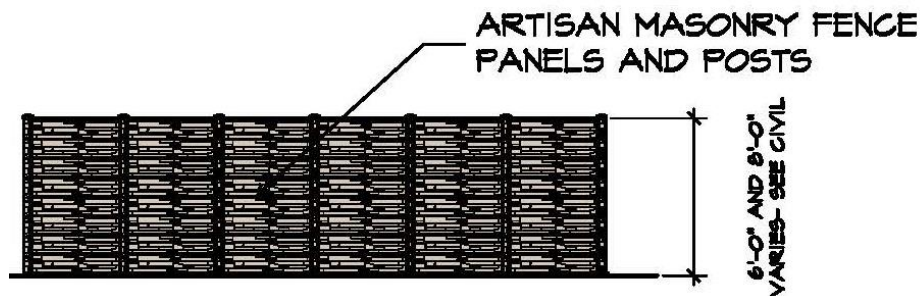


Figure 7: Close up of the Typical Fence Detail

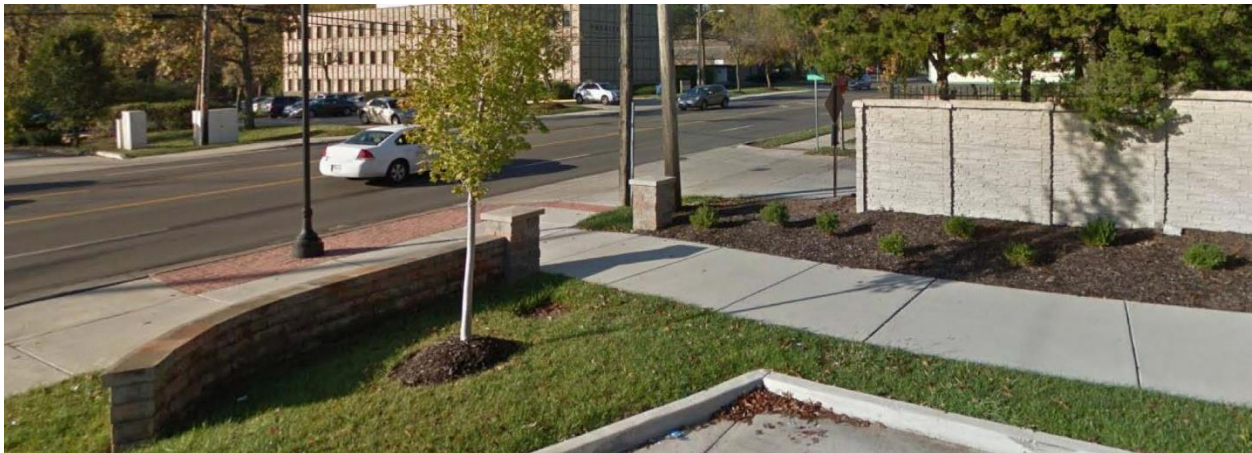


Figure 8: Close-up of Site Elements examples of the Knee wall and Fence design at the Olivette location



Figure 9: Detail of an example of the Trash Enclosure from Site Elements

### LAND USE AND ZONING OF SURROUNDING PROPERTIES

The adjacent zoning and land uses are as follows:

| DIRECTION | USE                                                                       | ZONED                                                                    | SEPARATED BY           |
|-----------|---------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------|
| North     | Residential                                                               | Unincorporated St. Louis County C8<br>Planned Commercial; R3 Residential | Partial Oak Lake Court |
| South     | Complete Music, Masonic Lodge;<br>Residential Structures used for offices | Partial GC General Commercial;<br>C Single Family Residential            | Olive Boulevard        |
| East      | Gas Station with Car Wash                                                 | GC General Commercial                                                    | Schulte Road           |
| West      | Residential                                                               | Partial C Single Family Residential;<br>A Single Family Residential      | NA                     |

### COMPREHENSIVE PLAN REVIEW

As discussed in the previous review of the proposal, the subject property is within the East Olive Corridor of the *Creve Coeur 2030 Comprehensive Plan* where the vision for the area is to create a walkable corridor of destination retail boutiques, neighborhood service businesses, small-scale restaurants, attached townhomes, and low-density multi-family home and single family homes. Development of the East Olive corridor should encourage pedestrian access from adjacent neighborhoods and prioritize walkability between neighboring lots while accommodating car access and easy parking. Revitalization of this area has faltered due to the lot constraints, direct adjacency to established residential neighborhoods, and frontages onto Olive Boulevard. Existing lot constraints limit the limit development options for these properties. The East Olive Corridor comprises the Neighborhood Commercial District (NC) place type that supports the development of a variety of medium-to low –density commercial, retail, office, neighborhood service business and residential development in a commercial corridor with shallow lot depths. This district is designed to provide a transition between more intense commercial districts to the east and west that would build toward a coherent corridor identity. (p. 88). Frontage recommendations encourage uniform setbacks on neighboring lots to establish a consistent location and orientation of building façade frontages and primary building entrances to face Olive Boulevard.

Further, the Comprehensive Plan includes the overall goals of Placemaking & Community Identity that include the following:

- Improves streetscapes and public realm enhancements (Strategy 1.3),
- Ensures that adjacent non-residential and residential developments are compatible with each other (Strategy 1.8); and,



And, Under Economic Growth and Community Services that include:

- Strategy 3.1: Ensure future economic growth is responsive to the changing economy and captures the “place-making dividend”.
- Strategy 3.3: Transform the Olive Boulevard corridor with a Central Business District and supporting Mixed-Use Districts.

#### Compatibility with the Comprehensive Plan

The revised drawings represent an improvement since the previous application, with the relocation of the car wash to be placed along Olive Boulevard to create greater interest, reducing the overall size of the proposed development, and providing pedestrian elements such as the knee wall and lush landscaping along the pedestrian walkways, and sufficient landscaped buffer along the rear of the development for protection of the residential developments to the north. The concerns of staff and the Commission with the prior proposal focused on the policies of the Comprehensive Plan involving the scale of the proposed development, and the intensity of the uses at the scale which was proposed. The revised proposal reduces the overall scale in many areas including land area; number of gas pumps and size of overhead canopy; reduced size of the car wash structure, the number of outdoor vacuum stations; and, reduced stacking lanes.

Staff has compared the scale of the revised plan with the individual components of the car wash building, convenience store and gas canopy with other properties along the East Olive corridor. Several other buildings have been developed at the approximate same size, such as the Walgreens, the multi-tenant retail building where FroYo and BMO Harris Bank are located; Scotsman’s Jewelry and others suggests that the scale is now more proportionate with the existing commercial developments. The commercial development of these properties is oriented along Olive at a similar depth as other commercial developments within the East Olive corridor. Figure 10 provides an overlay of the redevelopment within the context of the immediate area to assist the Commission in its review of the scale.

The Comprehensive Plan also acknowledges the development challenges inherent with the East Olive corridor, many of which are present with these properties and with this development proposal. These include shallow lot depths, topography, small individual parcels, and the zoning requirements which involve assembly of multiple properties to provide sufficient land for development to provide the necessary buffering from residential property.

With respect to rezoning and commercial expansion of the East Olive corridor, the Comprehensive Plan foresees the redevelopment of properties in this area to transition to commercial along Olive with emphasis on protection from adjacent established residential neighborhoods. The revised proposal provides for sufficient buffering including tree preservation, additional landscaping and screen walls to afford reasonable protection for the adjacent residences.

Because the Comprehensive Plan provides broader goals to support the vision, the interpretation of the degree to which the development proposal achieves these goals is the charge of the Commission in its recommendation to the City Council. If the Commission finds that the proposal still does not meet with the goals of the Comprehensive Plan, further direction should be provided to the Applicant.



Figure 10: GIS view of the area with the components of the proposal shown.

### DESIGN GUIDELINES REVIEW

The City's Design Guidelines provide further recommendations on the layout and design for gas stations and car washes that include building architecture should be designed to provide an attractive appearance that is compatible with the surrounding area. Prefabricated or pre-designed buildings are strongly discouraged. When requested and approved, such buildings are to be substantially modified and embellished to create a project that is complementary to the community fabric. All architectural details should be related to an overall architectural theme. Separate structures, such as canopy, car wash or cashier's booth, on the site should be avoided. When requested and approved, separate structures are to have consistent architectural detail and design elements that provide a cohesive project appearance. And, a car wash that is incorporated into the project shall be well integrated into the design. The car wash opening should be sited so that it is not visible as the primary view front the street into the project site. (p. 11-12)

The Design Guidelines general recommendations include:

- Well-articulated high quality designs with pedestrian elements included;
- Scale of the building should be carefully considered with an architectural and urban scale compatible with the neighboring developments and that the coordination between the actual or apparent height of adjacent structures is strongly encouraged.
- Adjacent structures should carry the lines of one building into the next through the use of varying window heights, brick coursing, or other horizontal elements that complement neighboring buildings. (p. 7).
- Clearly defined primary building entrances that is oriented toward the street level.
- Building that are styles in an attempt to use the building itself as advertising are strongly discouraged, particularly where the proposed architecture is the result of a "corporate" or

franchise style. The building should not be designed as a sign and should not be flood lit at night. (p.8)

- Materials that have good architectural character, with a preference toward “green” traditional building materials, and limited use of EIFS (p. 9)

The following is a list of design matters that should be reviewed with the applicant by the Commission:

- *The elements of corporate architecture and the overall massing of the structures.* The proposal utilizes similar designs throughout the various structures; however, corporate design elements of Mobil on the Run and Briteworx car wash are present. The structures are not pre-fabricated and the architect has designed the buildings to be unique to the location. For example, a darker blue accent striping and for the tower roof structures are used instead of the traditional Mobil blue color. Staff believes that additional brick on the storefront of the c-store and on the car wash, particularly the west elevation of the wash and limiting the blue accents in between the glass on the car wash storefront would further the proposal toward the Design Guidelines and provide an improved appearance.
- *Building elements, such as parapet wall, penthouses or screen walls should be treated as an integral part of the architecture.* The mechanical screening and parapet walls are well integrated on the c-store, however, as noted, the amount of brick could be expanded to provide an improved appearance.



Figure 11: Close-up of the East Elevation showing the height of the storefront in comparison to the overall structure.

On the c-store, the massing is somewhat blocky with no sloped roofs except for the central tower element. If the Commission believes this is a concern, additional sloped roofs could be provided to reduce the massing.

- The entrance to the c-store provides for the prominent entrance to attract attention from Olive Boulevard. The doors; however, do not correspond to this element. The applicant has stated that two entrances are preferred to provide easier access to the store. Additionally, the column elements at the front entry do not carry all the way down. Staff would note that the awnings provide covering of the entrances; however, the placement on opposite sides of the tower element are not typical.



Figure 12: Close-up of South Elevation of the Convenience Store



- Accessory structures such as trash enclosures and fencing and similar site elements are to be compatible with the architecture of the main buildings and should use similar materials. The proposed walls and trash enclosure is inconsistent with these recommendations, that appear to utilize a prefabricated stacked stone style fence panel in a light brown color, where a brick style similar to the building would move the proposal toward the Design Guidelines and the requirements for gas stations.
- The Design Guidelines strongly encourages high quality landscaping that accentuates the building and site, softens the effects of parking in areas and enhances the quality of life of the City; and, that there is a consistency of landscape design throughout a development, and that landscaped areas are to be maximized and balanced throughout the site. The proposed landscaping along Olive is well designed. However, most of the landscaping is behind the proposed knee walls and blocked from view, where it should be along the Olive side to be consistent with the Comprehensive Plan that calls for well landscaped frontages. Moving the knee walls back and/or providing the landscaping in front would further the proposal toward the Design Guidelines. Further, the design should be carried north along Schulte Road to provide sufficient headlight screening and fill in along the west property line.

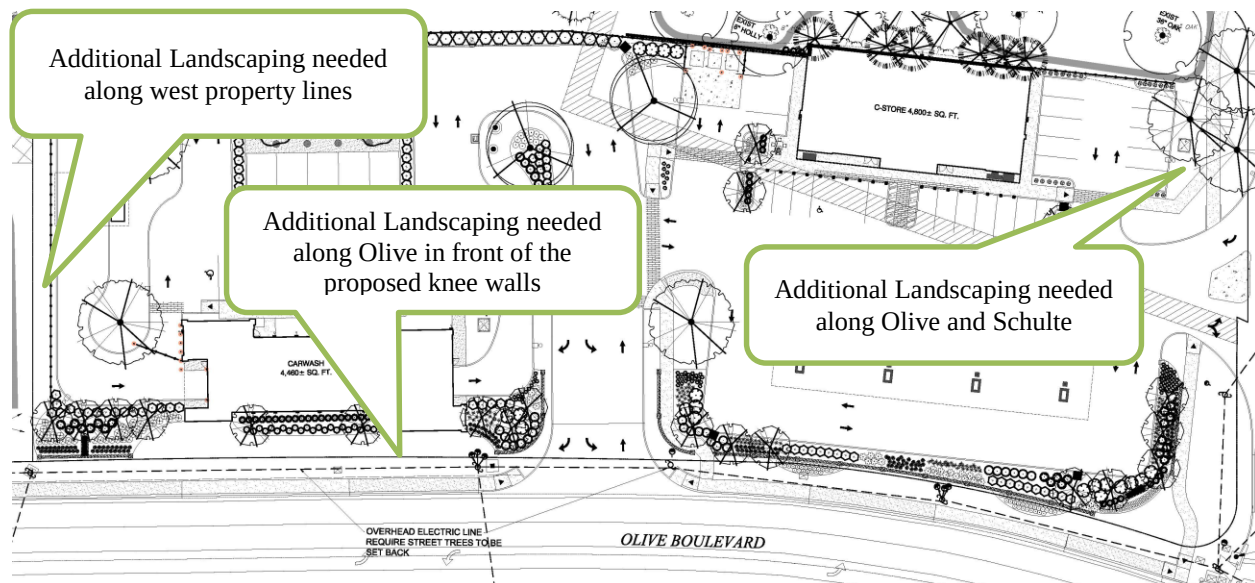


Figure 12: Close-up of the Landscaped Plan

- The proposed fence is extended south to the line of the car wash entrance. Staff recommends that the fencing be pulled back and dense, upright evergreens be carried north to provide for a softer, landscaped screening of the car wash entrance.



Figure 13: Google Image of the fencing at the Olivette Mobil location.

- The Landscape Plan lists Burning Bush as a proposed material, and that several of the proposed trees are 2 inch caliper. Burning Bush is listed on the City's Landscaping Guide as an invasive species, and all trees are to be a minimum of 3 inch caliper. Therefore any condition of approval should include that Burning Bush should be removed and replaced with a suitable material, and that all trees are to be 3 inch caliper.
- *The Design Guidelines recommend that sidewalks in front of retail businesses in a commercial district should be a minimum of 10 feet and include pedestrian amenities such as planters and benches. Outdoor sales, dining or storage should not impair pedestrian movement, and should maintain a minimum 4 foot clearance path along the sidewalk. Section 405.730(A)(2) Sidewalks of the Zoning Ordinance requires a minimum width of internal sidewalks in non-residential developments to be at least six feet and eight if used as a curb stop discussed further below. The Applicant is showing 6 feet along the east and west side of the c-store and in front of the tower element, and 10 feet at the entrances, per the image below. A 4 top table is shown on the west corner of the building for outdoor dining, in furtherance of the Design Guidelines. However, Staff recommends that all of the sidewalks adjacent to the building be increased to a minimum of 8 feet and that a minimum of four feet clearance along the car wash facility and the vacuums be provided to further the proposal toward the Design Guidelines and with the minimum requirements of the Zoning Ordinance. Additionally, the sidewalk in front of the car wash facility is showing 6 and 8 foot sidewalks, with the vacuum structures in the middle. This condition should be revised to provide at least a 4-foot wide clear pedestrian path.*



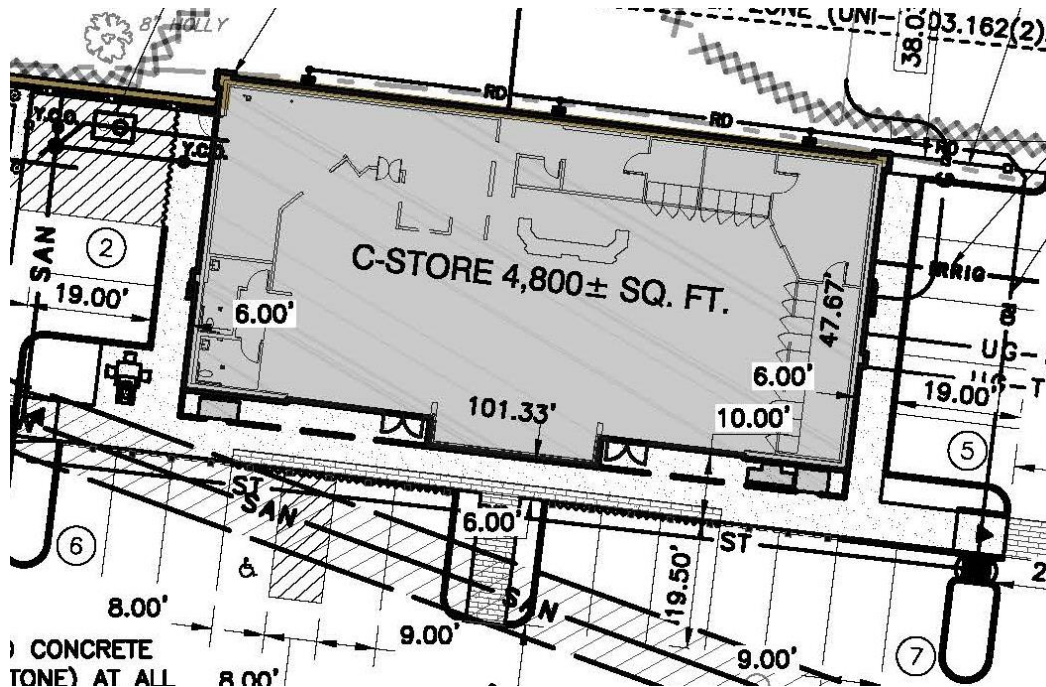


Figure 14: Close-up of the Site Development Plan.

- The Applicant is showing that all pedestrian crosswalks will utilize a stamped textured concrete in furtherance of the Design Guidelines that recommends at intersections, crosswalks, and main building entries, a change in sidewalk color, texture, or material should emphasize the location. Paint Striping to accentuate these areas is strongly discouraged. (p. 5). And as required in Section 405.730(A)(1)(c) Sidewalks of the Zoning Ordinance.

STAMPED CONCRETE



Figure 15: Close up of the Stamped concrete example from Applicant's materials.

- The City's Pedestrian Plan indicates that Olive Boulevard as a primary street should have a separated sidewalk. However, MoDOT has recently redone all of the sidewalks in this area along Olive Boulevard that are adjacent to the curb. Therefore, a condition to separate the sidewalk in this area has not been included.
- MoDOT has indicated the signal at Schulte and Olive Boulevard must be brought up to the ADA Compliance on all four legs of the intersection. MoDOT compliance has been included as a condition of approval.

## ZONING REVIEW

Section 405.1060(B) of Zoning Changes and Text Amendments requires that the action of the Planning and Zoning Commission approving, disapproving, or conditionally approving the site concept or site development plan shall accompany its recommendation to the City Council regarding the rezoning. Therefore, while a recommendation on the proposed conditional use permit and site development plan with any rezoning is required, the rezoning of properties is not contingent on the implementation of the development and, if approved, would remain.

### *Section 405.360: GC-General Commercial District*

The stated purpose and intent of the GC District is to accommodate by site development plan approval convenience retail shopping and services and offices which are free standing or part of small scale planned commercial developments and which are compatible in scale and intensity of use with adjacent residential uses. While a Gas Station with Convenience Store, and a Car Wash are conditional uses in the GC District, it is the overall scale and intensity of use that is reviewed with the stated purpose of the GC District. The purpose of the GC district is similar to the recommendations in the Comprehensive Plan. The convenience store, gas station, and car wash provide retail and services for the adjacent residential areas and other areas within this section of Creve Coeur.

With any rezoning, the minimum lots requirements for the proposed district apply. As discussed above, this is an expansion of the existing GC district that will total 3.92 acres. The minimum lot area is one-half acre with a minimum lot width of 75 feet, and minimum lot depth of 150 feet. The remaining parcel of 11141 Olive Boulevard is 100 feet in width an approximately 0.53 acres (0.43 acres in Creve Coeur and 0.10 acres in Un-incorporated St. Louis County.) The consolidated lot for the gas station, convenience store and car wash make up the remaining 3.39 acres. However, where a GC District abuts a single family residential district, 405.360(E)(4)(d) *Buffer yards* requires a buffer yard of twenty (20) feet on all sides that abut the single-family district. The minimum required buffer yard shall be increased in five (5) foot increments, up to a maximum of forty (40) feet, for each acre of the subject property over two (2) acres in area. All acreage shall be rounded up to the next whole number for buffer yard calculation purposes. The buffer yard shall not contain any impervious surface and shall be landscaped and provided with other screening devices as deemed appropriate by the Planning and Zoning Commission. Therefore, for the property at 11141 Olive Boulevard that would be rezoned but left undeveloped, the required buffer yard from the west property line is 20 feet and for the consolidated parcel associated with the development, 30 feet where adjacent to residential. The site development plan drawings for the car wash and gas station with convenience store will need to be revised to show a 30 foot buffer yard where it abuts a single family residential district. However, the Applicants are showing sufficient room to provide for such buffer.

For the property at 11141 Olive Boulevard, the home and drive way is within this required buffer yard area. A rezoning of a property cannot be completed where it would create non-conformities on the site. Further, the future use of this residential structure is unknown and if left vacant, this property could become a nuisance for the surrounding area. A condition to remove the existing home and driveway for future redevelopment and to comply with zoning has been included.

Maximum structure height shall not exceed 3 stories or 45 feet tall. The proposed is a single story use with the maximum structure height of approximately 27.38 feet for the convenience store, and 30.27 feet for the Briteworx Car Wash facility.

Maximum site coverage is 63%. The Planning and Zoning Commission may, in its discretion, allow the permitted coverage to be increased as a bonus by an additional factor to 70% in consideration of special or outstanding landscape and site planning features. As stated above, the total site coverage for the portion that is in Creve Coeur is 71.5%, while the overall site coverage is 50.2%.

*“Use” Specific Regulations*

Section 405.470(A)(13) provides specific requirements regarding gas stations and car washes:

*Section 405.470. Conditional Uses.*

*A. Conditional uses allowed in zoning districts are as follows:*

13. Gasoline service stations — NAICS 447110 and 447190 (conditional use in the "PC", "GC" and "CB" districts). The following specific development standards shall be met before a conditional use permit may be issued for a gasoline service station in accordance with Section 405.1070, so as to control the mode of development, method of operation and to ensure that the location does not adversely affect the health, safety and welfare of the community, especially from the traffic point of view.
  - a. *Site size.* Service station sites shall contain a minimum area of twenty thousand (20,000) square feet, a minimum lot frontage of one hundred (100) feet and a minimum of twenty-five hundred (2,500) square feet for each dispenser, whichever is greater. A dispenser may have more than one (1) hose.
  - b. *Setbacks.* All buildings shall be set back at least fifty (50) feet from the street right-of-way line and at least ten (10) feet from any other property line unless a greater setback is required by other provisions of this Chapter. Dispenser islands shall be set back twenty (20) feet from any property line. Canopies may be erected to within ten (10) feet of a property line or street right-of-way to protect automobiles positioned for service at pump islands.
  - c. *Service bays.* Service bays shall be limited to one (1) per five thousand (5,000) square feet of land area. All service bays are to be contained entirely within the building. Where adjacent to a residential district ("A", "B", "C", "D", "AR" or "MR"), no more than three (3) service bays shall be permitted. Service bay doors shall not face residentially zoned property.
  - d. *Parking and access.* In addition to providing parking in accordance with Section 405.820(F), there should be adequate space on site for automobiles to wait in line for each dispenser island and dispenser.
  - e. *Fencing.* The site shall be fenced with a six (6) foot brick or stone masonry wall or solid fence of wood or other material deemed appropriate by the Planning and Zoning Commission along each property line which abuts property zoned to any residential classification ("A", "B", "C", "D", "AR" or "MR").
  - f. *Retail sales.* Sales shall be restricted for the service station to gasoline, oil, tires, batteries and automotive accessories and food and beverages sold from vending machines, unless permission is explicitly granted as part of the conditional use permit for the sale of other items or classes of items such as food, beverages, personal care or other convenience items or car washing services.
  - g. *Trash disposal and storage.* All used tires and parts, trash and similar objects shall be stored within a solid brick or concrete enclosure in the rear half or, in the case of corner sites, the rear quarter of the site.
  - h. *Major repairs prohibited.* Major engine or transmission dismantling, body and fender work, top and upholstery work shall not be permitted on the premises of the service station.
  - i. *Trailer and equipment rental prohibited.* Trailer and equipment rentals shall not be permitted to operate on the premises of a service station.
  - j. *Gasoline deliveries.* No delivery tanker shall park on public right-of-way during gasoline delivery, nor shall any hose be permitted on the public right-of-way.
  - k. *Pump island location.* Pump islands located parallel to the street should observe a twenty (20) foot setback. Pump islands located perpendicular to the street should observe a thirty (30) foot setback.
  - l. *Landscaping and buffering.* A landscaped buffer at least ten (10) feet in width should be provided along the length of all property lines including along all frontage on street rights-of-way except where broken for entranceways. Landscaping shall be provided in accordance with a landscape plan approved by the Planning and Zoning Commission.
  - m. *Curb cuts and corner radius.* On corner sites a twenty (20) foot curb radius shall be provided and no curb entrance shall be located within less than fifty (50) feet from the end of such curve. At intersections where a primary flow of right turn traffic is anticipated, a thirty-five (35) foot corner curb radius of curvature shall be provided, again with a fifty (50) foot curb cut setback from the end of the curve.

- n. *Sight lines. Landscaping provided along the street frontage in accordance with paragraph (13)(l) "Landscaping and Buffering" above should preserve sight lines for entering and exiting traffic. This does not preclude careful placement of street trees with high foliage or low growing shrubbery (below thirty (30) inches).*

The proposed site development plan meets with the requirements for the use with the exception of the trash enclosure. As discussed above, the fence and trash enclosure material is a stacked pre-cast stone that is inconsistent with the building materials. Section 405.470 (A) (13)(g) specifically states that the trash enclosure shall be a solid brick enclosure, therefore a condition of approval includes that the trash enclosure shall be a brick to match the building, for the Zoning Administrator's approval.

#### *Landscaping*

As discussed above, the proposal provides for well-designed landscaping, with a few minor additional landscaped areas and adjustments needed to meet with the recommendations of the Comprehensive Plan, Design Guidelines, and the Zoning Ordinance.

Section 405.540 Landscaping provides design standards for landscape plans that include a minimum of 1 street tree for every 30 lineal feet of street frontage and such trees shall be located on the subject property at least 2.5 feet, but not more than 12 feet from the back of the curb unless additional setback is necessary to accommodate planned road widening, overhead utility line or some other condition identified by the Director of Planning. The Landscape Plan indicates that due to the overhead utilities and the gas pump island canopy, the trees will be a columnar variety that will be setback 15-25 feet along Olive Boulevard and Schulte Road, and 3 broad shade trees provided at the north end of the property along Schulte Road, thus meeting with the requirements of the ordinance.

Section 405.810(A)(5) provides additional requirements for headlight screening for parking lots, and extending the landscaping north along Schulte Road is needed to meet with this requirement. As discussed above, a condition of approval is that the Landscape plans shall be revised to meet with this requirement of the zoning ordinance.

#### *Lighting*

All lighting will be in conformance with Section 405.680 Lighting of the Zoning Ordinance that all lights will be downcast and fully shielded and will not cast lighting upon adjacent property or right-of-way. The Applicant's photometric plan is showing that at the car wash canopy the lighting will be 1.4 at the property line. However, this property 11141 Olive Boulevard is also being rezoned to GC-District with this request, Staff does not have a concern with the amount of spillage in this area.

The gas station canopy lights will be flush mounted to comply with the City's Design Guidelines that lighting fixtures are to be flush with the underside of the canopy (p.12).



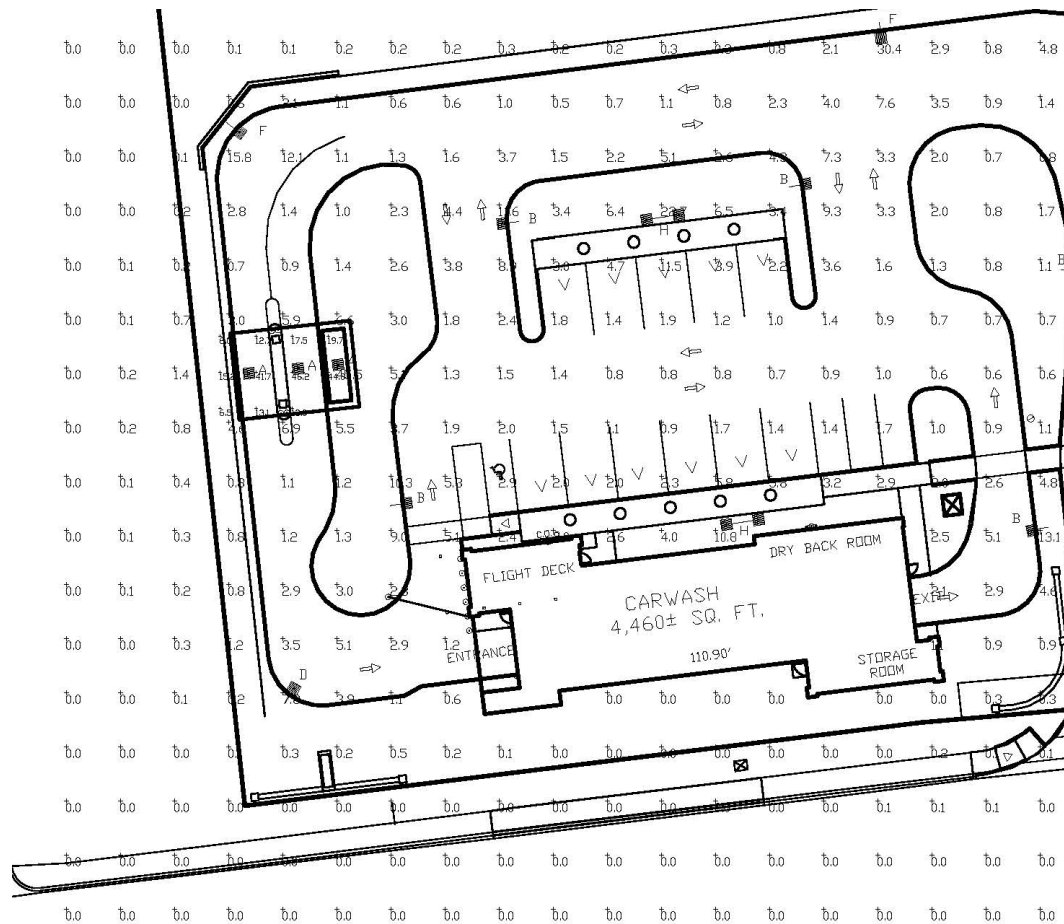


Figure 16: Close-up of the Applicant's Photometric Plan at the west property line

### Stormwater Mitigation

The plans include a stormwater detention basin on the northwest corner of the property located in unincorporated St. Louis County. Roof drains and surface storm water runoff will be collected and piped into this basin.

### Signs

Signs are reviewed at Staff level and review and ultimate approval of the development does not constitute approval of the signs shown on the drawings. Section 405.950(I) provides for specific direction on Automobile Service Station signs that include signs on the Canopy. Particularly subsection 4 that states that signs on the service station canopy shall not exceed 30 square feet in gross sign area per street frontage, and includes any business logo inclusive of striping or other symbols, appearing on the canopy shall count as part of the gross sign area. The Applicant's drawings show that the service station canopy will have a similar dark blue striping detail and crosshatched accent designs as the Mobil on the Run Store and the BriteWorx Car Wash facility. With these distinctions, staff does not believe that the darker blue coping of canopy should be considered an element of signage and count toward allowable sign area.

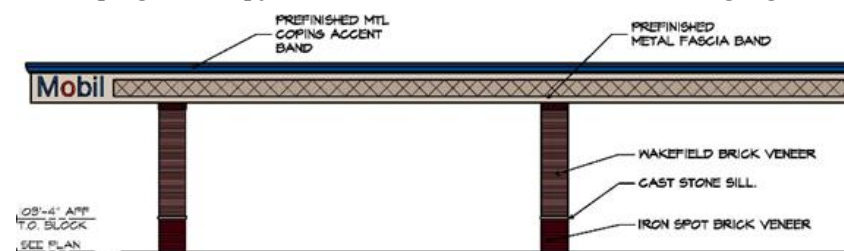


Figure 17: Close up of the Canopy structure elevation

### SOUND STUDY

A sound study was completed by Designed Acoustics based upon the nature of the proposed use for the prior review. A revised sound study with the new layout has not been provided. The Study completed in November of 2016, indicated that a worst case scenario at the closest residential property line with an 8 foot wall would have a 49 dBA at the property line. While reviewing the BriteWorx facility in Florissant, MO the report states that sound levels were taken at the wall (barrier) located behind the carwash that separates the carwash from a residential neighborhood. (53dBA to 56dBA) Additional sound level readings were taken behind the wall. The sound level readings behind the wall were significantly lower. (42dBA – 45dBA).

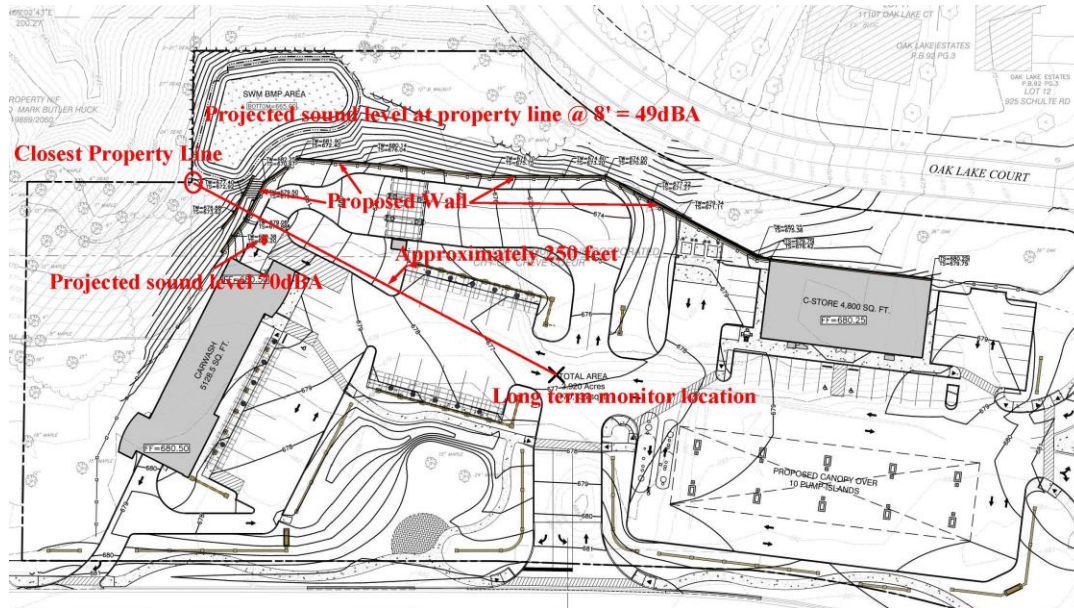


Figure 18: Close-up of the Acoustic Report Graphic

The graphics from the study is showing an average noise level of 65.8, with a Day average of 64.9 and night average of 57.0 on November 4, 2016

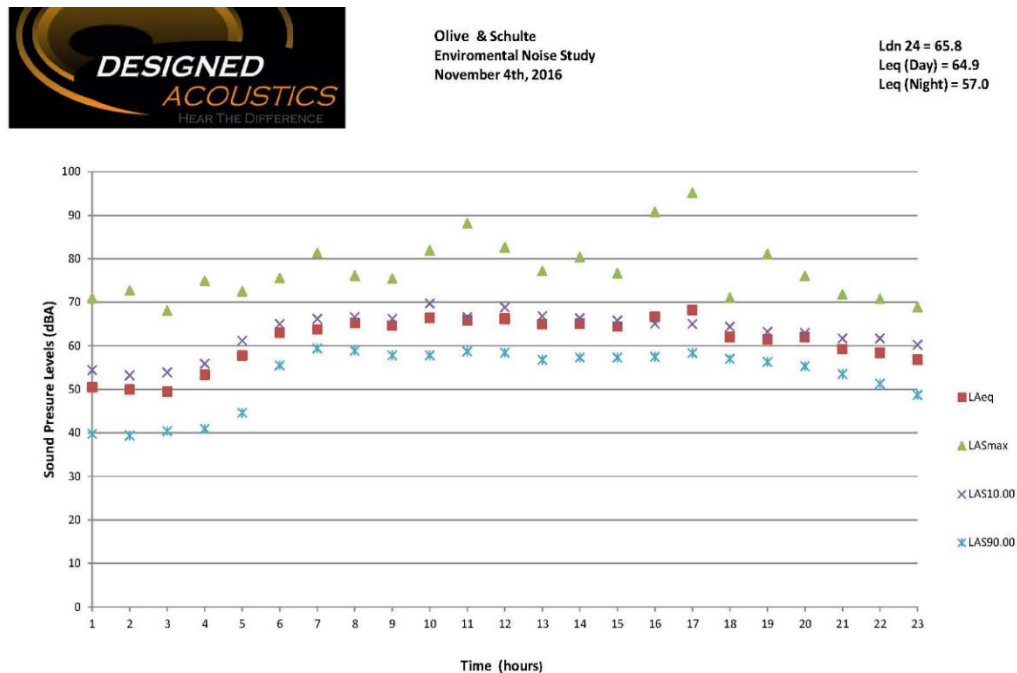


Figure 19: Graphic of the Environment Noise Study from the Applicant's Acoustic Study

As with a recent discussion of a similar facility the maximum sound, the perception of the noise and the level of sound impact can be very subjective. It should be noted that during that discussion, it was noted that the St. Louis County Daytime Permissible Sound Levels for a continuous operation of a car wash is 55 dBA max. To gain an understanding of the possible noise impacts associated with the car wash facility in particular, Staff would recommend that Commission members visit the Mobil on the Run location at 9371 Olive Boulevard in Olivette. The reorientation of carwash facility since this acoustic study was completed may further decrease the impact on the residential properties to the northwest. Staff recommends that an updated sound study be provided that reflects the current plan, prior to final Council review.

#### **TRAFFIC IMPACT STUDY**

A Traffic Impact Study (TIS) was submitted as part of the prior submittal and reviewed by the City's consulting traffic engineer. MoDOT has jurisdiction for Olive Boulevard and St. Louis County has jurisdiction for Schulte Road. Both agencies have reviewed the TIS and have provided the following comments and requirements:

##### **MoDOT:**

- The southbound dual left turns, due to geometric constraints with the southern approach, will not be required to be constructed.
- The development will dedicate right of way for future construction of dual southbound left turn lanes.
- The signal must be brought up to ADA compliance. This includes crosswalks on all 4 legs of the intersection with Audible Push Buttons and Countdown Pedestrian Signal Heads. If a specific crossing creates a safety concern, you can fill out a design exception for review and approvals
- An additional signal head is required for the southbound through movement. This can be mounted overhead on the existing mast arm or on a pedestal in the median island at the northbound approach.
- Based on the reduced number of trips that will be generated by the site, the right turn lane warrants on westbound Route 340 will need to be revised.

##### **St. Louis County:**

- Relocation and reconfiguration of Schulte Road access to be opposite the service station access to the east while restricting left turns into the subject site.
- Appropriate signal improvements as directed by MoDOT
- Reservation of ground for potential future alignment of Schulte Road.

St. Louis County observed that the traffic exiting the site should be more balanced amongst access points when level of service is particularly deficient at one while considerable excess capacity exists at others. In this case, is it reasonable to assume the large number of left turns at the unsignalized Olive Boulevard access when access to the signal is provided at Schulte Road? The County noted that no changes are necessary based upon this comment but should conditions change, this matter should be addressed.

Staff does not anticipate any additional requirements based on the redesign and would note that the former curb cut on the western end of the site has been eliminated. Nonetheless, a condition of approval has been included to require the applicant to provide approvals from MoDOT and St. Louis County based on an approved plan prior to the City issuing any construction permits for the project and that the traffic impact requirements of each agency be implemented.

#### **BOUNDARY ADJUSTMENT PLAT**

As part of this request, the Applicant has submitted a plat that would consolidate all of the individual lots into one new lot consisting of 3.320 acres and the lot at 11141 Olive Boulevard. The consolidated lots would straddle both jurisdictions of the City of Creve Coeur and Unincorporated St. Louis County.

### REVIEW BY ST. LOUIS COUNTY

The total development site includes 2.807 acres located within the City of Creve Coeur and 1.113 acres located within Unincorporated St. Louis County. Based upon conversations with the St. Louis County Planning Department, the Applicant will be required to submit the plans for the County's approval in conjunction with the review by the City. Any approval by the City of this proposal should incorporate a condition that the Applicant receive approval of the plan by St. Louis County and that any conditions of approval imposed by the County be followed in addition to those by the City of Creve Coeur.

### RECOMMENDATION AND ACTION

If approved, the proposed development would represent a notable change within the East Olive corridor. The proposal seeks to remove an antiquated gas station and accessory car wash with a more modern facility. With the suggestions offered by staff within this report along with discussions between the Commission and the applicant during the meeting, on balance, this revised proposal can achieve many of the goals and objectives of the Comprehensive Plan. Due to the nature of the proposed uses, the Commission should review the project to determine if any potential impacts with the development, particularly those that involve adjacent residential areas have been sufficiently mitigated.

If the Commission members believe that the revised proposal represents a development more in keeping with the Comprehensive Plan, meets the development standards of the zoning ordinance, including the conditional use requirements specific to gas stations, and significantly follows the Design Guidelines they should make a motion to to approve the rezoning, conditional use permit and site development plans, and boundary adjustment. Staff has provided conditions below which are included in the draft ordinance:

1. The Conditional Use Permit shall be for the operation of a 4,800 square foot new 24-hour Mobil on the Run Gas Station with convenience store, with 16 gas pumps, and a 4,460 Car Wash Facility with 11 outdoor vacuums located at 11109 – 11135 Olive Boulevard, and 11100, 11108, and 11114 Oak Lake Court
2. The existing home at 11141 Olive Boulevard shall be removed and the site cleared to be in compliance with the zoning ordinance for buffering adjacent to residentially zoned property.
3. The Car Wash Hours of operation, including the vacuums shall be 7 AM to 9 PM, seven days a week.
4. The Applicant is required to submit Grading and Site Improvement Plans, showing all exterior improvements, for all new construction to the Division of Planning for review, as required by Section 410.380 of the Subdivision and Land Development Regulations (Subdivision Code). The Grading and Site Improvement Plans shall be in substantial conformance with the Site Development Plans and the Landscape Plan submitted on November 27, 2017 as bound together and submitted in conjunction with Application #16-031 by CEC Civil & Environmental Consultants, Inc., and as amended below.
5. The Applicant is required to submit a Building Permit application, as required by Article II of the Building Code. Exterior elevations shall be in substantial conformance with the "Exterior Elevations" submitted on November 27, 2017 as bound together and submitted in conjunction with Application #16-031 by CEC Civil & Environmental Consultants, Inc., and as amended below.
6. The Landscape Plan shall be revised to provide additional plantings along Schulte Road and Olive Boulevard, as well as along the west property line, and relocate the knee walls further inward with the plantings on the public view for the Zoning Administrator's approval to meet with the City's Comprehensive Plan and Design Guidelines as well as Sections 405.540 and 405.810 of the Zoning Ordinance as discussed in the Staff Report for December 4<sup>th</sup> Planning and Zoning Commission Meeting.
7. An underground irrigation system shall be installed and maintained to serve all new landscaped areas. Vegetation that is totally or predominantly dead and/or disfigured due to disease or injury shall be replaced as needed and in a prompt manner.



8. The fence line shall end in line with the northwest corner of the car wash facility, and the upright evergreen landscaped hedge shall be carried around to provide sufficient screening of the entrance.
9. The site development plan drawings for the car wash and gas station with convenience store shall be revised to show a 30 foot buffer yard where it abuts a single family residential district.
10. The site development plans shall be revised to provide a minimum of 8 feet of sidewalk adjacent to the building, with a minimum 4 foot clearance between the vacuums and the building to meet with the regulations of Section 405.730 Sidewalks and City's Design Guidelines.
11. The Applicant shall bring the signal at Schulte Road and Olive Boulevard to the ADA Compliance on all four legs of the intersection, and that an additional signal head is required for the southbound through movement that can be mounted overhead on the existing mast arm or on a pedestal in the median island at the northbound approach, per MoDOT and St. Louis County's recommendations and approval.
12. Copies of MoDOT and St. Louis County approval based on the approved plans shall be provided prior to the issuance of a Site Improvement Permit or Building Permits from the City.
13. Employee parking, delivery and company vehicles shall be parked interior to the site and as far from the public right-of-way as possible.
14. Outdoor storage and display of merchandise shall be prohibited.
15. All signs and banners shall be in conformance with Article VIII, Sign Regulations, of the Zoning Code. Specifically, no temporary signs, including window signs, shall be placed on the car wash building.
16. All lighting shall comply with Section 405.680 Lighting of the Zoning Ordinance.
17. A revised sound study shall be provided based on the final site development plans prior to final action by the City Council.
18. Noise levels shall meet with the St. Louis County standards.
19. Any mechanical equipment installed for the site shall be properly screened with approved materials.
20. Any future enlargement, extension, expansion or alteration in the use of the structures or site must be approved by the City Council upon receipt of the recommendation of the Planning and Zoning Commission as an amendment to the Conditional Use Permit before a Building Permit for the enlargement, expansion or alteration may be issued.
21. Failure to comply with any one or all of the conditions of this permit shall be adequate cause for the revocation of said permit by the City Council, provided, however, no permit shall be revoked without prior notice to the owner of the intention of the City Council to revoke this permit and reasonable time granted to the owner to correct or remedy any such breach of conditions, except for repeated breaches or violations.
22. No conditional use permit granted by the City Council shall be valid for a period longer than one year from the date it grants the conditional use permit, unless within such period: (1) a building permit is obtained and construction is begun; or (2) if a building permit is not required, an occupancy permit is obtained and the use of the building commenced. The City Council may grant extensions to the one (1) year period of not more than one hundred and eighty (180) days each, without notice or hearing, provided that a written request for such extension is filed by the original applicant and approved by the City Council prior to the date the conditional use permit is scheduled to expire.
23. Any transfer of ownership or lease of the property shall include in the transfer or lease agreement a provision that the purchaser or lessee agrees to be bound by the approved Site Development Plan for the property and the conditions herein set forth, and written confirmation thereof signed by the new owner or lessee shall be filed with the City at the time of such transfer or lease. Failure to comply with this provision shall not excuse anyone from these conditions.

### **MOTION**

The proposal will require three different motions for approval; one for the rezoning of all of the properties; the boundary adjustment plat and conditional use permit; and, the site development plan approval for the Gas Station and Car Wash. Below are example motions, in the appropriate order:

“I move to approve Application #16-031 for the rezoning of properties at 11127, 11135 & 11141 Olive Boulevard, currently zoned C Single Family Residential, to GC General Commercial.”

“I move to approve Application #16-031 for a boundary adjustment and conditional use permit for a Mobil on the Run convenience store and Gas Station and Briteworx car wash facility with 11 outdoor vacuum stations located as shown in the materials submitted on November 27, 2017 at 11109-11135 Olive Boulevard & 11100-11114 Oak Lake Court, subject to the condition that that a final drawing be prepared for review by staff and signature and recording.” (Conditions may be added, eliminated, or modified by preceding motion)

“I move to approve Application #16-031 for site development plan for a Mobil on the Run convenience store with 16 gas pumps and Briteworx car wash facility with 11 outdoor vacuum stations located at 11109-11135 Olive Boulevard & 11100-11114 Oak Lake Court as shown in the materials submitted on November 27, 2017, and per the conditions provided in the Draft Ordinance for the meeting of December 4, 2017” (conditions may be added, eliminated, or modified by preceding motion).

**Or,**

“I move to continue Application #16-031 for the rezoning, conditional use permit, and site development plan and boundary adjustment approval of a Mobil on the Run convenience store and Gas Station and Briteworx car wash facility located at 11109-11135 Olive Boulevard & 11100-11114 Oak Lake Court, to allow for the Applicant to revise the drawings based upon the discussion and direction from the Commission” (conditions may be added, eliminated, or modified by preceding motion).

---

### **APPENDIX 1: COMPREHENSIVE PLAN, INCLUDING DESIGN GUIDELINES**

Included and attached by reference. See body of report for specific excerpts.

### **APPENDIX 2: ZONING CODE**

Included and attached by reference. See body of report for specific excerpts.



### APPENDIX 3: AERIAL PHOTO



Attachment: 16-031.Staff Report.12-4-2017 (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)



#### APPENDIX 4: SITE PHOTOGRAPHS

Photo Date: 12/01/2016



Description: View looking northwest at the Existing Mobil Station at 11109 Olive Boulevard from the Olive Boulevard and Schulte Road intersection.



Description: View looking north at the home used as a commercial office at 11127 Olive Boulevard that that will be removed for the proposed development.



Description: View looking north at the home used as a commercial office at 11135 Olive Boulevard that will be removed for the proposed development.

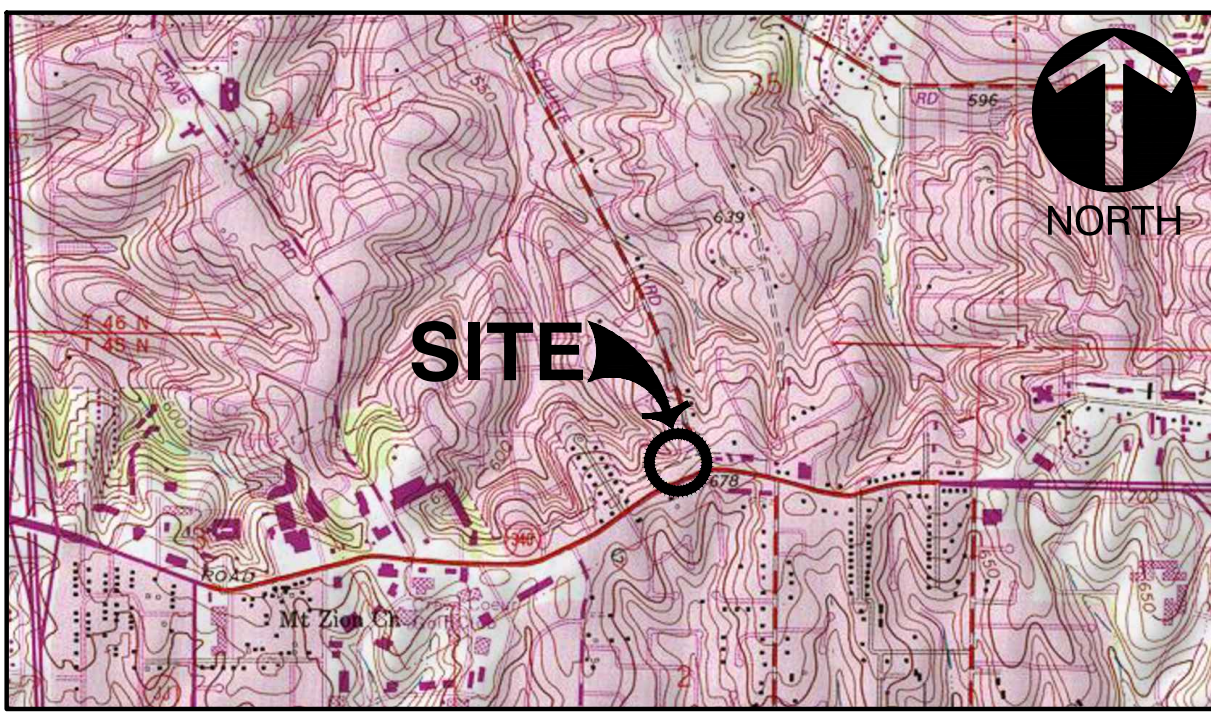


|                                                                                      |                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Description: View looking northwest at the home used as a commercial office at 11141 Olive Boulevard that will be removed for the proposed development. The home at 1147 Olive Boulevard in the background will be remaining.</p> |
|   | <p>Description: View looking south from the subject property at the homes south of Olive Boulevard.</p>                                                                                                                              |
|  | <p>Description: View looking southeast at the commercial buildings at the corner of Olive Boulevard and Mary Meadows Drive on the southside of Olive Boulevard.</p>                                                                  |



|                                                                                     |                                                                                                                                                                  |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Description: View looking east from western property line of the subject properties.</p>                                                                      |
|   | <p>Description: View looking southwest of the home at 11100 Oak Lake Court that will be removed for the proposed development.</p>                                |
|  | <p>Description: View looking east from the cul-de-sac of Oak Lake Court at 11108 and 11114 Oak Lake Court that will be removed for the proposed development.</p> |





### USGS MAP

U.S.G.S. 7.5' TOPOGRAPHIC MAP CREVE COEUR QUADRANGLE MISSOURI  
DATED 1990, PHOTOREVISED 1993  
SCALE 1" = 2,000'

### THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT

LACLEDE GAS COMPANY  
COMMERCIAL & INDUSTRIAL MARKETING  
720 OLIVE STREET  
ST. LOUIS, MO 63101  
CONTACT: JIM TRAVIS  
PHONE: (314) 342-0687  
EMAIL: JTravis@lacledegas.com

AT&T TELEPHONE  
402 N 3RD  
ST. CHARLES, MO 63301  
CONTACT: JIM LULLY  
PHONE: (636) 949-4228

MCI FIBER  
2400 NORTH GLENVILLE  
RICHARDSON, TX 75082  
CONTACT:  
PHONE: (972) 729-6016 EXT. 1

MISSOURI AMERICAN WATER  
727 CRAIG RD.  
CREVE COEUR, MO 63141  
CONTACT: DAWN SPINK  
PHONE: (314) 996-2379  
EMAIL: dawn.spink@amwater.com

CREVE COEUR FIRE PROTECTION  
DISTRICT  
11221 OLIVE BLVD.  
CREVE COEUR, MO 63141  
CONTACT: MR. KENNETH BLACK  
PHONE:

ST. LOUIS METROPOLITAN SEWER  
DISTRICT  
2350 MARKET ST.  
ST. LOUIS, MO 63103  
PHONE: (314) 768-6200

AMEREN  
DORSETT DISTRICT  
1212 DORSETT ROAD  
MARYLAND HEIGHTS, MO 63043  
CONTACT: RYAN ALEXANDER  
PHONE: (636) 387-6650  
EMAIL: RAlexander2@ameren.com

CHARTER COMMUNICATIONS  
815 CHARTER COMMONS  
TOWN & COUNTRY, MO 63017  
CONTACT: RICHARD STURK  
PHONE: (636) 387-6650  
EMAIL: mopping-design@chartercom.com

MODOT  
WEST AREA PERMITS  
1590 WOODLAKE DRIVE  
CHESTERFIELD, MO 63017-5712  
CONTACT: JIM BODART  
PHONE: (314) 340-4318  
EMAIL: James.Bodart@modot.mo.gov

### ARCHITECT

OSM, INC.  
15510 OLIVE BLVD., SUITE 207  
ST. LOUIS, MISSOURI 63017  
PH: (636) 536-7004  
FX: (636) 536-7014  
CONTACT: STEWART MACGREGOR  
EMAIL: SM@ATT.NET

### CIVIL ENGINEER

CIVIL & ENVIRONMENTAL  
CONSULTANTS, INC.  
4848 PARK 370 BLVD., SUITE F  
HAZELWOOD, MISSOURI 63042  
PH: (314) 656-4566  
FX: (314) 656-4595  
CONTACT: KEVIN KAMP, PE

### LANDSCAPE

ACORN LANDSCAPES  
HTTP://WWW.ACORNLANDSCAPES.COM  
PH: (636) 394-0255  
CONTACT: MARY FRANCOIS DEWESE  
EMAIL: DEWESE@ACORNLANDSCAPES.COM

### LIGHTING

PEIKER PIATCHEK ASSOCIATES  
ST. LOUIS, MISSOURI 63129  
PH: (314) 892-4646  
FX: (314) 397-1160  
CONTACT: RICHARD HAYDEN  
EMAIL: RHAYDEBP@AOL.COM

### PRELIMINARY DRAINAGE NOTES

- PROJECT AREA: 147,605 SQ.FT. (3.39 ACRES)
- WATERSHED: FEE FEE
- 15YR/20MIN DIFFERENTIAL RUNOFF (Q=A\*PI, PER MSD):

| DIFFERENTIAL RUNOFF CALCULATION (15-YEAR/20-MINUTE) |           |           |      |         |  |
|-----------------------------------------------------|-----------|-----------|------|---------|--|
| SITE DRAINAGE AREA                                  |           |           |      |         |  |
|                                                     | AREA (SF) | AREA (AC) |      |         |  |
| TOTAL DISTURBED AREA                                | 147,605   | 3.39      |      |         |  |
| EXISTING SITE RUNOFF                                |           |           |      |         |  |
|                                                     | AREA (SF) | AREA (AC) | PI   | Q (CFS) |  |
| ROOF (DISCONNECTED)                                 | 19,485    | 0.45      | 3.54 | 1.58    |  |
| PERVIOUS                                            | 86,496    | 1.99      | 1.70 | 3.38    |  |
| IMPERVIOUS                                          | 41,624    | 0.96      | 3.54 | 3.38    |  |
| TOTAL                                               | 147,605   | 3.39      | 2.46 | 8.34    |  |
| PROPOSED SITE RUNOFF                                |           |           |      |         |  |
|                                                     | AREA (SF) | AREA (AC) | PI   | Q (CFS) |  |
| ROOF (DIRECT CONNECT)                               | 17,720    | 0.41      | 4.20 | 1.71    |  |
| PERVIOUS                                            | 68,134    | 1.56      | 1.70 | 2.66    |  |
| IMPERVIOUS                                          | 61,751    | 1.42      | 3.54 | 5.02    |  |
| TOTAL                                               | 147,605   | 3.39      | 2.77 | 9.39    |  |

| DIFFERENTIAL RUNOFF |          |                     |
|---------------------|----------|---------------------|
| PROPOSED            | EXISTING | DIFFERENTIAL (CFS)* |
| 9.39                | 8.34     | 1.06                |

\*Per MSD Table 4-5, this project is in a restricted watershed with a differential runoff less than 5cfs, thus it is required to provide detention to limit runoff for the 2-year and 100-year 24-hour storms to the existing condition ("zero increase"). Water quality must also be provided per MSD requirements.

- PER MSD SECTION 4.080.01(2B), THIS PROJECT DOES NOT REQUIRE DETENTION, HOWEVER THE SITE MUST PROVIDE WATER QUALITY.
- PER THE NATIONAL RESOURCE CONSERVATION SERVICE (NRCS) THIS PROJECT IS WITHIN HYDROLOGIC SOIL GROUP "D" HAVING A LOW INFILTRATION RATE AND HIGH RUNOFF POTENTIAL.
- WATER QUALITY VOLUME FOR THE ENTIRE SITE (3.39 ACRES AT 51% IMPERVIOUS) PER MARYLAND STORMWATER DESIGN MANUAL APPENDIX D-10:  
W<sub>Q</sub>=3.02 CFS OR W<sub>Q</sub>=8,300 CF

- WATER QUALITY BMPs:
- HYDRODYNAMIC SEPARATOR AND SNOUT FOR HOTSPOT AREA AT GAS PUMPS
  - BIORETENTION (WILL ALSO PROVIDE VOLUME REDUCTION)



CALL BEFORE  
YOU DIG!  
1-800-DIG-RITE

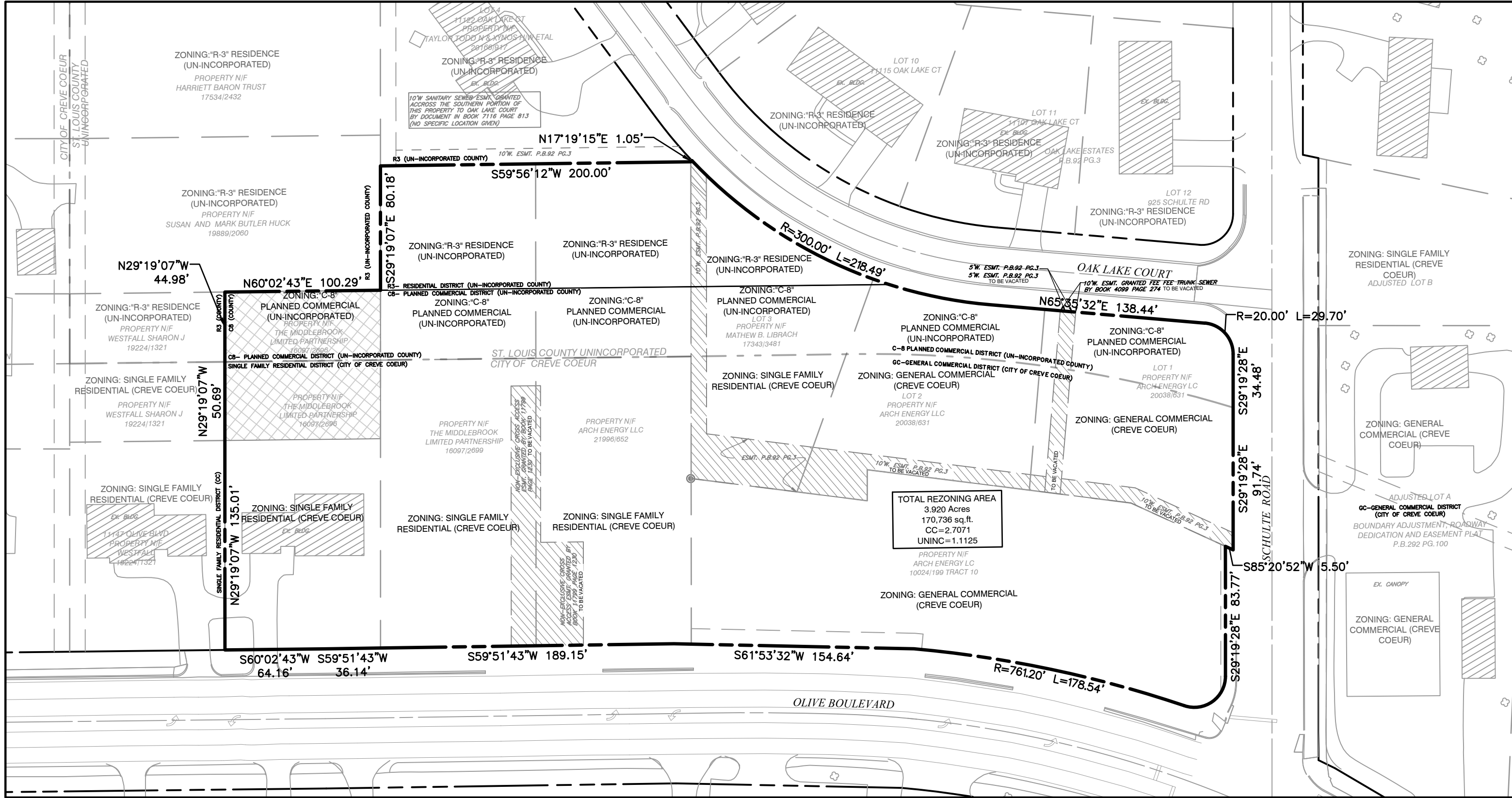
### REFERENCE

- TOPOGRAPHIC SURVEY PROVIDED BY CLIENT DATED SEPTEMBER 9, 2006. TREE SURVEY PROVIDED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED JANUARY 15, 2009.



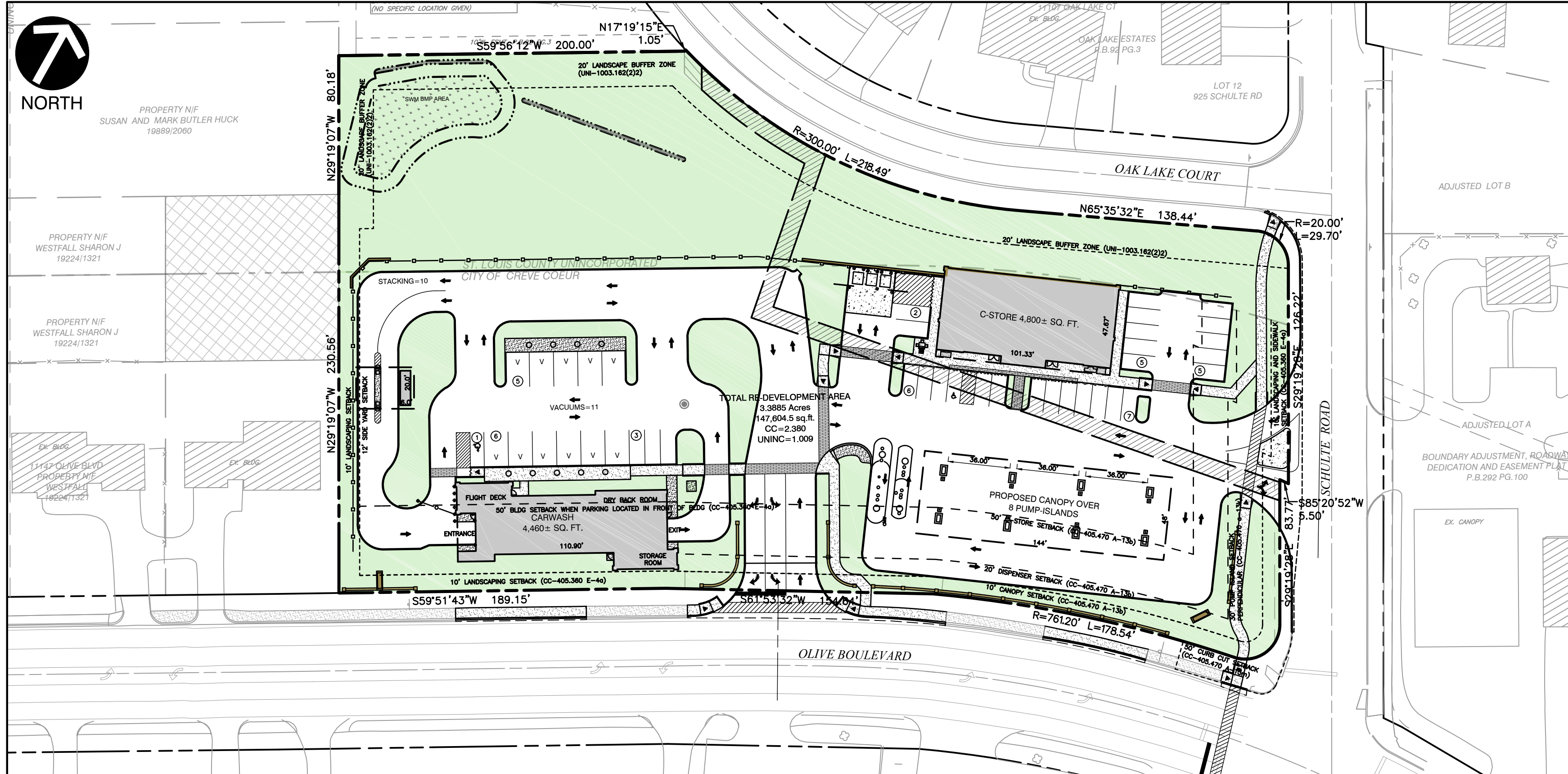
# SITE DEVELOPMENT PLAN FOR Mobil On the Run

A TRACT OF LAND BEING ALL OF LOTS 1, 2, 3 AND 4 OF "OAK LAKE ESTATES", P.B.92 PG.3  
AND PART OF LOTS 3, 4, AND 5 OF THE SUBDIVISION OF THE FARM OF S.S. MATSON IN U.S. SURVEY 1962,  
TOWNSHIP 45 NORTH, RANGE 5 EAST OF THE FIFTH PRINCIPAL MERIDIAN ST. LOUIS COUNTY, MISSOURI



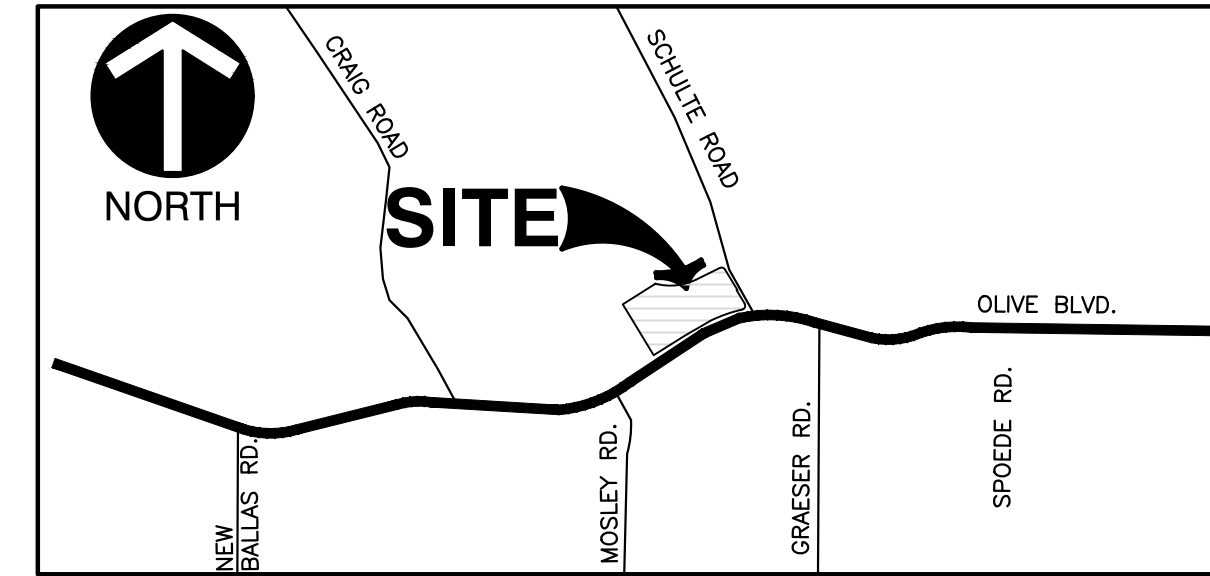
### ZONING MAP

SCALE: 1" = 60'



### OVERALL SITE MAP

SCALE: 1" = 50'



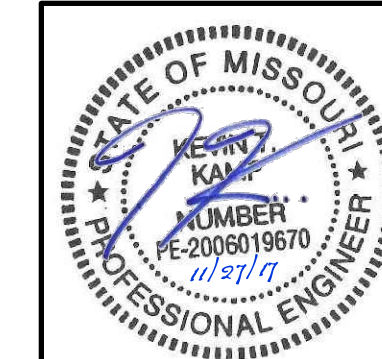
### DEVELOPMENT NOTES

- TOTAL SITE DEVELOPMENT AREA: 147,605 SQ.FT. (3.389 ACRES)  
AREA WITHIN CITY LIMITS 103,655 SQ.FT. (2.380 ACRES)  
AREA WITHIN UNINCORPORATED 43,950 SQ. FT. (1.009 ACRES)
- TOTAL SITE REZONING AREA: 170,736 SQ.FT. (3.920 ACRES)  
AREA WITHIN CITY LIMITS 122,277 SQ.FT. (2.807 ACRES)  
AREA WITHIN UNINCORPORATED 48,459 SQ. FT. (1.113 ACRES)
- CURRENT ZONING (CC)--PROPOSED ZONING (CC)--  
CURRENT ZONING (UN)--PROPOSED ZONING (UN)--  
SINGLE FAMILY RESIDENTIAL & GENERAL COMMERCIAL  
R3 (RESIDENCE) & C8 (PLANNED COMMERCIAL DISTRICT)  
C8 (PLANNED COMMERCIAL DISTRICT)
- SETBACKS--  
FRONT YARD/ROW (CC) 10 FEET OLIVE BLVD. (CC)  
SIDE YARD (CC) 0 FEET SCHULTE RD (IN LIEU OF ROW GIVEN TO COUNTY)  
SIDE YARD (UN) 12 FEET  
REAR YARD (UN) 10 FEET  
BUILDING HEIGHT 15 FEET (NORTH PROPERTY LINE)  
NOTE: ALL PROPOSED BUILDINGS TO BE 1 STORY IN HEIGHT
- SPECIAL CONSIDERATIONS--  
4.1. TRASH ENCLOSURES SHALL BE INTERIOR TO THE SITE AND NOT ALONG THE NORTH PROPERTY LINE.  
4.2. SIDEWALKS ALONG OLIVE BLVD. SHALL BE FIVE-FOOT IN WIDTH UNLESS ABUTTING CURB, IN WHICH CASE SHALL BE INCREASED TO SIX-FOOT WIDE.  
4.3. PLAN SHALL BE SO DEVELOPED TO INCLUDE AN INTEGRATED PEDESTRIAN CIRCULATION SYSTEM.
- FIRE DISTRICT: CREVE COEUR
- FLOOD NOTE:  
ACCORDING TO THE FLOOD INSURANCE RATE MAP OF THE CITY OF CREVE COEUR, MISSOURI (COMMUNITY PANEL NUMBER 290344 0166 H, EFFECTIVE DATE AUGUST 2, 1995), AND THE FLOOD INSURANCE RATE MAP OF ST. LOUIS COUNTY, MISSOURI (UNINCORPORATED AREAS) (COMMUNITY PANEL NUMBER 290327 0166 H, EFFECTIVE DATE AUGUST 2, 1995) THIS PROPERTY LIES WITHIN ZONE X. ZONE X IS DEFINED AS AN AREA OF MINIMAL FLOOD HAZARD.
- ALL PROPOSED UTILITIES SHALL BE LOCATED UNDERGROUND.
- TRASH ENCLOSURES SHALL BE SIX FOOT (6') IN HEIGHT AND SHALL BE CONSTRUCTED W/ A SIGHT-PROOF GATE; MATERIALS SHALL BE COMPATIBLE WITH THE ARCHITECTURE OF MAIN BUILDINGS AND OF SIMILAR MATERIALS.
- ALL DRIVE-THROUGH AND DRIVE-IN SALES OF GOODS OR SERVICES (NOT INCLUDING RESTAURANTS) (CC-442100) (CONDITIONAL USE IN THE "PC", "GC" AND "CB" DISTRICTS). SHALL PROVIDE SPACE FOR AT LEAST THREE (3) CARS PER DRIVE-UP WINDOW OR STATION.  
SHALL PROVIDE LANDSCAPING TO SCREEN THE VIEW OF DRIVE-UP WAITING SPACES FROM SURROUNDING PROPERTIES.  
DRIVE-UP WINDOW ACCESS, WAITING SPACES AND EGRESS SHALL NOT INTERFERE WITH SITE CIRCULATION OR BE HAZARDOUS TO MOTORISTS ENTERING, EXITING OR PASSING BY THE SITE.
- NOTE THAT ANY TENANT SIGNAGE IS REVIEWED UNDER A SEPARATE PERMIT PROCESS AND ANY APPROVAL OF THE PROJECT DOES NOT CONSTITUTE APPROVAL FOR ANY SIGNAGE SHOWN IN THE DRAWINGS
- RATIO OF FLOOR TO SITE IN SQ.FT. (FAR)  
1:15 (1 SQ.FT. OF FLOOR SPACE TO 15 SQ.FT. OF PARCEL AREA)
- PARKING CALCULATIONS:  
REQUIRED  
GENERAL RETAIL PER SEC 405.820(F) 4 PER 1,000 SQ.FT. and GASOLINE STATIONS PER SEC 405.820(F) 1c 4 PER 1,000 SQ.FT. [NOTE: NO SERVICE BAYS; EXPANDED AREAS BETWEEN PUMP ISLANDS (36 FEET HAVE BEEN PROVIDED FOR MANEUVERING)]  
TOTAL SQ.FT. = 4,800/1000\*4 = 19.2  
PROVIDED  
PARKING SPACES = 25 SPACES INCLUSIVE OF 1 ACCESSIBLE SPACES

| SITE CALCULATIONS:       | *GREENSPACE DEFINED AS AREAS OF LANDSCAPE AND WALKWAYS |                                   |           |
|--------------------------|--------------------------------------------------------|-----------------------------------|-----------|
|                          | CITY OF CREVE COEUR                                    | ST. LOUIS COUNTY (UNINCORPORATED) | TOTAL SDP |
| TOTAL SITE AREA          | 103,655                                                | 43,950                            | 147,605   |
| BUILDING                 | 9,706                                                  | 0                                 | 9,706     |
| PAVEMENT                 | 64,357                                                 | 107                               | 64,464    |
| SIDEWALK                 | 5,012                                                  | 289                               | 5,301     |
| LANDSCAPE                | 24,580                                                 | 43,555                            | 68,134    |
| GREEN SPACE              | 29,592                                                 | 43,843                            | 73,435    |
| PERCENTAGE GREENSPACE*   | 28.5%                                                  | 99.8%                             | 49.8%     |
| PERCENTAGE SITE COVERAGE | 71.5%                                                  | 0.2%                              | 50.2%     |

### DRAWING LIST

| SHEET NO. | DRAWING NO. | TITLE                    |
|-----------|-------------|--------------------------|
| 01        | C000        | COVER                    |
| 02        | C100        | EXISTING CONDITIONS PLAN |
| 03        | C200        | SITE & UTILITY PLAN      |
| 04        | C300        | GRADING PLAN             |
| 05        | C301        | SITE SECTIONS            |



| REVISION RECORD |            | NO. |            | DATE |            | DESCRIPTION |            |
|-----------------|------------|-----|------------|------|------------|-------------|------------|
| 1               | 11/20/2017 | 1   | 11/20/2017 | 1    | 11/20/2017 | 1           | 11/20/2017 |
| 2               | 11/20/2017 | 2   | 11/20/2017 | 2    | 11/20/2017 | 2           | 11/20/2017 |
| 3               | 11/20/2017 | 3   | 11/20/2017 | 3    | 11/20/2017 | 3           | 11/20/2017 |
| 4               | 11/20/2017 | 4   | 11/20/2017 | 4    | 11/20/2017 | 4           | 11/20/2017 |
| 5               | 11/20/2017 | 5   | 11/20/2017 | 5    | 11/20/2017 | 5           | 11/20/2017 |
| 6               | 11/20/2017 | 6   | 11/20/2017 | 6    | 11/20/2017 | 6           | 11/20/2017 |
| 7               | 11/20/2017 | 7   | 11/20/2017 | 7    | 11/20/2017 | 7           | 11/20/2017 |
| 8               | 11/20/2017 | 8   | 11/20/2017 | 8    | 11/20/2017 | 8           | 11/20/2017 |

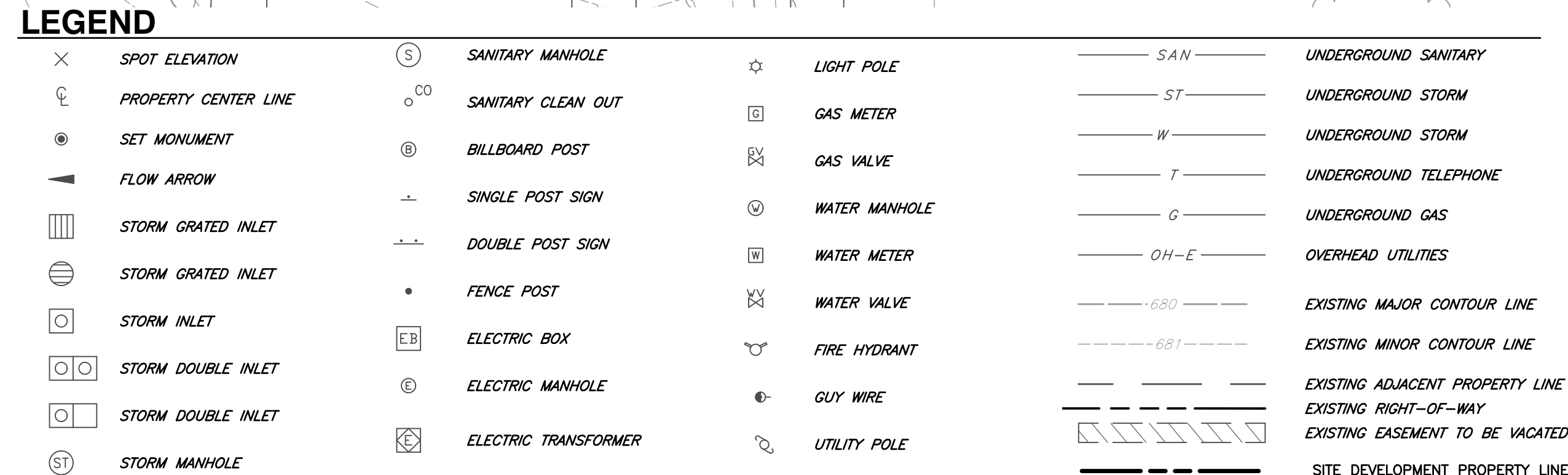
|                                                    |  |                                     |  |
|----------------------------------------------------|--|-------------------------------------|--|
| Civil & Environmental Consultants, Inc.            |  | CERTIFICATION/LICENSE NO. 202013942 |  |
| 4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042 |  | 314-656-4566 - 866-250-3679         |  |
| www.ccecinc.com                                    |  |                                     |  |

|                  |  |                     |  |
|------------------|--|---------------------|--|
| WALLIS COMPANIES |  | 106 EAST WASHINGTON |  |
| CUBA, MO 65453   |  | (636) 549-1600      |  |

|                       |            |                               |     |
|-----------------------|------------|-------------------------------|-----|
| SITE DEVELOPMENT PLAN |            | MOBIL ON THE RUN & BRITE WORX |     |
| COVER                 |            |                               |     |
| DATE:                 | APRIL 2017 | DRAWN BY:                     | CAC |
| DWG SCALE:            | AS NOTED   | CHECKED BY:                   | KTK |
| PROJECT NO:           | 110-241    | APPROVED BY:                  | KTK |

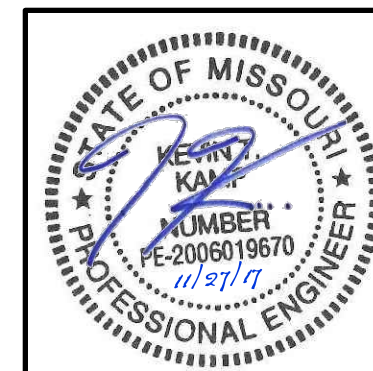
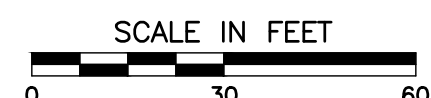
|              |          |
|--------------|----------|
| DRAWING NO.: | C000     |
| SHEET        | 01 OF 05 |





## REFERENCE

1. TOPOGRAPHIC SURVEY PROVIDED BY CLIENT DATED SEPTEMBER 9, 2006. TREE SURVEY PROVIDED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED JANUARY 15, 2009.



Attachment: Revised Plans received November 27, 2017 (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)





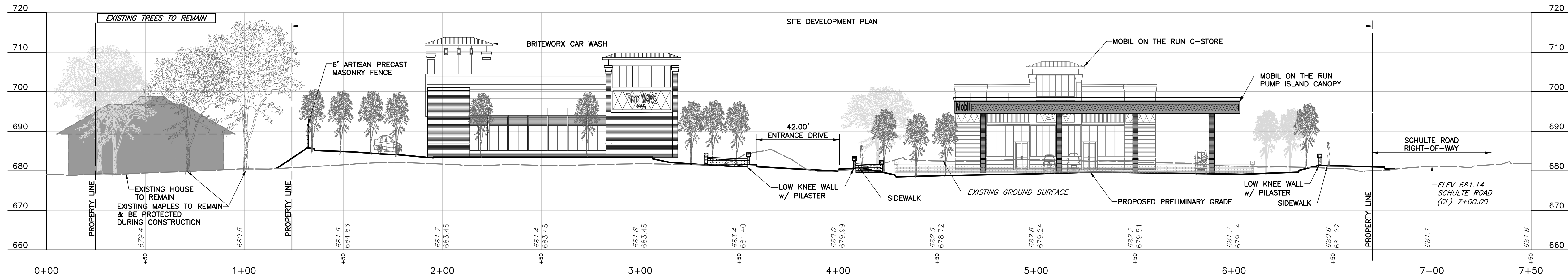
Attachment: Revised Plans received November 27, 2017 (16-031 Mobil on the Run and Brita Worx Car Wash RZG,CUP,SDP)



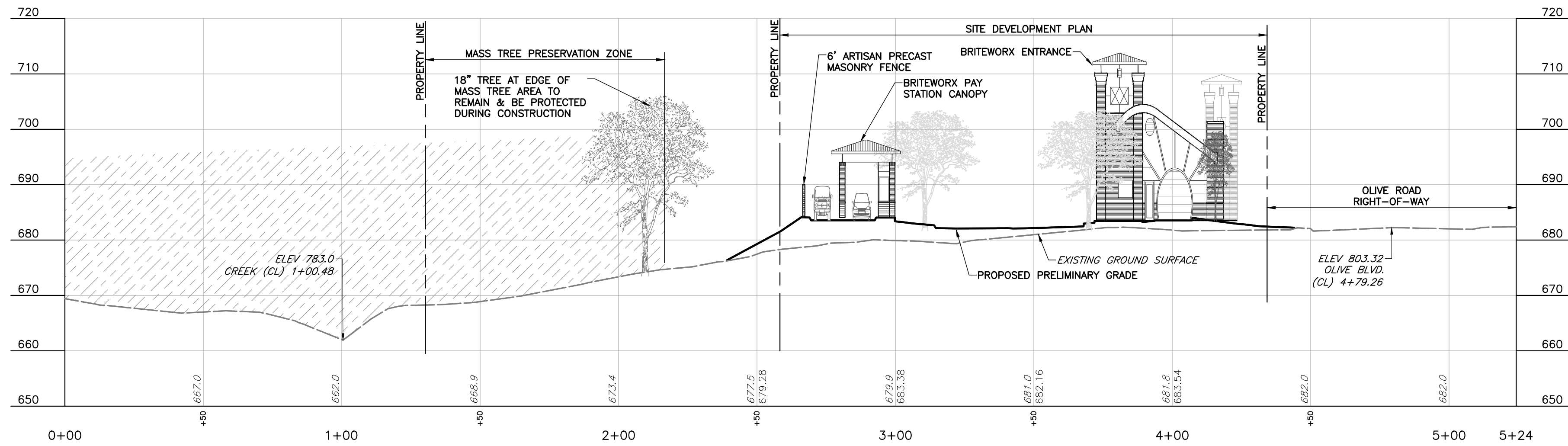




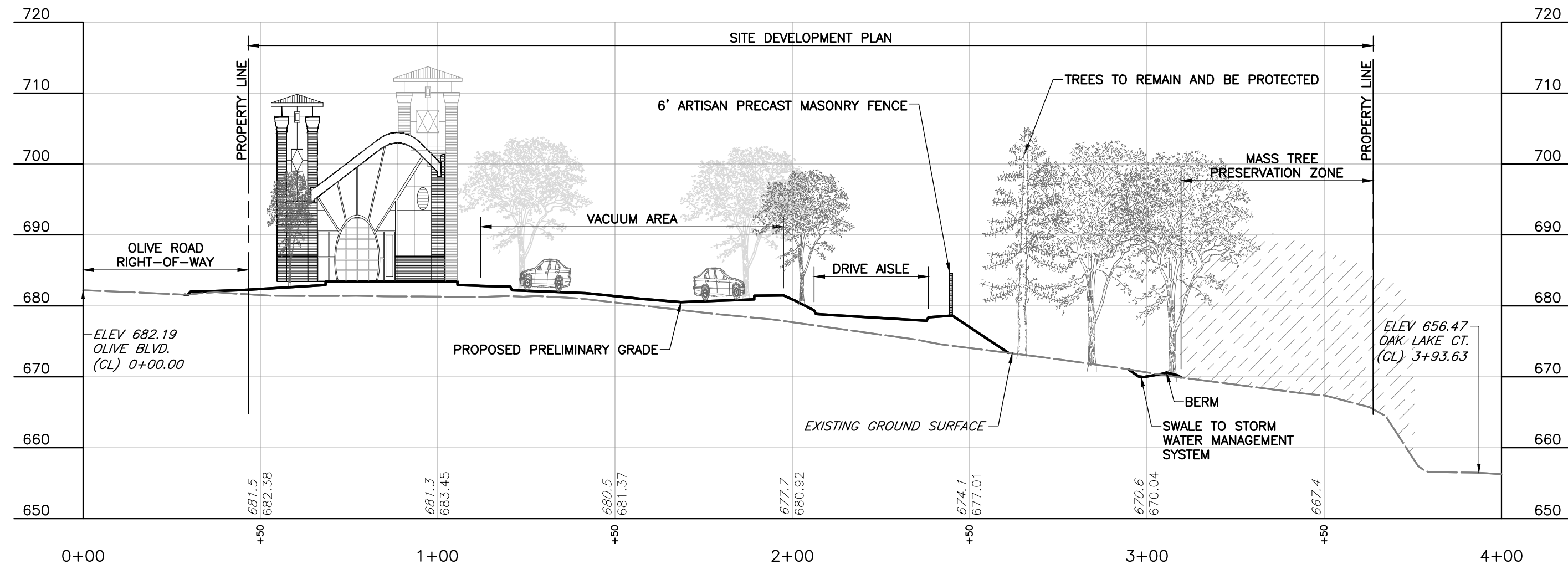
\\SPR-SR-01\GIS\Projects\2017\110-241-000\Drawings\04a\Britework\_C-Store\_110241-004-C30.dwg (C:\Users\jgall\OneDrive\Documents\Projects\2017\110-241-000\Drawings\04a\Britework\_C-Store\_110241-004-C30.dwg) - LRF: 11/27/2017 10:22 PM



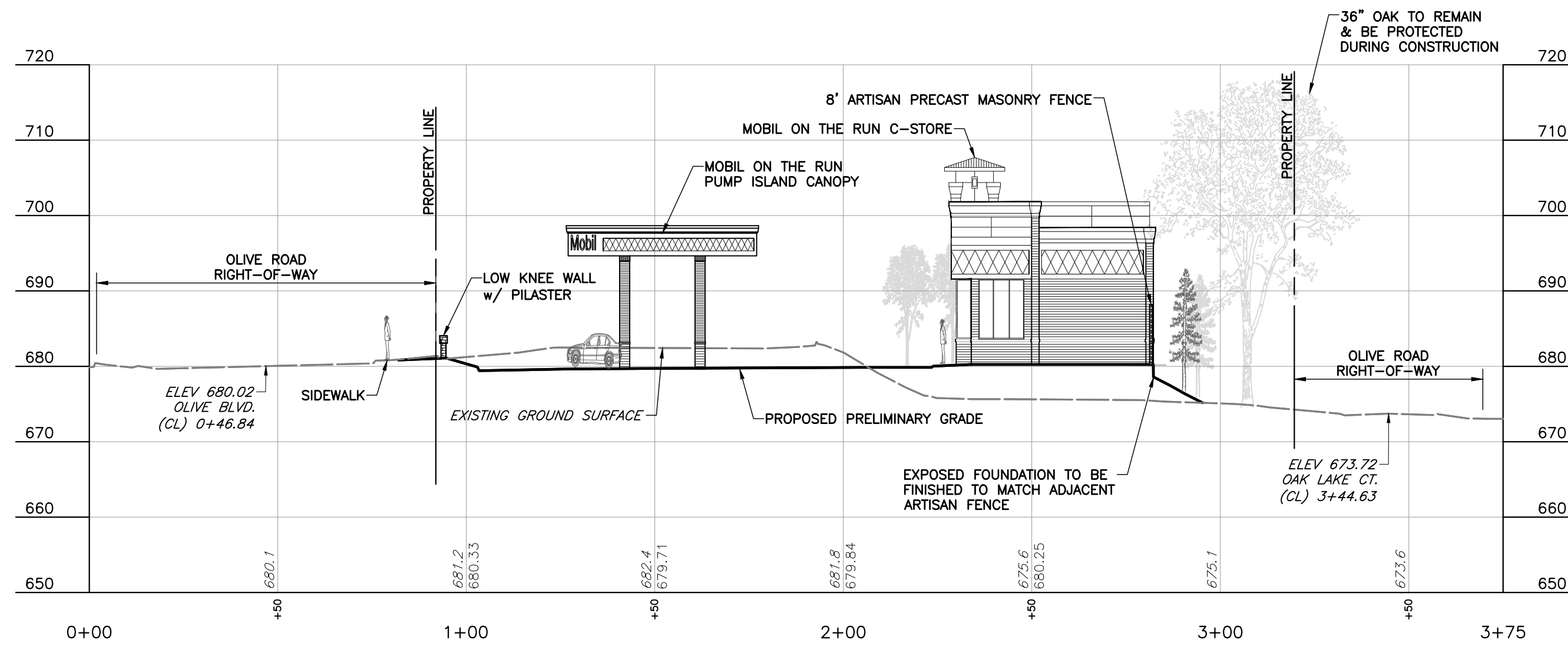
**A-A' PROFILE**  
SCALE H:1"=30'; V:1"=15'



**B-B' PROFILE**  
SCALE H:1"=30'; V:1"=15'



**C-C' PROFILE**  
SCALE H:1"=30'; V:1"=15'



**D-D' PROFILE**  
SCALE H:1"=30'; V:1"=15'

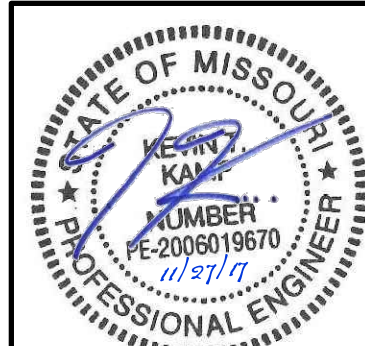
NOTE: BUILDING ELEVATIONS ARE PICTORIAL,  
REFER TO ARCHITECTURAL BUILDING  
ELEVATIONS FOR DETAIL ELEVATION PLANS

- REFERENCE**
1. TOPOGRAPHIC SURVEY PROVIDED BY CLIENT DATED SEPTEMBER 9, 2009. TREE SURVEY PROVIDED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED JANUARY 15, 2009.



CALL BEFORE  
YOU DIG!  
1-800-DIG-RITE

\*HAND SIGNATURE ON FILE



**SITE DEVELOPMENT PLAN**  
**MOBIL ON THE RUN & BRITE WORX**

**SITE SECTIONS**

DATE: APRIL 2017  
DRAWN BY: KTK  
PROJECT NO: 110-241  
APPROVED BY: KTK

**WALLIS COMPANIES**  
**106 EAST WASHINGTON**  
**CUBA, MO 65453**  
**(636) 549-1600**

ZIP- 63146

**Civil & Environmental Consultants, Inc.**  
CERTIFICATION/LICENSE NO. 2002013942  
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042  
314-656-4566 · 866-250-3679  
www.ccecinc.com

**REVISION RECORD**

| NO. | DATE       | DESCRIPTION                                                                                |
|-----|------------|--------------------------------------------------------------------------------------------|
| 1.  | 11/09/2017 | SUBMITTAL TO CITY OF CRIE COLOR, REZONING, CONDITIONAL USE & SITE DEVELOPMENT PLAN PLAT    |
| 2.  | 10/09/2017 | RE-SUBMITTAL TO CITY OF CRIE COLOR, REZONING, CONDITIONAL USE & SITE DEVELOPMENT PLAN PLAT |
| 3.  | 11/10/2017 | RE-SUBMITTAL TO CITY OF CRIE COLOR, REZONING, CONDITIONAL USE & SITE DEVELOPMENT PLAN PLAT |
| 4.  | 11/27/2017 | RE-SUBMITTAL FOR THE DECEMBER 4TH PLANNING & ZONING COMMISSION MEETING                     |
| 5.  | ---        | ---                                                                                        |
| 6.  | ---        | ---                                                                                        |
| 7.  | ---        | ---                                                                                        |
| 8.  | ---        | ---                                                                                        |

DRAWING NO: **C301**  
SHEET 05 OF 05



DEVELOPMENT NOTES

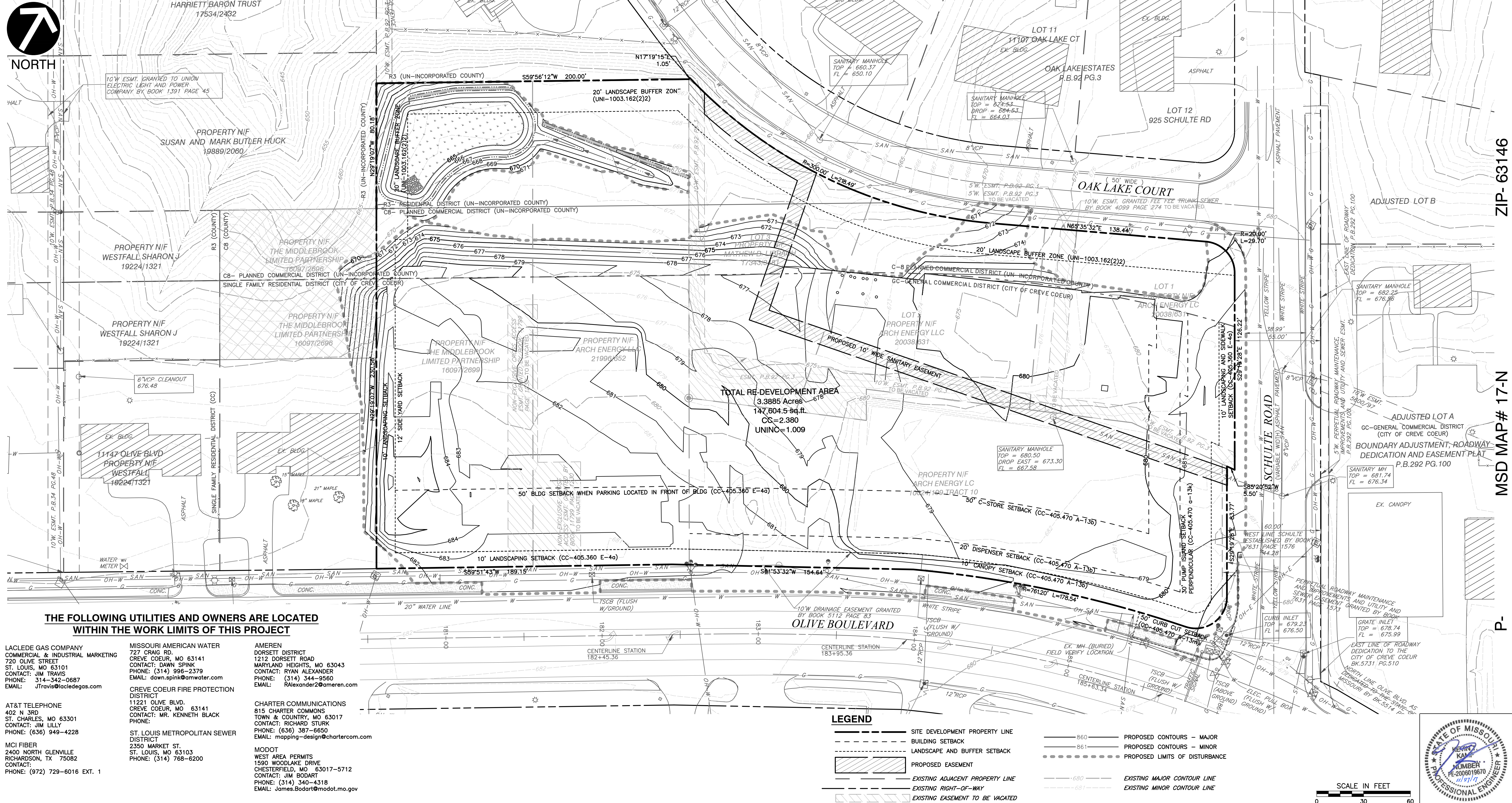
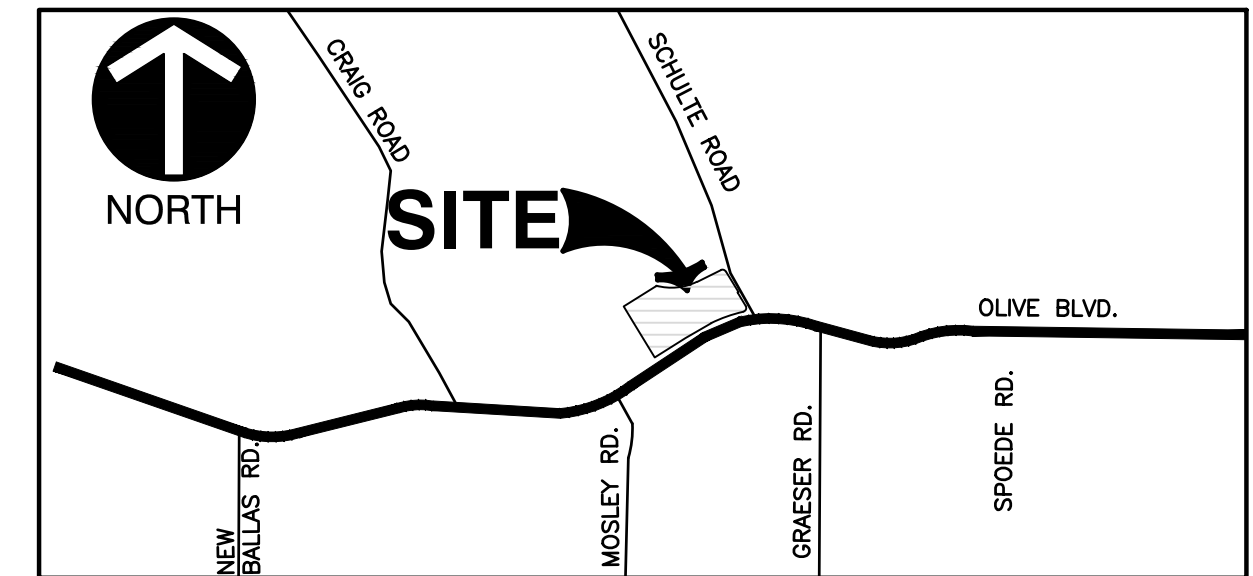
- TOTAL SITE DEVELOPMENT AREA:  
AREA WITHIN CITY LIMITS  
AREA WITHIN UNINCORPORATED
- CURRENT ZONING (CC)-  
PROPOSED ZONING (CC)-  
CURRENT ZONING (UNI)-  
PROPOSED ZONING (UNI)-
- SETBACKS-  
FRONT YARD/ROW (CC)  
SIDE YARD (CC)  
SIDE YARD (UNI)  
REAR YARD (UNI)  
BUILDING HEIGHT
- SPECIAL CONSIDERATIONS-  
4.1. TRASH ENCLOSURES SHALL BE INTERIOR TO THE SITE AND NOT ALONG THE NORTH PROPERTY LINE  
4.2. SIDEWALKS ALONG OLIVE BLVD. SHALL BE FIVE-FOOT IN WIDTH UNLESS ABUTTING CURB, IN WHICH CASE SHALL BE INCREASED TO SIX-FOOT WIDE.  
4.3. PLAN SHALL BE SO DEVELOPED TO INCLUDE AN INTEGRATED PEDESTRIAN CIRCULATION SYSTEM.
- FIRE DISTRICT: CREVE COEUR
- FLOOD NOTE:  
ACCORDING TO THE FLOOD INSURANCE RATE MAP OF THE CITY OF CREVE COEUR, MISSOURI (COMMUNITY PANEL NUMBER 290344 0166 H, EFFECTIVE DATE AUGUST 2, 1995), AND THE FLOOD

- INSURANCE RATE MAP OF ST. LOUIS COUNTY, MISSOURI (UNINCORPORATED AREAS) (COMMUNITY PANEL NUMBER 290327 0166 H, EFFECTIVE DATE AUGUST 2, 1995) THIS PROPERTY LIES WITHIN ZONE X. ZONE X IS DEFINED AS AN AREA OF MINIMAL FLOOD HAZARD.
- ALL PROPOSED UTILITIES SHALL BE LOCATED UNDERGROUND.
  - TRASH ENCLOSURES SHALL BE SIX FOOT (6') IN HEIGHT AND SHALL BE CONSTRUCTED W/ A SIGHT-PROOF GATE; MATERIALS SHALL BE COMPATIBLE WITH THE ARCHITECTURE OF MAIN BUILDINGS AND OF SIMILAR MATERIALS.
  - ALL DRIVE-THROUGH AND DRIVE-IN SALES OF GOODS OR SERVICES (NOT INCLUDING RESTAURANTS) (CC-442100) (CONDITIONAL USE IN THE "PC", "GC" AND "CB" DISTRICTS). SHALL PROVIDE SPACE FOR AT LEAST THREE (3) CARS PER DRIVE-UP WINDOW OR STATION. SHALL PROVIDE LANDSCAPING TO SCREEN THE VIEW OF DRIVE-UP WAITING SPACES FROM SURROUNDING PROPERTIES. DRIVE-UP WINDOW ACCESS, WAITING SPACES AND EGRESS SHALL NOT INTERFERE WITH SITE CIRCULATION OR BE HAZARDOUS TO MOTORISTS ENTERING, EXITING OR PASSING BY THE SITE.
  - NOTE THAT ANY TENANT SIGNAGE IS REVIEWED UNDER A SEPARATE PERMIT PROCESS AND ANY APPROVAL OF THE PROJECT DOES NOT CONSTITUTE APPROVAL FOR ANY SIGNAGE SHOWN IN THE DRAWINGS
  - RATIO OF FLOOR TO SITE IN SQ.FT. (FAR)  
1:15 (1 SQ.FT. OF FLOOR SPACE TO 15 SQ.FT. OF PARCEL AREA)
  - PARKING CALCULATIONS:  
REQUIRED  
GENERAL RETAIL PER SEC 405.820(F) @ 4 PER 1,000 SQ.FT. and GASOLINE STATIONS PER SEC 405.820(F) @ 4 PER 1,000 SQ.FT. [NOTE: NO SERVICE BAYS; EXPANDED AREAS BETWEEN PUMP ISLANDS (36 FEET HAVE BEEN PROVIDED FOR MANEUVERING)]  
TOTAL SQ.FT. = 4,800/1000\*4 = 19.2  
PROVIDED  
PARKING SPACES = 25 SPACES INCLUSIVE OF 1 ACCESSIBLE SPACES



PRELIMINARY PLAT  
**Mobil On the Run**

A TRACT OF LAND BEING ALL OF LOTS 1, 2, 3 AND 4 OF "OAK LAKE ESTATES", P.B.92 PG.3 AND PART OF LOTS 3, 4, AND 5 OF THE SUBDIVISION OF THE FARM OF S.S. MATSON IN U.S. SURVEY 1962, TOWNSHIP 45 NORTH, RANGE 5 EAST OF THE FIFTH PRINCIPAL MERIDIAN ST. LOUIS COUNTY, MISSOURI



THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT

- LACLEDE GAS COMPANY  
COMMERCIAL & INDUSTRIAL MARKETING  
720 OLIVE STREET  
ST. LOUIS, MO 63101  
CONTACT: JIM TRAVIS  
PHONE: 314-342-0687  
EMAIL: JTravis@lacledegas.com
- AT&T TELEPHONE  
402 N 3RD  
ST. CHARLES, MO 63301  
CONTACT: JIM LULLY  
PHONE: (636) 949-4228
- MCI FIBER  
2400 NORTH GLENVILLE  
RICHARDSON, TX 75082  
CONTACT:  
PHONE: (972) 729-6016 EXT. 1
- MISSOURI AMERICAN WATER  
727 CRAIG RD.  
CREVE COEUR, MO 63141  
CONTACT: DAWN SPINK  
PHONE: (314) 996-2379  
EMAIL: dawn.spink@amwater.com
- CREVE COEUR FIRE PROTECTION DISTRICT  
11221 OLIVE BLVD.  
CREVE COEUR, MO 63141  
CONTACT: MR. KENNETH BLACK  
PHONE:
- ST. LOUIS METROPOLITAN SEWER DISTRICT  
2350 MARKET ST.  
ST. LOUIS, MO 63103  
PHONE: (314) 768-6200
- AMEREN  
DORSETT DISTRICT  
1212 DORSETT ROAD  
MARYLAND HEIGHTS, MO 63043  
CONTACT: RYAN ALEXANDER  
PHONE: (314) 344-9560  
EMAIL: RAlexander2@ameren.com
- CHARTER COMMUNICATIONS  
815 CHARTER COMMONS  
TOWN & COUNTRY, MO 63017  
CONTACT: RICHARD STURK  
PHONE: (636) 387-6650  
EMAIL: mapping-design@chartercom.com
- MODOT  
WEST AREA PERMITS  
1590 WOODLAKE DRIVE  
CHESTERFIELD, MO 63017-5712  
CONTACT: JIM BODART  
PHONE: (314) 340-4318  
EMAIL: James.Bodart@modot.mo.gov

LEGEND

- SITE DEVELOPMENT PROPERTY LINE
- BUILDING SETBACK
- LANDSCAPE AND BUFFER SETBACK
- PROPOSED EASEMENT
- EXISTING ADJACENT PROPERTY LINE
- EXISTING RIGHT-OF-WAY
- EXISTING EASEMENT TO BE VACATED
- PROPOSED CONTOURS - MAJOR
- PROPOSED CONTOURS - MINOR
- PROPOSED LIMITS OF DISTURBANCE
- EXISTING MAJOR CONTOUR LINE
- EXISTING MINOR CONTOUR LINE

SCALE IN FEET  
0 30 60



REVISION RECORD

| NO. | DATE       | DESCRIPTION                                                         |
|-----|------------|---------------------------------------------------------------------|
| 1   | 11/20/2017 | SUBMITTAL TO CITY OF CREVE COEUR, MISSOURI, FOR PRELIMINARY PLAT    |
| 2   | 11/20/2017 | RE-SUBMITTAL TO CITY OF CREVE COEUR, MISSOURI, FOR PRELIMINARY PLAT |
| 3   | 11/20/2017 | RE-SUBMITTAL TO CITY OF CREVE COEUR, MISSOURI, FOR PRELIMINARY PLAT |
| 4   | 11/20/2017 | RE-SUBMITTAL TO CITY OF CREVE COEUR, MISSOURI, FOR PRELIMINARY PLAT |
| 5   | 11/20/2017 | RE-SUBMITTAL TO CITY OF CREVE COEUR, MISSOURI, FOR PRELIMINARY PLAT |
| 6   | 11/20/2017 | RE-SUBMITTAL TO CITY OF CREVE COEUR, MISSOURI, FOR PRELIMINARY PLAT |
| 7   | 11/20/2017 | RE-SUBMITTAL TO CITY OF CREVE COEUR, MISSOURI, FOR PRELIMINARY PLAT |
| 8   | 11/20/2017 | RE-SUBMITTAL TO CITY OF CREVE COEUR, MISSOURI, FOR PRELIMINARY PLAT |

WALLIS COMPANIES  
106 EAST WASHINGTON  
CUBA, MO 65453  
(636) 549-1600

Civil & Environmental Consultants, Inc.  
CERTIFICATION/LICENSE NO. 2020213942  
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042  
314-656-4566 - 866-250-3679  
www.cecinc.com

SITE DEVELOPMENT PLAN  
MOBIL ON THE RUN & BRITE WORX  
PRELIMINARY PLAT

DRAWING NO.:  
SHEET 1 OF 1

DATE: APRIL 2017  
DRAWN BY: CAC  
CHECKED BY: DRAFT  
1" = 30' (CHECKED BY: 110-241)  
APPROVED BY: KTK



8

7

6

5

4

3

2

1

EXISTING TREES

58 TREES EXIST ON THE SITE OF SIZE THAT COUNT TOWARDS PRESERVATION ORDINANCE.

25% ARE REQUIRED TO BE PRESERVED, WE ARE PRESERVING 16 TREES THAT ARE 8" CAL AND LARGER (27.5% OF EXISTING TREES)

3 ADDITIONAL TREES (< 8" CAL SO NOT COUNTED IN THE TREE CONSERVATION ORDINANCE, BUT DO COUNT TOWARDS LANDSCAPING CREDITS) OF QUALITY NATIVE SPECIES WILL ALSO BE PRESERVED

TOTAL TREES PROTECTED ON SITE = 19

EXISTING TREES TO BE PRESERVED WILL HAVE AN APPROXIMATE TREE ROOT PROTECTION AREA AS SHOWN.

EXISTING TREE LEGEND

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

REVISION RECORD

| NO | DATE | DESCRIPTION |
|----|------|-------------|
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |

# TREE SURVEY AND PRESERVATION PLAN CONCEPT

DEVELOPMENT NOTES

1. TOTAL SITE DEVELOPMENT AREA: 147,605 SQ. FT. (3.389 ACRES)

AREA WITHIN CITY LIMITS 103,655 SQ. FT. (2.380 ACRES)

AREA WITHIN UNINCORPORATED 43,950 SQ. FT. (1.009 ACRES)

1. TOTAL SITE REZONING AREA: 170,736 SQ. FT. (3.920 ACRES)

AREA WITHIN CITY LIMITS 122,277 SQ. FT. (2.807 ACRES)

AREA WITHIN UNINCORPORATED 48,459 SQ. FT. (1.113 ACRES)

2. CURRENT ZONING (CC)- SINGLE FAMILY RESIDENTIAL & GENERAL COMMERCIAL

PROPOSED ZONING (CC)- GENERAL COMMERCIAL

CURRENT ZONING (UNI)- R3 (RESIDENCE) & C8 (PLANNED COMMERCIAL DISTRICT)

PROPOSED ZONING (UNI)- C8 (PLANNED COMMERCIAL DISTRICT)

3. SETBACKS- FRONT YARD/ROW (CC) 10 FEET OLIVE BLVD. (CC)

0 FEET SCHULTE ROAD (IN LIEU OF ROW GIVEN TO COUNTY)

SIDE YARD (CC) 12 FEET

SIDE YARD (UNI) 10 FEET

REAR YARD (UNI) 15 FEET (NORTH PROPERTY LINE)

BUILDING HEIGHT NOTE: ALL PROPOSED BUILDINGS TO BE 1 STORY IN HEIGHT

4. SPECIAL CONSIDERATIONS- 4.1. TRASH ENCLOSURES SHALL BE INTERIOR TO THE SITE AND NOT ALONG THE NORTH PROPERTY LINE.

4.2. SIDEWALKS ALONG OLIVE BLVD. SHALL BE FIVE-FOOT IN WIDTH UNLESS ABUTTING CURB, IN WHICH CASE SHALL BE INCREASED TO SIX-FOOT WIDE.

4.3. PLAN SHALL BE SO DEVELOPED TO INCLUDE AN INTEGRATED PEDESTRIAN CIRCULATION SYSTEM.

5. FIRE DISTRICT: CREVE COEUR

6. FLOOD NOTE: ACCORDING TO THE FLOOD INSURANCE RATE MAP OF THE CITY OF CREVE COEUR, MISSOURI (COMMUNITY PANEL NUMBER 290344 0166 H, EFFECTIVE DATE AUGUST 2, 1995), AND THE FLOOD INSURANCE RATE MAP OF ST. LOUIS COUNTY, MISSOURI (UNINCORPORATED AREAS) (COMMUNITY PANEL NUMBER 290327 0166 H, EFFECTIVE DATE AUGUST 2, 1995) THIS PROPERTY LIES WITHIN ZONE X. ZONE X IS DEFINED AS AN AREA OF MINIMAL FLOOD HAZARD.

7. ALL PROPOSED UTILITIES SHALL BE LOCATED UNDERGROUND.

8. TRASH ENCLOSURES SHALL BE SIX FOOT (6') IN HEIGHT AND SHALL BE CONSTRUCTED W/ A SIGHT-PROOF GATE; MATERIALS SHALL BE COMPATIBLE WITH THE ARCHITECTURE OF MAIN BUILDINGS AND OF SIMILAR MATERIALS.

9. ALL DRIVE-THROUGH AND DRIVE-IN SALES OF GOODS OR SERVICES (NOT INCLUDING RESTAURANTS) (CC-442100) (CONDITIONAL USE IN THE "PC", "CC" AND "CB" DISTRICTS). SHALL PROVIDE SPACE FOR AT LEAST THREE (3) CARS PER DRIVE-UP WINDOW OR STATION. SHALL PROVIDE LANDSCAPING TO SCREEN THE VIEW OF DRIVE-UP WAITING SPACES FROM SURROUNDING PROPERTIES. DRIVE-UP WINDOW ACCESS, WAITING SPACES AND EGRESS SHALL NOT INTERFERE WITH SITE CIRCULATION OR BE HAZARDOUS TO MOTORISTS ENTERING, EXITING OR PASSING BY THE SITE.

10. NOTE THAT ANY TENANT SIGNAGE IS REVIEWED UNDER A SEPARATE PERMIT PROCESS AND ANY APPROVAL OF THE PROJECT DOES NOT CONSTITUTE APPROVAL FOR ANY SIGNAGE SHOWN IN THE DRAWINGS

11. RATIO OF FLOOR TO SITE IN SQ.FT. (FAR) 1:15 (1 SQ.FT. OF FLOOR SPACE TO 15 SQ.FT. OF PARCEL AREA)

12. PARKING CALCULATIONS: REQUIRED GENERAL RETAIL PER SEC 405.820(F) @ 4 PER 1,000 SQ.FT. and GASOLINE STATIONS PER SEC 405.820(F)1c @ 4 PER 1,000 SQ.FT. [NOTE: NO SERVICE BAYS; EXPANDED AREAS BETWEEN PUMP ISLANDS (36 FEET HAVE BEEN PROVIDED FOR MANEUVERING)] TOTAL SQ.FT. = 4,800/1000\*4 = 19.2 PROVIDED PARKING SPACES = 25 SPACES INCLUSIVE OF 1 ACCESSIBLE SPACES

6.1.b

WALLIS COMPANIES

106 EAST WASHINGTON

CUBA, MO 65453

(636) 549-1600

Civil & Environmental Consultants, Inc.

CERTIFICATION/LICENSE NO. 2002013942

4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042

314-856-4566 - 866-250-3679

www.cecinc.com

REVISION RECORD

| NO | DATE | DESCRIPTION |
|----|------|-------------|
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |
|    |      |             |

TREE PRESERVATION PLAN

DRAWING NO.: L1

SHEET 1 OF 2

DATE: 11-25-2017

DRAWN BY: MFD

DWG SCALE: AS NOTED

CHECKED BY: KTK

PROJECT NO:

APPROVED BY:

Attachment: Revised Plans received November 27, 2017 (16-031 Mobil on the Run and Britte Work Car Wash RZG,CUP,SDP)

D:\projects\106 East Washington\106 East Washington.dwg (11/25/2017 - mfd) - LP: 11/25/2017 6:08 PM



TREES

EXISTING TREES - 19 EXISTING TREES WILL BE PRESERVED

STREET TREES ALONG OLIVE - OVERHEAD UTILITIES OBSTRUCT THE PLACEMENT OF STREET TREES ALONG THIS ENTIRE FRONTAGE 425' OF FRONTAGE REQUIRES 14 STREET TREES AND 14 TREES ARE PROVIDED. COLUMNAR TREES WILL BE USED SET BACK FROM THE OVERHEAD UTILITIES BETWEEN 15' AND 25' TO PROVIDE MINIMUM CLEARANCE OF FUTURE CANOPY.

STREET TREES ALONG SCHULTE - OVERHEAD UTILITIES OBSTRUCT THE PLACEMENT OF STREET TREES ALONG THIS FRONTAGE EXCEPT AT THE VERY NORTH END. 191' FRONTAGE REQUIRES 6 STREET TREES AND 6 TREES ARE PROVIDED. 3 COLUMNAR TREES SET BACK FROM THE OVERHEAD UTILITIES 15'-25' TO PROVIDE MINIMUM CLEARANCE OF FUTURE CANOPY AND 3 BROAD SHADE TREES AT THE NORTHERN END.

PARKING LOT TREES - 443 LF OF PARKING AND VACUUM STALLS REQUIRE 9 INTERIOR PARKING LOT TREES. 11 INTERIOR PARKING LOT TREES ARE PROVIDED - 6 SHADE TREES, 3 COLUMNAR TREES AND 2 FLOWERING TREES.

15 ADDITIONAL TREES (A MIX OF SHADE TREES AND EVERGREEN TREES) WILL BE PROVIDED IN THE GREEN SPACE TO THE NORTH OF THE PROPERTY FOR RESIDENTIAL BUFFER AND SCREENING.

TOTAL PROPOSED TREES = 46 NEW TREES AND 19 EXISTING TREES = 65

NOTES:

1. ALL LANDSCAPE AREAS WITHIN GRADING LIMITS TO BE IRRIGATED.

2. ALL GREENSPACE AREAS OUTSIDE OF MULCHED LANDSCAPE BEDS, BUT WITHIN THE GRADING LIMITS TO BE SODDED TURF. IN AREAS OUTSIDE OF THE GRADING LIMITS THE EXISTING UNDISTURBED TURF AND FOREST UNDERSTORY WILL REMAIN.

PLANTING CONCEPT

OLIVE AND SCHULTE SIDES: THE MAIN LANDSCAPE TREATMENT IS THE ORNAMENTAL KNEE WALL. THIS LOW WALL IS LUSHLY BACK PLANTED IN A GARDEN STYLE WITH BOTH NATIVE AND HIGHLY ORNAMENTAL FLOWERING PERENNIALS AND SHRUBS. PLANTS RISE ABOVE THE WALL (WALL IS APPROX 2.5" TALL AND PLANTS BEHIND IT ARE 3-8" TALL), AND A VARIETY OF BLOOM TIMES AND BOLD MASSING GIVES THE DESIGN STRONG STREET APPEAL. SOME POCKETS OF PLANTING IN FRONT OF THE WALL (4' TALL) WILL SOFTEN THE WALL WITHOUT OBSCURING IT IN IT'S ENTIRETY.

A SIGNIFICANT NUMBER OF THE PLANT SPECIES USED IN THIS PLAN ARE NATIVE (OR NATIVE CULTIVARS).

ON THE NORTH AND WEST MANY LARGE EXISTING TREES ARE PRESERVED AS AN IMMEDIATE BUFFER TO THE RESIDENTIAL AREA, AND MANY ADDITIONAL EVERGREENS AND SOME DECIDUOUS TREES ARE PROPOSED FOR FURTHER SCREENING.

ALL OTHER INFORMATION BESIDES THE PROPOSED PLANTINGS ARE SHOWN FOR REFERENCE ONLY. CONSULT THE SITE DEVELOPMENT PLAN, CIVIL, AND ARCHITECTURAL PLANS FOR CONFIRMATION OF ALL HARDSCAPE ELEMENTS.

SITE CALCULATIONS:

|                          | *GREENSPACE DEFINED AS AREAS OF LANDSCAPE AND WALKWAYS |                                   |           |
|--------------------------|--------------------------------------------------------|-----------------------------------|-----------|
|                          | CITY OF CREVE COEUR                                    | ST. LOUIS COUNTY (UNINCORPORATED) | TOTAL SDP |
| TOTAL SITE AREA          | 103,655                                                | 43,950                            | 147,605   |
| BUILDING                 | 9,706                                                  | 0                                 | 9,706     |
| PAVEMENT                 | 64,357                                                 | 107                               | 64,464    |
| SIDEWALK                 | 5,012                                                  | 289                               | 5,301     |
| LANDSCAPE                | 24,580                                                 | 43,555                            | 68,134    |
| GREEN SPACE              | 29,592                                                 | 43,843                            | 73,435    |
| PERCENTAGE GREENSPACE*   | 28.5%                                                  | 99.8%                             | 49.8%     |
| PERCENTAGE SITE COVERAGE | 71.5%                                                  | 0.2%                              | 50.2%     |

DEVELOPMENT NOTES

1. TOTAL SITE DEVELOPMENT AREA: 147,605 SQ. FT. (3.389 ACRES)

AREA WITHIN CITY LIMITS: 103,655 SQ. FT. (2.380 ACRES)

AREA WITHIN UNINCORPORATED: 43,950 SQ. FT. (1.009 ACRES)

1. TOTAL SITE REZONING AREA: 170,736 SQ. FT. (3.920 ACRES)

AREA WITHIN CITY LIMITS: 122,277 SQ. FT. (2.807 ACRES)

AREA WITHIN UNINCORPORATED: 48,459 SQ. FT. (1.113 ACRES)

2. CURRENT ZONING (CC) - SINGLE FAMILY RESIDENTIAL & GENERAL COMMERCIAL

PROPOSED ZONING (CC) - GENERAL COMMERCIAL

CURRENT ZONING (UNI) - R3 (RESIDENCE) & C8 (PLANNED COMMERCIAL DISTRICT)

PROPOSED ZONING (UNI) - C8 (PLANNED COMMERCIAL DISTRICT)

3. SETBACKS -

FRONT YARD/ROW (CC) 10 FEET OLIVE BLVD. (CC)

SIDE YARD (CC) 0 FEET SCHULTE ROAD (IN LIEU OF ROW GIVEN TO COUNTY)

SIDE YARD (UNI) 12 FEET

REAR YARD (UNI) 10 FEET

BUILDING HEIGHT 15 FEET (NORTH PROPERTY LINE)

NOTE: ALL PROPOSED BUILDINGS TO BE 1 STORY IN HEIGHT

4. SPECIAL CONSIDERATIONS -

4.1. TRASH ENCLOSURES SHALL BE INTERIOR TO THE SITE AND NOT ALONG THE NORTH PROPERTY LINE

4.2. SIDEWALKS ALONG OLIVE BLVD. SHALL BE FIVE-FOOT IN WIDTH UNLESS ABUTTING CURB, IN WHICH CASE SHALL BE INCREASED TO SIX-FOOT WIDE

4.3. PLAN SHALL BE SO DEVELOPED TO INCLUDE AN INTEGRATED PEDESTRIAN CIRCULATION SYSTEM.

5. FIRE DISTRICT: CREVE COEUR

6. FLOOD NOTE:

ACCORDING TO THE FLOOD INSURANCE RATE MAP OF THE CITY OF CREVE COEUR, MISSOURI (COMMUNITY PANEL NUMBER 290344 0166 H, EFFECTIVE DATE AUGUST 2, 1995), AND THE FLOOD INSURANCE RATE MAP OF ST. LOUIS COUNTY, MISSOURI (UNINCORPORATED AREAS) (COMMUNITY PANEL NUMBER 290327 0166 H, EFFECTIVE DATE AUGUST 2, 1995) THIS PROPERTY LIES WITHIN ZONE X. ZONE X IS DEFINED AS AN AREA OF MINIMAL FLOOD HAZARD.

7. ALL PROPOSED UTILITIES SHALL BE LOCATED UNDERGROUND.

8. TRASH ENCLOSURES SHALL BE SIX FOOT (6') IN HEIGHT AND SHALL BE CONSTRUCTED W/ A SIGHT-PROOF GATE; MATERIALS SHALL BE COMPATIBLE WITH THE ARCHITECTURE OF MAIN BUILDINGS AND OF SIMILAR MATERIALS.

9. ALL DRIVE-THROUGH AND DRIVE-IN SALES OF GOODS OR SERVICES (NOT INCLUDING RESTAURANTS) (CC-442100) (CONDITIONAL USE IN THE "PC", "GC" AND "CB" DISTRICTS), SHALL PROVIDE SPACE FOR AT LEAST THREE (3) CARS PER DRIVE-UP WINDOW OR STATION. SHALL PROVIDE LANDSCAPING TO SCREEN THE VIEW OF DRIVE-UP WAITING SPACES FROM SURROUNDING PROPERTIES. DRIVE-UP WINDOW ACCESS, WAITING SPACES AND EGRESS SHALL NOT INTERFERE WITH SITE CIRCULATION OR BE HAZARDOUS TO MOTORISTS ENTERING, EXITING OR PASSING BY THE SITE.

10. NOTE THAT ANY TENANT SIGNAGE IS REVIEWED UNDER A SEPARATE PERMIT PROCESS AND ANY APPROVAL OF THE PROJECT DOES NOT CONSTITUTE APPROVAL FOR ANY SIGNAGE SHOWN IN THE DRAWINGS

11. RATIO OF FLOOR TO SITE IN SQ.FT. (FAR) 1:15 (1 SQ.FT. OF FLOOR SPACE TO 15 SQ.FT. OF PARCEL AREA)

12. PARKING CALCULATIONS:

REQUIRED: GENERAL RETAIL PER SEC 405.820(F) @ 4 PER 1,000 SQ.FT. AND GASOLINE STATIONS PER SEC 405.820(F)1c @ 4 PER 1,000 SQ.FT. (NOTE: NO SERVICE BAYS; EXPANDED AREAS BETWEEN PUMP ISLANDS (36 FEET HAVE BEEN PROVIDED FOR MANEUVERING) TOTAL SQ.FT. = 4,800/1000\*4 = 19.2

PROVIDED: PARKING SPACES = 25 SPACES INCLUSIVE OF 1 ACCESSIBLE SPACES

PLANT SCHEDULE

| DECIDUOUS TREES    | BOTANICAL NAME / COMMON NAME                                      | CONT.      | GAL.    | SIZE | QTY. |
|--------------------|-------------------------------------------------------------------|------------|---------|------|------|
|                    | Acer rubrum 'Armstrong' / Armstrong Red Maple                     | -          | 3" cal. |      | 20   |
|                    | Acer saccharum / Sugar Maple                                      | -          | 3" cal. |      | 2    |
|                    | Gleditsia triacanthos 'Skyline' / Skyline Honey Locust            | -          | 3" cal. |      | 1    |
|                    | Quercus bicolor / Swamp White Oak                                 | -          | 2" cal. |      | 3    |
|                    | Quercus rubra / Red Oak                                           | -          | 2" cal. |      | 2    |
| EVERGREEN TREES    | BOTANICAL NAME / COMMON NAME                                      | CONT.      | GAL.    | SIZE | QTY. |
|                    | Ilex opaca / American Holly                                       | 5'-6' tall |         |      | 6    |
|                    | Picea canadensis / Norway Spruce                                  | -          | 6' tall |      | 4    |
| FLOWERING TREES    | BOTANICAL NAME / COMMON NAME                                      | CONT.      | GAL.    | SIZE | QTY. |
|                    | Malus x 'Prairifire' / Prairifire Crab Apple                      | -          | 2" cal. |      | 2    |
| SHRUBS             | BOTANICAL NAME / COMMON NAME                                      | CONT.      |         |      | QTY. |
|                    | Buxus x 'Green Velvet' / Bonwood                                  | 2 gal.     |         |      | 21   |
|                    | Evanthus alatus 'Compactus' / Compact Burning Bush                | 3 gal.     |         |      | 25   |
|                    | Hemerocallis x 'Little Drapette' / Little Drapette Daylily        | 1 gal.     |         |      | 83   |
|                    | Hydrangea arborescens 'Pee Wee' / Pee Wee Oakleaf Hydrangea       | 3 gal.     |         |      | 34   |
|                    | Hydrangea paniculata 'Little Lime' / Little Lime Hydrangea        | 3 gal.     |         |      | 13   |
|                    | Hydrangea paniculata 'Remy' / Vanilla Strawberry Hydrangea        | 3 gal.     |         |      | 14   |
|                    | Ilex x meserveae 'China Girl' TM / China Girl Holly               | 3 gal.     |         |      | 43   |
|                    | Juniperus chinensis 'Sea Green' / Sea Green Juniper               | 2 gal.     |         |      | 55   |
|                    | Lagerstroemia indica 'Victor' / Grape Myrtle                      | 3 gal.     |         |      | 38   |
|                    | Physocarpus opulifolius 'Amber Jubilee' / Ninebark                | 3 gal.     |         |      | 43   |
|                    | Taxus x media 'Densiformis' / Dense Yew                           | 3 gal.     |         |      | 7    |
|                    | Viburnum dilatatum 'Cardinal Candy' / Cardinal Candy Viburnum     | 3 gal.     |         |      | 21   |
| ANNUALS/PERENNIALS | BOTANICAL NAME / COMMON NAME                                      | CONT.      |         |      | QTY. |
|                    | Amsonia hybrid III / Arkansas Blue-star                           | 1 gal.     |         |      | 114  |
|                    | Aster novae-angliae 'Purple Dome' / Purple Dome New England Aster | 1 gal.     |         |      | 48   |
|                    | Heuchera x 'Citronella' / 'Yellow Coral Bells                     | 1 gal.     |         |      | 30   |
|                    | Iris sibirica 'Caesar's Brother' / Caesar's Brother Siberian Iris | 1 gal.     |         |      | 14   |
|                    | Penstemon digitalis 'Husker Red' / Beardtongue                    | 1 gal.     |         |      | 42   |
|                    | Rudbeckia fulgida / Coneflower                                    | qt.        |         |      | 123  |
| GRASSES            | BOTANICAL NAME / COMMON NAME                                      | CONT.      |         |      | QTY. |
|                    | Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass   | qt.        |         |      | 71   |
| GROUND COVERS      | BOTANICAL NAME / COMMON NAME                                      | CONT.      |         |      | QTY. |
|                    | Liriope spicata / Creeping Lily Turf                              | PLUS       |         |      | 108  |

EXISTING TREE TO BE PRESERVED

EXIST TREE SPECIES & SIZE

24 (Worksheet) (Acorn) (2016) (02) Model Information: acorn.com November 2017 (Worksheet) 20th Nov 2017 11:25:2017 8:30 PM

DATE: 11-25-2017 DRAWN BY: MFD

DWG SCALE: AS NOTED CHECKED BY: KTK

PROJECT NO:

APPROVED BY:

REVISION RECORD

NO. DATE DESCRIPTION

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

307

308

309

310

311

312

313

314

315

316

317

318

319

320

321

322

323

324

325

326

327

328

329

330

331

332

333

334

335

336

337

338

339

340

341

342

343

344

345

346

347

348

349

350

351

352

353

354

355

356

357

358

359

360

361

362

363

364

365

366

367

368

369

370

371

372

373

374

375

376

377

378

379

380

381

382

383

384

385

386

387

388

389

390

391

392

393

394

395

396

397

398

399

400

401

402

403

404

405

406

407

408

409

410

411

412

413

414

415

416

417

418

419

420

421

422

423

424

425

426

427

428

429

430

431

432

433

434

435

436

437

438

439

440

441

442

443

444

445

446

447

448

449

450

451

452

453

454

455

456

457

458

459

460

461

462

463

464

465

466

467

468

469

470

471

472

473

474

475

476

477

478

479

480

481

482

483

484

485

486

487

488

489

490

491

492

493

494

495

496

497

498

499

500

501

502

503

504

505

506

507

508

509

510

511

512

513

514

515

516

517

518

519

520

521

522

523

524

525

526

527

528

529

530

531

532

533

534

535

536

537

538

539

540

541

542

543

544

545

546

547

548

549

550

551

552

553

554

555

556

557

558

559

560

561

562

563

564

565

566

567

568

569

570

571

572

573

574

575

576

577

578

579

580

581

582

583

584

585

586

587

588

589

590

591

592

593

594

595

596

597

598

599

600

601

602

603

604

605

606

607

608

609

610

611

612

613

614

615

616

617

618

619

620

621

622

623

624

625

626

627

628

629

630

631

632

633

634

635

636

637

638

639

640

641

642

643

644

645

646

647

648

649

650

651

652

653

654

655

656

657

658

659

660

661

662

663

664

665

666

667

668

669

670

671

672

673

674

675

676

677

678

679

680

681

682

683

684

685

686

687

688

689

690

691

692

693

694

695

696

697

698

699

700

701

702

703

704

705

706

707

708

709

710

711

712

713

714

715

716

717

718

719

720

721

722

723

724

725

726

727

728

729

730

731

732

733

734

735

736

737

738

739

740

741

742

743

744

745

746

747

748

749

750

751

752

753

754

755

756

757

758

759

760

761

762

763

764

765

766

767

768

769

770

771

772

773

774

775

776

777

778

779

780

781

782

783

784

785

786

787

788

789

790

791

792

793

794

795

796

797

798

799

800

801

802

803

804

805

806

807

808

809

810

811

812

813

814

815

816

817

818

819

820

821

822

823

824

825

826

827

828

829

830

831

832

833

834

835

836

837

838

839

840

841

842

843

844

845

846

847

848

849

850

851

852

853

854

855

856

857

858

859

860

861

862

863

864

865

866

867

868

869

870

871

872

873

874

875

876

877

878

879

880

881

882

883

884

885

886

887

888

889

890

891

892

893

894

895

896

897

898

899

900

901

902

903

904

905

906

907

908

909

910

911

912

913

914

915

916

917

918

919

920

921

922

923

924

925

926

927

928

929

930

931

932

933

934

935

936

937

938

939

940

941

942

943

944

945

946

947

948

949

950

951

952

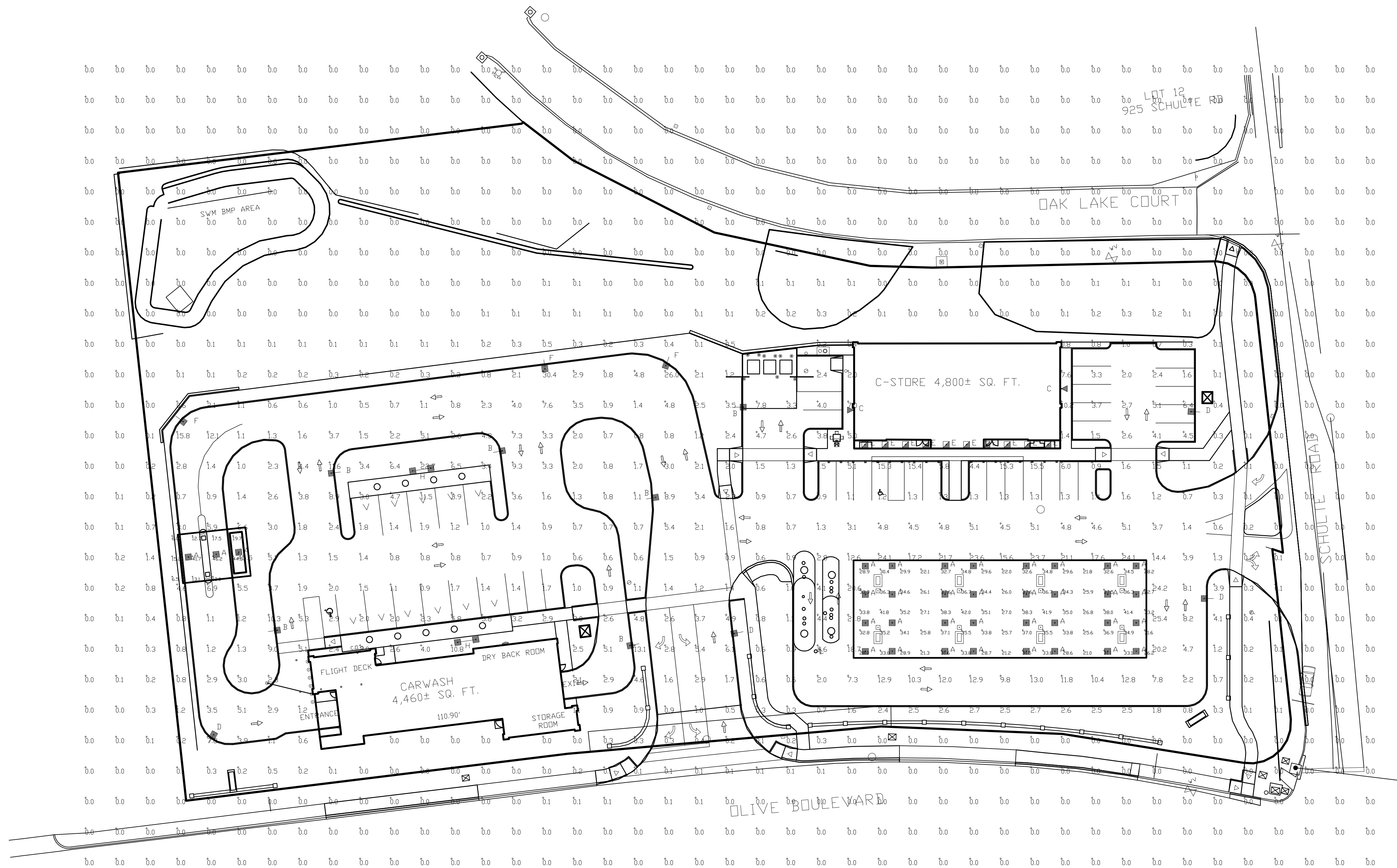
953

954

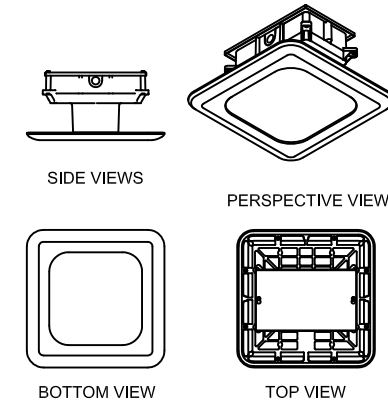
955

95

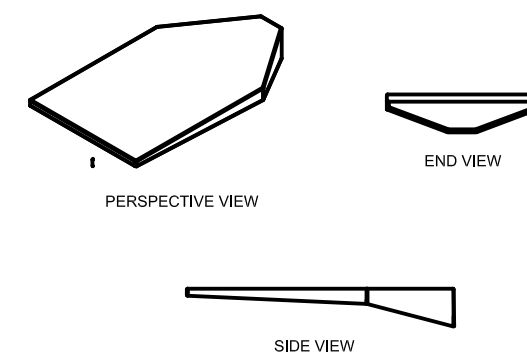




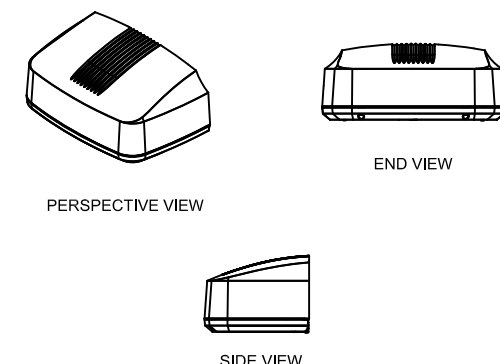
CRUS-SC-LED  
LED CANOPY LIGHT - LEGACY



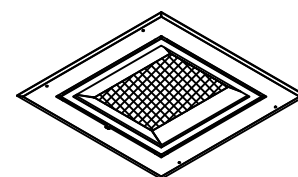
XLCS  
LED Area Light



XPWS3  
LED Wall Mount Light



XSL2-S-50  
LED Soffit



| Luminaire Schedule |     |       |             |                                                 |       |             |                  |            |
|--------------------|-----|-------|-------------|-------------------------------------------------|-------|-------------|------------------|------------|
| Symbol             | Qty | Label | Arrangement | Description                                     | LLF   | Lumens/Lamp | Arr. Lum. Lumens | Arr. Watts |
|                    | 35  | A     | SINGLE      | CRUS-SC-LED-LW-CW-UE MTD @ 15' GAS, 10' PAY CAN | 1.000 | N.A.        | 10871            | 87.9       |
|                    | 6   | B     | SINGLE      | XLCS-FT-LED-SS-CW-SINGLE-16'POLE+2'BASE         | 1.000 | N.A.        | 11383            | 96.2       |
|                    | 2   | C     | SINGLE      | XPWS3-FT-LED-48-350-CW-UE MTD @ 12'             | 1.000 | N.A.        | 5094             | 55         |
|                    | 4   | D     | SINGLE      | XLCS-FT-LED-SS-CW-HSS-SINGLE-16'POLE+2'BASE     | 1.000 | N.A.        | 9099             | 95.8       |
|                    | 10  | E     | SINGLE      | XSL2-S-LED-50-SS-CW MTD @ 10'                   | 1.000 | N.A.        | 6193             | 59.9       |
|                    | 3   | F     | SINGLE      | XLCS-FT-LED-SS-CW-HSS-SINGLE-8' MT HGT          | 1.000 | N.A.        | 9099             | 95.8       |
|                    | 2   | H     | D180°       | XLCS-FT-LED-SS-CW-D180-16'POLE+2'BASE           | 1.000 | N.A.        | 22766            | 192.4      |

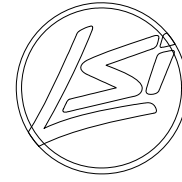
| Calculation Summary      |             |       |       |      |      |         |         |  |
|--------------------------|-------------|-------|-------|------|------|---------|---------|--|
| Label                    | CalcType    | Units | Avg   | Max  | Min  | Avg/Min | Max/Min |  |
| ALL CALC POINTS AT GRADE | Illuminance | Fc    | 1.42  | 45.5 | 0.0  | N.A.    | N.A.    |  |
| GAS CANOPY               | Illuminance | Fc    | 32.18 | 42.0 | 21.0 | 1.53    | 2.00    |  |
| PAY CANOPY               | Illuminance | Fc    | 21.45 | 46.2 | 6.0  | 3.58    | 7.70    |  |
| INSIDE CURB              | Illuminance | Fc    | 4.74  | 30.4 | 0.0  | N.A.    | N.A.    |  |

ALL CANOPY FIXTURES ARE RECESSED/FLUSH MOUNT

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted. Fixture nomenclature noted does not include mounting hardware or poles. This drawing is for photometric evaluation purposes only and should not be used as a construction document or as a final document for ordering product.

Total Project Watts  
Total Watts = 5418.098



LIGHTING PROPOSAL LD-134109-5

MOBIL ON THE RUN  
110241 OLIVE BLVD  
CREVE COEUR, MO

BY: MVE DATE: 8-4-16 REV: 11-20-17 SHEET 1 OF 1

SCALE: 1"=30'



**P&Z SET  
REVISED**



ExxonMobil

CONVENIENCE STORE AND CAR WASH

11029 OLIVE BLVD

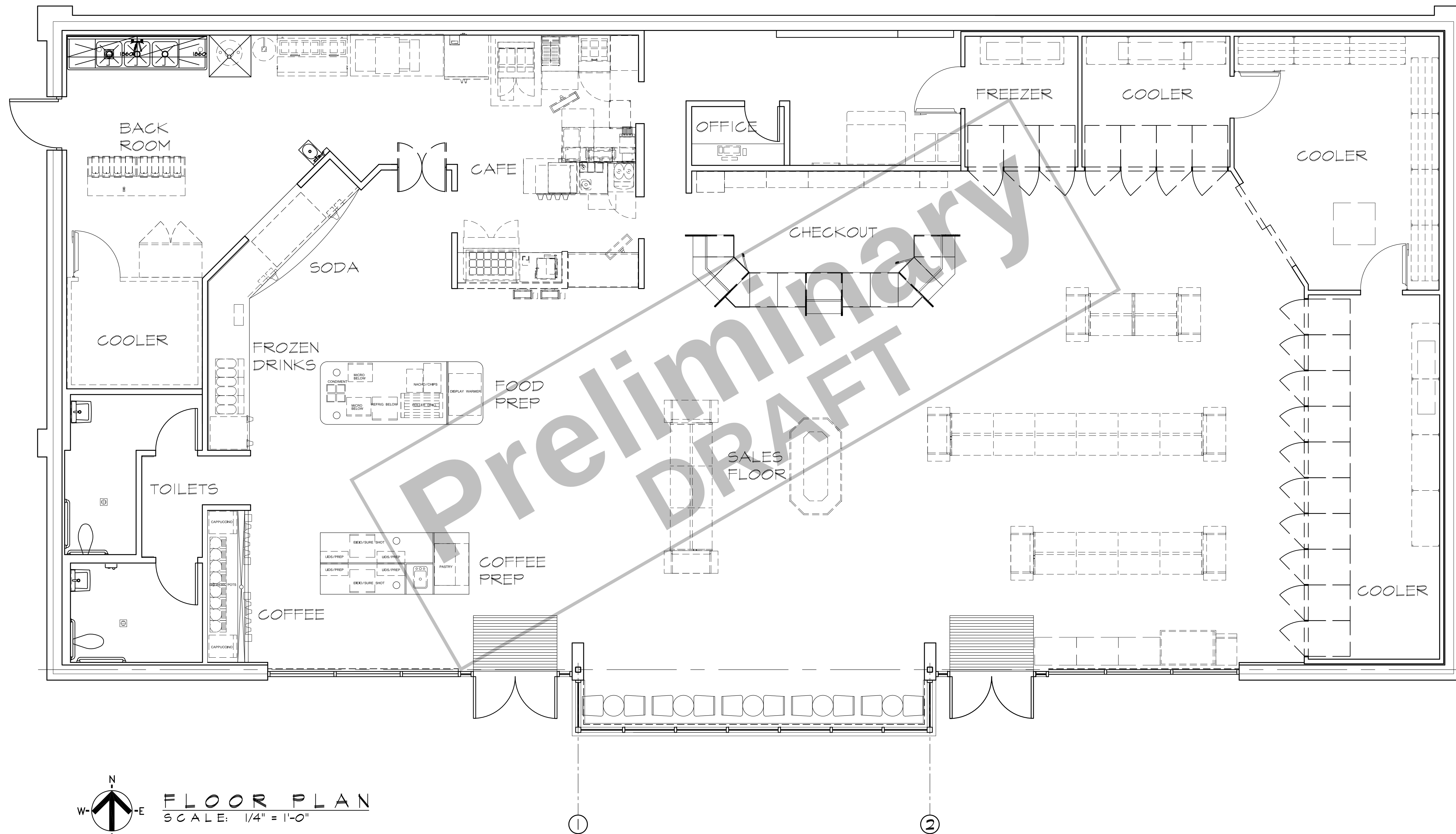
Attachment: Revised Plans received November 27, 2017 (16-031 Mobil on the Run and Brite Work Car Wash RZG CUP SDF)

|                |         |
|----------------|---------|
| PROJECT NUMBER | 1623    |
| DATE           | 6-23-17 |
| DRAWN BY       | TSM     |
| CHECKED BY     | SAW     |
| REVISION       | 7-10-17 |
|                | 8-11-17 |
|                | 8-17-17 |
|                | 11-9-17 |

# A1.1

## FLOOR PLAN

Copyright OSM, Inc. a Missouri Corporation  
All concepts and drawings are the property  
of OSM, Inc. and shall not be used, copied  
or reproduced in any manner without written  
permission from OSM, Inc. © OSM, Inc. 2017





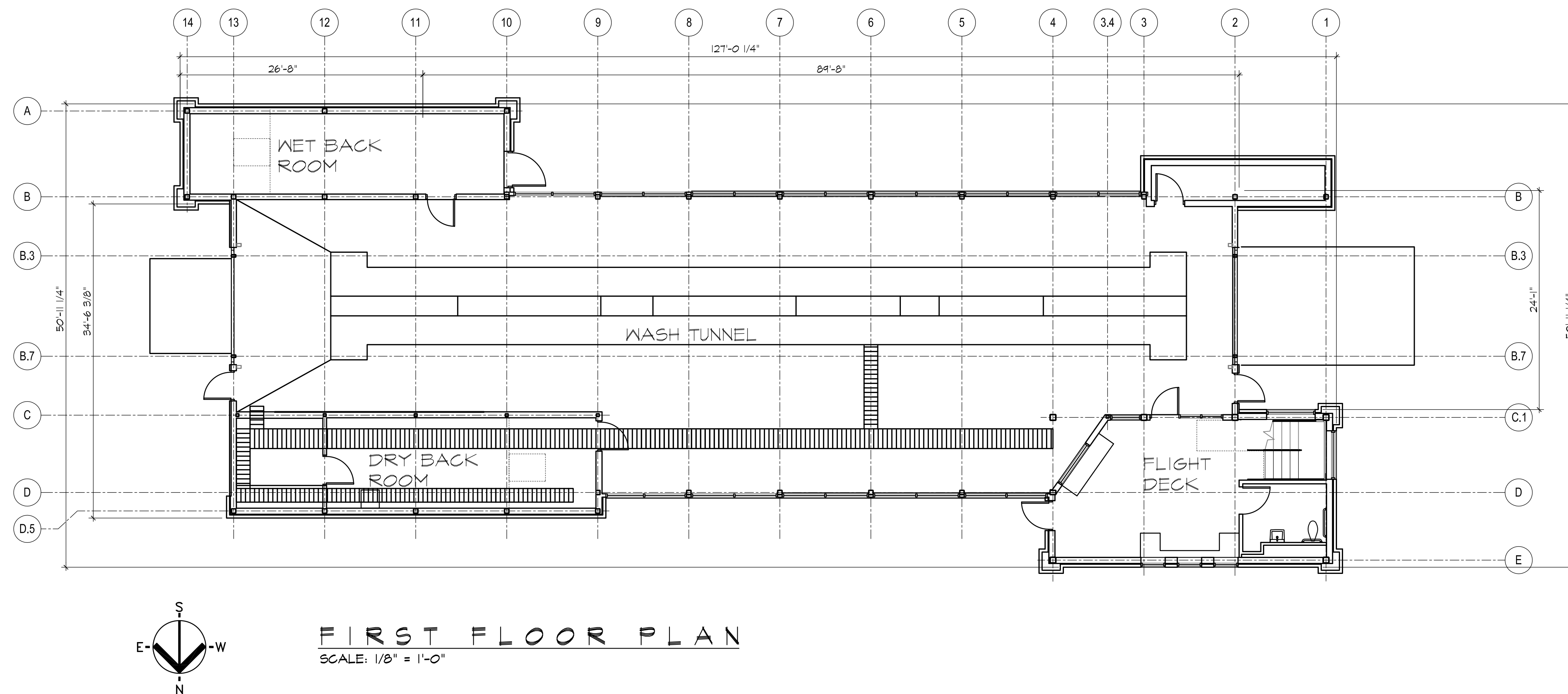
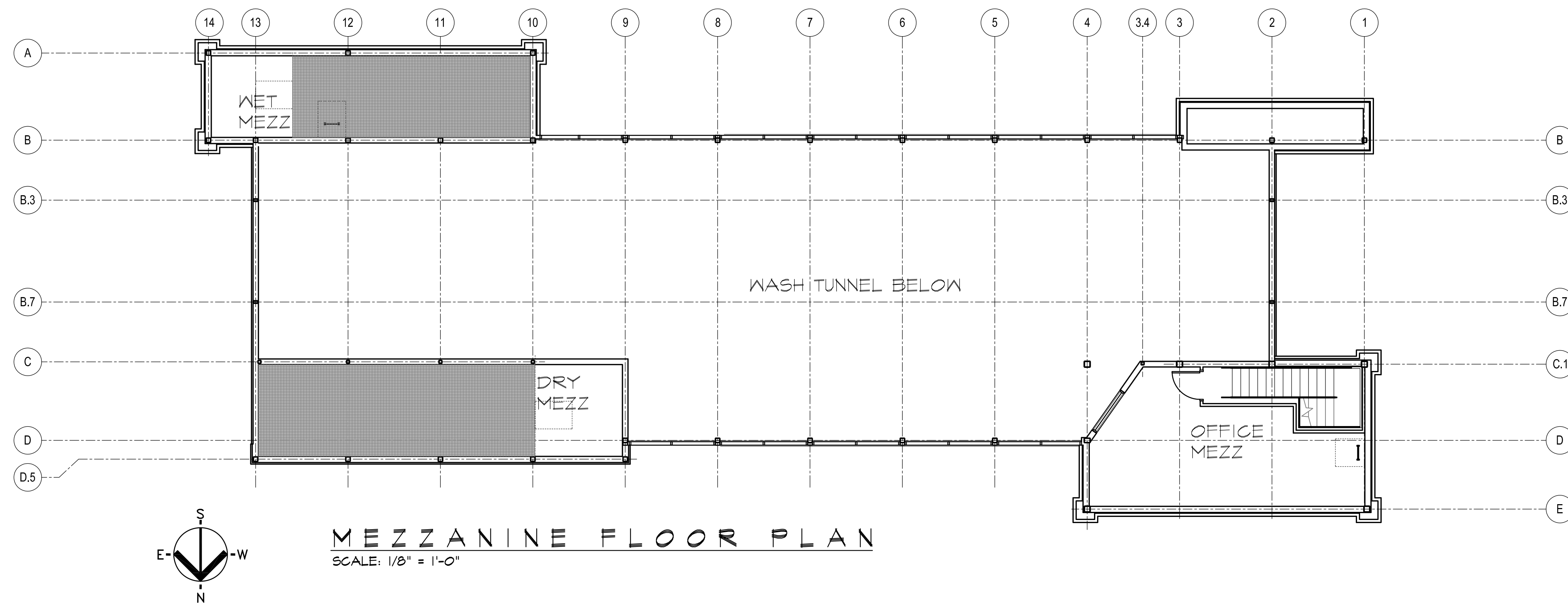
**P&Z SET  
REVISED**

**On the Run** **ExxonMobil**  
**CONVENIENCE STORE AND CAR WASH**  
11029 OLIVE BLVD  
Attachment: Revised Plans received November 27, 2017 (16-031 Mobil on the Run and Brite Work Car Wash RZG.CUP.SDP)

|                |         |
|----------------|---------|
| PROJECT NUMBER | 1623    |
| DATE           | 6-23-17 |
| DRAWN BY       | JVF     |
| CHECKED BY     | SNM     |
| REVISION       | 7-10-17 |
|                | 8-11-17 |
|                | 8-17-17 |
|                | 11-9-17 |

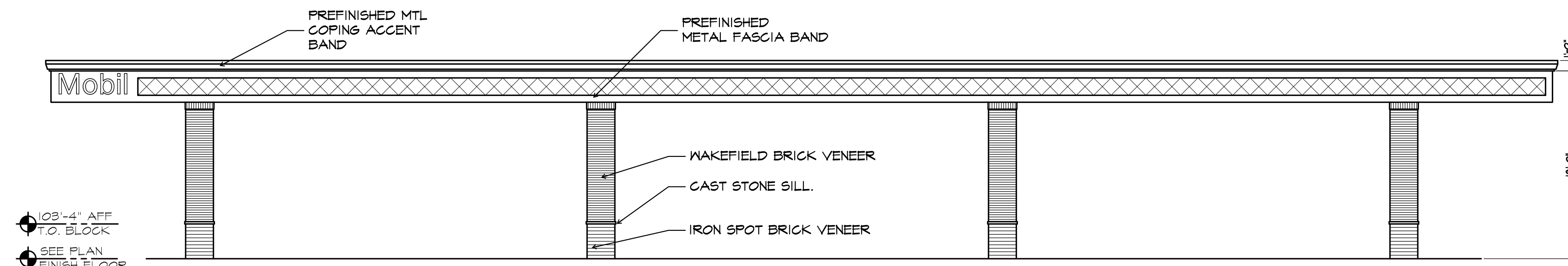
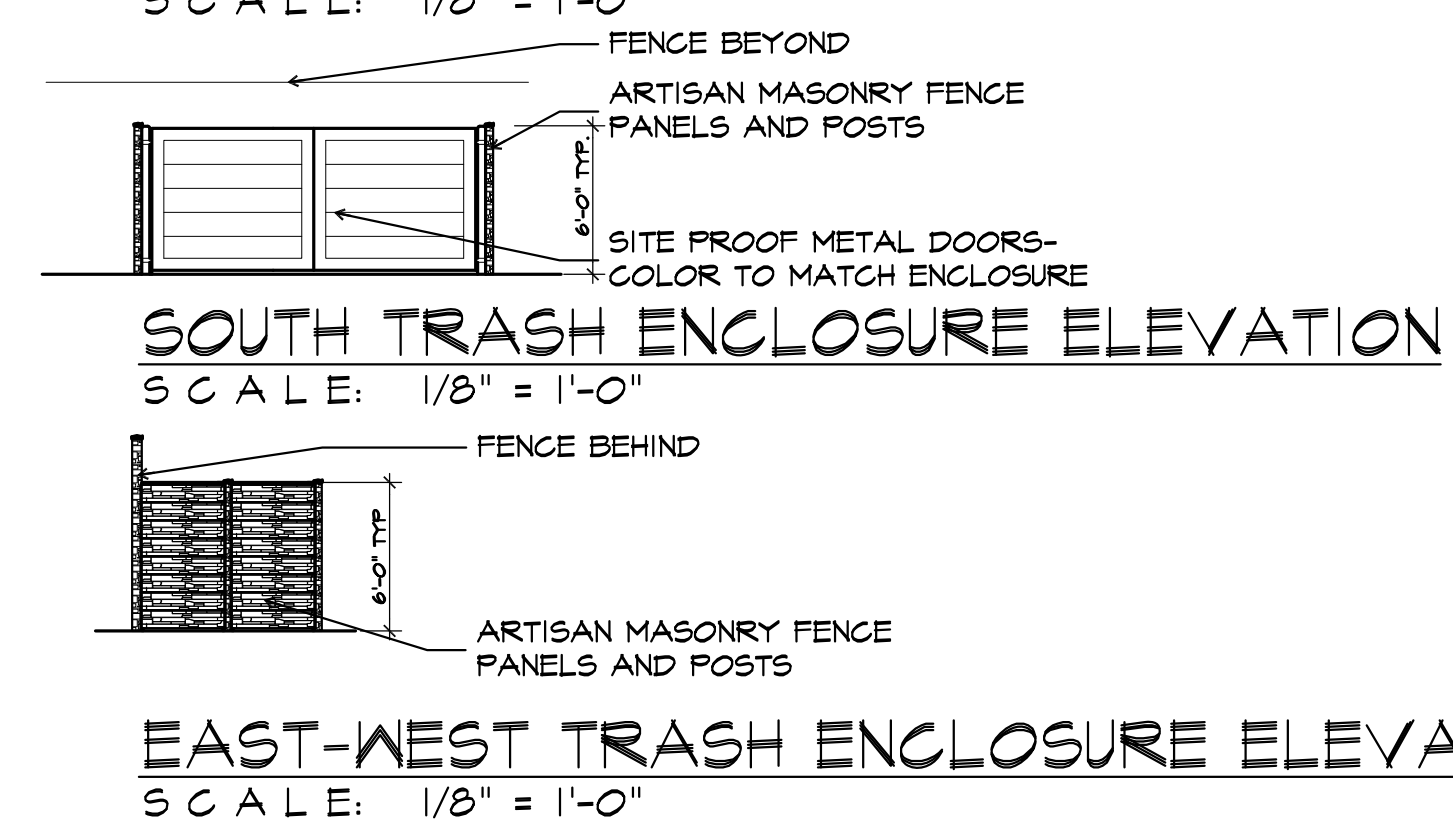
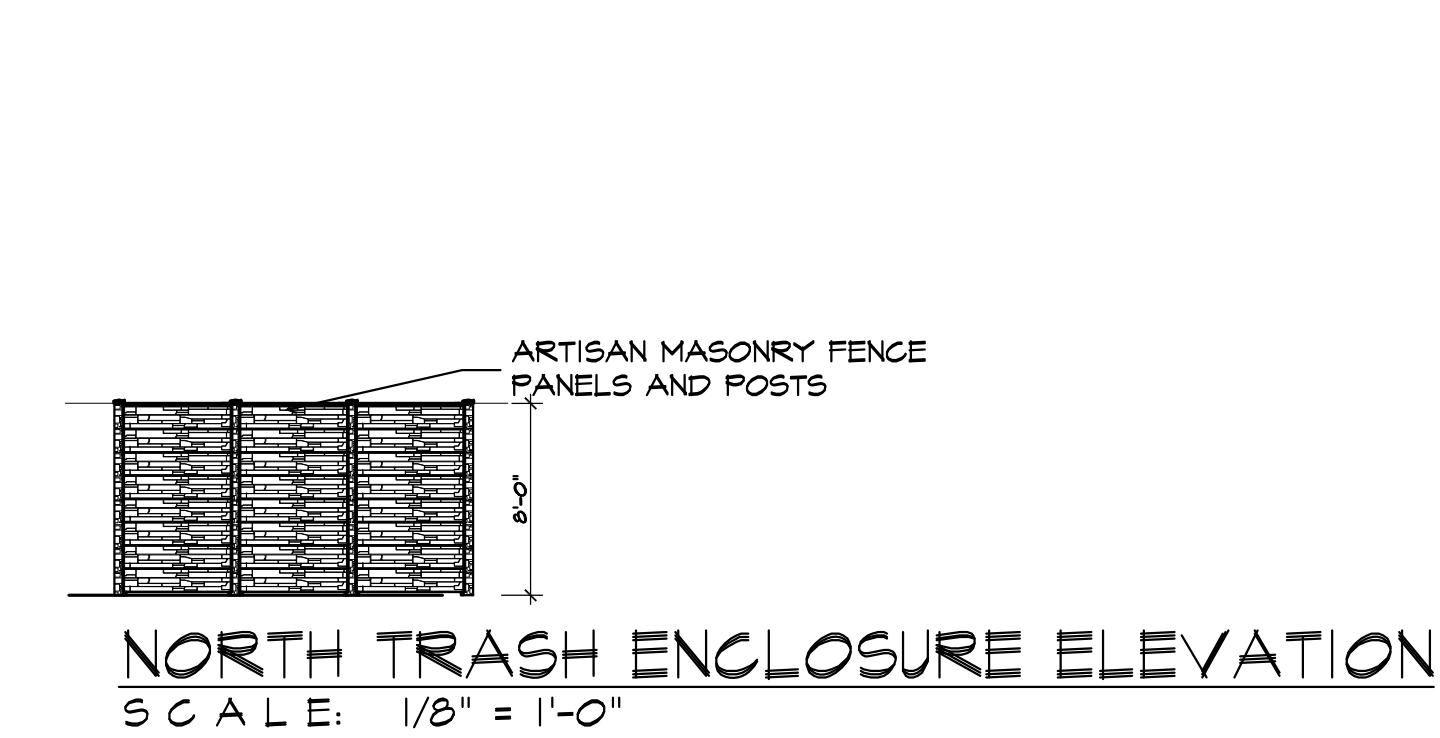
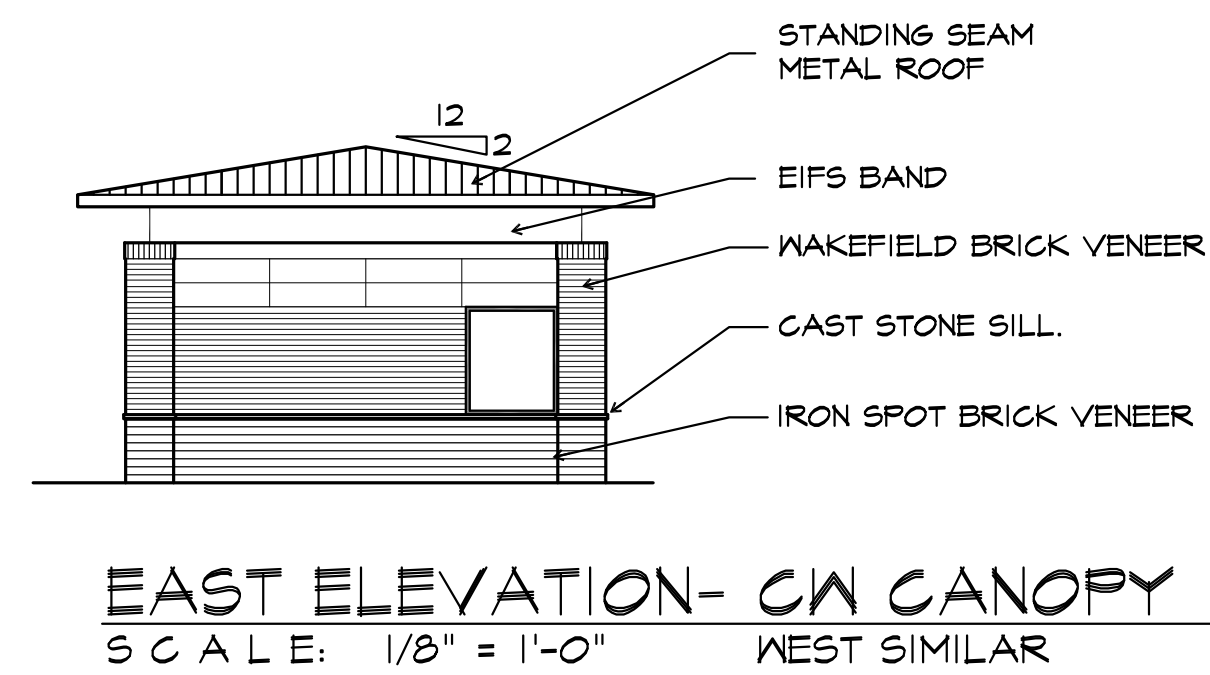
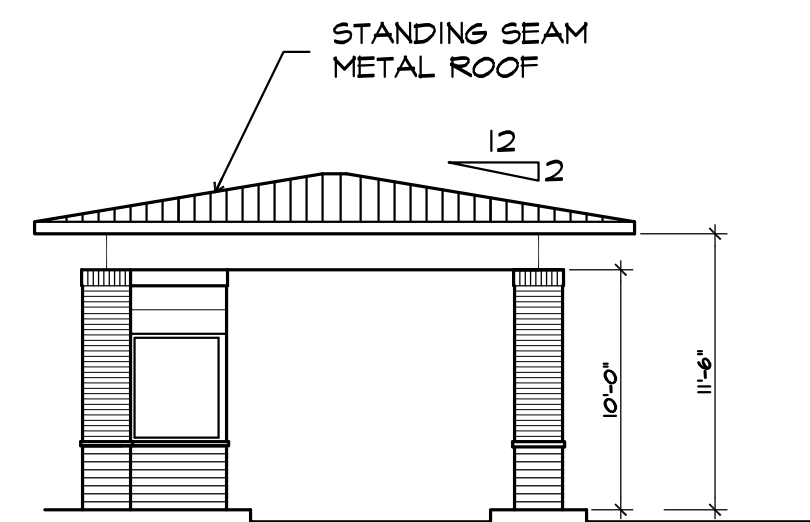
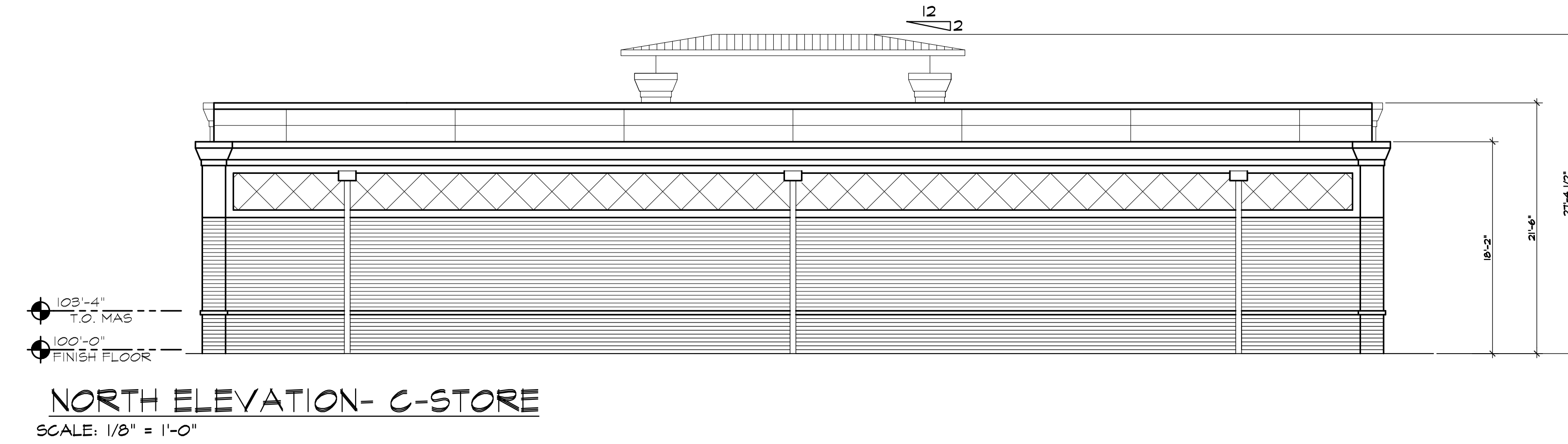
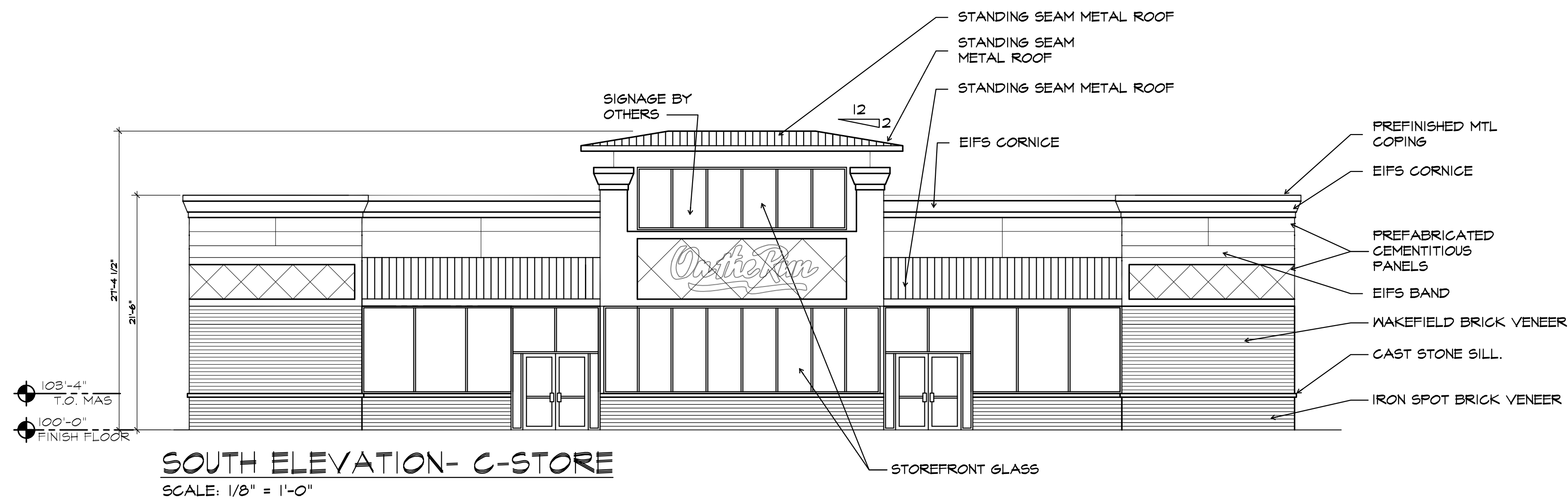
**A1.2**  
**CW FLOOR  
PLANS**

Copyright OSM, Inc. a Missouri Corporation.  
All concepts and drawings are the property  
of OSM, Inc. and shall not be used, copied  
or reproduced in any manner without written  
permission from OSM, Inc. © OSM, Inc. 2017

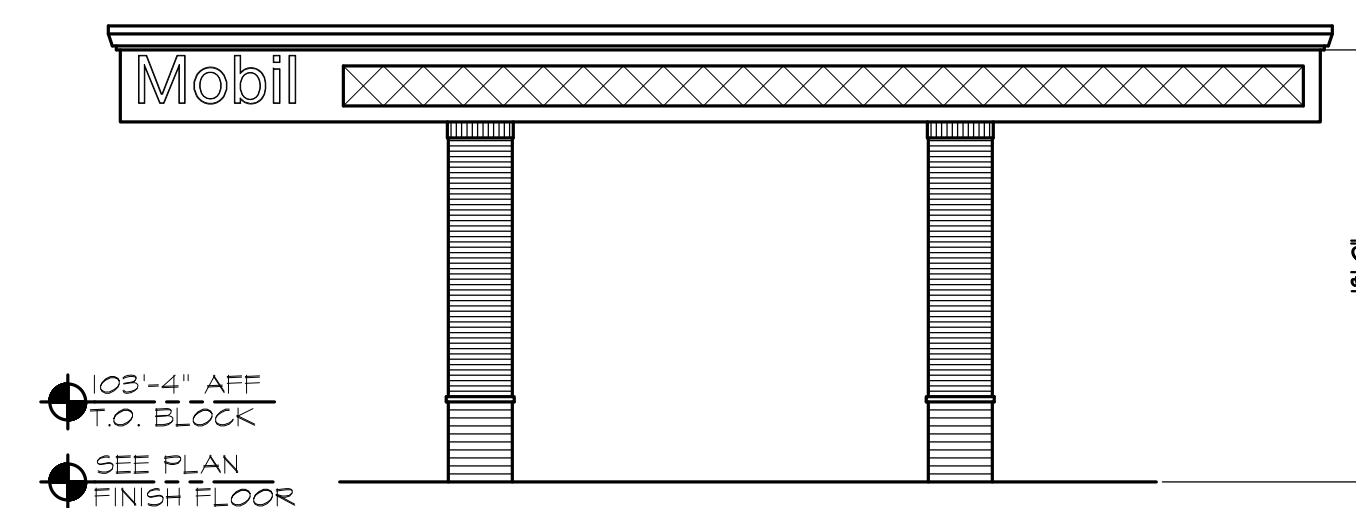




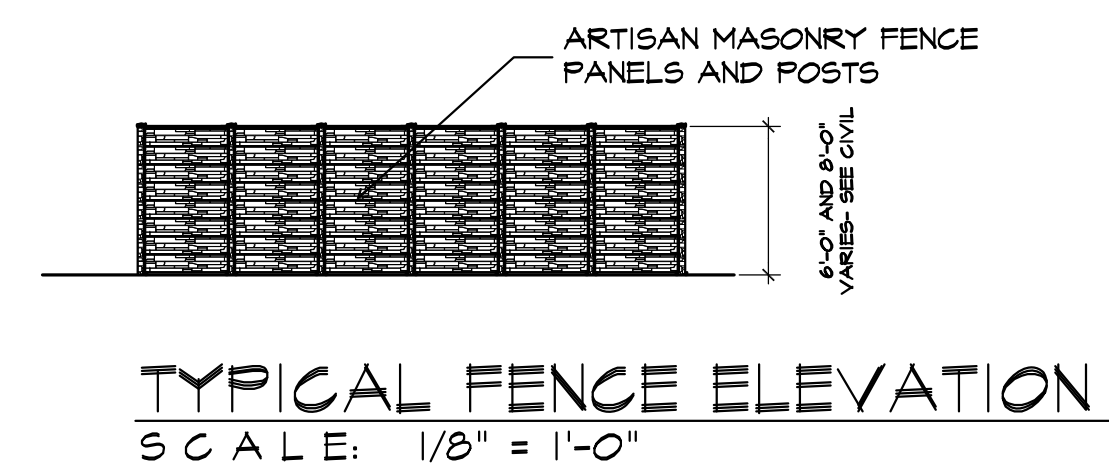
**P&Z SET  
REVISED**



**SOUTH ELEVATION FUEL CANOPY**  
 SCALE: 1/8" = 1'-0"



**EAST ELEVATION FUEL CANOPY**  
 SCALE: 1/8" = 1'-0"



**On the Run** **ExxonMobil**  
**CONVENIENCE STORE AND CAR WASH**  
 11029 OLIVE BLVD  
 Attachment: Revised Plans received November 27, 2017 (16-031 Mobil on the Run and Britte Work Car Wash RZG CUP SDF)

|                |          |
|----------------|----------|
| PROJECT NUMBER | 1623     |
| DATE           | 6-23-17  |
| DRAWN BY       | JVF      |
| CHECKED BY     | SNM      |
| REVISION       | 7-10-17  |
|                | 8-11-17  |
|                | 8-17-17  |
|                | 11-9-17  |
|                | 11-27-17 |

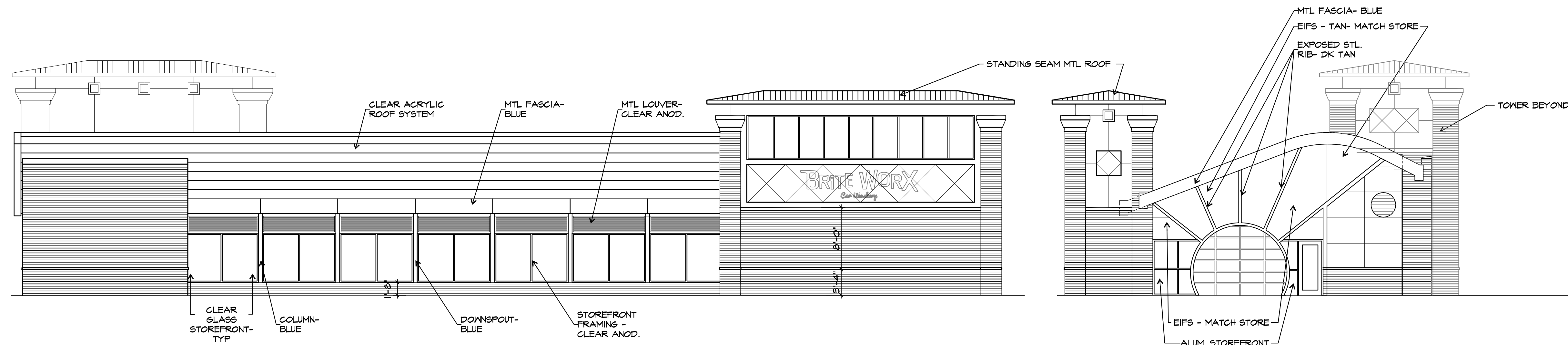
**A5.1**

**EXTERIOR  
ELEVATIONS**

Copyright OSM, Inc. a Missouri Corporation. All concepts and drawings are the property of OSM, Inc. and shall not be used, copied or reproduced in any manner without written permission from OSM, Inc. © OSM, Inc. 2017

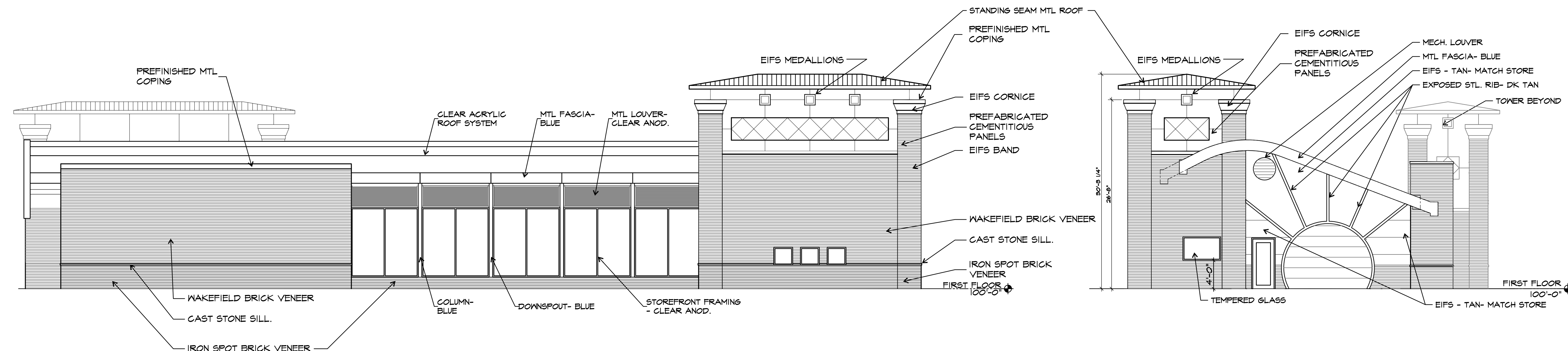


**P&Z SET  
REVISED**



**SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"

**EAST ELEVATION**  
SCALE: 1/8" = 1'-0"



**NORTH ELEVATION**  
SCALE: 1/8" = 1'-0"

**WEST ELEVATION**  
SCALE: 1/8" = 1'-0"

**On the Run** **ExxonMobil**  
**CONVENIENCE STORE AND CAR WASH**  
1109 OLIVE BLVD  
Attachment: Revised Plans received November 27, 2017 (16-031 Mobil on the Run and Brite Worx Car Wash RZG CUP SDF)

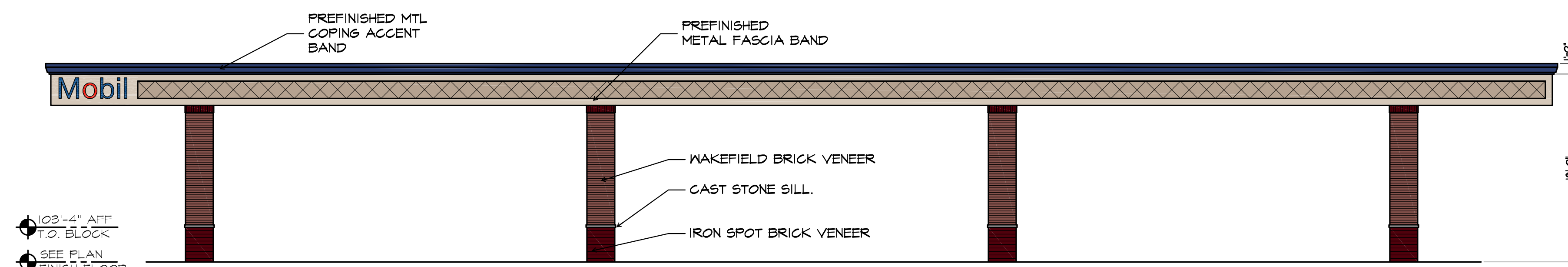
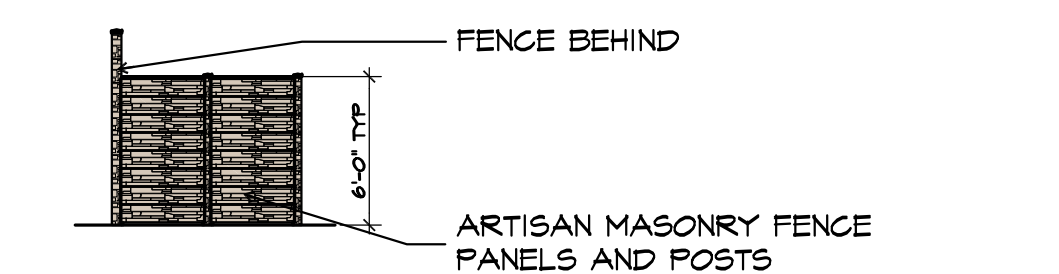
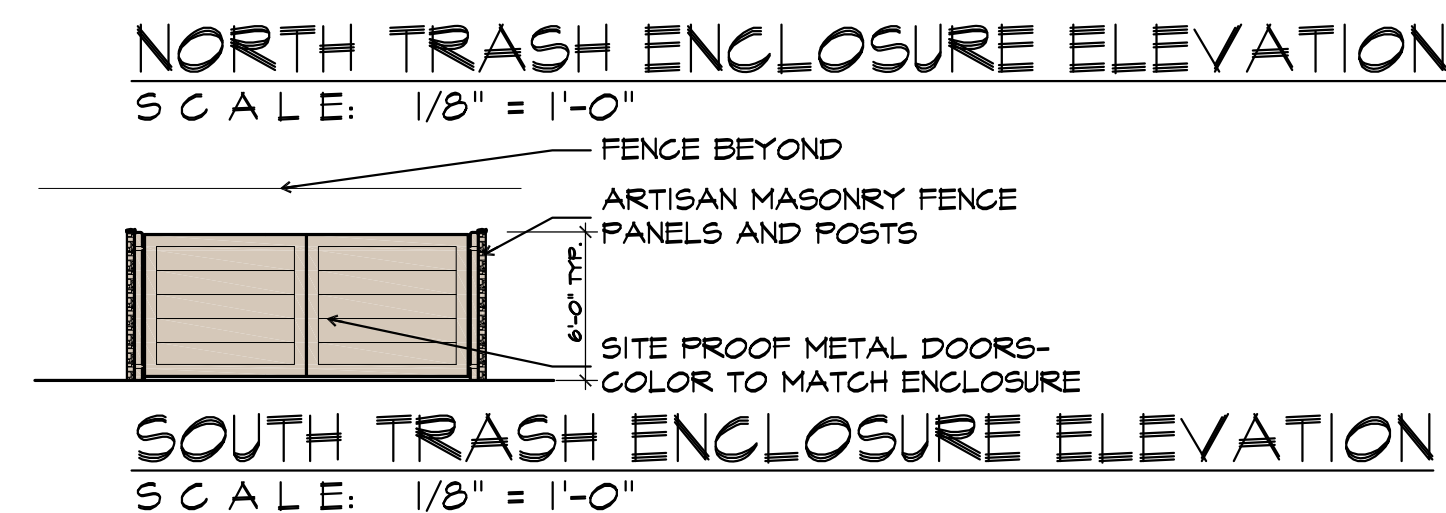
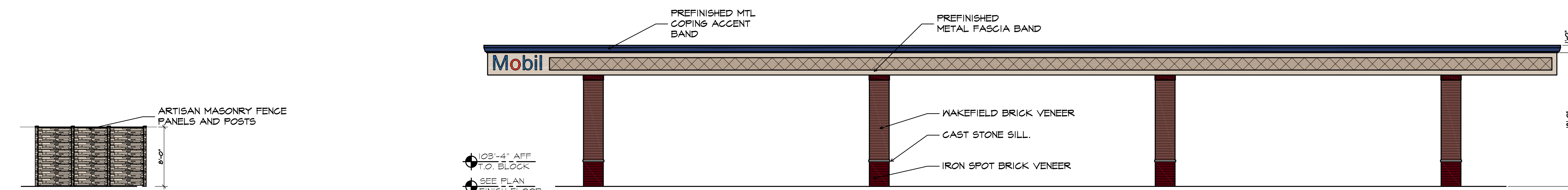
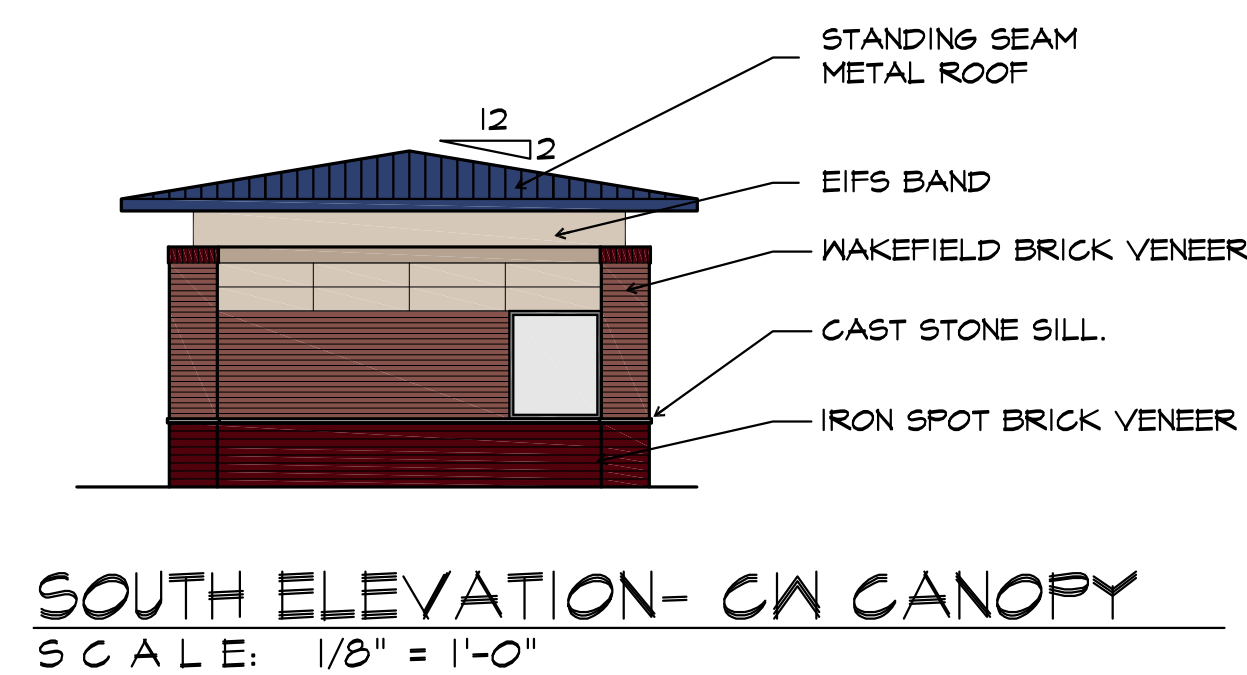
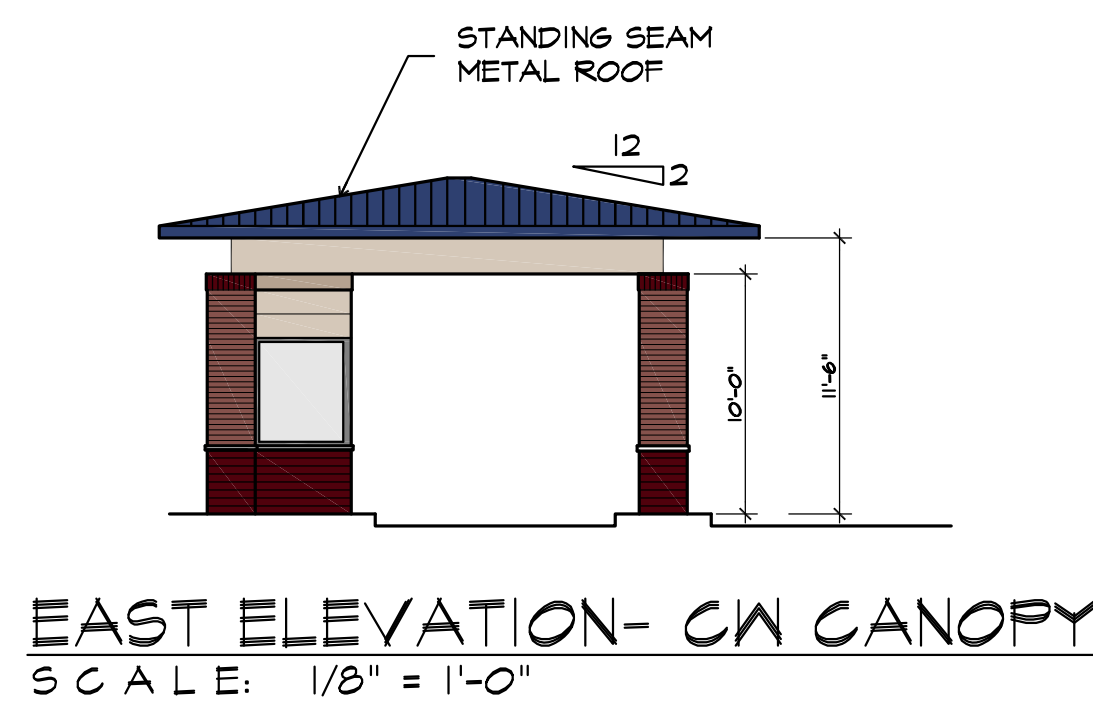
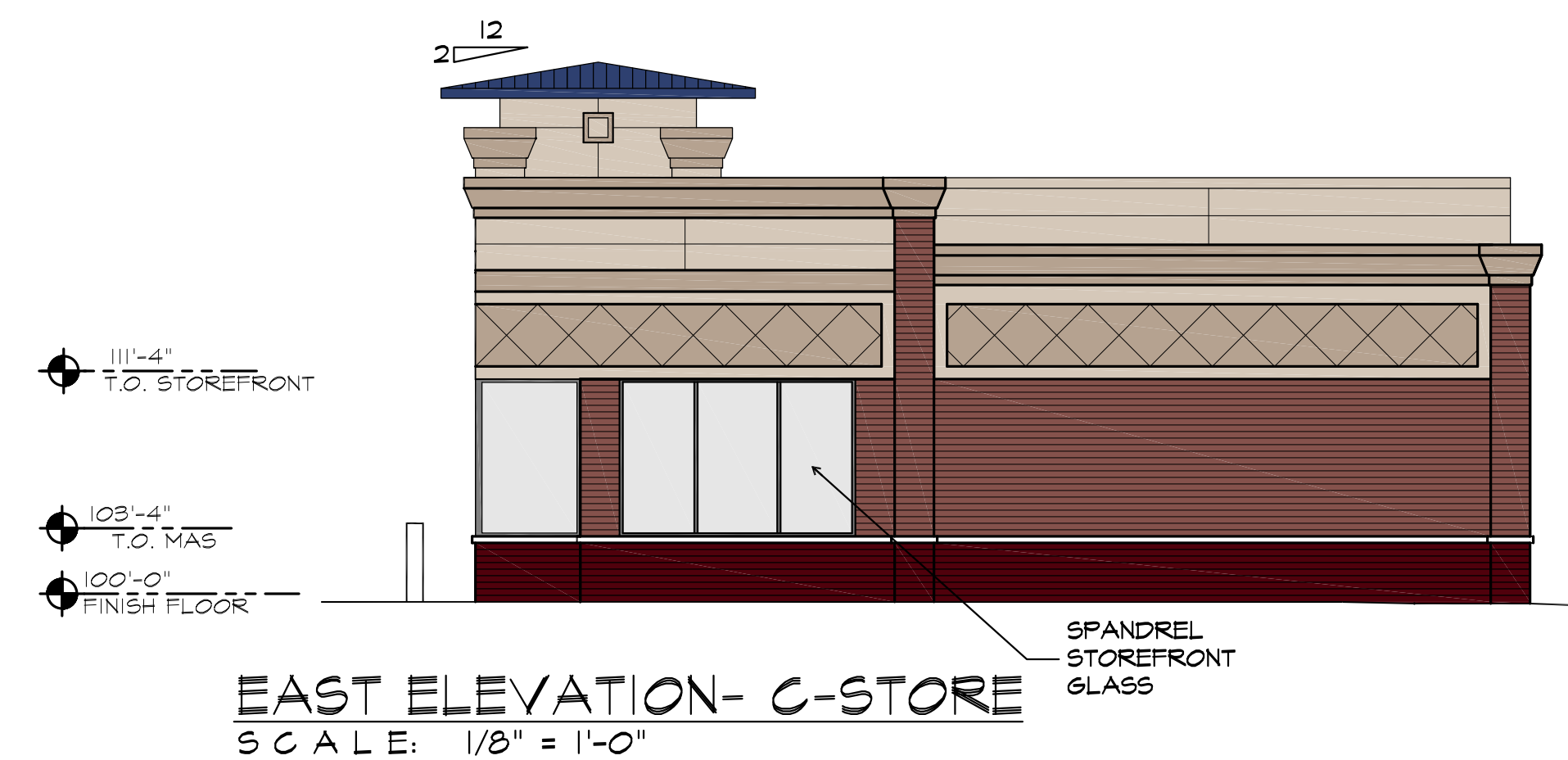
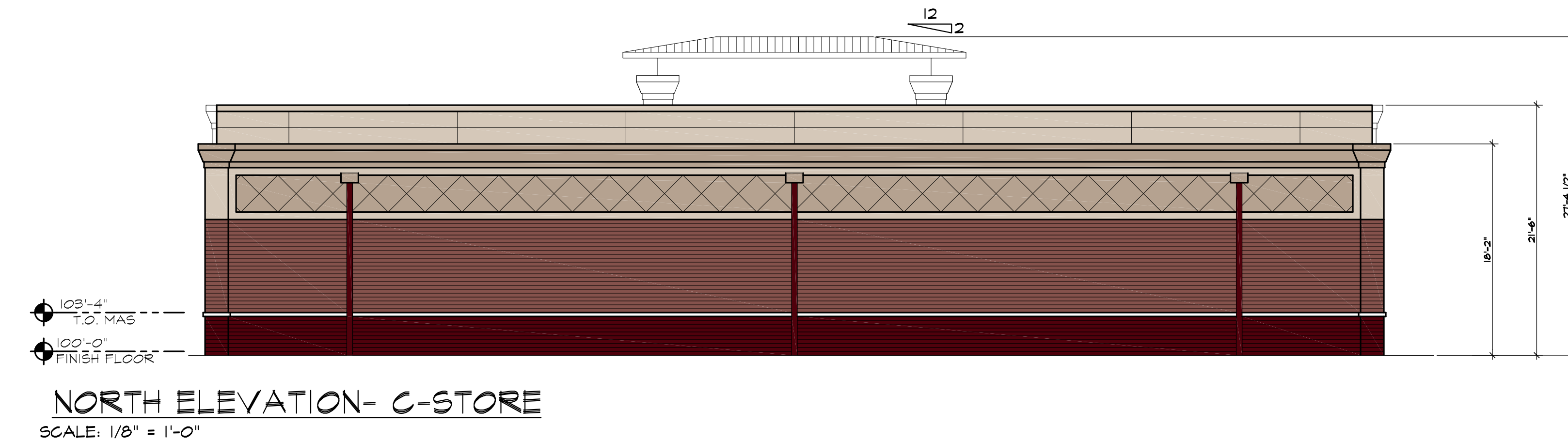
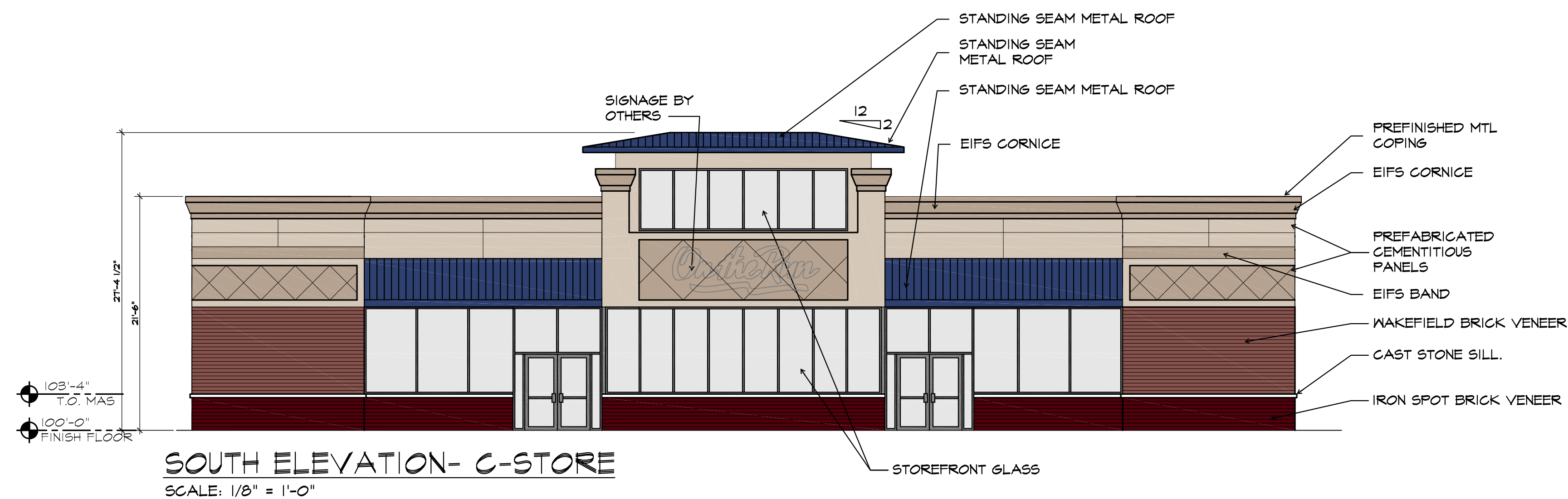
|                |          |
|----------------|----------|
| PROJECT NUMBER | 1623     |
| DATE           | 6-23-17  |
| DRAWN BY       | JVF      |
| CHECKED BY     | SNM      |
| REVISION       | 7-10-17  |
|                | 8-11-17  |
|                | 8-17-17  |
|                | 11-4-17  |
|                | 11-27-17 |

**A5.2**

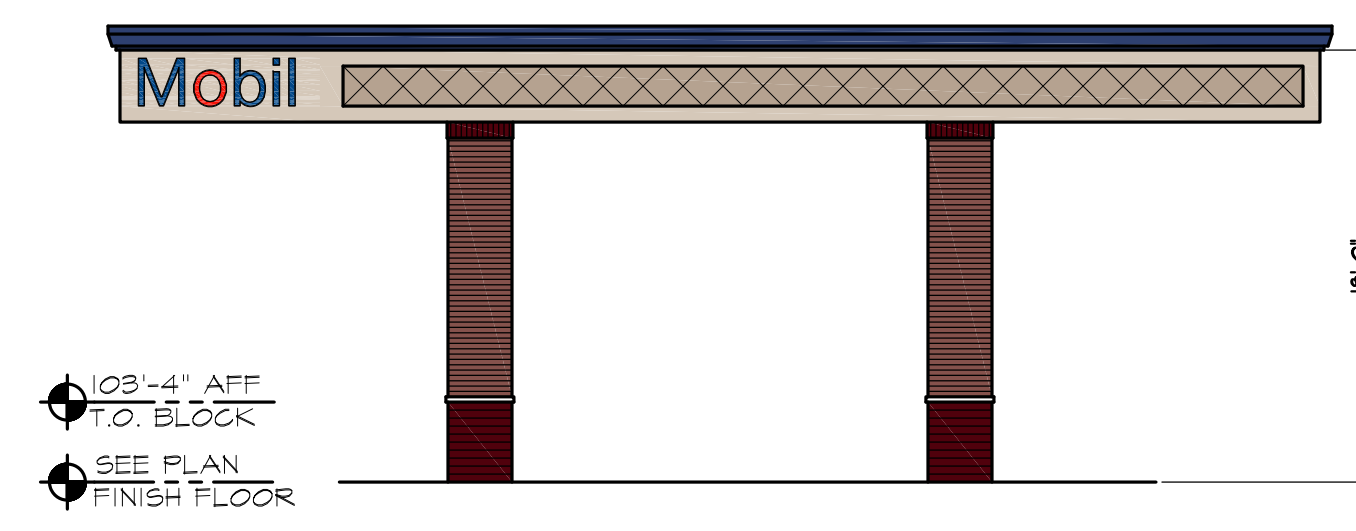
**EXTERIOR  
ELEVATIONS**



**P&Z SET  
REVISED**



**SOUTH ELEVATION FUEL CANOPY**  
 SCALE: 1/8" = 1'-0"



**On the Run** **ExxonMobil**  
**CONVENIENCE STORE AND CAR WASH**  
 1109 OLIVE BLVD.  
 Attachment: Revised Plans received November 27, 2017 (16-031 Mobil on the Run and Brito Work Car Wash RZG CUP SDR)

|                |          |
|----------------|----------|
| PROJECT NUMBER | 1623     |
| DATE           | 6-23-17  |
| DRAWN BY       | JVF      |
| CHECKED BY     | SNM      |
| REVISION       | 7-10-17  |
|                | 8-11-17  |
|                | 8-17-17  |
|                | 11/8/17  |
|                | 11-27-17 |

**A5.1**

**EXTERIOR  
ELEVATIONS**

Copyright OSM, Inc. a Missouri Corporation. All concepts and drawings are the property of OSM, Inc. and shall not be used, copied or reproduced in any manner without written permission from OSM, Inc. © OSM, Inc. 2017



**P&Z SET  
REVISED**

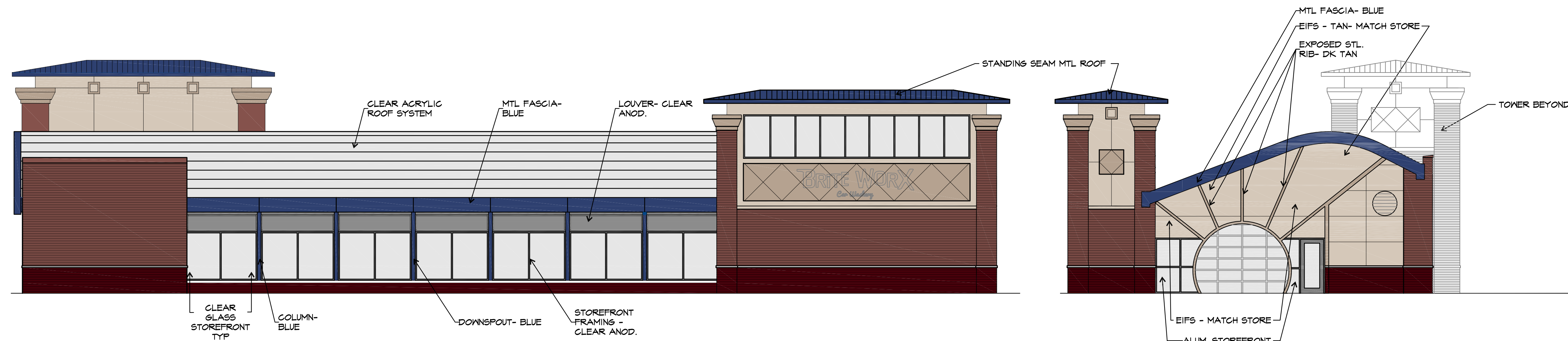
**On the Run** **ExxonMobil**  
**CONVENIENCE STORE AND CAR WASH**  
11029 OLIVE BLVD.  
Attachment: Revised Plans received November 27, 2017 (16-031 Mobil on the Run and Brite Work Car Wash RZG CUP.SDP)

|                |          |
|----------------|----------|
| PROJECT NUMBER | 1623     |
| DATE           | 6-23-17  |
| DRAWN BY       | JVF      |
| CHECKED BY     | SNM      |
| REVISION       | 7-10-17  |
|                | 8-11-17  |
|                | 8-17-17  |
|                | 11-9-17  |
|                | 11-27-17 |

**A5.2**

**EXTERIOR  
ELEVATIONS**

Copyright OSM, Inc. a Missouri Corporation.  
All concepts and drawings are the property of OSM, Inc. and shall not be used, copied or reproduced in any manner without written permission from OSM, Inc. ©OSM, Inc. 2017



**SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"

**EAST ELEVATION**  
SCALE: 1/8" = 1'-0"



**NORTH ELEVATION**  
SCALE: 1/8" = 1'-0"

**WEST ELEVATION**  
SCALE: 1/8" = 1'-0"



## Concept Revision Narrative

### Mobil On the Run Convenience Store and BriteWorx Car Wash

Northwest Corner of Olive and Schulte, Creve Coeur, MO 63141

This concept design narrative was prepared to provide a detailed description of the individual changes made to the Site Plan in response to the feedback received at the December 5<sup>th</sup>, 2016 Planning and Zoning Commission meeting, April 24<sup>th</sup>, 2017 City Council Meeting, and subsequent meetings with City Planning Staff and Residents.

#### A. Limit retail uses size and scale

- 1) A new smaller version of the BriteWorx tunnel carwash (from 5,128.5 to 4,460 sq. ft.) has been proposed for this site to reduce the size, scale, and intensity.
- 2) The gas canopy was reduced from the 50' x 184' / 10-pump island design to a 48' x 144' / 8-pump-island configuration.
- 3) The western parcel in the rezoning was removed from the re-development plan.

#### B. Protection of the existing healthy vegetation setting

- 1) With the assistance of a Landscape Architect, the protection zone areas for the existing larger trees being saved was expanded and additional measures are to be taken during demolition and construction.
- 2) The greenspace in the rear of the site was expanded to provide less impact on the vegetation and moves the limits of developed area further from the residential uses.

#### C. Volume

- 1) The number of vacuum stations was reduced from the earlier proposed 17 stalls to 11 stalls.
- 2) The number of pumps were reduced from 10 pumps to 8 pumps.

#### D. Mitigate Impact on residential area

- 1) An expanded greenspace buffer to the north will assist in any impact to the surrounding residential neighborhoods.
- 2) The reduced footprints and elimination of the vacuums increases the amount of greenspace, allows for a more compact footprint, and enhances the aesthetics of the development.

#### E. Setbacks and Connectivity

- 1) The redesign of the carwash layout and moving the vacuums behind the wash a fewer number of vacuum stations provide for greater landscape treatments in the buffer area



- around the carwash building and reduces the need for the furthest west property in the development. This is still a part of the rezoning application.
- 2) The reduction of the size of the gas canopy allows for more open space in front of the C-Store retail business and provides greater ease of maneuvering as one circulates the site.

**F. Reduce the large gaps and interruptions along the streetscape**

- 1) By reducing the non-pedestrian elements (vacuums, entrance lanes to carwash, pump islands, greenspaces, etc.) between the BriteWorx and Mobil on the Run, there is more connectivity as opposed to interruptions along the streetscape.

The Mobil on the Run and BriteWorx CarWashery provides a needed updated neighborhood service at this location with consideration to the elements of the design guidelines, comprehensive plan, and city ordinances.



Land Description  
Project No. 110-241

City of Creve Coeur Tract  
Oak Lake Crossing  
November 22, 2017

A tract of land being Part of Lots 1, 2, and 3 of "Oak Lake Estates", recorded in Plat Book 92, Page 3 of St. Louis County Records, and Part of Lots 3, 4 and 5 of the subdivision of the Farm of S. S. Matson, being part of U.S. Survey 1962, Township 45 North, Range 5 East of the Fifth Principal Meridian, St. Louis County, Missouri, more particularly described as follows:

Commencing at the intersection of the East line of a tract of land conveyed to Halliburton and Kohring, by deed recorded in Book 7558, Page 658 of said records with the North line of Olive Boulevard as widened by document recorded in Book 5112, Page 66 of said records, said point being 45.00 feet perpendicular distance North of Missouri State Highway 340 (variable width), also known as Olive Boulevard centerline station 179+55.77; thence along the said East line and along the East line of a tract of land conveyed to Pfortmiller by deed recorded in Book 11682, Page 2248 of said records, North 29 degrees 19 minutes 07 seconds West, 185.70 feet to the corporate limit line of the City of Creve Coeur; thence along said line the following courses and distances; thence North 60 degrees 01 minutes 53 seconds East, 100.29 feet to the POINT OF BEGINNING of the tract herein described; thence continuing along the corporate limit line of the City of Creve Coeur, North 60 degrees 01 minutes 53 seconds East, 200.09 feet; thence North 59 degrees 51 minutes 43 seconds East, 104.63 feet; thence along a curve to the right, the chord of which bears North 68 degrees 42 minutes 21 seconds East, 247.12 feet and the radius point of which bears South 30 degrees 08 minutes 17 seconds East, 803.69 feet from the last mentioned point, an arc distance of 248.11 feet to the West line of Schulte Road (variable width); thence along said West line Schulte Road, as described in Book 7631, Page 1576 of said records, the following courses and distances; thence South 29 degrees 19 minutes 28 seconds East, 91.74 feet; thence South 85 degrees 20 minutes 52 seconds West, 5.50 feet; thence South 29 degrees 19 minutes 28 seconds East, 83.77 feet; thence along a curve to the right, the chord of which bears South 24 degrees 59 minutes 17 seconds West, 32.49 feet and the radius point of which bears South 60 degrees 40 minutes 32 seconds West, 20.00 feet from the last mentioned point, an arc distance of 37.92 feet to a point being 45.00 feet perpendicular distance North of Olive Boulevard centerline station 185+63.34; thence along the aforesaid North right-of-way line of Olive Boulevard, being 45.00 feet perpendicularly distant north of and parallel to the centerline of said Olive Boulevard, the following courses and distances; thence along a curve to the left, the chord of which bears South 72 degrees 34 minutes 52 seconds West, 178.13 feet and the radius point of which bears South 10 degrees 41 minutes 58 seconds East, 761.20 feet from the last mentioned point, an arc distance of 178.54 feet to a point; thence South 61 degrees 53 minutes 32 seconds West, 154.64 feet; and thence South 59 degrees 51 minutes 43 seconds West, 189.15 feet; thence leaving said North right-of-way line, North 29 degrees 19 minutes 07 seconds West, 185.61 feet to the POINT OF BEGINNING, containing 2.380 acres, more or less.



Land Description  
Project No. 110-241

St. Louis County Tract  
Oak Lake Crossing  
November 22, 2017

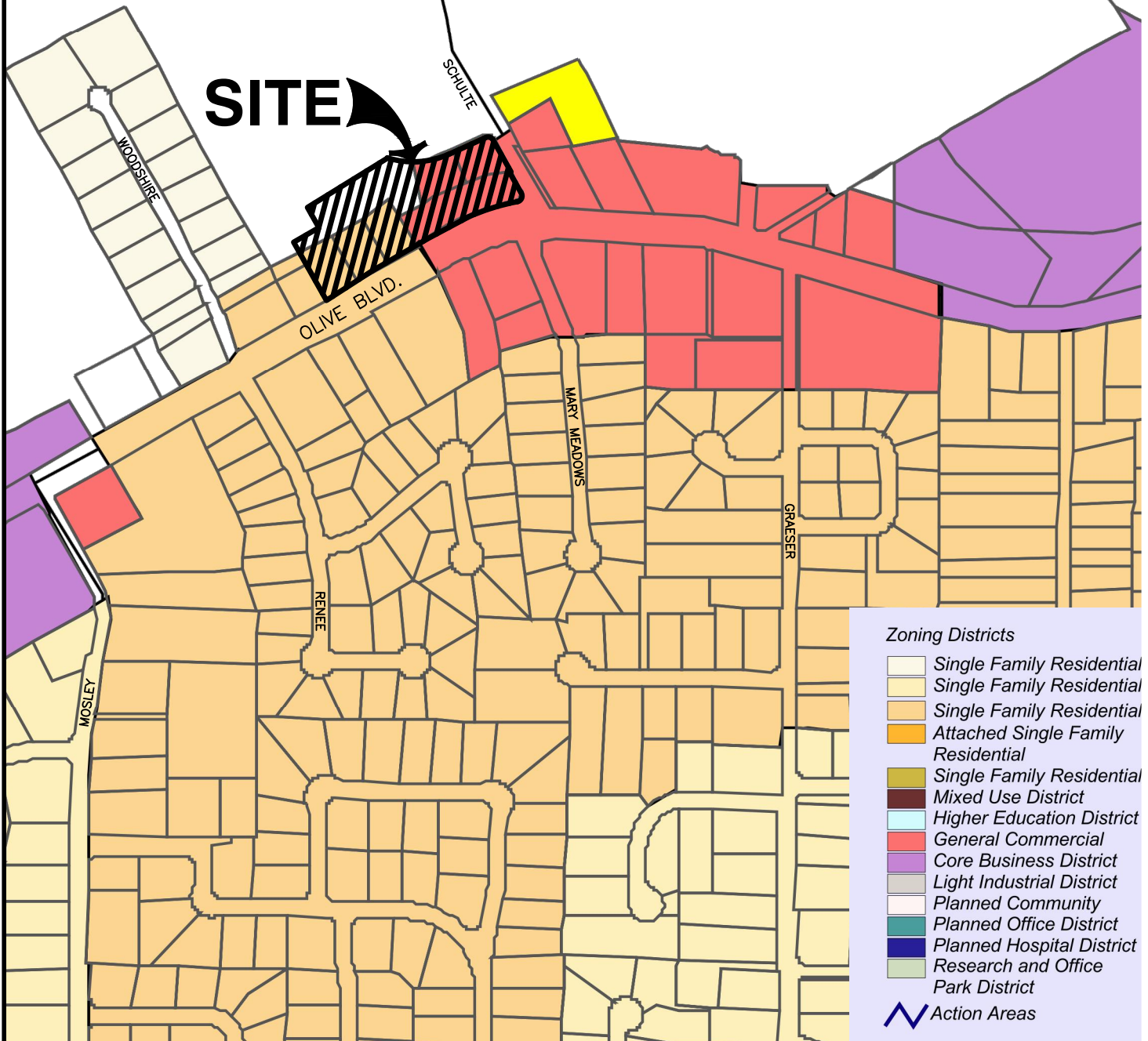
A tract of land being Part of Lots 1, 2, and 3 of "Oak Lake Estates", recorded in Plat Book 92, Page 3 of St. Louis County Records, and Part of Lots 3, 4 and 5 of the Subdivision of the Farm of S. S. Matson, being Part of U.S. Survey 1962, Township 45 North, Range 5 East of the Fifth Principal Meridian, St. Louis County, Missouri, more particularly described as follows:

Commencing at the intersection of the East line of a tract of land conveyed to Halliburton and Kohring, by deed recorded in Book 7558, Page 658 of said records with the North line of Olive Boulevard as widened by document recorded in Book 5112, Page 66 of said records, said point being 45.00 feet perpendicular distance North of Missouri State Highway 340 (variable width), also known as Olive Boulevard centerline station 179+55.77; thence along the said East line and along the East line of a tract of land conveyed to Pfortmiller by deed recorded in Book 11682, Page 2248 of said records, North 29 degrees 19 minutes 07 seconds West, 185.70 feet to the corporate limit line of the City of Creve Coeur; thence along said line North 60 degrees 01 minutes 53 seconds East, 100.29 feet to the POINT OF BEGINNING of the tract herein described, said point being on the corporate limit line of the City of Creve Coeur; thence North 29 degrees 19 minutes 07 seconds West, 125.13 feet; thence North 59 degrees 56 minutes 12 seconds East, 200.00 feet; thence North 17 degrees 19 minutes 15 seconds East, 1.05 feet to the South line of Oak Lake Court, 50 feet wide; thence along said South line of Oak Lake Court, 50 feet wide, the following courses and distances; thence along a curve to the left, the chord of which bears North 86 degrees 27 minutes 24 seconds East, 213.69 feet and the radius point of which bears North 17 degrees 19 minutes 15 seconds East, 300.00 feet from the last mentioned point, an arc distance of 218.49 feet; thence North 65 degrees 35 minutes 32 seconds East, 138.44 feet; thence along a curve to the right, the chord of which bears South 71 degrees 51 minutes 58 seconds East, 27.05 feet and the radius of which bears South 24 degrees 24 minutes 28 seconds East, 20.00 feet from the last mentioned point, an arc distance of 29.70 feet to the West line of Schulte Road (variable width); thence along said West line Schulte Road, as described in Book 7631, Page 1576 of said records, South 29 degrees 19 minutes 28 seconds East, 34.48 feet to the aforementioned corporate limit line of the City of Creve Coeur; thence along said line the following courses and distances; thence along a curve to the left, the chord of which bears South 68 degrees 42 minutes 21 seconds West, 247.13 feet and the radius point of which bears South 12 degrees 27 minutes 00 seconds East, 803.69 feet from the last mentioned point, an arc distance of 248.11 feet; thence South 59 degrees 51 minutes 43 seconds West, 104.63 feet; thence South 60 degrees 01 minutes 53 seconds West, 200.09 feet to the POINT OF BEGINNING, containing 1.009 acre, more or less.





# SITE



## REFERENCE

1. IMAGE DEPICTED COURTESY OF CREVE COEUR DEPARTMENT OF COMMUNITY DEVELOPMENT, GOVERNMENT CENTER, 300 N. NEW BALLAS ROAD, CREVE COEUR, MO 63141.

\*HAND SIGNATURE ON FILE



### Civil & Environmental Consultants, Inc.

4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042

314-656-4566 · 866-250-3679

www.cecinc.com

WALLIS COMPANIES  
106 EAST WASHINGTON  
CUBA, MO 65453  
(636) 549-1600

### BRITE WORX/MOBIL ON THE RUN ZONING MAP

|           |           |             |        |              |         |             |
|-----------|-----------|-------------|--------|--------------|---------|-------------|
| DRAWN BY: | MAK       | CHECKED BY: | KTK    | APPROVED BY: | KTK*    | FIGURE NO.: |
| DATE:     | NOV. 2016 | DWG SCALE:  | (NONE) | PROJECT NO:  | 110-241 |             |



## TECHNICAL MEMORANDUM

**Date:** November 13, 2017

**To:** Mr. Kevin T. Kamp, P.E.

**From:** Lee Cannon, P.E., PTOE

**CBB Job Number:** 091-16-08

**Project:** Work Order 8 – Creve Coeur Mobil Gas Station  
Creve Coeur, Missouri

CBB has completed this addendum to the traffic impact study dated 11/4/16 pertaining to the Proposed Mobil Gas and Convenience Store with Car Wash redevelopment in Creve Coeur, Missouri. The redevelopment site is located on the northwest quadrant of Olive Boulevard at Schulte Road.

### Revised Site Plan

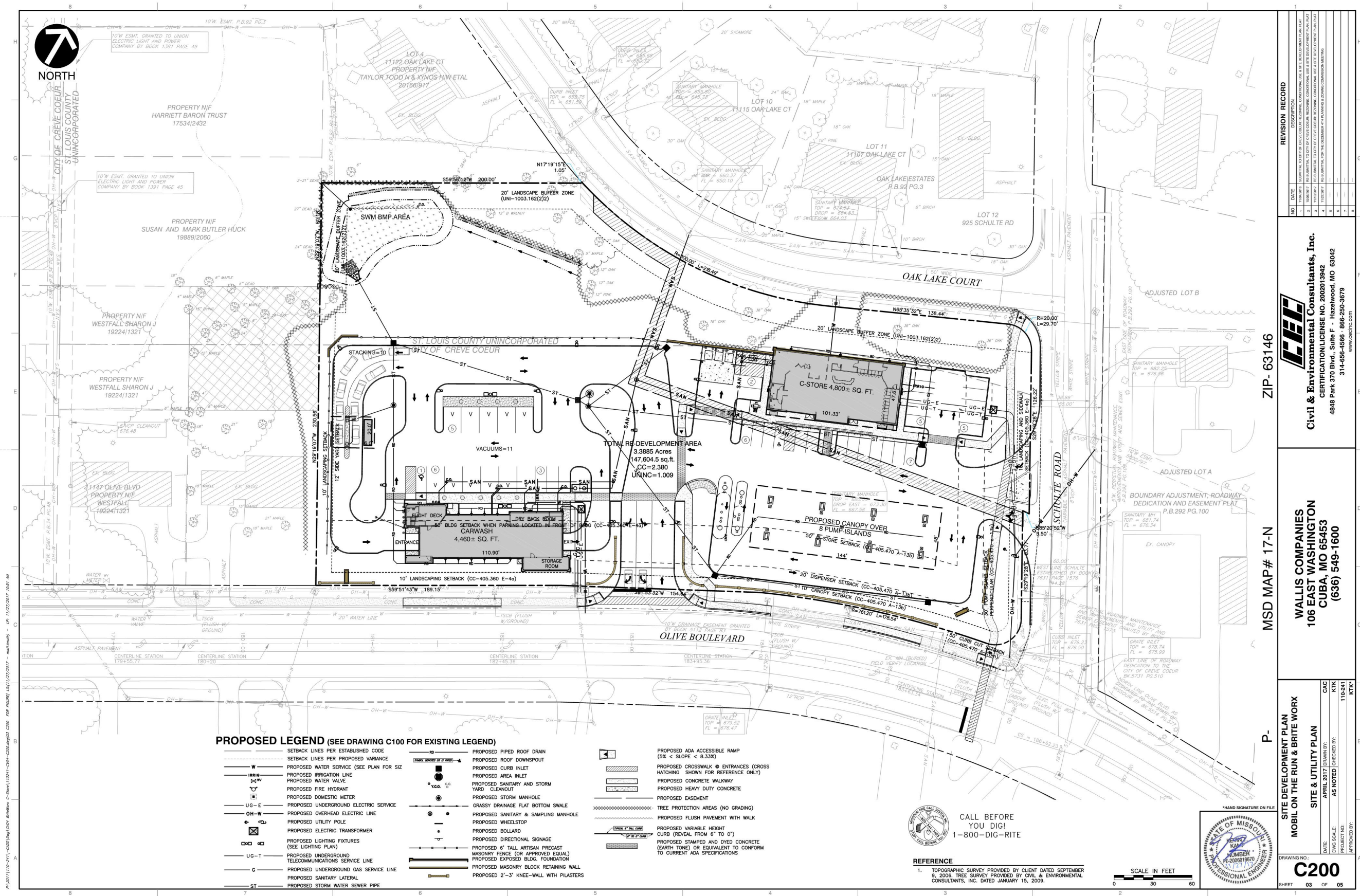
It is our understanding the site plan for the proposed redevelopment has been revised. The site plan provided for the original traffic impact study showed the proposed access plan for the site would consist of one right-out only driveway along Olive Boulevard near the west property line, one full access driveway on Olive Boulevard, and one three-quarter access driveway (no left-turn in) is on Schulte Road.

Exhibit 1R illustrates the revised preliminary site plan. As can be seen in Exhibit 1R, the proposed access for the site would consist of one full access driveway on Olive Boulevard, and one three-quarter access driveway (no left-turn in) on Schulte Road. The previously proposed right-out-only along Olive Boulevard was eliminated. The proposed 20 vehicle fueling positions were reduced to 16 vehicle fueling positions.

### Revised Full Access Driveway

The proposed full access curb cut on Olive Boulevard in the original site plan was approximately 345 feet west of Schulte Road. On the revised site plan, the proposed full access curb cut on Olive Boulevard is approximately 320 feet west of Schulte Road. We acknowledge that the proposed full access driveway is still slightly closer to Schulte than MoDOT's desired corner clearance distance per their Access Management Guidelines, but the proposed development significantly improves access management along Olive Boulevard by reducing the five-existing full-access curb cuts to one curb cut.





**Civil & Environmental Consultants, Inc.**  
CERTIFICATION LICENSE NO. 202013942  
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042  
314-656-4566 - 866-250-3679  
WWW.CECINC.COM

**WALLIS COMPANIES**  
106 EAST WASHINGTON  
CUBA, MO 65453  
(636) 549-1600

**SITE DEVELOPMENT PLAN**  
**MOBIL ON THE RUN & BRITE WORX**  
**SITE & UTILITY PLAN**  
DATE: APRIL 2017  
DRAWN BY: KTK  
AS NOTED  
CHECKED BY: KTK  
APPROVED BY: KTK

Exhibit 1R: Revised Preliminary Site Plan (Provided by Others)



### Revised Trip Generation

As noted above, the revised site plan shows that the proposed redevelopment would consist of 16 vehicle fueling positions which is a decrease from the originally proposed 20 vehicle fueling positions. The decrease in the number of vehicle fueling positions is expected to decrease the number of expected trips generated during the AM, Midday, and PM peak hours of a typical weekday.

CBB previously performed manual turning movement counts at the existing site driveways and found the current gas station generates 80 total trips during the AM peak hour, 120 total trips during the Midday peak hour and 100 trips during the PM peak hour with 8 vehicle fueling positions. In order to estimate the forecasted trips for the reconstructed store, the trips to the current store were increased based on the percentage increase in the number of vehicle fueling positions. **Table 1R** summarizes the trips counted at the existing Mobil and the projected trips based the previously proposed site plan and the current revised site plan. For simplicity, the trip estimate doubled the counts sin the new store will have twice as many vehicle fueling positions as the existing store.

**Table 1R: Local Trip Generation Estimate – Based on Current Site Counts and Number of Fueling Positions**

| Land Use                                        | No. of Vehicle Fueling Positions | AM Peak Hour |           |            | Midday Peak Hour |            |            | PM Peak Hour |            |            |
|-------------------------------------------------|----------------------------------|--------------|-----------|------------|------------------|------------|------------|--------------|------------|------------|
|                                                 |                                  | In           | Out       | Total      | In               | Out        | Total      | In           | Out        | Total      |
| Existing Mobil Station                          | 8                                | 45           | 35        | 80         | 65               | 55         | 120        | 50           | 50         | 100        |
| Original Study Mobil Station Estimate           | 20                               | 115          | 85        | 200        | 165              | 135        | 300        | 125          | 125        | 250        |
| <b>Revised Site Plan Mobil Station Estimate</b> | <b>16</b>                        | <b>90</b>    | <b>70</b> | <b>160</b> | <b>130</b>       | <b>110</b> | <b>240</b> | <b>100</b>   | <b>100</b> | <b>200</b> |

CBB was provided customer transaction counts (gross receipts) for a similar Mobil gas station further east on Olive Boulevard in Olivette, Missouri. That location was also recently rebuilt to provide the improved convenience store, car wash and sixteen vehicle fueling positions to the brand's "Mobil on the Run" status. Based on the transaction counts, a trip generation estimate was made based on the same number of vehicle fueling positions at the proposed Schulte Store. **Table 2R** summarizes the trip estimate based on the similar facility records. For simplicity, the trip estimate was equal to the transactions forecast since the two stores will have the same number of vehicle fueling positions.





**Table 2R: Estimated Trips for Proposed Mobil Gas Station Rebuild Based on Similar Site Transaction Data**

| Land Use                                        | No. of Vehicle Fueling Positions | AM Peak Hour |           |            | Midday Peak Hour |            |            | PM Peak Hour |           |            |
|-------------------------------------------------|----------------------------------|--------------|-----------|------------|------------------|------------|------------|--------------|-----------|------------|
|                                                 |                                  | In           | Out       | Total      | In               | Out        | Total      | In           | Out       | Total      |
| Similar Mobil Station (Transaction Data)        | 16                               | 80           | 80        | 160        | 125              | 125        | 250        | 95           | 95        | 190        |
| Original Study Mobil Station Estimate           | 20                               | 100          | 100       | 200        | 155              | 155        | 310        | 120          | 120       | 240        |
| <b>Revised Site-Plan Mobil Station Estimate</b> | <b>16</b>                        | <b>80</b>    | <b>80</b> | <b>160</b> | <b>125</b>       | <b>125</b> | <b>250</b> | <b>95</b>    | <b>95</b> | <b>190</b> |

When comparing both methods above, trips are expected to be on the same order of magnitude for the proposed store. However, the trip estimate for the Mobil gas station based on transaction data is expected to be the most accurate trip forecast since it is based on local data for this exact use. Therefore, the trips estimated by the transactional data (Table 2R) were considered below.

It should be reiterated that the existing Mobil station already generates trips on the roadway system. Therefore, the existing trips were not assigned, resulting in a net increase in trips, as shown in **Table 3R**.

Furthermore, not all of the added site trips would represent *new* traffic on the adjacent roadways. A significant portion of the traffic attracted to this site would already be traveling on Olive Boulevard or Shulte Road as part of another trip (i.e., “pass-by” trips). These trips would represent patrons attracted to the gas station on their way to or from home, work, or another destination as a “convenience stop”. Based upon statistical information provided in the *Trip Generation Handbook, A Recommended Practice* it was assumed that 62% of the development’s traffic would be pass-by in nature during the AM peak hour, and 56% of the development’s traffic would be pass-by during the PM peak hour. ITE does not provide a pass-by percentage for the Midday peak hour so the pass-by percentage from the PM peak hour was also used during the Midday peak hour. As seen in Table 3R, the proposed gas station would generate roughly double the total trips to and from the existing gas station (turns at the site driveways) with 30 *new* trips during the AM peak hour, 60 *new* trips during the Midday peak hour, 40 *new* trips during the PM peak hour.



**Table 3R: Increase in Trips for Proposed Mobil Gas Station Rebuild**

|                                       | AM Peak Hour |           |           | Midday Peak Hour |           |            | PM Peak Hour |           |           |
|---------------------------------------|--------------|-----------|-----------|------------------|-----------|------------|--------------|-----------|-----------|
|                                       | In           | Out       | Total     | In               | Out       | Total      | In           | Out       | Total     |
| Estimated Trips to Revised Mobil Site | 80           | 80        | 160       | 125              | 125       | 250        | 95           | 95        | 190       |
| Trips to Existing Mobil Site          | (45)         | (35)      | (80)      | (65)             | (55)      | (120)      | (50)         | (50)      | (100)     |
| <b>Net Increase in Total Trips</b>    | <b>35</b>    | <b>45</b> | <b>80</b> | <b>60</b>        | <b>70</b> | <b>130</b> | <b>45</b>    | <b>45</b> | <b>90</b> |
| Pass-By Trips                         | 25           | 25        | 50        | 35               | 35        | 70         | 25           | 25        | 50        |
| New Trips                             | 10           | 20        | 30        | 25               | 35        | 60         | 20           | 20        | 40        |

### **Traffic Operations**

The site-generated trips would be expected to decrease by roughly 20% from those shown in original traffic impact study. Consequently, the operations at those driveways would be better than the results shown in the original study. Since the developer is still willing to abide by the findings of the original traffic impact study, those recommended improvements will better mitigate the lower number of added trips.

### **Conclusion**

In summary, the revised site plan for the Proposed Mobil Gas and Convenience Store with Car Wash redevelopment in Creve Coeur, Missouri is expected to decrease the site-generated trips by roughly 20% from the levels shown in the original traffic impact study dated 11/4/16. With the expected decrease in site-generated trips at the site driveways, the operations at those driveways would be improved from the results shown in the original traffic impact study. No further improvements from those previously recommended are required or necessary. Should there be any questions regarding this addendum, please contact me at 314-308-6547 or [Lcannon@cbbtraffic.com](mailto:Lcannon@cbbtraffic.com).

Sincerely,

Lee Cannon, P.E., PTOE  
Principal, Traffic Engineer



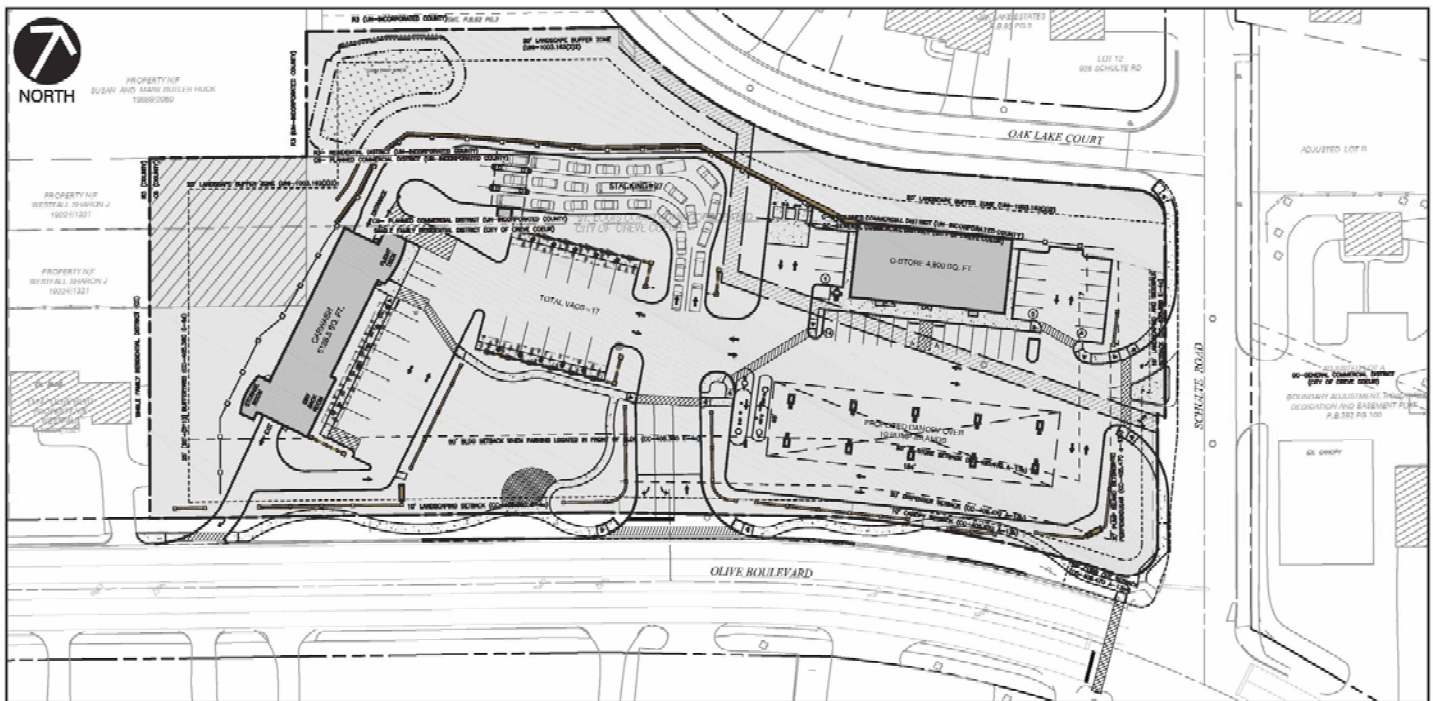
# Traffic Impact Study

for

## Proposed Mobil Rebuild with Car Wash

Creve Coeur, Missouri

11.04.2016



OVERALL SITE MAP

SCALE: 1" = 50'

prepared by:



prepared for:

Civil & Environmental Consultants, I  
4848 Park 370 Boulevard, Suite F  
Hazelwood, Missouri 63042

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

## Table of Contents

|                                                                                  |           |
|----------------------------------------------------------------------------------|-----------|
| <b>TABLE OF CONTENTS.....</b>                                                    | <b>i</b>  |
| <b>LIST OF EXHIBITS .....</b>                                                    | <b>ii</b> |
| <b>LIST OF TABLES.....</b>                                                       | <b>ii</b> |
| <b>LIST OF FIGURES.....</b>                                                      | <b>ii</b> |
| <b>INTRODUCTION.....</b>                                                         | <b>1</b>  |
| <b>BASE TRAFFIC CONDITIONS .....</b>                                             | <b>4</b>  |
| EXISTING ROAD SYSTEM .....                                                       | 4         |
| BASE TRAFFIC VOLUMES .....                                                       | 5         |
| BASE OPERATING CONDITIONS .....                                                  | 6         |
| QUEUE OBSERVATIONS .....                                                         | 10        |
| DELAY OBSERVATIONS AT OLIVE BOULEVARD AND WOODSHIRE LANE/RENEE LANE .....        | 11        |
| <b>PROPOSED REDEVELOPMENT.....</b>                                               | <b>12</b> |
| PROPOSED ACCESS.....                                                             | 12        |
| DRIVEWAY SIGHT DISTANCE.....                                                     | 12        |
| TRIP GENERATION.....                                                             | 13        |
| <i>Trip Generation – ITE Data</i> .....                                          | 13        |
| <i>Trip Generation – Local Data</i> .....                                        | 14        |
| TRIP DISTRIBUTION .....                                                          | 16        |
| <b>2016 BUILD CONDITIONS.....</b>                                                | <b>18</b> |
| 2016 BUILD TRAFFIC VOLUMES .....                                                 | 18        |
| RIGHT-TURN LANE WARRANTS .....                                                   | 18        |
| 2016 BUILD OPERATING CONDITIONS .....                                            | 20        |
| ALTERNATIVES ANALYSIS .....                                                      | 22        |
| <i>Signal Timing Adjustments</i> .....                                           | 22        |
| <i>Add Flashing Yellow Arrow</i> .....                                           | 22        |
| <i>Provide a Southbound Right-Turn Lane</i> .....                                | 22        |
| <i>Provide Dual Southbound Left-Turn Lanes and Split-Phase North-South</i> ..... | 23        |
| <i>Pedestrian Issues</i> .....                                                   | 24        |
| <b>20-YEAR CONDITIONS .....</b>                                                  | <b>27</b> |
| FORECASTED 20-YEAR NO-BUILD CONDITIONS (2036) .....                              | 27        |
| FORECASTED 20-YEAR BUILD CONDITIONS (2036) .....                                 | 27        |
| <b>CONCLUSIONS.....</b>                                                          | <b>34</b> |



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

## List of Exhibits

|                                                                 |    |
|-----------------------------------------------------------------|----|
| EXHIBIT 1: PRELIMINARY SITE PLAN (PROVIDED BY OTHERS) .....     | 2  |
| EXHIBIT 2: BASE TRAFFIC VOLUMES (2013 COUNTS) .....             | 7  |
| EXHIBIT 3: NET INCREASE OF SITE-GENERATED TRAFFIC VOLUMES ..... | 17 |
| EXHIBIT 4: 2016 BUILD TRAFFIC VOLUMES .....                     | 19 |
| EXHIBIT 5: 20-YEAR NO-BUILD TRAFFIC VOLUMES .....               | 28 |
| EXHIBIT 6: 20-YEAR BUILD TRAFFIC VOLUMES .....                  | 29 |

## List of Tables

|                                                                                                        |    |
|--------------------------------------------------------------------------------------------------------|----|
| TABLE 1: LEVEL OF SERVICE THRESHOLDS .....                                                             | 8  |
| TABLE 2: TRAFFIC OPERATING CONDITIONS – BASE TRAFFIC VOLUMES .....                                     | 9  |
| TABLE 3: OBSERVED DELAYS – EXISTING CONDITIONS .....                                                   | 11 |
| TABLE 4: ITE TRIP GENERATION ESTIMATE – MOBIL GAS STATION REBUILD .....                                | 14 |
| TABLE 5: LOCAL TRIP GENERATION ESTIMATE – BASED ON CURRENT TRIPS AND FUELING POSITIONS .....           | 14 |
| TABLE 6: ESTIMATED TRIPS FOR PROPOSED MOBIL GAS STATION REBUILD BASED ON TRANSACTION DATA .....        | 15 |
| TABLE 7: INCREASE IN TRIPS FOR PROPOSED MOBIL GAS STATION REBUILD .....                                | 16 |
| TABLE 8: TRAFFIC OPERATING CONDITIONS – BUILD TRAFFIC VOLUMES .....                                    | 21 |
| TABLE 9: BUILD OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – AM PEAK HOUR .....        | 24 |
| TABLE 10: BUILD OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – MIDDAY PEAK HOUR .....   | 25 |
| TABLE 11: BUILD OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – PM PEAK HOUR .....       | 26 |
| TABLE 12: PROGRESSION ANALYSIS – 70TH PERCENTILE LINK BANDS .....                                      | 26 |
| TABLE 13: 20-YEAR OPERATING CONDITIONS .....                                                           | 30 |
| TABLE 14: 20-YEAR OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – AM PEAK HOUR .....     | 32 |
| TABLE 15: 20-YEAR OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – MIDDAY PEAK HOUR ..... | 32 |
| TABLE 16: 20-YEAR OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – PM PEAK HOUR .....     | 33 |
| TABLE 17: 20-YEAR PROGRESSION ANALYSIS – 70 <sup>TH</sup> PERCENTILE LINK BANDS .....                  | 33 |

## List of Figures

|                                                  |    |
|--------------------------------------------------|----|
| FIGURE 1: SITE LOCATION MAP .....                | 1  |
| FIGURE 2: RIGHT-TURN LANE WARRANTS (MODOT) ..... | 18 |

*Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri*

## Introduction

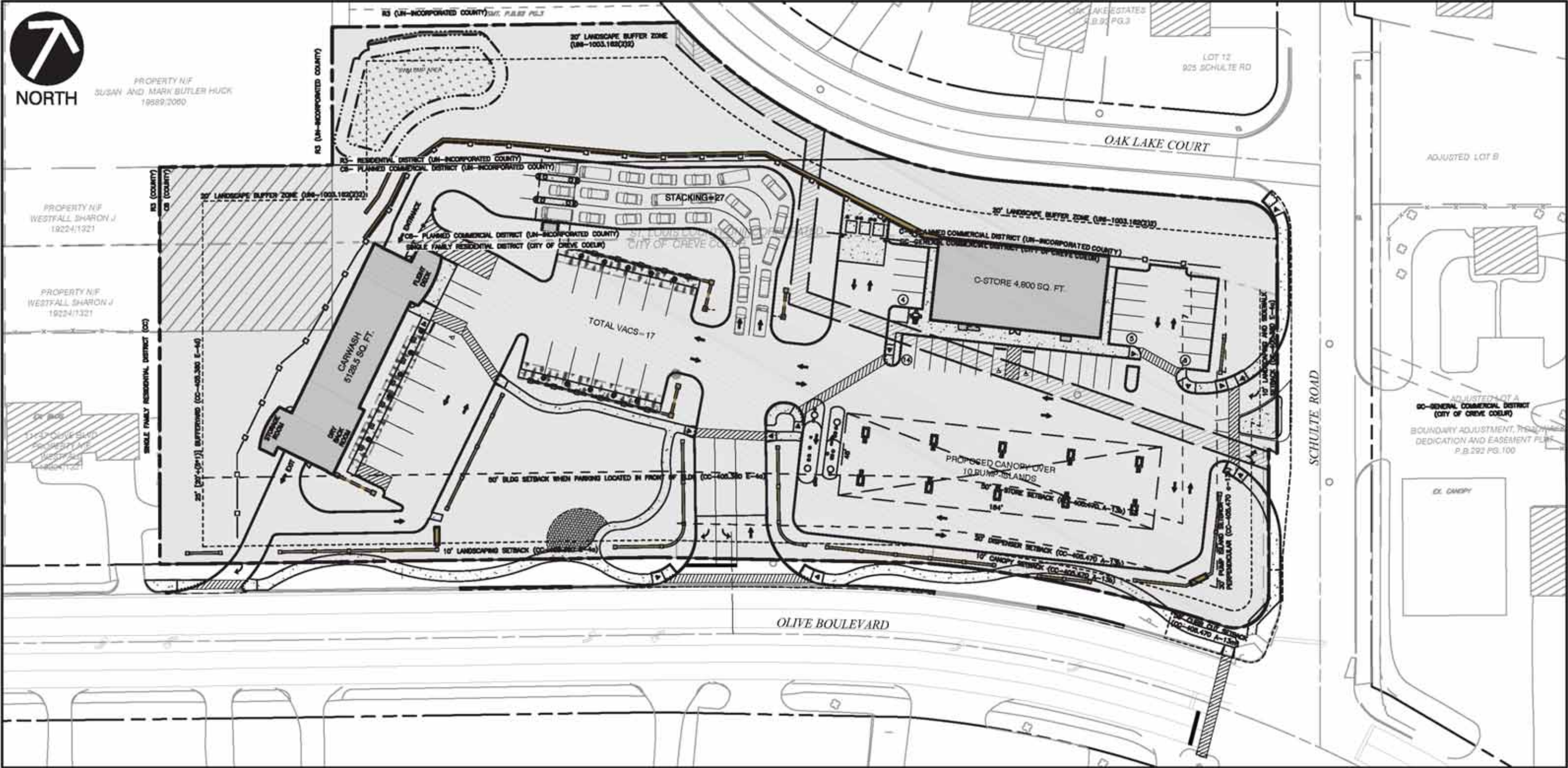
CBB has completed a traffic impact study for the Mobil Gas and Convenience Store with Car Wash redevelopment in Creve Coeur, Missouri. The redevelopment site is located on the northwest quadrant of Olive Boulevard at Schulte Road. The site location and the adjacent roadways are depicted in **Figure 1**.



**Figure 1: Site Location Map**

The existing Mobil gas station with eight vehicle fueling positions, small convenience kiosk, and car wash as well as three single-family homes along Olive Boulevard (currently used as commercial businesses) and three single-family homes along Oak Lake Court occupy the site today. It is our understanding that the existing Mobil gas station would be re-built with twenty vehicle fueling positions and an expanded convenience store, as well as an improved car wash. Access to the site would be provided via one right-out only driveway along Olive Boulevard near the west property line and one full access driveway on Olive Boulevard. Additionally, one three-quarter access driveway (no left-turn in) is proposed on Schulte Road. No access is proposed to Oak Lake Court. **Exhibit 1** illustrates the preliminary site plan provided by your civil engineer.





OVERALL SITE MAP  
SCALE: 1" = 50'

*Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri*

---

It should be noted that five curb cuts along Olive Boulevard (two to the existing Mobil site and three that serve residential structures operating as business) would be consolidated into the two access points noted above. The existing access to Schulte Road would be moved further to the north (away from the signal) to align with the existing Shell gas station on the east side of the road and would be limited to three-quarter access.

A scoping meeting was held with representatives from the Missouri Department of Transportation (MoDOT), the City of Creve Coeur and the development team. St. Louis County Department of Transportation (SLCDOT) was not able to attend the initial meeting but provided their comments and input separately. The purpose of this traffic study was to determine the number of trips that would be generated by the proposed re-development; evaluate the impact of those trips on operating conditions along the adjacent roadways; determine the ability of motorists to safely enter and exit the site and recommend appropriate access locations and configurations. Where necessary, roadway improvements and/or traffic control modifications have been recommended to mitigate the impact of the re-development. The focus of our analysis was the a.m., midday, and p.m. peak hours of a typical weekday. This scope does not include an analysis of internal circulation on the site itself or parking sufficiency.

The following report presents CBB's analysis comparing traffic conditions with and without the proposed redevelopment. The methodology employed to complete this study, along with the findings and conclusions, are discussed in greater detail in the subsequent sections. CBB followed current industry standard methods and processes in the completion of our work.



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

## **Base Traffic Conditions**

In order to identify the traffic impacts associated with the proposed development, it is essential to understand the pre-development traffic conditions in the area. To that end, it was necessary to perform an operational analysis of the base traffic volumes on the surrounding road system. Therefore, any deficiencies in the current road system will be identified before the traffic generated by the proposed redevelopment is added to the system.

### **Existing Road System**

**Olive Boulevard** (Missouri Route 340) is owned and maintained by MoDOT. Olive Boulevard is a major east-west arterial with a five-lane cross-section: two through lanes in each direction and a center left-turn lane. However, the left-turn lanes at Schulte Road/Mary Meadows Lane are substandard in width – 9 feet on the east and west leg. There is also a sweeping horizontal curve at this intersection that restricts sight distance along the roadway, particularly visibility on the south side. The approaches of Schulte Road and Mary Meadows Lane are offset (Mary Meadows Lane intersects Olive Boulevard further to the west) and skewed relative to the Olive Boulevard centerline, which is undesirable from an operational and safety perspective.

**Schulte Road** is a two-lane urban collector owned and maintained by SLCDOT. Schulte Road serves a large residential area to the north. A dedicated southbound left-turn lane and a shared through/right-lane are provided at the signalized intersection with Olive Boulevard. A separate northbound left-turn lane, albeit very short, is marked on Schulte Road at Oak Lake Court.

**Oak Lake Court** is a cul-de-sac residential street that currently serves 10 single-family homes. Oak Lake Court has access to Schulte Road a few hundred feet north of Olive Boulevard. Oak Lake Court is owned and maintained by SLCDOT.

**Mary Meadows Lane** is a private 24-foot wide, residential street that serves eighteen homes with one commercial driveway connection for the building in the southeast quadrant of Olive Boulevard and Mary Meadows. A channelized lane for eastbound-to-southbound right-turns is provided (this lane is separated by a raised median). The alignment and configuration of this lane is awkward and appears to be a remnant of a previous alignment modification. It was also noted that the vertical profile and horizontal alignment of Mary Meadows Lane restricts the sight distance across Olive Boulevard between northbound and southbound motorists approaching the intersection.

This study intersection is part of a coordinated system along Olive Boulevard with cycle lengths that are set at 140 seconds during the AM and PM peak hours and 120 seconds during the weekday and Saturday midday peak hours. At the signalized intersection of Olive Boulevard with Schulte Road/Mary Meadows Lane, the northbound and southbound approaches operate on a common phase while the eastbound and westbound left-turns operate with protected-plus-permitted Flashing Yellow Arrow (FYA) phasing.

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

**Dautel Lane** is a local roadway that serves a residential area north of Olive Boulevard with two commercial driveways that serve a pharmacy and jewelry store/thrift shop. A dedicated southbound left-turn lane and a shared through/right-lane are provided at the signalized intersection with Olive Boulevard.

**Graeser Road** is a two-lane urban collector owned and maintained by SLCDOT. Graeser Road serves a large residential area to the south with driveway access to commercial uses that front Olive Boulevard. A dedicated northbound left-turn lane and a shared through/right-lane are provided at the signalized intersection with Olive Boulevard.

At the signalized intersection of Olive Boulevard with Dautel Lane/Graeser Road, the northbound and southbound approaches operate on a common phase with Flashing Yellow Arrow phasing while the eastbound and westbound left-turns operate with protected-plus-permitted Flashing Yellow Arrow phasing.

**Woodshire Lane** is a cul-de-sac local residential street that serves eighteen single-family homes to the north of Olive Boulevard. Woodshire Lane is located nearly opposite Renee Lane, offset slightly to the east.

**Renee Lane** is a local residential street that provides access to two cul-de-sac residential streets and serves approximately forty single-family homes to the south of Olive Boulevard.

**Mosley Road** is a local urban collector road that serves a large residential area to the south with access driveways to commercial/office uses that front Olive Boulevard. Separate northbound left-turn and right-turn lanes are provided at the signalized intersection with Olive Boulevard.

The signalized intersection of Olive Boulevard with Mosley Road is a “T” intersection with the westbound left-turns operating with protected-plus-permitted Flashing Yellow Arrow phasing.

### **Base Traffic Volumes**

The following intersections were included in the traffic impact study analyses:

- Olive Boulevard at Mosley Road (Signalized);
- Olive Boulevard at Schulte Road/Mary Meadows Lane (Signalized);
- Olive Boulevard at Dautel Lane/Graeser Road (Signalized);
- Olive Boulevard at Woodshire Lane/Renee Lane (Side-Street Stop); and
- Oak Lake Court at Schulte Road (Side-Street Stop).

Turning movement traffic counts were collected by CBB in 2013 as part of the Olive Boulevard (Route 340) signal retiming project. The traffic counts collected at the signalized intersections of Olive Boulevard with Mosley Road, Schulte Road/Mary Meadows Lane, and Dautel Lane/Graeser Road were used for this traffic study. Based on this count data, the peak hours of the intersection identified for analysis were the morning (7:45 to 8:45 a.m.), midday (12:00 p.m. to 1:00 p.m.), and afternoon (4:30 to 5:30 p.m.) peak hours of a typical weekday.



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

These counts were supplemented with new traffic counts and delay observations conducted by CBB during the weekday morning (7:00 - 9:00 a.m.), midday (11:00 a.m. to 1:00 p.m.) and weekday afternoon (4:00 - 6:00 p.m.) peak periods at the intersection of Olive Boulevard with Woodshire Lane/Renee Lane. Spot counts were also performed at the existing Mobil driveways to determine peak hour trips. Queue observations were also made for westbound Olive Boulevard at Schulte Road and southbound Schulte Road at Olive Boulevard. Trip estimates were utilized to address traffic for the 10 homes on Oak Lake Court. The Base Traffic Volumes are summarized in **Exhibit 2**.

As can be seen, the traffic volumes are relatively consistent during the three peak hours. The east-west volumes on Olive Boulevard are heavy during each peak hour. Traffic volumes to and from Mary Meadows Lane are relatively light since the street only serves eighteen homes. Traffic to and from Schulte Road is moderate with the heaviest volumes occurring in the p.m. peak hour.

### **Base Operating Conditions**

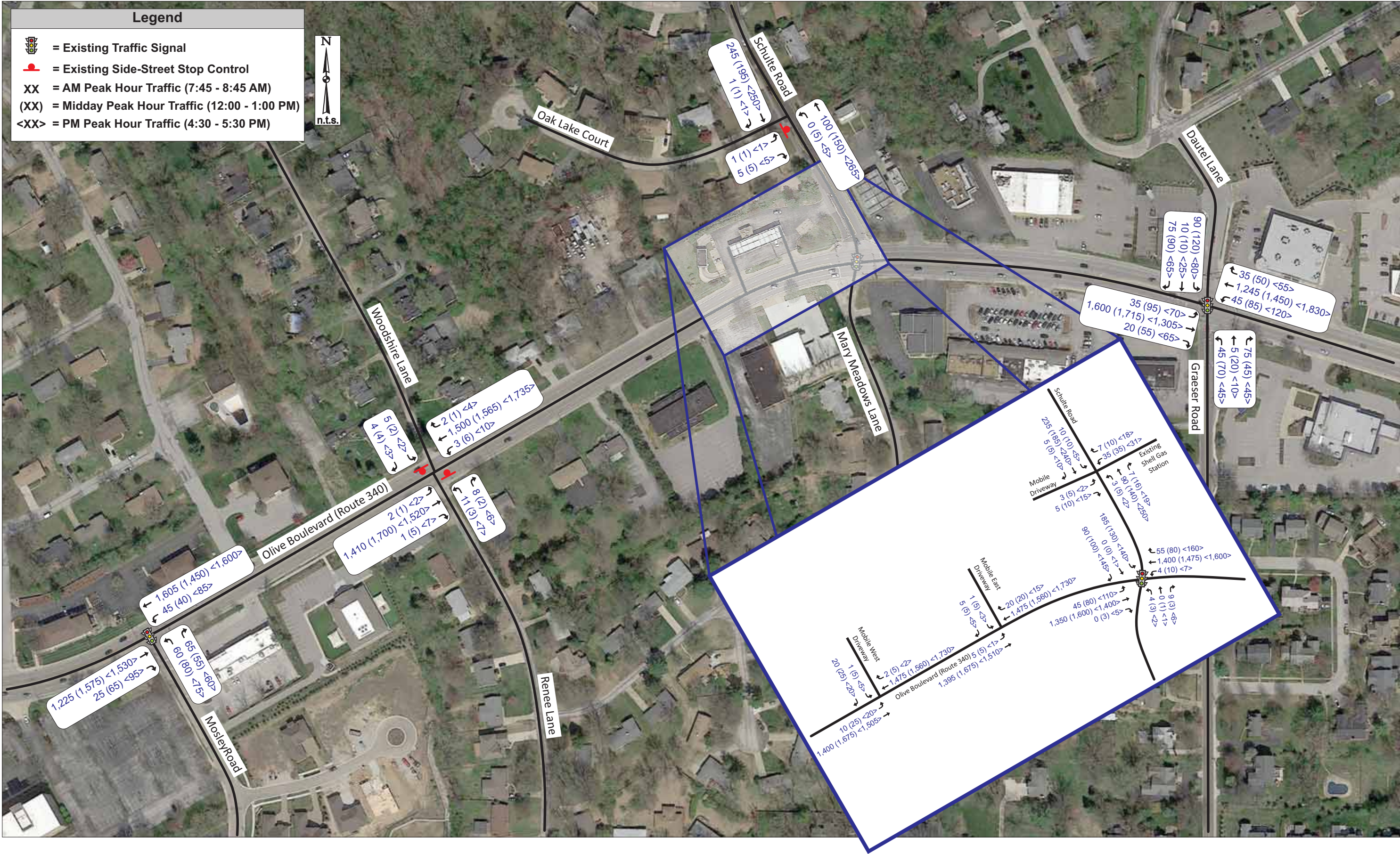
The base operating conditions for the study area intersections were evaluated using SYNCHRO 8, which is based on procedures outlined in the *Highway Capacity Manual* to determine estimates of capacity and operational performance of signalized and unsignalized intersections. Our traffic operations analysis includes measures of effectiveness generated by the SYNCHRO software.

The operating conditions were graded in accordance with six levels of traffic service (Level A "Free Flow" to Level F "Fully Saturated") established by the *Highway Capacity Manual*. Levels of service (LOS) are measures of traffic flow which consider such factors as speed, delay, traffic interruptions, safety, driver comfort, and convenience. Level C, which is normally used for highway design, represents a roadway with volumes ranging from 70% to 80% of its capacity. However, Level D is generally considered acceptable for peak period conditions.

It must also be acknowledged that the perception of acceptable traffic service varies widely by area. Specifically, more delay is usually tolerated in urban areas compared to rural areas. Based on the character of this area, we believe that LOS D would be a desirable target for overall peak period traffic operations but may not be achievable for the unsignalized movements due to the heavy peak hour volumes along Olive Boulevard.

The thresholds that define levels of service at an intersection are based upon the type of control used (i.e., whether it is signalized or unsignalized) and the calculated delay. For signalized and all-way stop intersections, the average control delay per vehicle is estimated for each movement and aggregated for each approach and the intersection as a whole. At intersections with partial (side-street) stop control, delay is calculated for the minor movements only since motorists on the main road are not required to stop. Furthermore, criteria differ for the two, since control types create different driver expectations. **Table 1** summarizes the level of service thresholds used in this analysis.







**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 1: Level of Service Thresholds**

| <b>Level of Service (LOS)</b> | <b>Control Delay per Vehicle (sec/veh)</b> |                                   |
|-------------------------------|--------------------------------------------|-----------------------------------|
|                               | <b>Signalized Intersections</b>            | <b>Unsignalized Intersections</b> |
| A                             | ≤ 10                                       | 0-10                              |
| B                             | > 10-20                                    | > 10-15                           |
| C                             | > 20-35                                    | > 15-25                           |
| D                             | > 35-55                                    | > 25-35                           |
| E                             | > 55-80                                    | > 35-50                           |
| F                             | > 80                                       | > 50                              |

It should be noted that the unsignalized intersections within the study area were evaluated using the HCM 2010 module in the Synchro software. Each of the study intersections was evaluated using the methodologies described above. The results of the SYNCHRO evaluations are summarized in **Table 2**. Levels of service and average delay for each intersection approach are reported for the weekday AM, Midday, and PM peak hours.

Operating conditions at the study intersections are generally favorable (LOS C or better overall and LOS D or better by approach) with the exception of northbound Renee Lane during the midday and PM peak hours, the southbound approach of Woodshire Lane during the PM peak hour, the southbound approach of Schulte Road at Olive Boulevard during the AM peak hour, the southbound approach of the Mobil West Driveway during the midday and PM peak hours, and the southbound approach of the Mobil East Driveway during the AM, midday and PM peak hours.

The lengthy delays for southbound Schulte Road are primarily due to a relatively long cycle (140 second AM/PM and 120 second midday) with a relatively small amount of green time allocated to Schulte Road/Mary Meadows Lane. It should be noted that the calculated volume to capacity ratios (v/c) do not exceed 1.0 during the peak hours but did reach 0.92 during the AM peak hour, 0.78 during the Midday peak hour and 0.82 during the PM peak hour. In this case, the cycle length dictates the poor level of service during the AM peak hour and drives the longer delays in the Midday and PM peak hours. The northbound and southbound approaches have minimal green times to maximize progression bands for the heavy eastbound and westbound through movements.

The southbound approaches exiting the current Mobil East and West Driveways operate poorly due to the heavy traffic volumes along Olive Boulevard and the close spacing of the Mobil Driveways from the Schulte Road signal, which typically does not allow for two-stage left-turns; therefore, no two-stage left-turns were assumed in the analyses for the Mobil driveways. If two-stage left-turns were completed by motorists, then the calculated southbound delays may improve.

The analyses software results indicate that the existing movements from Renee Lane and Woodshire Lane operate at less than desirable levels during the PM peak and southbound

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

approach during the midday peak, primarily due to the heavy east-west traffic along Olive Boulevard. It should be noted that current delay observations were made at Renee Lane/Woodshire Lane, which is discussed further below.

**Table 2: Traffic Operating Conditions – Base Traffic Volumes**

| Intersection/Approach                                                          | AM Peak Hour     | Midday Peak Hour | PM Peak Hour     |
|--------------------------------------------------------------------------------|------------------|------------------|------------------|
| <b><i>Olive Boulevard and Mosley Road – Signalized</i></b>                     |                  |                  |                  |
| Eastbound Olive Boulevard                                                      | A (2.4)          | A (5.3)          | A (5.9)          |
| Westbound Olive Boulevard                                                      | B (12.1)         | A (9.6)          | B (10.9)         |
| Northbound Mosley Road                                                         | D (43.9)         | D (43.3)         | D (48.5)         |
| <b>Overall Intersection</b>                                                    | <b>A (9.4)</b>   | <b>A (8.9)</b>   | <b>B (10.0)</b>  |
| <b><i>Olive Boulevard and Woodshire Lane/Renee Lane – Side-Street Stop</i></b> |                  |                  |                  |
| Eastbound Left-Turn Olive Boulevard                                            | B (14.2)         | B (14.8)         | C (16.6)         |
| Westbound Left-Turn Olive Boulevard                                            | B (13.4)         | C (16.4)         | B (14.6)         |
| Northbound Renee Lane                                                          | D (32.6)         | E (43.5)         | E (35.5)         |
| Southbound Woodshire Lane                                                      | D (33.3)         | D (28.2)         | E (36.7)         |
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b>  |                  |                  |                  |
| Eastbound Olive Boulevard                                                      | B (17.0) 20' LT  | B (10.4) 30' LT  | B (16.8) 105' LT |
| Westbound Olive Boulevard                                                      | B (11.0)         | A (4.8)          | A (8.3)          |
| Northbound Mary Meadows Lane                                                   | D (51.2)         | D (44.3)         | D (51.3)         |
| Southbound Schulte Road                                                        | E (71.8) 335' LT | D (46.3) 190' LT | D (53.8) 225' LT |
| <b>Overall Intersection</b>                                                    | <b>B (19.2)</b>  | <b>B (10.3)</b>  | <b>B (15.6)</b>  |
| <b><i>Olive Boulevard and Dautel Lane/Graeser Road – Signalized</i></b>        |                  |                  |                  |
| Eastbound Olive Boulevard                                                      | A (6.2)          | B (15.3)         | B (11.4)         |
| Westbound Olive Boulevard                                                      | B (15.0)         | B (15.9)         | C (29.1)         |
| Northbound Dautel Lane                                                         | C (32.3)         | D (36.6)         | D (41.6)         |
| Southbound Graeser Road                                                        | D (49.9)         | D (42.6)         | D (50.4)         |
| <b>Overall Intersection</b>                                                    | <b>B (13.1)</b>  | <b>B (17.9)</b>  | <b>C (23.6)</b>  |
| <b><i>Oak Lake Court and Schulte Road – Side-Street Stop</i></b>               |                  |                  |                  |
| Eastbound Oak Lake Court                                                       | A (9.9)          | A (9.6)          | B (10.2)         |
| Northbound Left-Turn Schulte Road                                              | A (7.7)          | A (7.7)          | A (7.8)          |
| <b><i>Schulte Road at Mobil/Shell Driveway – Side-Street Stop</i></b>          |                  |                  |                  |
| Eastbound Mobil Driveway                                                       | B (10.4)         | B (10.2)         | B (10.3)         |
| Westbound Shell Driveway                                                       | B (11.5)         | B (11.6)         | B (13.0)         |
| Northbound Schulte Road                                                        | A (7.7)          | A (7.7)          | A (7.8)          |
| Southbound Schulte Road                                                        | A (7.4)          | A (7.6)          | A (7.8)          |
| <b><i>Olive Boulevard at Mobil West Driveway – Side-Street Stop</i></b>        |                  |                  |                  |
| Eastbound Left-Turn Olive Boulevard                                            | B (14.2)         | B (13.3)         | C (17.3)         |
| Southbound Mobil Driveway                                                      | C (23.9)         | F (77.7)         | F (104.8)        |
| <b><i>Olive Boulevard at Mobil East Driveway – Side-Street Stop</i></b>        |                  |                  |                  |
| Eastbound Left-Turn Olive Boulevard                                            | B (14.2)         | C (15.5)         | C (16.7)         |
| Southbound Mobil Driveway                                                      | E (36.7)         | F (78.0)         | F (115.0)        |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

### **Queue Observations**

The eastbound queues along Olive Boulevard from the traffic signal at Schulte Road and southbound queues along Schulte Road from the Olive Boulevard signal were observed during the AM, Midday and PM peak hours. Queue observations were made to verify the Synchro estimated queues and determine potential blockages of the proposed access points.

The location of the existing Mobil East driveway allows approximately two vehicles to stack on Olive Boulevard eastbound (approximately 65 feet) before it is blocked, while the Mobile West Driveway allows approximately 5 or 6 vehicles to stack (approximately 185 feet) before it is blocked. The proposed full access further to the west on Olive Boulevard will allow 10 or 11 vehicles to stack (approximately 265 feet) before it will be blocked.

Based on the field observations during the AM, Midday and PM peak hours, there is a heavy, steady flow of traffic on Olive Boulevard during the AM and PM peak hours, with moderate to heavy traffic during the Midday peak hour. The eastbound queues on Olive Boulevard at Schulte Road/Mary Meadows Lane are routinely long during the AM, Midday and PM peak hours.

AM peak observations indicate that the eastbound left-turn queue along Olive Boulevard from Schulte Road had a maximum length of 3, 6, and 5 vehicles during the AM, Midday, and PM peak hours, respectively. Observations indicate that the eastbound left-turn queues all cleared each time the cycle changed to green during the AM, Midday and PM peak hours. Observations also indicated that the eastbound left-turn queues blocked the existing driveways several times during the peak hours. However, since the proposed relocated access will allow for more storage in the eastbound left-turn lane, the proposed driveway location should not be blocked during any of the peak hours.

The existing Mobil gas station driveway on Schulte Road allows approximately 3 vehicles to stack (approximately 75 feet) before it is blocked. The proposed three-quarter access (no left-turn in) on Schulte Road would allow approximately 4 vehicles to stack (approximately 100 feet) before will be blocked.

Observations indicate that the southbound left-turn queue along Schulte Road from Olive Boulevard had a maximum queue of 11, 7 and 10 vehicles during the AM, Midday, and PM peak hours, respectively, while average queues were 8, 6 and 7 vehicles, respectively. Observations further indicate that the southbound left-turn queues cleared a vast majority of the time each cycle during the AM, Midday and PM peak hours. Peak hour observations indicate that the southbound left-turn queues blocked the existing Mobil and Shell driveways several times during the peak hours and local drivers tend to spill back into the northbound left-turn lane marked for Oak Lake Court in order to leave the right-turn lane clear.

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Delay Observations at Olive Boulevard and Woodshire Lane/Renee Lane**

CBB also recorded the actual delays experienced by vehicles attempting to turn from Woodshire Lane and Renee Lane onto Olive Boulevard during the AM, Midday and PM peak hours to verify the accuracy of the average delays reported in the analyses. Based on the total volume on the side streets and the total measured delay for each vehicle, the average delays observed for the southbound approach of Woodshire Lane and northbound Renee Lane are summarized in **Table 3**. These average delays included both left and right-turning vehicles which share each exit lane.

**Table 3: Observed Delays – Existing Conditions**

| Intersection/Approach                                                          | AM Peak Hour | Midday Peak Hour | PM Peak Hour |
|--------------------------------------------------------------------------------|--------------|------------------|--------------|
| <b><i>Olive Boulevard and Woodshire Lane/Renee Lane – Side-Street Stop</i></b> |              |                  |              |
| Northbound Renee Lane                                                          | 21.6 sec     | 25.2 sec         | 36.2 sec     |
| Southbound Woodshire Lane                                                      | 28.3 sec     | 40.7 sec         | 24.6 sec     |

Average Vehicular delay in seconds per vehicle

It should be noted that some vehicles experienced more delay than the average listed in Table 3, and some vehicles experienced less. The maximum delays for southbound Woodshire Lane were observed to be 80 seconds, 110 seconds and 65 seconds during the AM, Midday and PM peak hour, respectively, while the minimum delays observed were approximately 5 seconds during each peak hour. The maximum delays for northbound Renee Lane were observed to be 67 seconds, 67 seconds and 174 seconds during the AM, Midday and PM peak hour, respectively, while the minimum delays observed were approximately 4 seconds during the AM and PM peak hours, and 2 seconds during the Midday peak hour.

Overall, the delays estimated by the computer analysis software were reasonably accurate (some lower and some higher) when compared to actual delays observed in the field. It should also be noted that the southbound volume on Woodshire Lane was very low (less than 10 vph), and the northbound volume on Renee Lane was also low (5 vph to 19 vph) which is a small sample size and may create quite a lot of volatility on those delays experienced by each approach from day to day.



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

## **Proposed Redevelopment**

The proposed redevelopment would rebuild the existing Mobil gas station to provide twenty vehicle fueling positions, an expanded convenience store, and a new car wash. It is our understanding that three-single family home structures along Olive Boulevard and three single-family residences along Oak Lake Court would be razed to make way for the new gas station.

### **Proposed Access**

Access to the site is proposed via one full access curb cut on Olive Boulevard approximately 345 feet west of Schulte Road and one right-out-only curb cut approximately 290 feet to the west of the proposed full access driveway. This access arrangement remains similar to the previous redevelopment proposed on the site. It is our understanding that MoDOT traffic and permits staff was agreeable to these access locations for the previous project. It is acknowledged that the proposed full access driveway is slightly closer to Schulte than MoDOT's desired corner clearance distance per their Access Management Guidelines, but the proposed development significantly improves access management along Olive by reducing the five existing full-access curb cuts to two curb cuts: one full access and one right-out-only.

Access is also proposed on Schulte Road in the form of a three-quarter access driveway (no left-turn in) that would be located opposite the existing Shell gas station driveway. It is our understanding that the SLCDOT has insisted on the no left-turn-in restriction due to the southbound queues from the signal at Olive Boulevard even though a similar, yet worse access management is currently in place for the existing Mobil Station.

### **Driveway Sight Distance**

Adequate sight distance is necessary at intersections to allow drivers to perceive potentially conflicting vehicles or other road users and allow those motorists sufficient time to adjust their speed to avoid a collision or make a choice of when to cross or enter the mainline traffic flow. All drivers approaching or stopped at an intersection should have an unobstructed view of the entire intersection so that potential collisions can be avoided.

MoDOT's Engineering Policy Guide (EPG) Section 233.2.1 Intersection sight distance, was referenced to determine the minimum sight distance needs at the site driveway. The MoDOT method incorporates the method from A Policy on Geometric Design of Highways and Streets published by the American Association of State Highway and Transportation Officials (AASHTO), commonly referred to as the "Green Book", which uses the design speed of the major road and the required gap time from a minor road to enter or cross the major road to define the minimum safe distance for entrance visibility. The minimum intersection sight distance according to the MoDOT EPG on a 35 mph roadway is **390 feet**. The minimum stopping sight distance along a 35 mph roadway is **200 feet**.

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

The sight distance available at the proposed full access driveway was not measured, but field observations verified ample visibility in excess of the minimums. The site engineer should verify the sight distance all proposed driveways on the site plan with respect to all site improvements. Careful consideration should always be given to sight distance obstructions when planning any aesthetics enhancements, such as berms, fencing, signs and landscaping, to ensure that these improvements do not obstruct the view of entering and exiting traffic at the site intersections with the public roads. It is generally recommended that all improvements higher than 3.0 feet above the elevation of the nearest pavement edge be held back at least 20 feet from the traveled roadway.

### **Trip Generation**

In order to estimate the trip generation of the improved gas station, convenience store and car wash, several methods were considered. The first method compared several gas station land use codes as identified by ITE. The second comparison considered the local data from the existing location at Schulte and transactional data from another facility within the area, which is similar to the proposed.

#### Trip Generation – ITE Data

Traffic forecasts were estimated by using information provided in the “Trip Generation Manual”, Ninth Edition, published by the Institute of Transportation Engineers (ITE). This manual, which is a standard resource for transportation engineers, is based on a compilation of nationwide studies documenting the traffic characteristics of various land uses.

Based on the preliminary site plan provided, the proposed development consists of twenty vehicle fueling positions, a convenience store, and a car wash. Trip generation was reviewed for land uses similar to those shown on the site plan to provide an average number of trips during each peak hour.

Based upon the recommended procedure for estimating trip generation outlined in the “Trip Generation Handbook, A Recommended Practice”, published by ITE (March 2001), the average trip rate was utilized for:

- Land Use 944 – Gasoline/Service Station
- Land Use 945 – Gasoline/Service Station with Convenience Market
- Land Use 946 – Gasoline/Service Station with Convenience Market and Car Wash

As shown in **Table 4**, the forecasted average number of trips for a 20 vehicle fueling position gas station is expected to be 230 total trips during the AM peak hour, 310 total trips during the Midday peak hour, and 280 total trips during the PM peak hour.



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 4: ITE Trip Generation Estimate – Mobil Gas Station Rebuild**

| <i>Land Use</i>                                                              | <i>Vehicle Fueling Positions</i> | <i>AM Peak Hour</i> |            |              | <i>Midday Peak Hour</i> |            |              | <i>PM Peak Hour</i> |            |              |
|------------------------------------------------------------------------------|----------------------------------|---------------------|------------|--------------|-------------------------|------------|--------------|---------------------|------------|--------------|
|                                                                              |                                  | <i>In</i>           | <i>Out</i> | <i>Total</i> | <i>In</i>               | <i>Out</i> | <i>Total</i> | <i>In</i>           | <i>Out</i> | <i>Total</i> |
| Gasoline/Service Station (Land Use 944)                                      | 20                               | 125                 | 120        | 245          | 185                     | 185        | 370          | 140                 | 140        | 280          |
| Gasoline/Service Station with Convenience Market (Land Use 945)              | 20                               | 105                 | 105        | 210          | 135                     | 135        | 270          | 135                 | 135        | 270          |
| Gasoline/Service Station with Convenience Market and Car Wash (Land Use 946) | 20                               | 120                 | 120        | 240          | 145                     | 145        | 290          | 140                 | 140        | 280          |
| <b>Average Number of Trips</b>                                               |                                  | <b>115</b>          | <b>115</b> | <b>230</b>   | <b>155</b>              | <b>155</b> | <b>310</b>   | <b>140</b>          | <b>140</b> | <b>280</b>   |

**Trip Generation – Local Data**

Based on CBB's driveway counts, the current gas station generates 80 total trips during the AM peak hour, 120 total trips during the Midday peak hour and 100 trips during the PM peak hour with 8 vehicle fueling positions. As noted above, the proposed Mobil gas station will provide twenty vehicle fueling positions. In order to estimate the forecasted trips for the new store, the trips to the current store were increased based on the percentage increase in the number of vehicle fueling positions. **Table 5** summarizes the trips counted at the existing Mobil and the projected trips based on the increase in the number of pumps.

**Table 5: Local Trip Generation Estimate – Based on Current Trips and Fueling Positions**

| <i>Land Use</i>                 | <i>No. of Vehicle Fueling Positions</i> | <i>AM Peak Hour</i> |            |              | <i>Midday Peak Hour</i> |            |              | <i>PM Peak Hour</i> |            |              |
|---------------------------------|-----------------------------------------|---------------------|------------|--------------|-------------------------|------------|--------------|---------------------|------------|--------------|
|                                 |                                         | <i>In</i>           | <i>Out</i> | <i>Total</i> | <i>In</i>               | <i>Out</i> | <i>Total</i> | <i>In</i>           | <i>Out</i> | <i>Total</i> |
| Existing Mobil Station          | 8                                       | 45                  | 35         | 80           | 65                      | 55         | 120          | 50                  | 50         | 100          |
| Proposed Mobil Station Estimate | 20                                      | 115                 | 85         | 200          | 165                     | 135        | 300          | 125                 | 125        | 250          |

CBB was provided customer transaction counts (gross receipts) for a similar Mobil gas station further east on Olive Boulevard in Olivette, Missouri. This location was also recently rebuilt to provide the improved convenience store, car wash and sixteen vehicle fueling positions. Based on the transaction counts, a trip generation estimate was made based on the higher number of vehicle fueling positions at the proposed Schulte Store. **Table 6** summarizes the trip estimated based on the similar facility records.

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 6: Estimated Trips for Proposed Mobil Gas Station Rebuild based on Transaction Data**

| <i>Land Use</i>                          | <i>No. of Vehicle Fueling Positions</i> | <i>AM Peak Hour</i> |            |              | <i>Midday Peak Hour</i> |            |              | <i>PM Peak Hour</i> |            |              |
|------------------------------------------|-----------------------------------------|---------------------|------------|--------------|-------------------------|------------|--------------|---------------------|------------|--------------|
|                                          |                                         | <i>In</i>           | <i>Out</i> | <i>Total</i> | <i>In</i>               | <i>Out</i> | <i>Total</i> | <i>In</i>           | <i>Out</i> | <i>Total</i> |
| Similar Mobil Station (Transaction Data) | 16                                      | 80                  | 80         | 160          | 125                     | 125        | 250          | 95                  | 95         | 190          |
| <b>Proposed Mobil Station Estimate</b>   | <b>20</b>                               | <b>100</b>          | <b>100</b> | <b>200</b>   | <b>155</b>              | <b>155</b> | <b>310</b>   | <b>120</b>          | <b>120</b> | <b>240</b>   |

When comparing all the different methods above, trips are expected to be in the same order of magnitude. However, the trip estimate for the Mobil gas station based on transaction data is expected to be the most accurate trip forecast since it is based on local data for this exact use. Therefore, the trips estimated by the transactional data (Table 6) were used in this study.

It should be reiterated that the existing Mobil station already generates trips on the roadway system. Therefore, the existing trips were negated from the trip estimate resulting in a net increase in trips, as shown in **Table 7**.

Furthermore, not all of the added site trips would represent *new* traffic on the adjacent roadways. A significant portion of the traffic attracted to this site would already be traveling on Olive Boulevard or Shulte Road as part of another trip (i.e., “pass-by” trips). These trips would represent patrons attracted to the gas station on their way to or from home, work, or another destination as a “convenience stop”. Based upon statistical information provided in the *Trip Generation Handbook, A Recommended Practice* it was assumed that 62% of the development’s traffic would be pass-by in nature during the AM peak hour, and 56% of the development’s traffic would be pass-by during the PM peak hour. ITE does not provide a pass-by percentage for the Midday peak hour so the pass-by percentage from the PM peak hour was also used during the Midday peak hour. As seen in Table 7, the proposed gas station would generate 50 *new* trips during the AM peak hour, 80 *new* trips during the Midday peak hour, 60 *new* trips during the PM peak hour.



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 7: Increase in Trips for Proposed Mobil Gas Station Rebuild**

|                                        | <b>AM Peak Hour</b> |            |              | <b>Midday Peak Hour</b> |            |              | <b>PM Peak Hour</b> |            |              |
|----------------------------------------|---------------------|------------|--------------|-------------------------|------------|--------------|---------------------|------------|--------------|
|                                        | <i>In</i>           | <i>Out</i> | <i>Total</i> | <i>In</i>               | <i>Out</i> | <i>Total</i> | <i>In</i>           | <i>Out</i> | <i>Total</i> |
| Estimated Trips to Improved Mobil Site | 100                 | 100        | 200          | 155                     | 155        | 310          | 120                 | 120        | 240          |
| Trips to Existing Mobil Site           | (45)                | (35)       | (80)         | (65)                    | (55)       | (120)        | (50)                | (50)       | (100)        |
| <b>Net Increase in Trips</b>           | <b>55</b>           | <b>65</b>  | <b>120</b>   | <b>90</b>               | <b>100</b> | <b>190</b>   | <b>70</b>           | <b>70</b>  | <b>140</b>   |
| Pass-By Trips                          | 35                  | 35         | 70           | 55                      | 55         | 110          | 40                  | 40         | 80           |
| New Trips                              | 20                  | 30         | 50           | 35                      | 45         | 80           | 30                  | 30         | 60           |

**Trip Distribution**

The traffic generated by the redevelopment was assigned to the adjoining roadway system based on existing traffic patterns. The directional distribution of the existing trips was assumed to remain constant for the increase in trips during the AM, Midday and PM peak hours. The pass-by trips were assigned to Olive Boulevard based on the existing traffic patterns.

**Exhibit 3** illustrates the net increase of trips for the proposed Mobil station rebuild at the study intersections. As would be expected, the biggest impact of the development is at the proposed driveways. Added turns at the main Olive Boulevard driveway are expected range from 96 to 160 trips. These trips equate to approximately one and a half vehicle per minute to about 3 trips per minute on average during the peak hours.

The impacts of the proposed Mobil redevelopment are expected to be diminished outside of the direct vicinity of the site due to the high number of pass-by trips associated with the use. As seen in Exhibit 3, the added trips outside of the vicinity of the Mobil driveways are expected to be less than 30 vph during the AM and PM peak hours and 40 vph or less during the Midday peak hour.

The added trips at the intersection of Olive Boulevard and Schulte Road is expected to be 18 vph, 33 vph, and 26 vph during the AM, Midday, and PM peak hours, respectively. These trips equate to approximately one vehicle per two minutes on average during the Midday and PM peak hours or one vehicle every three minutes on average during the AM peak hour.

As can be seen, the increase in the southbound left-turn from Schulte Road to Olive Boulevard is expected to be less than 10 vph during the AM, Midday and PM peak hours. The site trips represent less than one additional vehicle each six minutes on average.



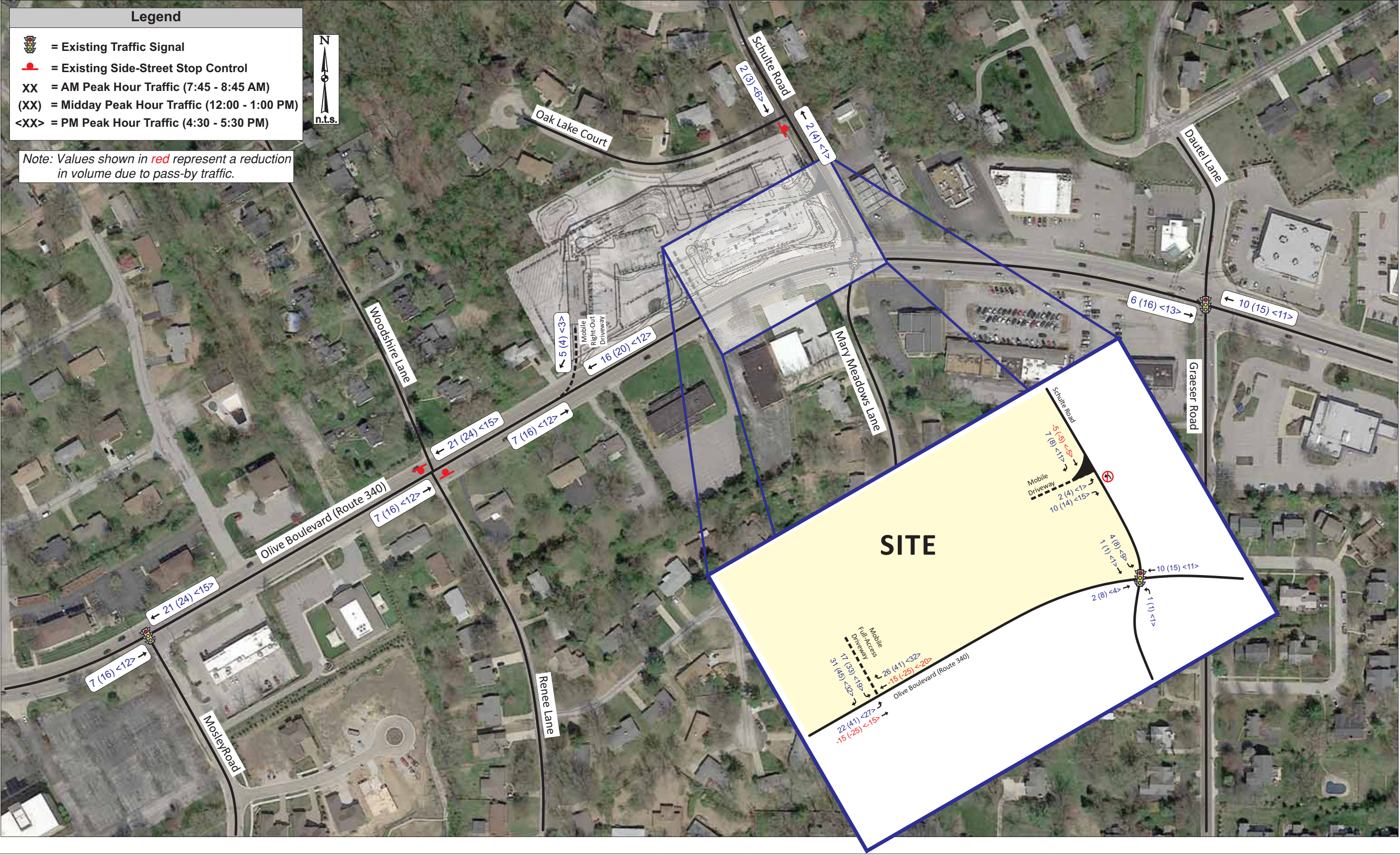


Exhibit 3: Net Increase of Site-Generated Traffic Volumes



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

## 2016 Build Conditions

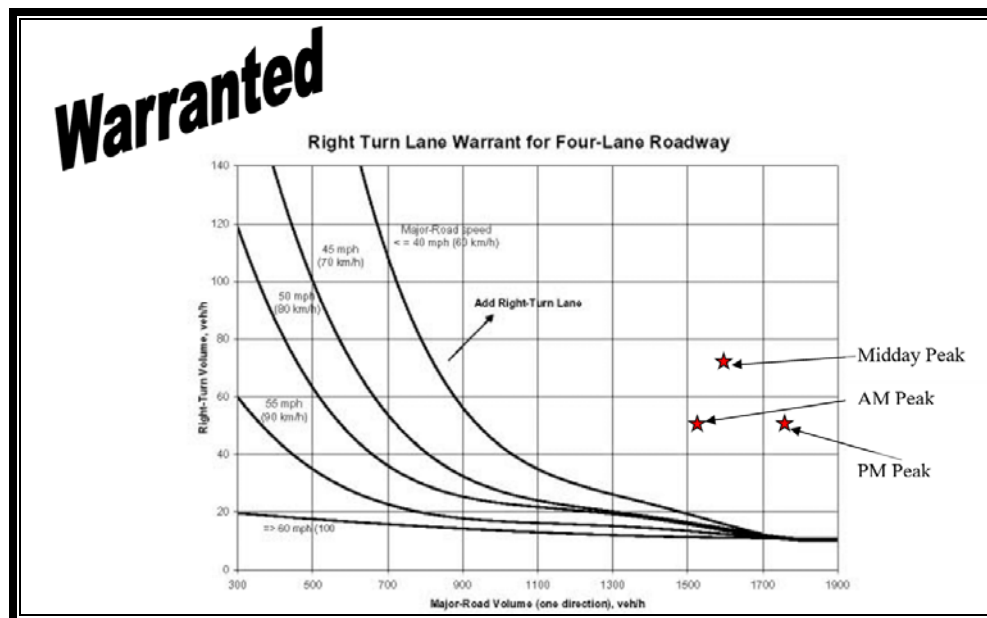
### 2016 Build Traffic Volumes

The traffic generated by the proposed Mobil gas station rebuild (Exhibit 3) was aggregated with the Base Traffic Volumes (Exhibit 2) to reflect the Forecasted Traffic Volumes. **Exhibit 4** reflects the 2016 Build Traffic Volumes.

### Right-Turn Lane Warrants

The MoDOT figure, *Right Turn Lane Warrant for a Four-Lane Roadway*, was utilized to address traffic volumes at the intersection of Olive Boulevard with the proposed full access driveway for the proposed Mobil redevelopment. **Figure 2** illustrates the 2016 Build Traffic Volumes plotted on the MoDOT figure for evaluation of a westbound right-turn lane. Based on the minimal number of right-turns needed to satisfy the criteria in conjunction with the heavy traffic volumes along Olive Boulevard, a separate westbound right-turn lane is warranted. Based on the posted speed limit of 35 mph, a 90-foot storage length with taper is required to meet MoDOT's deceleration minimum.

However, it should be noted that the addition of a separate westbound right-turn lane on Olive Boulevard at the proposed main access would have minimal impacts to operating conditions. It should also be noted that a Metro Bus stop is located near Schulte Road and overhead utilities are located in this area. Furthermore, the Olive Boulevard corridor does not have separate right-turn lanes at unsignalized intersections that do not feed into additional through lanes to right-turn lanes at signals; Therefore, a separate westbound right-turn lane is not recommended at this location.



**Figure 2: Right-Turn Lane Warrants (MoDOT)**



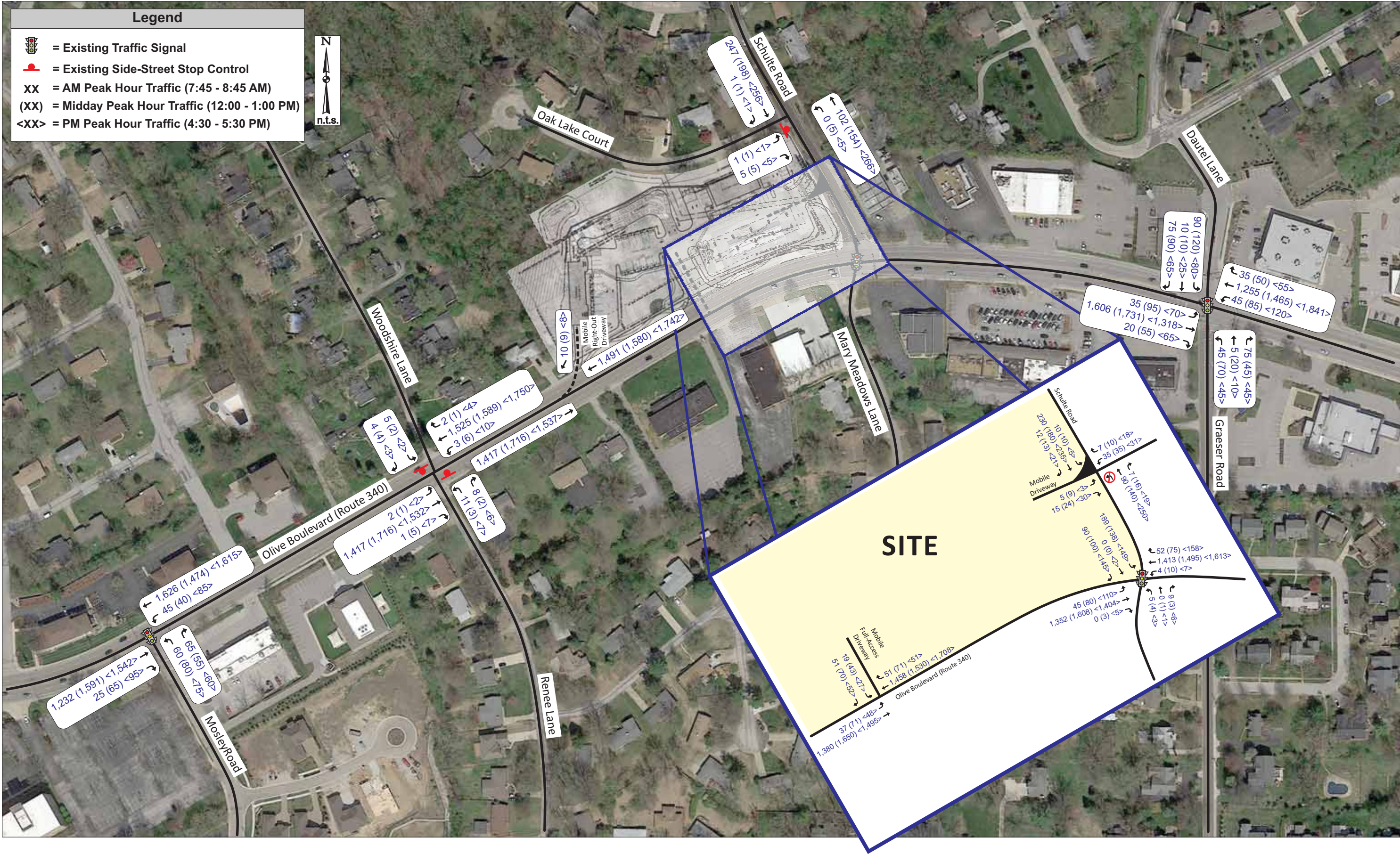


Exhibit 4: 2016 Build Traffic Volumes



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

**2016 Build Operating Conditions**

The 2016 Build Traffic Volumes were reanalyzed using the same methodology applied to the baseline conditions in an effort to identify any impacts of the proposed development. **Table 8** summarizes the levels of service and average delays at the study intersections during both peak hours with the 2016 Build Traffic Volumes.

As can be seen in **Table 8**, the overall intersection operations are expected to remain at similar levels as the base conditions during the weekday AM, Midday and PM peak hours. This analysis assumes no changes in the signal timing at Olive Boulevard and Schulte Road which gives preference to the east-west movements on Olive Boulevard. In fact, the overall change in delay is less than one second during all three peak hours at the Schulte signal. The southbound approach is expected to have minimal increases with 5.2 seconds during the AM peak hour, 4.9 seconds during the Midday peak hour and 1.9 seconds during the PM peak hour. The southbound levels of service would remain poor, again primarily due to the long cycle lengths.

The forecasted build v/c ratios for the southbound approach of Schulte Road remain less than 1.0 during the peak hours. The southbound v/c ratio is forecasted to be 0.95 during the AM peak hour, 0.80 during the Midday peak hour and 0.84 during the PM peak hour. In this case, the cycle length dictates the poor level of service during the AM peak hour and drives the poor movement levels in the PM peak hour. The northbound and southbound approaches have minimal green times to maximize green available to the heavy eastbound and westbound through movements on Olive Boulevard.

As previously noted, the increase in the southbound left-turns from Schulte Road to Olive Boulevard is expected to be less than 10 vph during all peaks, which represents less than one additional vehicle every six minutes on average.

The right-out-only Mobil driveway on Olive Boulevard and the three-quarter access drive on Schulte Road are expected to operate at acceptable levels of service during all three peak hours. It should be noted that the evaluations cannot effectively address the impact of the southbound queue along Schulte Road that would block the three-quarter access drive at times during the peak hours. Any queueing created by blockages would occur on the site. It was noted that the southbound left-turn delays at the unsignalized intersection are generally less than those forecasted for the southbound left-turn from Schulte Road at Olive Boulevard.

The main full access driveway on Olive Boulevard is expected to operate at acceptable levels, except for the southbound left-turn exiting movement during the peak hours. It is acknowledged that the through volumes on Olive Boulevard are heavy during the peak hours, which limits the availability of gaps at the proposed Olive Boulevard access drive during the peak hours. However, the presence of a center-left-turn lane along Olive Boulevard does allow for a motorist to complete their turn in two stages as opposed to waiting for a simultaneous gap in both directions of traffic flow, which is a common practice along the Olive Boulevard

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

Corridor and throughout the greater St. Louis Metropolitan area and therefore was assumed in these analyses.

**Table 8: Traffic Operating Conditions – Build Traffic Volumes**

| Intersection/Approach                                                             | AM Peak Hour     | Midday Peak Hour | PM Peak Hour     |
|-----------------------------------------------------------------------------------|------------------|------------------|------------------|
| <b><i>Olive Boulevard and Mosley Road – Signalized</i></b>                        |                  |                  |                  |
| Eastbound Olive Boulevard                                                         | A (2.4)          | A (5.3)          | A (5.9)          |
| Westbound Olive Boulevard                                                         | B (11.7)         | A (9.5)          | B (10.8)         |
| Northbound Mosley Road                                                            | D (43.9)         | D (43.3)         | D (48.5)         |
| <b>Overall Intersection</b>                                                       | <b>A (9.2)</b>   | <b>A (8.8)</b>   | <b>A (10.0)</b>  |
| <b><i>Olive Boulevard and Woodshire Lane/Renee Lane – Side-Street Stop</i></b>    |                  |                  |                  |
| Eastbound Left-Turn Olive Boulevard                                               | B (14.4)         | C (15.0)         | C (16.8)         |
| Westbound Left-Turn Olive Boulevard                                               | B (13.5)         | C (16.6)         | B (14.8)         |
| Northbound Renee Lane                                                             | D (33.0)         | E (43.9)         | E (36.3)         |
| Southbound Woodshire Lane                                                         | D (34.2)         | D (28.9)         | D (37.3)         |
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b>     |                  |                  |                  |
| Eastbound Olive Boulevard                                                         | B (17.0) 20' LT  | B (10.8) 30' LT  | B (17.2) 110' LT |
| Westbound Olive Boulevard                                                         | B (11.2)         | A (5.1)          | A (8.8)          |
| Northbound Mary Meadows Lane                                                      | D (51.3)         | D (44.3)         | D (51.2)         |
| Southbound Schulte Road                                                           | E (77.0) 345' LT | D (51.2) 210' LT | E (55.7) 250' LT |
| <b>Overall Intersection</b>                                                       | <b>B (19.7)</b>  | <b>B (11.1)</b>  | <b>B (16.3)</b>  |
| <b><i>Olive Boulevard and Dautel Lane/Graeser Road – Signalized</i></b>           |                  |                  |                  |
| Eastbound Olive Boulevard                                                         | A (6.4)          | B (15.7)         | B (11.4)         |
| Westbound Olive Boulevard                                                         | B (15.1)         | B (16.0)         | C (29.4)         |
| Northbound Dautel Lane                                                            | C (32.3)         | D (36.6)         | D (41.6)         |
| Southbound Graeser Road                                                           | D (49.9)         | D (42.6)         | D (50.4)         |
| <b>Overall Intersection</b>                                                       | <b>B (13.2)</b>  | <b>B (18.1)</b>  | <b>C (23.7)</b>  |
| <b><i>Oak Lake Court and Schulte Road – Side-Street Stop</i></b>                  |                  |                  |                  |
| Eastbound Oak Lake Court                                                          | A (9.9)          | A (9.7)          | B (10.3)         |
| Northbound Left-Turn Schulte Road                                                 | A (7.7)          | A (7.7)          | A (7.8)          |
| <b><i>Schulte Road at Mobil/Shell Driveway – Side-Street Stop</i></b>             |                  |                  |                  |
| Eastbound Mobil Driveway                                                          | B (10.2)         | B (10.1)         | B (10.3)         |
| Westbound Shell Driveway                                                          | B (11.5)         | B (11.6)         | B (13.2)         |
| Southbound Schulte Road                                                           | A (7.4)          | A (7.6)          | A (7.8)          |
| <b><i>Olive Boulevard at Mobil Right-Out Only Driveway – Side-Street Stop</i></b> |                  |                  |                  |
| Southbound Mobil Driveway                                                         | C (16.5)         | C (17.4)         | C (19.2)         |
| <b><i>Olive Boulevard at Mobil Full Access Driveway – Side-Street Stop</i></b>    |                  |                  |                  |
| Eastbound Left-Turn Olive Boulevard                                               | C (15.3)         | C (17.8)         | C (19.2)         |
| Southbound Mobil Left-Turn                                                        | E (48.0)         | F (93.8)         | F (81.0)         |
| Southbound Mobil Right-Turn                                                       | C (18.7)         | C (21.4)         | C (22.8)         |
| Southbound Mobil Driveway Approach                                                | D (26.7)         | E (49.0)         | E (42.7)         |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

The impacts of the new Mobil are also diminished outside of the direct access points to Olive Boulevard. As can be seen, minimal increases are expected at the signalized intersections with Olive Boulevard with Schulte Road, Mosely Road and Greaser/Dautel Lane. The analysis software estimates an increase of less than one second of delay for the northbound approach



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

of Renee Lane and less than one second of delay increase for the southbound approach of Woodshire Lane during each of the peak hours.

### **Alternatives Analysis**

Several alternatives were evaluated to identify the impacts of each potential improvement. **Tables 9-11** summarize the build conditions with various alternative modifications.

#### Signal Timing Adjustments

The green time was increased for Schulte Road/Mary Meadows Lane to obtain similar levels of service as the existing conditions. An additional two seconds of green time during the AM peak, four seconds during the Midday peak and 2 seconds during the PM peak could be reallocated from the mainline to the north-south approaches to reach comparable levels to the existing conditions. As can be seen, the minimal change in signal timing would not result in major impacts to the mainline Olive Boulevard traffic conditions. **Table 12** illustrates the impacts to progression along the Olive Boulevard corridor. As can be seen in Table 12, the impacts to east-west progression are also minimal.

#### Add Flashing Yellow Arrow

During the traffic scoping meeting, Flashing Yellow Arrows (FYA) for the northbound and southbound approaches were discussed to improve safety at the intersection. Therefore, an analysis scenario was generated to show the operational impacts of switching to northbound and southbound FYA.

Based on the analysis, the FYA would provide negligible changes in operating conditions for the southbound approach, but the safety at the intersection may be improved substantially. The [www.CMFClearinghouse.org](http://www.CMFClearinghouse.org) was consulted in order to attempt to quantify the safety implications of installing a FYA. Based on countermeasure “Changing from permissive only to FYA- Permissive only (CMF ID: 7698)” in the CFM Clearinghouse, various Crash Reduction Factors (CRF) could be applied to various crash types as summarized below.

- CRF of 10.8% (decrease) to all crash types and all severities;
- CRF of 31.1% (decrease) to all crash types; Fatal, serious injury and minor injuries;
- CRF of 50.2% (decrease) to Left-turn crash types; all severities; and
- CRF of 65.1% (decrease) to Left-turn crash types and Fatal, serious injury and minor injury severities.

Although a crash analysis was not identified as a specific part of this study scope, the CMF's listed above would appear to have the potential to significantly improve safety (decrease the number of crashes) for the southbound left-turns.

#### Provide a Southbound Right-Turn Lane

During the traffic scoping meeting, it was specifically requested that one analysis scenario consider a separate southbound left-turn lane, through lane and right-turn lane. Therefore, an analysis scenario was generated to show the operational impacts of providing a separated southbound right-turn lane.

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

Based on the analysis, the addition of a southbound right-turn lane on Schulte Road would provide no improvement in operations when compared to the current condition. The minimal southbound through volumes (3 to 5 vph) have a low potential to block the southbound right-turns; therefore, the through/right-turn lane acts as a *defacto* right-turn lane in the existing condition. In addition, the westbound through volumes along Olive Boulevard are very heavy during the peak hours making it more difficult to find an adequate gap in westbound traffic to complete the right turn movement versus reaching the southbound stop bar due to other conflicting southbound through vehicles. Since there appears to be no benefit to provide a separate right-turn lane, it is not recommended.

**Provide Dual Southbound Left-Turn Lanes and Split-Phase North-South**

Previous studies of this intersection recommended split phasing and/or a horizontal and vertical realignment of Schulte Road and/or Mary Meadow Lane to decrease the offset and skew of the north-south approaches as well as the northbound sight distance obstruction created by the cresting of the profile grades. In order to realign the intersection, multiple property owners would be impacted. Previous plans, by others, to redevelopment the southwest quadrant of the intersection did not materialize. Consequently, the subject development has reserved ground in the northeast quadrant of the intersection so that realignment can occur in the future.

CBB also considered an alternative analysis where the intersection is re-aligned with dual southbound left-turn lanes (one southbound left-turn and one southbound shared left-turn/though lane) and a separate southbound right-turn lane. This would also require split-phasing the north-south approaches.

In order to maximize the amount of green time provided to the mainline, the northbound approach (Mary Meadows Lane) was given the minimum amount of split time (13.1 seconds), while the southbound approach was only provided enough split time to obtain similar levels of service as the existing conditions. The southbound green time was assumed to 17.9, 16.9, 17.9 seconds during the AM, Midday and PM peak hours, for a total north-south green time of 31, 30, and 31 seconds. The overall north-south green time would be slightly more with the split-phase when comparable to the 2016 Build conditions with modified signal timings.

Table 12 illustrates the impacts to progression along the Olive Boulevard corridor. As can be seen, the split-phase condition would have a negative impact on progression when compared to the existing conditions, except for the eastbound link between Mosley Road and Schulte Road during the Midday as well as the westbound link between Schulte Road and Mosley Road during the Midday peak hour. However, the link changes would have no effect on the corridor green bands, shown in Table 12.



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

The biggest benefit of the dual left-turn alternative is the reduction in length of the southbound queues by approximately 40% during the AM peak hour, approximately 36% during the Midday peak hour and approximately 38% during the PM peak hour when compared to the single left-turn lane with modified signal timing. Even with the dual southbound left-turn scenario, the 95<sup>th</sup> percentile queues would still block the proposed relocated access to Schulte Road during all three peak hours.

It should also be noted that the while a split-phase scenario for the northbound and southbound approaches improves the southbound queueing, the 13.1 to 17.9 seconds assumed for those approaches would not provide adequate pedestrian accommodations (during every signal cycle) across Olive Boulevard. As a result, when the push button is activated it would give ample crossing time to accommodate pedestrians but the signal would become out-of-step for several cycles.

### Pedestrian Issues

MoDOT requested that pedestrian accommodations (pedestrian push buttons and indications with marked crosswalks) be installed across Olive Boulevard. CBB recommends that the pedestrian accommodations be located on the west side of the intersection only. CBB believes that it is better and safer to have the pedestrians crossing the west leg, since it is closer to the MetroBus stop and the pedestrian phase would run with the heavier traffic flow so it would cause less disruptions. If the crosswalks were provided on the east side of the intersection the pedestrians would be crossing paths with the heavy southbound left-turn vehicles and would potential be less safe than crossing on the west side because there is lower northbound left-turn volume verses the southbound left-turn.

**Table 9: Build Operating Conditions with Alternative Improvement Scenarios – AM Peak Hour**

| Intersection/Approach                                                  | Original<br>Timing<br>[28 sec n-s] | with Timing<br>Adjustments<br>[30 Sec n-s] | Add Flashing<br>Yellow Arrow<br>NB & SB<br>[28 Sec n-s] | Separate SB<br>Right-Turn<br>Lane<br>[28 Sec n-s] | With Dual Left<br>and Split-<br>Phase <sup>1</sup><br>[31 Sec n-s] |
|------------------------------------------------------------------------|------------------------------------|--------------------------------------------|---------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------|
| <b>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</b> |                                    |                                            |                                                         |                                                   |                                                                    |
| Eastbound Olive Boulevard                                              | B (17.0) 20' LT                    | B (18.0) 20' LT                            | B (17.0) 20' LT                                         | B (17.0) 20' LT                                   | B (13.7) 20' LT                                                    |
| Westbound Olive Boulevard                                              | B (11.2)                           | B (11.1)                                   | B (11.2)                                                | B (11.2)                                          | A (7.4)                                                            |
| Northbound Mary Meadows Ln.                                            | D (51.3)                           | D (49.5)                                   | D (51.2)                                                | D (51.2)                                          | E (69.0)                                                           |
| Southbound Schulte Road                                                | E (77.0) 345' LT                   | E (69.4) 325' LT                           | E (77.3) 345' LT                                        | E (77.0) 345' LT                                  | E (69.0) 190' LT                                                   |
| <b>Overall Intersection</b>                                            | <b>B (19.7)</b>                    | <b>B (19.5)</b>                            | <b>B (19.8)</b>                                         | <b>B (19.7)</b>                                   | <b>B (15.9)</b>                                                    |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

<sup>1</sup> Dual Southbound Lefts and Split Phase (13.1 sec +17.9 sec)

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 10: Build Operating Conditions with Alternative Improvement Scenarios – Midday Peak Hour**

| Intersection/Approach                                                  | Original Timing<br>[24 sec n-s] | Timing Adjustments<br>[26 Sec n-s] | Add Flashing Yellow Arrow<br>NB & SB<br>[24 Sec n-s] | Separate SB Right-Turn Lane<br>[24 Sec n-s] | With Dual Left and Split-Phase <sup>1</sup><br>[30 Sec n-s] |
|------------------------------------------------------------------------|---------------------------------|------------------------------------|------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------|
| <b>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</b> |                                 |                                    |                                                      |                                             |                                                             |
| Eastbound Olive Boulevard                                              | B (10.8) 30' LT                 | B (10.1) 40' LT                    | B (10.8) 30' LT                                      | B (10.8) 30' LT                             | A (7.7) 40' LT                                              |
| Westbound Olive Boulevard                                              | A (5.1)                         | A (6.6)                            | A (5.1)                                              | A (5.1)                                     | A (6.6)                                                     |
| Northbound Mary Meadows Ln.                                            | D (44.3)                        | D (41.9)                           | D (44.3)                                             | D (44.3)                                    | E (55.4)                                                    |
| Southbound Schulte Road                                                | D (51.2) 210' LT                | D (46.3) 180' LT                   | D (51.2) 210' LT                                     | D (51.2) 210' LT                            | D (44.9) 115' LT                                            |
| <b>Overall Intersection</b>                                            | <b>B (11.1)</b>                 | <b>B (11.0)</b>                    | <b>B (11.1)</b>                                      | <b>B (11.1)</b>                             | <b>A (9.8)</b>                                              |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

<sup>1</sup> Dual Southbound Lefts and Split Phase (13.1 sec +16.9 sec)

**Table 11: Build Operating Conditions with Alternative Improvement Scenarios – PM Peak Hour**

| Intersection/Approach                                                  | Original Timing<br>[28 sec n-s] | Timing Adjustments<br>[30 Sec n-s] | Add Flashing Yellow Arrow<br>NB & SB<br>[28 Sec n-s] | Separate SB Right-Turn Lane<br>[28 Sec n-s] | With Dual Left and Split-Phase <sup>1</sup><br>[31 Sec n-s] |
|------------------------------------------------------------------------|---------------------------------|------------------------------------|------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------|
| <b>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</b> |                                 |                                    |                                                      |                                             |                                                             |
| Eastbound Olive Boulevard                                              | B (17.2) 110' LT                | B (16.3) 110' LT                   | B (17.3) 110' LT                                     | B (17.2) 110' LT                            | B (13.4) 110' LT                                            |
| Westbound Olive Boulevard                                              | A (8.8)                         | B (10.5)                           | A (8.8)                                              | A (8.8)                                     | A (9.5)                                                     |
| Northbound Mary Meadows Ln.                                            | D (51.2)                        | D (49.8)                           | D (51.2)                                             | D (51.1)                                    | E (67.3)                                                    |
| Southbound Schulte Road                                                | E (55.7) 250' LT                | D (53.3) 225' LT                   | E (55.7) 250' LT                                     | E (55.7) 250' LT                            | D (53.2) 140' LT                                            |
| <b>Overall Intersection</b>                                            | <b>B (16.3)</b>                 | <b>B (16.6)</b>                    | <b>B (16.4)</b>                                      | <b>B (16.3)</b>                             | <b>B (14.9)</b>                                             |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

<sup>1</sup> Dual Southbound Lefts and Split Phase (13.1 sec +17.9 sec)



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 12: Progression Analysis – 70th Percentile Link Bands**

| 70 <sup>th</sup> Percentile Link Green Bands              | Weekday AM Peak Hour |                   |                     | Weekday Midday Peak Hour |                   |                     | Weekday PM Peak Hour |                   |                     |
|-----------------------------------------------------------|----------------------|-------------------|---------------------|--------------------------|-------------------|---------------------|----------------------|-------------------|---------------------|
|                                                           | Existing             | Timing Adjustment | Dual LT/Split-Phase | Existing                 | Timing Adjustment | Dual LT/Split-Phase | Existing             | Timing Adjustment | Dual LT/Split-Phase |
| <b>Eastbound</b>                                          |                      |                   |                     |                          |                   |                     |                      |                   |                     |
| Mosley Road to Schulte Road link                          | 81 sec               | 79 sec            | 78 sec              | 77 sec                   | 78 sec            | 89 sec              | 83 sec               | 83 sec            | 83 sec              |
| Schulte to Dautel Lane Link                               | 97 sec               | 97 sec            | 97 sec              | 78 sec                   | 78 sec            | 78 sec              | 101 sec              | 99 sec            | 98 sec              |
| Eastbound Arterial Green Band (Craig Road to Spoede Road) | 70 sec               | 70 sec            | 70 sec              | 47 sec                   | 47 sec            | 47 sec              | 71 sec               | 71 sec            | 71 sec              |
| <b>Westbound</b>                                          |                      |                   |                     |                          |                   |                     |                      |                   |                     |
| Dautel Lane to Schulte Road Link                          | 98 sec               | 97 sec            | 96 sec              | 73 sec                   | 70 sec            | 68 sec              | 88 sec               | 86 sec            | 85 sec              |
| Schulte Road to Mosley Road Link                          | 82 sec               | 80 sec            | 79 sec              | 63 sec                   | 59 sec            | 68 sec              | 73 sec               | 71 sec            | 70 sec              |
| Westbound Arterial Green Band (Spoede Road to Craig Road) | 60 sec               | 60 sec            | 60 sec              | 50 sec                   | 50 sec            | 50 sec              | 55 sec               | 55 sec            | 55 sec              |

## 20-Year Conditions

### Forecasted 20-Year No-Build Conditions (2036)

In order to assess the long-term traffic impacts, 20-year traffic projections were also analyzed. Specifically, traffic growth was assumed at a rate of 0.5% annually for 20 years (or 10.5% overall) along each of the roadways within the study area. The 20-year background growth was applied to the base traffic volumes to compare future traffic conditions assuming that the site remains as it currently stands. Forecasted 20-Year No-Build Volumes (only background growth added) are shown in **Exhibit 5**.

As can be seen, the 20-Year No-Build traffic forecast represents an increase over the base traffic forecast due to the background growth. East-west through traffic volumes along Olive Boulevard are expected to increase by as much as 180 vph during the peak periods due to incremental background growth.

### Forecasted 20-Year Build Conditions (2036)

The 20-year No-Build Traffic Volumes (Exhibit 5) were aggregated with the site-generated trips for the new Mobil redevelopment trips (Exhibit 3) to create the 20-Year Build Traffic Volumes shown in **Exhibit 6**. It should be noted that traffic oriented to/from the proposed development was not increased since full build-out of the site was assumed to take place during the opening year. In other words, site-generated traffic volumes would reach their peak during the opening year and therefore would not experience any appreciable growth, which is consistent with standard industry practice. The anticipated operating conditions at the study intersections for the 20-Year No-Build and 20-year Build Traffic conditions are summarized in **Table 13**.

As shown in the LOS Table, all of the study intersections would degrade more in the 2036 No-Build Condition due to the increase in background traffic. As can be seen, the southbound approach of Schulte Road would operate at LOS F during the AM peak hour and LOS E during the PM peak hour. The v/c ratio for the southbound approach will reach 1.02 during the AM peak hour but remain less than 0.85 during the Midday and PM peak hours.

The east-west through lanes reach a volume-to-capacity ratio of 1.00 during the PM peak hour which indicates the east-west lanes would be approaching their capacity, and ultimately, a third lane would be necessary along Olive Boulevard to obtain acceptable levels for the long-term growth conditions. It should be reiterated that the 20-Year design scenarios are included to provide a general idea of future conditions as a planning tool and should not be used to dictate physical improvements required for construction under permit where background traffic growth is the critical element. Due to capacity constraints upstream or downstream, resulting congestion and the build-out of the surrounding area, the future traffic projections may not be realized/feasible unless major capacity improvements are built.





Job# 091-16-8  
11/03/16





Job# 091-16-8  
11/03/16



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 13: 20-Year Operating Conditions**

| Intersection/Approach                                                          | AM Peak Hour        |                                                         | Midday Peak Hour    |                                                         | PM Peak Hour        |                                                         |
|--------------------------------------------------------------------------------|---------------------|---------------------------------------------------------|---------------------|---------------------------------------------------------|---------------------|---------------------------------------------------------|
|                                                                                | 20-Year No Build    | 20-Year Build<br><i>Original Timing</i><br>(28 sec n-s) | 20-Year No Build    | 20-Year Build<br><i>Original Timing</i><br>(24 sec n-s) | 20-Year No Build    | 20-Year Build<br><i>Original Timing</i><br>(28 sec n-s) |
| <b><i>Olive Boulevard and Mosley Road – Signalized</i></b>                     |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Olive Boulevard                                                      | A (2.5)             | A (2.5)                                                 | A (6.6)             | A (6.6)                                                 | A (7.2)             | A (7.4)                                                 |
| Westbound Olive Boulevard                                                      | B (13.1)            | B (12.8)                                                | B (10.7)            | B (10.8)                                                | B (13.3)            | B (13.6)                                                |
| Northbound Mosley Road                                                         | D (44.1)            | D (44.1)                                                | D (44.4)            | D (44.4)                                                | D (49.2)            | D (49.2)                                                |
| <b>Overall Intersection</b>                                                    | <b>A (10.0)</b>     | <b>A (9.8)</b>                                          | <b>B (10.0)</b>     | <b>B (10.1)</b>                                         | <b>B (11.9)</b>     | <b>B (12.0)</b>                                         |
| <b><i>Olive Boulevard and Woodshire Lane/Renee Lane – Side-Street Stop</i></b> |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Left-Turn Olive Blvd                                                 | C (15.4)            | C (15.6)                                                | C (16.5)            | C (16.8)                                                | C (18.9)            | C (19.0)                                                |
| Westbound Left-Turn Olive Blvd                                                 | B (14.8)            | B (14.8)                                                | C (18.5)            | C (18.7)                                                | C (16.6)            | C (16.7)                                                |
| Northbound Renee Lane                                                          | E (40.8)            | E (40.8)                                                | F (55.3)            | F (55.3)                                                | E (45.4)            | E (46.4)                                                |
| Southbound Woodshire Lane                                                      | E (39.2)            | E (39.9)                                                | D (33.9)            | D (35.1)                                                | E (46.6)            | E (48.1)                                                |
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b>  |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Olive Boulevard                                                      | B (18.0)<br>20' LT  | B (17.9)<br>20' LT                                      | B (13.9)<br>50' LT  | B (14.6)<br>50' LT                                      | B (17.9)<br>105' LT | B (18.2)<br>105' LT                                     |
| Westbound Olive Boulevard                                                      | B (12.5)            | B (12.6)                                                | A (8.4)             | A (9.0)                                                 | C (21.6)            | C (24.2)                                                |
| Northbound Mary Meadows Lane                                                   | D (51.2)            | D (51.2)                                                | D (44.2)            | D (44.3)                                                | D (51.0)            | D (51.1)                                                |
| Southbound Schulte Road                                                        | F (83.9)<br>385' LT | F (90.2)<br>395' LT                                     | D (50.6)<br>225' LT | D (54.6)<br>240' LT                                     | E (58.4)<br>260' LT | E (61.0)<br>285' LT                                     |
| <b>Overall Intersection</b>                                                    | <b>C (21.4)</b>     | <b>C (22.0)</b>                                         | <b>B (13.9)</b>     | <b>B (14.9)</b>                                         | <b>C (23.0)</b>     | <b>C (24.7)</b>                                         |
| <b><i>Olive Boulevard and Dautel Lane/Graeser Road – Signalized</i></b>        |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Olive Boulevard                                                      | A (8.1)             | A (8.3)                                                 | C (25.8)            | C (27.4)                                                | B (13.5)            | B (13.7)                                                |
| Westbound Olive Boulevard                                                      | B (17.0)            | B (17.1)                                                | B (18.7)            | B (19.0)                                                | D (40.0)            | D (42.1)                                                |
| Northbound Dautel Lane                                                         | C (31.8)            | C (31.8)                                                | D (36.2)            | D (36.2)                                                | D (41.3)            | D (41.3)                                                |
| Southbound Graeser Road                                                        | D (51.6)            | D (51.6)                                                | D (42.0)            | D (42.0)                                                | D (52.9)            | D (52.9)                                                |
| <b>Overall Intersection</b>                                                    | <b>B (15.0)</b>     | <b>B (15.1)</b>                                         | <b>C (24.1)</b>     | <b>C (25.0)</b>                                         | <b>C (30.4)</b>     | <b>C (31.6)</b>                                         |
| <b><i>Oak Lake Court and Schulte Road – Side-Street Stop</i></b>               |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Oak Lake Court                                                       | B (10.1)            | B (10.1)                                                | A (9.8)             | A (9.8)                                                 | B (10.4)            | B (10.5)                                                |
| Northbound Left-Turn Schulte Rd                                                | A (7.7)             | A (7.7)                                                 | A (7.7)             | A (7.7)                                                 | A (7.9)             | A (7.9)                                                 |
| <b><i>Schulte Road at Mobil/Shell Driveway – Side-Street Stop</i></b>          |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Mobil Driveway                                                       | B (10.6)            | B (10.4)                                                | B (10.4)            | B (10.4)                                                | B (10.5)            | B (10.5)                                                |
| Westbound Shell Driveway                                                       | B (12.0)            | B (12.1)                                                | B (12.2)            | B (12.2)                                                | B (14.1)            | B (14.2)                                                |
| Northbound Schulte Road                                                        | A (7.8)             | --                                                      | A (7.7)             | --                                                      | A (7.9)             | --                                                      |
| Southbound Schulte Road                                                        | A (7.5)             | A (7.5)                                                 | A (7.6)             | A (7.6)                                                 | A (7.9)             | A (7.9)                                                 |
| <b><i>Olive Boulevard at Mobil West Driveway – Side-Street Stop</i></b>        |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Left-Turn Olive Blvd                                                 | C (15.7)            | --                                                      | C (17.7)            | --                                                      | C (19.9)            | --                                                      |
| Southbound Mobil Driveway                                                      | C (29.8)            | C (18.2)                                                | F (150.1)           | C (19.3)                                                | F (>200)            | C (21.6)                                                |
| <b><i>Olive Boulevard at Mobil East Driveway – Side-Street Stop</i></b>        |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Left-Turn Olive Blvd                                                 | C (15.7)            | C (17.2)                                                | C (16.8)            | C (20.8)                                                | C (18.9)            | C (22.7)                                                |
| Southbound Mobil Left-Turn                                                     | --                  | F (61.3)                                                | --                  | F (141.2)                                               | --                  | F (118.7)                                               |
| Southbound Mobil Right-Turn                                                    | --                  | C (21.0)                                                | --                  | C (24.8)                                                | --                  | D (26.8)                                                |
| Southbound Mobil Driveway                                                      | F (50.8)            | D (31.9)                                                | F (>200)            | F (69.1)                                                | F (>200)            | F (58.2)                                                |

Attachment: Reports and Exhibits Received November 11-27-2017 (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

Under the 2036 Build condition, the overall intersection operations are expected to remain at similar overall levels as the 2036 No-Build with minimal changes in delay during the weekday AM, Midday and PM peak hours. Without signal timing adjustments, the overall delay is expected to increase less than 2 seconds during the AM, Midday or PM peak hour at Schulte Road and Olive Boulevard. The southbound approach is expected to have minimal increases with 6.3 seconds during the AM peak hour, 4 seconds during the Midday peak hour and 2.6 seconds during the PM peak hour. Without signal timing adjustments, the 2036 forecasted build v/c ratios for the southbound approach would remain more than 1.0 during the AM peak hour. The southbound v/c ratio is forecasted to be 0.88 or better during the Midday or PM peak hour. Again, the cycle length dictates and high v/c ratios drive the poor level of service during the AM and PM peak hours. The northbound and southbound approaches have minimal green times to maximize green times to the heavy eastbound and westbound through movements on Olive Boulevard.

As previously noted, the increase in the southbound left-turns from Schulte Road to Olive Boulevard is expected to be less than 10 vph during all peaks. The increase in site trips represent less than one additional vehicle every six minutes on average.

Again, the three Mobil driveways (main access to Olive Boulevard, right-out only to Olive Boulevard and the three-quarter access driveway on Schulte Road) are expected to operate at acceptable levels of service during the peak hours with the exception of the southbound left-turn out of the site during the peak hours. It should also be noted that the southbound left-turn delay exiting the Mobil Driveway was generally less than the southbound left-turn delay on Schulte Road at Olive Boulevard since Schulte vehicles turns must wait for green.

Again, the impacts of the new Mobil are diminished outside of the direct access points to Olive Boulevard. As can be seen, minimal increases are expected at the signalized intersections including Olive Boulevard at Schulte Road. The impacts of the new Mobil are also expected to be minimal at the signalized intersections adjacent to Schulte (Mosely Road and Greaser/Dautel Lane). Furthermore, the analysis software estimates an increase in delay of one second or less for the northbound approach of Renee Lane and less than two seconds of delay for the southbound approach of Woodshire Lane during each of the peak hours as compared to the 2036 No-Build.

Similar to the 2016 build conditions, various alternatives were re-evaluated to summarize the impacts of the potential improvements. Again, the modified signal timing would improve the southbound approach and have minimal impacts to the mainline; the separate right-turn lane would have no worthwhile impacts; the Flashing Yellow Arrow provided minimal operation changes but potentially a safety improvement; and the dual left-turn would provide improved operations but would have the most negative impact to adjacent link progression.



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 14: 20-Year Operating Conditions with Alternative Improvement Scenarios – AM Peak Hour**

| Intersection/Approach                                                         | 20-Year No Build | 20-Year Build<br>Original Timing<br>[28 sec n-s] | 20-Year Build<br>Timing<br>Adjustments<br>[29 Sec n-s] | 20-Year Build<br>Add Flashing<br>Yellow Arrow<br>NB& SB<br>[28 Sec n-s] | 20-Year Build<br>Separate SB<br>Right-Turn<br>Lane<br>[28 Sec n-s] | 20-Year Build with<br>Dual Left and<br>Split-Phase <sup>1</sup><br>[30 Sec n-s] |
|-------------------------------------------------------------------------------|------------------|--------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b> |                  |                                                  |                                                        |                                                                         |                                                                    |                                                                                 |
| Eastbound Olive Boulevard                                                     | B (18.0) 20' LT  | B (17.9) 20' LT                                  | B (18.7) 20' LT                                        | B (17.9) 20' LT                                                         | B (17.9) 20' LT                                                    | B (13.8) 20' LT                                                                 |
| Westbound Olive Boulevard                                                     | B (12.5)         | B (12.6)                                         | B (12.8)                                               | B (12.6)                                                                | B (12.6)                                                           | A (8.5)                                                                         |
| Northbound Mary Meadows Lane                                                  | D (51.2)         | D (51.2)                                         | D (50.3)                                               | D (51.2)                                                                | D (51.2)                                                           | E (69.0)                                                                        |
| Southbound Schulte Road                                                       | F (83.9) 385' LT | F (90.2) 395' LT                                 | F (82.1) 385' LT                                       | F (91.1) 395' LT                                                        | F (90.3) 395' LT                                                   | F (82.7) 230' LT                                                                |
| <b>Overall Intersection</b>                                                   | <b>C (21.4)</b>  | <b>C (22.0)</b>                                  | <b>C (21.7)</b>                                        | <b>C (22.1)</b>                                                         | <b>C (22.0)</b>                                                    | <b>B (17.7)</b>                                                                 |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

<sup>1</sup> Dual Southbound Lefts and Split Phase (13.1 sec +16.9 sec)

**Table 15: 20-Year Operating Conditions with Alternative Improvement Scenarios – Midday Peak Hour**

| Intersection/Approach                                                         | 20-Year No Build | 20-Year Build<br>Original Timing<br>[24 sec n-s] | 20-Year Build<br>Timing<br>Adjustments<br>[27 Sec n-s] | 20-Year Build<br>Add Flashing<br>Yellow Arrow<br>NB& SB<br>[24 Sec n-s] | 20-Year Build<br>Separate SB<br>Right-Turn<br>Lane<br>[24 Sec n-s] | 20-Year Build with<br>Dual Left and<br>Split-Phase <sup>1</sup><br>[30 Sec n-s] |
|-------------------------------------------------------------------------------|------------------|--------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b> |                  |                                                  |                                                        |                                                                         |                                                                    |                                                                                 |
| Eastbound Olive Boulevard                                                     | B (13.9) 50' LT  | B (14.6) 50' LT                                  | B (15.4) 50' LT                                        | B (14.6) 50' LT                                                         | B (14.6) 50' LT                                                    | B (10.4) 55' LT                                                                 |
| Westbound Olive Boulevard                                                     | A (8.4)          | A (9.0)                                          | B (10.2)                                               | A (9.0)                                                                 | A (9.0)                                                            | A (8.4)                                                                         |
| Northbound Mary Meadows Lane                                                  | D (44.2)         | D (44.3)                                         | D (41.9)                                               | D (44.3)                                                                | D (44.1)                                                           | E (55.4)                                                                        |
| Southbound Schulte Road                                                       | D (50.6) 225' LT | D (54.6) 240' LT                                 | D (48.7) 210' LT                                       | D (54.6) 240' LT                                                        | D (54.6) 240' LT                                                   | D (50.6) 135' LT                                                                |
| <b>Overall Intersection</b>                                                   | <b>B (13.9)</b>  | <b>B (14.9)</b>                                  | <b>B (15.4)</b>                                        | <b>B (14.9)</b>                                                         | <b>B (14.9)</b>                                                    | <b>B (12.3)</b>                                                                 |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

Dual Southbound Lefts and Split Phase (13.1 sec +15.9 sec)

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**

**Creve Coeur, Missouri**

**Table 16: 20-Year Operating Conditions with Alternative Improvement Scenarios – PM Peak Hour**

| Intersection/Approach                                                         | 20-Year No Build | 20-Year Build<br>Original Timing<br>[28 sec n-s] | 20-Year Build<br>Timing<br>Adjustments<br>[30 Sec n-s] | 20-Year Build<br>Add Flashing<br>Yellow Arrow<br>NB& SB<br>[28 Sec n-s] | 20-Year Build<br>Separate SB<br>Right-Turn Lane<br>[28 Sec n-s] | 20-Year Build with<br>Dual Left and<br>Split-Phase <sup>1</sup><br>[30 Sec n-s] |
|-------------------------------------------------------------------------------|------------------|--------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b> |                  |                                                  |                                                        |                                                                         |                                                                 |                                                                                 |
| Eastbound Olive Boulevard                                                     | B (17.9) 105' LT | B (18.2) 105' LT                                 | B (17.5) 105' LT                                       | B (18.3) 105' LT                                                        | B (18.2) 105' LT                                                | B (13.9) 105' LT                                                                |
| Westbound Olive Boulevard                                                     | C (21.6)         | C (24.2)                                         | C (28.2)                                               | C (24.5)                                                                | C (24.2)                                                        | B (15.6)                                                                        |
| Northbound Mary Meadows Lane                                                  | D (51.0)         | D (51.1)                                         | D (49.5)                                               | D (51.0)                                                                | D (51.0)                                                        | E (67.3)                                                                        |
| Southbound Schulte Road                                                       | E (58.4) 260' LT | E (61.0) 285' LT                                 | E (57.2) 265' LT                                       | E (61.1) 285' LT                                                        | E (61.0) 285' LT                                                | E (57.8) 175' LT                                                                |
| <b>Overall Intersection</b>                                                   | <b>C (23.0)</b>  | <b>C (24.7)</b>                                  | <b>C (26.0)</b>                                        | <b>C (24.9)</b>                                                         | <b>C (24.7)</b>                                                 | <b>B (18.4)</b>                                                                 |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

Dual Southbound Lefts and Split Phase (13.1 sec + 16.9 sec)

**Table 17: 20-Year Progression Analysis – 70<sup>th</sup> Percentile Link Bands**

| <i>70<sup>th</sup> Percentile Link Green Bands</i>            | <i>Weekday AM Peak Hour</i> |                              |                                     | <i>Weekday Midday Peak Hour</i> |                              |                                     | <i>Weekday PM Peak Hour</i> |                              |                                     |
|---------------------------------------------------------------|-----------------------------|------------------------------|-------------------------------------|---------------------------------|------------------------------|-------------------------------------|-----------------------------|------------------------------|-------------------------------------|
|                                                               | <i>Existing</i>             | <i>Timing<br/>Adjustment</i> | <i>Dual<br/>LT/Split-<br/>Phase</i> | <i>Existing</i>                 | <i>Timing<br/>Adjustment</i> | <i>Dual<br/>LT/Split-<br/>Phase</i> | <i>Existing</i>             | <i>Timing<br/>Adjustment</i> | <i>Dual<br/>LT/Split-<br/>Phase</i> |
| <b>Eastbound</b>                                              |                             |                              |                                     |                                 |                              |                                     |                             |                              |                                     |
| Mosley Road to Schulte Road Link                              | 80 sec                      | 79 sec                       | 78 sec                              | 77 sec                          | 77 sec                       | 88 sec                              | 83 sec                      | 83 sec                       | 83 sec                              |
| Schulte to Dautel Lane Link                                   | 97 sec                      | 97 sec                       | 97 sec                              | 76 sec                          | 76 sec                       | 76 sec                              | 96 sec                      | 94 sec                       | 94 sec                              |
| Eastbound Arterial Green Band<br>(Craig Road to Spoeede Road) | 70 sec                      | 70 sec                       | 70 sec                              | 46 sec                          | 46 sec                       | 46 sec                              | 67 sec                      | 67 sec                       | 67 sec                              |
| <b>Westbound</b>                                              |                             |                              |                                     |                                 |                              |                                     |                             |                              |                                     |
| Dautel Lane to Schulte Road Link                              | 98 sec                      | 98 sec                       | 97 sec                              | 72 sec                          | 70 sec                       | 68 sec                              | 86 sec                      | 84 sec                       | 84 sec                              |
| Schulte Road to Mosley Road Link                              | 82 sec                      | 81 sec                       | 80 sec                              | 63 sec                          | 60 sec                       | 68 sec                              | 72 sec                      | 70 sec                       | 70 sec                              |
| Westbound Arterial Green Band<br>(Spoeede Road to Craig Road) | 60 sec                      | 60 sec                       | 60 sec                              | 50 sec                          | 50 sec                       | 50 sec                              | 52 sec                      | 52 sec                       | 52 sec                              |



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

## Conclusions

CBB completed a traffic impact study for the proposed Creve Coeur Mobil with Car Wash redevelopment in Creve Coeur, Missouri. The site located on the northwest quadrant of Olive Boulevard at Schulte Road. The site is currently occupied by a Mobil gas station with a small convenience store and a car wash as well as a several homes.

- Access to the redeveloped site is proposed via one full access driveway on Olive Boulevard, one right-turn exit-only driveway on Olive Boulevard at the west end of the property, and one three-quarter driveway (no left-turn in) on Schulte Road generally opposite the existing Shell station driveway.
- Base traffic conditions were observed and evaluated to reveal constraints that currently exist at the signalized intersection of Olive Boulevard with Schulte Road/Mary Meadows Lane. The north-south approaches currently operate at less than desirable levels of service during the AM and PM peak hours primarily as a result of long signal cycle lengths dictated by other critical intersections on the Olive Boulevard corridor. The horizontal and vertical physical configuration of the existing intersection is also less than desirable.
- The new Mobil gas station would be expected to generate approximately 120, 190, and 140 additional trips during the AM, Midday and PM peak hours of a typical weekday, respectively.
- Based on MoDOT's Access Management Guidelines, a separate westbound right-turn lane would be warranted on Olive Boulevard at the proposed full-access driveway. However, that lane would have minimal impact on operating conditions, have impacts to utilities and separate right-turn lanes are not currently provided at unsignalized intersections along the Olive Boulevard corridor, CBB does not recommend the installation of the right-turn lane on Olive Boulevard at the proposed full access driveway.
- The proposed access drives would operate at acceptable levels of service, except for the southbound left-turns out of the main entrance, which is primarily due to the heavy east-west volumes on Olive Boulevard. The left-turning motorists should be able to make two-stage turns onto eastbound Olive Boulevard via the center left-turn lane or go to the signal via Schulte Road.
  - A two-lane exit is recommended and proposed on the conceptual site plan to separate exiting left and right-turns. It should also be noted that this driveway has the ability to storage approximately 4 or 5 vehicles that would be queued in the southbound direction before impacting internal circulation.

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

- The impacts of the proposed Mobil can be mitigated at the intersection of Olive Boulevard with Schulte Road by providing two seconds of additional north-south green time during the AM and PM peak hour and four seconds of additional north-south green time in the Midday peak hour. On-site observations found that the southbound approach currently clears during a vast majority of the cycles, even during the peak hours, so timing adjustments may not be necessary to allow acceptable operations in the field.
- Minimal operational impacts would be gained by providing a separate southbound right-turn lane since the southbound through volumes are so low, the lane currently operates as a defacto right-turn lane. CBB does not recommend this improvement.
- Minimal operational impacts are expected with the installation of Flashing yellow arrows for the northbound and southbound approaches, but could provide significant improvements in safety, especially related to left-turn crashes. CBB recommends this change.
- If dual southbound left-turns (one left-turn and one share left-turn/through lane) are constructed, a slightly larger north-south split is needed to accommodate the forecasted traffic since split phasing should be required which would negatively impact progression along Olive Boulevard. The primary benefits of the dual left-turn lanes would be accommodation of a safer north-south phasing (split phased) and cutting the southbound queue length nearly in half.
  - It should be noted that the proposed rebuilding of the Mobil gas station has very little impact at the signalized intersection and the existing safety concerns with the horizontal and vertical alignment of the north and south legs are present with or without the proposed development.
  - This improvement would help to address the long-term needs of the intersection. It is not feasible to construct the full intersection improvements without the coordination and concurrence with the private ownership of Mary Meadows on the south side of the road.
  - As a result, the subject development has reserved ground in the northeast quadrant of the intersection so that a better horizontal alignment can occur in the future when all parties can come to an agreement.
- A marked pedestrian crossing is recommended across the west side of the intersection to accommodate pedestrians crossing Olive Boulevard.
- Since traffic to and from the development is not expected to create a noticeable change in traffic along Olive Boulevard to the west (limited to less than 25 vph in either direction), there will be limited impact to ingress/egress for the adjacent neighboring streets (Renee Lane and Woodshire Lane). The delay increases are estimated to be less than one additional second for the northbound approach and one additional second for the southbound approach.



*Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri*

---

- The results for the Year 2036 No-Build Scenario and 2036 Build Scenario are very similar, where only slight increases in north-south green times are needed to effectively accommodate the traffic from the proposed new Mobil gas station.

We trust that you will find that the information in this report useful in evaluating the traffic impacts of the subject site. Please contact Brian Rensing in our St. Louis office (314) 449-9569 or via email at [Brensing@cbbtraffic.com](mailto:Brensing@cbbtraffic.com) should there be any questions or need for additional information.

CBB Job No. 2016-91

prepared by:



**CBB**

12400 Olive Boulevard  
Suite 430  
St. Louis, MO 63141  
(314) 878-6644





**ENVIRONMENTAL  
NOISE STUDY OF PROPOSED  
NEW COMMERCIAL DEVELOPMENT  
ON THE NORTH WEST CORNER OF OLIVE AND SCHULTE,  
LOCATED IN CREVE COUER MISSOURI**

**PREPARED FOR:**

Arch Energy (Wallis Companies)  
106 E. Washington  
Cuba, Missouri 65453

**PREPARED BY:**

KEVIN TANKERSLEY  
President / Senior Engineer  
DESIGNED ACOUSTICS, LLC  
PROJECT #  
11824

DATE  
NOVEMBER 10<sup>th</sup>, 2016

**Environmental Noise Study**  
**November 10<sup>th</sup>, 2016**

Environmental Noise Study Report

**TABLE OF CONTENTS**

|                                             |   |
|---------------------------------------------|---|
| INTRODUCTION.....                           | 3 |
| NOISE MEASUREMENTS .....                    | 3 |
| INSTRUMENTATION .....                       | 4 |
| MEASUREMENTS.....                           | 4 |
| FINDINGS.....                               | 5 |
| CONCLUDING REMARKS .....                    | 6 |
| ACOUSTIC NOMENCLATURE AND TERMINOLOGY ..... | 7 |



## Environmental Noise Study November 10<sup>th</sup>, 2016

### INTRODUCTION

Designed Acoustics was retained by Wallis Companies to perform an Environmental Noise Study and to provide an evaluation of existing and potential noise levels that could be generated by a proposed new commercial development. The property is at northwest corner of Olive & Schulte located in Creve Coeur Missouri. This report summarizes Designed Acoustics' noise investigation and the potential audible effects at the property lines of the proposed site. Environmental noise studies, being investigative by nature, are often forced to make assumptions concerning the properties of the noise source(s) under such study. Designed Acoustics recognizes the proposed uses and have elected to base the study upon a conservative "worst case situation" in order to ensure the validity of calculated results.

The following report explains the methodology used to gather data as well as Designed Acoustics' findings and compliance with the City of Creve Coeur criteria which is:

*An acoustical study shall be submitted demonstrating that the order facility and service windows will not produce sounds exceeding sixty (60) dB as measured at any property line abutting a residential use, up to a height of eight (8) feet above ground at the property line and demonstrating that the order facility and service windows will not increase ambient sound levels at other property lines above the average Monday to Friday midday level.*

For the development proposed at this location, no service order window is proposed however, some of the mechanical components of the car wash have higher decibel levels and will be evaluated. It should also be noted that the hours of operation proposed for the carwash portion of the facility are from approximately 7 am until 8 pm.

### NOISE MEASUREMENTS

Long-term 24-hour noise measurements were completed at the subject site. While on-site short term measurements were also taken at the same time that the long term monitoring was beginning, approximately 4pm on Thursday, November 3rd, 2016. Additionally, short term background noise measurements were again taken at the time that the long term monitors were retrieved, approximately 10am on Wednesday, November 9th, 2016.

## Environmental Noise Study November 10<sup>th</sup>, 2016

### INSTRUMENTATION

A Larson-Davis Laboratories Model Sound Expert LxT precision sound level meter was used for all octave band measurements reported here. This meter conforms to the ANSI Standard Specifications for Sound Level Meters S1.4-1983, Type 1 (Precision), and the IEC Standard 651-1979, Sound-Level Meters, Type 1 Peak. The instrument was calibrated and is traceable to The National Institute of Standards. Evidence of traceability is on file at the Larson Davis Corporate Headquarters. The meter calibration was field verified before and after the measurement session.

Larson-Davis Laboratories Model Sound Expert LxT sound meters were used for A-weighted long-term sound level measurements. This meter conforms to ANSI Standard Specifications for Sound Level Meters S1.4-1983, Type 2, and the IEC 651-1979, Sound Level Meters Type 2. The instruments were calibrated and are traceable to the National Institute of Standards. Evidence of traceability is on file at the Larson Davis Corporate Headquarters. The meters were field verified before and after the measurement session.

### MEASUREMENTS

Long Term monitor results

| Date                                       | Ldn (dBA) | Lday (dBA) | Ln timer (dBA) |
|--------------------------------------------|-----------|------------|----------------|
| Friday, November 4 <sup>th</sup> , 2016    | 65.8      | 64.9       | 57.0           |
| Saturday, November 5 <sup>th</sup> , 2016  | 65.7      | 66.4       | 54.3           |
| Sunday, November 6 <sup>th</sup> , 2016    | 65.1      | 63.2       | 57.1           |
| Monday, November 7 <sup>th</sup> , 2016    | 65.3      | 65.2       | 55.4           |
| Tuesday, November 8 <sup>th</sup> , 2016   | 65.8      | 64.7       | 57.1           |
| Wednesday, November 9 <sup>th</sup> , 2016 | 64.9*     | 64.9*      | 54.3*          |
|                                            |           |            |                |

\*Not a complete 24 hour cycle of data.



## Environmental Noise Study November 10<sup>th</sup>, 2016

### FINDINGS

The estimated impact of speaker noise at the nearest property line was calculated using provided manufactures data. The total attenuation at the nearest property line (and beyond) was calculated based on land topography supplied to Designed Acoustics by the site civil engineer, barrier height and location(s) (insertion loss<sup>1</sup>), and distance from source. The calculations show no increase of noise impact at the property line. It is important to note that as a conservative approach Designed Acoustics did NOT take into consideration the large amounts of trees and shrubs at the property lines and beyond. Due to seasonal changes in the geometry, shape, and consistency of such barriers, sound attenuation is difficult to predict when these are figured into the calculations. Designed Acoustics acknowledges that trees and foliage, in bloom, will add a slight degree of extra attenuation beyond those factors accounted for in this study. Therefore, the addition of trees and / or foliage near the property lines will have a positive impact on the noise environment beyond the property line.

The estimated SPLs assume a 6' barrier (that Designed Acoustics supports installing) placed between the given property lines and proposed carwash. Additionally, estimated SPLs at the northwest property line took into consideration the elevation difference between the carwash and the nearby property. This topography increases the barrier effectiveness at the northwest property line. Designed Acoustics estimated these SPLs at an 8' height per the aforementioned city code.

The site plan, provided by CEC and included in the appendix, indicates the approximate distance from the closest point on the North West property line to the entrance to the car wash. Designed Acoustics estimates a sound level of 70dBA at this area. Distance attenuation along with barrier attenuation was used to calculate the estimated property line dBA at 8'. The worst case is calculated to be 49 dBA at the property line. It's important to note that these estimated SPLs are lower than the onsite background measurements that have been taken. We recognize that the driers exiting the car wash are in fact the loudest noise generator on site, approximately 95dBA to 100dBA during its cycle, the direction of those driers will face the highway. It's our conclusion that the highway noise and the distance would dampen those levels significantly. While we did check all property line dBA levels during our study, Designed Acoustics has chosen the car wash entrance area to focus on because we are confident it would be the worst case scenario for noise on the proposed new development and any residential property line.

It is Designed Acoustics professional opinion that the operation of the proposed new development will have no negative environmental noise impact on adjacent properties and that the proposed noise levels that will be present upon development as proposed will meet the regulations presented.

**Environmental Noise Study**  
**November 10<sup>th</sup>, 2016**

## **CONCLUDING REMARKS**

As stated earlier environmental noise impact studies, being investigative by nature, are often forced to make assumptions concerning the properties of the noise source under such study. Designed Acoustics recognizes the usage of this proposed development. We have elected to base our study upon this worst case situation in order to ensure the validity of calculated results.

As a first step, Designed Acoustics placed a long term noise monitor at the proposed location in order to quantify the day, night, Leq background noise levels as a base starting point for our acoustical analysis

Designed Acoustics was supplied with manufacturer's noise measurements of the proposed equipment for our review and to establish if the equipment proposed would have the potential for negative effects on the surrounding areas.

As an additional step we were given access to an existing location with similar equipment. (475 N. Lindberg, Florissant. Missouri)  
Designed Acoustics visited that location on November 9<sup>th</sup>, 2016 at approximately 11:30am. While on site sound level readings of the car wash were taken. It's important to note that the sound level readings taken matched the manufacturer's data that was given to us for review. While still on site, sound levels were taken at the wall (barrier) located behind the carwash that separates the carwash from a residential neighborhood. (53dBA to 56dBA) Additional sound level readings were taken behind the wall. The sound level readings behind the wall were significantly lower. (42dBA – 45dBA)

Based on our acoustical analysis and the factors mentioned in this report the new development shall meet the aforementioned city code requirements.



## ACOUSTIC NOMENCLATURE AND TERMINOLOGY

**ANSI:** American National Standards Institute

**A-Weighing:** Prescribed frequency response defined by ANSI Standard S-1971. Used to obtain a single number representing the sound pressure level of a noise in a manner approximating the response of the ear, by de-emphasizing the effects of the low and high frequencies.

**Background Sound:** Sound that remains when sound of interest is removed is background sound relative to the sound of interest.

**Daytime:** The hours 0700 (7:00 am) to 2200 (10:00 pm).

**Day-night average sound level (Ldn):** A measure of the noise environment over a 24-hour A-weighted sound level with a 10 dB weighing applied to the nighttime levels. When equivalent level (Leq) information is available, the Ldn is calculated as follows:

Where  $Leq(d) = Leq$  for the hours 0700-2200.

$Leq(n) = Leq$  for the hours 2200-0700.

Annualized Ldn is effective Ldn determined over a full year accounting for daily and seasonal variations.

**dBA:** Overall A-weighted sound pressure level expressed in decibels referenced to 20 micro-pascals.

**Decibel (dB):** Ten times the logarithm of the ratio of a quantity (X) to a reference quantity ( $X_r$ ).

**Equivalent Sound Level (Leq):** The level of a constant sound which, in a given situation and time period, has the same sound energy as a time varying sound level.

$f_i$  = percent of time period in which a particular  $L_i$  occurs.

$L_i$  = sound level in dB.

**Exceedance Level - Ln:** The sound pressure level exceeded n percent of the time. Example: L10 is the sound pressure level exceeded 10% of the time during a measurement period. L50 corresponds to the median level.

**Frequency:** Number of complete oscillation cycles per unit of time. The frequency is the reciprocal of the period. The unit of frequency often used is the Hertz.

**Hertz (Hz):** Unit of frequency equal to one cycle per second.

**Ldn:** See day-night average sound level.

**Leq(n):** Equivalent sound level for a period n in length.

**Lmax:** The maximum sound level detected during the period of measurement.

**Lmin:** The minimum sound level detected during the period of measurement.

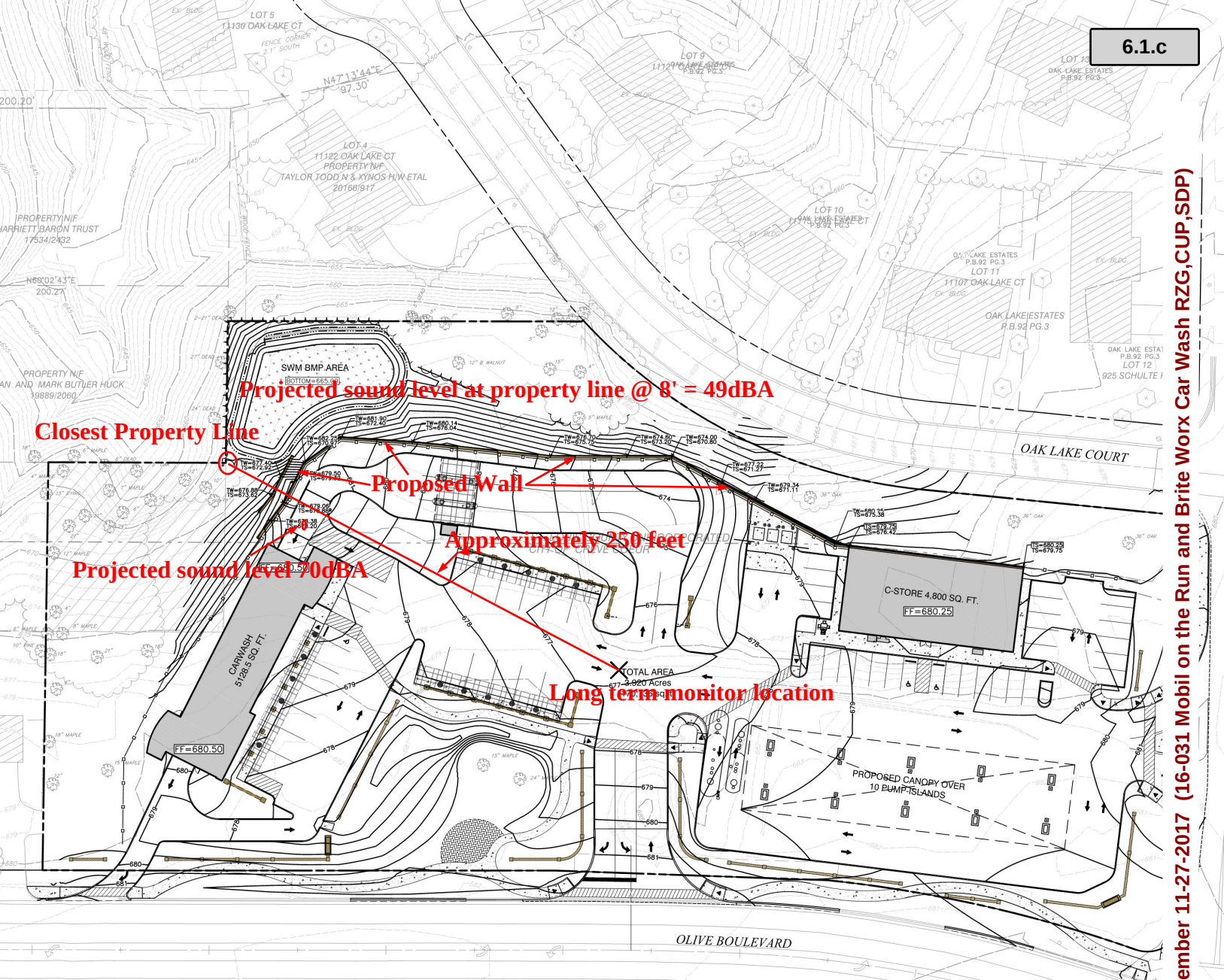
**Ln:** See Exceedance Level, the sound level exceeded n percent of the time.

**Nighttime:** The hours 2200 (10:00 pm) to 0700 (7:00 am).

**Sound Pressure Level (SPL):** In decibels, 20 times the logarithm to the base 10 of the ratio of a sound pressure to the reference sound pressure of 20 micro-pascals. Where  $p$  = sound pressure to be quantified  $p_{ref} = 20$  micro-Pascals (metric).  $2.9 \times 10^{-9}$  psi (English)

## Figures 1 & Graphs 1 – 6

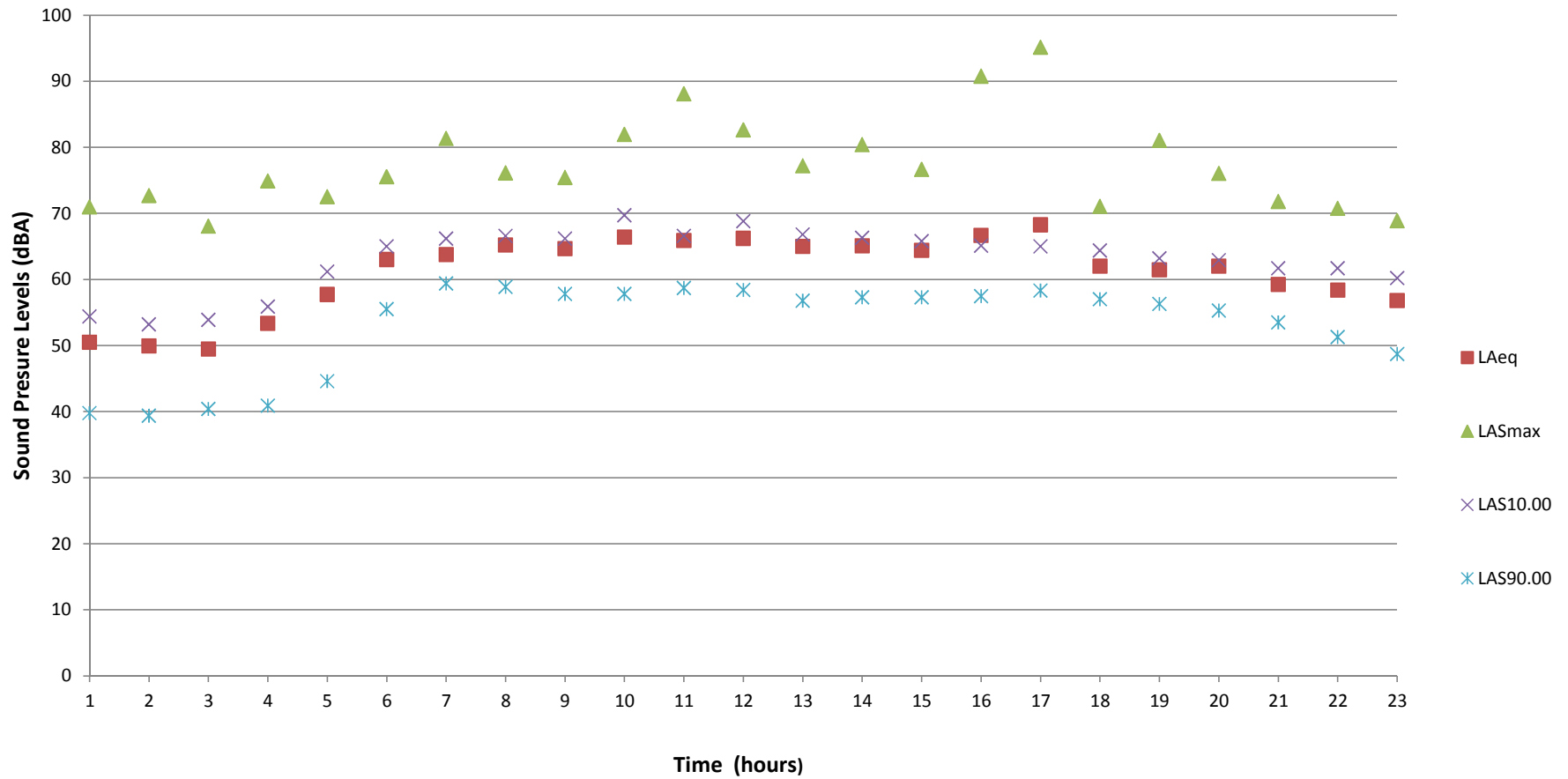






Olive & Schulte  
 Enviromental Noise Study  
 November 4th, 2016

Ldn 24 = 65.8  
 Leq (Day) = 64.9  
 Leq (Night) = 57.0

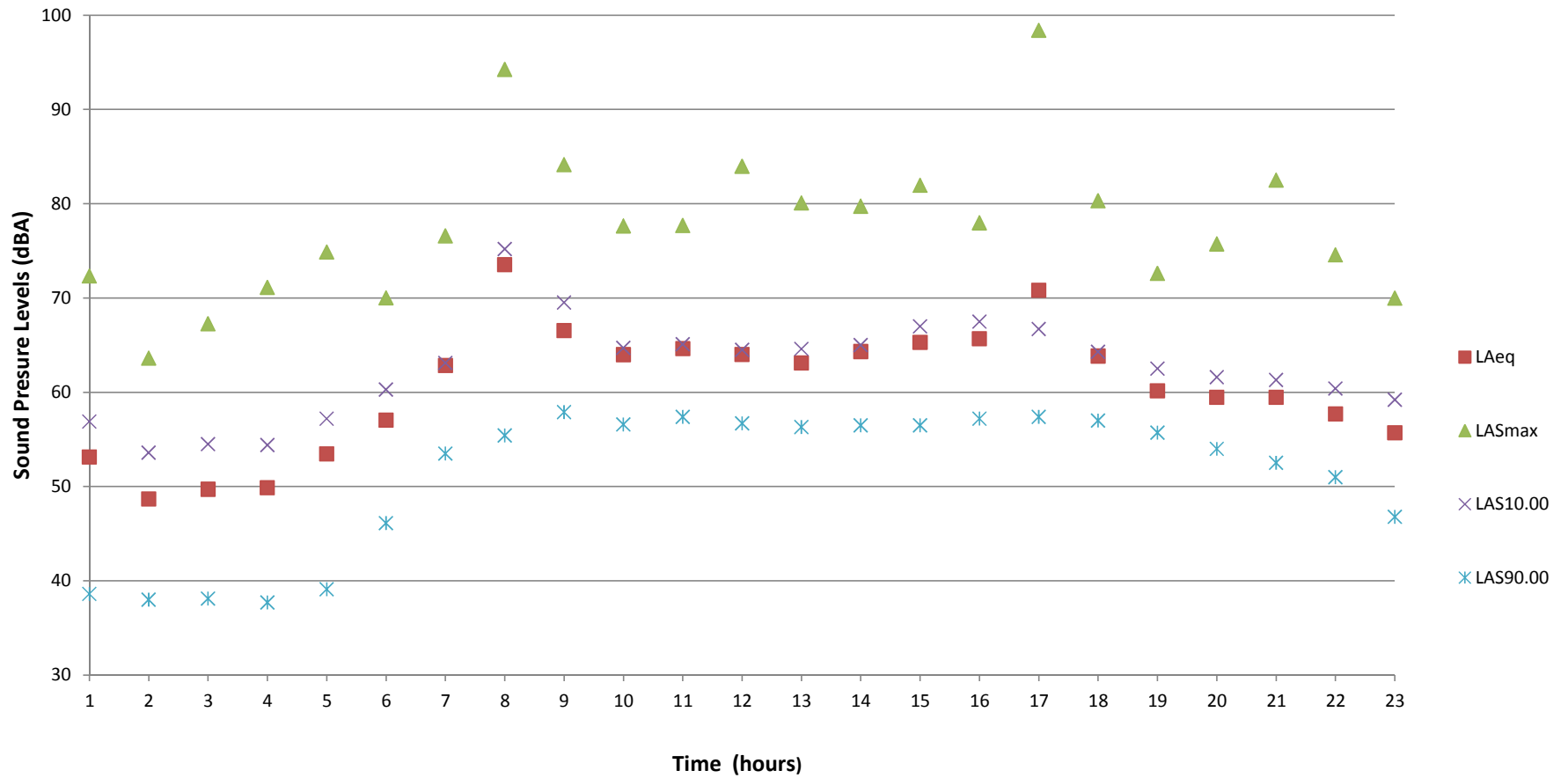






Olive & Schulte  
 Enviromental Noise Study  
 November 5th, 2016

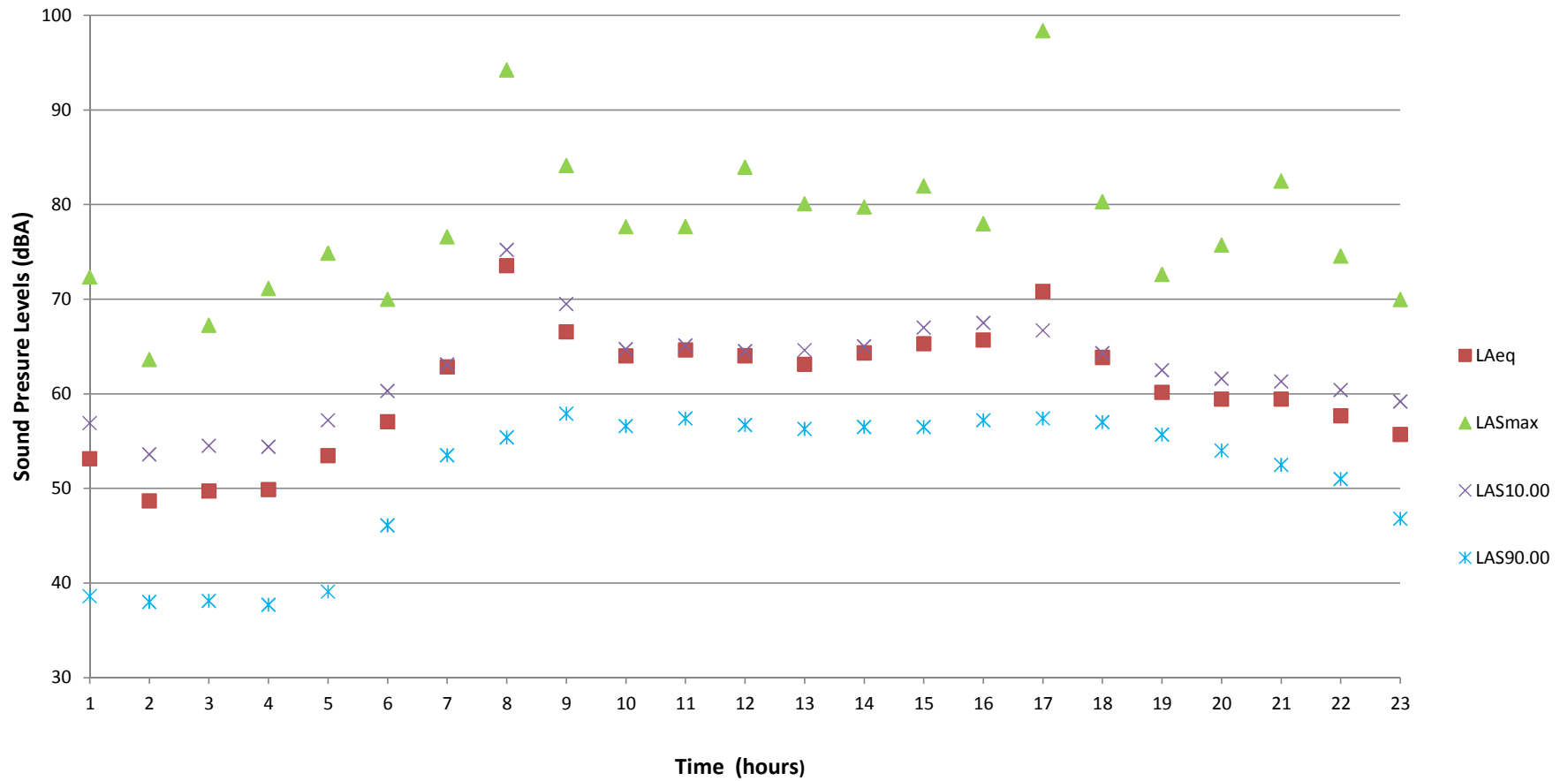
Ldn 24 = 65.7  
 Leq (Day) = 66.4  
 Leq (Night) = 54.3





Olive & Schulte  
 Enviromental Noise Study  
 November 6th, 2016

Ldn 24 = 65.1  
 Leq (Day) = 63.2  
 Leq (Night) = 57.1

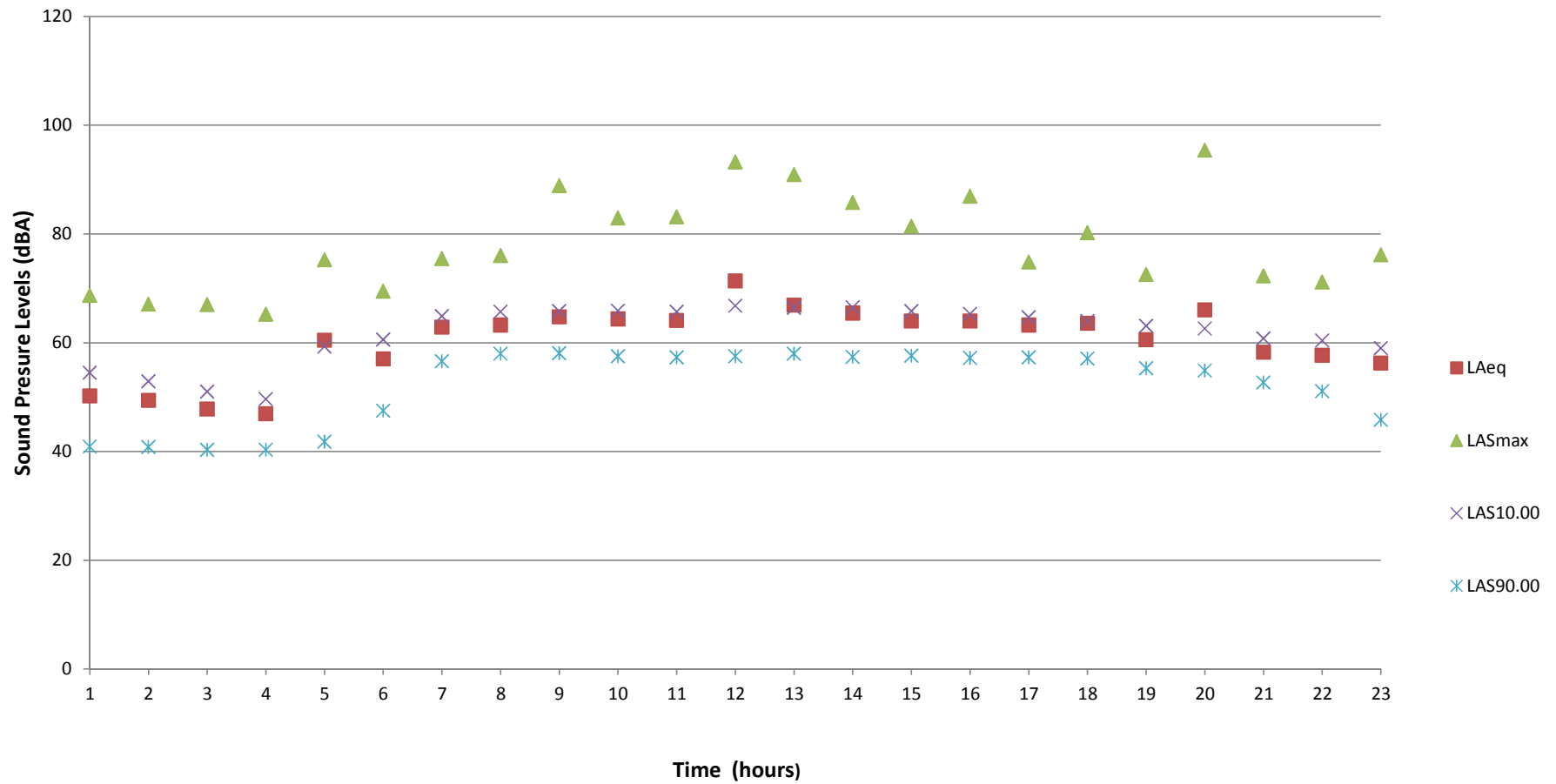






Olive & Schulte  
 Enviromental Noise Study  
 November 7th, 2016

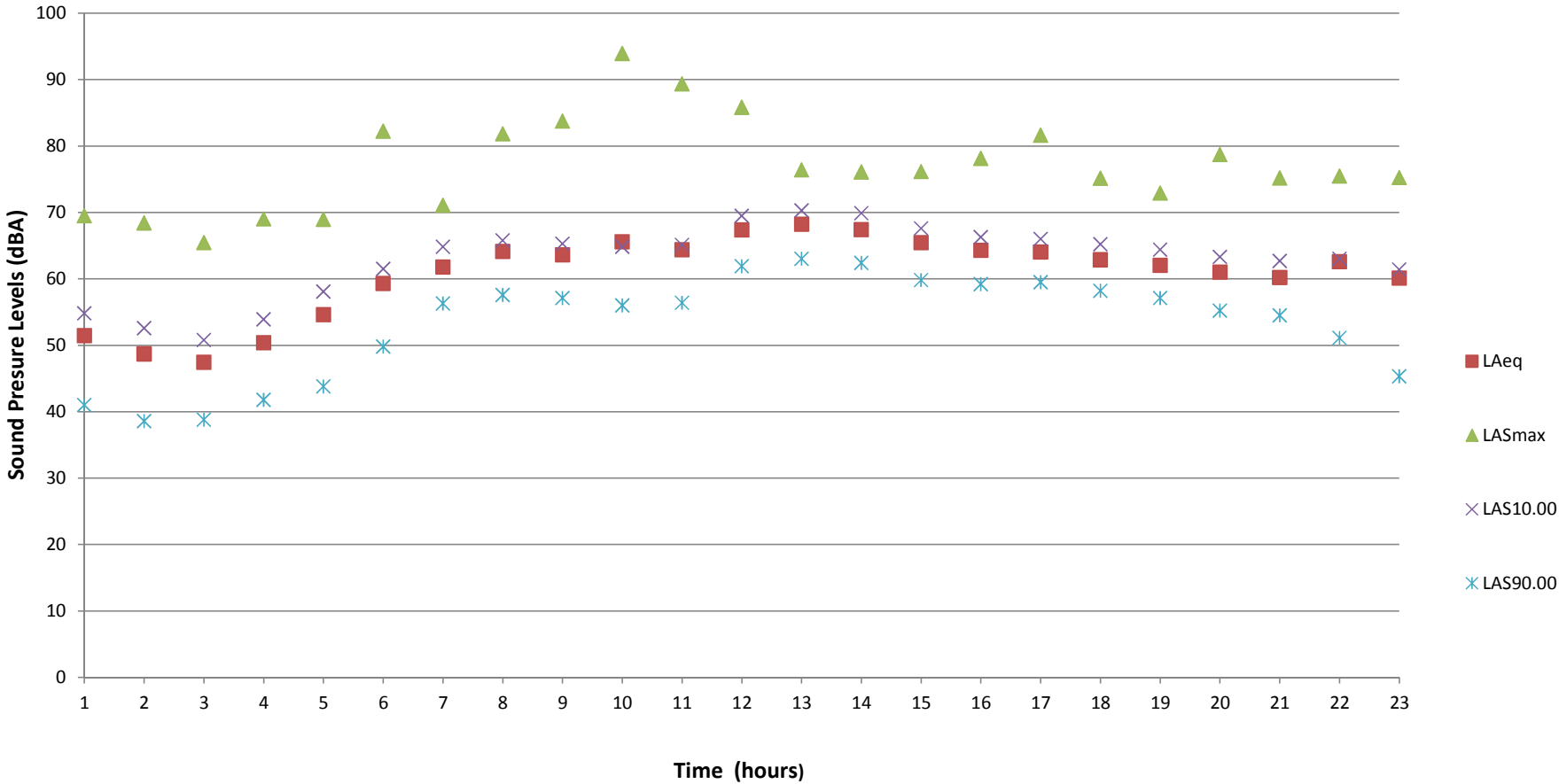
Ldn 24 = 65.3  
 Leq (Day) = 65.2  
 Leq (Night) = 55.4





Olive & Schulte  
Enviromental Noise Study  
November 8th, 2016

Ldn 24 = 65.8  
Leq (Day) = 64.7  
Leq (Night) = 57.1

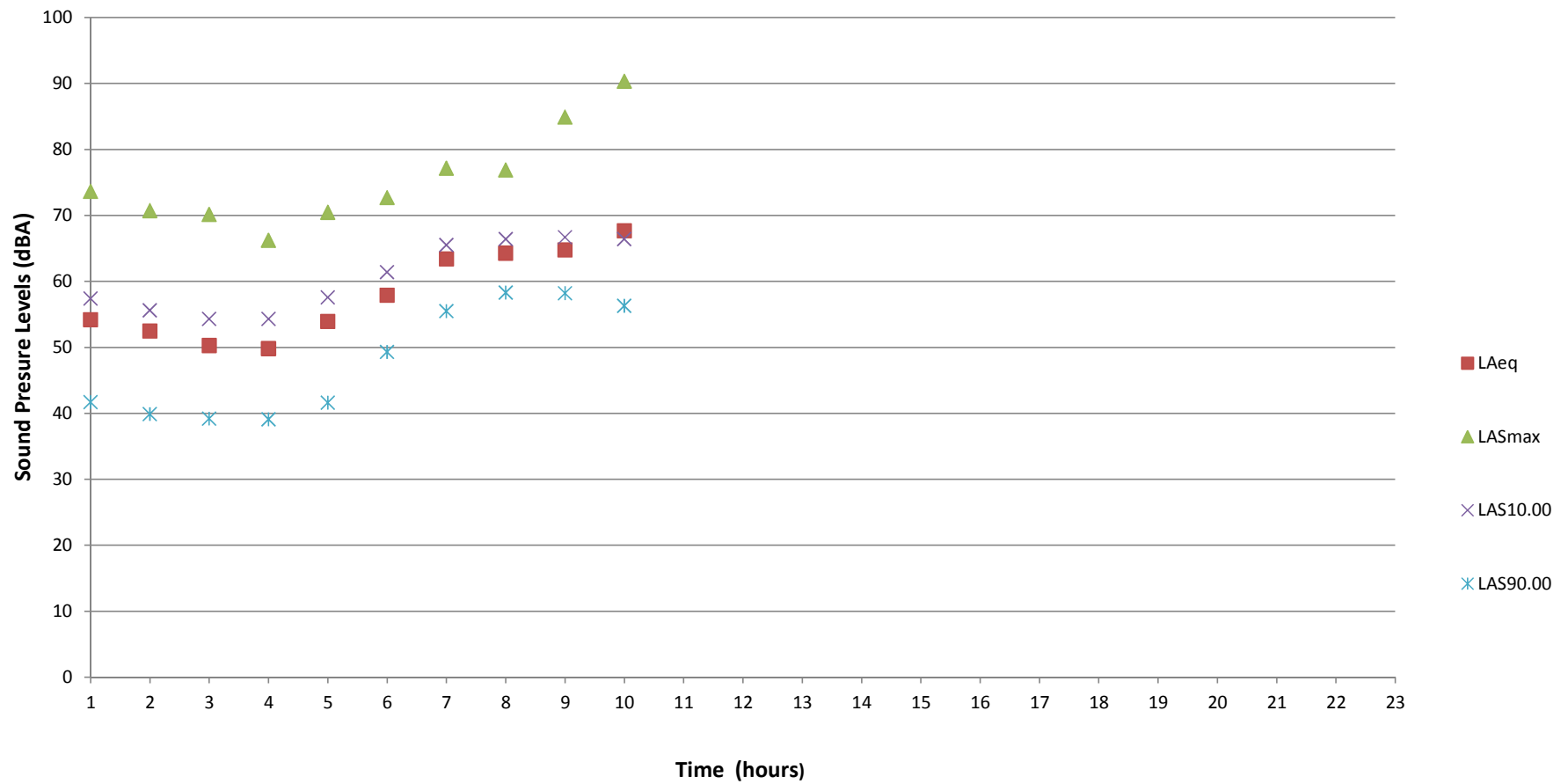






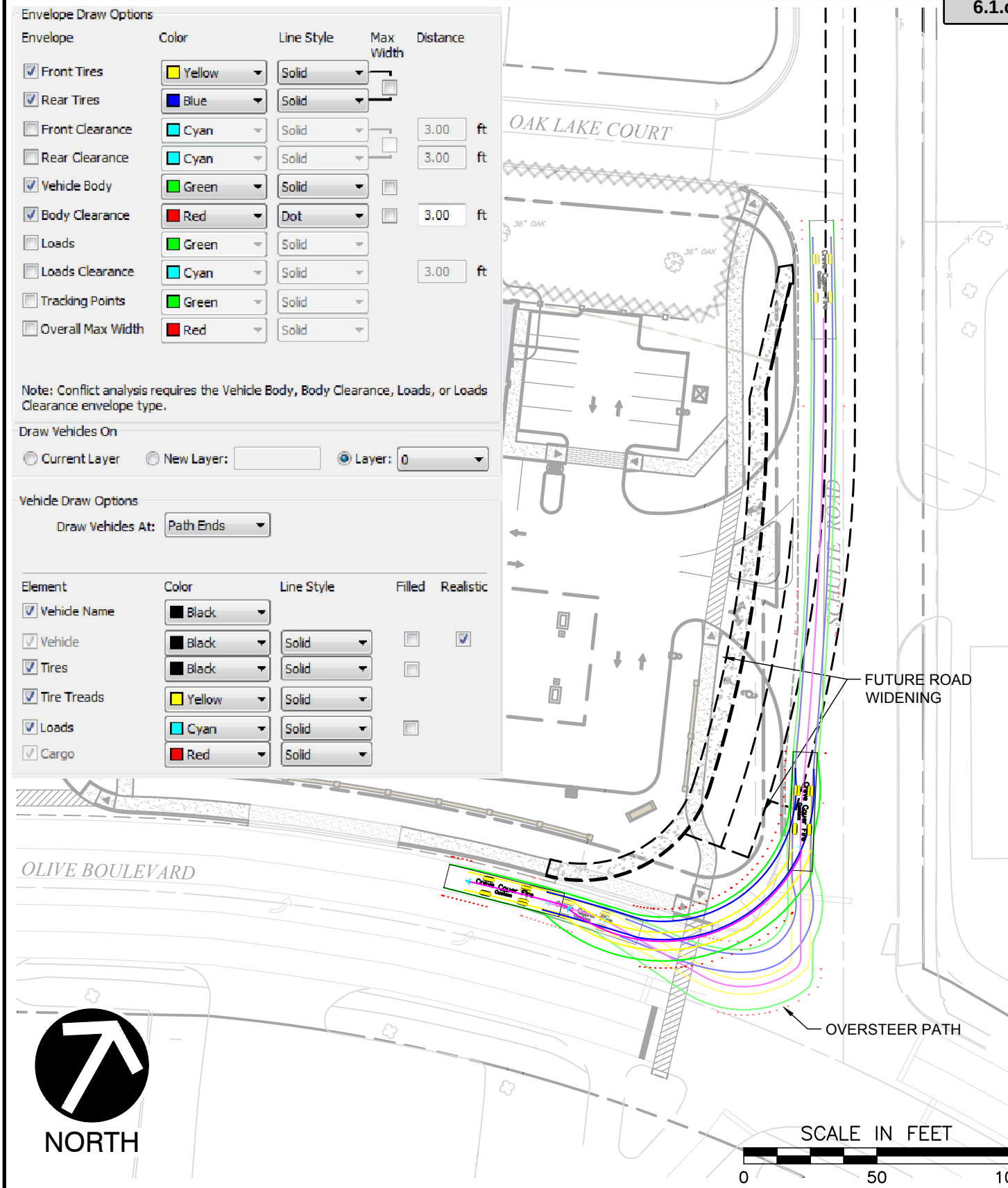
Olive & Schulte  
 Enviromental Noise Study  
 November 9th, 2016  
 (Only partial day of recordings)

Ldn 24 = 64.9  
 Leq (Day) = 64.9  
 Leq (Night) = 54.3



P:\2011\110-241\110-241-CADD\Draw\110241-CV04-SP01 Exhibits.dwg{FIRETRUCK-A} LS:(11/9/2017 - cragel) - LP: 11/9/2017 2:47 PM

6.1.c



Attachment: Reports and Exhibits Received November 11-27-2017 (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)

**Civil & Environmental Consultants, Inc.**  
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042  
314-656-4566 · 866-250-3679  
www.cecinc.com

WALLIS COMPANIES  
106 EAST WASHINGTON  
CUBA, MO 65453

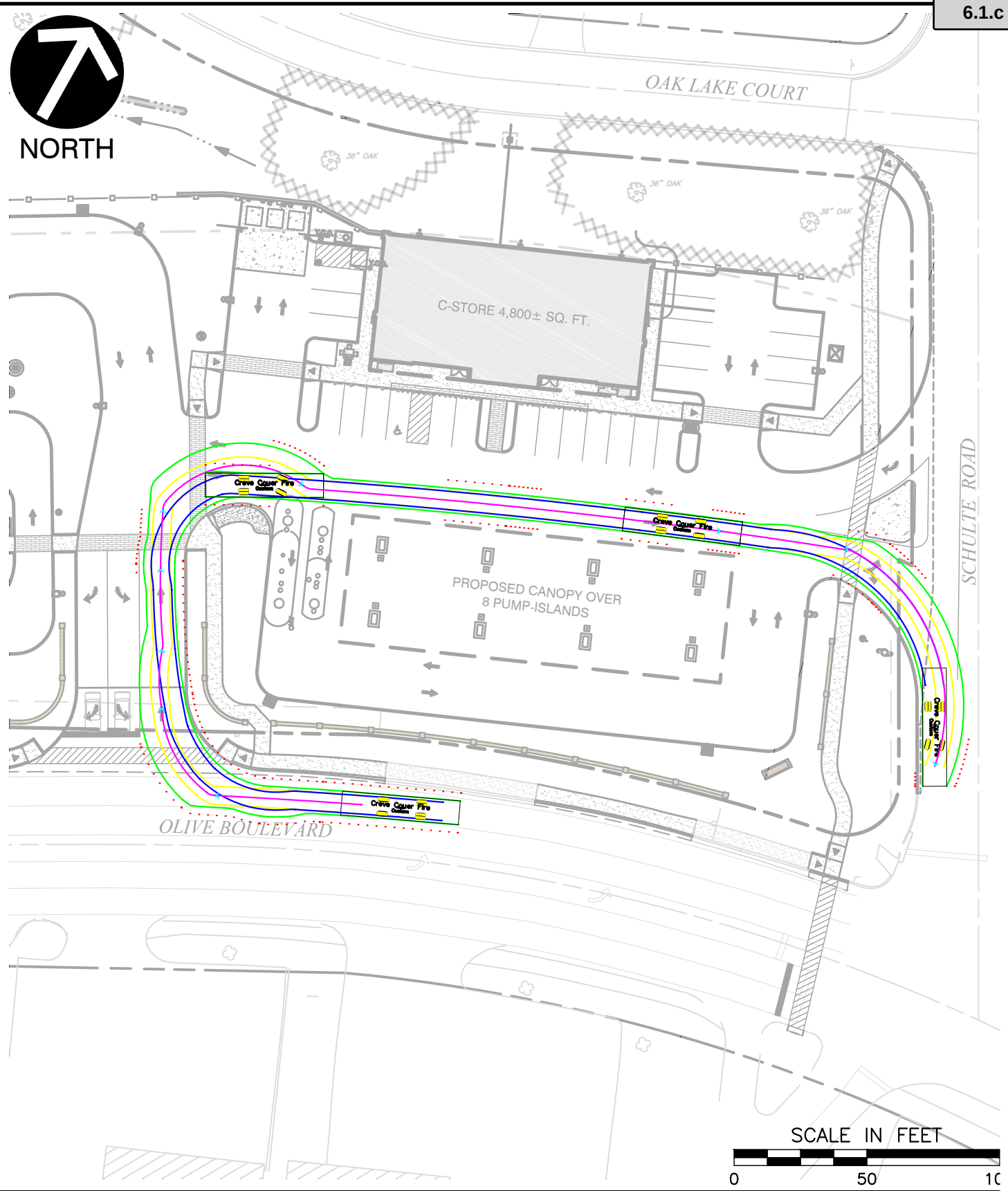
**FIRE TRUCK ACCESS EXHIBIT  
SCHULTE TO OLIVE BLVD, WESTBOUND**

|           |           |             |        |              |         |                |
|-----------|-----------|-------------|--------|--------------|---------|----------------|
| DRAWN BY: | CAC       | CHECKED BY: | KTK    | APPROVED BY: | KTK*    | FIGURE NO.:    |
| DATE:     | NOV. 2017 | DWG SCALE:  | 1"=50' | PROJECT NO:  | 110-241 | Packet Pg. 117 |





NORTH

**Civil & Environmental Consultants, Inc.**

4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042

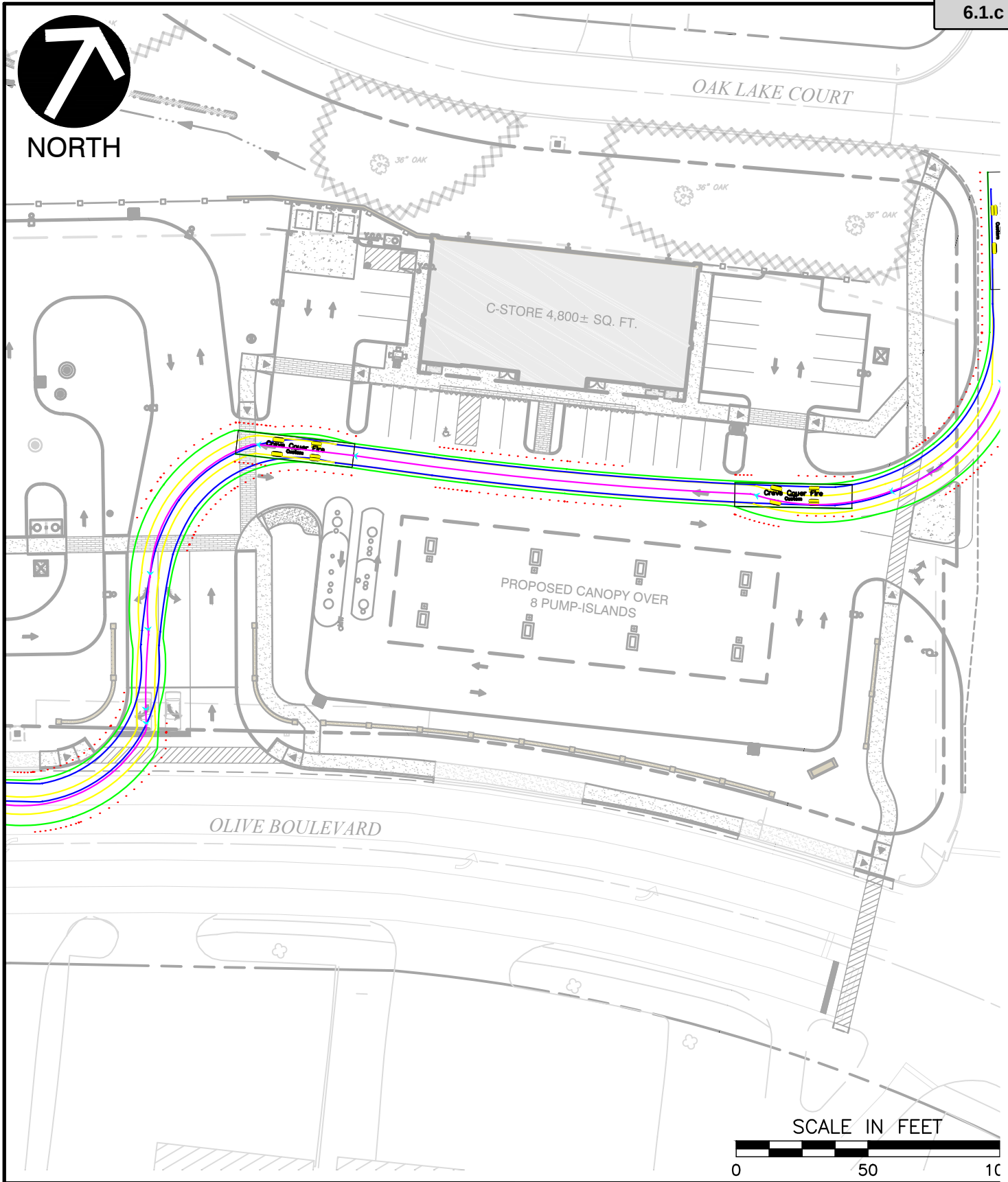
314-656-4566 · 866-250-3679

www.cecinc.com

WALLIS COMPANIES  
106 EAST WASHINGTON  
CUBA, MO 65453

**FIRE TRUCK ACCESS EXHIBIT  
OLIVE BLVD ENTRANCE**

|           |           |             |        |              |         |             |
|-----------|-----------|-------------|--------|--------------|---------|-------------|
| DRAWN BY: | CAC       | CHECKED BY: | KTK    | APPROVED BY: | KTK*    | FIGURE NO.: |
| DATE:     | NOV. 2017 | DWG SCALE:  | 1"=50' | PROJECT NO:  | 110-241 |             |



### Civil & Environmental Consultants, Inc.

4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042

314-656-4566 · 866-250-3679

www.cecinc.com

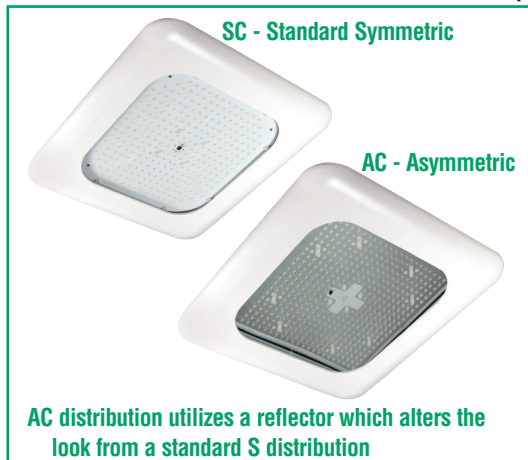
WALLIS COMPANIES  
106 EAST WASHINGTON  
CUBA, MO 65453

### FIRE TRUCK ACCESS EXHIBIT SCHULTE ROAD ENTRANCE

|           |           |             |        |              |         |             |
|-----------|-----------|-------------|--------|--------------|---------|-------------|
| DRAWN BY: | CAC       | CHECKED BY: | KTK    | APPROVED BY: | KTK*    | FIGURE NO.: |
| DATE:     | NOV. 2017 | DWG SCALE:  | 1"=50' | PROJECT NO:  | 110-241 |             |



## LED CANOPY LIGHT - LEGACY™ (CRUS)



### DOE LIGHTING FACTS

Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit [www.lightingfacts.com](http://www.lightingfacts.com) for specific catalog strings.

US & Int'l. patents pending.

**HOUSING** - Low profile, durable die-cast, aluminum construction, providing a reliable weather-tight seal.

**LEDS** - Features an array of select, mid-power, high brightness, high efficiency LED chips; 5000K color temperature, 70 CRI (nominal).

**DRIVE CURRENT** - Choice of Very Low Wattage (VLW), Low Wattage (LW), Super Saver (SS), High Output (HO) or Very High Output (VHO).

**OPTICS / DISTRIBUTION** - Choice of Symmetrical or Asymmetrical, which directs light through a clear tempered glass lens, to provide a uniform distribution of light to vertical and horizontal surfaces.

**OPTICAL UNIT** - Features an ultra-slim 7/8" profile die-cast housing, with a flat glass lens. Unit is water-resistant, sealed to an IP67 rating. Integral designed heat sink does not trap dirt and grime, ensuring cool running performance over the life of the fixture.

**PRESSURE STABILIZING VENT** - Luminaire assembly incorporates a pressure stabilizing vent breather to prevent seal fatigue and failure.

**HAZARDOUS LOCATION** - Designed for lighter than air fuel applications. Product is suitable for Class 1 Division 2 only when properly installed per LSI installation instructions (consult factory).

**DRIVER** - State-of-the-art driver technology superior energy efficiency and optimum light output. Driver components are fully encased in potting for moisture resistance. Complies with IEC and FCC standards. 0-10 V dimming supplied standard with all drive currents.

**DRIVER HOUSING** - Die-cast aluminum, wet location rated driver/electrical enclosure is elevated above canopy deck to prevent water entry, provide easy "knock-out" connection of primary wiring and contributes to attaining the lowest operating temperatures available. Seals to optical housing via one-piece molded silicone gasket.

**OPERATING TEMPERATURE** - -40°C to 50°C (-40°F to +122°F)

**ELECTRICAL** - Universal voltage power supply, 120-277 VAC, 50/60 HZ input. Drivers feature two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Scenario 1, Location Category C.

**FINISH** - Standard color is white and is finished with LSI's DuraGrip® polyester powder coat process. DuraGrip withstands extreme weather changes without cracking or peeling.

**INSTALLATION** - One person installation. No additional sealant required. Installs in a 12" or 16" deck pan. Deck penetration consists of a 4" hole, simplifying installation and water sealing. Unit is designed to quickly retrofit into existing Scottsdale (4") hole as well as openings for Encore and Encore Top Access and to reconnect wiring for the SC/ECTA without having to relocate the conduit. Retro panels are available for existing Encores (see back page) as well as kits for recessed and 2x2 installations (see separate spec sheets). Support brackets are provided standard, to prevent sagging of deck.

**SHIPPING WEIGHT** - 27 pounds (single pack), 48 pounds (double pack).

**EXPECTED LIFE** - Minimum 60,000 to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**WARRANTY** - Limited 5-year warranty.

**LISTING** - UL and ETL listed to UL 1598, UL 8750 and other U.S. and International safety standards. Suitable for wet locations.

**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.

### Consult Factory

**Class 1, Division 2** – Standard on SS & LW.

**T5 Temperature Classification** – The surface temperature of this product will not rise above 100°C., within a 40°C ambient.

**Gas Groups A,B,C, and D** – Group A: Acetylene / Group B: Hydrogen / Group C: Propane and Ethylene / Group D: Benzene, Butane, Methane & Propane.

This product, or selected versions of this product, meet the standards listed below.  
Please consult factory for your specific requirements.



IP67



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_  
Catalog # \_\_\_\_\_

03/23/16

Packet Pg. 120

# LED CANOPY LIGHT - LEGACY™ (CRUS)

## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **CRUS SC LED HO 50 UE WHT**

| Prefix | Distribution <sup>1</sup>                    | Light Source | Drive Current                                                                                          | Color Temperature | Input Voltage                                             | Finish                                     | Options |
|--------|----------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------|--------------------------------------------|---------|
| CRUS   | SC - Standard<br>Symmetric<br>AC - Aymmetric | LED          | VLW - Very Low Watt<br>LW - Low Watt<br>SS - Super Saver<br>HO - High Output<br>VHO - Very High Output | 50 - 5000K        | UE - Universal<br>Voltage<br>(120-277V)<br><br>347 - 480V | WHT - White<br>BRZ - Bronze<br>BLK - Black | None    |

### FOOTNOTES:

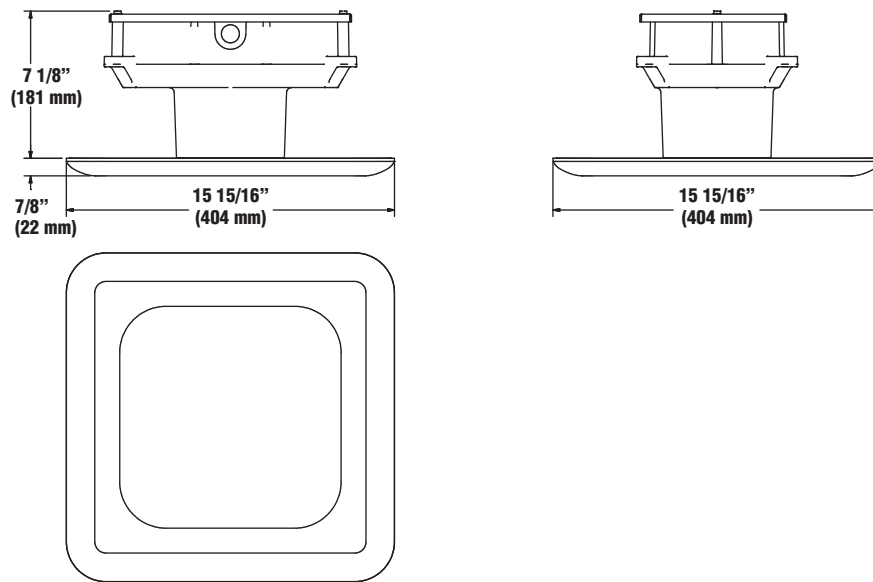
1- AC distribution utilizes a reflector which alters the look from a standard S distribution.

## ACCESSORY ORDERING INFORMATION

(Accessories are field installed)

| Description                                                  | Order Number | Description                                                          | Order Number |
|--------------------------------------------------------------|--------------|----------------------------------------------------------------------|--------------|
| Retrofit Panels - EC / ECTA / SCF to CRU, for 16" Deck Panel | 525946       | Kit - Hole Plugs and Silicone (enough for 25 retrofits) <sup>1</sup> | 1320540      |
| Retrofit Panels - ECTA / SCF to CRU, for 12" Deck Panel      | 530281       | 1- Consists of (25) 7/8" hole plugs and (1) 10.3 oz tube of RTV      |              |
| Retrofit 2x2 Cover Panel Blank (no holes)                    | 357282       |                                                                      |              |
| Retrofit RIC Cover Panel Blank (no holes)                    | 354702       |                                                                      |              |

## DIMENSIONS



## LIGHT OUTPUT - CRUS

|            |                        | Lumens |       | Watts |     | LPW |     |
|------------|------------------------|--------|-------|-------|-----|-----|-----|
|            |                        | SC     | AC    | SC    | AC  | SC  | AC  |
| Cool White | VLW - Very Low Watt    | 8842   | —     | 79    | —   | 112 | —   |
|            | LW - Low Watt          | 10871  | 8746  | 88    | 83  | 124 | 105 |
|            | SS - Super Saver       | 13554  | 11518 | 114   | 111 | 119 | 104 |
|            | HO - High Output       | 18633  | —     | 132   | —   | 141 | —   |
|            | VHO - Very High Output | 22418  | 17262 | 159   | 157 | 141 | 110 |



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

03/23/16

Packet Pg. 121



# LED CANOPY LIGHT - LEGACY™ UNIVERSAL SUPERKIT - 2X2 (CRUSK UNV)



US & Int'l. patents pending.

Crossover SuperKits allow you replace many existing 2x2 canopy fixtures (including LSI, Whiteway and Jet-Phillips) without having to know the dimensions of the existing fixture.

**HOUSING** - Low profile, durable die-cast, aluminum construction, providing a reliable weather-tight seal.

**LEDS** - Features an array of select, mid-power, high brightness, high efficiency LED chips; 5000K color temperature, 70 CRI (nominal).

**DRIVE CURRENT** - Choice of Very Low Wattage (VLW), Low Wattage (LW), Super Saver (SS), High Output (HO) or Very High Output (VHO).

**OPTICS / DISTRIBUTION** - Symmetrical, which directs light through a glass lens to provide a uniform distribution of light to vertical and horizontal surfaces.

**OPTICAL UNIT** - Features an ultra-slim 7/8" profile die cast housing, with a standard flat glass lens. Unit is water-resistant, sealed to an IP67 rating. Integral designed heat sink does not trap dirt and grime, ensuring cool running performance over the life of the fixture.

**PRESSURE STABILIZING VENT** - Luminaire assembly incorporates a pressure stabilizing vent breather to prevent seal fatigue and failure.

**DRIVER** - State-of-the-art driver technology superior energy-efficiency and optimum light output. Driver components are fully encased in potting for moisture resistance. Complies with IEC and FCC standards. 0-10 V dimming supplied standard with all drive currents.

**ADAPTOR PANEL** - Die formed galvanized steel, with powder coat finish.

**OPERATING TEMPERATURE** - -40°C to 50°C (-40°F to +122°F)

**ELECTRICAL** - Universal voltage power supply, 120-277 VAC, 50/60 HZ input. Drivers feature two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Scenario 1, Location Category C.

**FINISH** - Standard color is white and is finished with LSI's DuraGrip polyester powder coat process. DuraGrip withstands extreme weather changes without cracking or peeling.

**INSTALLATION** - Pre-assembled optical unit and mounting panel hinges and fastens to existing fixture housing in place of current door assembly. Driver is pre-mounted to back of CRUSK assembly.

**SHIPPING WEIGHT** - 27 pounds.

**EXPECTED LIFE** - Minimum 60,000 to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**WARRANTY** - Limited 5-year warranty.

**LISTING** - UL listed to UL 1598, UL 8750 and other U.S. and International safety standards. Suitable for wet locations.

**PHOTOMETRICS** - Applications layouts are available upon request. Contact LSI Petroleum Lighting or petroleum.apps@lsi-industries.com

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



IP67



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

03/23/16

Packet Pg. 122

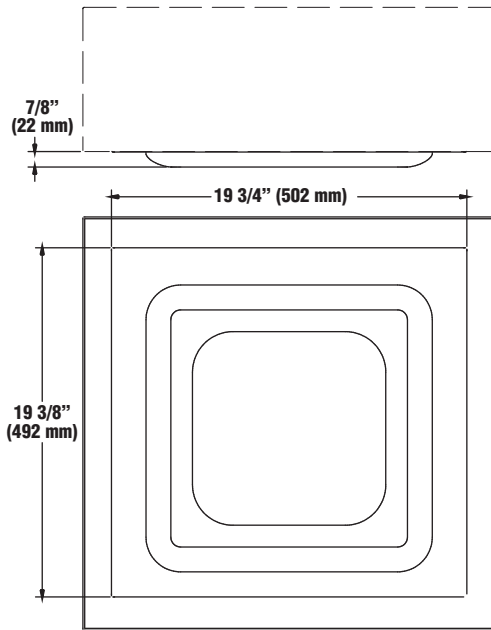
# LED CANOPY LIGHT - LEGACY™ UNIVERSAL SUPERKIT - 2X2 (CRUSK UNV)

## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **CRUSK UNV SC LED HO 50 UE WHT**

| Prefix                       | Distribution               | Light Source | Drive Current                                                                                          | Color Temperature | Input Voltage                                             | Finish                                     | Options |
|------------------------------|----------------------------|--------------|--------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------|--------------------------------------------|---------|
| CRUSK UNV<br>(Universal 2x2) | SC - Standard<br>Symmetric | LED          | VLW - Very Low Watt<br>LW - Low Watt<br>SS - Super Saver<br>HO - High Output<br>VHO - Very High Output | 50 - 5000K        | UE - Universal<br>Voltage<br>(120-277V)<br><br>347 - 480V | WHT - White<br>BRZ - Bronze<br>BLK - Black | None    |

## DIMENSIONS



## LIGHT OUTPUT - CRUSK UNV

|            |                        | Lumens |        | Watts |     | LPW |     |
|------------|------------------------|--------|--------|-------|-----|-----|-----|
|            |                        | SC     | AC     | SC    | AC  | SC  | AC  |
| Cool White | VLW - Very Low Watt    | 8,842  | —      | 79    | —   | 112 | —   |
|            | LW - Low Watt          | 10,871 | 8746   | 88    | 83  | 124 | 105 |
|            | SS - Super Saver       | 13,554 | 11,518 | 114   | 111 | 119 | 104 |
|            | HO - High Output       | 18633  | —      | 132   | —   | 141 | —   |
|            | VHO - Very High Output | 22418  | 17262  | 159   | 157 | 141 | 110 |



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

03/23/16

Packet Pg. 123



# LED CANOPY LIGHT - LEGACY™ RECESSED SUPERKIT – (CRUSK RECU)

Recessed Housing Not Included



US & Int'l. patents pending.

Crossover SuperKits allow you replace many existing recessed canopy fixtures (including LSI, Whiteway and Jet-Phillips) without having to know the dimensions of the existing fixture.

**HOUSING** - Low profile, durable die-cast, aluminum construction, providing a reliable weather-tight seal.

**LEDS** - Features an array of select, mid-power, high brightness, high efficiency LED chips; 5000K color temperature, 70 CRI (nominal).

**DRIVE CURRENT** - Choice of Very Low Wattage (VLW), Low Wattage (LW), Super Saver (SS), High Output (HO) or Very High Output (VHO).

**OPTICS / DISTRIBUTION** - Symmetrical, which directs light through a glass lens, to provide a uniform distribution of light to vertical and horizontal surfaces.

**OPTICAL UNIT** - Features an ultra-slim 7/8" profile die cast housing, with a standard flat glass lens. Unit is water-resistant, sealed to an IP67 rating. Integral designed heat sink does not trap dirt and grime, ensuring cool running performance over the life of the fixture.

**PRESSURE STABILIZING VENT** - Luminaire assembly incorporates a pressure stabilizing vent breather to prevent seal fatigue and failure.

**DRIVER** - State-of-the-art driver technology superior energy-efficiency and optimum light output. Driver components are fully encased in potting for moisture resistance. Complies with IEC and FCC standards. 0-10 V dimming supplied standard with all drive currents.

**ADAPTOR PANEL** - Die formed galvanized steel, with powder coat finish.

**OPERATING TEMPERATURE** - -40°C to 50°C (-40°F to +122°F)

**ELECTRICAL** - Universal voltage power supply, 120-277 VAC, 50/60 HZ input. Drivers feature two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Scenario 1, Location Category C.

**FINISH** - Standard color is white and is finished with LSI's DuraGrip polyester powder coat process. DuraGrip withstands extreme weather changes without cracking or peeling.

**INSTALLATION** - Tether holds pre-assembled optical unit and mounting panel hinges during wiring for one-man installation. Driver is pre-mounted to back of CRUSK assembly.

**SHIPPING WEIGHT** - 30 pounds.

**EXPECTED LIFE** - Minimum 60,000 to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**WARRANTY** - Limited 5-year warranty.

**LISTING** - UL listed to UL 1598, UL 8750 and other U.S. and International safety standards. Suitable for wet locations.

**PHOTOMETRICS** - Applications layouts are available upon request. Contact LSI Petroleum Lighting or petroleum.apps@lsi-industries.com

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_  
Catalog # \_\_\_\_\_

03/23/16

Packet Pg. 124

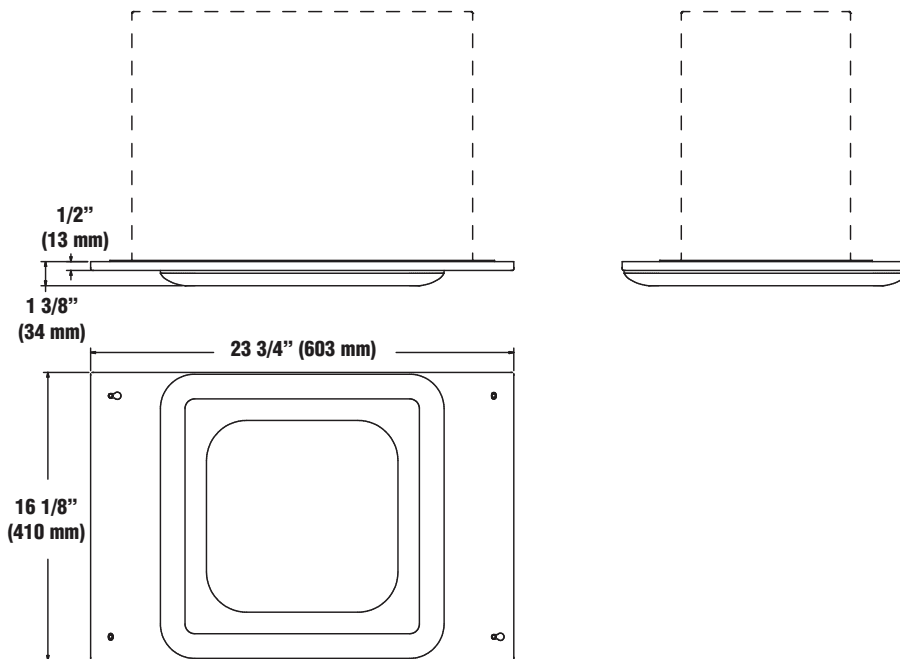
# LED CANOPY LIGHT - LEGACY™ RECESSED SUPERKIT – (CRUSK RECU)

## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **CRUSK RECU SC LED HO 50 UE WHT**

| Prefix                   | Distribution               | Light Source | Drive Current                                                                                          | Color Temperature | Input Voltage                                             | Finish                                     | Options |
|--------------------------|----------------------------|--------------|--------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------|--------------------------------------------|---------|
| CRUSK RECU<br>(Recessed) | SC - Standard<br>Symmetric | LED          | VLW - Very Low Watt<br>LW - Low Watt<br>SS - Super Saver<br>HO - High Output<br>VHO - Very High Output | 50 - 5000K        | UE - Universal<br>Voltage<br>(120-277V)<br><br>347 - 480V | WHT - White<br>BRZ - Bronze<br>BLK - Black | None    |

## DIMENSIONS



## LIGHT OUTPUT - CRUSK RECU

|            |                        | Lumens |       | Watts |     | LPW |     |
|------------|------------------------|--------|-------|-------|-----|-----|-----|
|            |                        | SC     | AC    | SC    | AC  | SC  | AC  |
| Cool White | VLW - Very Low Watt    | 8842   | –     | 79    | –   | 112 | –   |
|            | LW - Low Watt          | 10871  | 8746  | 88    | 83  | 124 | 105 |
|            | SS - Super Saver       | 13554  | 11518 | 114   | 111 | 119 | 104 |
|            | HO - High Output       | 18633  | –     | 132   | –   | 141 | –   |
|            | VHO - Very High Output | 22418  | 17262 | 159   | 157 | 141 | 110 |



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

03/23/16

Packet Pg. 125



# LED CANOPY LIGHT - LEGACY™ DOUBLE DECK (CRUS - DDM)



For Use on Water-tight Plenum Canopies

US & Int'l. patents pending.

**HOUSING** - Low profile, durable die-cast, aluminum construction, providing a reliable weather-tight seal.

**LEDS** - Features an array of select, mid-power, high brightness, high efficiency LED chips; 5000K color temperature, 70 CRI (nominal).

**DRIVE CURRENT** - Choice of Very Low Wattage (VLW), Low Wattage (LW), Super Saver (SS), High Output (HO) or Very High Output (VHO).

**OPTICS / DISTRIBUTION** - Symmetrical, which directs light through a clear tempered glass lens, to provide a uniform distribution of light to vertical and horizontal surfaces.

**OPTICAL UNIT** - Features an ultra-slim 7/8" profile die cast housing, with a standard flat glass lens. Unit is water-resistant, sealed to an IP67 rating. Integral designed heat sink does not trap dirt and grime, ensuring cool running performance over the life of the fixture.

**PRESSURE STABILIZING VENT** - Luminaire assembly incorporates a pressure stabilizing vent breather to prevent seal fatigue and failure.

**HAZARDOUS LOCATION** - Designed for lighter than air fuel applications. Product is suitable for Domestic Class 1 Division 2, only when properly installed per LSI installation instructions (consult factory).

**DRIVER** - State-of-the-art driver technology superior energy-efficiency and optimum light output. Driver components are fully encased in potting for moisture resistance. Complies with IEC and FCC standards. 0-10 V dimming supplied standard with all drive currents.

**DRIVER HOUSING** - Die cast aluminum, wet location rated driver/electrical enclosure is elevated above canopy deck to prevent water entry, provide easy "knock-out" connection of primary wiring and contributes to attaining the lowest operating temperatures available. Seals to optical housing via one-piece molded silicone gasket.

**OPERATING TEMPERATURE** - -40°C to 50°C (-40°F to +122°F)

**ELECTRICAL** - Universal voltage power supply, 120-277 VAC, 50/60 HZ input. Drivers feature two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Scenario 1, Location Category C.

**FINISH** - Standard color is white and is finished with LSI's DuraGrip polyester powder coat process. DuraGrip withstands extreme weather changes without cracking or peeling.

**INSTALLATION** - One person installation. No additional sealant required. Installs in a 12" or 16" deck pan. Deck penetration consists of a 11" square hole. Fixture is secured via 4 fasteners directly through frame and deck into structure members/beams.

**SHIPPING WEIGHT** - 22 pounds.

**EXPECTED LIFE** - Minimum 60,000 to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**WARRANTY** - Limited 5-year warranty.

**LISTING** - UL and ETL listed to UL 1598, UL 8750 and other U.S. and International safety standards. Suitable for damp locations.

**PHOTOMETRICS** - Applications layouts are available upon request. Contact LSI Petroleum Lighting or petroleum.apps@lsi-industries.com.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



IP67



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

03/23/16

Packet Pg. 126

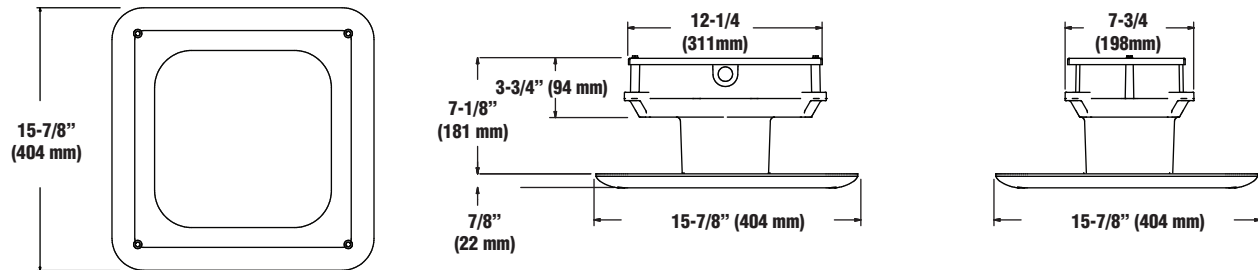
# LED CANOPY LIGHT - LEGACY™ DOUBLE DECK (CRUS - DDM)

## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **CRUS DDM SC LED SS 50 UE WHT**

| Prefix   | Distribution            | Light Source | Drive Current                                                                                          | Color Temperature | Input Voltage                                          | Finish                                     |
|----------|-------------------------|--------------|--------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------|--------------------------------------------|
| CRUS DDM | SC - Standard Symmetric | LED          | VLW - Very Low Watt<br>LW - Low Watt<br>SS - Super Saver<br>HO - High Output<br>VHO - Very High Output | 50 - 5000K        | UE - Universal Voltage<br>(120-277V)<br><br>347 - 347V | WHT - White<br>BRZ - Bronze<br>BLK - Black |

## DIMENSIONS



## LIGHT OUTPUT - CRUS DDM

|            |                        | Lumens |       | Watts |     | LPW |     |
|------------|------------------------|--------|-------|-------|-----|-----|-----|
|            |                        | SC     | AC    | SC    | AC  | SC  | AC  |
| Cool White | VLW - Very Low Watt    | 8842   | -     | 79    | -   | 112 | -   |
|            | LW - Low Watt          | 10871  | 8746  | 88    | 83  | 124 | 105 |
|            | SS - Super Saver       | 13554  | 11518 | 114   | 111 | 119 | 104 |
|            | HO - High Output       | 18633  | -     | 132   | -   | 141 | -   |
|            | VHO - Very High Output | 22418  | 17262 | 159   | 157 | 141 | 110 |

LED Chips are frequently updated therefore values may increase.



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

03/23/16

Packet Pg. 127



## LED SURFACE MOUNT - LEGACY™ (CRUS SM)



US & Int'l. patents pending.

**HOUSING** - One-piece, die-formed, aluminum housing with powder coated finish. One conduit knockout and four mounting holes. 2x2 housing is formed from zinc-coated steel.

**LEDS** - Features an array of select, mid-power, high brightness, high efficiency LED chips; 5000K color temperature, 70 CRI.

**DRIVE CURRENT** - Choice of Very Low Wattage (VLW), Low Wattage (LW), Super Saver (SS), High Output (HO) or Very High Output (VHO).

**OPTICS / DISTRIBUTION** - Symmetrical, which directs light through a glass lens to provide a uniform distribution of light to vertical and horizontal surfaces.

**OPTICAL UNIT** - Features an ultra-slim 7/8" profile die cast housing, with a standard flat clear or diffused glass lens. Unit is water-resistant, sealed to an IP67 rating. Integral designed heat sink does not trap dirt and grime, ensuring cool running performance over the life of the fixture.

**PRESSURE STABILIZING VENT** - Luminaire assembly incorporates a pressure stabilizing vent breather to prevent seal fatigue and failure.

**DRIVER** - State-of-the-art driver technology superior energy-efficiency and optimum light output. Driver components are fully encased in potting for moisture resistance. Complies with IEC and FCC standards. 0-10 V dimming supplied standard with all drive currents.

**ADAPTOR PANEL** - Die formed galvanized steel, with powder coat finish.

**OPERATING TEMPERATURE** - -40°C to 50°C (-40°F to +122°F)

**ELECTRICAL** - Universal voltage power supply, 120-277 VAC, 50/60 HZ input. Drivers feature two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Scenario 1, Location Category C.

**FINISH** - Standard color is white and is finished with LSI's DuraGrip polyester powder coat process. DuraGrip withstands extreme weather changes without cracking or peeling.

**INSTALLATION** - Pre-assembled optical unit and mounting panel attaches to fixture housing via 4 fasteners. Driver is pre-mounted to back of optical assembly.

**SHIPPING WEIGHT** - 35 pounds.

**EXPECTED LIFE** - Minimum 60,000 to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**WARRANTY** - Limited 5-year warranty.

**PHOTOMETRICS** - Applications layouts are available upon request. Contact LSI Petroleum Lighting or [petroleum.apps@lsi-industries.com](mailto:petroleum.apps@lsi-industries.com)

**LISTING** - UL listed to UL 1598, UL 8750 and other U.S. and International safety standards. Suitable for wet locations. For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at [www.designlights.org](http://www.designlights.org).

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



IP67



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_  
Catalog # \_\_\_\_\_

03/23/16

Packet Pg. 128

# LED SURFACE MOUNT - LEGACY™ (CRUS SM)

## LUMINAIRE ORDERING INFORMATION

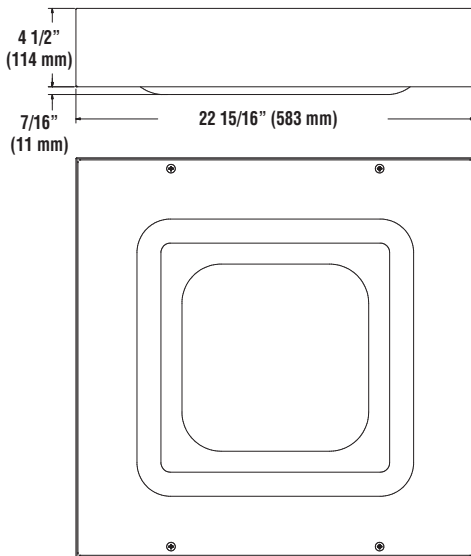
TYPICAL ORDER EXAMPLE: **CRUS SM SC LED VHO 50 UE WHT**

| Prefix                     | Distribution            | Light Source | Drive Current                                                                                          | Color Temperature | Input Voltage                                            | Finish                                     | Options             |
|----------------------------|-------------------------|--------------|--------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------|--------------------------------------------|---------------------|
| CRUS SM<br>(Surface Mount) | SC - Standard Symmetric | LED          | VLW - Very Low Watt<br>LW - Low Watt<br>SS - Super Saver<br>HO - High Output<br>VHO - Very High Output | 50 - 5000K        | UE - Universal Voltage<br>(120-277V)<br><br>347-480 Volt | WHT - White<br>BRZ - Bronze<br>BLK - Black | DFL - Diffused Lens |

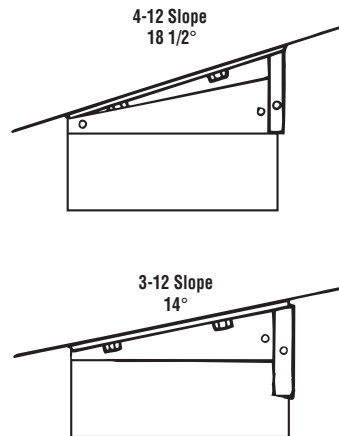
## ACCESSORY ORDERING INFORMATION

| Description               | Order Number |
|---------------------------|--------------|
| SSA Slope Surface Adaptor | 52152 CLR    |
| 2x2 Shallow Housing Only  | 545376       |
| 10' Toggle Cable Hanger   | TCH10        |

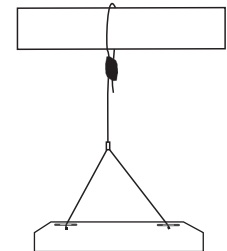
## DIMENSIONS



## SLOPE SURFACE ADAPTOR – SSA ACCESSORY



## TOGGLE CABLE HANGER



## LIGHT OUTPUT - CRUS SM

|            |                        | Lumens |       | Watts |     | LPW |     |
|------------|------------------------|--------|-------|-------|-----|-----|-----|
|            |                        | SC     | AC    | SC    | AC  | SC  | AC  |
| Cool White | VLW - Very Low Watt    | 8842   | —     | 79    | —   | 112 | —   |
|            | LW - Low Watt          | 10871  | 8746  | 88    | 83  | 124 | 105 |
|            | SS - Super Saver       | 13554  | 11518 | 114   | 111 | 119 | 104 |
|            | HO - High Output       | 18633  | —     | 132   | —   | 141 | —   |
|            | VHO - Very High Output | 22418  | 17262 | 159   | 157 | 141 | 110 |

LED Chips are frequently updated therefore values may increase.



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

03/23/16

Packet Pg. 129



## LED AREA LIGHTS - LSI SLICE SMALL (XLCS)



US & Int'l. patents pending

**SMARTTEC™** - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Select high-brightness LEDs in Cool White (5000°K nominal), or Neutral White (4000°K nominal) color temperature, 70 CRI (nominal).

**DISTRIBUTION/PERFORMANCE** - Types FT and 5. Exceptional uniformity creates bright environment at lower light levels.

**HOUSING** - One-piece, die-formed aluminum housing contains factory prewired driver. Wiring access door (with safety lanyard) located underneath.

**OPTICAL UNIT** - Clear tempered flat glass lens permanently sealed to weather-tight aluminum optic frame (includes pressure-stabilizing breather). Optic frame recessed into housing cavity and sealed to the housing with one-piece EPDM gasket.

**MOUNTING** - Tapered rear design allows fixtures to be mounted in 90° and 120° configurations without the need for extension arms. Use with 3" reduced drilling pattern. A round pole plate is required for mounting to round poles. Wall mount available by ordering wall mounting bracket (BKS-XBO-WM-\*CLR). See Accessory Ordering Information chart for all brackets.

**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets Location Category C Low. Available with universal voltage power supply 120-277 VAC (50/60Hz input), and 347-480 VAC. Optional button-type photocells (PCI) are available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

**DRIVER** - Available in SS (Super Saver) and HO (High Output) drive currents. Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F)

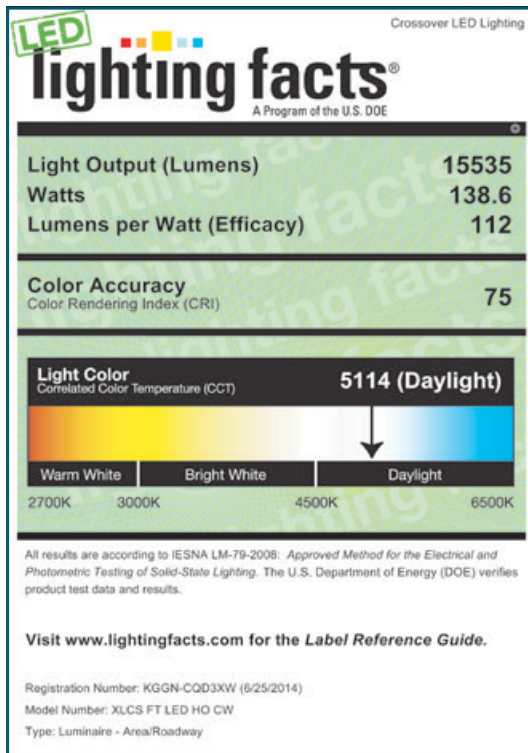
**FINISH** - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Available in black, bronze and white. Other standard LSI finishes available. Consult factory.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.

**SHIPPING WEIGHT (in carton)** - One fixture: 17.5 lbs. (7.9 kg). Packed two per carton: 30 lbs. (13.6 kg).

**LISTING** - UL listed to U.S. and international safety standards. Suitable for wet locations.



This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



Fixtures comply with ANSI C136.31-2010 American National Standard for Roadway Lighting Equipment - Luminaire Vibration 1.5G requirements.

| LIGHT OUTPUT - XLCS |    |                  |        |                 |
|---------------------|----|------------------|--------|-----------------|
|                     |    | Lumens (Nominal) |        | Watts (Nominal) |
|                     |    | Type FT          | Type 5 |                 |
| Cool White          | SS | 11400            | 11400  | 97              |
|                     | HO | 15500            | 15700  | 140             |
| Neutral White       | SS | 9200             | 9300   | 97              |
|                     | HO | 12100            | 12200  | 140             |

# LED AREA LIGHTS - LSI SLICE SMALL (XLCS)

## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XLCS 5 LED SS CW UE BLK PCI120**

| Prefix | Distribution                     | Light Source | Drive Current                       | Color Temperature                     | Input Voltage                                                                          | Finish                                     | Options                                                                            |
|--------|----------------------------------|--------------|-------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------------------------------|
| XLCS   | 5 - Type V<br>FT - Forward Throw | LED          | SS - Super Saver<br>HO -High Output | CW - Cool White<br>NW - Neutral White | UE - Universal Voltage<br>(120-277V)<br><br>347-480<br>Universal Voltage<br>(347-480V) | BLK - Black<br>BRZ - Bronze<br>WHT - White | Button Type Photocells<br>PCI120 - 120V<br>PCI208-277V - 208-277V<br>PCI347 - 347V |

### LUMINAIRE EPA CHART - XLCS

|  |        |     |
|--|--------|-----|
|  | Single | 0.4 |
|  | D180°  | 0.8 |
|  | D90°   | 0.6 |
|  | T90°   | 1.4 |
|  | TN120° | 1.4 |
|  | Q90°   | 1.6 |

**Note:** House Side Shield adds to fixture EPA. Consult Factory.

### ACCESSORY ORDERING INFORMATION

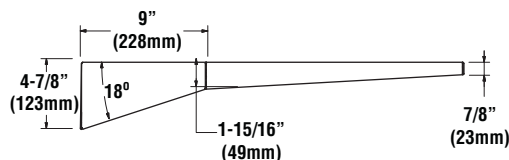
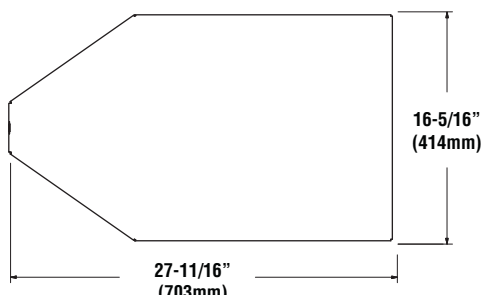
(Accessories are field installed)

| Description                                | Order Number       | Description                            | Order Number             |
|--------------------------------------------|--------------------|----------------------------------------|--------------------------|
| BKS-XBO-WM-* -CLR Wall Mount Bracket       | 382132CLR          | DFK208, 240 Double Fusing (208V, 240V) | DFK208, 240 <sup>2</sup> |
| XLCS-FT-HSS House Side Shield (Black only) | C/F <sup>1</sup>   | DFK480 Double Fusing (480V)            | DFK480 <sup>2</sup>      |
| X4RPP Round Pole Plate for 4" Poles        | 379967CLR          | FK347 Single Fusing (347V)             | FK347 <sup>2</sup>       |
| X5RPP Round Pole Plate for 5" Poles        | 379968CLR          |                                        |                          |
| FK120 Single Fusing (120V)                 | FK120 <sup>2</sup> |                                        |                          |
| FK277 Single Fusing (277V)                 | FK277 <sup>2</sup> |                                        |                          |

### FOOTNOTES:

- 1 - House Side Shields add to fixture EPA. Consult factory.
- 2 - Fusing must be located in the hand hole of pole.

### DIMENSIONS





## LED PATRIOT® WALL SCNCE (XPWS3)



### DOE LIGHTING FACTS

Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit [www.lightingfacts.com](http://www.lightingfacts.com) for specific catalog strings.

| LIGHT OUTPUT - XPWS3 |           |                               |         |         |       |    |
|----------------------|-----------|-------------------------------|---------|---------|-------|----|
|                      |           | Distribution/Lumens (Nominal) |         |         |       |    |
| Milliamps            | # of LEDs | Type FT                       | Type WT | Type WW | Watts |    |
| Cool White           | 350 mA    | 28                            | 3100    | 3000    | 3200  | 34 |
|                      |           | 48                            | 5100    | 5100    | 5200  | 55 |
|                      | 450 mA    | 28                            | 3700    | 3600    | 3800  | 44 |
|                      |           | 48                            | 6200    | 6100    | 6300  | 72 |
| Neutral White        | 350 mA    | 28                            | 2900    | 2900    | 3100  | 34 |
|                      |           | 48                            | 4900    | 4800    | 4900  | 55 |
|                      | 450 mA    | 28                            | 3500    | 3500    | 3700  | 44 |
|                      |           | 48                            | 5800    | 5700    | 5800  | 72 |

LED Chips are frequently updated therefore values may increase.

Also available in traditional light sources

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



IP65



US patent 7828456, 8002428 and CAN 2736757 & 2736757 and MX patent 29631 and ISRL 49679 and AUS 2008312668 and US & Int'l. patents pending

**SMARTTEC™** -LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature

**ENERGY SAVING CONTROL OPTIONS** - DIM- 0-10 volt dimming enabled with controls by others.

**OPTIONAL INTEGRAL MOTION SENSOR** - Passive infrared motion sensor activates switching of luminaire light levels. High level light is activated when passersby enter target zone and increased to full bright in 1-2 seconds. Low light level (30% of maximum drive current) is activated when target zone is absent of motion activity for 5 minutes and is gradually ramped down (10 seconds) to low level. Sensor detection range 110° horizontal x 93° vertical x 10 meters maximum distance.

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Available with 28 or 48 select high-brightness LEDs in Cool White (5000K nominal) or Neutral White (4000K nominal) color temperature, 70 CRI (nominal).

**OPTICS/DISTRIBUTIONS** - Ultra-high efficiency reflectors provide three distributions. Choose from Wide Throw (WT), Forward Throw (FT) or Wall Wash (WW).

**HOUSING** - One-piece die-cast aluminum housing is smoothly contoured rectangular shape. Mounting hardware is stainless steel or electro-zinc plated steel. Housing and optical unit are sealed with extruded silicone gasket; supply conductors with molded EPDM bushing.

**OPTICAL UNIT** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure stabilizing breather allows super-tight protection while preventing cycling from building up internal pressures and vacuums that can stress optical unit seals.

**WALL MOUNTING** - Galvanized-steel universal wall mounting plate easily mounts directly to 4" octagonal or square junction box. EPDM gasket is supplied to be installed between mounting plate and junction box, sealing junction box from entrance of water. Universal plate permits fixture to be mounted in uplighting (indoor only) or downlighting position.

**POLE MOUNTING** - XPMa (for square) or XPMAR (for round) allows mounting to poles in single and D180 configurations. Use with 3" reduced drilling pattern.

**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) or 347-480VAC.

**DRIVER** - Available in 350mA and 450mA drive currents (Drive currents are factory programmed). Components are fully encased in potting material for IP65 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed.

**EMERGENCY OPTIONS** - Optional integral emergency battery-back-up options are available. BB option operates in 0°C to 60°C ambient temperature and CWBB operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F)

**FINISH** - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.

**SHIPPING WEIGHT (in carton)** - 30 lbs./13.6Kg

**LISTING** - ETL listed to ANSI/UL1598, UL8750 and other U.S. and international safety standards. Suitable for wet locations in downlight position. Optional Class 1 Division 2 (groups A, B, C & D) hazardous location rating is available (Select HL option). For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at [www.designlights.org](http://www.designlights.org).

# LED PATRIOT® WALL SCNCE (XPWS3)

## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XPWS3 FT LED 48 450 CW UE WHT BB**

| Prefix                          | Distribution                                            | Light Source | # of LEDs | Drive Current              | Color Temperature                     | Input Voltage                                   | Finish                                                                                                                                  | Options                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------|---------------------------------------------------------|--------------|-----------|----------------------------|---------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| XPWS3 - LED Patriot Wall Sconce | WT - Wide Throw<br>FT - Forward Throw<br>WW - Wall Wash | LED          | 28<br>48  | 350 - 350mA<br>450 - 450mA | CW - Cool White<br>NW - Neutral White | UE - Universal Voltage (120-277)<br><br>347-480 | BLK - Black<br>BRZ - Bronze<br>GPT - Graphite<br>MSV - Metallic Silver<br>PLP - Platinum Plus<br>SVG - Satin Verde Green<br>WHT - White | BB - Battery Back-up <sup>1</sup><br>CWBB - Cold Weather Battery Back-up <sup>1</sup><br>DIM - 0 - 10V dimming (from external signal) <sup>2</sup><br>IMS - Integral Motion Sensor <sup>2</sup><br>EMR2 - Two Emergency 12V Circuit Provisions with (2) 35 Watt Halogen Lamps <sup>3</sup><br>PCI 120 - Button Type Photocell<br>PCI 208 - Button Type Photocell<br>PCI 240 - Button Type Photocell<br>PCI 277 - Button Type Photocell<br>PCI 347 - Button Type Photocell<br>HL - Class1, Division2, Hazardous Location Rating. ETL listed to UL844 <sup>4</sup><br>XPMA - Pole Mounting Adaptor w/fixture backplate for use with square poles <sup>5</sup><br>XPMAR4 - Pole Mounting Adaptor w/fixture backplate for use with 4" O.D. round poles <sup>5</sup><br>XPMAR5 - Pole Mounting Adaptor w/fixture backplate for use with 5" O.D. round poles <sup>5</sup> |

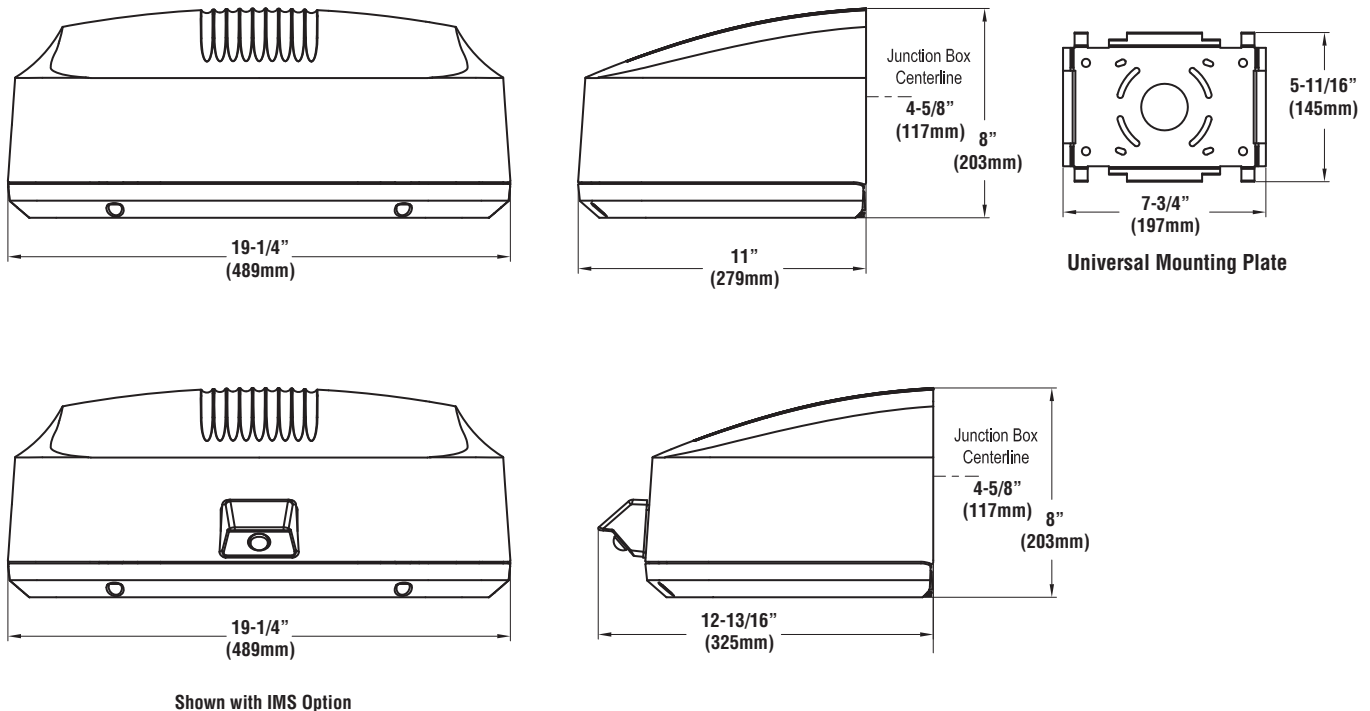
## ACCESSORY ORDERING INFORMATION (Accessories are field installed)

| Description                                                 | Order Number       | Description                 | Order Number            |
|-------------------------------------------------------------|--------------------|-----------------------------|-------------------------|
| XPWS3 Polycarbonate Shield                                  | 244657             | DFK208, 240 - Double Fusing | DFK208,240 <sup>6</sup> |
| XPWS3 SW BLK - Surface Wiring Box (Available in black only) | 356915BLK          | DFK480 - Double Fusing      | DFK480 <sup>6</sup>     |
| FK120 - Single Fusing                                       | FK120 <sup>6</sup> | FK347 - Single Fusing       | FK347 <sup>6</sup>      |
| FK277 - Single Fusing                                       | FK277 <sup>6</sup> |                             |                         |

### FOOTNOTES:

- 1 - Available with UE voltage only. Not available with EMR2 or HL options.
- 2 - DIM and IMS cannot be ordered together.
- 3 - Utilizes GZ4 sockets. 12 volt separate circuits required. Not available with battery back-up, photocell option, HL, XPMA or XPMAR options.
- 4 - Not available with battery backup, photocell or EMR2 option.
- 5 - Not available with EMR2 option. Designed with 3" reduced drilling pattern. For S or D180 mounting configuration only.
- 6 - Fusing to be installed in a compatible junction box supplied by contractor.

## DIMENSIONS





## LED SOFFIT LIGHT (XSL2)



US patents D574994 & D595896 & 7828456 and US & Int'l. patents pending

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Select high-brightness LEDs. Cool White 5000K color temperature, 69 CRI (nominal).

**DRIVER CURRENT** - Super saver (SS) - most economical and highest lumens per watt or High Output (HO) - highest output per initial dollar.

**DISTRIBUTION/PERFORMANCE** - Type S (Symmetric) or 5A (Type 5). Excellent uniformity with Bug rating of BU-UO-G1. Optional diffused lens available to reduce visibility of diodes

**HOUSING/OPTICAL UNIT** - Housing is die-formed aluminum with a gasketed clear tempered glass lens providing a water-resistant seal. Weather-tight aluminum enclosure contains factory prewired driver to ensure no water entry. Sealed optical unit containing LEDs rated IP67.

**MOUNTING** - Direct mounts with screws through the trim frame (standard). Optional channel bar kit available to suspend assembly from ceiling joists. 12" clearance required for ease of installation.

**ELECTRICAL** - Universal frequency power supply (50/60 Hz). Supply voltage must be specified for pre-wired thermal protectors.

**DRIVER** - State-of-the-art driver technology designed specifically for LSI LED light sources provides unsurpassed system efficiency. Driver will operate with input of 120/208/240/277V (50/60 Hz). Components are fully encased in potting material for moisture resistance. Driver complies with IEC and FCC standards.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F).

**FINISH** - Each fixture is finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard color is white.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Application layouts are available upon request. Contact LSI Applications Group at [lighting.apps@lsi-industries.com](mailto:lighting.apps@lsi-industries.com)

**LISTING** - Listed to U.S. and Canadian safety standards. Suitable for damp locations.

Crossover® LED Lighting

# lighting facts<sup>CM</sup>

A Program of the U.S. DOE

|                            |      |
|----------------------------|------|
| Light Output (Lumens)      | 4957 |
| Watts                      | 62.2 |
| Lumens per Watt (Efficacy) | 79   |

|                             |    |
|-----------------------------|----|
| Color Accuracy              | 69 |
| Color Rendering Index (CRI) |    |

**Light Color**  
Correlated Color Temperature (CCT)

5100 (Daylight)

2700K 3000K 4500K 6500K

Warm White Bright White Daylight

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results. Products qualified under the DOE ENERGY STAR® program have the ENERGY STAR mark on this label.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: KGGN-EDE2GE  
Model Number: XSL2-S-LED-50-CW-UE  
Type: Surface and pendant-mounted downlights

This "Lighting Facts Label" represents LSI's commitment, through participation in the Department of Energy's SSL Quality Advocates program, to accurately report performance criteria of our LED fixtures. **This label represents a single test of a single fixture. Input power below represents rated values for the family.** Color temperature and lumen output for each variation of this Crossover® fixture can be found in the ordering information below as well as at [www.lightingfacts.com](http://www.lightingfacts.com).

| LIGHT OUTPUT - XSL2 |                  |        |       |     |
|---------------------|------------------|--------|-------|-----|
| Clear Lens          |                  | Lumens | Watts | LPW |
| Type S              | SS - Super Saver | 6,193  | 60    | 103 |
|                     | HO - High Output | 8,348  | 86    | 97  |
| Type 5A             | SS - Super Saver | 5,158  | 60    | 86  |
|                     | HO - High Output | 6,959  | 86    | 81  |
| Diffused Lens       |                  |        |       |     |
| Type S              | SS - Super Saver | 5,752  | 60    | 96  |
|                     | HO - High Output | 6,751  | 87    | 78  |
| Type 5A             | SS - Super Saver | 4,393  | 60    | 73  |
|                     | HO - High Output | 5,842  | 87    | 67  |

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



IP67



Suitable for damp locations



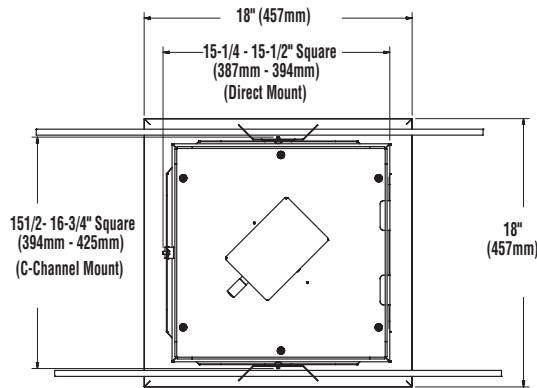
# LED SOFFIT LIGHT (XSL2)

## PRODUCT ORDERING INFORMATION

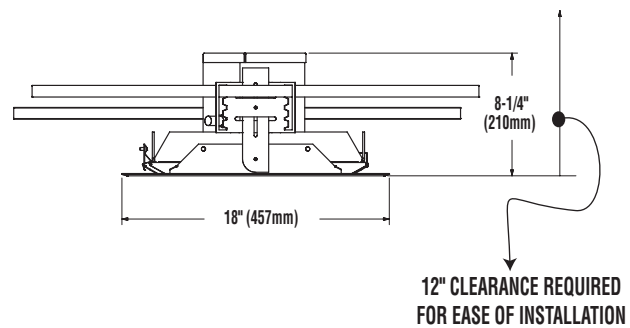
TYPICAL ORDER EXAMPLE: **XSL2 S LED 50 SS CW 120 WHT CMT**

| Prefix              | Distribution                 | Light Source | # of LEDs | Drive Current                        | Color Temperature                 | Input Voltage                   | Finish      | Options                                                                       |
|---------------------|------------------------------|--------------|-----------|--------------------------------------|-----------------------------------|---------------------------------|-------------|-------------------------------------------------------------------------------|
| XSL2 - Soffit Light | S - Symmetric<br>5A - Type 5 | LED          | 50        | HO - High Output<br>SS - Super Saver | CW - Cool White<br>(5000° K nom.) | 120<br>208<br>240<br>277<br>347 | WHT - White | CMT - Channel Bar<br>Mounting Kit<br>DM - Direct Mount<br>DFL - Diffused Lens |

### DIMENSIONS

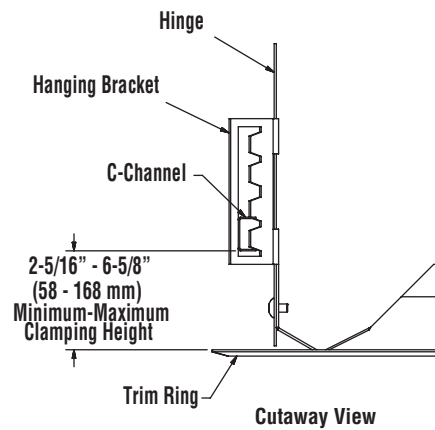


TOP VIEW



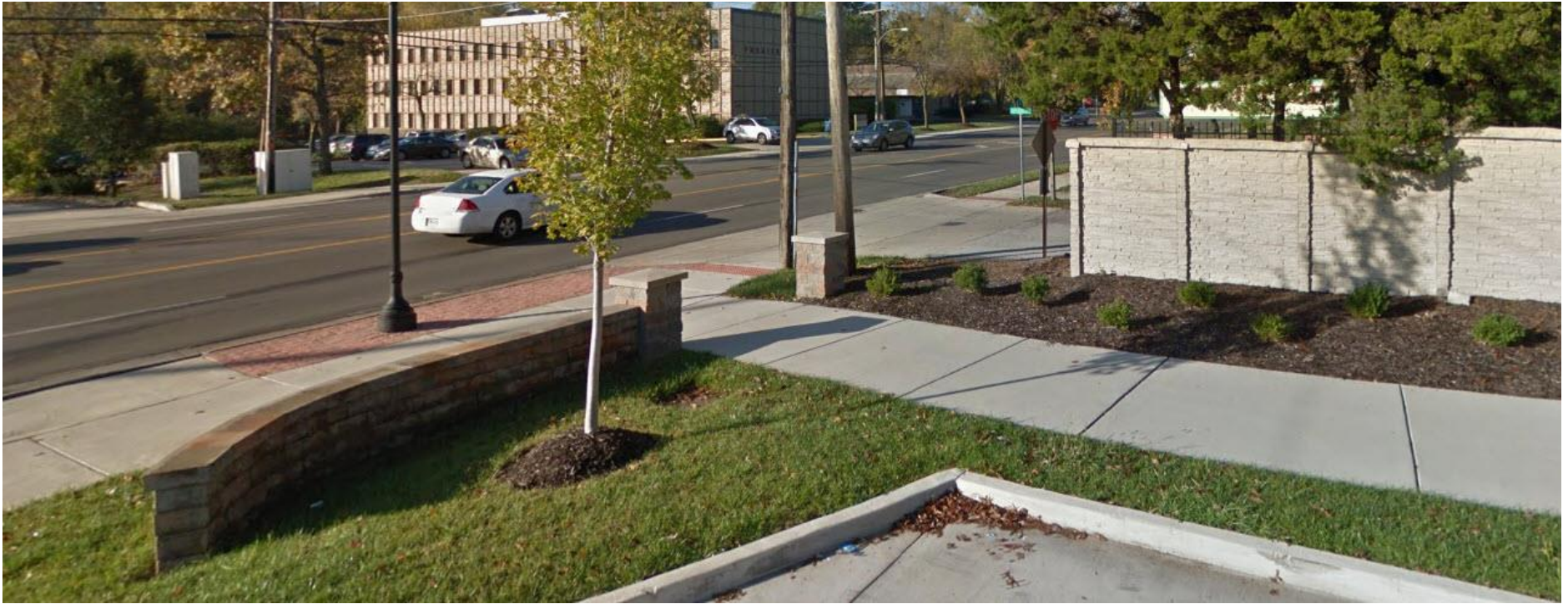
SIDE VIEW  
(Channel Mount Shown)

SHIPPING WEIGHT - 14 lbs. (6.4kg)

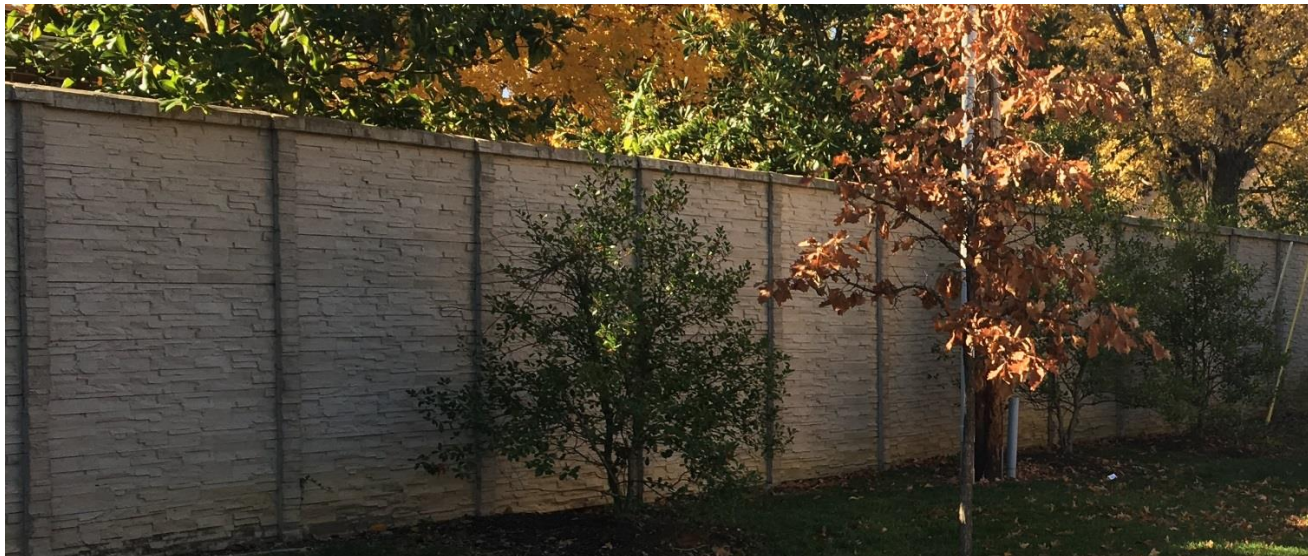


Cutaway View





ARTISAN FENCE





## TRASH ENCLOSURE

6.1.c

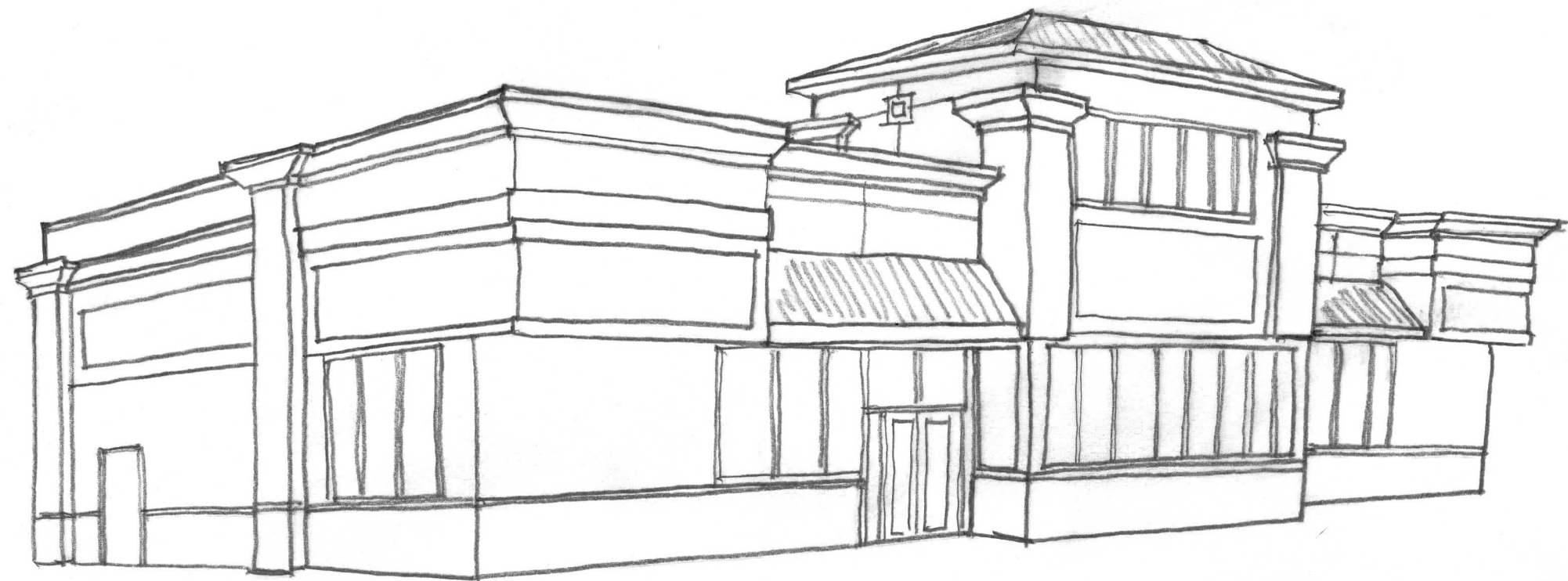


Attachment: Reports and Exhibits Received November 11-27-2017 (16-031 Mobil on the Run and Brite



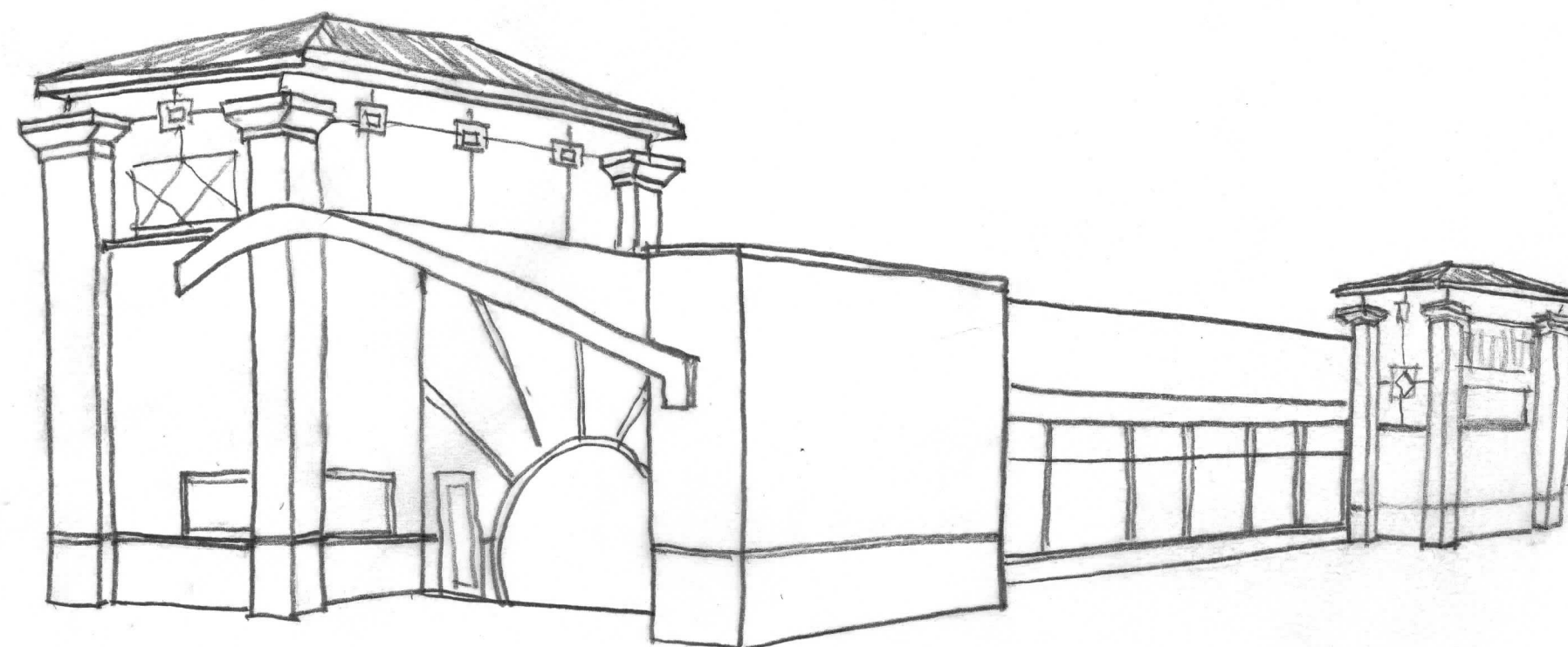
## STAMPED CONCRETE





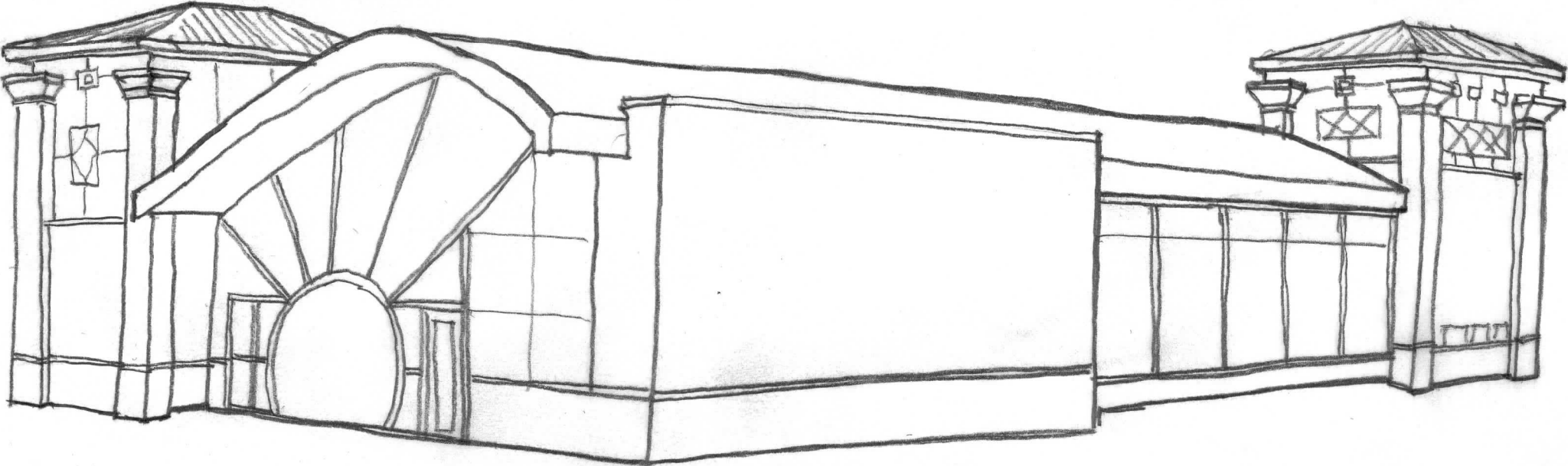
STORE





ENTRY END - LOOKING FROM OLIVE BLVD





EXIT END - LOOKING TOWARD OLIVE BLVD



BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

**AN ORDINANCE AUTHORIZING THE REZONING OF 11127-11141 OLIVE BOULEVARD FROM C SINGLE FAMILY RESIDENTIAL TO GC-GENERAL COMMERCIAL AND ISSUANCE OF A NEW CONDITIONAL USE PERMIT, AND SITE DEVELOPMENT PLAN APPROVAL OF A MOBIL ON THE RUN CONVENIENCE STORE WITH GAS PUMPS AND BRITEWORX CAR WASH FACILITY LOCATED AT 11109-11141 OLIVE BOULEVARD & 11100-11114 OAK LAKE COURT**

**WHEREAS**, Gasoline Stations with Convenience Stores (NAICS #447110) and Car Wash Facilities (NAICS #811192) are conditional uses in the GC-General Commercial District; and

**WHEREAS**, Kevin Kamp, of Civil & Environmental Consultants, Inc. has submitted an application on behalf of Wallis Companies (Arch Energy, LLC), for the rezoning of 11127, 11135 & 11141 Olive Boulevard, from C-Single Family Residential District to GC-General Commercial District, and for a Conditional Use Permit, Site Development Plan and Boundary Adjustment for a new Mobil on the Run convenience store with gas pumps and BriteWorx Car Wash facility encompassing 11109-11135 Olive Boulevard and 11100-11114 Oak Lake Court.; and

**WHEREAS**, a public hearing was held by the Creve Coeur Planning and Zoning Commission on Monday, December 5, 2016, beginning at 6:30 p.m., and continued on December 4, 2017, beginning at 6:30 p.m. or immediately following the close of the previous public hearing, on said application for the conditional use permit as provided by Section 405.1070(D)(2); and

**WHEREAS**, notice of publication for said public hearing had been previously published at least 15 days prior to the hearing, in the St. Louis Countian, a newspaper of general circulation in the City of Creve Coeur; and

**WHEREAS**, the Planning and Zoning Commission reviewed and, by a \_\_\_\_\_ vote, recommended approval of the conditional use permit and site plan, subject to the conditions contained herein, at its meeting on December 4, 2017; and

**WHEREAS**, all parties desiring to be heard, either for or against said application, were given an opportunity to be heard, and a copy of the proposed ordinance has been made available for public inspection prior to its consideration by the Council; and this Bill having been read by title in open meeting two times before final passage by the City Council, and

**WHEREAS**, the City Council finds that the application and evidence presented clearly indicate that the proposed conditional use, when subject to certain conditions set forth herein:

1. Will contribute to and promote the community welfare and convenience at the specific location.
2. Will not cause substantial injury to the value of neighboring property.
3. Meets the applicable provisions of the City's Comprehensive Plan and any applicable neighborhood or sector plans and complies with other applicable zoning district regulations and provisions of this Chapter, unless good cause exists for deviation therefrom.
4. Will be compatible with the surrounding area and thus will not impose an excessive burden or have a substantial negative impact on surrounding or adjacent users or on community facilities or services.

BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

**NOW, THEREFORE,** be it ordained by the City Council of the City of Creve Coeur, St. Louis County, Missouri, as follows:

**Section 1:** Authorizes the rezoning of the properties at 11127, 11135 & 11141 Olive Boulevard, currently zoned C Single Family Residential, to GC General Commercial..

**Section 2:** A Conditional Use Permit is authorized to be issued pursuant to Section 4 hereof for the operation of a Mobil on the Run Gas Station with Convenience store with 16 gas pumps and Briteworx car wash facility with 11 outdoor vacuum stations located at 11109-11135 Olive Boulevard & 11100-11114 Oak Lake Court:

A tract of land being Part of Lots 1, 2, and 3 of "Oak Lake Estates", recorded in Plat Book 92, Page 3 of St. Louis County Records, and Part of Lots 3, 4 and 5 of the subdivision of the Farm of S. S. Matson, being part of U.S. Survey 1962, Township 45 North, Range 5 East of the Fifth Principal Meridian, St. Louis County, Missouri, more particularly described as follows:

Commencing at the intersection of the East line of a tract of land conveyed to Halliburton and Kohring, by deed recorded in Book 7558, Page 658 of said records with the North line of Olive Boulevard as widened by document recorded in Book 5112, Page 66 of said records, said point being 45.00 feet perpendicular distance North of Missouri State Highway 340 (variable width), also known as Olive Boulevard centerline station 179+55.77; thence along the said East line and along the East line of a tract of land conveyed to Pfortmiller by deed recorded in Book 11682, Page 2248 of said records, North 29 degrees 19 minutes 07 seconds West, 185.70 feet to the corporate limit line of the City of Creve Coeur; thence along said line the following courses and distances; thence North 60 degrees 01 minutes 53 seconds East, 100.29 feet to the POINT OF BEGINNING of the tract herein described; thence continuing along the corporate limit line of the City of Creve Coeur, North 60 degrees 01 minutes 53 seconds East, 200.09 feet; thence North 59 degrees 51 minutes 43 seconds East, 104.63 feet; thence along a curve to the right, the chord of which bears North 68 degrees 42 minutes 21 seconds East, 247.12 feet and the radius point of which bears South 30 degrees 08 minutes 17 seconds East, 803.69 feet from the last mentioned point, an arc distance of 248.11 feet to the West line of Schulte Road (variable width); thence along said West line Schulte Road, as described in Book 7631, Page 1576 of said records, the following courses and distances; thence South 29 degrees 19 minutes 28 seconds East, 91.74 feet; thence South 85 degrees 20 minutes 52 seconds West, 5.50 feet; thence South 29 degrees 19 minutes 28 seconds East, 83.77 feet; thence along a curve to the right, the chord of which bears South 24 degrees 59 minutes 17 seconds West, 32.49 feet and the radius point of which bears South 60 degrees 40 minutes 32 seconds West, 20.00 feet from the last mentioned point, an arc distance of 37.92 feet to a point being 45.00 feet perpendicular distance North of Olive Boulevard centerline station 185+63.34; thence along the aforesaid North right-of-way line of Olive Boulevard, being 45.00 feet perpendicularly distant north of and parallel to the centerline of said Olive Boulevard, the following courses and distances; thence along a curve to the left, the chord of which bears South 72 degrees 34 minutes 52 seconds West, 178.13 feet and the radius point of which bears South 10 degrees 41 minutes 58 seconds East, 761.20 feet from the last mentioned point, an arc distance of 178.54 feet to a point; thence South 61 degrees 53 minutes 32 seconds West, 154.64 feet; and thence South 59 degrees 51 minutes 43 seconds West, 189.15 feet; thence leaving said North right-of-way line, North 29 degrees 19 minutes 07 seconds West, 185.61 feet to the POINT OF BEGINNING, containing 2.380 acres, more or less.

And,

Attachment: 16-031.Draft Ordinance.12-4-2017 (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,\$DP)



BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

A tract of land being Part of Lots 1, 2, and 3 of "Oak Lake Estates", recorded in Plat Book 92, Page 3 of St. Louis County Records, and Part of Lots 3, 4 and 5 of the Subdivision of the Farm of S. S. Matson, being Part of U.S. Survey 1962, Township 45 North, Range 5 East of the Fifth Principal Meridian, St. Louis County, Missouri, more particularly described as follows:

Commencing at the intersection of the East line of a tract of land conveyed to Halliburton and Kohring, by deed recorded in Book 7558, Page 658 of said records with the North line of Olive Boulevard as widened by document recorded in Book 5112, Page 66 of said records, said point being 45.00 feet perpendicular distance North of Missouri State Highway 340 (variable width), also known as Olive Boulevard centerline station 179+55.77; thence along the said East line and along the East line of a tract of land conveyed to Pfortmiller by deed recorded in Book 11682, Page 2248 of said records, North 29 degrees 19 minutes 07 seconds West, 185.70 feet to the corporate limit line of the City of Creve Coeur; thence along said line North 60 degrees 01 minutes 53 seconds East, 100.29 feet to the POINT OF BEGINNING of the tract herein described, said point being on the corporate limit line of the City of Creve Coeur; thence North 29 degrees 19 minutes 07 seconds West, 125.13 feet; thence North 59 degrees 56 minutes 12 seconds East, 200.00 feet; thence North 17 degrees 19 minutes 15 seconds East, 1.05 feet to the South line of Oak Lake Court, 50 feet wide; thence along said South line of Oak Lake Court, 50 feet wide, the following courses and distances; thence along a curve to the left, the chord of which bears North 86 degrees 27 minutes 24 seconds East, 213.69 feet and the radius point of which bears North 17 degrees 19 minutes 15 seconds East, 300.00 feet from the last mentioned point, an arc distance of 218.49 feet; thence North 65 degrees 35 minutes 32 seconds East, 138.44 feet; thence along a curve to the right, the chord of which bears South 71 degrees 51 minutes 58 seconds East, 27.05 feet and the radius of which bears South 24 degrees 24 minutes 28 seconds East, 20.00 feet from the last mentioned point, an arc distance of 29.70 feet to the West line of Schulte Road (variable width); thence along said West line Schulte Road, as described in Book 7631, Page 1576 of said records, South 29 degrees 19 minutes 28 seconds East, 34.48 feet to the aforementioned corporate limit line of the City of Creve Coeur; thence along said line the following courses and distances; thence along a curve to the left, the chord of which bears South 68 degrees 42 minutes 21 seconds West, 247.13 feet and the radius point of which bears South 12 degrees 27 minutes 00 seconds East, 803.69 feet from the last mentioned point, an arc distance of 248.11 feet; thence South 59 degrees 51 minutes 43 seconds West, 104.63 feet; thence South 60 degrees 01 minutes 53 seconds West, 200.09 feet to the POINT OF BEGINNING, containing 1.009 acre, more or less.

**Section 3:** The Conditional Use Permit granted shall be subject to all applicable statutes, ordinances, rules and regulations, and the following conditions:

1. The Conditional Use Permit shall be for the operation of a 4,800 square foot new 24-hour Mobil on the Run Gas Station with convenience store, with 16 gas pumps, and a 4,460 Car Wash Facility with 11 outdoor vacuums located at 11109 – 11135 Olive Boulevard, and 11100, 11108, and 11114 Oak Lake Court
2. The existing home at 11141 Olive Boulevard shall be removed and the site cleared to be in compliance with the zoning ordinance for buffering adjacent to residentially zoned property.
3. The Car Wash Hours of operation, including the vacuums shall be 7 AM to 9 PM, seven days a week.
4. The Applicant is required to submit Grading and Site Improvement Plans, showing all exterior improvements, for all new construction to the Division of Planning for review, as required by Section 410.380 of the Subdivision and Land Development Regulations (Subdivision Code). The Grading and Site Improvement Plans shall be in substantial conformance with the Site Development Plans and the Landscape Plan submitted on

BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

November 27, 2017 as bound together and submitted in conjunction with Application #16-031 by CEC Civil & Environmental Consultants, Inc., and as amended below.

5. The Applicant is required to submit a Building Permit application, as required by Article II of the Building Code. Exterior elevations shall be in substantial conformance with the "Exterior Elevations" submitted on November 27, 2017 as bound together and submitted in conjunction with Application #16-031 by CEC Civil & Environmental Consultants, Inc., and as amended below.
6. The Landscape Plan shall be revised to provide additional plantings along Schulte Road and Olive Boulevard, as well as along the west property line, and relocate the knee walls further inward with the plantings on the public view for the Zoning Administrator's approval to meet with the City's Comprehensive Plan and Design Guidelines as well as Sections 405.540 and 405.810 of the Zoning Ordinance as discussed in the Staff Report for December 4<sup>th</sup> Planning and Zoning Commission Meeting.
7. An underground irrigation system shall be installed and maintained to serve all new landscaped areas. Vegetation that is totally or predominantly dead and/or disfigured due to disease or injury shall be replaced as needed and in a prompt manner.
8. The fence line shall end in line with the northwest corner of the car wash facility, and the upright evergreen landscaped hedge shall be carried around to provide sufficient screening of the entrance.
9. The site development plan drawings for the car wash and gas station with convenience store shall be revised to show a 30 foot buffer yard where it abuts a single family residential district.
10. The site development plans shall be revised to provide a minimum of 8 feet of sidewalk adjacent to the building, with a minimum 4 foot clearance between the vacuums and the building to meet with the regulations of Section 405.730 Sidewalks and City's Design Guidelines.
11. The Applicant shall bring the signal at Schulte Road and Olive Boulevard to the ADA Compliance on all four legs of the intersection, and that an additional signal head is required for the southbound through movement that can be mounted overhead on the existing mast arm or on a pedestal in the median island at the northbound approach, per MoDOT and St. Louis County's recommendations and approval.
12. Copies of MoDOT and St. Louis County approval based on the approved plans shall be provided prior to the issuance of a Site Improvement Permit or Building Permits from the City.
13. Employee parking, delivery and company vehicles shall be parked interior to the site and as far from the public right-of-way as possible.
14. Outdoor storage and display of merchandise shall be prohibited.
15. All signs and banners shall be in conformance with Article VIII, Sign Regulations, of the Zoning Code. Specifically, no temporary signs, including window signs, shall be placed on the car wash building.
16. All lighting shall comply with Section 405.680 Lighting of the Zoning Ordinance.
17. A revised sound study shall be provided based on the final site development plans prior to final action by the City Council.
18. Noise levels shall meet with the St. Louis County standards.
19. Any mechanical equipment installed for the site shall be properly screened with approved materials.
20. Any future enlargement, extension, expansion or alteration in the use of the structures or site must be approved by the City Council upon receipt of the recommendation of the Planning and Zoning Commission as an amendment to the Conditional Use Permit before a Building Permit for the enlargement, expansion or alteration may be issued.



BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

21. Failure to comply with any one or all of the conditions of this permit shall be adequate cause for the revocation of said permit by the City Council, provided, however, no permit shall be revoked without prior notice to the owner of the intention of the City Council to revoke this permit and reasonable time granted to the owner to correct or remedy any such breach of conditions, except for repeated breaches or violations.
22. No conditional use permit granted by the City Council shall be valid for a period longer than one year from the date it grants the conditional use permit, unless within such period: (1) a building permit is obtained and construction is begun; or (2) if a building permit is not required, an occupancy permit is obtained and the use of the building commenced. The City Council may grant extensions to the one (1) year period of not more than one hundred and eighty (180) days each, without notice or hearing, provided that a written request for such extension is filed by the original applicant and approved by the City Council prior to the date the conditional use permit is scheduled to expire.
23. Any transfer of ownership or lease of the property shall include in the transfer or lease agreement a provision that the purchaser or lessee agrees to be bound by the approved Site Development Plan for the property and the conditions herein set forth, and written confirmation thereof signed by the new owner or lessee shall be filed with the City at the time of such transfer or lease. Failure to comply with this provision shall not excuse anyone from these conditions.

**Section 4:** The City Administrator of the City of Creve Coeur is hereby authorized and directed to issue a Conditional Use Permit in accordance with the provisions of this ordinance, said permit to expressly provide for the conditions and stipulations hereinabove set out in Section 3 of this ordinance. Exercise of the rights granted pursuant to the issued permit shall constitute acceptance of all conditions and stipulations set forth herein.

**Section 5:** This ordinance shall become effective in accordance with Section 3.11 (g) of the City Charter.

ADOPTED THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2017.

\_\_\_\_\_  
ROBERT HOFFMAN  
PRESIDENT OF CITY COUNCIL

APPROVED THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2017.

\_\_\_\_\_  
BARRY GLANTZ  
MAYOR

ATTEST:

\_\_\_\_\_  
DEBORAH RYAN, MPCC  
CITY CLERK

Attachment: 16-031.Draft Ordinance.12-4-2017 (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)



300 North New Ballas Road • Creve Coeur, Missouri 63141  
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966  
www.creve-coeur.org

**APPLICATION TO PLANNING AND ZONING COMMISSION  
#16-031 FOR THE REZONING, CONDITIONAL USE PERMIT, AND SITE  
DEVELOPMENT PLAN AND BOUNDARY ADJUSTMENT APPROVAL OF A  
MOBIL ON THE RUN CONVENIENCE STORE WITH GAS PUMPS AND  
BRITWORX CAR WASH FACILITY LOCATED AT 11109-11141 OLIVE  
BOULEVARD & 11100-11114 OAK LAKE COURT, CURRENTLY ZONED GC  
GENERAL COMMERCIAL AND C SINGLE FAMILY RESIDENTIAL**

**FOR THE MEETING OF:** Monday, December 5, 2016

**LOCATION:** 11109 – 11141 Olive Boulevard, and 11100, 11108, and 11114 Oak Lake Court, including portions of unincorporated St. Louis County, at the northwest corner of Schulte Road, and Olive Boulevard.

**REQUEST:** Kevin Kamp, of Civil & Environmental Consultants, Inc. has submitted an application on behalf of Wallis Companies (Arch Energy, LLC), for the rezoning of 11127, 11135 & 11141 Olive Boulevard, from C-Single Family Residential District to GC-General Commercial District, and for a Conditional Use Permit, Site Development Plan and Boundary Adjustment for a new Mobil on the Run convenience store with gas pumps and BriteWorx Car Wash facility encompassing 11109-11141 Olive Boulevard and 11100-11114 Oak Lake Court.

**ADDITIONAL INFORMATION:** The Applicant will also be submitting to St. Louis County for review and approval of the proposed uses for the portions of these properties located within Unincorporated St. Louis County. Section 405.360 GC-General Commercial District generally requires a minimum area of five acres, but not if expanding an existing GC District, and the existing Mobil Station at 11109 Olive Boulevard is already zoned GC-General Commercial. The proposal is 3.92 acres and is adjacent to an existing property zoned GC District. Gasoline Stations with Convenience Stores (NAICS #447110) and Car Wash Facilities (NAICS #811192) are conditional uses in the GC District. The existing Mobil was originally developed in 1984.

**Key Issues:**

- Does the request integrate with the existing surrounding uses?
- Does the request further the goals and/or implement the Comprehensive Plan?
- Does the request meet with the minimum standards of the proposed GC-General Commercial?
- Is the request consistent with the required findings for a conditional use permit?

**Comp. Plan References**

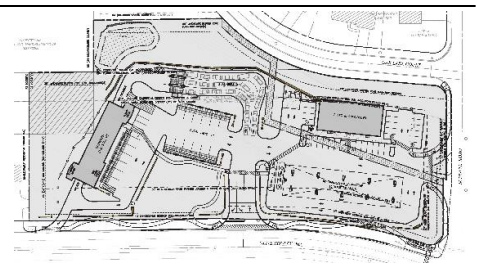
- East Olive Corridor Action Area

**Zoning Code References**

- Section 405.210: Regulation of Uses, Table A
- Section 405.360 GC-General Core Business District
- Section 405.470 Conditional Uses
- Section 405.1060 Zoning Changes and Text Amendments

**APPLICANT:** Kevin Kamp  
Civil & Environmental Consultants, Inc.  
4848 Park 370 Boulevard, Suite F  
Hazelwood, MO 63042

**PROPERTY** Wallis Companies (Arch Energy, LLC)  
**OWNER:** 106 East Washington  
Cuba, MO 65453



**REPORT PREPARED BY:** Jason Jaggi, AICP, Director of Community Development; Whitney Kelly, AICP, City Planner  
**DATE:** 12/1/2016  
**ATTACHMENTS:** Applicant's Materials received November 4, 2016  
Traffic Impact Study from CBB  
City's Consulting Traffic Engineer Memo  
Sound Study submitted November 4, 2016  
Public Comment



## SCOPE OF REVIEW AND STAFF ANALYSIS

The focus of this staff report is to provide an analysis and findings on the most significant aspects of these applications for the proposed development as they relate to the request for rezoning, compatibility with the Comprehensive Plan, Design Guidelines and Zoning Ordinance. Staff is of the opinion that it would be most useful for the Commission and the public to review the broader aspects of this proposal with the Applicant so that further direction can be provided.

## SUMMARY OF PROPOSAL

Kevin Kemp, of Civil & Environmental Consultants, Inc., on behalf of Wallis Companies, has submitted a request for the following:

- Rezone the 11127, 11135 & 11141 Olive Boulevard properties in the City of Creve Coeur from C-Single Family Residential District to GC-General Commercial District.
- Conditional Use and Site Development Plan approval for a 4,800 square foot new 24-hour Mobil on the Run Convenience Store located on the former Oak Lake Court parcels, with 20 pump Gas Station on the existing 11109 Olive Boulevard gas station site and a 5,128 square foot BriteWorx Car Wash with 17 outdoor vacuum stations on the 11127, 11135 & 11141 Olive Boulevard properties that has proposed hours of operation of 7 AM to 9 PM.
- Boundary adjustment approval to consolidate 11109 – 11141 Olive Boulevard, and 11100, 11108, and 11114 Oak Lake Court into one 3.92 acre parcel.

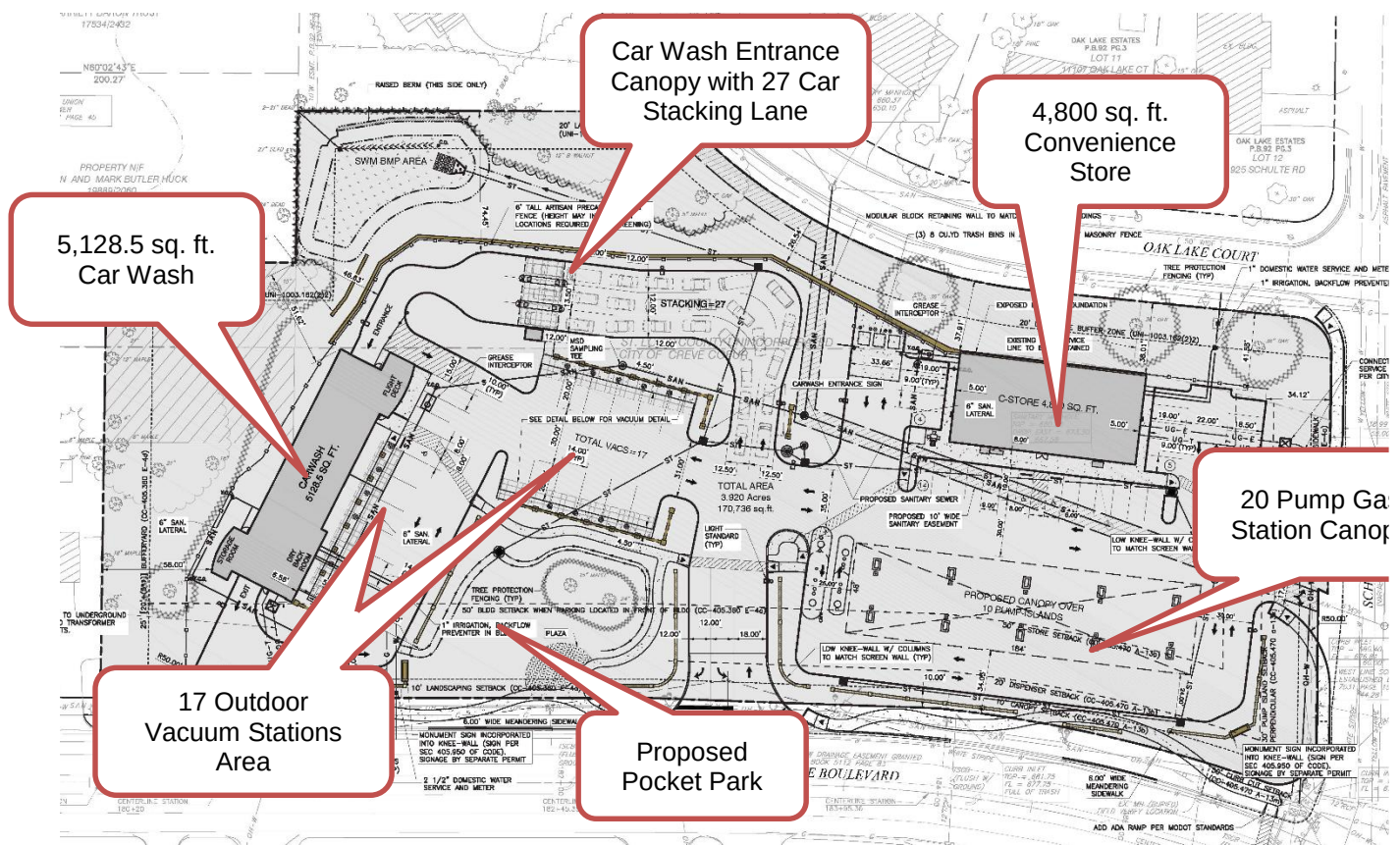


Figure 1: Close-up of the Applicant's Site Development Plan



Figure 2: South Elevation of the Convenience Store

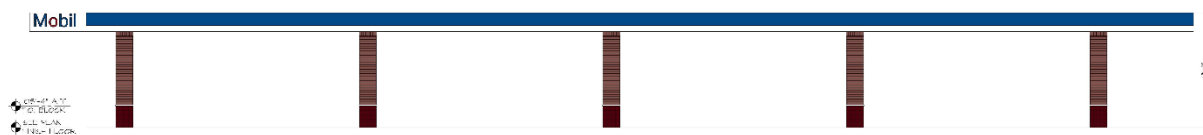


Figure 3: South Elevation of the Gas Pumps Canopy

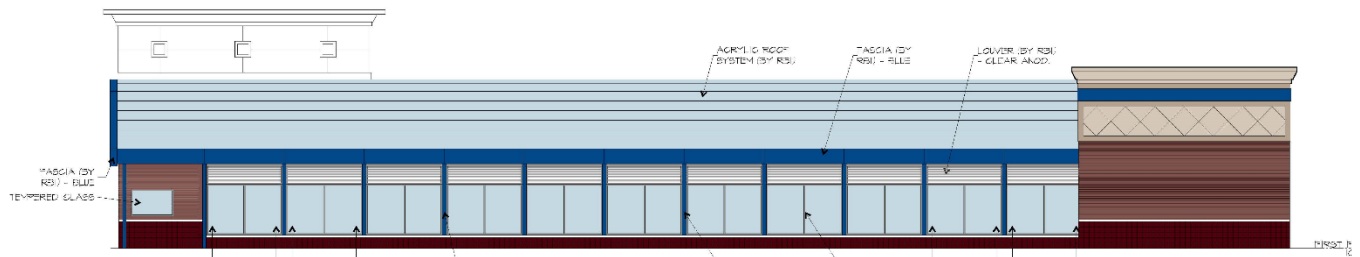


Figure 4: West Elevation of the Car Wash Facility

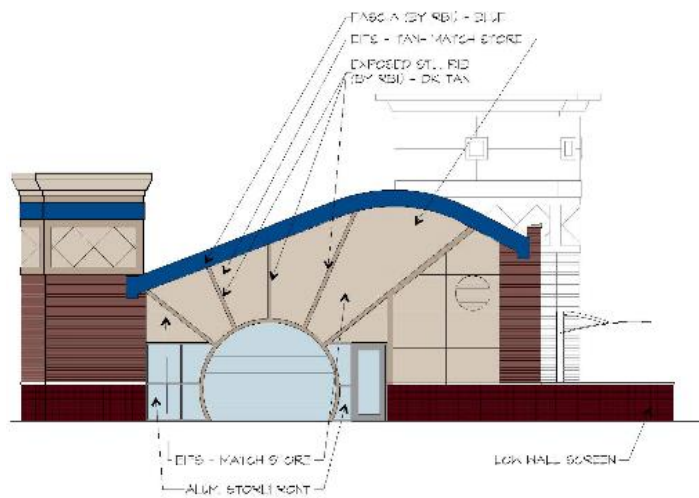


Figure 5: South Elevation of the Car Wash Facility

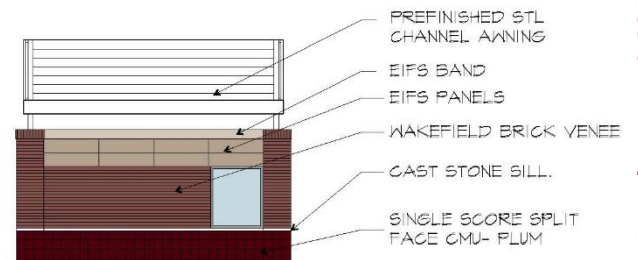


Figure 6: South Elevation of the Vacuum Stations



## LAND USE AND ZONING OF SURROUNDING PROPERTIES

The adjacent zoning and land uses are as follows:

| DIRECTION | USE                                                                          | ZONED                                                                    | SEPARATED BY           |
|-----------|------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------|
| North     | Residential                                                                  | Unincorporated St. Louis County C8<br>Planned Commercial; R3 Residential | Partial Oak Lake Court |
| South     | Complete Music, Masonic<br>Lodge; Residential Structures<br>used for offices | Partial GC General Commercial; C<br>Single Family Residential            | Olive Boulevard        |
| East      | Gas Station with Car Wash                                                    | GC General Commercial                                                    | Schulte Road           |
| West      | Residential                                                                  | Partial C Single Family Residential;<br>A Single Family Residential      | NA                     |

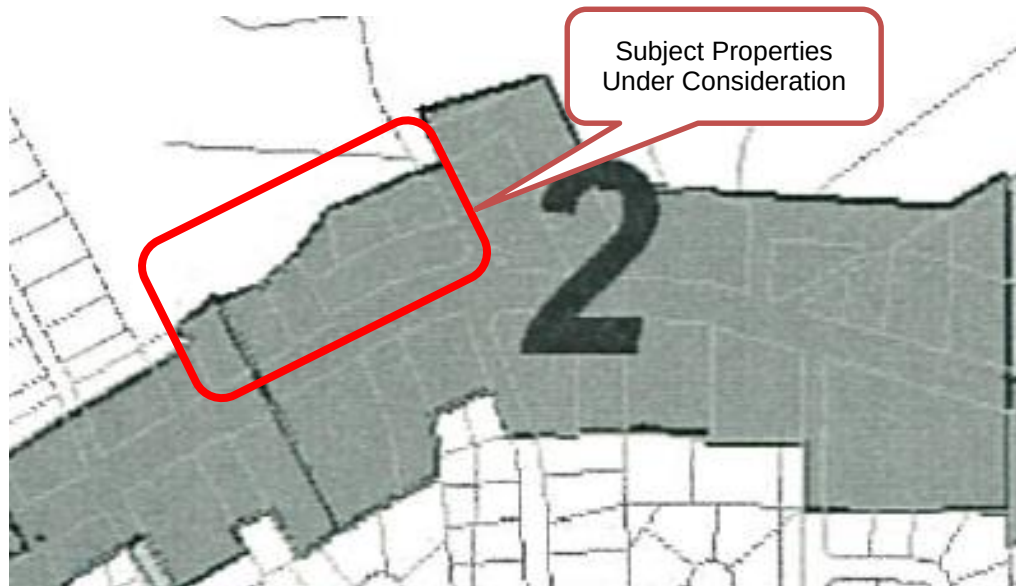
## COMPREHENSIVE PLAN REVIEW

The subject property is located in the East Olive Corridor of the Comprehensive Plan that envisions an area of small businesses with a residential neighborhood character, with substantial green spaces and with landscaping for a “green line” park that gives the impression of driving or walking through a park along Olive Boulevard (page 51). The Residential Preservation and Economic Development Section discusses that the land uses envisioned for this corridor include small-scale retail, office, single-family, multi-family, and parks and recreation uses with the following policies, which are most applicable to the nature of this request (Pages 52-53):

- 1. Preserve and protect single-family residential areas from intrusions of non-residential uses. Limit commercial and non-single family uses to Olive Boulevard. Limit retail uses to a size and scale designed to provide goods and services to the Creve Coeur market rather than to a regional market.*
- 3. Maintain this area with a residential character, even when homes are converted or replaced by business uses. New development or redevelopment should be compatible with the low-density residential character of the corridor, as discussed below.*
- 4. Protect existing healthy, larger trees during the development or redevelopment process.*
- 5. All elevations of new construction or redevelopment should maintain the overall character of the existing residential structure or area. Emphasis should be given to compatible door, window and other opening location, size and scale.*
- 7. All new development or redevelopment of non-residential uses should comply with the Creve Coeur Design Guidelines. The City’s Design Guidelines should be strengthened for this area to ensure that building scale, height, shape, and volume will be compatible with residential structures. Illustrations should be added to depict acceptable building design features.*
- 8. Mechanical equipment should be located so as not to be visible from any public ways or adjacent residential areas. Where such limitation is not possible, the facilities should be screened from public view with materials compatible with the building. The backs or sides of buildings adjacent to residential areas should be designed so as to cover utility boxes and meters, have architectural treatment of facades similar to the front façade, incorporate landscaping, strips or other buffers (low walls, ornamental fencing and incorporate opaque screening of dumpsters and mechanical equipment.*
- 9. Mitigate the impact of non-residential uses on residential area through heavy landscaping and other buffers.*
- 10. New buildings should have setbacks consistent with surrounding established residential patterns and provide a sidewalk and landscape treatment in the front of buildings. New development should be designed to provide connections to the “green line” park linear greenway.*

15. Operational compatibility standards should be adopted and enforced to control noise, lighting, the placement of outdoor vending machines, and hours of operation, particularly for commercial uses near residential areas.

Further, the Comprehensive Plan provides recommendations of key properties along the East Olive Corridor. The subject properties lie largely in East Olive Corridor Key Property Area 2, with a small portion in Key Area 1 as shown below:



**Figure 7: Close-up of the East Olive Corridor Key Properties Map of the Comprehensive Plan found on Page 55, with the subject properties boxed in red.**

East Olive Corridor Key Property Area 2 recommends that as redevelopment and new investment occurs, the area will be encouraged to remain commercial, with uses limited to neighborhood-oriented commercial. Redevelopment should be designed to protect and be compatible with adjacent residential areas, as provided for in the *Residential Preservation and Economic Development* recommendations for the East Olive Corridor. (Page 57).

The current draft of the Comprehensive Plan Update, *Creve Coeur 2030*, currently under review would further the existing Comprehensive Plan recommendations with the East Olive Corridor vision to create a walkable corridor of destination retail boutiques, neighborhood service business, small-scale restaurants, and attached townhomes and low-density multi-family homes that encourage pedestrian access from adjacent neighborhoods and prioritize walkability between neighboring lots while accommodating car access and easy parking (p. 88). Frontage recommendations encourage uniform setbacks on neighboring lots to establish a consistent location and orientation of building façade frontages to Olive Boulevard.

#### Compatibility with the Comprehensive Plan

The proposed development of a gas station with a convenience store and a separate, detached car wash facility with exterior vacuum stations appears to be consistent with a few of the policies of the Comprehensive Plan; however, Staff finds the proposal to be in conflict with several significant policies of the Plan.

The development includes pedestrian amenities and landscaping treatments given the proposed auto-oriented uses. For example, the Applicant has included a pocket park with pedestrian amenities and sufficient landscaped buffer along the rear and west side of the development and low-height landscape wall feature which furthers the project toward the goals of the Comprehensive Plan. In addition, the Applicant is proposing to save several large, mature trees on the site and has incorporated them into the site planning for the project.



The proposal's primary challenges with the policies of the Comprehensive Plan involve the scale of the proposed development, the intensity of the uses at the scale which is proposed, and the compatibility of the development with the residential character of this section of Olive Boulevard. The Comprehensive Plan clearly speaks to this area of Olive Boulevard as having a vision for smaller scale retail and service businesses that cater to the surrounding residential neighborhoods. To further the goal of compatibility, the Comprehensive Plan suggests that the commercial uses themselves incorporate design elements that maintain this strong residential character. As currently proposed, Staff finds that this project is inconsistent with these elements of the Comprehensive Plan. Redevelopment of the existing facility within the existing GC District would be more in keeping with the character of the area, and the Comprehensive Plan, and standards for the GC District discussed further below.

A rezoning contrary to the Comprehensive Plan should be founded on two concepts: one, that the current goals, and those proposed with the *Creve Coeur 2030* plan, are sufficiently debatable that their intended outcomes can be questioned; and two, that the proposal more adequately fulfills the goals of the Comprehensive Plan and, by extension, represents a greater benefit to the public interest. Staff is not convinced that the proposal offers a greater benefit to the public interest, or more adequately fulfills the goals of the Comprehensive Plan. While current plan recommendations for the area may be questionable with regard to the conversion of existing homes to commercial uses, and that the GC District may be an appropriate zoning discussed further below, the overall scale of the proposed development would represent a significant departure for the area that has maintained a residential feel connecting the larger commercial centers of the Central Business District and the Commerce Center. Regardless of the specific merits of the proposal, it remains unclear how it represents a tangibly greater benefit to the public. Staff finds that the scale and intensity of the proposed development would be more appropriate in a larger heavy commercial or industrial area.

#### DESIGN GUIDELINES REVIEW

As noted earlier in this report, Staff will only provide discussions on the larger design issues. Once direction has been provided on the overall appropriateness of the project, as proposed, a more detailed review will be provided at the appropriate time.

The Design Guidelines recommend that the size, design, and orientation of buildings should be sensitive to existing terrain, existing buildings, and the surrounding area, the use of natural materials and architectural consistency between all building elevations, and an overall sense of architectural continuity on all elevations. The use of false or decorative façade treatments is discouraged. Further, multiple buildings on the same site are to create a cohesive visual relationship between the buildings. Material and/or color changes at the outside corners of structures that give the impression of thinness and artificiality of the material are discouraged.

The following is a list of Staff's key items that should be discussed and/or revised based on further discussion at the meeting:

- The large gaps and interruptions along the "streetscape" caused by the non-pedestrian elements, such as the vacuum area, and service entrance into the car wash facility.
- The degree of usability of the 'pocket park' pedestrian amenities in the proposed location and the extensive use of low walls to provide visual interest which appears to heighten the large scale of the development.
- Strong use of corporate architecture and overuse of EIFS that is strongly discouraged, and the overall design which is inconsistent with the Comprehensive Plan which calls for incorporating residential design elements to maintain the residential character of commercial buildings in this section of Olive Boulevard.
- Building elements, such as parapet wall, penthouses or screen walls should be treated as an integral part of the architecture, where the Convenience Store relies on EIFS to create an artificial height to the building that is not in keeping with the residential character surrounding the area.

- The lack of a separated pedestrian connection from the gas pump to the main entrance of the convenience store that does not interfere with the Accessible parking area, where the Design Guidelines recommend breaking up the row of parking.
- The Design Guidelines provide specific direction regarding Auto Service Stations where separate structures, such as a canopy, carwash or cashier's booth should be avoided; however, if approved, should have a consistent design theme and a car wash that is incorporated into the project shall be well integrated into the design.

### **ZONING REVIEW**

Section 405.1060(B) of Zoning Changes and Text Amendments requires that the action of the Planning and Zoning Commission approving, disapproving, or conditionally approving the site concept or site development plan shall accompany its recommendation to the City Council regarding the rezoning. Therefore, while a recommendation on the proposed conditional use permit and site development plan with any rezoning is required, the rezoning of properties is not contingent on the implementation of the development and, if approved, would remain.

The stated purpose and intent of the GC District is to accommodate by site development plan approval convenience retail shopping and services and offices which are free standing or part of small scale planned commercial developments and which are compatible in scale and intensity of use with adjacent residential uses. While a Gas Station with Convenience Store, and a Car Wash are conditional uses in the GC District, it is the overall scale and intensity of use of the proposal that are inconsistent with the stated purpose of the GC District.

As Staff is seeking direction regarding the key discussions of the appropriateness of the development with the Comprehensive Plan and the purposes and intent of the GC-General Commercial District, a full analysis with the remaining sections of the Zoning Code, including signage and landscaping will be completed at a later time.

### **TRAFFIC IMPACT STUDY**

The Applicant has included a Traffic Impact Study (TIS) conducted by CBB that has been reviewed by the City's Consulting Traffic Engineer, GBA. Comments from St. Louis County Department of Transportation have been provided; however, MoDOT has not provided formal comments at this time. The City's Consulting Traffic Engineer did raise a few items, namely, requesting additional queue length information for other turning movements within the study area, the difficulty of enforcing the no left turn access from northbound Schulte into the site, the spacing of the full access point from the Olive/Schulte intersection, and the proximity and orientation of the adjacent driveway to the residence to the west with the exit from the car wash facility that is within 50 feet from one another.

Since both adjacent public roadways are controlled by entities other than the City (MoDOT and St. Louis County), the Applicant will be required to obtain final approval from each agency. The TIS prepared by CBB on behalf of the Applicant, the GBA TIS review memo, and the review letter by St. Louis County are attached to this report for review by the Commission.

### **SOUND STUDY**

A sound study was completed by Designed Acoustics based upon the nature of the proposed use. To gain an understanding of the possible noise impacts associated with the car wash facility in particular, Staff would recommend that Commission members visit the Mobil on the Run location at 9371 Olive Boulevard in Olivette. Depending upon the direction of the other elements of this proposal staff would look to review the noise study in greater detail at the appropriate time.



### **BOUNDARY ADJUSTMENT PLAT**

As part of this request, the Applicant has submitted a plat that would consolidate all of the individual lots into one new lot consisting of 3.920 acres. The consolidated lot would straddle both jurisdictions of the City of Creve Coeur and Unincorporated St. Louis County. As a boundary adjustment plat is largely a ministerial act by the Commission, it would be appropriate to defer action.

### **REVIEW BY ST. LOUIS COUNTY**

The total development site includes 2.807 acres located within the City of Creve Coeur and 1.113 acres located within Unincorporated St. Louis County. Based upon conversations with the St. Louis County Planning Department, the Applicant will be required to submit the plans for the County's approval in conjunction with the review by the City. Any approval by the City of this proposal should incorporate a condition that the Applicant receive approval of the plan by St. Louis County.

### **RECOMMENDATION AND ACTION**

At this time, Staff is seeking direction regarding the compatibility of the proposal with the Comprehensive Plan, the rezoning of portions of the site to the GC District, and the larger aspects of the Design Guidelines before completing a full review of the Conditional Use and Site Development Plans.

As discussed throughout this report, the GC District may be an appropriate zoning designation; however it is Staff's opinion that the proposal does not meet with significant elements of the Comprehensive Plan and does not create a compelling argument for action inconsistent with the Comprehensive Plan, nor are there public benefits unique to this project that substantially justify the approval of the proposal as presented. Further, the scale of the proposal is inconsistent with the stated purposes of the GC District that calls for small scale neighborhood commercial developments that is compatible in scale with the adjacent residences and would leave a remnant parcel which would effectively prohibit any future redevelopment potential of the property that fronts directly onto Olive Boulevard located just west of the development at 11147 Olive Boulevard.

The Commission should hear from the Applicant and provide direction regarding the Comprehensive Plan and the appropriateness of the proposal within the General Commercial District. If they find that additional design consideration or other modifications are necessary which may include reducing the scale of the project, they should make a motion to continue the proposal to the December 19<sup>th</sup> or later meeting and provide such direction to the Applicant. If they find that the proposal is inconsistent with the Comprehensive Plan and with the purpose and intent of the General Commercial District, they should make motions to approve the applications and then individually vote to recommend denial of the Applications.

### **MOTION**

The following are examples of appropriate motions for these applications, **but without any stated conditions at this point:**

"I move to approve Application #16-031 for the rezoning of properties at 11127, 11135 & 11141 Olive Boulevard, currently zoned C Single Family Residential, to GC General Commercial."

"I move to approve Application #16-031 for a boundary adjustment and conditional use permit for a Mobil on the Run convenience store with 20 gas pumps and Briteworx car wash facility with 17 outdoor vacuum stations located at 11109-11141 Olive Boulevard & 11100-11114 Oak Lake Court."

"I move to approve Application #16-031 for site development plan for a Mobil on the Run convenience store with 20 gas pumps and Briteworx car wash facility with 17 outdoor vacuum stations located at 11109-11141 Olive Boulevard & 11100-11114 Oak Lake Court."

**Or,**

“I move to continue Application #16-031 for the rezoning, conditional use permit, and site development plan and boundary adjustment approval of a Mobil on the Run convenience store with 20 gas pumps and Briteworx car wash facility located at 11109-11141 Olive Boulevard & 11100-11114 Oak Lake Court, currently zoned GC General Commercial and C Single Family Residential to allow for the Applicant to revise the drawings based upon the discussion and direction from the Commission” (conditions may be added, eliminated, or modified by preceding motion).

---

**APPENDIX 1: COMPREHENSIVE PLAN, INCLUDING DESIGN GUIDELINES**

Included and attached by reference. See body of report for specific excerpts.

**APPENDIX 2: ZONING CODE**

Included and attached by reference. See body of report for specific excerpts.



### APPENDIX 3: AERIAL PHOTO



Attachment: 16-031.Mobil and BriteWorx.Staff Report.12-5-2016 (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)



#### APPENDIX 4: SITE PHOTOGRAPHS

Photo Date: 12/01/2016



Description: View looking northwest at the Existing Mobil Station at 11109 Olive Boulevard from the Olive Boulevard and Schulte Road intersection.



Description: View looking north at the home used as a commercial office at 11127 Olive Boulevard that that will be removed for the proposed development.



Description: View looking north at the home used as a commercial office at 11135 Olive Boulevard that will be removed for the proposed development.



|                                                                                      |                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Description: View looking northwest at the home used as a commercial office at 11141 Olive Boulevard that will be removed for the proposed development. The home at 1147 Olive Boulevard in the background will be remaining.</p> |
|   | <p>Description: View looking south from the subject property at the homes south of Olive Boulevard.</p>                                                                                                                              |
|  | <p>Description: View looking southeast at the commercial buildings at the corner of Olive Boulevard and Mary Meadows Drive on the southside of Olive Boulevard.</p>                                                                  |

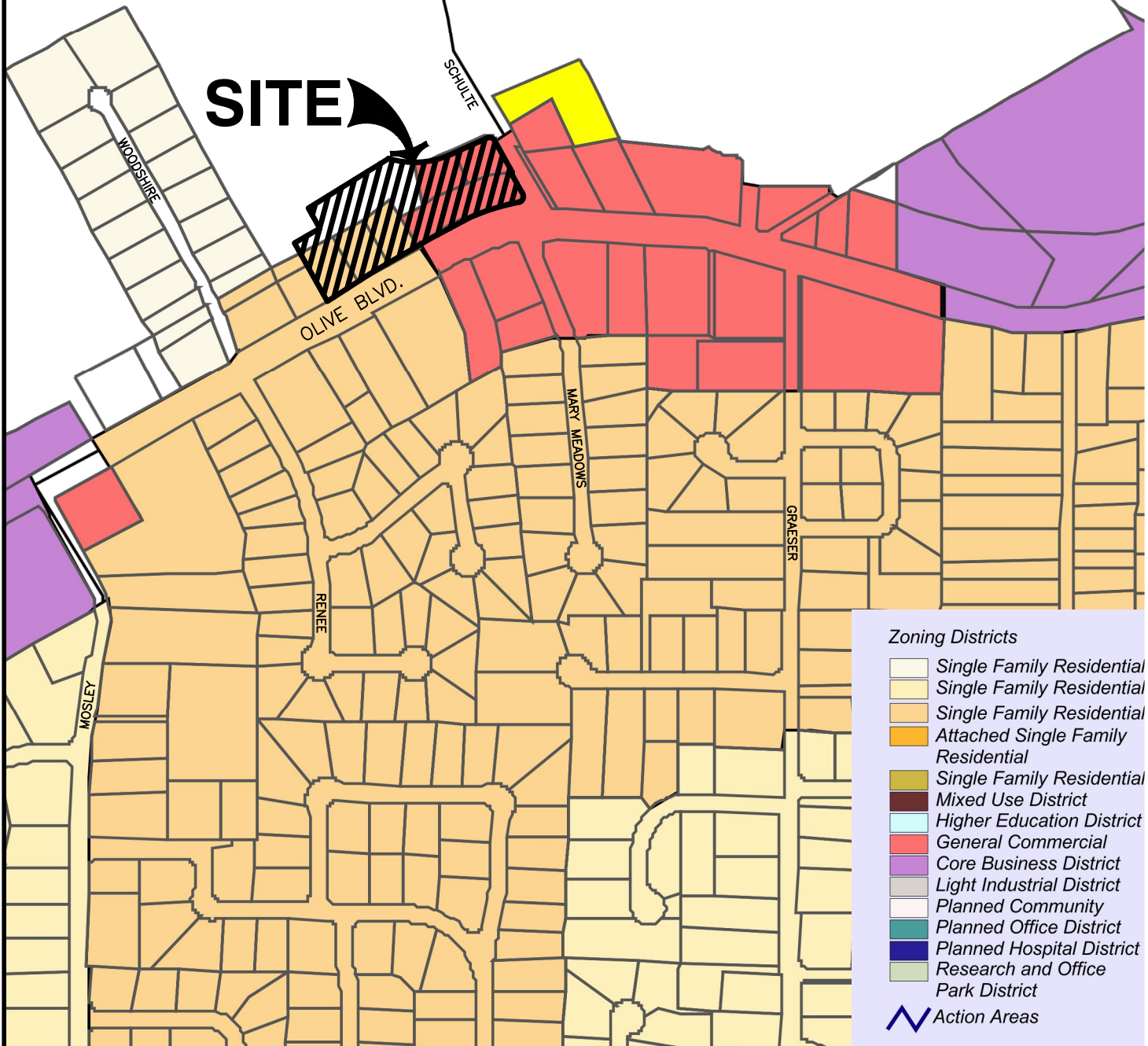


|                                                                                     |                                                                                                                                                                  |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Description: View looking east from western property line of the subject properties.</p>                                                                      |
|   | <p>Description: View looking southwest of the home at 11100 Oak Lake Court that will be removed for the proposed development.</p>                                |
|  | <p>Description: View looking east from the cul-de-sac of Oak Lake Court at 11108 and 11114 Oak Lake Court that will be removed for the proposed development.</p> |





# SITE



## REFERENCE

1. IMAGE DEPICTED COURTESY OF CREVE COEUR DEPARTMENT OF COMMUNITY DEVELOPMENT, GOVERNMENT CENTER, 300 N. NEW BALLAS ROAD, CREVE COEUR, MO 63141.

\*HAND SIGNATURE ON FILE



### Civil & Environmental Consultants, Inc.

4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042

314-656-4566 · 866-250-3679

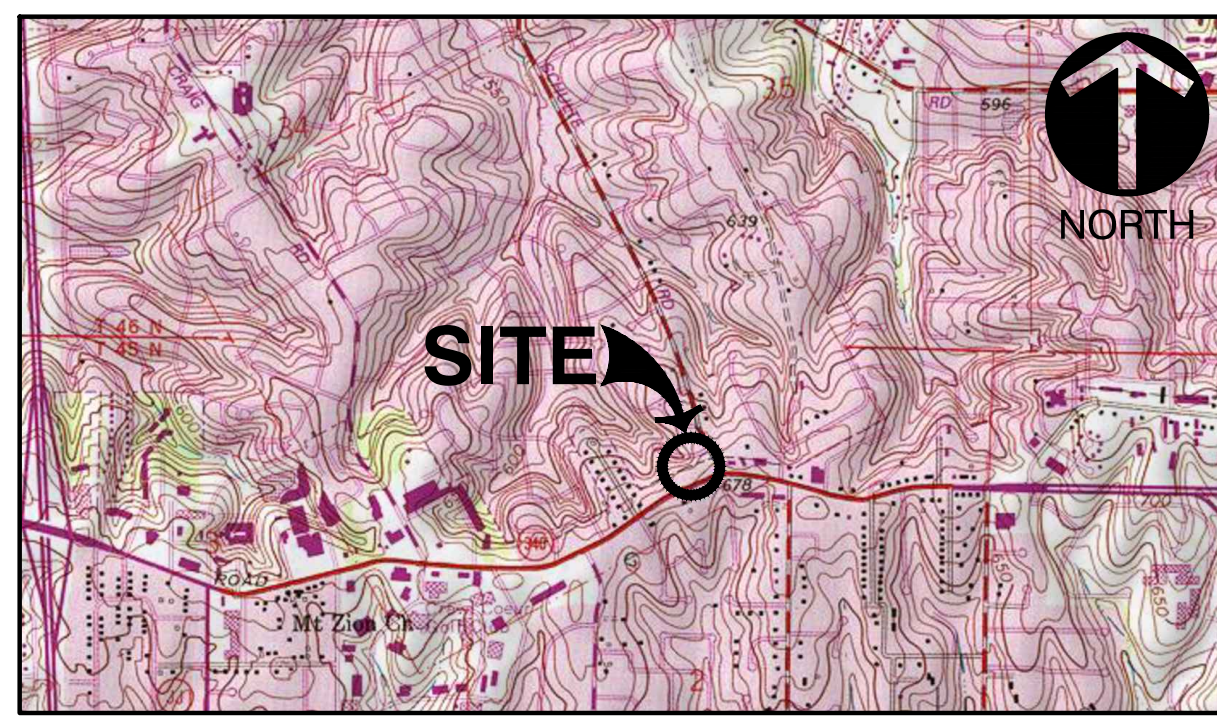
www.cecinc.com

WALLIS COMPANIES  
106 EAST WASHINGTON  
CUBA, MO 65453  
(636) 549-1600

### BRITE WORX/MOBIL ON THE RUN ZONING MAP

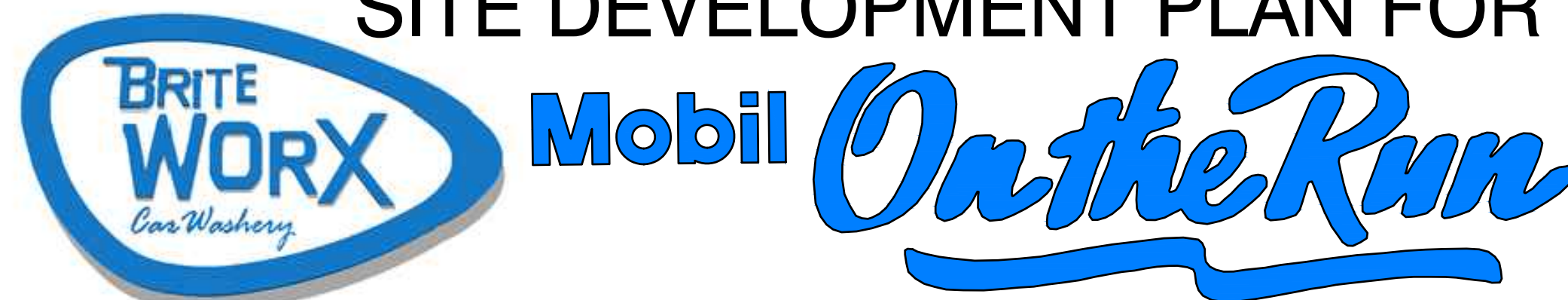
|           |           |             |        |              |         |             |
|-----------|-----------|-------------|--------|--------------|---------|-------------|
| DRAWN BY: | MAK       | CHECKED BY: | KTK    | APPROVED BY: | KTK*    | FIGURE NO.: |
| DATE:     | NOV. 2016 | DWG SCALE:  | (NONE) | PROJECT NO:  | 110-241 |             |



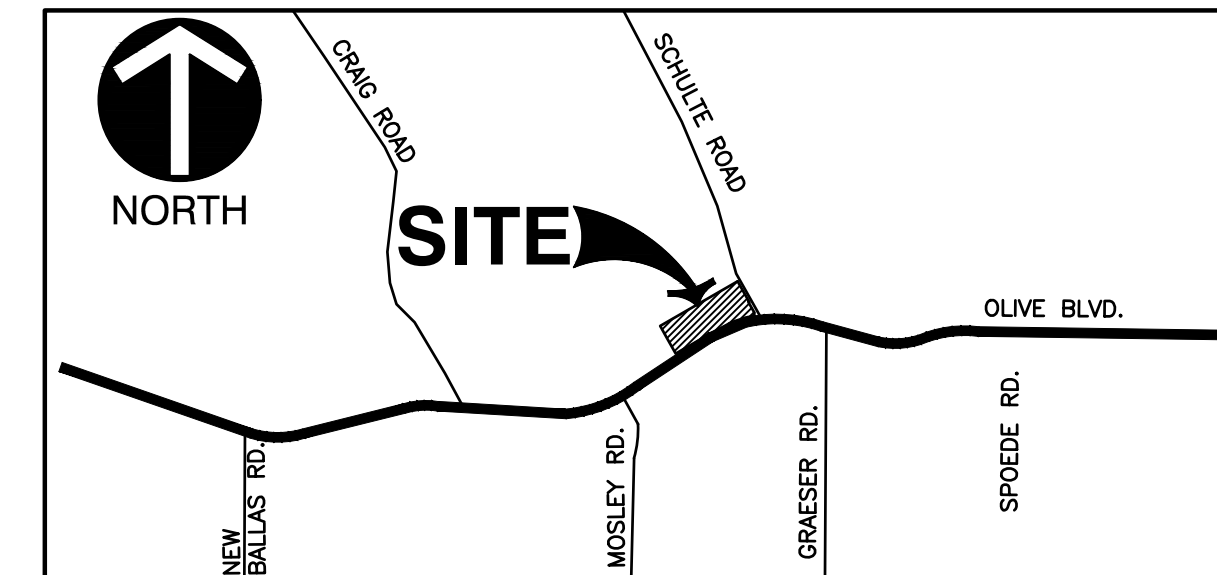


### USGS MAP

U.S.G.S. 7.5' TOPOGRAPHIC MAP CREVE COEUR QUADRANGLE MISSOURI  
DATED 1990, PHOTOREVISED 1993  
SCALE 1" = 2,000'



A TRACT OF LAND BEING ALL OF LOTS 1, 2, 3 AND 4 OF "OAK LAKE ESTATES", P.B.92 PG.3  
AND PART OF LOTS 3, 4, AND 5 OF THE SUBDIVISION OF THE FARM OF S.S. MATSON IN U.S. SURVEY 1962,  
TOWNSHIP 45 NORTH, RANGE 5 EAST OF THE FIFTH PRINCIPAL MERIDIAN ST. LOUIS COUNTY, MISSOURI



| SITE CALCULATIONS:       | *GREENSPACE DEFINED AS AREAS OF LANDSCAPE AND WALKWAYS/PLAZAS |                                   |           |
|--------------------------|---------------------------------------------------------------|-----------------------------------|-----------|
|                          | CITY OF CREVE COEUR                                           | ST. LOUIS COUNTY (UNINCORPORATED) | TOTAL     |
| TOTAL SITE AREA          | 122,276.9                                                     | 48,459.0                          | 170,735.9 |
| BUILDING                 | 9,928.5                                                       | 0.0                               | 9,928.5   |
| PAVEMENT                 | 59,543.1                                                      | 8,353.8                           | 67,896.9  |
| SIDEWALK/PLAZA           | 6,499.6                                                       | 59.4                              | 6,559.0   |
| LANDSCAPE                | 46,305.7                                                      | 40,045.8                          | 86,351.5  |
| PERCENTAGE GREENSPACE*   | 43.2%                                                         | 82.8%                             | 54.4%     |
| PERCENTAGE SITE COVERAGE | 56.8%                                                         | 17.2%                             | 45.6%     |

### PRE/POST IMPERVIOUS AREAS [AREAS IN SQ. FT.]

[BASED ON ABOVE]  
TOTAL AREA OF SITE = 170,736  
PRE-DEVELOPMENT IMPERVIOUS AREAS = 65,586 ~ 38.4%  
POST-DEVELOPMENT IMPERVIOUS AREAS = 77,833 ~ 45.6%

### THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT

LACLEDE GAS COMPANY  
COMMERCIAL & INDUSTRIAL MARKETING  
720 OLIVE STREET  
ST. LOUIS, MO 63101  
CONTACT: JIM TRAVIS  
PHONE: 314-342-0687  
EMAIL: jtravis@lacledegas.com

AT&T TELEPHONE  
402 N 3RD  
ST. CHARLES, MO 63301  
CONTACT: JIM LILLY  
PHONE: (636) 949-4228

MCI FIBER  
2400 NORTH GLENVILLE  
RICHARDSON, TX 75082  
CONTACT:  
PHONE: (972) 729-6016 EXT. 1

MISSOURI AMERICAN WATER  
727 CRAIG RD.  
CREVE COEUR, MO 63141  
CONTACT: DAWN SPINK  
PHONE: (314) 996-2379  
EMAIL: dawn.spink@amwater.com

CREVE COEUR FIRE PROTECTION DISTRICT  
11221 OLIVE BLVD.  
CREVE COEUR, MO 63141  
CONTACT: MR. KENNETH BLACK  
PHONE:

ST. LOUIS METROPOLITAN SEWER DISTRICT  
2350 MARKET ST.  
ST. LOUIS, MO 63103  
PHONE: (314) 768-6200

AMEREN  
DORSETT DISTRICT  
1212 DORSETT ROAD  
MARYLAND HEIGHTS, MO 63043  
CONTACT: RYAN ALEXANDER  
PHONE: (314) 344-9560  
EMAIL: RAlexander2@ameren.com

CHARTER COMMUNICATIONS  
815 CHARTER COMMONS  
TOWN & COUNTRY, MO 63017  
CONTACT: RICHARD STURK  
PHONE: (636) 387-6650  
EMAIL: mopping-design@chartercom.com

MODOT  
WEST AREA PERMITS  
1590 WOODLAKE DRIVE  
CHESTERFIELD, MO 63017-5712  
CONTACT: JIM BODART  
PHONE: (314) 340-4318  
EMAIL: James.Bodart@modot.mo.gov

### ARCHITECT

OSM, INC.  
15510 OLIVE BLVD., SUITE 207  
ST. LOUIS, MISSOURI 63017  
PH: (636) 536-7004  
FX: (636) 536-7014  
CONTACT: STEWART MACGREGOR  
EMAIL: SM@ATT.NET

### LANDSCAPE

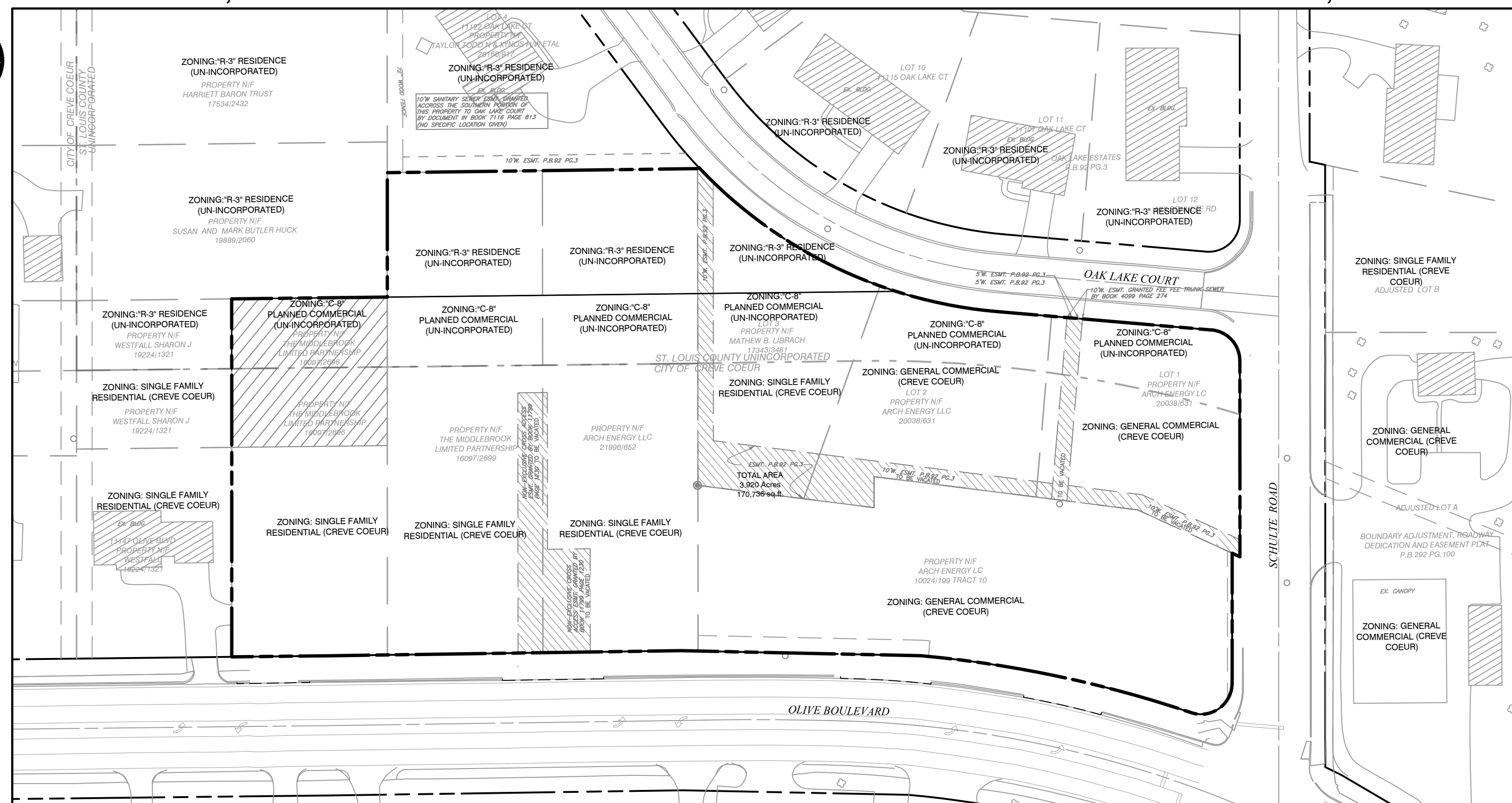
ACORN LANDSCAPES  
HTTP://WWW.ACORNLANDSCAPES.COM  
PH: (636) 394-0255  
CONTACT: MARY FRANCOIS DEWEESE  
EMAIL: DEWEESE@ACORNLANDSCAPES.COM

### CIVIL ENGINEER

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.  
4848 PARK 370 BLVD., SUITE F  
HAZELWOOD, MISSOURI 63042  
PH: (314) 656-4566  
FX: (314) 656-4595  
CONTACT: KEVIN KAMP, PE

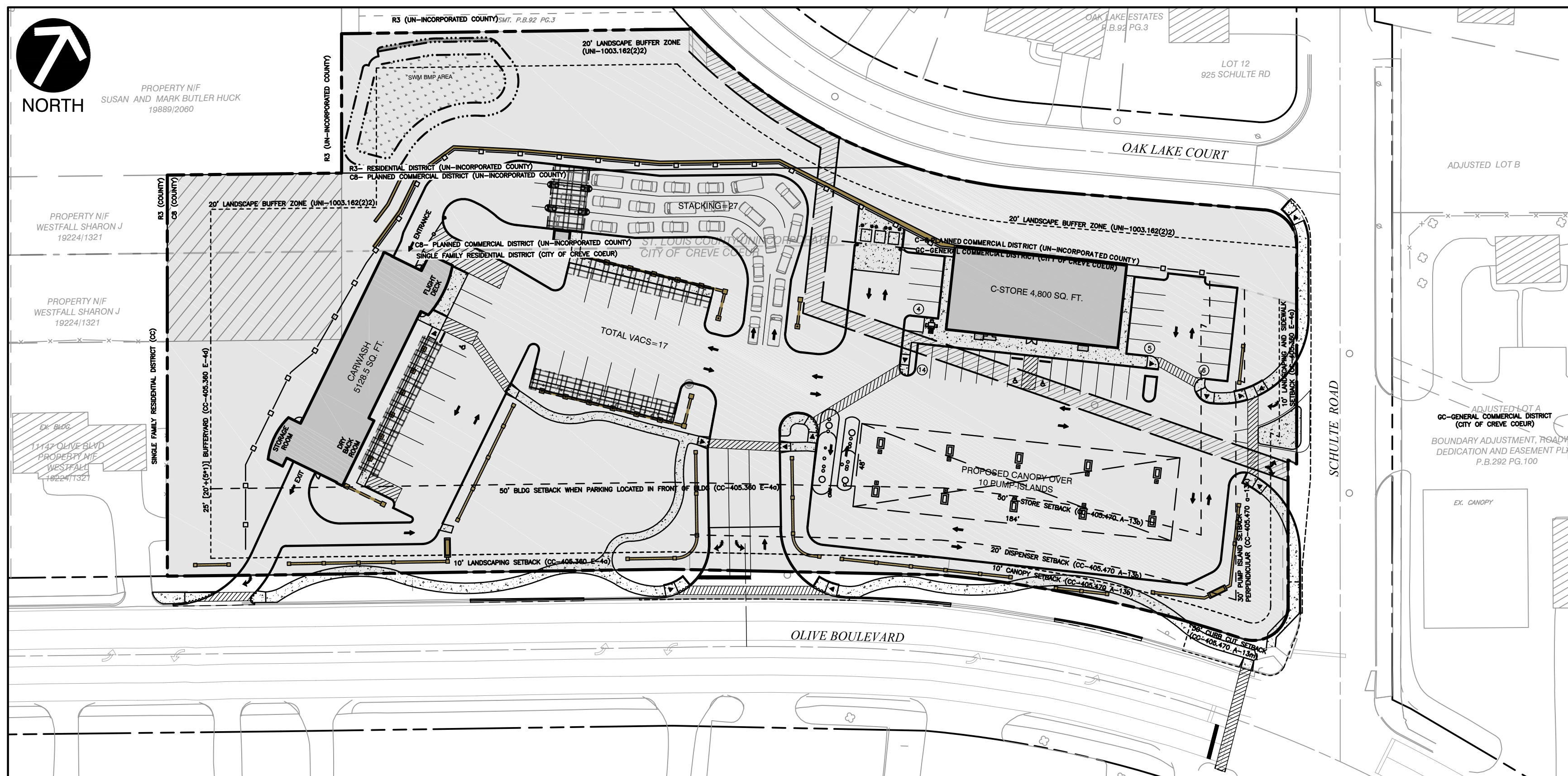
### LIGHTING

PEIKER PIATCHEK ASSOCIATES  
ST. LOUIS, MISSOURI 63129  
PH: (314) 892-4646  
FX: (314) 397-1160  
CONTACT: RICHARD HAYDEN  
EMAIL: RHAYDEBP@AOL.COM



### ZONING MAP

SCALE: 1" = 60'



### OVERALL SITE MAP

SCALE: 1" = 50'

### DEVELOPMENT NOTES

- TOTAL PARCEL AREA: 170,736 SQ. FT. (3.920 ACRES)  
AREA WITHIN CITY LIMITS: 122,277 SQ. FT. (2.807 ACRES)  
AREA WITHIN UNINCORPORATED: 48,459 SQ. FT. (1.113 ACRES)
- CURRENT ZONING (CC)-  
PROPOSED ZONING (CC)-  
CURRENT ZONING (UNI)-  
PROPOSED ZONING (UNI)-  
SINGLE FAMILY RESIDENTIAL & GENERAL COMMERCIAL  
GENERAL COMMERCIAL  
R3 (RESIDENCE) & C8 (PLANNED COMMERCIAL DISTRICT)  
C8 (PLANNED COMMERCIAL DISTRICT)
- SETBACKS-  
FRONT YARD/ROW (CC) 10 FEET OLIVE BLVD. (CC)  
0 FEET SCHULTE ROAD (IN LIEU OF ROW GIVEN TO COUNTY)  
SIDE YARD (CC) 12 FEET  
SIDE YARD (UNI) 10 FEET  
REAR YARD (UNI) 15 FEET (NORTH PROPERTY LINE)  
BUFFER YARD 25 FEET [SEC 405.360 E-4J]\* WITH FENCE FOR DRIVE THRU SCREENING  
\*BUFFER YARD @ 20FT + (5 X 1) = 25 FEET  
BUILDING HEIGHT NOTE: ALL PROPOSED BUILDINGS TO BE 1 STORY IN HEIGHT
- SPECIAL CONSIDERATIONS-  
4.1. TRASH ENCLOSURES SHALL BE INTERIOR TO THE SITE AND NOT ALONG THE NORTH PROPERTY LINE.  
4.2. SIDEWALKS ALONG OLIVE BLVD. SHALL BE FIVE-FOOT IN WIDTH UNLESS ABUTTING CURB, IN WHICH CASE SHALL BE INCREASED TO SIX-FOOT WIDE.  
4.3. PLAN SHALL BE SO DEVELOPED TO INCLUDE AN INTEGRATED PEDESTRIAN CIRCULATION SYSTEM.
- FIRE DISTRICT: CREVE COEUR
- FLOOD NOTE:  
ACCORDING TO THE FLOOD INSURANCE RATE MAP OF THE CITY OF CREVE COEUR, MISSOURI (COMMUNITY PANEL NUMBER 290344 0166 H, EFFECTIVE DATE AUGUST 2, 1995), AND THE FLOOD INSURANCE RATE MAP OF ST. LOUIS COUNTY, MISSOURI (UNINCORPORATED AREAS) (COMMUNITY PANEL NUMBER 290327 0166 H, EFFECTIVE DATE AUGUST 2, 1995) THIS PROPERTY LIES WITHIN ZONE X. ZONE X IS DEFINED AS AN AREA OF MINIMAL FLOOD HAZARD.
- ALL PROPOSED UTILITIES SHALL BE LOCATED UNDERGROUND.
- TRASH ENCLOSURES SHALL BE SIX FOOT (6') IN HEIGHT AND SHALL BE CONSTRUCTED W/ A SIGHT-PROOF GATE. MATERIALS SHALL BE COMPATIBLE WITH THE ARCHITECTURE OF MAIN BUILDINGS AND OF SIMILAR MATERIALS.
- STACKING: GENERAL STANDARDS  
9.1. DRIVE-THROUGH STACKING LANES SHALL HAVE A MINIMUM WIDTH OF TWELVE FEET.  
9.2. STACKING LANES SHALL BE SET BACK 20 FEET FROM RESIDENTIALLY ZONED PROPERTY LINES.  
9.3. AUDIBLE ELECTRONIC DEVICES SUCH AS LOUDSPEAKERS, AUTOMOBILE SERVICE ORDER DEVICES, AND SIMILAR INSTRUMENTS SHALL NOT BE LOCATED WITHIN 50 FEET OF ANY RESIDENTIAL PROPERTY LINE.  
9.4. ALL DRIVE-THROUGH AREAS, INCLUDING BUT NOT LIMITED TO MENU BOARDS, STACKING LANES, TRASH RECEPTACLES, LOUDSPEAKERS, DRIVE UP WINDOWS, AND OTHER OBJECTS ASSOCIATED WITH THE DRIVE-THROUGH AREA SHALL BE LOCATED IN THE SIDE OR REAR YARD OF A PROPERTY, AND SHALL NOT CROSS, INTERFERE WITH, OR IMPEDE ANY PUBLIC RIGHT-OF-WAY.

### SITE CALCULATIONS 170,736 SQ. FT.:

|                     |   |                               |
|---------------------|---|-------------------------------|
| AREA CREVE COEUR    | = | 122,277 SQ. FT. (2.807 ACRES) |
| GREENSPACE (CC)     | = | 52,808                        |
| IMPERVIOUS (CC)     | = | 69,472 (56.8%)                |
| AREA UNINCORPORATED | = | 48,459 SQ. FT. (1.113 ACRES)  |
| GREENSPACE (UNI)    | = | 40,098                        |
| IMPERVIOUS (CC)     | = | 8,361 (17.3%)                 |
| TOTAL GREENSPACE    | = | 91,548 (54.4%)                |
| TOTAL IMPERVIOUS    | = | 77,833 (45.6%)                |

RATIO OF FLOOR TO SITE IN SQ. FT. (FAR)  
1:17.2 (1 SQ. FT. OF FLOOR SPACE TO 17.2 SQ. FT. OF PARCEL AREA)

### PARKING CALCULATIONS:

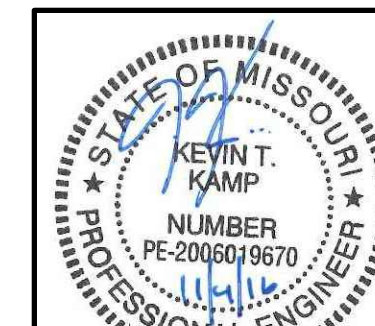
REQUIRED = GENERAL RETAIL @ 4 PER 1,000 SQ. FT. = 19.2  
UNINCORPORATED  
REQUIRED = CARWASH @ 1/BAY + 5 STACKING PER BAY = 20  
= FOOD MARKET @ 3-1/3 PER 1,000 SQ. FT. = 15.9  
PROVIDED = 27 STACKING  
= 30 SPACES INCLUSIVE OF 2 ACCESSIBLE SPACES

### PRELIMINARY DRAINAGE NOTES

- PROJECT AREA: 170,736 (3.92 ACRES)
- WATERSHED: FEE FEE
- 15YR/20MIN DIFFERENTIAL RUNOFF (Q=A\*PI, PER MSD):  
PRE: Q=(3.92AC)\*(0.38)\*(3.54)+(3.92AC)\*(0.62)\*(1.70)=9.43 CFS  
POST: Q=(3.92AC)\*(0.10)\*(4.20)+(3.92AC)\*(0.41)\*(3.54)+  
(3.92AC)\*(0.49)\*(4.60)=9.84 CFS  
DIFFERENTIAL RUNOFF: Q=(+)-1.17 CFS
- PER MSD SECTION 4.080.01(2B), THIS PROJECT DOES NOT REQUIRE DETENTION, HOWEVER THE SITE MUST PROVIDE WATER QUALITY.
- PER THE NATIONAL RESOURCE CONSERVATION SERVICE (NRCS) THIS PROJECT IS WITHIN HYDROLOGIC SOIL GROUP "D" HAVING A LOW INFILTRATION RATE AND HIGH RUNOFF POTENTIAL.
- WATER QUALITY VOLUME FOR THE ENTIRE SITE (3.92 ACRES AT 51% IMPERVIOUS) PER MARYLAND STORMWATER DESIGN MANUAL APPENDIX D-10:  
Wqv=3.02 CFS OR Wqv=5,300 CF  
WATER QUALITY BMPs:  
• HYDRODYNAMIC SEPARATOR AND SNOOT FOR HOTSPOT AREA AT GAS PUMPS  
• BIORETENTION (WILL ALSO PROVIDE VOLUME REDUCTION)

### DRAWING LIST

| SHEET NO. | DRAWING NO. | TITLE                    |
|-----------|-------------|--------------------------|
| 01        | C000        | COVER                    |
| 02        | C100        | EXISTING CONDITIONS PLAN |
| 03        | C200        | SITE & UTILITY PLAN      |
| 04        | C300        | GRADING PLAN             |
| 05        | C301        | SITE SECTIONS            |



CALL BEFORE  
YOU DIG!  
1-800-DIG-RITE

### REFERENCE

- TOPOGRAPHIC SURVEY PROVIDED BY CLIENT DATED SEPTEMBER 9, 2006. TREE SURVEY PROVIDED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED JANUARY 15, 2009.

### REVISION RECORD

| NO. | DATE      | DESCRIPTION                                                                              |
|-----|-----------|------------------------------------------------------------------------------------------|
| 1   | 1/15/2011 | SUBMITTAL TO CITY OF CREVE COEUR, REGIONAL, CONDITIONAL USE & SITE DEVELOPMENT PLAN, P&T |
| 2   |           |                                                                                          |
| 3   |           |                                                                                          |
| 4   |           |                                                                                          |
| 5   |           |                                                                                          |
| 6   |           |                                                                                          |
| 7   |           |                                                                                          |
| 8   |           |                                                                                          |

**Civil & Environmental Consultants, Inc.**  
CERTIFICATION/LICENSE NO. 2002013942  
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042  
314-656-4566 - 866-250-3679  
www.civilinc.com

ZIP- 63146

MSD MAP# 17-N

**WALLIS COMPANIES**  
106 EAST WASHINGTON  
CUBA, MO 65453  
(636) 549-1600

**SITE DEVELOPMENT PLAN**  
**MOBIL ON THE RUN & BRITE WORX**

DRAWING NO.:

**C000**

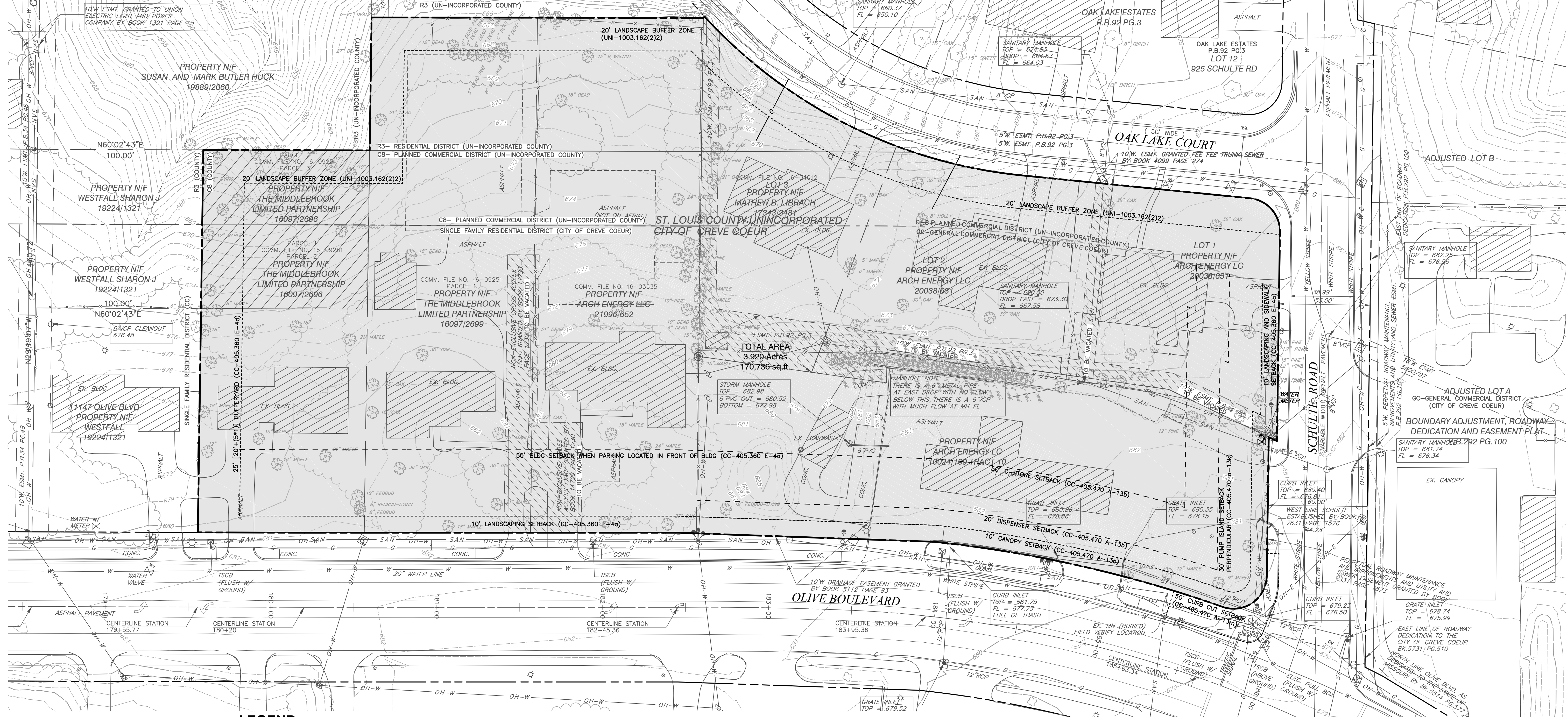
SHEET 01 OF 05





NORTH

CITY OF CREVE COEUR  
ST. LOUIS COUNTY  
UNINCORPORATED



| LEGEND                     |                           |
|----------------------------|---------------------------|
| X SPOT ELEVATION           | (S) SANITARY MANHOLE      |
| PC PROPERTY CENTER LINE    | (CO) SANITARY CLEAN OUT   |
| SET MONUMENT               | (B) BILLBOARD POST        |
| FLOW ARROW                 | (+/-) SINGLE POST SIGN    |
| STORM GRATED INLET         | (+/-) DOUBLE POST SIGN    |
| STORM GRATED INLET         | (F) FENCE POST            |
| STORM INLET                | (EB) ELECTRIC BOX         |
| STORM DOUBLE INLET         | (E) ELECTRIC MANHOLE      |
| STORM DOUBLE INLET         | (E) ELECTRIC METER        |
| STORM MANHOLE              | (ET) ELECTRIC TRANSFORMER |
| (PB) PULL BOX              | (*) LIGHT POLE            |
| (G) GAS METER              | (V) GAS VALVE             |
| (W) WATER MANHOLE          | (W) WATER METER           |
| (V) WATER VALVE            | (F) FIRE HYDRANT          |
| (G) GUY WIRE               | (U) UTILITY POLE          |
| (SAN) UNDERGROUND SANITARY | (ST) UNDERGROUND STORM    |
| (W) UNDERGROUND TELEPHONE  | (G) UNDERGROUND GAS       |
| (OH-E) OVERHEAD UTILITIES  | (MAJ) MAJOR CONTOUR LINE  |
| (MIN) MINOR CONTOUR LINE   |                           |

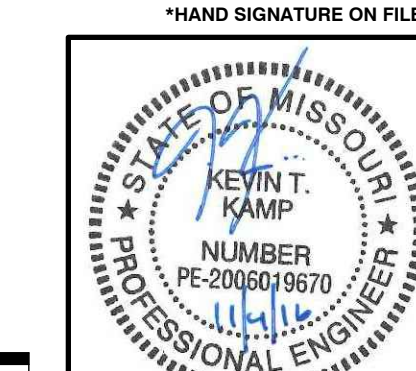
REFERENCE

1. TOPOGRAPHIC SURVEY PROVIDED BY CLIENT DATED SEPTEMBER 9, 2006. TREE SURVEY PROVIDED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED JANUARY 15, 2009.

CALL BEFORE  
YOU DIG!  
1-800-DIG-RITE



SCALE IN FEET



ZIP- 63146

MSD MAP# 17-N

P-

SITE DEVELOPMENT PLAN  
MOBIL ON THE RUN & BRITE WORX

EXISTING CONDITIONS PLAN

DRAWING NO. C100

SHEET 02 OF 05

DATE: AUG. 2016  
DWG SCALE: AS NOTED  
PROJECT NO: 110-241  
APPROVED BY: KTK

CAC

KTK

110-241

Civil & Environmental Consultants, Inc.

CERTIFICATION/LICENSE NO. 2002013942

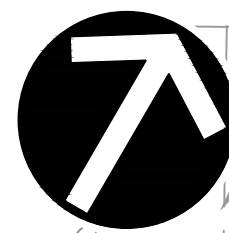
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042

314-656-4566 · 866-250-3679

www.cecinc.com

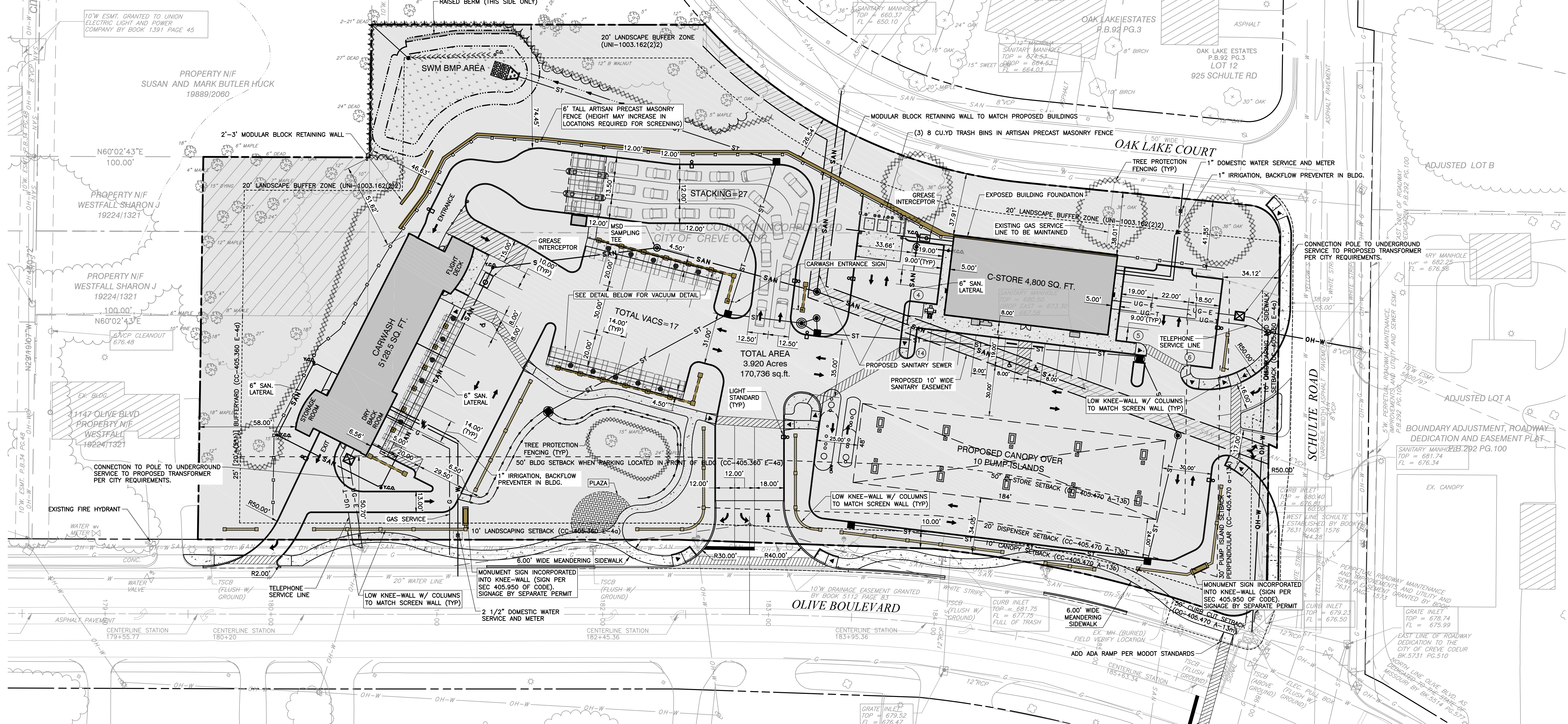
| NO. | DATE     | REVISION | RECORD |
|-----|----------|----------|--------|
| 1   | 11/04/16 | 1        | 1      |
| 2   |          |          |        |
| 3   |          |          |        |
| 4   |          |          |        |
| 5   |          |          |        |
| 6   |          |          |        |
| 7   |          |          |        |
| 8   |          |          |        |





NORTH

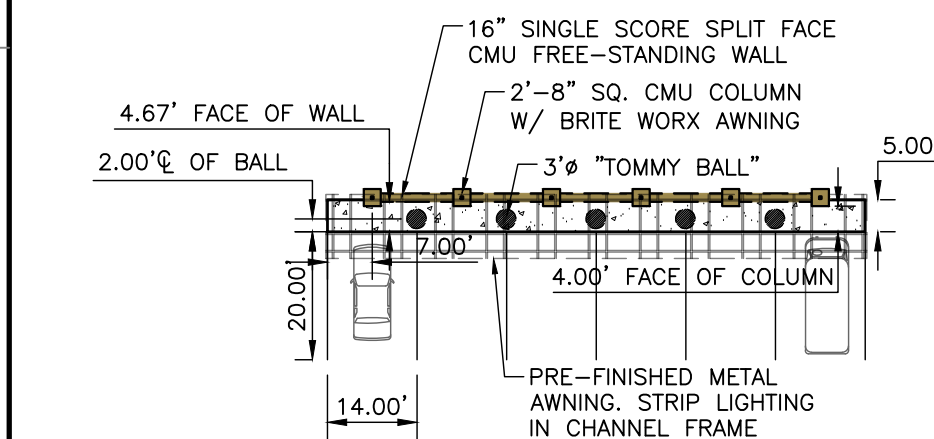
CITY OF CREVE COEUR  
ST. LOUIS COUNTY  
UNINCORPORATED



PROPOSED LEGEND (SEE DRAWING C100 FOR EXISTING LEGEND)

|      |                                                      |                                                                    |
|------|------------------------------------------------------|--------------------------------------------------------------------|
| W    | SETBACK LINES PER ESTABLISHED CODE                   | PROPOSED ROOF DOWNSPOUT                                            |
| W    | SETBACK LINES PER PROPOSED VARIANCE                  | PROPOSED ROOF DOWNSPOUT SPLASH PAD                                 |
| UG-E | PROPOSED WATER SERVICE (SEE PLAN FOR SIZES)          | PROPOSED CURB INLET                                                |
| OH-W | PROPOSED WATER VALVE                                 | PROPOSED AREA INLET                                                |
| UG-T | PROPOSED FIRE HYDRANT                                | PROPOSED SANITARY AND STORM YARD CLEANOUT                          |
| OH-W | PROPOSED DOMESTIC METER                              | PROPOSED STORM MANHOLE                                             |
| UG-T | PROPOSED UNDERGROUND ELECTRIC SERVICE                | GRASSY DRAINAGE FLAT BOTTOM SWALE                                  |
| OH-W | PROPOSED OVERHEAD ELECTRIC LINE                      | PROPOSED WHEELSTOP                                                 |
| UG-T | PROPOSED UTILITY POLE                                | PROPOSED BOLLARD                                                   |
| OH-W | PROPOSED ELECTRIC TRANSFORMER                        | PROPOSED DIRECTIONAL SIGNAGE                                       |
| UG-T | PROPOSED LIGHTING FIXTURES (SEE LIGHTING PLAN)       | PROPOSED VACUUM CANOPY                                             |
| G    | PROPOSED UNDERGROUND TELECOMMUNICATIONS SERVICE LINE | PROPOSED 6' TALL ARTISAN PRECAST MASONRY FENCE (OR APPROVED EQUAL) |
| SAN  | PROPOSED UNDERGROUND GAS SERVICE LINE                | PROPOSED 4' TALL SCREEN WALL WITH COLUMNS                          |
| ST   | PROPOSED SANITARY LATERAL                            | PROPOSED 2'-3" KNEE-WALL WITH 4" PILASTER                          |
| ST   | PROPOSED STORM WATER SEWER PIPE                      | PROPOSED FLUSH PAVEMENT WITH WALK                                  |

DETAIL DRAWING FOR VACUUM STATIONS



CALL BEFORE  
YOU DIG!  
1-800-DIG-RITE

REFERENCE  
1. TOPOGRAPHIC SURVEY PROVIDED BY CLIENT DATED SEPTEMBER 9, 2006. TREE SURVEY PROVIDED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED JANUARY 15, 2009.



ZIP- 63146

MSD MAP# 17-N

P-

SITE DEVELOPMENT PLAN  
MOBIL ON THE RUN & BRITE WORX

SITE & UTILITY PLAN

|             |           |              |     |
|-------------|-----------|--------------|-----|
| DATE:       | AUG. 2016 | DRAWN BY:    | CAC |
| DWG SCALE:  | AS NOTED  | CHECKED BY:  | KTK |
| PROJECT NO: | 110-241   | APPROVED BY: | KTK |

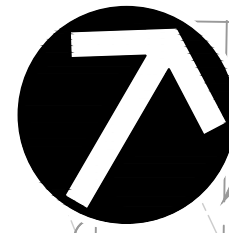
DRAWING NO. **C200**  
SHEET 03 OF 05

WALLIS COMPANIES  
106 EAST WASHINGTON  
CUBA, MO 65453  
(636) 549-1600

Civil & Environmental Consultants, Inc.  
CERTIFICATION/LICENSE NO. 2002013942  
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042  
314-656-4566 - 866-250-3679  
www.cecinc.com

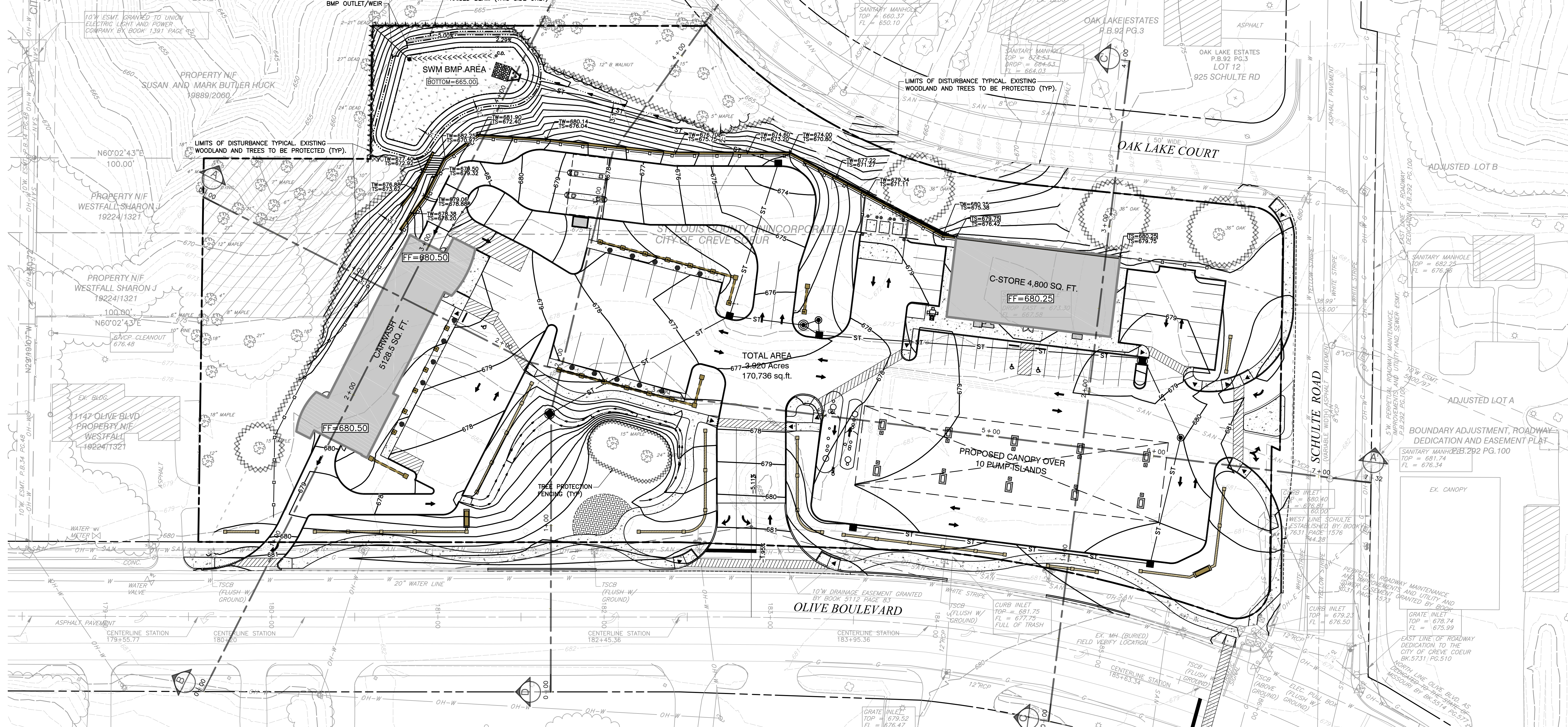
| NO. | DATE       | REVISION                                                                                  | RECORD |
|-----|------------|-------------------------------------------------------------------------------------------|--------|
| 1   | 11/14/2016 | SUBMITTAL TO CITY OF CREVE COEUR, REGIONAL, CONDITIONAL USE & SITE DEVELOPMENT PLAN, PLAT |        |
| 2   |            |                                                                                           |        |
| 3   |            |                                                                                           |        |
| 4   |            |                                                                                           |        |
| 5   |            |                                                                                           |        |
| 6   |            |                                                                                           |        |
| 7   |            |                                                                                           |        |
| 8   |            |                                                                                           |        |





NORTH

CITY OF CREVE COEUR  
ST. LOUIS COUNTY  
UNINCORPORATED



#### PROPOSED LEGEND (SEE DRAWING C100 FOR EXISTING LEGEND)

- |                                                   |                                                                     |                                    |
|---------------------------------------------------|---------------------------------------------------------------------|------------------------------------|
| ST                                                | PROPOSED STORM WATER SEWER PIPE                                     | PROPOSED CONTOUR                   |
| PROPOSED ROOF DOWNSPOUT                           | PROPOSED ROOF DOWNSPOUT SPLASH PAD                                  | PROPOSED LIMITS OF DISTURBANCE     |
| PROPOSED CURB INLET                               | PROPOSED AREA INLET                                                 | TREE PROTECTION AREAS (NO GRADING) |
| PROPOSED SANITARY AND STORM YARD CLEANOUT         | PROPOSED STORM MANHOLE                                              |                                    |
| GRASSY DRAINAGE FLAT BOTTOM SWALE                 | PROPOSED 6\" TALL ARTISAN PRECAST MASONRY FENCE (OR APPROVED EQUAL) |                                    |
| PROPOSED 4\" TALL SCREEN WALL WITH COLUMNS        | PROPOSED 2'-3\" KNEE-WALL WITH 4\" PILASTER                         |                                    |
| PROPOSED FLUSH PAVEMENT WITH WALK                 | PROPOSED VARIABLE HEIGHT CURB (REVEAL FROM 6\" TO 0\")              |                                    |
| PROPOSED ADA ACCESSIBLE RAMP (5% < SLOPE < 8.33%) |                                                                     |                                    |



CALL BEFORE  
YOU DIG!  
1-800-DIG-RITE

#### REFERENCE

- TOPOGRAPHIC SURVEY PROVIDED BY CLIENT DATED SEPTEMBER 9, 2006. TREE SURVEY PROVIDED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED JANUARY 15, 2009.

SCALE IN FEET  
0 30 60

ZIP- 63146

MSD MAP# 17-N

P-

SITE DEVELOPMENT PLAN  
MOBIL ON THE RUN & BRITE WORX

GRADING PLAN

DRAWING NO.  
**C300**

SHEET 04 OF 05

|             |           |              |     |
|-------------|-----------|--------------|-----|
| DATE:       | AUG. 2016 | DRAWN BY:    | CAC |
| DWG SCALE:  | AS NOTED  | CHECKED BY:  | KTK |
| PROJECT NO: | 110-241   | APPROVED BY: | KTK |

**WALLIS COMPANIES**  
106 EAST WASHINGTON  
CUBA, MO 65453  
(636) 549-1600

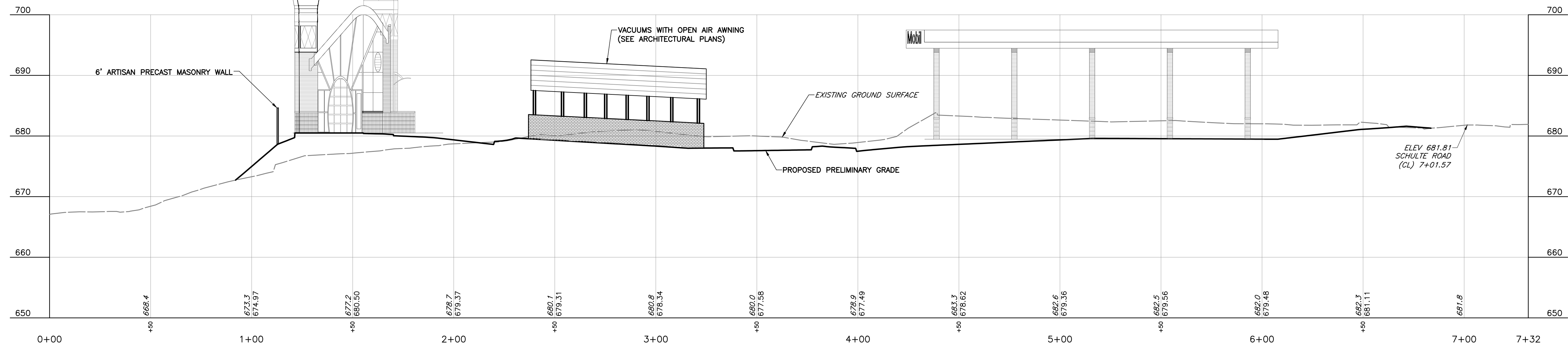
**Civil & Environmental Consultants, Inc.**  
CERTIFICATION/LICENSE NO. 2002013942  
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042  
314-656-4566 · 866-250-3679  
www.cccinc.com

REVISION RECORD

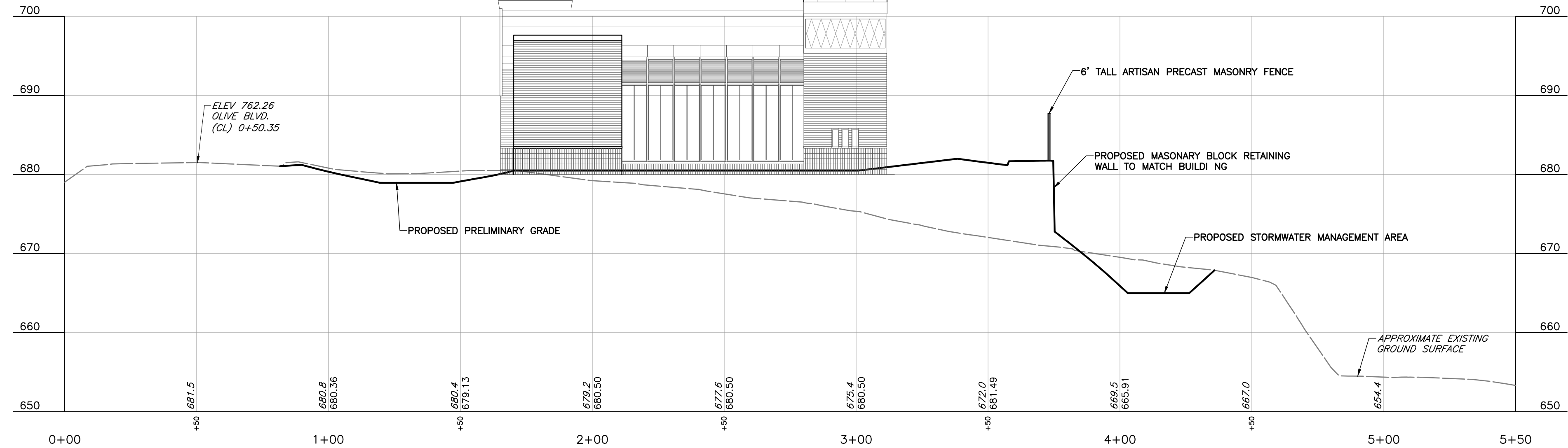
| NO. | DATE       | DESCRIPTION                                                                             |
|-----|------------|-----------------------------------------------------------------------------------------|
| 1   | 11/04/2016 | SUBMITTAL TO CITY OF CREVE COEUR REGARDING CONDITIONAL USE & SITE DEVELOPMENT PLAN PLAT |
| 2   |            |                                                                                         |
| 3   |            |                                                                                         |
| 4   |            |                                                                                         |
| 5   |            |                                                                                         |
| 6   |            |                                                                                         |
| 7   |            |                                                                                         |
| 8   |            |                                                                                         |



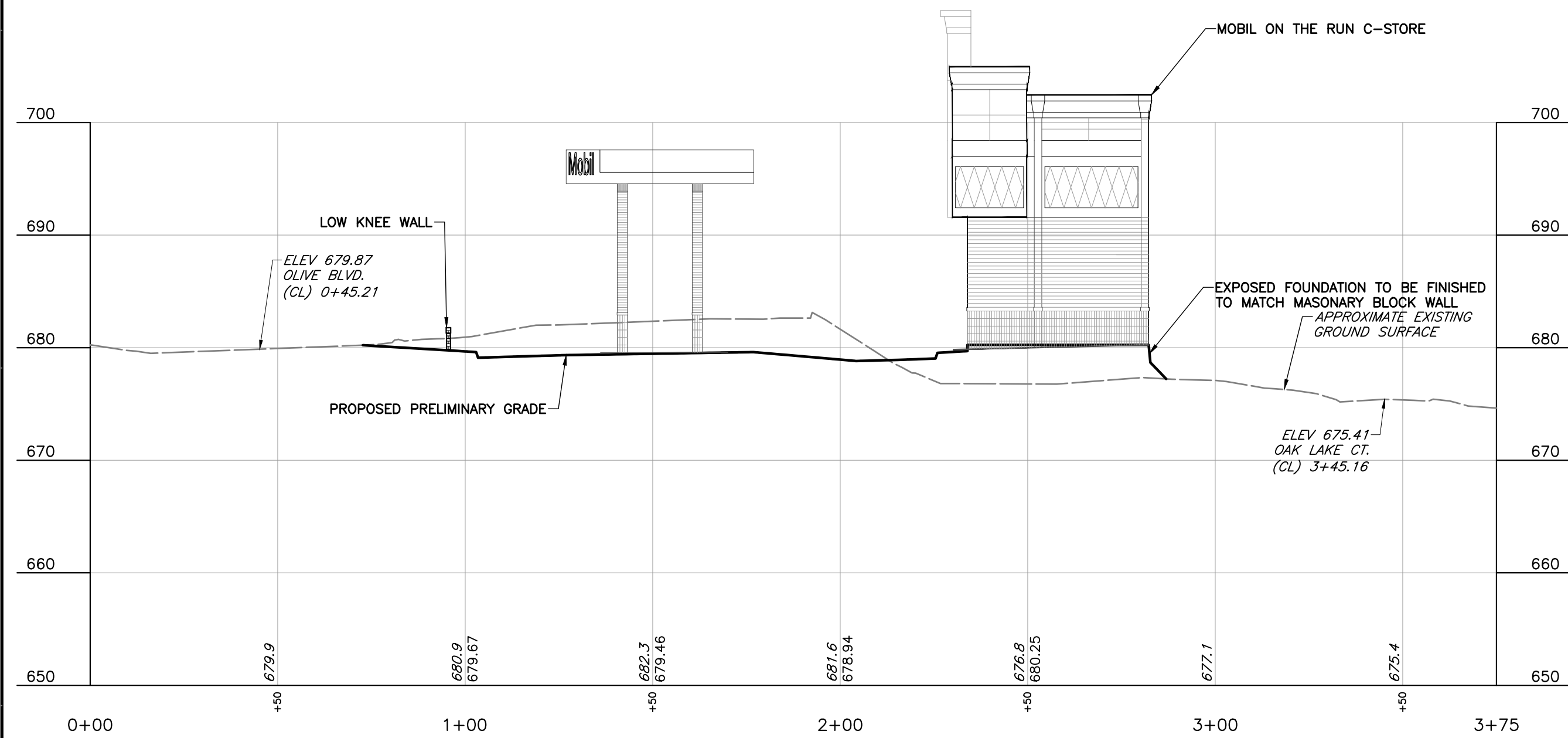
\\SPR-STL01\US Projects\2011\10-2411-C301\Drawings\C-Store\110241-C301.dwg, C-Store\110241-C301.dwg - LSP: 11/4/2016 1:11 PM



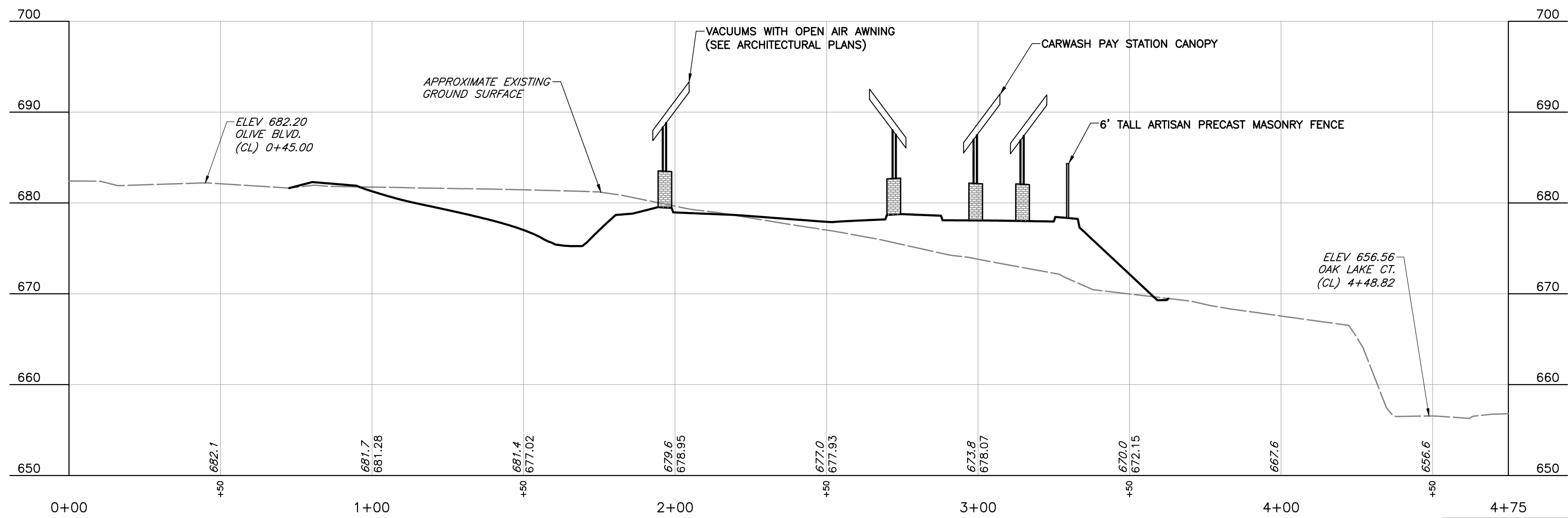
SECTION A-A'  
SCALE H:1"=30'; V:1"=10'



SECTION B-B'  
SCALE H:1"=30'; V:1"=10'



SECTION C-C'  
SCALE H:1"=30'; V:1"=10'



SECTION D-D'  
SCALE H:1"=30'; V:1"=10'

- REFERENCE**
1. TOPOGRAPHIC SURVEY PROVIDED BY CLIENT DATED SEPTEMBER 9, 2009. TREE SURVEY PROVIDED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED JANUARY 15, 2009.



CALL BEFORE  
YOU DIG!  
1-800-DIG-RITE

\*HAND SIGNATURE ON FILE

| REVISION RECORD |            |
|-----------------|------------|
| NO              | DATE       |
| 1               | 11/04/2016 |
| 2               |            |
| 3               |            |
| 4               |            |
| 5               |            |
| 6               |            |
| 7               |            |
| 8               |            |

**Civil & Environmental Consultants, Inc.**  
CERTIFICATION/LICENSE NO. 2002013942  
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042  
314-656-4566 · 866-250-3679  
www.cesinc.com

**WALLIS COMPANIES**  
106 EAST WASHINGTON  
CUBA, MO 65453  
(636) 549-1600

**SITE DEVELOPMENT PLAN**  
**MOBIL ON THE RUN & BRITE WORX**

| SITE SECTIONS |         |
|---------------|---------|
| DATE:         | CAC     |
| AUG. 2016     |         |
| DRAWN BY:     | KTK     |
| AS NOTED      |         |
| CHECKED BY:   |         |
| PROJECT NO:   | 110-241 |
| APPROVED BY:  | KTK     |

DRAWING NO:  
**C301**  
SHEET 05 OF 05

ZIP- 63146

MSD MAP# 17-N



P&Z SET

On the Run

ExxonMobil

CONVENIENCE STORE AND CAR WASH

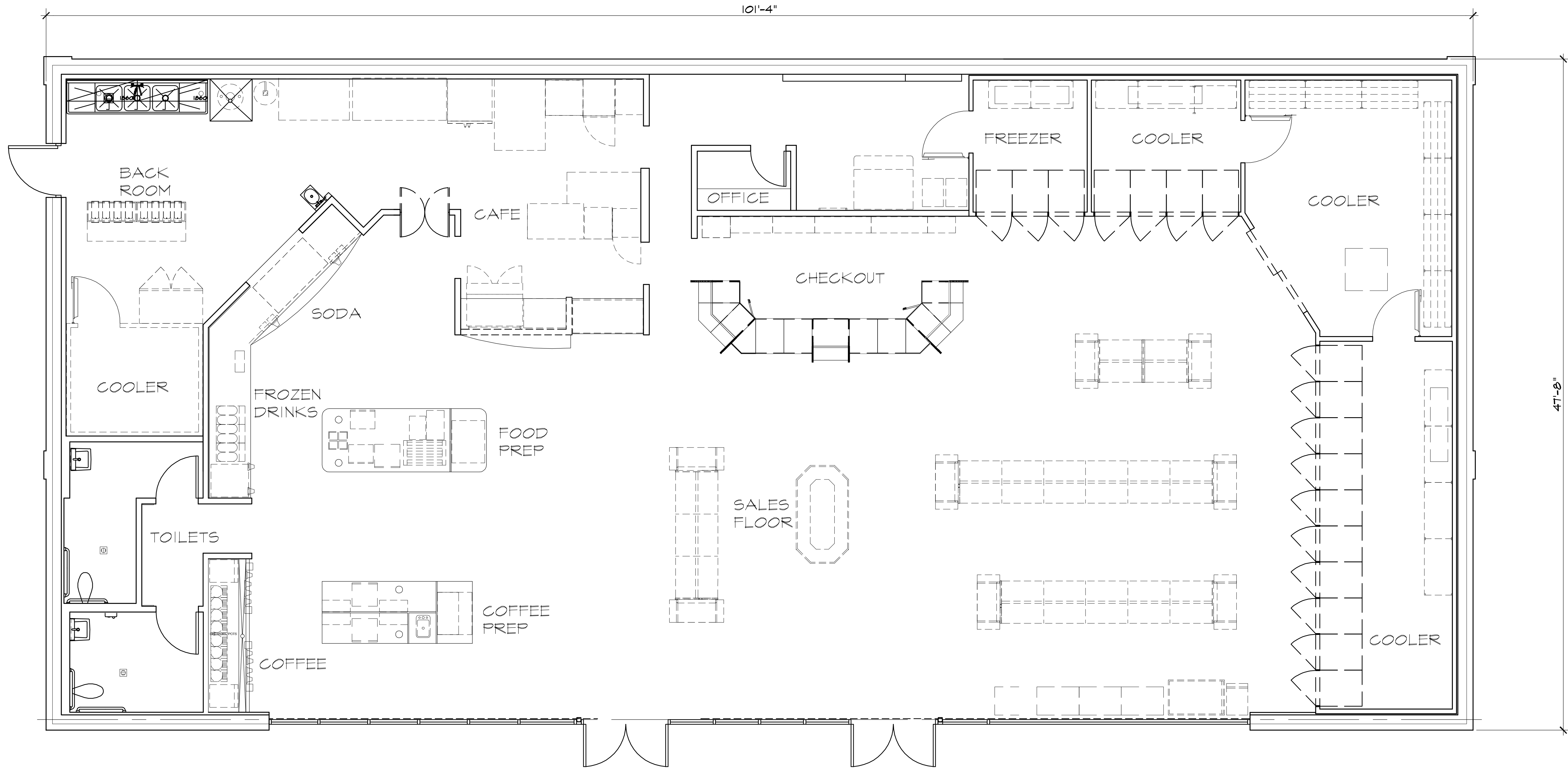
1109 OLIVE BLVD  
CHEVE COEUR, MISSOURI 63141  
Attachment: 20161104\_Architectural (16-031 Mobil on the Run and Brite Work Car Wash RZG,CUP,SDP)

|                |         |
|----------------|---------|
| PROJECT NUMBER | 1623    |
| DATE           | 11-4-16 |
| DRAWN BY       | TSW     |
| CHECKED BY     | SNM     |
| REVISION       |         |
|                |         |
|                |         |
|                |         |
|                |         |

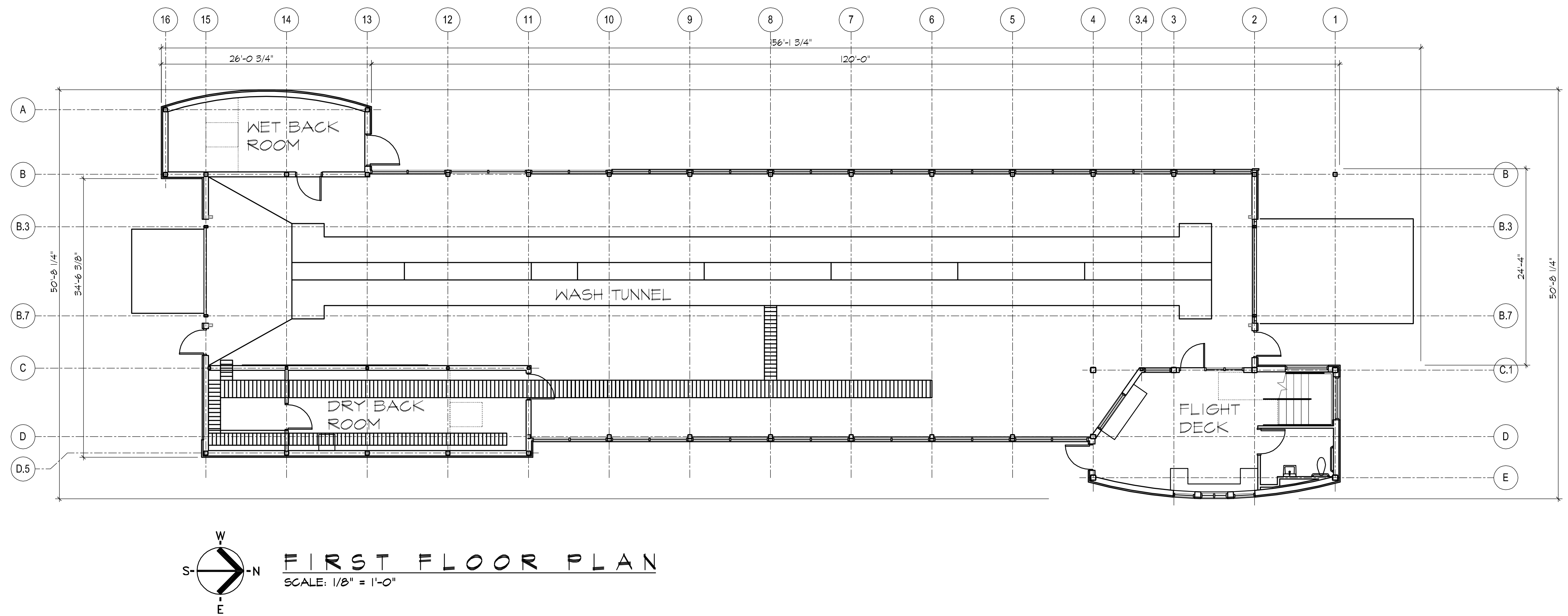
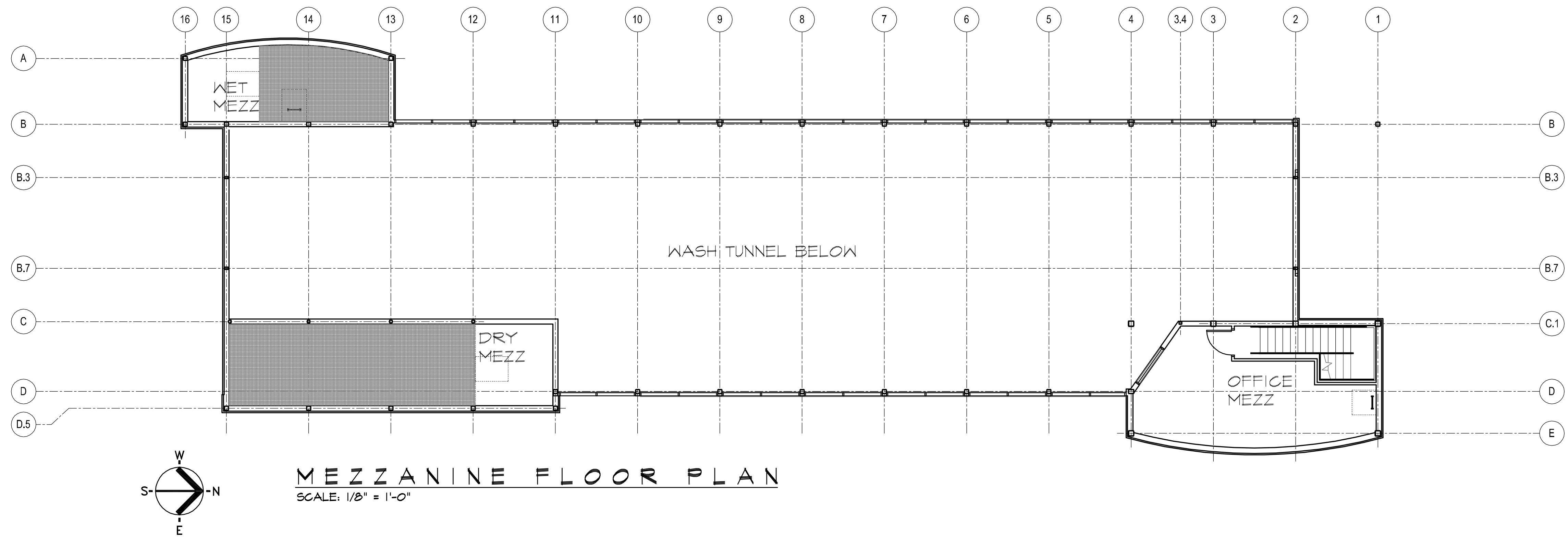
A1.1

FLOOR PLAN

Copyright OSM, Inc., a Missouri Corporation.  
All Concepts and drawings are the property  
of OSM, Inc. and shall not be used, copied,  
or reproduced in any manner without written  
permission from OSM, Inc. © OSM, Inc. 2016







P&Z SET

|                |         |
|----------------|---------|
| PROJECT NUMBER | 1623    |
| DATE           | 11-4-16 |
| DRAWN BY       | JVF     |
| CHECKED BY     | SNM     |
| REVISION       |         |

A1.2

CW FLOOR PLANS



## P&amp;Z SET

**ExxonMobil**  
*On the Run*

**CONVENIENCE STORE AND CAR WASH**

1109 OLIVE BLVD  
 CHEVE COEUR, MISSOURI 63141

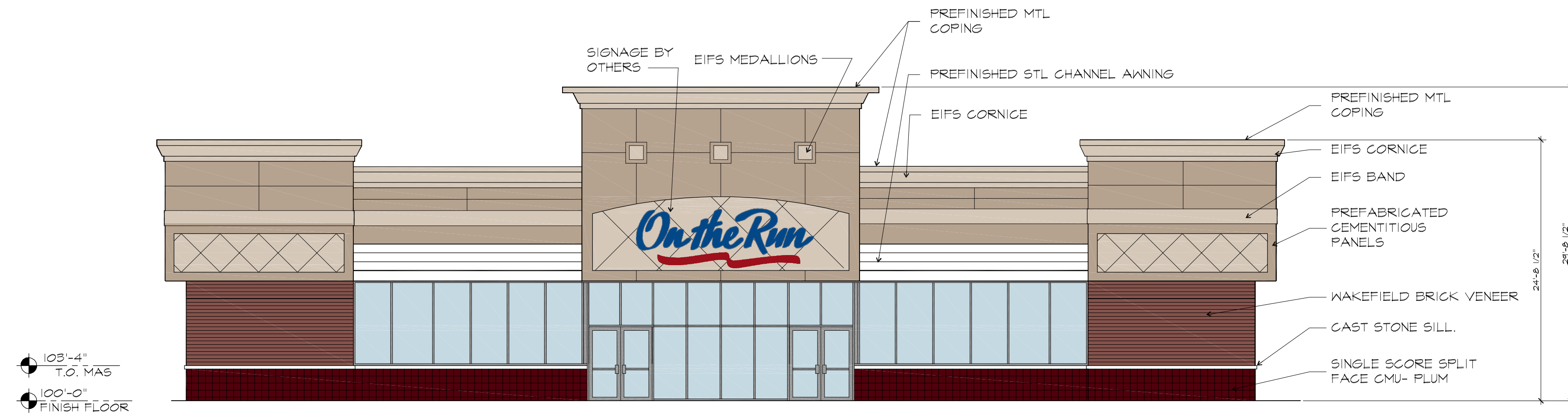
Attachment: 20161104\_Architectural (16-031 Mobil on the Run and Britte Worx Car Wash RZG.CUP.SDP)

PROJECT NUMBER 1623  
 DATE 11-4-16  
 DRAWN BY TRM  
 CHECKED BY SWM  
 REVISION

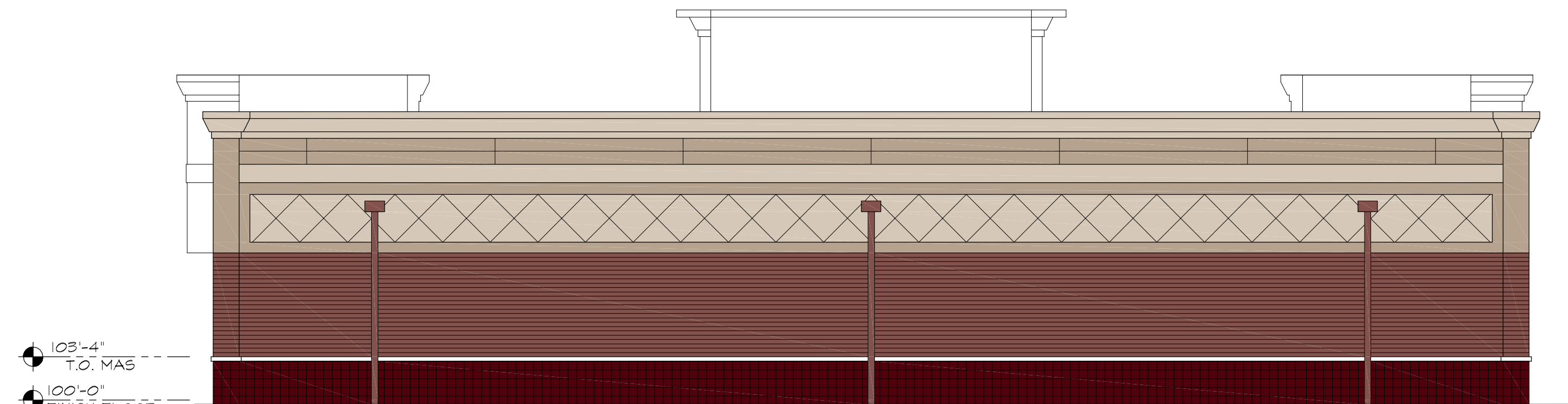
A5.1

## EXTERIOR ELEVATIONS

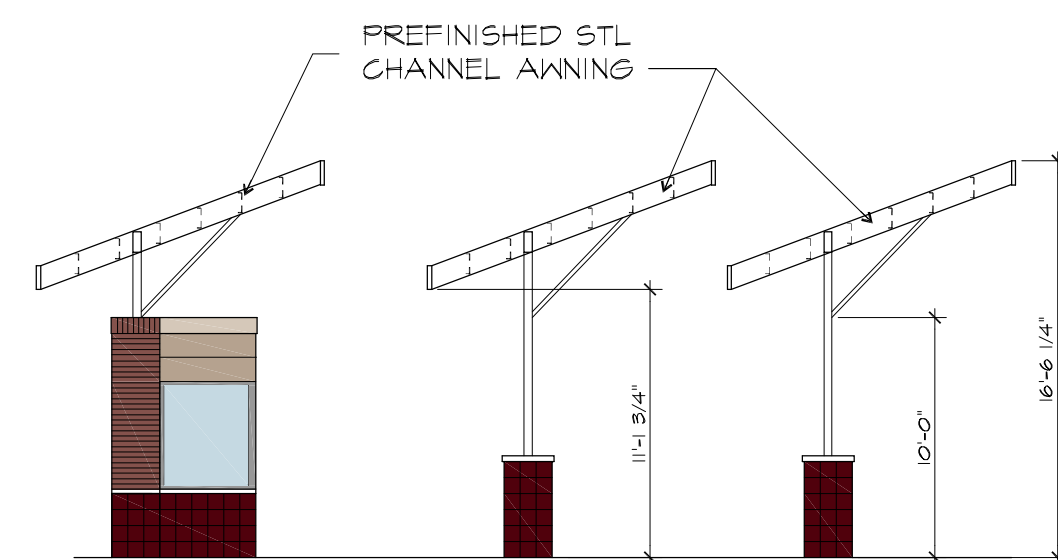
Copyright OSM, Inc. a Missouri Corporation  
 All concepts and drawings are the property  
 of OSM, Inc. and shall not be used, copied,  
 or reproduced in any manner without written  
 permission from OSM, Inc. © OSM, Inc. 2016



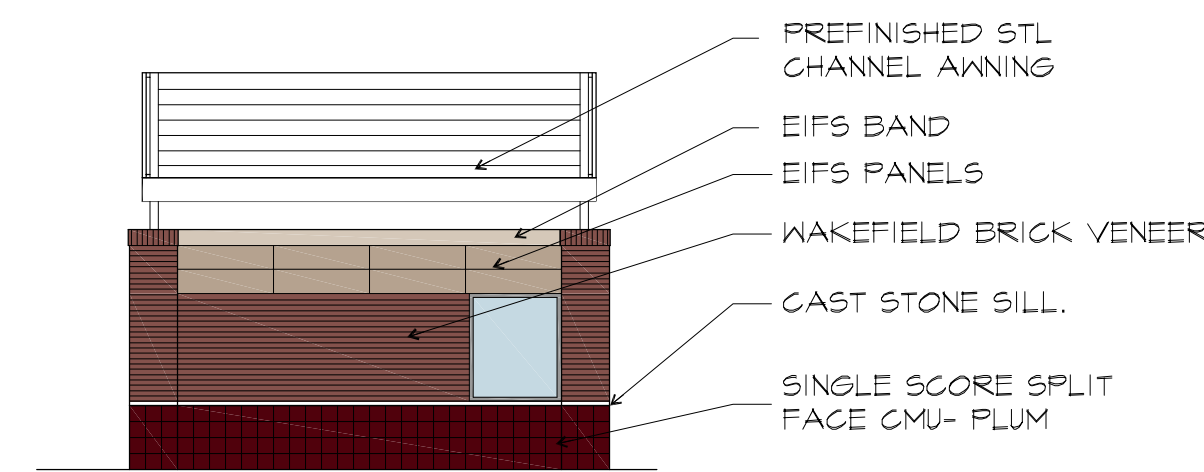
**SOUTH ELEVATION- C-STORE**  
 SCALE: 1/8" = 1'-0"



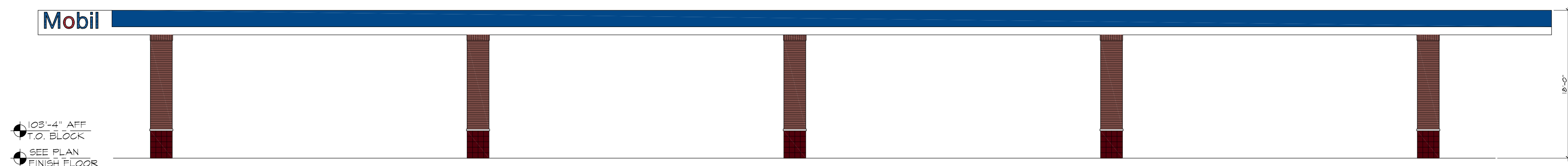
**NORTH ELEVATION- C-STORE**  
 SCALE: 1/8" = 1'-0"



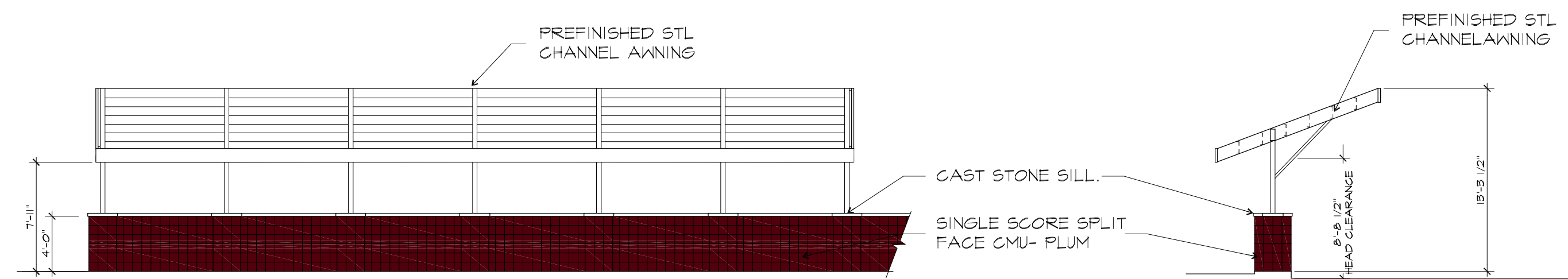
**EAST ELEVATION- CW CANOPY**  
 SCALE: 1/8" = 1'-0"



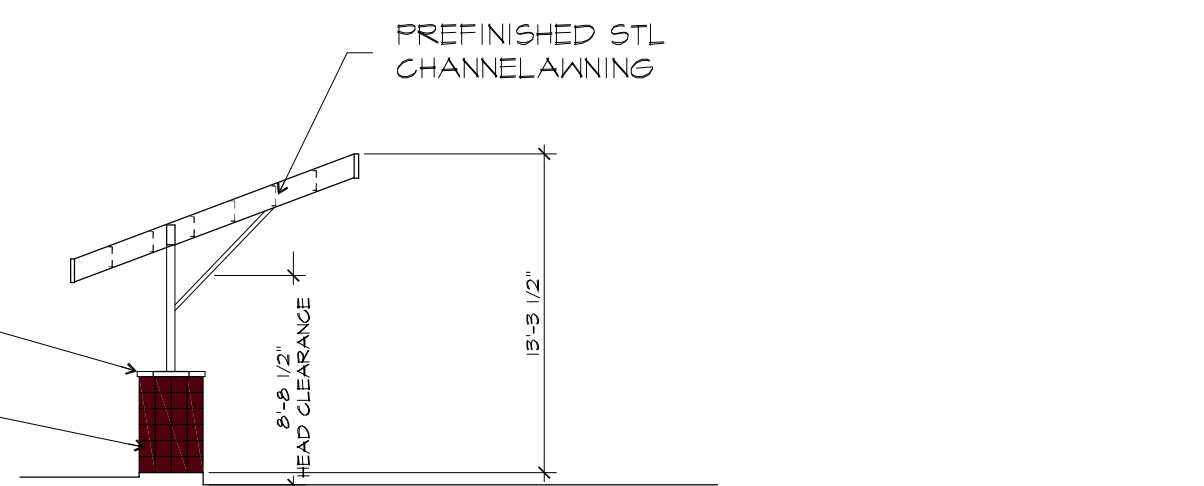
**SOUTH ELEVATION- CW CANOPY**  
 SCALE: 1/8" = 1'-0"



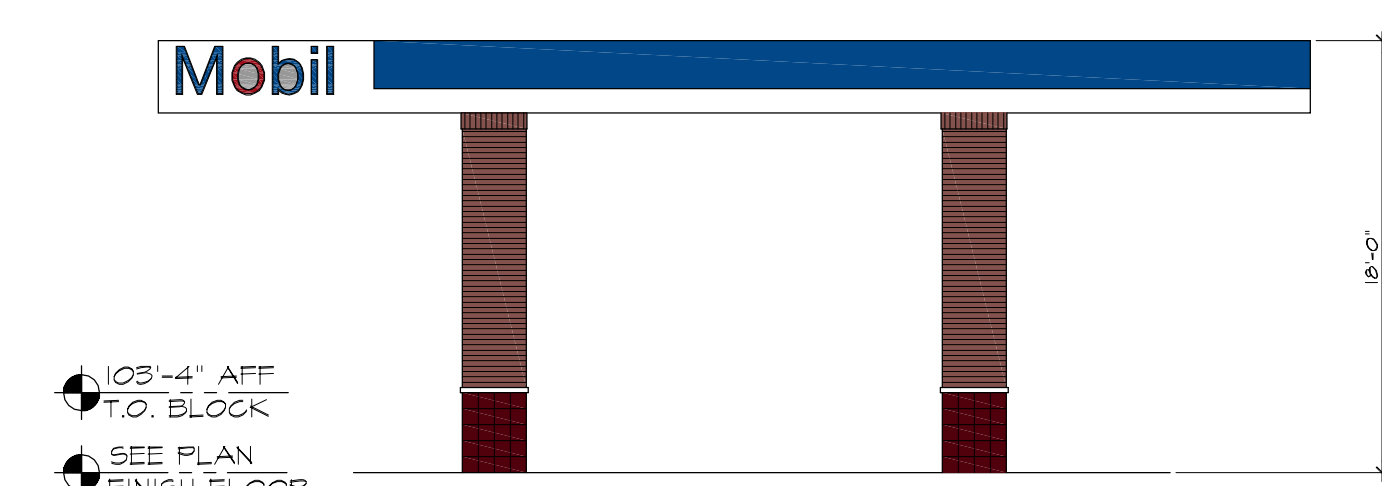
**SOUTH ELEVATION FUEL CANOPY**  
 SCALE: 1/8" = 1'-0"



**SOUTH ELEVATION- VACUUM SCREEN- CONNECTOR**  
 SCALE: 1/8" = 1'-0"



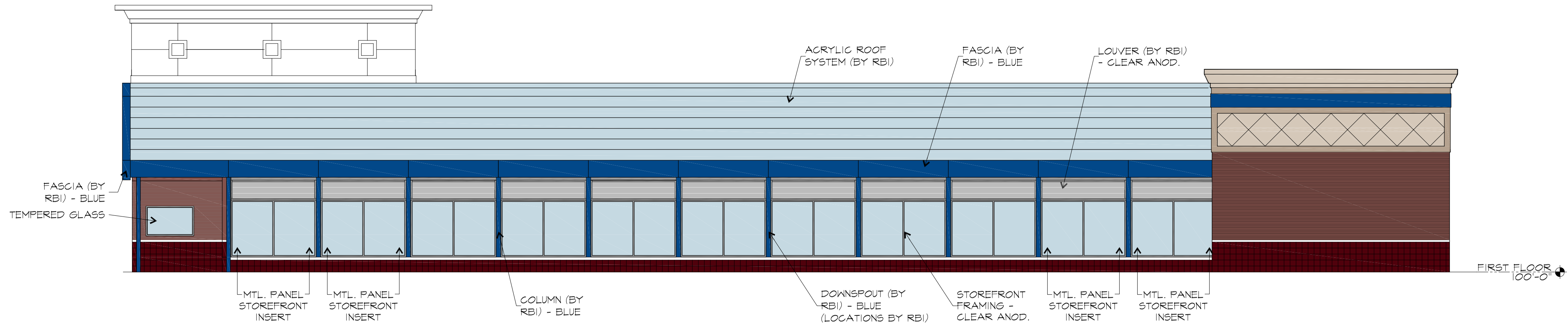
**EAST ELEVATION VACUUM SCREEN**  
 SCALE: 1/8" = 1'-0"



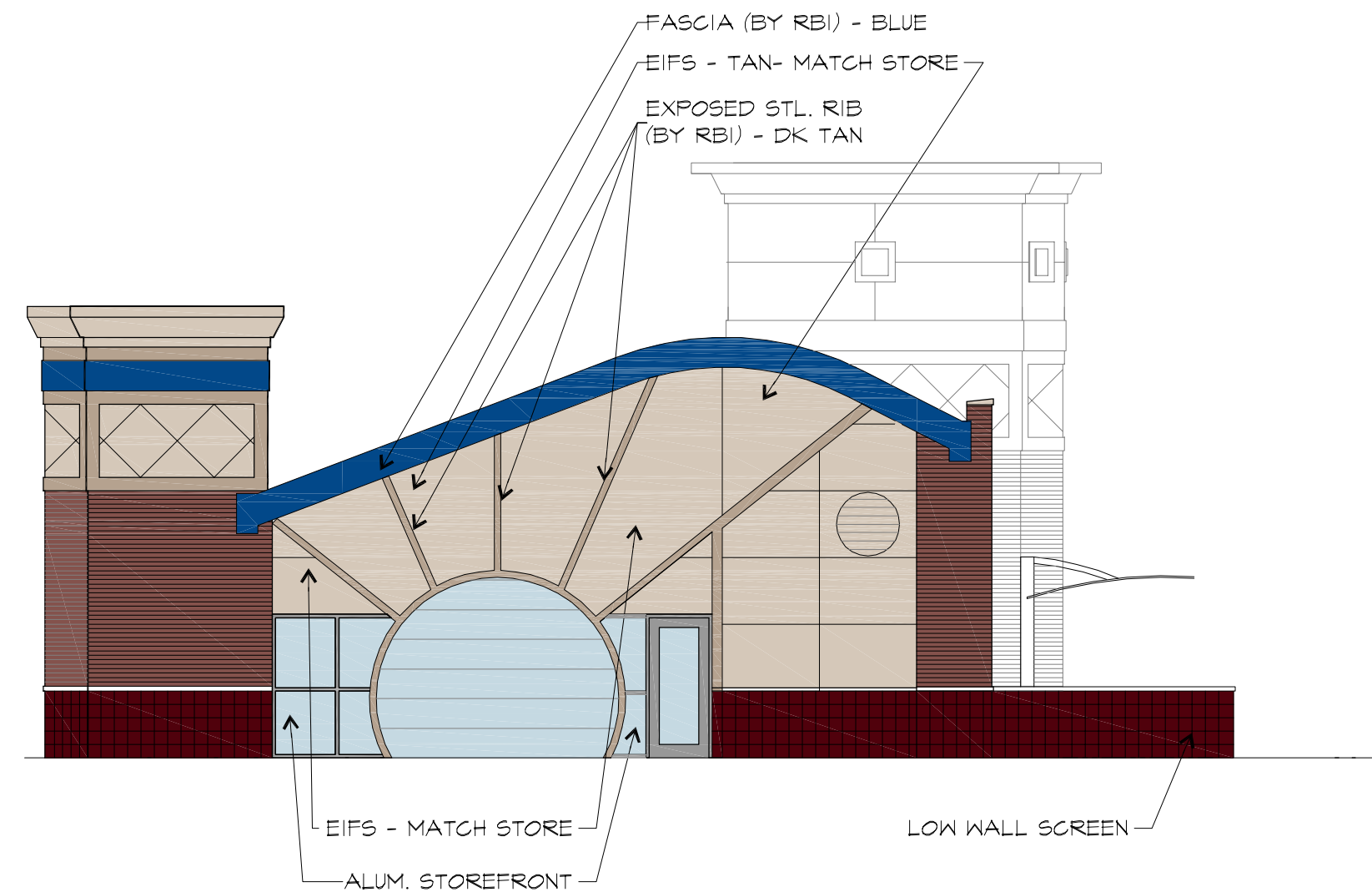
**EAST ELEVATION FUEL CANOPY**  
 SCALE: 1/8" = 1'-0"



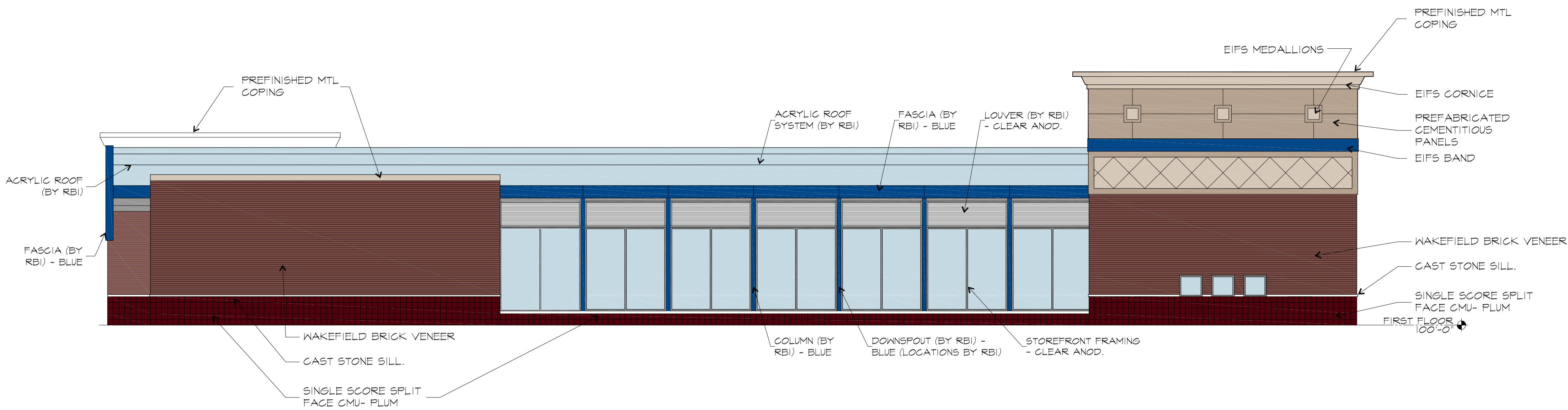
P&Z SET



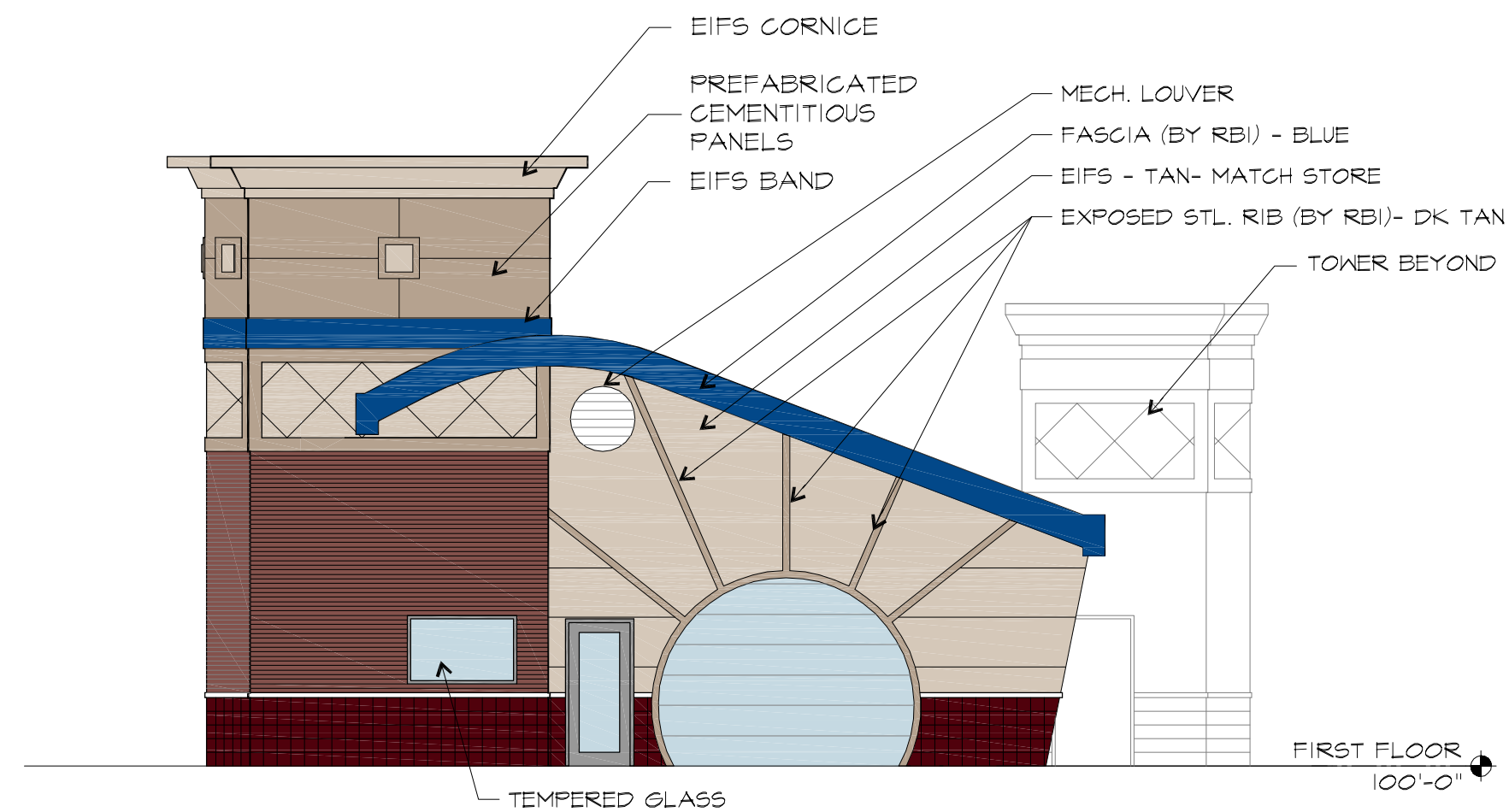
WEST ELEVATION  
SCALE: 1/8" = 1'-0"



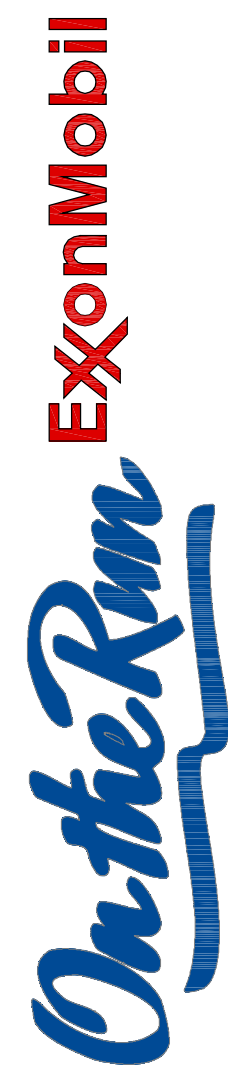
SOUTH ELEVATION  
SCALE: 1/8" = 1'-0"



EAST ELEVATION  
SCALE: 1/8" = 1'-0"



NORTH ELEVATION  
SCALE: 1/8" = 1'-0"



CONVENIENCE STORE AND CAR WASH

1109 OLIVE BLVD  
CHEVE COEUR, MISSOURI 63141  
Attachment: 20161104\_Architectural (16-031 Mobil on the Run and Brite Work Car Wash RZG.CUP.SDP)

|                |         |
|----------------|---------|
| PROJECT NUMBER | 1623    |
| DATE           | 11-4-16 |
| DRAWN BY       | JVF     |
| CHECKED BY     | SNM     |
| REVISION       |         |
|                |         |
|                |         |
|                |         |

A5.2  
EXTERIOR ELEVATIONS

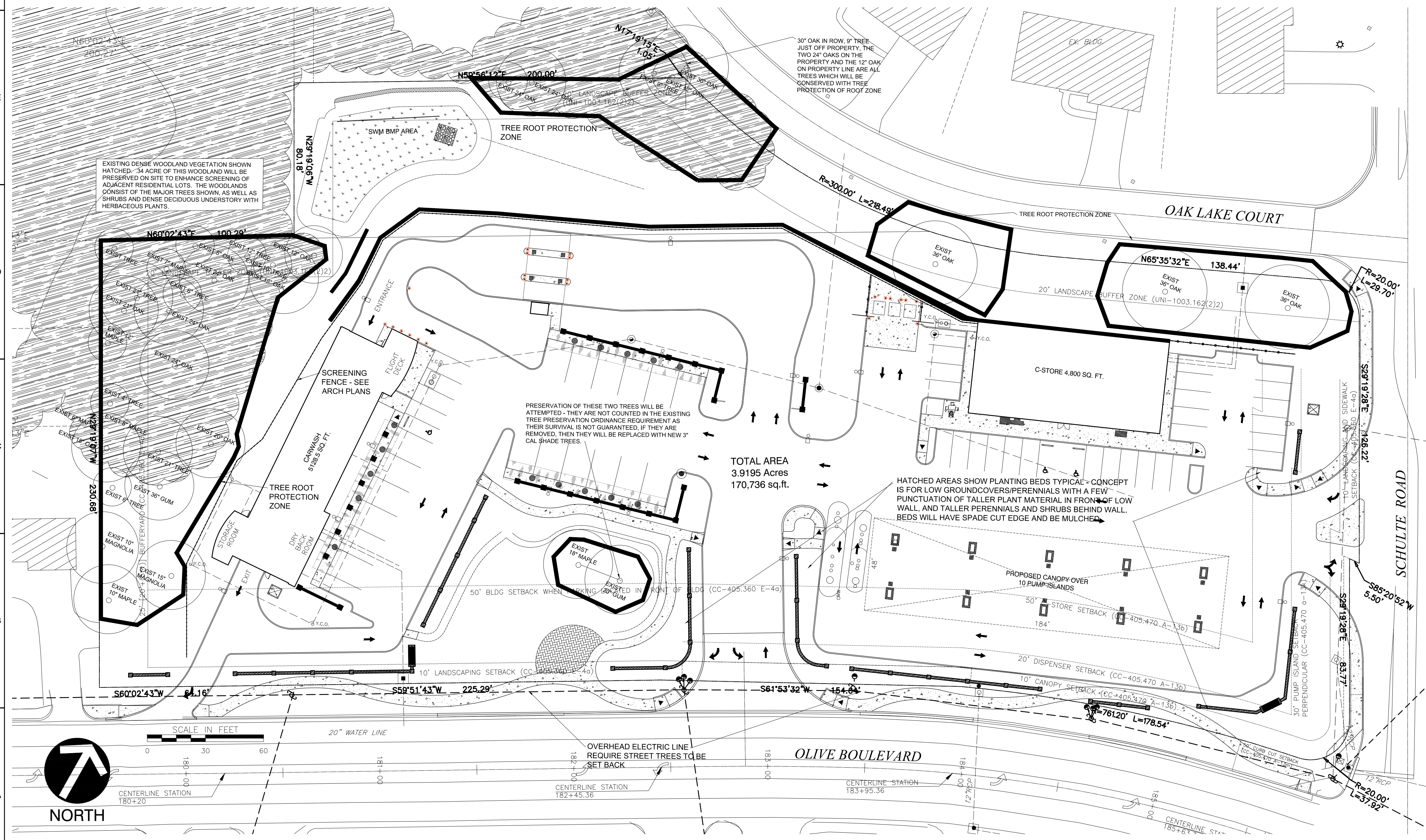
Copyright OSM, Inc. a Missouri Corporation. All Concepts and drawings are the property of OSM, Inc. and shall not be used, copied or reproduced in any manner without written permission from OSM, Inc. © OSM, Inc. 2016



FIELD ADJUSTMENT MAY BE NECESSARY FOR DEMO OF EXISTING STRUCTURES.

|                     |           |                     |                 |                    |               |
|---------------------|-----------|---------------------|-----------------|--------------------|---------------|
| <b>DRAWING NO.:</b> |           | <b>DATE:</b>        | <b>NOV 2016</b> | <b>BY:</b>         | <b>MFB</b>    |
| <b>SHEET</b>        |           | <b>DWG SCALE:</b>   | <b>1"=30'</b>   | <b>CHECKED BY:</b> | <b>DRF</b>    |
| <b>1</b>            | <b>OF</b> | <b>PROJECT NO.:</b> |                 | <b>11-24-</b>      | <b>11-24-</b> |
| <b>2</b>            |           | <b>APPROVED BY:</b> |                 | <b>DRF</b>         | <b>DRF</b>    |

**PLANNED COMMERCIAL DEVELOPMENT  
BRITTE WORX CARWASHERY  
MOBIL ON THE RUN  
WALLIS COMPANIES**





TREES

EXISTING TREES - 72 TREES EXIST ON THE SITE -18 WILL BE PRESERVED

STREET TREES ALONG OLIVE - OVERHEAD UTILITIES OBSTRUCT THE PLACEMENT OF STREET TREES ALONG THIS ENTIRE FRONTAGE  
2 OF THE EXISTING LARGE SHADE TREES, 1 NEW LARGE SHADE TREES, 2 NEW FLOWERING TREES AND 13 COLUMNAR DECIDUOUS TREES WILL BE PROVIDED ALONG THIS STREET IN LOCATIONS THAT CAN BE SET BACK FROM THE UTILITY INTERFERENCE.

STREET TREES ALONG SCHULTE - OVERHEAD UTILITIES OBSTRUCT THE PLACEMENT OF STREET TREES ALONG THIS FRONTAGE  
EXCEPT AT THE VERY NORTH END WHICH CAN ACCOMMODATE 2 STREET TREES. AN ADDITIONAL 2 LARGE SHADE TREES WILL BE PROVIDED ALONG THIS STREET IN LOCATIONS THAT CAN BE SET BACK FROM THE UTILITY INTERFERENCE AND NOT OBSTRUCT THE SIGHT TRIANGLE OF THE INTERSECTION.

PARKING LOT TREES - 12 PARKING LOT TREES ARE REQUIRED FOR THE PROPOSED LINEAL FEET OF PARKING AND VACUUM SPACES  
10 LARGE DECIDUOUS TREES 2 FLOWERING TREES ARE PROVIDED TO MEET THIS REQUIREMENT

14 ADDITIONAL TREES (A MIX OF SHADE TREES, FLOWERING TREES AND EVERGREEN TREES) WILL BE PROVIDED IN THE GREEN SPACE TO THE NORTH AND WEST OF THE PROPERTY FOR RESIDENTIAL BUFFER.

TOTAL PROPOSED TREES = 46 NEW TREES AND 34 EXISTING TREES = 80

- NOTES:
1. ALL LANDSCAPE AREAS WITHIN GRADING LIMITS TO BE IRRIGATED.
  2. ALL GREENSPACE AREAS OUTSIDE OF MULCHED LANDSCAPE BEDS TO BE SODDED TURF.

PLANTING CONCEPT

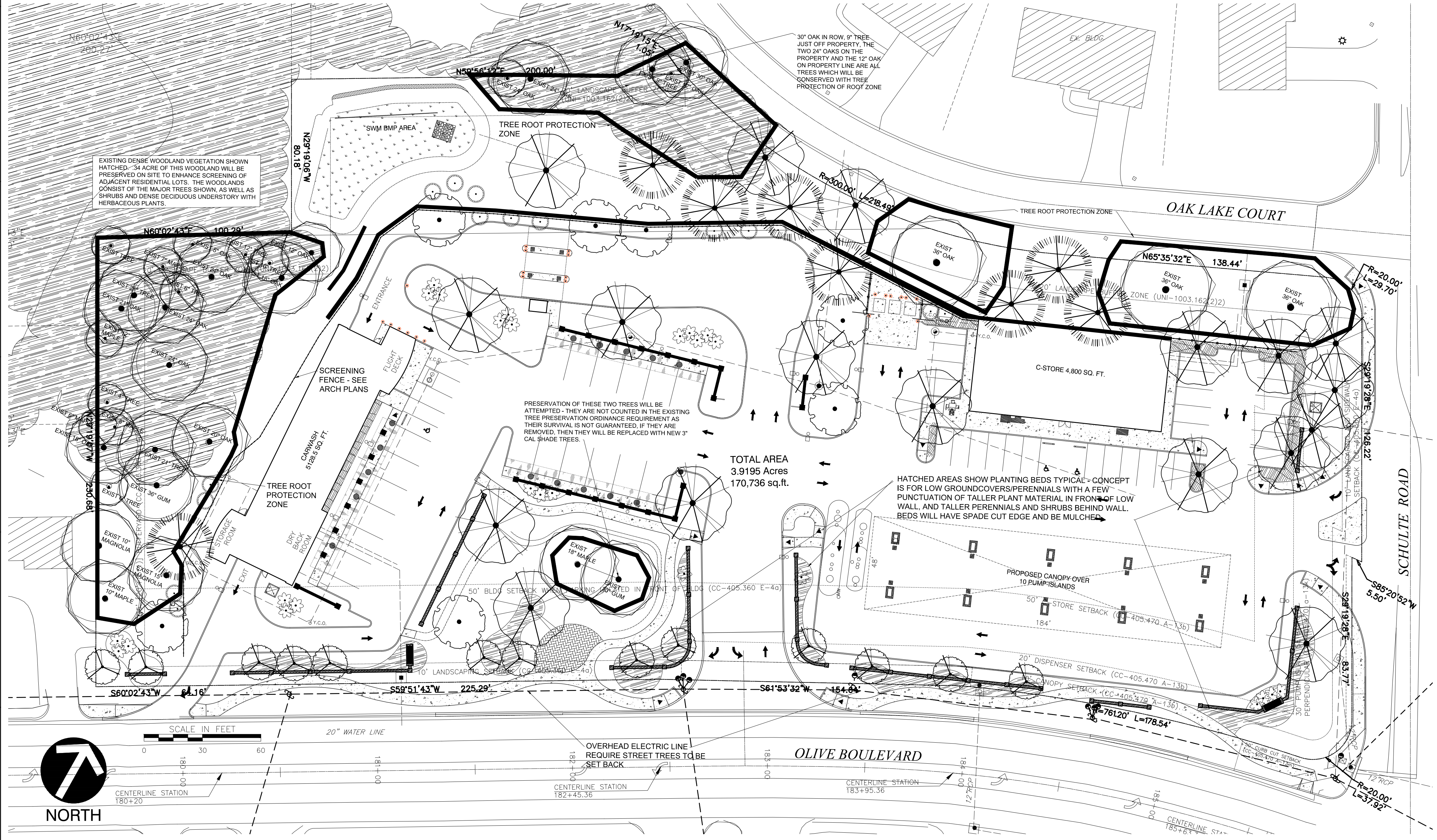
OLIVE AND SCHULTE SIDES: THE MAIN LANDSCAPE TREATMENT IS THE ORNAMENTAL KNEE WALL. THIS WALL IS ACCENTED WITH VERY LOW GROUNDCOVER BEDS IN FRONT AND PUNCTUATED WITH TALLER FLOWERING SHRUBS ON THE BACKSIDE WHICH WILL BE TALLER THAN THE WALL CREATING A MODULATING LAYERED LOOK WHICH ENHANCES THE WALL WITHOUT OBSCURING IT. IN THE FRONT PLAZA AREA, THE EXISTING TREES GIVE INSTANT VEGETATIVE MASS AND ARE SUPPLEMENTED WITH A GARDEN STYLE LANDSCAPE OF FLOWERING TREES, SHRUBS AND PERENNIAL FLOWERS. ON THE NORTH AND WEST MANY LARGE EXISTING TREES ARE PRESERVED AS AN IMMEDIATE BUFFER TO THE RESIDENTIAL AREA, AND MANY ADDITIONAL EVERGREENS AND SOME DECIDUOUS TREES ARE PROPOSED FOR FURTHER SCREENING.

ALL OTHER INFORMATION BESIDES THE PROPOSED PLANTINGS ARE SHOWN FOR REFERENCE ONLY. CONSULT THE SITE DEVELOPMENT PLAN, CIVIL, AND ARCHITECTURAL PLANS FOR CONFIRMATION OF ALL HARDSCAPE ELEMENTS.

DEVELOPMENT NOTES

1. TOTAL PARCEL AREA: 170,736 SQ.FT. (3.920 ACRES)  
AREA WITHIN CITY LIMITS: 122,277 SQ.FT. (2.807 ACRES)  
AREA WITHIN UNINCORPORATED: 48,459 SQ. FT. (1.113 ACRES)
  2. CURRENT ZONING (CC)-  
PROPOSED ZONING (CC)-  
CURRENT ZONING (UNI)-  
PROPOSED ZONING (UNI)-  
SINGLE FAMILY RESIDENTIAL & GENERAL COMMERCIAL  
GENERAL COMMERCIAL  
R3 (RESIDENCE) & C8 (PLANNED COMMERCIAL DISTRICT)  
C8 (PLANNED COMMERCIAL DISTRICT)
  3. SETBACKS-  
FRONT YARD/ROW (CC) 10 FEET OLIVE BLVD. (CC)  
0 FEET SCHULTE ROAD (IN LIEU OF ROW GIVEN TO COUNTY)  
SIDE YARD (CC) 12 FEET  
SIDE YARD (UNI) 10 FEET  
REAR YARD (UNI) 15 FEET (NORTH PROPERTY LINE)  
BUFFER YARD 25 FEET [SEC 405.360 E-48]\* WITH FENCE FOR DRIVE THRU SCREENING  
\*BUFFER YARD @ 20FT + (5 X 1) = 25 FEET  
BUILDING HEIGHT NOTE: ALL PROPOSED BUILDINGS TO BE 1 STORY IN HEIGHT
  4. SPECIAL CONSIDERATIONS-  
4.1. TRASH ENCLOSURES SHALL BE INTERIOR TO THE SITE AND NOT ALONG THE NORTH PROPERTY LINE  
4.2. SIDEWALKS ALONG OLIVE BLVD. SHALL BE FIVE-FOOT IN WIDTH UNLESS ABUTTING CURB, IN WHICH CASE SHALL BE INCREASED TO SIX-FOOT WIDE.  
4.3. PLAN SHALL BE SO DEVELOPED TO INCLUDE AN INTEGRATED PEDESTRIAN CIRCULATION SYSTEM.
  5. FIRE DISTRICT: CREVE COEUR
  6. FLOOD NOTE:  
ACCORDING TO THE FLOOD INSURANCE RATE MAP OF THE CITY OF CREVE COEUR, MISSOURI (COMMUNITY PANEL NUMBER 290344 0166 H, EFFECTIVE DATE AUGUST 2, 1995), AND THE FLOOD INSURANCE RATE MAP OF ST. LOUIS COUNTY, MISSOURI (UNINCORPORATED AREAS) (COMMUNITY PANEL NUMBER 290327 0166 H, EFFECTIVE DATE AUGUST 2, 1995) THIS PROPERTY LIES WITHIN ZONE X. ZONE X IS DEFINED AS AN AREA OF MINIMAL FLOOD HAZARD.
  7. ALL PROPOSED UTILITIES SHALL BE LOCATED UNDERGROUND,
  8. TRASH ENCLOSURES SHALL BE SIX FOOT (6') IN HEIGHT AND SHALL BE CONSTRUCTED W/ A SIGHT-PROOF GATE; MATERIALS SHALL BE COMPATIBLE WITH THE ARCHITECTURE OF MAIN BUILDINGS AND OF SIMILAR MATERIALS.
  9. STACKING: GENERAL STANDARDS  
9.1. DRIVE-THROUGH STACKING LANES SHALL HAVE A MINIMUM WIDTH OF TWELVE FEET.  
9.2. STACKING LANES SHALL BE SET BACK 20 FEET FROM RESIDENTIALLY ZONED PROPERTY LINES.  
9.3. AUDIBLE ELECTRONIC DEVICES SUCH AS LOUDSPEAKERS, AUTOMOBILE SERVICE ORDER DEVICES, AND SIMILAR INSTRUMENTS SHALL NOT BE LOCATED WITHIN 50 FEET OF ANY RESIDENTIAL PROPERTY LINE.  
9.4. ALL DRIVE-THROUGH AREAS, INCLUDING BUT NOT LIMITED TO MENU BOARDS, STACKING LANES, TRASH RECEPTACLES, LOUDSPEAKERS, DRIVE UP WINDOWS, AND OTHER OBJECTS ASSOCIATED WITH THE DRIVE-THROUGH AREA SHALL BE LOCATED IN THE SIDE OR REAR YARD OF A PROPERTY, AND SHALL NOT CROSS, INTERFERE WITH, OR IMPEDE ANY PUBLIC RIGHT-OF-WAY.
  10. CROSS-ACCESS TO BE ESTABLISHED BY PLAT.
- PARKING CALCULATIONS:  
CREVE COEUR  
REQUIRED = GENERAL RETAIL @ 4 PER 1,000 SQ.FT. = 19.2  
UNINCORPORATED-  
REQUIRED = CARWASH @ 1/BAY + 5 STACKING PER BAY = 20  
= FOOD MARKET @ 3-1/3 PER 1,000 SQ.FT. = 15.9  
PROVIDED = 27 STACKING  
= 30 SPACES INCLUSIVE OF 2 ACCESSIBLE SPACES
- SITE CALCULATIONS 170,736 SQ.FT.:  
AREA CREVE COEUR = 122,277 SQ.FT.  
GREENSPACE (CC) = 45,466.5  
IMPERVIOUS (CC) = 76,810.5 (62.8%)  
AREA UNINCORPORATED = 48,459 SQ. FT. (1.109 ACRES)  
GREENSPACE (UNI) = 38,826  
IMPERVIOUS (CC) = 9,633 (19.9%)  
TOTAL GREENSPACE = 84,292.5 (49.4%)  
TOTAL IMPERVIOUS = 86,433.5 (50.6%)  
RATIO OF FLOOR TO SITE IN SQ.FT. (FAR) 1:17.2 (1 SQ.FT. OF FLOOR SPACE TO 17.2 SQ.FT. OF PARCEL AREA)

CONCEPT LANDSCAPE PLAN preliminary



CONCEPT\_PLANT\_SCHEDULE

- 18 LARGE DECIDUOUS TREE  
TYPICAL LARGE SHADE TREE SUCH AS MAPLE, HONEYLOCUST, GINKGO, YELLOWWOOD, ETC. INSTALLED AT 2.5-3" CAL INITIAL SIZE.
- 7 SMALL FLOWERING DECIDUOUS TREE  
ORNAMENTAL SMALL TREE SUCH AS MULTISTEM REDBUD, FRINGE TREE OR DOGWOOD INSTALLED AT 6' TALL INITIAL SIZE.
- 8 EVERGREEN TREE  
LARGE EVERGREEN TREES SUCH AS WHITE PINE, NORWAY SPRUCE AND SERBIAN SPRUCE, INSTALLED AT 6-7' TALL INITIAL SIZE
- 13 COLUMNAR DECIDUOUS TREE  
COLUMNAR FORM OF DECIDUOUS SHADE TREES SUCH AS MAPLE, GINKGO OR OAK, THESE STAY NARROW LIKE A COLUMN. INSTALLED AT A 2.5-3" GALIPER INITIAL SIZE
- 34 EXISTING TREE TO REMAIN  
THE EXISTING TREES TO BE PRESERVED INCLUDE VARIOUS DECIDUOUS SPECIES AND SOME EVERGREEN SPECIES AS SHOWN ON THE PLAN. THEY RANGE IN SIZE FROM 8" CAL. TO 36" CAL. IN SIZE.
- 15 LARGE EVERGREEN SHRUBS  
MATURE AT 20-25' TALL, SLOWER GROWING AND DENSER THAN LARGER EVERGREEN TREES AT MATURITY. 4-5' TALL INITIAL PLANTING SIZE (LARGER INITIAL PLANTING SIZE NOT AVAIL. DUE TO SLOW GROWING NATURE OF THIS TYPE OF EVERGREEN) EXAMPLES INCLUDE KETELEER UPRIGHT JUNIPER AND OAKLEAF HOLLY.
- 27 LARGE FLOWERING SHRUBS  
LARGE ORNAMENTAL FLOWERING SHRUBS SUCH AS VIBURNUM, CREPE MYRTLE AND THE LARGE HYDRANGEA (LIMELIGHT)
- 3,175 sf ORNAMENTAL LANDSCAPE  
PERENNIAL FLOWERS, LOW SHRUBS, ORNAMENTAL GRASSES AND GROUNDCOVER MIX FOR ORNAMENTATION.

**Civil & Environmental Consultants, Inc.**  
CERTIFICATION/LICENSE NO. 2002013942  
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042  
314-656-4566 • 866-250-3679  
www.ccecinc.com



|                                |              |
|--------------------------------|--------------|
| PLANNED COMMERCIAL DEVELOPMENT | MFD          |
| BRITE WORX CARWASHERY          | DRAFT        |
| MOBIL ON THE RUN               | 110-241      |
| WALLIS COMPANIES               | DRAFT        |
| DATE: NOV 2016                 | DRAWN BY:    |
| DWG SCALE: 1"=30'              | CHECKED BY:  |
| PROJECT NO:                    | APPROVED BY: |
| DRAWING NO.: LA 02             |              |
| SHEET 1 OF 2                   |              |



## **Design Narrative**

### **Mobil On the Run Convenience Store and BriteWorx Car Wash**

Northwest Corner of Olive and Schulte, Creve Coeur, MO 63141

This design narrative was prepared to provide a description of how the individual components presented in the “City of Creve Coeur Design Guidelines” were addressed and considered in preparation of the proposed development. These are numbered to follow along with those guidelines.

#### **Chapter 1- Site Layout**

##### **A. Physical Features and Site Relationships**

1. The existing topography and foliage is being maintained as much as possible to minimize the site topography changes. Grade changes will be as natural as possible, however, the use of retaining walls and masonry fencing will be used to provide additional screening and enhancements to the buffer yards.
2. Existing site features are being maintained to as much as possible with new natural site features added to enhance the site. These new site features add interest to the site and provide nodes along the way for the pedestrians to enjoy, such as a small “pocket park.”
3. Building orientation has been designed to create spaces of interest and focal points within the site which adds visual interest. These features soften the scale of the project by providing intermittent screening from all approaches to the site.
4. Site design addresses these issues by utilizing existing natural barriers and augmenting them with new manufactured barriers to compliment those natural barriers, lessening the impact to the adjacent properties. By combining existing natural barriers with new landscaped areas on the entirety of the site, the impact of this development is minimized. This development proposes approximately 50% green space to lessen the impact on surrounding property owners.
5. Utility project elements are designed to be as far back on the site as possible and screened. Materials for screening and physical locations were evaluated to lessen the visual impact to the public
6. Though this project is not phased, care has been taken to maintain continuity and completeness.

## B. Streetscape/Pedestrian Orientation

1. Streetscaping design mixes hard elements and soft elements in order to visually and textually create interest in the pathway around the site. The hard element is a low, pedestrian scale, wall with pilasters and street lights that helps guide the pedestrian along the site and then into the site. Once on the site, more wandering paths allow pedestrian circulation within the site. This directly correlates to the City's Pedestrian Plan.
2. Where gaps occur in the streetscaping, pedestrian circulation is encouraged to enter into the site to discover greenspace and other outdoor elements.
3. The open space in the streetscape provides a path to help direct pedestrians from the street through the site to either building, as well as, between both buildings. The "pocket park" area of interest also helps mitigate stormwater runoff.
4. The design incorporates public spaces within the site for pedestrians and community members to view landscaping and to gather. These features directly correlate to the City's Pedestrian Plan.
5. Site design and building design are integrated to provide various scales, materials and 3 dimensional elements to enhance the visual interest of pedestrians and the community. This correlates directly to the City's Pedestrian Plan.
6. Public entrance to the buildings from the street is through a series of paths, landscaped with street trees, low masonry walls and street lights. Signage will be visible and identifiable from the street and the windows will be lightly tinted to encourage facility users to enter. These paths correlate directly to the City's Pedestrian Plan.
7. Street trees are designed in to enhance the site appearance and compliment the overall experience. By using a multiple species approach, the landscaping provides visual and textural variation and guards against diseases affecting single species.
8. Sidewalk and lighting are consistent and coordinated with the overall site design. These elements are integral to the further development of the East Olive Corridor Plan to enhance the pedestrian experience and provide visual interest along the street and through the site.
9. Sidewalk and vehicle intersections are designed to emphasize the pedestrian path through color and texture changes. These elements clearly define the pedestrian experience, clearly separates pedestrian and vehicular movements and correlates to the City's Pedestrian Plan.
10. The rear of the buildings are designed to be consistent in color and material to the front of the buildings and vegetation, both new and preserved, was considered to also add to the buffer and transition.
11. Vehicle access to the site has been designed to provide one main access point per street frontage and the access along Olive is shared between the two site uses.



12. The walk in front of the entry to the business is 10' wide with more than 4' of pedestrian clearance. The ease of pedestrian movement correlates to the City's Pedestrian Plan.
13. The sidewalks comply with the City Pedestrian Plan.

### **C. Streetscape/Pedestrian Orientation**

1. Circulation patterns on the perimeter and interior to the site are clearly defined and safe.
2. Pedestrian routes within the site are buffered and landscaped and also provide points of interest and other amenities.
3. Access by vehicle and by pedestrian are separated and safe while adding to the arrival experience to the site and buildings.
4. Pedestrian, bicycle and vehicle circulation have been separated to the extent possible. When these paths cross, color and texture designations occur.
5. Pedestrian linkage between structures and within the site are provided and emphasized.
6. Bicycle parking is highly visible and lockable.

Note: All of these site and pedestrian points of interest and circulation routes have been created by the building placement and designed elements to reduce the commercial feel of the proposed development to a more residential/neighborhood feel.

## **Chapter 2- Buildings**

### **A. General Architectural Guidelines**

1. The building designs are articulated to create interest and be distinct while using high quality materials.
2. Outdoor spaces of interest have been incorporated into the overall design with structures of similar building elements linking the site together. The small scale of these connector elements and outdoor spaces reduce the scale of the overall development, while still linking the development together as a whole.
3. The building facades have been articulated to increase visual interest and create shadow lines using various elements. These elements help breakdown the building scale to create a more human scale and clearly define the building entry points and termination points.
4. The nature of this particular type of building use is single story. The building height has been increased to add mass and create more visual interest and to screen various necessary functional equipment. The building has been situated on the site further back from the street due to site function and also to reduce the scale of the building to a more

human scale. This setback also affords more opportunity to screen the building and reduce elements to a more human scale at the street view.

## **B. Scale**

1. The site layout and building height have been carefully considered. Lower use adjacent areas receive the lower height of the building elevations and the more public and visible views receive the higher building elevations while still maintaining a human scale through the use of material and massing. Additionally, staff has indicated a potential use for the property immediately adjacent (West) of the site and the scale of this potential development has been taken into consideration. This development provides additional space between the potential development to the West through building orientation. This orientation affords additional opportunities for maximum screening.
2. The buildings achieve human scale through multiple massing changes, material accents various insets and building element features.
3. Both buildings employ similar massing and detail elements to maintain consistency within the site. The linking element between the buildings employs similar material and massing elements, further connecting the buildings and maintaining design consistency.

## **C. Design**

1. The building design incorporates several high quality materials and design elements throughout the site. The scale of these elements are residential scale to add to the human scale of the building. The colors selected are warm and inviting, adding to the residential scale and feel of the building.
2. Façade design for all structures incorporates several massing changes to decrease repetitiveness and provide visual interest.
3. The entry pieces are articulated vertically and horizontally to clearly define the entrance.
4. Overall site and building design use elements consistent with high quality and visual interest. As the pedestrian approaches and then enters the site, these elements will increase slightly in scale and change texture and color providing an interesting journey. The low wall elements and overhead canopies use materials consistent with the proposed building while also screening functional elements of the vacuum areas from vehicular and pedestrian view.
5. Separation distance between the buildings is the minimum for required vehicle circulation. In order to visually link the buildings, a connector element is designed with similar design materials and elements to maintain visual consistency.
6. Each building is a unique design, consistent with the City Comprehensive Plan while maintaining enough similarity to other previous projects by this Developer. While the



buildings are similar in style to other previously designed buildings for this client, they are not “prototype” buildings. Different locations and sites have different design parameters which provides the opportunity to create a unique building while maintaining familiarity with a brand.

7. Mixed use of this site is provided through separate building experiences.
8. All elevations receive the same design and material treatment.
9. Both buildings utilize parapets to screen roof top items. Those parapet elements are integral to the design concept.
10. Both buildings utilize energy efficient design elements and systems.

#### **D. Relationship to Neighboring Development**

1. The site and building development is consistent with surrounding existing and newer developments along the East Olive Corridor in the use of material, streetscape and color. This design utilizing a complete package of site and building design, in a unique location, will help set a standard for future development along this corridor. The use of the site is not changing. The proposed development will enhance the design of the corner and provide a fresh, new, updated design showing the City’s progress.
2. Both main buildings are linked visually with a connecting element using consistent materials and massing.
3. The majority of the building materials and colors are earth tone and neutral. An accent color is used to tie both buildings together and create visual interest. This same accent color is seen all along the East Olive Corridor from Graeser Road to Interstate 270.
4. Pedestrian paths and pedestrian elements are incorporated into the site plan design and the building layout to create outdoor public spaces of interest.

#### **E. Materials/Colors**

1. The building materials selected are of high quality and high durability and most are natural, traditional materials.
2. Color for the materials is integral, adding to their durability. The most durable materials are placed near the ground to achieve maximum durability.
3. The EIFS element is used in a location that is not accessible to the user in order to maintain the building material durability. The “plasticity” of the EIFS allows for the various insets and offsets and detail accents to visually enhance the building design while allowing the predominate material to be masonry used at the lower level.
4. Both buildings utilize the same Architectural elements and color to provide design consistency throughout the site. All elevations use similar elements and colors to maintain design consistency within the building façades.

5. Any material color changes will occur at inside corners to emphasize mass and alleviate the appearance of “thinness.” Material continuity is maintained within each elevation.
6. Soffits will receive similar finish treatment as the main fascia material.
7. The sidewalks and drive areas are differentiated through color and texture.

#### **F. Building Services**

1. Services and trash receptacles are located deep within the site and shielded by solid fences and partially by the buildings so as not to be as visible to the vehicle traffic or pedestrian traffic.
2. Loading areas are also located deep within the site to shield them from vehicle or pedestrian traffic.
3. The utility meters will be located such that they are screened from public view.

### **Chapter 3- “Use” Specific Guidelines**

#### **A. Not Applicable**

#### **B. Auto Service Stations**

1. The site layout provides one entrance per street on this corner lot. Customer safety is provided by a low masonry wall incorporated into the streetscape design.
2. The paved area is as minimal as possible to provide safe vehicular and pedestrian movement throughout the site. Material, texture and color changes are used to distinguish and separate pathways. This safer pedestrian movement directly correlates to the City’s Pedestrian Plan.
3. The buildings have been designed specifically for this site to provide an increased, upgraded, level of detail beyond the previous buildings of this type within the region. This increased level of detail enhances the users experience of the facility and the City. The Developer has incorporated several adjacent lots in order to reduce the commercial impact and density of the development.
4. Through material and color consistency, the freestanding elements associated with this site are compatible and consistent to the major building elements.
5. Tank vent are incorporated into the fuel canopy design to reduce visibility.
6. The Car Wash Architectural elements, materials and colors are consistent with the Convenience Store Architectural elements, materials and colors. The orientation of the Car Wash building is to specifically reduce the intrusion of the exit opening to vehicular and pedestrian traffic. The exit end also incorporates a storefront element, similar to a



retail establishment, to further deemphasize the door opening element. The orientation also reduces the impact on the surrounding residential areas and the potential development area to the West.

7. All lighting fixtures will be flush with the underside of the canopy.

#### **C. Not Applicable**

#### **D. Not Applicable**

#### **E. Accessory Buildings and Facilities**

1. The accessory facilities such as trash enclosures are designed to directly relate in material, character and detail to the other site components.

### **Chapter 4 – Landscape Design**

1. The landscape design for this proposed redevelopment is of high quality and seeks to maintain and use existing mature vegetation, accommodate and accent pedestrian facilities, provide ample green space and areas of visual interest, and soften larger rigid elements.
2. There is a consistent yet still diverse species and theme throughout the development.
3. The design of the landscape helps identify pedestrian circulation paths from street frontage to the commercial business.
4. Significant design effort and attention has been placed into maintaining existing vegetation in buffer areas and new landscape has been proposed to enhance those buffers.
5. Clear pedestrian pathways and landscape materials have been provided to lessen potential damage by pedestrian or motor traffic.
6. The parking areas are landscaped with trees, shrubbery, and other landscaping materials as well as a pedestrian scale wall.
7. The landscape plan has incorporated a patio area and other such features to create points of visual interest.
8. The green space provided exceeds the requirements and these areas are landscaped with grouped plantings and other elements throughout the site.
9. The pedestrian scale landscape wall, signage, trash receptacles, fencing and other site elements are incorporated into the design of the landscaping.
10. The scale of the landscape materials is diverse by making use of mature existing vegetation and providing low-level shrubbery and landscaping materials. Together

these elements compliment and soften larger scale architectural elements.

11. As mentioned above, the existing mature vegetation has been incorporated into the overall design scheme.
12. Irrigation systems are proposed for the site.
13. The landscape design is intended to accent and enhance architectural and site design features.
14. Any groundcover is proposed to be live plant material.
15. While no berms are proposed, the existing topography helps add to visual screening from adjacent residents.
16. Changes in existing vegetation and topography have been minimized to the extent feasible.

## **Chapter 5- Miscellaneous**

### **A. Signage**

1. The signage will comply with municipal requirements and are integrated into the building design to blend while being an accent.
2. Not applicable
3. Sign areas are minimal and strategically place in logical locations.
4. Individual letter signs will be used where practical.
5. Signage will be internally lighted with little or no glare.

Note: The signage be more consistent with the “Green Line Park” approach mentioned in the Comprehensive Plan.

### **B. Lighting**

1. Illumination levels across the site will vary depending on use and safety. The lighting has been designed to reduce any light directed off site. Full cut off fixtures will be used as required to reduce light directed off site and glare.
2. Exterior lighting will be shielded as required and parallel to the ground.
3. The building lighting is integrated into the building and will be complimentary to the building color and style.
4. Fixture mounting height will vary across the site depending on clearance requirements.
5. Bollard lights may be used at strategic locations to enhance the pedestrian experience.
6. Raised lights poles along the streetscape will be pedestrian scale Architectural style.
7. No neon lighting is proposed.
8. A photometric plan will be provided.



Note: Every effort has been made to discuss the impact with the adjacent residents. Those concerns have been addressed. To minimize the impact, central vacuum systems and lowered, shielded lighting is proposed.

### **C. Utilities**

1. Utilities will be underground and the transformer will be screened.

### **D. Stormwater Drainage**

1. Rooftop drainage has been considered and is conveyed and contained so that it does not impact landscaped areas or sidewalks.
2. The stormwater management facility has been designed to be natural in configuration and appearance and contributes to the enhancement of the buffer.
3. The site exceeds minimum standards for open space requirements and the stormwater management facility is situated such that it does not detract from visual interest.

### **E. Energy Conservation**

1. The building orientation, materials and systems are designed with good energy conservation principles.

### **F. Screening**

1. The proposed masonry fencing is designed with a natural stone façade and visual monotony is minimized by site landscaping and architectural elements.
2. The proposed masonry wall (sound wall) is designed to minimize the visual and audible impacts and it's textures and color coordinate with the balance of the site architecture.
3. The fencing is an integral part of the site.
4. Chain link fencing is not proposed.
5. The proposed fencing is a highly decorative masonry fence.
6. The trash enclosure will be constructed of the same material.

### **G. Parking**

1. The parking lot has limited vast open areas and is broken-up by landscaped areas and pedestrian pathways.

2. On street parking is not feasible at this location, and parking has been located furthest away from residential areas and provided in a manner consistent with the needs of the proposed operation.
3. Underground parking is not proposed.
4. There are no vast open areas of parking proposed that would cause significant glare reflection or visual impact.
5. The parking layout and design is enhanced with pedestrian circulation and does not obstruct direct access from street pedestrian facilities to the public commercial business.
6. Extensive landscaped areas are proposed on the site.
7. Landscaped islands and open spaces have been incorporated into the facilities.
8. No parking or vehicular circulation is proposed in required buffer yard or side yard setback area.
9. No parking structure is proposed.
10. No parking structure is proposed.

#### **H. Retaining Wall**

1. The topography of the site has been designed where feasible to minimize the height and length of the retaining walls. The vegetation, both preserved existing trees and proposed landscaping, has been incorporated to enhance visual appearance.
2. The proposed retaining wall has not been terraced in an effort to preserve and maintain existing mature vegetation.
3. The materials utilized for the retaining wall coordinate with the building materials and architecture.



# DEVELOPMENT NOTES

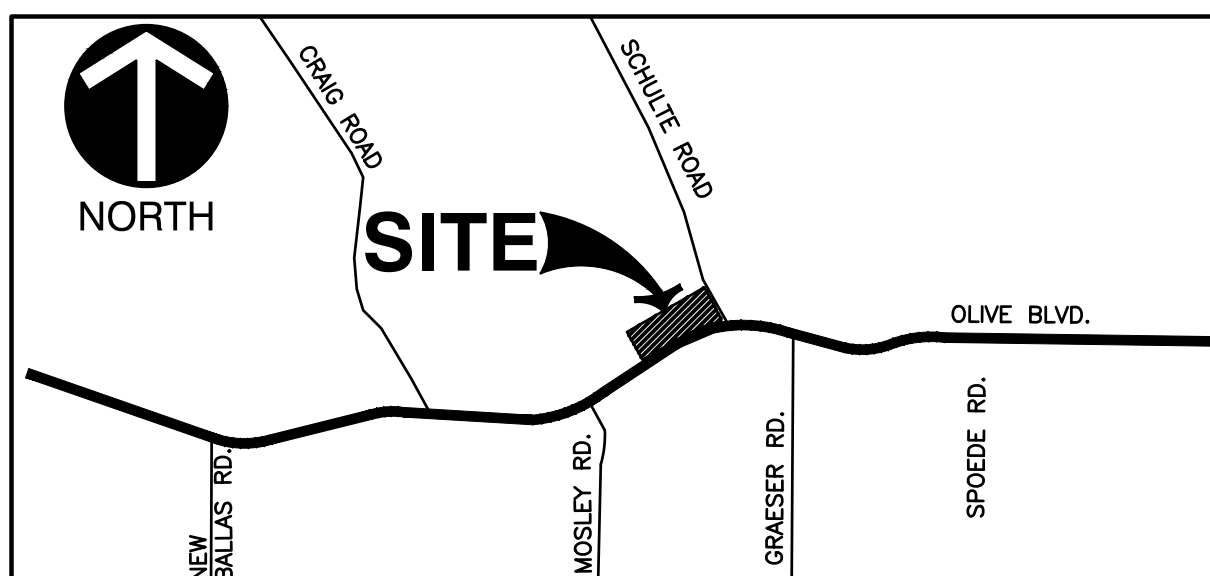
- TOTAL PARCEL AREA: 170,736 SQ.FT. (3.920 ACRES)  
AREA WITHIN CITY LIMITS: 122,277 SQ.FT. (2.807 ACRES)  
AREA WITHIN UNINCORPORATED: 48,459 SQ. FT. (1.113 ACRES)
- CURRENT ZONING (CC)- SINGLE FAMILY RESIDENTIAL & GENERAL COMMERCIAL  
PROPOSED ZONING (CC)- GENERAL COMMERCIAL  
CURRENT ZONING (UN)- R3 (RESIDENCE) & C8 (PLANNED COMMERCIAL DISTRICT)  
PROPOSED ZONING (UN)- C8 (PLANNED COMMERCIAL DISTRICT)
- SETBACKS-  
FRONT YARD/ROW (CC) 10 FEET OLIVE BLVD. (CC)  
SIDE YARD (CC) 0 FEET SCHULTE ROAD (IN LIEU OF ROW GIVEN TO COUNTY)  
SIDE YARD (UN) 12 FEET  
REAR YARD (UN) 10 FEET  
BUFFER YARD (UN) 15 FEET (NORTH PROPERTY LINE)  
SCREENING 25 FEET [SEC 405.360 E-44] WITH FENCE FOR DRIVE THRU  
\*BUFFER YARD @ 20FT + (5 X 1) = 25 FEET  
BUILDING HEIGHT NOTE: ALL PROPOSED BUILDINGS TO BE 1 STORY IN HEIGHT
- SPECIAL CONSIDERATIONS-  
4.1. TRASH ENCLOSURES SHALL BE INTERIOR TO THE SITE AND NOT ALONG THE NORTH PROPERTY LINE  
4.2. SIDEWALKS ALONG OLIVE BLVD. SHALL BE FIVE-FOOT IN WIDTH UNLESS ABUTTING CURB, IN WHICH CASE SHALL BE INCREASED TO SIX-FOOT WIDE.  
4.3. PLAN SHALL BE SO DEVELOPED TO INCLUDE AN INTEGRATED PEDESTRIAN CIRCULATION SYSTEM.
- FIRE DISTRICT: CREVE COEUR
- FLOOD NOTE:  
ACCORDING TO THE FLOOD INSURANCE RATE MAP OF THE CITY OF CREVE COEUR, MISSOURI (COMMUNITY PANEL NUMBER 290344 0166 H, EFFECTIVE DATE AUGUST 2, 1995), AND THE FLOOD INSURANCE RATE MAP OF ST. LOUIS COUNTY, MISSOURI (UNINCORPORATED AREAS) (COMMUNITY PANEL NUMBER 290327 0166 H, EFFECTIVE DATE AUGUST 2, 1995) THIS PROPERTY LIES WITHIN ZONE X. ZONE X IS DEFINED AS AN AREA OF MINIMAL FLOOD HAZARD.
- ALL PROPOSED UTILITIES SHALL BE LOCATED UNDERGROUND.
- TRASH ENCLOSURES SHALL BE SIX FOOT (6') IN HEIGHT AND SHALL BE CONSTRUCTED W/ A SIGHT-PROOF GATE; MATERIALS SHALL BE COMPATIBLE WITH THE ARCHITECTURE OF MAIN BUILDINGS AND OF SIMILAR MATERIALS.
- STACKING: GENERAL STANDARDS  
9.1. DRIVE-THROUGH STACKING LANES SHALL HAVE A MINIMUM WIDTH OF TWELVE FEET.  
9.2. STACKING LANES SHALL BE SET BACK 20 FEET FROM RESIDENTIALLY ZONED PROPERTY LINES.  
9.3. AUDIBLE ELECTRONIC DEVICES SUCH AS LOUSPEAKERS, AUTOMOBILE SERVICE ORDER DEVICES, AND SIMILAR INSTRUMENTS SHALL NOT BE LOCATED WITHIN 50 FEET OF ANY RESIDENTIAL PROPERTY LINE.  
9.4. ALL DRIVE-THROUGH AREAS, INCLUDING BUT NOT LIMITED TO MENU BOARDS, STACKING LANES, TRASH RECEPTACLES, LOUSPEAKERS, DRIVE UP WINDOWS, AND OTHER OBJECTS ASSOCIATED WITH THE DRIVE-THROUGH AREA SHALL BE LOCATED IN THE SIDE OR REAR YARD OF A PROPERTY, AND SHALL NOT CROSS, INTERFERE WITH, OR IMPEDE ANY PUBLIC RIGHT-OF-WAY.

SITE CALCULATIONS 170,736 SQ.FT.:  
AREA CREVE COEUR = 122,277 SQ.FT. (2.807 ACRES)  
GREENSPACE (CC) = 52,805  
IMPERVIOUS (CC) = 69,472 (56.8%)  
AREA UNINCORPORATED = 48,459 SQ.FT. (1.113 ACRES)  
GREENSPACE (UN) = 40,098  
IMPERVIOUS (CC) = 8,361 (17.3%)  
TOTAL GREENSPACE = 91,548 (54.4%)  
TOTAL IMPERVIOUS = 77,833 (45.6%)  
RATIO OF FLOOR TO SITE IN SQ.FT. (FAR)  
1:17.2 (1 SQ.FT. OF FLOOR SPACE TO 17.2 SQ.FT. OF PARCEL AREA)

PARKING CALCULATIONS:  
CREVE COEUR  
REQUIRED = GENERAL RETAIL @ 4 PER 1,000 SQ.FT. = 19.2  
UNINCORPORATED  
REQUIRED = CARWASH @ 1/BAY + 5 STACKING PER BAY = 20  
= FOOD MARKET @ 3-1/3 PER 1,000 SQ.FT. = 15.9  
PROVIDED = 27 STACKING  
= 30 SPACES INCLUSIVE OF 2 ACCESSIBLE SPACES



## A TRACT OF LAND BEING ALL OF LOTS 1, 2, 3 AND 4 OF "OAK LAKE ESTATES", P.B.92 PG.3 AND PART OF LOTS 3, 4, AND 5 OF THE SUBDIVISION OF THE FARM OF S.S. MATSON IN U.S. SURVEY 1962, TOWNSHIP 45 NORTH, RANGE 5 EAST OF THE FIFTH PRINCIPAL MERIDIAN ST. LOUIS COUNTY, MISSOURI



# PRELIMINARY DRAINAGE NOTES

- PROJECT AREA: 170,736 (3.92 ACRES)
- WATERSHED: FEE FEE
- 15YR/20MIN DIFFERENTIAL RUNOFF (Q=A\*Pi, PER MSD):  
PRE: Q=(3.92AC)\*(0.38)\*(3.54)+(3.92AC)\*(0.62)\*(1.70)=9.43 CFS  
POST: Q=(3.92AC)\*(0.10)\*(4.20)+(3.92AC)\*(0.41)\*(3.54)+  
(3.92AC)\*(0.49)\*(4.60)=9.84 CFS  
DIFFERENTIAL RUNOFF: Q=(+)-1.17 CFS
- PER MSD SECTION 4.080.01(2B), THIS PROJECT DOES NOT REQUIRE DETENTION, HOWEVER THE SITE MUST PROVIDE WATER QUALITY.
- PER THE NATIONAL RESOURCE CONSERVATION SERVICE (NRCS) THIS PROJECT IS WITHIN HYDROLOGIC SOIL GROUP 'D' HAVING A LOW INFILTRATION RATE AND HIGH RUNOFF POTENTIAL.
- WATER QUALITY VOLUME FOR THE ENTIRE SITE (3.92 ACRES AT 51% IMPERVIOUS) PER MARYLAND STORMWATER DESIGN MANUAL APPENDIX D-10:  
WQp=3.02 CFS OR WQv=8,300 CF  
WATER QUALITY BMPs:  
• HYDRODYNAMIC SEPARATOR AND SNOUT FOR HOTSPOT AREA AT GAS PUMPS  
• BIORETENTION (WILL ALSO PROVIDE VOLUME REDUCTION)

## THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT

LACLEDE GAS COMPANY  
COMMERCIAL & INDUSTRIAL MARKETING  
720 OLIVE STREET  
ST. LOUIS, MO 63101  
CONTACT: DAWN SPINK  
PHONE: 314-342-0687  
EMAIL: JTravis@lacledegas.com

MISSOURI AMERICAN WATER  
727 CRAIG RD.  
CREVE COEUR, MO 63141  
CONTACT: DAWN SPINK  
PHONE: (314) 996-2379  
EMAIL: dawn.spink@amwater.com

CREVE COEUR FIRE PROTECTION DISTRICT  
11221 OLIVE BLVD.  
CREVE COEUR, MO 63141  
CONTACT: MR. KENNETH BLACK  
PHONE: (636) 949-4228

ST. LOUIS METROPOLITAN SEWER DISTRICT  
2350 MARKET ST.  
ST. LOUIS, MO 63103  
PHONE: (314) 768-6200

AMEREN  
DORSETT DISTRICT  
1212 DORSETT ROAD  
MARYLAND HEIGHTS, MO 63043  
CONTACT: RYAN ALEXANDER  
PHONE: (314) 344-9560  
EMAIL: RAlexander2@ameren.com

CHARTER COMMUNICATIONS  
815 CHARTER COMMONS  
TOWN & COUNTRY, MO 63017  
CONTACT: RICHARD STURK  
PHONE: (636) 387-6650  
EMAIL: mapping-design@chartercom.com

MODOT  
WEST AREA PERMITS  
1590 WOODLAKE DRIVE  
CHESTERFIELD, MO 63017-5712  
CONTACT: JIM BODART  
PHONE: (314) 434-4318  
EMAIL: James.Bodart@modot.mo.gov

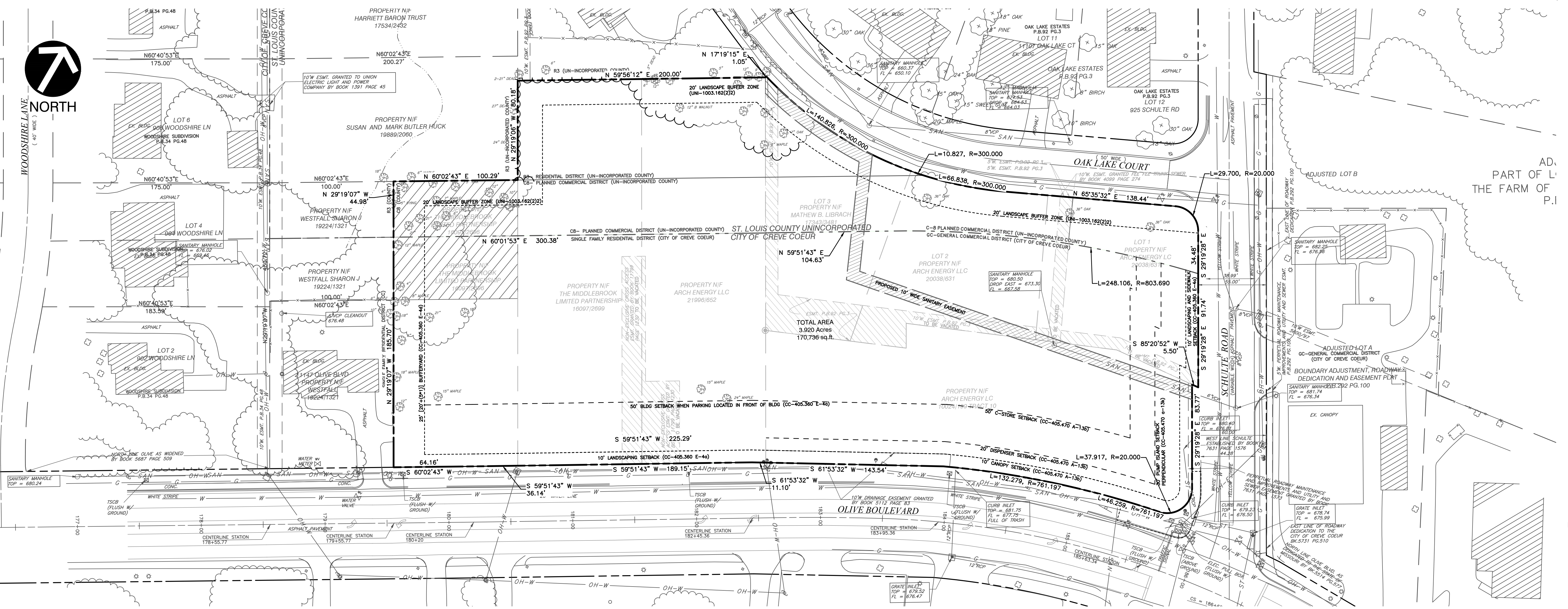
**Civil & Environmental Consultants, Inc.**  
CERTIFICATION/LICENSE NO. 2002013942  
4848 Park 370 Blvd., Suite F - Hazelwood, MO 63042  
314-656-4566 - 866-250-3679  
www.cecinc.com

**WALLIS COMPANIES**  
106 EAST WASHINGTON  
CUBA, MO 65453  
(636) 549-1600

**SITE DEVELOPMENT PLAN**  
**MOBIL ON THE RUN & BRITE WORX**

**PRELIMINARY PLAT**

DRAWING NO. **PLAT**  
SHEET 1 OF 1



- REFERENCE**
- TOPOGRAPHIC SURVEY PROVIDED BY CLIENT DATED SEPTEMBER 9, 2006. TREE SURVEY PROVIDED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED JANUARY 15, 2009.

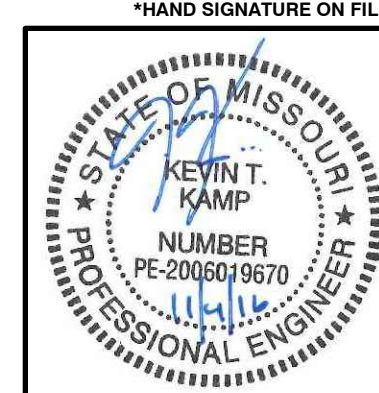


CALL BEFORE  
YOU DIG!  
1-800-DIG-RITE

# LEGEND

- PARCEL LINE
- SETBACK LINE
- PROPOSED EASEMENT
- EASEMENT VACATE

SCALE IN FEET  
0 30 60



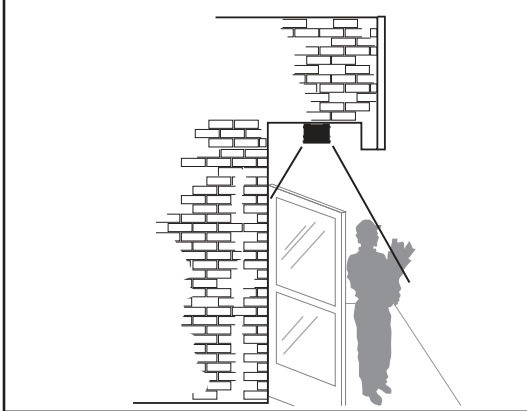
DRAWING NO. **PLAT**  
SHEET 1 OF 1



## LED SOFFIT STRIP - LSS



### TYPICAL APPLICATION



### U.S. and international patents pending

**APPLICATION** - A complete continuous row building series of high performance, energy efficient LED illumination in an easy to install format. Designed for applications for storefront walkways and sidewalks.

**LEDS** - Select High-brightness LEDs. Available in 4100K (NW) and 5000K (CW). 70 CRI (nominal).

**OPTICS** - High efficiency, die formed, one piece reflectors provide a smooth and brilliant Symmetrical distribution.

**LIGHT OUTPUT** - Input power is 2.64 watts per foot. Cool White (CW) lumens per foot are 215. Neutral White (NW) lumens per foot are 180.

**HOUSING** - Die formed, non-corrosive aluminum, painted with several powder coat finish options.

**POWER SUPPLY** - 60w, 120-277V 50/60Hz. IP67 rated for use in wet, damp and dry locations.

**OPERATING TEMPERATURE** - -35°C to +60°C (-31°F to +140°F)

**INSTALLATION** - Installs in continuous row or staggered applications designed to span entire soffit lengths.

**EXPECTED LIFE** - Projected life of 50,000 hours minimum.

**WARRANTY** - Limited 5-year warranty.

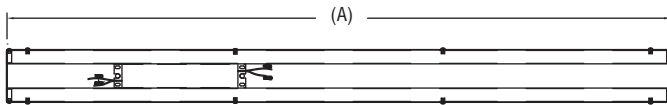
**LISTING** - ETL compliant to U.S. and Canadian safety standards. Suitable for wet locations.

**PHOTOMETRICS** - Application layouts are available upon request. Contact LSI Applications Group at [lighting.apps@lsi-industries.com](mailto:lighting.apps@lsi-industries.com)



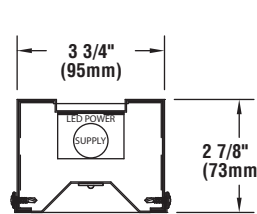
wet location

### DIMENSIONS

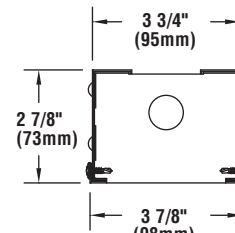


| Description          | Dim "A"       |
|----------------------|---------------|
| 4 ft. Soffit Housing | 48" / 1220 mm |
| 6 ft. Soffit Housing | 72" / 1829 mm |
| 8 Ft. Soffit Housing | 96" / 2439 mm |

Dimensions above are for determining overall length of individual sections. Specify total linear run length per individual straight run to insure proper power supply requirements. Standard maximum length of a single unit is 8 feet. All other specified lengths are combinations of 8 feet and below.



CROSS SECTION



END VIEW

### LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **LSS 4 LED CW UE**

| Prefix | Total Linear Length Required (ft.) <sup>1</sup> | Light Source               | LED Color                             | Input Voltage                              |
|--------|-------------------------------------------------|----------------------------|---------------------------------------|--------------------------------------------|
| LSS    | 4 - 4ft<br>6 - 6ft<br>8 - 8ft                   | LED - Light Emitting Diode | CW - Cool White<br>NW - Neutral White | UE - Universal Input Voltage<br>(120-277V) |

#### NOTE:

1- Standard maximum length of a single unit is 8 feet. All other specified lengths are combinations of 8 feet and below.



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

03/30/15

Packet Pg. 183



## LED CANOPY LIGHT - LEGACY™ (CRUS)



US & Int'l. patents pending.

**HOUSING** - Low profile, durable die-cast, aluminum construction, providing a reliable weather-tight seal.

**LEDS** - Features an array of select, mid-power, high brightness, high efficiency LED chips; 5300°K color temperature, 70 CRI (nominal).

**DRIVE CURRENT** - Choice of Low Wattage (LW) or Super Saver (SS).

**OPTICS / DISTRIBUTION** - Symmetrical, which directs light through a clear tempered glass lens, to provide a uniform distribution of light to vertical and horizontal surfaces.

**OPTICAL UNIT** - Features an ultra-slim 7/8" profile die cast housing, with a flat glass lens. Unit is water-resistant, sealed to an IP67 rating. Integral designed heat sink does not trap dirt and grime, ensuring cool running performance over the life of the fixture.

**PRESSURE STABILIZING VENT** - Luminaire assembly incorporates a pressure stabilizing vent breather to prevent seal fatigue and failure.

**HAZARDOUS LOCATION** - Designed for lighter than air fuel applications. Product is suitable for Class 1 Division 2 only when properly installed per LSI installation instructions (consult factory).

**DRIVER** - State-of-the-art driver technology superior energy-efficiency and optimum light output. Driver components are fully encased in potting for moisture resistance. Complies with IEC and FCC standards.

**DRIVER HOUSING** - Die cast aluminum, wet location rated driver/electrical enclosure is elevated above canopy deck to prevent water entry, provide easy "knock-out" connection of primary wiring and contributes to attaining the lowest operating temperatures available. Seals to optical housing via one-piece molded silicone gasket.

**OPERATING TEMPERATURE** - -40°C to 50°C (-40°F to +122°F)

**ELECTRICAL** - Universal voltage power supply, 120-277 VAC, 50/60 HZ input. Drivers feature two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Scenario 1, Location Category C.

**FINISH** - Standard color is white and is finished with LSI's DuraGrip polyester powder coat process. DuraGrip withstands extreme weather changes without cracking or peeling.

**INSTALLATION** - One person installation. No additional sealant required. Installs in a 12" or 16" deck pan. Deck penetration consists of a 4" hole, simplifying installation and water sealing. Unit is designed to quickly retrofit into existing Scottsdale (4") hole as well as openings for Encore and Encore Top Access and to reconnect wiring for the SC/ECTA without having to relocate the conduit. Retro panels are available for existing Encores (see back page) as well as kits for recessed and 2x2 installations (see separate spec sheets). Support brackets are provided standard, to prevent sagging of deck.

**SHIPPING WEIGHT** - 27 pounds (single pack), 48 pounds (double pack).

**EXPECTED LIFE** - Minimum 60,000 to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**WARRANTY** - Limited 5-year warranty.

**LISTING** - UL and ETL listed to UL 1598, UL 8750 and other U.S. and International safety standards. Suitable for wet locations.

**PHOTOMETRICS** - Applications layouts are available upon request. Contact LSI Petroleum Lighting or petroleum.apps@lsi-industries.com

### Consult Factory

**Class 1, Division 2** – Standard on SS & LW.

**T5 Temperature Classification** – The surface temperature of this product will not rise above 100°C., within a 40°C ambient.

**Gas Groups A,B,C, and D** – Group A: Acetylene / Group B: Hydrogen / Group C: Propane and Ethylene / Group D: Benzene, Butane, Methane & Propane.

This product, or selected versions of this product, meet the standards listed below.  
Please consult factory for your specific requirements.



# LED CANOPY LIGHT - LEGACY™ (CRUS)

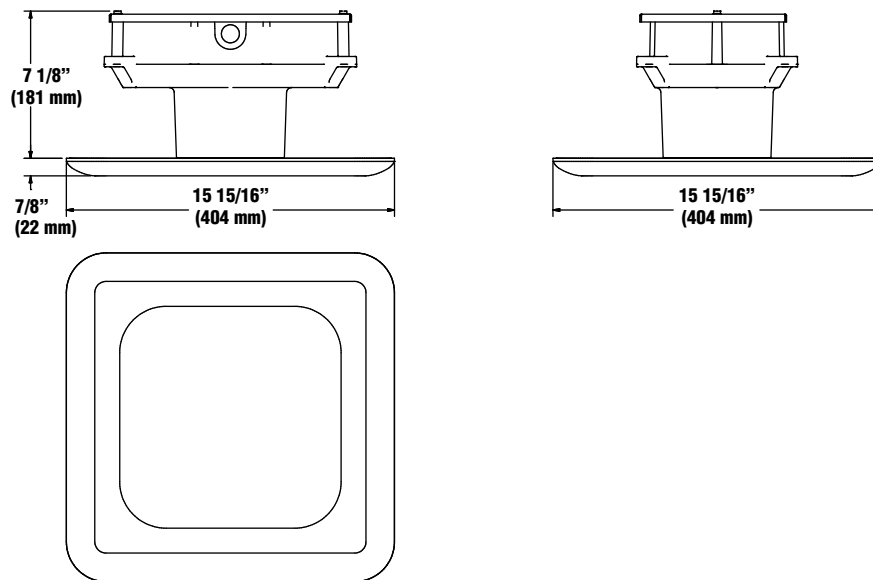
## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **CRUS SC LED SS CW UE WHT**

| Prefix | Distribution            | Light Source | Drive Current                     | Color Temperature | Input Voltage                                          | Finish                                     | Options |
|--------|-------------------------|--------------|-----------------------------------|-------------------|--------------------------------------------------------|--------------------------------------------|---------|
| CRUS   | SC - Standard Symmetric | LED          | LW - Low Watt<br>SS - Super Saver | CW - Cool White   | UE - Universal Voltage<br>(120-277V)<br><br>347 - 347V | WHT - White<br>BRZ - Bronze<br>BLK - Black | None    |

| ACCESSORY ORDERING INFORMATION (Accessories are field installed) |              |                                                                      |              |
|------------------------------------------------------------------|--------------|----------------------------------------------------------------------|--------------|
| Description                                                      | Order Number | Description                                                          | Order Number |
| Retrofit Panels - EC / ECTA / SCF to CRU, for 16" Deck Panel     | 525946       | Kit - Hole Plugs and Silicone (enough for 25 retrofits) <sup>1</sup> | 1320540      |
| Retrofit Panels - ECTA / SCF to CRU, for 12" Deck Panel          | 530281       | 1- Consists of (25) 7/8" hole plugs and (1) 10.3 oz tube of RTV      |              |
| Retrofit 2x2 Cover Panel Blank (no holes)                        | 357282       | 2- Flange Kit used to mount CRU in double deck applications          |              |
| Retrofit RIC Cover Panel Blank (no holes)                        | 354702       |                                                                      |              |

## DIMENSIONS



| LIGHT OUTPUT - CRUS |                  |        |       |     |
|---------------------|------------------|--------|-------|-----|
| Cool White          |                  | Lumens | Watts | LPW |
|                     | LW - Low Watt    | 10,871 | 88    | 124 |
|                     | SS - Super Saver | 13,554 | 114   | 119 |



# LED LENSED STRIP - SDL

## PRODUCT HIGHLIGHTS

- Accepts optional plug-in wiring feature for continuous row installation
- Alignment couplers furnished for continuous row installation
- Suitable for surface, pendant, or stem mounting

**EXPECTED LIFE** - Projected life of at least 60,000 hours. Contact factory for TM-21 detail.

**LEDS** - Use of closely-spaced medium-power, high-brightness chips minimizes pixelation and provides uniform lens luminance. Available in Cool White (5000K), Neutral White (4000K) and Warm White (3500K) color temperatures. CRI  $\geq$  80 (CW > 70). LM-80 reports available.

**CONSTRUCTION** - Fixture housing, end sections, and channel cover constructed of code-gauge, die-formed steel.

**LENS** - Specially designed frosted extruded lens with micro prisms for maximum source diffusion and soft, even illumination.

**FINISH** - All metal parts are painted after fabrication following treatment with phosphate rust inhibitor. Finish coating of housing reflecting surfaces is with high-reflectance (minimum 92%) polyester powder.

**ELECTRICAL** - Universal voltage (120-277 Vac) input, 50/60Hz, 347 VAC. Power factor > 0.9, THD < 20%, in-rush current < 15 Amps.

**DRIVER** - High-performance isolated driver features over-voltage, over-current and short-circuit (with auto-recovery) protection. Driver module is sealed to IP66 protection levels, with a Class A sound rating. 0-10 volt dimming standard.

**WARRANTY** - Limited 5-year warranty.

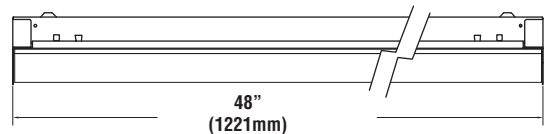
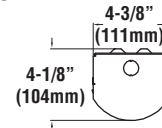
**PHOTOMETRICS** - Please visit our website at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.

**LISTING** - Listed to UL 1598 and UL 8750. Suitable for damp locations. For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at [www.designlights.org](http://www.designlights.org).

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



## DIMENSIONS



| LIGHT OUTPUT - SDL LENSED STRIP |                  |       |       |       |
|---------------------------------|------------------|-------|-------|-------|
|                                 | Lumens (Nominal) |       |       | Watts |
|                                 | WW               | NW    | CW    |       |
| SDL 2 LW - 2FT                  | 1490             | 1475  | 1705  | 14    |
| SDL 2 SS - 2FT                  | 2430             | 3115  | 2960  | 28    |
| SDL 4 LW - 4FT                  | 3000             | 3105  | 3700  | 29    |
| SDL 4 SS - 4FT                  | 3475             | 3635  | 4380  | 34    |
| SDL 4 HO - 4FT                  | 4770             | 4990  | 5875  | 44    |
| SDL 4 VHO - 4FT                 | 5685             | 5965  | 7225  | 57    |
| SDL 8 LW - 8FT                  | 5995             | 6210  | 7400  | 58    |
| SDL 8 SS - 8FT                  | 6945             | 7268  | 8760  | 68    |
| SDL 8 HO - 8FT                  | 9555             | 9795  | 11752 | 88    |
| SDL 8 VHO - 8FT                 | 11370            | 11930 | 14450 | 114   |

LED Chips are frequently updated therefore values may increase.

## ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **SDL 4 LED HO CW UE**

| Prefix                         | Length                                 | Light Source | Lumen Output                                                                                              | Color Temperature                                                                | Line Voltage                                  | Options                                                                                                                                                       |
|--------------------------------|----------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SDL - Strip With Diffused Lens | 2 - 2 foot<br>4 - 4 foot<br>8 - 8 foot | LED          | LW - Low Watt<br>SS - Super saver<br>HO - High Output <sup>3</sup><br>VHO - Very High Output <sup>3</sup> | CW - Soft White (5000K)<br>NW - Neutral White (4000K)<br>WW - Warm White (3500K) | UE - Universal Electronic (120-277V) 347-347V | EM - Emergency Battery Pack <sup>1</sup><br>SD50 - Step Dimming to 50%<br>PM - Pre-wired Plug-in Assembly (specify circuitry See Options/Accessories Section) |

## ACCESSORY ORDERING INFORMATION (Accessories are field installed)

| Description                                                     | Order Number       |
|-----------------------------------------------------------------|--------------------|
| Grid Hanger                                                     | GH                 |
| Chain Hanger Set (36" length)                                   | CHS3               |
| Chain Hanger Set (60" length)                                   | CHS5               |
| Wire Guard - 4 foot                                             | WG240 <sup>2</sup> |
| T-bar Kits (includes junction box, wire collar, & grid hangers) | TBKT               |

1- Emergency Battery Pack not available on 2ft fixture.

2- 8ft fixture requires (2) wire guards.

3- HO and VHO for 4 ft. & 8ft. fixtures only.



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

05/25/16

Packet Pg. 186

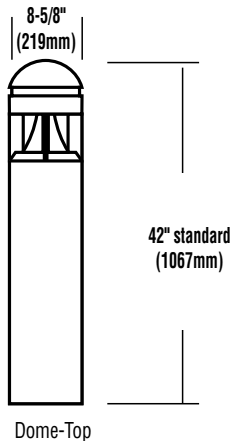
## LED BOLLARD LIGHT (XBVRD)



### DOE LIGHTING FACTS

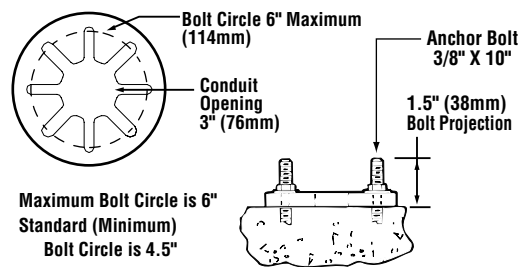
Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit [www.lightingfacts.com](http://www.lightingfacts.com) for specific catalog strings.

### DIMENSIONS



### BASE DETAIL

**Note:** Base plate dimensions may change without notice. Do not use for setting anchor bolts. Consult factory for base plate templates.



Also available in traditional light sources

### U.S. and international patents pending

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDs** - An array of 24 select high-brightness LEDs in Cool White (5000K), Warm White (3500K) or Neutral White (4000K) color temperature, 69 CRI

**REFLECTOR/DISTRIBUTION** - Indirect. Photometric data is tested in accordance to IESNA Procedures.

**HOUSING** - Crown: Virtually tamper-proof concealed stainless steel fasteners in the cast aluminum crown assembly.

Lower Housing: One-piece, .322 inch seamless, extruded aluminum. Various heights are available in 6" increments starting at a minimum of 30" (maximum height is 60"). Lower housing attaches to cast aluminum base plate with four stainless steel roll pins.

**OPTIONAL ROUGHNECK REINFORCEMENT** - .375" thick zinc plated, steel base plate with welded U shaped reinforcement. 3/8" diameter 302 stainless steel roll pins with 10,000 lb. shear load.

**LENS/GASKET** - One-piece, clear acrylic lens enclosure fully gasketed at top and bottom edge.

**ANCHOR BOLTS** - Requires four heavy-duty 3/8" x 10" galvanized steel anchor bolts.

**ELECTRICAL** - Universal voltage power supply (120-277 VAC, 50/60 Hz). 347-480V also available - 400mA is standard. Surge protector meets IEEE C62.41.2-2002, Scenario 1 Location Category C.

**DRIVER** - State-of-the-art driver technology designed specifically LSI LED light sources provides unsurpassed system efficiency. Driver complies with IEC and FCC standards.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F).

**FINISH** - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.

**DECAL STRIPING** - Color-coordinated decal is available in 9 standard decal colors or by custom order from a selection of hundreds. Decal is guaranteed for five years against peeling, cracking, or fading.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.

**LISTING** - Listed to U.S. and Canadian safety standards. Suitable for wet locations. DLC - not all possible distributions are DLC approved. Please refer to LSI or DLC web site for specific listings. For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at [www.designlights.org](http://www.designlights.org).

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.

ARRA  
Funding Compliant

ETL  
Intertek  
wet location

CE

UL

### LIGHT OUTPUT - XBVR

| Description           | # of LEDs | Output |       |
|-----------------------|-----------|--------|-------|
|                       |           | Lumens | Watts |
| Cool White XBVR ID    | 24        | 1338   | 38    |
| Neutral White XBVR ID | 24        | 1224   | 38    |
| Warm White XBVR ID    | 24        | 856    | 38    |

LED Chips are frequently updated therefore values may increase.



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

07/28/16

Packet Pg. 187



# LED BOLLARD LIGHT (XBVRD)

## PRODUCT ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XBVRF ID LED 24 400 CW UE BRZ 45**

| Prefix                                  | Distribution  | Light Source                     | # of LEDS | Drive Current | Color Temp                                                                                | Line Voltage                                                                                | Finish                                                                                                                                                | Options                                                                                                                                                                                                                                                   |
|-----------------------------------------|---------------|----------------------------------|-----------|---------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| XBVRF<br>Flat-Top<br>XBVRD<br>Round-Top | ID - Indirect | LED - Light<br>Emitting<br>Diode | 24        | 400           | CW - Cool White<br>(5000K)<br>NW - Neutral White<br>(4000K)<br>WW - Warm White<br>(3000K) | UE - Universal Electronic<br>(120-277V 50/60Hz)<br><br>347 - 347 volt<br><br>480 - 480 volt | BRZ - Bronze<br>BLK - Black<br>PLP - Platinum Plus<br>BUF - Buff<br>WHT - White<br>GPT - Graphite<br>SVG - Satin Verde Green<br>MSV - Metallic Silver | H - XX (Specify Height) <sup>1</sup><br>PCI120 - Button-type Photocell<br>PCI208, 240,277 - Button-type Photocell<br>PCI347 - Button-type Photocell<br>GFR - GFI Duplex Receptacle<br>LAB - Less Anchor Bolts<br>RN - Roughneck Heavy Duty Mounting Plate |

<sup>1</sup> - Taller or shorter heights available in 6" increments. Minimum height is 30". Maximum height is 60".

### ACCESSORY ORDERING INFORMATION (Accessories are field installed)

| Description                                           | Order Number |
|-------------------------------------------------------|--------------|
| ABKIT - Anchor Bolt Kit (BVR) 3/8" x 10" - Galvanized | 285560       |
| HSS - Round House Side Shield                         | 122510       |

#### Color Decals

45 - Light Gold  
20 - Charcoal Metallic  
55 - Black  
94 - Blue Black  
59 - Dark Green  
51 - Dark Red  
21 - Tomato Red  
50 - White  
700 - Aztec Silver Metallic

## BUG CHARTS

### XBVR- TYPE ID

| Drive Current | Color Temp. * | Lumens | Watts | LER | BUG Rating |
|---------------|---------------|--------|-------|-----|------------|
| 400           | CW            | 1338   | 38    | 35  | B1-U2-G1   |
|               | NW            | 1224   | 38    | 32  | B1-U2-G1   |
|               | WW            | 856    | 38    | 23  | B1-U1-G1   |

\* Color Temperature: WW-3000K, NW-4000K, CW-5000K



Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

07/28/16

Packet Pg. 188

## LED AREA LIGHTS - LSI SLICE SMALL (XLCS)



US & Int'l. patents pending

**SMARTTEC™** - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Select high-brightness LEDs in Cool White (5000°K nominal), or Neutral White (4000°K nominal) color temperature, 70 CRI (nominal).

**DISTRIBUTION/PERFORMANCE** - Types FT and 5. Exceptional uniformity creates bright environment at lower light levels.

**HOUSING** - One-piece, die-formed aluminum housing contains factory prewired driver. Wiring access door (with safety lanyard) located underneath.

**OPTICAL UNIT** - Clear tempered flat glass lens permanently sealed to weather-tight aluminum optic frame (includes pressure-stabilizing breather). Optic frame recessed into housing cavity and sealed to the housing with one-piece EPDM gasket.

**MOUNTING** - Tapered rear design allows fixtures to be mounted in 90° and 120° configurations without the need for extension arms. Use with 3" reduced drilling pattern. A round pole plate is required for mounting to round poles. Wall mount available by ordering wall mounting bracket (BKS-XBO-WM-\* -CLR). See Accessory Ordering Information chart for all brackets.

**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets Location Category C Low. Available with universal voltage power supply 120-277 VAC (50/60Hz input), and 347-480 VAC. Optional button-type photocells (PCI) are available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

**DRIVER** - Available in SS (Super Saver) and HO (High Output) drive currents. Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F)

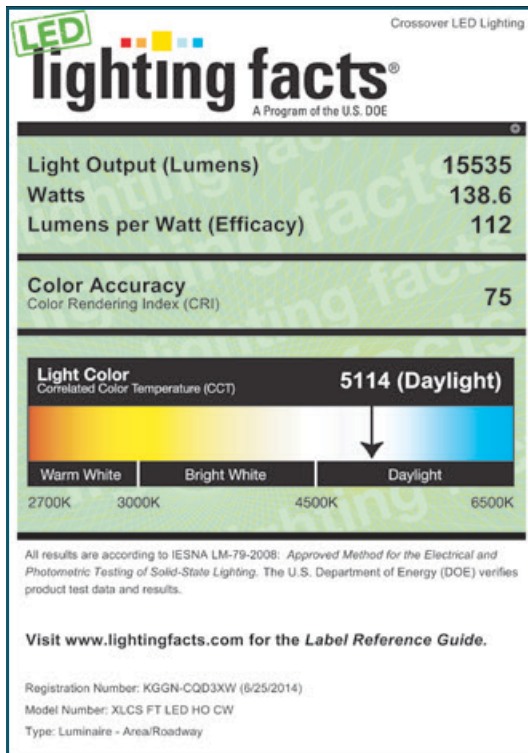
**FINISH** - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Available in black, bronze and white. Other standard LSI finishes available. Consult factory.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.

**SHIPPING WEIGHT (in carton)** - One fixture: 17.5 lbs. (7.9 kg). Packed two per carton: 30 lbs. (13.6 kg).

**LISTING** - UL listed to U.S. and international safety standards. Suitable for wet locations.



This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



Fixtures comply with ANSI C136.31-2010 American National Standard for Roadway Lighting Equipment - Luminaire Vibration 1.5G requirements.

| LIGHT OUTPUT - XLCS |    |                  |        |                 |
|---------------------|----|------------------|--------|-----------------|
|                     |    | Lumens (Nominal) |        | Watts (Nominal) |
|                     |    | Type FT          | Type 5 |                 |
| Cool White          | SS | 11400            | 11400  | 97              |
|                     | HO | 15500            | 15700  | 140             |
| Neutral White       | SS | 9200             | 9300   | 97              |
|                     | HO | 12100            | 12200  | 140             |



# LED AREA LIGHTS - LSI SLICE SMALL (XLCS)

## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XLCS 5 LED SS CW UE BLK PCI120**

| Prefix | Distribution                     | Light Source | Drive Current                       | Color Temperature                     | Input Voltage                                                                          | Finish                                     | Options                                                                            |
|--------|----------------------------------|--------------|-------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------------------------------|
| XLCS   | 5 - Type V<br>FT - Forward Throw | LED          | SS - Super Saver<br>HO -High Output | CW - Cool White<br>NW - Neutral White | UE - Universal Voltage<br>(120-277V)<br><br>347-480<br>Universal Voltage<br>(347-480V) | BLK - Black<br>BRZ - Bronze<br>WHT - White | Button Type Photocells<br>PCI120 - 120V<br>PCI208-277V - 208-277V<br>PCI347 - 347V |

### LUMINAIRE EPA CHART - XLCS

|                                                                                   |        |     |
|-----------------------------------------------------------------------------------|--------|-----|
|  | Single | 0.4 |
|  | D180°  | 0.8 |
|  | D90°   | 0.6 |
|  | T90°   | 1.4 |
|  | TN120° | 1.4 |
|  | Q90°   | 1.6 |

**Note:** House Side Shield adds to fixture EPA. Consult Factory.

### ACCESSORY ORDERING INFORMATION

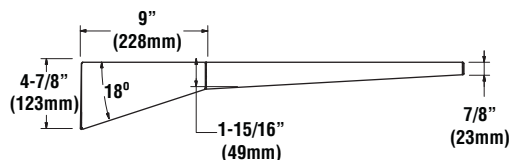
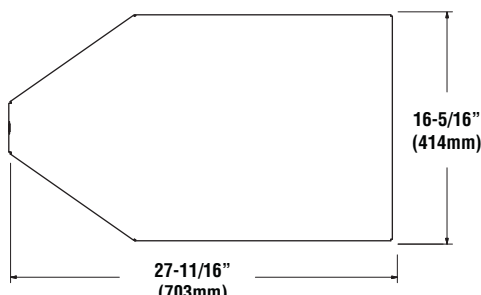
(Accessories are field installed)

| Description                                | Order Number       | Description                            | Order Number             |
|--------------------------------------------|--------------------|----------------------------------------|--------------------------|
| BKS-XBO-WM-* -CLR Wall Mount Bracket       | 382132CLR          | DFK208, 240 Double Fusing (208V, 240V) | DFK208, 240 <sup>2</sup> |
| XLCS-FT-HSS House Side Shield (Black only) | C/F <sup>1</sup>   | DFK480 Double Fusing (480V)            | DFK480 <sup>2</sup>      |
| X4RPP Round Pole Plate for 4" Poles        | 379967CLR          | FK347 Single Fusing (347V)             | FK347 <sup>2</sup>       |
| X5RPP Round Pole Plate for 5" Poles        | 379968CLR          |                                        |                          |
| FK120 Single Fusing (120V)                 | FK120 <sup>2</sup> |                                        |                          |
| FK277 Single Fusing (277V)                 | FK277 <sup>2</sup> |                                        |                          |

### FOOTNOTES:

- 1 - House Side Shields add to fixture EPA. Consult factory.
- 2 - Fusing must be located in the hand hole of pole.

### DIMENSIONS



## LED PATRIOT® WALL SCNCE (XPWS3)



### DOE LIGHTING FACTS

Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit [www.lightingfacts.com](http://www.lightingfacts.com) for specific catalog strings.

| LIGHT OUTPUT - XPWS3          |           |         |         |         |       |    |
|-------------------------------|-----------|---------|---------|---------|-------|----|
| Distribution/Lumens (Nominal) |           |         |         |         |       |    |
| Milliamps                     | # of LEDs | Type FT | Type WT | Type WW | Watts |    |
| Cool White                    | 350 mA    | 28      | 3100    | 3000    | 3200  | 34 |
|                               |           | 48      | 5100    | 5100    | 5200  | 55 |
|                               | 450 mA    | 28      | 3700    | 3600    | 3800  | 44 |
|                               |           | 48      | 6200    | 6100    | 6300  | 72 |
| Neutral White                 | 350 mA    | 28      | 2900    | 2900    | 3100  | 34 |
|                               |           | 48      | 4900    | 4800    | 4900  | 55 |
|                               | 450 mA    | 28      | 3500    | 3500    | 3700  | 44 |
|                               |           | 48      | 5800    | 5700    | 5800  | 72 |

LED Chips are frequently updated therefore values may increase.

Also available in traditional light sources

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



IP65



US patent 7828456, 8002428 and CAN 2736757 & 2736757 and MX patent 29631 and ISRL 49679 and AUS 2008312668 and US & Int'l. patents pending

**SMARTTEC™** -LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature

**ENERGY SAVING CONTROL OPTIONS** - DIM- 0-10 volt dimming enabled with controls by others.

**OPTIONAL INTEGRAL MOTION SENSOR** - Passive infrared motion sensor activates switching of luminaire light levels. High level light is activated when passersby enter target zone and increased to full bright in 1-2 seconds. Low light level (30% of maximum drive current) is activated when target zone is absent of motion activity for 5 minutes and is gradually ramped down (10 seconds) to low level. Sensor detection range 110° horizontal x 93° vertical x 10 meters maximum distance.

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Available with 28 or 48 select high-brightness LEDs in Cool White (5000K nominal) or Neutral White (4000K nominal) color temperature, 70 CRI (nominal).

**OPTICS/DISTRIBUTIONS** - Ultra-high efficiency reflectors provide three distributions. Choose from Wide Throw (WT), Forward Throw (FT) or Wall Wash (WW).

**HOUSING** - One-piece die-cast aluminum housing is smoothly contoured rectangular shape. Mounting hardware is stainless steel or electro-zinc plated steel. Housing and optical unit are sealed with extruded silicone gasket; supply conductors with molded EPDM bushing.

**OPTICAL UNIT** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure stabilizing breather allows super-tight protection while preventing cycling from building up internal pressures and vacuums that can stress optical unit seals.

**WALL MOUNTING** - Galvanized-steel universal wall mounting plate easily mounts directly to 4" octagonal or square junction box. EPDM gasket is supplied to be installed between mounting plate and junction box, sealing junction box from entrance of water. Universal plate permits fixture to be mounted in uplighting (indoor only) or downlighting position.

**POLE MOUNTING** - XPMa (for square) or XPMAR (for round) allows mounting to poles in single and D180 configurations. Use with 3" reduced drilling pattern.

**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) or 347-480VAC.

**DRIVER** - Available in 350mA and 450mA drive currents (Drive currents are factory programmed). Components are fully encased in potting material for IP65 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed.

**EMERGENCY OPTIONS** - Optional integral emergency battery-back-up options are available. BB option operates in 0°C to 60°C ambient temperature and CWBB operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F)

**FINISH** - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.

**SHIPPING WEIGHT (in carton)** - 30 lbs./13.6Kg

**LISTING** - ETL listed to ANSI/UL1598, UL8750 and other U.S. and international safety standards. Suitable for wet locations in downlight position. Optional Class 1 Division 2 (groups A, B, C & D) hazardous location rating is available (Select HL option). For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at [www.designlights.org](http://www.designlights.org).



# LED PATRIOT® WALL SCNCE (XPWS3)

## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XPWS3 FT LED 48 450 CW UE WHT BB**

| Prefix                          | Distribution                                            | Light Source | # of LEDs | Drive Current              | Color Temperature                     | Input Voltage                                   | Finish                                                                                                                                  | Options                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------|---------------------------------------------------------|--------------|-----------|----------------------------|---------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| XPWS3 - LED Patriot Wall Sconce | WT - Wide Throw<br>FT - Forward Throw<br>WW - Wall Wash | LED          | 28<br>48  | 350 - 350mA<br>450 - 450mA | CW - Cool White<br>NW - Neutral White | UE - Universal Voltage (120-277)<br><br>347-480 | BLK - Black<br>BRZ - Bronze<br>GPT - Graphite<br>MSV - Metallic Silver<br>PLP - Platinum Plus<br>SVG - Satin Verde Green<br>WHT - White | BB - Battery Back-up <sup>1</sup><br>CWBB - Cold Weather Battery Back-up <sup>1</sup><br>DIM - 0 - 10V dimming (from external signal) <sup>2</sup><br>IMS - Integral Motion Sensor <sup>2</sup><br>EMR2 - Two Emergency 12V Circuit Provisions with (2) 35 Watt Halogen Lamps <sup>3</sup><br>PCI 120 - Button Type Photocell<br>PCI 208 - Button Type Photocell<br>PCI 240 - Button Type Photocell<br>PCI 277 - Button Type Photocell<br>PCI 347 - Button Type Photocell<br>HL - Class1, Division2, Hazardous Location Rating. ETL listed to UL844 <sup>4</sup><br>XPMA - Pole Mounting Adaptor w/fixture backplate for use with square poles <sup>5</sup><br>XPMAR4 - Pole Mounting Adaptor w/fixture backplate for use with 4" O.D. round poles <sup>5</sup><br>XPMAR5 - Pole Mounting Adaptor w/fixture backplate for use with 5" O.D. round poles <sup>5</sup> |

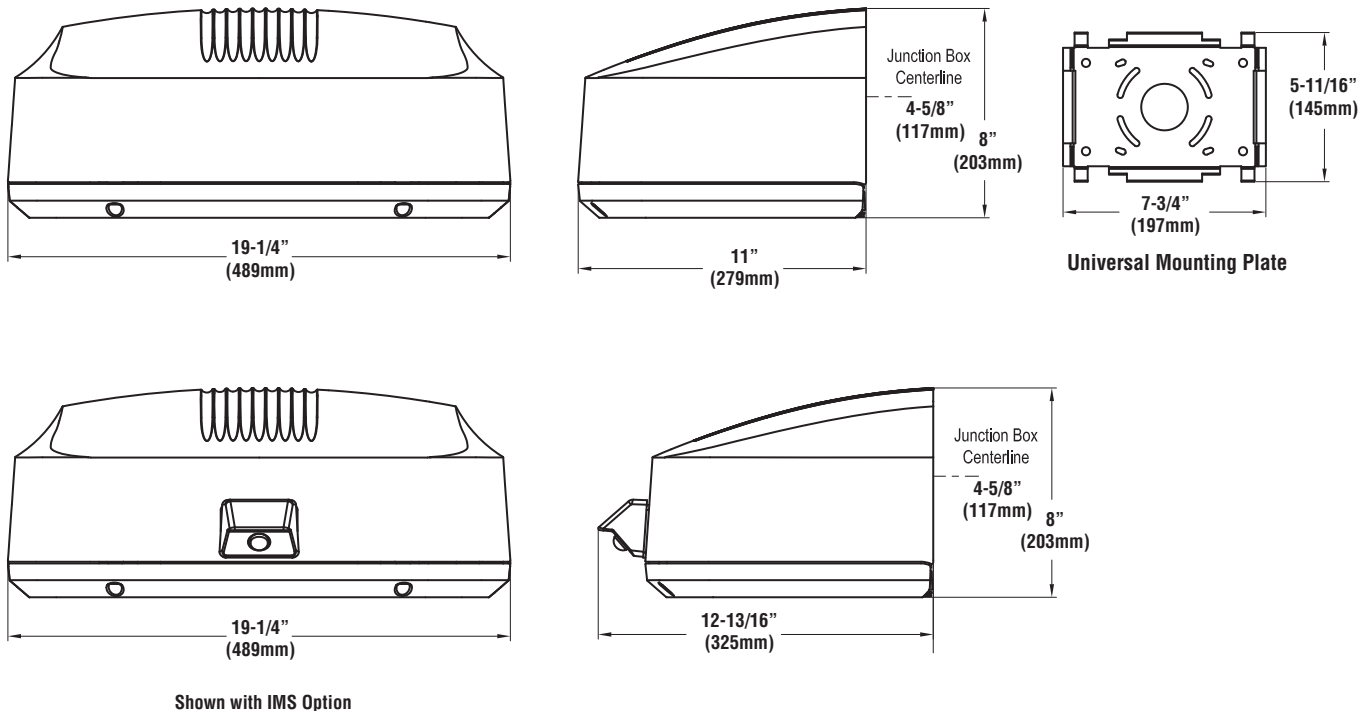
### ACCESSORY ORDERING INFORMATION (Accessories are field installed)

| Description                                                 | Order Number       | Description                 | Order Number            |
|-------------------------------------------------------------|--------------------|-----------------------------|-------------------------|
| XPWS3 Polycarbonate Shield                                  | 244657             | DFK208, 240 - Double Fusing | DFK208,240 <sup>6</sup> |
| XPWS3 SW BLK - Surface Wiring Box (Available in black only) | 356915BLK          | DFK480 - Double Fusing      | DFK480 <sup>6</sup>     |
| FK120 - Single Fusing                                       | FK120 <sup>6</sup> | FK347 - Single Fusing       | FK347 <sup>6</sup>      |
| FK277 - Single Fusing                                       | FK277 <sup>6</sup> |                             |                         |

#### FOOTNOTES:

- 1 - Available with UE voltage only. Not available with EMR2 or HL options.
- 2 - DIM and IMS cannot be ordered together.
- 3 - Utilizes GZ4 sockets. 12 volt separate circuits required. Not available with battery back-up, photocell option, HL, XPMA or XPMAR options.
- 4 - Not available with battery backup, photocell or EMR2 option.
- 5 - Not available with EMR2 option. Designed with 3" reduced drilling pattern. For S or D180 mounting configuration only.
- 6 - Fusing to be installed in a compatible junction box supplied by contractor.

## DIMENSIONS



## LED SOFFIT LIGHT (XSL2)



US patents D574994 & D595896 & 7828456 and US & Int'l. patents pending

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Select high-brightness LEDs. Cool White 5000K color temperature, 69 CRI (nominal).

**DRIVER CURRENT** - Super saver (SS) - most economical and highest lumens per watt or High Output (HO) - highest output per initial dollar.

**DISTRIBUTION/PERFORMANCE** - Type S (Symmetric) or 5A (Type 5). Excellent uniformity with Bug rating of BU-UO-G1. Optional diffused lens available to reduce visibility of diodes

**HOUSING/OPTICAL UNIT** - Housing is die-formed aluminum with a gasketed clear tempered glass lens providing a water-resistant seal. Weather-tight aluminum enclosure contains factory prewired driver to ensure no water entry. Sealed optical unit containing LEDs rated IP67.

**MOUNTING** - Direct mounts with screws through the trim frame (standard). Optional channel bar kit available to suspend assembly from ceiling joists. 12" clearance required for ease of installation.

**ELECTRICAL** - Universal frequency power supply (50/60 Hz). Supply voltage must be specified for pre-wired thermal protectors.

**DRIVER** - State-of-the-art driver technology designed specifically for LSI LED light sources provides unsurpassed system efficiency. Driver will operate with input of 120/208/240/277V (50/60 Hz). Components are fully encased in potting material for moisture resistance. Driver complies with IEC and FCC standards.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F).

**FINISH** - Each fixture is finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard color is white.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Application layouts are available upon request. Contact LSI Applications Group at [lighting.apps@lsi-industries.com](mailto:lighting.apps@lsi-industries.com)

**LISTING** - Listed to U.S. and Canadian safety standards. Suitable for damp locations.

Crossover® LED Lighting

# lighting facts<sup>CM</sup>

A Program of the U.S. DOE

|                            |      |
|----------------------------|------|
| Light Output (Lumens)      | 4957 |
| Watts                      | 62.2 |
| Lumens per Watt (Efficacy) | 79   |

|                             |    |
|-----------------------------|----|
| Color Accuracy              | 69 |
| Color Rendering Index (CRI) |    |

**Light Color**  
Correlated Color Temperature (CCT)

5100 (Daylight)

2700K 3000K 4500K 6500K

Warm White Bright White Daylight

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results. Products qualified under the DOE ENERGY STAR® program have the ENERGY STAR mark on this label.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: KGGN-EDE2GE  
Model Number: XSL2-S-LED-50-CW-UE  
Type: Surface and pendant-mounted downlights

This "Lighting Facts Label" represents LSI's commitment, through participation in the Department of Energy's SSL Quality Advocates program, to accurately report performance criteria of our LED fixtures. **This label represents a single test of a single fixture. Input power below represents rated values for the family.** Color temperature and lumen output for each variation of this Crossover® fixture can be found in the ordering information below as well as at [www.lightingfacts.com](http://www.lightingfacts.com).

| LIGHT OUTPUT - XSL2 |                  |        |       |     |
|---------------------|------------------|--------|-------|-----|
|                     | Clear Lens       | Lumens | Watts | LPW |
| Type S              | SS - Super Saver | 6,193  | 60    | 103 |
|                     | HO - High Output | 8,348  | 86    | 97  |
| Type 5A             | SS - Super Saver | 5,158  | 60    | 86  |
|                     | HO - High Output | 6,959  | 86    | 81  |
|                     | Diffused Lens    |        |       |     |
| Type S              | SS - Super Saver | 5,752  | 60    | 96  |
|                     | HO - High Output | 6,751  | 87    | 78  |
| Type 5A             | SS - Super Saver | 4,393  | 60    | 73  |
|                     | HO - High Output | 5,842  | 87    | 67  |

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



IP67



Suitable for damp locations





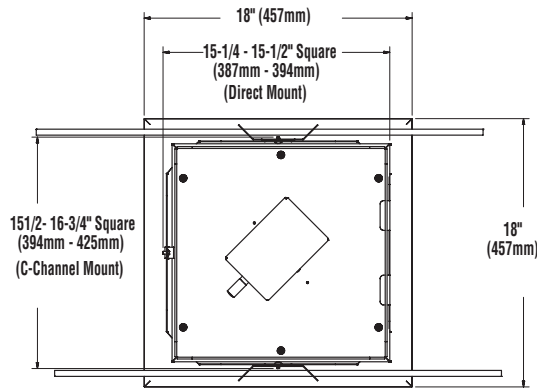
# LED SOFFIT LIGHT (XSL2)

## PRODUCT ORDERING INFORMATION

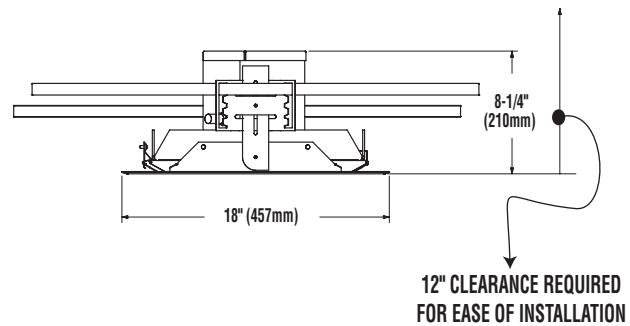
TYPICAL ORDER EXAMPLE: **XSL2 S LED 50 SS CW 120 WHT CMT**

| Prefix              | Distribution              | Light Source | # of LEDs | Drive Current                        | Color Temperature                 | Input Voltage                   | Finish      | Options                                                                    |
|---------------------|---------------------------|--------------|-----------|--------------------------------------|-----------------------------------|---------------------------------|-------------|----------------------------------------------------------------------------|
| XSL2 - Soffit Light | S - Symmetric 5A - Type 5 | LED          | 50        | HO - High Output<br>SS - Super Saver | CW - Cool White<br>(5000° K nom.) | 120<br>208<br>240<br>277<br>347 | WHT - White | CMT - Channel Bar Mounting Kit<br>DM - Direct Mount<br>DFL - Diffused Lens |

### DIMENSIONS

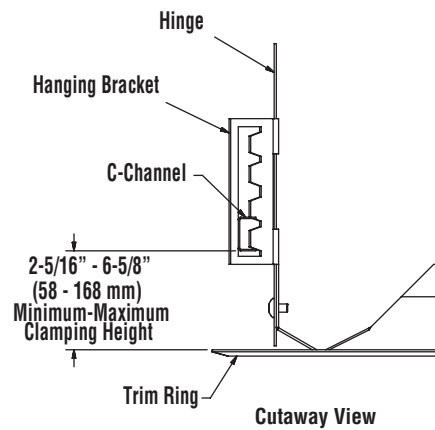


TOP VIEW



SIDE VIEW  
(Channel Mount Shown)

SHIPPING WEIGHT - 14 lbs. (6.4kg)



Cutaway View



creating remarkable solutions  
for a higher quality of life

9801 Renner Boulevard  
Lenexa, Kansas  
66219-9745

913.492.0400  
913.577.8200 fax

Office Locations  
Lenexa, KS  
Kansas City, MO  
O'Fallon, MO  
Chesterfield, MO  
Omaha, NE  
Rock Island, IL  
Broomfield, CO  
Dallas/Ft. Worth, TX

www.gbateam.com

## MEMORANDUM

To: Jason W. Jaggi, AICP (City of Creve Coeur)  
From: Amanda J. Anderson P.E., PTOE  
David J. Mennenga, P.E., PTOE  
Date: November 21, 2016  
Subject: Proposed Mobil Rebuild – Traffic Impact Study Review

As requested, GBA staff has completed a review of the traffic impact study report and site plans submitted in association with the proposed redevelopment of the Mobil gas and convenience store with car wash, located in the northwest quadrant of the intersection of Olive Boulevard with Schulte Road in Creve Coeur, Missouri. The traffic impact study report prepared by CBB Transportation was determined to be a very thorough evaluation of the existing traffic conditions, as well as for the expected future traffic operations with the redevelopment of this proposed Mobil gas station / car wash site.

As part of this study, CBB developed trip generation estimates based on a Mobil station with similar improvements to the east on Olive Boulevard in Olivette, Missouri. It should be noted that the trip generation estimates for the proposed Mobil station redevelopment site are lower than the trip generation rates as described in the Institute of Transportation Engineers' (ITE) "Trip Generation Manual" for Land Use 946 – Service Station with Convenience Market and Car Wash by nearly 20% in both the morning and evening peak hour. The mid-day peak hour estimate is higher than the ITE trip generation rate. Due to the proximity of the existing Mobil gas station used for estimating trips for the study, the CBB developed trip generation rates seem reasonable for this location.

Using information provided in the ITE "Trip Generation Manual" for similar land uses, the assumed "average" pass-by trip reduction of 62 percent during the morning peak hour and 56 percent during both the mid-day and evening peak hours are appropriate.

Attachment: GBA Mobil Rebuild Memo 11-21-2016 (16-031 Mobil on the Run and Brite Worx Car Wash RZG, CUP, SDP)



Based upon the trip generation rates for the similar Mobil station near the study site and the reduction of pass-by trips and existing trips generated by the site, the proposed Mobil station would only be expected to create 50 “new” trips (i.e., 20 inbound trips, 30 outbound trips) during the morning peak traffic hour. The site would generate 80 “new” trips (i.e., 35 inbound trips, 45 outbound trips) during the mid-day peak hour, and 60 “new” trips (i.e., 30 inbound trips, 30 outbound trips) during the evening peak hour.

The traffic impact study stated the site-generated traffic was assigned to the adjoining roadway system based on existing traffic patterns. This assignment is reasonable for the proposed redevelopment of the Mobil gas station / car wash site, with the majority of the site-generated traffic expected to access the site via Olive Boulevard. The assumed annual background traffic growth rate of 0.5% per year for the future 20-year design horizon is also reasonable for this location, due to the limited potential for other new developments in the surrounding area.

Related to the traffic impact study report itself, we do have the following comments regarding several erroneous statements or factual discrepancies contained therein:

- The report states that Version 8 of the Synchro analysis software was utilized for this traffic study. Although we would not expect significantly different analysis results, the consultant should consider using the most current version (Ver. 9) of Synchro for future studies submitted to the City.
- It is standard practice to report the 95<sup>th</sup>-percentile queue length for each movement at a signalized intersection. Queue lengths have been only reported for the critical left-turns on the southbound approach and the eastbound approach at the intersection of Olive Boulevard with Schulte Road. The City may consider requesting additional queue length information within the study area.
- On page 8 of the Base Operating Conditions analyses, it was stated that, “...no two-stage left-turn were assumed in the analyses...” because the spacing to the signal does not typically allow for the these turns. On page 20, the study report indicates two-stage left-turn were included as part of the analyses for the 2016 Build Operating Conditions. The City may consider requesting clarification for the discrepancies between the two scenarios since the 2016 Build results may be optimistically reported for southbound movements with this assumption.
- On Schulte Road, left-turns are prohibited into the site. This will be difficult to enforce without constructing a non-traversable median on Schulte Road. However, such a median cannot be

constructed without impacting the southbound left-turn operations into the Shell Station or onto Schulte Road.

- The proposed full access driveway appears to be approximately 320 feet from Schulte Road. Using MoDOT's Access Management Guidelines, the suggested corner clearance for a Major – Non Freeway type facility is 440 to 660 feet. As noted in the study report, the project consolidates several access points onto Olive Boulevard, and MoDOT staff has preliminarily approved the proposed access locations.
- The proposed right-out on Olive Boulevard, at the west edge of the site, is approximately 50 feet from the existing driveway for the adjacent property. If the drive were constructed more perpendicular to Olive Boulevard, the separation distance could be increased. Additionally, the distance between the right-out driveway and the full access driveway on Olive Boulevard appears to be approximately 350 feet, also short of the recommended 440 feet of separation distance. Final MoDOT traffic and permits staff approval may be required for these proposed access locations.

The on-site parking lot layout provides for a very straight-forward internal circulation pattern, including the one-way ingress point into the car wash lanes, one-way egress routes exiting the carwash, and two-way circulation lanes elsewhere.

The submitted site plan includes a total of 29 parking spaces adjacent to the convenience store. Based upon a review of ITE's "Parking Generation" criterion for this type of gasoline/service station with convenience market land use, the average peak period parking demand rate of 0.75 vehicles per fueling position would indicate that about 15 parking spaces should be required. In order to fully cover the upper end of ITE's 85<sup>th</sup>-percentile confidence interval range (i.e., a rate of 1.03 vehicles per fueling position), a total of 21 parking spaces would instead need to be provided for this site. Based on the City's Zoning Ordinance 405.820, four parking spaces are required per 1,000 square feet of gross floor area. Therefore, more than adequate parking has been provided for this proposed site redevelopment project.

cc: MCE, file



Steven V. Stenger  
County Executive

Saint Louis  
**COUNTY**  
**TRANSPORTATION**  
**PUBLIC WORKS**

Nichalos D. Gardner, Ph.D., P.E.  
Director

Stephanie Leon Streeter, P.E.  
Deputy Director

November 21, 2016

Mr. Brian Rensing, P.E., P.T.O.E.  
Associate – Transportation Engineer  
Crawford, Bunte, Brammeier  
12400 Oliver Boulevard, Suite 430  
St. Louis, Missouri 63141

RE: Traffic Impact Study  
Mobil Rebuild with Car Wash

Dear Mr. Rensing:

I have completed my review of the November 4, 2016 traffic impact study that you prepared for the proposed development in the northwest quadrant of the intersection of Olive Boulevard (Missouri Route 340) and Schulte Road in Creve Coeur, Missouri.

Based on the assumption of:

- A 20-pump service station with convenience market and car wash

I am satisfied that your study conclusions are a reasonably accurate assessment of traffic conditions that might be anticipated upon completion of this project. I am generally satisfied that the methodology of this study is valid. I agree with the following required roadway improvements:

- Relocation and reconfiguration of Schulte Road access to be opposite the service station access to the east while restricting left turns into the subject site
- Appropriate signal improvements as directed by the Missouri Department of Transportation
- Reservation of ground for potential future alignment of Schulte Road

Please submit site plans for concept approval showing roadway improvements, however note that any change to the approved site plan or traffic impact study may require review, and approval from this Department and may result in changes in requirements. No further submittals of the traffic impact study to St. Louis County Department of Transportation will be required unless changes to the site study are made. Any submittals required by other reviewing agencies will need to be reviewed by this Department. While no resubmittal of this study is being required at this time, should it become necessary in the future, please address the following comment:

- Traffic exiting the site should be more balanced amongst access points when level of service is particularly deficient at one while considerable excess capacity exists at others. In this case, is it reasonable to assume the large number of left turns at the unsignalized Olive Boulevard access when access to the signal is provided at Schulte Road?

Thank you for the opportunity to review your traffic impact study for this development. Please feel free to contact me at (314) 615-8594, if you require any further information or assistance.

Sincerely,



Adam J. Spector, P.E.  
Transportation Planning Project Manager

AJS:mtb

cc: Kevin Kamp, Civil & Environmental Consultants  
Whitney Kelly, City Planner, City of Creve Coeur  
Karen Yeomans, Southwest Area Engineer, MoDOT



St. Louis District  
Gregory J. Horn, District Engineer

Missouri Department of Transportation

1590 Woodlake Drive  
Chesterfield, Missouri 63017-5712  
314.275.1500  
Fax: 573.522.6475  
1.888.ASK MODOT (275.6636)

January 18, 2017

Lee Cannon, P.E., PTOE  
CBB  
12400 Olive Blvd, Suite 430  
St. Louis, MO 63141

RE: Mobil Gas Station

Dear Mr. Cannon,

This is in response to the meeting that was held on January 18, 2017 in regards to the comments that were submitted for the Mobil Gas Station Traffic Impact Study (TIS) on Missouri Route 340 at Schulte Road. During the meeting each topic that was outlined in the TIS review comments was thoroughly discussed and the following recommendations were agreed to by all parties:

- The southbound dual left turns, due to geometric constraints with the southern approach, will not be required to be constructed.
- The development will dedicate right of way for future construction of dual southbound left turn lanes.
- The signal must be brought up to ADA compliance. This includes crosswalks on all 4 legs of the intersection with Audible Push Buttons and Countdown Pedestrian Signal Heads. If a specific crossing creates a safety concern, you can fill out a design exception for review and approvals.
- An additional signal head is required for the southbound through movement. This can be mounted overhead on the existing mast arm or on a pedestal in the median island at the northbound approach.
- Based on the reduced number of trips that will be generated by the site, the right turn lane warrants on westbound Route 340 will need to be revised.

Sincerely,

Jeanette Ruggeri  
Senior Traffic Studies Specialist  
Missouri Department of Transportation  
SouthWest St. Louis County  
jeanette.ruggeri@modot.mo.gov



*Our mission is to provide a world-class transportation experience that delights our customers and promotes a prosperous Missouri.*

www.modot.org

Attachment: MoDOT\_TIS\_Revised\_Review\_Comments\_January2017 (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)



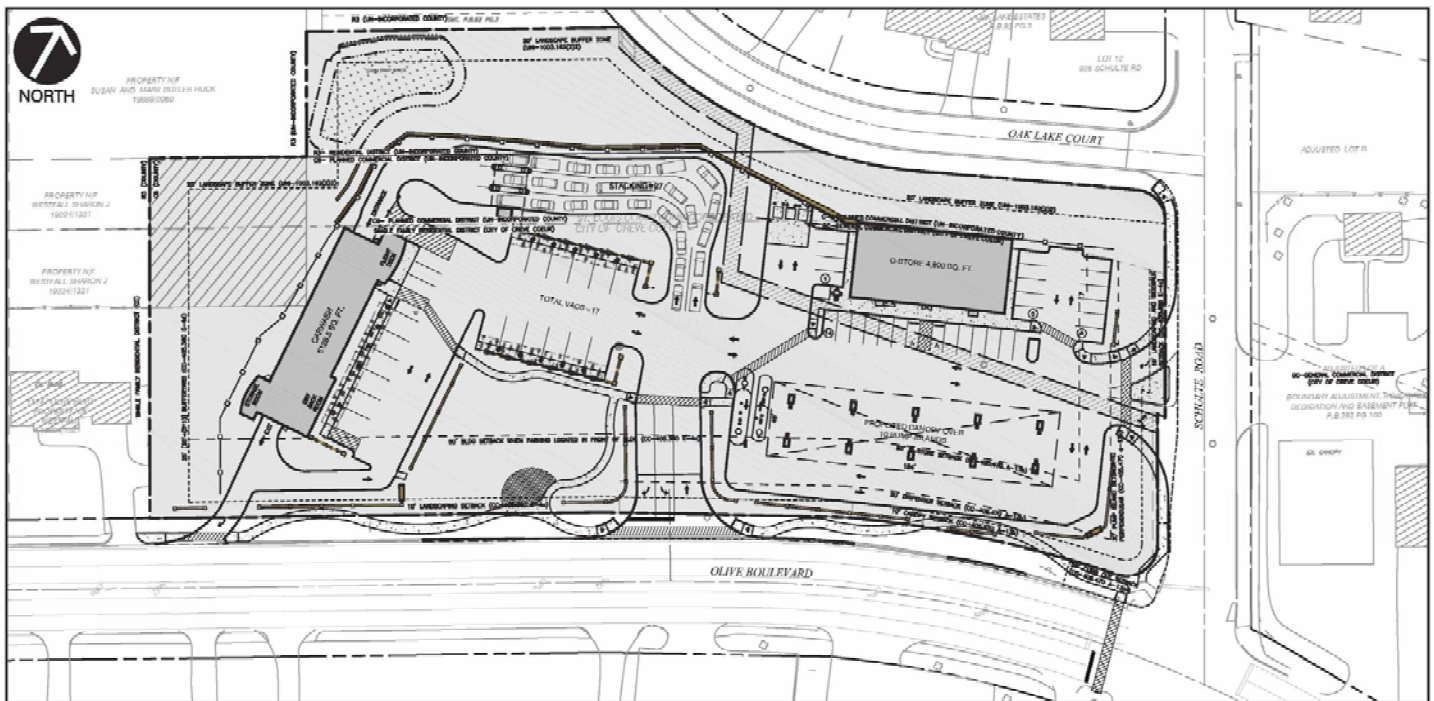
# Traffic Impact Study

for

## Proposed Mobil Rebuild with Car Wash

Creve Coeur, Missouri

11.04.2016



**OVERALL SITE MAP**

SCALE: 1" = 50'

prepared by:



prepared for:

Civil & Environmental Consultants, I  
4848 Park 370 Boulevard, Suite F  
Hazelwood, Missouri 63042

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

## Table of Contents

|                                                                                 |           |
|---------------------------------------------------------------------------------|-----------|
| <b>TABLE OF CONTENTS .....</b>                                                  | <b>i</b>  |
| <b>LIST OF EXHIBITS .....</b>                                                   | <b>ii</b> |
| <b>LIST OF TABLES.....</b>                                                      | <b>ii</b> |
| <b>LIST OF FIGURES.....</b>                                                     | <b>ii</b> |
| <b>INTRODUCTION.....</b>                                                        | <b>1</b>  |
| <b>BASE TRAFFIC CONDITIONS .....</b>                                            | <b>4</b>  |
| EXISTING ROAD SYSTEM .....                                                      | 4         |
| BASE TRAFFIC VOLUMES .....                                                      | 5         |
| BASE OPERATING CONDITIONS .....                                                 | 6         |
| QUEUE OBSERVATIONS .....                                                        | 10        |
| DELAY OBSERVATIONS AT OLIVE BOULEVARD AND WOODSHIRE LANE/RENEE LANE .....       | 11        |
| <b>PROPOSED REDEVELOPMENT .....</b>                                             | <b>12</b> |
| PROPOSED ACCESS .....                                                           | 12        |
| DRIVEWAY SIGHT DISTANCE .....                                                   | 12        |
| TRIP GENERATION .....                                                           | 13        |
| <i>Trip Generation – ITE Data .....</i>                                         | <i>13</i> |
| <i>Trip Generation – Local Data .....</i>                                       | <i>14</i> |
| TRIP DISTRIBUTION .....                                                         | 16        |
| <b>2016 BUILD CONDITIONS.....</b>                                               | <b>18</b> |
| 2016 BUILD TRAFFIC VOLUMES .....                                                | 18        |
| RIGHT-TURN LANE WARRANTS .....                                                  | 18        |
| 2016 BUILD OPERATING CONDITIONS .....                                           | 20        |
| ALTERNATIVES ANALYSIS .....                                                     | 22        |
| <i>Signal Timing Adjustments.....</i>                                           | <i>22</i> |
| <i>Add Flashing Yellow Arrow.....</i>                                           | <i>22</i> |
| <i>Provide a Southbound Right-Turn Lane.....</i>                                | <i>22</i> |
| <i>Provide Dual Southbound Left-Turn Lanes and Split-Phase North-South.....</i> | <i>23</i> |
| <i>Pedestrian Issues.....</i>                                                   | <i>24</i> |
| <b>20-YEAR CONDITIONS .....</b>                                                 | <b>27</b> |
| FORECASTED 20-YEAR NO-BUILD CONDITIONS (2036) .....                             | 27        |
| FORECASTED 20-YEAR BUILD CONDITIONS (2036) .....                                | 27        |
| <b>CONCLUSIONS.....</b>                                                         | <b>34</b> |



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

## List of Exhibits

|                                                                |    |
|----------------------------------------------------------------|----|
| EXHIBIT 1: PRELIMINARY SITE PLAN (PROVIDED BY OTHERS).....     | 2  |
| EXHIBIT 2: BASE TRAFFIC VOLUMES (2013 COUNTS) .....            | 7  |
| EXHIBIT 3: NET INCREASE OF SITE-GENERATED TRAFFIC VOLUMES..... | 17 |
| EXHIBIT 4: 2016 BUILD TRAFFIC VOLUMES .....                    | 19 |
| EXHIBIT 5: 20-YEAR NO-BUILD TRAFFIC VOLUMES.....               | 28 |
| EXHIBIT 6: 20-YEAR BUILD TRAFFIC VOLUMES .....                 | 29 |

## List of Tables

|                                                                                                       |    |
|-------------------------------------------------------------------------------------------------------|----|
| TABLE 1: LEVEL OF SERVICE THRESHOLDS .....                                                            | 8  |
| TABLE 2: TRAFFIC OPERATING CONDITIONS – BASE TRAFFIC VOLUMES.....                                     | 9  |
| TABLE 3: OBSERVED DELAYS – EXISTING CONDITIONS .....                                                  | 11 |
| TABLE 4: ITE TRIP GENERATION ESTIMATE – MOBIL GAS STATION REBUILD.....                                | 14 |
| TABLE 5: LOCAL TRIP GENERATION ESTIMATE – BASED ON CURRENT TRIPS AND FUELING POSITIONS .....          | 14 |
| TABLE 6: ESTIMATED TRIPS FOR PROPOSED MOBIL GAS STATION REBUILD BASED ON TRANSACTION DATA.....        | 15 |
| TABLE 7: INCREASE IN TRIPS FOR PROPOSED MOBIL GAS STATION REBUILD .....                               | 16 |
| TABLE 8: TRAFFIC OPERATING CONDITIONS – BUILD TRAFFIC VOLUMES.....                                    | 21 |
| TABLE 9: BUILD OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – AM PEAK HOUR .....       | 24 |
| TABLE 10: BUILD OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – MIDDAY PEAK HOUR.....   | 25 |
| TABLE 11: BUILD OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – PM PEAK HOUR.....       | 26 |
| TABLE 12: PROGRESSION ANALYSIS – 70TH PERCENTILE LINK BANDS .....                                     | 26 |
| TABLE 13: 20-YEAR OPERATING CONDITIONS.....                                                           | 30 |
| TABLE 14: 20-YEAR OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – AM PEAK HOUR .....    | 32 |
| TABLE 15: 20-YEAR OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – MIDDAY PEAK HOUR..... | 32 |
| TABLE 16: 20-YEAR OPERATING CONDITIONS WITH ALTERNATIVE IMPROVEMENT SCENARIOS – PM PEAK HOUR.....     | 33 |
| TABLE 17: 20-YEAR PROGRESSION ANALYSIS – 70 <sup>TH</sup> PERCENTILE LINK BANDS.....                  | 33 |

## List of Figures

|                                                  |    |
|--------------------------------------------------|----|
| FIGURE 1: SITE LOCATION MAP.....                 | 1  |
| FIGURE 2: RIGHT-TURN LANE WARRANTS (MODOT) ..... | 18 |

*Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri*

## Introduction

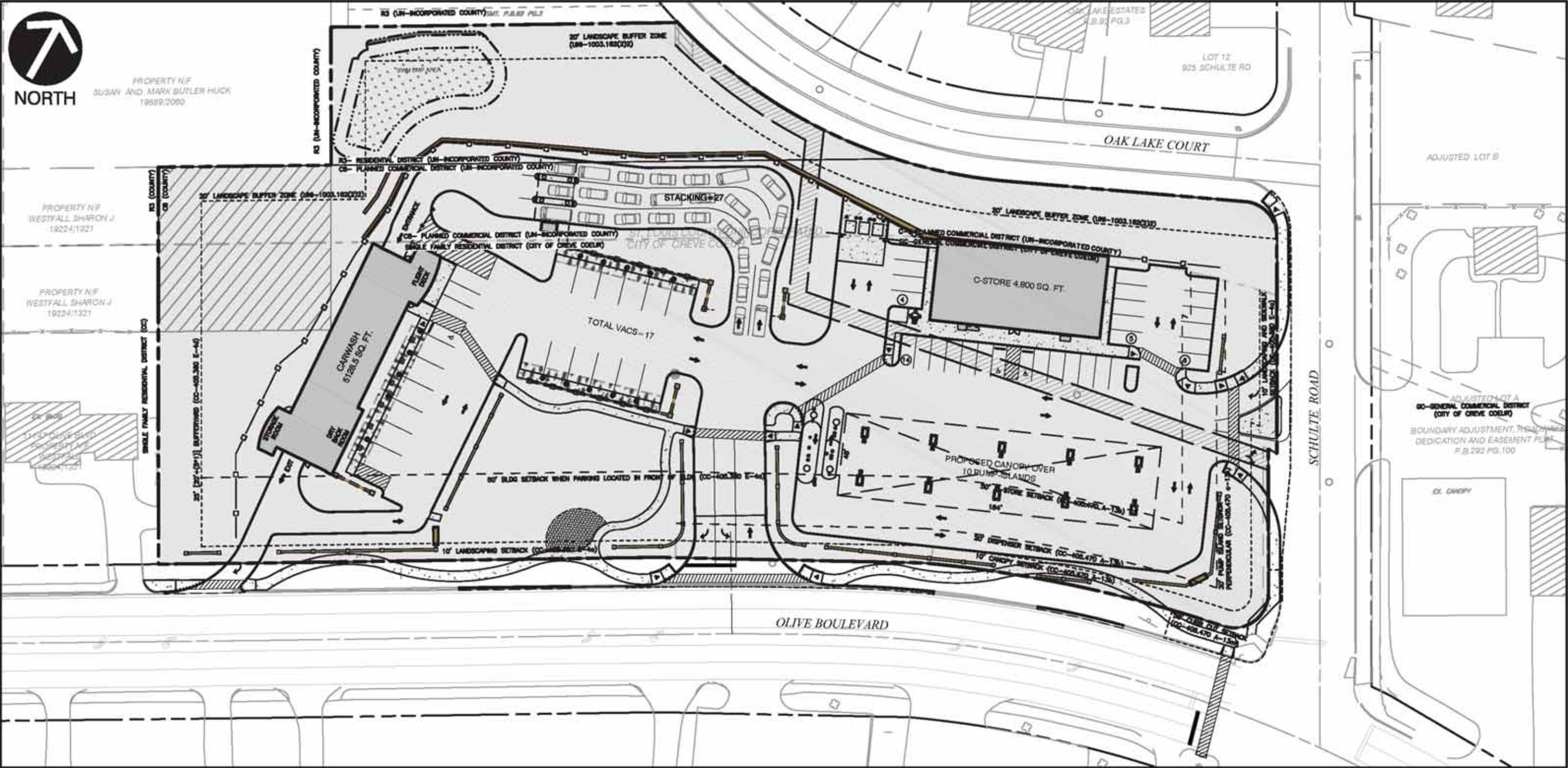
CBB has completed a traffic impact study for the Mobil Gas and Convenience Store with Car Wash redevelopment in Creve Coeur, Missouri. The redevelopment site is located on the northwest quadrant of Olive Boulevard at Schulte Road. The site location and the adjacent roadways are depicted in **Figure 1**.



**Figure 1: Site Location Map**

The existing Mobil gas station with eight vehicle fueling positions, small convenience kiosk, and car wash as well as three single-family homes along Olive Boulevard (currently used as commercial businesses) and three single-family homes along Oak Lake Court occupy the site today. It is our understanding that the existing Mobil gas station would be re-built with twenty vehicle fueling positions and an expanded convenience store, as well as an improved car wash. Access to the site would be provided via one right-out only driveway along Olive Boulevard near the west property line and one full access driveway on Olive Boulevard. Additionally, one three-quarter access driveway (no left-turn in) is proposed on Schulte Road. No access is proposed to Oak Lake Court. **Exhibit 1** illustrates the preliminary site plan provided by your civil engineer.





OVERALL SITE MAP  
SCALE: 1" = 50'

Attachment: 20161104\_Traffic Study CBB (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)

---

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

---

It should be noted that five curb cuts along Olive Boulevard (two to the existing Mobil site and three that serve residential structures operating as business) would be consolidated into the two access points noted above. The existing access to Schulte Road would be moved further to the north (away from the signal) to align with the existing Shell gas station on the east side of the road and would be limited to three-quarter access.

A scoping meeting was held with representatives from the Missouri Department of Transportation (MoDOT), the City of Creve Coeur and the development team. St. Louis County Department of Transportation (SLCDOT) was not able to attend the initial meeting but provided their comments and input separately. The purpose of this traffic study was to determine the number of trips that would be generated by the proposed re-development; evaluate the impact of those trips on operating conditions along the adjacent roadways; determine the ability of motorists to safely enter and exit the site and recommend appropriate access locations and configurations. Where necessary, roadway improvements and/or traffic control modifications have been recommended to mitigate the impact of the re-development. The focus of our analysis was the a.m., midday, and p.m. peak hours of a typical weekday. This scope does not include an analysis of internal circulation on the site itself or parking sufficiency.

The following report presents CBB's analysis comparing traffic conditions with and without the proposed redevelopment. The methodology employed to complete this study, along with the findings and conclusions, are discussed in greater detail in the subsequent sections. CBB followed current industry standard methods and processes in the completion of our work.



*Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri*

## Base Traffic Conditions

In order to identify the traffic impacts associated with the proposed development, it is essential to understand the pre-development traffic conditions in the area. To that end, it was necessary to perform an operational analysis of the base traffic volumes on the surrounding road system. Therefore, any deficiencies in the current road system will be identified before the traffic generated by the proposed redevelopment is added to the system.

### Existing Road System

**Olive Boulevard** (Missouri Route 340) is owned and maintained by MoDOT. Olive Boulevard is a major east-west arterial with a five-lane cross-section: two through lanes in each direction and a center left-turn lane. However, the left-turn lanes at Schulte Road/Mary Meadows Lane are substandard in width – 9 feet on the east and west leg. There is also a sweeping horizontal curve at this intersection that restricts sight distance along the roadway, particularly visibility on the south side. The approaches of Schulte Road and Mary Meadows Lane are offset (Mary Meadows Lane intersects Olive Boulevard further to the west) and skewed relative to the Olive Boulevard centerline, which is undesirable from an operational and safety perspective.

**Schulte Road** is a two-lane urban collector owned and maintained by SLCDOT. Schulte Road serves a large residential area to the north. A dedicated southbound left-turn lane and a shared through/right-lane are provided at the signalized intersection with Olive Boulevard. A separate northbound left-turn lane, albeit very short, is marked on Schulte Road at Oak Lake Court.

**Oak Lake Court** is a cul-de-sac residential street that currently serves 10 single-family homes. Oak Lake Court has access to Schulte Road a few hundred feet north of Olive Boulevard. Oak Lake Court is owned and maintained by SLCDOT.

**Mary Meadows Lane** is a private 24-foot wide, residential street that serves eighteen homes with one commercial driveway connection for the building in the southeast quadrant of Olive Boulevard and Mary Meadows. A channelized lane for eastbound-to-southbound right-turns is provided (this lane is separated by a raised median). The alignment and configuration of this lane is awkward and appears to be a remnant of a previous alignment modification. It was also noted that the vertical profile and horizontal alignment of Mary Meadows Lane restricts the sight distance across Olive Boulevard between northbound and southbound motorists approaching the intersection.

This study intersection is part of a coordinated system along Olive Boulevard with cycle lengths that are set at 140 seconds during the AM and PM peak hours and 120 seconds during the weekday and Saturday midday peak hours. At the signalized intersection of Olive Boulevard with Schulte Road/Mary Meadows Lane, the northbound and southbound approaches operate on a common phase while the eastbound and westbound left-turns operate with protected-plus-permitted Flashing Yellow Arrow (FYA) phasing.

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

**Dautel Lane** is a local roadway that serves a residential area north of Olive Boulevard with two commercial driveways that serve a pharmacy and jewelry store/thrift shop. A dedicated southbound left-turn lane and a shared through/right-lane are provided at the signalized intersection with Olive Boulevard.

**Graeser Road** is a two-lane urban collector owned and maintained by SLCDOT. Graeser Road serves a large residential area to the south with driveway access to commercial uses that front Olive Boulevard. A dedicated northbound left-turn lane and a shared through/right-lane are provided at the signalized intersection with Olive Boulevard.

At the signalized intersection of Olive Boulevard with Dautel Lane/Graeser Road, the northbound and southbound approaches operate on a common phase with Flashing Yellow Arrow phasing while the eastbound and westbound left-turns operate with protected-plus-permitted Flashing Yellow Arrow phasing.

**Woodshire Lane** is a cul-de-sac local residential street that serves eighteen single-family homes to the north of Olive Boulevard. Woodshire Lane is located nearly opposite Renee Lane, offset slightly to the east.

**Renee Lane** is a local residential street that provides access to two cul-de-sac residential streets and serves approximately forty single-family homes to the south of Olive Boulevard.

**Mosley Road** is a local urban collector road that serves a large residential area to the south with access driveways to commercial/office uses that front Olive Boulevard. Separate northbound left-turn and right-turn lanes are provided at the signalized intersection with Olive Boulevard.

The signalized intersection of Olive Boulevard with Mosley Road is a “T” intersection with the westbound left-turns operating with protected-plus-permitted Flashing Yellow Arrow phasing.

### **Base Traffic Volumes**

The following intersections were included in the traffic impact study analyses:

- Olive Boulevard at Mosley Road (Signalized);
- Olive Boulevard at Schulte Road/Mary Meadows Lane (Signalized);
- Olive Boulevard at Dautel Lane/Graeser Road (Signalized);
- Olive Boulevard at Woodshire Lane/Renee Lane (Side-Street Stop); and
- Oak Lake Court at Schulte Road (Side-Street Stop).

Turning movement traffic counts were collected by CBB in 2013 as part of the Olive Boulevard (Route 340) signal retiming project. The traffic counts collected at the signalized intersections of Olive Boulevard with Mosley Road, Schulte Road/Mary Meadows Lane, and Dautel Lane/Graeser Road were used for this traffic study. Based on this count data, the peak hours of the intersection identified for analysis were the morning (7:45 to 8:45 a.m.), midday (12:00 p.m. to 1:00 p.m.), and afternoon (4:30 to 5:30 p.m.) peak hours of a typical weekday.



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

These counts were supplemented with new traffic counts and delay observations conducted by CBB during the weekday morning (7:00 - 9:00 a.m.), midday (11:00 a.m. to 1:00 p.m.) and weekday afternoon (4:00 - 6:00 p.m.) peak periods at the intersection of Olive Boulevard with Woodshire Lane/Renee Lane. Spot counts were also performed at the existing Mobil driveways to determine peak hour trips. Queue observations were also made for westbound Olive Boulevard at Schulte Road and southbound Schulte Road at Olive Boulevard. Trip estimates were utilized to address traffic for the 10 homes on Oak Lake Court. The Base Traffic Volumes are summarized in **Exhibit 2**.

As can be seen, the traffic volumes are relatively consistent during the three peak hours. The east-west volumes on Olive Boulevard are heavy during each peak hour. Traffic volumes to and from Mary Meadows Lane are relatively light since the street only serves eighteen homes. Traffic to and from Schulte Road is moderate with the heaviest volumes occurring in the p.m. peak hour.

### **Base Operating Conditions**

The base operating conditions for the study area intersections were evaluated using SYNCHRO 8, which is based on procedures outlined in the *Highway Capacity Manual* to determine estimates of capacity and operational performance of signalized and unsignalized intersections. Our traffic operations analysis includes measures of effectiveness generated by the SYNCHRO software.

The operating conditions were graded in accordance with six levels of traffic service (Level A "Free Flow" to Level F "Fully Saturated") established by the *Highway Capacity Manual*. Levels of service (LOS) are measures of traffic flow which consider such factors as speed, delay, traffic interruptions, safety, driver comfort, and convenience. Level C, which is normally used for highway design, represents a roadway with volumes ranging from 70% to 80% of its capacity. However, Level D is generally considered acceptable for peak period conditions.

It must also be acknowledged that the perception of acceptable traffic service varies widely by area. Specifically, more delay is usually tolerated in urban areas compared to rural areas. Based on the character of this area, we believe that LOS D would be a desirable target for overall peak period traffic operations but may not be achievable for the unsignalized movements due to the heavy peak hour volumes along Olive Boulevard.

The thresholds that define levels of service at an intersection are based upon the type of control used (i.e., whether it is signalized or unsignalized) and the calculated delay. For signalized and all-way stop intersections, the average control delay per vehicle is estimated for each movement and aggregated for each approach and the intersection as a whole. At intersections with partial (side-street) stop control, delay is calculated for the minor movements only since motorists on the main road are not required to stop. Furthermore, criteria differ for the two, since control types create different driver expectations. **Table 1** summarizes the level of service thresholds used in this analysis.



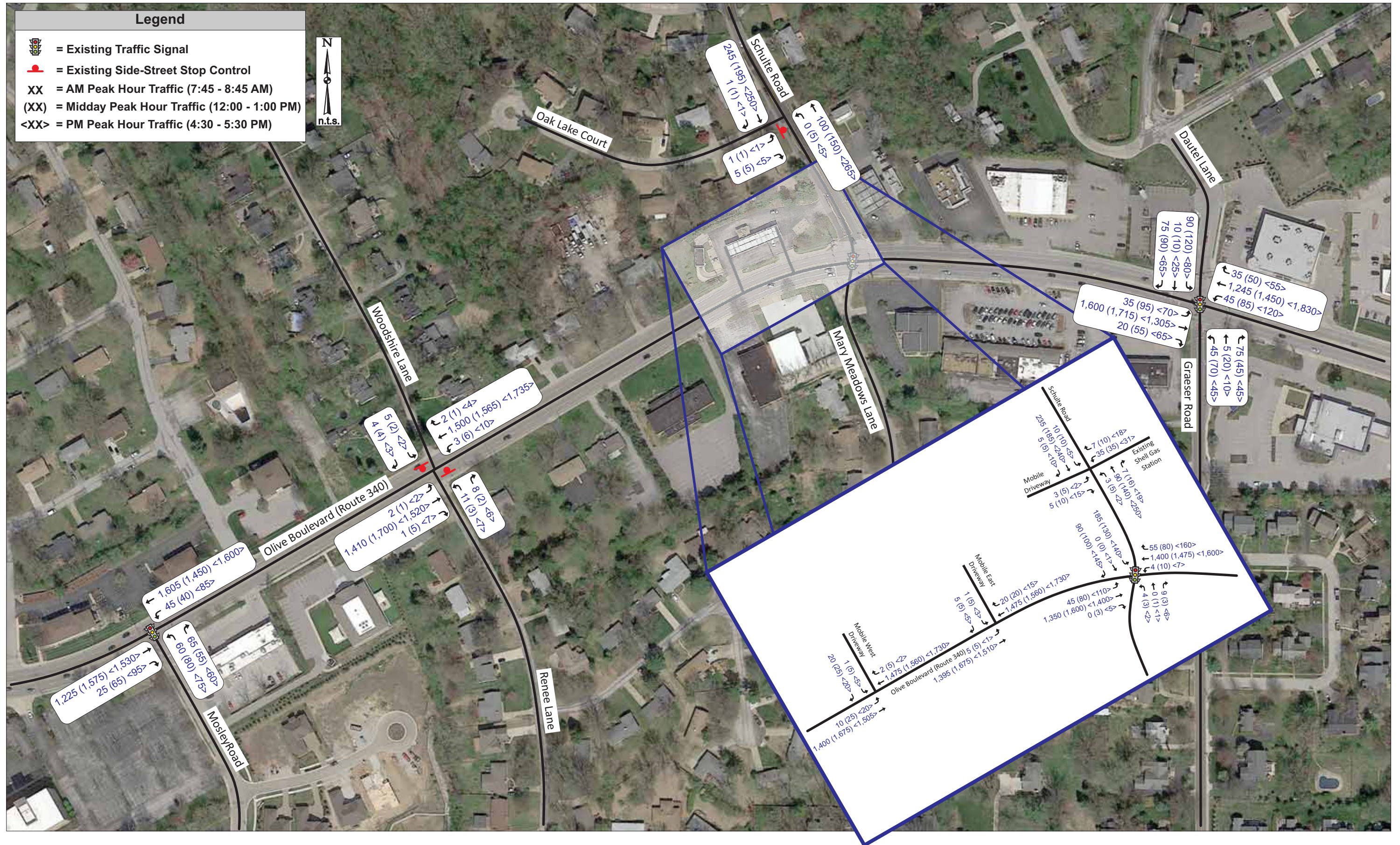


Exhibit 2: Base Traffic Volumes (2013 Counts)



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 1: Level of Service Thresholds**

| <b>Level of Service (LOS)</b> | <b>Control Delay per Vehicle (sec/veh)</b> |                                   |
|-------------------------------|--------------------------------------------|-----------------------------------|
|                               | <b>Signalized Intersections</b>            | <b>Unsignalized Intersections</b> |
| A                             | ≤ 10                                       | 0-10                              |
| B                             | > 10-20                                    | > 10-15                           |
| C                             | > 20-35                                    | > 15-25                           |
| D                             | > 35-55                                    | > 25-35                           |
| E                             | > 55-80                                    | > 35-50                           |
| F                             | > 80                                       | > 50                              |

It should be noted that the unsignalized intersections within the study area were evaluated using the HCM 2010 module in the Synchro software. Each of the study intersections was evaluated using the methodologies described above. The results of the SYNCHRO evaluations are summarized in **Table 2**. Levels of service and average delay for each intersection approach are reported for the weekday AM, Midday, and PM peak hours.

Operating conditions at the study intersections are generally favorable (LOS C or better overall and LOS D or better by approach) with the exception of northbound Renee Lane during the midday and PM peak hours, the southbound approach of Woodshire Lane during the PM peak hour, the southbound approach of Schulte Road at Olive Boulevard during the AM peak hour, the southbound approach of the Mobil West Driveway during the midday and PM peak hours, and the southbound approach of the Mobil East Driveway during the AM, midday and PM peak hours.

The lengthy delays for southbound Schulte Road are primarily due to a relatively long cycle (140 second AM/PM and 120 second midday) with a relatively small amount of green time allocated to Schulte Road/Mary Meadows Lane. It should be noted that the calculated volume to capacity ratios (v/c) do not exceed 1.0 during the peak hours but did reach 0.92 during the AM peak hour, 0.78 during the Midday peak hour and 0.82 during the PM peak hour. In this case, the cycle length dictates the poor level of service during the AM peak hour and drives the longer delays in the Midday and PM peak hours. The northbound and southbound approaches have minimal green times to maximize progression bands for the heavy eastbound and westbound through movements.

The southbound approaches exiting the current Mobil East and West Driveways operate poorly due to the heavy traffic volumes along Olive Boulevard and the close spacing of the Mobil Driveways from the Schulte Road signal, which typically does not allow for two-stage left-turns; therefore, no two-stage left-turns were assumed in the analyses for the Mobil driveways. If two-stage left-turns were completed by motorists, then the calculated southbound delays may improve.

The analyses software results indicate that the existing movements from Renee Lane and Woodshire Lane operate at less than desirable levels during the PM peak and southbound

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

approach during the midday peak, primarily due to the heavy east-west traffic along Olive Boulevard. It should be noted that current delay observations were made at Renee Lane/Woodshire Lane, which is discussed further below.

**Table 2: Traffic Operating Conditions – Base Traffic Volumes**

| Intersection/Approach                                                          | AM Peak Hour     | Midday Peak Hour | PM Peak Hour     |
|--------------------------------------------------------------------------------|------------------|------------------|------------------|
| <b><i>Olive Boulevard and Mosley Road – Signalized</i></b>                     |                  |                  |                  |
| Eastbound Olive Boulevard                                                      | A (2.4)          | A (5.3)          | A (5.9)          |
| Westbound Olive Boulevard                                                      | B (12.1)         | A (9.6)          | B (10.9)         |
| Northbound Mosley Road                                                         | D (43.9)         | D (43.3)         | D (48.5)         |
| <b>Overall Intersection</b>                                                    | <b>A (9.4)</b>   | <b>A (8.9)</b>   | <b>B (10.0)</b>  |
| <b><i>Olive Boulevard and Woodshire Lane/Renee Lane – Side-Street Stop</i></b> |                  |                  |                  |
| Eastbound Left-Turn Olive Boulevard                                            | B (14.2)         | B (14.8)         | C (16.6)         |
| Westbound Left-Turn Olive Boulevard                                            | B (13.4)         | C (16.4)         | B (14.6)         |
| Northbound Renee Lane                                                          | D (32.6)         | E (43.5)         | E (35.5)         |
| Southbound Woodshire Lane                                                      | D (33.3)         | D (28.2)         | E (36.7)         |
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b>  |                  |                  |                  |
| Eastbound Olive Boulevard                                                      | B (17.0) 20' LT  | B (10.4) 30' LT  | B (16.8) 105' LT |
| Westbound Olive Boulevard                                                      | B (11.0)         | A (4.8)          | A (8.3)          |
| Northbound Mary Meadows Lane                                                   | D (51.2)         | D (44.3)         | D (51.3)         |
| Southbound Schulte Road                                                        | E (71.8) 335' LT | D (46.3) 190' LT | D (53.8) 225' LT |
| <b>Overall Intersection</b>                                                    | <b>B (19.2)</b>  | <b>B (10.3)</b>  | <b>B (15.6)</b>  |
| <b><i>Olive Boulevard and Dautel Lane/Graeser Road – Signalized</i></b>        |                  |                  |                  |
| Eastbound Olive Boulevard                                                      | A (6.2)          | B (15.3)         | B (11.4)         |
| Westbound Olive Boulevard                                                      | B (15.0)         | B (15.9)         | C (29.1)         |
| Northbound Dautel Lane                                                         | C (32.3)         | D (36.6)         | D (41.6)         |
| Southbound Graeser Road                                                        | D (49.9)         | D (42.6)         | D (50.4)         |
| <b>Overall Intersection</b>                                                    | <b>B (13.1)</b>  | <b>B (17.9)</b>  | <b>C (23.6)</b>  |
| <b><i>Oak Lake Court and Schulte Road – Side-Street Stop</i></b>               |                  |                  |                  |
| Eastbound Oak Lake Court                                                       | A (9.9)          | A (9.6)          | B (10.2)         |
| Northbound Left-Turn Schulte Road                                              | A (7.7)          | A (7.7)          | A (7.8)          |
| <b><i>Schulte Road at Mobil/Shell Driveway – Side-Street Stop</i></b>          |                  |                  |                  |
| Eastbound Mobil Driveway                                                       | B (10.4)         | B (10.2)         | B (10.3)         |
| Westbound Shell Driveway                                                       | B (11.5)         | B (11.6)         | B (13.0)         |
| Northbound Schulte Road                                                        | A (7.7)          | A (7.7)          | A (7.8)          |
| Southbound Schulte Road                                                        | A (7.4)          | A (7.6)          | A (7.8)          |
| <b><i>Olive Boulevard at Mobil West Driveway – Side-Street Stop</i></b>        |                  |                  |                  |
| Eastbound Left-Turn Olive Boulevard                                            | B (14.2)         | B (13.3)         | C (17.3)         |
| Southbound Mobil Driveway                                                      | C (23.9)         | F (77.7)         | F (104.8)        |
| <b><i>Olive Boulevard at Mobil East Driveway – Side-Street Stop</i></b>        |                  |                  |                  |
| Eastbound Left-Turn Olive Boulevard                                            | B (14.2)         | C (15.5)         | C (16.7)         |
| Southbound Mobil Driveway                                                      | E (36.7)         | F (78.0)         | F (115.0)        |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

### **Queue Observations**

The eastbound queues along Olive Boulevard from the traffic signal at Schulte Road and southbound queues along Schulte Road from the Olive Boulevard signal were observed during the AM, MIDDAY and PM peak hours. Queue observations were made to verify the Synchro estimated queues and determine potential blockages of the proposed access points.

The location of the existing Mobil East driveway allows approximately two vehicles to stack on Olive Boulevard eastbound (approximately 65 feet) before it is blocked, while the Mobile West Driveway allows approximately 5 or 6 vehicles to stack (approximately 185 feet) before it is blocked. The proposed full access further to the west on Olive Boulevard will allow 10 or 11 vehicles to stack (approximately 265 feet) before it will be blocked.

Based on the field observations during the AM, MIDDAY and PM peak hours, there is a heavy, steady flow of traffic on Olive Boulevard during the AM and PM peak hours, with moderate to heavy traffic during the MIDDAY peak hour. The eastbound queues on Olive Boulevard at Schulte Road/Mary Meadows Lane are routinely long during the AM, MIDDAY and PM peak hours.

AM peak observations indicate that the eastbound left-turn queue along Olive Boulevard from Schulte Road had a maximum length of 3, 6, and 5 vehicles during the AM, MIDDAY, and PM peak hours, respectively. Observations indicate that the eastbound left-turn queues all cleared each time the cycle changed to green during the AM, MIDDAY and PM peak hours. Observations also indicated that the eastbound left-turn queues blocked the existing driveways several times during the peak hours. However, since the proposed relocated access will allow for more storage in the eastbound left-turn lane, the proposed driveway location should not be blocked during any of the peak hours.

The existing Mobil gas station driveway on Schulte Road allows approximately 3 vehicles to stack (approximately 75 feet) before it is blocked. The proposed three-quarter access (no left-turn in) on Schulte Road would allow approximately 4 vehicles to stack (approximately 100 feet) before will be blocked.

Observations indicate that the southbound left-turn queue along Schulte Road from Olive Boulevard had a maximum queue of 11, 7 and 10 vehicles during the AM, MIDDAY, and PM peak hours, respectively, while average queues were 8, 6 and 7 vehicles, respectively. Observations further indicate that the southbound left-turn queues cleared a vast majority of the time each cycle during the AM, MIDDAY and PM peak hours. Peak hour observations indicate that the southbound left-turn queues blocked the existing Mobil and Shell driveways several times during the peak hours and local drivers tend to spill back into the northbound left-turn lane marked for Oak Lake Court in order to leave the right-turn lane clear.

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Delay Observations at Olive Boulevard and Woodshire Lane/Renee Lane**

CBB also recorded the actual delays experienced by vehicles attempting to turn from Woodshire Lane and Renee Lane onto Olive Boulevard during the AM, Midday and PM peak hours to verify the accuracy of the average delays reported in the analyses. Based on the total volume on the side streets and the total measured delay for each vehicle, the average delays observed for the southbound approach of Woodshire Lane and northbound Renee Lane are summarized in **Table 3**. These average delays included both left and right-turning vehicles which share each exit lane.

**Table 3: Observed Delays – Existing Conditions**

| Intersection/Approach                                                          | AM Peak Hour | Midday Peak Hour | PM Peak Hour |
|--------------------------------------------------------------------------------|--------------|------------------|--------------|
| <b><i>Olive Boulevard and Woodshire Lane/Renee Lane – Side-Street Stop</i></b> |              |                  |              |
| Northbound Renee Lane                                                          | 21.6 sec     | 25.2 sec         | 36.2 sec     |
| Southbound Woodshire Lane                                                      | 28.3 sec     | 40.7 sec         | 24.6 sec     |

Average Vehicular delay in seconds per vehicle

It should be noted that some vehicles experienced more delay than the average listed in Table 3, and some vehicles experienced less. The maximum delays for southbound Woodshire Lane were observed to be 80 seconds, 110 seconds and 65 seconds during the AM, Midday and PM peak hour, respectively, while the minimum delays observed were approximately 5 seconds during each peak hour. The maximum delays for northbound Renee Lane were observed to be 67 seconds, 67 seconds and 174 seconds during the AM, Midday and PM peak hour, respectively, while the minimum delays observed were approximately 4 seconds during the AM and PM peak hours, and 2 seconds during the Midday peak hour.

Overall, the delays estimated by the computer analysis software were reasonably accurate (some lower and some higher) when compared to actual delays observed in the field. It should also be noted that the southbound volume on Woodshire Lane was very low (less than 10 vph), and the northbound volume on Renee Lane was also low (5 vph to 19 vph) which is a small sample size and may create quite a lot of volatility on those delays experienced by each approach from day to day.



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

## **Proposed Redevelopment**

The proposed redevelopment would rebuild the existing Mobil gas station to provide twenty vehicle fueling positions, an expanded convenience store, and a new car wash. It is our understanding that three-single family home structures along Olive Boulevard and three single-family residences along Oak Lake Court would be razed to make way for the new gas station.

### **Proposed Access**

Access to the site is proposed via one full access curb cut on Olive Boulevard approximately 345 feet west of Schulte Road and one right-out-only curb cut approximately 290 feet to the west of the proposed full access driveway. This access arrangement remains similar to the previous redevelopment proposed on the site. It is our understanding that MoDOT traffic and permits staff was agreeable to these access locations for the previous project. It is acknowledged that the proposed full access driveway is slightly closer to Schulte than MoDOT's desired corner clearance distance per their Access Management Guidelines, but the proposed development significantly improves access management along Olive by reducing the five existing full-access curb cuts to two curb cuts: one full access and one right-out-only.

Access is also proposed on Schulte Road in the form of a three-quarter access driveway (no left-turn in) that would be located opposite the existing Shell gas station driveway. It is our understanding that the SLCDOT has insisted on the no left-turn-in restriction due to the southbound queues from the signal at Olive Boulevard even though a similar, yet worse access management is currently in place for the existing Mobil Station.

### **Driveway Sight Distance**

Adequate sight distance is necessary at intersections to allow drivers to perceive potentially conflicting vehicles or other road users and allow those motorists sufficient time to adjust their speed to avoid a collision or make a choice of when to cross or enter the mainline traffic flow. All drivers approaching or stopped at an intersection should have an unobstructed view of the entire intersection so that potential collisions can be avoided.

MoDOT's Engineering Policy Guide (EPG) Section 233.2.1 Intersection sight distance, was referenced to determine the minimum sight distance needs at the site driveway. The MoDOT method incorporates the method from A Policy on Geometric Design of Highways and Streets published by the American Association of State Highway and Transportation Officials (AASHTO), commonly referred to as the "Green Book", which uses the design speed of the major road and the required gap time from a minor road to enter or cross the major road to define the minimum safe distance for entrance visibility. The minimum intersection sight distance according to the MoDOT EPG on a 35 mph roadway is **390 feet**. The minimum stopping sight distance along a 35 mph roadway is **200 feet**.

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

The sight distance available at the proposed full access driveway was not measured, but field observations verified ample visibility in excess of the minimums. The site engineer should verify the sight distance all proposed driveways on the site plan with respect to all site improvements. Careful consideration should always be given to sight distance obstructions when planning any aesthetics enhancements, such as berms, fencing, signs and landscaping, to ensure that these improvements do not obstruct the view of entering and exiting traffic at the site intersections with the public roads. It is generally recommended that all improvements higher than 3.0 feet above the elevation of the nearest pavement edge be held back at least 20 feet from the traveled roadway.

### **Trip Generation**

In order to estimate the trip generation of the improved gas station, convenience store and car wash, several methods were considered. The first method compared several gas station land use codes as identified by ITE. The second comparison considered the local data from the existing location at Schulte and transactional data from another facility within the area, which is similar to the proposed.

#### Trip Generation – ITE Data

Traffic forecasts were estimated by using information provided in the “Trip Generation Manual”, Ninth Edition, published by the Institute of Transportation Engineers (ITE). This manual, which is a standard resource for transportation engineers, is based on a compilation of nationwide studies documenting the traffic characteristics of various land uses.

Based on the preliminary site plan provided, the proposed development consists of twenty vehicle fueling positions, a convenience store, and a car wash. Trip generation was reviewed for land uses similar to those shown on the site plan to provide an average number of trips during each peak hour.

Based upon the recommended procedure for estimating trip generation outlined in the “Trip Generation Handbook, A Recommended Practice”, published by ITE (March 2001), the average trip rate was utilized for:

- Land Use 944 – Gasoline/Service Station
- Land Use 945 – Gasoline/Service Station with Convenience Market
- Land Use 946 – Gasoline/Service Station with Convenience Market and Car Wash

As shown in **Table 4**, the forecasted average number of trips for a 20 vehicle fueling position gas station is expected to be 230 total trips during the AM peak hour, 310 total trips during the Midday peak hour, and 280 total trips during the PM peak hour.



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 4: ITE Trip Generation Estimate – Mobil Gas Station Rebuild**

| <i>Land Use</i>                                                              | <i>Vehicle Fueling Positions</i> | <i>AM Peak Hour</i> |            |              | <i>Midday Peak Hour</i> |            |              | <i>PM Peak Hour</i> |            |              |
|------------------------------------------------------------------------------|----------------------------------|---------------------|------------|--------------|-------------------------|------------|--------------|---------------------|------------|--------------|
|                                                                              |                                  | <i>In</i>           | <i>Out</i> | <i>Total</i> | <i>In</i>               | <i>Out</i> | <i>Total</i> | <i>In</i>           | <i>Out</i> | <i>Total</i> |
| Gasoline/Service Station (Land Use 944)                                      | 20                               | 125                 | 120        | 245          | 185                     | 185        | 370          | 140                 | 140        | 280          |
| Gasoline/Service Station with Convenience Market (Land Use 945)              | 20                               | 105                 | 105        | 210          | 135                     | 135        | 270          | 135                 | 135        | 270          |
| Gasoline/Service Station with Convenience Market and Car Wash (Land Use 946) | 20                               | 120                 | 120        | 240          | 145                     | 145        | 290          | 140                 | 140        | 280          |
| <b>Average Number of Trips</b>                                               |                                  | <b>115</b>          | <b>115</b> | <b>230</b>   | <b>155</b>              | <b>155</b> | <b>310</b>   | <b>140</b>          | <b>140</b> | <b>280</b>   |

**Trip Generation – Local Data**

Based on CBB's driveway counts, the current gas station generates 80 total trips during the AM peak hour, 120 total trips during the Midday peak hour and 100 trips during the PM peak hour with 8 vehicle fueling positions. As noted above, the proposed Mobil gas station will provide twenty vehicle fueling positions. In order to estimate the forecasted trips for the new store, the trips to the current store were increased based on the percentage increase in the number of vehicle fueling positions. **Table 5** summarizes the trips counted at the existing Mobil and the projected trips based on the increase in the number of pumps.

**Table 5: Local Trip Generation Estimate – Based on Current Trips and Fueling Positions**

| <i>Land Use</i>                 | <i>No. of Vehicle Fueling Positions</i> | <i>AM Peak Hour</i> |            |              | <i>Midday Peak Hour</i> |            |              | <i>PM Peak Hour</i> |            |              |
|---------------------------------|-----------------------------------------|---------------------|------------|--------------|-------------------------|------------|--------------|---------------------|------------|--------------|
|                                 |                                         | <i>In</i>           | <i>Out</i> | <i>Total</i> | <i>In</i>               | <i>Out</i> | <i>Total</i> | <i>In</i>           | <i>Out</i> | <i>Total</i> |
| Existing Mobil Station          | 8                                       | 45                  | 35         | 80           | 65                      | 55         | 120          | 50                  | 50         | 100          |
| Proposed Mobil Station Estimate | 20                                      | 115                 | 85         | 200          | 165                     | 135        | 300          | 125                 | 125        | 250          |

CBB was provided customer transaction counts (gross receipts) for a similar Mobil gas station further east on Olive Boulevard in Olivette, Missouri. This location was also recently rebuilt to provide the improved convenience store, car wash and sixteen vehicle fueling positions. Based on the transaction counts, a trip generation estimate was made based on the higher number of vehicle fueling positions at the proposed Schulte Store. **Table 6** summarizes the trip estimated based on the similar facility records.

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 6: Estimated Trips for Proposed Mobil Gas Station Rebuild based on Transaction Data**

| <b>Land Use</b>                          | <b>No. of Vehicle Fueling Positions</b> | <b>AM Peak Hour</b> |            |              | <b>Midday Peak Hour</b> |            |              | <b>PM Peak Hour</b> |            |              |
|------------------------------------------|-----------------------------------------|---------------------|------------|--------------|-------------------------|------------|--------------|---------------------|------------|--------------|
|                                          |                                         | <b>In</b>           | <b>Out</b> | <b>Total</b> | <b>In</b>               | <b>Out</b> | <b>Total</b> | <b>In</b>           | <b>Out</b> | <b>Total</b> |
| Similar Mobil Station (Transaction Data) | 16                                      | 80                  | 80         | 160          | 125                     | 125        | 250          | 95                  | 95         | 190          |
| <b>Proposed Mobil Station Estimate</b>   | <b>20</b>                               | <b>100</b>          | <b>100</b> | <b>200</b>   | <b>155</b>              | <b>155</b> | <b>310</b>   | <b>120</b>          | <b>120</b> | <b>240</b>   |

When comparing all the different methods above, trips are expected to be in the same order of magnitude. However, the trip estimate for the Mobil gas station based on transaction data is expected to be the most accurate trip forecast since it is based on local data for this exact use. Therefore, the trips estimated by the transactional data (Table 6) were used in this study.

It should be reiterated that the existing Mobil station already generates trips on the roadway system. Therefore, the existing trips were negated from the trip estimate resulting in a net increase in trips, as shown in **Table 7**.

Furthermore, not all of the added site trips would represent *new* traffic on the adjacent roadways. A significant portion of the traffic attracted to this site would already be traveling on Olive Boulevard or Shulte Road as part of another trip (i.e., “pass-by” trips). These trips would represent patrons attracted to the gas station on their way to or from home, work, or another destination as a “convenience stop”. Based upon statistical information provided in the *Trip Generation Handbook, A Recommended Practice* it was assumed that 62% of the development’s traffic would be pass-by in nature during the AM peak hour, and 56% of the development’s traffic would be pass-by during the PM peak hour. ITE does not provide a pass-by percentage for the Midday peak hour so the pass-by percentage from the PM peak hour was also used during the Midday peak hour. As seen in Table 7, the proposed gas station would generate 50 *new* trips during the AM peak hour, 80 *new* trips during the Midday peak hour, 60 *new* trips during the PM peak hour.



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 7: Increase in Trips for Proposed Mobil Gas Station Rebuild**

|                                        | <b>AM Peak Hour</b> |            |              | <b>Midday Peak Hour</b> |            |              | <b>PM Peak Hour</b> |            |              |
|----------------------------------------|---------------------|------------|--------------|-------------------------|------------|--------------|---------------------|------------|--------------|
|                                        | <i>In</i>           | <i>Out</i> | <i>Total</i> | <i>In</i>               | <i>Out</i> | <i>Total</i> | <i>In</i>           | <i>Out</i> | <i>Total</i> |
| Estimated Trips to Improved Mobil Site | 100                 | 100        | 200          | 155                     | 155        | 310          | 120                 | 120        | 240          |
| Trips to Existing Mobil Site           | (45)                | (35)       | (80)         | (65)                    | (55)       | (120)        | (50)                | (50)       | (100)        |
| <b>Net Increase in Trips</b>           | <b>55</b>           | <b>65</b>  | <b>120</b>   | <b>90</b>               | <b>100</b> | <b>190</b>   | <b>70</b>           | <b>70</b>  | <b>140</b>   |
| Pass-By Trips                          | 35                  | 35         | 70           | 55                      | 55         | 110          | 40                  | 40         | 80           |
| New Trips                              | 20                  | 30         | 50           | 35                      | 45         | 80           | 30                  | 30         | 60           |

**Trip Distribution**

The traffic generated by the redevelopment was assigned to the adjoining roadway system based on existing traffic patterns. The directional distribution of the existing trips was assumed to remain constant for the increase in trips during the AM, Midday and PM peak hours. The pass-by trips were assigned to Olive Boulevard based on the existing traffic patterns.

**Exhibit 3** illustrates the net increase of trips for the proposed Mobil station rebuild at the study intersections. As would be expected, the biggest impact of the development is at the proposed driveways. Added turns at the main Olive Boulevard driveway are expected range from 96 to 160 trips. These trips equate to approximately one and a half vehicle per minute to about 3 trips per minute on average during the peak hours.

The impacts of the proposed Mobil redevelopment are expected to be diminished outside of the direct vicinity of the site due to the high number of pass-by trips associated with the use. As seen in Exhibit 3, the added trips outside of the vicinity of the Mobil driveways are expected to be less than 30 vph during the AM and PM peak hours and 40 vph or less during the Midday peak hour.

The added trips at the intersection of Olive Boulevard and Schulte Road is expected to be 18 vph, 33 vph, and 26 vph during the AM, Midday, and PM peak hours, respectively. These trips equate to approximately one vehicle per two minutes on average during the Midday and PM peak hours or one vehicle every three minutes on average during the AM peak hour.

As can be seen, the increase in the southbound left-turn from Schulte Road to Olive Boulevard is expected to be less than 10 vph during the AM, Midday and PM peak hours. The site trips represent less than one additional vehicle each six minutes on average.



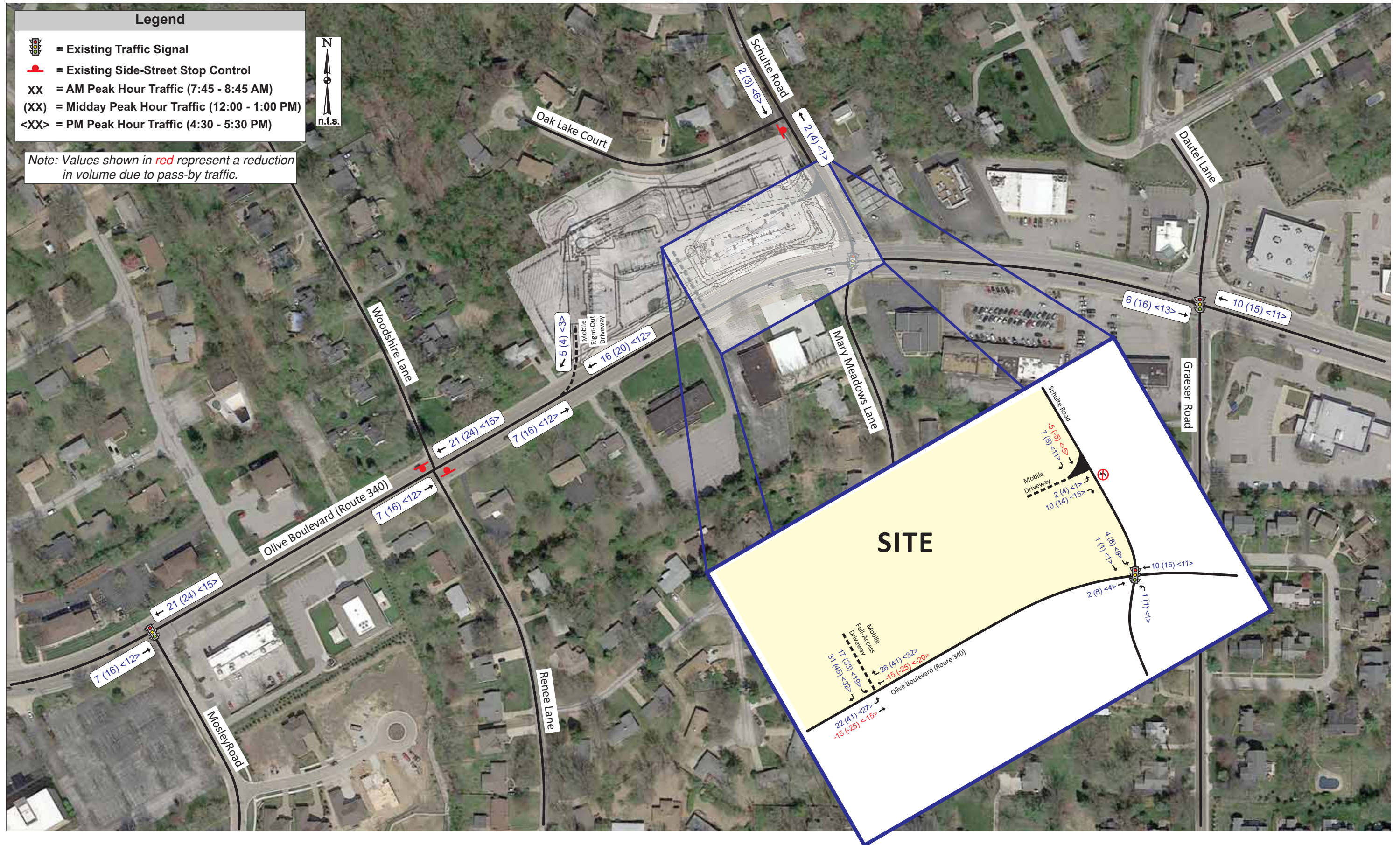


Exhibit 3: Net Increase of Site-Generated Traffic Volumes



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

## 2016 Build Conditions

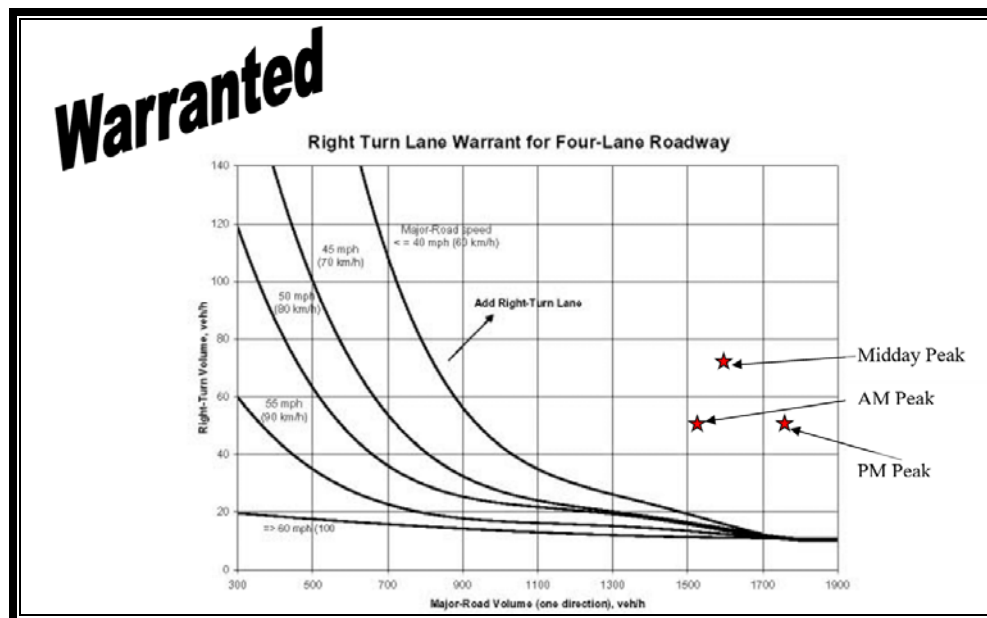
### 2016 Build Traffic Volumes

The traffic generated by the proposed Mobil gas station rebuild (Exhibit 3) was aggregated with the Base Traffic Volumes (Exhibit 2) to reflect the Forecasted Traffic Volumes. **Exhibit 4** reflects the 2016 Build Traffic Volumes.

### Right-Turn Lane Warrants

The MoDOT figure, *Right Turn Lane Warrant for a Four-Lane Roadway*, was utilized to address traffic volumes at the intersection of Olive Boulevard with the proposed full access driveway for the proposed Mobil redevelopment. **Figure 2** illustrates the 2016 Build Traffic Volumes plotted on the MoDOT figure for evaluation of a westbound right-turn lane. Based on the minimal number of right-turns needed to satisfy the criteria in conjunction with the heavy traffic volumes along Olive Boulevard, a separate westbound right-turn lane is warranted. Based on the posted speed limit of 35 mph, a 90-foot storage length with taper is required to meet MoDOT's deceleration minimum.

However, it should be noted that the addition of a separate westbound right-turn lane on Olive Boulevard at the proposed main access would have minimal impacts to operating conditions. It should also be noted that a Metro Bus stop is located near Schulte Road and overhead utilities are located in this area. Furthermore, the Olive Boulevard corridor does not have separate right-turn lanes at unsignalized intersections that do not feed into additional through lanes to right-turn lanes at signals; Therefore, a separate westbound right-turn lane is not recommended at this location.



**Figure 2: Right-Turn Lane Warrants (MoDOT)**





Job# 091-16-8  
11/03/16



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

### **2016 Build Operating Conditions**

The 2016 Build Traffic Volumes were reanalyzed using the same methodology applied to the baseline conditions in an effort to identify any impacts of the proposed development. **Table 8** summarizes the levels of service and average delays at the study intersections during both peak hours with the 2016 Build Traffic Volumes.

As can be seen in **Table 8**, the overall intersection operations are expected to remain at similar levels as the base conditions during the weekday AM, Midday and PM peak hours. This analysis assumes no changes in the signal timing at Olive Boulevard and Schulte Road which gives preference to the east-west movements on Olive Boulevard. In fact, the overall change in delay is less than one second during all three peak hours at the Schulte signal. The southbound approach is expected to have minimal increases with 5.2 seconds during the AM peak hour, 4.9 seconds during the Midday peak hour and 1.9 seconds during the PM peak hour. The southbound levels of service would remain poor, again primarily due to the long cycle lengths.

The forecasted build v/c ratios for the southbound approach of Schulte Road remain less than 1.0 during the peak hours. The southbound v/c ratio is forecasted to be 0.95 during the AM peak hour, 0.80 during the Midday peak hour and 0.84 during the PM peak hour. In this case, the cycle length dictates the poor level of service during the AM peak hour and drives the poor movement levels in the PM peak hour. The northbound and southbound approaches have minimal green times to maximize green available to the heavy eastbound and westbound through movements on Olive Boulevard.

As previously noted, the increase in the southbound left-turns from Schulte Road to Olive Boulevard is expected to be less than 10 vph during all peaks, which represents less than one additional vehicle every six minutes on average.

The right-out-only Mobil driveway on Olive Boulevard and the three-quarter access drive on Schulte Road are expected to operate at acceptable levels of service during all three peak hours. It should be noted that the evaluations cannot effectively address the impact of the southbound queue along Schulte Road that would block the three-quarter access drive at times during the peak hours. Any queueing created by blockages would occur on the site. It was noted that the southbound left-turn delays at the unsignalized intersection are generally less than those forecasted for the southbound left-turn from Schulte Road at Olive Boulevard.

The main full access driveway on Olive Boulevard is expected to operate at acceptable levels, except for the southbound left-turn exiting movement during the peak hours. It is acknowledged that the through volumes on Olive Boulevard are heavy during the peak hours, which limits the availability of gaps at the proposed Olive Boulevard access drive during the peak hours. However, the presence of a center-left-turn lane along Olive Boulevard does allow for a motorist to complete their turn in two stages as opposed to waiting for a simultaneous gap in both directions of traffic flow, which is a common practice along the Olive Boulevard

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

Corridor and throughout the greater St. Louis Metropolitan area and therefore was assumed in these analyses.

**Table 8: Traffic Operating Conditions – Build Traffic Volumes**

| Intersection/Approach                                                             | AM Peak Hour     | Midday Peak Hour | PM Peak Hour     |
|-----------------------------------------------------------------------------------|------------------|------------------|------------------|
| <b><i>Olive Boulevard and Mosley Road – Signalized</i></b>                        |                  |                  |                  |
| Eastbound Olive Boulevard                                                         | A (2.4)          | A (5.3)          | A (5.9)          |
| Westbound Olive Boulevard                                                         | B (11.7)         | A (9.5)          | B (10.8)         |
| Northbound Mosley Road                                                            | D (43.9)         | D (43.3)         | D (48.5)         |
| <b>Overall Intersection</b>                                                       | <b>A (9.2)</b>   | <b>A (8.8)</b>   | <b>A (10.0)</b>  |
| <b><i>Olive Boulevard and Woodshire Lane/Renee Lane – Side-Street Stop</i></b>    |                  |                  |                  |
| Eastbound Left-Turn Olive Boulevard                                               | B (14.4)         | C (15.0)         | C (16.8)         |
| Westbound Left-Turn Olive Boulevard                                               | B (13.5)         | C (16.6)         | B (14.8)         |
| Northbound Renee Lane                                                             | D (33.0)         | E (43.9)         | E (36.3)         |
| Southbound Woodshire Lane                                                         | D (34.2)         | D (28.9)         | D (37.3)         |
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b>     |                  |                  |                  |
| Eastbound Olive Boulevard                                                         | B (17.0) 20' LT  | B (10.8) 30' LT  | B (17.2) 110' LT |
| Westbound Olive Boulevard                                                         | B (11.2)         | A (5.1)          | A (8.8)          |
| Northbound Mary Meadows Lane                                                      | D (51.3)         | D (44.3)         | D (51.2)         |
| Southbound Schulte Road                                                           | E (77.0) 345' LT | D (51.2) 210' LT | E (55.7) 250' LT |
| <b>Overall Intersection</b>                                                       | <b>B (19.7)</b>  | <b>B (11.1)</b>  | <b>B (16.3)</b>  |
| <b><i>Olive Boulevard and Dautel Lane/Graeser Road – Signalized</i></b>           |                  |                  |                  |
| Eastbound Olive Boulevard                                                         | A (6.4)          | B (15.7)         | B (11.4)         |
| Westbound Olive Boulevard                                                         | B (15.1)         | B (16.0)         | C (29.4)         |
| Northbound Dautel Lane                                                            | C (32.3)         | D (36.6)         | D (41.6)         |
| Southbound Graeser Road                                                           | D (49.9)         | D (42.6)         | D (50.4)         |
| <b>Overall Intersection</b>                                                       | <b>B (13.2)</b>  | <b>B (18.1)</b>  | <b>C (23.7)</b>  |
| <b><i>Oak Lake Court and Schulte Road – Side-Street Stop</i></b>                  |                  |                  |                  |
| Eastbound Oak Lake Court                                                          | A (9.9)          | A (9.7)          | B (10.3)         |
| Northbound Left-Turn Schulte Road                                                 | A (7.7)          | A (7.7)          | A (7.8)          |
| <b><i>Schulte Road at Mobil/Shell Driveway – Side-Street Stop</i></b>             |                  |                  |                  |
| Eastbound Mobil Driveway                                                          | B (10.2)         | B (10.1)         | B (10.3)         |
| Westbound Shell Driveway                                                          | B (11.5)         | B (11.6)         | B (13.2)         |
| Southbound Schulte Road                                                           | A (7.4)          | A (7.6)          | A (7.8)          |
| <b><i>Olive Boulevard at Mobil Right-Out Only Driveway – Side-Street Stop</i></b> |                  |                  |                  |
| Southbound Mobil Driveway                                                         | C (16.5)         | C (17.4)         | C (19.2)         |
| <b><i>Olive Boulevard at Mobil Full Access Driveway – Side-Street Stop</i></b>    |                  |                  |                  |
| Eastbound Left-Turn Olive Boulevard                                               | C (15.3)         | C (17.8)         | C (19.2)         |
| Southbound Mobil Left-Turn                                                        | E (48.0)         | F (93.8)         | F (81.0)         |
| Southbound Mobil Right-Turn                                                       | C (18.7)         | C (21.4)         | C (22.8)         |
| Southbound Mobil Driveway Approach                                                | D (26.7)         | E (49.0)         | E (42.7)         |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

The impacts of the new Mobil are also diminished outside of the direct access points to Olive Boulevard. As can be seen, minimal increases are expected at the signalized intersections with Olive Boulevard with Schulte Road, Mosely Road and Greaser/Dautel Lane. The analysis software estimates an increase of less than one second of delay for the northbound approach



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

of Renee Lane and less than one second of delay increase for the southbound approach of Woodshire Lane during each of the peak hours.

### **Alternatives Analysis**

Several alternatives were evaluated to identify the impacts of each potential improvement. **Tables 9-11** summarize the build conditions with various alternative modifications.

#### Signal Timing Adjustments

The green time was increased for Schulte Road/Mary Meadows Lane to obtain similar levels of service as the existing conditions. An additional two seconds of green time during the AM peak, four seconds during the Midday peak and 2 seconds during the PM peak could be reallocated from the mainline to the north-south approaches to reach comparable levels to the existing conditions. As can be seen, the minimal change in signal timing would not result in major impacts to the mainline Olive Boulevard traffic conditions. **Table 12** illustrates the impacts to progression along the Olive Boulevard corridor. As can be seen in Table 12, the impacts to east-west progression are also minimal.

#### Add Flashing Yellow Arrow

During the traffic scoping meeting, Flashing Yellow Arrows (FYA) for the northbound and southbound approaches were discussed to improve safety at the intersection. Therefore, an analysis scenario was generated to show the operational impacts of switching to northbound and southbound FYA.

Based on the analysis, the FYA would provide negligible changes in operating conditions for the southbound approach, but the safety at the intersection may be improved substantially. The [www.CMFClearinghouse.org](http://www.CMFClearinghouse.org) was consulted in order to attempt to quantify the safety implications of installing a FYA. Based on countermeasure “Changing from permissive only to FYA- Permissive only (CMF ID: 7698)” in the CFM Clearinghouse, various Crash Reduction Factors (CRF) could be applied to various crash types as summarized below.

- CRF of 10.8% (decrease) to all crash types and all severities;
- CRF of 31.1% (decrease) to all crash types; Fatal, serious injury and minor injuries;
- CRF of 50.2% (decrease) to Left-turn crash types; all severities; and
- CRF of 65.1% (decrease) to Left-turn crash types and Fatal, serious injury and minor injury severities.

Although a crash analysis was not identified as a specific part of this study scope, the CMF's listed above would appear to have the potential to significantly improve safety (decrease the number of crashes) for the southbound left-turns.

#### Provide a Southbound Right-Turn Lane

During the traffic scoping meeting, it was specifically requested that one analysis scenario consider a separate southbound left-turn lane, through lane and right-turn lane. Therefore, an analysis scenario was generated to show the operational impacts of providing a separated southbound right-turn lane.

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

Based on the analysis, the addition of a southbound right-turn lane on Schulte Road would provide no improvement in operations when compared to the current condition. The minimal southbound through volumes (3 to 5 vph) have a low potential to block the southbound right-turns; therefore, the through/right-turn lane acts as a *defacto* right-turn lane in the existing condition. In addition, the westbound through volumes along Olive Boulevard are very heavy during the peak hours making it more difficult to find an adequate gap in westbound traffic to complete the right turn movement versus reaching the southbound stop bar due to other conflicting southbound through vehicles. Since there appears to be no benefit to provide a separate right-turn lane, it is not recommended.

**Provide Dual Southbound Left-Turn Lanes and Split-Phase North-South**

Previous studies of this intersection recommended split phasing and/or a horizontal and vertical realignment of Schulte Road and/or Mary Meadow Lane to decrease the offset and skew of the north-south approaches as well as the northbound sight distance obstruction created by the cresting of the profile grades. In order to realign the intersection, multiple property owners would be impacted. Previous plans, by others, to redevelopment the southwest quadrant of the intersection did not materialize. Consequently, the subject development has reserved ground in the northeast quadrant of the intersection so that realignment can occur in the future.

CBB also considered an alternative analysis where the intersection is re-aligned with dual southbound left-turn lanes (one southbound left-turn and one southbound shared left-turn/though lane) and a separate southbound right-turn lane. This would also require split-phasing the north-south approaches.

In order to maximize the amount of green time provided to the mainline, the northbound approach (Mary Meadows Lane) was given the minimum amount of split time (13.1 seconds), while the southbound approach was only provided enough split time to obtain similar levels of service as the existing conditions. The southbound green time was assumed to 17.9, 16.9, 17.9 seconds during the AM, Midday and PM peak hours, for a total north-south green time of 31, 30, and 31 seconds. The overall north-south green time would be slightly more with the split-phase when comparable to the 2016 Build conditions with modified signal timings.

Table 12 illustrates the impacts to progression along the Olive Boulevard corridor. As can be seen, the split-phase condition would have a negative impact on progression when compared to the existing conditions, except for the eastbound link between Mosley Road and Schulte Road during the Midday as well as the westbound link between Schulte Road and Mosley Road during the Midday peak hour. However, the link changes would have no effect on the corridor green bands, shown in Table 12.



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

The biggest benefit of the dual left-turn alternative is the reduction in length of the southbound queues by approximately 40% during the AM peak hour, approximately 36% during the Midday peak hour and approximately 38% during the PM peak hour when compared to the single left-turn lane with modified signal timing. Even with the dual southbound left-turn scenario, the 95<sup>th</sup> percentile queues would still block the proposed relocated access to Schulte Road during all three peak hours.

It should also be noted that the while a split-phase scenario for the northbound and southbound approaches improves the southbound queueing, the 13.1 to 17.9 seconds assumed for those approaches would not provide adequate pedestrian accommodations (during every signal cycle) across Olive Boulevard. As a result, when the push button is activated it would give ample crossing time to accommodate pedestrians but the signal would become out-of-step for several cycles.

#### Pedestrian Issues

MoDOT requested that pedestrian accommodations (pedestrian push buttons and indications with marked crosswalks) be installed across Olive Boulevard. CBB recommends that the pedestrian accommodations be located on the west side of the intersection only. CBB believes that it is better and safer to have the pedestrians crossing the west leg, since it is closer to the MetroBus stop and the pedestrian phase would run with the heavier traffic flow so it would cause less disruptions. If the crosswalks were provided on the east side of the intersection the pedestrians would be crossing paths with the heavy southbound left-turn vehicles and would potential be less safe than crossing on the west side because there is lower northbound left-turn volume verses the southbound left-turn.

**Table 9: Build Operating Conditions with Alternative Improvement Scenarios – AM Peak Hour**

| Intersection/Approach                                                         | <i>Original<br/>Timing<br/>[28 sec n-s]</i> | <i>with Timing<br/>Adjustments<br/>[30 Sec n-s]</i> | <i>Add Flashing<br/>Yellow Arrow<br/>NB &amp; SB<br/>[28 Sec n-s]</i> | <i>Separate SB<br/>Right-Turn<br/>Lane<br/>[28 Sec n-s]</i> | <i>With Dual Left<br/>and Split-<br/>Phase <sup>1</sup><br/>[31 Sec n-s]</i> |
|-------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------|
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b> |                                             |                                                     |                                                                       |                                                             |                                                                              |
| Eastbound Olive Boulevard                                                     | B (17.0) 20' LT                             | B (18.0) 20' LT                                     | B (17.0) 20' LT                                                       | B (17.0) 20' LT                                             | B (13.7) 20' LT                                                              |
| Westbound Olive Boulevard                                                     | B (11.2)                                    | B (11.1)                                            | B (11.2)                                                              | B (11.2)                                                    | A (7.4)                                                                      |
| Northbound Mary Meadows Ln.                                                   | D (51.3)                                    | D (49.5)                                            | D (51.2)                                                              | D (51.2)                                                    | E (69.0)                                                                     |
| Southbound Schulte Road                                                       | E (77.0) 345' LT                            | E (69.4) 325' LT                                    | E (77.3) 345' LT                                                      | E (77.0) 345' LT                                            | E (69.0) 190' LT                                                             |
| <b>Overall Intersection</b>                                                   | <b>B (19.7)</b>                             | <b>B (19.5)</b>                                     | <b>B (19.8)</b>                                                       | <b>B (19.7)</b>                                             | <b>B (15.9)</b>                                                              |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

<sup>1</sup> Dual Southbound Lefts and Split Phase (13.1 sec +17.9 sec)

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 10: Build Operating Conditions with Alternative Improvement Scenarios – Midday Peak Hour**

| Intersection/Approach                                                  | Original Timing<br>[24 sec n-s] | Timing Adjustments<br>[26 Sec n-s] | Add Flashing Yellow Arrow<br>NB & SB<br>[24 Sec n-s] | Separate SB Right-Turn Lane<br>[24 Sec n-s] | With Dual Left and Split-Phase <sup>1</sup><br>[30 Sec n-s] |
|------------------------------------------------------------------------|---------------------------------|------------------------------------|------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------|
| <b>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</b> |                                 |                                    |                                                      |                                             |                                                             |
| Eastbound Olive Boulevard                                              | B (10.8) 30' LT                 | B (10.1) 40' LT                    | B (10.8) 30' LT                                      | B (10.8) 30' LT                             | A (7.7) 40' LT                                              |
| Westbound Olive Boulevard                                              | A (5.1)                         | A (6.6)                            | A (5.1)                                              | A (5.1)                                     | A (6.6)                                                     |
| Northbound Mary Meadows Ln.                                            | D (44.3)                        | D (41.9)                           | D (44.3)                                             | D (44.3)                                    | E (55.4)                                                    |
| Southbound Schulte Road                                                | D (51.2) 210' LT                | D (46.3) 180' LT                   | D (51.2) 210' LT                                     | D (51.2) 210' LT                            | D (44.9) 115' LT                                            |
| <b>Overall Intersection</b>                                            | <b>B (11.1)</b>                 | <b>B (11.0)</b>                    | <b>B (11.1)</b>                                      | <b>B (11.1)</b>                             | <b>A (9.8)</b>                                              |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

<sup>1</sup> Dual Southbound Lefts and Split Phase (13.1 sec +16.9 sec)

**Table 11: Build Operating Conditions with Alternative Improvement Scenarios – PM Peak Hour**

| Intersection/Approach                                                  | Original Timing<br>[28 sec n-s] | Timing Adjustments<br>[30 Sec n-s] | Add Flashing Yellow Arrow<br>NB & SB<br>[28 Sec n-s] | Separate SB Right-Turn Lane<br>[28 Sec n-s] | With Dual Left and Split-Phase <sup>1</sup><br>[31 Sec n-s] |
|------------------------------------------------------------------------|---------------------------------|------------------------------------|------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------|
| <b>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</b> |                                 |                                    |                                                      |                                             |                                                             |
| Eastbound Olive Boulevard                                              | B (17.2) 110' LT                | B (16.3) 110' LT                   | B (17.3) 110' LT                                     | B (17.2) 110' LT                            | B (13.4) 110' LT                                            |
| Westbound Olive Boulevard                                              | A (8.8)                         | B (10.5)                           | A (8.8)                                              | A (8.8)                                     | A (9.5)                                                     |
| Northbound Mary Meadows Ln.                                            | D (51.2)                        | D (49.8)                           | D (51.2)                                             | D (51.1)                                    | E (67.3)                                                    |
| Southbound Schulte Road                                                | E (55.7) 250' LT                | D (53.3) 225' LT                   | E (55.7) 250' LT                                     | E (55.7) 250' LT                            | D (53.2) 140' LT                                            |
| <b>Overall Intersection</b>                                            | <b>B (16.3)</b>                 | <b>B (16.6)</b>                    | <b>B (16.4)</b>                                      | <b>B (16.3)</b>                             | <b>B (14.9)</b>                                             |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

<sup>1</sup> Dual Southbound Lefts and Split Phase (13.1 sec +17.9 sec)



*Traffic Impact Study – Proposed Mobil Rebuild with Car Wash*  
*Creve Coeur, Missouri*

**Table 12: Progression Analysis – 70th Percentile Link Bands**

| <i>70<sup>th</sup> Percentile Link Green Bands</i>        | <i>Weekday AM Peak Hour</i> |                          |                            | <i>Weekday Midday Peak Hour</i> |                          |                            | <i>Weekday PM Peak Hour</i> |                          |                            |
|-----------------------------------------------------------|-----------------------------|--------------------------|----------------------------|---------------------------------|--------------------------|----------------------------|-----------------------------|--------------------------|----------------------------|
|                                                           | <i>Existing</i>             | <i>Timing Adjustment</i> | <i>Dual LT/Split-Phase</i> | <i>Existing</i>                 | <i>Timing Adjustment</i> | <i>Dual LT/Split-Phase</i> | <i>Existing</i>             | <i>Timing Adjustment</i> | <i>Dual LT/Split-Phase</i> |
| <b>Eastbound</b>                                          |                             |                          |                            |                                 |                          |                            |                             |                          |                            |
| Mosley Road to Schulte Road link                          | 81 sec                      | 79 sec                   | 78 sec                     | 77 sec                          | 78 sec                   | 89 sec                     | 83 sec                      | 83 sec                   | 83 sec                     |
| Schulte to Dautel Lane Link                               | 97 sec                      | 97 sec                   | 97 sec                     | 78 sec                          | 78 sec                   | 78 sec                     | 101 sec                     | 99 sec                   | 98 sec                     |
| Eastbound Arterial Green Band (Craig Road to Spoede Road) | 70 sec                      | 70 sec                   | 70 sec                     | 47 sec                          | 47 sec                   | 47 sec                     | 71 sec                      | 71 sec                   | 71 sec                     |
| <b>Westbound</b>                                          |                             |                          |                            |                                 |                          |                            |                             |                          |                            |
| Dautel Lane to Schulte Road Link                          | 98 sec                      | 97 sec                   | 96 sec                     | 73 sec                          | 70 sec                   | 68 sec                     | 88 sec                      | 86 sec                   | 85 sec                     |
| Schulte Road to Mosley Road Link                          | 82 sec                      | 80 sec                   | 79 sec                     | 63 sec                          | 59 sec                   | 68 sec                     | 73 sec                      | 71 sec                   | 70 sec                     |
| Westbound Arterial Green Band (Spoede Road to Craig Road) | 60 sec                      | 60 sec                   | 60 sec                     | 50 sec                          | 50 sec                   | 50 sec                     | 55 sec                      | 55 sec                   | 55 sec                     |

## 20-Year Conditions

### Forecasted 20-Year No-Build Conditions (2036)

In order to assess the long-term traffic impacts, 20-year traffic projections were also analyzed. Specifically, traffic growth was assumed at a rate of 0.5% annually for 20 years (or 10.5% overall) along each of the roadways within the study area. The 20-year background growth was applied to the base traffic volumes to compare future traffic conditions assuming that the site remains as it currently stands. Forecasted 20-Year No-Build Volumes (only background growth added) are shown in **Exhibit 5**.

As can be seen, the 20-Year No-Build traffic forecast represents an increase over the base traffic forecast due to the background growth. East-west through traffic volumes along Olive Boulevard are expected to increase by as much as 180 vph during the peak periods due to incremental background growth.

### Forecasted 20-Year Build Conditions (2036)

The 20-year No-Build Traffic Volumes (Exhibit 5) were aggregated with the site-generated trips for the new Mobil redevelopment trips (Exhibit 3) to create the 20-Year Build Traffic Volumes shown in **Exhibit 6**. It should be noted that traffic oriented to/from the proposed development was not increased since full build-out of the site was assumed to take place during the opening year. In other words, site-generated traffic volumes would reach their peak during the opening year and therefore would not experience any appreciable growth, which is consistent with standard industry practice. The anticipated operating conditions at the study intersections for the 20-Year No-Build and 20-year Build Traffic conditions are summarized in **Table 13**.

As shown in the LOS Table, all of the study intersections would degrade more in the 2036 No-Build Condition due to the increase in background traffic. As can be seen, the southbound approach of Schulte Road would operate at LOS F during the AM peak hour and LOS E during the PM peak hour. The v/c ratio for the southbound approach will reach 1.02 during the AM peak hour but remain less than 0.85 during the Midday and PM peak hours.

The east-west through lanes reach a volume-to-capacity ratio of 1.00 during the PM peak hour which indicates the east-west lanes would be approaching their capacity, and ultimately, a third lane would be necessary along Olive Boulevard to obtain acceptable levels for the long-term growth conditions. It should be reiterated that the 20-Year design scenarios are included to provide a general idea of future conditions as a planning tool and should not be used to dictate physical improvements required for construction under permit where background traffic growth is the critical element. Due to capacity constraints upstream or downstream, resulting congestion and the build-out of the surrounding area, the future traffic projections may not be realized/feasible unless major capacity improvements are built.





Job# 091-16-8  
11/03/16



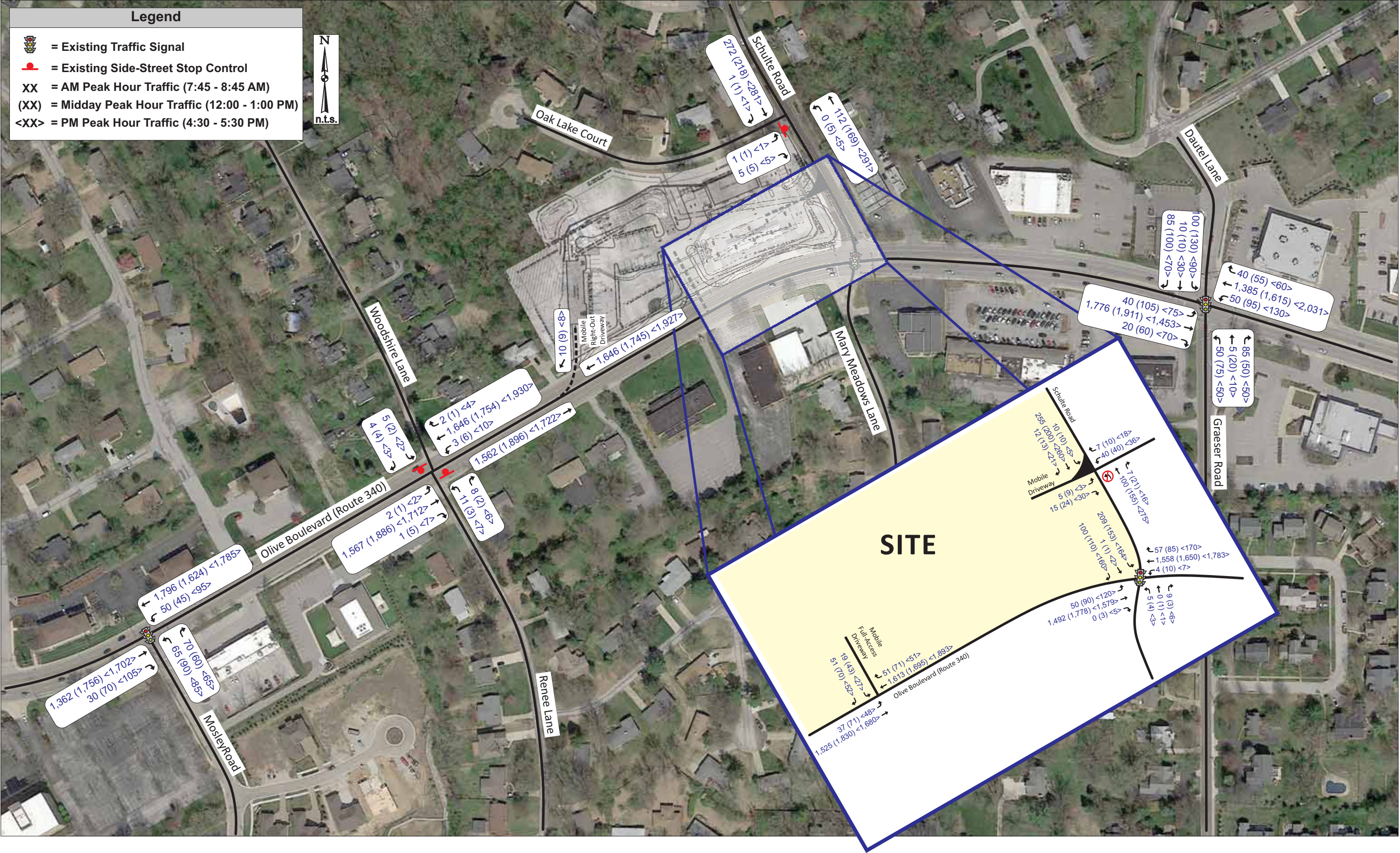


Exhibit 6: 20-Year Build Traffic Volumes



**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**  
**Creve Coeur, Missouri**

**Table 13: 20-Year Operating Conditions**

| Intersection/Approach                                                          | AM Peak Hour        |                                                         | Midday Peak Hour    |                                                         | PM Peak Hour        |                                                         |
|--------------------------------------------------------------------------------|---------------------|---------------------------------------------------------|---------------------|---------------------------------------------------------|---------------------|---------------------------------------------------------|
|                                                                                | 20-Year No Build    | 20-Year Build<br><i>Original Timing</i><br>(28 sec n-s) | 20-Year No Build    | 20-Year Build<br><i>Original Timing</i><br>(24 sec n-s) | 20-Year No Build    | 20-Year Build<br><i>Original Timing</i><br>(28 sec n-s) |
| <b><i>Olive Boulevard and Mosley Road – Signalized</i></b>                     |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Olive Boulevard                                                      | A (2.5)             | A (2.5)                                                 | A (6.6)             | A (6.6)                                                 | A (7.2)             | A (7.4)                                                 |
| Westbound Olive Boulevard                                                      | B (13.1)            | B (12.8)                                                | B (10.7)            | B (10.8)                                                | B (13.3)            | B (13.6)                                                |
| Northbound Mosley Road                                                         | D (44.1)            | D (44.1)                                                | D (44.4)            | D (44.4)                                                | D (49.2)            | D (49.2)                                                |
| <b>Overall Intersection</b>                                                    | <b>A (10.0)</b>     | <b>A (9.8)</b>                                          | <b>B (10.0)</b>     | <b>B (10.1)</b>                                         | <b>B (11.9)</b>     | <b>B (12.0)</b>                                         |
| <b><i>Olive Boulevard and Woodshire Lane/Renee Lane – Side-Street Stop</i></b> |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Left-Turn Olive Blvd                                                 | C (15.4)            | C (15.6)                                                | C (16.5)            | C (16.8)                                                | C (18.9)            | C (19.0)                                                |
| Westbound Left-Turn Olive Blvd                                                 | B (14.8)            | B (14.8)                                                | C (18.5)            | C (18.7)                                                | C (16.6)            | C (16.7)                                                |
| Northbound Renee Lane                                                          | E (40.8)            | E (40.8)                                                | F (55.3)            | F (55.3)                                                | E (45.4)            | E (46.4)                                                |
| Southbound Woodshire Lane                                                      | E (39.2)            | E (39.9)                                                | D (33.9)            | D (35.1)                                                | E (46.6)            | E (48.1)                                                |
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b>  |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Olive Boulevard                                                      | B (18.0)<br>20' LT  | B (17.9)<br>20' LT                                      | B (13.9)<br>50' LT  | B (14.6)<br>50' LT                                      | B (17.9)<br>105' LT | B (18.2)<br>105' LT                                     |
| Westbound Olive Boulevard                                                      | B (12.5)            | B (12.6)                                                | A (8.4)             | A (9.0)                                                 | C (21.6)            | C (24.2)                                                |
| Northbound Mary Meadows Lane                                                   | D (51.2)            | D (51.2)                                                | D (44.2)            | D (44.3)                                                | D (51.0)            | D (51.1)                                                |
| Southbound Schulte Road                                                        | F (83.9)<br>385' LT | F (90.2)<br>395' LT                                     | D (50.6)<br>225' LT | D (54.6)<br>240' LT                                     | E (58.4)<br>260' LT | E (61.0)<br>285' LT                                     |
| <b>Overall Intersection</b>                                                    | <b>C (21.4)</b>     | <b>C (22.0)</b>                                         | <b>B (13.9)</b>     | <b>B (14.9)</b>                                         | <b>C (23.0)</b>     | <b>C (24.7)</b>                                         |
| <b><i>Olive Boulevard and Dautel Lane/Graeser Road – Signalized</i></b>        |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Olive Boulevard                                                      | A (8.1)             | A (8.3)                                                 | C (25.8)            | C (27.4)                                                | B (13.5)            | B (13.7)                                                |
| Westbound Olive Boulevard                                                      | B (17.0)            | B (17.1)                                                | B (18.7)            | B (19.0)                                                | D (40.0)            | D (42.1)                                                |
| Northbound Dautel Lane                                                         | C (31.8)            | C (31.8)                                                | D (36.2)            | D (36.2)                                                | D (41.3)            | D (41.3)                                                |
| Southbound Graeser Road                                                        | D (51.6)            | D (51.6)                                                | D (42.0)            | D (42.0)                                                | D (52.9)            | D (52.9)                                                |
| <b>Overall Intersection</b>                                                    | <b>B (15.0)</b>     | <b>B (15.1)</b>                                         | <b>C (24.1)</b>     | <b>C (25.0)</b>                                         | <b>C (30.4)</b>     | <b>C (31.6)</b>                                         |
| <b><i>Oak Lake Court and Schulte Road – Side-Street Stop</i></b>               |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Oak Lake Court                                                       | B (10.1)            | B (10.1)                                                | A (9.8)             | A (9.8)                                                 | B (10.4)            | B (10.5)                                                |
| Northbound Left-Turn Schulte Rd                                                | A (7.7)             | A (7.7)                                                 | A (7.7)             | A (7.7)                                                 | A (7.9)             | A (7.9)                                                 |
| <b><i>Schulte Road at Mobil/Shell Driveway – Side-Street Stop</i></b>          |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Mobil Driveway                                                       | B (10.6)            | B (10.4)                                                | B (10.4)            | B (10.4)                                                | B (10.5)            | B (10.5)                                                |
| Westbound Shell Driveway                                                       | B (12.0)            | B (12.1)                                                | B (12.2)            | B (12.2)                                                | B (14.1)            | B (14.2)                                                |
| Northbound Schulte Road                                                        | A (7.8)             | --                                                      | A (7.7)             | --                                                      | A (7.9)             | --                                                      |
| Southbound Schulte Road                                                        | A (7.5)             | A (7.5)                                                 | A (7.6)             | A (7.6)                                                 | A (7.9)             | A (7.9)                                                 |
| <b><i>Olive Boulevard at Mobil West Driveway – Side-Street Stop</i></b>        |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Left-Turn Olive Blvd                                                 | C (15.7)            | --                                                      | C (17.7)            | --                                                      | C (19.9)            | --                                                      |
| Southbound Mobil Driveway                                                      | C (29.8)            | C (18.2)                                                | F (150.1)           | C (19.3)                                                | F (>200)            | C (21.6)                                                |
| <b><i>Olive Boulevard at Mobil East Driveway – Side-Street Stop</i></b>        |                     |                                                         |                     |                                                         |                     |                                                         |
| Eastbound Left-Turn Olive Blvd                                                 | C (15.7)            | C (17.2)                                                | C (16.8)            | C (20.8)                                                | C (18.9)            | C (22.7)                                                |
| Southbound Mobil Left-Turn                                                     | --                  | F (61.3)                                                | --                  | F (141.2)                                               | --                  | F (118.7)                                               |
| Southbound Mobil Right-Turn                                                    | --                  | C (21.0)                                                | --                  | C (24.8)                                                | --                  | D (26.8)                                                |
| Southbound Mobil Driveway                                                      | F (50.8)            | D (31.9)                                                | F (>200)            | F (69.1)                                                | F (>200)            | F (58.2)                                                |

Attachment: 20161104\_Traffic Study CBB (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

Under the 2036 Build condition, the overall intersection operations are expected to remain at similar overall levels as the 2036 No-Build with minimal changes in delay during the weekday AM, Midday and PM peak hours. Without signal timing adjustments, the overall delay is expected to increase less than 2 seconds during the AM, Midday or PM peak hour at Schulte Road and Olive Boulevard. The southbound approach is expected to have minimal increases with 6.3 seconds during the AM peak hour, 4 seconds during the Midday peak hour and 2.6 seconds during the PM peak hour. Without signal timing adjustments, the 2036 forecasted build v/c ratios for the southbound approach would remain more than 1.0 during the AM peak hour. The southbound v/c ratio is forecasted to be 0.88 or better during the Midday or PM peak hour. Again, the cycle length dictates and high v/c ratios drive the poor level of service during the AM and PM peak hours. The northbound and southbound approaches have minimal green times to maximize green times to the heavy eastbound and westbound through movements on Olive Boulevard.

As previously noted, the increase in the southbound left-turns from Schulte Road to Olive Boulevard is expected to be less than 10 vph during all peaks. The increase in site trips represent less than one additional vehicle every six minutes on average.

Again, the three Mobil driveways (main access to Olive Boulevard, right-out only to Olive Boulevard and the three-quarter access driveway on Schulte Road) are expected to operate at acceptable levels of service during the peak hours with the exception of the southbound left-turn out of the site during the peak hours. It should also be noted that the southbound left-turn delay exiting the Mobil Driveway was generally less than the southbound left-turn delay on Schulte Road at Olive Boulevard since Schulte vehicles turns must wait for green.

Again, the impacts of the new Mobil are diminished outside of the direct access points to Olive Boulevard. As can be seen, minimal increases are expected at the signalized intersections including Olive Boulevard at Schulte Road. The impacts of the new Mobil are also expected to be minimal at the signalized intersections adjacent to Schulte (Mosely Road and Greaser/Dautel Lane). Furthermore, the analysis software estimates an increase in delay of one second or less for the northbound approach of Renee Lane and less than two seconds of delay for the southbound approach of Woodshire Lane during each of the peak hours as compared to the 2036 No-Build.

Similar to the 2016 build conditions, various alternatives were re-evaluated to summarize the impacts of the potential improvements. Again, the modified signal timing would improve the southbound approach and have minimal impacts to the mainline; the separate right-turn lane would have no worthwhile impacts; the Flashing Yellow Arrow provided minimal operation changes but potentially a safety improvement; and the dual left-turn would provide improved operations but would have the most negative impact to adjacent link progression.



*Traffic Impact Study – Proposed Mobil Rebuild with Car Wash*  
*Creve Coeur, Missouri*

**Table 14: 20-Year Operating Conditions with Alternative Improvement Scenarios – AM Peak Hour**

| Intersection/Approach                                                         | 20-Year No Build | 20-Year Build<br>Original Timing<br>[28 sec n-s] | 20-Year Build<br>Timing<br>Adjustments<br>[29 Sec n-s] | 20-Year Build<br>Add Flashing<br>Yellow Arrow<br>NB& SB<br>[28 Sec n-s] | 20-Year Build<br>Separate SB<br>Right-Turn<br>Lane<br>[28 Sec n-s] | 20-Year Build with<br>Dual Left and<br>Split-Phase <sup>1</sup><br>[30 Sec n-s] |
|-------------------------------------------------------------------------------|------------------|--------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b> |                  |                                                  |                                                        |                                                                         |                                                                    |                                                                                 |
| Eastbound Olive Boulevard                                                     | B (18.0) 20' LT  | B (17.9) 20' LT                                  | B (18.7) 20' LT                                        | B (17.9) 20' LT                                                         | B (17.9) 20' LT                                                    | B (13.8) 20' LT                                                                 |
| Westbound Olive Boulevard                                                     | B (12.5)         | B (12.6)                                         | B (12.8)                                               | B (12.6)                                                                | B (12.6)                                                           | A (8.5)                                                                         |
| Northbound Mary Meadows Lane                                                  | D (51.2)         | D (51.2)                                         | D (50.3)                                               | D (51.2)                                                                | D (51.2)                                                           | E (69.0)                                                                        |
| Southbound Schulte Road                                                       | F (83.9) 385' LT | F (90.2) 395' LT                                 | F (82.1) 385' LT                                       | F (91.1) 395' LT                                                        | F (90.3) 395' LT                                                   | F (82.7) 230' LT                                                                |
| <b>Overall Intersection</b>                                                   | <b>C (21.4)</b>  | <b>C (22.0)</b>                                  | <b>C (21.7)</b>                                        | <b>C (22.1)</b>                                                         | <b>C (22.0)</b>                                                    | <b>B (17.7)</b>                                                                 |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

<sup>1</sup> Dual Southbound Lefts and Split Phase (13.1 sec +16.9 sec)

**Table 15: 20-Year Operating Conditions with Alternative Improvement Scenarios – Midday Peak Hour**

| Intersection/Approach                                                         | 20-Year No Build | 20-Year Build<br>Original Timing<br>[24 sec n-s] | 20-Year Build<br>Timing<br>Adjustments<br>[27 Sec n-s] | 20-Year Build<br>Add Flashing<br>Yellow Arrow<br>NB& SB<br>[24 Sec n-s] | 20-Year Build<br>Separate SB<br>Right-Turn<br>Lane<br>[24 Sec n-s] | 20-Year Build with<br>Dual Left and<br>Split-Phase <sup>1</sup><br>[30 Sec n-s] |
|-------------------------------------------------------------------------------|------------------|--------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b> |                  |                                                  |                                                        |                                                                         |                                                                    |                                                                                 |
| Eastbound Olive Boulevard                                                     | B (13.9) 50' LT  | B (14.6) 50' LT                                  | B (15.4) 50' LT                                        | B (14.6) 50' LT                                                         | B (14.6) 50' LT                                                    | B (10.4) 55' LT                                                                 |
| Westbound Olive Boulevard                                                     | A (8.4)          | A (9.0)                                          | B (10.2)                                               | A (9.0)                                                                 | A (9.0)                                                            | A (8.4)                                                                         |
| Northbound Mary Meadows Lane                                                  | D (44.2)         | D (44.3)                                         | D (41.9)                                               | D (44.3)                                                                | D (44.1)                                                           | E (55.4)                                                                        |
| Southbound Schulte Road                                                       | D (50.6) 225' LT | D (54.6) 240' LT                                 | D (48.7) 210' LT                                       | D (54.6) 240' LT                                                        | D (54.6) 240' LT                                                   | D (50.6) 135' LT                                                                |
| <b>Overall Intersection</b>                                                   | <b>B (13.9)</b>  | <b>B (14.9)</b>                                  | <b>B (15.4)</b>                                        | <b>B (14.9)</b>                                                         | <b>B (14.9)</b>                                                    | <b>B (12.3)</b>                                                                 |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

Dual Southbound Lefts and Split Phase (13.1 sec +15.9 sec)

**Traffic Impact Study – Proposed Mobil Rebuild with Car Wash**

*Creve Coeur, Missouri*

**Table 16: 20-Year Operating Conditions with Alternative Improvement Scenarios – PM Peak Hour**

| Intersection/Approach                                                         | 20-Year No Build | 20-Year Build<br>Original Timing<br>[28 sec n-s] | 20-Year Build<br>Timing<br>Adjustments<br>[30 Sec n-s] | 20-Year Build<br>Add Flashing<br>Yellow Arrow<br>NB& SB<br>[28 Sec n-s] | 20-Year Build<br>Separate SB<br>Right-Turn Lane<br>[28 Sec n-s] | 20-Year Build with<br>Dual Left and<br>Split-Phase <sup>1</sup><br>[30 Sec n-s] |
|-------------------------------------------------------------------------------|------------------|--------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b><i>Olive Boulevard and Schulte Road/Mary Meadows Lane – Signalized</i></b> |                  |                                                  |                                                        |                                                                         |                                                                 |                                                                                 |
| Eastbound Olive Boulevard                                                     | B (17.9) 105' LT | B (18.2) 105' LT                                 | B (17.5) 105' LT                                       | B (18.3) 105' LT                                                        | B (18.2) 105' LT                                                | B (13.9) 105' LT                                                                |
| Westbound Olive Boulevard                                                     | C (21.6)         | C (24.2)                                         | C (28.2)                                               | C (24.5)                                                                | C (24.2)                                                        | B (15.6)                                                                        |
| Northbound Mary Meadows Lane                                                  | D (51.0)         | D (51.1)                                         | D (49.5)                                               | D (51.0)                                                                | D (51.0)                                                        | E (67.3)                                                                        |
| Southbound Schulte Road                                                       | E (58.4) 260' LT | E (61.0) 285' LT                                 | E (57.2) 265' LT                                       | E (61.1) 285' LT                                                        | E (61.0) 285' LT                                                | E (57.8) 175' LT                                                                |
| <b>Overall Intersection</b>                                                   | <b>C (23.0)</b>  | <b>C (24.7)</b>                                  | <b>C (26.0)</b>                                        | <b>C (24.9)</b>                                                         | <b>C (24.7)</b>                                                 | <b>B (18.4)</b>                                                                 |

(xx.x) - Level of Service (Vehicular delay in seconds per vehicle)

Dual Southbound Lefts and Split Phase (13.1 sec + 16.9 sec)

**Table 17: 20-Year Progression Analysis – 70<sup>th</sup> Percentile Link Bands**

| <i>70<sup>th</sup> Percentile Link Green Bands</i>            | <i>Weekday AM Peak Hour</i> |                              |                                     | <i>Weekday Midday Peak Hour</i> |                              |                                     | <i>Weekday PM Peak Hour</i> |                              |                                     |
|---------------------------------------------------------------|-----------------------------|------------------------------|-------------------------------------|---------------------------------|------------------------------|-------------------------------------|-----------------------------|------------------------------|-------------------------------------|
|                                                               | <i>Existing</i>             | <i>Timing<br/>Adjustment</i> | <i>Dual<br/>LT/Split-<br/>Phase</i> | <i>Existing</i>                 | <i>Timing<br/>Adjustment</i> | <i>Dual<br/>LT/Split-<br/>Phase</i> | <i>Existing</i>             | <i>Timing<br/>Adjustment</i> | <i>Dual<br/>LT/Split-<br/>Phase</i> |
| <b>Eastbound</b>                                              |                             |                              |                                     |                                 |                              |                                     |                             |                              |                                     |
| Mosley Road to Schulte Road Link                              | 80 sec                      | 79 sec                       | 78 sec                              | 77 sec                          | 77 sec                       | 88 sec                              | 83 sec                      | 83 sec                       | 83 sec                              |
| Schulte to Dautel Lane Link                                   | 97 sec                      | 97 sec                       | 97 sec                              | 76 sec                          | 76 sec                       | 76 sec                              | 96 sec                      | 94 sec                       | 94 sec                              |
| Eastbound Arterial Green Band<br>(Craig Road to Spoeede Road) | 70 sec                      | 70 sec                       | 70 sec                              | 46 sec                          | 46 sec                       | 46 sec                              | 67 sec                      | 67 sec                       | 67 sec                              |
| <b>Westbound</b>                                              |                             |                              |                                     |                                 |                              |                                     |                             |                              |                                     |
| Dautel Lane to Schulte Road Link                              | 98 sec                      | 98 sec                       | 97 sec                              | 72 sec                          | 70 sec                       | 68 sec                              | 86 sec                      | 84 sec                       | 84 sec                              |
| Schulte Road to Mosley Road Link                              | 82 sec                      | 81 sec                       | 80 sec                              | 63 sec                          | 60 sec                       | 68 sec                              | 72 sec                      | 70 sec                       | 70 sec                              |
| Westbound Arterial Green Band<br>(Spoeede Road to Craig Road) | 60 sec                      | 60 sec                       | 60 sec                              | 50 sec                          | 50 sec                       | 50 sec                              | 52 sec                      | 52 sec                       | 52 sec                              |



***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

## Conclusions

CBB completed a traffic impact study for the proposed Creve Coeur Mobil with Car Wash redevelopment in Creve Coeur, Missouri. The site located on the northwest quadrant of Olive Boulevard at Schulte Road. The site is currently occupied by a Mobil gas station with a small convenience store and a car wash as well as a several homes.

- Access to the redeveloped site is proposed via one full access driveway on Olive Boulevard, one right-turn exit-only driveway on Olive Boulevard at the west end of the property, and one three-quarter driveway (no left-turn in) on Schulte Road generally opposite the existing Shell station driveway.
- Base traffic conditions were observed and evaluated to reveal constraints that currently exist at the signalized intersection of Olive Boulevard with Schulte Road/Mary Meadows Lane. The north-south approaches currently operate at less than desirable levels of service during the AM and PM peak hours primarily as a result of long signal cycle lengths dictated by other critical intersections on the Olive Boulevard corridor. The horizontal and vertical physical configuration of the existing intersection is also less than desirable.
- The new Mobil gas station would be expected to generate approximately 120, 190, and 140 additional trips during the AM, Midday and PM peak hours of a typical weekday, respectively.
- Based on MoDOT's Access Management Guidelines, a separate westbound right-turn lane would be warranted on Olive Boulevard at the proposed full-access driveway. However, that lane would have minimal impact on operating conditions, have impacts to utilities and separate right-turn lanes are not currently provided at unsignalized intersections along the Olive Boulevard corridor, CBB does not recommend the installation of the right-turn lane on Olive Boulevard at the proposed full access driveway.
- The proposed access drives would operate at acceptable levels of service, except for the southbound left-turns out of the main entrance, which is primarily due to the heavy east-west volumes on Olive Boulevard. The left-turning motorists should be able to make two-stage turns onto eastbound Olive Boulevard via the center left-turn lane or go to the signal via Schulte Road.
  - A two-lane exit is recommended and proposed on the conceptual site plan to separate exiting left and right-turns. It should also be noted that this driveway has the ability to storage approximately 4 or 5 vehicles that would be queued in the southbound direction before impacting internal circulation.

***Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri***

- The impacts of the proposed Mobil can be mitigated at the intersection of Olive Boulevard with Schulte Road by providing two seconds of additional north-south green time during the AM and PM peak hour and four seconds of additional north-south green time in the Midday peak hour. On-site observations found that the southbound approach currently clears during a vast majority of the cycles, even during the peak hours, so timing adjustments may not be necessary to allow acceptable operations in the field.
- Minimal operational impacts would be gained by providing a separate southbound right-turn lane since the southbound through volumes are so low, the lane currently operates as a defacto right-turn lane. CBB does not recommend this improvement.
- Minimal operational impacts are expected with the installation of Flashing yellow arrows for the northbound and southbound approaches, but could provide significant improvements in safety, especially related to left-turn crashes. CBB recommends this change.
- If dual southbound left-turns (one left-turn and one share left-turn/through lane) are constructed, a slightly larger north-south split is needed to accommodate the forecasted traffic since split phasing should be required which would negatively impact progression along Olive Boulevard. The primary benefits of the dual left-turn lanes would be accommodation of a safer north-south phasing (split phased) and cutting the southbound queue length nearly in half.
  - It should be noted that the proposed rebuilding of the Mobil gas station has very little impact at the signalized intersection and the existing safety concerns with the horizontal and vertical alignment of the north and south legs are present with or without the proposed development.
  - This improvement would help to address the long-term needs of the intersection. It is not feasible to construct the full intersection improvements without the coordination and concurrence with the private ownership of Mary Meadows on the south side of the road.
  - As a result, the subject development has reserved ground in the northeast quadrant of the intersection so that a better horizontal alignment can occur in the future when all parties can come to an agreement.
- A marked pedestrian crossing is recommended across the west side of the intersection to accommodate pedestrians crossing Olive Boulevard.
- Since traffic to and from the development is not expected to create a noticeable change in traffic along Olive Boulevard to the west (limited to less than 25 vph in either direction), there will be limited impact to ingress/egress for the adjacent neighboring streets (Renee Lane and Woodshire Lane). The delay increases are estimated to be less than one additional second for the northbound approach and one additional second for the southbound approach.



*Traffic Impact Study – Proposed Mobil Rebuild with Car Wash  
Creve Coeur, Missouri*

---

- The results for the Year 2036 No-Build Scenario and 2036 Build Scenario are very similar, where only slight increases in north-south green times are needed to effectively accommodate the traffic from the proposed new Mobil gas station.

We trust that you will find that the information in this report useful in evaluating the traffic impacts of the subject site. Please contact Brian Rensing in our St. Louis office (314) 449-9569 or via email at [Brensing@cbbtraffic.com](mailto:Brensing@cbbtraffic.com) should there be any questions or need for additional information.

CBB Job No. 2016-91

prepared by:



**CBB**

12400 Olive Boulevard  
Suite 430

St. Louis, MO 63141  
(314) 878-6644





**ENVIRONMENTAL  
NOISE STUDY OF PROPOSED  
NEW COMMERCIAL DEVELOPMENT  
ON THE NORTH WEST CORNER OF OLIVE AND SCHULTE,  
LOCATED IN CREVE COUER MISSOURI**

**PREPARED FOR:**

Arch Energy (Wallis Companies)  
106 E. Washington  
Cuba, Missouri 65453

**PREPARED BY:**

KEVIN TANKERSLEY  
President / Senior Engineer  
DESIGNED ACOUSTICS, LLC  
PROJECT #  
11824

**DATE**

NOVEMBER 10<sup>th</sup>, 2016

**Environmental Noise Study**  
**November 10<sup>th</sup>, 2016**

Environmental Noise Study Report

**TABLE OF CONTENTS**

|                                             |   |
|---------------------------------------------|---|
| INTRODUCTION.....                           | 3 |
| NOISE MEASUREMENTS .....                    | 3 |
| INSTRUMENTATION .....                       | 4 |
| MEASUREMENTS.....                           | 4 |
| FINDINGS.....                               | 5 |
| CONCLUDING REMARKS .....                    | 6 |
| ACOUSTIC NOMENCLATURE AND TERMINOLOGY ..... | 7 |



## Environmental Noise Study November 10<sup>th</sup>, 2016

### INTRODUCTION

Designed Acoustics was retained by Wallis Companies to perform an Environmental Noise Study and to provide an evaluation of existing and potential noise levels that could be generated by a proposed new commercial development. The property is at northwest corner of Olive & Schulte located in Creve Coeur Missouri. This report summarizes Designed Acoustics' noise investigation and the potential audible effects at the property lines of the proposed site. Environmental noise studies, being investigative by nature, are often forced to make assumptions concerning the properties of the noise source(s) under such study. Designed Acoustics recognizes the proposed uses and have elected to base the study upon a conservative "worst case situation" in order to ensure the validity of calculated results.

The following report explains the methodology used to gather data as well as Designed Acoustics' findings and compliance with the City of Creve Coeur criteria which is:

*An acoustical study shall be submitted demonstrating that the order facility and service windows will not produce sounds exceeding sixty (60) dB as measured at any property line abutting a residential use, up to a height of eight (8) feet above ground at the property line and demonstrating that the order facility and service windows will not increase ambient sound levels at other property lines above the average Monday to Friday midday level.*

For the development proposed at this location, no service order window is proposed however, some of the mechanical components of the car wash have higher decibel levels and will be evaluated. It should also be noted that the hours of operation proposed for the carwash portion of the facility are from approximately 7 am until 8 pm.

### NOISE MEASUREMENTS

Long-term 24-hour noise measurements were completed at the subject site. While on-site short term measurements were also taken at the same time that the long term monitoring was beginning, approximately 4pm on Thursday, November 3rd, 2016. Additionally, short term background noise measurements were again taken at the time that the long term monitors were retrieved, approximately 10am on Wednesday, November 9th, 2016.

## Environmental Noise Study November 10<sup>th</sup>, 2016

### INSTRUMENTATION

A Larson-Davis Laboratories Model Sound Expert LxT precision sound level meter was used for all octave band measurements reported here. This meter conforms to the ANSI Standard Specifications for Sound Level Meters S1.4-1983, Type 1 (Precision), and the IEC Standard 651-1979, Sound-Level Meters, Type 1 Peak. The instrument was calibrated and is traceable to The National Institute of Standards. Evidence of traceability is on file at the Larson Davis Corporate Headquarters. The meter calibration was field verified before and after the measurement session.

Larson-Davis Laboratories Model Sound Expert LxT sound meters were used for A-weighted long-term sound level measurements. This meter conforms to ANSI Standard Specifications for Sound Level Meters S1.4-1983, Type 2, and the IEC 651-1979, Sound Level Meters Type 2. The instruments were calibrated and are traceable to the National Institute of Standards. Evidence of traceability is on file at the Larson Davis Corporate Headquarters. The meters were field verified before and after the measurement session.

### MEASUREMENTS

Long Term monitor results

| Date                                       | Ldn (dBA) | Lday (dBA) | Lnight (dBA) |
|--------------------------------------------|-----------|------------|--------------|
| Friday, November 4 <sup>th</sup> , 2016    | 65.8      | 64.9       | 57.0         |
| Saturday, November 5 <sup>th</sup> , 2016  | 65.7      | 66.4       | 54.3         |
| Sunday, November 6 <sup>th</sup> , 2016    | 65.1      | 63.2       | 57.1         |
| Monday, November 7 <sup>th</sup> , 2016    | 65.3      | 65.2       | 55.4         |
| Tuesday, November 8 <sup>th</sup> , 2016   | 65.8      | 64.7       | 57.1         |
| Wednesday, November 9 <sup>th</sup> , 2016 | 64.9*     | 64.9*      | 54.3*        |
|                                            |           |            |              |

\*Not a complete 24 hour cycle of data.



## Environmental Noise Study November 10<sup>th</sup>, 2016

### FINDINGS

The estimated impact of speaker noise at the nearest property line was calculated using provided manufactures data. The total attenuation at the nearest property line (and beyond) was calculated based on land topography supplied to Designed Acoustics by the site civil engineer, barrier height and location(s) (insertion loss<sup>1</sup>), and distance from source. The calculations show no increase of noise impact at the property line. It is important to note that as a conservative approach Designed Acoustics did NOT take into consideration the large amounts of trees and shrubs at the property lines and beyond. Due to seasonal changes in the geometry, shape, and consistency of such barriers, sound attenuation is difficult to predict when these are figured into the calculations. Designed Acoustics acknowledges that trees and foliage, in bloom, will add a slight degree of extra attenuation beyond those factors accounted for in this study. Therefore, the addition of trees and / or foliage near the property lines will have a positive impact on the noise environment beyond the property line.

The estimated SPLs assume a 6' barrier (that Designed Acoustics supports installing) placed between the given property lines and proposed carwash. Additionally, estimated SPLs at the northwest property line took into consideration the elevation difference between the carwash and the nearby property. This topography increases the barrier effectiveness at the northwest property line. Designed Acoustics estimated these SPLs at an 8' height per the aforementioned city code.

The site plan, provided by CEC and included in the appendix, indicates the approximate distance from the closest point on the North West property line to the entrance to the car wash. Designed Acoustics estimates a sound level of 70dBA at this area. Distance attenuation along with barrier attenuation was used to calculate the estimated property line dBA at 8'. The worst case is calculated to be 49 dBA at the property line. It's important to note that these estimated SPLs are lower than the onsite background measurements that have been taken. We recognize that the driers exiting the car wash are in fact the loudest noise generator on site, approximately 95dBA to 100dBA during its cycle, the direction of those driers will face the highway. It's our conclusion that the highway noise and the distance would dampen those levels significantly. While we did check all property line dBA levels during our study, Designed Acoustics has chosen the car wash entrance area to focus on because we are confident it would be the worst case scenario for noise on the proposed new development and any residential property line.

It is Designed Acoustics professional opinion that the operation of the proposed new development will have no negative environmental noise impact on adjacent properties and that the proposed noise levels that will be present upon development as proposed will meet the regulations presented.

**Environmental Noise Study**  
**November 10<sup>th</sup>, 2016**

## **CONCLUDING REMARKS**

As stated earlier environmental noise impact studies, being investigative by nature, are often forced to make assumptions concerning the properties of the noise source under such study. Designed Acoustics recognizes the usage of this proposed development. We have elected to base our study upon this worst case situation in order to ensure the validity of calculated results.

As a first step, Designed Acoustics placed a long term noise monitor at the proposed location in order to quantify the day, night, Leq background noise levels as a base starting point for our acoustical analysis

Designed Acoustics was supplied with manufacturer's noise measurements of the proposed equipment for our review and to establish if the equipment proposed would have the potential for negative effects on the surrounding areas.

As an additional step we were given access to an existing location with similar equipment. (475 N. Lindberg, Florissant. Missouri)  
Designed Acoustics visited that location on November 9<sup>th</sup>, 2016 at approximately 11:30am. While on site sound level readings of the car wash were taken. It's important to note that the sound level readings taken matched the manufacturer's data that was given to us for review. While still on site, sound levels were taken at the wall (barrier) located behind the carwash that separates the carwash from a residential neighborhood. (53dBA to 56dBA) Additional sound level readings were taken behind the wall. The sound level readings behind the wall were significantly lower. (42dBA – 45dBA)

Based on our acoustical analysis and the factors mentioned in this report the new development shall meet the aforementioned city code requirements.



## ACOUSTIC NOMENCLATURE AND TERMINOLOGY

**ANSI:** American National Standards Institute

**A-Weighing:** Prescribed frequency response defined by ANSI Standard S-1971. Used to obtain a single number representing the sound pressure level of a noise in a manner approximating the response of the ear, by de-emphasizing the effects of the low and high frequencies.

**Background Sound:** Sound that remains when sound of interest is removed is background sound relative to the sound of interest.

**Daytime:** The hours 0700 (7:00 am) to 2200 (10:00 pm).

**Day-night average sound level (L<sub>dn</sub>):** A measure of the noise environment over a 24-hour A-weighted sound level with a 10 dB weighing applied to the nighttime levels. When equivalent level (L<sub>eq</sub>) information is available, the L<sub>dn</sub> is calculated as follows:

Where  $L_{eq}(d) = L_{eq}$  for the hours 0700-2200.

$L_{eq}(n) = L_{eq}$  for the hours 2200-0700.

Annualized L<sub>dn</sub> is effective L<sub>dn</sub> determined over a full year accounting for daily and seasonal variations.

**dBA:** Overall A-weighted sound pressure level expressed in decibels referenced to 20 micro-pascals.

**Decibel (dB):** Ten times the logarithm of the ratio of a quantity (X) to a reference quantity (X<sub>r</sub>).

**Equivalent Sound Level (L<sub>eq</sub>):** The level of a constant sound which, in a given situation and time period, has the same sound energy as a time varying sound level.

$f_i$  = percent of time period in which a particular  $L_i$  occurs.

$L_i$  = sound level in dB.

**Exceedance Level - L<sub>n</sub>:** The sound pressure level exceeded n percent of the time. Example: L<sub>10</sub> is the sound pressure level exceeded 10% of the time during a measurement period. L<sub>50</sub> corresponds to the median level.

**Frequency:** Number of complete oscillation cycles per unit of time. The frequency is the reciprocal of the period. The unit of frequency often used is the Hertz.

**Hertz (Hz):** Unit of frequency equal to one cycle per second.

**L<sub>dn</sub>:** See day-night average sound level.

**L<sub>eq</sub>(n):** Equivalent sound level for a period n in length.

**L<sub>max</sub>:** The maximum sound level detected during the period of measurement.

**L<sub>min</sub>:** The minimum sound level detected during the period of measurement.

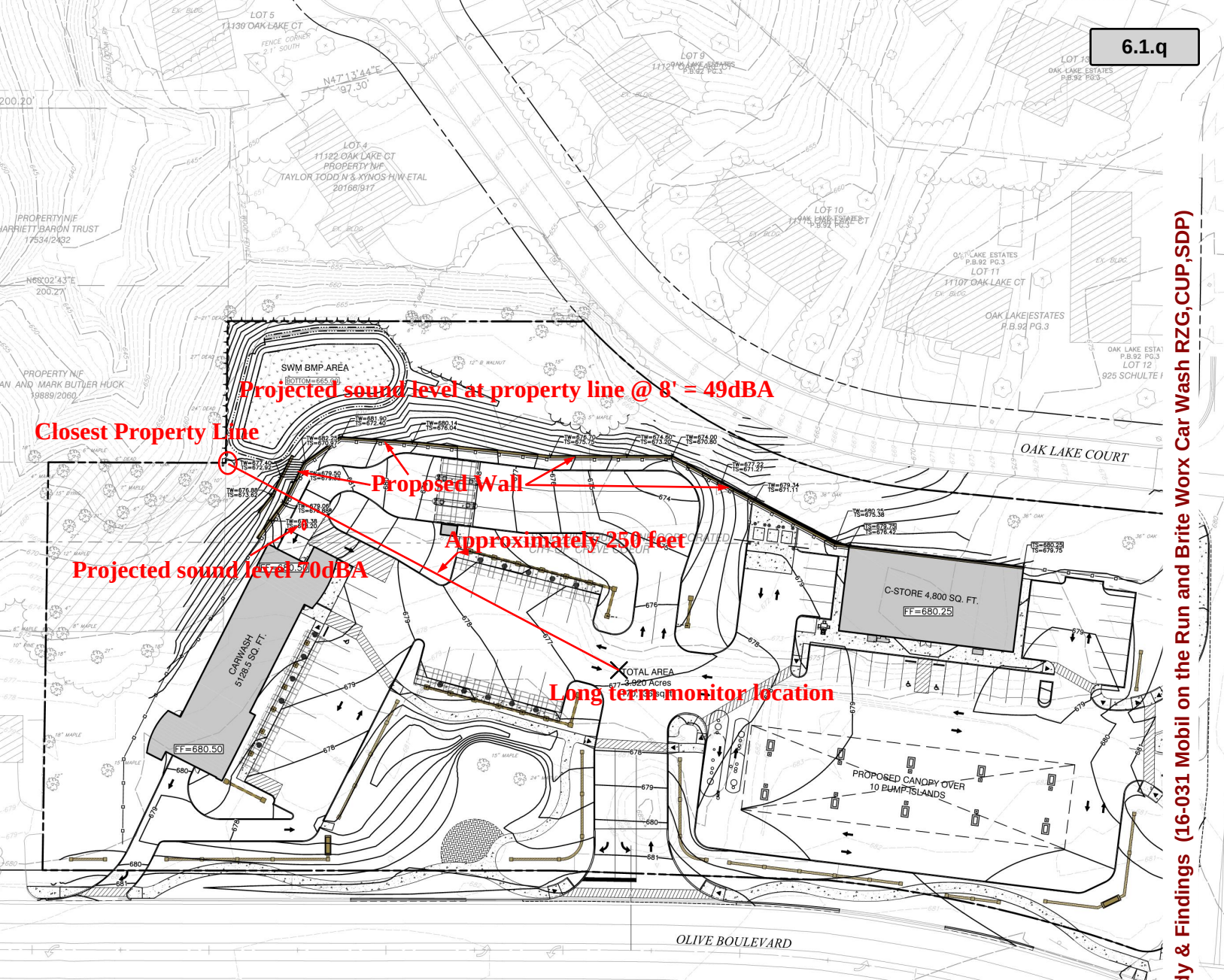
**L<sub>n</sub>:** See Exceedance Level, the sound level exceeded n percent of the time.

**Nighttime:** The hours 2200 (10:00 pm) to 0700 (7:00 am).

**Sound Pressure Level (SPL):** In decibels, 20 times the logarithm to the base 10 of the ratio of a sound pressure to the reference sound pressure of 20 micro-pascals. Where p = sound pressure to be quantified  $p_{ref} = 20$  micro-Pascals (metric).  $2.9 \times 10^{-9}$  psi (English)

## Figures 1 & Graphs 1 – 6

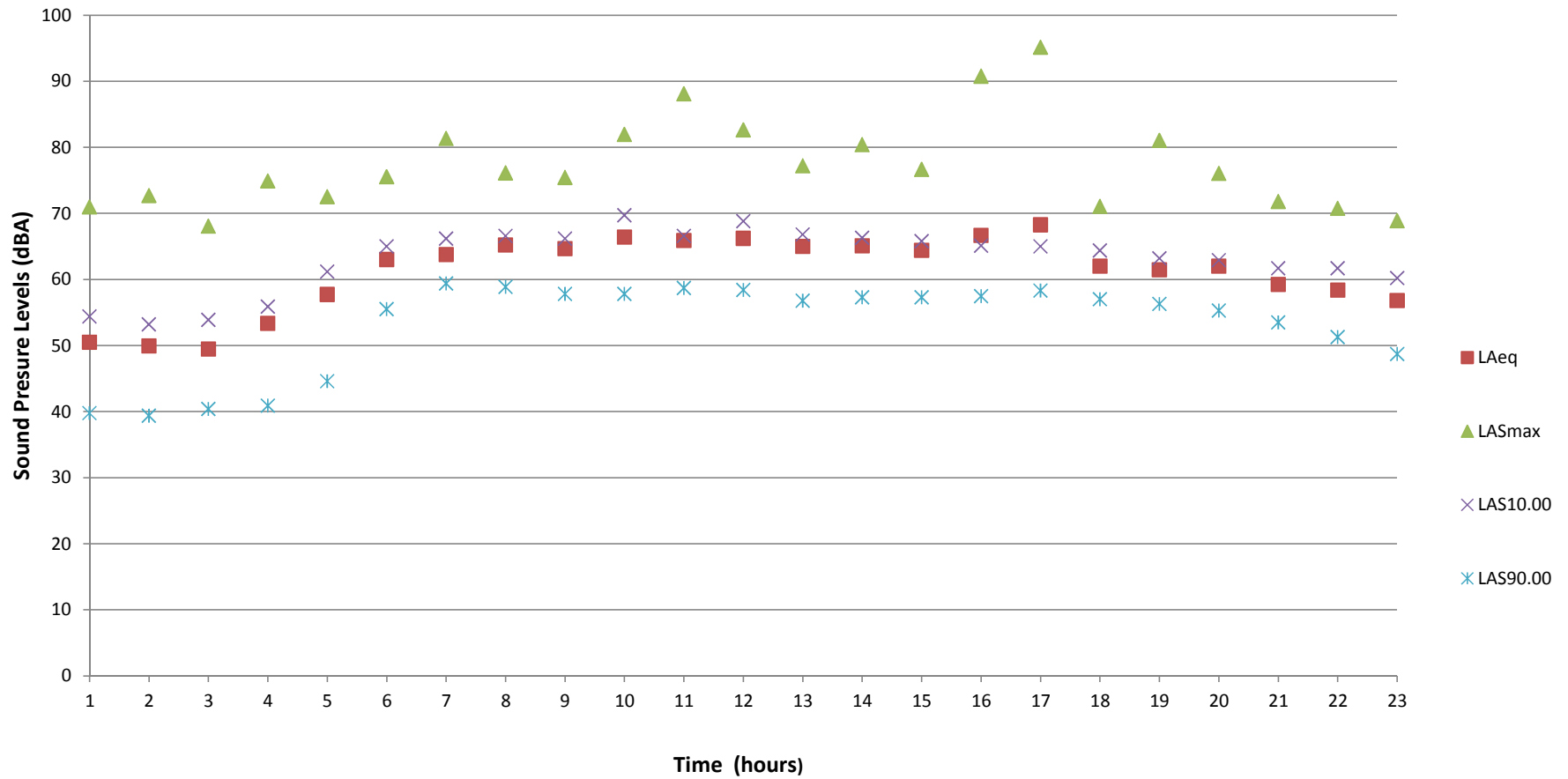






Olive & Schulte  
 Enviromental Noise Study  
 November 4th, 2016

Ldn 24 = 65.8  
 Leq (Day) = 64.9  
 Leq (Night) = 57.0

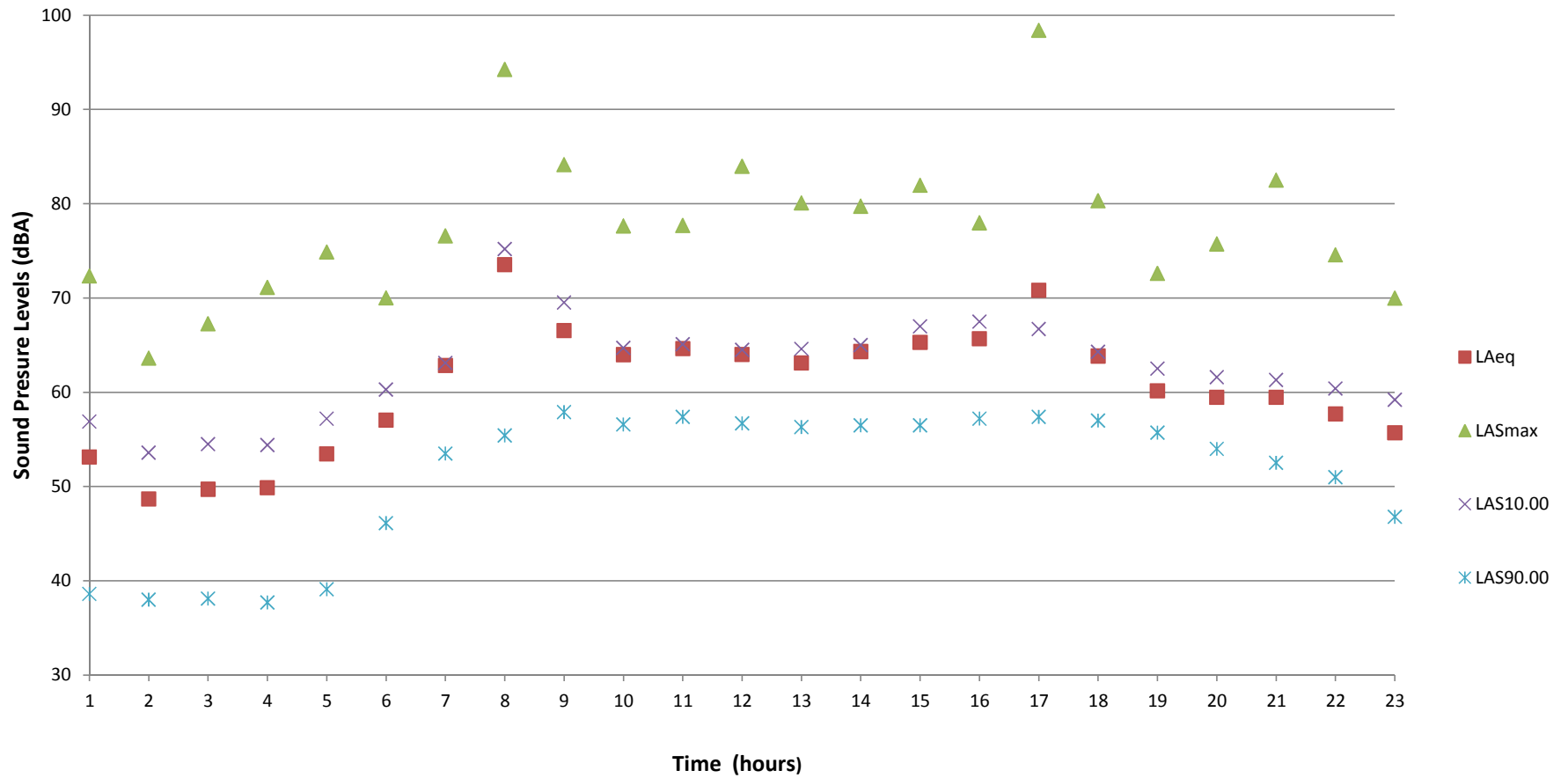






Olive & Schulte  
 Enviromental Noise Study  
 November 5th, 2016

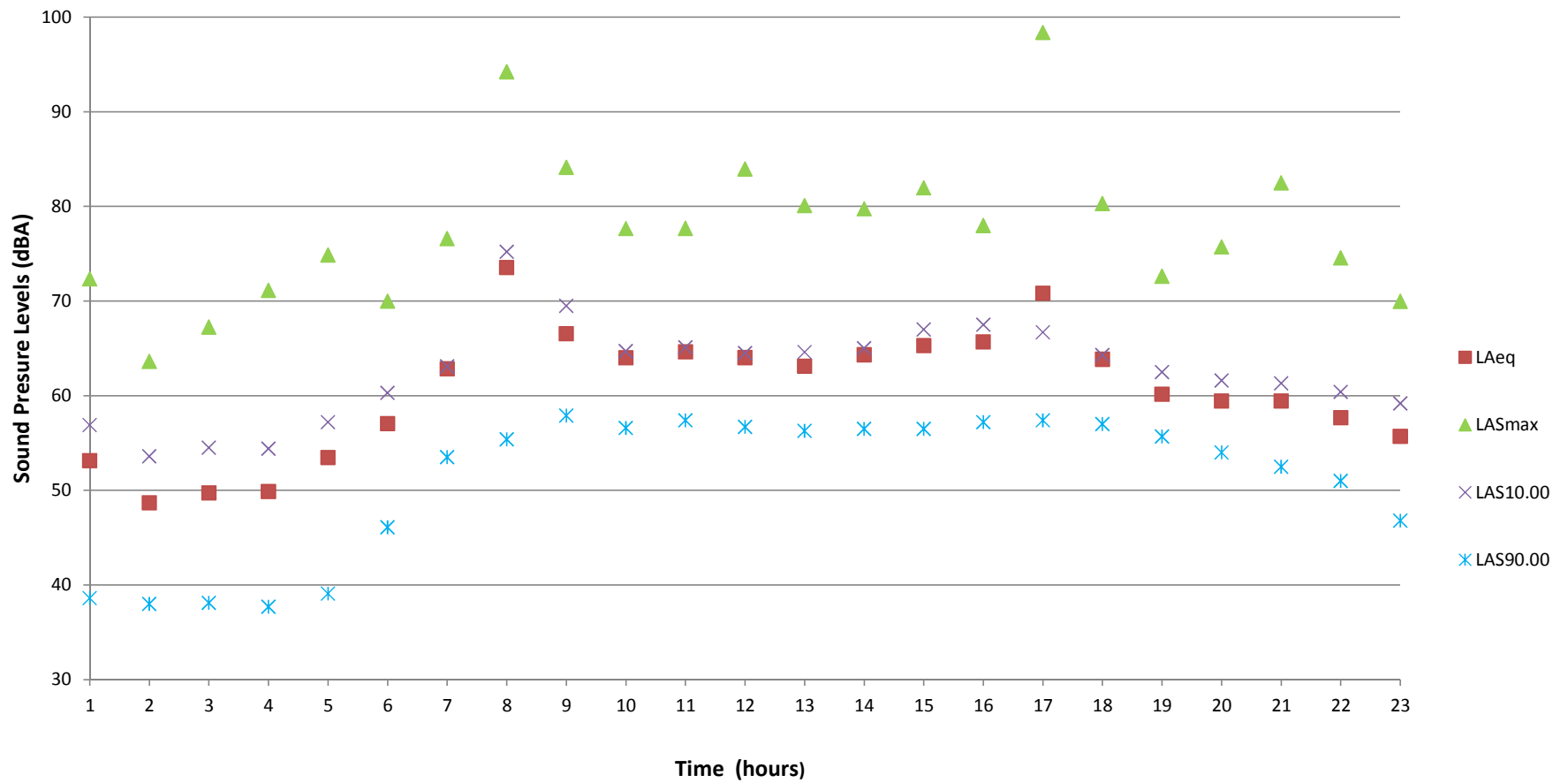
Ldn 24 = 65.7  
 Leq (Day) = 66.4  
 Leq (Night) = 54.3





Olive & Schulte  
 Enviromental Noise Study  
 November 6th, 2016

Ldn 24 = 65.1  
 Leq (Day) = 63.2  
 Leq (Night) = 57.1

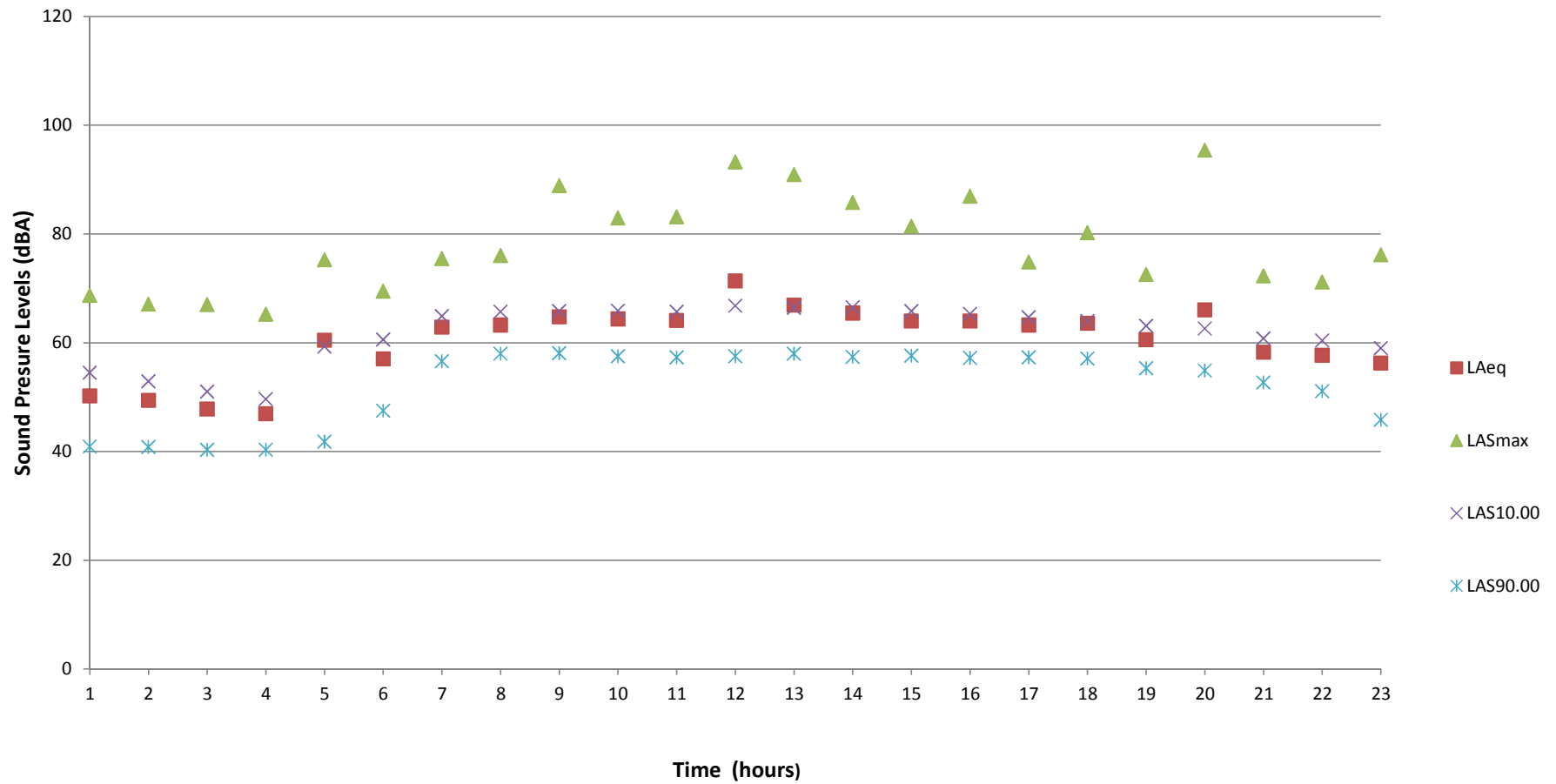






Olive & Schulte  
 Enviromental Noise Study  
 November 7th, 2016

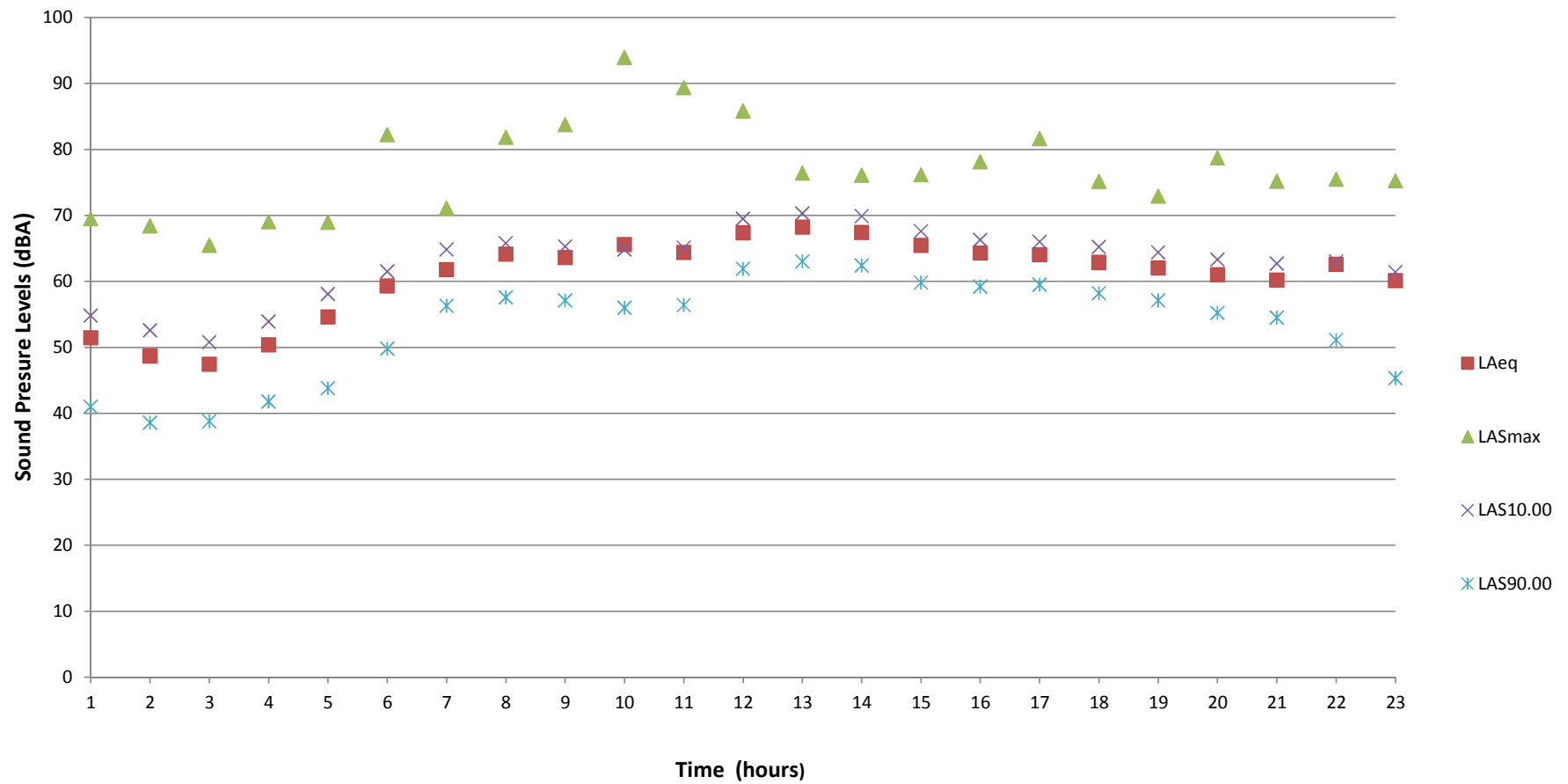
Ldn 24 = 65.3  
 Leq (Day) = 65.2  
 Leq (Night) = 55.4





Olive & Schulte  
 Enviromental Noise Study  
 November 8th, 2016

Ldn 24 = 65.8  
 Leq (Day) = 64.7  
 Leq (Night) = 57.1

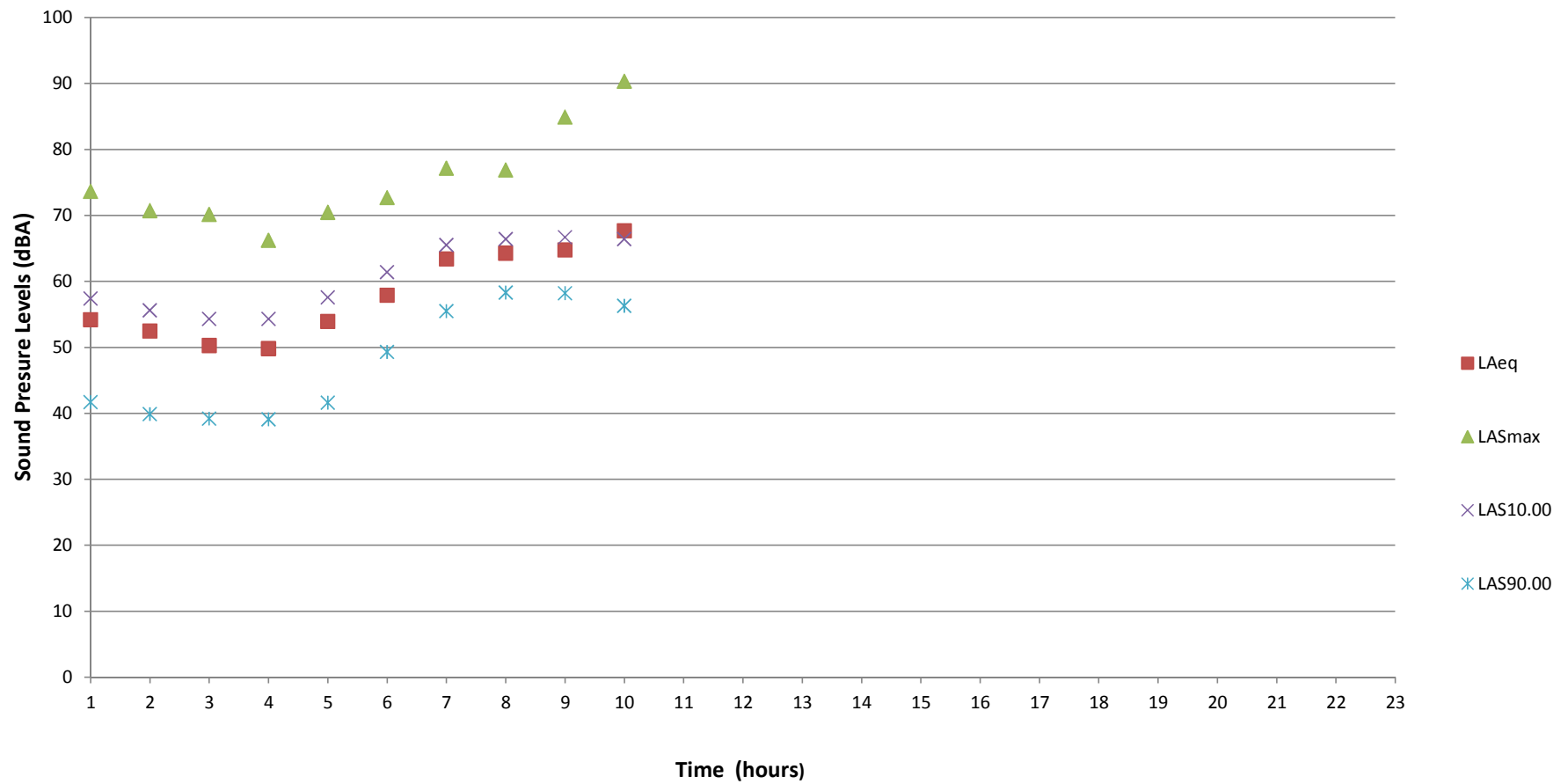






Olive & Schulte  
 Enviromental Noise Study  
 November 9th, 2016  
 (Only partial day of recordings)

Ldn 24 = 64.9  
 Leq (Day) = 64.9  
 Leq (Night) = 54.3



## PLANNING AND ZONING COMMISSION PUBLIC HEARING

CITY OF CREVE COEUR, MISSOURI

300 NORTH NEW BALLAS ROAD

MONDAY, DECEMBER 5, 2016

6:30 P.M.

## PUBLIC HEARING

APPLICATION NO. 16-031

## THOSE IN ATTENDANCE:

Ms. Beth Kistner, Chair  
Mr. Tim Carney  
Ms. Muriel Hall  
Mr. Don Magruder  
Mr. Gene Rovak  
Ms. Heather Silverman  
Mr. Matthew Schuh  
Mr. Carl Lumley, City Attorney  
Mr. Jason Jaggi, Director of Community Development  
Ms. Whitney Kelly, City Planner  
Ms. Jessica Stutte, Planning Assistant/Recording Secretary

McLaughlin Court Reporting Services, Inc.

Deborah K. McLaughlin, RPR, MO-CCR #314, IL-CSR, KS-CCR  
4772 Gatesbury Drive  
St. Louis, MO 63128  
(314)974-1199



1 CHAIRMAN KISTNER: All right. We're going to  
2 open up our Planning and Zoning Commission meeting for  
3 Monday, December 5th, 2016.

4 Let's start with our call to order.

5 Mr. Carney?

6 MR. CARNEY: Present.

7 CHAIRMAN KISTNER: Ms. Hall? She's absent.

8 Mr. Magruder?

9 MR. MAGRUDER: Present.

10 CHAIRMAN KISTNER: Mr. Rovak?

11 MR. ROVAK: Present.

12 CHAIRMAN KISTNER: Ms. Silverman?

13 MS. SILVERMAN: Present.

14 CHAIRMAN KISTNER: Mr. Schuh is absent at this  
15 time.

16 City Attorney, Carl Lumley?

17 MR. LUMLEY: Present.

18 CHAIRMAN KISTNER: Director of Community  
19 Development, Jason Jaggi?

20 MR. JAGGI: Present.

21 CHAIRMAN KISTNER: City Planner, Whitney Kelly?

22 MS. KELLY: Present.

23 CHAIRMAN KISTNER: And Planning  
24 Assistant/Recording Secretary, Jessica Stutte?

25 MS. STUTTE: Present.

1 CHAIRMAN KISTNER: And please note that  
2 Ms. Hall --

3 MS. HALL: Present.

4 CHAIRMAN KISTNER: -- is with us. Is present.  
5 All right.

6 We're going to start with the acceptance of the  
7 agenda. We have a motion?

8 MS. SILVERMAN: I so move.

9 MR. ROVAK: Second.

10 CHAIRMAN KISTNER: Second Mr. Rovak. All in  
11 favor?

12 (All responded aye.)

13 (Mr. Schuh is now present.)

14 CHAIRMAN KISTNER: Now we'll move to New  
15 Business.

16 We have a public hearing, Application  
17 No. 16-031: A rezoning, conditional use permit and site  
18 development plan and boundary adjustment approval for the  
19 Mobile On the Run Convenience Store with gas pumps and  
20 Briteworx Car Wash facility located at 11109 to 11141  
21 Olive Boulevard and 11100 to 11114 Oak Lake Court,  
22 currently zoned GC, General Commercial, and C Single  
23 Family Residential.

24 Any people who think they want to speak to this  
25 matter tonight, if you could come forward and be sworn in,



1 that'll just make it a little faster when we get to the  
2 various points of comment during the evening.

3 (The speakers were sworn in by the court  
4 reporter.)

5 CHAIRMAN KISTNER: All right. Thank you.

6 Good evening. Assume you're the applicant. If  
7 you can start with your name and dress.

8 MR. KAMP: Certainly will.

9 My name is Kevin Kamp. I'm with Civil &  
10 Environmental Consultants located in Hazelwood, Missouri.

11 Here tonight representing Wallis Companies.

12 Also with me are some -- several folks from  
13 Wallis and several members of the design team.

14 And tonight we're happy to and excited to  
15 present to you the plan for the redevelopment of the  
16 existing Mobil Gas Station Convenience Store and Car Wash  
17 at Olive and Schulte.

18 The current station was constructed in the  
19 mid-'80s. And then Wallis acquired the sites in the early  
20 '90s when Mobile sold their retail locations in this area  
21 to the Wallis family.

22 So the goals of this development are to  
23 modernize the service offering. The convenience store  
24 there today is not only to provide the items or the  
25 offerings now expected by the consumer, and the proposed

1 plan will provide for a new On the Run concept convenience  
2 offering.

3           The pump area will be enhanced with improved  
4 circulation and traffic flow around the pump islands, and  
5 the current automatic car wash on the facility will be  
6 replaced with a state of the art Briteworx Tunnel Wash  
7 facility.

8           The owner is -- is further committing to the  
9 neighborhood by providing the high-quality accessible  
10 redevelopment that is feasibly consistent with the Design  
11 Guidelines and the Comprehensive Plan while preserving and  
12 enhancing the buffer between the adjacent residents and  
13 the major state arterial highway of Olive Boulevard.

14           The proposed site will reduce the current five  
15 full access curb cuts onto Olive with one full access  
16 location with ride-out egress on the western portion of  
17 the site.

18           The Schulte access will be slightly realigned,  
19 and also will be constructed in order to prevent left turn  
20 movements into the facility.

21           The streetscape will provide for an enhanced  
22 pedestrian path that provides pedestrian openings along  
23 the way and access to the site, and large areas of open  
24 space adjacent to that frontage will also provide esthetic  
25 views from the passing traffic.



1           It will also feature a small knee wall that is  
2 constructed along the right-of-way with other street trees  
3 and other such elements along that streetscape.

4           So this is a generated video from our computer  
5 model of the developed -- developed, basically, for the  
6 design of the site. And the site provides for some safe  
7 and clearly defined vehicular pathways and ample room for  
8 backing and ample room for circulation between the pumps.

9           And the layout and the openness, while not  
10 typically found with this type of use, separates the  
11 particular components, but keeps them connected enough to  
12 appropriately share access and circulation.

13           See, there's also circulation that is clear and  
14 separate entrance and exits for the wash.

15           I'm talking faster than the video is moving.  
16 Sorry.

17           And I should note that careful design  
18 consideration was given to the locating the site elements  
19 and how they are positioned to create visual interest and  
20 provide for the expansive green spaces on the development.

21           And this open space and area recognizes and  
22 bridges the needs of revitalizing the current uses with  
23 the guidelines for design and the concepts in the  
24 Comprehensive Plan.

25           This figure here shows the intensity as a

1 percentage building coverage per the site area. And as  
2 can be seen, the existing Mobile site, which is in the  
3 lower left corner there, that represents about  
4 12.3 percent of that site area of the existing site.

5 It's made up and comprised of those buildings.  
6 And what we did was, okay, you have the canopy, you have  
7 the -- the C-Store and you have the car wash.

8 If we look at the overall area that's to be  
9 redeveloped and included in the redevelopment effort, that  
10 overall intensity or, you know, building area versus site  
11 area is around 13.1 percent.

12 And then that compared to the proposed  
13 development, we're looking at about 11 percent of building  
14 coverage versus site area.

15 Should be noted that the development overall has  
16 about 50 percent green space, actually, about 54 percent  
17 green space.

18 So building architecture. So high quality, low  
19 to no maintenance materials are being used to maintain the  
20 quality of the development for the city and the  
21 neighborhood.

22 These natural materials, which are, I have a  
23 small sample board up here, and we can pass that around,  
24 consist of integral colors, split face bands. And these  
25 materials are used in concert with the massing to reduce



1 the visual scale of the building and to make it more of a  
2 human scale.

3 The materials are residential in scale, not  
4 commercial. Material changes also emphasize the  
5 horizontal lines, further reducing the visual scale of the  
6 building.

7 Massing changes are not only to add the visual  
8 interest, but they help define the ins and the entrance of  
9 the building.

10 These massing changes are done both horizontally  
11 and vertically to be more human scale.

12 On the car wash side, it does utilize the same  
13 materials and the massing elements as far as the store to  
14 maintain some consistency individual connection between  
15 the two facilities as required by the Design Guidelines.

16 And we also have provided several connecting  
17 elements on the site, which also some of them act as a  
18 vacuum canopy -- or vacuum stations, and they -- these  
19 visually connect the two principal buildings on the site.

20 And the -- the building placement and the  
21 connecting elements on the site gives the development a  
22 sense of welcoming and community.

23 The -- so commercial buildings and residential  
24 buildings have different architectural styles and  
25 characteristics and functional requirements. Creating a

1 commercial neighborhood store, which looks commercial, but  
2 feels residential in scale is what has been achieved  
3 through the material scale and material selection and  
4 colors. But, most importantly, by building placement in  
5 landscaped areas similar to a park-like setting.

6 The design planning process all -- also  
7 considered several other important elements. And we can  
8 go through in detail any of these elements and answer all  
9 these questions, but I think, kind of playing off of what  
10 Jason had asked in your packets, that, you know, that  
11 there's a lot of, lot of elements that we have spent a  
12 long time kind of developing, and so just trying to give a  
13 broad brush overview first, so.

14 The landscaping made extensive use of the  
15 existing vegetation, especially in the buffer areas.

16 And the buffer areas are also enhanced with new  
17 plant materials, a retaining wall, as well as a sound wall  
18 or masonry fence.

19 Lighting has also been designed and pole heights  
20 and light levels have been adjusted to customize -- and  
21 customized for the security and safety needs for each  
22 component of the overall use, while maintaining and being  
23 very cognizant of the adjacent neighbors.

24 A noise study was also conducted, with -- which  
25 concluded that the operation of the proposed redevelopment



1 with the proposed elements of the fence and topography  
2 will have no negative noise impact on the adjacent  
3 properties.

4           Oops. There we go. We can go on.

5           Traffic study was also completed for this  
6 project by CBB, and Lee Cannon with CBB is here tonight,  
7 if we want to get into further details about those  
8 particular components.

9           But the commercial corridor of Olive Boulevard,  
10 Missouri State Route 340, is a five-lane state-maintained  
11 arterial highway with high existing volumes, especially  
12 during the peak hours.

13           And the study found the proposed site access,  
14 we'll kind of go point by point of their study, on  
15 Olive -- Olive Boulevard will consolidate those five  
16 existing curb cuts into two. The new full access driveway  
17 will be further away from the signal at Schulte, and will  
18 have separate exit lanes for both left and right turn  
19 movements. And the throat of the stacking lanes will be  
20 about four to five cars.

21           The second curb cut on Olive will be a ride-out  
22 only. It's an egress for the -- mainly for the exiting  
23 car wash.

24           The current access on Schulte, as I mentioned  
25 earlier, will be reduced to limit the north turns in --

1 northbound turns in from Schulte, and there is no access  
2 proposed from Oak Lake Court.

3           The new Mobile is expected to have an increase  
4 of on-site traffic, however, there is available capacity  
5 on Olive, and based on the convenience-oriented use of  
6 the -- and high traffic levels, much of this added traffic  
7 will be captured trips from the existing flows and the  
8 traffic already exist on Olive.

9           Those captured trips will add to the turns and  
10 the site driveways, but will not increase the traffic  
11 flows away from the site. Less out of the site directly  
12 onto Olive will have, during those highest delay periods,  
13 have the option to make a right onto Schulte and then  
14 utilize the light onto Olive.

15           Some of the -- there are some signal timing  
16 changes that can be made to accommodate the additional  
17 traffic efficiency. And CBB has recommended potentially  
18 even changing the left turn signal heads to have some  
19 flashing yellow indicators, which will allow for larger  
20 green turn -- green times on that Schulte left turn.

21           CBB also did recommend that we mark a pedestrian  
22 crossing on the west leg of Olive Boulevard. And although  
23 findings of impact did not require any modifications to  
24 the existing intersection, the redevelopment, just by  
25 planning prospectus, does propose an open space in the



1 area nearest Schulte and Olive, that could, in the  
2 potential of a future right-of-way in the event it would  
3 be needed for a future improvement of Schulte or Mary  
4 Meadows intersection.

5 So the study itself has been reviewed by  
6 St. Louis County and the City's third party consultant,  
7 both of whom have concurred with findings. MoDOT has yet  
8 to officially respond.

9 So the -- this redevelopment site area has been  
10 in the works for, I think nearly ten years, honestly, with  
11 various uses, all of which contemplated far more intense  
12 multi-tenant type of developments.

13 We are thankful for the opportunity to seek your  
14 favorable recommendation for the development. And we also  
15 very much appreciate the City staff, current and former,  
16 for meeting with this current design team and this current  
17 proposal for well over a year now.

18 And it has really afforded us the opportunity  
19 to -- to really listen, adjust, make some other, you know,  
20 modifications to the proposal as we've gone along.

21 So with that, I'd be happy to answer any  
22 questions. I understand the public hearing nature,  
23 there's going to be some back and forth, but thank you for  
24 your time.

25 CHAIRMAN KISTNER: Thank you.

1 Anybody have any questions right now for the  
2 applicant before we hear from Jason?

3 Actually, you know what, I do have a -- sorry,  
4 Jason.

5 Can I ask one question?

6 MR. JAGGI: I'll set up while you're asking the  
7 question.

8 CHAIRMAN KISTNER: All right.

9 Could you give a little information about how  
10 the -- the size of this location would compare to the one  
11 in Olivette, for which I think a lot of people here are  
12 familiar, including, you know, number of pumps, amount of  
13 area, egress, that sort of thing?

14 MR. KAMP: Okay. The site itself is  
15 considerably less.

16 I mean this is a -- from a site area and amount  
17 of green space, this is -- this is larger in acreage,  
18 total acreage of the tract that would normally house the  
19 C-Store.

20 And as far as how it compares to the Olivette  
21 store, it's the same footprint except the difference is,  
22 at Olivette, instead of having the car wash stand alone,  
23 all that internal circulation and everything, that car  
24 wash is bolted to the back of the building.

25 So, but the equipment interior in that car wash



1 is very similar. The -- the offerings inside of the store  
2 are very similar. The pump and the spacing is something  
3 that we would continue, and that's something that's done  
4 with a lot of new On the Run facilities, but it's similar  
5 to Olivette.

6 CHAIRMAN KISTNER: So the -- the number of pumps  
7 is the same?

8 MR. KAMP: Number of pumps at Olivette, we  
9 have -- we have eight fueling islands. Here we have ten.

10 CHAIRMAN KISTNER: So it's, what, 20, 25 percent  
11 bigger?

12 MR. KAMP: Yeah, 25 percent.

13 CHAIRMAN KISTNER: And square footage of the  
14 convenience store?

15 MR. KAMP: C-store is the same, I believe.  
16 Little bit smaller than Olivette.

17 CHAIRMAN KISTNER: Okay. Thank you.

18 MR. KAMP: Uh-huh.

19 MR. JAGGI: Good evening, Chair Kistner, Members  
20 of Planning & Zoning Commission. Jason Jaggi, Director of  
21 the Department of Community Development, on behalf of the  
22 City of Creve Coeur.

23 I think Mr. Kamp provided you a good overview of  
24 the project in terms of the specific aspects of the  
25 development proposal, and how that project may -- may meet

1 with the City's Comprehensive Plan and City's Design  
2 Guidelines.

3 I thought it might be beneficial for you to kind  
4 of understand a little bit maybe of the context in terms  
5 of what's being requested this evening on -- for you to  
6 look at.

7 This is a rather complex proposal, and that  
8 involves property that encompassed both City of Creve  
9 Coeur, within our city limits, as well as the  
10 unincorporated sections of Creve Coeur. And also these  
11 properties have a mixture of zoning designations, both  
12 inside the city limits, as well as within unincorporated  
13 St. Louis County.

14 So I thought it might be beneficial to kind of  
15 break down these various elements for you in a larger  
16 scale.

17 And then I'm certainly available to answer any  
18 questions you may have as we proceed through my  
19 presentation or afterwards.

20 So what we -- what staff's approach to this  
21 proposal, given the complexity, is we thought it would be  
22 important for the Commission to look at this project  
23 initially from a big picture standpoint. Namely, in terms  
24 of, one, the rezoning, and, two, the -- the compliance  
25 with the proposal as it relates to the Comprehensive



1 Plan's larger objectives for this area of the city.

2           So, as Mr. Kamp mentioned, this proposal does  
3 include seven parcels. You can see here on the map,  
4 although I don't think I have a pointer, unfortunately,  
5 the red box does highlight seven. The project area, which  
6 does contain seven parcels.

7           Thank you.

8           You can see here this is the -- the -- the  
9 proposed development area. These are the residential uses  
10 that are partially located in the city, and then partially  
11 located in unincorporated county. The same holds true for  
12 these properties that have a large degree of their  
13 frontages within the City of Creve Coeur. But, again,  
14 they're split with St. Louis County. So this boundary  
15 here is the city/county limits, all this is county, all  
16 this is city.

17           The applicant is proposing to rezone a portion  
18 of this, and upon conclusion of the project, it would be  
19 located on one consolidated lot. So all this would be  
20 proposed to be consolidated into one lot that is also a  
21 request that's in front of you this evening.

22           So in terms of the zoning overview, again, this  
23 is the -- the applicant submitted this. I kind of touched  
24 it up a little bit just to further educate you on some of  
25 the -- the context in terms of the rezoning question

1 that's before you this evening.

2           You can see here these are the properties. This  
3 is where the existing gas station sits on the existing  
4 parcel.

5           And then you have the Creve Coeur portion to the  
6 north is also zoned GC. These areas are right now  
7 currently zoned GC as we stand today. The areas -- the  
8 three parcels, as we move further west on Olive, are zoned  
9 residential, although I believe there is some commercial  
10 use in at least some of them, but they are zoned  
11 residential right now.

12           As we move on the south side of Olive, this map  
13 is a little out of date because it was pulled from our  
14 website, which is not exactly current, but this is the  
15 most current version, we actually have this area zoned GC  
16 as well. This is the Masonic Temple that was subject to a  
17 proposed use in association with the Goddard School. That  
18 project actually never resulted, however, the zoning,  
19 which was rezoning in conjunction with that development  
20 application, remains. So this is zoned GC. This property  
21 here. And then as we move further west, the actual  
22 Goddard School location is also zoned GC.

23           So that gives you a little bit of the context in  
24 terms of the zoning along this portion of Creve Coeur is  
25 all GC, and this is all Single Family Residential through



1 here.

2           Based on that, you know, if you look at the GC  
3 District in terms of the rezoning request, the purpose of  
4 the GC District is to accommodate convenience retail  
5 shopping and services and offices, which are freestanding  
6 or part of a small scale planned commercial development,  
7 which are compatible in scale and intensity of use with  
8 adjacent residential uses. That is the purpose of the GC  
9 District.

10           And as I just described, there has been some  
11 history of rezoning some of these areas to the GC  
12 District, based on development proposals that have come  
13 forward, but -- to the City.

14           So, in regards to the rezoning, I would say  
15 staff's, you know, and we touched on this in the staff  
16 report, but we definitely understand the pattern of  
17 rezoning some of these single families with frontages  
18 along Olive. But we do have some concerns with, primarily  
19 two things, with a rezoning request standing on its own.

20           One is we would -- with this proposal, we would  
21 have this property here, which is 111 -- I'm sorry --  
22 11147 Olive Boulevard. Right here. That would not be  
23 subject to any rezoning. That would remain residential.

24           And then, obviously, we have the -- the  
25 Woodshire properties, which are zoned residentials now,

1 but those are a little more consistent with -- with  
2 Woodshire.

3 But this is one thing that we did notice if this  
4 rezoning were to move forward, we would have kind of a  
5 remnant parcel that would still have residential zoning,  
6 which means what's the future of that property. It's a --  
7 it's a bit of an unknown at this point.

8 But what we also -- when looking at rezoning, we  
9 think it's important for the Commission to consider, you  
10 know, when we rezone properties, what are we -- we -- what  
11 are we rezoning it to, and what is the intent of the  
12 district into which it would be rezoned.

13 And that's where I think we have some concerns  
14 with this development proposal and the scale that it is  
15 being presented this evening.

16 So to -- that -- that kind of touches base on  
17 the rezoning aspect of it.

18 Specific to the development proposal, you have a  
19 conditional use and a site development plan application  
20 request, as well as a boundary or a subdivision plat that  
21 would consolidate all the parcels.

22 Our 2002 Comprehensive Plan, which is our  
23 existing Comprehensive Plan, this area falls within the  
24 East Olive Corridor. This is an area that calls for small  
25 businesses with residential character and substantial



1 green space and landscaping.

2 It also is part of the key area, a specific area  
3 of the 2002 Plan called Area No. 2 in East Olive, which  
4 also suggests that as this area redevelops, it shall  
5 remain commercial with neighborhood-oriented commercial,  
6 and it's also to maintain that compatibility with the  
7 adjacent residential areas.

8 So in the staff report, which you have, and the  
9 applicant has as well, we've identified nine segments of  
10 the Comprehensive Plan, nine policies, and we evaluated  
11 this project based on those nine policies.

12 I won't go into each one of those, but I'll just  
13 try to summarize that for you this evening, and if you  
14 have specific questions, we're available to respond to  
15 those.

16 I also want to touch on, and the staff report  
17 touches on the 2030 Comprehensive Plan, which is,  
18 obviously, under development. It's been part of your  
19 review for the last several months.

20 And in a nutshell, that plan, basically,  
21 emphasizes the existing policies of the 2002 Plan, but  
22 further those to -- to accentuate or to recommend  
23 additional walkability within the district, but to,  
24 essentially, remain neighborhood-oriented and service-type  
25 businesses with the introduction of also multi-family as a

1 possibility.

2           Envision that the East Corridor could be part of  
3 a larger rezoning in the future as well, based on a  
4 implementation strategy of the plan, where, you know, this  
5 area, if it were to proceed as -- as we're discussing is  
6 on review, this area could be subject to a new zoning  
7 potentially as an implementation measure.

8           So as we -- as I've described both of the -- the  
9 Comprehensive Plans, the one official plan and then the  
10 plan that we are under review, how does this application  
11 comport to those ideals. How does it match up with that.

12           And this is where we have little bit of a  
13 concern. One is, on a pro side, the -- the plan calls for  
14 pedestrian amenities, landscape buffers adjacent to  
15 residential areas. By and large, this application seems  
16 to meet with that on -- on a bigger scale.

17           Also the plan calls for saving some mature trees  
18 and incorporating that into a site plan. We think the  
19 applicant has also done a good job with that as well.

20           But those are, you know, relatively minor  
21 issues. Our larger issues, basically, boil down to the  
22 scale and intensity of the proposal.

23           If you look at the Comprehensive Plan, it  
24 clearly states that it's supposed to be compatible with  
25 residential character of Olive Boulevard, calls for

1 smaller retail and service businesses that cater to  
2 surrounding residences.

3 It also encourages residential design elements  
4 to be incorporated as much as possible with proposals that  
5 are in the commercial portion of the East Olive Corridor,  
6 and it could be questioned as to whether this proposal  
7 meets with the scale and intensity of uses of the  
8 Comprehensive Plan, and one that respects the adjacent  
9 residential areas.

10 In terms of Design Guidelines, we did not  
11 prepare a detailed Design Guideline review for you at this  
12 time based upon discussion of some of the larger issues,  
13 but we did have a few concerns, and I'll just touch on  
14 those just in general.

15 You know, the use of EIFS, the -- the kind of  
16 corporate architecture look of the proposed submittal, as  
17 well as it doesn't seem to incorporate some bit of a  
18 residential design element that the Comp Plan seems to  
19 call for.

20 Mr. Kamp addressed the traffic impact study. I  
21 don't think staff has any other comments at this point.  
22 You do have the CBB report. You also have the report from  
23 GBA, which is the City's traffic consultant.

24 By and large there's some recommendations, but  
25 those can be met, it appears, with the proposed project.



1           The staff -- the sound study as well, we did  
2 receive that, and we haven't really analyzed that to a  
3 great degree at this time, but we can certainly answer any  
4 questions you may have regarding those two documents at  
5 this time.

6           So in -- in regard to the -- to the motions you  
7 do have, this -- this will be discussed, obviously, and  
8 then you do have some motions that will need to be voted  
9 upon separately, and we can assist in that as you move  
10 further in the proceedings this evening.

11           I think I'll stop there, and if there's any  
12 questions, I'd be happy to answer those at this time.

13           CHAIRMAN KISTNER: Anybody ready to -- have any  
14 questions for Jason?

15           Yeah, I think if not, I'd like to hear from,  
16 there's, obviously, a substantial amount of interest from,  
17 I presume, the residents in the areas around. So I think  
18 this would be a good time.

19           I don't have any speaker cards, so I think,  
20 first of all, there were a few people who -- who did --  
21 who were sworn in. I don't have a way of knowing who you  
22 are who were sworn in, but if you could figure -- okay.  
23 You raised your hand, you're up first.

24           MS. CHERYL RICHARDS: So do I need to talk --

25           CHAIRMAN KISTNER: No, you need to come forward.

1 MS. CHERYL RICHARDS: Okay.

2 CHAIRMAN KISTNER: If you've already been sworn  
3 in.

4 MS. CHERYL RICHARDS: I was sworn.

5 CHAIRMAN KISTNER: Okay. Then if you could just  
6 start with your name and address.

7 MS. CHERYL RICHARDS: I'm Cheryl Richards, and  
8 my --

9 CHAIRMAN KISTNER: And just one second too.

10 Because we have -- especially because we have a  
11 lot of people, we have a tradition of three minutes, so  
12 I'm not -- I don't have a clock on me, but if everybody  
13 could just be sort of cognizant of that as they're  
14 talking.

15 MS. CHERYL RICHARDS: Okay. My name is Cheryl  
16 Richards. I live at 842 Mary Meadows Lane.

17 And the issues that I just wanted to make sure  
18 were addressed had to do with the traffic.

19 The first one is the whole issue of going  
20 straight through that intersection with Mary Meadows,  
21 because it's hard to do at this point. It said on page 23  
22 in one of these things that it said de-facto right turn  
23 lane to go onto Olive, and that is true.

24 If you're in the -- the lane, and you want to go  
25 straight into Mary Meadows, cars honk at you because they

1 can't believe that anybody would actually want to go  
2 straight. And I do not even try to go straight from Mary  
3 Meadows through because of all the left turn -- turning  
4 cars that it seems like it's too dangerous. So that's one  
5 issue in terms of what -- how to address some of that.

6 The second issue is how to make sure that the  
7 traffic is not going to go into the gas station from the  
8 Schulte side.

9 We have a exit only sign on Mary Meadows for the  
10 commercial strip that goes off of Mary Meadows, and people  
11 are not following that at all. They go in when it's  
12 convenient for them. And so I'm not quite sure how it is  
13 that this is going to get enforced.

14 And the third thing that I was wondering about,  
15 because we had gone through the issues with Walgreens and  
16 Fifth Third Bank at the top of Mary Meadows and Olive, was  
17 whether MoDOT is really going to agree to doing something  
18 in terms of changing how much time is allocated in the  
19 traffic lights for Olive.

20 I thought, historically, they were really not in  
21 favor of reducing the time.

22 And right now with the cars that are turning  
23 left from Schulte onto Olive, it's really dangerous if  
24 you're making a right turn from Mary Meadows. There's now  
25 a no right turn, so you're kind of turning right at the



1 same time as they're turning left, and it's really  
2 complicated.

3 We are still training our young drivers on our  
4 street to be very, very careful whenever they go out into  
5 the Olive intersection.

6 I'm just kind of concerned about having more  
7 traffic at that intersection.

8 That three minutes?

9 CHAIRMAN KISTNER: Thank you very much.

10 Yeah --

11 MS. CHERYL RICHARDS: Thank you.

12 CHAIRMAN KISTNER: -- that's wonderful. Thank  
13 you.

14 We have a next speaker?

15 And have you been -- and start with your name  
16 and address, please.

17 MR. MARK HUCK: My name is Mark Huck. I live at  
18 906 Woodshire.

19 And, let's see, hold on. My property's right  
20 here (witness indicating).

21 I guess just the first --

22 CHAIRMAN KISTNER: Just for the record, since --  
23 your property that adjoins this property?

24 MR. MARK HUCK: Yes, it does.

25 CHAIRMAN KISTNER: Okay.

1 MR. MARK HUCK: My house sits right about here  
2 (witness indicating).

3 Woodshire Lane is not shown here. It's just to  
4 the west of the property.

5 A few points. I think it's -- was very well  
6 noted that -- I really don't know how this development  
7 fits within the spirit of the Comprehensive Plan as far as  
8 small businesses with residential character. I mean it's  
9 just a massive plot.

10 Secondly, of course, I think all of us on  
11 Woodshire Lane are concerned about the additional traffic.  
12 And especially for those who live towards the south end of  
13 Woodshire Lane, there's, my guess is there's going to be  
14 additional lights because of the gas pumps, the parking  
15 lot, the area where the -- the vacuums are.

16 Additionally, there are three lanes wide of cars  
17 that line up for the car wash, and, you know, as they're  
18 turning and coming in, they're going to be shooting right  
19 onto our property.

20 There was an elevation study, I guess, I don't  
21 know if I would call it a study, when we met a couple of  
22 months ago, the people from Mobile were -- had some  
23 elevations done, but we really didn't get time to get into  
24 what effect it would have on everybody, so that's just  
25 another concern.

1 I guess, lastly, when you're trying to turn into  
2 Woodshire Lane coming from the west, we have to rely on  
3 the light at Schulte, and when the traffic is stopped by a  
4 red light, then, typically, there's a number of cars  
5 coming off of Schulte that are heading west. And a few  
6 cars come out of the Mobile On the Run, so it can be quite  
7 a bear sometimes trying to get into Woodshire Lane.

8 And I really -- I would guess they're doing this  
9 because they anticipate having more cars coming in and  
10 out, and I don't know how that's going to -- to help our  
11 situation.

12 Additionally, where the existing entrances and  
13 exits are to the Mobile, there -- the first one is set up,  
14 and these are rough numbers based off of Google, 735 feet  
15 before you can turn into the first entrance, and then  
16 about 850 feet before you can turn into the second  
17 entrance. So that means cars that are traveling eastbound  
18 are starting to pull over into the center lane, which  
19 means, of course, if you're trying to get out of  
20 Woodshire, you can't because you have cars that are in the  
21 left-hand lane heading east, and, of course, you can't  
22 pull into the center lane, that's against the law to pull  
23 into the center lane and then try to merge on to the  
24 eastbound lanes.

25 So with the new proposal, when the traffic stops



1 here, of course, you're going to have people coming off of  
2 Schulte, then you're going to have an exit that is going  
3 to be 660 feet from Woodshire, then another one that's  
4 going to be 340 feet. And I can just, you know, the  
5 concern is there's going to be, as soon as traffic is  
6 stopped here, there's going to be a constant flow of  
7 people coming out of the Mobile Station and on Schulte  
8 Road, and you're never going to be able to cross it, so.

9 I don't know how these studies are done, but,  
10 you know, from a practical standpoint, those would be my  
11 concerns as far as additional traffic.

12 CHAIRMAN KISTNER: Thank you very much.

13 MR. MARK HUCK: Thank you.

14 CHAIRMAN KISTNER: Do we have other residents?  
15 People in the audience who wish to speak?

16 Come forth. And were you sworn in?

17 MR. ANDY VOSS: I was.

18 CHAIRMAN KISTNER: Okay. If you could start  
19 with your name and address.

20 MR. ANDY VOSS: My name's Andy Voss. I live  
21 down from Mark Huck on 910 Woodshire, which would be just  
22 north of his property. I also have a parcel of land that  
23 backs up close to this adjacent property.

24 You know, I think one thing I just want to  
25 expand upon what Mark says, is if you look at what the

1 existing businesses are there today, we're taking a vast  
2 jump from what that is. We're talking about businesses  
3 that operate during normal business hours, where we would  
4 have residents, the way they are now, with businesses  
5 shutting down during the normal business hours. Here we  
6 will have a gas station, as Mark stated, with lights,  
7 traffic and sound beyond those normal business hours.

8           And I think that's something that definitely  
9 needs to be taken into account when looking at this, as  
10 you compare it to the surrounding residential areas.

11           The other part, I'd be interested to see where  
12 some of the comparative numbers were drawn from, as far as  
13 visits in the Mobile numbers to see if it's a similar  
14 situated Mobile Station.

15           I think one of the reasons that they're looking  
16 to expand upon this Mobile Station is to capture some of  
17 the CityPlace traffic in the CityPlace, so my guess is  
18 what you would see here is a significant jump in the  
19 visitation.

20           Also, the comparisons on the number of things  
21 that weren't discussed, things surrounding the -- the car  
22 wash, the -- the number of vacuums and all of those type  
23 of situations that actually increase the size of this plot  
24 drastically.

25           And so in looking at all of that, I think the

1 number one thing -- and the other part I didn't see, I saw  
2 a mention of a light study. I don't know that -- has that  
3 been published or something that we could see as to the  
4 results of that? And so I saw the traffic, and I saw the  
5 sound, but how that light study, what the results of that  
6 light study were, I -- I'd like to see those, if at all  
7 possible.

8 MS. KELLY: They were on the City's website.

9 MR. ANDY VOSS: They were. Okay. Thank you.

10 CHAIRMAN KISTNER: Thank you very much.

11 Do we have other people?

12 We have a lot of interest -- we have a lot of  
13 interest, but not necessarily speakers. Okay.

14 With that, I think it's -- are there any  
15 questions that anyone here has for -- yes.

16 MR. ROVAK: I have one small one.

17 On the photo -- photometric study, which -- and  
18 I did not look at that itself yet, usually what I see in  
19 those are the levels of intensity as you go both  
20 directions along the site.

21 Is there also, in terms of the selection of  
22 light standards and fixtures, cut-off angles that are  
23 going to preclude spillage of light, so that if you're  
24 standing off from the site, you're not looking into bright  
25 lights?



1           We've seen sites that have had good control of  
2 the general lighting intensity, but bad control, and  
3 they're not all -- not necessarily in Creve Coeur, but  
4 others along Olive that I've seen that as you drive by,  
5 you're looking into some very, very intense lighting.

6           MR. KAMP: Yeah.

7           MR. ROVAK: So that's one of the things I'd like  
8 to ask.

9           MR. KAMP: Yeah, so you're right, on the  
10 photometrics themselves, yeah, we -- we do comply with the  
11 code that the -- the foot candles --

12          MR. ROVAK: Right.

13          MR. KAMP: -- as predicted and measured and all  
14 that, so what -- the other thing we did, that Mr. Huck  
15 actually talked about, we, and I showed you a video from  
16 this -- this plan we did --

17          MR. ROVAK: Uh-huh.

18          MR. KAMP: -- we did some -- some looking at,  
19 both along Oak Lake and Woodshire, and then we're  
20 proposing this masonry wall -- or let's call it -- let's  
21 call it the masonry fence, just to keep the terminology  
22 correct.

23          MR. ROVAK: Uh-huh.

24          MR. KAMP: And that sits atop, actually, a  
25 retaining wall as well.

1           So what we did is we -- we -- we modeled the top  
2 of this wall to be such that along Oak Lake, as you do get  
3 a small look into the site from back there, that you would  
4 not be able to see the underside of the canopy.

5           MR. ROVAK: That's what I'm asking.

6           MR. KAMP: Right.

7           MR. ROVAK: So you got cut off -- these are cut  
8 off --

9           MR. KAMP: Correct.

10          And then, additionally, we spent a good deal of  
11 time in this car wash, which is not open 24 hours. It's  
12 7 a.m. to 8 p.m. operation. We -- we really customized  
13 the lighting to be only effective enough for security  
14 concerns and -- and those types of things on those off  
15 hours.

16          Additionally, the site configuration, the -- the  
17 building itself is going to block this canopy from -- from  
18 traversing west into the -- the Woodshire thing, and then  
19 a fence continues all the way around to meet that building  
20 as well.

21          MR. ROVAK: Okay. Thank you.

22          MR. KAMP: Uh-huh.

23          Oh, and, yeah, I'm sorry. And the headlight  
24 part as well, as you're -- you're coming into the, you  
25 know, pay station area, that -- that's there, is just

1 going to block, and -- and there's also a good amount of  
2 grade difference --

3 MR. ROVAK: Uh-huh.

4 MR. KAMP: -- between the two, yeah.

5 MR. ROVAK: Okay. Thank you.

6 MS. SILVERMAN: How tall was that fence?

7 MR. KAMP: It's 6 to 8 feet. And as we further  
8 refine that this particular masonry sound wall fence, it's  
9 very -- it's like a stone facade-looking thing. We've  
10 used it -- it's the same fence that's at the Olivette  
11 facility. It can go up to 10 foot in height, so as we  
12 start finalizing grades and getting into construction  
13 documents, we're not limited at that 8 foot, we can -- if  
14 there are areas that, you know, to prevent things like  
15 seeing the underside of the canopy and those kind of  
16 things, we can add to.

17 MR. SCHUH: But general and specific question,  
18 and it may be better answered by staff, but if you have an  
19 answer, I'm open to hearing it.

20 Any idea where the nearest gas stations are in  
21 relation to the proposed site?

22 And then my question for staff is going to be  
23 about the -- whether there's any averages per capita or  
24 per square mileage about whether there's an average number  
25 of gas stations per those -- per those measures?



1 MR. KAMP: Well, typically the, you know, I'll  
2 take a stab, and, Jason, definitely, you know, if there's  
3 particular statistics for Creve Coeur, but right now the  
4 closest gas station is right here on the corner where  
5 we're currently located.

6 There's one that -- that's Circle K, that's the  
7 Shell. Going west, there's a facility right at Olive and  
8 Ballas, and I'm sure you guys are familiar with how  
9 challenging that can be to get in and out of, cause that  
10 is a small parcel of property, so.

11 You know, and as far as locations of convenience  
12 stores along, you know, a heavily traveled, probably one  
13 of the larger arteries of the state route through the  
14 community on Olive is logical place that, you know,  
15 generally that's where they will locate.

16 And did that answer your question?

17 MR. SCHUH: How about per car washes?

18 MR. KAMP: Carwashes, in this particular --  
19 well, in Olivette, it's -- you know, I don't know what --  
20 they're a neighborhood use, so this is not -- this is not  
21 a destination type of thing where you're going to get  
22 people from all over the county going to this particular  
23 car wash.

24 I mean this is a -- a neighborhood use. And  
25 that's why, you know, we feel like this is still a strong

1 place to be. It serves the -- the significantly large  
2 residential community immediately adjacent and behind,  
3 across and up and down Olive. And so this is not like a  
4 type of destination.

5 So as far as where they're located, and  
6 especially the style, type, price points, all those  
7 things, are really the demands of serving the demands of  
8 the, you know, the community that's there, and that's how  
9 it's kind of put together.

10 MR. MAGRUDER: I have a question.

11 MR. KAMP: Yes, sir.

12 MR. MAGRUDER: Has a study been done trying to  
13 determine how -- what the traffic will be in and out of  
14 the -- this particular site after it's built?

15 It's going to bring a lot more traffic than we  
16 now see, I would imagine. Has a study been done?

17 MR. KAMP: Yes. And, actually, I'll let Lee  
18 kind of address that.

19 MR. MAGRUDER: Okay.

20 MR. KAMP: If we want to talk about traffic for  
21 a little bit, I can kind of get it pulled up here. Is  
22 that --

23 CHAIRMAN KISTNER: So do we want to get into the  
24 detail of traffic, or I think -- I think the first thing  
25 for us to decide is there's sort of the -- the larger

1 issue of is -- is the -- the plan itself consistent --

2 MR. MAGRUDER: Oh, okay.

3 CHAIRMAN KISTNER: -- enough with our  
4 Comprehensive Plan.

5 Is this -- do we want to get into the detail of  
6 the building materials and the traffic and all that?

7 MR. MAGRUDER: I'll withdraw my question for  
8 now.

9 CHAIRMAN KISTNER: Well, and I'm not suggesting  
10 you need to.

11 MR. MAGRUDER: That's okay.

12 CHAIRMAN KISTNER: But my thought was that we  
13 should address the -- the sort of that threshold question  
14 of is this something that we want to work with, and kind  
15 of, you know, get into that detail? Does it -- does it  
16 meet the threshold criteria for something that -- that  
17 fits, and that we want to, you know, consider and move  
18 forward on?

19 MR. MAGRUDER: Okay. I have something on that  
20 too.

21 2030 Comprehensive Plan we've been working on  
22 for a year reads, "The vision of East Olive is to create a  
23 walkable corridor of destination retail boutiques,  
24 neighborhood services and small-scale restaurants and  
25 attached townhomes and a low-density multi-family homes".



1 I don't see this -- this is the same thing at  
2 all. So it doesn't feel like, to me, this fits where  
3 we're trying to go in that area in the upcoming  
4 Comprehensive Plan.

5 I sort of hate to think we spent all that time  
6 on the Comprehensive Plan and ignore it.

7 MR. KAMP: I guess, you know, cause we -- in --  
8 in looking through and going through the design challenges  
9 of -- of the site, those are things that we considered as  
10 well as that the -- the forward thinking Comprehensive  
11 Plan, and that is why the expansive green space.

12 This is -- this is a neighborhood service that's  
13 here now, and looking to modernize those service  
14 offerings.

15 You know, going from a smaller site to allow for  
16 that, the expansion to -- of those -- those services, and  
17 increasing the ability for, you know, more modern  
18 conveniences that you would find at that newer stations,  
19 we feel like by providing like those pocket parcels,  
20 expansive green spaces along that streetscape breaks up  
21 some of that intensity and actually lets us have less  
22 coverage, site coverage from a building perspective on the  
23 overall site than exists now.

24 You know -- you know, architecturally, while,  
25 you know, we do have residential elements within it like

1 the trellis over the connecting elements and things like  
2 that, that start to tie in some of the residential, you  
3 know, there -- there exist in the corridor like Scotsman's  
4 and things like where they are commercial structures,  
5 that's a community service and a community business that's  
6 oriented to the committee -- or the community, so.

7 CHAIRMAN KISTNER: Anything else?

8 MR. ROVAK: What's -- quick question.

9 I looked for it, and maybe I overlooked it, but  
10 didn't see it.

11 In the various site plans --

12 MR. KAMP: Uh-huh.

13 MR. ROVAK: -- say beginning with demo plan,  
14 maybe you could expand on that. Is there one where the  
15 proposed plan is superimposed on the existing site?

16 I was looking for it, and like I say, I may have  
17 overlooked it, but that's -- sometime answers a lot of  
18 these kinds of questions --

19 MR. KAMP: If I don't have it in this package, I  
20 can -- I do not think that's included in your packet --

21 MR. ROVAK: Okay.

22 MR. KAMP: -- but I think I have something.

23 VOICE: Had it side by side --

24 MR. KAMP: I --

25 MR. ROVAK: Okay. That would be good.

1 VOICE: -- on the coverage slide.

2 MR. KAMP: Yeah. Well, I do also have this that  
3 I can probably toggle back and forth on here.

4 So this is the -- the existing site. So you can  
5 see this is kind of where the landscape business operates  
6 now.

7 MR. ROVAK: Uh-huh.

8 MR. KAMP: This is a moving company type of  
9 thing. The business operates here. There's a little  
10 hatched area that's a deed restricted area, that's going  
11 to remain as is and vegetated as is.

12 MR. ROVAK: Okay.

13 MR. KAMP: And then this is -- these are the  
14 three houses, which are part in the county, part in the  
15 city. And then this, of course, is the existing Mobile  
16 station.

17 MR. ROVAK: That's the station and the car  
18 wash --

19 MR. KAMP: Right.

20 MR. ROVAK: -- to the immediate west?

21 MR. KAMP: Right.

22 And this is then the proposed site.

23 So the -- the -- this building here is no closer  
24 than -- than the residents are now.

25 And, actually, even from a grade perspective,



1 everything along here stays intact all the way up to the  
2 edges of the fence, so that way we're preserving trees,  
3 and then we're protecting with some -- a little bit of  
4 topography changes, as well as the -- the additional wall  
5 to -- to help further keep even Olive Boulevard noise  
6 from -- from bleeding back through.

7 MR. ROVAK: All right. Thank you.

8 MR. KAMP: Uh-huh. Did that help?

9 MR. ROVAK: Yes, it does.

10 MR. KAMP: Okay.

11 MR. ROVAK: I think that's -- I think a lot of  
12 these, particularly when we want to look at what the  
13 impact is, I like to compare it with to what do we have  
14 now and what direction does this take us.

15 MR. KAMP: Okay. Would it help if we -- we  
16 provided a plan that kind of related it too for you?

17 CHAIRMAN KISTNER: I -- I mean not -- let's see  
18 where we get to tonight.

19 MR. ROVAK: Okay.

20 CHAIRMAN KISTNER: So just for a comment from  
21 myself, there was a paragraph in the staff report that  
22 really struck me, and I want to -- I want to read it.

23 "Is staff's opinion that the proposal does not  
24 meet with the significant elements of the Comprehensive  
25 Plan, and does not create a compelling argument for action

1 inconsistent with the Comprehensive Plan, nor are there  
2 public benefits unique to this project that substantially  
3 justify the approval of the proposal as presented.

4 Further, the scale of the proposal is  
5 inconsistent with the stated purposes of the GC District  
6 that calls for small-scale neighborhood commercial  
7 developments that is compatible in scale with the adjacent  
8 residences and would leave a remnant parcel, which would  
9 effectively prohibit any future redevelopment potential of  
10 the property -- that property that fronts directly onto  
11 Olive Boulevard located just west of the development."

12 For me, that -- that's a -- a pretty compelling  
13 statement in the staff's findings. I think, for me,  
14 personally, I -- I reached the same conclusion.

15 I would like -- that is that is so overarching,  
16 I'd like to get some comment from -- from others on the  
17 Commission whether or not you concur with that or not,  
18 because if not, then there's a lot of other things to  
19 discuss and continue on with.

20 But -- but to me, that's a pretty threshold  
21 evaluation, and I'd like to see what other people think  
22 about it.

23 MR. CARNEY: Yeah, I -- I agree with you there,  
24 and I also agree with Mr. Magruder. We've been looking at  
25 this East Olive Corridor for a year, and I think we're

1 actually maybe liberalizing things a little bit on that  
2 corridor, but I don't think we're -- I think this is a  
3 step too far.

4 I don't think we're talking about allowing  
5 General Commercial development like you would have in the  
6 GC District in this corridor.

7 So I don't think it -- it meets the old  
8 guidelines, and I don't think it meets the new guidelines.

9 MR. MAGRUDER: Obviously, I feel the same way.

10 I want to say this though. I think Mobile did a  
11 dynamite job in trying to put together something that was  
12 well done, as beautiful as it is.

13 I just don't think it fits here is -- is my  
14 issue because we're not -- the Comprehensive Plan isn't  
15 looking at a gigantic thing like this, is the way I read  
16 it, and so but I want to tell you, I thought that it  
17 was -- it was very attractive. I just don't think it  
18 fits.

19 MR. KAMP: And I appreciate. I mean I'm -- you  
20 know, when I think intensity, I think of, you know, some  
21 of those other uses, like multi-family, those kind of  
22 things that are going to really have a significant amount  
23 of site coverage or proposals that have made previously,  
24 which are several multi-tenant buildings all stacked up  
25 together with -- with parking and things like that.



1           And while, architecturally, maybe they'll have a  
2 pitched roof or something like that, but the true  
3 intensity in the site coverage, I feel, is not as  
4 compatible with potentially what we're proposing and as  
5 far as the open space and that feel, that it's more of a  
6 park-like setting, and we have these uses that are needed  
7 in a neighborhood and in a Commercial District that's  
8 adjacent to neighborhoods.

9           You know, and from -- even from a building  
10 scale, there's the front door of this particular corridor  
11 opens up with the, you know, the Scotsman -- the Scotsman  
12 Jewelry facility, which is a nice looking building, but it  
13 definitely has commercial elements, and that's the front  
14 door of this thing.

15           So I'm trying to help understand, you know, what  
16 direction could -- could we head. I mean we -- we -- we  
17 definitely envisioned adding this, not having another  
18 user, not trying to do this plus a fast food or this plus  
19 another sit-down restaurant or whatever, you know, part on  
20 this development, but rather use that space to create some  
21 of that open area in the -- the total effort of making it  
22 a more neighborhood facility.

23           CHAIRMAN KISTNER: To me, any time you get to  
24 that kind of scale and scope, you're talking about ten  
25 times four -- is it forty pumps? Twenty --

1 MS. SILVERMAN: Ten pumps.

2 CHAIRMAN KISTNER: Or ten -- ten -- ten --

3 MR. KAMP: That would be --

4 MS. SILVERMAN: Twenty.

5 CHAIRMAN KISTNER: -- bays, twenty pumps.

6 MR. KAMP: That would be twenty fueling

7 locations.

8 CHAIRMAN KISTNER: Fueling locations.

9 MS. SILVERMAN: Uh-huh.

10 CHAIRMAN KISTNER: And that is way beyond local  
11 residential. That is all about capturing traffic off of  
12 Olive.

13 It's -- it's not -- it's not a residential  
14 small-scale neighborhood commercial development when you  
15 get to that kind of scale of -- of development.

16 So I don't think there's any way when you  
17 combine seven pieces of property for a gas station,  
18 convenience store and car wash, by definition, you have  
19 gone outside of that kind of small-scale commercial  
20 development that is envisioned in the -- and is defined in  
21 the Commercial -- in the GC District, and is described in  
22 both the current and the -- the Draft 2030 Comprehensive  
23 Plan.

24 MR. KAMP: So when I'm hearing you speak of  
25 scale, it's number of pumps.

1 Are there other elements besides the number of  
2 pumps that -- that you could point to?

3 MS. HALL: Yes.

4 CHAIRMAN KISTNER: Uh-huh.

5 MS. HALL: Okay. So a couple things that I  
6 noticed is like for the car wash, you're going to have  
7 seventeen vacuum stations.

8 MR. KAMP: Yeah.

9 MS. HALL: I mean that's a lot.

10 MR. KAMP: So these are --

11 CHAIRMAN KISTNER: For the neighborhood.

12 MS. HALL: Right. And then --

13 MR. KAMP: Well, these are -- it's a free vacuum  
14 service that's provided on the exit side.

15 MS. HALL: But it's seventeen. I mean I haven't  
16 seen too many car wash gas stations that have seventeen.

17 And then twenty-seven canopy stacking lanes. I  
18 guess for them to dry the cars, or whatever they're going  
19 to do.

20 MR. KAMP: No, that's the entrance to the wash.  
21 That's the queue for the --

22 CHAIRMAN KISTNER: Waiting.

23 MS. HALL: Oh, okay.

24 So just to support what we're thinking is a  
25 large scale.



1 MR. KAMP: Okay.

2 MR. MAGRUDER: Larger scale meaning the number  
3 of linear feet along Olive is probably tripled what we  
4 have -- what we now see with the Mobile Station that's  
5 there.

6 MS. SILVERMAN: I think it's not just the amount  
7 of space that it's taking up, but also the amount -- I  
8 mean I think we're also talking about in terms of, you  
9 know, twenty-seven cars just being there to -- to -- to  
10 wash, plus the seventeen that could be vacuuming, plus  
11 there's, you know, twenty spots for gas, I mean that's  
12 certainly more cars than are in the neighborhood -- or  
13 maybe not in the neighborhood, but more cars that are  
14 going to be utilizing that service in the neighborhood at  
15 that time.

16 MS. HALL: So I just had one other question.

17 Does -- I notice this company, this energy  
18 company that's -- that has this gas station, is there any  
19 other gas station that they built like this that we can  
20 reference this to --

21 MR. KAMP: So --

22 MS. HALL: -- to --

23 MR. KAMP: -- Arch Energy, is that what you're  
24 speaking of?

25 MS. HALL: Yes.

1 MR. KAMP: Okay.

2 MS. HALL: Uh-huh.

3 MR. KAMP: That was one of the Wallis companies.

4 Wallis is a --

5 MS. HALL: Right. Okay.

6 MR. KAMP: -- family-owned business. They're  
7 based in Cuba, Missouri.

8 MS. HALL: Okay.

9 MR. KAMP: And they -- they -- they are the  
10 distributor, the wholesaler, for Mobile and BP Products  
11 here in Eastern Missouri.

12 MS. HALL: Okay.

13 MR. KAMP: And they have about thirty-two  
14 company-owned Mobile On the Run stores here.

15 MS. HALL: Okay.

16 MR. KAMP: Kind of the more recent ones are  
17 Olivette, the one near the airport, which is a BP On the  
18 Run.

19 And, yeah, so they've operated and developed  
20 several.

21 MS. HALL: So, but do they have one that's this  
22 size?

23 MR. KAMP: So this is -- as far as the store  
24 itself, it's the same, it's about maybe a little bit  
25 smaller than the Olivette store. That's -- that's kind of

1 mid block between -- same situation, only except mid block  
2 between Lindbergh and I70 instead of Lindbergh and -- and  
3 270.

4 MS. HALL: Okay. So this is the last question.

5 MR. KAMP: Uh-huh.

6 MS. HALL: Maybe this will kind of clear it up.

7 Okay. So at Olivette, how many vacuum stalls do  
8 they have there?

9 MR. KAMP: So Olivette is a little bit offering  
10 on the car wash side. It's bolted to the back and behind  
11 they have carpet cleaners and -- and kind of vacuum  
12 stations on the back side of it.

13 MS. HALL: Yes.

14 MR. KAMP: The offering itself for Briteworx is  
15 similar to a standalone car wash facility that they have  
16 on -- in Florissant off of North Lindbergh.

17 MS. HALL: Okay.

18 MR. KAMP: And they also have a -- an operating  
19 Briteworx location in Columbia, Illinois.

20 MS. HALL: Okay. Okay.

21 MR. KAMP: And so --

22 MS. HALL: So this is kind of like the first  
23 test run of a station of this capacity --

24 MR. KAMP: No --

25 MS. HALL: -- or do they have one?



1 MR. KAMP: -- I wouldn't -- I wouldn't say that  
2 at all. It's, basically, two -- two successful business  
3 units that -- that are under the Wallis umbrella, one  
4 being Briteworx Car Wash and the other being the Mobile On  
5 the Run facilities.

6 And rather than having a wash attached to the  
7 building with the depth and trying to preserve some of  
8 that -- that -- that -- that buffer yard behind, there's  
9 just simply not enough depth to get that to work. So just  
10 moving the wash over also provides for a much -- much  
11 higher end offering from the car wash perspective than  
12 that's -- than that's other places.

13 MS. HALL: Okay. Thank you.

14 CHAIRMAN KISTNER: So the -- there's 25 percent  
15 more pumps.

16 I think you didn't answer about the -- the  
17 vacuum station, so there are either none or a lot fewer  
18 than the seventeen proposed here --

19 MR. KAMP: Yeah, it's a different thing, cause  
20 they're a pay for use at the Olivette location, but at the  
21 Florissant location, I think there are -- there are twelve  
22 at the Florissant location currently, and there's fourteen  
23 at the Columbia, Illinois location.

24 And those -- this is a free service, a part of  
25 your -- your wash, so the use rate goes up a little higher

1 as -- as you offer it.

2 CHAIRMAN KISTNER: I'm sure it does.

3 MR. KAMP: The difference here compared to  
4 Florissant Briteworx and the Columbia Briteworx is that  
5 those vacuums are not individual vacuums themselves. This  
6 is a centralized type of system. So the only thing that's  
7 actually in the stalls where the vacuums are is just a  
8 hose that -- that is then concealed within the  
9 architecture, so it's not, you know, the big machine  
10 that's sitting out at each of those stalls.

11 MR. SCHUH: Beth, I think I saw a couple of  
12 audience members with their hands raised, if we're still  
13 open for public comment.

14 CHAIRMAN KISTNER: We are. If people want to  
15 come and be sworn in.

16 If you have something to say, you really have to  
17 come up. We're in a public hearing, so it has to be  
18 recorded. So if anybody wants to come up and speak, just  
19 please do so. Just a quick swearing in, and give us your  
20 comments.

21 MR. KAMP: This is Mary --

22 (The speaker was sworn in by the court  
23 reporter.)

24 MR. KAMP: So Mary's our landscape --

25 CHAIRMAN KISTNER: Start with -- let her give

1 her name and address.

2 MS. MARY DEWEESE: My name is Mary Deweese, and  
3 I am the landscape architect on this project.

4 And I just wanted to clarify. There's been a  
5 few questions about the scale of the site, and I think  
6 that's different from the conversation you're having about  
7 maybe the scale of -- the number of vacuums.

8 The scale of the site consolidating all of those  
9 parcels is actually a huge benefit to the residential  
10 scale of the project because the buildings themselves are  
11 still regular gas station size, but they're put on a huge  
12 parcel, so that there's so much protected. There's --  
13 there's a third of an acre of woods that aren't even  
14 touched behind this. There's the park area in front.

15 So you can't have a business with a lot of green  
16 space and existing trees and those beautiful trees without  
17 expanding the actual parcel to make room for all the  
18 landscape.

19 That's all.

20 CHAIRMAN KISTNER: Thank you.

21 I'll -- I'll -- I know you've already been up  
22 here to speak, but I'll bring you back one more time.

23 MR. ANDY VOSS: Again, my name is Andy Voss at  
24 910 Woodshire.

25 You know, just listening to some of the -- the



1 rebuttals or back and forth and the discussion points, I  
2 mean I've heard a lot about green space on this site plan.

3 I mean to me, all I keep hearing is you can  
4 dress this up any way you want, but it doesn't change the  
5 purpose of this site and this plan.

6 The fact that a gas station has green space on  
7 it does not change the functional use as in comparison to  
8 what you've described to us here tonight as what the plan  
9 is going forward.

10 I've also taken a look in a short time at some  
11 of the comparison gas stations that they've eluded to.

12 One of them is on Highway 67 in Florissant.  
13 We're talking about things that are not sitting and  
14 surrounded by residential plans.

15 So I don't think that those reference points are  
16 accurate as things to use when we're discussing this.

17 Thank you.

18 CHAIRMAN KISTNER: Thank you.

19 MR. MAGRUDER: Thank you.

20 MR. KAMP: Just one quick point of  
21 clarification.

22 Highway 67 is North Lindbergh, just like this is  
23 Highway 340 and it's Olive Boulevard.

24 And actually the one in Florissant is -- does  
25 have residents immediately behind it. And we worked with

1       them in the same capacity.

2               I just want to make sure that we're on the same  
3       page.

4               CHAIRMAN KISTNER:   Thank you.

5               MR. KAMP:   And -- and I think Mr. Voss' point is  
6       correct, I mean we are providing this green space, and I  
7       think it's in lieu of these uses crammed in a smaller site  
8       with additional uses there, or replacing the car wash with  
9       a multi-tenant building.

10              I mean the, you know, I think it's a blessing  
11      for the community to have such high property values, but I  
12      think the reality is is for -- for this project to be  
13      revitalized in this area of Olive to be revitalized at  
14      some point, it's going to take some wherewithal for that  
15      person who would redevelop it to invest in something that  
16      makes sense for the return, makes sense for the community  
17      and still meets all the other merits of the Design  
18      Guidelines and Comprehensive Plan.

19              But finding that use, you know, has left this  
20      project and this site area, whether it be the Mobile or --  
21      or previous, you know, developments, it's left this with  
22      just the, you know, obsolete structures that are there  
23      today.

24              So I mean I would encourage that -- I would love  
25      the opportunity to continue to hear the dialogue about

1 what is -- what is making the intensity and hearing that,  
2 so we can have the opportunity to kind of absorb that and  
3 see if there are still additional tweaks we can make to  
4 that plan to lower that -- this perceived intensity and  
5 things like that.

6 CHAIRMAN KISTNER: Thank you.

7 I think at this point we -- if there is no new  
8 information to take in or questions to be asked, that we  
9 will close the public hearing and continue our discussion  
10 and debate.

11 Mr. Lumley.

12 MR. LUMLEY: I offer the following exhibits into  
13 the record of this public hearing: Documentation in  
14 possession of the city clerk reflecting public notice, the  
15 staff's report, the application and materials presented  
16 this evening by the applicant, the City's Code of  
17 Ordinances and Charter, City Comprehensive Plan and the  
18 public file regarding the application.

19 CHAIRMAN KISTNER: The hearing is closed.

20 (The public hearing was closed at 7:39 p.m.)  
21  
22  
23  
24  
25



STATE OF MISSOURI       )  
                                          ) SS  
COUNTY OF ST. LOUIS    )

I, Deborah K. McLaughlin, Registered Professional Reporter, Missouri Certified Court Reporter, Illinois Certified Shorthand Reporter and Kansas Certified Court Reporter, do hereby certify that I reported the Planning and Zoning public hearing stenographically and later reduced to typewriting; and that this is a true and accurate transcript of the public hearing.

*Deborah K. McLaughlin*

\_\_\_\_\_, RPR, MO-CCR, IL-CSR, KS-CCR  
Deborah K. McLaughlin, RPR, MO-CCR, IL-CSR, KS-CCR

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>CHAIRMAN</b><br/> <b>KISTNER:</b> [56] 1/24<br/> 2/6 2/9 2/11 2/13 2/17<br/> 2/20 2/22 2/25 3/3 3/9<br/> 3/13 4/4 12/24 13/7<br/> 14/5 14/9 14/12 14/16<br/> 23/12 23/24 24/1 24/4<br/> 24/8 26/8 26/11 26/21<br/> 26/24 29/11 29/13<br/> 29/17 31/9 36/22 37/2<br/> 37/8 37/11 39/6 41/16<br/> 41/19 44/22 45/1 45/4<br/> 45/7 45/9 46/3 46/10<br/> 46/21 50/13 51/1<br/> 51/13 51/24 52/19<br/> 53/17 54/3 55/5 55/18<br/> <b>MR. ANDY VOSS:</b> [4]<br/> 29/16 29/19 31/8<br/> 52/22<br/> <b>MR. CARNEY:</b> [2]<br/> 2/5 42/22<br/> <b>MR. JAGGI:</b> [3] 2/19<br/> 13/5 14/18<br/> <b>MR. KAMP:</b> [65]<br/> <b>MR. LUMLEY:</b> [2]<br/> 2/16 55/11<br/> <b>MR. MAGRUDER:</b><br/> [11] 2/8 36/9 36/11<br/> 36/18 37/1 37/6 37/10<br/> 37/18 43/8 47/1 53/18<br/> <b>MR. MARK HUCK:</b><br/> [4] 26/16 26/23 26/25<br/> 29/12<br/> <b>MR. ROVAK:</b> [24]<br/> 2/10 3/8 31/15 32/6<br/> 32/11 32/16 32/22<br/> 33/4 33/6 33/20 34/2<br/> 34/4 39/7 39/12 39/20<br/> 39/24 40/6 40/11<br/> 40/16 40/19 41/6 41/8<br/> 41/10 41/18<br/> <b>MR. SCHUH:</b> [3]<br/> 34/16 35/16 51/10<br/> <b>MS. CHERYL</b><br/> <b>RICHARDS:</b> [6]<br/> 23/23 23/25 24/3 24/6<br/> 24/14 26/10<br/> <b>MS. HALL:</b> [24] 3/2<br/> 46/2 46/4 46/8 46/11<br/> 46/14 46/22 47/15<br/> 47/21 47/24 48/1 48/4<br/> 48/7 48/11 48/14<br/> 48/20 49/3 49/5 49/12<br/> 49/16 49/19 49/21<br/> 49/24 50/12<br/> <b>MS. KELLY:</b> [2] 2/21<br/> 31/7<br/> <b>MS. MARY</b><br/> <b>DEWEESE:</b> [1] 52/1<br/> <b>MS. SILVERMAN:</b> [7]<br/> 2/12 3/7 34/5 44/25<br/> 45/3 45/8 47/5<br/> <b>MS. STUTTE:</b> [1]<br/> 2/24<br/> <b>VOICE:</b> [2] 39/22</p> | <p>39/25<br/> '<br/> '80s [1] 4/19<br/> '90s [1] 4/20<br/> 0<br/> 031 [2] 1/9 3/17<br/> 1<br/> 10 [1] 34/11<br/> 11 percent [1] 7/13<br/> 111 [1] 18/21<br/> 11100 [1] 3/21<br/> 11109 [1] 3/20<br/> 11114 [1] 3/21<br/> 11141 [1] 3/20<br/> 11147 [1] 18/22<br/> 1199 [1] 1/24<br/> 12.3 percent [1] 7/4<br/> 13.1 percent [1] 7/11<br/> 16-031 [2] 1/9 3/17<br/> 2<br/> 20 [1] 14/10<br/> 2002 [3] 19/22 20/3<br/> 20/21<br/> 2016 [2] 1/4 2/3<br/> 2030 [3] 20/17 37/21<br/> 45/22<br/> 23 [1] 24/21<br/> 24 [1] 33/11<br/> 25 percent [3] 14/10<br/> 14/12 50/14<br/> 270 [1] 49/3<br/> 3<br/> 300 [1] 1/3<br/> 314 [2] 1/23 1/24<br/> 340 [2] 10/10 53/23<br/> 340 feet [1] 29/4<br/> 4<br/> 4772 [1] 1/23<br/> 5<br/> 50 percent [1] 7/16<br/> 54 percent [1] 7/16<br/> 5th [1] 2/3<br/> 6<br/> 63128 [1] 1/24<br/> 660 feet [1] 29/3<br/> 67 [2] 53/12 53/22<br/> 6:30 [1] 1/5<br/> 7<br/> 7 a.m [1] 33/12<br/> 735 [1] 28/14<br/> 7:39 [1] 55/20<br/> 8<br/> 8 feet [1] 34/7<br/> 842 [1] 24/16<br/> 850 feet [1] 28/16</p> | <p>9<br/> 906 [1] 26/18<br/> 910 [2] 29/21 52/24<br/> 974-1199 [1] 1/24<br/> A<br/> a.m [1] 33/12<br/> ability [1] 38/17<br/> able [2] 29/8 33/4<br/> about [31] 7/3 7/13<br/> 7/16 7/16 10/7 10/20<br/> 13/9 25/14 26/6 27/1<br/> 27/11 28/16 30/2<br/> 32/15 34/23 34/24<br/> 35/17 36/20 42/22<br/> 43/4 44/24 45/11 47/8<br/> 48/13 48/24 50/16<br/> 52/5 52/6 53/2 53/13<br/> 54/25<br/> absent [2] 2/7 2/14<br/> absorb [1] 55/2<br/> accentuate [1] 20/22<br/> acceptance [1] 3/6<br/> access [9] 5/15 5/15<br/> 5/18 5/23 6/12 10/13<br/> 10/16 10/24 11/1<br/> accessible [1] 5/9<br/> accommodate [2]<br/> 11/16 18/4<br/> account [1] 30/9<br/> accurate [2] 53/16<br/> 56/10<br/> achieved [1] 9/2<br/> acquired [1] 4/19<br/> acre [1] 52/13<br/> acreage [2] 13/17<br/> 13/18<br/> across [1] 36/3<br/> act [1] 8/17<br/> action [1] 41/25<br/> actual [2] 17/21 52/17<br/> actually [15] 7/16<br/> 13/3 17/15 17/18 25/1<br/> 30/23 32/15 32/24<br/> 36/17 38/21 40/25<br/> 43/1 51/7 52/9 53/24<br/> add [3] 8/7 11/9 34/16<br/> added [1] 11/6<br/> adding [1] 44/17<br/> additional [8] 11/16<br/> 20/23 27/11 27/14<br/> 29/11 41/4 54/8 55/3<br/> additionally [4] 27/16<br/> 28/12 33/10 33/16<br/> address [7] 24/6 25/5<br/> 26/16 29/19 36/18<br/> 37/13 52/1<br/> addressed [2] 22/20<br/> 24/18<br/> adjacent [12] 5/12<br/> 5/24 9/23 10/2 18/8<br/> 20/7 21/14 22/8 29/23<br/> 36/2 42/7 44/8<br/> adjoins [1] 26/23<br/> adjust [1] 12/19<br/> adjusted [1] 9/20</p> | <p>adjustment [1] 3/18<br/> afforded [1] 12/18<br/> after [1] 36/14<br/> afterwards [1] 15/19<br/> again [3] 16/13 16/22<br/> 52/23<br/> against [1] 28/22<br/> agenda [1] 3/7<br/> ago [1] 27/22<br/> agree [3] 25/17 42/23<br/> 42/24<br/> airport [1] 48/17<br/> all [41] 2/1 3/5 3/10<br/> 3/12 4/5 9/6 9/8 12/11<br/> 13/8 13/23 16/15<br/> 16/15 16/19 17/25<br/> 17/25 19/21 23/20<br/> 25/3 25/11 27/10<br/> 30/22 30/25 31/6 32/3<br/> 32/13 33/19 35/22<br/> 36/6 37/6 38/2 38/5<br/> 41/1 41/7 43/24 45/11<br/> 50/2 52/8 52/17 52/19<br/> 53/3 54/17<br/> allocated [1] 25/18<br/> allow [2] 11/19 38/15<br/> allowing [1] 43/4<br/> alone [1] 13/22<br/> along [14] 5/22 6/2<br/> 6/3 12/20 17/24 18/18<br/> 31/20 32/4 32/19 33/2<br/> 35/12 38/20 41/1 47/3<br/> already [3] 11/8 24/2<br/> 52/21<br/> also [40] 4/12 5/19<br/> 5/24 6/1 6/13 8/4 8/16<br/> 8/17 9/6 9/16 9/19<br/> 9/24 10/5 11/21 12/14<br/> 15/10 16/20 17/6<br/> 17/22 19/8 20/2 20/4<br/> 20/6 20/16 20/25<br/> 21/17 21/19 22/3<br/> 22/22 29/22 30/20<br/> 31/21 34/1 40/2 42/24<br/> 47/7 47/8 49/18 50/10<br/> 53/10<br/> although [3] 11/22<br/> 16/4 17/9<br/> am [1] 52/3<br/> amenities [1] 21/14<br/> amount [7] 13/12<br/> 13/16 23/16 34/1<br/> 43/22 47/6 47/7<br/> ample [2] 6/7 6/8<br/> analyzed [1] 23/2<br/> Andy [2] 29/20 52/23<br/> angles [1] 31/22<br/> another [4] 27/25<br/> 29/3 44/17 44/19<br/> answer [8] 9/8 12/21<br/> 15/17 23/3 23/12<br/> 34/19 35/16 50/16<br/> answer your [1]<br/> 35/16<br/> answered [1] 34/18<br/> answers [1] 39/17</p> | <p>anticipate [1] 28/9<br/> any [20] 3/24 9/8<br/> 11/23 12/21 13/1<br/> 15/17 18/23 22/21<br/> 23/3 23/11 23/13<br/> 23/19 31/14 34/20<br/> 34/23 42/9 44/23<br/> 45/16 47/18 53/4<br/> anybody [4] 13/1<br/> 23/13 25/1 51/18<br/> anyone [1] 31/15<br/> Anything [1] 39/7<br/> appears [1] 22/25<br/> applicant [7] 4/6 13/2<br/> 16/17 16/23 20/9<br/> 21/19 55/16<br/> application [8] 1/9<br/> 3/16 17/20 19/19<br/> 21/10 21/15 55/15<br/> 55/18<br/> appreciate [2] 12/15<br/> 43/19<br/> approach [1] 15/20<br/> appropriately [1]<br/> 6/12<br/> approval [2] 3/18<br/> 42/3<br/> Arch [1] 47/23<br/> architect [1] 52/3<br/> architectural [1] 8/24<br/> architecturally [2]<br/> 38/24 44/1<br/> architecture [3] 7/18<br/> 22/16 51/9<br/> are [82]<br/> area [34] 4/20 5/3<br/> 6/21 7/1 7/4 7/8 7/10<br/> 7/11 7/14 12/1 12/9<br/> 13/13 13/16 16/1 16/5<br/> 16/9 17/15 19/23<br/> 19/24 20/2 20/2 20/3<br/> 20/4 21/5 21/6 27/15<br/> 33/25 38/3 40/10<br/> 40/10 44/21 52/14<br/> 54/13 54/20<br/> areas [13] 5/23 9/5<br/> 9/15 9/16 17/6 17/7<br/> 18/11 20/7 21/15 22/9<br/> 23/17 30/10 34/14<br/> aren't [1] 52/13<br/> argument [1] 41/25<br/> around [5] 5/4 7/11<br/> 7/23 23/17 33/19<br/> art [1] 5/6<br/> arterial [2] 5/13 10/11<br/> arteries [1] 35/13<br/> as [91]<br/> ask [2] 13/5 32/8<br/> asked [2] 9/10 55/8<br/> asking [2] 13/6 33/5<br/> aspect [1] 19/17<br/> aspects [1] 14/24<br/> assist [1] 23/9<br/> Assistant [2] 1/18<br/> 2/24<br/> Assistant/Recording<br/> [2] 1/18 2/24</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b><br><b>association</b> [1] 17/17<br><b>Assume</b> [1] 4/6<br><b>at</b> [56] 2/14 3/20 4/17 7/8 7/13 10/17 13/22 14/8 15/6 15/22 17/10 18/2 19/7 19/8 21/23 22/11 22/21 23/3 23/4 23/12 24/16 24/21 24/25 25/11 25/16 25/25 26/7 26/17 28/3 29/25 30/9 30/25 31/6 31/18 32/18 34/10 34/13 35/7 38/1 38/18 41/12 42/24 43/15 47/14 49/7 50/2 50/20 50/20 50/22 50/23 51/10 52/23 53/10 54/13 55/7 55/20<br><b>atop</b> [1] 32/24<br><b>attached</b> [2] 37/25 50/6<br><b>ATTENDANCE</b> [1] 1/12<br><b>Attorney</b> [2] 1/16 2/16<br><b>attractive</b> [1] 43/17<br><b>audience</b> [2] 29/15 51/12<br><b>automatic</b> [1] 5/5<br><b>available</b> [3] 11/4 15/17 20/14<br><b>average</b> [1] 34/24<br><b>averages</b> [1] 34/23<br><b>away</b> [2] 10/17 11/11<br><b>aye</b> [1] 3/12 | 42/24 52/4 52/21<br><b>before</b> [4] 13/2 17/1 28/15 28/16<br><b>beginning</b> [1] 39/13<br><b>behalf</b> [1] 14/21<br><b>behind</b> [5] 36/2 49/10 50/8 52/14 53/25<br><b>being</b> [7] 7/19 9/22 15/5 19/15 47/9 50/4 50/4<br><b>believe</b> [3] 14/15 17/9 25/1<br><b>beneficial</b> [2] 15/3 15/14<br><b>benefit</b> [1] 52/9<br><b>benefits</b> [1] 42/2<br><b>besides</b> [1] 46/1<br><b>Beth</b> [2] 1/13 51/11<br><b>better</b> [1] 34/18<br><b>between</b> [6] 5/12 6/8 8/14 34/4 49/1 49/2<br><b>beyond</b> [2] 30/7 45/10<br><b>big</b> [2] 15/23 51/9<br><b>bigger</b> [2] 14/11 21/16<br><b>bit</b> [12] 14/16 15/4 16/24 17/23 19/7 21/12 22/17 36/21 41/3 43/1 48/24 49/9<br><b>bleeding</b> [1] 41/6<br><b>blessing</b> [1] 54/10<br><b>block</b> [4] 33/17 34/1 49/1 49/1<br><b>board</b> [1] 7/23<br><b>boil</b> [1] 21/21<br><b>bolted</b> [2] 13/24 49/10<br><b>both</b> [9] 8/10 10/18 12/7 15/8 15/11 21/8 31/19 32/19 45/22<br><b>Boulevard</b> [10] 3/21 5/13 10/9 10/15 11/22 18/22 21/25 41/5 42/11 53/23<br><b>boundary</b> [3] 3/18 16/14 19/20<br><b>boutiques</b> [1] 37/23<br><b>box</b> [1] 16/5<br><b>BP</b> [2] 48/10 48/17<br><b>break</b> [1] 15/15<br><b>breaks</b> [1] 38/20<br><b>bridges</b> [1] 6/22<br><b>bright</b> [1] 31/24<br><b>bring</b> [2] 36/15 52/22<br><b>Briteworx</b> [7] 3/20 5/6 49/14 49/19 50/4 51/4 51/4<br><b>broad</b> [1] 9/13<br><b>brush</b> [1] 9/13<br><b>buffer</b> [4] 5/12 9/15 9/16 50/8<br><b>buffers</b> [1] 21/14<br><b>building</b> [19] 7/1 7/10 7/13 7/18 8/1 8/6 8/9 8/20 9/4 13/24 33/17 | 33/19 37/6 38/22<br>40/23 44/9 44/12 50/7 54/9<br><b>buildings</b> [6] 7/5 8/19 8/23 8/24 43/24 52/10<br><b>built</b> [2] 36/14 47/19<br><b>business</b> [10] 3/15 30/3 30/5 30/7 39/5 40/5 40/9 48/6 50/2 52/15<br><b>businesses</b> [7] 19/25 20/25 22/1 27/8 30/1 30/2 30/4<br><b>but</b> [58] | 11/17 11/21 22/22<br><b>CCR</b> [6] 1/23 1/23 56/13 56/13 56/14 56/14<br><b>center</b> [3] 28/18 28/22 28/23<br><b>centralized</b> [1] 51/6<br><b>certainly</b> [4] 4/8 15/17 23/3 47/12<br><b>Certified</b> [3] 56/5 56/6 56/6<br><b>certify</b> [1] 56/7<br><b>Chair</b> [2] 1/13 14/19<br><b>challenges</b> [1] 38/8<br><b>challenging</b> [1] 35/9<br><b>change</b> [2] 53/4 53/7<br><b>changes</b> [5] 8/4 8/7 8/10 11/16 41/4<br><b>changing</b> [2] 11/18 25/18<br><b>character</b> [3] 19/25 21/25 27/8<br><b>characteristics</b> [1] 8/25<br><b>Charter</b> [1] 55/17<br><b>Cheryl</b> [2] 24/7 24/15<br><b>Circle</b> [1] 35/6<br><b>circulation</b> [5] 5/4 6/8 6/12 6/13 13/23<br><b>city</b> [20] 1/2 1/16 1/17 2/16 2/21 7/20 12/15 14/22 15/8 15/9 15/12 16/1 16/10 16/13 16/15 16/16 18/13 40/15 55/14 55/17<br><b>City's</b> [6] 12/6 15/1 15/1 22/23 31/8 55/16<br><b>city/county</b> [1] 16/15<br><b>CityPlace</b> [2] 30/17 30/17<br><b>Civil</b> [1] 4/9<br><b>clarification</b> [1] 53/21<br><b>clarify</b> [1] 52/4<br><b>cleaners</b> [1] 49/11<br><b>clear</b> [2] 6/13 49/6<br><b>clearly</b> [2] 6/7 21/24<br><b>clerk</b> [1] 55/14<br><b>clock</b> [1] 24/12<br><b>close</b> [2] 29/23 55/9<br><b>closed</b> [2] 55/19 55/20<br><b>closer</b> [1] 40/23<br><b>closest</b> [1] 35/4<br><b>code</b> [2] 32/11 55/16<br><b>COEUR</b> [9] 1/2 14/22 15/9 15/10 16/13 17/5 17/24 32/3 35/3<br><b>cognizant</b> [2] 9/23 24/13<br><b>colors</b> [2] 7/24 9/4<br><b>Columbia</b> [3] 49/19 50/23 51/4<br><b>combine</b> [1] 45/17<br><b>come</b> [8] 3/25 18/12 23/25 28/6 29/16 51/15 51/17 51/18 | <b>coming</b> [7] 27/18 28/2 28/5 28/9 29/7 33/24<br><b>comment</b> [4] 4/2 41/20 42/16 51/13<br><b>comments</b> [2] 22/21 51/20<br><b>comments at</b> [1] 22/21<br><b>commercial</b> [20] 3/22 8/4 8/23 9/1 9/1 10/9 17/9 18/6 20/5 20/5 22/5 25/10 39/4 42/6 43/5 44/7 44/13 45/14 45/19 45/21<br><b>COMMISSION</b> [6] 1/1 2/2 14/20 15/22 19/9 42/17<br><b>committee</b> [1] 39/6<br><b>committing</b> [1] 5/8<br><b>community</b> [12] 1/17 2/18 8/22 14/21 35/14 36/2 36/8 39/5 39/5 39/6 54/11 54/16<br><b>Comp</b> [1] 22/18<br><b>companies</b> [2] 4/11 48/3<br><b>company</b> [4] 40/8 47/17 47/18 48/14<br><b>company-owned</b> [1] 48/14<br><b>comparative</b> [1] 30/12<br><b>compare</b> [3] 13/10 30/10 41/13<br><b>compared</b> [2] 7/12 51/3<br><b>compares</b> [1] 13/20<br><b>comparison</b> [2] 53/7 53/11<br><b>comparisons</b> [1] 30/20<br><b>compatibility</b> [1] 20/6<br><b>compatible</b> [4] 18/7 21/24 42/7 44/4<br><b>compelling</b> [2] 41/25 42/12<br><b>completed</b> [1] 10/5<br><b>complex</b> [1] 15/7<br><b>complexity</b> [1] 15/21<br><b>compliance</b> [1] 15/24<br><b>complicated</b> [1] 26/2<br><b>comply</b> [1] 32/10<br><b>component</b> [1] 9/22<br><b>components</b> [2] 6/11 10/8<br><b>comport</b> [1] 21/11<br><b>Comprehensive</b> [23] 5/11 6/24 15/1 15/25 19/22 19/23 20/10 20/17 21/9 21/23 22/8 27/7 37/4 37/21 38/4 38/6 38/10 41/24 42/1 43/14 45/22 54/18 55/17<br><b>comprised</b> [1] 7/5 |
| <b>B</b><br><b>back</b> [9] 12/23 13/24 33/3 40/3 41/6 49/10 49/12 52/22 53/1<br><b>backing</b> [1] 6/8<br><b>backs</b> [1] 29/23<br><b>bad</b> [1] 32/2<br><b>BALLAS</b> [2] 1/3 35/8<br><b>bands</b> [1] 7/24<br><b>Bank</b> [1] 25/16<br><b>base</b> [1] 19/16<br><b>based</b> [8] 11/5 18/2 18/12 20/11 21/3 22/12 28/14 48/7<br><b>basically</b> [4] 6/5 20/20 21/21 50/2<br><b>bays</b> [1] 45/5<br><b>be</b> [69]<br><b>bear</b> [1] 28/7<br><b>beautiful</b> [2] 43/12 52/16<br><b>because</b> [13] 17/13 24/10 24/10 24/21 24/25 25/3 25/15 27/14 28/9 28/20 42/18 43/14 52/10<br><b>been</b> [16] 9/2 9/19 9/20 12/5 12/9 18/10 20/18 24/2 26/15 31/3 36/12 36/16 37/21                                                                                                             | 42/24 52/4 52/21<br><b>before</b> [4] 13/2 17/1 28/15 28/16<br><b>beginning</b> [1] 39/13<br><b>behalf</b> [1] 14/21<br><b>behind</b> [5] 36/2 49/10 50/8 52/14 53/25<br><b>being</b> [7] 7/19 9/22 15/5 19/15 47/9 50/4 50/4<br><b>believe</b> [3] 14/15 17/9 25/1<br><b>beneficial</b> [2] 15/3 15/14<br><b>benefit</b> [1] 52/9<br><b>benefits</b> [1] 42/2<br><b>besides</b> [1] 46/1<br><b>Beth</b> [2] 1/13 51/11<br><b>better</b> [1] 34/18<br><b>between</b> [6] 5/12 6/8 8/14 34/4 49/1 49/2<br><b>beyond</b> [2] 30/7 45/10<br><b>big</b> [2] 15/23 51/9<br><b>bigger</b> [2] 14/11 21/16<br><b>bit</b> [12] 14/16 15/4 16/24 17/23 19/7 21/12 22/17 36/21 41/3 43/1 48/24 49/9<br><b>bleeding</b> [1] 41/6<br><b>blessing</b> [1] 54/10<br><b>block</b> [4] 33/17 34/1 49/1 49/1<br><b>board</b> [1] 7/23<br><b>boil</b> [1] 21/21<br><b>bolted</b> [2] 13/24 49/10<br><b>both</b> [9] 8/10 10/18 12/7 15/8 15/11 21/8 31/19 32/19 45/22<br><b>Boulevard</b> [10] 3/21 5/13 10/9 10/15 11/22 18/22 21/25 41/5 42/11 53/23<br><b>boundary</b> [3] 3/18 16/14 19/20<br><b>boutiques</b> [1] 37/23<br><b>box</b> [1] 16/5<br><b>BP</b> [2] 48/10 48/17<br><b>break</b> [1] 15/15<br><b>breaks</b> [1] 38/20<br><b>bridges</b> [1] 6/22<br><b>bright</b> [1] 31/24<br><b>bring</b> [2] 36/15 52/22<br><b>Briteworx</b> [7] 3/20 5/6 49/14 49/19 50/4 51/4 51/4<br><b>broad</b> [1] 9/13<br><b>brush</b> [1] 9/13<br><b>buffer</b> [4] 5/12 9/15 9/16 50/8<br><b>buffers</b> [1] 21/14<br><b>building</b> [19] 7/1 7/10 7/13 7/18 8/1 8/6 8/9 8/20 9/4 13/24 33/17 | 33/19 37/6 38/22<br>40/23 44/9 44/12 50/7 54/9<br><b>buildings</b> [6] 7/5 8/19 8/23 8/24 43/24 52/10<br><b>built</b> [2] 36/14 47/19<br><b>business</b> [10] 3/15 30/3 30/5 30/7 39/5 40/5 40/9 48/6 50/2 52/15<br><b>businesses</b> [7] 19/25 20/25 22/1 27/8 30/1 30/2 30/4<br><b>but</b> [58] | 11/17 11/21 22/22<br><b>CCR</b> [6] 1/23 1/23 56/13 56/13 56/14 56/14<br><b>center</b> [3] 28/18 28/22 28/23<br><b>centralized</b> [1] 51/6<br><b>certainly</b> [4] 4/8 15/17 23/3 47/12<br><b>Certified</b> [3] 56/5 56/6 56/6<br><b>certify</b> [1] 56/7<br><b>Chair</b> [2] 1/13 14/19<br><b>challenges</b> [1] 38/8<br><b>challenging</b> [1] 35/9<br><b>change</b> [2] 53/4 53/7<br><b>changes</b> [5] 8/4 8/7 8/10 11/16 41/4<br><b>changing</b> [2] 11/18 25/18<br><b>character</b> [3] 19/25 21/25 27/8<br><b>characteristics</b> [1] 8/25<br><b>Charter</b> [1] 55/17<br><b>Cheryl</b> [2] 24/7 24/15<br><b>Circle</b> [1] 35/6<br><b>circulation</b> [5] 5/4 6/8 6/12 6/13 13/23<br><b>city</b> [20] 1/2 1/16 1/17 2/16 2/21 7/20 12/15 14/22 15/8 15/9 15/12 16/1 16/10 16/13 16/15 16/16 18/13 40/15 55/14 55/17<br><b>City's</b> [6] 12/6 15/1 15/1 22/23 31/8 55/16<br><b>city/county</b> [1] 16/15<br><b>CityPlace</b> [2] 30/17 30/17<br><b>Civil</b> [1] 4/9<br><b>clarification</b> [1] 53/21<br><b>clarify</b> [1] 52/4<br><b>cleaners</b> [1] 49/11<br><b>clear</b> [2] 6/13 49/6<br><b>clearly</b> [2] 6/7 21/24<br><b>clerk</b> [1] 55/14<br><b>clock</b> [1] 24/12<br><b>close</b> [2] 29/23 55/9<br><b>closed</b> [2] 55/19 55/20<br><b>closer</b> [1] 40/23<br><b>closest</b> [1] 35/4<br><b>code</b> [2] 32/11 55/16<br><b>COEUR</b> [9] 1/2 14/22 15/9 15/10 16/13 17/5 17/24 32/3 35/3<br><b>cognizant</b> [2] 9/23 24/13<br><b>colors</b> [2] 7/24 9/4<br><b>Columbia</b> [3] 49/19 50/23 51/4<br><b>combine</b> [1] 45/17<br><b>come</b> [8] 3/25 18/12 23/25 28/6 29/16 51/15 51/17 51/18 | <b>coming</b> [7] 27/18 28/2 28/5 28/9 29/7 33/24<br><b>comment</b> [4] 4/2 41/20 42/16 51/13<br><b>comments</b> [2] 22/21 51/20<br><b>comments at</b> [1] 22/21<br><b>commercial</b> [20] 3/22 8/4 8/23 9/1 9/1 10/9 17/9 18/6 20/5 20/5 22/5 25/10 39/4 42/6 43/5 44/7 44/13 45/14 45/19 45/21<br><b>COMMISSION</b> [6] 1/1 2/2 14/20 15/22 19/9 42/17<br><b>committee</b> [1] 39/6<br><b>committing</b> [1] 5/8<br><b>community</b> [12] 1/17 2/18 8/22 14/21 35/14 36/2 36/8 39/5 39/5 39/6 54/11 54/16<br><b>Comp</b> [1] 22/18<br><b>companies</b> [2] 4/11 48/3<br><b>company</b> [4] 40/8 47/17 47/18 48/14<br><b>company-owned</b> [1] 48/14<br><b>comparative</b> [1] 30/12<br><b>compare</b> [3] 13/10 30/10 41/13<br><b>compared</b> [2] 7/12 51/3<br><b>compares</b> [1] 13/20<br><b>comparison</b> [2] 53/7 53/11<br><b>comparisons</b> [1] 30/20<br><b>compatibility</b> [1] 20/6<br><b>compatible</b> [4] 18/7 21/24 42/7 44/4<br><b>compelling</b> [2] 41/25 42/12<br><b>completed</b> [1] 10/5<br><b>complex</b> [1] 15/7<br><b>complexity</b> [1] 15/21<br><b>compliance</b> [1] 15/24<br><b>complicated</b> [1] 26/2<br><b>comply</b> [1] 32/10<br><b>component</b> [1] 9/22<br><b>components</b> [2] 6/11 10/8<br><b>comport</b> [1] 21/11<br><b>Comprehensive</b> [23] 5/11 6/24 15/1 15/25 19/22 19/23 20/10 20/17 21/9 21/23 22/8 27/7 37/4 37/21 38/4 38/6 38/10 41/24 42/1 43/14 45/22 54/18 55/17<br><b>comprised</b> [1] 7/5 |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>C</b></p> <p><b>computer</b> [1] 6/4</p> <p><b>concealed</b> [1] 51/8</p> <p><b>concept</b> [1] 5/1</p> <p><b>concepts</b> [1] 6/23</p> <p><b>concern</b> [3] 21/13<br/>27/25 29/5</p> <p><b>concerned</b> [2] 26/6<br/>27/11</p> <p><b>concerns</b> [5] 18/18<br/>19/13 22/13 29/11<br/>33/14</p> <p><b>concert</b> [1] 7/25</p> <p><b>concluded</b> [1] 9/25</p> <p><b>conclusion</b> [2] 16/18<br/>42/14</p> <p><b>concur</b> [1] 42/17</p> <p><b>concurred</b> [1] 12/7</p> <p><b>conditional</b> [2] 3/17<br/>19/19</p> <p><b>conducted</b> [1] 9/24</p> <p><b>configuration</b> [1]<br/>33/16</p> <p><b>conjunction</b> [1] 17/19</p> <p><b>connect</b> [1] 8/19</p> <p><b>connected</b> [1] 6/11</p> <p><b>connecting</b> [3] 8/16<br/>8/21 39/1</p> <p><b>connection</b> [1] 8/14</p> <p><b>consider</b> [2] 19/9<br/>37/17</p> <p><b>considerably</b> [1]<br/>13/15</p> <p><b>consideration</b> [1]<br/>6/18</p> <p><b>considered</b> [2] 9/7<br/>38/9</p> <p><b>consist</b> [1] 7/24</p> <p><b>consistency</b> [1] 8/14</p> <p><b>consistent</b> [3] 5/10<br/>19/1 37/1</p> <p><b>consolidate</b> [2] 10/15<br/>19/21</p> <p><b>consolidated</b> [2]<br/>16/19 16/20</p> <p><b>consolidating</b> [1]<br/>52/8</p> <p><b>constant</b> [1] 29/6</p> <p><b>constructed</b> [3] 4/18<br/>5/19 6/2</p> <p><b>construction</b> [1]<br/>34/12</p> <p><b>consultant</b> [2] 12/6<br/>22/23</p> <p><b>Consultants</b> [1] 4/10</p> <p><b>consumer</b> [1] 4/25</p> <p><b>contain</b> [1] 16/6</p> <p><b>contemplated</b> [1]<br/>12/11</p> <p><b>context</b> [3] 15/4<br/>16/25 17/23</p> <p><b>continue</b> [4] 14/3<br/>42/19 54/25 55/9</p> <p><b>continues</b> [1] 33/19</p> <p><b>control</b> [2] 32/1 32/2</p> <p><b>convenience</b> [9] 3/19</p> | <p>4/16 4/23 5/1 11/5<br/>14/14 18/4 35/11<br/>45/18</p> <p><b>convenience-orient</b><br/><b>d</b> [1] 11/5</p> <p><b>conveniences</b> [1]<br/>38/18</p> <p><b>convenient</b> [1] 25/12</p> <p><b>conversation</b> [1] 52/6</p> <p><b>corner</b> [2] 7/3 35/4</p> <p><b>corporate</b> [1] 22/16</p> <p><b>correct</b> [3] 32/22 33/9<br/>54/6</p> <p><b>corridor</b> [10] 10/9<br/>19/24 21/2 22/5 37/23<br/>39/3 42/25 43/2 43/6<br/>44/10</p> <p><b>could</b> [16] 3/25 12/1<br/>13/9 21/2 21/6 22/6<br/>23/22 24/5 24/13<br/>29/18 31/3 39/14<br/>44/16 44/16 46/2<br/>47/10</p> <p><b>could figure</b> [1] 23/22</p> <p><b>county</b> [9] 12/6 15/13<br/>16/11 16/14 16/15<br/>16/15 35/22 40/14<br/>56/2</p> <p><b>couple</b> [3] 27/21 46/5<br/>51/11</p> <p><b>course</b> [5] 27/10<br/>28/19 28/21 29/1<br/>40/15</p> <p><b>court</b> [7] 1/22 3/21<br/>4/3 11/2 51/22 56/5<br/>56/6</p> <p><b>coverage</b> [7] 7/1 7/14<br/>38/22 38/22 40/1<br/>43/23 44/3</p> <p><b>crammed</b> [1] 54/7</p> <p><b>create</b> [4] 6/19 37/22<br/>41/25 44/20</p> <p><b>Creating</b> [1] 8/25</p> <p><b>CREVE</b> [9] 1/2 14/22<br/>15/8 15/10 16/13 17/5<br/>17/24 32/3 35/3</p> <p><b>criteria</b> [1] 37/16</p> <p><b>cross</b> [1] 29/8</p> <p><b>crossing</b> [1] 11/22</p> <p><b>CSR</b> [3] 1/23 56/13<br/>56/14</p> <p><b>Cuba</b> [1] 48/7</p> <p><b>curb</b> [3] 5/15 10/16<br/>10/21</p> <p><b>current</b> [11] 4/18 5/5<br/>5/14 6/22 10/24 12/15<br/>12/16 12/16 17/14<br/>17/15 45/22</p> <p><b>currently</b> [4] 3/22<br/>17/7 35/5 50/22</p> <p><b>customize</b> [1] 9/20</p> <p><b>customized</b> [2] 9/21<br/>33/12</p> <p><b>cut</b> [4] 10/21 31/22<br/>33/7 33/7</p> <p><b>cut-off</b> [1] 31/22</p> | <p><b>cuts</b> [2] 5/15 10/16</p> <p><b>D</b></p> <p><b>dangerous</b> [2] 25/4<br/>25/23</p> <p><b>date</b> [1] 17/13</p> <p><b>de</b> [1] 24/22</p> <p><b>de-facto</b> [1] 24/22</p> <p><b>deal</b> [1] 33/10</p> <p><b>debate</b> [1] 55/10</p> <p><b>Deborah</b> [3] 1/23 56/4<br/>56/14</p> <p><b>DECEMBER</b> [2] 1/4<br/>2/3</p> <p><b>December 5th</b> [1] 2/3</p> <p><b>decide</b> [1] 36/25</p> <p><b>deed</b> [1] 40/10</p> <p><b>define</b> [1] 8/8</p> <p><b>defined</b> [2] 6/7 45/20</p> <p><b>definitely</b> [5] 18/16<br/>30/8 35/2 44/13 44/17</p> <p><b>definition</b> [1] 45/18</p> <p><b>degree</b> [2] 16/12 23/3</p> <p><b>delay</b> [1] 11/12</p> <p><b>demands</b> [2] 36/7<br/>36/7</p> <p><b>demo</b> [1] 39/13</p> <p><b>density</b> [1] 37/25</p> <p><b>Department</b> [1] 14/21</p> <p><b>depth</b> [2] 50/7 50/9</p> <p><b>described</b> [4] 18/10<br/>21/8 45/21 53/8</p> <p><b>design</b> [15] 4/13 5/10<br/>6/6 6/17 6/23 8/15 9/6<br/>12/16 15/1 22/3 22/10<br/>22/11 22/18 38/8<br/>54/17</p> <p><b>designations</b> [1]<br/>15/11</p> <p><b>designed</b> [1] 9/19</p> <p><b>destination</b> [3] 35/21<br/>36/4 37/23</p> <p><b>detail</b> [4] 9/8 36/24<br/>37/5 37/15</p> <p><b>detailed</b> [1] 22/11</p> <p><b>details</b> [1] 10/7</p> <p><b>determine</b> [1] 36/13</p> <p><b>developed</b> [3] 6/5 6/5<br/>48/19</p> <p><b>developing</b> [1] 9/12</p> <p><b>development</b> [27]<br/>1/17 2/19 3/18 4/22<br/>6/20 7/13 7/15 7/20<br/>8/21 12/14 14/21<br/>14/25 16/9 17/19 18/6<br/>18/12 19/14 19/18<br/>19/19 20/18 27/6<br/>42/11 43/5 44/20<br/>45/14 45/15 45/20</p> <p><b>developments</b> [3]<br/>12/12 42/7 54/21</p> <p><b>Deweese</b> [1] 52/2</p> <p><b>dialogue</b> [1] 54/25</p> <p><b>did</b> [16] 7/6 11/21<br/>11/23 19/3 22/10<br/>22/13 23/1 23/20<br/>31/18 32/14 32/16</p> | <p>32/18 33/1 35/16 41/8<br/>43/10</p> <p><b>didn't</b> [4] 27/23 31/1<br/>39/10 50/16</p> <p><b>difference</b> [3] 13/21<br/>34/2 51/3</p> <p><b>different</b> [3] 8/24<br/>50/19 52/6</p> <p><b>direction</b> [2] 41/14<br/>44/16</p> <p><b>directions</b> [1] 31/20</p> <p><b>directly</b> [2] 11/11<br/>42/10</p> <p><b>Director</b> [3] 1/17 2/18<br/>14/20</p> <p><b>discuss</b> [1] 42/19</p> <p><b>discussed</b> [2] 23/7<br/>30/21</p> <p><b>discussing</b> [2] 21/5<br/>53/16</p> <p><b>discussion</b> [3] 22/12<br/>53/1 55/9</p> <p><b>distributor</b> [1] 48/10</p> <p><b>district</b> [10] 18/3 18/4<br/>18/9 18/12 19/12<br/>20/23 42/5 43/6 44/7<br/>45/21</p> <p><b>do</b> [26] 13/3 18/18<br/>22/22 23/7 23/8 23/24<br/>24/18 24/21 25/2<br/>29/14 31/11 32/10<br/>33/2 36/23 37/5 38/25<br/>39/20 40/2 41/13<br/>44/18 46/19 48/21<br/>49/7 49/25 51/19 56/7</p> <p><b>Documentation</b> [1]<br/>55/13</p> <p><b>documents</b> [2] 23/4<br/>34/13</p> <p><b>does</b> [18] 8/12 11/25<br/>16/2 16/5 16/6 21/10<br/>21/11 26/24 37/15<br/>37/15 41/9 41/14<br/>41/23 41/25 47/17<br/>51/2 53/7 53/24</p> <p><b>doesn't</b> [3] 22/17 38/2<br/>53/4</p> <p><b>doing</b> [2] 25/17 28/8</p> <p><b>Don</b> [1] 1/14</p> <p><b>don't</b> [21] 16/4 22/21<br/>23/19 23/21 24/12<br/>27/6 27/20 28/10 29/9<br/>31/2 35/19 38/1 39/19<br/>43/2 43/4 43/7 43/8<br/>43/13 43/17 45/16<br/>53/15</p> <p><b>done</b> [8] 8/10 14/3<br/>21/19 27/23 29/9<br/>36/12 36/16 43/12</p> <p><b>door</b> [2] 44/10 44/14</p> <p><b>down</b> [6] 15/15 21/21<br/>29/21 30/5 36/3 44/19</p> <p><b>Draft</b> [1] 45/22</p> <p><b>drastically</b> [1] 30/24</p> <p><b>drawn</b> [1] 30/12</p> <p><b>dress</b> [2] 4/7 53/4</p> | <p><b>drive</b> [2] 1/23 32/4</p> <p><b>drivers</b> [1] 26/3</p> <p><b>driveway</b> [1] 10/16</p> <p><b>driveways</b> [1] 11/10</p> <p><b>dry</b> [1] 46/18</p> <p><b>during</b> [5] 4/2 10/12<br/>11/12 30/3 30/5</p> <p><b>dynamite</b> [1] 43/11</p> <p><b>E</b></p> <p><b>each</b> [3] 9/21 20/12<br/>51/10</p> <p><b>earlier</b> [1] 10/25</p> <p><b>early</b> [1] 4/19</p> <p><b>east</b> [7] 19/24 20/3<br/>21/2 22/5 28/21 37/22<br/>42/25</p> <p><b>eastbound</b> [2] 28/17<br/>28/24</p> <p><b>Eastern</b> [1] 48/11</p> <p><b>edges</b> [1] 41/2</p> <p><b>educate</b> [1] 16/24</p> <p><b>effect</b> [1] 27/24</p> <p><b>effective</b> [1] 33/13</p> <p><b>effectively</b> [1] 42/9</p> <p><b>efficiency</b> [1] 11/17</p> <p><b>effort</b> [2] 7/9 44/21</p> <p><b>egress</b> [3] 5/16 10/22<br/>13/13</p> <p><b>EIFS</b> [1] 22/15</p> <p><b>eight</b> [1] 14/9</p> <p><b>either</b> [1] 50/17</p> <p><b>element</b> [1] 22/18</p> <p><b>elements</b> [16] 6/3<br/>6/18 8/13 8/17 8/21<br/>9/7 9/8 9/11 10/1<br/>15/15 22/3 38/25 39/1<br/>41/24 44/13 46/1</p> <p><b>elevation</b> [1] 27/20</p> <p><b>elevations</b> [1] 27/23</p> <p><b>else</b> [1] 39/7</p> <p><b>eluded</b> [1] 53/11</p> <p><b>emphasize</b> [1] 8/4</p> <p><b>emphasizes</b> [1] 20/21</p> <p><b>encompassed</b> [1]<br/>15/8</p> <p><b>encourage</b> [1] 54/24</p> <p><b>encourages</b> [1] 22/3</p> <p><b>end</b> [2] 27/12 50/11</p> <p><b>energy</b> [2] 47/17<br/>47/23</p> <p><b>enforced</b> [1] 25/13</p> <p><b>enhanced</b> [3] 5/3<br/>5/21 9/16</p> <p><b>enhancing</b> [1] 5/12</p> <p><b>enough</b> [4] 6/11<br/>33/13 37/3 50/9</p> <p><b>entrance</b> [5] 6/14 8/8<br/>28/15 28/17 46/20</p> <p><b>entrances</b> [1] 28/12</p> <p><b>Environmental</b> [1]<br/>4/10</p> <p><b>Envision</b> [1] 21/2</p> <p><b>envisioned</b> [2] 44/17<br/>45/20</p> <p><b>equipment</b> [1] 13/25</p> <p><b>especially</b> [5] 9/15</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>E</b><br>especially... [4] 10/11<br>24/10 27/12 36/6<br>essentially [1] 20/24<br>esthetic [1] 5/24<br>evaluated [1] 20/10<br>evaluation [1] 42/21<br>even [6] 11/18 25/2<br>40/25 41/5 44/9 52/13<br>evening [10] 4/2 4/6<br>14/19 15/5 16/21 17/1<br>19/15 20/13 23/10<br>55/16<br>event [1] 12/2<br>everybody [2] 24/12<br>27/24<br>everything [2] 13/23<br>41/1<br>exactly [1] 17/14<br>except [2] 13/21 49/1<br>excited [1] 4/14<br>exhibits [1] 55/12<br>exist [2] 11/8 39/3<br>existing [18] 4/16 7/2<br>7/4 9/15 10/11 10/16<br>11/7 11/24 17/3 17/3<br>19/23 20/21 28/12<br>30/1 39/15 40/4 40/15<br>52/16<br>exists [1] 38/23<br>exit [4] 10/18 25/9<br>29/2 46/14<br>exiting [1] 10/22<br>exits [2] 6/14 28/13<br>expand [3] 29/25<br>30/16 39/14<br>expanding [1] 52/17<br>expansion [1] 38/16<br>expansive [3] 6/20<br>38/11 38/20<br>expected [2] 4/25<br>11/3<br>extensive [1] 9/14 | 13/20 27/7 29/11<br>30/12 35/11 36/5 43/3<br>44/5 48/23<br>fast [1] 44/18<br>faster [2] 4/1 6/15<br>favor [2] 3/11 25/21<br>favorable [1] 12/14<br>feasibly [1] 5/10<br>feature [1] 6/1<br>feel [6] 35/25 38/2<br>38/19 43/9 44/3 44/5<br>feels [1] 9/2<br>feet [6] 28/14 28/16<br>29/3 29/4 34/7 47/3<br>fence [8] 9/18 10/1<br>32/21 33/19 34/6 34/8<br>34/10 41/2<br>few [5] 22/13 23/20<br>27/5 28/5 52/5<br>fewer [1] 50/17<br>Fifth [1] 25/16<br>figure [2] 6/25 23/22<br>file [1] 55/18<br>finalizing [1] 34/12<br>find [1] 38/18<br>finding [1] 54/19<br>findings [3] 11/23<br>12/7 42/13<br>first [9] 9/13 23/20<br>23/23 24/19 26/21<br>28/13 28/15 36/24<br>49/22<br>fits [5] 27/7 37/17<br>38/2 43/13 43/18<br>five [4] 5/14 10/10<br>10/15 10/20<br>five-lane [1] 10/10<br>fixtures [1] 31/22<br>flashing [1] 11/19<br>Florissant [6] 49/16<br>50/21 50/22 51/4<br>53/12 53/24<br>flow [2] 5/4 29/6<br>flows [2] 11/7 11/11<br>folks [1] 4/12<br>following [2] 25/11<br>55/12<br>food [1] 44/18<br>foot [3] 32/11 34/11<br>34/13<br>footage [1] 14/13<br>footprint [1] 13/21<br>former [1] 12/15<br>forth [4] 12/23 29/16<br>40/3 53/1<br>forty [1] 44/25<br>forward [7] 3/25<br>18/13 19/4 23/25<br>37/18 38/10 53/9<br>found [2] 6/10 10/13<br>four [2] 10/20 44/25<br>fourteen [1] 50/22<br>free [2] 46/13 50/24<br>freestanding [1] 18/5<br>from bleeding [1]<br>41/6 | front [4] 16/21 44/10<br>44/13 52/14<br>frontage [1] 5/24<br>frontages [2] 16/13<br>18/17<br>fronts [1] 42/10<br>fueling [3] 14/9 45/6<br>45/8<br>full [3] 5/15 5/15<br>10/16<br>functional [2] 8/25<br>53/7<br>further [12] 5/8 8/5<br>10/7 10/17 16/24 17/8<br>17/21 20/22 23/10<br>34/7 41/5 42/4<br>future [5] 12/2 12/3<br>19/6 21/3 42/9 | <b>G</b><br>gas [17] 3/19 4/16<br>17/3 25/7 27/14 30/6<br>34/20 34/25 35/4<br>45/17 46/16 47/11<br>47/18 47/19 52/11<br>53/6 53/11<br>Gatesbury [1] 1/23<br>GBA [1] 22/23<br>GC [14] 3/22 17/6<br>17/7 17/15 17/20<br>17/22 17/25 18/2 18/4<br>18/8 18/11 42/5 43/6<br>45/21<br>Gene [1] 1/15<br>general [5] 3/22<br>22/14 32/2 34/17 43/5<br>generally [1] 35/15<br>generated [1] 6/4<br>get [19] 4/1 10/7<br>25/13 27/23 27/23<br>28/7 28/19 33/2 35/9<br>35/21 36/21 36/23<br>37/5 37/15 41/18<br>42/16 44/23 45/15<br>50/9<br>getting [1] 34/12<br>gigantic [1] 43/15<br>give [4] 9/12 13/9<br>51/19 51/25<br>given [2] 6/18 15/21<br>gives [2] 8/21 17/23<br>go [15] 9/8 10/4 10/4<br>10/14 20/12 24/23<br>24/24 25/1 25/2 25/7<br>25/11 26/4 31/19<br>34/11 38/3<br>goals [1] 4/22<br>Goddard [2] 17/17<br>17/22<br>goes [2] 25/10 50/25<br>going [34] 2/1 3/6<br>12/23 24/19 25/7<br>25/13 25/17 27/13<br>27/18 28/10 29/1 29/2<br>29/2 29/4 29/5 29/6<br>29/8 31/23 33/17 34/1<br>34/22 35/7 35/21 | 35/22 36/15 38/8<br>38/15 40/10 43/22<br>46/6 46/18 47/14 53/9<br>54/14<br>gone [3] 12/20 25/15<br>45/19<br>good [9] 4/6 14/19<br>14/23 21/19 23/18<br>32/1 33/10 34/1 39/25<br>Google [1] 28/14<br>got [1] 33/7<br>grade [2] 34/2 40/25<br>grades [1] 34/12<br>great [1] 23/3<br>green [13] 6/20 7/16<br>7/17 11/20 11/20<br>13/17 20/1 38/11<br>38/20 52/15 53/2 53/6<br>54/6<br>green turn [1] 11/20<br>guess [8] 26/21 27/13<br>27/20 28/1 28/8 30/17<br>38/7 46/18<br>Guideline [1] 22/11<br>guidelines [8] 5/11<br>6/23 8/15 15/2 22/10<br>43/8 43/8 54/18<br>guys [1] 35/8 | Heather [1] 1/15<br>heavily [1] 35/12<br>height [1] 34/11<br>heights [1] 9/19<br>help [6] 8/8 28/10<br>41/5 41/8 41/15 44/15<br>her [2] 51/25 52/1<br>here [36] 4/11 6/25<br>7/23 10/6 13/11 14/9<br>16/3 16/8 16/15 17/2<br>17/21 18/1 18/21<br>18/22 26/20 27/1 27/3<br>29/1 29/6 30/5 30/18<br>31/15 35/4 36/21<br>38/13 40/3 40/9 40/23<br>41/1 43/13 48/11<br>48/14 50/18 51/3<br>52/22 53/8<br>hereby [1] 56/7<br>high [5] 5/9 7/18<br>10/11 11/6 54/11<br>high-quality [1] 5/9<br>higher [2] 50/11<br>50/25<br>highest [1] 11/12<br>highlight [1] 16/5<br>highway [5] 5/13<br>10/11 53/12 53/22<br>53/23<br>his [1] 29/22<br>historically [1] 25/20<br>history [1] 18/11<br>hold [1] 26/19<br>holds [1] 16/11<br>homes [1] 37/25<br>honestly [1] 12/10<br>honk [1] 24/25<br>horizontal [1] 8/5<br>horizontally [1] 8/10<br>hose [1] 51/8<br>hours [6] 10/12 30/3<br>30/5 30/7 33/11 33/15<br>house [2] 13/18 27/1<br>houses [1] 40/14<br>how [20] 6/19 13/9<br>13/20 14/25 21/10<br>21/11 25/5 25/6 25/12<br>25/18 27/6 28/10 29/9<br>31/5 34/6 35/8 35/17<br>36/8 36/13 49/7<br>however [2] 11/4<br>17/18<br>Huck [3] 26/17 29/21<br>32/14<br>huge [2] 52/9 52/11<br>huh [12] 14/18 32/17<br>32/23 33/22 34/3<br>39/12 40/7 41/8 45/9<br>46/4 48/2 49/5<br>human [2] 8/2 8/11 |
| <b>F</b><br>facade [1] 34/9<br>facade-looking [1]<br>34/9<br>face [1] 7/24<br>facilities [3] 8/15 14/4<br>50/5<br>facility [9] 3/20 5/5<br>5/7 5/20 34/11 35/7<br>44/12 44/22 49/15<br>fact [1] 53/6<br>facto [1] 24/22<br>falls [1] 19/23<br>familiar [2] 13/12<br>35/8<br>families [1] 18/17<br>family [7] 3/23 4/21<br>17/25 20/25 37/25<br>43/21 48/6<br>family-owned [1]<br>48/6<br>far [11] 8/13 12/11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                | <b>H</b><br>had [7] 9/10 24/18<br>25/15 27/22 32/1<br>39/23 47/16<br>Hall [3] 1/14 2/7 3/2<br>hand [2] 23/23 28/21<br>hands [1] 51/12<br>happy [3] 4/14 12/21<br>23/12<br>hard [1] 24/21<br>has [21] 7/15 9/2 9/19<br>11/17 12/5 12/7 12/9<br>12/18 18/10 20/9<br>21/19 22/21 31/2<br>31/15 36/12 36/16<br>44/13 47/18 51/17<br>53/6 54/19<br>hatched [1] 40/10<br>hate [1] 38/5<br>have [101]<br>haven't [2] 23/2 46/15<br>having [6] 13/22 26/6<br>28/9 44/17 50/6 52/6<br>Hazelwood [1] 4/10<br>head [1] 44/16<br>heading [2] 28/5<br>28/21<br>headlight [1] 33/23<br>heads [1] 11/18<br>hear [3] 13/2 23/15<br>54/25<br>hear from [1] 23/15<br>heard [1] 53/2<br>hearing [15] 1/1 1/8<br>3/16 12/22 34/19<br>45/24 51/17 53/3 55/1<br>55/9 55/13 55/19<br>55/20 56/8 56/10                                                                                                                                                                                                                             | <b>I</b><br>I'd [8] 12/21 23/12<br>23/15 30/11 31/6 32/7<br>42/16 42/21<br>I'll [10] 13/6 20/12<br>22/13 23/11 35/1                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>I</b></p> <p><b>I'll...</b> [5] 36/17 37/7<br/>52/21 52/21 52/22</p> <p><b>I'm</b> [17] 4/9 6/15<br/>15/17 18/21 24/7<br/>24/12 25/12 26/6 33/5<br/>33/23 34/19 35/8 37/9<br/>43/19 44/15 45/24<br/>51/2</p> <p><b>I've</b> [4] 21/8 32/4 53/2<br/>53/10</p> <p><b>I70</b> [1] 49/2</p> <p><b>idea</b> [1] 34/20</p> <p><b>ideals</b> [1] 21/11</p> <p><b>identified</b> [1] 20/9</p> <p><b>if</b> [37] 3/25 4/6 7/8<br/>10/7 18/2 19/3 20/13<br/>21/5 21/23 23/11<br/>23/15 23/22 24/2 24/5<br/>24/12 24/24 25/23<br/>27/21 28/19 29/18<br/>29/25 30/13 31/6<br/>31/23 34/13 34/18<br/>35/2 36/20 39/19<br/>41/15 42/18 51/12<br/>51/14 51/16 51/18<br/>55/3 55/7</p> <p><b>ignore</b> [1] 38/6</p> <p><b>IL</b> [3] 1/23 56/13<br/>56/14</p> <p><b>IL-CSR</b> [3] 1/23 56/13<br/>56/14</p> <p><b>Illinois</b> [3] 49/19<br/>50/23 56/5</p> <p><b>imagine</b> [1] 36/16</p> <p><b>immediate</b> [1] 40/20</p> <p><b>immediately</b> [2] 36/2<br/>53/25</p> <p><b>impact</b> [4] 10/2 11/23<br/>22/20 41/13</p> <p><b>implementation</b> [2]<br/>21/4 21/7</p> <p><b>important</b> [3] 9/7<br/>15/22 19/9</p> <p><b>importantly</b> [1] 9/4</p> <p><b>improved</b> [1] 5/3</p> <p><b>improvement</b> [1] 12/3</p> <p><b>in</b> [136]</p> <p><b>Inc</b> [1] 1/22</p> <p><b>include</b> [1] 16/3</p> <p><b>included</b> [2] 7/9<br/>39/20</p> <p><b>including</b> [1] 13/12</p> <p><b>inconsistent</b> [2] 42/1<br/>42/5</p> <p><b>incorporate</b> [1] 22/17</p> <p><b>incorporated</b> [1] 22/4</p> <p><b>incorporating</b> [1]<br/>21/18</p> <p><b>increase</b> [3] 11/3<br/>11/10 30/23</p> <p><b>increasing</b> [1] 38/17</p> <p><b>indicating</b> [2] 26/20<br/>27/2</p> <p><b>indicators</b> [1] 11/19</p> <p><b>individual</b> [2] 8/14</p> | <p>51/5</p> <p><b>information</b> [2] 13/9<br/>55/8</p> <p><b>initially</b> [1] 15/23</p> <p><b>ins</b> [1] 8/8</p> <p><b>inside</b> [2] 14/1 15/12</p> <p><b>instead</b> [2] 13/22 49/2</p> <p><b>intact</b> [1] 41/1</p> <p><b>integral</b> [1] 7/24</p> <p><b>intense</b> [2] 12/11 32/5</p> <p><b>intensity</b> [12] 6/25<br/>7/10 18/7 21/22 22/7<br/>31/19 32/2 38/21<br/>43/20 44/3 55/1 55/4</p> <p><b>intent</b> [1] 19/11</p> <p><b>interest</b> [5] 6/19 8/8<br/>23/16 31/12 31/13</p> <p><b>interested</b> [1] 30/11</p> <p><b>interior</b> [1] 13/25</p> <p><b>internal</b> [1] 13/23</p> <p><b>intersection</b> [5] 11/24<br/>12/4 24/20 26/5 26/7</p> <p><b>into</b> [29] 5/20 10/7<br/>10/16 16/20 19/12<br/>20/12 21/18 24/25<br/>25/7 26/4 27/23 28/1<br/>28/7 28/15 28/16<br/>28/18 28/22 28/23<br/>30/9 31/24 32/5 33/3<br/>33/18 33/24 34/12<br/>36/23 37/5 37/15<br/>55/12</p> <p><b>introduction</b> [1]<br/>20/25</p> <p><b>invest</b> [1] 54/15</p> <p><b>involves</b> [1] 15/8</p> <p><b>is</b> [178]</p> <p><b>is that</b> [1] 42/15</p> <p><b>islands</b> [2] 5/4 14/9</p> <p><b>isn't</b> [1] 43/14</p> <p><b>issue</b> [5] 24/19 25/5<br/>25/6 37/1 43/14</p> <p><b>issues</b> [5] 21/21<br/>21/21 22/12 24/17<br/>25/15</p> <p><b>issues that</b> [1] 24/17</p> <p><b>it</b> [85]</p> <p><b>it's</b> [50] 7/5 10/22<br/>13/21 14/4 14/10 19/6<br/>19/7 19/9 20/6 20/18<br/>21/24 24/21 25/4<br/>25/11 25/23 26/1 27/3<br/>27/5 27/8 30/13 31/14<br/>33/11 34/7 34/8 34/9<br/>34/10 35/19 36/9<br/>36/14 36/15 44/5<br/>45/13 45/13 45/13<br/>45/25 46/13 46/15<br/>47/6 47/7 48/24 48/24<br/>49/10 50/2 50/19 51/9<br/>53/23 54/7 54/10<br/>54/14 54/21</p> <p><b>items</b> [1] 4/24</p> <p><b>its</b> [1] 18/19</p> <p><b>itself</b> [7] 12/5 13/14<br/>31/18 33/17 37/1</p> | <p>48/24 49/14</p> <p><b>J</b></p> <p><b>Jaggi</b> [3] 1/17 2/19<br/>14/20</p> <p><b>Jason</b> [8] 1/17 2/19<br/>9/10 13/2 13/4 14/20<br/>23/14 35/2</p> <p><b>Jessica</b> [2] 1/18 2/24</p> <p><b>Jewelry</b> [1] 44/12</p> <p><b>job</b> [2] 21/19 43/11</p> <p><b>jump</b> [2] 30/2 30/18</p> <p><b>just</b> [42] 4/1 9/12<br/>11/24 16/24 18/10<br/>20/12 22/13 22/14<br/>24/5 24/9 24/13 24/17<br/>26/6 26/21 26/22 27/3<br/>27/9 27/24 29/4 29/21<br/>29/24 32/21 33/25<br/>41/20 42/11 43/13<br/>43/17 46/24 47/6 47/9<br/>47/16 50/9 50/9 51/7<br/>51/18 51/19 52/4<br/>52/25 53/20 53/22<br/>54/2 54/22</p> <p><b>justify</b> [1] 42/3</p> <p><b>K</b></p> <p><b>Kamp</b> [4] 4/9 14/23<br/>16/2 22/20</p> <p><b>Kansas</b> [1] 56/6</p> <p><b>keep</b> [3] 32/21 41/5<br/>53/3</p> <p><b>keeps</b> [1] 6/11</p> <p><b>Kelly</b> [2] 1/17 2/21</p> <p><b>Kevin</b> [1] 4/9</p> <p><b>key</b> [1] 20/2</p> <p><b>kind</b> [28] 9/9 9/12<br/>10/14 15/3 15/14<br/>16/23 19/4 19/16<br/>22/15 25/25 26/6<br/>34/15 36/9 36/18<br/>36/21 37/14 40/5<br/>41/16 43/21 44/24<br/>45/15 45/19 48/16<br/>48/25 49/6 49/11<br/>49/22 55/2</p> <p><b>kinds</b> [1] 39/18</p> <p><b>Kistner</b> [2] 1/13 14/19</p> <p><b>knee</b> [1] 6/1</p> <p><b>know</b> [55] 7/10 9/10<br/>12/19 13/3 13/12 18/2<br/>18/15 19/10 21/4<br/>21/20 22/15 27/6<br/>27/17 27/21 28/10<br/>29/4 29/9 29/10 29/24<br/>31/2 33/25 34/14 35/1<br/>35/2 35/11 35/12<br/>35/14 35/19 35/19<br/>35/25 36/8 37/15<br/>37/17 38/7 38/15<br/>38/17 38/24 38/24<br/>38/25 39/3 43/20<br/>43/20 44/9 44/11<br/>44/15 44/19 47/9<br/>47/11 51/9 52/21<br/>52/25 54/10 54/19</p> | <p>54/21 54/22</p> <p><b>knowing</b> [1] 23/21</p> <p><b>KS</b> [3] 1/23 56/13<br/>56/14</p> <p><b>KS-CCR</b> [3] 1/23<br/>56/13 56/14</p> <p><b>L</b></p> <p><b>Lake</b> [4] 3/21 11/2<br/>32/19 33/2</p> <p><b>land</b> [1] 29/22</p> <p><b>landscape</b> [5] 21/14<br/>40/5 51/24 52/3 52/18</p> <p><b>landscaped</b> [1] 9/5</p> <p><b>landscaping</b> [2] 9/14<br/>20/1</p> <p><b>lane</b> [13] 10/10 24/16<br/>24/23 24/24 27/3<br/>27/11 27/13 28/2 28/7<br/>28/18 28/21 28/22<br/>28/23</p> <p><b>lanes</b> [5] 10/18 10/19<br/>27/16 28/24 46/17</p> <p><b>large</b> [6] 5/23 16/12<br/>21/15 22/24 36/1<br/>46/25</p> <p><b>larger</b> [10] 11/19<br/>13/17 15/15 16/1 21/3<br/>21/21 22/12 35/13<br/>36/25 47/2</p> <p><b>last</b> [2] 20/19 49/4</p> <p><b>lastly</b> [1] 28/1</p> <p><b>later</b> [1] 56/8</p> <p><b>law</b> [1] 28/22</p> <p><b>layout</b> [1] 6/9</p> <p><b>least</b> [1] 17/10</p> <p><b>leave</b> [1] 42/8</p> <p><b>Lee</b> [2] 10/6 36/17</p> <p><b>left</b> [11] 5/19 7/3<br/>10/18 11/18 11/20<br/>25/3 25/23 26/1 28/21<br/>54/19 54/21</p> <p><b>left-hand</b> [1] 28/21</p> <p><b>leg</b> [1] 11/22</p> <p><b>less</b> [3] 11/11 13/15<br/>38/21</p> <p><b>let</b> [2] 36/17 51/25</p> <p><b>let's</b> [5] 2/4 26/19<br/>32/20 32/20 41/17</p> <p><b>lets</b> [1] 38/21</p> <p><b>levels</b> [3] 9/20 11/6<br/>31/19</p> <p><b>liberalizing</b> [1] 43/1</p> <p><b>lieu</b> [1] 54/7</p> <p><b>light</b> [9] 9/20 11/14<br/>28/3 28/4 31/2 31/5<br/>31/6 31/22 31/23</p> <p><b>lighting</b> [4] 9/19 32/2<br/>32/5 33/13</p> <p><b>lights</b> [4] 25/19 27/14<br/>30/6 31/25</p> <p><b>like</b> [32] 9/5 23/15<br/>25/4 31/6 32/7 34/9<br/>34/14 35/25 36/3 38/2<br/>38/19 38/19 38/25<br/>39/1 39/3 39/4 39/16<br/>41/13 42/15 42/16</p> | <p>42/21 43/5 43/15<br/>43/21 43/25 44/2<br/>46/6 47/19 49/22<br/>53/22 55/5</p> <p><b>limit</b> [1] 10/25</p> <p><b>limited</b> [1] 34/13</p> <p><b>limits</b> [3] 15/9 15/12<br/>16/15</p> <p><b>Lindbergh</b> [4] 49/2<br/>49/2 49/16 53/22</p> <p><b>line</b> [1] 27/17</p> <p><b>linear</b> [1] 47/3</p> <p><b>lines</b> [1] 8/5</p> <p><b>listen</b> [1] 12/19</p> <p><b>listening</b> [1] 52/25</p> <p><b>little</b> [16] 4/1 13/9<br/>14/16 15/4 16/24<br/>17/13 17/23 19/1<br/>21/12 36/21 40/9 41/3<br/>43/1 48/24 49/9 50/25</p> <p><b>live</b> [4] 24/16 26/17<br/>27/12 29/20</p> <p><b>local</b> [1] 45/10</p> <p><b>locate</b> [1] 35/15</p> <p><b>located</b> [8] 3/20 4/10<br/>16/10 16/11 16/19<br/>35/5 36/5 42/11</p> <p><b>locating</b> [1] 6/18</p> <p><b>location</b> [8] 5/16<br/>13/10 17/22 49/19<br/>50/20 50/21 50/22<br/>50/23</p> <p><b>locations</b> [4] 4/20<br/>35/11 45/7 45/8</p> <p><b>logical</b> [1] 35/14</p> <p><b>long</b> [1] 9/12</p> <p><b>look</b> [11] 7/8 15/6<br/>15/22 18/2 21/23<br/>22/16 29/25 31/18<br/>33/3 41/12 53/10</p> <p><b>looked</b> [1] 39/9</p> <p><b>looking</b> [15] 7/13<br/>19/8 30/9 30/15 30/25<br/>31/24 32/5 32/18 34/9<br/>38/8 38/13 39/16<br/>42/24 43/15 44/12</p> <p><b>looks</b> [1] 9/1</p> <p><b>lot</b> [18] 9/11 9/11<br/>13/11 14/4 16/19<br/>16/20 24/11 27/15<br/>31/12 31/12 36/15<br/>39/17 41/11 42/18<br/>46/9 50/17 52/15 53/2</p> <p><b>Louis</b> [5] 1/24 12/6<br/>15/13 16/14 56/2</p> <p><b>love</b> [1] 54/24</p> <p><b>low</b> [2] 7/18 37/25</p> <p><b>low-density</b> [1] 37/25</p> <p><b>lower</b> [2] 7/3 55/4</p> <p><b>Lumley</b> [3] 1/16 2/16<br/>55/11</p> <p><b>M</b></p> <p><b>machine</b> [1] 51/9</p> <p><b>made</b> [4] 7/5 9/14<br/>11/16 43/23</p> <p><b>Magruder</b> [3] 1/14 2/8</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>M</b></p> <p><b>Magruder...</b> [1] 42/24</p> <p><b>mainly</b> [1] 10/22</p> <p><b>maintain</b> [3] 7/19<br/>8/14 20/6</p> <p><b>maintained</b> [1] 10/10</p> <p><b>maintaining</b> [1] 9/22</p> <p><b>maintenance</b> [1] 7/19</p> <p><b>major</b> [1] 5/13</p> <p><b>make</b> [9] 4/1 8/1<br/>11/13 12/19 24/17<br/>25/6 52/17 54/2 55/3</p> <p><b>makes</b> [2] 54/16<br/>54/16</p> <p><b>making</b> [3] 25/24<br/>44/21 55/1</p> <p><b>many</b> [2] 46/16 49/7</p> <p><b>map</b> [2] 16/3 17/12</p> <p><b>mark</b> [5] 11/21 26/17<br/>29/21 29/25 30/6</p> <p><b>Mary</b> [11] 12/3 24/16<br/>24/20 24/25 25/2 25/9<br/>25/10 25/16 25/24<br/>51/21 52/2</p> <p><b>Mary's</b> [1] 51/24</p> <p><b>Masonic</b> [1] 17/16</p> <p><b>masonry</b> [4] 9/18<br/>32/20 32/21 34/8</p> <p><b>massing</b> [4] 7/25 8/7<br/>8/10 8/13</p> <p><b>massive</b> [1] 27/9</p> <p><b>match</b> [1] 21/11</p> <p><b>material</b> [3] 8/4 9/3<br/>9/3</p> <p><b>materials</b> [8] 7/19<br/>7/22 7/25 8/3 8/13<br/>9/17 37/6 55/15</p> <p><b>matter</b> [1] 3/25</p> <p><b>Matthew</b> [1] 1/16</p> <p><b>mature</b> [1] 21/17</p> <p><b>may</b> [6] 14/25 14/25<br/>15/18 23/4 34/18<br/>39/16</p> <p><b>maybe</b> [9] 15/4 39/9<br/>39/14 43/1 44/1 47/13<br/>48/24 49/6 52/7</p> <p><b>McLaughlin</b> [4] 1/22<br/>1/23 56/4 56/14</p> <p><b>me</b> [9] 4/12 24/12<br/>38/2 41/22 42/12<br/>42/13 42/20 44/23<br/>53/3</p> <p><b>Meadows</b> [9] 12/4<br/>24/16 24/20 24/25<br/>25/3 25/9 25/10 25/16<br/>25/24</p> <p><b>mean</b> [15] 13/16 27/8<br/>35/24 41/17 43/19<br/>44/16 46/9 46/15 47/8<br/>47/11 53/2 53/3 54/6<br/>54/10 54/24</p> <p><b>meaning</b> [1] 47/2</p> <p><b>means</b> [3] 19/6 28/17<br/>28/19</p> <p><b>measure</b> [1] 21/7</p> <p><b>measured</b> [1] 32/13</p> | <p><b>measures</b> [1] 34/25</p> <p><b>meet</b> [5] 14/25 21/16<br/>33/19 37/16 41/24</p> <p><b>meeting</b> [2] 2/2 12/16</p> <p><b>meets</b> [4] 22/7 43/7<br/>43/8 54/17</p> <p><b>members</b> [3] 4/13<br/>14/19 51/12</p> <p><b>mention</b> [1] 31/2</p> <p><b>mentioned</b> [2] 10/24<br/>16/2</p> <p><b>merge</b> [1] 28/23</p> <p><b>merits</b> [1] 54/17</p> <p><b>met</b> [2] 22/25 27/21</p> <p><b>mid</b> [3] 4/19 49/1 49/1</p> <p><b>mid-'80s</b> [1] 4/19</p> <p><b>might</b> [2] 15/3 15/14</p> <p><b>mileage</b> [1] 34/24</p> <p><b>minor</b> [1] 21/20</p> <p><b>minutes</b> [2] 24/11<br/>26/8</p> <p><b>MISSOURI</b> [7] 1/2<br/>4/10 10/10 48/7 48/11<br/>56/1 56/5</p> <p><b>mixture</b> [1] 15/11</p> <p><b>MO</b> [4] 1/23 1/24<br/>56/13 56/14</p> <p><b>MO-CCR</b> [3] 1/23<br/>56/13 56/14</p> <p><b>Mobil</b> [1] 4/16</p> <p><b>Mobile</b> [18] 3/19 4/20<br/>7/2 11/3 27/22 28/6<br/>28/13 29/7 30/13<br/>30/14 30/16 40/15<br/>43/10 47/4 48/10<br/>48/14 50/4 54/20</p> <p><b>model</b> [1] 6/5</p> <p><b>modeled</b> [1] 33/1</p> <p><b>modern</b> [1] 38/17</p> <p><b>modernize</b> [2] 4/23<br/>38/13</p> <p><b>modifications</b> [2]<br/>11/23 12/20</p> <p><b>MoDOT</b> [2] 12/7<br/>25/17</p> <p><b>MONDAY</b> [2] 1/4 2/3</p> <p><b>months</b> [2] 20/19<br/>27/22</p> <p><b>more</b> [15] 8/1 8/11<br/>12/11 19/1 26/6 28/9<br/>36/15 38/17 44/5<br/>44/22 47/12 47/13<br/>48/16 50/15 52/22</p> <p><b>most</b> [2] 9/4 17/15</p> <p><b>motion</b> [1] 3/7</p> <p><b>motions</b> [2] 23/6 23/8</p> <p><b>move</b> [8] 3/8 3/14<br/>17/8 17/12 17/21 19/4<br/>23/9 37/17</p> <p><b>move on</b> [1] 17/12</p> <p><b>movements</b> [2] 5/20<br/>10/19</p> <p><b>moving</b> [3] 6/15 40/8<br/>50/10</p> <p><b>Mr</b> [7] 1/13 1/14 1/15<br/>1/16 1/16 1/17 3/13</p> | <p><b>Mr.</b> [12] 2/5 2/8 2/10<br/>2/14 3/10 14/23 16/2<br/>22/20 32/14 42/24<br/>54/5 55/11</p> <p><b>Mr. Carney</b> [1] 2/5</p> <p><b>Mr. Huck</b> [1] 32/14</p> <p><b>Mr. Kamp</b> [3] 14/23<br/>16/2 22/20</p> <p><b>Mr. Lumley</b> [1] 55/11</p> <p><b>Mr. Magruder</b> [2] 2/8<br/>42/24</p> <p><b>Mr. Rovak</b> [2] 2/10<br/>3/10</p> <p><b>Mr. Schuh</b> [1] 2/14</p> <p><b>Mr. Voss'</b> [1] 54/5</p> <p><b>Ms</b> [6] 1/13 1/14 1/15<br/>1/17 1/18 2/7</p> <p><b>Ms.</b> [2] 2/12 3/2</p> <p><b>Ms. Hall</b> [1] 3/2</p> <p><b>Ms. Silverman</b> [1]<br/>2/12</p> <p><b>much</b> [10] 11/6 12/15<br/>22/4 25/18 26/9 29/12<br/>31/10 50/10 50/10<br/>52/12</p> <p><b>multi</b> [6] 12/12 20/25<br/>37/25 43/21 43/24<br/>54/9</p> <p><b>multi-family</b> [3] 20/25<br/>37/25 43/21</p> <p><b>multi-tenant</b> [3] 12/12<br/>43/24 54/9</p> <p><b>Muriel</b> [1] 1/14</p> <p><b>my</b> [17] 4/9 15/18<br/>24/8 24/15 26/17<br/>26/19 27/1 27/13<br/>29/10 29/20 30/17<br/>34/22 37/7 37/12<br/>43/13 52/2 52/23</p> <p><b>myself</b> [1] 41/21</p> <p><b>N</b></p> <p><b>name</b> [10] 4/7 4/9<br/>24/6 24/15 26/15<br/>26/17 29/19 52/1 52/2<br/>52/23</p> <p><b>name's</b> [1] 29/20</p> <p><b>Namely</b> [1] 15/23</p> <p><b>natural</b> [1] 7/22</p> <p><b>nature</b> [1] 12/22</p> <p><b>near</b> [1] 48/17</p> <p><b>nearest</b> [2] 12/1<br/>34/20</p> <p><b>nearly</b> [1] 12/10</p> <p><b>necessarily</b> [2] 31/13<br/>32/3</p> <p><b>need</b> [4] 23/8 23/24<br/>23/25 37/10</p> <p><b>needed</b> [2] 12/3 44/6<br/>30/9</p> <p><b>negative</b> [1] 10/2</p> <p><b>neighborhood</b> [17]<br/>5/9 7/21 9/1 20/5<br/>20/24 35/20 35/24<br/>37/24 38/12 42/6 44/7<br/>44/22 45/14 46/11</p> | <p>47/12 47/13 47/14</p> <p><b>neighborhood-orient</b><br/><b>ed</b> [2] 20/5 20/24</p> <p><b>neighborhoods</b> [1]<br/>44/8</p> <p><b>neighbors</b> [1] 9/23</p> <p><b>never</b> [2] 17/18 29/8</p> <p><b>new</b> [11] 1/3 3/14 5/1<br/>9/16 10/16 11/3 14/4<br/>21/6 28/25 43/8 55/7</p> <p><b>newer</b> [1] 38/18</p> <p><b>next</b> [1] 26/14</p> <p><b>nice</b> [1] 44/12</p> <p><b>nine</b> [3] 20/9 20/10<br/>20/11</p> <p><b>no</b> [12] 1/9 3/17 7/19<br/>10/2 11/1 20/3 23/25<br/>25/25 40/23 46/20<br/>49/24 55/7</p> <p><b>noise</b> [3] 9/24 10/2<br/>41/5</p> <p><b>none</b> [1] 50/17</p> <p><b>nor</b> [1] 42/1</p> <p><b>normal</b> [3] 30/3 30/5<br/>30/7</p> <p><b>normally</b> [1] 13/18</p> <p><b>north</b> [6] 1/3 10/25<br/>17/6 29/22 49/16<br/>53/22</p> <p><b>northbound</b> [1] 11/1</p> <p><b>not</b> [49] 4/24 6/9 8/3<br/>8/7 11/10 11/23 17/14<br/>18/22 22/10 23/15<br/>24/12 25/2 25/7 25/11<br/>25/12 25/20 27/3<br/>31/13 31/18 31/24<br/>32/3 32/3 33/4 33/11<br/>34/13 35/20 35/20<br/>36/3 37/9 39/20 41/17<br/>41/23 41/25 42/17<br/>42/17 42/18 43/14<br/>44/3 44/17 44/18<br/>45/13 45/13 47/6<br/>47/13 50/9 51/5 51/9<br/>53/7 53/13</p> <p><b>not individual</b> [1]<br/>51/5</p> <p><b>note</b> [2] 3/1 6/17</p> <p><b>noted</b> [2] 7/15 27/6</p> <p><b>notice</b> [3] 19/3 47/17<br/>55/14</p> <p><b>noticed</b> [1] 46/6</p> <p><b>now</b> [20] 3/13 3/14<br/>4/25 12/17 13/1 17/6<br/>17/11 18/25 25/22<br/>25/24 30/4 35/3 36/16<br/>37/8 38/13 38/23 40/6<br/>40/24 41/14 47/4</p> <p><b>number</b> [12] 13/12<br/>14/6 14/8 28/4 30/20<br/>30/22 31/1 34/24<br/>45/25 46/1 47/2 52/7</p> <p><b>numbers</b> [3] 28/14<br/>30/12 30/13</p> <p><b>nutshell</b> [1] 20/20</p> | <p><b>O</b></p> <p><b>Oak</b> [4] 3/21 11/2<br/>32/19 33/2</p> <p><b>objectives</b> [1] 16/1</p> <p><b>obsolete</b> [1] 54/22</p> <p><b>obviously</b> [5] 18/24<br/>20/18 23/7 23/16 43/9</p> <p><b>off</b> [12] 9/9 25/10 28/5<br/>28/14 29/1 31/22<br/>31/24 33/7 33/8 33/14<br/>45/11 49/16</p> <p><b>offer</b> [2] 51/1 55/12</p> <p><b>offering</b> [5] 4/23 5/2<br/>49/9 49/14 50/11</p> <p><b>offerings</b> [3] 4/25<br/>14/1 38/14</p> <p><b>offices</b> [1] 18/5</p> <p><b>official</b> [1] 21/9</p> <p><b>officially</b> [1] 12/8</p> <p><b>Oh</b> [3] 33/23 37/2<br/>46/23</p> <p><b>old</b> [1] 43/7</p> <p><b>Olive</b> [39] 3/21 4/17<br/>5/13 5/15 10/9 10/15<br/>10/15 10/21 11/5 11/8<br/>11/12 11/14 11/22<br/>12/1 17/8 17/12 18/18<br/>18/22 19/24 20/3<br/>21/25 22/5 24/23<br/>25/16 25/19 25/23<br/>26/5 32/4 35/7 35/14<br/>36/3 37/22 41/5 42/11<br/>42/25 45/12 47/3<br/>53/23 54/13</p> <p><b>Olivette</b> [13] 13/11<br/>13/20 13/22 14/5 14/8<br/>14/16 34/10 35/19<br/>48/17 48/25 49/7 49/9<br/>50/20</p> <p><b>on</b> [88]</p> <p><b>on-site</b> [1] 11/4</p> <p><b>one</b> [37] 5/15 13/5<br/>13/10 15/24 16/19<br/>16/20 18/20 19/3<br/>20/12 21/9 21/13 22/8<br/>24/9 24/19 24/22 25/4<br/>28/13 29/3 29/24<br/>30/15 31/1 31/16<br/>31/16 32/7 35/6 35/12<br/>39/14 47/16 48/3<br/>48/17 48/21 49/25<br/>50/3 52/22 53/12<br/>53/20 53/24</p> <p><b>ones</b> [1] 48/16</p> <p><b>only</b> [7] 4/24 8/7<br/>10/22 25/9 33/13 49/1<br/>51/6</p> <p><b>onto</b> [8] 5/15 11/12<br/>11/13 11/14 24/23<br/>25/23 27/19 42/10</p> <p><b>Oops</b> [1] 10/4</p> <p><b>open</b> [9] 2/2 5/23 6/21<br/>11/25 33/11 34/19<br/>44/5 44/21 51/13</p> <p><b>openings</b> [1] 5/22</p> <p><b>openness</b> [1] 6/9</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>O</b></p> <p><b>opens</b> [1] 44/11</p> <p><b>operate</b> [1] 30/3</p> <p><b>operated</b> [1] 48/19</p> <p><b>operates</b> [2] 40/5 40/9</p> <p><b>operating</b> [1] 49/18</p> <p><b>operation</b> [2] 9/25 33/12</p> <p><b>opinion</b> [1] 41/23</p> <p><b>opportunity</b> [4] 12/13 12/18 54/25 55/2</p> <p><b>option</b> [1] 11/13</p> <p><b>or</b> [30] 4/24 7/10 8/18 9/18 12/3 15/19 18/6 19/20 20/22 31/3 32/20 34/23 36/24 39/6 42/17 42/17 43/23 44/2 44/18 44/19 45/2 46/18 47/12 49/25 50/17 53/1 54/8 54/20 54/21 55/8</p> <p><b>order</b> [2] 2/4 5/19</p> <p><b>Ordinances</b> [1] 55/17</p> <p><b>oriented</b> [4] 11/5 20/5 20/24 39/6</p> <p><b>other</b> [19] 6/2 6/3 9/7 12/19 22/21 29/14 30/11 31/1 31/11 32/14 42/18 42/21 43/21 46/1 47/16 47/19 50/4 50/12 54/17</p> <p><b>others</b> [2] 32/4 42/16</p> <p><b>our</b> [15] 2/2 2/4 6/4 15/9 17/13 19/22 19/22 21/21 26/3 26/3 27/19 28/10 37/3 51/24 55/9</p> <p><b>our landscape</b> [1] 51/24</p> <p><b>out</b> [12] 5/16 10/21 11/11 17/13 26/4 28/6 28/10 28/19 29/7 35/9 36/13 51/10</p> <p><b>outside</b> [1] 45/19</p> <p><b>over</b> [5] 12/17 28/18 35/22 39/1 50/10</p> <p><b>overall</b> [5] 7/8 7/10 7/15 9/22 38/23</p> <p><b>overarching</b> [1] 42/15</p> <p><b>overlooked</b> [2] 39/9 39/17</p> <p><b>overview</b> [3] 9/13 14/23 16/22</p> <p><b>own</b> [1] 18/19</p> <p><b>owned</b> [2] 48/6 48/14</p> <p><b>owner</b> [1] 5/8</p> | <p><b>page</b> [2] 24/21 54/3</p> <p><b>paragraph</b> [1] 41/21</p> <p><b>parcel</b> [7] 17/4 19/5 29/22 35/10 42/8 52/12 52/17</p> <p><b>parcels</b> [6] 16/3 16/6 17/8 19/21 38/19 52/9</p> <p><b>park</b> [3] 9/5 44/6 52/14</p> <p><b>park-like</b> [2] 9/5 44/6</p> <p><b>parking</b> [2] 27/14 43/25</p> <p><b>part</b> [11] 18/6 20/2 20/18 21/2 30/11 31/1 33/24 40/14 40/14 44/19 50/24</p> <p><b>partially</b> [2] 16/10 16/10</p> <p><b>particular</b> [8] 6/11 10/8 34/8 35/3 35/18 35/22 36/14 44/10</p> <p><b>particularly</b> [1] 41/12</p> <p><b>party</b> [1] 12/6</p> <p><b>pass</b> [1] 7/23</p> <p><b>passing</b> [1] 5/25</p> <p><b>path</b> [1] 5/22</p> <p><b>pathways</b> [1] 6/7</p> <p><b>pattern</b> [1] 18/16</p> <p><b>pay</b> [2] 33/25 50/20</p> <p><b>peak</b> [1] 10/12</p> <p><b>pedestrian</b> [4] 5/22 5/22 11/21 21/14</p> <p><b>people</b> [13] 3/24 13/11 23/20 24/11 25/10 27/22 29/1 29/7 29/15 31/11 35/22 42/21 51/14</p> <p><b>per</b> [6] 7/1 34/23 34/24 34/25 34/25 35/17</p> <p><b>perceived</b> [1] 55/4</p> <p><b>percent</b> [8] 7/4 7/11 7/13 7/16 7/16 14/10 14/12 50/14</p> <p><b>percentage</b> [1] 7/1</p> <p><b>periods</b> [1] 11/12</p> <p><b>permit</b> [1] 3/17</p> <p><b>person</b> [1] 54/15</p> <p><b>personally</b> [1] 42/14</p> <p><b>perspective</b> [3] 38/22 40/25 50/11</p> <p><b>photo</b> [1] 31/17</p> <p><b>photometric</b> [1] 31/17</p> <p><b>photometrics</b> [1] 32/10</p> <p><b>picture</b> [1] 15/23</p> <p><b>pieces</b> [1] 45/17</p> <p><b>pitched</b> [1] 44/2</p> <p><b>place</b> [2] 35/14 36/1</p> <p><b>placement</b> [2] 8/20 9/4</p> <p><b>places</b> [1] 50/12</p> <p><b>plan</b> [44] 3/18 4/15 5/1 5/11 6/24 15/1 19/19 19/22 19/23</p> | <p>20/3 20/10 20/17 20/20 20/21 21/4 21/9 21/10 21/13 21/17 21/18 21/23 22/8 22/18 27/7 32/16 37/1 37/4 37/21 38/4 38/6 38/11 39/13 39/15 41/16 41/25 42/1 43/14 45/23 53/2 53/5 53/8 54/18 55/4 55/17</p> <p><b>Plan's</b> [1] 16/1</p> <p><b>planned</b> [1] 18/6</p> <p><b>Planner</b> [2] 1/17 2/21</p> <p><b>planning</b> [8] 1/1 1/18 2/2 2/23 9/6 11/25 14/20 56/7</p> <p><b>plans</b> [3] 21/9 39/11 53/14</p> <p><b>plant</b> [1] 9/17</p> <p><b>plat</b> [1] 19/20</p> <p><b>playing</b> [1] 9/9</p> <p><b>please</b> [3] 3/1 26/16 51/19</p> <p><b>plot</b> [2] 27/9 30/23</p> <p><b>plus</b> [4] 44/18 44/18 47/10 47/10</p> <p><b>pocket</b> [1] 38/19</p> <p><b>point</b> [10] 10/14 10/14 19/7 22/21 24/21 46/2 53/20 54/5 54/14 55/7</p> <p><b>pointer</b> [1] 16/4</p> <p><b>points</b> [5] 4/2 27/5 36/6 53/1 53/15</p> <p><b>pole</b> [1] 9/19</p> <p><b>policies</b> [3] 20/10 20/11 20/21</p> <p><b>portion</b> [5] 5/16 16/17 17/5 17/24 22/5</p> <p><b>positioned</b> [1] 6/19</p> <p><b>possession</b> [1] 55/14</p> <p><b>possibility</b> [1] 21/1</p> <p><b>possible</b> [2] 22/4 31/7</p> <p><b>potential</b> [2] 12/2 42/9</p> <p><b>potentially</b> [3] 11/17 21/7 44/4</p> <p><b>practical</b> [1] 29/10</p> <p><b>preclude</b> [1] 31/23</p> <p><b>predicted</b> [1] 32/13</p> <p><b>prepare</b> [1] 22/11</p> <p><b>present</b> [12] 2/6 2/9 2/11 2/13 2/17 2/20 2/22 2/25 3/3 3/4 3/13 4/15</p> <p><b>presentation</b> [1] 15/19</p> <p><b>presented</b> [3] 19/15 42/3 55/15</p> <p><b>preserve</b> [1] 50/7</p> <p><b>preserving</b> [2] 5/11 41/2</p> <p><b>presume</b> [1] 23/17</p> <p><b>pretty</b> [2] 42/12 42/20</p> <p><b>prevent</b> [2] 5/19 34/14</p> | <p><b>previous</b> [1] 54/21</p> <p><b>previously</b> [1] 43/23</p> <p><b>price</b> [1] 36/6</p> <p><b>primarily</b> [1] 18/18</p> <p><b>principal</b> [1] 8/19</p> <p><b>pro</b> [1] 21/13</p> <p><b>probably</b> [3] 35/12 40/3 47/3</p> <p><b>proceed</b> [2] 15/18 21/5</p> <p><b>proceedings</b> [1] 23/10</p> <p><b>process</b> [1] 9/6</p> <p><b>Products</b> [1] 48/10</p> <p><b>Professional</b> [1] 56/4</p> <p><b>prohibit</b> [1] 42/9</p> <p><b>project</b> [14] 10/6 14/24 14/25 15/22 16/5 16/18 17/18 20/11 22/25 42/2 52/3 52/10 54/12 54/20</p> <p><b>properties</b> [6] 10/3 15/11 16/12 17/2 18/25 19/10</p> <p><b>property</b> [15] 15/8 17/20 18/21 19/6 26/23 26/23 27/4 27/19 29/22 29/23 35/10 42/10 42/10 45/17 54/11</p> <p><b>property's</b> [1] 26/19</p> <p><b>proposal</b> [16] 12/17 12/20 14/25 15/7 15/21 15/25 16/2 18/20 19/14 19/18 21/22 22/6 28/25 41/23 42/3 42/4</p> <p><b>proposals</b> [3] 18/12 22/4 43/23</p> <p><b>propose</b> [1] 11/25</p> <p><b>proposed</b> [16] 4/25 5/14 7/12 9/25 10/1 10/13 11/2 16/9 16/20 17/17 22/16 22/25 34/21 39/15 40/22 50/18</p> <p><b>proposing</b> [3] 16/17 32/20 44/4</p> <p><b>prospectus</b> [1] 11/25</p> <p><b>protected</b> [1] 52/12</p> <p><b>protecting</b> [1] 41/3</p> <p><b>provide</b> [5] 4/24 5/1 5/21 5/24 6/20</p> <p><b>provided</b> [4] 8/16 14/23 41/16 46/14</p> <p><b>provides</b> [3] 5/22 6/6 50/10</p> <p><b>providing</b> [3] 5/9 38/19 54/6</p> <p><b>public</b> [14] 1/1 1/8 3/16 12/22 42/2 51/13 51/17 55/9 55/13 55/14 55/18 55/20 56/8 56/10</p> <p><b>published</b> [1] 31/3</p> <p><b>pull</b> [3] 28/18 28/22</p> | <p>28/22</p> <p><b>pulled</b> [2] 17/13 3</p> <p><b>pump</b> [3] 5/3 5/4 14/2</p> <p><b>pumps</b> [12] 3/19 6/8 13/12 14/6 14/8 27/14 44/25 45/1 45/5 45/25 46/2 50/15</p> <p><b>purpose</b> [3] 18/3 18/8 53/5</p> <p><b>purposes</b> [1] 42/5</p> <p><b>put</b> [3] 36/9 43/11 52/11</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><b>Q</b></p> <p><b>quality</b> [3] 5/9 7/18 7/20</p> <p><b>question</b> [12] 13/5 13/7 16/25 34/17 34/22 35/16 36/10 37/7 37/13 39/8 47/16 49/4</p> <p><b>questioned</b> [1] 22/6</p> <p><b>questions</b> [12] 9/9 12/22 13/1 15/18 20/14 23/4 23/12 23/14 31/15 39/18 52/5 55/8</p> <p><b>queue</b> [1] 46/21</p> <p><b>quick</b> [3] 39/8 51/19 53/20</p> <p><b>quite</b> [2] 25/12 28/6</p> |
| <p><b>P</b></p> <p><b>p.m</b> [3] 1/5 33/12 55/20</p> <p><b>package</b> [1] 39/19</p> <p><b>packet</b> [1] 39/20</p> <p><b>packets</b> [1] 9/10</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><b>R</b></p> <p><b>raised</b> [2] 23/23 51/12</p> <p><b>rate</b> [1] 50/25</p> <p><b>rather</b> [3] 15/7 44/20 50/6</p> <p><b>reached</b> [1] 42/14</p> <p><b>read</b> [2] 41/22 43/15</p> <p><b>reads</b> [1] 37/22</p> <p><b>ready</b> [1] 23/13</p> <p><b>realigned</b> [1] 5/18</p> <p><b>reality</b> [1] 54/12</p> <p><b>really</b> [15] 12/18 12/19 23/2 25/17 25/20 25/23 26/1 27/6 27/23 28/8 33/12 36/7 41/22 43/22 51/16</p> <p><b>reasons</b> [1] 30/15</p> <p><b>rebuttals</b> [1] 53/1</p> <p><b>receive</b> [1] 23/2</p> <p><b>recent</b> [1] 48/16</p> <p><b>recognizes</b> [1] 6/21</p> <p><b>recommend</b> [2] 11/21 20/22</p> <p><b>recommendation</b> [1] 12/14</p> <p><b>recommendations</b> [1] 22/24</p> <p><b>recommended</b> [1] 11/17</p> <p><b>record</b> [2] 26/22 55/13</p> <p><b>recorded</b> [1] 51/18</p> <p><b>Recording</b> [2] 1/18 2/24</p> <p><b>red</b> [2] 16/5 28/4</p> | <p><b>6.1.r</b></p>                                                                                                                                                                                                                                                                                                                                                                               |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>R</b></p> <p>redevelop [1] 54/15<br/> redeveloped [1] 7/9<br/> redevelopment [7] 4/15 5/10 7/9 9/25 11/24 12/9 42/9<br/> redevelops [1] 20/4<br/> reduce [2] 5/14 7/25<br/> reduced [2] 10/25 56/9<br/> reducing [2] 8/5 25/21<br/> reference [2] 47/20 53/15<br/> refine [1] 34/8<br/> reflecting [1] 55/14<br/> regard [1] 23/6<br/> regarding [2] 23/4 55/18<br/> regards [1] 18/14<br/> Registered [1] 56/4<br/> regular [1] 52/11<br/> related [1] 41/16<br/> relates [1] 15/25<br/> relation [1] 34/21<br/> relatively [1] 21/20<br/> rely [1] 28/2<br/> remain [4] 18/23 20/5 20/24 40/11<br/> remains [1] 17/20<br/> remnant [2] 19/5 42/8<br/> replaced [1] 5/6<br/> replacing [1] 54/8<br/> report [7] 18/16 20/8 20/16 22/22 22/22 41/21 55/15<br/> reported [1] 56/7<br/> reporter [6] 4/4 51/23 56/5 56/5 56/6 56/7<br/> Reporting [1] 1/22<br/> representing [1] 4/11<br/> represents [1] 7/3<br/> request [4] 16/21 18/3 18/19 19/20<br/> requested [1] 15/5<br/> require [1] 11/23<br/> required [1] 8/15<br/> requirements [1] 8/25<br/> residences [2] 22/2 42/8<br/> residential [27] 3/23 8/3 8/23 9/2 16/9 17/9 17/11 17/25 18/8 18/23 19/5 19/25 20/7 21/15 21/25 22/3 22/9 22/18 27/8 30/10 36/2 38/25 39/2 45/11 45/13 52/9 53/14<br/> residentials [1] 18/25<br/> residents [6] 5/12 23/17 29/14 30/4 40/24 53/25<br/> respects [1] 22/8<br/> respond [2] 12/8 20/14</p> | <p>responded [1] 3/12<br/> restaurant [1] 44/19<br/> restaurants [1] 37/24<br/> restricted [1] 40/10<br/> resulted [1] 17/18<br/> results [2] 31/4 31/5<br/> retail [4] 4/20 18/4 22/1 37/23<br/> retaining [2] 9/17 32/25<br/> return [1] 54/16<br/> review [4] 20/19 21/6 21/10 22/11<br/> reviewed [1] 12/5<br/> revitalized [2] 54/13 54/13<br/> revitalizing [1] 6/22<br/> rezone [2] 16/17 19/10<br/> rezoned [1] 19/12<br/> rezoning [15] 3/17 15/24 16/25 17/19 18/3 18/11 18/14 18/17 18/19 18/23 19/4 19/8 19/11 19/17 21/3<br/> Richards [2] 24/7 24/16<br/> ride [2] 5/16 10/21<br/> ride-out [2] 5/16 10/21<br/> right [31] 2/1 3/5 4/5 6/2 10/18 11/13 12/2 13/1 13/8 17/6 17/11 18/22 24/22 25/22 25/24 25/25 25/25 26/19 27/1 27/18 32/9 32/12 33/6 35/3 35/4 35/7 40/19 40/21 41/7 46/12 48/5<br/> right-of-way [2] 6/2 12/2<br/> ROAD [2] 1/3 29/8<br/> roof [1] 44/2<br/> room [3] 6/7 6/8 52/17<br/> rough [1] 28/14<br/> route [2] 10/10 35/13<br/> Rovak [3] 1/15 2/10 3/10<br/> RPR [3] 1/23 56/13 56/14<br/> run [8] 3/19 5/1 14/4 28/6 48/14 48/18 49/23 50/5</p> <p><b>S</b></p> <p>safe [1] 6/6<br/> safety [1] 9/21<br/> said [2] 24/21 24/22<br/> same [14] 8/12 13/21 14/7 14/15 16/11 26/1 34/10 38/1 42/14 43/9 48/24 49/1 54/1 54/2<br/> sample [1] 7/23<br/> saving [1] 21/17<br/> saw [4] 31/1 31/4</p> | <p>31/4 51/11<br/> say [6] 18/14 39/13 39/16 43/10 50/1 51/16<br/> says [1] 29/25<br/> scale [30] 8/1 8/2 8/3 8/5 8/11 9/2 9/3 15/16 18/6 18/7 19/14 21/16 21/22 22/7 37/24 42/4 42/6 42/7 44/10 44/24 45/14 45/15 45/19 45/25 46/25 47/2 52/5 52/7 52/8 52/10<br/> scale of [1] 52/7<br/> School [2] 17/17 17/22<br/> Schuh [3] 1/16 2/14 3/13<br/> Schulte [15] 4/17 5/18 10/17 10/24 11/1 11/13 11/20 12/1 12/3 25/8 25/23 28/3 28/5 29/2 29/7<br/> scope [1] 44/24<br/> Scotsman [2] 44/11 44/11<br/> Scotsman's [1] 39/3<br/> second [6] 3/9 3/10 10/21 24/9 25/6 28/16<br/> Secondly [1] 27/10<br/> Secretary [2] 1/18 2/24<br/> sections [1] 15/10<br/> security [2] 9/21 33/13<br/> see [21] 6/13 16/3 16/8 17/2 26/19 30/11 30/13 30/18 31/1 31/3 31/6 31/18 33/4 36/16 38/1 39/10 40/5 41/17 42/21 47/4 55/3<br/> seeing [1] 34/15<br/> seek [1] 12/13<br/> seem [1] 22/17<br/> seems [3] 21/15 22/18 25/4<br/> seen [4] 7/2 32/1 32/4 46/16<br/> segments [1] 20/9<br/> selection [2] 9/3 31/21<br/> sense [3] 8/22 54/16 54/16<br/> separate [2] 6/14 10/18<br/> separately [1] 23/9<br/> separates [1] 6/10<br/> serves [1] 36/1<br/> service [9] 4/23 20/24 22/1 38/12 38/13 39/5 46/14 47/14 50/24<br/> service-type [1] 20/24<br/> services [4] 1/22 18/5 37/24 38/16<br/> serving [1] 36/7</p> | <p>set [2] 13/6 28/13<br/> setting [2] 9/5 44/6<br/> seven [6] 16/3 16/5 16/6 45/17 46/17 47/9<br/> seventeen [5] 46/7 46/15 46/16 47/10 50/18<br/> several [7] 4/12 4/13 8/16 9/7 20/19 43/24 48/20<br/> shall [1] 20/4<br/> share [1] 6/12<br/> She's [1] 2/7<br/> Shell [1] 35/7<br/> shooting [1] 27/18<br/> shopping [1] 18/5<br/> short [1] 53/10<br/> Shorthand [1] 56/6<br/> should [3] 6/17 7/15 37/13<br/> showed [1] 32/15<br/> shown [1] 27/3<br/> shows [1] 6/25<br/> shutting [1] 30/5<br/> side [9] 8/12 17/12 21/13 25/8 39/23 39/23 46/14 49/10 49/12<br/> sign [1] 25/9<br/> signal [3] 10/17 11/15 11/18<br/> significant [3] 30/18 41/24 43/22<br/> significantly [1] 36/1<br/> Silverman [2] 1/15 2/12<br/> similar [6] 9/5 14/1 14/2 14/4 30/13 49/15<br/> simply [1] 50/9<br/> since [1] 26/22<br/> single [3] 3/22 17/25 18/17<br/> sir [1] 36/11<br/> sit [1] 44/19<br/> sit-down [1] 44/19<br/> site [48] 3/17 5/14 5/17 5/23 6/6 6/6 6/18 7/1 7/2 7/4 7/4 7/10 7/14 8/17 8/19 8/21 10/13 11/4 11/10 11/11 11/11 12/9 13/14 13/16 19/19 21/18 31/20 31/24 33/3 33/16 34/21 36/14 38/9 38/15 38/22 38/23 39/11 39/15 40/4 40/22 43/23 44/3 52/5 52/8 53/2 53/5 54/7 54/20<br/> sites [2] 4/19 32/1<br/> sits [3] 17/3 27/1 32/24<br/> sitting [2] 51/10 53/13<br/> situated [1] 30/14<br/> situation [2] 28/11</p> | <p>49/1<br/> situations [1] 30/48/22 52/11<br/> slide [1] 40/1<br/> slightly [1] 5/18<br/> small [12] 6/1 7/23 18/6 19/24 27/8 31/16 33/3 35/10 37/24 42/6 45/14 45/19<br/> small-scale [4] 37/24 42/6 45/14 45/19<br/> smaller [5] 14/16 22/1 38/15 48/25 54/7<br/> so [96]<br/> sold [1] 4/20<br/> some [40] 4/12 6/6 8/14 8/17 11/15 11/15 11/18 12/19 12/23 16/24 17/9 17/10 18/10 18/11 18/17 18/18 19/13 21/17 22/12 22/17 22/24 23/8 25/5 27/22 30/12 30/16 32/5 32/18 32/18 38/21 39/2 41/3 42/16 43/20 44/20 50/7 52/25 53/10 54/14 54/14<br/> something [13] 14/2 14/3 25/17 30/8 31/3 37/14 37/16 37/19 39/22 43/11 44/2 51/16 54/15<br/> sometime [1] 39/17<br/> sometimes [1] 28/7<br/> soon [1] 29/5<br/> sorry [4] 6/16 13/3 18/21 33/23<br/> sort [5] 13/13 24/13 36/25 37/13 38/5<br/> sound [5] 9/17 23/1 30/7 31/5 34/8<br/> south [2] 17/12 27/12<br/> space [15] 5/24 6/21 7/16 7/17 11/25 13/17 20/1 38/11 44/5 44/20 47/7 52/16 53/2 53/6 54/6<br/> spaces [2] 6/20 38/20<br/> spacing [1] 14/2<br/> speak [5] 3/24 29/15 45/24 51/18 52/22<br/> speaker [3] 23/19 26/14 51/22<br/> speakers [2] 4/3 31/13<br/> speaking [1] 47/24<br/> specific [5] 14/24 19/18 20/2 20/14 34/17<br/> spent [3] 9/11 33/10 38/5<br/> spillage [1] 31/23<br/> spirit [1] 27/7<br/> split [2] 7/24 16/14</p> | <p>6.1.r</p> <p>Attachment: 12-5-2016 Public Hearing Transcripts (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>S</b></p> <p><b>spots [1]</b> 47/11</p> <p><b>square [2]</b> 14/13 34/24</p> <p><b>SS [1]</b> 56/1</p> <p><b>St [2]</b> 1/24 56/2</p> <p><b>St. [3]</b> 12/6 15/13 16/14</p> <p><b>St. Louis [3]</b> 12/6 15/13 16/14</p> <p><b>stab [1]</b> 35/2</p> <p><b>stacked [1]</b> 43/24</p> <p><b>stacking [2]</b> 10/19 46/17</p> <p><b>staff [9]</b> 12/15 18/15 20/8 20/16 22/21 23/1 34/18 34/22 41/21</p> <p><b>staff's [5]</b> 15/20 18/15 41/23 42/13 55/15</p> <p><b>stalls [3]</b> 49/7 51/7 51/10</p> <p><b>stand [2]</b> 13/22 17/7</p> <p><b>standalone [1]</b> 49/15</p> <p><b>standards [1]</b> 31/22</p> <p><b>standing [2]</b> 18/19 31/24</p> <p><b>standpoint [2]</b> 15/23 29/10</p> <p><b>start [9]</b> 2/4 3/6 4/7 24/6 26/15 29/18 34/12 39/2 51/25</p> <p><b>starting [1]</b> 28/18</p> <p><b>state [6]</b> 5/6 5/13 10/10 10/10 35/13 56/1</p> <p><b>state-maintained [1]</b> 10/10</p> <p><b>stated [2]</b> 30/6 42/5</p> <p><b>statement [1]</b> 42/13</p> <p><b>states [1]</b> 21/24</p> <p><b>station [20]</b> 4/16 4/18 17/3 25/7 29/7 30/6 30/14 30/16 33/25 35/4 40/16 40/17 45/17 47/4 47/18 47/19 49/23 50/17 52/11 53/6</p> <p><b>station of [1]</b> 49/23</p> <p><b>stations [8]</b> 8/18 34/20 34/25 38/18 46/7 46/16 49/12 53/11</p> <p><b>statistics [1]</b> 35/3</p> <p><b>stays [1]</b> 41/1</p> <p><b>stenographically [1]</b> 56/8</p> <p><b>step [1]</b> 43/3</p> <p><b>still [7]</b> 19/5 26/3 35/25 51/12 52/11 54/17 55/3</p> <p><b>stone [1]</b> 34/9</p> <p><b>stop [1]</b> 23/11</p> <p><b>stopped [2]</b> 28/3 29/6</p> <p><b>stops [1]</b> 28/25</p> <p><b>store [14]</b> 3/19 4/16 4/23 7/7 8/13 9/1</p> | <p>13/19 13/21 14/1 14/14 14/15 45/18 48/23 48/25</p> <p><b>stores [2]</b> 35/12 48/14</p> <p><b>straight [4]</b> 24/20 24/25 25/2 25/2</p> <p><b>strategy [1]</b> 21/4</p> <p><b>street [2]</b> 6/2 26/4</p> <p><b>streetscape [3]</b> 5/21 6/3 38/20</p> <p><b>strip [1]</b> 25/10</p> <p><b>strong [1]</b> 35/25</p> <p><b>struck [1]</b> 41/22</p> <p><b>structures [2]</b> 39/4 54/22</p> <p><b>studies [1]</b> 29/9</p> <p><b>study [15]</b> 9/24 10/5 10/13 10/14 12/5 22/20 23/1 27/20 27/21 31/2 31/5 31/6 31/17 36/12 36/16</p> <p><b>Stutte [2]</b> 1/18 2/24</p> <p><b>style [1]</b> 36/6</p> <p><b>styles [1]</b> 8/24</p> <p><b>subdivision [1]</b> 19/20</p> <p><b>subject [3]</b> 17/16 18/23 21/6</p> <p><b>submittal [1]</b> 22/16</p> <p><b>submitted [1]</b> 16/23</p> <p><b>substantial [2]</b> 19/25 23/16</p> <p><b>substantially [1]</b> 42/2</p> <p><b>successful [1]</b> 50/2</p> <p><b>such [3]</b> 6/3 33/2 54/11</p> <p><b>suggesting [1]</b> 37/9</p> <p><b>suggests [1]</b> 20/4</p> <p><b>summarize [1]</b> 20/13</p> <p><b>superimposed [1]</b> 39/15</p> <p><b>support [1]</b> 46/24</p> <p><b>supposed [1]</b> 21/24</p> <p><b>sure [6]</b> 24/17 25/6 25/12 35/8 51/2 54/2</p> <p><b>surrounded [1]</b> 53/14</p> <p><b>surrounding [3]</b> 22/2 30/10 30/21</p> <p><b>swearing [1]</b> 51/19</p> <p><b>sworn [9]</b> 3/25 4/3 23/21 23/22 24/2 24/4 29/16 51/15 51/22</p> <p><b>system [1]</b> 51/6</p> <hr/> <p><b>T</b></p> <p><b>take [4]</b> 35/2 41/14 54/14 55/8</p> <p><b>taken [2]</b> 30/9 53/10</p> <p><b>taking [2]</b> 30/1 47/7</p> <p><b>talk [2]</b> 23/24 36/20</p> <p><b>talked [1]</b> 32/15</p> <p><b>talking [7]</b> 6/15 24/14 30/2 43/4 44/24 47/8 53/13</p> <p><b>tall [1]</b> 34/6</p> <p><b>team [2]</b> 4/13 12/16</p> <p><b>tell [1]</b> 43/16</p> | <p><b>Temple [1]</b> 17/16</p> <p><b>ten [7]</b> 12/10 14/9 44/24 45/1 45/2 45/2 45/2</p> <p><b>tenant [3]</b> 12/12 43/24 54/9</p> <p><b>terminology [1]</b> 32/21</p> <p><b>terms [12]</b> 14/24 15/4 15/23 16/22 16/25 17/24 18/3 22/10 25/5 25/18 31/21 47/8</p> <p><b>test [1]</b> 49/23</p> <p><b>than [12]</b> 6/15 14/16 36/15 38/23 40/24 40/24 47/12 48/25 50/6 50/11 50/12 50/18</p> <p><b>thank [22]</b> 4/5 12/23 12/25 14/17 16/7 26/9 26/11 26/12 29/12 29/13 31/9 31/10 33/21 34/5 41/7 50/13 52/20 53/17 53/18 53/19 54/4 55/6</p> <p><b>thankful [1]</b> 12/13</p> <p><b>that [240]</b></p> <p><b>that'll [1]</b> 4/1</p> <p><b>that's [53]</b> 7/8 14/3 14/3 16/21 17/1 19/13 25/4 26/12 27/24 28/10 28/22 29/3 30/8 32/7 33/5 33/25 34/10 35/6 35/6 35/15 35/25 36/8 36/8 37/11 38/12 39/5 39/5 39/17 39/20 40/10 40/10 40/17 41/11 42/12 42/20 44/7 44/13 46/9 46/14 46/20 46/21 47/4 47/11 47/18 48/21 48/25 48/25 50/12 50/12 51/6 51/10 52/6 52/19</p> <p><b>That's what [1]</b> 33/5</p> <p><b>the exit [1]</b> 46/14</p> <p><b>the stalls [1]</b> 51/7</p> <p><b>the way [1]</b> 30/4</p> <p><b>their [4]</b> 4/20 10/14 16/12 51/12</p> <p><b>them [7]</b> 6/11 8/17 17/10 25/12 46/18 53/12 54/1</p> <p><b>themselves [3]</b> 32/10 51/5 52/10</p> <p><b>then [28]</b> 4/19 7/12 11/13 15/17 16/10 17/5 17/21 18/24 21/9 23/8 24/5 28/4 28/15 28/23 29/2 29/3 32/19 33/10 33/18 34/22 40/13 40/15 40/22 41/3 42/18 46/12 46/17 51/8</p> <p><b>there [38]</b> 4/24 7/3 10/4 11/1 11/4 11/15 17/9 18/10 23/11</p> | <p>23/20 27/16 27/20 28/13 30/1 31/14 31/21 33/3 33/25 34/14 36/8 39/3 39/3 39/14 41/21 42/1 42/23 46/1 47/5 47/9 47/18 49/8 50/17 50/21 50/21 54/8 54/22 55/3 55/7</p> <p><b>there's [32]</b> 6/13 9/11 12/23 22/24 23/11 23/16 25/24 27/13 27/13 28/4 29/5 29/6 34/1 34/23 34/24 35/2 35/6 35/7 36/25 40/9 42/18 44/10 45/16 47/11 50/8 50/14 50/22 52/4 52/12 52/12 52/13 52/14</p> <p><b>these [25]</b> 7/22 7/24 8/10 8/18 9/8 9/9 15/10 15/15 16/9 16/12 17/2 17/6 18/11 18/17 24/22 28/14 29/9 33/7 39/18 40/13 41/12 44/6 46/10 46/13 54/7</p> <p><b>these are [1]</b> 46/13</p> <p><b>they [26]</b> 3/24 6/19 8/8 8/18 17/10 24/25 25/11 25/20 26/4 28/9 30/4 31/8 31/9 35/15 39/4 47/19 48/9 48/9 48/9 48/13 48/21 49/8 49/11 49/15 49/18 49/25</p> <p><b>they'll [1]</b> 44/1</p> <p><b>they're [14]</b> 16/14 24/13 26/1 27/17 27/18 28/8 30/15 32/3 35/20 36/5 46/18 48/6 50/20 52/11</p> <p><b>they've [2]</b> 48/19 53/11</p> <p><b>thing [16]</b> 13/13 19/3 25/14 29/24 31/1 32/14 33/18 34/9 35/21 36/24 38/1 40/9 43/15 44/14 50/19 51/6</p> <p><b>things [20]</b> 18/19 24/22 30/20 30/21 32/7 33/14 34/14 34/16 36/7 38/9 39/1 39/4 42/18 43/1 43/22 43/25 46/5 53/13 53/16 55/5</p> <p><b>think [54]</b> 3/24 9/9 12/10 13/11 14/23 16/4 19/9 19/13 21/18 22/21 23/11 23/15 23/17 23/19 27/5 27/10 29/24 30/8 30/15 30/25 31/14 36/24 36/24 38/5 39/20 39/22 41/11</p> | <p>41/11 42/13 42/21 42/25 43/2 43/2 43/13 43/7 43/8 43/10 43/13 43/17 43/20 43/20 45/16 47/6 47/8 50/16 50/21 51/11 52/5 53/15 54/5 54/7 54/10 54/12 55/7</p> <p><b>thinking [2]</b> 38/10 46/24</p> <p><b>third [4]</b> 12/6 25/14 25/16 52/13</p> <p><b>thirty [1]</b> 48/13</p> <p><b>thirty-two [1]</b> 48/13</p> <p><b>this [156]</b></p> <p><b>those [42]</b> 1/12 7/5 10/7 10/15 11/9 11/12 19/1 20/11 20/12 20/15 20/22 21/11 21/20 22/14 22/25 23/4 23/12 27/12 29/10 30/7 30/22 31/6 31/19 33/14 33/14 34/15 34/25 34/25 36/6 38/9 38/13 38/16 38/16 38/19 43/21 43/21 50/24 51/5 51/10 52/8 52/16 53/15</p> <p><b>though [1]</b> 43/10</p> <p><b>thought [6]</b> 15/3 15/14 15/21 25/20 37/12 43/16</p> <p><b>three [5]</b> 17/8 24/11 26/8 27/16 40/14</p> <p><b>threshold [3]</b> 37/13 37/16 42/20</p> <p><b>throat [1]</b> 10/19</p> <p><b>through [11]</b> 9/3 9/8 15/18 17/25 24/20 25/3 25/15 35/13 38/8 38/8 41/6</p> <p><b>tie [1]</b> 39/2</p> <p><b>Tim [1]</b> 1/13</p> <p><b>time [18]</b> 2/15 9/12 12/24 22/12 23/3 23/5 23/12 23/18 25/18 25/21 26/1 27/23 33/11 38/5 44/23 47/15 52/22 53/10</p> <p><b>times [2]</b> 11/20 44/25</p> <p><b>times four [1]</b> 44/25</p> <p><b>timing [1]</b> 11/15</p> <p><b>today [4]</b> 4/24 17/7 30/1 54/23</p> <p><b>together [3]</b> 36/9 43/11 43/25</p> <p><b>toggle [1]</b> 40/3</p> <p><b>tonight [6]</b> 3/25 4/11 4/14 10/6 41/18 53/8</p> <p><b>too [6]</b> 24/9 25/4 37/20 41/16 43/3 46/16</p> <p><b>top [2]</b> 25/16 33/1</p> <p><b>topography [2]</b> 10/1 41/4</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>T</b></p> <p><b>total</b> [2] 13/18 44/21</p> <p><b>touch</b> [2] 20/16 22/13</p> <p><b>touched</b> [3] 16/23<br/>18/15 52/14</p> <p><b>touches</b> [2] 19/16<br/>20/17</p> <p><b>towards</b> [1] 27/12</p> <p><b>townhomes</b> [1] 37/25</p> <p><b>tract</b> [1] 13/18</p> <p><b>tradition</b> [1] 24/11</p> <p><b>traffic</b> [29] 5/4 5/25<br/>10/5 11/4 11/6 11/6<br/>11/8 11/10 11/17<br/>22/20 22/23 24/18<br/>25/7 25/19 26/7 27/11<br/>28/3 28/25 29/5 29/11<br/>30/7 30/17 31/4 36/13<br/>36/15 36/20 36/24<br/>37/6 45/11</p> <p><b>traffic and</b> [1] 37/6</p> <p><b>training</b> [1] 26/3</p> <p><b>transcript</b> [1] 56/10</p> <p><b>traveled</b> [1] 35/12</p> <p><b>traveling</b> [1] 28/17</p> <p><b>traversing</b> [1] 33/18</p> <p><b>trees</b> [5] 6/2 21/17<br/>41/2 52/16 52/16</p> <p><b>trellis</b> [1] 39/1</p> <p><b>tripled</b> [1] 47/3</p> <p><b>trips</b> [2] 11/7 11/9</p> <p><b>true</b> [4] 16/11 24/23<br/>44/2 56/9</p> <p><b>try</b> [3] 20/13 25/2<br/>28/23</p> <p><b>trying</b> [10] 9/12 28/1<br/>28/7 28/19 36/12 38/3<br/>43/11 44/15 44/18<br/>50/7</p> <p><b>Tunnel</b> [1] 5/6</p> <p><b>turn</b> [12] 5/19 10/18<br/>11/18 11/20 11/20<br/>24/22 25/3 25/24<br/>25/25 28/1 28/15<br/>28/16</p> <p><b>turning</b> [5] 25/3 25/22<br/>25/25 26/1 27/18</p> <p><b>turns</b> [3] 10/25 11/1<br/>11/9</p> <p><b>tweaks</b> [1] 55/3</p> <p><b>twelve</b> [1] 50/21</p> <p><b>twenty</b> [7] 44/25 45/4<br/>45/5 45/6 46/17 47/9<br/>47/11</p> <p><b>twenty-seven</b> [2]<br/>46/17 47/9</p> <p><b>two</b> [10] 8/15 8/19<br/>10/16 15/24 18/19<br/>23/4 34/4 48/13 50/2<br/>50/2</p> <p><b>type</b> [9] 6/10 12/12<br/>20/24 30/22 35/21<br/>36/4 36/6 40/8 51/6</p> <p><b>types</b> [1] 33/14</p> <p><b>typewriting</b> [1] 56/9</p> <p><b>typically</b> [3] 6/10 28/4</p> | <p>35/1</p> <p><b>U</b></p> <p><b>Uh</b> [12] 14/18 32/17<br/>32/23 33/22 34/3<br/>39/12 40/7 41/8 45/9<br/>46/4 48/2 49/5</p> <p><b>Uh-huh</b> [12] 14/18<br/>32/17 32/23 33/22<br/>34/3 39/12 40/7 41/8<br/>45/9 46/4 48/2 49/5</p> <p><b>umbrella</b> [1] 50/3</p> <p><b>under</b> [3] 20/18 21/10<br/>50/3</p> <p><b>underside</b> [2] 33/4<br/>34/15</p> <p><b>understand</b> [4] 12/22<br/>15/4 18/16 44/15</p> <p><b>unfortunately</b> [1]<br/>16/4</p> <p><b>unincorporated</b> [3]<br/>15/10 15/12 16/11</p> <p><b>unique</b> [1] 42/2</p> <p><b>units</b> [1] 50/3</p> <p><b>unknown</b> [1] 19/7</p> <p><b>up</b> [24] 2/2 7/5 7/23<br/>13/6 16/24 21/11<br/>23/23 27/17 28/13<br/>29/23 34/11 36/3<br/>36/21 38/20 41/1<br/>43/24 44/11 47/7 49/6<br/>50/25 51/17 51/18<br/>52/21 53/4</p> <p><b>upcoming</b> [1] 38/3</p> <p><b>upon</b> [5] 16/18 22/12<br/>23/9 29/25 30/16</p> <p><b>us</b> [8] 3/4 12/18 27/10<br/>36/25 38/21 41/14<br/>51/19 53/8</p> <p><b>use</b> [18] 3/17 6/10<br/>9/14 9/22 11/5 17/10<br/>17/17 18/7 19/19<br/>22/15 35/20 35/24<br/>44/20 50/20 50/25<br/>53/7 53/16 54/19</p> <p><b>used</b> [3] 7/19 7/25<br/>34/10</p> <p><b>user</b> [1] 44/18</p> <p><b>uses</b> [9] 6/22 12/11<br/>16/9 18/8 22/7 43/21<br/>44/6 54/7 54/8</p> <p><b>usually</b> [1] 31/18</p> <p><b>utilize</b> [2] 8/12 11/14</p> <p><b>utilizing</b> [1] 47/14</p> <p><b>V</b></p> <p><b>vacuum</b> [7] 8/18 8/18<br/>46/7 46/13 49/7 49/11<br/>50/17</p> <p><b>vacuuming</b> [1] 47/10</p> <p><b>vacuums</b> [6] 27/15<br/>30/22 51/5 51/5 51/7<br/>52/7</p> <p><b>values</b> [1] 54/11</p> <p><b>various</b> [4] 4/2 12/11<br/>15/15 39/11</p> <p><b>vast</b> [1] 30/1</p> | <p><b>vegetated</b> [1] 40/11</p> <p><b>vegetation</b> [1] 9/15</p> <p><b>vehicular</b> [1] 6/7</p> <p><b>version</b> [1] 17/15</p> <p><b>versus</b> [2] 7/10 7/14</p> <p><b>vertically</b> [1] 8/11</p> <p><b>very</b> [14] 9/23 12/15<br/>14/1 14/2 26/4 26/4<br/>26/9 27/5 29/12 31/10<br/>32/5 32/5 34/9 43/17</p> <p><b>video</b> [3] 6/4 6/15<br/>32/15</p> <p><b>views</b> [1] 5/25</p> <p><b>vision</b> [1] 37/22</p> <p><b>visitation</b> [1] 30/19</p> <p><b>visits</b> [1] 30/13</p> <p><b>visual</b> [4] 6/19 8/1 8/5<br/>8/7</p> <p><b>visually</b> [1] 8/19</p> <p><b>volumes</b> [1] 10/11</p> <p><b>Voss</b> [2] 29/20 52/23</p> <p><b>Voss'</b> [1] 54/5</p> <p><b>voted</b> [1] 23/8</p> <p><b>W</b></p> <p><b>Waiting</b> [1] 46/22</p> <p><b>Walgreens</b> [1] 25/15</p> <p><b>walkability</b> [1] 20/23</p> <p><b>walkable</b> [1] 37/23</p> <p><b>wall</b> [8] 6/1 9/17 9/17<br/>32/20 32/25 33/2 34/8<br/>41/4</p> <p><b>Wallis</b> [7] 4/11 4/13<br/>4/19 4/21 48/3 48/4<br/>50/3</p> <p><b>want</b> [19] 3/24 10/7<br/>20/16 24/24 25/1<br/>29/24 36/20 36/23<br/>37/5 37/14 37/17<br/>41/12 41/22 41/22<br/>43/10 43/16 51/14<br/>53/4 54/2</p> <p><b>wanted</b> [2] 24/17 52/4</p> <p><b>wants</b> [1] 51/18</p> <p><b>was</b> [24] 4/18 6/18<br/>7/6 9/24 10/5 17/13<br/>17/16 17/19 24/4<br/>25/14 25/16 27/5<br/>27/20 29/17 34/6<br/>37/12 39/16 41/21<br/>43/11 43/17 43/17<br/>48/3 51/22 55/20</p> <p><b>wash</b> [29] 3/20 4/16<br/>5/5 5/6 6/14 7/7 8/12<br/>10/23 13/22 13/24<br/>13/25 27/17 30/22<br/>33/11 35/23 40/18<br/>45/18 46/6 46/16<br/>46/20 47/10 49/10<br/>49/15 50/4 50/6 50/10<br/>50/11 50/25 54/8</p> <p><b>washes</b> [1] 35/17</p> <p><b>way</b> [13] 5/23 6/2<br/>12/2 23/21 30/4 33/19<br/>41/1 41/2 43/9 43/15<br/>45/10 45/16 53/4</p> <p><b>we</b> [121]</p> | <p><b>we'll</b> [2] 3/14 10/14</p> <p><b>we're</b> [26] 2/1 3/6<br/>4/14 7/13 20/14 21/5<br/>30/1 30/2 32/19 34/13<br/>35/5 38/3 41/2 41/3<br/>42/25 43/2 43/4 43/14<br/>44/4 46/24 47/8 51/12<br/>51/17 53/13 53/16<br/>54/2</p> <p><b>we've</b> [6] 12/20 20/9<br/>32/1 34/9 37/21 42/24</p> <p><b>website</b> [2] 17/14<br/>31/8</p> <p><b>welcoming</b> [1] 8/22</p> <p><b>well</b> [23] 9/17 12/17<br/>15/9 15/12 17/16<br/>19/20 20/9 21/3 21/19<br/>22/17 23/1 27/5 32/25<br/>33/20 33/24 35/1<br/>35/19 37/9 38/10 40/2<br/>41/4 43/12 46/13</p> <p><b>were</b> [14] 4/3 19/4<br/>21/5 23/20 23/21<br/>23/22 24/18 25/20<br/>27/22 29/16 30/12<br/>31/6 31/8 31/9</p> <p><b>weren't</b> [1] 30/21</p> <p><b>west</b> [10] 11/22 17/8<br/>17/21 27/4 28/2 28/5<br/>33/18 35/7 40/20<br/>42/11</p> <p><b>western</b> [1] 5/16</p> <p><b>what</b> [38] 7/6 9/2 9/9<br/>13/3 14/10 15/20<br/>15/20 19/8 19/10<br/>19/10 19/11 25/5<br/>27/24 29/25 29/25<br/>30/2 30/18 31/5 31/18<br/>32/14 33/1 33/5 35/19<br/>36/13 41/12 41/13<br/>41/14 42/21 44/4<br/>44/15 46/24 47/3 47/4<br/>47/23 53/8 53/8 55/1<br/>55/1</p> <p><b>what's</b> [3] 15/5 19/6<br/>39/8</p> <p><b>whatever</b> [2] 44/19<br/>46/18</p> <p><b>when</b> [16] 4/1 4/20<br/>19/8 19/10 25/11<br/>27/21 28/1 28/3 28/25<br/>30/9 41/12 43/20<br/>45/14 45/16 45/24<br/>53/16</p> <p><b>whenever</b> [1] 26/4</p> <p><b>where</b> [19] 17/3 19/13<br/>21/4 21/12 27/15<br/>28/12 30/3 30/11<br/>34/20 35/4 35/15<br/>35/21 36/5 38/2 39/4<br/>39/14 40/5 41/18 51/7</p> <p><b>wherewithal</b> [1]<br/>54/14</p> <p><b>whether</b> [6] 22/6<br/>25/17 34/23 34/24<br/>42/17 54/20</p> | <p><b>which</b> [31] 7/2 7/22<br/>8/17 9/1 9/24 11/1<br/>12/11 13/11 16/5<br/>17/14 17/19 18/5 18/7<br/>18/21 18/25 19/6<br/>19/12 19/22 20/3 20/8<br/>20/17 22/23 28/18<br/>29/21 31/17 33/11<br/>40/14 42/8 43/24<br/>44/12 48/17</p> <p><b>while</b> [6] 5/11 6/9<br/>9/22 13/6 38/24 44/1</p> <p><b>Whitney</b> [2] 1/17 2/21</p> <p><b>who</b> [9] 3/24 23/20<br/>23/20 23/21 23/21<br/>23/22 27/12 29/15<br/>54/15</p> <p><b>whole</b> [1] 24/19</p> <p><b>wholesaler</b> [1] 48/10</p> <p><b>whom</b> [1] 12/7</p> <p><b>why</b> [2] 35/25 38/11</p> <p><b>wide</b> [1] 27/16</p> <p><b>will</b> [29] 4/8 5/1 5/3<br/>5/5 5/14 5/18 5/19<br/>5/21 5/24 6/1 10/2<br/>10/15 10/17 10/17<br/>10/19 10/21 10/25<br/>11/7 11/9 11/10 11/12<br/>11/19 23/7 23/8 30/6<br/>35/15 36/13 49/6 55/9</p> <p><b>wish</b> [1] 29/15</p> <p><b>withdraw</b> [1] 37/7</p> <p><b>within</b> [8] 15/9 15/12<br/>16/13 19/23 20/23<br/>27/7 38/25 51/8</p> <p><b>without</b> [1] 52/16</p> <p><b>witness</b> [2] 26/20<br/>27/2</p> <p><b>won't</b> [1] 20/12</p> <p><b>wonderful</b> [1] 26/12</p> <p><b>wondering</b> [1] 25/14</p> <p><b>woods</b> [1] 52/13</p> <p><b>Woodshire</b> [14] 18/25<br/>19/2 26/18 27/3 27/11<br/>27/13 28/2 28/7 28/20<br/>29/3 29/21 32/19<br/>33/18 52/24</p> <p><b>work</b> [2] 37/14 50/9</p> <p><b>worked</b> [1] 53/25</p> <p><b>working</b> [1] 37/21</p> <p><b>works</b> [1] 12/10</p> <p><b>would</b> [39] 12/2 13/10<br/>13/18 14/3 15/21<br/>16/18 16/19 18/14<br/>18/20 18/20 18/22<br/>18/23 19/4 19/5 19/12<br/>19/21 23/18 25/1<br/>27/21 27/24 28/8<br/>29/10 29/21 30/3<br/>30/18 33/3 36/16<br/>38/18 39/25 41/15<br/>42/8 42/8 42/15 43/5<br/>45/3 45/6 54/15 54/24<br/>54/24</p> <p><b>wouldn't</b> [2] 50/1<br/>50/1</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

6.1.r

**Y**

**yard [1]** 50/8  
**yeah [13]** 14/12 23/15  
26/10 32/6 32/9 32/10  
33/23 34/4 40/2 42/23  
46/8 48/19 50/19  
**year [3]** 12/17 37/22  
42/25  
**years [1]** 12/10  
**yellow [1]** 11/19  
**yes [8]** 26/24 31/15  
36/11 36/17 41/9 46/3  
47/25 49/13  
**yet [2]** 12/7 31/18  
**you [152]**  
**you're [22]** 4/6 13/6  
23/23 24/24 25/24  
25/25 28/1 28/19 29/1  
29/2 29/8 31/23 31/24  
32/5 32/9 33/24 33/24  
35/21 44/24 46/6  
47/23 52/6  
**you've [3]** 24/2 52/21  
53/8  
**young [1]** 26/3  
**your [15]** 4/7 9/10  
12/13 12/24 20/18  
23/23 24/6 26/15  
26/23 29/19 35/16  
39/20 50/25 50/25  
51/19

**Z**

**zoned [9]** 3/22 17/6  
17/7 17/8 17/10 17/15  
17/20 17/22 18/25  
**zoning [10]** 1/1 2/2  
14/20 15/11 16/22  
17/18 17/24 19/5 21/6  
56/8





Whitney Kelly <wkelly@crevecoeurmo.gov>

## #16-031 For The Rezoning Of 11109-11141 Olive Blvd for Mobil On The Run, meeting Dec.5, 2016

Bill Halliburton <billhfs@sbcglobal.net>

Mon, Nov 28, 2016 at 1:22 PM

To: wkelly@crevecoeurmo.gov, Jason Jaggi <jjaggi@crevecoeurmo.gov>, jfaron@crevecoeurmo.gov, atravers@crevecoeurmo.gov, bgiantz@ci.creve-coeur.mo.us

Dear Concerned City Officials:

I received the Notice Of Public Hearing, Application to Planning and Zoning Commission for the rezoning and conditional use permit for 11109-11141 Olive Blvd. and 11100-11114 Oak Lake Ct., currently Zoned GC General Commercial and C Single Family Residential to be held December 5th, 2016.

Reading the Key Issues, the request does not integrate with the existing surrounding uses. Were this to be approved, i would become the next door neighbor to the project, and be the only remaining residence in the block at 11147 Olive Blvd. I would have a residence next door to a very large and bright service station-car wash-and possible Quick Mart.

It this seems to advance I will study Section 405.210; Regulation of Uses, Table A.,  
Section 405.360 GC-General Core Business District,  
Section 405.470 Conditional Uses,  
Section 405-1060 Zoning Changes and Text Amendments.

Obviously, this does not give me a sense of well being. I would be the 'proverbial lonely petunia in an onion patch', and all I'd do is cry all day.

Thank you for sending the information.

Sincerely,

Bill Halliburton

11147 Olive Blvd.

Creve Coeur, Mo. 63141-7650

Attachment: Public Comments from December 5, 2016 Meeting (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)

November 30, 2016

PLANNING DEPT.  
DEC 1 2016  
RECEIVED

To the members of the Creve Coeur Planning and Zoning Commission:

My name is Joan Althaus. I reside at 11107 Oak Lake Court in the residence into which my husband and I and three young children moved fifty five years ago. We looked at numerous properties before selecting this house. It was well constructed by a local builder but the main reason we chose to live here was the quiet location and the safety that living on a cul de sac provided.

When the rest of the houses on the cul de sac were completed, the 11 houses were occupied by professional people with children similar in age, There would be 13 children who would line up at Oak Lake Court and Schulte Road to await the school bus which would take them to Weber School (now Creve Coeur City Hall). The children played together and enjoyed the safety of very little traffic on our little street. The families knew one another and enjoyed neighborhood picnics in our backyards. Of course the scene has changed over the years as the children grew up and the ownership of the properties changed. We now have families with pre school children who enjoy the safety that the cul de sac provides as they walk with their children and pets in the street. There are no sidewalks. It is presently a safe, quiet environment for those families and their children.

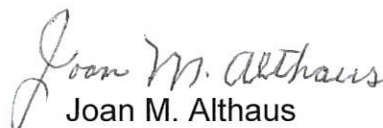
If the Mobil on the Run is approved, this will no longer be the safe, quiet street now being enjoyed by those families who chose to live here.

I have several concerns, my main one being the traffic that such an expanded operation would generate and its effect on Oak Lake Court. Even now there are times when the traffic on Schulte Road is so heavy it is difficult to exit Oak Lake Court. There are accesses to the present Mobil Station and the Shell station opposite each other on Schulte Road which also presents a traffic problem and will only intensify. Even now, I often have cars turning around in my drive.

I have some other concerns and I hope that it will remain a requirement that there will be no access to the expanded facility from Oak Lake Court.

If the expansion is approved, there would be a need for a place for the workmen to park. I request that it be a contingent that a place be provided and that they be prevented from parking on Oak Lake Court.

Although my property is located in the unincorporated county, I have always aligned myself with Creve Coeur and put much effort into working for the betterment of the community.

  
Joan M. Althaus  
Creve Coeur Squire

314 872 7922

Attachment: Public Comments from December 5, 2016 Meeting (16-031 Mobil on the Run and Brite Worx Car Wash RZG, CUP, SDP)



Whitney Kelly &lt;wkelly@crevecoeurmo.gov&gt;

---

## Application #16-031 Rezoning for Mobil on the Run

---

**Bill Halliburton** <billhfs@sbcglobal.net>

Wed, Apr 19, 2017 at 1:56 PM

To: Jason Jaggi <jjaggi@crevecoeurmo.gov>, Whitney Kelly <wkelly@crevecoeurmo.gov>, bglantz@ci.creve-coeur.mo.us, jfaron@crevecoeurmo.gov, atravers@crevecoeurmo.gov

Dear Concerned Creve Coeur Administrators:

I own the single family residence at 11147 Olive Blvd. I have owned this home since 1972.

11127-11135-11141 Olive are residences too, and office several commercial enterprises, and have so for many years, as I am sure you are aware.

11141 is used as dormitory housing for employees that are here for the landscaping season each year and are employed by Quiet Village Landscaping Co., which offices at 11135 Olive Blvd., along with other commercial enterprises. This has existed for years, though I am aware that Quiet Village has acquired property to move to North of Creve Coeur. 11127 Olive contains commercial enterprises also.

Were the rezoning to take place, I would be the only residence left in this block of homes. I would be between the Mobil complex, and the houses on Woodshire Lane. This would not be desirable at all, nor a desirable situation to be in.

I ask that you not approve this rezoning as my residence would not integrate with the existing surrounding uses.

I would certainly be "lonely" on Olive, and essentially have a depreciated property.

Please pass this on to the Planning and Zoning Commission Members;

Beth Kistner, Chair

Gene Rovak

Tim Carney

Heather Silverman

Matthew Schuh

Muriel Hall

Donald Magruder

Thank you for your help,

Sincerely,

Bill Halliburton

11147 Olive Blvd.

(314)567-4163

fax- (314)567-3729

e-mail- billhfs@sbcglobal.net

Attachment: Public Comments from the April 2017 Council Meeting (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)





Whitney Kelly &lt;wkelly@crevecoeurmo.gov&gt;

## 18 pictures for you

1 message

**william k Halliburton** <billhfs22@gmail.com>

Wed, Apr 19, 2017 at 2:32 PM

To: wkelly@crevecoeurmo.gov

11127-11135-11141 Olive, all residential.

You have been sent 18 pictures.

DSCN2641.JPG  
DSCN2642.JPG  
DSCN2643.JPG  
DSCN2644.JPG  
DSCN2645.JPG  
DSCN2646.JPG  
DSCN2647.JPG  
DSCN2648.JPG  
DSCN2649.JPG  
DSCN2650.JPG  
DSCN2651.JPG  
DSCN2652.JPG  
DSCN2653.JPG  
DSCN2654.JPG  
DSCN2655.JPG  
DSCN2656.JPG  
DSCN2657.JPG  
DSCN2658.JPG

These pictures were sent with Picasa, from Google.

Try it out here: <http://picasa.google.com/>

### 18 attachments



**DSCN2641.JPG**  
82K



**DSCN2642.JPG**  
79K

Attachment: Public Comments from the April 2017 Council Meeting (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)



































Jason Jaggi &lt;jjaggi@crevecoeurmo.gov&gt;

---

**Mobil on the Run applicatin resurrected after withdrawal?**

1 message

---

**L R** <lrezny@hotmail.com>

Mon, Apr 24, 2017 at 2:30 PM

To: "mayor-council@crevecoeurmo.gov" &lt;mayor-council@crevecoeurmo.gov&gt;, "jjaggi@crevecoeurmo.gov" &lt;jjaggi@crevecoeurmo.gov&gt;

Concerning the Mobil on the Run application: On Dec 5, the Rezoning, was unanimously denied by Planning and Zoning, then boundary adjustment and Conditional Use permit were unanimously denied,. Finally the Site Plan was unanimously denied. Obviously the plan needs significant work.

It could have gone to Council in that form the next week, but it was WITHDRAWN, not postponed, by the lawyer a few days later. It was withdrawn, not by an inexperienced person, but by the well paid lawyer of the substantial and experienced Wallis company.

Since it was withdrawn, the SAME plan should not have come back for a year.

Why is it here now?

The lawyer did what he did, and then he died of a heart problem, not dementia.

A NEW application could be filed NOW if it had SIGNIFICANT changes. This plan clearly needs significant changes. Given the withdrawal, if they just want to do some nice, but minor, changes, they should have to wait the year the withdrawal requires.

Let them know as soon as they make a NEW plan that is consistent with the Comprehensive Plan and the neighborhood they should come back.

Attachment: Public Comments from the April 2017 Council Meeting (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)



Jason Jaggi &lt;jjaggi@crevecoeurmo.gov&gt;

## Problems with Left turns on N bound Schulte and a Solution

1 message

L R &lt;lrezny@hotmail.com&gt;

Mon, Apr 24, 2017 at 4:48 PM

To: "mayor-council@crevecoeurmo.gov" &lt;mayor-council@crevecoeurmo.gov&gt;, Jason Jaggi &lt;jjaggi@crevecoeurmo.gov&gt;

Last week I was headed W on Olive in front of Trader Joe's when a car traveling E on Olive made a fast U turn in front of me and turned into McDonald's.

Note that the No Left into McDonald's has been the case for years, but there are always people who do not know this and do stupid and/or illegal things.

It is best to make the road simple enough that they are not tempted.

In the case of the Mobil redo, it is proposed to forbid a left turn into the station from N bound Schulte. The station can be approached from the

W in which case you CAN make a left turn in the middle of Olive. But the Olive is busy and you might think it safer to use the light at Schulte to make a left and

use Schulte to enter, at which point you would be denied a Left in.

If you were approaching from the E there would no direction on Olive that you should drive past the pumps and enter from Olive. The shorter route to the pumps

is a Right onto Schulte, where only then you find you are denied the Left into the Mobil.

Now a portion of the people from the W or E on Olive have a dilemma. No Left into the Mobil.

They might miss seeing the NO LEFT sign and turn in the out,

or they might see the sign and make a U turn on Schulte if traffic is light,

or they might turn into the Shell on the right, interfering with the circulation and exiting at Shell,

or they might proceed down Schulte to the next best spot, Oak Lake, where you turn Left and find the first driveway, Joans at 11107,

or the drive at 11115, home of a preschooler.

Hopefully they would notice the playground in the front yard at 11121 and avoid that drive way.

Maybe they are are polite, not wanting to use someones drive and go to the circle at the end to turn and retrace their drive past the children's yards twice.

Now these children will not always be small, in a few yeas they will be older and want to play in the previously quiet circle at the end of their own street.

Attachment: Public Comments from the April 2017 Council Meeting (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)



Will it be safe?

**Possible solution, using part of the Mobil land to widen this stretch of Schulte to put a N bound Left turn lane on Schulte to queue the cars waiting to turn left into the Mobile.**



Jason Jaggi &lt;jjaggi@crevecoeurmo.gov&gt;

---

## Questions about noise from the proposed Mobil on the Run

1 message

L R &lt;lrezny@hotmail.com&gt;

Mon, Apr 24, 2017 at 4:57 PM

To: "mayor-council@crevecoeurmo.gov" &lt;mayor-council@crevecoeurmo.gov&gt;, Jason Jaggi &lt;jjaggi@crevecoeurmo.gov&gt;

### Questions about noise from the proposed Mobil on the Run

The noise study only looked at the noise from the entrance, not the exit with the dryers on the Olive side.

It says the dryers would be very noisy, 95-100 dBA, but that the street noise would cover it.

May be true, but that assumes that the street is uniformly noisy. When the background street noise abated, like in the evenings and on the weekend, there would be the 100dBA of dryer noise ft 70 or 75 from the property line. What will be the noise at the property line at 11147 Olive ?

Is there a masonry wall on that side?

Is there any study of the noise from the 10 vacuums ?

Why are these question coming to Council? Ans: This project was rejected and is not ready for prime time.

Attachment: Public Comments from the April 2017 Council Meeting (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)



Jason Jaggi &lt;jjaggi@crevecoeurmo.gov&gt;

## Widening Schulte and good plan design

1 message

L R &lt;lrezny@hotmail.com&gt;

Mon, Apr 24, 2017 at 4:09 PM

To: "mayor-council@crevecoeurmo.gov" &lt;mayor-council@crevecoeurmo.gov&gt;, Jason Jaggi &lt;jjaggi@crevecoeurmo.gov&gt;

Schulte needs to be moved a bit to the West EVENTUALLY to align with Mary Meadows. It is not an emergency.

The current plan for the Mobil on the Run forbids Left turn from N bound Schulte. Experts have said that would be hard to enforce. You will get examples of the problems that not allowing Lefts will cause elsewhere later.

If more business is attracted to the NW corner of Schulte and Olive, Schulte needs to be widened at Olive to allow a lane for the N bound left turners.

Is not clear to me who is responsible for the County road, Schulte, at an intersection in Creve Coeur, but currently government bodies ask the owner or developer to do this kind of infrastructure when they redevelop. It may be the responsibility of St Louis County, or of Creve Coeur, and will have to be coordinated with MODOT as Olive is a State road.

Paying for the infrastructure is part of the cost of development. It is not a bribe to allow bad design. It is part of cost of allowing good design, especially when the need for the infrastructure is not urgent. The only reason the issue is coming up now is that the owner wants to redo the property and that changes the handling of the Left turns N bound on Schulte.

Creve Coeur needs to take this opportunity to fix Schulte if Mobil is asking for an opportunity to fix their property. Just be careful not to make the infrastructure changes that redeveloping Mobil would require an excuse to accept bad design on the Mobil property.

If Mobil wants to redevelop this infrastructure change needs to be brought up early on.

Attachment: Public Comments from the April 2017 Council Meeting (16-031 Mobil on the Run and Brite Worx Car Wash RZG,CUP,SDP)



RECEIVED

NOV 27 2017

PLANNING DEPT.

11107 Oak Lake Court  
St Louis Mo 63146  
November 14, 2017

6.1.u

To the members of the Creve Coeur Planning and Zoning Commission:

(copy of)

I am enclosing a letter that I sent a year ago as the composition of the commission may have changed since my November 30, 2016 letter.

My concerns remain the same except now my concern regarding added traffic has intensified. I've observed much more traffic on Schulte Road now that industry has increased in the West Port area. The employees are using Schulte (and also Craig) as means of reaching Olive Street Road.

Schulte Road presents many hazards. It is narrow...there are no sidewalks and there are ditches along the sides of the street so that pedestrians are walking in the street, or running in the street. The area surrounding Schulte Road has been designated as a Naturally Occurring Retirement Community, so there are numerous retirees using the street.

The intersection of Schulte and Olive is at present time hazardous and would become more so with added traffic.

I do not use the intersection as frequently as my neighbors who travel that route to and from work, but this is what I recently encountered:

I was on Schulte, making my left turn, and after completing it, I signaled to pull to the right lane and there was a car right beside me that had made a left turn from the right turn lane.

A few days later, I am again in the left turn lane and the driver of the car in front of me grew impatient waiting for the light to turn, so he made a right turn from the left turn lane, went a short distance, made a U turn and was able to travel east without a delay..

Those were just hazards that I've encountered recently with that intersection of Schulte and Olive and I don't travel it that frequently... I'm certain that there have been many other such occurrences.

Every meeting I've attended and every discussion I've had, the problem of increased traffic is of great concern to all, as it should be. I'm wondering what solution is proposed for providing a safe flow of traffic if this proposed Mobil on the Run is permitted.

We do at times, have cars using the cul de sac as their turn round when the drivers encounter difficulty exiting or entering one of the existing gas stations.. We do have families with young children residing on Oak Lake Court and that presents a hazard.

I note from signs that there is a Water Way that may be proposed within a block of Schulte...no excuse for dirty cars.

*Joan M. Althaus*  
Joan M. Althaus 314 872 7922

Encl.

Attachment: Public Comment received for the December 4, 2017 Meeting (16-031 Mobil on the Run and Brite Worx Car Wash RZG, CUP, SDP)

COPY

To the members of the Creve Coeur Planning and Zoning Commission:

My name is Joan Althaus. I reside at 11107 Oak Lake Court in the residence into which my husband and I and three young children moved fifty five years ago. We looked at numerous properties before selecting this house. It was well constructed by a local builder but the main reason we chose to live here was the quiet location and the safety that living on a cul de sac provided.

When the rest of the houses on the cul de sac were completed, the 11 houses were occupied by professional people with children similar in age, There would be 13 children who would line up at Oak Lake Court and Schulte Road to await the school bus which would take them to Weber School (now Creve Coeur City Hall). The children played together and enjoyed the safety of very little traffic on our little street. The families knew one another and enjoyed neighborhood picnics in our backyards. Of course the scene has changed over the years as the children grew up and the ownership of the properties changed. We now have families with pre school children who enjoy the safety that the cul de sac provides as they walk with their children and pets in the street. There are no sidewalks. It is presently a safe, quiet environment for those families and their children.

If the Mobil on the Run is approved, this will no longer be the safe, quiet street now being enjoyed by those families who chose to live here.

I have several concerns, my main one being the traffic that such an expanded operation would generate and its effect on Oak Lake Court. Even now there are times when the traffic on Schulte Road is so heavy it is difficult to exit Oak Lake Court. There are accesses to the present Mobil Station and the Shell station opposite each other on Schulte Road which also presents a traffic problem and will only intensify. Even now, I often have cars turning around in my drive.

I have some other concerns and I hope that it will remain a requirement that there will be no access to the expanded facility from Oak Lake Court.

If the expansion is approved, there would be a need for a place for the workmen to park. I request that it be a contingent that a place be provided and that they be prevented from parking on Oak Lake Court.

Although my property is located in the unincorporated county, I have always aligned myself with Creve Coeur and put much effort into working for the betterment of the community.

Joan M. Althaus  
Creve Coeur Squire

314 872 7922





Whitney Kelly &lt;wkelly@crevecoeurmo.gov&gt;

## Fwd: Proposed Mobil-on-the-Run Gas Station and Brite Worx Car Wash @ Olive/Schulte

1 message

Jason Jaggi <jjaggi@crevecoeurmo.gov>  
To: Whitney Kelly <wkelly@crevecoeurmo.gov>

Mon, Nov 13, 2017 at 8:35 AM

Please include in the packet material for the Mobil on the Run and car wash application.

----- Forwarded message -----

From: **Joseph Piotrowicz** <piotrowicz4@yahoo.com>

Date: Sun, Nov 12, 2017 at 2:07 PM

Subject: Proposed Mobil-on-the-Run Gas Station and Brite Worx Car Wash @ Olive/Schulte

To: Jason Jaggi <jjaggi@crevecoeurmo.gov>, "gchoate@stlouisco.com" <gchoate@stlouisco.com>

Cc: Jason Jaggi <jjaggi@ci.creve-coeur.mo.us>, Scott Saunders <ssaunders@ci.creve-coeur.mo.us>, "spage@stlouisco.com" <spage@stlouisco.com>, "atravers@crevecoeurmo.gov" <atravers@crevecoeurmo.gov>, "jfaron@crevecoeurmo.gov" <jfaron@crevecoeurmo.gov>, "elawrence@crevecoeurmo.gov"

<elawrence@crevecoeurmo.gov>, "truzicka@crevecoeurmo.gov" <truzicka@crevecoeurmo.gov>, "cdalfonso@crevecoeurmo.gov" <cdalfonso@crevecoeurmo.gov>, "rhoffman@crevecoeurmo.gov"

<rhoffman@crevecoeurmo.gov>, "sbaseley@crevecoeurmo.gov" <sbaseley@crevecoeurmo.gov>, Joseph Piotrowicz <piotrowicz4@yahoo.com>

Jason/Gail,

My wife, Jill, and I live on Pam Lane, which will be directly behind and downhill from the proposed giant Mobil gas station and Car Wash. We have a few concerns/comments that we were hoping that is being considered by Creve Coeur and St. Louis County during this proposal process. Please send this email to others (council members, alderpersons, etc.) who have any impact on denying/approving the proposed giant gas station development at Olive/Schulte.

Creve Coeur East Olive Corridor Neighborhood Commercial District

1. From the Creve Coeur Comprehensive Plan on page 88: 'The Vision for East Olive is to create a walkable corridor of destination retail boutiques, neighborhood service businesses, small-scale restaurants, attached townhomes, and low-density multi-family homes and single family homes. Development of the East Olive corridor should encourage pedestrian access from adjacent neighborhoods and prioritize walkability between neighboring lots while accommodating car access and easy parking.'
2. Besides the obvious that a giant car wash and gas station not fitting anywhere in that description, I hope the following concerns further discourage you from approving the plan presented for the Mobil-on-the-Run and Briteworx car wash.

Sewer/Storm Drainage

1. The proposed plan for the site includes a SWM BMP very near the residential homes behind the site. What is the plan of action to control possible odors created by the SWM BMP?
2. It looks like all of the storm water from the proposed site is to drains to the proposed SWM BMP. What happens to the rainwater from the site if the rainstorm overwhelms the SWM BMP? Where does the overflow go?
3. It looks like the sewer waste from the site will be added to the current system used by the Oak Lake Court residences and the Pam Lane homes. Has anyone reached out to MSD to see if the current system can handle the new output from the proposed waste? If so, can we be provided with MSD's response? Our understanding is the that sewer system in this watershed is old and already has issues with its current usage amounts. During and after heavy rainstorms we can even smell sewage in our backyards. Also, the current storm system drains from Oak Lake Court directly to the backyards of the Oak Lake Court and Pam Lane residences as an underground storm drainage system does not currently exist. What has MSD communicated regarding this proposal and can we obtain a copy of MSD's feedback/report?

Noise Pollution



1. It appears that the car wash house is now proposed to be parallel to Olive instead of diagonally and facing Mary Meadows residences. This appears to have solved on problem and has created others: 1) The vehicles are stacking up the NW corner to pay and wait to get into the car wash. 2) Vehicles make lots noise (engines/exhaust/loud music). 3) We assume the 9 vacuum stations will actually have 18 vacuums and serve two parking spaces a piece. 4) The 18 vacuums will be between the car wash building and the residences. A lot of the noise will be blocked by and bounced off of the car Building and back into the residential neighborhood. 5) Three residential homes and many trees on the south side of Oak Lake Court currently act as a buffer between the current gas station. The three residential homes will be demolished and a lot of the trees will be cut down with the newer gas station foot print moving even closer to the Oak Lake Court and Pam Lane residences. 6) The terrain behind the site leads down into a valley which is located behind the Pam Lane and Oak Lake Courts.
2. Taking the SIX factors mentioned here into account, the new gas station will have huge negative impact on the noise level in the neighborhood behind the proposed giant gas station and car wash as the noise will be naturally funneled down into the valley.

### Light Pollution

1. The new site plan includes several buildings, light posts and accounts for large amount of vehicular traffic. Taking into account 1) the removal of the three residential homes on Oak Lake Court, 2) the removal of many trees, 3) the site plan is closer to current existing occupied residential homes than ever before, 4) the terrain is a valley with the bright lights of the gas station/car wash at the top of the hill and the residential homes all downhill.
2. Taking the FOUR factors mentioned above into account, the great amount of increased light pollution will have a huge negative impact on the residential homes.

### Traffic

1. From Olive, the new site plan calls for one entrance and that is located on north side of Olive and very close to the Schulte intersection. This creates traffic issues on a curve of busy Olive for the customers of the gas station/car wash AND for drivers heading eastbound Olive and looking to turn left onto Schulte. This adds a great deal of danger to an already dangerous intersection.
2. Drivers traveling northbound on Schulte cannot turn into Mobil. This will lead to 2 very unwanted things: 1) Drivers will still try to illegally enter the new site and will most likely cause accidents and traffic/delays. 2) Drivers will turn around on residential driveways on Schulte, Oak Lake Court or Pam Lane.
3. From Mobil, customers exiting onto Schulte, are allowed to turn left-northbound onto Schulte. Why? This is already danger at the current site and a larger customer base would make navigation of this tight intersection even worse.
4. Simply put, the Olive/Schulte intersection cannot handle this site plan.

### Previous Residential Comments/Requests Ignored

At December meeting with the surrounding residences, we asked for some considerations and were also provided information that has now changed.

1. The fence on the north side of the property was 8 foot tall and we asked for the design team to make it taller. However, it looks like the fence is now 6 foot tall. Considering the elevation of the light/noise pollution sources and the downhill terrain towards the surrounding residential homes, this is no way helpful in blocking the light/noise pollution and is worse than the initial plan.
2. We asked if a litter control plan would be considered and have not heard back. Is there a plan for one, and, if so, what are the details? Consider the trash that accumulates from the smaller gas station, we can only imagine it will only get worse. We can't even get the current Shell gas station owners to clean up the trash-filled empty lot they own just north of their gas station.
3. We asked if the dumpsters and cooking vents for the prepared foods could be moved as close to Schulte as possible and away from the residential homes to reduce noise and smell pollutions. After reviewing the plans, it does not look like either requests were met.

### Olive/Graeser A Better Gas Station/Car Wash Station

1. Waterway looking into the site at Olive/Graeser appears to be a way better site for a giant car wash/gas station: 1) the terrain is mostly flat, 2) the intersection has already been updated/enlarged and can handle the traffic for this kind of business, and 3) residential homes are further away from the site and are not being removed as part of the plan.
2. Since this is better, why would Creve Coeur need another giant gas station/car wash, in a location that doesn't work, and very near an existing Shell gas station/car wash.

Re-Zoned

1. Have all of the residential home on Oak Lake Court been re-zoned from residential to commercial?

Thank you for taking the time to read and respond to this email,  
Joe Piotrowicz  
[11116 Pam Lane](#)  
[St. Louis, MO 63146](#)  
[H: 314-989-1412](#)

--  
Jason W. Jaggi, AICP  
Director of Community Development  
[City of Creve Coeur, Missouri](#)  
[300 North New Ballas Rd](#)  
[Creve Coeur, MO 63141](#)  
[314-872-2504](#)

**PLEASE NOTE MY NEW EMAIL ADDRESS:**  
[jjaggi@crevecoeurmo.gov](mailto:jjaggi@crevecoeurmo.gov)

[www.creve-coeur.org](http://www.creve-coeur.org)



Whitney Kelly &lt;wkelly@crevecoeurmo.gov&gt;

---

**Mobil On The Run- November 20, 2017 P&Z**

---

**Bill Halliburton** <billhfs@sbcglobal.net>

Thu, Nov 16, 2017 at 3:14 PM

To: barry glantz <bglantz@crevecoeurmo.gov>, Jason Jaggi <jjaggi@crevecoeurmo.gov>, Whitney Kelly <wkelly@crevecoeurmo.gov>, Alexis Travers <atravers@crevecoeurmo.gov>, jfaron@crevecoeurmo.gov

Dear Concerned City Leaders:

I received the NOTICE OF PUBLIC HEARING and again see that the rezone is for all the 11000 block of Olive, except my residence at 11147 Olive. I am not delighted about being the only home left in the block, as I had suggested to you all in a prior e-mail.

I have sent pictures of all the house on the block, and will repeat sending them today. None of the houses are now or have for many years been in compliance with the City Master Zoning Plans, and obviously are still not.

I owned 902 Woodshire for many years, and coincidentally had Mr. and Mrs. Magruder as rental tenants for a couple of years. Their home was being renovated further down on Woodshire. The whole of Woodshire Lane was not then part of Creve Coeur. I assume that now it is, as Mr. Magruder is on P&Z.

11141 Olive, next door to me acts as housing for the employees of the Lawn Care Service that was housed in the next house East for many years. It still has the residents, who are not a problem for me, but being residential, unlicensed automobiles in the front and rear yards is a bit of a stretch.

I am against the rezoning as I do not want to be the only residence left in this block of Olive. I would still be the lonely little petunia in an onion patch, and that would be disastrous for us, as we are quite advanced in age. I would appreciate my thoughts being passed on to the P&Z Committee, in addition to all of you.

We have resided in Creve Coeur since 1968, 49 years, and do own other property in Creve Coeur. We maintain our property.

I will, under separate cover, again send the pictures of the residences on this block. I remember when 11135 was Mr. Bayer's State Farm Office, and office in his home, and 11135 was the Wagner Family, Landscaping, and office in their home, and 11141 was the Christoferson home, until he passed on and his widow Ruth moved to Friendship Village South and sold the home. I realize that nothing is a permanent as change, but isolating one residence is not change, it is in my opinion, very unfair.

Respectfully,  
Bill Halliburton

Attachment: Public Comment received for the December 4, 2017 Meeting (16-031 Mobil on the Run and Brite Worx Car Wash RZG, CUP, SDP)





































# HBE Corporation

11330 Olive Boulevard, St. Louis, MO 63141  
(314) 567-9000 Fax: (314) 567-0602 www.hbecorp.com

December 13, 2017

The Department of Community Development  
Government Center  
300 N New Ballas Road  
Creve Coeur, Missouri 63141  
Attention: Jason Jaggi

RECEIVED  
DEC 13 2017  
PLANNING DEPT.

Re: Application #17-028 – Creve Coeur Grand Hotel, Creve Coeur, MO.

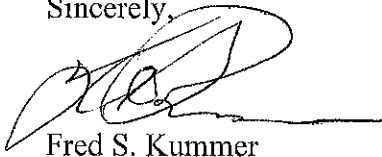
Dear Mr. Jaggi,

Please be advised that we are incorporating certain modifications to the project per our discussions and that we are requesting that this Application be “Untabled” by the Commission at the December 18, 2017 meeting and that it will be placed on the Agenda for the Planning and Zoning Meeting scheduled for January 16, 2018.

Please advise us of your acceptance to this request.

Thank-you

Sincerely,



Fred S. Kummer

President & CEO

HBE Corporation

Attachment: HBESRequesttoUntable-121817 (#17-028: HBE Rezoning to PCD)



300 North New Ballas Road • Creve Coeur, Missouri 63141  
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966  
www.creve-coeur.org

**APPLICATION TO PLANNING AND ZONING COMMISSION  
#17-040 FOR A MINOR SITE PLAN APPROVAL FOR NEW EXTERIOR  
PAINTING AND LED LIGHTING FOR THE POST II SPORTS BAR AND  
GRILL AT 763 OLD BALLAS ROAD**

**FOR THE MEETING OF:** Monday, December 18, 2017

**LOCATION:** 763 Old Ballas Road, zoned CB-Core Business District.

**REQUEST:** Shannon Brown, DeSIGNery, on behalf of the Post II Sports Bar and Grill at 763 Old Ballas Road, has submitted for a minor site plan for modifications to the exterior of the tenant space. The revised proposal now includes new awnings in the same color found elsewhere on the building, and limiting the painted striping to a single blue color at the base of the building.

**ADDITIONAL INFORMATION:** Additionally, Section 405.1080 requires Planning and Zoning Commission approval with any exterior changes to the building or the site. The Post received approval for a conditional use permit in 2013 with Ordinance No. 5296, and amending Ordinance No. 5330 that included a 758 square foot room addition.

**Key Issues:**

- Does the request integrate with the existing surrounding uses?
- Does the request further or implement the goals of the Comprehensive Plan?

**Creve Coeur 2030 Comprehensive Plan References**

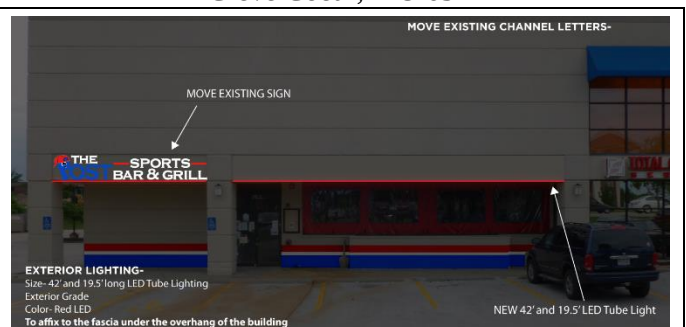
- Creve Coeur's Downtown and Central Business District
- Design Guidelines

**Zoning Code References**

- Section 405.370: CB- Core Business District
- Section 405.930 (F) Illuminated Signs
- Section 405.1080 Site Concept, Site Development and Minor Site Plan Approval.

**APPLICANT'S REPRESENTATIVE:** Shannon C. Brown  
DeSIGNery  
3051 Bartold Ave.  
St. Louis, MO 63143

**APPLICANT:** Adrian Glass  
The Post Sports Bar and Grill  
763 Old Ballas Road  
Creve Coeur, MO 63141



**REPORT PREPARED BY:** Whitney Kelly, AICP, City Planner  
**DATE:** 12/15/2017  
**ATTACHMENTS:** Applicant's Revised Materials received December 15, 2017

### REVISED PROPOSAL

Based upon the discussion at the previous meeting, the Applicant has revised their request to provide new awnings over the tenant space that are a consistent color as the other awnings on the front of the building, and a single stripe painted along the base of the building underneath the overhang.



Figure 1: Close-up of the Applicant's revised proposal



Figure 2: Close-up of the phot rendering of the proposed awning and strip on the building

Staff recommend approval for the addition of an awning consistent with the remainder of the building, and with the condition that the Applicant receive a building permit for placement of the awnings. The 24" blue painted stripe along the base does not significantly impact the building, and is intended to provide interest to the space as viewed from N. New Ballas Road.

All Signs are reviewed per the Sign Ordinance and not at the discretion of the Planning and Zoning Commission, with the exception of the use of neon lighting as discussed during the previous Planning and Zoning Commission. The new location is acceptable as it is now placed in proximity to the tenant space.

### ACTION AND MOTION

The motion to approve the minor site plan as shown in the Applicant's materials will be in the form of approval, approval with conditions, denial or deferral. The following is an example of an appropriate motion for this application:



“I move to approve the minor site plan for the new awnings for the Post II Sports Bar and Grill located at 763 Old Ballas Road to be the same blue as the existing awnings on the building, and that the Applicant obtain a building permit, and the new painted strip along the base of the tenant space be as presented in the Staff Report for the meeting of December 18, 2018” (conditions may be added, eliminated, or modified by preceding motion).

---

**APPENDIX 1: COMPREHENSIVE PLAN, INCLUDING DESIGN GUIDELINES**

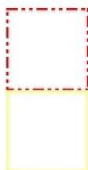
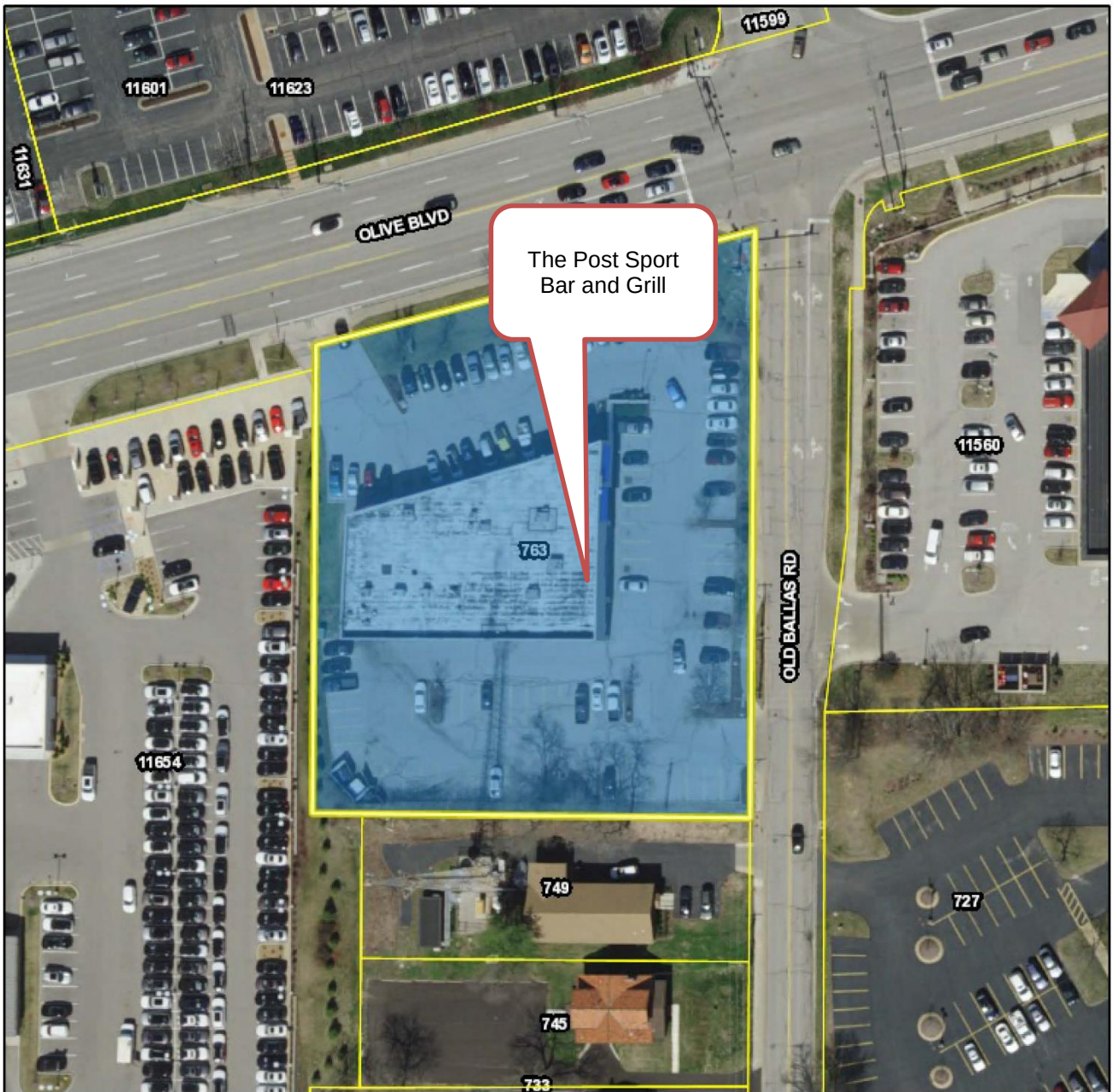
Included and attached by reference. See body of report for specific excerpts.

**APPENDIX 2: ZONING CODE**

Included and attached by reference. See body of report for specific excerpts.

## APPENDIX 3: AERIAL PHOTO

## 763 Old Ballas Road



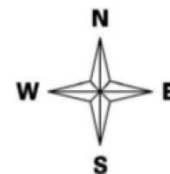
City Limits

Parcels

Parcels Label

Roads Labels

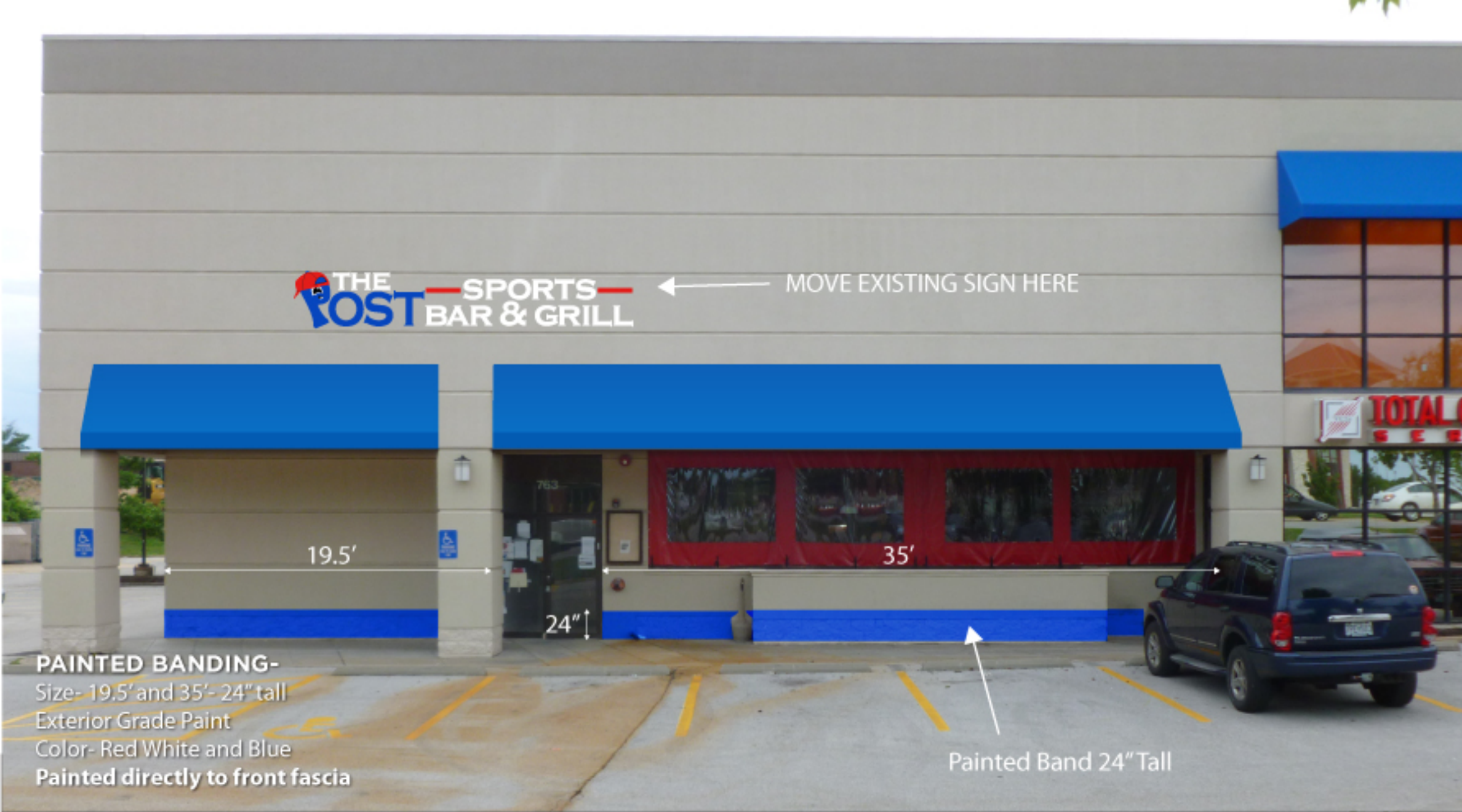
November 6, 2017



Prepared By

HORNER SHIFRIN





**Post Sports Bar & Grill**  
763 Old Ballas Rd, Creve Coeur, MO 63141



ALL SIGNS, GRAPHICS AND DESIGNS SHALL REMAIN THE SOLE PROPERTY OF THE DESIGNERY UNTIL PAID IN FULL, OR RELEASED IN WRITING. © THE DESIGNERY 2015

**DESIGNERY**  
creative solutions  
3051 Bartold Ave., St. Louis MO 63143  
www.designery.com | 314.647.1700

**CLIENT** | Post Sports Bar  
**CONTACT** | Adrian Glass  
**PHONE** | 618-920-9419  
**EMAIL** | aglass@thepostsportsbar.com

**PROJECT** | Exterior Lighting  
**SIGN TYPE** | LED  
**SIGN**

|              |        |                 |          |
|--------------|--------|-----------------|----------|
| <b>JOB</b>   | 16464  | <b>DATE</b>     | 12.14.17 |
| <b>PROOF</b> | PERMIT | <b>DESIGNER</b> | Colleen  |
|              |        | <b>DATE</b>     |          |

© The DeSIGNery Shop 2015. All Rights Reserved. This is an original unpublished design, created solely by The DeSIGNery Shop. This design shall remain the intellectual property of The DeSIGNery Shop and is submitted for your approval, for this specific project. Unauthorized use of this design in part, or whole, is prohibited without express written consent of The DeSIGNery Shop. All signs, graphics and designs shall remain the sole property of The DeSIGNery Shop until paid in full, or released in writing.









300 North New Ballas Road • Creve Coeur, Missouri 63141  
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966  
www.creve-coeur.org

**APPLICATION TO PLANNING AND ZONING COMMISSION  
#17-040 FOR A MINOR SITE PLAN APPROVAL FOR NEW EXTERIOR  
PAINTING AND LED LIGHTING FOR THE POST II SPORTS BAR AND  
GRILL AT 763 OLD BALLAS ROAD**

**FOR THE MEETING OF:** Monday, December 4, 2017

**LOCATION:** 763 Old Ballas Road, zoned CB-Core Business District.

**REQUEST:** Shannon Brown, DeSIGNery, on behalf of the Post II Sports Bar and Grill at 763 Old Ballas Road, has submitted for a minor site plan for modifications to the exterior of the tenant space that includes new LED tube lighting to mimic the style of exposed neon that will highlight the width of the tenant space, and new painted red, white, and blue stripes that match the colors of the sign along the lower portion of the tenant space.

**ADDITIONAL INFORMATION:** Section 405.930(F)(8) Illuminated Signs states that the use of exposed neon as an illumination source for identification or an architectural feature must be reviewed and approved by the Planning and Zoning Commission prior to installation or erection of the exposed neon. Additionally, Section 405.1080 requires Planning and Zoning Commission approval with any exterior changes to the building or the site. The Post received approval for a conditional use permit in 2013 with Ordinance No. 5296, and amending Ordinance No. 5330 that included a 758 square foot room addition.

**Key Issues:**

- Does the request integrate with the existing surrounding uses?
- Does the request further or implement the goals of the Comprehensive Plan?

**Creve Coeur 2030 Comprehensive Plan References**

- Creve Coeur's Downtown and Central Business District
- Design Guidelines

**Zoning Code References**

- Section 405.370: CB- Core Business District
- Section 405.930 (F) Illuminated Signs
- Section 405.1080 Site Concept, Site Development and Minor Site Plan Approval.

**APPLICANT'S REPRESENTATIVE:** Shannon C. Brown  
DeSIGNery  
3051 Bartold Ave.  
St. Louis, MO 63143

**APPLICANT:** Adrian Glass  
The Post Sports Bar and Grill  
763 Old Ballas Road  
Creve Coeur, MO 63141



**REPORT PREPARED BY:** Whitney Kelly, AICP, City Planner  
**DATE:** 11/30/2017  
**ATTACHMENTS:** Applicant's Materials received November 29, 2017

### PROPOSAL

The Applicant is seeking approval for a new LED tube light that mimics the appearance of neon strip for to highlight the entire width of the tenant space and to incorporate it into the sign, as well as add new painted striping along the lower portion of the space underneath the overhang. The painted stripes are the same red, white, and blue of the sign in the effort to get more visibility to the space.

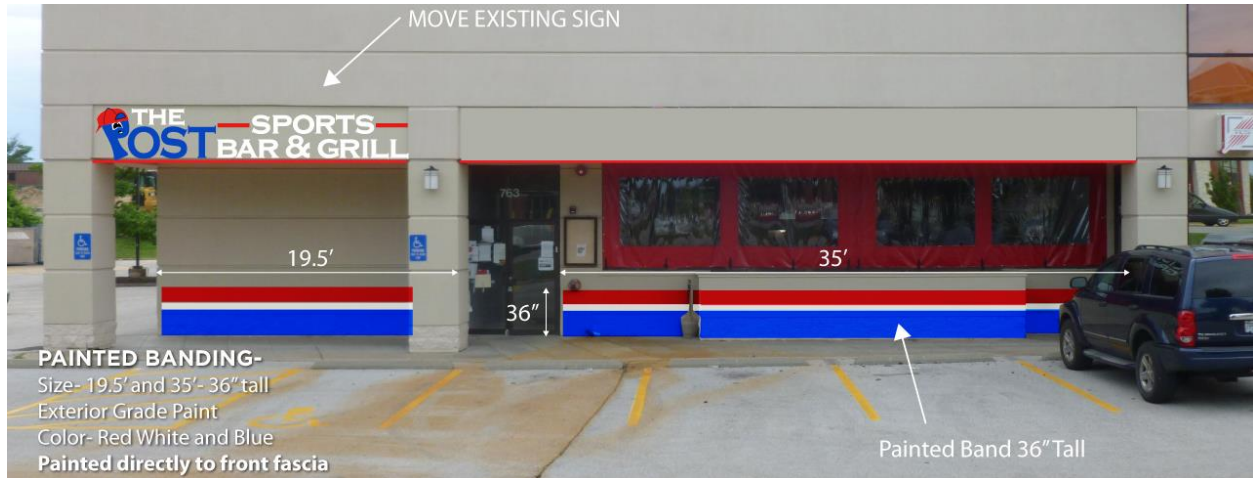


Figure 1: Detail of the proposed striping



Figure 2: Detail of the Neon Style tube light along the exterior of the tenant space



Figure 3: Detail of the type of tube light.



## LAND USE AND ZONING OF SURROUNDING PROPERTIES

The adjacent zoning and land uses are as follows:

| DIRECTION | USE                      | ZONED                       | SEPARATED BY    |
|-----------|--------------------------|-----------------------------|-----------------|
| North     | City Place office/retail | “CB” Core Business District | Olive Boulevard |
| South     | Office Building          | “CB” Core Business District | NA              |
| East      | CVS Pharmacy             | “CB” Core Business District | Old Ballas Road |
| West      | Plaza Jaguar-Land Rover  | “CB” Core Business District | NA              |

## COMPREHENSIVE PLAN REVIEW

### *Creve Coeur 2030 Plan*

The *Creve Coeur 2030 Plan* includes the overall goal for Placemaking & Community Identity by creating mixed-use, walkable districts (p. 45), and for the long-term Economic Growth & Community Services goal of provide the community services, amenities and experiences necessary to leverage and capture the changing consumer preferences for more lifestyle centers (p. 47). The subject property is located within the Community Center District and Central Business District overlay that supports the development of a variety of medium- to high-density, high-intensity, and mixed-use commercial, dining, retail, office and multi-family residential in a vibrant, walkable, urban environment. As the use is pre-existing and operating under an existing conditional use permit, the issue before the Commission on this request is largely design related.

## DESIGN GUIDELINES REVIEW

In the review of the use of the corporate identity of the striped awnings for the tenant space, the Design Guidelines, provide recommendations specifically directed at situations such as this. The following guidelines are of particular interest:

### Chapter 2 Building

#### C. Design

- Buildings that are stylized in an attempt to use the building itself as advertising are strongly discouraged, particularly where the proposed architecture is the result of a “corporate” or franchise style. The building should not be designed as a sign and should not be flood lit at night.

#### D. Relationship to Neighboring Development

- Architectural design should be compatible with the developing character of the neighborhood area. Design compatibility includes complementary building style, form, size, color and materials.
- Building color should be compatible with the neighborhood and should reinforce the visual character of the environment of the proposed buildings. The color should not be such that the building is competing for attention, building colors should be subdued and not garish and should not, in any way, constitute “signing” of the building or site.

#### E. Materials/Colors

- Architectural consistency of colors, materials and detailing are to be provided between all building elevations. False or decorative façade treatments, where one or more unrelated materials are placed upon the building should be avoided. Large parapet walls should reflect the function behind them [and] should not be freestanding. All elevations need not look alike; however, a sense of overall architectural continuity is strongly encouraged.
- Material or color changes should occur at a change of plane. Materials or color changes at the outside corners of structures that give the impression of “thinness” and artificiality of the materials are discouraged. Inconsistent adornment and frequent changes in material should be avoided.

## Chapter 5 Miscellaneous

### A. Signage

1. All signs are to be architecturally integrated and complement their surroundings in terms of size, shape, color, texture and lighting. Signs are to complement the overall design of the building and are not to be designed to be in visual competition with other signs in the area.
2. New signs proposed for existing buildings should provide a compatible appearance with other building signage. Where no sign program exists there should be an attempt to bring in a unifying element (such as size).

### B. Lighting

2. Exterior light sources may not be exposed and should be shielded from view, down cast and parallel with the ground.
3. Exterior lighting is to be architecturally integrated with the building style, material and colors.
7. The Planning Commission shall separately review the use of neon. A written statement from an architect explaining the intended use of the lighting and its relationship to the project and surrounding environment shall be submitted in conjunction with any proposed neon.

The use of the exposed LED tube lighting in conjunction with the existing sign would be inconsistent with the Design Guidelines and would give this tenant an advantage that other tenants do not have, by appearing to allow for a sign to expand the entire width of the tenant space. As an alternative, lighting underneath the structural overhang of the building to illuminate the space, would be in better keeping with the overall building design and create the visibility at night needed to attract customers, and would not appear to be tenant specific in nature, nor would such improvement require Planning and Zoning Commission approval

As with a similar review of awnings, Staff believes the painted striping provides for some individual tenant interest given that nothing in the overall building is Corporate in design. However, the colors are to match the red, white and blue of the existing Post sign colors, and thus in combination with the signage and LED tube lighting takes this tenant space too far from the recommendations of the Design Guidelines. Staff recommends limiting the improvements to that of just the painting at the lower portion of the tenant space with a single strip of a blue that matches the awning already on the building, and eliminating the use of the tube, neon style light would be more acceptable and consistent with the recent action of the Commission. Additional visibility of the space may be provided with the use of regular lighting underneath the overhang that is consistent with lighting elsewhere on the building, and would not appear as a tenant specific detail, nor would it require Planning and Zoning Commission approval.

## ZONING REVIEW

A minor site plan is required for a change in use of an entire site to another permitted use, or any proposed alteration that would significantly affect the exterior of a building, or redevelopment of a site that already contains a building or buildings, provided that such expansion, change or redevelopment shall not add more than five thousand (5,000) square feet of new impermeable surface to the site. The applicant is significantly affecting the exterior of the building, so this is the appropriate process for review.

The City's Sign Regulations specifically reviews the use of neon lighting as Signage that requires the Planning and Zoning Commission review and approval prior to the installation of the lighting, per the following.

### Section 405.930 General Provisions

#### D. Prohibited Signs. The following types of signs are specifically prohibited in the City:

7. Strips or strings of lights used to call attention to a use or occupancy by outlining property lines, sales area, rooflines, doors, windows, wall edges or other architectural features of a building site. Exempted from this provision are holiday-style lighting

displayed from November first (1st) through January fifteenth (15th) and lights which are an integral architectural feature of the original design of a structure as approved by the Planning and Zoning Commission. (The use of exposed neon is governed by Section 405.930(F)(7) and (8)).

F. Illuminated Signs. The following requirements shall apply to illuminated signs:

7. The use of exposed neon in a window sign(s) with aggregate area larger than six (6) square feet must be reviewed and approved by the Planning and Zoning Commission prior to installation or erection of such sign(s).
8. The use of exposed neon as an illumination source for identification or an architectural feature must be reviewed and approved by the Planning and Zoning Commission prior to installation or erection of the exposed neon.

The proposed LED tube lighting is 42 feet and 19.5 feet in length and is meant to mimic the use of neon that will appear to expand the existing sign to the entire width of the tenant space.

As discussed above, this request could be viewed as giving this tenant an advantage that other tenants with limited visibility from the street are not provided. Additional lighting underneath the building overhang would provide greater visibility of the space when the business is open at night, without the need for the Commission's review, nor would it be specific to the tenant for any future tenant. The Commission should discuss options of the use of lighting, and the colors of the painting with the Applicant. If the Commission is supportive of the use of the LED tube lighting the motion will need to be revised to include such.

All Signs are reviewed per the Sign Ordinance and not at the discretion of the Planning and Zoning Commission, with the exception of the use of neon lighting as discussed above. Moving the Sign higher on the building is not permissible, as that is not an area associated with the tenant space.

#### **ACTION AND MOTION**

The motion to approve the minor site plan as shown in the Applicant's materials will be in the form of approval, approval with conditions, denial or deferral. The following is an example of an appropriate motion for this application:

"I move to approve the minor site plan for the LED lighting and new painted stripes for the Post II Sports Bar and Grill located at 763 Old Ballas Road subject as discussed for the meeting of December 4, 2017" (conditions may be added, eliminated, or modified by preceding motion).

---

#### **APPENDIX 1: COMPREHENSIVE PLAN, INCLUDING DESIGN GUIDELINES**

Included and attached by reference. See body of report for specific excerpts.

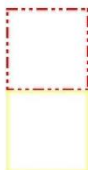
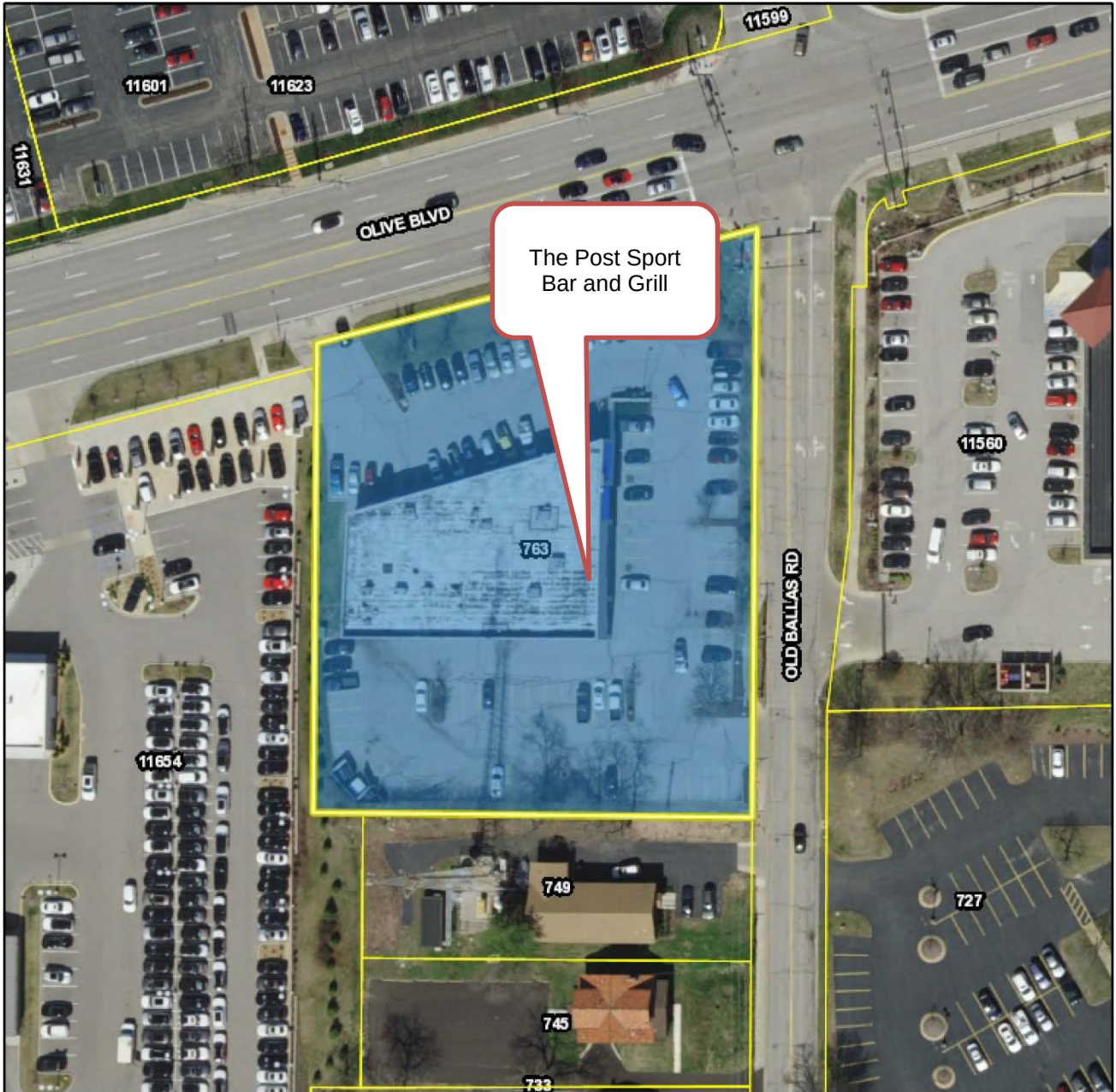
#### **APPENDIX 2: ZONING CODE**

Included and attached by reference. See body of report for specific excerpts.



APPENDIX 3: AERIAL PHOTO

763 Old Ballas Road



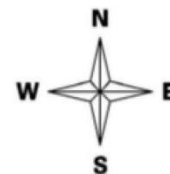
City Limits

Parcels

Parcels Label

Roads Labels

November 6, 2017



Prepared By

HORNER SHIFRIN

**APPENDIX 4: SITE PHOTOGRAPHS**

Photo Date: 11/30/2017



Description: View of the tenant space looking northwest from Old Balls Road



Description: View looking southwest from the north east corner of the property.



Description: View looking southwest at the front of the building facing Olive Boulevard.



The Post Sports Bar and Grill is located at 763 Old Ballas Road which is on the corner of Olive and Old Ballas. The space is in the back area of the building facing Old Ballas. The store front is challenged in respects to visibility with the heavy traffic flow on Olive. Traffic traveling eastbound has zero view of the store frontage. Traffic traveling westbound has limited viewing. The Post has an illuminated sign on the entrance of the space but the sign has limited viewing from west bound traffic.

There are 2 visibility issues the business needs to resolve. The first one is during daylight hours when the entire building from the Olive perspective appears to be not be open and operating even with the building sign. The facade is plain with no color to attract the lucrative lunch crowd traveling westbound on Olive. The lunch crowd is vital for any restaurant operating in that area of Creve Coeur. We propose to paint on the facade 3 colors matching the Post's color branding. Revenue from year 2014 to 2017 projection indicates a revenue loss of 9%. We believe a substantial portion of the sales decrease (and subsequent decrease in sales tax revenue) is attributed to the poor visibility, lack of attraction and growing impediment of the trees on Old Ballas.

The other visibility issue is during night hours where the illuminated sign is partially blocked by the trees as well competing with the downward slope of the property. Our solution to this problem would be to move the existing sign to another location on the same side of the building at a height that reduces the visibility issues caused by the low façade and trees. We have reached out to the landlord of the building to ensure that this would not be a problem with them considering the higher portion of the façade is the outside wall of another store. The landlord has said that it would not be a problem and they just need to see a rendering in order to see what the sign would look like so they can officially sign off on the permission.

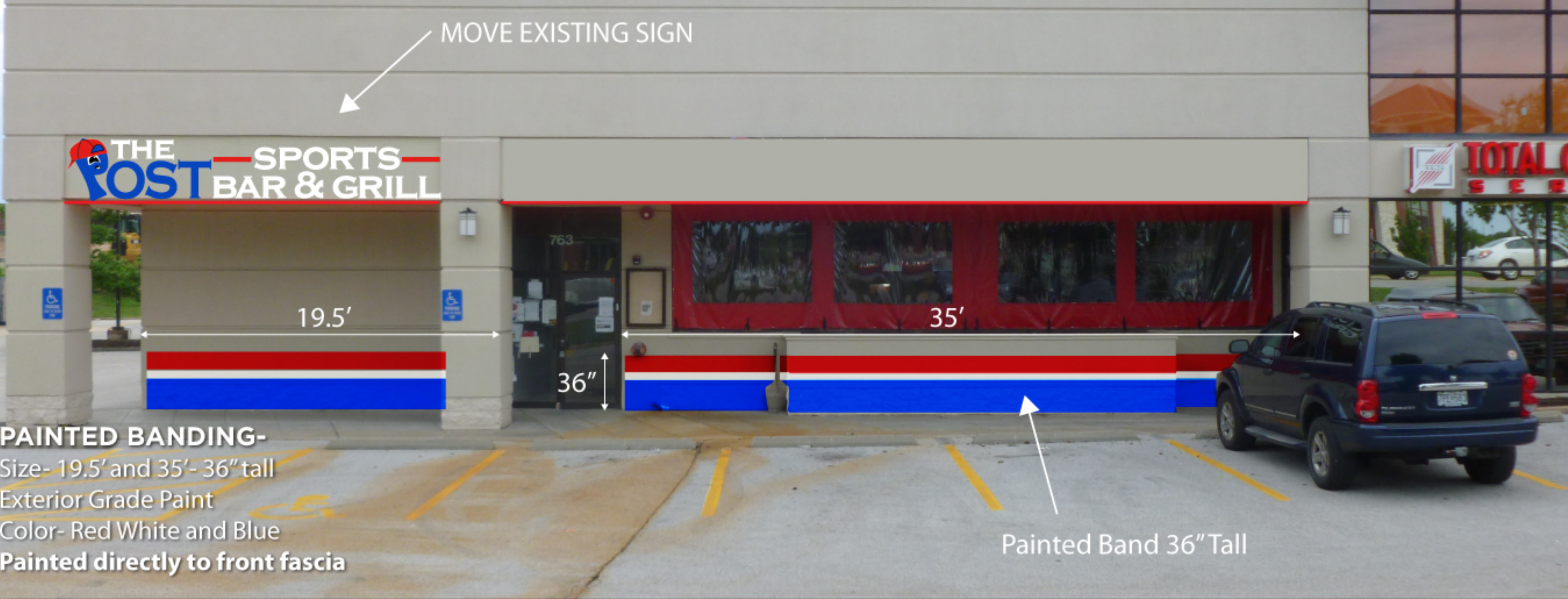
Another option for improved visibility would be to add a red LED tube light that would extend across the fascia facing Old Ballas. This would grab attention to potential customers traveling westbound on Olive.

We hope the board can see the challenges The Post Sports Bar and Grill is experiencing and approve the recommendations offered in the review.

Thank you

Adrian Glass  
President



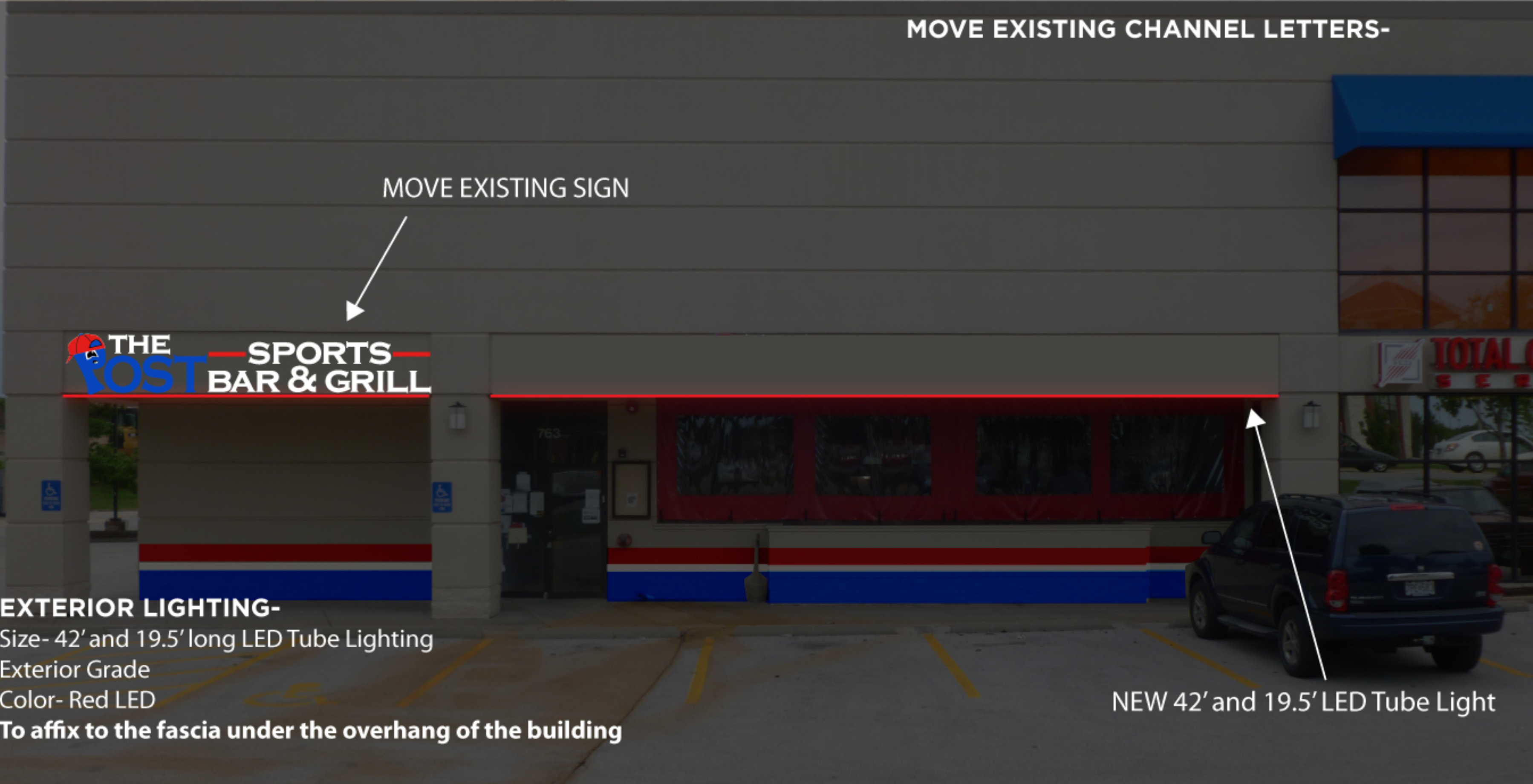


**PAINTED BANDING-**  
Size- 19.5' and 35'- 36" tall  
Exterior Grade Paint  
Color- Red White and Blue  
Painted directly to front fascia

Painted Band 36" Tall



**Post Sports Bar & Grill**  
763 Old Ballas Rd, Creve Coeur, MO 63141



**EXTERIOR LIGHTING-**  
Size- 42' and 19.5' long LED Tube Lighting  
Exterior Grade  
Color- Red LED  
To affix to the fascia under the overhang of the building

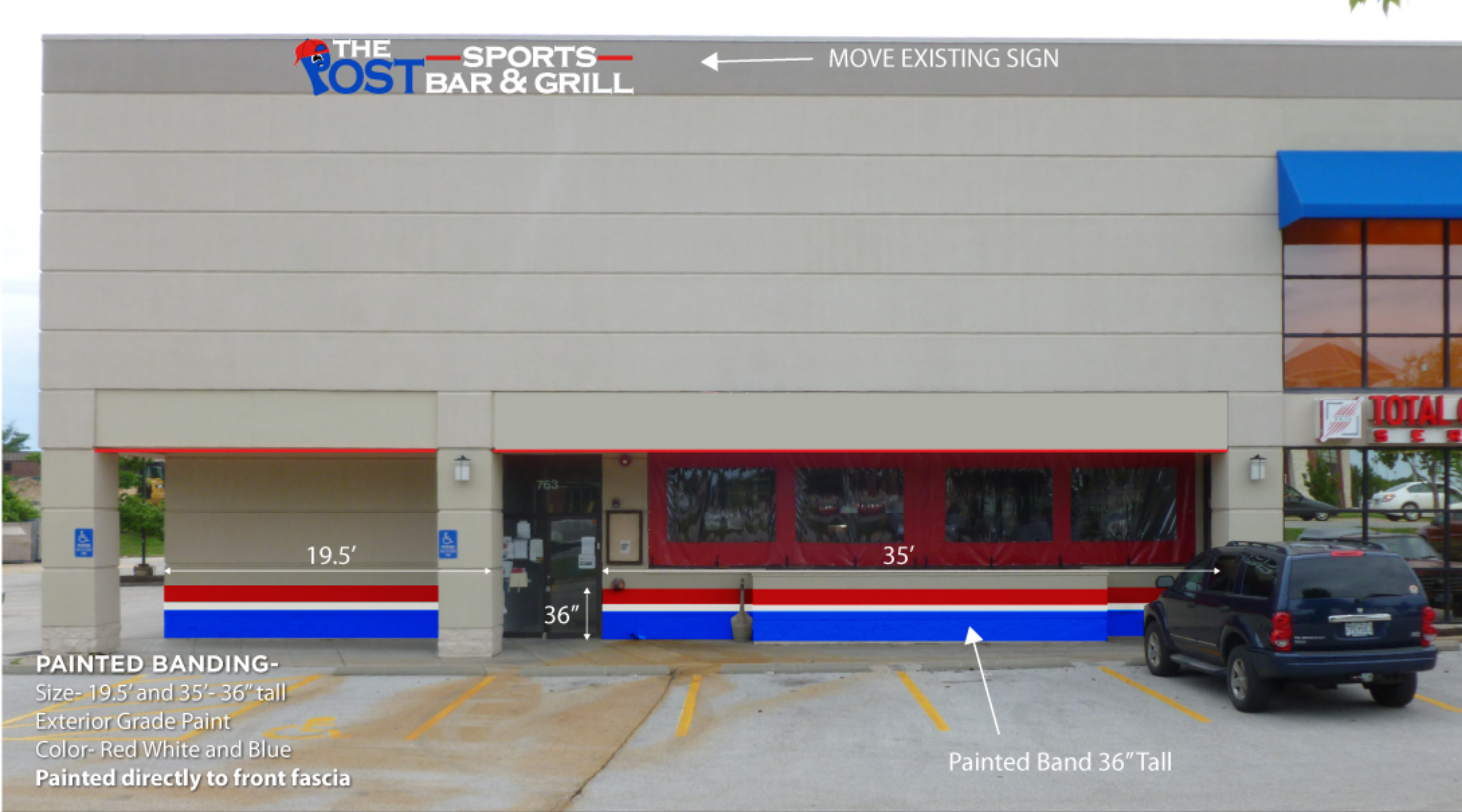
NEW 42' and 19.5' LED Tube Light



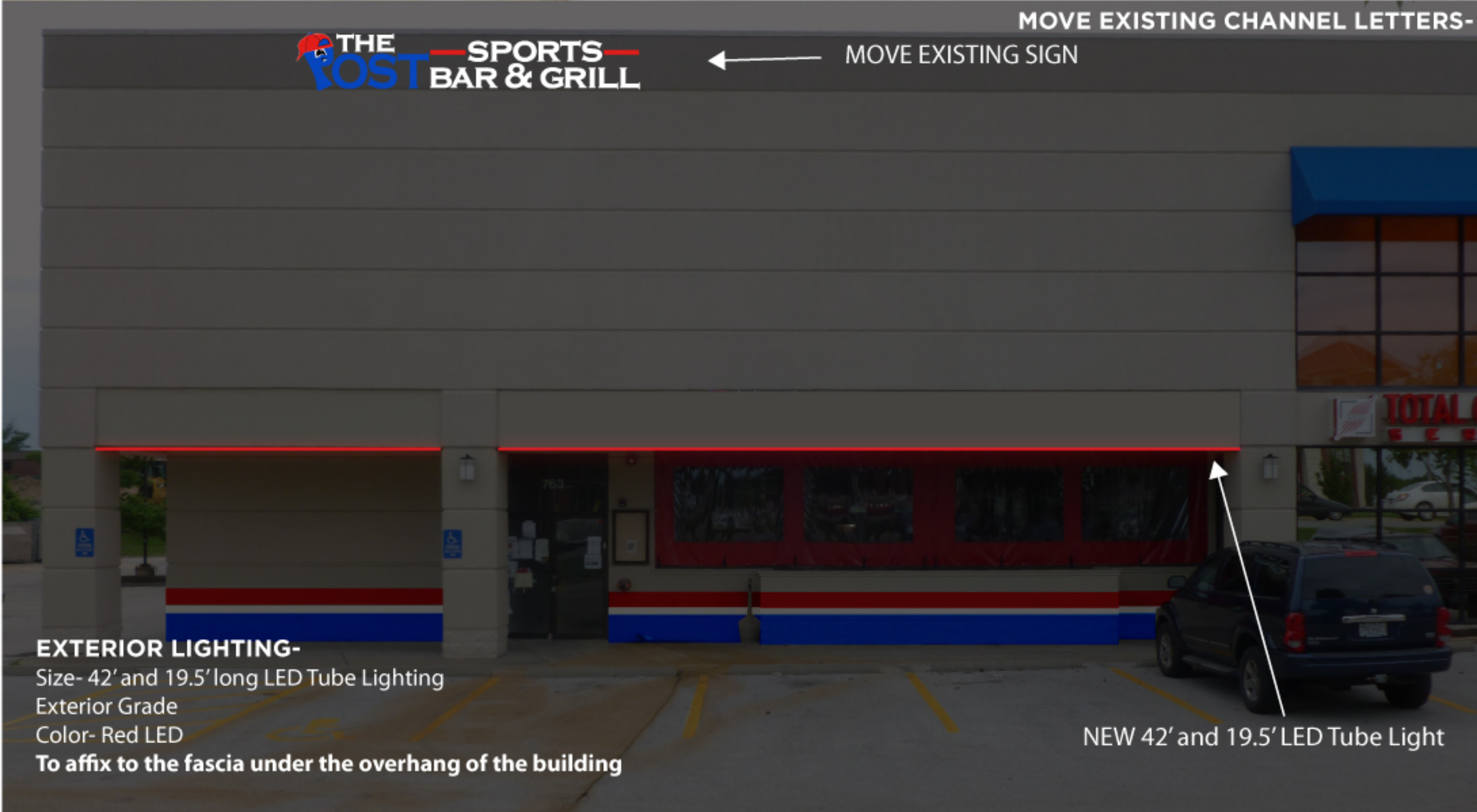
**Exterior Grade LED Tube Lighting**

ALL SIGNS, GRAPHICS AND DESIGNS SHALL REMAIN THE SOLE PROPERTY OF THE DESIGNERY UNTIL PAID IN FULL, OR RELEASED IN WRITING. © THE DESIGNERY 2015





**Post Sports Bar & Grill**  
763 Old Ballas Rd, Creve Coeur, MO 63141



ALL SIGNS, GRAPHICS AND DESIGNS SHALL REMAIN THE SOLE PROPERTY OF THE DESIGNERY UNTIL PAID IN FULL, OR RELEASED IN WRITING. © THE DESIGNERY 2015

**DESIGNERY**  
creative solutions

3051 Bartold Ave., St. Louis MO 63143  
www.designery.com | 314.647.1700

**CLIENT** | Post Sports Bar

**CONTACT** | Adrian Glass

**PHONE** | 618-920-9419

**EMAIL** | aglass@thepostsportsbar.com

**PROJECT** | Exterior Lighting

**SIGN TYPE** | LED

**SIGN**

|              |        |                 |         |
|--------------|--------|-----------------|---------|
| <b>JOB</b>   | 16464  | <b>DATE</b>     | 10.2.17 |
| <b>PROOF</b> | PERMIT | <b>DESIGNER</b> | Colleen |
|              |        | <b>DATE</b>     |         |

© The DeSIGNery Shop 2015. All Rights Reserved. This is an original unpublished design, created solely by The DeSIGNery Shop. This design shall remain the intellectual property of The DeSIGNery Shop and is submitted for your approval, for this specific project. Unauthorized use of this design in part, or whole, is prohibited without express written consent of The DeSIGNery Shop. All signs, graphics and designs shall remain the sole property of The DeSIGNery Shop until paid in full, or released in writing.

Packet Pg. 372





300 North New Ballas Road • Creve Coeur, Missouri 63141  
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966  
www.creve-coeur.org

**APPLICATION TO PLANNING AND ZONING COMMISSION**  
**#17-043 FOR A CONDITIONAL USE PERMIT FOR A USED CAR DEALER,**  
**CAN-AM CARS LTD AT 10665 BAUR BOULEVARD**

**FOR THE MEETING OF:** December 18, 2017

**LOCATION:** 10665 Baur Boulevard, in the LI (Light Industrial) District

**REQUEST:** Jeff Downes, of Can-Am Cars LTD, has submitted an application for a conditional use permit for the warehousing and sale of vintage race cars and parts at 10665 Baur Boulevard, Creve Coeur, MO 63141 in the City's LI-Light Industrial District. The vehicles are not for street use, and the business is not open to the public; conducted by appointment only. There are no changes to the exterior of the building or site proposed with this application.

**ADDITIONAL INFORMATION:** Used Car Sales (NAICS 441120) are permitted as conditional uses with review and approval by the City Council upon the recommendation of the Planning and Zoning Commission in the LI-Light Industrial District, provided that all business operations (including, but not limited to, vehicle service, cleaning and storage) will take place indoors, and at no time will any vehicle that is on the premises for sale or service be parked or displayed outdoors.

**Key Issues:**

- Does the request integrate with the surrounding uses?
- Does the request further the goals and/or implement the Comprehensive Plan?

**Comprehensive Plan References**

- Mixed-Use Innovation Campus District (MUIC)

**Zoning Code References**

- Section 405.210: Regulation of Uses
- Section 405.380: LI Light Industrial District
- Section 405.470: Conditional Uses
- Article VII Off-Street Parking And Loading Regulations

**APPLICANTS:** Jeff Downes  
Can-Am Cars LTD  
825 Wheelwright Drive  
Manchester, MO 63021

**PROPERTY OWNER:** Jennifer Haines Downes  
JHD Properties LLC  
312 Cabin Grove Lane  
Creve Coeur, MO 63141



**REPORT PREPARED BY:** Whitney Kelly, AICP, City Planner

**DATE:** December 12, 2017

**ATTACHMENTS:** Applicant's Materials received November 17, 2017  
Draft Ordinance

Attachment: 17-043.Can-Am Cars CUP.Staff Report.12-18-2017 (#17-043: Can-Am Cars CUP)

### BACKGROUND AND PROPOSAL

The existing 18,416 sq. ft. warehouse building was originally built in 1966 on a site of approximately 1.27 acres in the Lindbergh-Warson Industrial Center. Originally developed under St. Louis County jurisdiction, the entire area was annexed into the City of Creve Coeur in 1990 and subsequently zoned LI-Light Industrial District. The property has remained largely unchanged since that time.

On October 24, 2011, the City Council approved a text amendment to include the sale of used-only automotive dealers in the “LI” District as a conditional use, provided that all business operations will take place indoors, and at no time will any vehicle that is on the premises for sale or service be parked or displayed outdoors.

The Applicant is a used car dealer that specializes in vintage race cars and parts, and currently operates in Manchester, MO. The Applicant will be utilizing the entire building and all activity and storage of all vehicles and parts will be indoors. No changes to the exterior of the building or site are proposed with this request.

### LAND USE AND ZONING OF SURROUNDING PROPERTIES

The adjacent zoning and land uses are as follows:

| DIRECTION | USE        | ZONED                        | SEPARATED BY   |
|-----------|------------|------------------------------|----------------|
| North     | Industrial | Unincorporated St. Louis Co. | N/A            |
| South     | Industrial | LI-Light Industrial          | Baur Boulevard |
| East      | Industrial | LI-Light Industrial          | NA             |
| West      | Industrial | LI-Light Industrial          | NA             |

### COMPREHENSIVE PLAN REVIEW

The subject property is located within the Mixed-Use Innovation Campus District and the 39 North Master Plan. The vision for the Mixed-Use Innovation Campus District (MUIC) is a sustainable hub for cutting-edge research, job opportunities, and community amenities that encourages innovation, collaboration, and entrepreneurship in a vibrant, mixed-use environment. As the proposal is utilizing a vacant warehouse building, and the nature of the use requires that a clean, well-kept appearance be maintained that is of a higher caliber than is typically seen in traditional light industrial uses, the proposed use would satisfy the goals and objectives of the Comprehensive Plan in as much as this request can.

### ZONING REVIEW

#### Pre-conditions:

Used-only automotive dealers are permitted with conditions in the “LI” Light Industrial District subject to the provisions of Section 405.470:

#### SECTION 405.470: CONDITIONAL USES

12. New car dealers, used car dealers, motorcycle dealers, and boat dealers — NAICS 441110, 441120, 441221 and 441222 (conditional use in the "LI" District).
  - a. Indoor operations only. All business operations (including, but not limited to, vehicle service, cleaning and storage) will take place indoors, and at no time will any vehicle that is on the premises for sale or service be parked or displayed outdoors. This shall not be interpreted to require service bay doors to be closed except as may be required by an approved conditional use permit.
  - b. Site size. Shall be located on lots of not less than one (1) acre.
  - c. Trash disposal and storage. All used tires and parts, trash and similar objects shall be stored and fully screened from view of the public right-of-way.



The Applicant has indicated that all cars and any maintenance will occur inside the building. There is a pre-existing trash dumpster enclosure at the rear of the property that consists of raw metal chain-link fencing with inserts, per the image below:



Figure 1: Close-up of the site photos showing the existing trash enclosure.

The City's Design Guidelines that states that "chain link fencing is discouraged. Chain link fencing with wood or any type of inserts or lining is not considered suitable." And, all Accessory Structures, such as trash enclosures are to be designed to directly relate in material, character and detail to the primary building on the site. Staff has included a condition of approval that the existing enclosure may remain. But if it is to be rebuilt, a material consistent with the main building would be required for the Zoning Administrator's approval at that time. If the Commission wishes to see that the structure be completed with the application, discussion with the Applicant and an amendment to the draft ordinance will be necessary.

Lastly, the property consists of 1.27 acres, thus satisfying all of the requirements for the conditional use, subject to the aforementioned condition.

#### *Landscaping:*

The existing landscaping has been well maintained, with the minor exception of a few missing bushes along the front of the building. Therefore, Staff has included a recommendation for a new landscape plan at this time to account for the existing landscaping and provide for replacement to the missing shrubs. If the Commission would like to see additional plantings, a condition will need to be included.

#### *Parking:*

Parking regulations for Automotive Dealers are discussed under Section 405.820(F)(1) of the Required Off-Street Parking Spaces regulations:

#### SECTION 405.820. REQUIRED OFF-STREET PARKING SPACES.

##### F. Wholesale And Retail Trade (NAICS 42, 44-45, 49 722).

##### 1. Automotive Dealers (NAICS 4411-4413) (not including automobile repair):

- a. Automobile or boat dealers (NAICS 4411-4412). One (1) space per two hundred fifty (250) square feet of showroom floor area plus three (3) parking spaces per service bay plus one (1) space per one thousand two hundred fifty (1,250) square feet of total aggregate building area. Parking spaces typically occupied by new or used automobiles for sale shall not be counted towards the required off-street parking requirements. Such parking spaces occupied by automobiles for sale do not have to meet the minimum parking space requirements specified in this Chapter.

6. Wholesale trade, warehousing and storage (NAICS 42, 49) shall have their parking requirements based on the following:

| Building Size                                                             | Parking Spaces                |
|---------------------------------------------------------------------------|-------------------------------|
| Less than 5,000 square feet                                               | 1 space per 1,000 square feet |
| 5,000 to 15,000 square feet                                               | 1 space per 1,500 square feet |
| 15,001 to 40,000 square feet                                              | 1 space per 2,000 square feet |
| Greater than 40,001 square feet                                           | 1 space per 2,500 square feet |
| or one (1) space per employee on the largest shift, whichever is greater. |                               |

The Applicant's site plan indicates that there are 27 parking spaces on site, plus two spaces for loading and unloading of large trucks. Two spaces are shown as a compact car, where the City's Parking regulations only allow for a 9x19 dimension for the parking space. Given the specialized nature of the Automotive dealer, that the business is limited to appointments only and not open to the general public, with 3 employees, and that this is the only use within the building and all vehicles are stored within the warehouse space, Staff would view the parking to be more appropriately aligned with that of a warehousing and storage use. For an 18,416 sq. ft. building, a total of 10 spaces are required for warehousing and storage uses. Thus, Staff does not anticipate a parking problem with this use. While visiting the site, the only spaces striped are the four spaces at the front of the building, and those are very faint. Therefore, Staff has included a condition of approval that the parking lot will need to be restriped with a minimum of 10 parking spaces required.

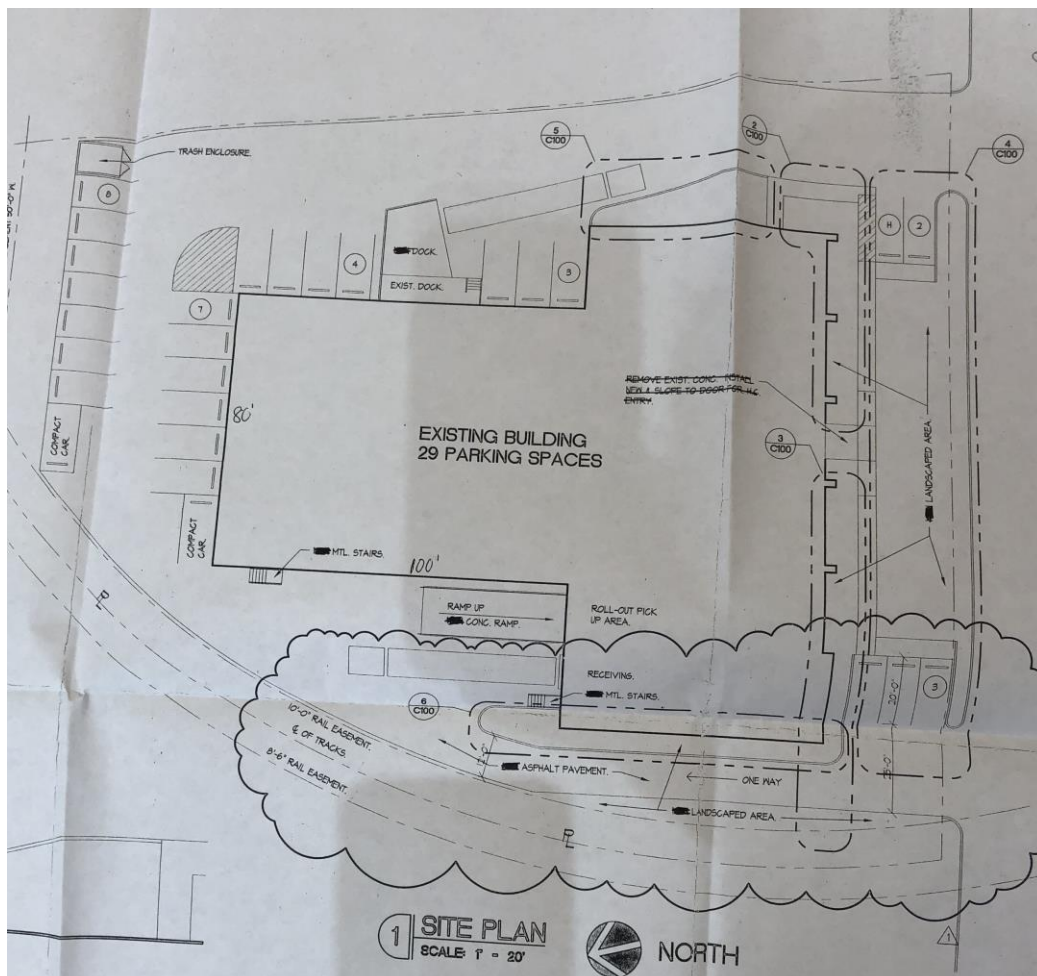


Figure 2: Close-up of the Applicant's site plan



## RECOMMENDATION

Based on the above analysis, the request for a conditional use permit meets all of the requirements of the Comprehensive Plan and Zoning Ordinances. Staff recommends approval subject to the conditions below which are included in the draft ordinance:

1. The Conditional Use Permit shall be for the operation of a used-only automotive dealer (NAICS 441120) located at 10665 Baur Boulevard.
2. All business operations shall take place indoors, and at no time will any vehicle that is on the premises for sale or service be parked or displayed outdoors.
3. There shall be no body work or major repairs of vehicles, or testing of engines, associated with this use at this location.
4. The hours of operation are by appointment only. Additional business hours may be permitted with the Zoning Administrator's approval, including but not limited to, the hosting of special events.
5. The Applicant shall obtain a building permit to address any building code issues associated with the use and any property maintenance issues.
6. A new landscape plan shall be provided to account for the existing and to replace where there are some missing shrubs on the site.
7. The parking lot shall be restriped to provide at least 10 parking spaces.
8. The existing chain link trash enclosure may remain, however should it be rebuilt it shall be of a materials consistent with the main building for the Zoning Administrator's approval.
9. Any new mechanical equipment installed for the site shall be properly screened with approved materials by the Zoning Administrator.
10. All signs and banners shall be in conformance with Article VII, Sign Regulations, of the Zoning Code.
11. Any future enlargement, extension, expansion or alteration in the use of the structures or site must be approved by the City Council upon receipt of the recommendation of the Planning and Zoning Commission as an amendment to the Conditional Use Permit before a Building Permit for the enlargement, expansion or alteration may be issued.

## ACTION

If the Planning and Zoning Commission finds the attached draft conditional use permit ordinance to be in conformance with the purposes and regulations of the Comprehensive Plan and Zoning Code, it may vote on a recommendation to the City Council. Any changes to the draft ordinance should be discussed and made by separate actions.

## MOTION

The following is an example of an appropriate motion for this application:

"I move to recommend approval of a new Conditional Use Permit for Can-AM Cars, LLC allowing used-only automotive sales at 10665 Gateway Boulevard, subject to the conditions contained in the draft ordinance attached to the staff report on Application #17-043, dated December 18, 2017" (conditions may be added, eliminated, or modified by preceding motion).

---

## APPENDIX 1: COMPREHENSIVE PLAN

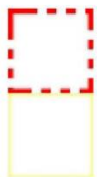
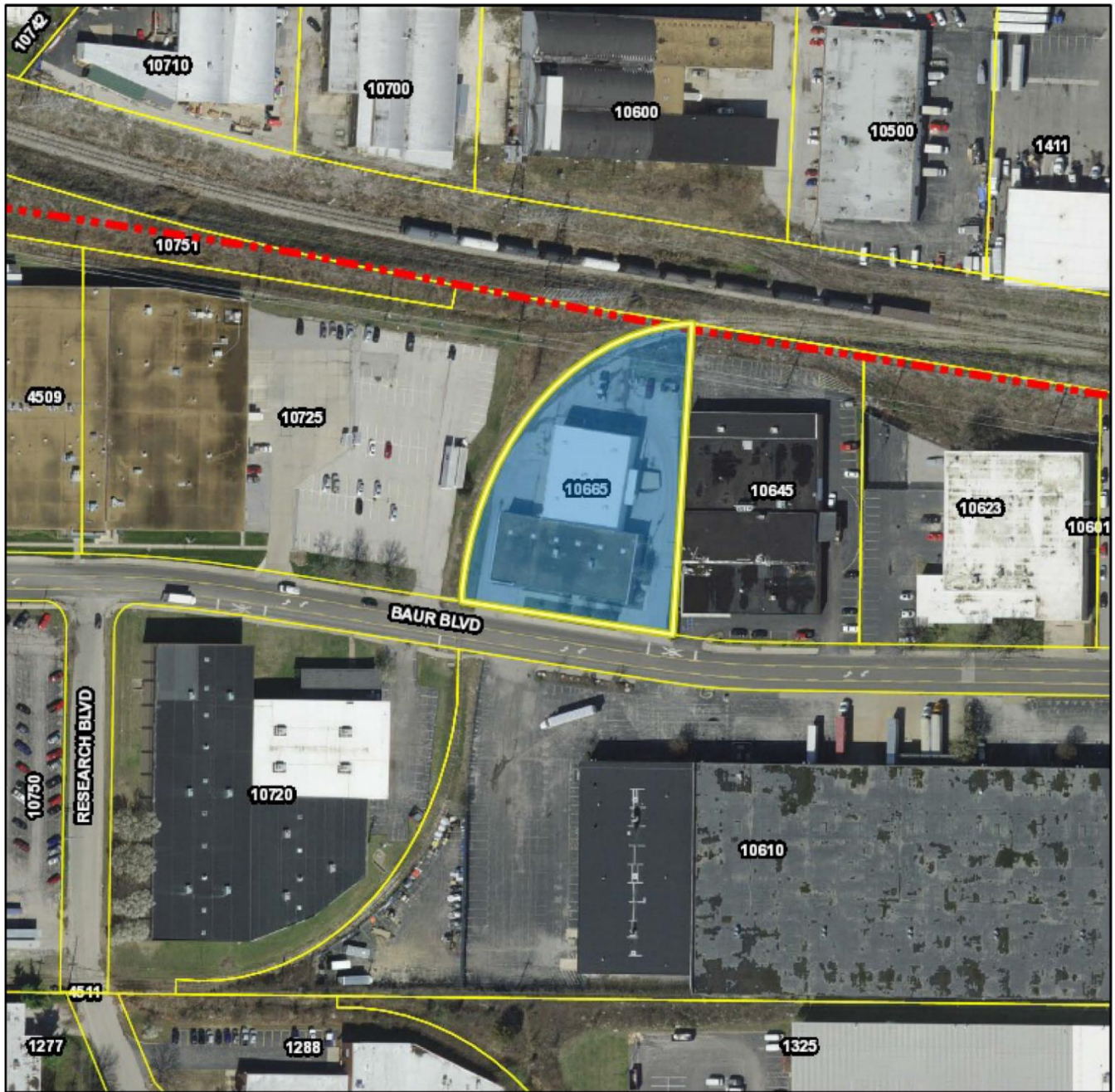
Included and attached by reference. See body of report for specific excerpts.

## APPENDIX 2: ZONING CODE

Included and attached by reference. See body of report for specific excerpts.

### APPENDIX 3: AERIAL PHOTO

#### 10665 Baur Boulevard



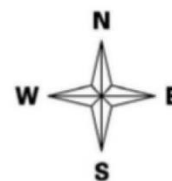
City Limits

Parcels

Parcels Label

Roads Labels

December 4, 2017



Prepared By

HORNER SHIFRIN



| APPENDIX 4: SITE PHOTOGRAPHS                                                        | Photo Date:12/12/2017                                                                                                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
|    | <p>Description: View of the existing building from across Baur Blvd.</p>                                                   |
|   | <p>Description: View of the looking north along the east of the building, with the trash enclosure at the back corner.</p> |
|  | <p>Description: View of the looking northwest toward the adjacent industrial development.</p>                              |

CAN-AM CARS LTD  
JEFF DOWNES  
(W) 636-227-3959  
(C) 314-602-3140

825 WHEELWRIGHT DRIVE  
MANCHESTER, MO 63021  
CANAMCARS@SBCGLOBAL.NET  
JEFFD@CANAMCARSLTD.COM

November 16, 2017

Planning Division  
City of Creve Coeur  
300 North New Ballas Road  
Creve Coeur, Missouri 63141

Dear Sir / Madame,

Can-Am Cars LTD is submitting an application for a Conditional Use permit for the building at 10665 Baur Blvd.

Can-Am Cars LTD plans to use the warehouse to house our Vintage Race Car collection and associated Vintage Race Car parts. The vehicles are race cars and are not for street use.

In addition, Can-Am Cars LTD is not open to the public. Therefore, our impact on our neighboring businesses will be negligible.

There will not be any tenants in the building.

Please contact me with any questions, or if you need additional information.

Thank you for your time.

Regards,



Jeff Downes  
Can-Am Cars LTD  
825 Wheelwright Drive  
Manchester, MO 63021  
314-602-3140






 city  
of

# CREVE COEUR

## PLANNING DIVISION

 300 North New Ballas Road Creve Coeur, Missouri 63141  
 Tel. (314) 872-2501 • Fax (314) 872-2505

### PLANNING AND ZONING COMMISSION AGENDA APPLICATION CONDITIONAL USE PERMIT

PLEASE COMPLETE FRONT AND BACK PAGES

| Applicant:                                           | Applicant's Representative (if applicable):              |
|------------------------------------------------------|----------------------------------------------------------|
| <b>Name</b><br><u>Can-Am Cars LTD</u>                | <b>Name</b><br><u>Jeff Downes</u>                        |
| <b>Company (If Applicable)</b><br><u>Jeff Downes</u> | <b>Company (If Applicable)</b><br><u>Can-Am Cars LTD</u> |
| <b>Address</b><br><u>825 Wheelwright Dr.</u>         | <b>Address</b><br><u>825 Wheelwright Dr.</u>             |
| <b>Address</b><br><u>Manchester MO 63021</u>         | <b>Address</b><br><u>Manchester, MO 63021</u>            |
| <b>Telephone #</b> <u>636-227-3959</u>               | <b>Telephone #</b> <u>314-602-3140</u>                   |
| <b>Fax #</b> <u>636-227-3959</u>                     | <b>Fax #</b> _____                                       |
| <b>Email:</b> <u>canamcars@sbcglobal.net</u>         | <b>Email:</b> <u>jeff@canamcarsltd.com</u>               |
| <b>Applicant's Signature</b>                         | <b>Applicant's Representative's Signature</b>            |

| Property Information:                                 | Owner's Acknowledgement (if different from applicant):      |
|-------------------------------------------------------|-------------------------------------------------------------|
| <b>Address</b><br><u>10665 Baur Blvd</u>              | <b>Name</b><br><u>Jennifer Haines Downes</u>                |
| <b>Address</b><br><u>Creve Coeur MO 63132</u>         | <b>Company (If Applicable)</b><br><u>JHD Properties LLC</u> |
| <b>Development Name (if any)</b><br><u>Commercial</u> | <b>Address</b><br><u>312 Cabin Grave Lane</u>               |
| <b>Current Zoning</b><br><u>Commercial</u>            | <b>Address</b><br><u>Creve Coeur, MO 63141</u>              |
| <b>Prior CUP Approvals (if known)</b><br>_____        | <b>Telephone #</b> <u>314-302-2444</u>                      |
| _____                                                 | <b>Fax #</b> _____                                          |
| _____                                                 | <b>Email:</b> <u>jenniedownes@sbcglobal.net</u>             |
| _____                                                 | <b>Owner's Signature</b>                                    |

Attachment: Applicant's Materials (#17-043: Can-AM Cars CUP)

**Description of Requested Use (attach additional sheets as needed)**

General Description of Business:

Vintage race car collection  
and associated Vintage race car parts.  
Vehicles are race cars and not for  
street use.

Gross Floor Area – Existing and Proposed:

18,416 sqft

Number of Seats (for restaurant only):

N/A

Number of Employees at the busiest shift:

3

Hours of Operation:

By appointment only

Current or Most Recent Use of the Property:

Motor Distributing

Will the applicant apply for a liquor license: Yes

No

**Rationale**

Please describe in detail, on an attached sheet, the reasons why you believe the request for a conditional use permit should be approved and what steps are being taken to lessen any impacts on surrounding residences and businesses. An explanation of the building and landscape designs (if changes are proposed) should also be included.

**Submittal Checklist**

- |                                                                                          |                                                                      |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Rationale                                            | <input type="checkbox"/> Building elevations for new construction    |
| <input checked="" type="checkbox"/> Site plan                                            | <input type="checkbox"/> Photographs of existing structures          |
| <input checked="" type="checkbox"/> Access and parking plan; (may be shown on site plan) | <input type="checkbox"/> Materials samples                           |
| <input checked="" type="checkbox"/> Landscape plan                                       | <input checked="" type="checkbox"/> Legal Description in Word format |
| <input type="checkbox"/> Floor plan                                                      | <input checked="" type="checkbox"/> Fees: \$250 (non-refundable)     |
| <input type="checkbox"/> Electronic copies of all materials                              | \$2000 (refundable deposit)                                          |
|                                                                                          | <input type="checkbox"/> Other items as requested by staff           |

Preferred Public Hearing Date: Monday, \_\_\_\_\_, 20\_\_\_\_.

**\*\*Confirm schedule and available meeting dates with Planning Division staff\*\*****Office Use Only**

All Sections Complete

Received By:

All Documents, incl. e-Copies

Fees Paid

Date:

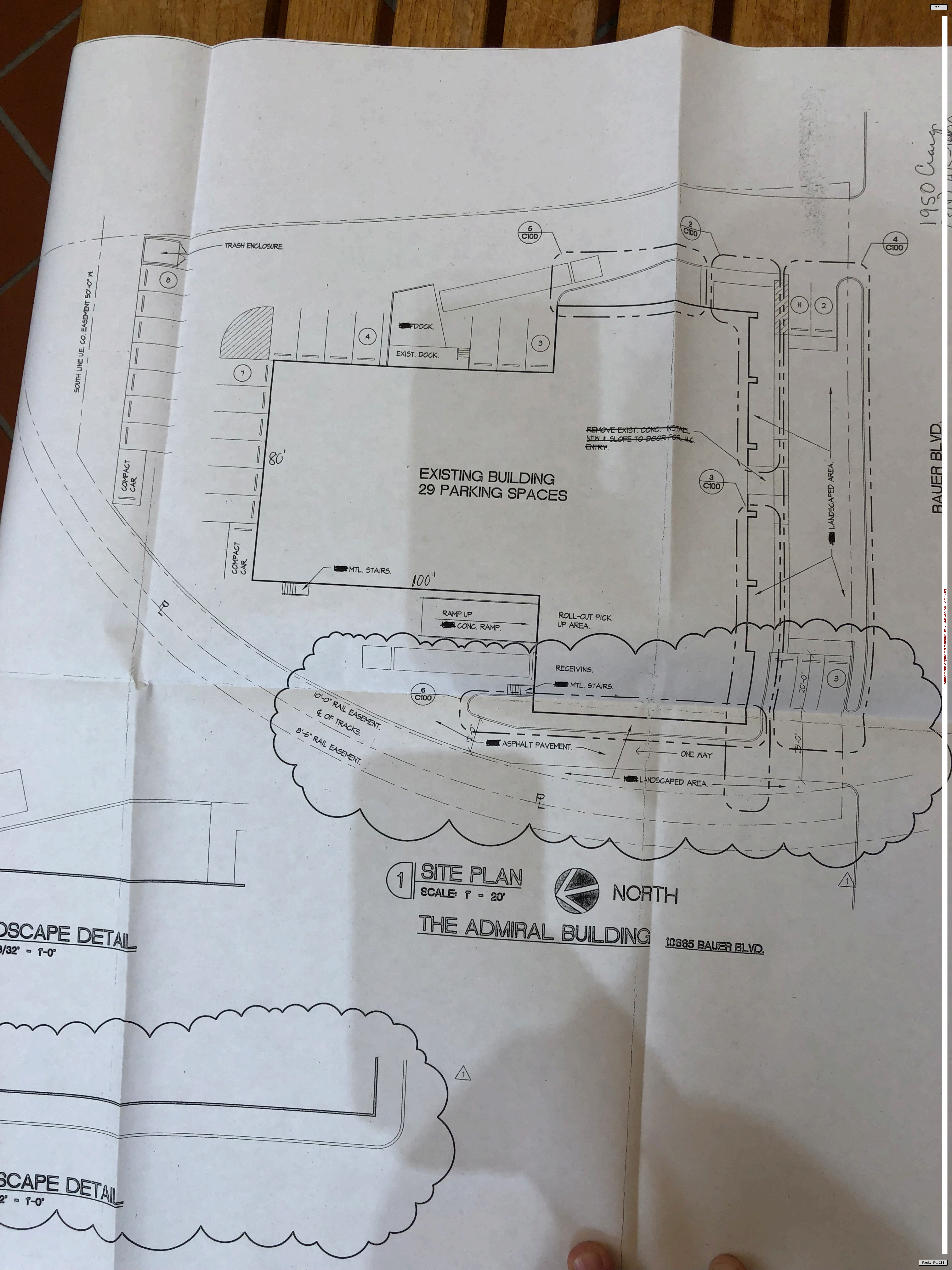
Jason Jaggi, AICP, Director of Community Development

Whitney Kelly, AICP, City Planner

Jessica Stutte, Administrative Assistant (314-872-2501)

Revised: 1/17





LANDSCAPE DETAIL  
3/32" = 1'-0"

LANDSCAPE DETAIL  
2" = 1'-0"

1950 Camp

BAUER BLVD.

Attachment: Applicant's Materials (10-000-Cover-A4-Cover-Cover)













BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

**AN ORDINANCE AUTHORIZING THE ISSUANCE OF A NEW CONDITIONAL USE  
PERMIT FOR USED-ONLY AUTOMOTIVE DEALER, CAN-AM CARS, LLC  
AT10665 BAUR BOULEVARD**

**WHEREAS**, under Section 405.380(C), all Used Car Sales (NAICS 441120) in the “LI” Light Industrial zoning district require the issuance of a conditional use permit as provided in Section 405.1070, Conditional Use Permits; and

**WHEREAS**, an application was submitted by Jeff Downes owner of Can-Am Cars LTD, for a conditional use permit for the sale of vintage race cars and parts at 10665 Baur Boulevard, where all activity will occur inside the building; and

**WHEREAS**, a public hearing was held by the Creve Coeur Planning and Zoning Commission on Monday, December 18, 2017, beginning at 6:30 p.m. or immediately following the close of the previous public hearing, on said application for the conditional use permit as provided by Section 405.1070(D)(2); and

**WHEREAS**, notice of publication for said public hearing had been previously published at least 15 days prior to the hearing, in the St. Louis Countian, a newspaper of general circulation in the City of Creve Coeur; and

**WHEREAS**, the Planning and Zoning Commission reviewed and, by a \_\_\_\_ vote, recommended approval of the conditional use permit, subject to the conditions contained herein, at its meeting on December 18, 2017; and

**WHEREAS**, all parties desiring to be heard, either for or against said application, were given an opportunity to be heard, and a copy of the proposed ordinance has been made available for public inspection prior to its consideration by the Council; and this Bill having been read by title in open meeting two times before final passage by the City Council, and

**WHEREAS**, the City Council finds that the application and evidence presented clearly indicate that the proposed conditional use, when subject to certain conditions set forth herein:

1. Will contribute to and promote the community welfare and convenience at the specific location.
2. Will not cause substantial injury to the value of neighboring property.
3. Meets the applicable provisions of the City's Comprehensive Plan and any applicable neighborhood or sector plans and complies with other applicable zoning district regulations and provisions of this Chapter, unless good cause exists for deviation therefrom.
4. Will be compatible with the surrounding area and thus will not impose an excessive burden or have a substantial negative impact on surrounding or adjacent users or on community facilities or services.

**NOW, THEREFORE**, be it ordained by the City Council of the City of Creve Coeur, St. Louis County, Missouri, as follows:

**Section 1:** A Conditional Use Permit is authorized to be issued pursuant to Section 3 hereof for the operation of a used-only automobile dealership (NAICS 441120) at 10665 Baur Boulevard, in LI (Light Industrial) District, whose legal description is as follows:

Attachment: 17-043. Can-Am Cars CUP. Draft Ordinance. 12-18-2017 (#17-043: Can-Am Cars CUP)

BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

Part of Section 2 of Lindbergh-Warson Industrial Center, as per plat thereof recorded in Plat Book 76 page 13 of the St. Louis County Records and described as follows:

Beginning at a point in the North line of Baur Boulevard, 50 feet wide at the Southwest corner of a part of said Section 2, conveyed to Compton and Sons, Inc., a corporation, by instrument recorded in Book 3641 page 476, thence on the North line of said Baur Boulevard, North 81 degrees West to a curve being the West line of a 10 foot wide Rail Easement as shown on said plat, thence North on the arc of said curve having a radius of 287.94 feet to the South line of said right of way, South 80 degrees 59 minutes East to the Northwest corner of said tract conveyed to Compton and Sons, Inc., thence on the West line of said tract conveyed to Compton and Sons, Inc., South 2 degrees 50 minutes West 326.95 feet to the North line of said Baur Boulevard and the point of beginning.

**Section 2:** The Conditional Use Permit granted shall be subject to all applicable statutes, ordinances, rules and regulations, and the following conditions:

1. The Conditional Use Permit shall be for the operation of a used-only automotive dealer (NAICS 441120) located at 10665 Baur Boulevard.
2. All business operations shall take place indoors, and at no time will any vehicle that is on the premises for sale or service be parked or displayed outdoors.
3. There shall be no body work or major repairs of vehicles, or testing of engines, associated with this use at this location.
4. The hours of operation are by appointment only. Additional business hours may be permitted with the Zoning Administrator's approval, including but not limited to, the hosting of special events.
5. The Applicant shall obtain a building permit to address any building code issues associated with the use and any property maintenance issues.
6. The parking lot shall be restriped to provide at least 10 parking spaces.
7. The existing chain link trash enclosure may remain, however should it be rebuilt it shall be of a materials consistent with the main building for the Zoning Administrator's approval.
8. A new landscape plan shall be provided to account for the existing and to replace where there are some missing shrubs on the site.
9. Any new mechanical equipment installed for the site shall be properly screened with approved materials by the Zoning Administrator.
10. All signs and banners shall be in conformance with Article VII, Sign Regulations, of the Zoning Code.
11. Any future enlargement, extension, expansion or alteration in the use of the structures or site must be approved by the City Council upon receipt of the recommendation of the Planning and Zoning Commission as an amendment to the Conditional Use Permit before a Building Permit for the enlargement, expansion or alteration may be issued.
12. Failure to comply with any one or all of the conditions of this permit shall be adequate cause for the revocation of said permit by the City Council, provided, however, no permit shall be revoked without prior notice to the owner of the intention of the City Council to revoke this permit and reasonable time granted to the owner to correct or remedy any such breach of conditions, except for repeated breaches or violations.
13. No conditional use permit granted by the City Council shall be valid for a period longer than one year from the date it grants the conditional use permit, unless within such period: (1) a building permit is obtained and construction is begun; or (2) if a building



BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

permit is not required, an occupancy permit is obtained and the use of the building commenced. The City Council may grant extensions to the one (1) year period of not more than one hundred and eighty (180) days each, without notice or hearing, provided that a written request for such extension is filed by the original applicant and approved by the City Council prior to the date the conditional use permit is scheduled to expire.

14. Any transfer of ownership or lease of the property shall include in the transfer or lease agreement a provision that the purchaser or lessee agrees to be bound by the approved Site Development Plan for the property and the conditions herein set forth, and written confirmation thereof signed by the new owner or lessee shall be filed with the City at the time of such transfer or lease. Failure to comply with this provision shall not excuse anyone from these conditions.

**Section 3:** The City Administrator of the City of Creve Coeur is hereby authorized and directed to issue a Conditional Use Permit in accordance with the provisions of this ordinance, said permit to expressly provide for the conditions and stipulations hereinabove set out in Section 2 of this ordinance. Exercise of the rights granted pursuant to the issued permit shall constitute acceptance of all conditions and stipulations set forth herein.

**Section 4:** This ordinance shall become effective in accordance with Section 3.11 (g) of the City Charter.

ADOPTED THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2017.

\_\_\_\_\_  
DR. ROBERT HOFFMAN  
PRESIDENT OF CITY COUNCIL

APPROVED THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2017.

\_\_\_\_\_  
BARRY GLANTZ  
MAYOR

ATTEST:

\_\_\_\_\_  
DEBORAH RYAN, MPCC  
CITY CLERK

Attachment: 17-043.Can-Am Cars CUP.Draft Ordinance.12-18-2017 (#17-043: Can-Am Cars CUP)



300 North New Ballas Road • Creve Coeur, Missouri 63141  
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966  
www.creve-coeur.org

**APPLICATION TO PLANNING AND ZONING COMMISSION  
#17-044 FOR THE REZONING FROM A SINGLE FAMILY RESIDENTIAL TO  
B SINGLE FAMILY RESIDENTIAL WITH RDD-RESIDENTIAL DESIGNED  
DEVELOPMENT DESIGNATION FOR 105 AND 157 N. NEW BALLAS ROAD, 1  
SANTINO COURT, AND 11921 LADUE ROAD**

**FOR THE MEETING OF:** Monday, December 18, 2017

**LOCATION:** 105 and 157 N. New Ballas Road, 1 Santino Court, and 11921 Ladue Road.

**REQUEST:** Brent Crittenden, of Urban Improvement Company, LLC, has submitted a request for the rezoning and preliminary plat approval of 4.732 acres at 105 and 157 N. New Ballas Road, 1 Santino Court, and 11921 Ladue Road, Creve Coeur, MO from A Single Family Residential to B Single Family Residential with RDD-Residential Design Development designation to allow for the development of a 9 single family home subdivision with an average lot size of 20,017 square feet.

**ADDITIONAL INFORMATION:** Any rezoning and preliminary plat with RDD designation requires City Council approval, upon the recommendation from the Planning and Zoning Commission. The properties are currently zoned A Single Family Residential and are part of the Emerald Green Estates Subdivision originally developed in the 1960's and early 1970's. The Subdivision includes a mix of zoning with A Single Family Residential along Ladue and N. New Ballas Roads, and B Single Family Residential interior to the subdivision, along Emerald Green Court and Emerald Green Drive.

**APPLICANT/ PROPERTY OWNER:** Brent Crittenden  
Urban Improvement Company, LLC  
1607 Tower Grove, Ave.  
St. Louis, MO 63110

**Key Issues:**

- Do the lots substantially meet all land development standards of this Chapter and those of any other applicable City regulations?

**Comprehensive Plan References**

- Estate Neighborhood 1 (ER-1)
- Estate Neighborhood 2 (ER-2)

**Zoning Code References**

- Section 405.250: A Single Family Residential
- Section 405.260: B Single Family Residential
- Section 405.450.C: Residential Designed Development Procedure
- Section 405.1060: Zoning changes and Text Amendments



**REPORT PREPARED BY:** Whitney Kelly, AICP, City Planner

**DATE:** December 12, 2017

**ATTACHMENTS:** Applicant's Materials received November 17, 2017 and revised drawings received December 12, 2017  
Draft Ordinance



### LAND USE AND ZONING OF SURROUNDING PROPERTIES

The adjacent zoning and land uses are as follows:

| DIRECTION | USE                                                       | ZONED                                                                       | SEPARATED BY       |
|-----------|-----------------------------------------------------------|-----------------------------------------------------------------------------|--------------------|
| North     | Single Family Residences                                  | A and B Single-Family Residential                                           | N/A                |
| South     | Woodbridge Subdivision<br>Multi Family Residences         | A-RDD, A Single Family Residential with<br>Residential Designed Development | Ladue Road         |
| East      | Religious/Institutional Use-<br>Congregation Shaare Emeth | A Single Family Residential                                                 | N. New Ballas Road |
| West      | Single Family Residences                                  | A and B Single-Family Residential                                           | NA                 |



Figure 1: Applicant's Rezoning Evaluation of Surrounding Area

### DEVELOPMENT STATISTICS & COMPARISON CHART

The following are statistics for the proposed Santino Court subdivision with the minimum requirements for the B Zoning District, and with the two most recent RDD Approvals:

|                                    | <b>PROPOSED<br/>SANTINO COURT</b> | <b>GENERIC B<br/>ZONING<br/>DISTRICT</b> | <b>CREEKSIDE AT MASON<br/>ZONED B-RDD<br/>(APPROVED IN 2014)</b> | <b>VILLAS AT MOSLEY<br/>ZONED C-RDD<br/>(APPROVED IN 2012)</b> |
|------------------------------------|-----------------------------------|------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------|
| Acres                              | 4.257<br>(excluding the ROW)      | varies                                   | 7.46 acres<br>(excluding ROW)                                    | 4 acres (including 24,263<br>sq. ft. of ROW)                   |
| No. of Units                       | 9 d.u.                            | varies                                   | 17 d.u.                                                          | 10 d.u                                                         |
| Units / Acre<br>(excluding<br>ROW) | 2.11                              | 2.18                                     | 2.28                                                             | 2.9                                                            |
| Lot Size<br>(sq.ft.)               | 10,481 (min.)<br>19,817.7 average | 20,000 (min.)                            | 9,100 (min.)<br>10,402 average                                   | 10,000 (min.)<br>11,250 average                                |
| Common<br>Ground / Open<br>Space   | 5,410 sq. ft.                     |                                          | 3.40 acres                                                       | 0.63 ac.                                                       |

|                       |                                                                            |                |                                        |                                                    |
|-----------------------|----------------------------------------------------------------------------|----------------|----------------------------------------|----------------------------------------------------|
| Lot Frontage          | 87 ft. (average)                                                           | 100 ft. (min.) | 70 ft. (min.)                          | 60 ft. (min.)                                      |
| Front Yard Setback    | 20 ft.                                                                     | 45 ft.         | 20 ft.                                 | 15 ft.                                             |
| Side Yard Setback     | 7.5 ft.; 25 feet adjacent to A District; 30 feet along N. New Ballas Road* | 15 ft.         | 8 ft.                                  | 5 ft.                                              |
| Rear Yard Setback     | 25 ft. for Lots 1-5<br>50 ft. for Lots 6-9 along Ladue Road                | 30 ft.         | 15 ft. (min.)                          | 22.5 ft. along the north<br>30 ft. along the south |
| Maximum Site Coverage | 35%<br>(Total coverage 27%)                                                | 35%            | 45% for each lot<br>24% for total area | 43%                                                |

\*The homes along N. New Ballas are showing a 30 foot building line, however the homes are showing that they are approximately 55 feet from the east property line along N. New Ballas Road, and 120 feet from Ladue Roads. The A district has a minimum front yard setback of 50 feet, and the B district has a minimum front yard setback of 45 feet along any road. Section 405.240(B)(1)(a) Setback Requirement on Certain Streets and Right-of-Way states buildings along N. New Ballas Road should be no further than the permitted setback of the district, plus 40 feet from the centerline of the right-of-way, which in this area is 60 feet, unless approved by the Planning and Zoning Commission, per below:

#### B. Setback Requirements On Certain Streets And Rights-Of-Way.

1. No building or structure shall be located further from a major street or highway in the City of Creve Coeur than provided for by the standards specified below:
  - a. Arterial street or highway (Ballas Road, Lindbergh Boulevard and Olive Boulevard): Forty (40) feet setback from the centerline of said arterial street or highway plus the permitted setback distance established in the zoning district. The Planning and Zoning Commission may increase the distance measured from the centerline of an arterial street or highway to ensure a consistent right-of-way along such a thoroughfare or if a road expansion is projected in an adopted land use plan.

Staff assumes that this was intended for the commercial development further north, and not intended for the residential areas. However since the proposal has the developments further away and in line with the residence to the north, Staff would recommend that a condition of approval for the final plat include that the building line along N. New Ballas Road should be moved to be 45 feet from the east property line to be consistent with the B district and more in line with the proposed homes, to ensure a consistent building line, and Landscaping along the street frontages area be maintained, per the discussion further below.

#### COMPREHENSIVE PLAN ANALYSIS

The *Creve Coeur 2030*, Goals for Residential Development & Preservation includes: to preserve and evolve its high-quality residential development and stable property values while enhancing the diversity of housing types and improving the walkability and accessibility of neighborhoods, including Strategy 2.1: providing opportunities for a greater diversity of housing options throughout the City to attract changing market demographics-including seniors, young professionals, and families, and Strategy 2.2: Guide the rebuilding of outdated housing stock in selected areas to improve housing diversity and maintain a competitive residential market. The proposal is to rezone the property to allow for a different type of housing that is designed to allow for aging in place homes, within a walkable neighborhood that will include a common ground area and energy efficient home. The design of the homes are a very modern, contemporary, aesthetic that is to be more attractive to young professionals and seniors that desire to age in place, in keeping with the goals and objectives of the City's Comprehensive Plan.





Figure 2: Close up of Community Place Type Districts Map, p. 55 of Creve Coeur 2030

The Emerald Green Estates Subdivision is within Estate Neighborhood 1 (ER-1) & 2 (ER-2), with the subject properties located in ER-2.

ER-2 describes large-lot (1 acre and larger) detached single family residential neighborhoods with a curvilinear, cul-de-sac street system in either a residential subdivision of multiple street with one or several entrances/ or on individual residential streets with one access to a through street or road and lacks a centralized subdivision common ground.

The Vision for ER-2 includes that homes should be architecturally-harmonious, located to provide large front lawns and preserve existing trees, and built to a consistent setback from the street. Streets should terminate in cul-de-sacs or circles to create small, secluded neighborhoods.

ER-1 are medium-lot (15,000 sq. ft. to 1 acre), detached single-family residential neighborhoods with both rectilinear and curvilinear, cul-de-sac street system in either a residential subdivision of multiple streets with one or several entrances; or on individual residential streets with on access to a through street or road. Estate 1 includes portions of the current B and C Single Family Residential zoning districts, based on physical characteristics and configuration.

The Comprehensive Plan largely looked at the residential areas with respect to existing character and didn't recommend specific redevelopment of residential areas throughout the City. Given the location on a busy intersection, and the adjacent surrounding development particularly for the west side of N. New Ballas Road, the rezoning to a B District with the Residential Designed Development Designation is largely in keeping with the Comprehensive Plan. While the lots are smaller than one acre, the overall density is in keeping with the adjacent ER-1 District, and the homes are reoriented to Santino Court, with a front yard setback of 20 feet. The Applicants are maintaining the large landscaped areas along the outer perimeters, along Ladue and N. New Ballas Roads. The homes, while a much more modern style than ordinarily found in the City, also target those that wish to age in place, and are all cohesive with one another, to create a small secluded neighborhood consistent with ER-2 vision.

## ZONING ANALYSIS

### Rezoning

Section 405.1060.E offers the following guidance regarding rezonings:

Zoning regulations should be changed if the public welfare is not served by the zoning or if the public interest served by the zoning is greatly outweighed by the detriment to private interests. In making this determination, the City should consider the adaptability of the subject property to its zoned use and the effect of zoning on property value in assessing private detriment. The character of the neighborhood, the zoning and uses of nearby property, and the detrimental effect that a change in zoning would have on other property in the area are relevant to the determination of public benefit.

Maintaining the existing A district is not advantageous to the long term sustainability of the area, particularly, a busy intersection on Ladue Road, west of N. New Ballas, near I-270. Maintaining a residential district with a higher level of density allows for the further protection of the residential development to the north, and is in keeping with the existing development to the south. With this proposal, the applicant has attempted to balance public benefit with the private interest of maintaining the residential character of the area and, thereby protecting the adjacent subdivision, while providing a similar density of the Emerald Green Estates Subdivision, and also providing for a unique housing development within the City.

The minimum district size for the B Single Family District is 5 acres, or if less than 5 acres in area may be rezoned when it is contiguous to such an existing district, per Section 405.260(E)(1) minimum district size. The subject properties consist of 4.275 acres surrounding the existing public right-of-way of Santino Court and are contiguous to the B District to the northwest as part of the Emerald Green Estates Subdivision.

Residential Design Development Procedure

The Applicant has proposed rezoning to the B Single Family Residential District, utilizing the Residential Designed Development (RDD) procedure. This procedure effectively creates an overlay wherein the City Council, on the recommendation of the Planning and Zoning Commission, may modify the lot and development standards, subject to certain provisions.

In determining conformance with the RDD, the critical questions for this project are fulfillment of the purpose of the RDD and tree preservation. With regard to the former, the Zoning Code states:

**SECTION 405.450: PERMITTED USES**

*C. Residential Designed Development Procedure. The purpose of this Section is to provide a permissive, voluntary and alternate zoning procedure in the "A", "B", "C" and "D" single-family residential and "AR" attached residential zoning districts in order to permit greater flexibility in the size and configuration of lots without altering the allowable residential density in these districts and to provide thereby for desirable and proper common open space, tree cover, recreation areas, parks or scenic vistas and the preservation of the natural beauty of the City.*

- 1. Variation in number, size of lots. The City Council may by ordinance grant a residential designed development permit upon recommendation of the Planning and consistent with good planning practice, consistent with good site landscape planning, is not detrimental to the existing and permitted uses in the surrounding area, is deemed desirable to promote the purposes of this Section and is in accordance with the following criteria.*
  - a. Minimum project area. No residential designed development permit shall be granted for any area of less than four (4) acres.*
  - b. Gross acreage. The lot sizes within the subdivision may vary from those required by the regulations for the single-family residential zoning district within which the site is located. The maximum number of lots that may be approved shall be computed by including only common area and lot acreage in gross acreage and dividing the gross acreage by the minimum lot area requirements of the district.*
  - c. Yards. The minimum front yard and side yard requirements for each lot as set out in the regulations for the single-family residential zoning district within which the site is located may be reduced by the City Council and, if so reduced, shall be set out on the preliminary subdivision plan to be submitted in accordance with Chapter 410, Subdivision and Development of Land.*
  - d. Site and building coverages. The maximum site and building coverage requirements for each lot, as set out in the regulations for the single-family residential zoning district within which the site is located, may be increased by the City Council and, if so increased, shall be set out on the preliminary subdivision plan to be submitted in accordance with Chapter 410, Subdivision and Development of Land.*
- 2. Common areas. As part of the residential designed development plan, common land for open space of recreational use shall be reserved for common use by all the owners of the residential lots and the subdivision and such common land may be included in the total gross acreage used for determining the number of lots*



permitted under the minimum lot size provisions of the residential zoning district within which it is located, subject to the following standards and conditions:

- a. *Subdivision plat.* All such common land shall be shown on the subdivision plat, to be approved by the Planning and Zoning Commission and the City Council and shall be shown as such on the record plat of such subdivision, subject to the restrictions set out below.
- b. *Trust indenture.* All common land shall be conveyed by the developer in fee simple absolute title by warranty deed to the trustees for the subdivision. The developer shall at the time of recording the record plat of such subdivision record a trust indenture providing that such common land shall be held and maintained by the trustees for the benefit, use and enjoyment of the lot owners, present and future, of such subdivision. Such trust indenture shall provide a uniform means of assessment to ensure that all such common land and any improvements constructed thereon shall be maintained by the trustees for the lot owners in compliance with the ordinances of this City and in such manner that such land and improvements will remain attractive and useful to the lot owners and shall not be injurious to the health, safety and welfare of the lot owners and of residents of surrounding areas or be detrimental to property values of surrounding areas. Such trust indenture shall also provide that the conveyance or change of ownership of any lot shall carry with it ownership in the common land and that no lot owner shall have the right to convey his/her interest in such common land except as an incident of the ownership of the platted lot even though such provisions are not expressly included in the deed of conveyance and shall further provide that no right or power conferred on the trustees by such indenture, in order to comply with the provisions of this paragraph, may be abrogated. All such trust indentures shall be submitted to the City Attorney for approval as to legal form and shall be recorded with the Recorder of Deeds of St. Louis County simultaneously with the recording of the final subdivision plat.
- c. *Maintenance of common areas and streets.* If the trustees of any such subdivision should fail to maintain any common area or street in accordance with the ordinances of the City or in such manner as to assure their intended use or in such manner as to injure the health, safety or welfare of the lot owners or of residents of surrounding areas or in such manner as to be detrimental to the property values of surrounding areas, the City may bring an action to compel the trustees or lot owners or both to correct any condition in such common area or street failing to meet any of the above standards. In the alternative, the City may correct any such condition in which event the City shall have the right to a lien against each lot in such subdivision for the pro rata cost of labor and material necessary to correct any such condition. The pro rata cost shall be determined by dividing the total cost, as determined by the City, by the number of lots in the subdivision. Any such lien shall bear interest at the rate per annum of two percent (2%) above prime and may be enforced by any means permitted by law or equity. In addition, the trustees or lot owners or both shall be responsible for any attorney's fees incurred by the City.

### 3. Procedure.

- a. *Application.* The granting of a residential designed development permit may be initiated by the filing of an application by one (1) or more of the owners or authorized representatives of the owners of the property sought to be used for the residential designed development proposal. Such application shall be submitted pursuant to and accompanied by a preliminary subdivision plan in accordance with Chapter 410, Subdivision and Development of Land

- including, but not limited to, the following information: The out boundaries of the property; the location, use and proposed improvements to all common land and streets; the total area of the property; and the proposed boundary lines of all lots showing the area and width of each lot.*
- b. Review. Such preliminary plan shall be reviewed by the Planning and Zoning Commission and a report and recommendation thereon made to the City Council for its approval, in accordance with the voting, nature and fee provisions of Chapter 410, Subdivision and Development of Land.*
  - c. Final subdivision plat. In the event such preliminary plat (plan) is approved by the City Council, the applicant shall thereafter submit a final subdivision plat, together with the trust indenture as required above, for approval by the City Council upon recommendation of the Planning and Zoning Commission as required in Chapter 410, Subdivision and Development of Land.*
4. *Tree conservation. Any development proposed as a residential designed development shall provide for the conservation of existing trees and existing tree masses on the site. The percentage of trees and tree masses preserved during development shall exceed the minimum standards of the subdivision regulations (shall exceed twenty-five percent (25%) of the existing trees and twenty-five percent (25%) of the existing tree mass areas).*

When reading the provisions for flexibility in lot size and configuration it is necessary to realize that the trade-off for this flexibility is the protection and/or provision of some natural quality of the site and City that is worth preserving. In other words, this process is not simply a way to avoid seeking variances before the Board of Adjustment. While the development does not offer the protection, nor provision of a natural resource worth preserving, the new park and amount of greenspace for the individual lots does create a comparably large amount of greenspace, and the proposal provides for a new type of housing that is consistent with good planning practices and landscape design, whereby all landscaping on each of the lots within the development, and that of the park, are maintained by the HOA, utilizing high quality native materials.



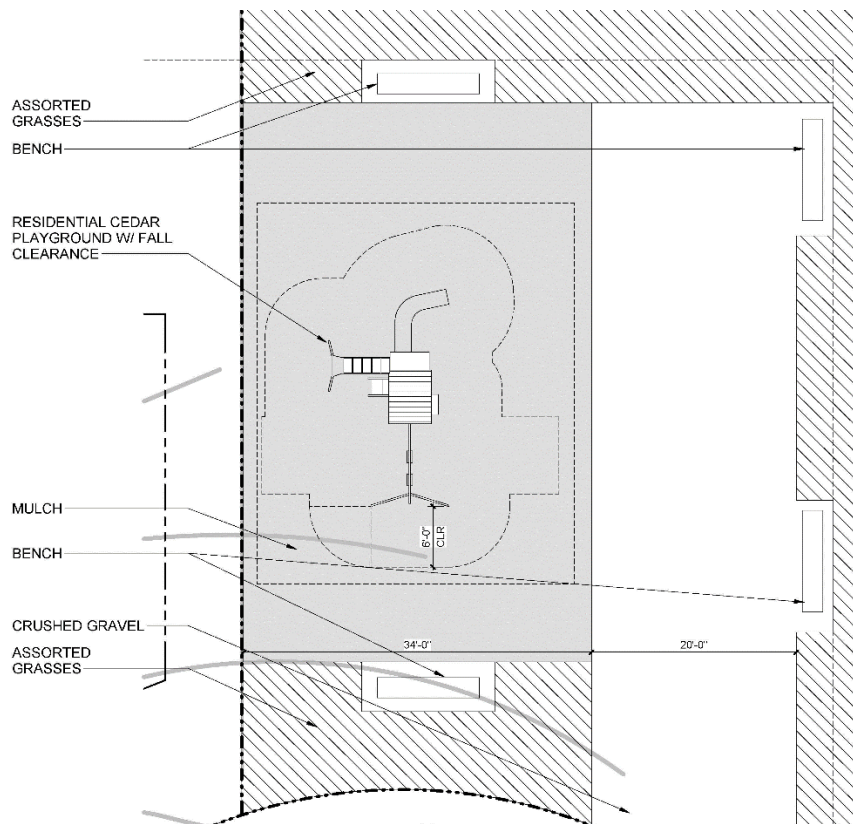
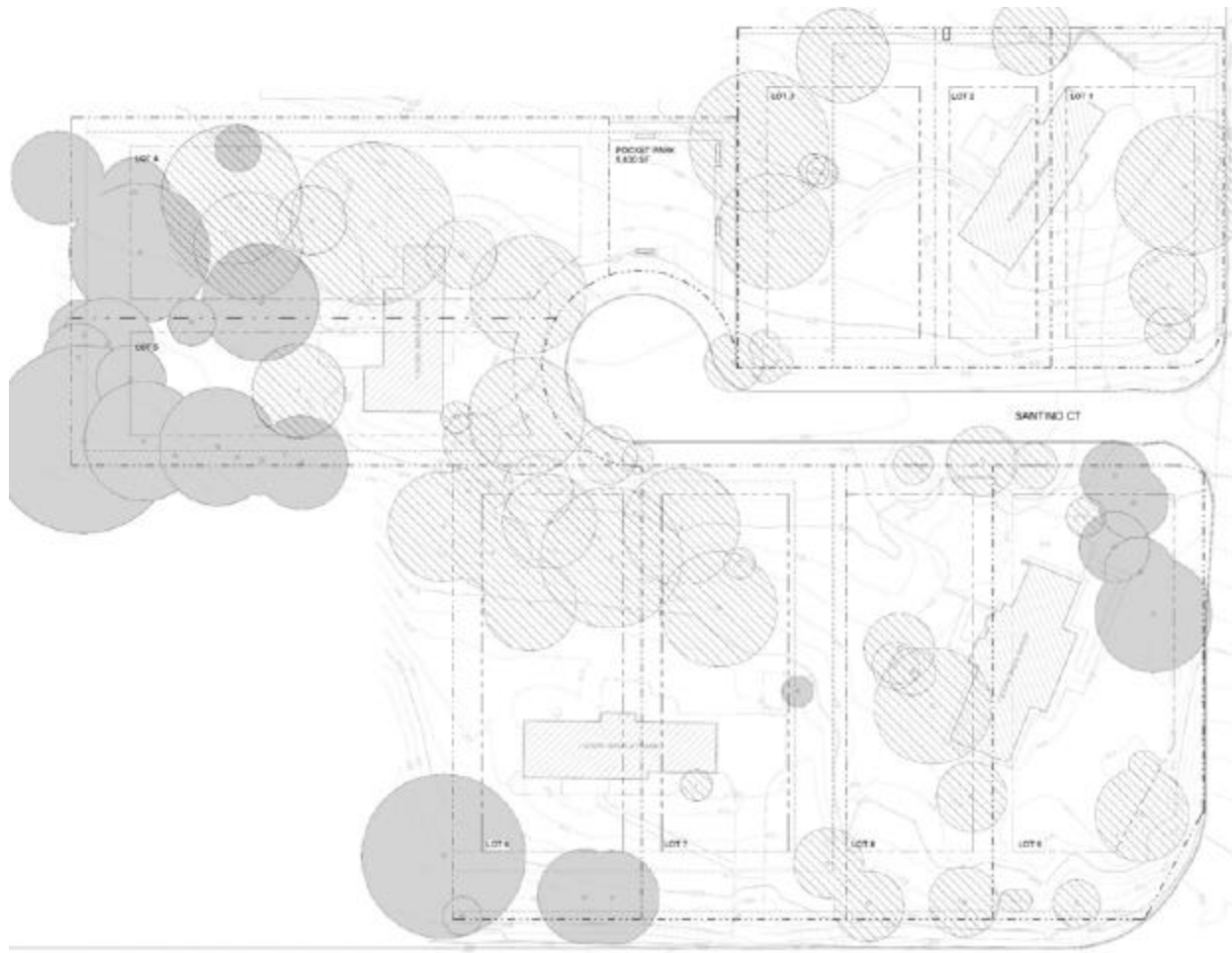


Figure 3: Close-up of the preliminary plans of the proposed playground from the Applicant's Slides

The proposal will preserve approximately 32.5% or 20 of the existing trees over 8" caliper or more, which is greater than the requirement that not less than 25% of the area of such tree masses nor 25% of eight inch caliper trees shall be preserved per the subsection 4 above as well as Section 410.320: Tree Conservation of the Subdivision Ordinance. However, they are having an arborist review the health of these trees, as the Applicant has indicated that many appear to be either dead or almost dead. A substantial portion of the removal of the trees results from the extensive regrading of the properties to allow for walkout basements, and soil modifications to meet with MSD requirements for stormwater. Therefore, the draft ordinance contains a condition of approval that the landscape plan be revised to meet with the tree preservation requirement that not more than 75% of the tree mass shall be removed, and/or a copy of the Arborist report indicating that the health of the trees is not worth preserving.



**Figure 4: Close-up of the Tree Census slide. The dark shaded are trees to be saved, and the hashed trees are to be removed.**

The Applicant is requesting lot sizes different from the requirements of the B Residential District regulations, while the lot coverage and floor area ratio (FAR) requirements will be maintained. Landscape easements are provided along N. New Ballas and Ladue Road Frontages. If approved, a condition should be put in place to require that all other standards not specifically approved by the City Council should be in conformance with the Section 405.260, B Single-Family Residential District of the Zoning Code.

Generally, any stormwater detention or BMP and landscaped easements are provided within common ground and not on private property, for maintenance and protection of the landscaping. Staff would generally prefer, that the landscaped areas along Ladue and N. New Ballas would be within common ground. However, the Applicant has indicated that the Homeowners Association would include maintaining the landscaping within an easement, and that the rain gardens are an option for each of the lots. The Applicant is in initial discussions with MSD and feels that with the amended soils, stormwater detention may not be necessary. Therefore, Staff has included a condition of approval that the City Attorney shall review the indentures to ensure that all landscaped easements and any stormwater areas are properly addressed.

#### **ARCHITECTURE AND DESIGN**

The Applicant has included several example elevations, however specific designs will be dependent upon the individual buyer. The designs are a very contemporary style that would be unique within the City. Discussion with the Applicant on the overall design and clarification on the various materials should be



had, as this would be a significant change in a highly visible area. Home Size ranging from 2,200 SF to 4,000 SF and materials consist of Brick, fiber cement lap siding, wood look accents, with sustainable/energy efficient features.



FRONT ELEVATION



LEFT ELEVATION



FRONT ELEVATION



LEFT ELEVATION



FRONT ELEVATION



LEFT ELEVATION

## DEVELOPMENT CHARACTERISTICS

- Traffic**  
 A traffic study was not submitted by the applicant. With the proposed 9 homes, the development will generate an amount of traffic that is appropriate for the size of the tract and it is not expected to change or to have an adverse impact on traffic flow. The subdivision is laid out utilizing the existing configuration of Santino Court.
- Sidewalks**  
 The proposal includes detached, five-foot wide sidewalks separated by approximately 7.5 feet of landscaping along both sides of the existing Santino Court that is consistent with Section 410.250(D) Sidewalks of the Subdivision Regulations which state the minimum width of sidewalks in residential subdivisions shall be five feet, except where otherwise approved, based on the proximity of the sidewalk to the roadway, the volume and speed of traffic, expected number of pedestrians or other safety factors.

The City's Public Works Department has received a federal grant to acquire easements and complete the sidewalk along N. New Ballas Road. The sidewalks shown are part of the grant and the Applicants have indicated that they will be donating the easements for the City to complete these sidewalks. The sidewalks along Ladue Road are preexisting.

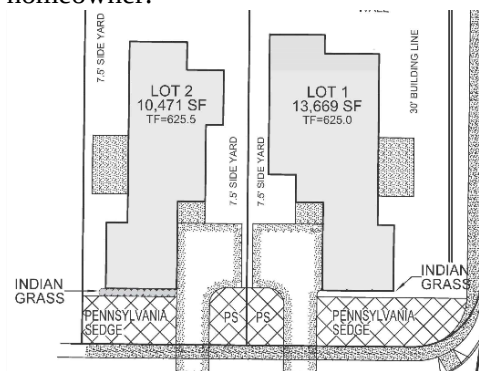
- Landscaping and Amenities**

As indicated above the Applicant is including a new playground for the subdivision, and new landscaping throughout the development. New street trees are provided along Santino court that appear to meet with the requirement of one street tree for every 30 lineal feet per Section 410.300 of the Subdivision and Development of Land. The trees consist of four different varieties that create greater interest than typically found in developments that only provide for the same variety. It should be noted that while 3" caliper trees are required when reviewing projects under the Zoning Ordinance, Section 410.300 Street Trees of the Subdivision Ordinance allows for a minimum of 2 ½ inch diameter as measured six inches above ground.

An evergreen hedge along with maiden grasses are provided along the North portion of N. New Ballas to provide screening of the retaining wall. Staff would also recommend that a hedge be provided along the north property line to provide additional screening for the home to the north. (However, it should be noted that there is approximately 10 foot grade difference from the property line to the bottom of the retaining wall.)

A mix of evergreen and grasses are provided along N. New Ballas Road south of Santino Court. And filling in between the existing trees, along with new trees along Ladue Road, is in keeping with the existing landscaping of the area. Staff has included a condition that the Landscape Plan shall be revised to indicate the appropriate number of street trees along Santino Court and for additional evergreens along the north property line for the Zoning Administrator's approval. However, the requirement of street trees for one for every 30 lineal feet has not been included due to the berms and other landscaping provided. Street trees along Ladue and N. New Ballas Roads should be provided to meet with the Subdivision Code, and is included as a condition for the Zoning Administrator's approval.

Additionally, typical lot landscaping includes a mix of native grasses, with the option of rain gardens to be maintained by the homeowner.



**Figure 5: Close-up of the Applicants Landscape Plan showing the typical lot plantings along Santino Court**

As mentioned above the proposal reorients the home along Santino Court, and is shown to be approximately 120 feet from Ladue Road, allowing for a large expanse of lush native landscaping along Ladue Road and at the N. New Ballas Road intersection.





The Applicants are showing a 50 foot building line along Ladue Road that is consistent with the adjacent properties and a 30 foot building line along N. New Ballas Road. Staff recommends that the building lines be moved closer to the proposed building to 45 feet along N. New Ballas Road, and that a 25 foot landscaped Easement be provided along Ladue Road and N. New Ballas Road, south of Santino Court, and to the top of the retaining all for Lot 1 to ensure long-term preservation of the green space and landscaping in these areas on the proposed lots.

With the subdivision reoriented toward Santino Court, Section 410.220.H, requires that a landscaped buffer shall be provided along the secondary streets to prevent direct access:

*If unavoidable, the primary frontage of double frontage lots shall be so designated on the subdivision plat, a common landscape buffer or easement shall be defined along the secondary street frontage and no access to the lot shall be allowed from the secondary street frontage. Where possible, primary frontage for such double frontage lots shall be on interior subdivision streets and a landscaped buffer or low masonry wall within an easement shall be provided along the secondary frontage on the major street, collector or arterial street to provide screening of sight and sound and to prevent direct access to said double frontage lot from this secondary frontage.*

The proposal includes a proposed fence and landscaping along N. New Ballas Road and Ladue Roads that will prevent any future access to Ladue Road. A condition of approval has been included to require easements along the secondary frontage.

- **Tree Coverage**

The Tree Census provided within the Applicant's slides is showing that preservation of 32.5% of the trees that are 8" or more in diameter. As discussed above, the minimum standard is that 25% of the trees must be preserved, as required by the section below:

**SECTION 410.320: TREE CONSERVATION**

*Any subdivision preliminary plat submitted after the effective date of this Section shall provide for the conservation of existing trees on the site. Nothing in this Section is intended to preclude the removal of existing trees after the receipt of an initial occupancy permit.*

1. *A tree census shall accompany every preliminary plat application. The tree census shall graphically depict the general location of all tree masses and all trees of eight (8) inch caliper size or larger. In addition, such census shall indicate which tree masses and trees are to remain and which tree masses and trees are to be removed. Not more than seventy-five percent (75%) of the area of such tree masses nor seventy-five percent (75%) of such eight (8) inch caliper trees shall be proposed for removal.*

The Applicants are having an arborist review the trees as many appear to be in poor health or dying. Therefore, Staff has included a condition that a tree preservation plan be submitted that preserves the minimum of 25% of the trees, and a copy of the Arborist Report indicating the health of the trees, and

those that should be removed and replaced. Replacement shall be at a 3:1 ratio, per Section 405.320 of the Subdivision Ordinance.

- *Site Grading*  
A large part of the existing land will be disturbed with some significant grading to provide for soil modification and basement walkouts along the north and the BMPs along Ladue Road for Stormwater Management. As discussed above, the applicant should attempt to work with the natural terrain more to both reduce the amount of tree cover removed and to better meet the goals of the Comprehensive Plan and the purposes of the RDD procedure. All other site grading requirements appear to be met.
- *Stormwater Control*  
The Applicant are showing BMP easements and are proposing soil modifications throughout the site, and have submitted the plans for review at MSD. The Applicants have indicated that they believe that the soil modifications should provide for sufficient detention and that the proposed BMPs may not be necessary. If approved, the BMP easements will not be necessary. Staff has included a condition of approval that final plans shall be submitted to conform to the requirements of MSD, which will be reviewed by the Planning and Zoning Commission and City Council for the final plat.
- *Fence*  
The Applicants are showing a 3.5 foot open slatted decorative fence approximately 15 feet from N. New Ballas Road north of Santino Court to provide a barrier along the retaining wall, and along Lot 9 south of Santino Court. A four foot wood privacy fence is proposed approximately at the 50 foot building line along Ladue Road and enclosing Lots 6-8, and a six foot privacy fence is provided elsewhere around the entire development. Section 405.680 Fences requires Planning and Zoning Commission approval of any fence within a front yard setback along any street right-of-way. As Staff has suggested that the Building Lines of the lots along N. New Ballas Road and Ladue Road to be moved back, approval of the plans would also include the approval of the fences as proposed. However, the fences are not currently shown on the site development plans, therefore Staff has included a condition of approval that the fence along Ladue Road shall not be closer than 50 feet, so as not to box in the adjacent residential property. The fencing along N. New Ballas Road is consistent with the proposed text amendment allowing for an open slatted dark metal style fence of not more than 4 feet in height to be 15 feet from the east property line. Staff would prefer that the same style be consistency along all street frontages. The Planning and Zoning Commission can review the design with the Applicant.





Figure 7: Applicant's Site Plan showing the location of proposed fencing.

- Subdivision Sign**  
 The site development plan and preliminary plat indicates a subdivision entrance sign at the southern entrance area. Signs for residential developments are permitted by site development plan approval per Section 405.940 Signs in Residential districts, as follows:

**SECTION 405.940: SIGNS IN RESIDENTIAL DISTRICTS**

*B. Residential Development Signs. Permanent signs designating a subdivision, neighborhood or multi-family development for traffic efficiency and safety shall be approved by the Planning and Zoning Commission through the site development plan approval process as defined in [Section 405.1080](#). Such signs shall be limited to twelve (12) square feet per sign face with a maximum of two (2) sign faces.*

**SUMMARY AND ACTION**

The proposed rezoning will allow a reasonable redevelopment of the subject properties that balances protection for the surrounding neighborhoods while providing a unique housing style. Further, the proposed subdivision is generally in keeping with the intent of the goals of the Comprehensive Plan by developing at a density that is largely in keeping with the surrounding development in an highly visible area. It also conforms to much of the purposes of the Residential Design Development procedure by providing for desirable layout, unique architectural style, and housing that promotes an aging in place that is not generally found in the City. Further the Applicants are including a playground as an amenity along with native landscaping along the street frontages.

In total, Staff recommends the following conditions of approval be included in the draft ordinance for the reasons discussed above:

- The final plat shall be revised to indicate the building line along North New Ballas Road be moved closer to 45 feet along N. New Ballas Road, and that a 25 foot landscaped Easement be provided along Ladue Road and N. New Ballas Road, south of Santino Court, and to the top of the retaining wall for Lot 1 to ensure long-term preservation of the green space and landscaping in these areas.
- The Landscape Plan shall be in substantial conformance with the Landscape plan submitted on December 12, 2017 subject to the requirements of Sections 410.300 and 410.320 of the Subdivision and Land Development Standards.
- The Landscape Plan shall be revised to include adding a minimum of one street tree for every 30 lineal feet or part thereof of street frontage, as required in Sections 410.300 and 410.320 of the Subdivision and Land Development Standards along Santino Court, Ladue Road, and North New Ballas Roads, for the Zoning Administrator's approval.
- Additional evergreen plants shall be provided along the north of Lots 1 and 2 to provide additional screening for the residents to the north.
- A tree preservation plan shall be submitted showing a minimum of 25% of the existing tree mass or 25% of the trees over 8" caliper shall be preserved as required by Section 405.320 Tree Conservation of the Subdivision Ordinance, and a copy of the Arborist Report regarding the health of the trees to be removed and replaced, subject to Zoning Administrator approval.
- The proposed four-foot fence along Ladue Road shall not be any closer than 25 feet from the property line.
- The Subdivision Improvement Plans shall include the appropriate easement for the sidewalks along N. New Ballas Road in coordination with the City's Public Works Department
- Prior to issuance of any building permits, the applicant shall prepare and record the final subdivision plat as approved by the City Council and indentures requiring public access, insurance, funding, maintenance of the stormwater BMPs as required by MSD, maintenance of landscaping along Ladue and N. New Ballas roads, and common ground area, to be approved by the City Attorney.
- All signs shall comply with Section 405.940 of the Zoning Ordinance.
- All street lighting shall meet with 405.680: Lighting of the Zoning Ordinance.
- All other standards not specifically approved by the City Council should be in conformance with the Section 405.260, B Single-Family Residential District of the Zoning Code.

If the Planning and Zoning Commission finds that the proposed rezoning to B Single Family Residential under the RDD procedure is appropriate and finds that the Preliminary Plat and subdivision improvements are acceptable, then a recommendation to the City Council on the draft RDD ordinance and preliminary plat can be voted on.

If the Commission members believe that the proposal as presented does not meet with the goals of the Comprehensive Plan or the purposes of the Zoning Code and Subdivision Code, then they should provide specific direction to the applicant regarding revisions needed and continue the item until the next meeting.

Any changes to the draft ordinance should be discussed and made by separate actions.

#### **MOTION**

The following are examples of motions to pass a recommendation on this application:

- 1) "I move to recommend approval of the Rezoning, Residential Designed Development and Preliminary Plat for the Santino Court subdivision submitted with Application #17-044, subject to the



conditions contained in the draft ordinance attached to the staff report for the meeting of December 18, 2017” (conditions may be added, eliminated, altered, and modified).

- 2) “I move to recommend approval of the Site Development Plan for the Santino Court subdivision submitted with Application #17-044, subject to the conditions contained in the draft ordinance attached to the staff report for the meeting of December 18, 2017” (conditions may be added, eliminated, altered, and modified).

The following is an example motion to continue the discussion to the subsequent meeting:

“I move to continue discussion of Application #17-044, the Rezoning and Preliminary Plat for the Santino Court subdivision, to the meeting of Tuesday, January 16, 2018, to allow the applicant time to address the concerns of the Planning and Zoning Commission expressed at the meeting of December 18, 2017.

---

**APPENDIX 1: COMPREHENSIVE PLAN**

Included and attached by reference. See body of report for specific excerpts.

**APPENDIX 2: ZONING CODE (CHAPTER 405 OF THE CREVE COEUR MUNICIPAL CODE)**

Included and attached by reference. See body of report for specific excerpts.

**APPENDIX 3: CREVE COEUR SUBDIVISION AND LAND DEVELOPMENT REGULATIONS (CHAPTER 410 OF THE CREVE COEUR MUNICIPAL CODE)**

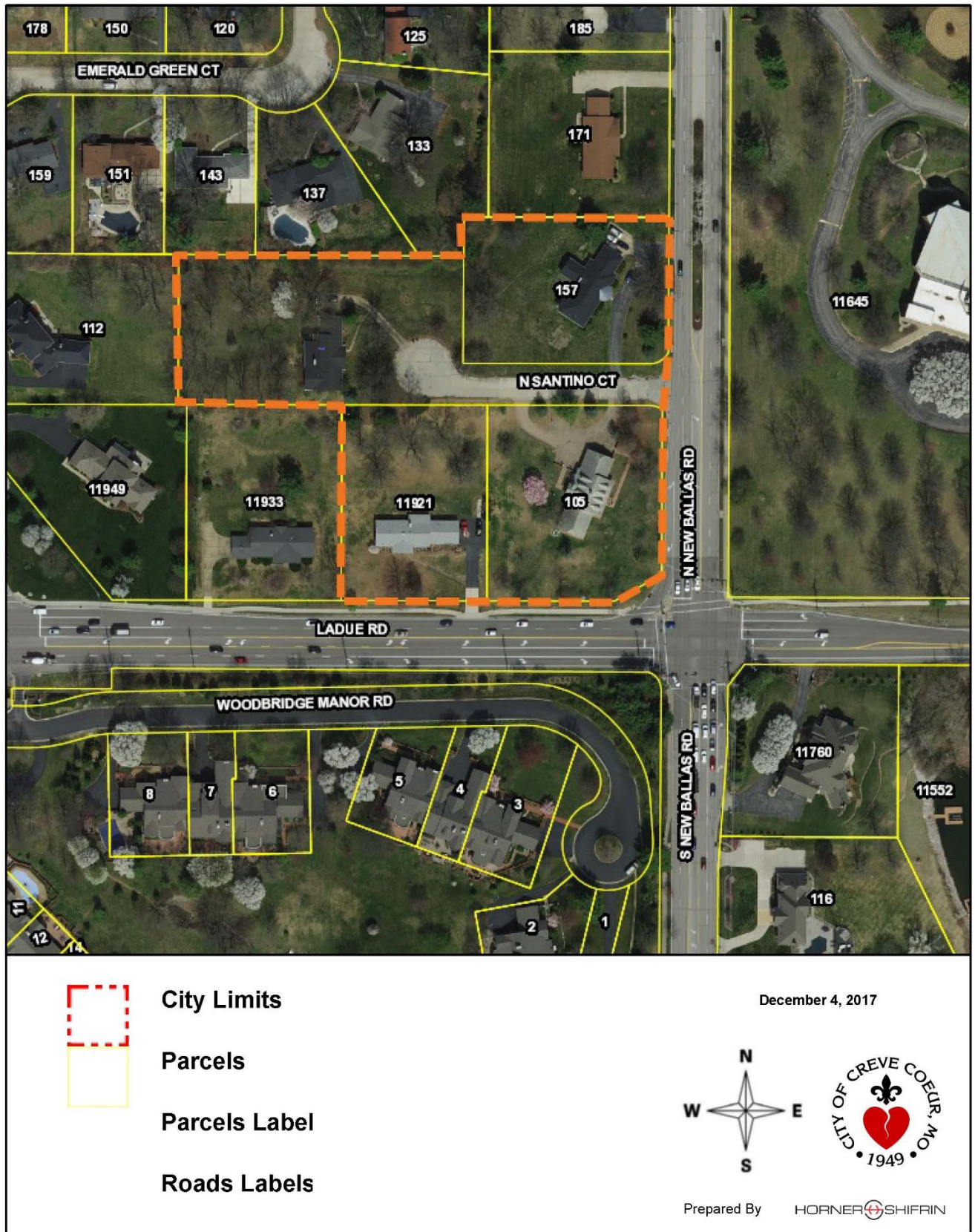
Included and attached by reference. See body of report for specific excerpts.

**APPENDIX 4: CREVE COEUR STREAM BUFFER PROTECTION REGULATIONS (CHAPTER 430 OF THE CREVE COEUR MUNICIPAL CODE)**

Included and attached by reference. See body of report for specific excerpts.

# APPENDIX 5: AERIAL MAP

## Santino Court Subdivision





**APPENDIX 6: SITE PHOTOGRAPHS**

Photo Date: 12/12/2017



Description: New Looking north west from Santino Court at the existing home at 157 N. New Ballas Road.



Description: View looking west at the home at 1 Santino Court.

Attachment: 17-044.Santino Court RZG and RDD.Staff Report.12-18-2017 (#17-044: Santino Court RZG B-RDD)

|                                                                                     |                                                                                                              |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|   | <p>Description: View looking southwest from Santino Court at the existing home at 105 N. New Ballas Road</p> |
|  | <p>Description: View looking south from Santino Court at the existing home at 11921 Ladue Road</p>           |



|                                                                                    |                     |
|------------------------------------------------------------------------------------|---------------------|
|  | <p>Description:</p> |
|------------------------------------------------------------------------------------|---------------------|



# Santino Court

## Proposed Residential Development – Re-zoning Request



Planning and home design by Central Design Office, LLC, under the supervision of Bre Crittenden, Architect, Missouri License # 2006003774. Not for construction.

Attachment: Santino Submittal Slides 11-17-2017 (#17-044: Santino Court RZG B-RDD)





# Santino Court

---

Proposed Residential Development - Re-zoning Request

November 17, 2017 Planning & Zoning Submittal

Brent Crittenden – Urban Improvement Company, LLC

Sarah Gibson – Urban Improvement Company, LLC

William Rombach – Urban Improvement Company, LLC

Brett McMahon – Urban Improvement Company, LLC

Taylor Williamson – Urban Improvement Company, LLC

Dave Volz – Volz, Inc.

Jeff Atkins – Volz, Inc.



# Re-zoning Request

---

- Site currently zoned Residential District 'A' (1 acre density)
- Proposed “Residential Design Development (RDD)” based on Residential District “B” zoning (20,000 sf per lot density), Single Family Residential (20,000+ SF per parcel in the aggregate).
- Need for re-zoning:
  - To serve existing residents within Creve Coeur and the greater Saint Louis area with an option to age in place. The age in place product is limited in the St. Louis area and we seek to provide a high quality option for people who find it desirable. The proposed project at Santino Court will be a walkable neighborhood which will include a common area and energy efficient homes in a maintenance free HOA. The increased density will allow the residents to have a sense of community amongst their neighbors.
  - Aging in place as "the ability to live in one's own home and community safely, independently, and comfortably, regardless of age, income, or ability level."





# Re-Zoning Request

- Surrounding Zoning
  - The site is currently zoned 'A'. The majority of the Emerald Green Subdivision is zoned 'B' with some surrounding parcels zoned 'A'.
  - This redevelopment offers average half acre lots, greenspace, and adjusted setbacks, to help promote a sense of community through an engaging streetscape and higher density

|                           |                                              |
|---------------------------|----------------------------------------------|
| North : 'B' – Residential | East : 'A' – Place of Worship                |
| South : 'A' - Residential | West : 'A' – Residential & 'B' – Residential |

| Emerald Green Subdivision |    |
|---------------------------|----|
| Existing 'A' Lots         | 10 |
| Existing 'B' Lots         | 31 |
| Proposed 'B' Lots         | 9  |



# Code Comparison

## Residential Zoning – Code Comparison Table

|                               | 'B' Residence District | Proposed Site Plan (RDD) |
|-------------------------------|------------------------|--------------------------|
| Lot Size                      | 20,000 SF              | 20,017 SF AVG            |
| Lot Width                     | 100 FT (min.)          | 87 FT AVG                |
| Lot Depth                     | 100 FT (min.)          | 218 FT AVG               |
| Units Per Acre                | 2.178                  | 2.112                    |
| Site Coverage                 | 35.0%                  | 10%                      |
| Front Yard Setback            | 45 FT                  | 20 FT                    |
| Side Yard Setback             | 15 FT                  | 7.5 FT                   |
| Rear Yard Setback             | 30 FT                  | 25 FT                    |
| Open Space (min. recommended) | 40%                    | 73% approx. proposed     |





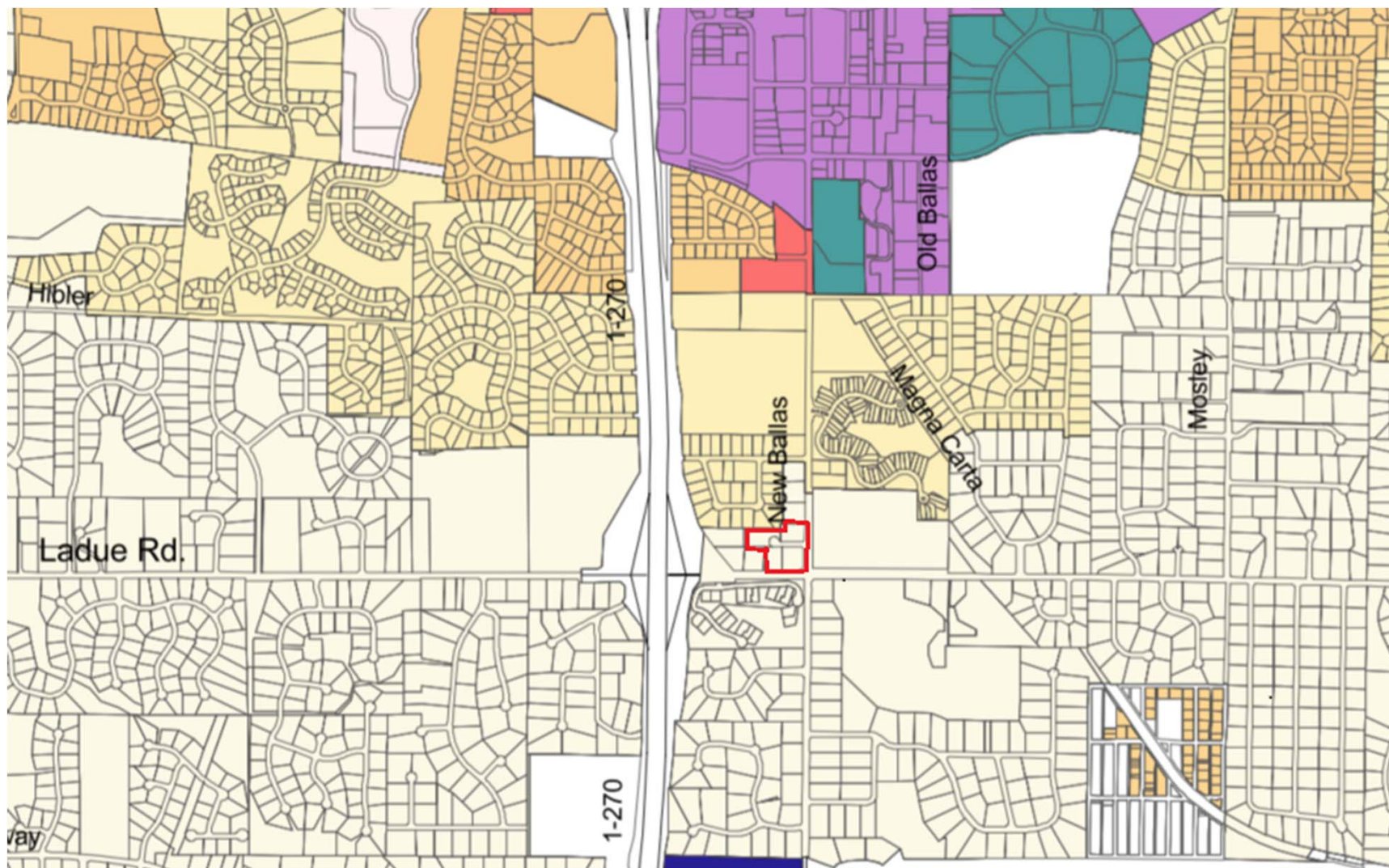
# Community Features

---

- Subdivision indentures guarantee maintenance & replacement of landscaping within Common Ground and Landscape Easements.
- Rain Gardens/Amended Soils providing Water Quality, Runoff Reduction and Landscape Features.
- Fencing around the property which will be elegantly landscaped to provide privacy for residents
- Common Ground with play space
- Home Details
  - Home Size ranging from 2,200 SF to 4,000 SF
  - Model Base Price: mid \$600's, Average Price: low \$800's
- Architectural Products
  - Brick, cement fiber lap siding, wood look accents
  - Architectural shingles, TPO (only on flat roof option)
  - Abundant available sustainable /energy efficient features



# Creve Coeur Zoning Map



- Proposed site is located at the Northwest corner of N. New Ballas Rd. and Ladue Rd. (outlined in red)
- Existing Zoning 'A'
- Proposed Zoning 'B' RDD
- Proposed 9 Homesites for a Single Family Residential Community





# Re-zoning Evaluation





# Existing Property



Emerald  
Green Estates



Carlyle Subdivision

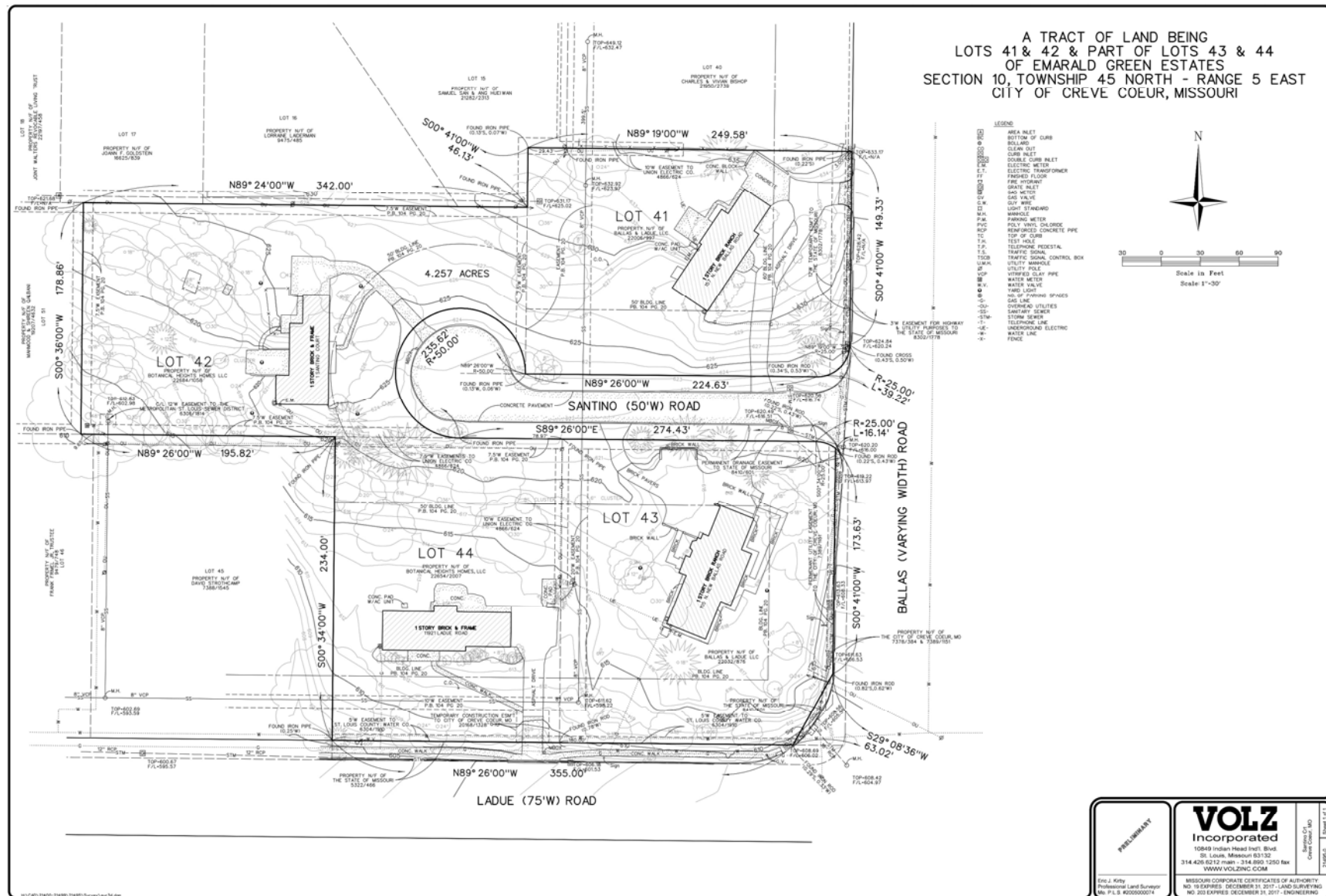
Shaare Emeth  
Congregation

Woodbridge  
Manor

Existing Lake

Attachment: Santino Submittal Slides 11-17-2017 (#17-044; Santino Court RZG B-RDD)



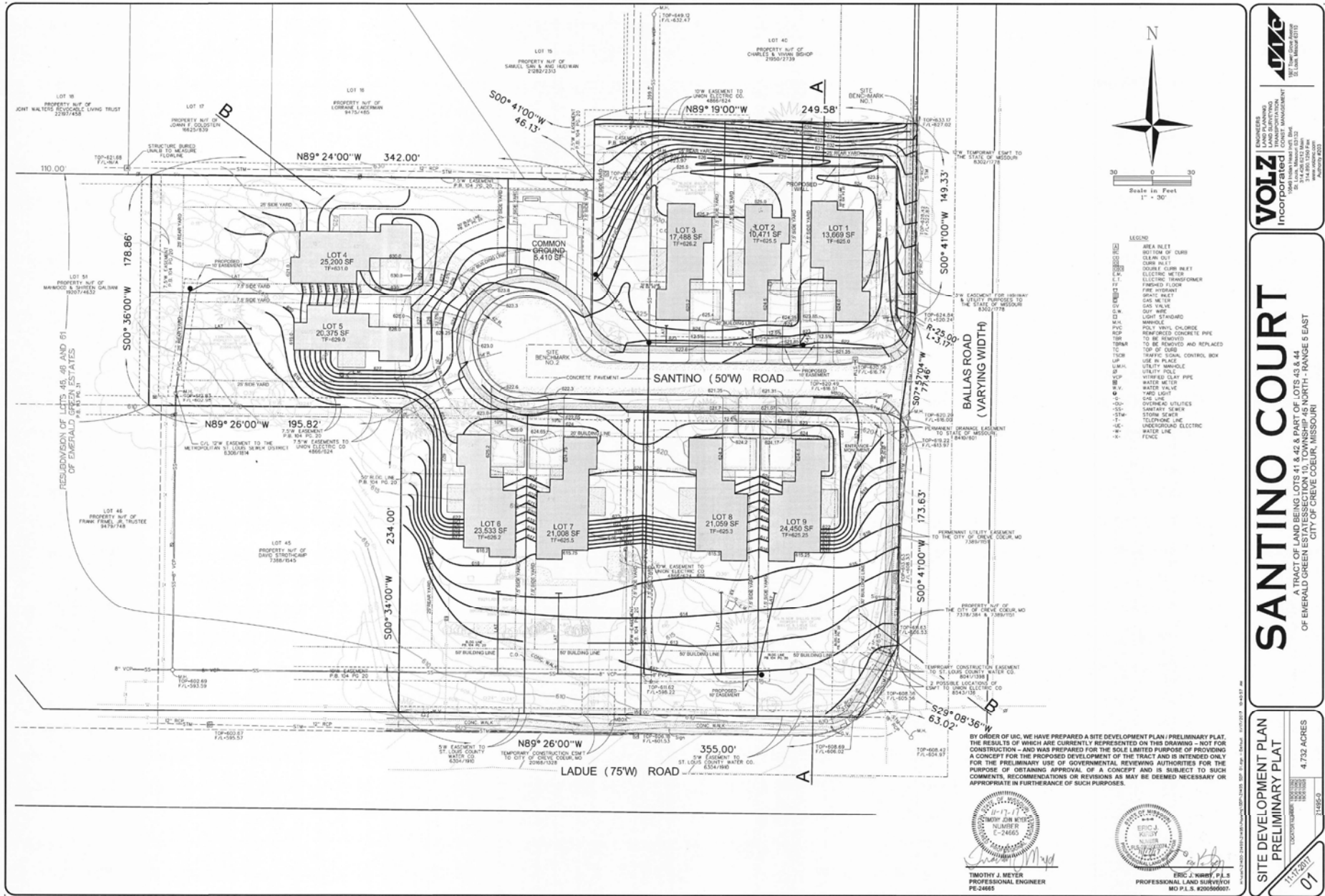


Existing Conditions Survey  
and Topography

# Concept Plan







Preliminary Site Development plan

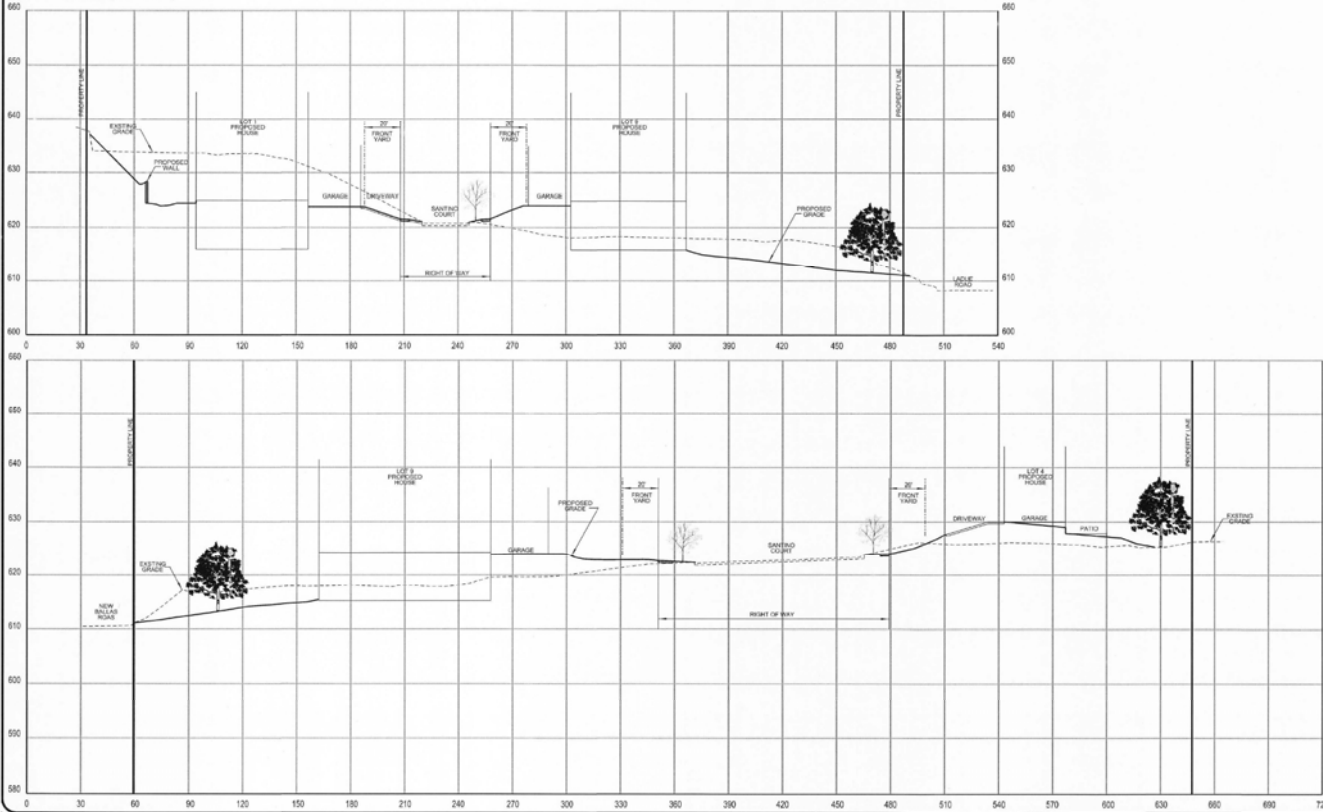
Attachment: Santino Submittal Slides 11-17-2017 (#17-044: Santino Court RZG B-RDD)



- DISTRICTS:  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
CREVE COEUR FIRE PROTECTION DISTRICT  
CREVE COEUR CREEK WATERSHED
- UTILITY SERVICE AREAS:  
AMEREN  
SPIRE GAS COMPANY  
MISSOURI AMERICAN WATER COMPANY  
CHARTER COMMUNICATIONS (CABLE TV)  
AT&T TELEPHONE COMPANY
- GENERAL NOTES:  
1. SANITARY SEWER CONNECTIONS SHALL BE AS APPROVED BY THE METROPOLITAN ST. LOUIS SEWER DISTRICT.  
2. STORMWATER MANAGEMENT SHALL BE DESIGNED PURSUANT TO THE CITY OF CREVE COEUR STANDARDS AND METROPOLITAN ST. LOUIS SEWER DISTRICT REQUIREMENTS AND DISCHARGE AT AN ADEQUATE NATURAL DISCHARGE POINT. SINKHOLES ARE NOT ADEQUATE NATURAL DISCHARGE POINTS.  
3. THE LOCATION OF STORM AND SANITARY SEWER IMPROVEMENTS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS AND SHALL BE INDICATED ON THE IMPROVEMENT PLANS.  
4. GRADING AND DRAINAGE SHALL BE PER CITY OF CREVE COEUR STANDARDS AND METROPOLITAN ST. LOUIS SEWER DISTRICT REQUIREMENTS.  
5. LANDSCAPING WILL BE PROVIDED AS REQUIRED BY CITY OF CREVE COEUR.  
6. SLOPE SHALL NOT EXCEED 3% (HORIZONTAL) TO 1% (VERTICAL) UNLESS SUPPORTED BY GEOTECHNICAL REPORT AND APPROVED BY THE CITY OF CREVE COEUR STANDARDS.  
7. SETBACKS FOR RDO REQUIREMENTS TAKE PRECEDENCE OVER "SPECIAL USE" SETBACK REQUIREMENTS.  
8. THE PROPOSED LIGHT STANDARDS SHALL BE IN COMPLIANCE TO THE CITY OF CREVE COEUR'S LIGHTING CODE.  
9. THE UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, NUMBER OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN AND SHALL BE LOCATED IN EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS IN THE FIELD PRIOR TO ANY GRADING. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319, RSMO.

A TRACT OF LAND BEING SANTINO ROAD (50 FEET WIDE), LOTS 41 & 42 AND PART OF LOTS 43 & 44 OF "EMERALD GREEN ESTATES" A SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 104, PAGE 20 OF THE ST. LOUIS COUNTY RECORDS IN SECTION 10, TOWNSHIP 45 NORTH - RANGE 5 EAST, CITY OF CREVE COEUR, ST. LOUIS COUNTY, MISSOURI AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 42; THENCE EASTWARDLY ALONG THE NORTH LINE OF SAID LOT 42 SOUTH 89 DEGREES 24 MINUTES 00 SECONDS EAST 142.00 FEET TO A POINT ON THE WEST LINE OF SAID LOT 41; THENCE NORTHWARDLY ALONG SAID WEST LINE NORTH 00 DEGREES 41 MINUTES 00 SECONDS EAST 48.13 FEET TO THE NORTH LINE OF SAID LOT 41; THENCE EASTWARDLY ALONG SAID NORTH LINE SOUTH 89 DEGREES 19 MINUTES 00 SECONDS WEST 289.58 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF BALLAS ROAD (VARYING WIDTH); THENCE SOUTHWARDLY ALONG SAID WEST RIGHT-OF-WAY LINE THE FOLLOWING COURSES AND DISTANCES: SOUTH 00 DEGREES 41 MINUTES 00 SECONDS WEST 149.33 FEET, ALONG A CURVE TO THE RIGHT WHOSE RADIUS POINT BEARS NORTH 89 DEGREES 19 MINUTES 00 SECONDS WEST 23.00 FEET FROM THE LAST MENTIONED POINT, A DISTANCE OF 3.17 FEET, SOUTH 07 DEGREES 07 MINUTES 00 SECONDS WEST 77.48 FEET, SOUTH 00 DEGREES 41 MINUTES 00 SECONDS WEST 173.43 FEET AND SOUTH 29 DEGREES 08 MINUTES 36 SECONDS WEST 63.02 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF LAQUE ROAD (75 FEET WIDE); THENCE WESTWARDLY ALONG SAID NORTH RIGHT-OF-WAY LINE NORTH 89 DEGREES 28 MINUTES 00 SECONDS WEST 358.00 FEET TO THE WEST LINE OF AFOREMENTIONED LOT 44; THENCE NORTHWARDLY ALONG SAID WEST LINE NORTH 00 DEGREES 34 MINUTES 00 SECONDS WEST 24.00 FEET TO A POINT ON THE SOUTH LINE OF AFOREMENTIONED LOT 42; THENCE WESTWARDLY ALONG SAID SOUTH LINE NORTH 89 DEGREES 28 MINUTES 00 SECONDS WEST 195.82 FEET TO THE WEST LINE OF SAID LOT 43; THENCE NORTHWARDLY ALONG SAID WEST LINE NORTH 00 DEGREES 38 MINUTES 00 SECONDS EAST 178.86 FEET TO THE POINT OF BEGINNING AND CONTAINING 4.732 ACRES ACCORDING TO CALCULATIONS BY VOLZ INCORPORATED DURING NOVEMBER 2017.



|                                  |                                                                                                                                                               |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROJECT NOTES:                   |                                                                                                                                                               |
| AREA OF SITE:                    | 4.732 ACRES - 4.287 ACRES EXCLUDES RIGHT-OF-WAY                                                                                                               |
| LOCATOR NO:                      | 180610392<br>180610982<br>180610402<br>180610928                                                                                                              |
| OWNER OF RECORD:                 | 180610392<br>180610982<br>180610402<br>180610928                                                                                                              |
| SITE ADDRESS:                    | BALLAS AND LAQUE LLC<br>157 N NEW BALLAS RD<br>SAINT LOUIS, MO 63141<br>180610928<br>BOTANICAL HEIGHTS HOMES<br>LLC<br>1 SANTINO CT<br>SAINT LOUIS, MO 63141  |
| PREPARED FOR:                    | 1807 TOWER GROVE AVENUE<br>ST. LOUIS, MISSOURI 63110<br>MAIN: 314.771.7300                                                                                    |
| PREPARED BY:                     | VOLZ Incorporated<br>10849 INDIAN HEAD IND. BLVD.<br>ST. LOUIS, MO 63132<br>314.634.6313 MAIN<br>314.890.1250 FAX                                             |
| EXISTING ZONING:                 | SINGLE FAMILY RESIDENTIAL                                                                                                                                     |
| PROPOSED ZONING:                 | "R" SINGLE FAMILY RESIDENTIAL - SECTION 405.260<br>RDO - RESIDENTIAL DEVELOPMENT DISTRICT                                                                     |
| PROPOSED SETBACKS:               | 20' FRONT YARD<br>7.5' SIDE YARD<br>25' REAR YARD<br>30' SETBACK                                                                                              |
| NEW BALLAS ROAD:                 | 50' SETBACK                                                                                                                                                   |
| LAQUE ROAD:                      | 3.45 ACRES / 4.732 ACRES = 73%                                                                                                                                |
| DENSITY CALCULATIONS:            | 4.287 ACRES - 185,434.92 SF EXCLUDES RIGHT OF WAY<br>25,000 SF<br>9 LOTS<br>= 9.27                                                                            |
| PROPOSED LOTS:                   | 9 LOTS x 2 PARKING SPACES PER LOT = 18 SPACES                                                                                                                 |
| OFF-STREET PARKING REQUIREMENTS: |                                                                                                                                                               |
| LEGAL DESCRIPTION:               | A TRACT OF LAND BEING LOTS 41 & 42 & PART OF LOTS 43 & 44 OF EMERALD GREEN ESTATES SECTION 10, TOWNSHIP 45 NORTH - RANGE 5 EAST CITY OF CREVE COEUR, MISSOURI |

BY ORDER OF UIC, WE HAVE PREPARED A SITE DEVELOPMENT PLAN / PRELIMINARY PLAT, THE RESULTS OF WHICH ARE CURRENTLY PENDING ON THIS DRAWING. NOT FOR CONSTRUCTION - AND WAS PREPARED FOR THE SOLE LIMITED PURPOSE OF PROVIDING A CONCEPT FOR THE PROPOSED DEVELOPMENT OF THE TRACT AND IS INTENDED ONLY FOR THE PRELIMINARY USE OF GOVERNMENTAL REVIEWING AUTHORITIES FOR THE PURPOSE OF OBTAINING APPROVAL OF A CONCEPT AND IS SUBJECT TO SUCH COMMENTS, RECOMMENDATIONS OR REVISIONS AS MAY BE DETERMINED NECESSARY OR APPROPRIATE IN FURTHERANCE OF SUCH PURPOSES.

TIMOTHY J. MEYER  
PROFESSIONAL ENGINEER  
PE-24665

ERIC J. KIRBY, P.L.S.  
PROFESSIONAL LAND SURVEYOR  
MO P.L.S. #20869007

VOLZ Incorporated  
1807 TOWER GROVE AVENUE  
ST. LOUIS, MISSOURI 63110  
MAIN: 314.771.7300  
FAX: 314.890.1250

# SANTINO COURT

A TRACT OF LAND BEING LOTS 41 & 42 & PART OF LOTS 43 & 44  
OF EMERALD GREEN ESTATES SECTION 10, TOWNSHIP 45 NORTH - RANGE 5 EAST  
CITY OF CREVE COEUR, MISSOURI

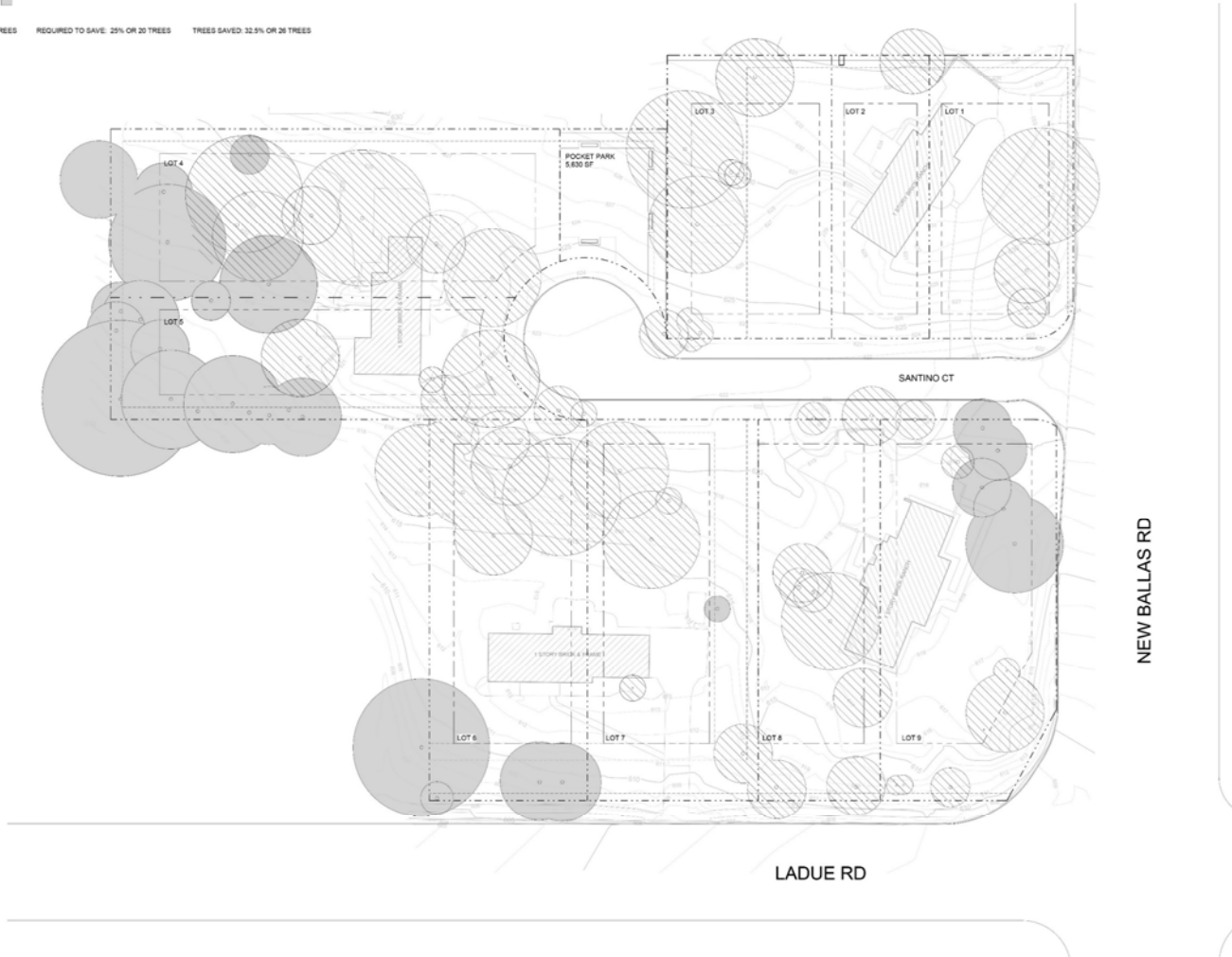
DATE: 11-17-2017  
SHEET: 02

Site Sections





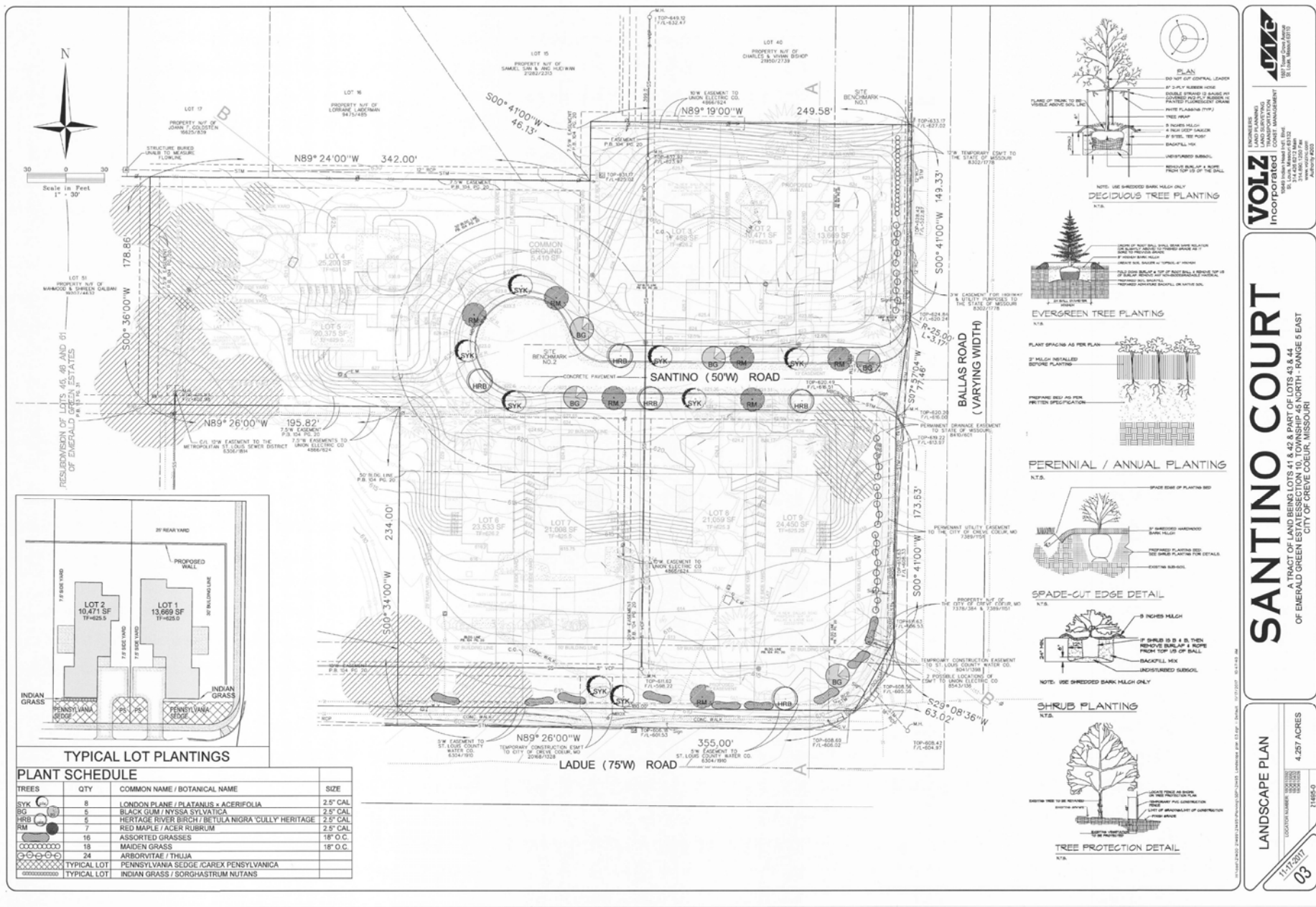
EXISTING TREES 8" DIA. OR MORE  
TREES TO SAVE  
INDIVIDUAL TREES: 8" DIA OR MORE  
80 TREES  
REQUIRED TO SAVE: 25% OR 20 TREES  
TREES SAVED: 32.5% OR 26 TREES



EXISTING TREES 8" DIA. OR MORE  
TREES TO SAVE

INDIVIDUAL TREES: 8" DIA OR MORE  
80 TREES  
REQUIRED TO SAVE: 25% OR 20 TREES  
TREES SAVED: 32.5% OR 26 TREES

# Tree Census



Preliminary Landscape Plan

Attachment: Santino Submittal Slides 11-17-2017 (#17-044; Santino Court RZG B-RDD)





# Examples of Trees/Plants on Landscape Plan



London Plane



Pennsylvania Sedge



Black Gum



Indian Grass



Heritage River Birch





# Examples of Trees/Plants on Landscape Plan



Red Maple



Evergreen



Assorted Grasses



Arborvitae



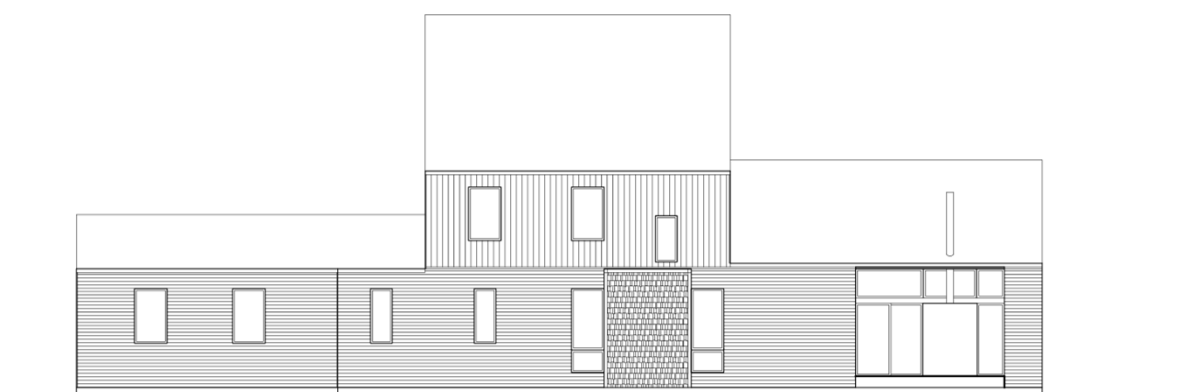


# Examples of Rain Gardens

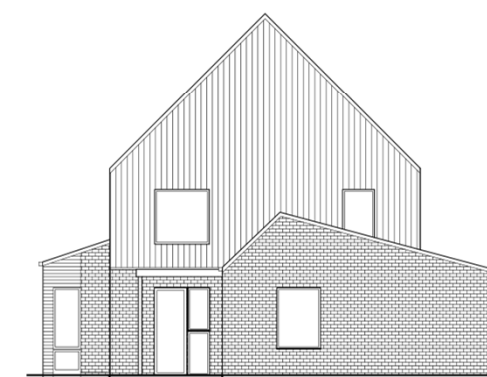
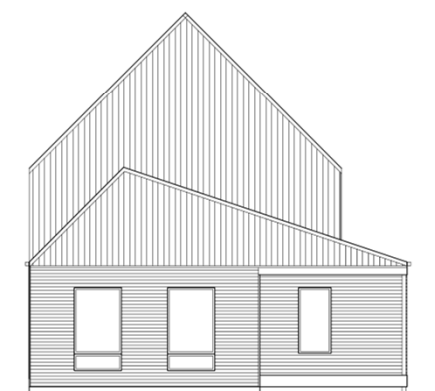
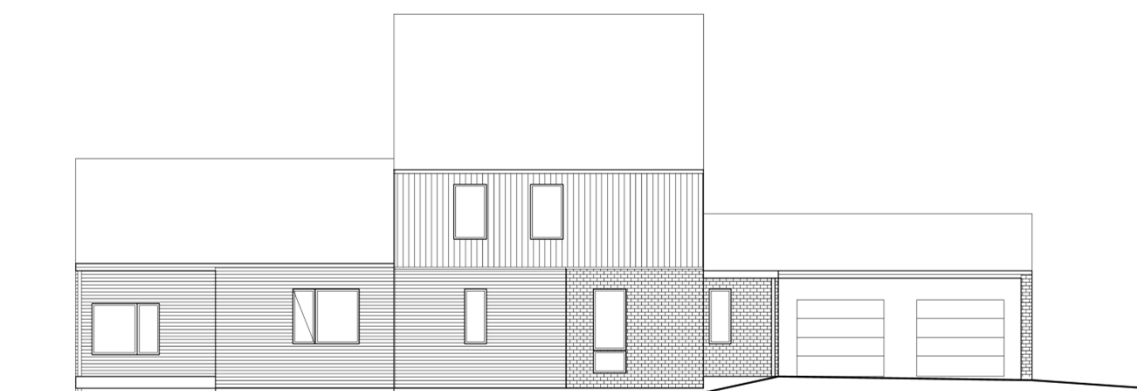




# Model 1 Elevations



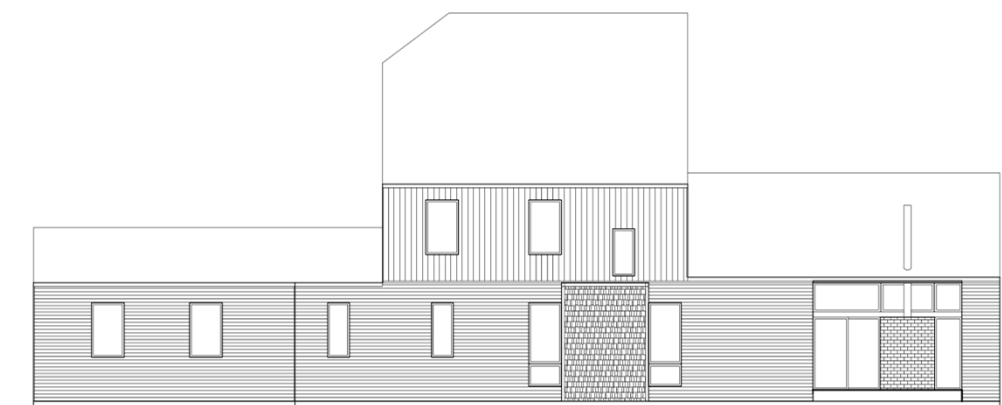
-  VERTICAL CEMENT FIBER SIDING
-  CEMENT FIBER LAP SIDING
-  BRICK
-  WOOD SIDING







# Model 2 Elevations

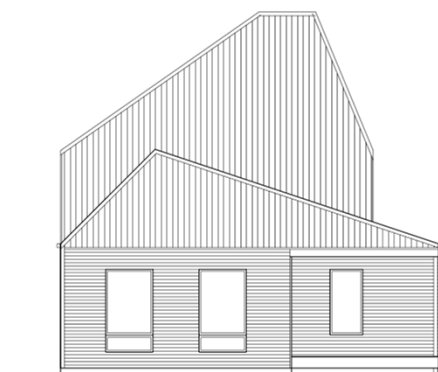
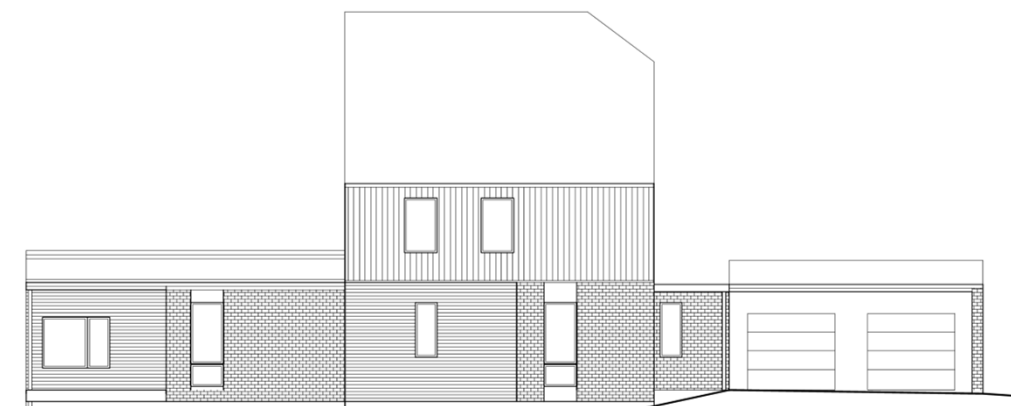


 VERTICAL CEMENT FIBER SIDING

 CEMENT FIBER LAP SIDING

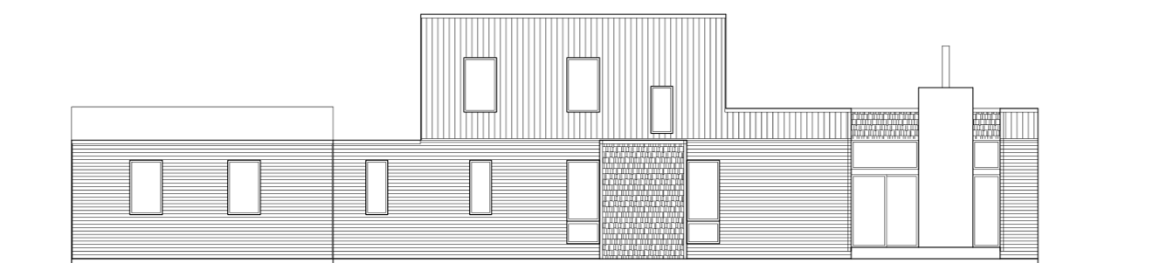
 BRICK

 WOOD SIDING

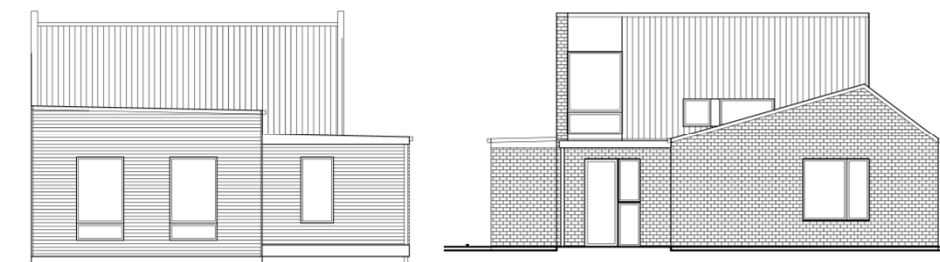
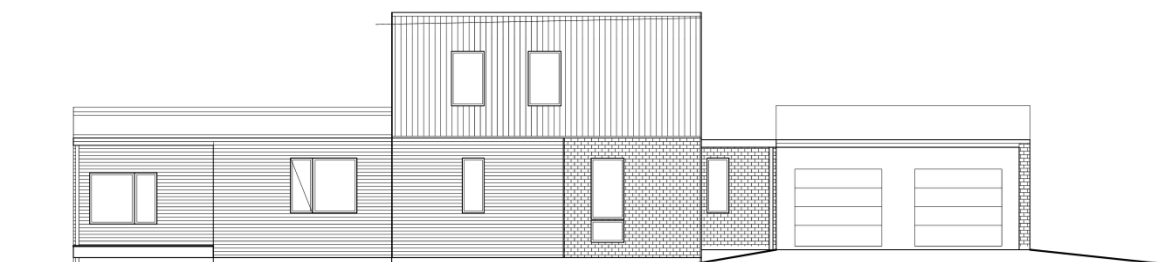




# Model 3 Elevations



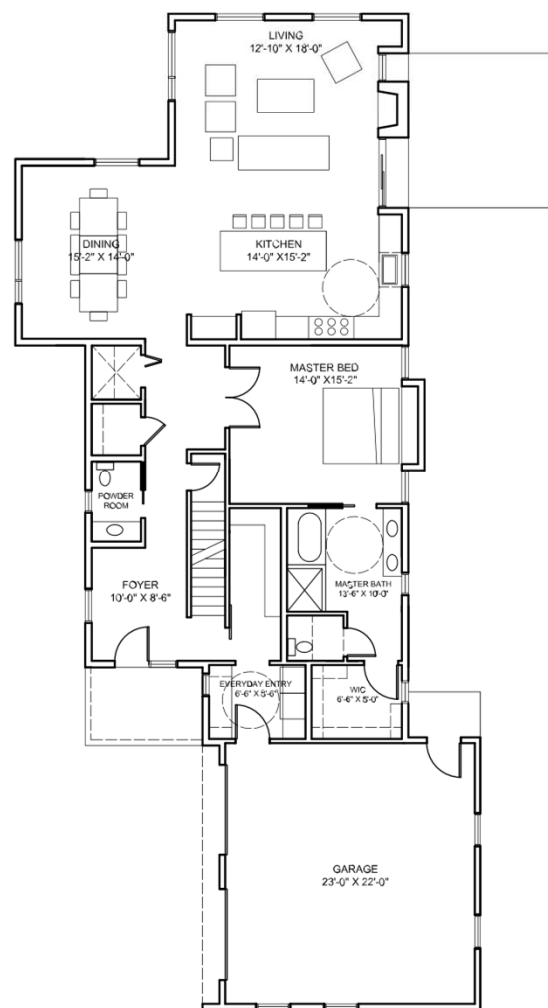
-  VERTICAL CEMENT FIBER SIDING
-  CEMENT FIBER LAP SIDING
-  BRICK
-  WOOD SIDING



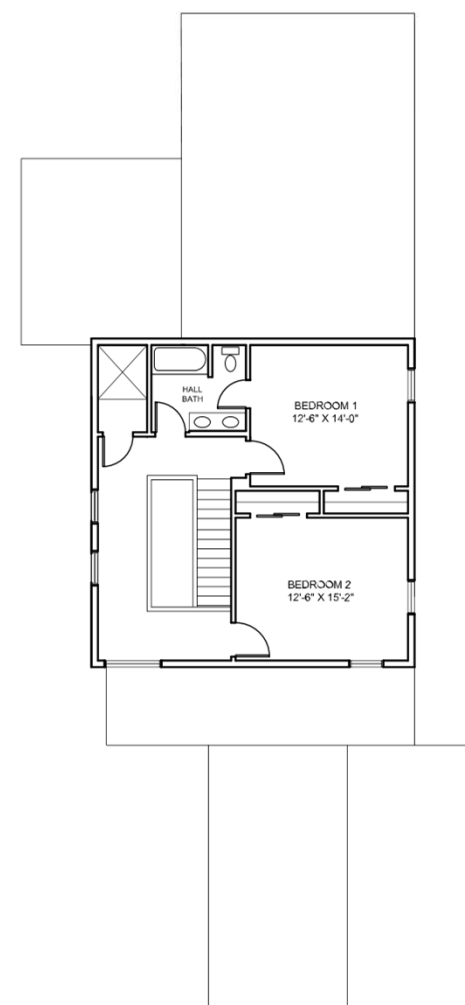




# Floor Plan A



1<sup>st</sup> Floor

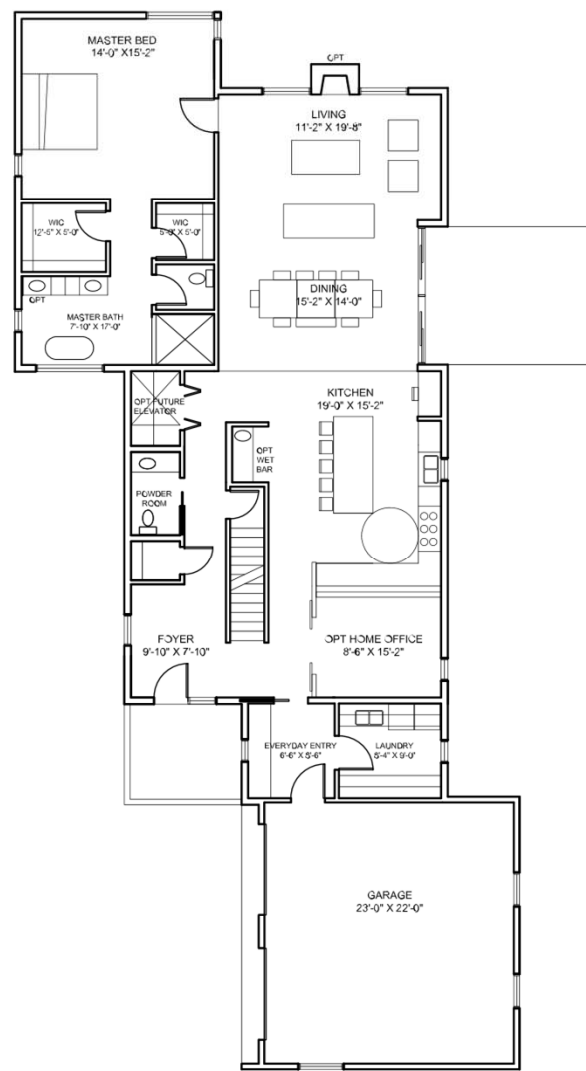


2<sup>nd</sup> Floor

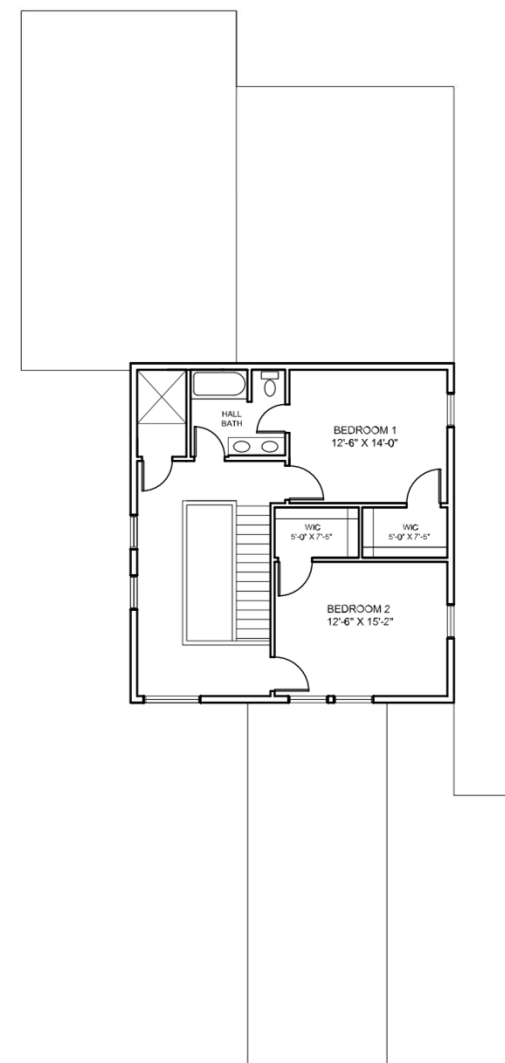
Note: All floor plans and elevations are compatible with each model.



# Floor Plan B



1<sup>st</sup> Floor



2<sup>nd</sup> Floor

Note: All floor plans and elevations are compatible with each model.





Perspective  
Looking West



Perspective  
Looking West

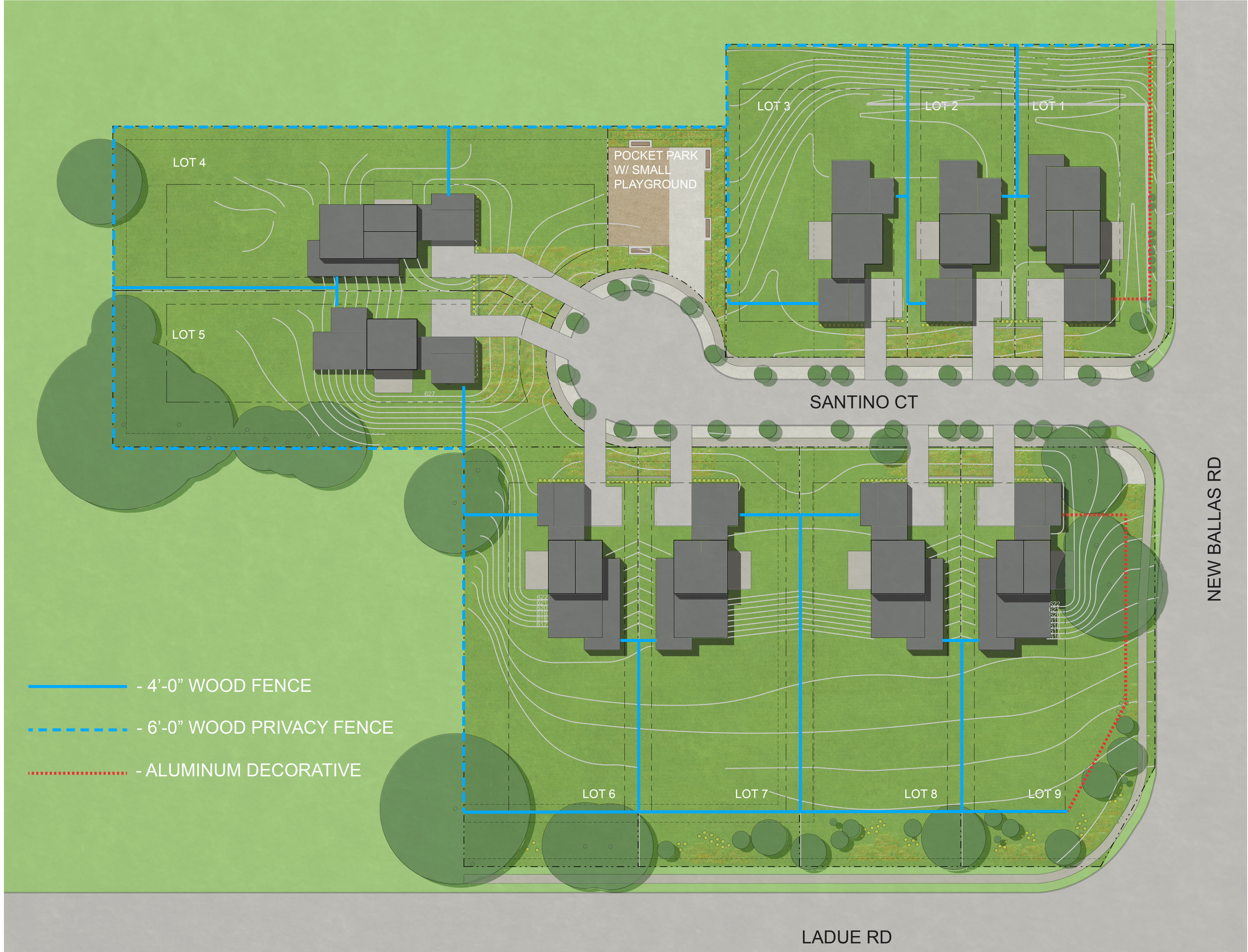




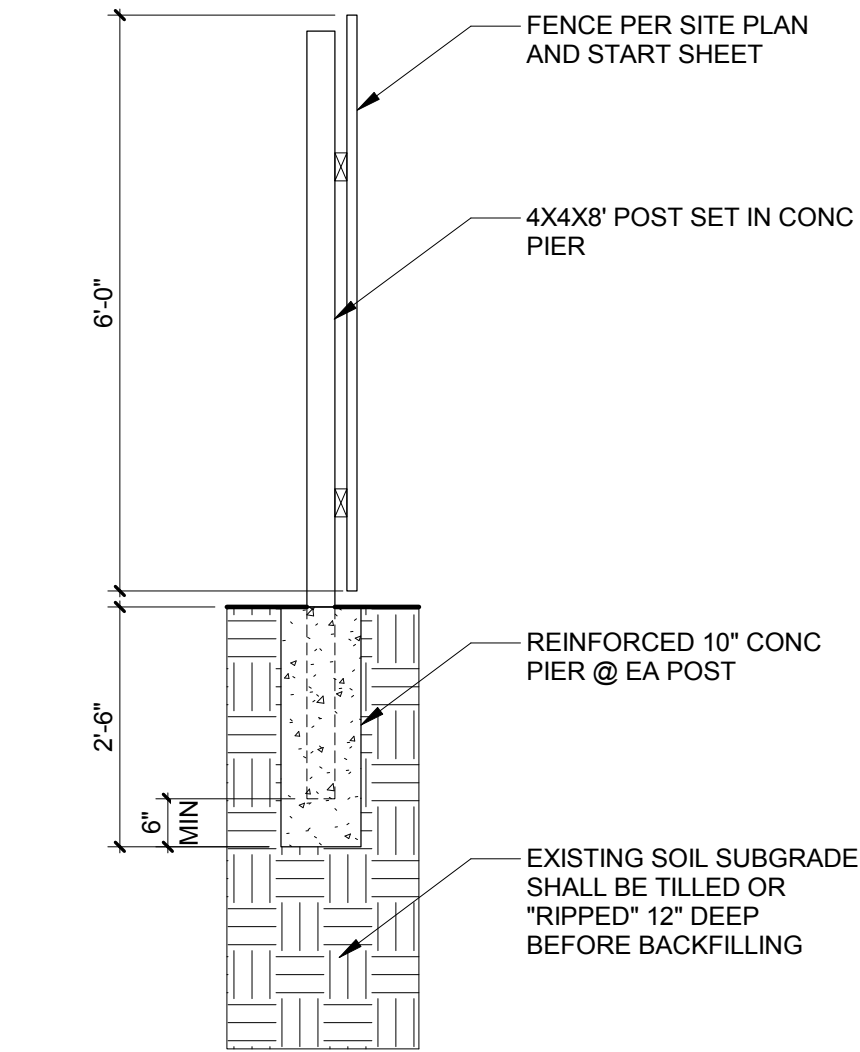
Perspective  
Looking South



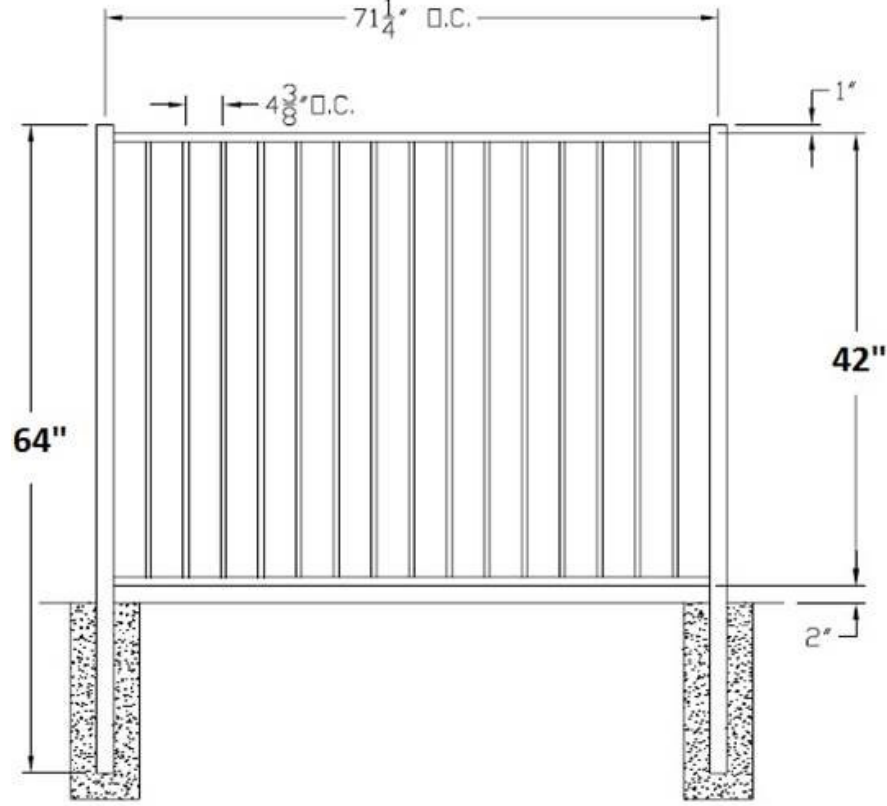
12/8/2017 2:30:48 PM



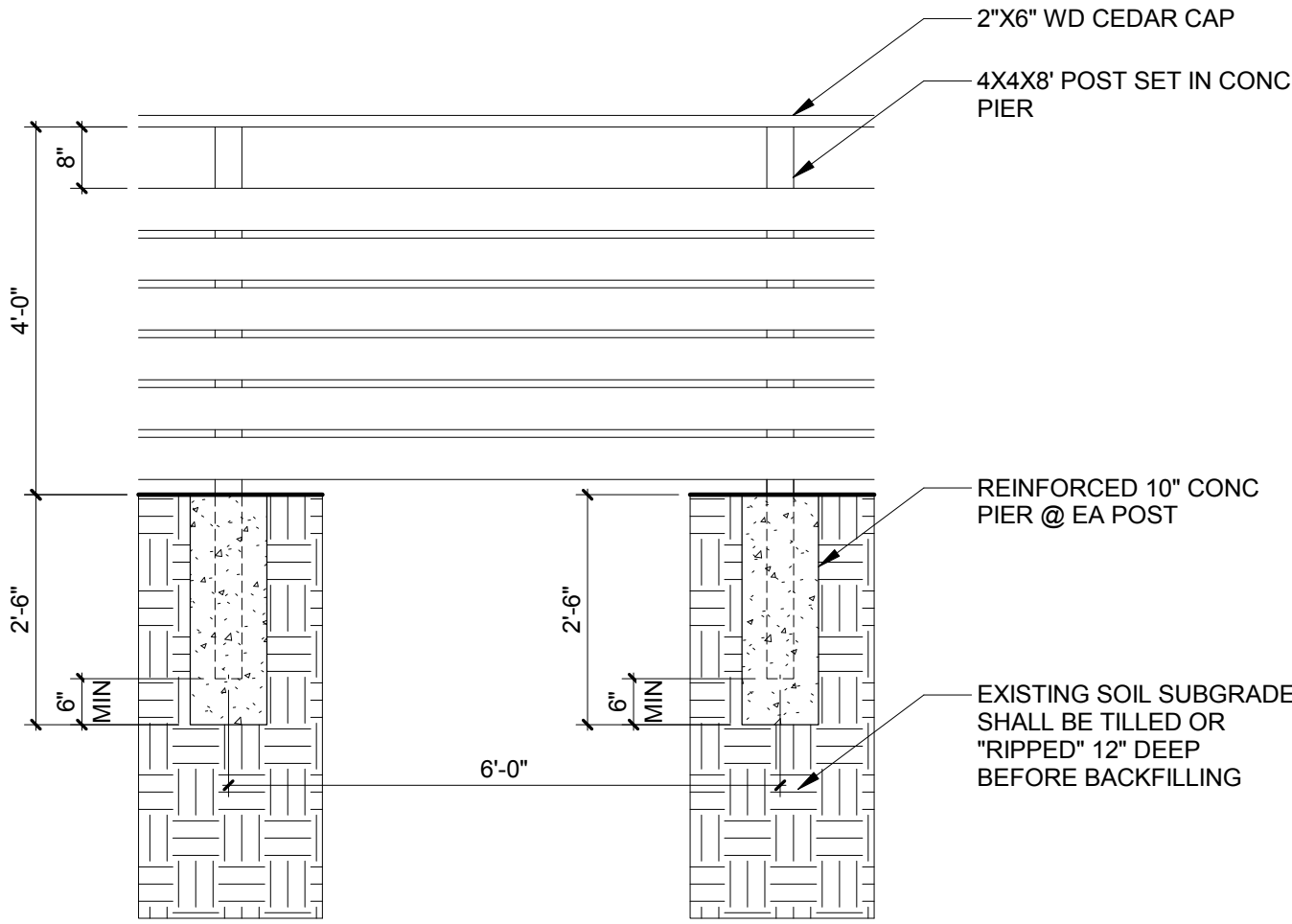
SITE PLAN



6'-0" WOOD PRIVACY FENCE DETAIL



DECORATIVE ALUMINUM FENCE DETAIL



4'-0" WOOD DECORATIVE FENCE DETAIL



OWNER:  
**UIC HOMES**  
1607 Tower Grove Avenue  
Saint Louis, Missouri 63110

ARCHITECT:  
**Central Design Office, LLC**  
**c/d/o**  
1607 Tower Grove Avenue  
Saint Louis, Missouri 63110  
centraldesignoffice.com  
314.771.7300

NOT FOR  
CONSTRUCTION

Brent A. Crittenden  
MO# 2006003774

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |

1" ACTUAL

140.01 00 - SINGLE FAMILY NEW CONSTRUCTION

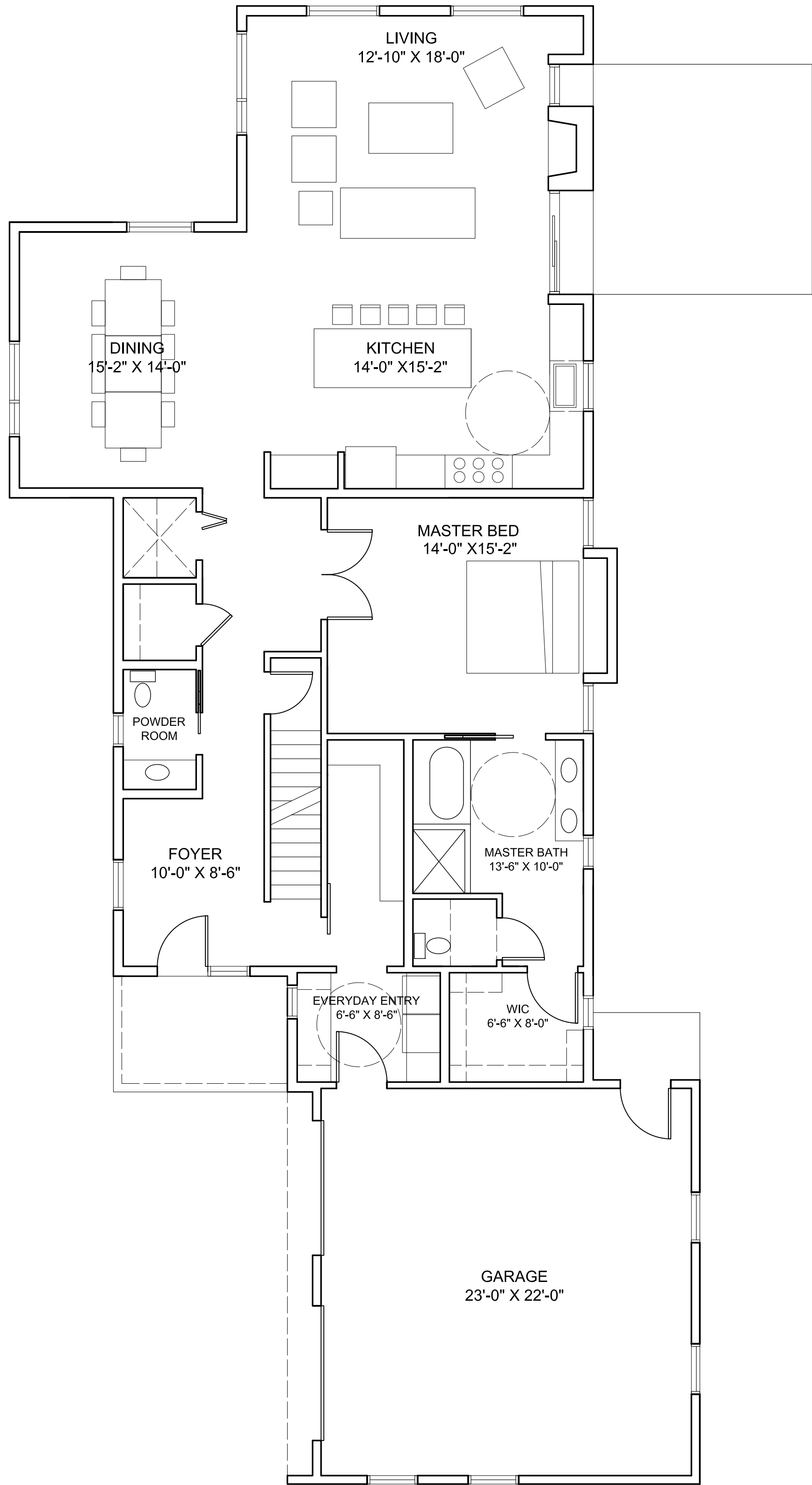
**SANTINO COURT**  
CREVE CEOUR, SANTINO COURT

ISSUE NAME: PRELIMINARY RDD  
ISSUE DATE: DECEMBER 11, 2017  
DRAWN BY: TNW  
SHEET NAME: FENCING LOCATION AND  
DETAILS

SHEET  
**001**

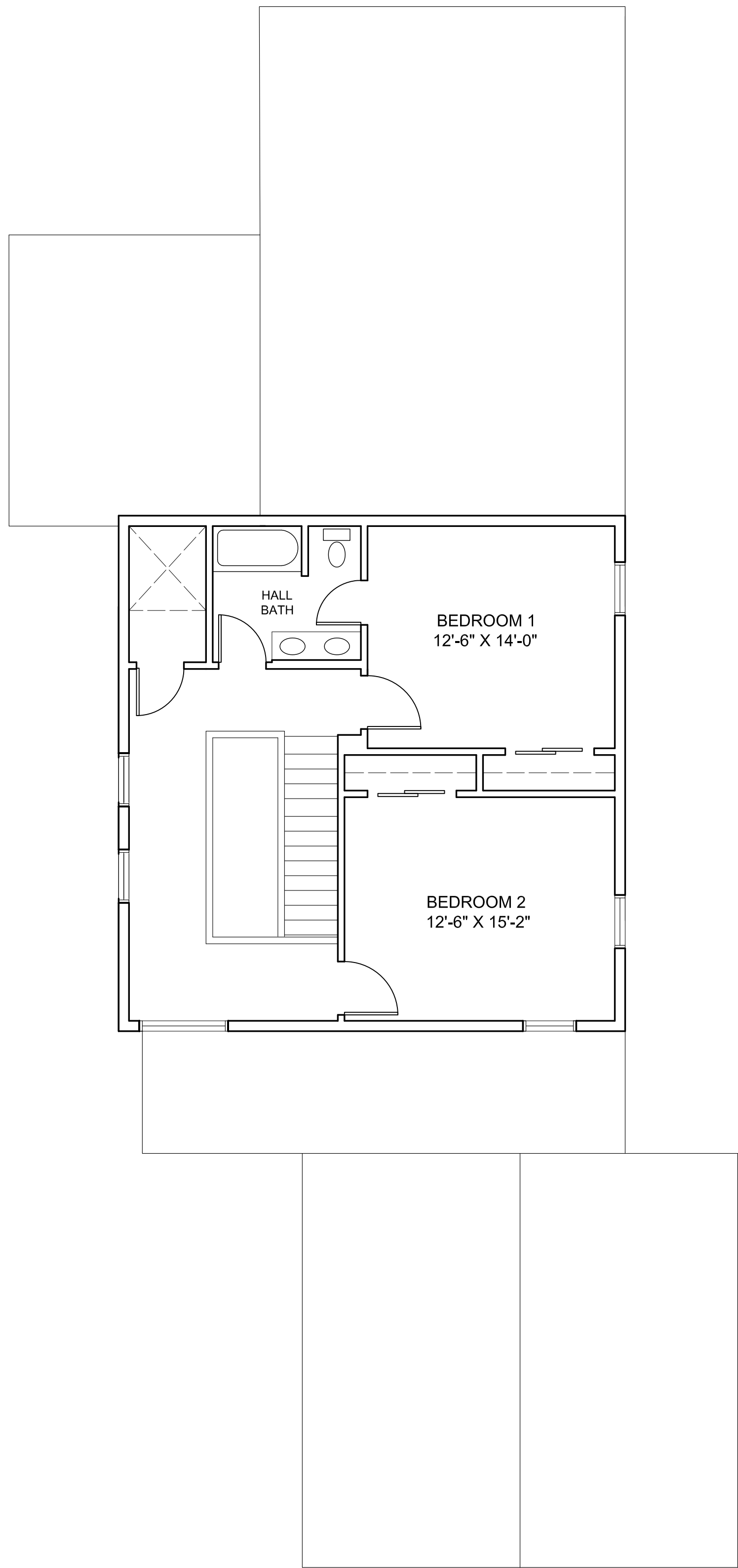


12/8/2017 2:30:51 PM



1<sup>ST</sup> FLOOR

FLOOR PLAN A



2<sup>ND</sup> FLOOR

Note: All floor plans and elevations are compatible with each model



OWNER:  
**UIC HOMES**  
1607 Tower Grove Avenue  
Saint Louis, Missouri 63110



ARCHITECT:  
Central Design Office, LLC



1607 Tower Grove Avenue  
Saint Louis, Missouri 63110  
centraldesignoffice.com  
314.771.7300

NOT FOR  
CONSTRUCTION

Brent A. Crittenden  
MO# 2006003774

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |

1" ACTUAL

140.01.00 - SINGLE FAMILY NEW CONSTRUCTION

SANTINO COURT  
CREVE CEOUR, SANTINO COURT

ISSUE NAME: PRELIMINARY RDD  
ISSUE DATE: DECEMBER 11, 2017  
DRAWN BY: Author  
SHEET NAME: FLOOR PLANS

SHEET

002





~~CDO~~

\_\_\_\_\_

Drent A. Gritterden

140.01.00 - SINGLE FAMILY NEW CONSTRUCTION

---

**SANTINO COURT**  
CREVE COEUR, SANTINO COURT

**SANTINO COURT**  
CREVE CEUR, SANTINO COURT

# TEST

COPYRIGHT 2017 CENTRAL DESIGN OFFICE, LLC





OWNER:  
**UIC HOMES**  
1607 Tower Grove Avenue  
Saint Louis, Missouri 63110



ARCHITECT:  
Central Design Office, LLC



1607 Tower Grove Avenue  
Saint Louis, Missouri 63110  
centraldesignoffice.com  
314.771.7300

NOT FOR  
CONSTRUCTION

Brent A. Crittenden  
MO# 2006003774

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |

1" ACTUAL

140.01.00 - SINGLE FAMILY NEW CONSTRUCTION  
**SANTINO COURT**  
CREVE CEOUR, SANTINO COURT

ISSUE NAME: PRELIMINARY RDD  
ISSUE DATE: DECEMBER 11, 2017  
DRAWN BY: Author  
SHEET NAME: ELEVATIONS

SHEET

004



FRONT ELEVATION



LEFT ELEVATION



RIGHT ELEVATION



BACK ELEVATION





FRONT ELEVATION



LEFT ELEVATION



RIGHT ELEVATION



BACK ELEVATION

OWNER:  
**UIC HOMES**  
1607 Tower Grove Avenue  
Saint Louis, Missouri 63110



ARCHITECT:  
Central Design Office, LLC



1607 Tower Grove Avenue  
Saint Louis, Missouri 63110  
centraldesignoffice.com  
314.771.7300

NOT FOR  
CONSTRUCTION

Brent A. Crittenden  
MO# 2006003774

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |

1" ACTUAL

140.01.00 - SINGLE FAMILY NEW CONSTRUCTION  
**SANTINO COURT**  
CREVE CEOUR, SANTINO COURT

ISSUE NAME: PRELIMINARY RDD  
ISSUE DATE: DECEMBER 11, 2017  
DRAWN BY: Author  
SHEET NAME: ELEVATIONS

SHEET  
**005**





FRONT ELEVATION



LEFT ELEVATION



RIGHT ELEVATION



BACK ELEVATION

OWNER:  
**UIC HOMES**  
1607 Tower Grove Avenue  
Saint Louis, Missouri 63110



ARCHITECT:  
Central Design Office, LLC



1607 Tower Grove Avenue  
Saint Louis, Missouri 63110  
centraldesignoffice.com  
314.771.7300

NOT FOR  
CONSTRUCTION

Brent A. Crittenden  
MO# 2006003774

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |

1" ACTUAL

140.01.00 - SINGLE FAMILY NEW CONSTRUCTION

SANTINO COURT  
CREVE CEOUR, SANTINO COURT

ISSUE NAME: PRELIMINARY RDD  
ISSUE DATE: DECEMBER 11, 2017  
DRAWN BY: Author  
SHEET NAME: ELEVATIONS

SHEET  
**006**

Attachment: Preliminary\_RDD\_submittal\_12112017 (#17-044: Santino Court RZG B-RDD)





PERSPECTIVE LOOKING SOUTH

OWNER:  
**UIC HOMES**  
1607 Tower Grove Avenue  
Saint Louis, Missouri 63110



ARCHITECT:  
**Central Design Office, LLC**



1607 Tower Grove Avenue  
Saint Louis, Missouri 63110  
centraldesignoffice.com  
314.771.7300

NOT FOR  
CONSTRUCTION

Brent A. Crittenden  
MO# 2006003774

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |

1" ACTUAL

140.01.00 - SINGLE FAMILY NEW CONSTRUCTION  
**SANTINO COURT**  
CREVE CEUR, SANTINO COURT

ISSUE NAME: PRELIMINARY RDD  
ISSUE DATE: DECEMBER 11, 2017  
DRAWN BY: Author  
SHEET NAME: PERSPECTIVE

SHEET  
**007**





PERSPECTIVE LOOKING WEST

OWNER:  
**UIC HOMES**  
1607 Tower Grove Avenue  
Saint Louis, Missouri 63110

**UIC**

ARCHITECT:  
Central Design Office, LLC

**CDO**

1607 Tower Grove Avenue  
Saint Louis, Missouri 63110  
centraldesignoffice.com  
314.771.7300

NOT FOR  
CONSTRUCTION

Brent A. Crittenden  
MO# 2006003774

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |

1" ACTUAL

140.01.00 - SINGLE FAMILY NEW CONSTRUCTION

**SANTINO COURT**  
CREVE CEOUR, SANTINO COURT

ISSUE NAME: PRELIMINARY RDD  
ISSUE DATE: DECEMBER 11, 2017  
DRAWN BY: Author  
SHEET NAME: PERSPECTIVE

**008**

SHEET

Attachment: Preliminary\_RDD\_submittal\_12112017 (#17-044: Santino Court RZG B-RDD)

12/8/2017 2:31:21 PM





PERSPECTIVE LOOKING WEST

12/8/2017 2:31:27 PM

OWNER:  
**UIC HOMES**  
1607 Tower Grove Avenue  
Saint Louis, Missouri 63110



ARCHITECT:  
**Central Design Office, LLC**



1607 Tower Grove Avenue  
Saint Louis, Missouri 63110  
centraldesignoffice.com  
314.771.7300

NOT FOR  
CONSTRUCTION

Brent A. Crittenden  
MO# 2006003774

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |

1" ACTUAL

140.01.00 - SINGLE FAMILY NEW CONSTRUCTION

**SANTINO COURT**  
CREVE COEUR, SANTINO COURT

ISSUE NAME: PRELIMINARY RDD  
ISSUE DATE: DECEMBER 11, 2017  
DRAWN BY: Author  
SHEET NAME: PERSPECTIVE

**009**  
SHEET



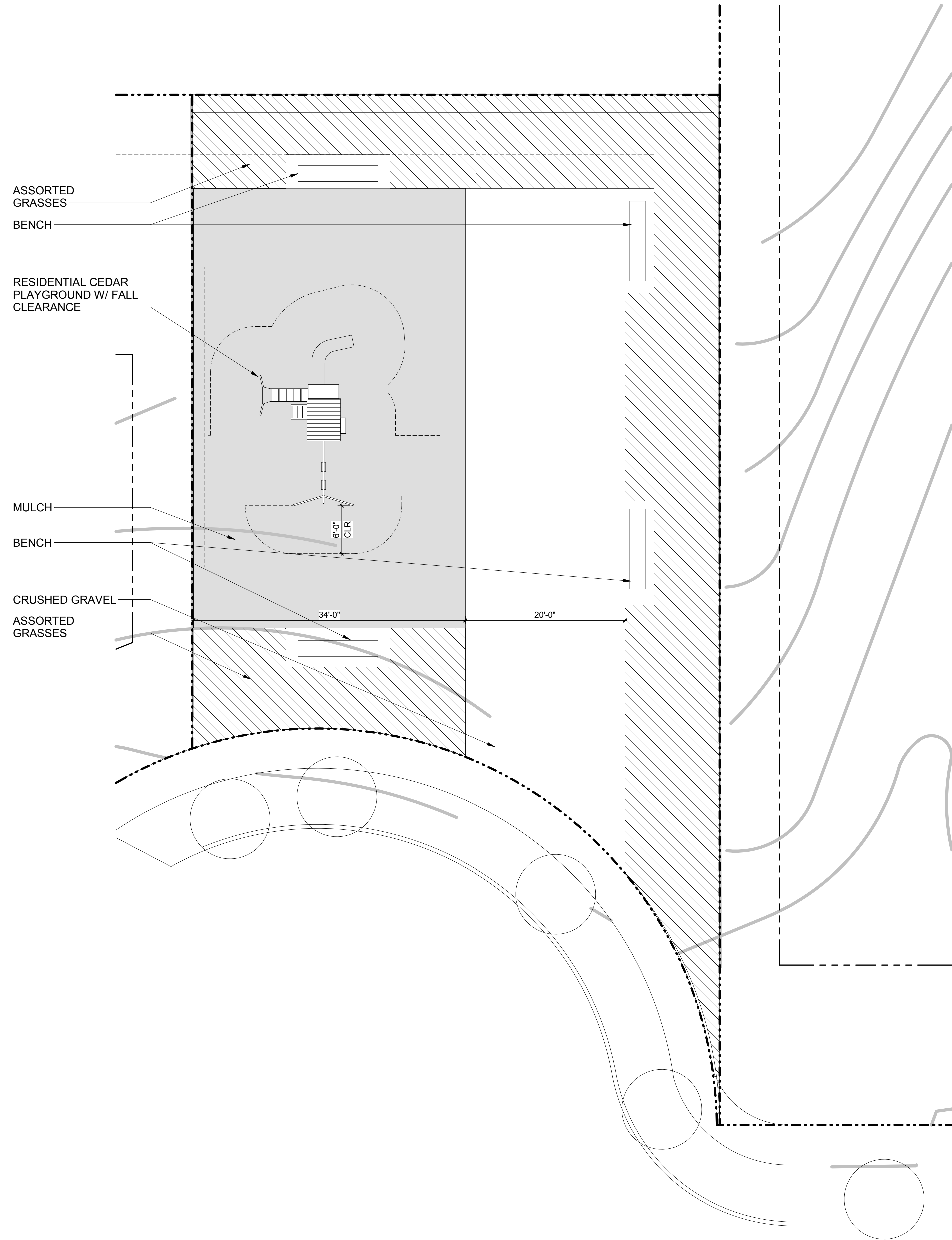


~~CDO~~

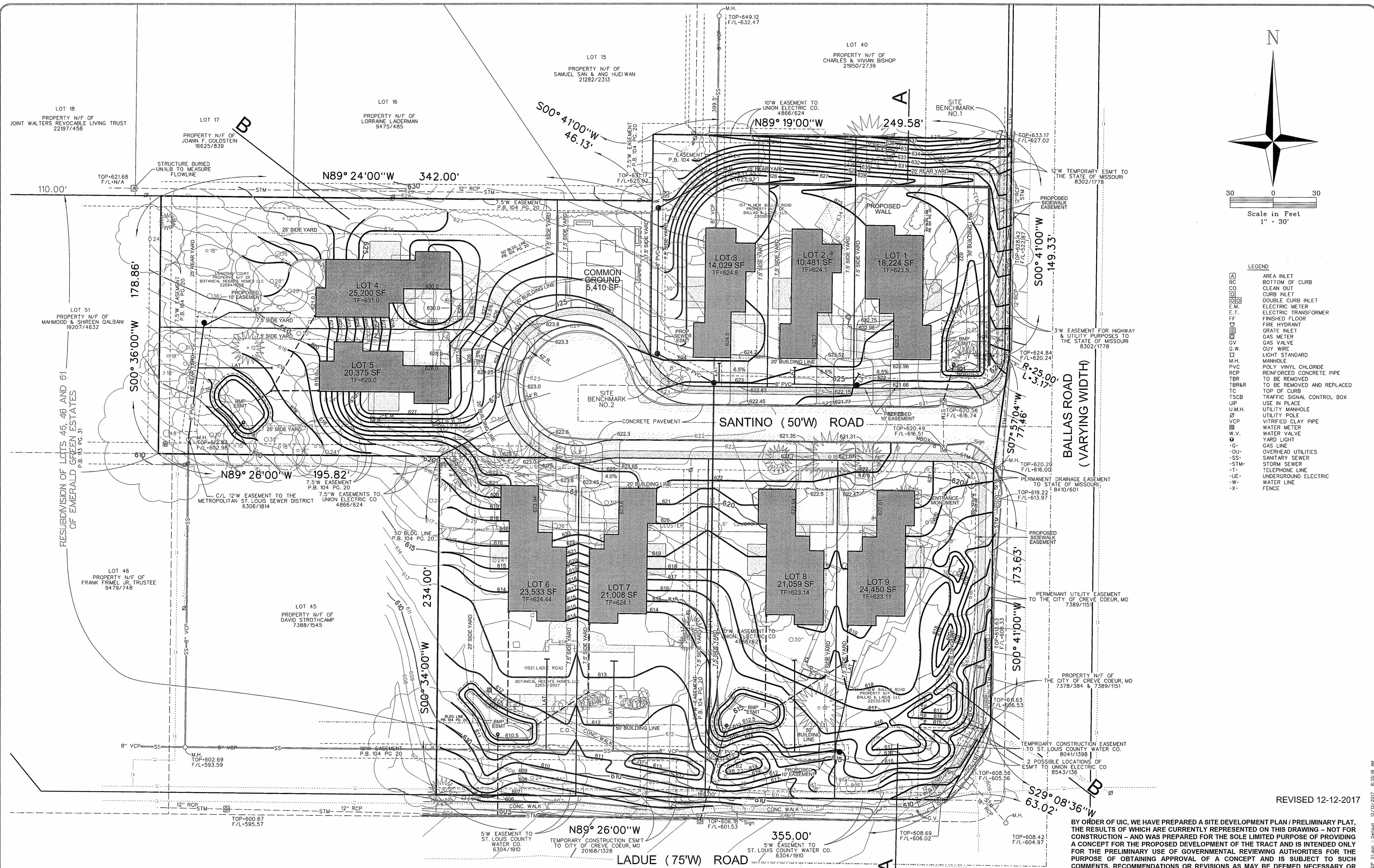
[illegible]

140.01.00 - SINGLE FAMILY NEW CONSTRUCTION

010







REVISED 12-12-2017

BY ORDER OF UIC, WE HAVE PREPARED A SITE DEVELOPMENT PLAN / PRELIMINARY PLAT, THE RESULTS OF WHICH ARE CURRENTLY REPRESENTED ON THIS DRAWING - NOT FOR CONSTRUCTION - AND WAS PREPARED FOR THE SOLE LIMITED PURPOSE OF PROVIDING A CONCEPT FOR THE PROPOSED DEVELOPMENT OF THE TRACT AND IS INTENDED ONLY FOR THE PRELIMINARY USE OF GOVERNMENTAL REVIEWING AUTHORITIES FOR THE PURPOSE OF OBTAINING APPROVAL OF A CONCEPT AND IS SUBJECT TO SUCH COMMENTS, RECOMMENDATIONS OR REVISIONS AS MAY BE DEEMED NECESSARY OR APPROPRIATE IN FURTHERANCE OF SUCH PURPOSES.

TIMOTHY J. MEYER  
PROFESSIONAL ENGINEER  
PE-24665

ERIC J. KIRBY  
PROFESSIONAL LAND SURVEYOR  
MO P.L.S. #200500007

SITE DEVELOPMENT PLAN  
PRELIMINARY PLAT

4.732 ACRES

21495-0

# SANTINO COURT

A TRACT OF LAND BEING LOTS 41 & 42 & PART OF LOTS 43 & 44  
OF EMERALD GREEN ESTATES SECTION 10, TOWNSHIP 45 NORTH - RANGE 5 EAST  
CITY OF CREVE COEUR, MISSOURI

VOLZ  
INCORPORATED

ENGINEERS  
LAND SURVEYING  
TRANSPORTATION  
CONST. MANAGEMENT  
10849 Indian Head Ind'l. Bld.  
St. Louis, Missouri 63132  
314-420-6222 Main  
314-420-6223 Fax  
www.volzinc.com  
Authority #203

Attachment: Preliminary\_RDD\_submittal\_12112017 (#17-044: Santino Court RZG B-RDD)



DISTRICTS:  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
CREVE COEUR FIRE PROTECTION DISTRICT PARKWAY SCHOOL DISTRICT  
CREVE COEUR CREEK WATERSHED

UTILITY SERVICE AREAS:

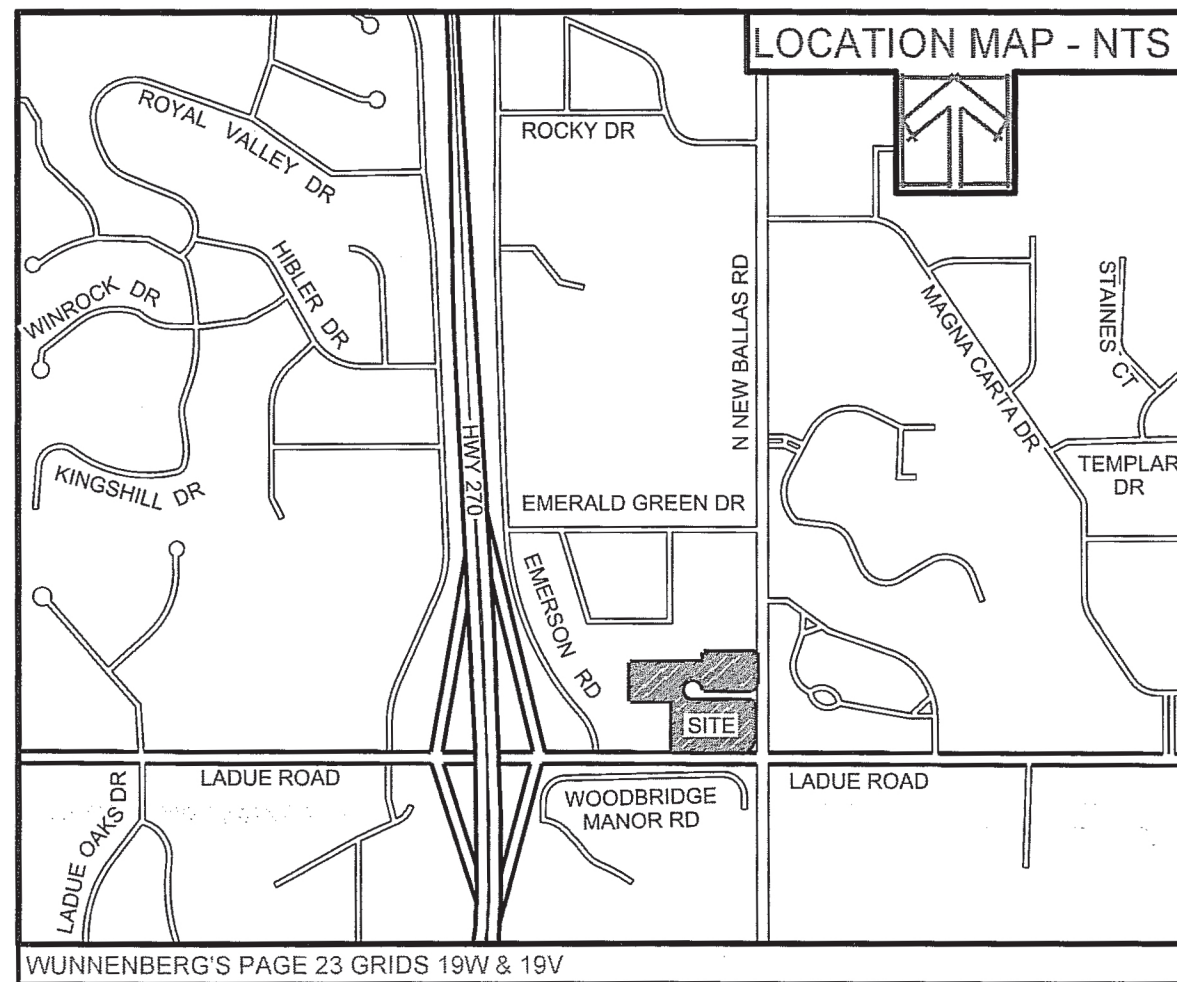
AMEREN  
SPIRE GAS COMPANY  
MISSOURI AMERICAN WATER COMPANY  
CHARTER COMMUNICATIONS (CABLE TV)  
AT&T TELEPHONE COMPANY

GENERAL NOTES:

- SANITARY SEWER CONNECTIONS SHALL BE AS APPROVED BY THE METROPOLITAN ST. LOUIS SEWER DISTRICT.
- STORMWATER MANAGEMENT SHALL BE DESIGNED PURSUANT TO THE CITY OF CREVE COEUR STANDARDS AND METROPOLITAN ST. LOUIS SEWER DISTRICT REQUIREMENTS AND DISCHARGE AT AN ADEQUATE NATURAL DISCHARGE POINT. SINKHOLES ARE NOT ADEQUATE NATURAL DISCHARGE POINTS.
- THE LOCATION OF STORM AND SANITARY SEWER IMPROVEMENTS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS AND SHALL BE INDICATED ON THE IMPROVEMENT PLANS.
- GRADING AND DRAINAGE SHALL BE PER CITY OF CREVE COEUR STANDARDS AND METROPOLITAN ST. LOUIS SEWER DISTRICT REQUIREMENTS.
- LANDSCAPING WILL BE PROVIDED AS REQUIRED BY CITY OF CREVE COEUR.
- SLOPE SHALL NOT EXCEED 3 (HORIZONTAL) : TO 1 (VERTICAL), UNLESS SUPPORTED BY GEOTECHNICAL REPORT AND APPROVED BY THE CITY OF CREVE COEUR STANDARDS.
- SETBACKS FOR RDD REQUIREMENTS TAKE PRECEDENCE OVER "SPECIAL USE" SETBACK REQUIREMENTS.
- THE PROPOSED LIGHT STANDARDS SHALL BE IN COMPLIANCE TO THE CITY OF CREVE COEUR'S LIGHTING CODE.
- THE UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, NUMBER OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN AND SHALL BE LOCATED IN EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS IN THE FIELD PRIOR TO ANY GRADING. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319, RSMO.

A TRACT OF LAND BEING SANTINO ROAD (50 FEET WIDE), LOTS 41 & 42 AND PART OF LOTS 43 & 44 OF "EMERALD GREEN ESTATES" A SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 104, PAGE 20 OF THE ST. LOUIS COUNTY RECORDS IN SECTION 10, TOWNSHIP 45 NORTH - RANGE 5 EAST, CITY OF CREVE COEUR, ST. LOUIS COUNTY, MISSOURI AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 42; THENCE EASTWARDLY ALONG THE NORTH LINE OF SAID LOT 42 SOUTH 89 DEGREES 24 MINUTES 00 SECONDS EAST 342.00 FEET TO A POINT ON THE WEST LINE OF SAID LOT 41; THENCE NORTHWARDLY ALONG SAID WEST LINE NORTH 00 DEGREES 41 MINUTES 00 SECONDS EAST 46.13 FEET TO THE NORTH LINE OF SAID LOT 41; THENCE EASTWARDLY ALONG SAID NORTH LINE SOUTH 89 DEGREES 19 MINUTES 00 SECONDS WEST 249.58 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF BALLAS ROAD (VARYING WIDTH); THENCE SOUTHWARDLY ALONG SAID WEST RIGHT-OF-WAY LINE THE FOLLOWING COURSES AND DISTANCES: SOUTH 00 DEGREES 41 MINUTES 00 SECONDS WEST 149.33 FEET, ALONG A CURVE TO THE RIGHT WHOSE RADIUS POINT BEARS NORTH 89 DEGREES 19 MINUTES 00 SECONDS WEST 25.00 FEET FROM THE LAST MENTIONED POINT, A DISTANCE OF 3.17 FEET, SOUTH 07 DEGREES 57 MINUTES 04 SECONDS WEST 77.46 FEET, SOUTH 00 DEGREES 41 MINUTES 00 SECONDS WEST 173.63 FEET AND SOUTH 29 DEGREES 08 MINUTES 36 SECONDS WEST 63.02 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF LADUE ROAD (75 FEET WIDE); THENCE WESTWARDLY ALONG SAID NORTH RIGHT-OF-WAY LINE NORTH 89 DEGREES 26 MINUTES 00 SECONDS WEST 355.00 FEET TO THE WEST LINE OF AFOREMENTIONED LOT 44; THENCE NORTHWARDLY ALONG SAID WEST LINE NORTH 00 DEGREES 34 MINUTES 00 SECONDS WEST 234.00 FEET TO A POINT ON THE SOUTH LINE OF AFOREMENTIONED LOT 42; THENCE WESTWARDLY ALONG SAID SOUTH LINE NORTH 89 DEGREES 26 MINUTES 00 SECONDS WEST 195.82 FEET TO THE WEST LINE OF SAID LOT 42; THENCE NORTHWARDLY ALONG SAID WEST LINE NORTH 00 DEGREES 36 MINUTES 00 SECONDS EAST 178.86 FEET TO THE POINT OF BEGINNING AND CONTAINING 4.732 ACRES ACCORDING TO CALCULATIONS BY VOLZ INCORPORATED DURING NOVEMBER 2017.



WUNNENBERG'S PAGE 23 GRIDS 19W & 19V

| STORMWATER MANAGEMENT<br>FLOOD PROTECTION |              |
|-------------------------------------------|--------------|
| TOTAL SITE AREA                           | = 185,130 sf |
| EXISTING                                  |              |
| PERVIOUS AREA                             | = 140,317 sf |
| PERVIOUS PERCENTAGE                       | = 75.8%      |
| 15YR-20MIN PI FACTOR                      | = 1.70       |
| PERVIOUS FLOWRATE (Q)                     | = 5.48 cfs   |
| IMPERVIOUS AREA                           | = 44,813 sf  |
| IMPERVIOUS PERCENTAGE                     | = 24.2%      |
| 15YR-20MIN PI FACTOR                      | = 3.54       |
| IMPERVIOUS FLOWRATE (Q)                   | = 3.64 cfs   |
| FLOWRATE (Q)                              | = 9.12 cfs   |
| PROPOSED                                  |              |
| PERVIOUS AREA                             | = 129,201 sf |
| PERVIOUS PERCENTAGE                       | = 69.8%      |
| 15YR-20MIN PI FACTOR                      | = 1.70       |
| PERVIOUS FLOWRATE (Q)                     | = 5.04 cfs   |
| IMPERVIOUS AREA                           | = 55,929 sf  |
| IMPERVIOUS PERCENTAGE                     | = 30.2%      |
| 15YR-20MIN PI FACTOR                      | = 3.54       |
| IMPERVIOUS FLOWRATE (Q)                   | = 4.55 cfs   |
| FLOWRATE (Q)                              | = 9.59 cfs   |
| DIFFERENTIAL FLOWRATE                     |              |
| PROP Q - EX Q                             | = 0.47 cfs   |
| Q <sub>p</sub>                            | Not Required |
| Q <sub>p</sub>                            | Not Required |
| CHANNEL PROTECTION                        |              |
| TOTAL SITE AREA                           | = 185,130 sf |
|                                           | = 4.25 Ac    |
| C <sub>pv</sub>                           | Not Required |
| WATER QUALITY                             |              |
| TOTAL DISTURBED AREA                      | = 172,737 sf |
|                                           | = 3.97 Ac    |
| W <sub>qv</sub>                           | Required     |

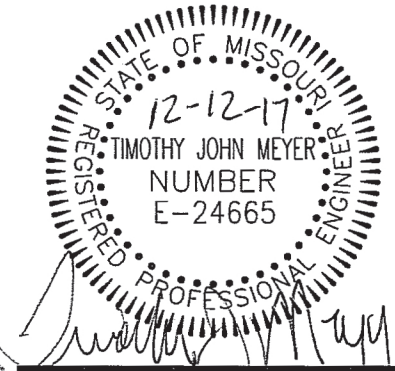
| PROJECT NOTES:                      |                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AREA OF SITE:                       | 4.732 ACRES   4.257 ACRES EXCLUDES RIGHT-OF-WAY                                                                                                                                                                                                                                                                                                        |
| LOCATOR NO:                         | 180610392<br>180610062<br>180610402<br>180610028                                                                                                                                                                                                                                                                                                       |
| OWNER OF RECORD:<br>SITE ADDRESS:   | 180610392<br>BALLAS AND LADUE LLC<br>157 N NEW BALLAS RD<br>SAINT LOUIS, MO 63141<br>180610062<br>BOTANICAL HEIGHTS HOMES<br>LLC<br>1 SANTINO CT<br>SAINT LOUIS, MO 63141<br>180610402<br>BALLAS & LADUE LLC<br>105 N NEW BALLAS RD<br>SAINT LOUIS, MO 63141<br>180610028<br>BOTANICAL HEIGHTS<br>HOMES LLC<br>11921 LADUE RD<br>SAINT LOUIS, MO 63141 |
| PREPARED FOR:                       | <br>1607 TOWER GROVE AVENUE<br>ST. LOUIS, MISSOURI 63110<br>MAIN: 314.771.7300                                                                                                                                                                                                                                                                         |
| PREPARED BY:                        | <br>10849 INDIAN HEAD INDL. BLVD.<br>ST. LOUIS, MO 63132<br>314.426.6212 MAIN<br>314.890.1250 FAX                                                                                                                                                                                                                                                      |
| EXISTING ZONING:                    | SINGLE FAMILY RESIDENTIAL                                                                                                                                                                                                                                                                                                                              |
| PROPOSED ZONING:                    | "B" SINGLE FAMILY RESIDENTIAL - SECTION 405.260<br>RDD - RESIDENTIAL DEVELOPMENT DISTRICT                                                                                                                                                                                                                                                              |
| PROPOSED SETBACKS:                  | 20' FRONT YARD<br>7.5' SIDE YARD<br>25' REAR YARD                                                                                                                                                                                                                                                                                                      |
| NEW BALLAS ROAD:                    | 30' SETBACK                                                                                                                                                                                                                                                                                                                                            |
| LADUE ROAD:                         | 50' SETBACK                                                                                                                                                                                                                                                                                                                                            |
| OPEN SPACE:                         | 3.45 ACRES / 4.732 ACRES = 73%                                                                                                                                                                                                                                                                                                                         |
| DENSITY CALCULATIONS:               | 4.257 ACRES - 185,434.92 SF EXCLUDES RIGHT OF WAY<br>185,434.92 SF<br>20,000 SF = 9.27<br>9 LOTS<br>9 LOTS x 2 PARKING SPACES PER = 18 SPACES                                                                                                                                                                                                          |
| PROPOSED LOTS:                      | 9 LOTS x 2 PARKING SPACES PER = 18 SPACES                                                                                                                                                                                                                                                                                                              |
| OFF-STREET<br>PARKING REQUIREMENTS: |                                                                                                                                                                                                                                                                                                                                                        |
| LEGAL DESCRIPTION                   | A TRACT OF LAND BEING LOTS 41 & 42 & PART OF LOTS 43 & 44 OF EMERALD GREEN ESTATES SECTION 10, TOWNSHIP 45 NORTH - RANGE 5 EAST CITY OF CREVE COEUR, MISSOURI                                                                                                                                                                                          |

BASED ON MSD GENERAL DESIGN CRITERIA FOR STORM WATER MANAGEMENT, WATER QUALITY IS THE ONLY ELEMENT REQUIRED. THIS SITE DOES NOT MEET THE THRESHOLD NEEDS FOR CHANNEL PROTECTION OR FLOOD VOLUME DETENTION.

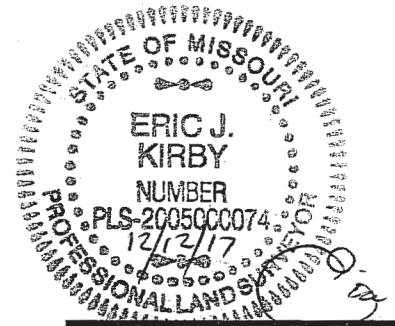
WATER QUALITY WILL BE ADDRESSED IN A SERIES OF RAIN GARDENS AS SHOWN ON THE PROPOSED PLAN.

REVISED 12-12-2017

BY ORDER OF UIC, WE HAVE PREPARED A SITE DEVELOPMENT PLAN / PRELIMINARY PLAT, THE RESULTS OF WHICH ARE CURRENTLY REPRESENTED ON THIS DRAWING - NOT FOR CONSTRUCTION - AND WAS PREPARED FOR THE SOLE LIMITED PURPOSE OF PROVIDING A CONCEPT FOR THE PROPOSED DEVELOPMENT OF THE TRACT AND IS INTENDED ONLY FOR THE PRELIMINARY USE OF GOVERNMENTAL REVIEWING AUTHORITIES FOR THE PURPOSE OF OBTAINING APPROVAL OF A CONCEPT AND IS SUBJECT TO SUCH COMMENTS, RECOMMENDATIONS OR REVISIONS AS MAY BE DEEMED NECESSARY OR APPROPRIATE IN FURTHERANCE OF SUCH PURPOSES.



TIMOTHY J. MEYER  
PROFESSIONAL ENGINEER  
PE-24665



ERIC J. KIRBY, P.L.S.  
PROFESSIONAL LAND SURVEYOR  
MO P.L.S. #200500007

SITE DEVELOPMENT PLAN  
PRELIMINARY PLAT

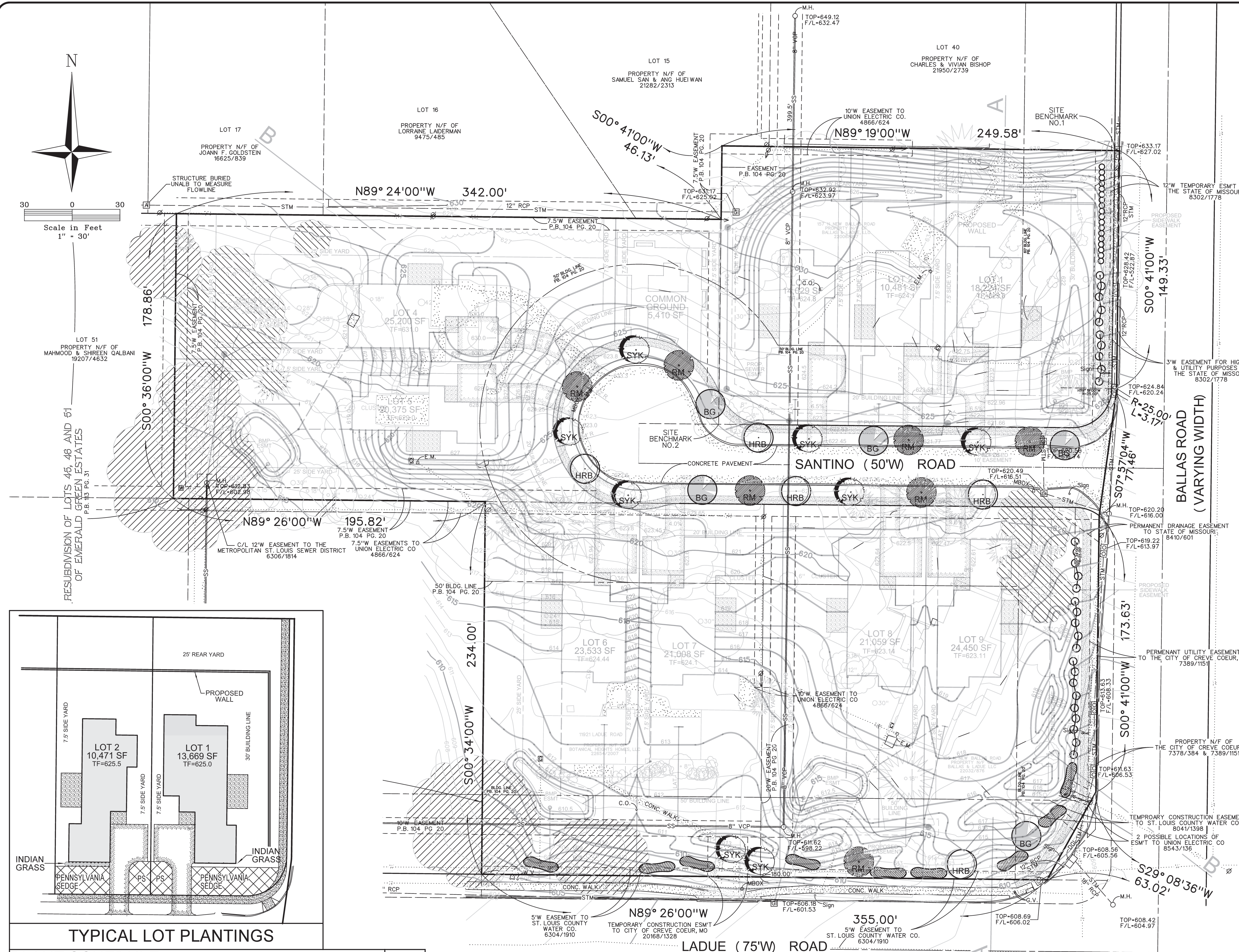
4.732 ACRES

21495-0

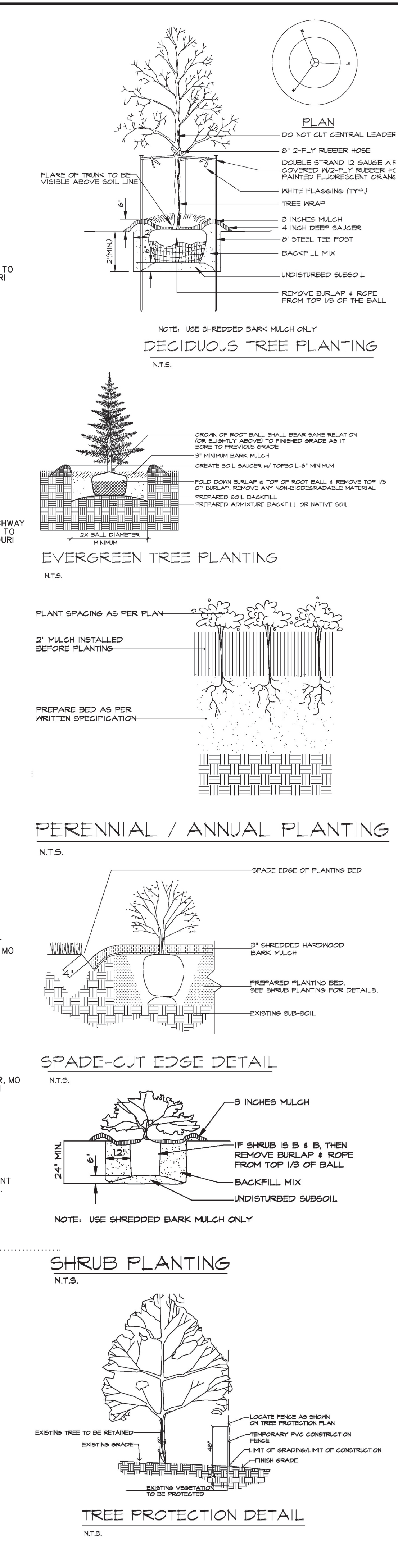
11-17-2017

02





| TYPICAL LOT PLANTINGS |             |                                                     |          |
|-----------------------|-------------|-----------------------------------------------------|----------|
| PLANT SCHEDULE        |             |                                                     |          |
| TREES                 | QTY         | COMMON NAME / BOTANICAL NAME                        | SIZE     |
| SYK                   | 8           | LONDON PLANE / PLATANUS x ACERIFOLIA                | 2.5" CAL |
| BG                    | 5           | BLACK GUM / NYSSA SYLVATICA                         | 2.5" CAL |
| HRB                   | 5           | HERTAGE RIVER BIRCH / BETULA NIGRA 'CULLY' HERITAGE | 2.5" CAL |
| RM                    | 7           | RED MAPLE / ACER RUBRUM                             | 2.5" CAL |
|                       | 16          | ASSORTED GRASSES                                    | 18" O.C. |
|                       | 18          | MAIDEN GRASS                                        | 18" O.C. |
|                       | 24          | ARBORVITAE / THUJA                                  |          |
|                       | TYPICAL LOT | PENNSYLVANIA SEDGE / CAREX PENNSYLVANICA            |          |
|                       | TYPICAL LOT | INDIAN GRASS / SORGHASTRUM NUTANS                   |          |



ENGINEERS  
LAND PLANNING  
LAND SURVEYING  
CONSULTANTS  
10049 Indian Head Road  
St. Louis, Missouri 63110  
314.426.6312 Main  
314.880.1250 Fax  
www.volzinc.com  
AUGUST 2003

# SANTINO COURT

A TRACT OF LAND BEING LOTS 41 & 42 & PART OF LOTS 43 & 44  
OF EMERALD GREEN ESTATE SECTION 10, TOWNSHIP 45 NORTH - RANGE 5 EAST  
CITY OF CREVE COEUR, MISSOURI

## LANDSCAPE PLAN

LOCATOR NUMBER: 180810302  
180810302  
180810302  
180810302

4.257 ACRES

21495-0

11-17-2017

03

Attachment: Preliminary\_RDD\_submittal\_12112017 (#17-044: Santino Court RZG B-RDD)

REVISED 12-12-2017

Packet Pg. 448



BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

**AN ORDINANCE AMENDING THE OFFICIAL ZONING MAP OF THE CITY OF CREVE COEUR TO REZONE 4.257 ACRES OF LAND FROM “A” SINGLE-FAMILY RESIDENTIAL DISTRICT TO “B” SINGLE-FAMILY RESIDENTIAL DISTRICT AND AUTHORIZING A RESIDENTIAL DESIGNED DEVELOPMENT (RDD) WITH ACCOMPANYING PRELIMINARY SUBDIVISION PLAT AND SITE DEVELOPMENT PLAN FOR THE PROPOSED SANTINO COURT SUBDIVISION, FOR THE PROPERTY CURRENTLY ADDRESSED AS 105 AND 157 N. NEW BALLAS ROAD, 1 SANTINO COURT, AND 11921 LADUE ROAD**

**WHEREAS**, Brent Crittenden, of Urban Improvement Company, LLC, has submitted a request for the rezoning and preliminary plat approval of 4.257 acres at 105 and 157 N. New Ballas Road, 1 Santino Court, and 11921 Ladue Road, Creve Coeur, MO from A Single Family Residential to B Single Family Residential with RDD-Residential Design Development designation to allow for the development of a 9 single family home subdivision with an average lot size of 19,817.7 square feet; and

**WHEREAS**, in accordance with Sections 405.280, 405.450(C), and 405.1080 of the Zoning Ordinance, the applicant has submitted a Site Development Plan (hereafter referred to as the “subdivision improvement plan”) and Preliminary Plat to the Department of Planning for the Santino Court subdivision, including 9 lots on the 4.257 acres, with residential designed development (RDD); and

**WHEREAS**, On December 18, 2017, the Planning and Zoning Commission conducted a public hearing on the rezoning and RDD request and accompanying Preliminary Plat; and

**WHEREAS**, notice of said public hearing had been previously published at least 15 days prior to the hearing, in the St. Louis Countian, a newspaper of general circulation in the City of Creve Coeur and otherwise posted and published in accordance with the Zoning Ordinance; and

**WHEREAS**, the Planning and Zoning Commission reviewed and, by a \_\_\_\_ vote recommended approval of the rezoning, RDD, plat, and site development plan, at its meeting on December 18, 2017; and,

**WHEREAS**, all persons who presented themselves and desiring to be heard were given an opportunity to be heard and a copy of the proposed ordinance was made available for public inspection prior to its further consideration by the City Council; and this Bill having been read by title in open meeting two times by the City Council; and

**WHEREAS**, the City Council being fully informed finds that rezoning the property would be in harmony with and bear a substantial relation to the public welfare, health, safety, comfort and convenience of the citizens of the City of Creve Coeur and in the public interest and in good zoning practice; and

**WHEREAS**, the City Council finds that the Residential Designed Development proposal, as submitted on December 12, 2018 and when subject to certain conditions set forth herein, is consistent with good planning practice, consistent with good site landscape planning, is not detrimental to the existing and permitted uses in the surrounding area, is deemed desirable to provide the purpose of Section 405.450 of the Zoning Code and is in accordance with the criteria of Section 405.450(C)(1-3) of the Zoning Code regarding minimum project area, gross acreage, yards, and site and building coverage;

Attachment: 17-044.Santino Court RZG and RDD.Draft Ordinance.12-18-2017 (#17-044: Santino Court RZG B-RDD)

BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

**NOW, THEREFORE,** be it ordained by the City Council of the City of Creve Coeur, St. Louis County, Missouri, as follows:

**SECTION 1:** The Official Zoning Map of the City of Creve Coeur shall be amended to rezone the property addressed as 105 and 157 N. New Ballas Road, 1 Santino Court, and 11921 Ladue Road, Creve Coeur, MO from A Single Family Residential to B Single Family Residential with RDD-Residential Design Development designation, subject to the conditions stated herein, which property is more specifically described as follows:

**Legal Descriptions**

1 Santino Court – Lot 42 of Emerald Green Estates, according to the plat thereof recorded in Plat Book 104 page 20 of the St. Louis County Records

105 N New Ballas - Lot 43 of Emerald Green Estates, according to the plat thereof, recorded in Plat Book 104 page 20, EXCEPTING THEREFROM the South 15 feet thereof conveyed to the State of Missouri by deed recorded in Book 5322 page 466 of the St. Louis County Records and FURTHER EXCEPTING THEREFROM that portion conveyed to the State of Missouri, acting by and through the Missouri Highway and Transportation Commission by deed recorded in Book 8410 page 601 of the St. Louis County Records.

157 N New Ballas – Lot 41 of Emerald Green Estates, according to the plat thereof recorded in plat book 104 page 20 of the St. Louis County Records.

11921 Ladue - Lot 44 of Emerald Green Estates, as per plat thereof recorded in Plat Book 104 page 20 of the St. Louis County Records, excepting therefrom the South 15 feet thereof conveyed to the State of Missouri by deed recorded in Book 5322 page 466.

**SECTION 2:** A residential designed development (RDD) permit is hereby granted for the Santino Court, to be located on the land described in Section 1 of this ordinance, subject to the conditions contained herein.

**SECTION 3:** The Santino Court RDD shall conform to the Site Improvement Plan, the Preliminary Plat and the Landscape Plan, last revised December 12, 2017, or as further revised as required and approved by the City of Creve Coeur, and are further subject to the following conditions:

1. The final plat shall be revised to indicate the building line along North New Ballas Road be moved closer to 45 feet along N. New Ballas Road, and that a 25 foot landscaped Easement provided along Ladue Road and N. New Ballas Road, south of Santino Court, and to the top of the retaining wall for Lot 1 to ensure long-term preservation of the green space and landscaping in these areas.
2. The Landscape Plan shall be in substantial conformance with the Landscape plan submitted on December 12, 2017 subject to the requirements of Sections 410.300 and 410.320 of the Subdivision and Land Development Standards.
3. The Landscape Plan shall be revised to include adding a minimum of one street tree for every 30 lineal feet or part thereof of street frontage, as required in Sections 410.300 and 410.320 of the Subdivision and Land Development Standards along Santino Court, Ladue Road, and North New Ballas Roads, for the Zoning Administrator's approval.



BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

4. Additional evergreen plants shall be provided along the north of Lots 1 and 2 to provide additional screening for the residents to the north.
5. A tree preservation plan shall be submitted showing a minimum of 25% of the existing tree mass or 25% of the trees over 8" caliper shall be preserved as required by Section 405.320 Tree Conservation of the Subdivision Ordinance, and a copy of the Arborist Report regarding the health of the trees to be removed and replaced, subject to Zoning Administrator approval.
6. The proposed four-foot fence along Ladue Road shall not be any closer than 25 feet from the property line.
7. The Subdivision Improvement Plans shall include the appropriate easement for the sidewalks along N. New Ballas Road in coordination with the City's Public Works Department
8. Prior to issuance of any building permits, the applicant shall prepare and record the final subdivision plat as approved by the City Council and indentures requiring public access, maintenance, insurance, funding, maintenance of the stormwater BMPs as required by MSD, maintenance of landscaping along Ladue and N. New Ballas roads, and common ground area, to be approved by the City Attorney.
9. All signs shall comply with Section 405.940 of the Zoning Ordinance.
10. All street lighting shall meet with 405.680: Lighting of the Zoning Ordinance.
11. All other standards not specifically approved by the City Council should be in conformance with the Section 405.260, B Single-Family Residential District of the Zoning Code.

**SECTION 4:** As set forth in Section 405.1080 of the Zoning Ordinance of the City of Creve Coeur, Site Development Plans approved by the City of Creve Coeur shall be valid for a period of up to one (1) year from the date it is approved. After one year, a Site Development Plan will no longer be valid unless an extension is granted. The City of Creve Coeur may grant one, one (1) year extension prior to the expiration of the Site Development Plan upon written request of the applicant submitted to the City at least 180 days prior to the expiration date and granted prior to the expiration date.

**SECTION 5:** This ordinance shall become effective in accordance with Section 3.11 (g) of the City Charter.

ADOPTED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2017

\_\_\_\_\_  
DR. ROBERT HOFFMAN  
PRESIDENT OF CITY COUNCIL

APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2017

\_\_\_\_\_  
BARRY GLANTZ  
MAYOR

Attachment: 17-044.Santino Court RZG and RDD.Draft Ordinance.12-18-2017 (#17-044: Santino Court RZG B-RDD)

BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

ATTEST:

---

DEBORAH RYAN, MPCC  
CITY CLERK

Attachment: 17-044.Santino Court RZG and RDD.Draft Ordinance.12-18-2017 (#17-044: Santino Court RZG B-RDD)