# SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS NORTHWEST CORNER OF TUDOR ROAD & MAIN STREET OPERATION AND MAINTENANCE PLAN

#### **Prepared for:**

Scannell Properties, LLC 8801 River Crossing Blvd, Ste 300 Indianapolis, IN 46240

May 2024



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#### PURPOSE

Stormwater Best Management Practices (BMPs) are implemented in this development to meet stormwater discharge water-quality standards of the City of Lee's Summit, Missouri. Permanent BMPs are provided via this development. In order for physical stormwater BMPs to be effective, proper maintenance is essential. Maintenance includes both routinely scheduled activities, as well as non-routine repairs that may be required after large storms, or because of other unforeseen conditions. *Maintenance of site specific BMPs is the responsibility of the property owner and a requirement of approval for this development*. The property owner, heirs and assigns shall maintain appropriate funds to provide all maintenance required up to and including replacement of said facilities at end of their useful life. The property owners shall require implementation of this manual for all BMPs transferred with land ownership transfer to subsequent property owners, heirs and assigns.

### **1. GENERAL SITE OVERVIEW**

The Scannell Development project (the project) is approximately 83 acres of proposed industrial development including warehouses, loading docks, parking lots, stormwater detention basins, and open space. This project is located northwest of the intersection of NW Tudor Road and NW Sloan Street in Lee's Summit, Missouri. Stormwater from the project is conveyed into the Cedar Creek Watershed, primarily via Little Cedar Creek (which generally flows from east to west through the project boundary) and an unnamed tributary to Little Cedar Creek (which generally flows from south to north along the west side of the project boundary). Figure 1 shows the location and boundary of the project. It should be noted that the project boundary has been slightly modified from the property boundary for analysis purposes. The project boundary has been expanded to include NW Sloan Road, near the southeast corner of the project boundary, as portions of the road may need to be reconfigured or reconstructed as part of this project.

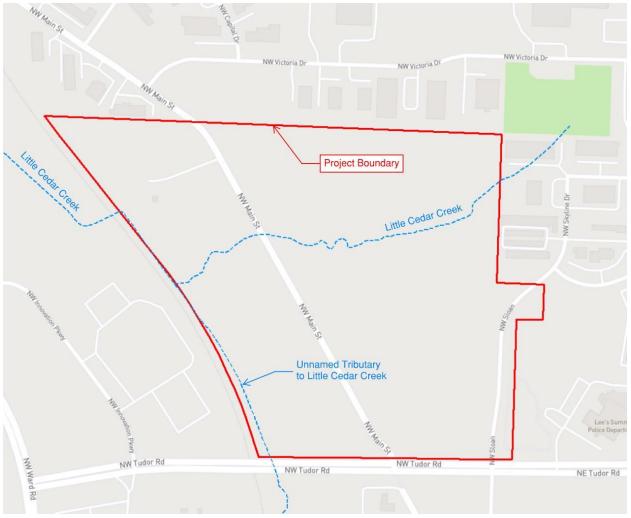


Figure 1. Location Map.

#### **1.1 Locations of Stormwater Best Management Practices**

The Lee's Summit Logistics Park Development has three stormwater detention basins located within the development. Dry detention basins are all within BMP Easements within Lot 1 of the Lee's Summit Logistics 1-3 Final Plat. Refer to Appendix A for location of both detention basins on the development map.

#### **1.2 Types of Stormwater Best Management Practices**

There are many different measures which can provide stormwater BMPs. The below list are the ones utilized within this development.

- Native vegetation
  - Plants which are historically located in this geographic region that are well adapted to the climate and natural disturbance. These are plants that are deep rooted which help enhance stormwater infiltration into the soil and reduce stormwater runoff velocities. By establishing these in green space areas they provide an effective means of stormwater benefits and require less maintenance over time.
- Stormwater dry detention basin
  - Are designed to provide stormwater management benefits during rainfall events and control release rates to minimize downstream impacts. These basins are dry in normal conditions and will fill up during rain events to allow pollutants to settle out. The bottom of the basin is relatively flat and portions may experience shallow pools of water. These pools help enhance basins pollutant removal and should fully dry up within a relatively short period after rainfalls (ideally a week after normal draw down conditions occurred). Pools should not have amphibians animal life present.

### 2. MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES

Stormwater management facilities need to be maintained to function properly. This section will discuss how to properly maintain the facilities within this development.

#### 2.1 Native Vegetation

Native vegetation provides many benefits for stormwater management. Per the APWA/MARC BMP manual, dated October 2012, the below are some of these benefits:

- Containing species of plants indigenous to the area, vegetation will be able to thrive in the local climate with less maintenance.
- Deep roots enhance stormwater infiltration into the soil.
- With deep-rooted nature, native vegetation is able to withstand flooding events as well as extended dry periods.
- Reduces flow velocity of stormwater runoff.
- Attracts wildlife and improved biological diversity.
- Requires little to no fertilizer or chemical maintenance, as well as reduced amounts of water to survive.

With these benefits, the bottom of a stormwater basin is an ideal place for native vegetation to be planted. The basin located within Tract E, are intended to be vegetated by natives. Some of the typical plants one may see are below:

- Prairie Cordgrass
- Dark Green Bulrush
- Dudley's Rush
- Milkweed
- Fox Sedge
- Water Plantain

- Aster
- Iris
- Sedge
- Coneflower
- Goldenrod
- Blazingstar

- Fescue
  - Cattail\*
- Switchgrass
- Indian Grass
- Little Bluestem
- Big Bluestem

\*Cattail growth shall be monitored to limit spread and not crowd out other species.

The maintenance requirements for native vegetation will vary depending on the climate, thus the maintenance of such should be flexible and allowed to change over time to allow responses to nature. The plan laid out in the below table are recommendations, the formal maintenance shall be adoptive based on the recommendations in Table 1.

#### Table 1. Maintenance of Native Vegetation

<b>Required Action</b>	Maintenance Objective	Frequency of Action
Debris and Litter Removal	Removal of debris and litter from the basin area to minimize outlet clogging and improve aesthetics	Periodically and after large rain events
1 <sup>st</sup> year of establishment- mowing*	To maintain a healthy level of vegetation	Mow no more than monthly to a minimum height of 5"
2 <sup>nd</sup> year of establishment- mowing*	To maintain a healthy level of vegetation	Mow once in June to a minimum height of 8", spot treat weeds as necessary
3 <sup>rd</sup> year and beyond of establishment- mowing*	To maintain a healthy level of vegetation	Mow once in the off-season (Late October to Early March) to a minimum height of 8"
Removal of invasive species	To encourage a healthy native plant environment, growth of species invasive to the area shall not occur	Periodically
Seeding (recommend to use a mix with the above plantings)	To establish plantings in bare areas	Shall occur if areas are bare soil for extend period of time

\*Native vegetation shall never be mowed in wet or muddy conditions.

#### 2.2 Extended Dry Detention Basin

Extended dry detention basins provide detention for the water quality volume with a 40-hour release rate, along with detention for up to the 100-year storm event. Generally, the basin is designed to be completely drained between 40-72 hours following a storm event equal to or greater than a 2-year rain event. These basins are typically simple in design, which helps make them relatively easy and inexpensive to maintain.

The basins within this development are planted with native vegetation, which maintenance requirements were discussed in Section 2.1, thus Table 2, is looking at the maintenance for the overall detention basin and not focused on the vegetation.

This basin was constructed in a natural channel allowing to take advantage of existing vegetation and drainage features. Part of the basin was also excavated out and a rock trench added to convey water from the storm sewer end section to the outlet. This part of the basin is relatively flat (designed with 2% slope) in nature to slow down water and allow for an extended period of treatment before reaching the outfall structure.

Required Action	Maintenance Objective	Frequency of Action
Debris and Litter Removal	Removal of debris and litter from the basin area to minimize outlet clogging and improve aesthetics	Periodically and after large rain events
Repairing Erosion	If erosional channels occur due to lack of vegetation and large rainfall events, the area shall be re-graded to fill in the channels and new vegetation shall be established per Section 2.1.	Periodically, as occurs after large rain events
Inspection of Outlet (D.B. 15-2)	Primary basin outfall structure. Inspection of the openings to ensure are free of debris and functioning properly. Box has 2 openings on 3 sides.	Yearly in the springtime and periodically until winter
Inspection of Outlet (D.B. 15-3)	Water quality outfall structure. Composed of a smaller box with a standpipe. Inspection of box and pipe shall occur to make sure bottom of box, standpipe, and basin surrounding area are free of silt and debris.	Yearly in the springtime and periodically until winter
Basin Vegetation Maintenance	Vegetation growth that does not meet requirements of section 2.1.	Yearly in the springtime and periodically until winter
Inspection of the Spillway	To ensure spillway is stable and functioning correctly	Yearly in the springtime and periodically until winter

#### Table 2. Maintenance of Extended Dry Detention Basin

Required Action	Maintenance Objective	Frequency of Action
Removal of Sediment	To ensure the basin has enough volume to handle rainfall events and function as designed	Rare once the area draining to the basin is fully developed and vegetation established. Should occur if owner notices large amounts of silt in the bottom that is preventing the basin from draining/functioning.

Maintenance for the basin shall be minimal to the owner, however if unforeseen events happen, the owner shall restore the basin, per the Detention Basin As-built sheet, Appendix B.

#### 2.3 Inspection of Facilities

The above sections mentioned maintenance and frequency for each action. When an inspection of the facilities is performed, the form found in Appendix C, shall be filled out and included in this report for record keeping. It is recommended that owner walks around the facility areas yearly to check conditions and make sure no major concerns are occurring. If they see something of concern, they should reach out to a licensed professional for a deeper inspection of the issues and guidance on repairs required.

#### 2.4 Repairs to Facilities

Many maintenance items can be done by the owner, however if larger repairs are needed the owner shall seek out a qualified contractor. Items that may require a contractor to perform are:

- Removal of sediment build up.
  - If there is undeveloped land, in proximity of the basin, sediment may be placed there with proper erosion control measure and seeding shall occur.
  - If the surrounding area is fully developed, then sediment shall be hauled off site to a proper disposal location.
- Repairs to the concrete outlet structure, spillway, or outlet pipe.
- Major erosional channels occurring on the sides slopes of the basin.

### **3. CHANGES TO THE CURRENT PLAN**

This section will discuss the process if changes are desired to the current Stormwater Management Facility-Best Management Practices Operation and Maintenance Plan.

#### 3.1 Ownership Change

In the event of ownership change of the land which BMPs are located on, the following steps should be performed.

- 1. Current owner shall have all BMPs inspected and reviewed to be fully functioning, per this plan. If deficiencies are found both parties shall discuss and agree upon a plan to address deficiencies.
- 2. City shall be notified via writing of the ownership change within 30 days.
- 3. Appendix D shall be updated with the new owner information.

#### **3.2 Additional Land Added to the Development**

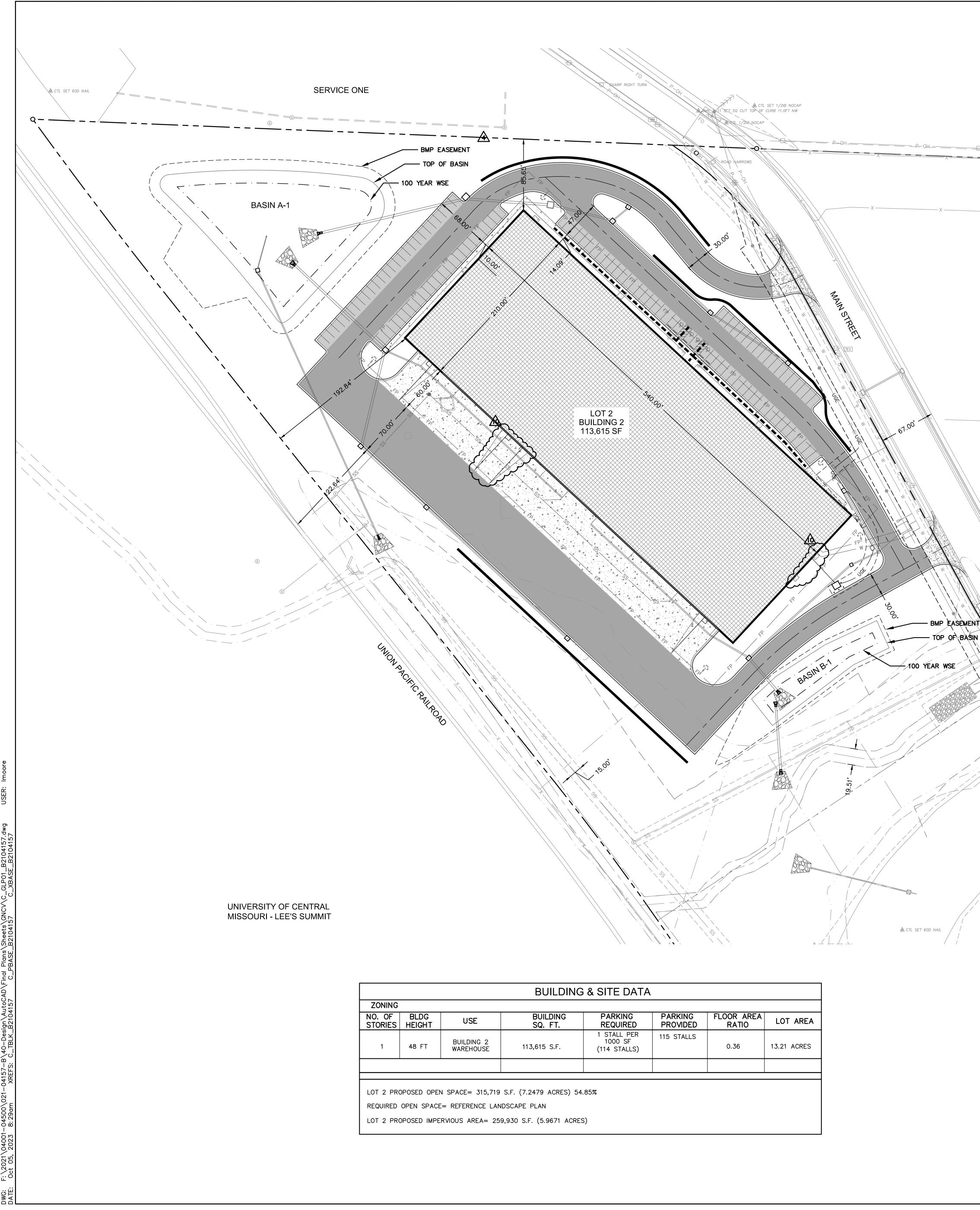
If additional land is added into the development, this document shall be updated to include any stormwater management facilities located within the additional area. A revision date shall be provided for the document along with a copy provided to the City of Lee's Summit, Missouri for review.

#### **3.3 Changes to How Maintenance is Performed**

If the owner has desire to change the recommended maintenance mentioned in this document, they shall prepare an update to this document and present it to Development Services Department with the City of Lee's Summit, Missouri to review. The City may require a licensed professional to update the recommendations.

### **APPENDIX A**

Location of Stormwater Management Facilities



BUILDING & SITE DATA						
USE BUILDING PARKING PARKING FLOOR AREA SQ. FT. REQUIRED PROVIDED RATIO LOT AREA						
BUILDING 2 WAREHOUSE	113,615 S.F.	1 STALL PER 1000 SF (114 STALLS)	115 STALLS	0.36	13.21 ACRES	
SPACE= 315,719 S.F. (7.2479 ACRES) 54.85% REFERENCE LANDSCAPE PLAN						

### LEGEND

	PROPERTY LINE
	SECTION LINE
	FEMA FLOOD PLAIN LIM
	LOT LINE
	ADA PATH — SIDEWALK DELINEATED AS ADA F BE ADA COMPLIANT.
SS	EXISTING SANITARY SEV EXISTING STORM EXISTING WATER PIPE EXISTING OVERHEAD PC EXISTING UNDERGROUND UNDERGROUND POWER NATURAL GAS PIPE CABLE TELEVISION CONI WATER PIPE SANITARY SEWER SERVI
	PROPOSED STORM SEW
	INSTALL STANDARD "WE (PER LEE'S SUMMIT STA
	INSTALL STANDARD "DF (PER LEE'S SUMMIT STA
	INSTALL "ADA RAMP" ( (PER LEE'S SUMMIT ST/
	INSTALL MEDIUM DUTY SEE PAVEMENT SECTION
	INSTALL HEAVY DUTY A PAVEMENT SECTION ON
	INSTALL HEAVY DUTY O PAVEMENT SECTION ON
	INSTALL CONCRETE SIDI SEE PAVEMENT SECTION

#### PROPERTY DESCRIPTION

ALL THAT PART OF AN UNPLATTED TRACT OF LAND, TOGETHER WITH ALL THAT PART OF NORTH MAIN STREET RIGHT OF WAY, ALL LYING IN THE WEST HALF OF SECTION 31, TOWNSHIP 48 NORTH, RANGE 31 WEST, LYING IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, DESCRIBED BY PATRICK ETHAN WARD, MO PLS-20050071, OF OLSSON MOLC-366, ON OCTOBER 14, 2021, AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF THE SOUTHWEST QUARTER OF SECTION 31, TOWNSHIP 48 NORTH, RANGE 31 WEST; THENCE SOUTH 01 DEGREE 59 MINUTES 47 SECONDS WEST, ON THE EAST LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 65.98 FEET TO A POINT ON THE WEST LINE OF NW SLOAN STREET RIGHT OF WAY, AS ESTABLISHED IN DOCUMENT 2013E0075031, SAID POINT ALSO LYING ON A NON-TANGENT CURVE; THENCE IN A SOUTHERLY DIRECTION, DEPARTING SAID EAST LINE, ON SAID WEST LINE AND ON A CURVE TO THE RIGHT WHOSE INITIAL TANGENT BEARS SOUTH 02 DEGREES 47 MINUTES 37 SECONDS WEST, HAVING A RADIUS OF 970.00 FEET, THROUGH A CENTRAL ANGLE OF 6 DEGREES 27 MINUTES 07 SECONDS, AN ARC DISTANCE OF 109.23 FEET TO A POINT OF TANGENCY; THENCE SOUTH 09 DEGREES 14 MINUTES 44 SECONDS WEST, CONTINUING ON SAID WEST LINE, A DISTANCE OF 111.80 FEET TO A POINT OF CURVATURE; THENCE IN A SOUTHERLY DIRECTION, CONTINUING ON SAID WEST LINE AND ON A CURVE TO THE LEFT, HAVING A RADIUS OF 1030.00 FEET, THROUGH A CENTRAL ANGLE OF 7 DEGREES 14 MINUTES 57 SECONDS, AN ARC DISTANCE OF 130.32 FEET TO A POINT OF TANGENCY; THENCE SOUTH 01 DEGREE 59 MINUTES 47 SECONDS WEST, CONTINUING ON SAID WEST LINE, A DISTANCE OF 69.49 FEET TO A POINT ON THE NORTH LINE OF NE TUDOR ROAD RIGHT OF WAY, AS ESTÁBLISHED IN SAID DOCUMENT 2013E0075031; THENCE SOUTH 46 DEGREES 15 MINUTES 48 SECONDS WEST, DEPARTING SAID WEST LINE, ON SAID NORTH LINE, A DISTANCE OF 46.09 FEET TO A POINT; THENCE NORTH 89 DEGREES 24 MINUTES 16 SECONDS WEST, CONTINUING ON SAID NORTH LINE, AND ON THE NORTH LINE OF NW TUDOR ROAD RIGHT OF WAY, AS ESTABLISHED IN DOCUMENT 2013E0075030, A DISTANCE OF 1249.23 FEET TO A POINT ON THE EAST LINE OF UNION PACIFIC RAILROAD RIGHT OF WAY, AS NOW ESTABLISHED, SAID POINT ALSO LYING ON A NON-TANGENT CURVE; THENCE IN A NORTHERLY AND NORTHWESTERLY DIRECTION, DEPARTING SAID NORTH LINE, ON SAID EAST LINE AND ON A CURVE TO THE LEFT WHOSE INITIAL TANGENT BEARS NORTH 15 DEGREES 46 MINUTES 27 SECONDS WEST, HAVING A RADIUS OF 3203.90 FEET, THROUGH A CENTRAL ANGLE OF 22 DEGREES 48 MINUTES 11 SECONDS, AN ARC DISTANCE OF 1275.12 FEET TO A POINT OF TANGENCY; THENCE NORTH 38 DEGREES 34 MINUTES 39 SECONDS WEST, CONTINUING ON SAID EAST LINE, A DISTANCE OF 738.40 FEET TO A POINT OF CURVATURE; THENCE IN A NORTHWESTERLY DIRECTION, CONTINUING ON SAID EAST LINE AND ON A CURVE TO THE RIGHT, HAVING A RADIUS OF 5981.13 FEET, THROUGH A CENTRAL ANGLE OF 2 DEGREES 39 MINUTES 22 SECONDS, AN ARC DISTANCE OF 277.27 FEET TO A POINT ON THE NORTH LINE OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF SAID SECTION 31, SAID POINT ALSO LYING ON A NON-TANGENT LINE; THENCE SOUTH 87 DEGREES 40 MINUTES 30 SECONDS EAST, DEPARTING SAID EAST LINE, ON SAID NORTH LINE, A DISTANCE OF 884.17 FEET TO A POINT ON A NON-TANGENT CURVE; THENCE IN A SOUTHEASTERLY DIRECTION, DEPARTING SAID NORTH LINE, ON A CURVE TO THE RIGHT WHOSE INITIAL TANGENT BEARS SOUTH 45 DEGREES 29 MINUTES 38 SECONDS EAST, HAVING A RADIUS OF 544.00 FEET, THROUGH A CENTRAL ANGLE OF 16 DEGREES 50 MINUTES 44 SECONDS, AN ARC DISTANCE OF 159.94 FEET TO A POINT OF TANGENCY; THENCE SOUTH 28 DEGREES 38 MINUTES 55 SECONDS EAST A DISTANCE OF 437.58 FEET TO A POINT OF CURVATURE; THENCE IN A SOUTHEASTERLY AND EASTERLY DIRECTION, ON A CURVE TO THE LEFT, HAVING A RADIUS OF 476.00 FEET, THROUGH A CENTRAL ANGLE OF 63 DEGREES 19 MINUTES 59 SECONDS, AN ARC DISTANCE OF 526.16 FEET TO A POINT OF TANGENCY; THENCE NORTH 88 DEGREES 01 MINUTE 06 SECONDS EAST A DISTANCE OF 416.85 FEET TO A POINT OF CURVATURE; THENCE IN AN EASTERLY AND SOUTHEASTERLY DIRECTION, ON A CURVE TO THE RIGHT, HAVING A RADIUS OF 544.00 FEET, THROUGH A CENTRAL ANGLE OF 65 DEGREES 51 MINUTES 08 SECONDS, AN ARC DISTANCE OF 625.24 FEET TO A POINT ON A NON-TANGENT LINE, SAID POINT ALSO LYING ON THE EAST LINE OF SAID NORTHWEST QUARTER; THENCE SOUTH 01 DEGREE 53 MINUTES 30 SECONDS WEST, ON SAID EAST LINE, A DISTANCE OF 338.00 FEET TO THE POINT OF BEGINNING, CONTAINING 2,375,437 SQUARE FEET OR 54.5325 ACRES, MORE OR LESS.

PROPERTY OWNER/ DEVELOPER SCANNELL PROPERTIES #603, LLC 8801 RIVER CROSSING BLVD, SUITE 300 INDIANAPOLIS, IN 46240 PH: 317-218-1648

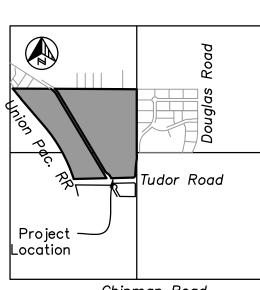
#### **ENGINEER/ LANDSCAPE ARCHITECT**

OLSSON 7301 W. 133RD STREET, SUITE 200 OVERLAND PARK, KS 66213 PH: 913-381-1170 F: 913-381-1174

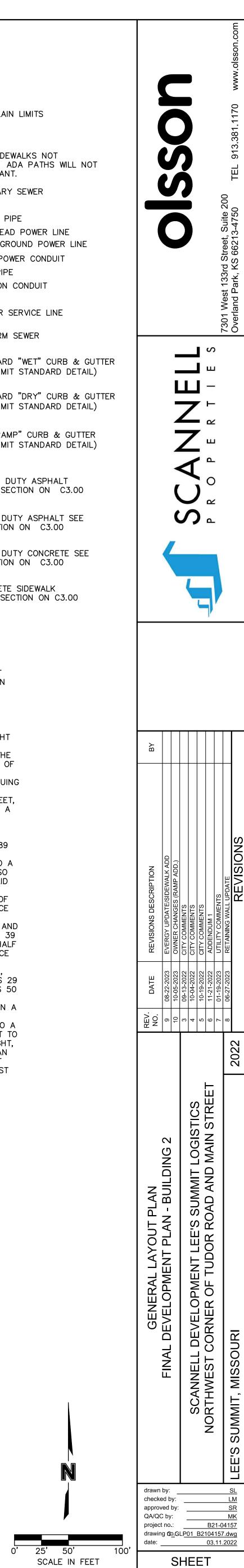
PROPOSED SITE USE INDUSTRIAL

**EXISTING & PROPOSED ZONING** EXISTING: PLANNED INDUSTRIAL PROPOSED: PLANNED INDUSTRIAL

SITE AREA NET SITE AREA= 3,439,837 SQ. FT., (78.9678 AC±)



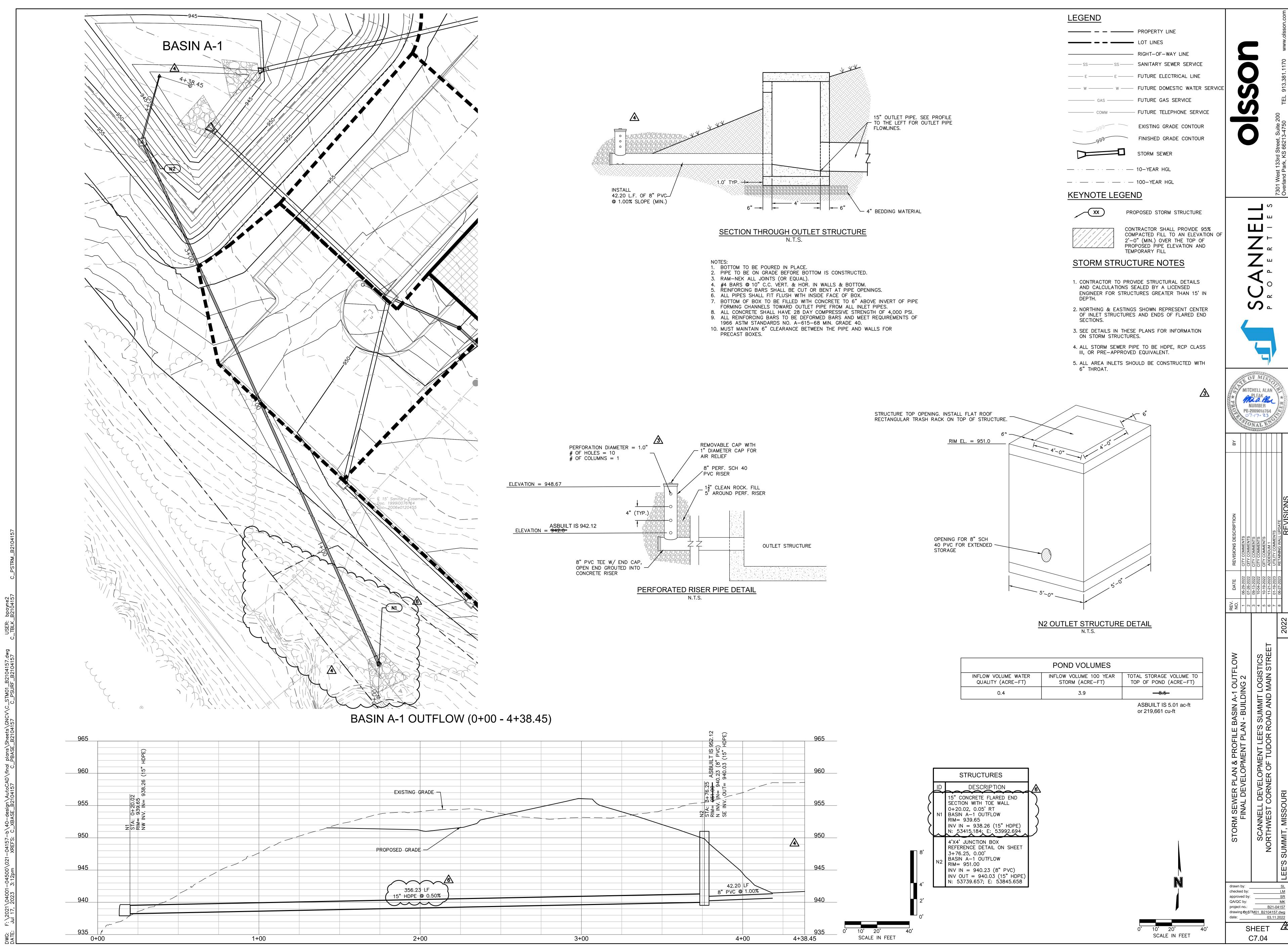
Chipman Road Section 31, T48N, R31W VICINITY MAP Scale: 1" = 2000'



C2.00

## APPENDIX B

Detention Basin As-Built Plan



POND VOLUMES					
INFLOW VOLUME WATER QUALITY (ACRE-FT)	INFLOW VOLUME 100 YEAR STORM (ACRE-FT)	TOTAL STORA TOP OF PON			
0.4	3.9				
		ASBUILT or 219.66			

### APPENDIX C Inspection Report Form

### **STORMWATER BMP INSPECTION REPORT FORM**

Location of BMP: Basin A-1 (NW corner of property) BMP Type: Extended Dry Detention Basin Date of Inspection: 07/30/2024 \_\_\_\_\_

Inspected by: Seth Reece

Features					
Maintenance Item	Yes	No	N/A	Comments	
Functioning to avoid complaints	X				
Aesthetically maintained	X				
Free of trash and debris	x				
Good vegetation cover	X				
Free of invasive species	x				
Evidence of erosion		х		There was no erosion within the basin at time of the inspection.	
Bottom of basin clear of excess sediment	x				
Outlet structure in working condition	X				
Spillway in working condition	x				

Action to be taken: Basin is functioning correctly.

#### **APPENDIX D** Ownership Information

### **OWNERSHIP INFORMATION**

Ownership information shall be updated in the event the property owner where the stormwater BMP's are located changes. Below is contact information for the property owner, shall they need to be contacted regarding the stormwater BMPs.

Stormwater BMP Property Ownership				
Property Owner	Scannell Properties, LLC			
Contact Person	Cam Duff			
Address	1600 Genessee St, Kansas City, MO 64102			
Phone Number	816.217.8181			
Email Address	Cam.Duff@scannellproperties.com			

Stormwater BMP Property Change of Ownership				
Property Owner				
Contact Person				
Address				
Phone Number				
Email Address				

Stormwater BMP Property Change of Ownership	
Property Owner	
Contact Person	
Address	
Phone Number	
Email Address	

Stormwater BMP Property Change of Ownership	
Property Owner	
Contact Person	
Address	
Phone Number	
Email Address	