STORMWATER POLLUTION PREVENTION PLAN

Designed in accordance with the Missouri State Operating Permit

Lee's Summit Middle School #4

Permit Tracking # MORA16296

Owner/Operator:

Lee's Summit R-7 School District
301 NE Tudor Road
NE Tudor Road
Lee's Suttmit, MO 64086

Prepared by:

Olsson
7301 W 133rd Street
Overland Park, KS 66213
913.381.1170

July 2020

SWPPP Certification (to be signed by permittee):

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

olsson

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SECTION 1

Delegation Statements & Contractor Certifications

Delegation Statement(s) for applicable personnel should be kept in this section. Contractor Certification Statements that contain contact information for those responsible for specific activities on the project should also be kept here.

Contractor/Subcontractor Certification

Project Name: _____

Permit Number: _____

Project Owner: _____

As a contractor/subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review upon request.

Each contractor/subcontractor engaged in activities at the construction site that could impact stormwater should be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to the project named above:

Service Provided: _____

Company Name: _____

Address: _____

_____

Telephone: _____

Representative: _____

Title: _____

Signature: _____

Date: _____

Delegation of Authority

I,_____, hereby designate the person(s) or specifically described position(s) below to be a duly authorized representative(s) for the purpose of overseeing compliance with environmental requirements, including the Missouri State Operating Permit.

Duly Authorized Representative:

Name or Position: _____

Company: _____

Address: _____

Phone: _____

Email: _____

By signing the certification below, I certify that I meet the signing requirements J.5.a of the Missouri State Operating Permit, 40 CFR 122.22 and 10 CSR 20-6.010 for this project.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Permittee Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

SECTION 2

Permit Authorization & Missouri State Operating Permit

Permit authorization from the MDNR and a copy of the Missouri State Operating Permit will be kept in this section.

The Application for Land Disturbance Stormwater General Permit was completed through the Missouri Gateway for Environmental Management at https://dnr.mo.gov/mogem/.

SECTION 3

SWPPP Narrative

SWPPP NARRATIVE CONTENTS

1.0. PROJECT CONTACT INFORMATION

Parties directly related to the compliance of the site are listed below. Any blank contacts were not known at the time of SWPPP creation and should be filled in when contractors are assigned.

Owner/Operator

Lee's Summit R-7 School District
Kyle Gorrell
301 N.E. Tudor Road
Lee's Summit, MO, 64086
816.96.2425
Kyle.gorrell@lsr7.net

General Contractor

McCownGordon Construction
Chris Hess
850 Main Street
Kansas City, MO, 64105
816.365.4774
chess@mccowngordon.com

SWPPP Preparer

Olsson
Terry Parsons
7301 W. 133rd St., Suite 200
Overland Park, KS, 66213
913.381.1170
tparsons@olsson.com

SWPPP Inspections

TBD
Contact Name
Address
City, State Zip Code
Phone
Email

Best Management Practices (BMP) Installation

TBD
Contact Name
Address
City, State Zip Code
Phone
Email

BMP Maintenance

TBD
Contact Name
Address
City, State Zip Code
Phone
Email

Should any of the above personnel change, tables will be updated and noted on the Amendment Log found in Section 7 and additional Contractor Certification Sheets will be added to Section 1 of this SWPPP.

2.0. INTRODUCTION AND DEFINITIONS

This document was created to comply with the Missouri State Operating Permit (MO-RA) in compliance with the Missouri Clean Water Law (Chapter 644 R.S. Mo. as amended) and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress). Relevant local ordinances are incorporated in Section 8 of this SWPPP. Permit language incorporated into this document will be denoted by *italics*.

The purpose of the SWPPP is to ensure the design, implementation, management, and maintenance of best management practices (BMPs) in order to prevent sediment and other pollutants in stormwater discharges associated with the land disturbance activities; compliance with the Missouri Water Quality Standards; and compliance with the terms and conditions of the general permit.

2.1. ACRONYMS

AST .....aboveground storage tank
BMP .....best management practice
MDNR .....Missouri Department of Natural Resources
ESA.....environmental site assessment
ESC .....erosion and sediment control
MO-RA.....Missouri State Operating Permit
MS4 .....municipal separate storm sewer system
NRC .....National Response Center
NRCS.....Natural Resources Conservation Service
REC .....recognized environmental condition
SPCC.....spill prevention control and countermeasures plan
SVOC.....semivolatile organic compound
SWPPP.....stormwater pollution prevention plan
TMDL .....total maximum daily load
TOC .....total organic carbon
VOC .....volatile organic compound
WSS.....Web Soil Survey

2.2. DEFINITIONS

Department
The Missouri Department of Natural Resources

Duly Authorized Representative

The representative authorized by the permittee. The duly authorized representative is responsible for the overall operation of the facility from which the discharge occurs. The authorization is made in writing by the permittee and is submitted to the director.

Permit

Missouri State Operating Permit (MO-RA)

Signatory Requirements

All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified (MDNR 2017).

- Signatory for a corporation: an individual having responsibility for the overall operation of the regulated facility or activity, such as the plant manager, or by an individual having overall responsibility for environmental matters at the facility.
- Signatory for a partnership or sole proprietorship: a general partner or the proprietor, respectively.
- Signatory for a municipal, state, federal, or other public facility: either a principal executive officer or an individual having overall responsibility for environmental matters at the facility.

Documents submitted to the MDNR should be certified by the following statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

3.0. SITE DESCRIPTION

Project Name: Lee's Summit R-7 New Middle School

Project Location: SE Corner Country Lane & SE Bailey Road, Lee's Summit, MO

Total project area: 52 acres

Area to be disturbed: 45 Acres

Anticipated start date: September 2020

Anticipated end date: August 2022

Past use: Undeveloped (Pasture)

Historic Preservation Information: See Section 11 of this document

Endangered Species Information: See Section 10 of this document

Existing conditions: Open Field

Description of Construction Activity: Mass Grading Activities

Table 1. Anticipated Sequence of Construction.

EROSION CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE DISTURBANCE	A1	CONSTRUCTION ENTRANCE	C	INSTALL AS INDICATED ON PLANS (IF SITE DISRUPTION LASTS LONGER THAN 14 DAYS)
	A2	SLOPE PROTECTION (SILT FENCE)	C	INSTALL AS INDICATED ON PLANS
	A3	TREE LINE PROTECTION (CONSTRUCTION FENCE)	D	INSTALL AS INDICATED ON PLANS
	A4	SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
B – MASS GRADING	B1	SLOPE PROTECTION (SILT FENCE)	D	INSTALL AS INDICATED ON PLANS
	B2	DIVERSION BERM		INSTALL AS INDICATED ON PLANS
	B3	SILTATION BASIN		INSTALL AS INDICATED ON PLANS
	B4	TEMPORARY SEDIMENT TRAP		INSTALL AS INDICATED ON PLANS
	B5	EROSION CONTROL BLANKET	N/A	INSTALL AS INDICATED ON PLANS
C – FINAL STABILIZATION	C1	REPLACE TOP SOIL, SEED MULCH	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF DISTURBED AREA.

Location of nearby or on-site surface waters: Open stream channel on east side of site

Table 2. Outfalls.

#	Type	Location	Drainage Area

Receiving Waters: Big Creek

4.0. EROSION AND SEDIMENT CONTROLS

Temporary BMPs used during active construction of the project will be listed below. Specific erosion and sediment control requirements found in the permit are also located here and should be addressed in the erosion and sediment control (ESC) plan sheets located in Section 5 of this SWPPP.

Table 3. Anticipated BMPs.

BMP	
Site Preparation	
SWPPP Sign	☒
Construction exit	☒
Wash rack	☐
Temporary stream crossing	☐
Surface roughening	☐
Tree protection	☒
Erosion Control	
Dust control	☐
Mulch	☐
Erosion control blankets	☒
Temporary seeding	☒
Permanent seeding	☒
Hydroseeding	☐
Sodding	☐
Slope protection	☒

BMP	
Sediment Control	
Silt fence	☒
Inlet protection	☒
Diversion berm	☒
Filter berm	☐
Outlet protection	☒
Check dam	☐
Sediment trap	☒
Sediment basin	☒
Pollution Prevention	
Stockpile	☒
Concrete washout	☒
Solid waste management	☐
Sanitary waste management	☐
Material staging areas	☒
	☐

Specification and detail sheets can be found in Section 6 of this SWPPP.

During construction, if additional BMPs not listed in Table 3 are required, the SWPPP will be amended. The BMP specification and detail sheets of the new BMPs should be added to Section 6 of this SWPPP, the locations noted on the BMP Tracking Map located in Section 5, and the change noted in the Log of Amendments located in Section 7 of this SWPPP.

4.1. EROSION AND SEDIMENT CONTROL DESIGN REQUIREMENTS

ESC plans for the project can be found in Section 5 of this SWPPP. Excerpts of these plans will be used as the basis of the BMP Tracking Map located in Section 5 of this SWPPP.

Ensure the design, installation and maintenance of effective erosion and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

a. *Control stormwater volume and velocity within the site to minimize soil erosion;*
b. *Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion;*
c. *Minimize the amount of soil exposed during construction activity;*
d. *Minimize the disturbance of steep slopes;*
e. *Minimize sediment discharges from the site. Design, install and maintain erosion and sediment controls that address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle size expected to be present on the site;*
f. *Provide and maintain natural buffers around surface waters as detailed in 8.f* (of the permit)*, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration and filtering, unless infeasible; and*
g. *Minimize soil compaction and, unless infeasible, preserve topsoil.*
h. *Capture or treat a 2-year, 24-hour storm event. A 2-year, 24-hour storm event shall be determined for the project location using the National Oceanic and Atmospheric Administration's National Weather Service Atlas 14 which can be located at http://hdsc.nws.noaagov/hdsc/pfds/* (MDNR 2017).

4.2. TREE AND VEGETATION PRESERVATION

Areas where existing trees and vegetation are preserved on-site can be found on the ESC plan sheets located in Section 5 of this SWPPP.

4.3. NATURAL BUFFERS

When applicable, natural buffers will be identified on the ESC plans located in Section 5 of this SWPPP.

For surface waters of the state, defined as "all waters within the jurisdiction of this state, including all rivers, streams, lakes and other bodies of surface and subsurface water lying within or forming a part of the boundaries of the state which are not entirely confined and located completely upon lands owned, leased or otherwise controlled by a single person or by two or more persons jointly or as tenants in common, located on or adjacent to the site, the permittee must:

a. *Provide and maintain a 50-foot undisturbed natural buffer;*

b. *Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer; or*
c. *If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.*
d. *Where you are retaining a buffer of any size, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the water:*
    a. *The ordinary high water mark of the water body, defined as the line on the shore established by fluctuations of the water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris; or*
    b. *The edge of the stream or river bank, bluff, or cliff, whichever is applicable* (MDNR 2017).

4.4. STABILIZATION REQUIREMENTS

The permit requires specific stabilization schedules depending on activity level and slope characteristics.

Table 4. Stabilization Requirements.

Situation	Stabilization Requirement
Soil-disturbing activities that have temporarily ceased on any portion of the site and will not resume for more than 14 calendar days.	Construct BMPs to establish interim stabilization; stabilization must be initiated immediately and completed within 14 calendar days. *
Soil-disturbing activities that have permanently ceased.	Final stabilization of disturbed areas must be initiated immediately and completed within 14 calendar days. *
Slopes with a greater than 3:1 ratio or slopes greater than 3% and greater than 150 feet in length.	Establish interim stabilization within 7 days of ceasing operations.

**Allowances to the 14-day completion period for temporary and final stabilization may be made because of weather and equipment malfunctions. The use of the allowances shall be documented in the SWPPP* (MDNR 2017) and can be found in Section 5 of this SWPPP.

5.0. STORMWATER MANAGEMENT CONTROLS

When applicable, permanent stormwater management BMPs will be listed and described here. Design specifications and details can be found in Section 6 of this SWPPP if applicable. These BMPs will remain in place to provide for stormwater management after construction has completed and the permit terminated.

Table 5. Post Construction Stormwater Management BMPs.

Type	Location	Receiving Water	Area Treated
Detention Basins	Multiple On Site	Big Creek	45 Acres

6.0. POLLUTION PREVENTION AND SPILL REPORTING

Good housekeeping practices shall be maintained at all times to keep waste from entering waters of the state. Below are lists of prohibited discharges, authorized non-stormwater discharges, and potential pollutants that will likely be on-site during construction. Suggested BMPs to help resolve potential discharges from non-stormwater discharges as well as potential pollutants are discussed.

6.1. PROHIBITED DISCHARGES

- *Any hazardous material, oil, lubricant, solid waste or other non-naturally occurring substance from the site, including fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;*
- *Soaps or solvents used in vehicle and equipment washing;*
- *Hazardous substances or petroleum products from an on-site spill or handling and disposal practices;*
- *Wash and/or rinse waters from concrete mixing equipment including ready mix concrete trucks, unless managed by an appropriate control. Any such pollutants must be adequately treated and addressed in the SWPPP, and cannot be discharged to waters of the state;*
- *Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;*
- *Domestic wastewaters, including gray waters; or*
- *Industrial stormwater runoff* (MDNR 2017).

6.2. AUTHORIZED NON-STORMWATER DISCHARGES

The below signified discharges are anticipated to occur on-site.

☐ *De-watering activities if there are no contaminants other than sediment present in discharge, and the discharge is treated as specified in Section C.8.m of the permit*
☐ *Flushing water hydrants and potable water lines*
☐ *Water only (i.e., without detergents and additives) rinsing of streets and buildings*
☐ *Site watering to establish vegetation*

Potential BMPs used for authorized non-stormwater discharges:

Dewatering activities if there are no contaminants other than sediment present in discharge, and the discharge is treated as specified in Section C.8.m of the permit
Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. Estimations of the volume of water discharged from these dewatering activities can be recorded in Section 5 of this SWPPP.

Dewatering of sediment-laden water should be discharged to a temporary or permanent sediment basin when possible, so the sediment may be allowed to settle out of suspension. If basins will be used, the existing water level should be inspected and drawn down if necessary.

Dewatering bags may also be used to filter sediment out of the water. They should be placed on a level surface away from slopes to prevent scouring, and water should ideally flow to a vegetated area toward perimeter controls. Premanufactured dewatering bags should be installed and maintained per manufacturer's recommendations.

Flushing water hydrants and potable water lines
Waters from hydrants and waterline flushing can be erosive and can lead to perimeter controls being overwhelmed. These waters should ideally be directed to clean, paved streets where water may enter the storm sewer system. On projects where this is not possible, diffusers should be used to prevent erosive water velocities, and flush water should be directed to relatively flat, vegetated portions of the project or to temporary or permanent basins.

Water only (i.e., without detergents and additives) rinsing of streets and buildings
Streets should be inspected to confirm sediment and spills have been removed before they are rinsed with water. Inlet protections should remain in place, so water may be filtered before leaving the site.

Stabilization typically occurs before buildings are washed down. Washwater should be directed to stabilized areas or perimeter controls. Water that escapes through paved surfaces should be treated by inlet protections before leaving the site.

Site watering to establish vegetation
Efforts should be taken to time watering activities that are intended to help establish vegetation so watering does not occur prior to or during precipitation. Areas should be watered only in amounts necessary for vegetation to establish or thrive. Irrigated areas should be monitored for overwatering and, if identified, amounts and timing of watering should be adjusted.

6.3. POTENTIAL POLLUTANTS

Potential pollutant sources that are anticipated to be on-site during the project can be found in the table below.

Table 6. Anticipated Potential Pollutants.
The below listed suggested BMPs are meant as initial examples and should be adjusted as site conditions necessitate different BMPs. The table should be amended should additional pollutants and BMPs be utilized onsite that were not originally anticipated.

Material/Activity	Potential Pollutants	Suggested BMPs
Concrete Curing Substances	Sediment, metals, hydrocarbons	Provide secondary containment in preparation and cleanup areas.

		Leftover curing substances should to be removed from the site or disposed of in a designated washout bin or pit designed to contain curing substances. Do not use materials during or directly prior to an anticipated rain event, and ensure excess materials are stored in a covered area to minimize contact with stormwater. Curing compounds should not be washed into a gutter, onto the ground, or into a storm drain inlet.
Concrete Washwater and Masonry Washwater	pH, heavy metals, silica	Concrete washwater will be controlled /contained at a designated location on-site such as a leak-proof container or settling basin of adequate size. Refer to Concrete Washout Specification located in Section 6 of this SWPPP for proper design criteria and use of concrete washout area. The concrete washout area should be cleaned out when it has reached 75% capacity, and dried concrete material should be disposed of in accordance with state and local regulations.
Detergents	pH, chlorine, surfactant	Use of detergents on-site should be discouraged. Washing of vehicles or equipment that requires the use of detergents should occur off-site.
Drywall and Joint Compound	Vinyl acetate, acetaldehyde, calcium sulfate dehydrate, formaldehyde, silica	Drywall and joint compound will be used on the interior of structures. Ideally these materials should be stored inside the structure out of contact of stormwater. If storage inside the structure is not practical, the materials should be placed in a storage container, contractor vehicle, or trailer or otherwise covered to minimize contact with stormwater. Waste products can be disposed of with construction debris as soon as possible and should not be allowed to accumulate on lots.
Fertilizers	Nutrients	Fertilizers can be kept on-site in amounts necessary for immediate use. In the event fertilizers must remain on-site longer, they should be stored in a covered area to minimize contact with precipitation. Refer to the manufacturer's recommendations for application and disposal. Do not over apply or apply before an anticipated runoff-producing rain event.
Form Release Oil	Petroleum hydrocarbons	Do not remove the original product label from container. Store containers in a covered area or in contractor vehicles to minimize contact with stormwater. Follow the manufacturer's recommended usage instructions.

		Do not use before or during any precipitation event. Use all of the product before disposing of the container and only place in a waste receptacle designated to receive this type of waste.
Fuels and Oils	Petroleum hydrocarbons and distillates	If aboveground storage tanks (ASTs) are required, locations will be tracked on the SWPPP map. A separate spill prevention containment and countermeasure (SPCC) plan will be developed should one or more of the following be present on-site: • A single AST for oil with 660 gallons or more capacity • Two or more ASTs with an aggregate of 1,320 gallons or more capacity (include storage vessels stored above ground with a capacity of 55 gallons or more with the aggregate total capacity) • Belowground oil storage vessels of 42,000 gallons or more Smaller fuel containers and gas-powered equipment should be kept in secondary containment vessels to prevent spills or leaks during fueling and operation. Small gas cans can be kept in the back of trucks when not in use. Drip pans should be used for parked vehicles where leaks have been identified. Soil stained with fuel or other petroleum products should be removed and disposed of in compliance with federal, state, and local requirements.
Grease / Lubricants	Petroleum hydrocarbons	If grease is to be stored on-site, it should be stored in a covered location to minimize contact with stormwater. The application of lubricants should be conducted off-site or in an area with sufficient secondary containment measures to contain any leaks or spills. Lubricants should not be applied in rain or on exposed areas of machinery when precipitation is expected.
Glue / Adhesives	Organic aromatic compounds, semivolatile organic compounds (SVOC)	Glue and adhesives may be used on-site for construction in interior work. Adhesives should be stored in covered areas and out of contact of precipitation. Materials will be used and disposed of in accordance with manufacturers recommendations. Exterior adhesives should not be applied during or immediately before anticipated precipitation events.
Landscape Materials	Nutrients, sediment, pH	Landscape materials include—but are not limited to—items such as topsoil, compost, mulch, polymers, gypsum, and lime.

		If the materials are to be stored on-site they should be stored in a covered area or covered with plastic sheeting, tarps, or similar products to minimize contact with stormwater. Soil amendments should not be used before anticipated runoff producing rain events.
Material Storage	Solid waste, hydrocarbons, nutrients, sediment, hazardous materials	As necessary and as space on the project allows, material storage areas should be dedicated on-site. The number of access points to the material storage area should be limited, and materials should be stored away from drainage courses and low areas. Hazardous materials should be stored in containers or structures or otherwise covered to minimize contact with stormwater. Secondary containment should be provided for the area not only to contain spills but also to limit multiple access points.
Paint	pH, ethylene glycol, titanium oxide, volatile organic compounds (VOC)	Paint washwater should be properly contained on-site in a designated area and handled similarly to concrete washwater. Used materials (i.e., soiled brushes, rollers, sprayers) and dried latex paint should be disposed of in appropriate waste receptacles, preferably off-site. Unused quantities of paint should be removed from site by trades and not disposed of on-site. Any quantities stored on-site should be stored in covered areas to minimize contact with stormwater.
Pesticides, Herbicides	Organophosphates, carbamates, triazines, chloroacetanilides, salts, heavy metals	Pesticides and herbicides should be used and disposed of per manufacturer's recommendations. Avoid overapplying products and avoid applying products before anticipated runoff-producing storm events. Storage of pesticides and herbicides on-site should be discouraged. Should storage on-site be required, items should be stored in covered areas to minimize contact with precipitation and stormwater. Spilled material should be promptly cleaned up per manufacturer's recommendations.
Refrigerants	Various -fluoroethanes and -fluoromethanes	Refrigerants will be used in heating, ventilation, and air-conditioning (HVAC) systems in built structures on-site. Refrigerants should not be stored on-site other than the volume needed for the HVAC systems. Refrigerants will be handled and disposed of by properly trained technicians.
Sanitary Waste	Bacteria, viruses, parasites	Sanitary stations should be located where accidental discharge cannot flow to storm drains, gutters, surface waters, or conveyance channels.

		Locate stations on a level, permeable surface, away from drainage courses and low areas. These stations should not be located on streets, sidewalks, or on top of inlets. Stations will be inspected and maintained by a qualified person at frequent and regular intervals to assure cleanliness and proper operation.
Sediment / Total Suspended Solids	Turbidity, nutrients	Surface water impairments caused by sediment and total suspended solids will have a higher risk of occurring in areas where soils have been disturbed for construction activities. Temporary controls are described in this SWPPP to control and contain this potential pollutant during land-disturbing activities of the project. Vegetation (temporary or permanent stabilization) is a very efficient BMP for controlling sediment and should be used whenever possible.
Solid Waste	Floatable and blowable trash and debris	Solid waste created from construction activities (including but not limited to scrap building material, product/material shipping waste, food containers, and cups) should be properly contained on-site and removed frequently from the site for disposal. Dumpsters should to be emptied at regular intervals and as needed during times of high activity on the site. Efforts should be taken to minimize exposure of solids wastes generated on the site to stormwater.
Solvents	VOC, SVOC	If solvents are stored on-site, they should be stored in a covered and secured area to prevent spills and minimize contact with stormwater. The materials will be used and disposed of per manufacturer's recommendations and federal, state, and local regulations.
Stains, Stucco, and Associated Materials	Ethylene glycol, SVOC, VOC, silica, pH	Secondary containment should be provided in mixing and cleanup areas. Leftover materials should be removed from the site or disposed of in an area designated to receive this type of waste. Do not use materials during a precipitation event, and ensure all excess materials are stored in a covered area to minimize contact with stormwater. Materials should not be washed into a gutter, on the ground, or into a storm drain inlet. If washing on-site, consider using a designated containment bin or pit for washwater.
Vehicle Washing, Wheel Washwater	Sediment, petroleum hydrocarbons, heavy metals	If vehicle washing and/or wheel washing is to occur on-site, it should be done in designated areas where washwater can collect in a basin or alternative control. Use of detergents should be discouraged.

Washing on paved surfaces should be discouraged unless water can be sufficiently treated before leaving the site.

6.4. NONREPORTABLE SPILL PROTOCOL

Most spills can be cleaned up following manufacturer's recommendations. Absorbent materials, sealable containers, plastic bags, and shovels/brooms are suggested as minimum spill response items that should be available at this location.

- Check for hazards (flammable material, noxious fumes). If flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present, leave the area and call 911.
- Make sure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
- Stop the spill source.
- Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
- If possible, stop the spill from entering drains (use absorbent or other material as necessary).
- Stop spill from spreading (use absorbent or other material).
- If spilled material has entered a storm sewer, contact the locality at the below number.
- Clean up spilled material according to manufacturer's specifications. For liquid spills, use absorbent material and do not flush the contaminated area with water.
- Properly dispose of cleaning materials and used absorbent material according to manufacturer specifications.

6.5. REPORTABLE SPILLS

Requirements for reporting spills of hazardous materials and typical site pollutants and spill report documentations can be found in Section 9 of this SWPPP.

Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the Stormwater Pollution Prevention Plan (SWPPP) and made available to the department upon request. The department may also require the submittal of a written or electronic report detailing measures taken to clean up the spill within five (5) days of the spill. Such a report must include the type of material spilled, volume, date of spill, date clean-up was completed, clean-up method, and final disposal method. If the spill occurs outside normal business hours, or if the permit holder cannot reach regional office staff for any reason, the permit holder is instructed to report the spill to the department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. Leaving a message on a department staff member voice-mail does not satisfy this reporting requirement (MDNR 2017).

Table 7. (City/County Entity Name for Spill Reporting) Contact.

Name/Position	Contact Number
City of Lee's Summit – Public Works	816.969.1800

Report to:	Contact Number
Kansas City Regional Office 500 NE Colbern Road Lee's Summit, MO 64086-4710	816.251.0700
Northeast Regional Office 1709 Prospect Drive Macon, MO 63552-2602	660.385.8000
Southeast Regional Office 2155 N. Westwood Boulevard Poplar Bluff, MO 63901	573.840.9750
Southwest Regional Office 2040 W. Woodland Springfield, MO 65807-5912	417.891.4300
St. Louis Regional Office 7545 S. Lindbergh, Suite 210 St. Louis, MO 63125	314.416.2960
MDNR 24-Hour Spill Response	573.634.2436
National Response Center (NRC)	800.424.8802

7.0. SWPPP IMPLEMENTATION

7.1. PUBLIC NOTIFICATION

The locations of the site posting will be noted on the site BMP Tracking Map located in Section 5 of this SWPPP. The location will be updated should the posting move.

The permittee shall post a copy of the public notification sign described by the Department at the main entrance to the site. The public notification sign must be visible from the public road that provides access to the site's main entrance. An alternate location is acceptable provided the public can see it and it is noted in the SWPPP. The public notification sign must remain posted at the site until the permit has been terminated (MDNR 2017).

7.2. INSPECTIONS

Site inspections should be conducted by qualified personnel at the frequency indicated below. Site inspection reports can be stored in Section 12 of this SWPPP unless otherwise noted.

The permittee (or a representative of the permittee) shall conduct regularly scheduled inspections. These inspections shall be conducted by a qualified person, one who is responsible for environmental matters at the site, or a person trained by and directly supervised by the person responsible for environmental matters at the site. For disturbed areas that have not been finally stabilized, all installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance. All stormwater outfalls shall be inspected for evidence of erosion or sediment deposition. When practicable the receiving stream shall also be inspected for 50 feet downstream of the outfall. Any structural or maintenance problems shall be noted in an inspection report and corrected as soon as possible but no more than seven calendar days after the inspection. All BMPs must be inspected in accordance to one of the two schedules listed below, and any changes to the frequency of inspections, including switching between the options listed below, must be documented in the SWPPP:

☐ *At least once every seven calendar days and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour storm has ceased during a normal work day and within 72 hours if the rain event ceases during a non-work day such as a weekend or holiday;*

or

☐ *Once every 14 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches of precipitation or greater, or the occurrence of runoff from snowmelt. To determine a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on site, or obtain the storm event information from a weather station for your location.*

a. *Inspections are only required during the project's normal working hours.*
b. *You must conduct an inspection within 24 hours once a storm event has produced 0.25 inches within a 24 hour period, even if the storm event is still continuing.*

c. *If you have elected to inspect every 14 calendar days and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm* (MDNR 2017).

7.3. CORRECTIVE ACTIONS

Structural or maintenance problems with BMPs used in this project and noted as a result of an inspection shall be corrected as soon as possible but no more than seven calendar days after the inspection.

7.4. MODIFICATION AND AMENDMENTS

Modifications and amendments to the SWPPP can be tracked in Section 7 of this SWPPP. Below are minimum guidelines for when the SWPPP should be updated.

The permittee shall amend the SWPPP at a minimum whenever the:

a. *Design, operation, or maintenance of BMPs is changed;*
b. *Design of the construction project is changed that could significantly affect the quality of the stormwater discharges;*
c. *Permittee's inspections indicate deficiencies in the SWPPP or any BMP;*
d. *Department notifies the permittee in writing of deficiencies in the SWPPP;*
e. *SWPPP is determined to be ineffective in minimizing or controlling erosion and sedimentation (e.g., there is visual evidence of excessive site erosion or excessive sediment deposits in streams or lakes); and/or*
f. *Department determines violations of water quality standards may occur or have occurred* (MDNR 2017).

7.5. TRANSFER OF OWNERSHIP

As necessary, permit transfers or records of sale should be placed in Section 2 of this SWPPP.

If the permittee sells any portion of the permitted site to a developer for commercial, industrial, or residential use, this land remains a part of the common sale and the new owner must obtain a permit prior to conducting any land disturbance activity. Therefore, the original permittee must amend the SWPPP to show that the property has been sold and therefore no longer under the original permit coverage.

If the entire tract is sold to a single entity, then this permit shall be terminated when the new owner obtains a new land disturbance permit for the site (MDNR 2017).

7.6. TERMINATION OF PERMIT

When the project is completed and has reached final stabilization, a copy of the notice of termination and confirmation from the MDNR should be placed in Section 14 of this SWPPP.

This permit may be terminated when the project is stabilized. The project is considered to be stabilized when perennial vegetation, pavement, buildings, or structures using permanent materials cover all areas that have been disturbed. With respect to areas that have been vegetated, vegetation cover shall be at least 70% over 100% of the site. In order to terminate the permit, the permittee shall notify the Department by submitting Form H Request for Termination of a General Permit (MDNR 2017).

7.7. RECORDS

When the project is complete, and the notice of termination has been accepted by the MDNR, records should be removed from the site and retained.

The permittee shall retain copies of this general permit, the SWPPP and all amendments for the site named in the State Operating Permit, results of any monitoring and analysis and all site inspection records required by this general permit. The records shall be accessible during normal business hours. The records shall be retained for a period of at least three years from the date of the Letter of Termination.

The permittee shall provide a copy of the SWPPP to the Department, USEPA, or any local agency or government representative if they request a copy in the performance of their official duties.

The permittee shall provide a copy of the SWPPP to those who are responsible for installation, operation, or maintenance of any BMP. The permittee, their representative, and/or the contractor(s) responsible for installation, operation and maintenance of the BMPs shall have a current copy of the SWPPP with them when on the project site (MDNR 2017).

8.0. REFERENCES

California Stormwater Quality Association. (November 2009). *Stormwater Best Management Practice Handbook Portal: Construction*. Retrieved from http://www.buenapark.com/home/showdocument?id=2557.

Missouri Department of Natural Resources. (February 2017). *Missouri State Operating Permit*. Retrieved from https://dnr.mo.gov/env/wpp/permits/issued/docs/RA00000.pdf.

Missouri Department of Natural Resources, ABC's of BMP's LLC and Shockey Consulting Services. (January 2011). *Protecting Water Quality: A field guide to erosion, sediment and stormwater best management practices for development sites in Missouri and Kansas*. Retrieved from https://dnr.mo.gov/env/wpp/wpcp-guide/docs/wpcp-guide.pdf.

United States Environmental Protection Agency. (May 2007). *Developing Your Stormwater Pollution Prevention Plan, A Guide for Construction Sites*. Retrieved from https://www.epa.gov/sites/production/files/2015-10/documents/sw_swppp_guide.pdf.

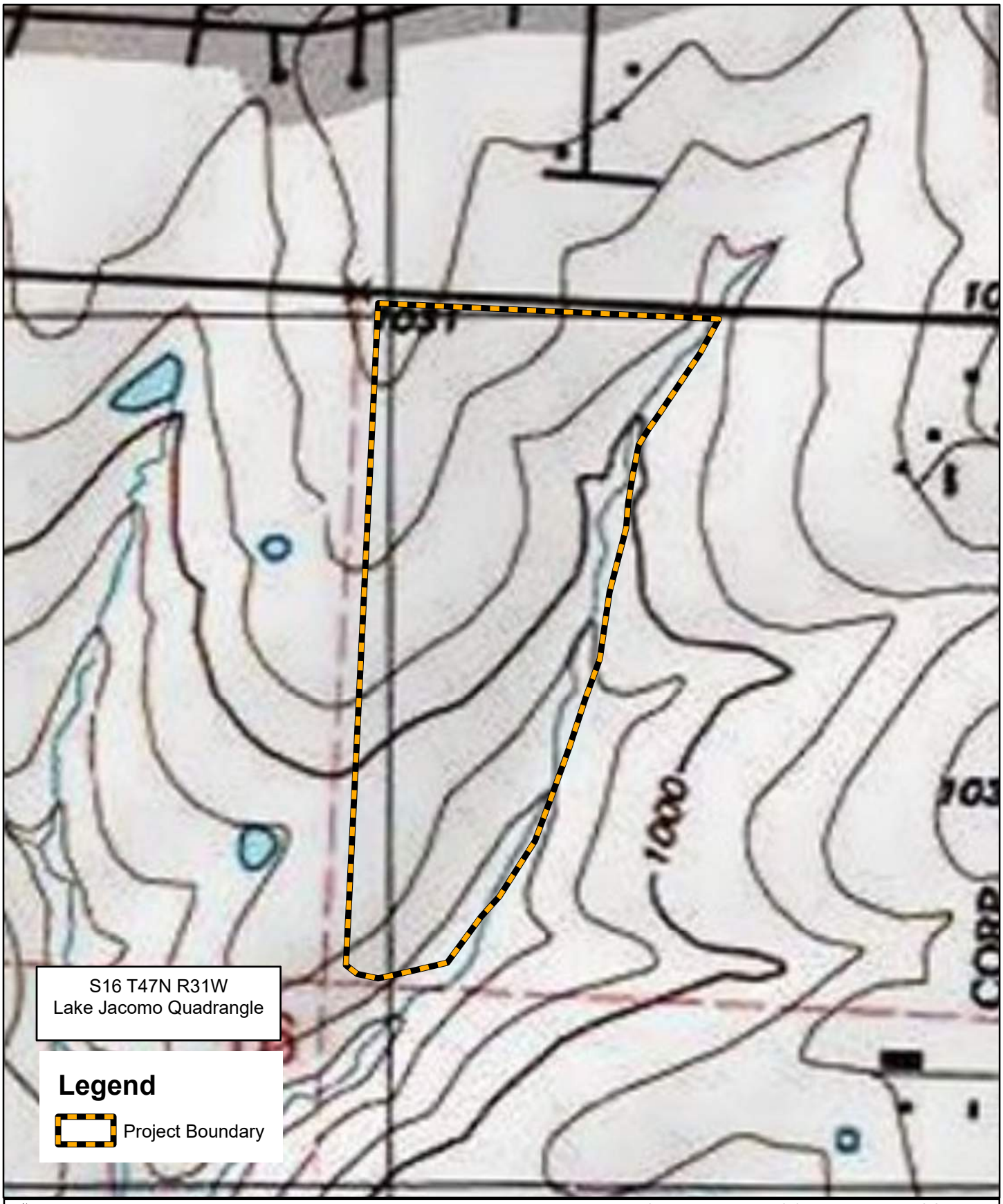
Virginia Department of Environmental Quality. (July 2014). *Single Family Residence Common Plan of Development or Sale Stormwater Pollution Prevention Plan Template*. Retrieved from http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx.

SECTION 4

Location/Topographical Map(s), FIRM Maps & Soils Maps

This section contains:

- -Required Location, Vicinity and Topographical Maps (as needed)
- -FIRM Maps
- -Soils Maps if needed



Project Number: 020-0103	**Topographic Map** Lee's Summit Middle School #4	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson	Figure
Drawn By: KK			7301 West 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	
Revision Date: 6/30/2020	Lee's Summit, Missouri			**2**

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Project Number: 020-0103	**Aerial Map** Lee's Summit Middle School #4	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 West 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure
Drawn By: KK				
Revision Date: 6/30/2020	Lee's Summit, Missouri			1

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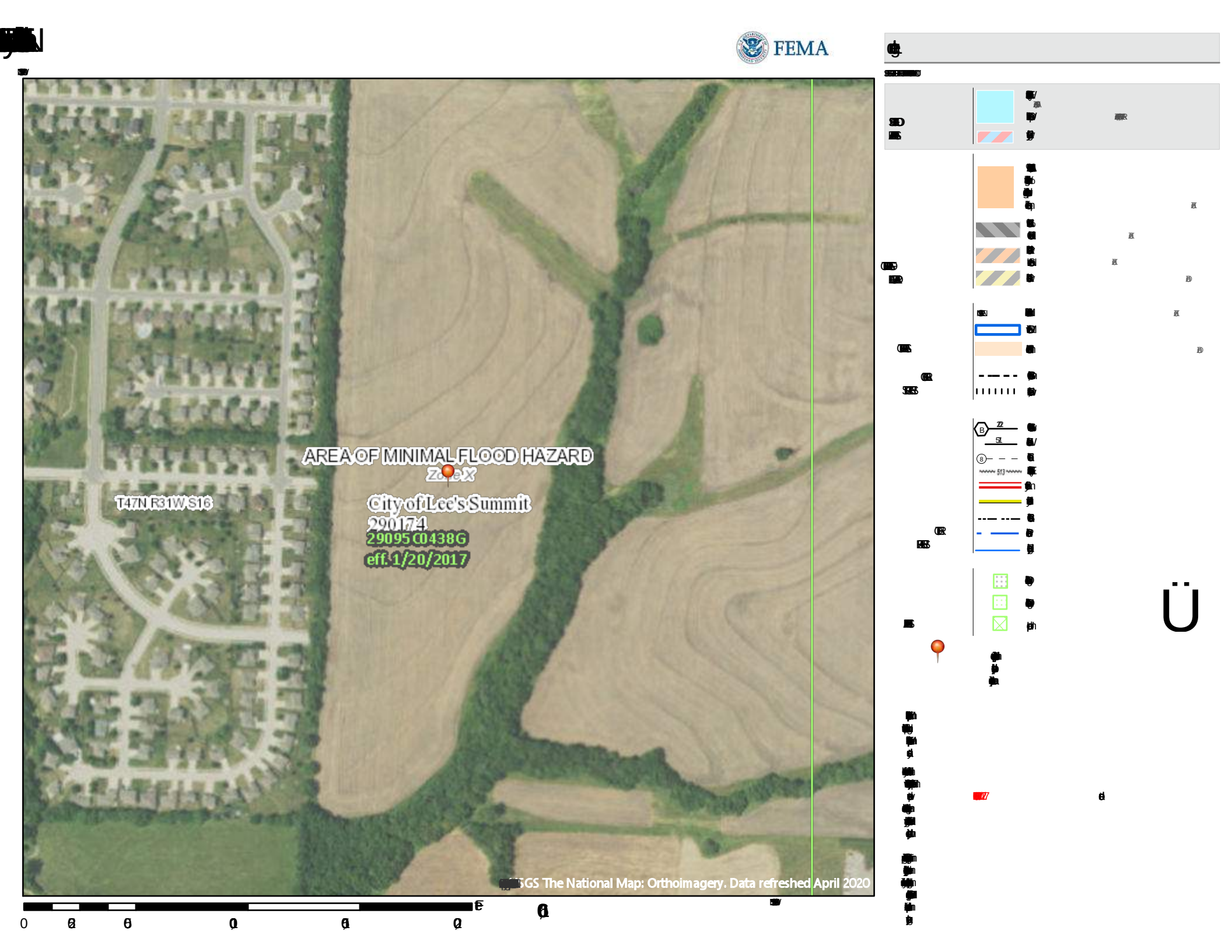

FEMA
AREA OF MINIMAL FLOOD HAZARD
Zone X
T47N R31W S16
City of Lee's Summit
290174
29095C0438G
eff. 1/20/2017
USGS The National Map: Orthoimagery. Data refreshed April 2020

Hydrologic Soil Group—Jackson County, Missouri
(Lee's Summit Middle School #4)

Map Scale: 1:4,580 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jackson County, Missouri
Survey Area Data: Version 22, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 6, 2019—Nov 16, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
10082	Arisburg-Urban land complex, 1 to 5 percent slopes	C	28.4	67.1%
10117	Sampsel silty clay loam, 5 to 9 percent slopes	C/D	13.9	32.9%
Totals for Area of Interest			**42.3**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

SECTION 5

BMP Tracking Map & Land Disturbance Tracking Log

This section contains:

- -Erosion and Sediment Control Plan sheet excerpts
- -Post Construction Stormwater Management Plan sheets if applicable
- -BMP Tracking Map (Working SWPPP Map)
  - -Record of Land Disturbance, Stabilization and BMP installation and removal
  - -Record of Dewatering Activities (e.g. dates and estimated volume of water discharged)

LAND DISTURBANCE PLANS FOR

LEE'S SUMMIT MIDDLE SCHOOL #4

SOUTH SIDE SE BAILEY ROAD AND COUNTRY LANE
NE 1/4 OF SECTION 16, TOWNSHIP 47 NORTH, RANGE 31 WEST
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	GENERAL NOTES
3	GRADING PLAN
4	EROSION CONTROL PLAN – PRE DISTURBANCE
5	EROSION CONTROL PLAN – PRE DISTURBANCE
6	EROSION CONTROL PLAN – MASS GRADING
7	EROSION CONTROL PLAN –MASS GRADING
8	EROSION CONTROL PLAN – FINAL STABILIZATION
9	EROSION CONTROL PLAN – FINAL STABILIZATION
10	SILTATION BASIN 1 GRADING DETAIL
11	SILTATION BASIN 2 GRADING DETAIL
12	EROSION CONTROL DETAILS
13	EROSION CONTROL DETAILS
14	EROSION CONTROL DETAILS

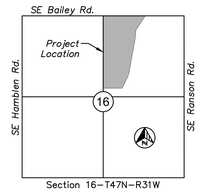
NOT TO SCALE

DEVELOPMENT TEAM CONTACT INFORMATION	
OWNER/DEVELOPER	
KYLE GORRELL DIRECTOR, LEE'S SUMMIT SCHOOL DISTRICT	502 SE TRANSPORT DRIVE LEE'S SUMMIT, MO 64081 816.986–2420
CIVIL ENGINEER	
TERRY PARSONS OLSSON	7301 W. 133RD STREET SUITE 200 OVERLAND PARK, KS 66213 PH: 913.381.1170 FAX: 913.381.1174 tparsons@olsson.com

LEGAL DESCRIPTION:

All that part of Northeast Quarter of Section 16, Township 47 North, Range 31 West, in the City of Lee's Summit, Jackson County, Missouri, as described by Timothy Blair Wiswell, Missouri Professional Licensed Surveyor, PLS–2009000067, and being more particularly described as follows:

COMMENCING at the Northwest corner of the Northeast Quarter, of said Section 16–T47N–R31W; thence South 02 degrees 20 minutes 19 seconds West, along the West line of said Northeast Quarter, a distance of 20.00 feet, to a point on the South Right–of–Way line of Bailey Road as now established, said point also being the Northeast corner of Lot 164 of Newberry Second Plat, Lots 1–65, 163 and 164, a subdivision in the City of Lee's Summit, Jackson County, Missouri; thence South 88 degrees 07 minutes 48 seconds East, on the South Right–of–Way line of said Bailey Road, a distance of 1,350.00 feet, to a point; thence South 35 degrees 20 minutes 58 seconds West, departing the South Right–of–Way line of said Bailey Road, a distance of 517.08 feet, to a point; thence South 07 degrees 56 minutes 53 seconds West, a distance of 320.18 feet, to a point; thence South 12 degrees 12 minutes 42 seconds West, a distance of 1,168.07 feet, to a point; thence South 27 degrees 41 minutes 50 seconds West, a distance of 480.35 feet, to a point on a line that is 300.00 feet North of and parallel to the South line of said Northeast Quarter; thence North 88 degrees 04 minutes 43 seconds West, on said parallel line, a distance of 630.96 feet, to a point on the West line of said Northeast Quarter, said point also being on the East line of Newberry Fourth Plat, a subdivision in the City of Lee's Summit, Jackson County, Missouri; thence North 02 degrees 20 minutes 19 seconds East, on the West line of said Northeast Quarter, and on the East line of said Newberry Fourth Plat, and on the East line of Newberry Third Plat, a subdivision in the City of Lee's Summit, Jackson County, Missouri, and on the East line of said Newberry Second Plat, Lots 1–65, 163 and 164, a distance of 2,330.63 feet, to the POINT OF BEGINNING, containing 2,250,248 square feet or 51.6586 acres, more or less.



VICINITY MAP
Scale: 1" = 2000'

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

COVER SHEET
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE' SUMMIT, MISSOURI

2020

drawn by: RLK
checked by: TP
approved by: TP
QA/QC by: ENG
project no.: 020-0103
drawing no.: C_GEN01_0200103
date: 06.10.20

SHEET
1 of 14

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\GNCV\LAND DISTURBANCE\C_GEN01_0200103.dwg USER: bkimmich
DATE: Jul 10, 2020 8:02am XREFS: C_XBASE_0200103 C_PBASE_0200103 V_XBOU_00103 T_PBASE_0200103 T_PSAS_0200103 C_PTBLK_0200103

GENERAL NOTES:

1. THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "1-800-DIG-RITE", 1(800)344-7483 OR 811 AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. !!STOP!! CALL BEFORE YOU DIG!!
2. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND ENGINEER.
3. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
4. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATION PURPOSES ONLY. CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL QUANTITIES AND FOR BRINGING THE PROJECT TO THE LINES AND GRADES SHOWN HEREIN. CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS REQUIRED TO FULFILL THE PLANS IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE EARTHWORK QUANTITIES AND TO ACCOUNT FOR HAUL IN OR HAUL OFF OF MATERIAL AS NECESSARY TO MEET THE LINES AND GRADES OF THE PLANS EVEN IF QUANTITY ESTIMATES ARE SHOWN WITHIN THESE DOCUMENTS. NO ADDITIONAL PAYMENTS WILL BE MADE FOR IMPORT OR EXPORT OF MATERIAL OR FOR ADJUSTMENTS TO QUANTITY ESTIMATES.
5. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATIONS *OF THE AMERICAN PUBLIC WORKS ASSOCIATION – KANSAS CITY METROPOLITAN CHAPTER (APWA-KC) AND* THE CITY OF LEE'S SUMMIT, MO, EXCEPT WHERE SHOWN OTHERWISE. NOTIFY ENGINEER OF DISCREPANCIES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, PAYING ALL FEES AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
7. THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF MISSOURI STATE LAW WHICH REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT-OF-WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM UTILITY COMPANIES.
8. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
9. THE CONTRACTOR SHALL LIMIT THE REMOVAL OF TREES TO THE LIMITS OF DEMOLITION SHOWN ON THE DEMOLITION PLAN.
10. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
11. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR.
12. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS ARE TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL OF SURFACE EROSION DURING CONSTRUCTION AND UNTIL THE OWNER ACCEPTS THE WORK AS COMPLETE. EROSION CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, THE SILT FENCES AND GRAVEL FILTER BAGS SHOWN ON THE EROSION CONTROL PLAN SHALL BE IN PLACE FOR THE DURATION OF THE SITE IMPROVEMENTS.
14. ALL HDPE PIPE SHALL BE ADS (N-12) OR APPROVED EQUAL, AND CONFORM TO AASHTO M294 SPECIFICATIONS. ALL PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
15. IF PRECAST CONCRETE STORM SEWER STRUCTURES ARE TO BE USED ON THIS PROJECT, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND HAVE THEM APPROVED BY THE ENGINEER PRIOR TO FABRICATION OF THE STRUCTURES. FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION.
16. EXISTING TOPSOIL SHALL BE STRIPPED TO A POINT WHERE ALL VEGETATION IS REMOVED. REFER TO THE GEOTECHNICAL REPORT PROVIDED BY CFS ENGINEERS, PROJECT NO. 20-1074 AND DATED JUNE 8, 2020 AND ALL ADDENDUMS FOR ADDITIONAL REQUIREMENTS.
17. THE CONTRACTOR SHALL, BY HIS OWN INVESTIGATION, AND PRIOR TO COMMENCING WORK, SATISFY HIMSELF AS TO THE SURFACE AND SUBSURFACE CONDITIONS TO BE ENCOUNTERED.
18. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BOUNDARY CORNERS AND SECTION CORNERS. ANY BOUNDARY CORNER AND/OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE.
19. NO FEDERALLY OWNED MAILBOX MAY BE DISTURBED. THE CONTRACTOR SHALL GIVE AT LEAST TWENTY-FOUR (24) HOURS ADVANCE NOTICE TO THE MANAGER OF DELIVERY AND COLLECTIONS. TAMPERING WITH FEDERAL MAIL FACILITIES MAY SUBJECT THE CONTRACTOR TO PROSECUTION BY THE FEDERAL GOVERNMENT.
20. THE CONTOUR LINES SHOWN ARE FOR MASS GRADING PURPOSES.
21. EXISTING CONTOURS REPRESENT MASS GRADING ELEVATIONS.
22. THE CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL UNLESS OTHERWISE SHOWN BY CONTOURS OR SPOT ELEVATIONS.
23. THE CONTRACTOR SHALL GRADE LANDSCAPED AREAS TO PROVIDE POSITIVE DRAINAGE IN THE BORROW AREA.
24. THE CONTRACTOR SHALL MAKE HIS OWN ASSUMPTIONS ON THE LOCATION AND CONSISTENCY OF ANY EXISTING ROCK LAYERS UNDERLYING THE PROJECT SITE. ALL ROCK EXCAVATION AND REMOVAL SHALL BE INCLUDED IN THE CONTRACTORS' BID.
25. CONTRACTOR TO FIELD VERIFY ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES AND INFRASTRUCTURE PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS.
26. BY ACCEPTING AND UTILIZING ANY ELECTRONIC FILE OF ANY DRAWING, REPORT OR DATA TRANSMITTED BY OLSSON (OLSSON), THE RECIPIENT AGREES FOR ITSELF, ITS SUCCESSORS, ASSIGNS, INSURERS AND ALL THOSE CLAIMING UNDER OR THROUGH IT, THAT BY USING ANY OF THE INFORMATION CONTAINED IN THE ELECTRONIC FILE, ALL USERS AGREE TO BE BOUND BY THE FOLLOWING TERMS. ALL OF THE INFORMATION CONTAINED IN THIS ELECTRONIC FILE IS THE WORK PRODUCT AND INSTRUMENT OF SERVICE OF OLSSON, WHO SHALL BE DEEMED THE AUTHOR, AND SHALL RETAIN ALL COMMON LAW, STATUTORY LAW AND OTHER RIGHTS, INCLUDING COPYRIGHTS, UNLESS THE SAME HAVE PREVIOUSLY BEEN TRANSFERRED IN WRITING TO THE RECIPIENT. THE INFORMATION CONTAINED IN THE ELECTRONIC FILE IS PROVIDED FOR THE CONVENIENCE OF THE RECIPIENT AND IS PROVIDED IN "AS IS" CONDITION. THE RECIPIENT IS AWARE THAT DIFFERENCES MAY EXIST BETWEEN THE ELECTRONIC FILES AND THE PRINTED HARD-COPY ORIGINAL SIGNED AND SEALED DRAWINGS OR REPORTS. IN THE EVENT OF A CONFLICT BETWEEN THE SIGNED AND SEALED ORIGINAL DOCUMENTS PREPARED BY OLSSON AND THE ELECTRONIC FILES TRANSFERRED HEREWITH, THE SIGNED AND SEALED ORIGINAL DOCUMENTS SHALL GOVERN. OLSSON SPECIFICALLY DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ELECTRONIC FILES. IT SHALL BE THE RECIPIENT'S RESPONSIBILITY TO CONFIRM THE ACCURACY OF THE INFORMATION CONTAINED IN THE ELECTRONIC FILE AND THAT IF ACCURATELY REFLECTS THE INFORMATION NEEDED BY THE RECIPIENT. THE RECIPIENT SHALL NOT RETRANSMIT THE ELECTRONIC FILE, OR ANY PORTION THEREOF, WITHOUT INCLUDING THIS DISCLAIMER AS PART OF ANY SUCH TRANSMISSION. IN ADDITION, THE RECIPIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS OLSSON, ITS OFFICERS, DIRECTORS, EMPLOYEES AND SUBCONSULTANTS AGAINST ANY AND ALL DAMAGES, LIABILITIES, CLAIMS OR COSTS, INCLUDING REASONABLE ATTORNEY'S AND EXPERT WITNESS FEES AND DEFENSE COSTS, ARISING FROM ANY CHANGES MADE BY ANYONE OTHER THAN OLSSON OR FROM ANY REUSE OF THE ELECTRONIC FILES WITHOUT THE PRIOR WRITTEN CONSENT OF OLSSON.
27. DESIGN PROFESSIONAL SHALL REVIEW SHOP DRAWINGS OR SAMPLES FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPTS ON THE PROJECT AND FOR COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS, AND SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. THE DESIGN PROFESSIONAL'S REVIEW SHALL NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS IN WRITING CALLED DESIGN PROFESSIONAL'S ATTENTION TO EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND DESIGN PROFESSIONAL HAS GIVEN WRITTEN APPROVAL OF EACH SUCH VARIATION BY SPECIFIC WRITTEN NOTATION THEREOF INCORPORATED INTO OR ACCOMPANYING THE SHOP DRAWING OR SAMPLE; NOR WILL ANY APPROVAL BY THE DESIGN PROFESSIONAL RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS WITH CONFORMANCE TO CONTRACT DOCUMENTS.
28. GENERAL CONSTRUCTION NOTE REGARDING SEQUENCING OF EROSION CONTROL – ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN, EXCEPT THAT SILT FENCE WHICH IS TO BE PLACED ALONG THE BACK OF CURB FOR PROTECTION OF THE STREET. SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR UNTIL ALL UTILITIES ARE IN PLACE. THE SILT FENCE THAT IS PLACED ALONG THE BACK OF THE CURB OR RIGHT-OF-WAY WILL BE INSTALLED IMMEDIATELY AFTER THE CURB IS CONSTRUCTED. EROSION AND SEDIMENTATION CONTROLS ARE TEMPORARY AND MUST BE REMOVED BY THE CONTRACTOR AFTER CONSTRUCTION IS COMPLETE AND THE DISTURBED AREA IS AT LEAST 70% PERMANENTLY VEGETATED.
29. HANDICAP PARKING STALLS SHALL BE SIGNED WITH CITY/ADA APPROVED SIGNAGE AND CONSTRUCTED IN STRICT ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS *OF THE APWA-KC,* CITY OF LEE'S SUMMIT ADA STANDARDS, *AND* SHALL NOT EXCEED 2.00 PERCENT IN ANY DIRECTION. ACCESSIBLE SIDEWALKS HAVE A MAXIMUM CROSS SLOPE OF 2 PERCENT AND A MAXIMUM LONGITUDINAL SLOPE OF 5 PERCENT.
30. ALL WATER LINES SHALL BE INSTALLED PER THE LATEST STANDARDS AND SPECIFICATIONS *OF THE APWA-KC AND* THE CITY OF LEE'S SUMMIT, MO. ALL WATER LINES SHALL BE A MINIMUM OF 48 INCHES BELOW THE FINISHED GRADE ELEVATIONS SHOWN HEREIN.
31. ALL WATER LINES SHALL BE INSTALLED PER CITY STANDARDS. ALL WATER LINES SHALL BE A MINIMUM OF 48 INCHES BELOW THE FINISHED GRADE ELEVATIONS SHOWN HEREIN.
32. ALL EXTERIOR CONCRETE SHALL BE KCMMB-4K AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI, SHALL MEET KCMMB STANDARDS AND SPECIFICATIONS, AND SHALL BE AIR ENTRAINED. FLYASH IS NOT A SUITABLE REPLACEMENT FOR PORTLAND CEMENT.
33. ALL ON-SITE WIRING AND CABLES SHALL BE PLACED UNDERGROUND.
34. CONCRETE PAVEMENT JOINTS SHALL BE CONSTRUCTED AS FOLLOWS (REFER TO HARDSCAPE PLANS FOR SPECIFIC TREATMENT OF THESE AREAS):
   A. CONTROL JOINTS SPACED AT INTERVALS NOT GREATER THAN 12 FEET AND TOOLED TO 1/3 THE SLAB THICKNESS.
   B. CONSTRUCTION JOINTS AT THE END OF EACH POUR AND WHEN PAVING OPERATIONS ARE SUSPENDED FOR 30 MINUTES OR MORE.
   C. ISOLATION JOINTS PLACED WHERE THE PAVEMENT ABUTS THE BUILDING, DRAINAGE STRUCTURES AND OTHER FIXED STRUCTURES, CONSTRUCTED WITH A 1/2" NONEXTRUDING FILLER, CLOSED-CELL FOLSSONM RUBBER OR A BITUMEN-TREATED FIBER-BOLSSONRD, AND WITH A THICKENED EDGE, INCREASED BY 20 PERCENT, TAPERED TO THE REGULAR THICKNESS IN 5 FEET.
   D. ALL EXPANSION JOINTS SHALL BE FILLED AND SEALED WITH A PLASTIC JOINT SEALANT MATERIAL.
35. TELEPHONE AND COMMUNICATION SERVICE ROUTING AND CONDUITS NOT SHOWN ON PLANS. CONTRACTOR SHALL INSTALL NECESSARY CONDUIT PRIOR TO PAVEMENT INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING AND INSTALLATION SCOPE WITH SERVICE PROVIDER.
36. ANY CONTRACTOR BIDDING ANY PORTION OF THIS WORK SHALL HAVE IN HIS OR HER POSSESSION A COMPLETE SET OF CONSTRUCTION DOCUMENTS AND BE FAMILIAR WITH ALL SCOPES OF WORK AND TRADES TO UNDERSTAND THEIR INTERACTIONS.
37. EXISTING TOPSOIL SHALL BE STRIPPED TO A POINT WHERE ALL VEGETATION IS REMOVED. REFER TO THE GEOTECHNICAL REPORT PROVIDED BY OLSSON DATED 01/09/2019 AND ALL ADDENDUMS.
38. SITE PREPARATION, GRADING AND EXCAVATION PROCEDURES SHALL CONFORM TO THE RECOMMENDATIONS AS OUTLINED IN THE GEOTECHNICAL REPORT PREPARED BY OLSSON DATED 01/09/2019 AND ALL ADDENDUMS.

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION & SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT. ANY AND ALL FINES ASSOCIATED WITH EROSION CONTROL VIOLATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
2. EROSION CONTROL IS THE CONTRACTOR'S RESPONSIBILITY. THIS PLAN SHOULD BE USED AS A GUIDE AND REPRESENTS THE MINIMUM EROSION CONTROL DEVICES REQUIRED.
3. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
4. CONTRACTOR IS RESPONSIBLE FOR INSPECTING AND REPAIRING ALL EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH RAINFALL EVENT.
5. THE CONTRACTOR SHALL PROVIDE ANY FURTHER EROSION CONTROL MEASURES IN ADDITION TO THOSE LISTED TO ENSURE THAT SILT WILL NOT LEAVE THE PROJECT CONFINES.
6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED WITH A HEALTHY STAND OF PERMANENT VEGETATION.
7. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AT COMPLETION OF CONSTRUCTION.
8. THE CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES, FLUMES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
9. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY STABILIZATION AS REQUIRED.
10. THE CONTRACTOR SHALL LEAVE THE EROSION CONTROL DEVICES AROUND ALL FIELD INLETS AT THE COMPLETION OF THE PROJECT.
11. THE CONTRACTOR SHALL PROVIDE AN INGRESS/EGRESS TRACKING PAD FOR VEHICULAR TRAFFIC AT A LOCATION APPROVED BY THE OWNERS REPRESENTATIVE.
12. ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS AND DESIGN CRITERIA OF THE ENGINEERING DIVISION, DEPARTMENT OF PUBLIC WORKS, CITY OF BLUE SPRINGS, MISSOURI AND THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, WATER POLLUTION CONTROL DIVISION, MOST CURRENT EDITIONS.
13. AT ANY TIME DURING CONSTRUCTION THE CITY ENGINEER MAY REQUIRE ADDITIONAL EROSION/SILTATION CONTROL MEASURES TO BE INSTALLED IN ORDER TO ADDRESS PROBLEM SITUATIONS OBSERVED ON THE SITE. WHEN REQUIRED SUCH MEASURES SHALL BE INSTALLED WITHIN 48 HOURS OF THE CITY ENGINEER'S VERBAL OR WRITTEN ORDER.
14. PROPOSED CONTOURS SHOWN ARE TO FINISH GRADE AND REFLECT SURFACE ELEVATIONS OF PAVEMENT AND LANDSCAPED AREAS AROUND BUILDINGS. THE CONTRACTOR SHALL ADJUST FOR PAVEMENT AND LANDSCAPED MATERIALS AS REQUIRED.
15. THE CONTRACTOR SHALL PLACE SEED AND TURF REINFORCEMENT EXCELSIOR BLANKETS (OR OTHER APPROVED EQUAL EROSION CONTROL BLANKETS) ON ALL SLOPES 6:1 AND GREATER.
16. SEED ALL DISTURBED AREA PER CITY STANDARDS AND SPECIFICATIONS.

CONTROL INFORMATION:

BASIS OF COORDINATES SHOWN HEREON ARE BASED ON MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE, AND SCALED TO GROUND COORDINATES UTILIZING A COMBINED ADJUSTMENT FACTOR OF 0.9998986, HOLDING JACKSON COUNTY GPS CONTROL POINT JA-45 AS A BASE POINT. DISTANCES SHOWN HEREON ARE GROUND DISTANCES IN US SURVEY FEET.

MO DNR JA-45:
KC METRO ALUMINUM GRS DISK SET IN CONCRETE ±3" BELOW PAVEMENT ON SHOULDER OF SE RANSON RD. STAMPED "JA-45".
N: 994990.346
E: 2834265.611
ELEV.: 1046.26'

OLSSON #100:
SET 1/2" REBAR WITH OLSSON CONTROL CAP. SET IN THE GRASS ON THE NORTH SIDE OF SE BAILEY RD.
N: 993598.83
E: 2831586.70
ELEVATION: 1032.16'
TIES:
1. SW 66.88' TO THE NE CORNER OF THE CONCRETE SIDEWALK ON THE SOUTH SIDE OF SE BAILEY RD.
2. SSW 82.19' TO THE CENTER OF A POWER POLE ON THE SOUTH SIDE OF SE BAILEY RD.
3. EAST 254.38' TO THE NW CORNER OF A CONCRETE CURB INLET ON THE NORTH SIDE OF SE BAILEY RD.
4. EAST ±298' TO THE CENTERLINE OF COUNTRY LN. ON THE NORTH SIDE OF SE BAILEY RD.

OLSSON #101:
SET 1/2" REBAR WITH OLSSON CONTROL CAP. SET IN THE GRASS ON THE NORTH SIDE OF SE BAILEY RD.
N: 993561.11
E: 2832755.84
ELEVATION: 1014.26'
TIES:
1. EAST 80.94' TO THE NW CORNER OF A CONCRETE CURB INLET ON THE NORTH SIDE OF SE BAILEY RD.
2. SE 91.53' TO THE SW CORNER OF A CONCRETE CURB INLET ON THE SOUTH SIDE OF SE BAILEY RD.
3. NE 94.82' TO THE SW CORNER OF A CONCRETE OVERFLOW STRUCTURE ON THE SOUTH SIDE OF A POND ON THE NORTH SIDE OF SE BAILEY RD.
4. WEST ±871' TO THE CENTERLINE OF COUNTRY LN. ON THE NORTH SIDE OF SE BAILEY RD.

OLSSON #102:
SET 1/2" REBAR WITH OLSSON CONTROL CAP. SET IN THE GRASS ±58' EAST OF THE EAST END OF SE 15TH ST.
N: 992084.37
E: 2831530.63
ELEVATION: 1012.56'
TIES:
1. NW 67.97' TO THE CENTER OF A WATER VALVE ON THE NORTH SIDE OF SE 15TH ST.
2. WEST 59.33' TO THE CENTER OF A SANITARY MANHOLE ON THE SOUTH SIDE OF SE 15TH ST.
3. WSW 57.28' TO THE SE CORNER OF THE EAST END OF THE CONCRETE SIDEWALK ON THE SOUTH SIDE OF SE 15TH ST.
4. NORTH ±15' TO THE EASTERLY PROLONGATION OF THE CENTERLINE OF SE 15TH ST.

OLSSON #103:
SET 1/2" REBAR WITH OLSSON CONTROL CAP. SET IN THE GRASS ±62' EAST OF THE EAST END OF SE CAPE DR.
N: 991553.72
E: 2831514.48
ELEVATION: 1000.43'
TIES:
1. NW 76.12' TO THE CENTER OF A TELEPHONE PEDESTAL ON THE NORTH SIDE OF SE CAPE DR.
2. SW 67.00' TO THE CENTER OF A WATER VALVE ON THE SOUTH SIDE OF SE CAPE DR.
3. SW 70.06' TO THE SE CORNER OF THE EAST END OF THE CONCRETE SIDEWALK ON THE SOUTH SIDE OF SE CAPE DR.
4. NORTH ±4' TO THE EASTERLY PROLONGATION OF THE CENTERLINE OF SE CAPE DR.

BASIS OF ELEVATIONS SHOWN HEREON ARE BASED UPON NAVD '88 UTILIZING MODOT'S CONTINUOUSLY MONITORED GNSS SYSTEM AND HOLDING THE ELEVATION OF JA-45 ELEVATION 1046.26'

OLSSON BENCHMARK #1:
SET CHISELED SQUARE CUT ON CENTER FRONT FACE OF A CURB INLET ON NORTH SIDE OF SE BAILEY RD. ±42' WEST OF COUNTRY LN.
ELEVATION: 1028.43'

OLSSON BENCHMARK #2:
SET CHISELED SQUARE CUT ON SE CORNER OF OVERFLOW STRUCTURE ON SOUTH SIDE OF POND ON NORTH SIDE OF SE BAILEY RD. ±962' EAST OF COUNTRY LN.
ELEVATION: 1017.13'

OLSSON BENCHMARK #3:
SET CHISELED "+" CUT ON SSE FLANGE BOLT OF FIRE HYDRANT IN NW QUADRANT OF THE INTERSECTION OF SE 15TH ST. AND SE DALTON DR.
ELEVATION: 1016.27'

OLSSON BENCHMARK #4:
SET CHISELED SQUARE CUT ON EDGE OF SIDEWALK AT THE WEST CENTER OF A CURB INLET IN THE NW QUADRANT OF THE INTERSECTION OF SE CAPE DR. AND SE DALTON DR.
ELEVATION: 999.24'

THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT-OF-WAY DO SO ONLY AFTER GIVING NOTICE TO, & OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE. CALL 1-800-DIG-RITE.

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TEL 913.381.1170
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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL NOTES
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE' SUMMIT, MISSOURI

2020

drawn by: RLK
checked by: TP
approved by: TP
QA/QC by: ENG
project no.: 020-0103
drawing no.: C_GEN01_0200103
date: 06.10.20

SHEET
2 of 14

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\GNCV\LAND DISTURBANCE\C_GEN01_0200103.dwg USER: bkimmich
DATE: Jul 10, 2020 8:02am XREFS: C_XBASE_0200103 C_PBASE_0200103 V_XBOU_00103 T_PBASE_0200103 T_PSAS_0200103 C_PTBLK_0200103

LEGEND

- PROPERTY LINE
- 995 EXISTING MAJOR CONTOUR
- 995 EXISTING MINOR CONTOUR
- 998 PROPOSED MAJOR CONTOUR
- 998 PROPOSED MINOR CONTOUR

CONTRACTOR NOTE:
THE GRADING SHOWN FOR IS BASED ON A APPROXIMATION FOR FINAL DESIGN. THE CONTRACTOR SHALL ENSURE THAT THE SITE DRAINS PROPERLY TO EROSION CONTROL MEASURES SHOWN. ITEMS SUCH AS ROAD CROWNS AND DITCHES CAN BE MODIFIED TO ACHIEVE SUCCESSFUL DRAINAGE

N

0' 50' 100' 200'
SCALE IN FEET

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

GRADING PLAN
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE' SUMMIT, MISSOURI

2020

drawn by:	RLK
checked by:	TP
approved by:	TP
QA/QC by:	ENG
project no.:	020-0103
drawing no.:	C_GRD01_0200103
date:	06.10.20

SHEET
3 of 14

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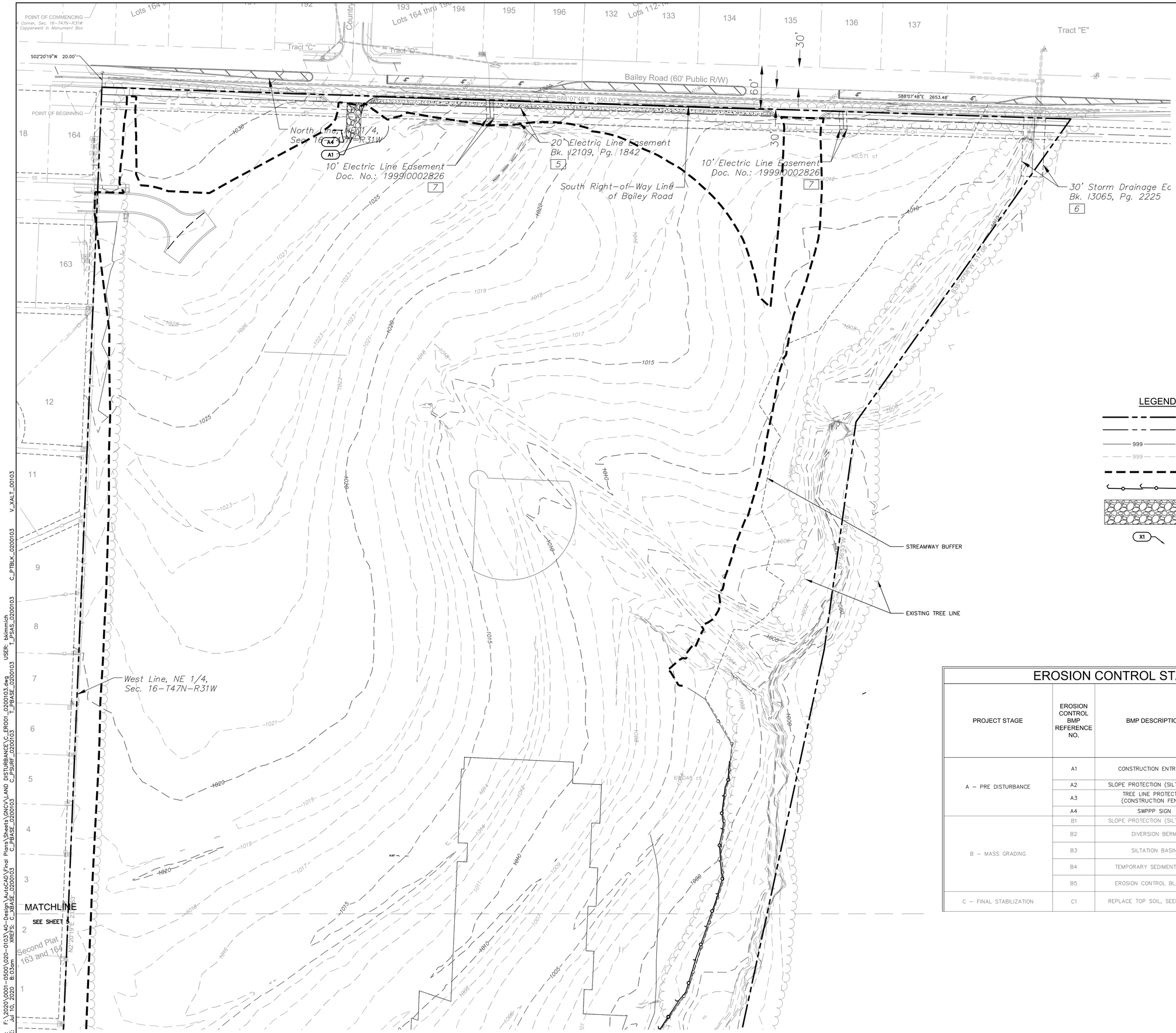

LEGEND

- PROPERTY LINE
- LOT LINE
- 999 PROPOSED CONTOUR
- 999 EXISTING CONTOUR
- LIMITS OF DISTURBANCE (41.8+/- ACRES)
- SILT FENCE
- TEMPORARY CONSTRUCTION ENTRANCE
- X1 EROSION CONTROL REFERENCE NUMBER

EROSION CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE DISTURBANCE	A1	CONSTRUCTION ENTRANCE	C	INSTALL AS INDICATED ON PLANS (IF SITE DISRUPTION LASTS LONGER THAN 14 DAYS)
	A2	SLOPE PROTECTION (SILT FENCE)	C	INSTALL AS INDICATED ON PLANS
	A3	TREE LINE PROTECTION (CONSTRUCTION FENCE)	D	INSTALL AS INDICATED ON PLANS
	A4	SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
B – MASS GRADING	B1	SLOPE PROTECTION (SILT FENCE)	D	INSTALL AS INDICATED ON PLANS
	B2	DIVERSION BERM		INSTALL AS INDICATED ON PLANS
	B3	SILTATION BASIN		INSTALL AS INDICATED ON PLANS
	B4	TEMPORARY SEDIMENT TRAP		INSTALL AS INDICATED ON PLANS
	B5	EROSION CONTROL BLANKET	N/A	INSTALL AS INDICATED ON PLANS
C – FINAL STABILIZATION	C1	REPLACE TOP SOIL, SEED MULCH	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF DISTURBED AREA.

N

0' 25' 50' 100'
SCALE IN FEET

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL PLAN - PRE DISTURBANCE
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE' SUMMIT, MISSOURI

2020

drawn by: RLK
checked by: TP
approved by: TP
QA/QC by: ENG
project no.: 020-0103
drawing no.: C_ERO01_0200103
date: 06.10.20

SHEET
4 of 14

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\GNC\V_LAND DISTURBANCE\C_ERO01_0200103.dwg USER: bkimmich
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LEGEND

- PROPERTY LINE
- LOT LINE
- 999 — PROPOSED CONTOUR
- 999 — EXISTING CONTOUR
- LIMITS OF DISTURBANCE (41.8+/– ACRES)
- SILT FENCE
- TEMPORARY CONSTRUCTION ENTRANCE
- X1 — EROSION CONTROL REFERENCE NUMBER

EROSION CONTROL STAGING CHART

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	A3	TREE LINE PROTECTION (CONSTRUCTION FENCE)	D	INSTALL AS INDICATED ON PLANS
	A4	SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
B – MASS GRADING	B1	SLOPE PROTECTION (SILT FENCE)	D	INSTALL AS INDICATED ON PLANS
	B2	DIVERSION BERM		INSTALL AS INDICATED ON PLANS
	B3	SILTATION BASIN		INSTALL AS INDICATED ON PLANS
	B4	TEMPORARY SEDIMENT TRAP		INSTALL AS INDICATED ON PLANS
	B5	EROSION CONTROL BLANKET	N/A	INSTALL AS INDICATED ON PLANS
C – FINAL STABILIZATION	C1	REPLACE TOP SOIL, SEED MULCH	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF DISTURBED AREA.

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LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

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2020

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SHEET
5 of 14

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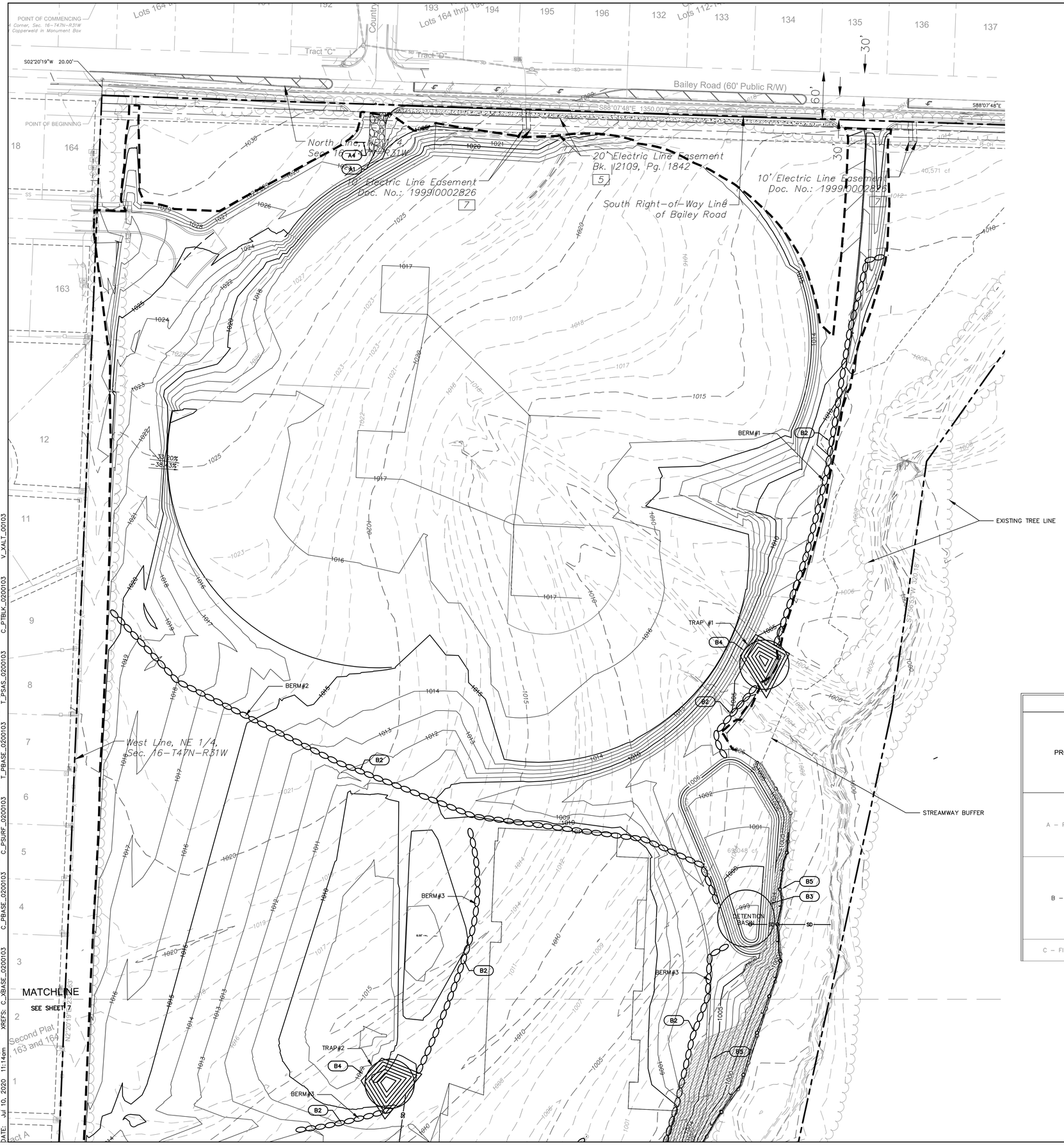

SEDIMENT TRAP DESIGN DATA
TITLE: Lees Summit Middle School #4
JOB #: 020-0103

Design Item:	Trap #1	Trap #2	Units	Notes:
Trap Data				
Drainage Area	4.30	4.66	acres	
Required Volume (1800 cf/acre)	286.7	306.7	cy	
Provided Volume	320.0	335.0	cy	
Sediment Cleanout Volume	64.0	67.0	cy	20% OF PROVIDED VOLUME
Sediment Cleanout Elevation	1003.6	1006.3		

Berm #1	
Drainage Area To Berm:	7.2 Acres
Flow Rate:	14.16 cfs
Slope of Berm:	2.00 %
Water Surface Depth:	12.8 in
Required Depth of Berm:	17.1 in
Provided Depth of Berm:	18 in

Berm #2	
Drainage Area To Berm:	8.7 Acres
Flow Rate:	17.11 cfs
Slope of Berm:	2.50 %
Water Surface Depth:	14.52 in
Required Depth of Berm:	19.3 in
Provided Depth of Berm:	24 in

Berm #3	
Drainage Area To Berm:	2.6 Acres
Flow Rate:	5.11 cfs
Slope of Berm:	1.50 %
Water Surface Depth:	8.4 in
Required Depth of Berm:	11.2 in
Provided Depth of Berm:	15 in

Berm #4	
Drainage Area To Berm:	4.5 Acres
Flow Rate:	8.85 cfs
Slope of Berm:	1.30 %
Water Surface Depth:	11.7 in
Required Depth of Berm:	15.6 in
Provided Depth of Berm:	18 in

LEGEND

- PROPERTY LINE
- LOT LINE
- 999 PROPOSED CONTOUR
- 999 EXISTING CONTOUR
- LIMITS OF DISTURBANCE (41.8+/– ACRES)
- SILT FENCE
- TEMPORARY CONSTRUCTION ENTRANCE
- X1 EROSION CONTROL REFERENCE NUMBER
- DIVERSION BERM

EROSION CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE DISTURBANCE	A1	CONSTRUCTION ENTRANCE	C	INSTALL AS INDICATED ON PLANS (IF SITE DISRUPTION LASTS LONGER THAN 14 DAYS)
	A2	SLOPE PROTECTION (SILT FENCE)	C	INSTALL AS INDICATED ON PLANS
	A3	TREE LINE PROTECTION (CONSTRUCTION FENCE)	D	INSTALL AS INDICATED ON PLANS
	A4	SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
B – MASS GRADING	B1	SLOPE PROTECTION (SILT FENCE)	D	INSTALL AS INDICATED ON PLANS
	B2	DIVERSION BERM		INSTALL AS INDICATED ON PLANS
	B3	SILTATION BASIN		INSTALL AS INDICATED ON PLANS
	B4	TEMPORARY SEDIMENT TRAP		INSTALL AS INDICATED ON PLANS
	B5	EROSION CONTROL BLANKET	N/A	INSTALL AS INDICATED ON PLANS
C – FINAL STABILIZATION	C1	REPLACE TOP SOIL, SEED MULCH	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF DISTURBED AREA.

N

0' 25' 50' 100'
SCALE IN FEET

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL PLAN - MASS GRADING
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE SUMMIT, MISSOURI

2020

drawn by: RLK
checked by: TP
approved by: TP
QA/QC by: ENG
project no.: 020-0103
drawing no.: C_ERO01_0200103
date: 06.15.20

SHEET
6 of 14

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\GNCV\LAND DISTURBANCE\C_ERO01_0200103.dwg USER: lparsons
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SEDIMENT BASIN & TRAP DESIGN DATA SUMMARY

TITLE: Lees Summit Middle School #4
JOB #: 020-0103

Design Item:	Basin 2	Units:	Notes:
Site Data:			
Tributary Drainage Area to Pond:	14.60	Acres	
Disturbed Tributary Drainage Area to Pond:	14.60	Acres	
50% (2 yr) Design Flow:	37.50	cfs	
4% (25 yr) Design Flow:	68.51	cfs	
Pond Data:			
Minimum Sediment Storage Volume:	1957	cu. yd.	134 cy/acre minimum
Provided Sediment Storage Volume:	3423	cu. yd.	134 cy/acre minimum
Bottom Elevation:	992.00	Ft	
Sediment Cleanout Elevation:	994.81	Ft	Elevation Equal to 50% of Original Design Volume.
Top of Riser Elevation:	996.90	Ft	Top of Dry Storage Volume
Emergency Spillway Elevation:	999.00	Ft	at or Above Q-2 elev. 1.0 ft min above principal spillway
Top of Dam Elevation:	1002.00	Ft	1.0 ft min above Q-25 elev.
Basin Shape Data:			
A= Area at Normal Pool	41000.00	SF	
L = Length of Flow Path	240.00	Ft	
We = Effective Width = A/L	171.00	Ft	
Length to Width Ratio = L/We	1.40		If Length to Width Ratio is less than 2, baffles are required
Principal Spillway Data:			
Riser Pipe Diameter:	48.00	in	15-inch min. Size for 2 year flow minimum
Barrell Pipe Diameter:	30	in	15-inch min. Size for 2 year flow minimum
Concrete Base size for Riser Pipe	11.69	cu. yd.	Size to Prevent Flotation. 1.25 safety factor required.
Skimmer Size:	4.00	in	Designer to provide specific details and calculations per application to dewater in 48 to 72 hours
Emergency Spillway Data:			
Design Width of Spillway:	190.00	Ft	
Design Depth in Spillway:	0.26	Ft	Use $Q_{25yr}=C_s b (H)^{(3/2)}$ where C_s=2.63, b is the Width of Spillway
Design Velocity in Spillway:	1.38	Ft/sec	
Lining Material:	LANDLOK 450 TRM	N/A	

LEGEND

- PROPERTY LINE
- LOT LINE
- 999 PROPOSED CONTOUR
- 999 EXISTING CONTOUR
- GRAVEL FILTER BAGS
- SILT FENCE
- LIMITS OF DISTURBANCE (41.8+/- ACRES)
- TEMPORARY CONSTRUCTION ENTRANCE
- X1 EROSION CONTROL REFERENCE NUMBER

EROSION CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE DISTURBANCE	A1	CONSTRUCTION ENTRANCE	C	INSTALL AS INDICATED ON PLANS (IF SITE DISRUPTION LASTS LONGER THAN 14 DAYS)
	A2	SLOPE PROTECTION (SILT FENCE)	C	INSTALL AS INDICATED ON PLANS
	A3	TREE LINE PROTECTION (CONSTRUCTION FENCE)	D	INSTALL AS INDICATED ON PLANS
	A4	SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
B – MASS GRADING	B1	SLOPE PROTECTION (SILT FENCE)	D	INSTALL AS INDICATED ON PLANS
	B2	DIVERSION BERM		INSTALL AS INDICATED ON PLANS
	B3	SILTATION BASIN		INSTALL AS INDICATED ON PLANS
	B4	TEMPORARY SEDIMENT TRAP		INSTALL AS INDICATED ON PLANS
	B5	EROSION CONTROL BLANKET	N/A	INSTALL AS INDICATED ON PLANS
C – FINAL STABILIZATION	C1	REPLACE TOP SOIL, SEED MULCH	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF DISTURBED AREA.

N

0' 25' 50' 100'
SCALE IN FEET

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL PLAN -MASS GRADING
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE' SUMMIT, MISSOURI

2020

drawn by: RLK
checked by: TP
approved by: TP
QA/QC by: ENG
project no.: 020-0103
drawing no.: C_ERO01_0200103
date: 06.10.20

SHEET
7 of 14

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USER: tparsons

SEDIMENT BASIN & TRAP DESIGN DATA SUMMARY

TITLE: Lees Summit Middle School #4
JOB #: 020-0103

Design Item:	Basin 1	Units	Notes:
Site Data:			
Tributary Drainage Area to Pond:	12.30	Acres	
Disturbed Tributary Drainage Area to Pond:	12.30	Acres	
50% (2 yr) Design Flow:	29.95	cfs	
4% (25 yr) Design Flow:	51.95	cfs	
Pond Data:			
Minimum Sediment Storage Volume:	1649	cu. yd.	134 cy/acre minimum
Provided Sediment Storage Volume:	2560	cu. yd.	134 cy/acre minimum
Bottom Elevation:	992.00	Ft	
Sediment Cleanout Elevation:	994.84	Ft	Elevation Equal to 50% of Original Design Volume.
Top of Riser Elevation:	996.96	Ft	Top of Dry Storage Volume
Emergency Spillway Elevation:	999.00	Ft	at or Above Q-2 elev. 1.0 ft min above principal spillway
Top of Dam Elevation:	1002.00	Ft	1.0 ft min above Q-25 elev.
Basin Shape Data:			
A= Area at Normal Pool	18000.00	SF	
L = Length of Flow Path	185.00	Ft	
We = Effective Width = A/L	171.00	Ft	
Length to Width Ratio = L/We	1.42		If Length to Width Ratio is less than 2, baffles are required
Principal Spillway Data:			
Riser Pipe Diameter:	48.00	in	18-inch min. Size for 2 year flow minimum
Barrel Pipe Diameter:	36	in	18-inch min. Size for 2 year flow minimum
Concrete Base size for Riser Pipe	6.97	cu. yd.	Size to Prevent Flotation. 1.25 safety factor required.
Skimmer Size:	4.00	in	Designer to provide specific details and calculations per application to dewater in 48 to 72 hours
Emergency Spillway Data:			
Design Width of Spillway:	100.00	Ft	
Design Depth in Spillway:	0.26	Ft	Use $Q_{25yr}=C_wbH^{\wedge}(3/2)$ where C_w=2.63, b is the Width of Spillway
Design Velocity in Spillway:	1.56	Ft/sec	
Lining Material:	LANDLOK 450 TRM	N/A	

LEGEND

- PROPERTY LINE
- LOT LINE
- 999 PROPOSED CONTOUR
- 999 EXISTING CONTOUR
- GRAVEL FILTER BAGS
- SILT FENCE
- LIMITS OF DISTURBANCE (41.8+/– ACRES)
- TEMPORARY CONSTRUCTION ENTRANCE
- X1 EROSION CONTROL REFERENCE NUMBER
- EROSION CONTROL BLANKET

EROSION CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
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	A2	SLOPE PROTECTION (SILT FENCE)	C	INSTALL AS INDICATED ON PLANS
	A3	TREE LINE PROTECTION (CONSTRUCTION FENCE)	D	INSTALL AS INDICATED ON PLANS
	A4	SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
B – MASS GRADING	B1	SLOPE PROTECTION (SILT FENCE)	D	INSTALL AS INDICATED ON PLANS
	B2	DIVERSION BERM		INSTALL AS INDICATED ON PLANS
	B3	SILTATION BASIN		INSTALL AS INDICATED ON PLANS
	B4	TEMPORARY SEDIMENT TRAP		INSTALL AS INDICATED ON PLANS
	B5	EROSION CONTROL BLANKET	N/A	INSTALL AS INDICATED ON PLANS
C – FINAL STABILIZATION	C1	REPLACE TOP SOIL, SEED MULCH	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF DISTURBED AREA.

N

0' 25' 50' 100'
SCALE IN FEET

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TEL 913.381.1170
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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL PLAN - FINAL STABILIZATION
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE' SUMMIT, MISSOURI

2020

drawn by: RLK
checked by: TP
approved by: TP
QA/QC by: ENG
project no.: 020-0103
drawing no.: C_ERO01_0200103
date: 06.10.20

SHEET
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SEDIMENT BASIN & TRAP DESIGN DATA SUMMARY

TITLE: Lees Summit Middle School #4

JOB #: 020-0103

Design Item:	Basin 2	Units	Notes:
Site Data:			
Tributary Drainage Area to Pond:	14.60	Acres	
Disturbed Tributary Drainage Area to Pond:	14.60	Acres	
50% (2 yr) Design Flow:	37.50	cfs	
4% (25 yr) Design Flow:	68.51	cfs	
Pond Data:			
Minimum Sediment Storage Volume:	1957	cu. yd.	134 cy/acre minimum
Provided Sediment Storage Volume:	3423	cu. yd.	134 cy/acre minimum
Bottom Elevation:	992.00	Ft	
Sediment Cleanout Elevation:	994.84	Ft	Elevation Equal to 50% of Original Design Volume.
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Emergency Spillway Elevation:	999.00	Ft	at or Above Q-2 elev. 1.0 ft min above principal spillway
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A= Area at Normal Pool	41000.00	SF	
L = Length of Flow Path	240.00	Ft	
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Length to Width Ratio = L/We	1.40		If Length to Width Ratio is less than 2, baffles are required
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Skimmer Size:	4.00	in	Designer to provide specific details and calculations per application to dewater in 48 to 72 hours
Emergency Spillway Data:			
Design Width of Spillway:	190.00	Ft	
Design Depth in Spillway:	0.26	Ft	Use $Q=C_s b H^{(3/2)}$ where C_s=2.63, b is the Width of Spillway
Design Velocity in Spillway:	1.38	Ft/sec	
Lining Material:	LANDLOK 450 TRM	N/A	

LEGEND

- PROPERTY LINE
- LOT LINE
- 999 PROPOSED CONTOUR
- 999 EXISTING CONTOUR
- GRAVEL FILTER BAGS
- SILT FENCE
- LIMITS OF DISTURBANCE (41.8+/- ACRES)
- TEMPORARY CONSTRUCTION ENTRANCE
- X1 EROSION CONTROL REFERENCE NUMBER
- EROSION CONTROL BLANKET

EROSION CONTROL STAGING CHART

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL PLAN - FINAL STABILIZATION
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE' SUMMIT, MISSOURI

2020

drawn by: RLK
checked by: TP
approved by: TP
QA/QC by: ENG
project no.: 020-0103
drawing no.: C_ERO01_0200103
date: 06.10.20

SHEET
9 of 14

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USER: bkimmich

Grading, Stabilization and Dewatering Activities Log

Date Activity Initiated	Description of Grading/Dewatering Activity	Date Activity Ceased (Indicate Temporary or Permanent)	Date When Stabilization Measures Initiated	Description of Stabilization Measure and Location

SECTION 6

BMP Specification & Detail Sheets

LEGEND

- PROPERTY LINE
- 995 EXISTING MAJOR CONTOUR
- 995 EXISTING MINOR CONTOUR
- 998 PROPOSED MAJOR CONTOUR
- 998 PROPOSED MINOR CONTOUR

SEDIMENT BASIN & TRAP DESIGN DATA SUMMARY

TITLE: Lees Summit Middle School #4
JOB #: 020-0103

Design Item:	Basin 1	Units	Notes:
Site Data:			
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Design Velocity in Spillway:	1.56	Ft/sec	
Lining Material:	LANDLOK 450 TRM	N/A	

N

0' 10' 20' 40'
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		REVISIONS	

SILTATION BASIN 1 GRADING DETAIL
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE' SUMMIT, MISSOURI

2020

drawn by: RLK
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approved by: TP
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SHEET
10 of 14

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201

Cape Drive

202

Newberry Fourth Plat
Lots 202-249 & Lot 254

203

204

205

206

207

DETENTION
BASIN 2

162,455 cf

4,976 cf

LEGEND

- PROPERTY LINE
- 995 EXISTING MAJOR CONTOUR
- 995 EXISTING MINOR CONTOUR
- 998 PROPOSED MAJOR CONTOUR
- 998 PROPOSED MINOR CONTOUR

SEDIMENT BASIN & TRAP DESIGN DATA SUMMARY

TITLE: Lees Summit Middle School #4
JOB #: 020-0103

Design Item:	Basin 2	Units	Notes:
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Design Depth in Spillway:	0.26	Ft	Use $Q_{25yr}=CbH^{(3/2)}$ where $C_w=2.63$, b is the Width of Spillway
Design Velocity in Spillway:	1.38	Ft/sec	
Lining Material:	LANDLOK 450 TRM	N/A	

N

0' 10' 20' 40'
SCALE IN FEET

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SILTATION BASIN 2 GRADING DETAIL
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE' SUMMIT, MISSOURI

2020

drawn by: RLK
checked by: TP
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project no.: 020-0103
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11 of 14

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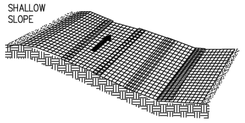
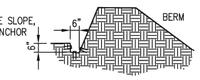
EROSION CONTROL BLANKET

SHALLOW SLOPE

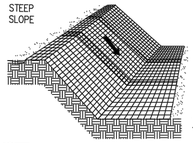


NOTE:
ON SHALLOW SLOPES, PROTECTIVE EROSION CONTROL BLANKETS MAY BE APPLIED ACROSS THE SLOPE.

NOTE:
WHERE THERE IS A BERM AT THE TOP OF THE SLOPE, BRING THE MATERIAL OVER THE BERM AND ANCHOR IT BEHIND THE BERM.



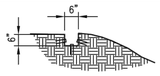
STEEP SLOPE



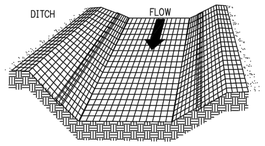
NOTE:
ON STEEP SLOPES, APPLY PROTECTIVE BLANKET PERPENDICULAR TO THE DIRECTION OF FLOW AND ANCHOR SECURELY.

TOP OF SLOPE BLANKET ANCHOR SLOT

NOTE:
BRING MATERIAL DOWN TO A LEVEL AREA BEFORE TERMINATING THE INSTALLATION.



DITCH FLOW



NOTE:
IN DITCHES, APPLY PROTECTIVE COVERING PARALLEL TO THE DIRECTION OF FLOW. USE CHECK SLOTS AS REQUIRED. AVOID JOINING MATERIAL IN THE CENTER OF THE DITCH IF AT ALL POSSIBLE. FOLLOW BLANKET MANUFACTURER'S RECOMMENDATIONS FOR ALLOWABLE VELOCITY AND SHEAR STRESS.

EROSION CONTROL BLANKET NOTES (1 OF 2):

A) SITE PREPARATION:
AFTER SITE HAS BEEN SHAPED AND GRADED, PREPARE A FRIABLE SEEDBED RELATIVELY FREE FROM CLODS AND ROCKS MORE THAN 1 1/2 INCHES IN DIAMETER AND ANY FOREIGN MATERIAL THAT WILL PREVENT UNIFORM CONTACT OF THE PROTECTIVE COVERING WITH THE SOIL SURFACE.

B) PLANTING:
LIME, FERTILIZE, AND SEED IN ACCORDANCE WITH SEEDING OR PLANTING PLAN. WHEN USING JUTE MESH ON A SEEDED AREA, APPLY APPROXIMATELY ONE HALF THE SEED AFTER LAYING THE MAT. THE PROTECTIVE COVERING CAN BE LAID OVER SPRIGGED AREAS WHERE SMALL GRASS PLANTS HAVE BEEN INSERTED INTO THE SOIL. WHERE GROUND COVERS ARE TO BE PLANTED, LAY THE PROTECTIVE COVERING FIRST AND THEN PLANT THROUGH THE MATERIAL AS PER PLANTING PLAN.

C) LAYING AND STAPLING;
IF INSTRUCTIONS HAVE BEEN FOLLOWED, ALL NEEDED CHECK SLOTS WILL HAVE BEEN INSTALLED, AND THE PROTECTIVE COVERING WILL BE LAID ON A FRIABLE SEEDBED FREE FROM CLODS, ROCKS, ROOTS, ETC. THAT MIGHT IMPEDE GOOD CONTACT.

1. START LAYING THE PROTECTIVE COVERING FROM THE TOP OF THE CHANNEL OR SLOPE AND UNROLL DOWN-GRADE. ALLOW TO LAY LOOSELY ON SOIL; DO NOT STRETCH.
2. UPSLOPE ENDS OF THE BLANKET SHOULD BE BURIED IN AN ANCHOR SLOT NO LESS THAN 6-INCHES DEEP. TAMP EARTH
3. FIRMLY OVER THE MATERIAL. WHEN TOP IS RELATIVELY FLAT, EXTEND BLANKET ABOUT 40 INCHES AWAY FROM SLOPE. STAPLE THE MATERIAL AT A MINIMUM OF EVERY 12 INCHES ACROSS THE TOP END.
4. EDGES OF THE MATERIAL SHALL BE STAPLED EVERY 3 FEET. WHERE MULTIPLE WIDTHS ARE LAID SIDE BY SIDE, THE ADJACENT EDGES SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AND STAPLED TOGETHER.
5. STAPLES SHALL BE PLACED DOWN THE CENTER, STAGGERED WITH THE EDGES AT 3-FOOT INTERVALS.

D) TROUBLESHOOTING:
CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL, IF ANY OF THE FOLLOWING OCCUR:

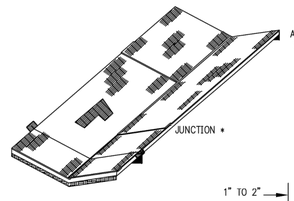
1. MOVEMENT OF THE BLANKET OR EROSION UNDER THE BLANKET IS OBSERVED.
2. VARIATIONS IN TOPOGRAPHY ON SITE INDICATE EROSION CONTROL MAT WILL NOT FUNCTION AS INTENDED; CHANGES IN PLAN MAY BE NEEDED, OR A BLANKET WITH A SHORTER OR LONGER LIFE MAY BE NEEDED.
3. DESIGN SPECIFICATIONS FOR SEED VARIETY, SEEDING DATES, OR EROSION CONTROL MATERIALS CANNOT BE MET; SUBSTITUTION MAY BE REQUIRED. UNAPPROVED SUBSTITUTIONS COULD RESULT IN FAILURE TO ESTABLISH VEGETATION.

E) MAINTENANCE & INSPECTION
INSPECT CONTROLS AFTER EACH RAIN EVENT OF 1/2 INCH OR GREATER, AND EVERY 7 DAYS UNTIL VEGETATION IS ESTABLISHED, FOR EROSION OR UNDERMINING BENEATH THE NETTING, BLANKETS, OR MATS. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE MATERIAL, ADD SOIL, TAMP DOWN, AND RESEED; RESECURE THE MATERIAL IN PLACE. IF NETTING, BLANKETS OR MATS BECOME DISLOCATED OR DAMAGED, REPAIR OR REPLACE AND RESECURE IMMEDIATELY.

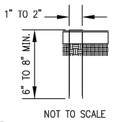
SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
EROSION CONTROL BLANKET SHEET 1 OF 2	STANDARD DRAWING NUMBER ESC-04 ADOPTED:

EROSION CONTROL BLANKET INSTALLATION FOR CHANNELS

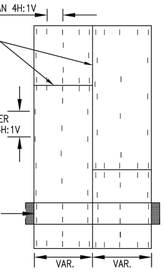


NOTE:
* JUNCTION: OVERLAP TOP BLANKET 6 INCHES MINIMUM AND STAPLE EVERY 6 INCHES ACROSS.



NOT TO SCALE

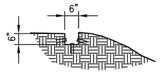
NOTE:
STAPLE FORMED FROM NO.11 STEEL WIRE.
MIN. 8" STAPLE LENGTH FOR SANDY SOIL.
MIN. 6" STAPLE LENGTH FOR OTHER SOIL.



PLAN VIEW STAPLING DIAGRAM
NOT TO SCALE

NOTE:
* CHECK SLOTS AT MIN. 50' INTERVALS; NOT REQUIRED WITH ALL COMBINATION BLANKETS

NOTE:
APPROXIMATELY 200 STAPLES ARE REQUIRED PER 100 SQ. YDS. OF MATERIAL ROLL. ANCHOR SLOTS, JUNCTION SLOTS, AND CHECK SLOTS TO BE BURIED 6" TO 12" DEEP.



ANCHOR SLOT

EROSION CONTROL BLANKET NOTES (2 OF 2):

F) STAPLES:
STAPLES FOR ANCHORING BLANKET SHALL BE NO. 11-GAUGE WIRE OR HEAVIER. THEIR LENGTH SHALL BE A MINIMUM OF 6 INCHES. A LARGER STAPLE WITH A LENGTH OF UP TO 12 INCHES SHALL BE USED ON LOOSE, SANDY, OR UNSTABLE SOILS.

G) JOINING PREOTECTIVE COVERINGS:
OVERLAP THE END OF THE PREVIOUS ROLL A MINIMUM OF 6 INCHES AND STAPLE. STAPLE ACROSS THE END OF THE ROLL JUST BELOW THE ANCHOR SLOT AND ACROSS THE MATERIAL EVERY 6 INCHES.

H) TERMINAL END:
AT THE POINT AT WHICH THE MATERIAL IS DISCONTINUED, OR WHERE THE PROTECTIVE COVERING MEETS A STRUCTURE OF SOME TYPE, STAPLE A MINIMUM OF EVERY 12 INCHES.

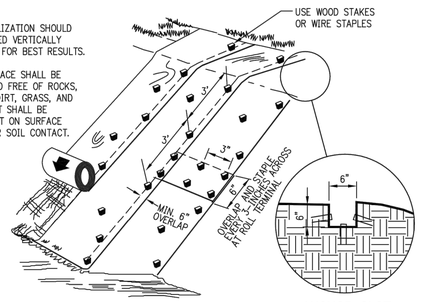
I) FINAL CHECK:
THESE INSTALLATION CRITERIA MUST BE ADHERED TO:
1. ALL DISTURBED AREAS ARE SEEDED.
2. PROTECTIVE BLANKET IS IN UNIFORM CONTACT WITH THE SOIL.
3. ALL LAP JOINTS ARE SECURE.
4. ALL STAPLES ARE DRIVEN FLUSH WITH THE GROUND.

SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
EROSION CONTROL BLANKET SHEET 2 OF 2	STANDARD DRAWING NUMBER ESC-05 ADOPTED:

TURF REINFORCEMENT MAT SLOPE INSTALLATION

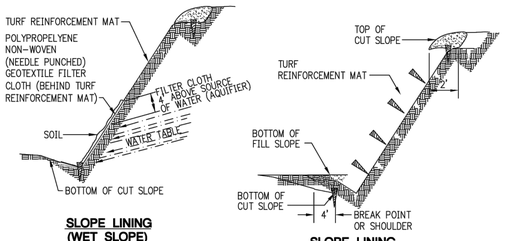
NOTES:
1. SOIL STABILIZATION SHOULD BE INSTALLED VERTICALLY DOWNSLOPE FOR BEST RESULTS.
2. SLOPE SURFACE SHALL BE SMOOTH AND FREE OF ROCKS, LUMPS OF DIRT, GRASS, AND STICKS. MAT SHALL BE PLACED FLAT ON SURFACE FOR PROPER SOIL CONTACT.



FILL SLOPE SECTION
NOT TO SCALE

ANCHOR SLOT
NOT TO SCALE
TRENCH INTO BERM AND PROGRESS DOWNSLOPE

TOE
MAINTAIN SLOPE ANGLE



SLOPE LINING (WET SLOPE)
NOT TO SCALE

SLOPE LINING (DRY SLOPE)
NOT TO SCALE

TURF REINFORCEMENT MAT SLOPE INSTALLATION NOTES:

A) TURF REINFORCEMENT MAT:

1. THE MAJORITY OF THESE PRODUCTS PROVIDE A THREE DIMENSIONAL GEOMATRIX OF NYLON, POLYETHYLENE, OR RANDOMLY ORIENTED MONOFILAMENTS, FORMING A MAT. THESE PRODUCTS CONTAIN ULTRAVIOLET (UV) INHIBITING STABILIZERS, ADDED TO THE COMPOUNDS TO ENSURE ENDURANCE, AND PROVIDE "PERMEANENT ROOT REINFORCEMENT." THE THREE DIMENSIONAL FEATURE CREATES AN OPEN SPACE WHICH IS ALLOWED TO FILL WITH SOIL. THE ROOTS OF THE GRASS PLANT BECOME ESTABLISHED WITHIN THE MAT ITSELF, FORMING A SYNERGISTIC ROOT AND MAT SYSTEM. AS THE GRASS BECOMES ESTABLISHED, THE TWO ACTUALLY "REINFORCE" EACH OTHER, PREVENTING MOVEMENT OR DAMAGE TO THE SOIL. ALLOWABLE VELOCITIES ARE INCREASED CONSIDERABLY OVER NATURAL TURF STANDS. SELECTION OF THE APPROPRIATE MATTING MATERIALS ALONG WITH PROPER INSTALLATION BECOME CRITICAL FACTORS IN THE SUCCESS OF THIS PRACTICE. CONSULTATION WITH THE SUPPLIER OR THE MANUFACTURER AND THOROUGH EVALUATION OF PERFORMANCE DATA TO ENSURE PROPER SELECTION OF A SOIL STABILIZATION MATTING ARE ALSO ESSENTIAL.

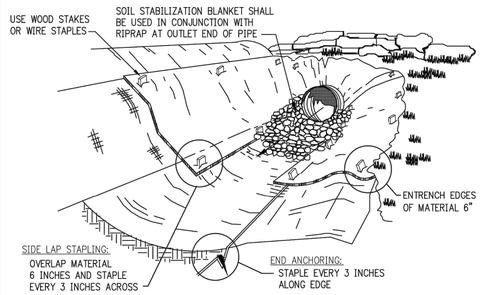
B) INSTALLATION REQUIREMENTS:

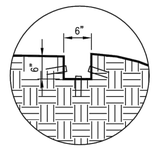
1. SITE PREPARATION:
   AFTER SITE HAS BEEN SHAPED AND GRADED, PREPARE A FRIABLE SEEDBED RELATIVELY FREE OF CLODS AND ROCKS MORE THAN 1-INCH IN DIAMETER AND ANY FOREIGN MATERIAL THAT WILL PREVENT CONTACT OF THE SOIL STABILIZATION MAT WITH THE SOIL SURFACE. IF NECESSARY, REDIRECT ANY RUNOFF AWAY FROM THE DITCH OR SLOPE DURING INSTALLATION.
2. PLANTING:
   LIME, FERTILIZE, AND SEED IN ACCORDANCE WITH THE APPROVED PLAN, PAYING SPECIAL ATTENTION TO THE PLANT SELECTION CHOSEN FOR THE MATTED AREA. IF THE AREA HAS BEEN SEEDED PRIOR TO INSTALLING THE MAT, RESEED ALL AREAS DISTURBED DURING INSTALLATION.
3. LAYING AND SECURING:
   SIMILAR TO INSTALLING OTHER EROSION CONTROL BLANKETS, BUT PLAN-APPROVING AUTHORITY'S REQUIREMENTS OR MANUFACTURER'S RECOMMENDATIONS MUST BE FOLLOWED AS DETAILED. THE KEY TO ACHIEVING DESIRED PERFORMANCE IS DEPENDENT UPON PROPER INSTALLATION.
4. SECURING THE MATERIAL AND JOINING BLANKETS:
   PRODUCT SPECIFICATIONS VARY. UPSTREAM AND DOWNSTREAM TERMINAL SLOTS, NEW ROLL OVERLAPS, AND MULTIPLE WIDTH INSTALLATIONS DIFFER BY PRODUCT AND MANUFACTURER.
5. FINAL CHECK:
   ENSURE THAT THESE INSTALLATION CRITERIA ARE COMPLETED:
   a. ALL DISTURBED AREAS ARE SEEDED.
   b. SOIL STABILIZATION BLANKET IS IN UNIFORM CONTACT WITH THE SOIL
   c. ALL REQUIRED SLOTS AND LAPPED JOINTS ARE IN PLACE.
   d. THE MATERIAL IS PROPERLY ANCHORED.

SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
TURF REINFORCEMENT MAT SLOPE INSTALLATION	STANDARD DRAWING NUMBER ESC-06 ADOPTED:

TURF REINFORCEMENT MAT CHANNEL INSTALLATION





ANCHOR SLOT DETAIL
NOT TO SCALE

TURF REINFORCEMENT MAT CHANNEL INSTALLATION NOTES:

A) TURF REINFORCEMENT MAT:

1. THE MAJORITY OF THESE PRODUCTS PROVIDE A THREE DIMENSIONAL GEOMATRIX OF NYLON, POLYETHYLENE, OR RANDOMLY ORIENTED MONOFILAMENTS TO FORM A MAT. THESE PRODUCTS CONTAIN ULTRAVIOLET (UV) INHIBITING STABILIZERS ADDED TO THE COMPOUNDS TO ENSURE ENDURANCE AND PROVIDE PERMEANENT ROOT REINFORCEMENT. THE THREE DIMENSIONAL FEATURE CREATES AN OPEN SPACE WHICH IS ALLOWED TO FILL WITH SOIL. THE ROOTS OF THE GRASS BECOME ESTABLISHED WITHIN THE MAT ITSELF, FORMING A SYNERGISTIC ROOT AND MAT SYSTEM. AS THE GRASS BECOMES ESTABLISHED, THE TWO ACTUALLY REINFORCE EACH OTHER PREVENTING MOVEMENT OF THE SOIL. ALLOWABLE VELOCITIES ARE INCREASED CONSIDERABLY OVER NATURAL TURF STANDS. SELECTION OF THE APPROPRIATE MATTING MATERIALS ALONG WITH PROPER INSTALLATION BECOME CRITICAL FACTORS IN THE SUCCESS OF THIS PRACTICE. CONSULTATION WITH THE SUPPLIER OR THE MANUFACTURER AND THOROUGH EVALUATION OF PERFORMANCE DATA TO ENSURE PROPER SELECTION OF A SOIL STABILIZATION MATTING ARE ALSO ESSENTIAL.

B) INSTALLATION REQUIREMENTS:

1. SITE PREPARATION:
   AFTER SITE HAS BEEN SHAPED AND GRADED, PREPARE A FRIABLE SEEDBED RELATIVELY FREE OF CLODS AND ROCKS MORE THAN 1-INCH IN DIAMETER AND ANY FOREIGN MATERIAL THAT WILL PREVENT CONTACT OF THE SOIL STABILIZATION MAT WITH THE SOIL SURFACE. IF NECESSARY, REDIRECT ANY RUNOFF AWAY FROM THE DITCH OR SLOPE DURING INSTALLATION.
2. PLANTING:
   LIME, FERTILIZE, AND SEED IN ACCORDANCE WITH THE APPROVED PLAN, PAYING SPECIAL ATTENTION TO THE PLANT SELECTION CHOSEN FOR THE MATTED AREA. IF THE AREA HAS BEEN SEEDED PRIOR TO INSTALLING THE MAT, RESEED ALL AREAS DISTURBED DURING INSTALLATION.
3. LAYING AND SECURING:
   SIMILAR TO INSTALLING OTHER EROSION CONTROL BLANKETS, BUT PLAN APPROVING AUTHORITY'S REQUIREMENTS OR MANUFACTURER'S RECOMMENDATIONS MUST BE FOLLOWED AS DETAILED. THE KEY TO ACHIEVING DESIRED PERFORMANCE IS DEPENDENT UPON PROPER INSTALLATION.
4. SECURING THE MATERIAL AND JOINING BLANKETS:
   PRODUCT SPECIFICATIONS VARY. UPSTREAM AND DOWNSTREAM TERMINAL SLOTS, NEW ROLL OVERLAPS, AND MULTIPLE WIDTH INSTALLATIONS DIFFER BY PRODUCT AND MANUFACTURER.
5. FINAL CHECK:
   THESE INSTALLATION CRITERIA MUST BE COMPLETED:
   a. ALL DISTURBED AREAS ARE SEEDED.
   b. SOIL STABILIZATION BLANKET IS IN UNIFORM CONTACT WITH THE SOIL
   c. ALL REQUIRED SLOTS AND LAPPED JOINTS ARE IN PLACE.
   d. THE MATERIAL IS PROPERLY ANCHORED.

SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
TURF REINFORCEMENT MAT CHANNEL INSTALLATION	STANDARD DRAWING NUMBER ESC-07 ADOPTED:

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

REV. NO.	DATE	REVISIONS DESCRIPTION

REVISIONS

EROSION CONTROL DETAILS
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

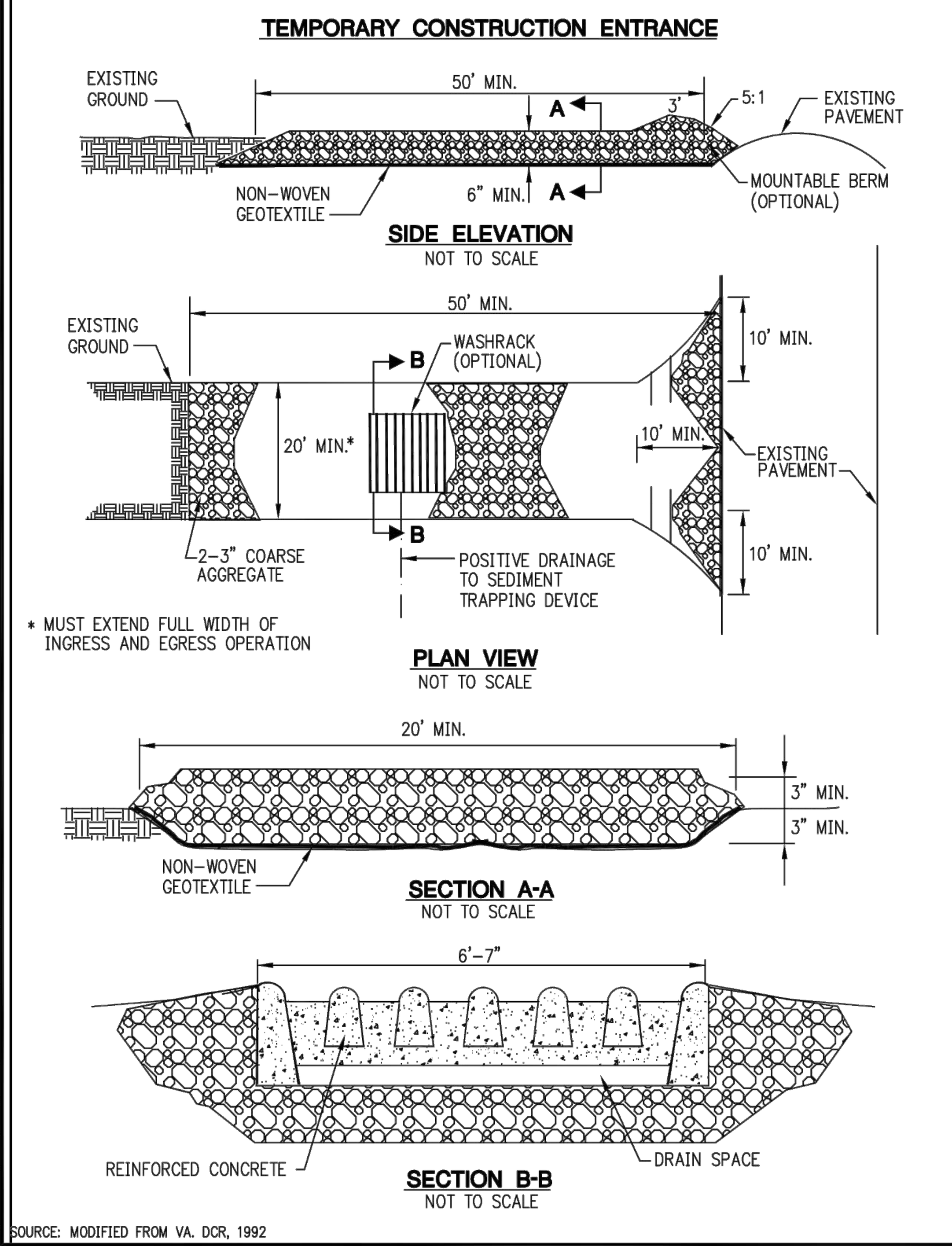
2020

LEE' SUMMIT, MISSOURI

drawn by: RLK
checked by: TP
approved by: TP
QA/QC by: ENG
project no.: 020-0103
drawing no.: C_DTL01_0200103
date: 06.10.20

SHEET 12 of 14

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\GNCV\LAND DISTURBANCE\C_DTL01_0200103.dwg USER: bkimmich
DATE: Jul 10, 2020 8:06am XREFS: C_XBASE_0200103 C_PBASE_0200103 V_XBOI_00103 C_PSUBE_0200103 T_PBASE_0200103 T_PSAS_0200103 C_PTBLK_0200103



TEMPORARY CONSTRCUTION ENTRANCE PAD NOTES:

A) INSTALLATION:

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. IF SLOPE TOWARDS THE PUBLIC ROAD EXCEEDS 2%, CONSTRUCT A 6-TO 8-INCH HIGH RIDGE WITH 3H:1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.
4. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS.
5. PLACE STONE TO DIMENSIONS AND GRADE AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
7. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

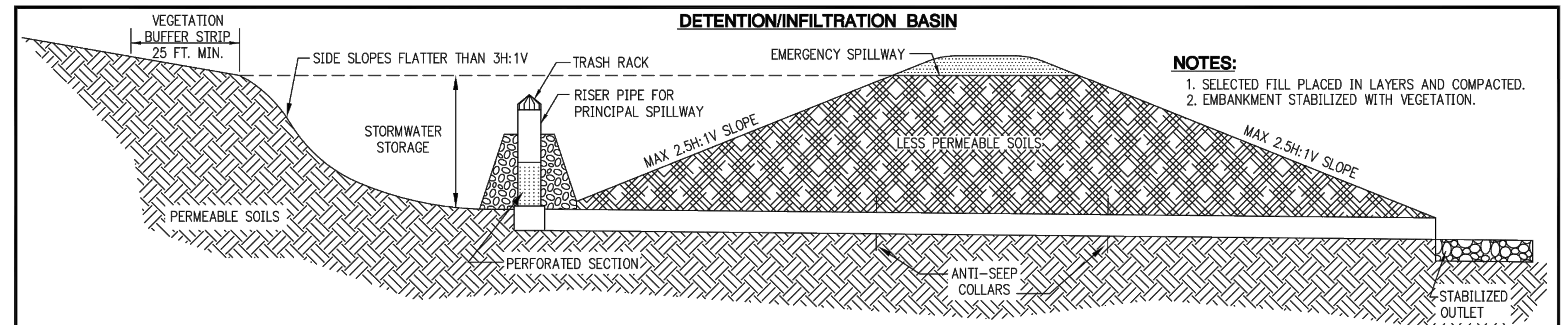
B) TROUBLESHOOTING:

1. CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
   a. INADEQUATE RUNOFF CONTROL TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROAD – INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES.
   b. SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL – INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC.
   c. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC – EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.

C) INSPECTION AND MAINTENANCE:

1. INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER 1/2-INCH OR GREATER STORM EVENTS.
2. RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN 2-AND 3-INCH STONE AS NEEDED.
4. IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
5. REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED.

AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
TEMPORARY CONSTRUCTION ENTRANCE
STANDARD DRAWING NUMBER ESC-01
ADOPTED:



NOTES:
1. SELECTED FILL PLACED IN LAYERS AND COMPACTED.
2. EMBANKMENT STABILIZED WITH VEGETATION.

CONSTRUCTION SPECIFICATIONS:

A) SITE PREPARATION:

1. LOCATE ALL UNDERGROUND UTILITIES.
2. FOLLOW ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.
3. CLEAR, GRUB, AND STRIP THE DAM FOUNDATION REMOVING ALL WOODY VEGETATION, ROCKS, AND OTHER OBJECTIONABLE MATERIAL.
4. DISPOSE OF TREES, LIMBS, LOGS, AND OTHER DEBRIS IN DESIGNATED DISPOSAL AREAS.
5. EXCAVATE THE PRINCIPAL SPILLWAY AREA, OUTLET APRON FIRST, STOCKPILING ANY SURFACE SOIL HAVING HIGH AMOUNTS OF ORGANIC MATTER FOR LATER USE.
6. CLEAR THE BASIN AND GRADE TO ALLOW SURFACE DRAINAGE AND TO ENCOURAGE ESTABLISHMENT OF A GOOD COVER OF VEGETATION. USE TRACKED EQUIPMENT TO AVOID COMPACTION.

B. PRINCIPAL SPILLWAY:

1. SITUATE THE SPILLWAY PIPE AND RISER ON A FIRM, EVEN FOUNDATION. PREPARE THE BEDDING FOR THE PIPE.
2. PLACE AROUND THE BARREL A 4-INCH LAYER OF MOIST, CLAYEY, WORKABLE SOIL, NOT PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR SILT; COMPACT WITH HAND TAMPERS TO AT LEAST THE DENSITY OF THE FOUNDATION SOIL. DO NOT RAISE THE PIPE FROM THE FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES.
3. EMBED THE RISER AT LEAST 12 INCHES INTO CONCRETE TO PROVIDE AN ANTI-FLOATATION BLOCK. THE WEIGHT OF THE CONCRETE SHOULD BALANCE THE BUOYANT FORCE ACTING ON THE RISER.
   BUOYANT FORCE = VOLUME OF RISER X 62.4 LBS/FT^3
4. PLACE A TRASH RACK AROUND THE RISER INLET. TRASH RACKS CAN BE CONSTRUCTED BY WELDING #4 REBAR IN A GRID WITH 4- TO 6-INCH OPENINGS
5. CONSTRUCT ANTI-SEEP DEVICES.
6. AT THE PIPE OUTLET, INSTALL A RIPRAP OR CONCRETE APRON AT LEAST 5 FEET WIDE AND 10 FEET LONG TO A STABLE GRADE.
7. OPTIONAL: A SLOTTED OR V-NOTCH WEIR, CONSTRUCTED WITHIN AN OPEN CHANNEL SPILLWAY, CAN BE USED IN PLACE OF A RISER AND CONDUIT AS A PRINCIPAL SPILLWAY.

C) EMBANKMENT:

1. SCARIFY THE EMBANKMENT FOUNDATION BEFORE PLACING FILL.
2. USE FILL FROM PREDETERMINED BORROW AREAS. IT SHOULD BE CLEAN, STABLE SOIL FREE OF ORGANIC MATERIAL, ROOTS, WOODY VEGETATION, ROCKS, AND OTHER DEBRIS. IT MUST BE WET ENOUGH TO FORM A BALL WITHOUT CRUMBLING, YET NOT SO WET THAT WATER CAN BE SQUEEZED OUT.
3. PLACE THE MOST PERMEABLE SOIL IN THE DOWNSTREAM TOE AND THE LEAST PERMEABLE IN THE CENTER PORTION OF THE DAM.
4. COMPACT THE FILL MATERIAL IN 6- TO 8-INCH, CONTINUOUS LAYERS OVER THE LENGTH OF THE DAM. CONSTRUCTION EQUIPMENT MAY BE ROUTED OVER THE DAM SO THAT EACH LAYER IS TRAVERSED BY AT LEAST ONE WHEEL OF THE EQUIPMENT). TRACKED CONSTRUCTION EQUIPMENT DOES NOT PROVIDE ADEQUATE COMPACTION.
5. PROTECT THE SPILLWAY BARREL WITH 2 FEET OF COMPACTED, HAND-TAMPED FILL BEFORE TRAVERSING OVER THE PIPE WITH EQUIPMENT.
6. CONSTRUCT AND COMPACT THE DAM TO 10% ABOVE THE DESIGN HEIGHT TO ALLOW FOR SETTLING.

D) EMERGENCY SPILLWAY:

1. CONSTRUCT THE SPILLWAY IN UNDISTURBED SOIL AROUND ONE END OF THE EMBANKMENT AND LOCATE IT SO THAT ALL EXCESS FLOW WILL RETURN TO THE RECEIVING CHANNEL WITHOUT DAMAGING THE EMBANKMENT.
2. STABILIZE THE SPILLWAY WITH VEGETATION AS SOON AS GRADING IS COMPLETE; OR INSTALL PAVING MATERIAL TO FINISHED GRADE IF THE SPILLWAY IS NOT TO BE VEGETATED.

E) EROSION CONTROL:

1. MINIMIZE THE SIZE OF DISTURBED AREAS. AT THE COMPLETION OF EACH PHASE OF CONSTRUCTION, VEGETATE THE DISTURBED AREAS TO MINIMIZE EROSION.
2. USE TEMPORARY DIVERSIONS TO PREVENT SURFACE WATER FROM RUNNING ONTO DISTURBED AREAS.
3. DIRECT ALL RUNOFF INTO THE BASIN AT LOW VELOCITY. ESTABLISH THE PRINCIPAL SPILLWAY OUTLET ELEVATION TO PREVENT PONDING OF WATER LONGER THAN 72 HOURS.
4. STABILIZE ALL DISTURBED AREAS EXCEPT THE LOWER HALF OF THE SEDIMENT BASIN IMMEDIATELY AFTER CONSTRUCTION.

F) SAFETY:

BECAUSE DETENTION PONDS THAT IMPOUND WATER ARE HAZARDOUS, THE FOLLOWING PRECAUTIONS SHOULD BE TAKEN:
1. AVOID STEEP SLOPES; SLOPES AROUND THE EXTENDED DETENTION POND SHOULD BE 2.5H:1V OR FLATTER; 3H:1V WHERE MAINTAINED BY TRACTOR OR OTHER EQUIPMENT.
2. FENCE AREA AND POST WARNING SIGNS IF TRESPASSING IS LIKELY.
3. DEWATER THE BASIN BETWEEN STORM EVENTS.

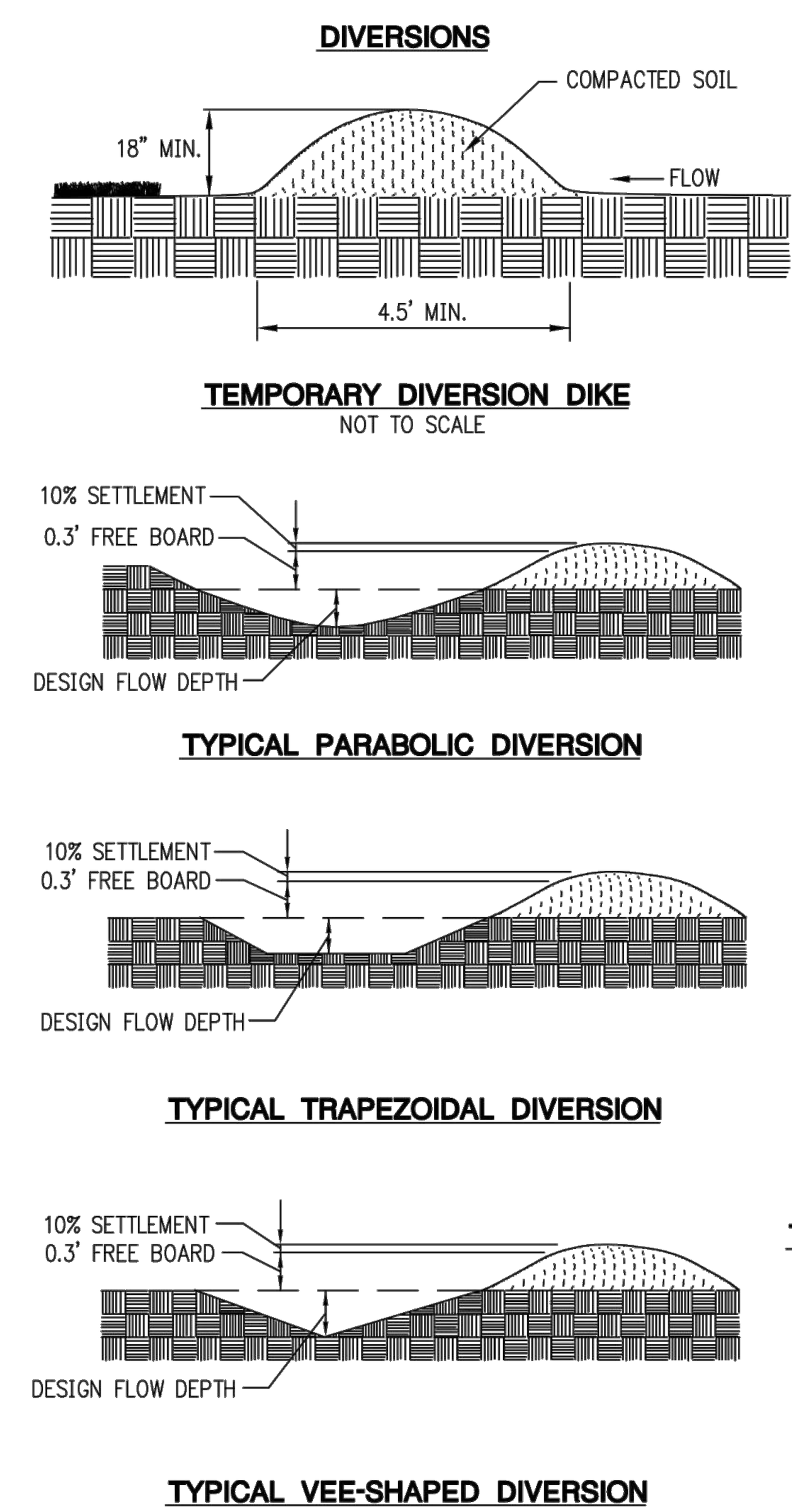
CONSTRUCTION VERIFICATION: CHECK THE FINISHED GRADES AND CONFIGURATION FOR ALL EARTHWORK. CHECK ELEVATIONS AND DIMENSIONS OF ALL PIPES AND STRUCTURES.

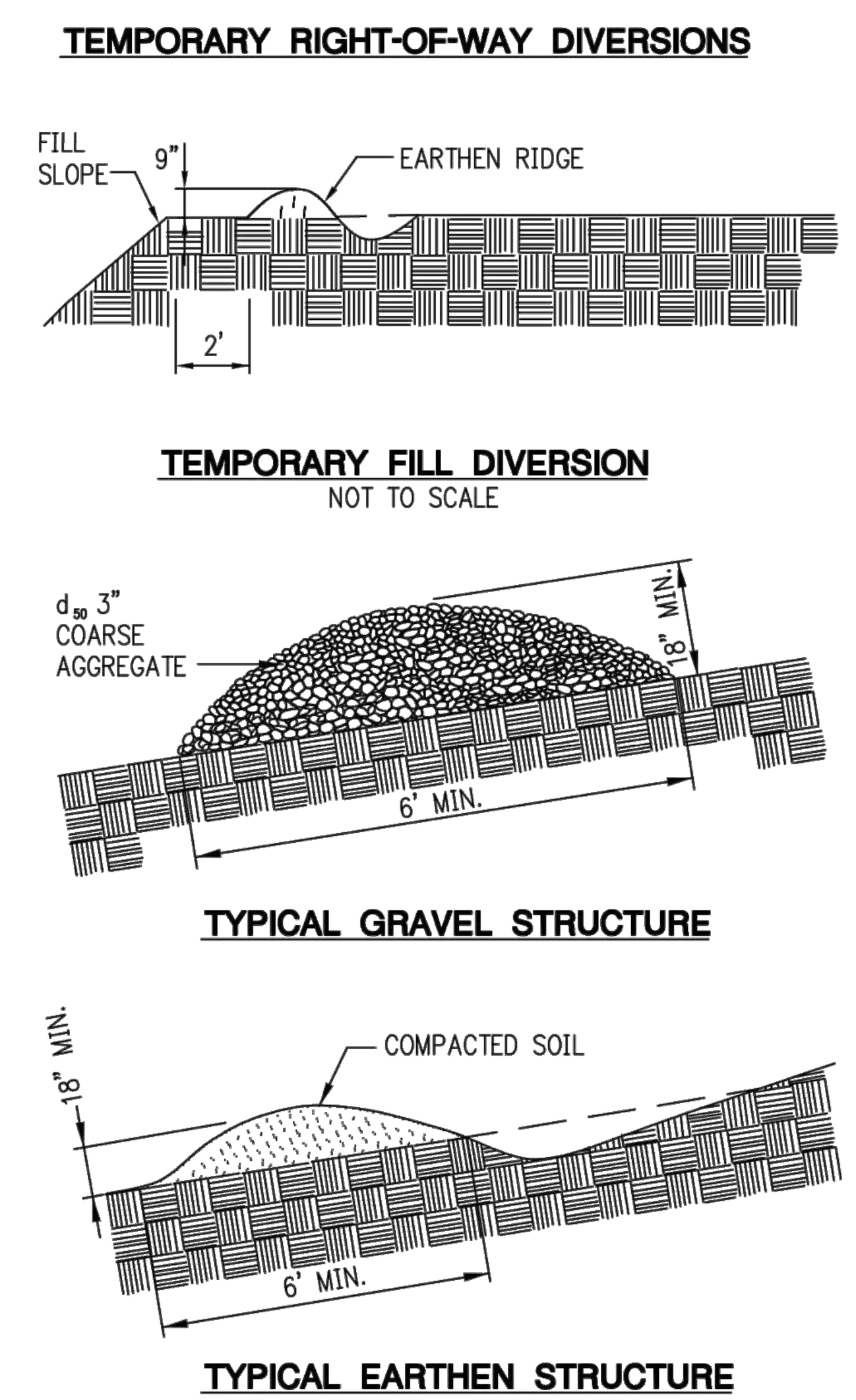
G) INSPECTION AND MAINTENANCE:

1. INSPECT THE BASIN AFTER EACH STORM EVENT OF 1/2 INCH OR GREATER. IF THE BASIN STARTS TO POND WATER FOR EXTENDED PERIODS OF TIME, IT MAY BE CLOGGED AND NEED TO BE CLEANED OUT.
2. REMOVE AND PROPERLY DISPOSE OF ANY SEDIMENT THAT IS COLLECTED AT THE UPSTREAM END OF THE BASIN.
3. PERIODICALLY CHECK THE EMBANKMENT, EMERGENCY SPILLWAY, AND OUTLET FOR EROSION DAMAGE, PIPING, SETTLING, SEEPAGE, OR SLUMPING ALONG THE TOE OR AROUND THE BARRELL REPAIR IMMEDIATELY.
4. REMOVE TRASH AND OTHER DEBRIS FROM THE RISER, EMERGENCY SPILLWAY, AND POOL AREA.
5. CLEAN OR REPLACE THE GRAVEL AROUND THE RISER IF THE SEDIMENT POOL DOES NOT DRAIN PROPERLY.

SOURCE: MODIFIED FROM MDNR, 1998

AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
DETENTION/ INFILTRATION BASIN
STANDARD DRAWING NUMBER ESC-35
ADOPTED:





TEMPORARY DIVERSION DIKE NOTES:

1. TEMPORARY DIVERSION DIKES MUST BE INSTALLED AS A FIRST STEP IN THE LAND-DISTURBING ACTIVITY AND MUST BE FUNCTIONAL PRIOR TO UPSLOPE LAND DISTURBANCE.
2. THE DIKE SHOULD BE ADEQUATELY COMPACTED TO PREVENT FAILURE.
3. TEMPORARY OR PERMANENT SEEDING AND MULCH SHALL BE APPLIED TO THE DIKE IMMEDIATELY FOLLOWING ITS CONSTRUCTION.
4. THE DIKE SHOULD BE LOCATED TO MINIMIZE DAMAGES BY CONSTRUCTION OPERATIONS AND TRAFFIC.

TEMPORARY FILL DIVERSION NOTES:

1. THE DIVERSION SHALL BE CONSTRUCTED AT THE TOP OF THE FILL AT THE END OF EACH WORK DAY AS NEEDED.
2. THE DIVERSION SHALL BE LOCATED AT LEAST 2 FEET INSIDE THE TOP EDGE OF THE FILL.
3. THE SUPPORTING RIDGE SHALL BE CONSTRUCTED WITH A UNIFORM HEIGHT ALONG ITS ENTIRE LENGTH. WITHOUT UNIFORM HEIGHT, THE FILL DIVERSION MAY BE SUSCEPTIBLE TO BREACHING.

RIGHT-OF-WAY DIVERSION DETAIL NOTES:

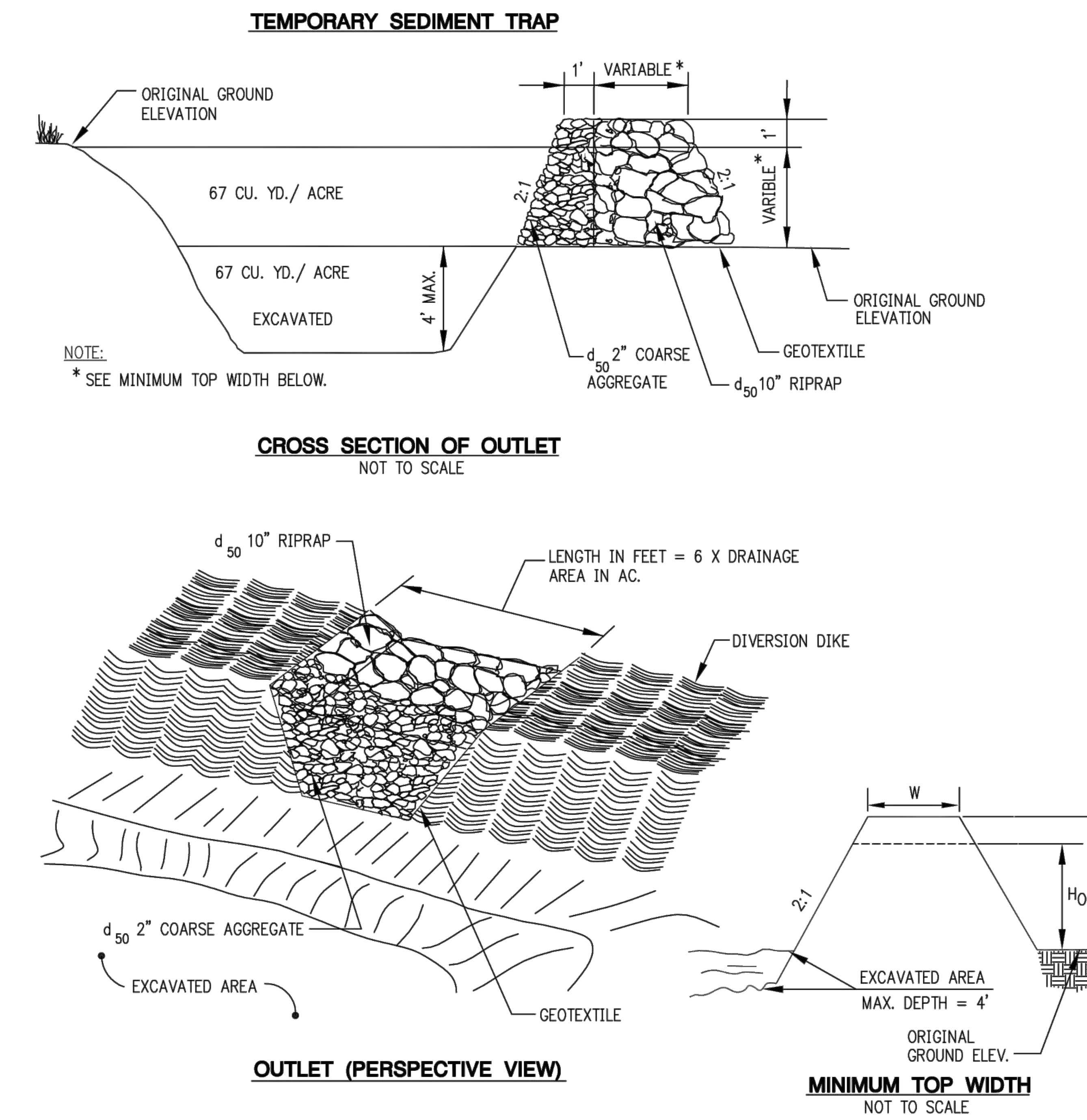
1. THE DIVERSION SHALL BE INSTALLED AS SOON AS THE RIGHT-OF-WAY HAS BEEN CLEARED AND/OR GRADED.
2. ALL EARTHEN DIVERSIONS SHALL BE MACHINE- OR HAND-COMPACTED IN 8-INCH LIFTS.
3. THE OUTLET OF THE DIVERSION SHALL BE LOCATED IN AN UNDISTURBED AND STABILIZED AREA WHEN AT ALL POSSIBLE. THE FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED OUTLET.
4. EARTHENED DIVERSIONS WHICH WILL NOT BE SUBJECT TO CONSTRUCTION TRAFFIC SHOULD BE STABLIIZED IN ACCORDANCE WITH TEMPORARY SEEDING.

DIVERSION DETAIL NOTES:

1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIVERSION.
2. THE DIVERSION SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS-SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, FREE OF IRREGULARITIES WHICH WILL IMPEDE FLOW.
3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETED DIVERSION. FILL SHALL BE COMPOSED OF SOIL WHICH IS FREE FROM EXCESSIVE ORGANIC DEBRIS, ROCKS, OR OTHER OBJECTIONABLE MATERIALS.
4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIVERSION.
5. PERMANENT STABILIZATION OF DISTURBED AREAS SHALL BE DONE IN ACCORDANCE WITH SECTION 2151.

SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
DIVERSIONS
STANDARD DRAWING NUMBER ESC-29
ADOPTED:



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3.0	2.0	2.5
3.5	2.5	3.0
4.0	3.0	3.0
4.5	3.5	4.0
5.0	4.0	4.5

TEMPORARY SEDIMENT TRAP NOTES:

A) CONSTRUCTION SPECIFICATIONS:

1. THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT.
2. FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHOULD BE COMPACTED IN 6-INCH LAYERS BY TRAVERSING WITH CONSTRUCTION EQUIPMENT.
3. THE EARTHEN EMBANKMENT SHALL BE SEEDED WITH TEMPORARY OR PERMANENT VEGETATION IMMEDIATELY AFTER INSTALLATION.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT TO MINIMIZE EROSION AND WATER POLLUTION.
5. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE UPSLOPE DRAINAGE AREA HAS BEEN STABILIZED.
6. ALL CUT AND FILL SLOPES SHALL BE 2H:1V OR FLATTER EXCEPT FOR EXCAVATED, WET STORAGE AREAS WHICH MAY BE AT A MAXIMUM 1H:1V GRADE.

B) INSPECTION AND MAINTENANCE:

1. INSPECT THE TEMPORARY SEDIMENT TRAP AFTER EACH STORM EVENT OF 1/2-INCH OR GREATER.
2. REMOVE AND PROPERLY DISPOSE OF SEDIMENT WHEN IT ACCUMULATES TO ONE-HALF THE DESIN VOLUME AS INDICATED BY THE CLEAN-OUT STAKE.
3. PERIODICALLY CHECK THE EMBANKMENT, SPILLWAY, AND OUTLET APRON FOR EROSION DAMAGE, SETTLING SEEPAGE, OR SLUMPING ALONG THE TOE AND REPAIR IMMEDIATELY.
4. REPLACE THE SPILLWAY GRAVEL FACING IF IT BECOMES CLOGGED.
5. INSPECT VEGETATION AND RESEED IF NECESSARY.
6. REPLACE ANY DISPLACED RIPRAP SO THAT NO REPLACEMENT ROCK IS ABOVE THE DESIGN GRADE.
7. REMOVE THE TEMPORARY SEDIMENT TRAP AFTER THE DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, INSPECTED, AND APPROVED. DO SO BY DRAINING ANY WATER, REMOVING THE SEDIMENT TO A DESIGNATED DISPOSAL AREA, AND GRADING THE SITE TO BLEND WITH THE SURROUNDING AREA; THEN STABILIZE.

SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
TEMPORARY SEDIMENT TRAP
STANDARD DRAWING NUMBER ESC-33
ADOPTED:

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

2020

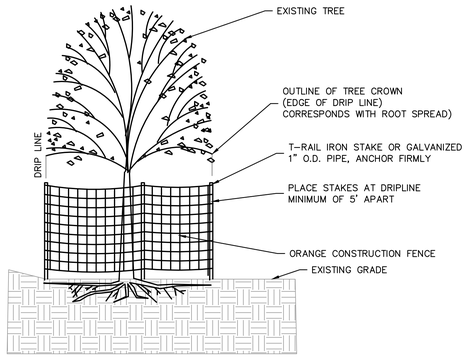
EROSION CONTROL DETAILS
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

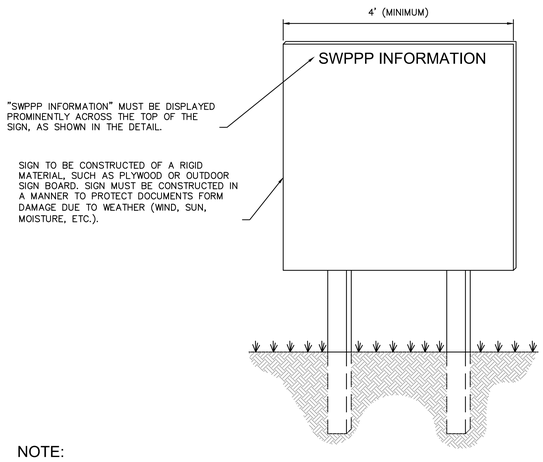
LEE' SUMMIT, MISSOURI

drawn by:	RLK
checked by:	TP
approved by:	TP
QA/QC by:	ENG
project no.:	020-0103
drawing no.:	C_DTL01_0200103
date:	06.10.20

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final_Plans\Sheets\GN\CVL\LAND DISTURBANCE\C_DTL01_0200103.dwg
DATE: Jul 10, 2020 8:06am
XREFS: C_XBASE_0200103
USER: bkimmich



TREE PROTECTION DETAIL
NOT TO SCALE



NOTE:

1. THE SWPPP INFORMATION SIGN MUST BE LOCATED NEAR THE ENTRANCE OF SITE, SUCH THAT IT IS ACCESSIBLE AND VIEWABLE BY THE GENERAL PUBLIC, BUT NOT OBSTRUCTING VIEW AS TO CAUSE A SAFETY HAZARD.
2. ALL POSTED DOCUMENTS REQUIRED BY THE DEPARTMENT OF NATURAL RESOURCES MUST BE MAINTAINED IN A CLEARLY READABLE CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE-OF-TERMINATION (NOT) IS FILED FOR THE PERMIT.
3. CONTRACTOR SHALL POST OTHER STORMWATER AND/OR EROSION CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING AGENCY.
4. SIGN SHALL BE LOCATED OUTSIDE PUBLIC RIGHT-OF-WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY.
5. CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY OF THE SWPPP INFORMATION SIGN.

SWPPP INFORMATION SIGN
NOT TO SCALE

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL DETAILS
LAND DISTURBANCE PLANS

LEE'S SUMMIT MIDDLE SCHOOL #4
SE BAILEY ROAD AND SE COUNTRY LANE

LEE' SUMMIT, MISSOURI

2020

drawn by: RLK
checked by: TP
approved by: TP
QA/QC by: ENG
project no.: 020-0103
drawing no.: C_DTL01_0200103
date: 06.10.20

SHEET
14 of 14

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\GNCV\LAND DISTURBANCE\C_DTL01_0200103.dwg USER: bkimmich
DATE: Jul 10, 2020 8:06am XREFS: C_XBASE_0200103 C_PBASE_0200103 V_XBOU_00103 C_PSURF_0200103 T_PBASE_0200103 T_PSAS_0200103
C_PTBLK_0200103

SECTION 7

Log of Amendments

The permittee shall amend the SWPPP at a minimum whenever the:

a. *Design, operation, or maintenance of BMPs is changed;*
b. *Design of the construction project is changed that could significantly affect the quality of the stormwater discharges;*
c. *Permittee's inspections indicate deficiencies in the SWPPP or any BMP;*
d. *Department notifies the permittee in writing of deficiencies in the SWPPP;*
e. *SWPPP is determined to be ineffective in minimizing or controlling erosion and sedimentation (e.g., there is visual evidence of excessive site erosion or excessive sediment deposits in streams or lakes); and/or*
f. *Department determines violations of water quality standards may occur or have occurred.*

SWPPP Amendment Log

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Authorized by [Name(s) and Title]

SECTION 8

Local Regulations & Additional Permits

Local Ordinances can be located here for reference only. Additional permits (i.e. 404, NWP, grading permits if required, etc.) can be kept here for reference only.

CHAPTER 241

EROSION AND SEDIMENT CONTROL

Section *24101*: Introduction/ Purpose

Soil is most vulnerable to erosion by wind and water during the construction process. Excessive soil in streams endangers water resources by reducing water quality and causing the siltation of aquatic habitat for fish and other desirable species. Eroded soil also necessitates repair of sewers and ditches, and the dredging of lakes. Clearing and grading during construction causes the loss of native vegetation necessary for terrestrial and aquatic habitat, and a healthy living environment for the citizens of Jackson County, Missouri.

The purpose of this ordinance is to safeguard persons, protect property, prevent damage to the environment and promote public welfare by effectively minimizing soil erosion and sedimentation during land development, building, landscaping or any other type of land disturbance in Jackson County, Missouri. Further, it provides builders, developers and property owners with soil erosion and sedimentation control standards and regulations.

The regulations and standards herein shall accomplish the following:

1. Establish standards for soil erosion and sedimentation control.
2. Minimize soil erosion and sedimentation during land development, building, landscaping or other land disturbing activities.
3. Minimize pollution of streams, ponds and lakes.
4. Encourage management of natural resources.
5. Preserve the beauty of the community and the value of the land.
6. Reduce maintenance costs of public and private improvements and services.
7. Promote and protect the public's health, safety, comfort and welfare.

(Ord. 3606, Eff. 03/08/05)

Section *24102*: Definitions

Applicant: Any legal entity requiring approval to develop, landscape or otherwise disturb land pursuant to Section 24103 of this ordinance. Legal entities shall include but not be limited to the following: individuals, sole proprietorships, limited liability companies, partnerships, limited partnerships, joint ventures, or corporations or other business organizations. Every name under which the applicant is currently doing or has done business in Jackson County, Missouri, other than the true name of such applicant, is hereby declared a fictitious name and shall be subject to Section 24103.

APWA: American Public Works Association.

Clearing: Any activity which removes the vegetative surface cover.

Director: The Director shall be the Director of Jackson County Public Works or the designated agent.

Drainage Way: Any surface feature that conveys surface runoff throughout the site.

Erosion: The wearing away of the land surface by the action of wind, water or gravity.

Erosion and Sediment Control Permit: Written authorization that regulates the quality of stormwater runoff due to the disturbance of land associated with development construction.

Erosion and Sediment Control Plan: A set of plans prepared by or under the direction of a licensed professional engineer or a certified erosion and sediment control professional indicating the specific measures and sequencing to be used controlling sediment and erosion on a development site before, during and after construction.

Erosion and Sediment Control Manual: APWA, Division III, Erosion and Sediment Control Specifications, and Design Standards pursuant to Section 24103 of this ordinance. All references are to current standards and any subsequent amendments**.**

Erosion Control: Measures that prevent erosion.

Grading: Excavation or fill of material, including the resulting conditions thereof.

Permanent Vegetation: Grass, sod or ground cover sufficient to prevent erosion.

Phasing: Clearing a parcel of land in distinct phases, with the stabilization of each phase within a specified time period.

Sediment: Solid material moved by erosion and deposited away from its point of origin.

Sediment Control: Regulates the amount of eroded sediment leaving the site.

Site: A parcel of land, or a contiguous combination thereof, where grading work is performed as a single unified operation.

Site Development: Altering terrain, vegetation and/or constructing improvements.

Stabilization: The use of practices that protects the exposed soil from excessive erosion.

Start of Construction: The first land-disturbing activity associated with a development, including land preparation such as clearing, grading and filling; installation of streets and walkways; excavation for basements, footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.

Stormwater runoff: Water that flows overland during a rain storm.

Streambank: The top of the natural incline bordering a stream.

Stripping: Any activity by which the vegetative cover is removed or significantly disturbed, including tree removal, clearing, grubbing and storage, or removal of topsoil.

Vegetative Cover: Any grasses, shrubs, trees and other vegetation that protects and stabilizes soils.

Watercourse: Any body of water, including, but not limited to lakes, ponds, rivers, streams, and bodies of water, which are delineated by Jackson County.

Waterway: A conveyance that directs surface runoff to a watercourse, or to the public storm drain. (Ord. 3606, Eff. 03/08/05)

Section *24103*: Application and Permits Process

A. No person, firm, corporation or other legal entity may develop, landscape or disturb land without the issuance of an Erosion Control permit and the approval of an Erosion and Sediment Control Plan by the Director of Public Works for Jackson County. Each applicant must disclose on the application all names under which it has conducted the business of developing, landscaping or otherwise disturbing land within Jackson County, Missouri. Disclosure shall include but not be limited to the status of the applicant as owner, proprietor, shareholder or investor. (Ord. 3606, Eff. 03/08/05)

B. All design, construction and maintenance standards shall be in accordance with the most current standards as established in APWA sections 5100, 5600, 2100, 2150, BMP Best Management Practices Manual and APWA Division III Standard Drawings. It is the Director's option to delete portions of these regulations that may not be appropriate for unincorporated Jackson County. The Director shall promulgate a list of any deleted regulations or portions thereof by means of public posting, brochures and/or posting on the County's website. (Ord. 3606, Eff.

03/08/05; Ord. 3654, Eff. 08/09/05)

C. No site development permit is required for the following activities:

1. any land disturbance activity that involves less than 100 cubic yards of earth movement; or
2. existing nursery and agricultural operations conducted as a permitted main or accessory use, or
3. home landscaping or gardening; or
4. reestablishment of lawn areas; or
5. any emergency activity which is immediately necessary for the protection of life, property or natural resources. (Ord. 3606, Eff. 03/08/05)

D. Any applicant having ten (10) or more violations with soil erosion ordinances within Jackson County will not be allowed to proceed with the application for a permit to develop in the unincorporated areas of Jackson County until submitting the following to the Director:

1. Explanation of each occurrence of violation of an erosion and sediment control ordinance for which applicant received notice; and

2. A copy of a final certificate of occupancy or certificate of completion for each project in which a violation occurred and applicant received notice.

3. Upon receipt of the required documents the Director will review and decide whether applicant may proceed with the application process. Applicant will be notified of the Director's decision in writing. (Ord. 3606, Eff. 03/08/05)

E. The applicant is responsible for any and all other permits that may be required from the Missouri Department of Natural Resources, Army Corps of Engineers and any other regulator as required by law. (Ord. 3606, Eff. 03/08/05)

F. Each application shall bear the name(s), address(es) and telephone number of the owner or developer of the site, and of any consulting firm retained by the applicant together with the name of the applicant' s principal contact at such firm, and shall be accompanied by a filing fee. (Ord. 3606, Eff. 03/08/05)

G. The issuance of a permit shall constitute authorization to do only that work described or shown on the approved plan. Each application shall include a statement that any land clearing, construction, or development involving the movement of earth shall be in accordance with the Erosion and Sediment Control Plan. (Ord. 3606, Eff. 03/08/05)

H. The permit shall be valid from the time that it is issued until a final certificate of

completion has been issued. (Ord. 3606, Eff. 03/08/05)

I. Final Acceptance and Certificate of Completion permit will not be issued until final grading has been completed and the site has been seeded and mulched or sodded. When conditions prevent ground cover from being established, an occupancy permit may be issued following installation of temporary erosion control measures sufficient to maintain sediment boundaries of the site, and the permittee agrees to maintain all erosion control materials. (Ord. 3606, Eff. 03/08/05)

J. If the permittee sells the property, or any portion thereof, before the expiration of the permit, the permit or portion of the permit, may be reassigned to the new owner of the site. The reassignment must first be approved by the Director. The new permittee(s) shall be responsible for compliance of the permit(s) until a final acceptance and /or a final certificate of occupancy is issued. The original permittee remains liable to Jackson County for only the land disturbance work through the date of reassignment. The original permittee will be released from that liability upon issuance of a final certificate of completion. The new permittee(s) shall make all submissions required to obtain a new erosion control permit. (Ord. 3606, Eff. 03/08/05)

K. The applicant(s) will be required to file, with the Director a faithful performance bond(s) or, letter(s) of credit in an amount of 120% of the estimated costs of the improvements, landscaping, and maintenance of improvements. The bond(s) or letter(s) of credit must remain in full force and effect for a period of not less than three (3) years. Each year within thirty (30) days of the anniversary date of the issuance of the permit the applicant will submit to the Director verification of current status of bond(s) or letter(s) of credit. This bond or letter of credit will cover the cost of repair when a failure of the installed soil erosion and sediment control improvements has occurred on the site. (Ord. 3606, Eff. 03/08/05)

L. Review and approval

1. The Director will review each application for an erosion control permit to determine its conformance with the provisions of this regulation. Within thirty (30) days after receiving an application, the Director shall, in writing:

   a. approve the permit application; or

   b. approve the permit application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this regulation, and issue the permit subject to these conditions; or

   c. disapprove the permit application, indicating the deficiencies and the procedure for submitting a revised application and/or submission. (Ord. 3606, Eff. 03/08/05)

2. Failure of the Director to act on original or revised applications within thirty (30) days of receipt shall authorize the applicant to proceed in accordance with the plans as filed unless such time is extended by written agreement between the applicant and Director. Pending preparation and approval of a revised plan, development activities shall be allowed to proceed in accordance with conditions established by the Director. (Ord. 3606, Eff. 03/08/05)

M. Permit Fee: Jackson County shall charge $500.00 for each permit plus $100.00 per acre of distributed land. (Ord. 3606, Eff. 03/08/05; Ord. 3654, Eff. 08/09/05)

Section *24104*: Education, Training and Certification

A. The Engineer and Developer or Project Manager are required to meet the minimum education and training requirements as required in APWA section 5102. (Ord. 3606, Eff. 03/08/05)

B. Projects with any type of Erosion Control Permit in unincorporated Jackson County must have at least one individual actively involved on the site who meets the Education, Training, and Certification requirements of APWA section 5102. (Ord. 3606, Eff. 03/08/05)

Section *24105*: Erosion and Sediment Control Plan

A. The erosion and sedimentation control plan must be prepared and certified by a Professional Engineer or certified erosion and sediment control professional on behalf of the applicant and must outline the measures that will be implemented to ensure soil and sediment is contained on the development site. (Ord. 3606, Eff. 03/08/05)

B. The Erosion and Sediment Control Plan shall include:

1. The property owner's name, address and telephone number.

2. The applicant’s name, address, and telephone number.

3. A natural resources map, at a scale no smaller than one (1) inch equals one hundred (100) feet, identifying the location; soils; forest cover; the surrounding area’s watercourses, water bodies and other significant geographic and natural features; and resources protected under other chapters of this code.

4. A one (1) inch equals one hundred (100) feet scale map of the site showing proposed excavation, grading or filling.

5. A one (1) inch equals one hundred (100) feet scale map of the site showing existing and proposed contours at two (2) feet intervals on USGS datum, clearing limits and delineation of one hundred (100) year flood plain and floodway.

6. A sequence of construction of the development site, including stripping and clearing; rough grading; construction of utilities, infrastructure, and buildings; final grading and landscaping; and removal of temporary erosion control devices. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of clearing, installation of temporary erosion and sediment measures, installation of storm drainage, paving of streets and parking areas, and establishment of permanent vegetation.

7. All erosion and sediment control measures necessary to meet the objectives of Jackson County and APWA Erosion and Sediment Control Specifications and Design Criteria throughout all phases of construction are required. Depending upon the complexity of the project, the drafting of intermediate plans may be required at the close of each season.

8. Seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and kind and quantity of mulching for both temporary and permanent vegetative control measures.

9. Provisions for maintenance of control facilities, including easements and estimates of the cost of maintenance.

10. Location of proposed and existing utility lines.

11. Details of temporary drainage system to direct stormwater runoff from graded portions of the site and details of the permanent drainage plan.

12. Temporary access routes.

13. Any additional items indicated in the APWA Erosion and Sediment Control Specifications and Design Criteria, current standards and any subsequent amendments.

14. The signature and seal of a Professional Engineer or certified erosion and sediment control professional.

15. The Director may require submission of other items such as graphic representation of existing and proposed drainage facilities; delineation of wetlands, water storage detention areas, drainage ditches, and easements; the quantity of soil to be excavated, filled or stored; copies of

other permits and applications for the site; and maximum surface runoff from the site. (Ord. 3606, Eff. 03/08/05)

C. Additional information or data, may be required, by the Director. Requirements for maps, plans, reports and/or drawings may be waived if the Director finds that the information submitted is sufficient to show that the proposed work will conform to the erosion and sediment control requirements.

D. Modifications to the plan

1. Major amendments of the erosion and sediment control plan shall be submitted to the Director and shall be processed and approved, or disapproved, in the same manner as the original plans.
2. Field modifications of a minor nature may be authorized by the Director by written authorization to the permittee.

Section *24106*: Design Requirements

A. Erosion control practices, sediment control practices, waterway crossings and construction site access shall meet the design criteria set forth in the APWA, Erosion and Sediment Control Specifications and Design Criteria current standards and any subsequent amendments, as adopted within this ordinance by Jackson County, and shall be adequate to regulate transportation of sediment from the site to the satisfaction of the Director. (Ord. 3606, Eff. 03/08/05)

B. Clearing and Grading of natural resources, such as forests and wetlands, shall not be permitted, except when in compliance with all other chapters of this code, the Jackson County Unified Development Code, and all other county, state and federal regulations. (Ord. 3606, Eff. 03/08/05)

C. Phasing shall be required on all sites disturbing greater than thirty (30) acres, with the size of each phase to be established in the Erosion and Sediment Control Plan. (Ord. 3606, Eff. 03/08/05)

D. Erosion and Sediment Control

1. Graded areas must be stabilized as soon as work is completed or if work is interrupted for twenty-one (21) or more calendar days. This may be waved when a silt pond is used.
2. Where natural vegetation is removed during grading, revegetation of the site shall be initiated as soon as is practicable following the initiation of grading work. Vegetation in sufficient density to provide effective erosion

control must be reestablished within fourteen (14) days following completion of major grading work.

3. If vegetative erosion control methods, such as seeding, have not become established within two weeks, Jackson County may require that the site be reseeded, or that an approved non-vegetative option be employed.

4. Erosion and Sediment Control measures shall be initiated prior to any land disturbance and shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site. (Ord. 3606, Eff. 03/08/05)

E. Waterways and Watercourses

1. Buildings, decks, patios, parking lots and other improvements shall be set back a minimum of one hundred and fifty (150) feet from the center of the stream. (Ord. 3654, Eff. 08/09/05)

2. When a wet watercourse must be crossed regularly during construction, a temporary stream crossing shall be provided, and an approval obtained from Jackson County. Additional permits may be required by the Missouri Department of Natural Resources and the Corps of Engineers.

3. When in-channel work is conducted, the channel shall be stabilized before, during and after work.

4. All on-site stormwater conveyance channels shall be designed according to the criteria outlined in APWA section 5100.

5. Stabilization adequate to prevent erosion must be provided at the outlets of all pipes and paved channels. (Ord. 3606, Eff. 03/08/05)

Section *24107*: Mud, Material or Debris on Public Roadways

A. No land disturbing, construction or other associated activities are permitted that cause mud, soil, earth, sand, gravel, rock, stone, concrete, building materials or other materials to be deposited on public streets. Trucks and other construction equipment should be cleaned on site to prevent mud from being deposited on public streets.

B. If mud, material or debris is deposited on a public or private street, the applicant responsible for the development site concerned will be

notified and shall abate the violation within four (4) hours of notification. Notification may be made by personal contact, telephone or the site will be posted. The notification will include the time notified and deadline for abating the violation. If the violation is not abated within four (4) hours, a stop work order shall be posted and Jackson County will cause the violation to be abated at property owner's expense. (Ord. 3606, Eff. 03/08/05)

Section *24108*: Inspection

A. By submitting a development plan or applying for a erosion control permit, the applicant consents to inspections of the proposed development site and all work in progress. The Director shall enter the property of the applicant as deemed necessary to make regular inspections to ensure the validity of the reports filed.

B. A copy of the permit must be available on the site for inspection by authorized representatives of Jackson County.

C. The Director shall make inspections as hereinafter required in Subsection D and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the erosion and sediment control plan as approved. Plans for grading, stripping, excavating, and filling work bearing the stamp of approval of Jackson County shall be maintained at the site during the progress of the work.

D. In order to obtain required inspections, the permittee shall notify the Director at least two (2) working days before the following:

1. Erosion and sediment control measures are in place and stabilized.
2. Site Clearing has been completed
3. Rough Grading has been completed
4. Final Grading has been completed
5. Close of the Construction Season
6. Removal or substantial modification of any erosion and sediment control measure or practice
7. Final Landscaping

E. The permittee or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlined in subsection D

above. The purpose of such inspections will be to determine the overall effectiveness of the control plan, and the need for additional control measures. All inspections shall be documented in writing.

F. In the event work does not conform to the permit or conditions of approval or to the approved plan or to any instructions of the Director, notice to comply shall be given to the permittee in writing. After a notice to comply is given, the permittee or the permittee's contractor(s) shall be required to make the corrections within the time period determined by the Director. If an imminent hazard exists, the Director shall require that the corrective work begin immediately. (Ord. 3606, Eff. 03/08/05)

Section *24109.* Enforcement and Penalties

A. Stop-Work Order; Revocation of Permit

1. In the event that any legal entity holding an erosion control permit pursuant to this ordinance violates the terms of the permit, or implements site development in such a manner as to materially adversely affect the health, welfare, or safety of persons residing or working in the neighborhood or development site so as to be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, the Director may suspend or revoke the erosion control permit and issue a stop-work order.

2. For the purposes of this ordinance, a stop work order is validly posted by posting a copy of the stop work order on the site of the land disturbance activity in reasonable proximity to a location where the land disturbance activity is taking place. A copy of the order, in the case of work for which there is a permit, shall be mailed by first class mail, postage prepaid, to the address listed by the permittee on the permit. In the case of work for which there is no permit, a copy of the order shall be mailed to the person listed as the owner of the property on tax records filed with Jackson County.

3. No person is permitted to continue or permit the continuance of work in an area covered by a stop work order, except work required to correct deficiencies with respect to an erosion or sediment control measure and as authorized by the Director.

4. Forty-eight (48) hours after posting a stop work order, the Director, if the conditions specified in the stop work order to resume work have not been satisfied, may issue a notice to the permittee, owner, or land user that Jackson County will perform work necessary to comply with this regulation. Jackson County may go on the land and commence work after

forty-eight (48) hours from issuing the notice of intent. The costs incurred by Jackson County to perform this work shall be charged against the Performance Bond. (Ord. 3606, Eff. 03/08/05)

B. Violation and Penalties

1. No permittee, owner, or land user shall construct, enlarge, alter, repair, or maintain any grading, excavation, or fill, or cause the same to be done, contrary to or in violation of any terms of this ordinance.

2. Any permittee, owner or land user violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and each day during which any violation of any of the provisions of this ordinance is committed, continued or permitted, shall constitute a separate offense.

3. Any waiver of a violation of this ordinance by the Director shall not be deemed or construed by permittee, owner, or land user to constitute a waiver of any prior or succeeding violation of this ordinance.

4. Upon conviction of any such violation, such permittee, owner, or land user shall be punished by a fine of not more than $1,000.00 or up to 1 year in the Jackson County Department of Corrections, for each offense. In addition to any other penalty authorized by this ordinance, any of the above referenced entities convicted of violating any of the provisions of this ordinance shall be required to bear the expense of such restoration. (Ord. 3606, Eff. 03/08/05)

Section *24110*. Separability

The provisions and sections of this ordinance shall be deemed to be separable, and the invalidity of any portion of this ordinance shall not affect the validity of the remainder.

(Ord. 3606, Eff. 03/08/05)

SECTION 9

Spill Response

This section contains Missouri Code of State Regulations as they pertain to hazardous substances and emergency response. Contained within are:

Division 24 - Hazardous Substance Emergency Response Office

- -10 CSR 24-1.010 - Organization
- -10 CSR 24-2.010 - Definitions
- -10 CSR 24-3.010 - Emergency Notification Procedures

Spill Report Forms

Rules of
Department of Natural Resources
Division 24—Hazardous Substance Emergency Response Office
Chapter 1—Organization

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 24—Hazardous Substance Emergency Response Office
Chapter 1—Organization

10 CSR 24-1.010 General Organization

PURPOSE: This rule explains the organization and responsibilities of the Hazardous Substance Emergency Response Office. Also explained is how to obtain additional information regarding these activities and where to make submittals to this office.

(1) The Department of Natural Resources is authorized under sections 260.500–260.550, RSMo to administer the state's Hazardous Substance Emergency Response Office. The director of the Department of Natural Resources appoints a director and staff who provide day-to-day operation of the Hazardous Substance Emergency Response Office.

(A) Among its operations, the Hazardous Substance Emergency Response Office performs the following administrative and technical functions: develop and adopt rules relating to hazardous substance emergencies; develop and update the state Hazardous Substance Emergency Response plan in cooperation with other state agencies and other affected persons; respond to, investigate, document and take action regarding hazardous substance emergencies in accordance with sections 260.500–260.550, RSMo; provide technical assistance to other state agencies, to political subdivisions of the state and to other persons upon request for the prevention, control and response to hazardous substance emergencies; enter into agreements with state, local and federal agencies and with other persons as necessary to develop and implement the Hazardous Substance Emergency Response Plan and to implement sections 260.500–260.550, RSMo; monitor the statewide telephone used to notify Missouri whenever a hazardous substance emergency occurs; notify appropriate agencies of hazardous substance emergencies; and cooperate with appropriate units of government and other persons to prevent the occurrence and improve response to hazardous substance emergencies.

(B) Requests for copies of rules, reports of incident investigations, technical information and assistance and any other submissions are to be made to the department's Hazardous Substance Emergency Response Office, Environmental Services Program, P.O. Box 176, Jefferson City, MO 65102. The telephone number during office hours is (573) 526-3348. For emergencies, the Hazardous Substance Emergency Response Office can be contacted any time at (573) 634-2436.

(2) Information.

(A) The mailing address for the Hazardous Substance Emergency Response Office is: Missouri Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102.

(B) The Hazardous Substance Emergency Response Office files, except trade secrets as provided for in section 260.550, RSMo, are public information and are located at 2710 West Main Street, Jefferson City, MO 65109.

(C) Anyone wishing to review information in the Hazardous Substance Emergency Response Office files is requested to make an appointment by calling (573) 526-3348. There is no fee for reviewing file information. There is a copying fee if copies of file information are made, and it must be paid by check, money order or exact change.

(D) Any request for information shall be in writing. All requests for information shall be available during normal business hours for inspection by the public.

(E) Nonemergency information can be obtained by contacting the department at the post office box listed previously or by calling (573) 526-3348.

(F) The number to contact the department for emergency release notifications under section 260.505, RSMo is (573) 634-2436. This is for emergencies only.

AUTHORITY: section 260.520, RSMo (Supp. 1995). Original rule filed Nov. 30, 1983, effective April 12, 1984. Emergency amendment filed Dec. 2, 1992, effective Jan. 1, 1993, expired April 20, 1993. Amended: Filed Oct. 5, 1992, effective April 8, 1993. Amended: Filed June 14, 1994, effective Jan. 29, 1995. Amended: Filed July 22, 1996, effective Feb. 28, 1997.*

**Original authority 1983, amended 1993, 1995.*

Rules of
Department of Natural Resources
Division 24—Hazardous Substance Emergency Response Office
Chapter 2—Definitions

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 24—Hazardous Substance Emergency Response Office
Chapter 2—Definitions

10 CSR 24-2.010 Definitions

PURPOSE: This rule provides definitions for terms used in 10 CSR 24.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. Therefore, the material which is so incorporated is on file with the agency who filed this rule, and with the Office of the Secretary of State. Any interested person may view this material at either agency's headquarters or the same will be made available at the Office of the Secretary of State at a cost not to exceed actual cost of copy reproduction. The entire text of the rule is printed here. This note refers only to the incorporated by reference material.

(1) Administrator—the administrator of the United States Environmental Protection Agency.

(2) Cleanup—all actions necessary to contain, collect, control, identify, analyze, cleanup, treat, disperse, remove or dispose of a hazardous substance.

(3) Cleanup costs—all costs incurred by the state or any of its political subdivisions or their agents or by any other person participating with the approval of the Department of Natural Resources in the prevention or mitigation of damages from a hazardous substance emergency or the cleanup of a hazardous substance involved in a hazardous substance emergency.

(4) Department—the Department of Natural Resources.

(5) Director—director of the Department of Natural Resources.

(6) Extremely hazardous substance—a substance listed under 40 CFR part 355 by the administrator.

(7) Hazardous substance—any substance or mixture of substances that presents a danger to the public health or safety or the environment and includes:

(A) Any hazardous waste identified or listed by the department under sections 260.350–260.430, RSMo;

(B) Any element, compound, mixture, solution or substance designated pursuant to Sections 101(14) and 102 of the Comprehensive Environment Response, Compensation and Liability Act (CERCLA) of 1980 or designated pursuant to section 304 of the Federal Emergency Planning and Community Right-to-Know Act of 1986; and

(C) Any hazardous material designated by the secretary of the United States Department of Transportation under the Hazardous Materials Transportation Act.

(8) Hazardous substance emergency and emergency involving a hazardous substance—

(A) Any release of hazardous substances or extremely hazardous substances in quantities equal to or in excess of those determined pursuant to section 101(14) or 102 of the CERCLA of 1980 or section 304 of the Federal Emergency Planning and Community Right-to-Know Act of 1986;;

(B) Any release of petroleum including crude oil or any fraction, natural gas, natural gas liquids, liquefied natural gas or synthetic gas usable for fuel (or mixture of natural gas and synthetic gas) in excess of fifty (50) gallons for liquids or three hundred (300) cubic feet for gases;

(C) Any release of a hazardous waste which is reportable under sections 260.350–260.430, RSMo;

(D) Any release of a hazardous substance which requires immediate notice under 49 CFR part 171; and

(E) The department shall promulgate rules identifying the substances and the quantities of substances which, if released, constitute a hazardous substance emergency.

(9) Hazardous Substance Emergency Response Plan—the plan, as specified in section 260.505, RSMo, developed and maintained by the Missouri Department of Natural Resources for response to hazardous substance emergencies.

(10) Local Emergency Planning Committee (LEPC) or committee—the people appointed by the Missouri Emergency Response Commission (MERC) for the purpose of improving hazardous chemical safety and preparedness.

(11) Local government—any county, township, municipal corporation, school district or other governmental body of equivalent rank.

(12) Person—any individual, partnership, copartnership, firm, company, public or private corporation, association, joint stock company, trust, estate, political subdivision or any agency, board, department or bureau of the state or federal government or any other legal entity which is recognized by law as the subject of rights and duties.

(13) Person having control over a hazardous substance—any person producing, handling, storing, transporting, refining or disposing of a hazardous substance when a hazardous substance emergency occurs, including bailees, carriers and any other person in control of a hazardous substance when a hazardous substance emergency occurs, whether they own the hazardous substance or are operating under a lease, contract or other agreement with the legal owner.

(14) Release—any threatened or real emission, discharge, spillage, leakage, pumping, pouring, emptying or dumping of a substance into or onto the land, air or waters of the state unless done in compliance with the conditions of a federal or state permit, unless the substance is confined and is expected to stay confined to property owned, leased or otherwise controlled by the person having control over the substance or unless, in the case of pesticides, application is done in accordance with the product label.

(15) State of Missouri Basic Emergency Operations Plan—the state plan, its annexes and appendices as developed or maintained by the state emergency management agency for response to natural and man-made disasters in this state.

(16) Waters of the state—all rivers, streams, lakes and other bodies of surface and subsurface water lying within or forming a part of the boundaries of the state which are not entirely confined and located completely upon lands owned, leased or otherwise controlled by a single person or by two (2) or more persons jointly or as tenants in common and include waters of the United States lying within the state.

AUTHORITY: section 260.520, RSMo Supp. 1993. Original rule filed Nov. 30, 1983, effective April 12, 1984. Emergency amendment filed Dec. 2, 1992, effective Jan. 1, 1993, expired April 30, 1993. Amended: Filed Oct. 5, 1992, effective April 8, 1993.*

Amended: Filed June 14, 1994, effective Jan. 29, 1995.

**Original authority: 260.520, RSMo 1983, amended 1993.*

Rules of
Department of Natural Resources
Division 24—Hazardous Substance Emergency Response Office
Chapter 3—Emergency Notification Procedures

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 24—Hazardous Substance Emergency Response Office
Chapter 3—Emergency Notification Procedures

10 CSR 24-3.010 Notification Procedures for Hazardous Substance Emergencies and for Emergency Notification of Releases of Hazardous Substances and Extremely Hazardous Substances

PURPOSE: This rule establishes a statewide emergency telephone number to notify Missouri whenever a hazardous substance emergency occurs and specifies the requirements for emergency notification and follow-up written notices in the event of a hazardous substance emergency, the release of a reportable quantity of a hazardous substance and the release of a reportable quantity of an extremely hazardous substance.

PUBLISHER'S NOTE: The publication of the full text of the material that the adopting agency has incorporated by reference in this rule would be unduly cumbersome or expensive. Therefore, the full text of that material will be made available to any interested person at both the Office of the Secretary of State and the office of the adopting agency, pursuant to section 536.031.4, RSMo. Such material will be provided at the cost established by state law.

(1) Any person having control over a hazardous substance shall contact Missouri by telephone at (573) 634-2436 or the National Response Center at (800) 424-8802 at the earliest practical moment upon discovery of an emergency involving a hazardous substance under his/her control. Information to be provided to Missouri to the best ability of the person having control over the hazardous substance includes: substance(s) involved, an indication of whether the substance is an extremely hazardous substance; the medium or media into which the release occurred; any known or anticipated acute or chronic health risks associated with the release and, where appropriate, advice regarding medical attention necessary for exposed individuals; proper precautions to take as a result of the release, including evacuation; amount of the substance(s) released or in danger of being released; location of the hazardous substance emergency and directions to the site; names, addresses and phone numbers of persons that may have information on the substances involved; when the hazardous substance emergency occurred, duration of the release and when it was discovered; actions taken to cleanup the hazardous substance and to end the hazardous substance emergency and when those actions will be taken; and any other pertinent information requested by Missouri, or as specified in the Missouri hazardous waste management commission regulations at 10 CSR 25-7.264(2)(D) and (E) and 10 CSR 25-7.265(2)(D) and (E). Federal reporting requirements for releases of hazardous substances can be found in 40 CFR parts 302 and 355. In addition, state reporting requirements contained in 11 CSR 40-4.030 reference these regulations, and require that certain information be provided to Local Emergency Planning Committees (LEPCs) for reportable releases of hazardous substances and extremely hazardous substances.

(2) The person monitoring the statewide emergency telephone shall notify appropriate agencies of the hazardous substance emergency as designated in the Hazardous Substance Emergency Response Plan.

(3) Upon request, written follow-up notifications are required for releases of hazardous substances and extremely hazardous substances as listed in 40 CFR parts 302 and 355. If requested, the person having control of the hazardous substance or extremely hazardous substance shall provide a written follow-up emergency notice (or notices, as more information becomes available) to the department setting forth and updating the information with respect to—

(A) Information required in section (1);

(B) Actions taken to respond to and contain the release;

(C) Any known or anticipated acute or chronic health risks associated with the release; and

(D) Where appropriate, advice regarding medical attention necessary for exposed individuals.

(4) If requested, a written report shall be provided to the department for any other hazardous substance emergency. The requested reports shall contain the information as specified in sections (1) and (3) of this rule and any other pertinent information as requested by the department. In addition, state reporting requirements in 11 CSR 40-4.030 require that written follow-up reports be provided to the Department of Public Safety and appropriate LEPCs for any reportable releases of hazardous substances or extremely hazardous substances.

AUTHORITY: section 260.520, RSMo (Supp. 1995). Original rule filed Nov. 30, 1983, effective April 12, 1984. Emergency amendment filed Dec. 2, 1992, effective Jan. 1, 1993, expired April 30, 1993. Amended: Filed Oct. 5, 1992, effective April 8, 1993. Amended: Filed June 14, 1994, effective Jan. 29, 1995. Amended: Filed July 22, 1996, effective Feb. 28, 1997.*

**Original authority 1983, amended 1993, 1995.*

Spill Report Form

For spills of reportable quantities that impact soil, surface water or ground water call MDNR 24-hour Environmental Emergency Response at 573-634-2436.

Site: _____ Primary Contractor: _____

Date: _____ Incident Date: _____

Complete for any type of petroleum product or hazardous materials / waste spill or incident. If the spill is of reportable quantity, report must be submitted within five (5) business days.

Keep a copy of this report with the SWPPP Log.

Person Reporting Spill or Incident	
Name	Address
Organization	
Title	
Telephone	
Email	Signature

Type of Spill:
Common Name of Spilled Substance
Estimated Quantity Spilled
Estimated Concentration
Date and Duration of Spill
Date Clean Up Completed

SPILL TO LAND	SPILL TO WATER BODY
Name of site:	Name of water body:
Street address:	Location of discharge
City	Description of area from which spilled material may reach:
County:	

Actions Taken:

To contain spill:

To clean up spill:

To remove/dispose of spilled substance and cleanup material:

To prevent reoccurrence:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Person responsible for managing spill response:	
Name	Signature
Phone	Email

SECTION 10

Endangered Species Documentation

Missouri Department of Conservation

Missouri Department of Conservation's Mission is to
protect and manage the forest, fish, and
wildlife resources of the state and to
facilitate and provide opportunities for all citizens to
use, enjoy and learn about these resources.

Natural Heritage Review Level Two Report: State Listed Endangered Species and/or Missouri Species/Natural Communities of Conservation Concern

There are records for state-listed Endangered Species, or Missouri Species or Natural Communities of Conservation Concern within or near the defined Project Area. Please contact Missouri Department of Conservation for further coordination.

Foreword: Thank you for accessing the Missouri Natural Heritage Review Website developed by the Missouri Department of Conservation with assistance from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, Missouri Department of Transportation and NatureServe. The purpose of this website is to provide information to federal, state and local agencies, organizations, municipalities, corporations and consultants regarding sensitive fish, wildlife, plants, natural communities and habitats to assist in planning, designing and permitting stages of projects.

PROJECT INFORMATION

Project Name and ID Number: Lee's Summit Middle School #4 #7737
User Project Number: 020-0103
Project Description: Construction of a 210,000 SF New Middle School in Lee's Summit, Missouri on 52 acre site at the SE corner of Country Lane & SE Bailey Road. Other improvements will include 4 baseball/softball fields, 6 lane track and football field, practice fields, access drives, parking lots. Construction is expected to begin late summer of '20 with the school opening fall of '22.
Project Type: Residential, Commercial and Governmental Building Development
Contact Person: Kyleen Kelly
Contact Information: kkelly@olssonassociates.com or 913-381-1170

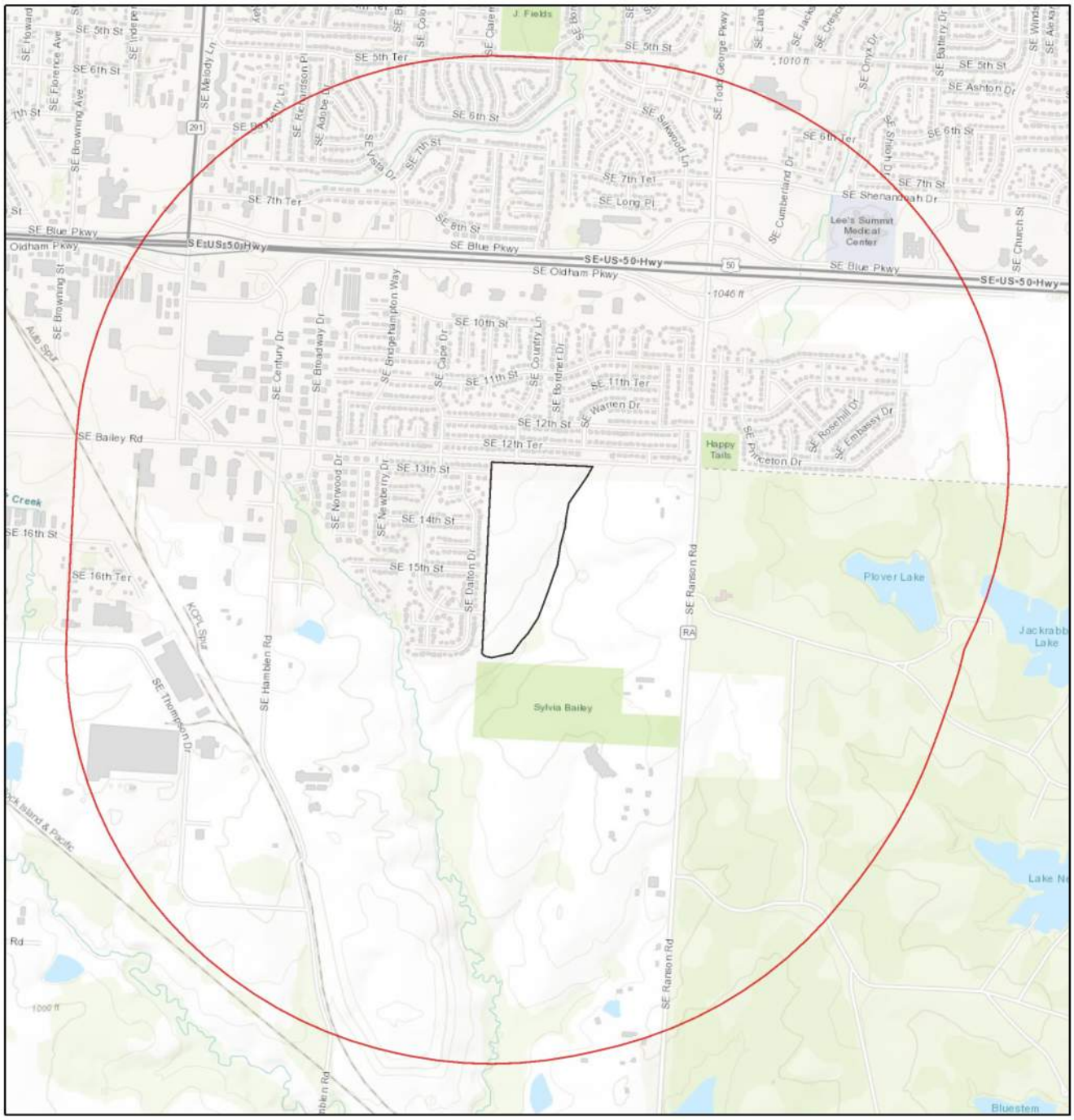
Disclaimer: The NATURAL HERITAGE REVIEW REPORT produced by this website identifies if a species tracked by the Natural Heritage Program is known to occur within or near the area submitted for your project, and shares suggested recommendations on ways to avoid or minimize project impacts to sensitive species or special habitats. If an occurrence record is present, or the proposed project might affect federally listed species, the user must contact the Department of Conservation or U.S. Fish and Wildlife Service for more information. The Natural Heritage Program tracks occurrences of sensitive species and natural communities where the species or natural community has been found. Lack of an occurrence record does not mean that a sensitive plant, animal or natural community is not present on or near the project area. Depending on the project, current habitat conditions, and geographic location in the state, surveys may be necessary. Additionally, because land use conditions change and animals move, the existence of an occurrence record does not mean the species/habitat is still present. Therefore, Reports include information about records near but not necessarily on the project site.

The Natural Heritage Report is not a site clearance letter for the project. It provides an indication of whether or not public lands and sensitive resources are known to be (or are likely to be) located close to the proposed project. Incorporating information from the Natural Heritage Program into project plans is an important step that can help reduce unnecessary impacts to Missouri's sensitive fish, forest and wildlife resources. However, the Natural Heritage Program is only one reference that should be used to evaluate potential adverse project impacts. Other types of information, such as wetland and soils maps and on-site inspections or surveys, should be considered. Reviewing current landscape and habitat information, and species' biological characteristics would additionally ensure that Missouri Species of Conservation Concern are appropriately identified and addressed in planning efforts.

U.S. Fish and Wildlife Service – Endangered Species Act (ESA) Coordination: Lack of a Natural Heritage Program occurrence record for federally listed species in your project area does not mean the species is not present, as the area may never have been surveyed. Presence of a Natural Heritage Program occurrence record does not mean the project will result in negative impacts. The information within this report is not intended to replace Endangered Species Act consultation with the U.S. Fish and Wildlife Service (USFWS) for listed species. Direct contact with the USFWS may be necessary to complete consultation and it is required for actions with a federal connection, such as federal funding or a federal permit; direct contact is also required if ESA concurrence is necessary. Visit the USFWS Information for Planning and Conservation (IPaC) website at https://ecos.fws.gov/ipac/ for further information. This site was developed to help streamline the USFWS environmental review process and is a first step in ESA coordination. The Columbia Missouri Ecological Field Services Office may be reached at 573-234-2132, or by mail at 101 Park Deville Drive, Suite A, Columbia, MO 65203.

Transportation Projects: If the project involves the use of Federal Highway Administration transportation funds, these recommendations may not fulfill all contract requirements. Please contact the Missouri Department of Transportation at 573-526-4778 or www.modot.mo.gov/ehp/index.htm for additional information on recommendations.

Lee's Summit Middle School #4



June 30, 2020

1:21,623

0 0.175 0.35 0.7 mi

0 0.275 0.55 1.1 km

Project Boundary

Buffered Project Boundary

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Species or Communities of Conservation Concern within the Area:

There are records for state-listed Endangered Species, or Missouri Species or Natural Communities of Conservation Concern within or near the defined Project Area. Please contact the Missouri Department of Conservation for further coordination.

MDC Natural Heritage Review
Resource Science Division
P.O. Box 180
Jefferson City, MO
65102-0180
Phone: 573-522-4115 ext. 3182
NaturalHeritageReview@mdc.mo.gov

Other Special Search Results:

The project occurs on or near public land, Reed (James A) Mem WA, please contact MDC.

Project Type Recommendations:
New construction, maintenance and remodeling, including government, commercial and residential buildings and other structures. Fish, forest, and wildlife impacts can be avoided by siting projects in locations that have already been disturbed or previously developed, where and when feasible, and by avoiding alteration of areas providing existing habitat, such as wetlands, streams, forest, native grassland, etc. The project should be managed to minimize erosion and sedimentation/runoff to nearby wetlands, streams and lakes, including adherence to any “Clean Water Act Permit” conditions. Project design should include stormwater management elements that assure storm discharge rates to streams for heavy rain events will not increase from present levels. Revegetate areas in which the natural cover is disturbed to minimize erosion using native plant species compatible with the local landscape and wildlife needs. Annual ryegrass may be combined with native perennials for quicker green-up. Avoid aggressive exotic perennials such as crownvetch and sericea lespedeza. Pollutants, including sediment, can have significant impacts far downstream. Use silt fences and/or vegetative filter strips to buffer streams and drainages, and monitor the site after rain events and until a well-rooted ground cover is reestablished.

Project Location and/or Species Recommendations:

Endangered Species Act Coordination - Indiana bats *(Myotis sodalis*, federal- and state-listed endangered) and **Northern long-eared bats** (*Myotis septentrionalis,* federal-listed threatened) may occur near the project area. Both of these species of bats hibernate during winter months in caves and mines. During the summer months, they roost and raise young under the bark of trees in wooded areas, often riparian forests and upland forests near perennial streams. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Do not enter caves known to harbor Indiana bats or Northern long-eared bats, especially from September to April. **If any trees need to be removed for your project, please contact the U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 ext. 100 for Ecological Services) for further coordination under the Endangered Species Act.**

Invasive exotic species are a significant issue for fish, wildlife and agriculture in Missouri. Seeds, eggs, and larvae may be moved to new sites on boats or construction equipment. Please inspect and clean equipment thoroughly before moving between project sites. See http://mdc.mo.gov//9633 for more information.

- Remove any mud, soil, trash, plants or animals from equipment before leaving any water body or work area.
- Drain water from boats and machinery that have operated in water, checking motor cavities, live-well, bilge and transom wells, tracks, buckets, and any other water reservoirs.
- When possible, wash and rinse equipment thoroughly with hard spray or HOT water (?140° F, typically available at do-it-yourself car wash sites), and dry in the hot sun before using again.

Streams and Wetlands – Clean Water Act Permits: Streams and wetlands in the project area should be protected from activities that degrade habitat conditions. For example, soil erosion, water pollution, placement of fill, dredging, in-stream activities, and riparian corridor removal, can modify or diminish aquatic habitats. Streams and wetlands may be protected under the Clean Water Act and require a permit for any activities that result in fill or other modifications to the site. Conditions provided within the U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 permit (http://www.nwk.usace.army.mil/Missions/RegulatoryBranch.aspx) and the Missouri Department of Natural Resources (DNR) issued Clean Water Act Section 401 Water Quality Certification (http://dnr.mo.gov/env/wpp/401/index.html), if required, should help minimize impacts to the aquatic organisms and aquatic habitat within the area. Depending on your project type, additional permits may be required by the Missouri Department of Natural Resources, such as permits for stormwater, wastewater treatment facilities, and confined animal feeding operations. Visit http://dnr.mo.gov/env/wpp/permits/index.html for more information on DNR permits. Visit both the USACE and DNR for more information on Clean Water Act permitting.

For further coordination with the Missouri Department of Conservation and the U.S. Fish and Wildlife Services, please see the contact information below.

MDC Natural Heritage Review
Resource Science Division
P.O. Box 180
Jefferson City, MO
65102-0180
Phone: 573-522-4115 ext. 3182
NaturalHeritageReview@mdc.mo.gov

U.S. Fish and Wildlife Service
Ecological Service
101 Park Deville Drive
Suite A
Columbia, MO
65203-0007
Phone: 573-234-2132

Miscellaneous Information

FEDERAL Concerns are species/habitats protected under the Federal Endangered Species Act and that have been known near enough to the project site to warrant consideration. For these, project managers must contact the U.S. Fish and Wildlife Service Ecological Services (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132; Fax 573-234-2181) for consultation.

STATE Concerns are species/habitats known to exist near enough to the project site to warrant concern and that are protected under the Wildlife Code of Missouri (RSMo 3 CSR 1 0). "State Endangered Status" is determined by the Missouri Conservation Commission under constitutional authority, with requirements expressed in the Missouri Wildlife Code, rule 3CSR 1 0-4.111. Species tracked by the Natural Heritage Program have a "State Rank" which is a numeric rank of relative rarity. Species tracked by this program and all native Missouri wildlife are protected under rule 3CSR 10-4.110 General Provisions of the Wildlife Code.

Additional information on Missouri's sensitive species may be found at http://mdc.mo.gov/discover-nature/field-guide/endangered-species . Detailed information about the animals and some plants mentioned may be accessed at http://mdc4.mdc.mo.gov/applications/mofwis/mofwis_search1.aspx . If you would like printed copies of best management practices cited as internet URLs, please contact the Missouri Department of Conservation.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
Phone: (573) 234-2132 Fax: (573) 234-2181

In Reply Refer To: June 30, 2020
Consultation Code: 03E14000-2020-SLI-2685
Event Code: 03E14000-2020-E-06784
Project Name: Lee's Summit Middle School #4

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

This response has been generated by the Information, Planning, and Conservation (IPaC) system to provide information on natural resources that could be affected by your project. The U.S. Fish and Wildlife Service (Service) provides this response under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

Threatened and Endangered Species

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. N**ote that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days.** The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance

Refer to the Midwest Region S7 Technical Assistance website for step-by-step instructions for making species determinations and for specific guidance on the following types of projects: projects in developed areas, HUD, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

Federally Listed Bat Species

Indiana bats, gray bats, and northern long-eared bats occur throughout Missouri and the information below may help in determining if your project may affect these species.

Gray bats - Gray bats roost in caves or mines year-round and use water features and forested riparian corridors for foraging and travel. If your project will impact caves, mines, associated riparian areas, or will involve tree removal around these features particularly within stream corridors, riparian areas, or associated upland woodlots gray bats could be affected.

Indiana and northern long-eared bats - These species hibernate in caves or mines only during the winter. In Missouri the hibernation season is considered to be November 1 to March 31. During the active season in Missouri (April 1 to October 31) they roost in forest and woodland habitats. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags 5 inches diameter at breast height (dbh) for Indiana bat, and 3 inches dbh for northern long-eared bat, that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Tree species often include, but are not limited to, shellbark or shagbark hickory, white oak, cottonwood, and maple. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, Indiana bats or northern long-eared bats could be affected.

Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas;
- Trees found in highly-developed urban areas (e.g., street trees, downtown areas);
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees; and
- A stand of eastern red cedar shrubby vegetation with no potential roost trees.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of "There are no listed species found within the vicinity of the project," then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example "No Effect" document also can be found on the S7 Technical Assistance website.

2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project other than bats (see #3 below) then project proponents can conclude the proposed activities **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain Life History Information for Listed and Candidate Species through the S7 Technical Assistance website.

3. If IPac returns a result that one or more federally listed bat species (Indiana bat, northern long-eared bat, or gray bat) are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** these bat species **IF** one or more of the following activities are proposed:

a. Clearing or disturbing suitable roosting habitat, as defined above, at any time of year;
b. Any activity in or near the entrance to a cave or mine;
c. Mining, deep excavation, or underground work within 0.25 miles of a cave or mine;
d. Construction of one or more wind turbines; or
e. Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on listed bat species. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example "No Effect" document also can be found on the S7 Technical Assistance website.

If any of the above activities are proposed in areas where one or more bat species may be present, project proponents can conclude the proposed activities **may affect** one or more bat species. We recommend coordinating with the Service as early as possible during project planning. If your project will involve removal of over 5 acres of suitable forest or woodland habitat, we recommend you complete a Summer Habitat Assessment prior to contacting our office to expedite the consultation process. The Summer Habitat Assessment Form is available in Appendix A of the most recent version of the Range-wide Indiana Bat Summer Survey Guidelines.

Other Trust Resources and Activities

Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed voluntary guidelines for minimizing impacts.

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to guidelines developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's Wind Energy Guidelines. In addition, please refer to the Service's Eagle Conservation Plan Guidance, which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

Next Steps

Should you determine that project activities **may affect** any federally listed species or trust resources described herein, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

If you have not already done so, please contact the Missouri Department of Conservation (Policy Coordination, P. O. Box 180, Jefferson City, MO 65102) for information concerning Missouri Natural Communities and Species of Conservation Concern.

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Karen Herrington

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
(573) 234-2132

Project Summary

Consultation Code: 03E14000-2020-SLI-2685

Event Code: 03E14000-2020-E-06784

Project Name: Lee's Summit Middle School #4

Project Type: DEVELOPMENT

Project Description: Construction of a 210,000 SF New Middle School in Lee's Summit, Missouri on 52 acre site at the SE corner of Country Lane & SE Bailey Road. Other improvements will include 4 baseball/softball fields, 6 lane track and football field, practice fields, access drives, parking lots. Construction is expected to begin late summer of '20 with the school opening fall of '22.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.89170981150005N94.34795544760101W

Counties: Jackson, MO

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R4SBC

SECTION 11

Historic Preservation Documentation

Section 106 of the 1966 National Historic Preservation Act (as amended) aims to protect historic and cultural properties from unintentional federal action. A federal action can be through a permit, license or funding. If the preceding situations do not apply to this project a Section 106 review is not required. The permittee must still comply with relevant state and local regulations.

July 21, 2020

Re: Historic Preservation Review for Lee's Summit Middle School #4

State Historic Preservation Office
P.O. Box 176
Jefferson City, MO 65102

Re: Lee's Summit Middle School #4
Lee's Summit, Missouri
Request for Consultation in accordance with 36 CFR 800
Olsson Project No. 020-0103

Dear Reviewer:

The following information is provided as our formal request for consultation regarding the proposed project in accordance with the Stormwater Pollution Prevention Plan and per requirements of the Notice of Intent for Land Disturbance Activities as requested by the Missouri Department of Conservation:

The proposed project is located at the southeast corner of Country Lane and SE Bailey Road in Lee's Summit, Missouri. This property is currently undeveloped. The existing property occupies approximately 52 acres.

The proposed site is located in Section 16 of Township 47 North, Range 31 West, in Lee's Summit, Jackson County, Missouri. It is bounded by SE Bailey Road to the north, a residential development to the west, and undeveloped agricultural land to the east and south (Figure 1, attached). The intent of the project is to construct a new 210,000 ft^2 middle school. In addition to the construction of the school building, other improvements will include four baseball/softball fields, a six-lane track and football field, practice fields, access drives, and parking lots.

We respectfully request a review of the proposed project area. Included are a site plan of the proposed area developments, an aerial map, and a USGS map of the surrounding area.

If you have questions or need further information, I can be reached at 913.381.1170, or by e-mail to kkelly@olsson.com.

Sincerely,

Kyleen Kelly
Associate Scientist

Encl.

7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
FAX 913.381.1174
www.olsson.com

Project Number: 020-0103	**Aerial Map** Lee's Summit Middle School #4	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 West 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure
Drawn By: KK				
Revision Date: 6/30/2020	Lee's Summit, Missouri			1

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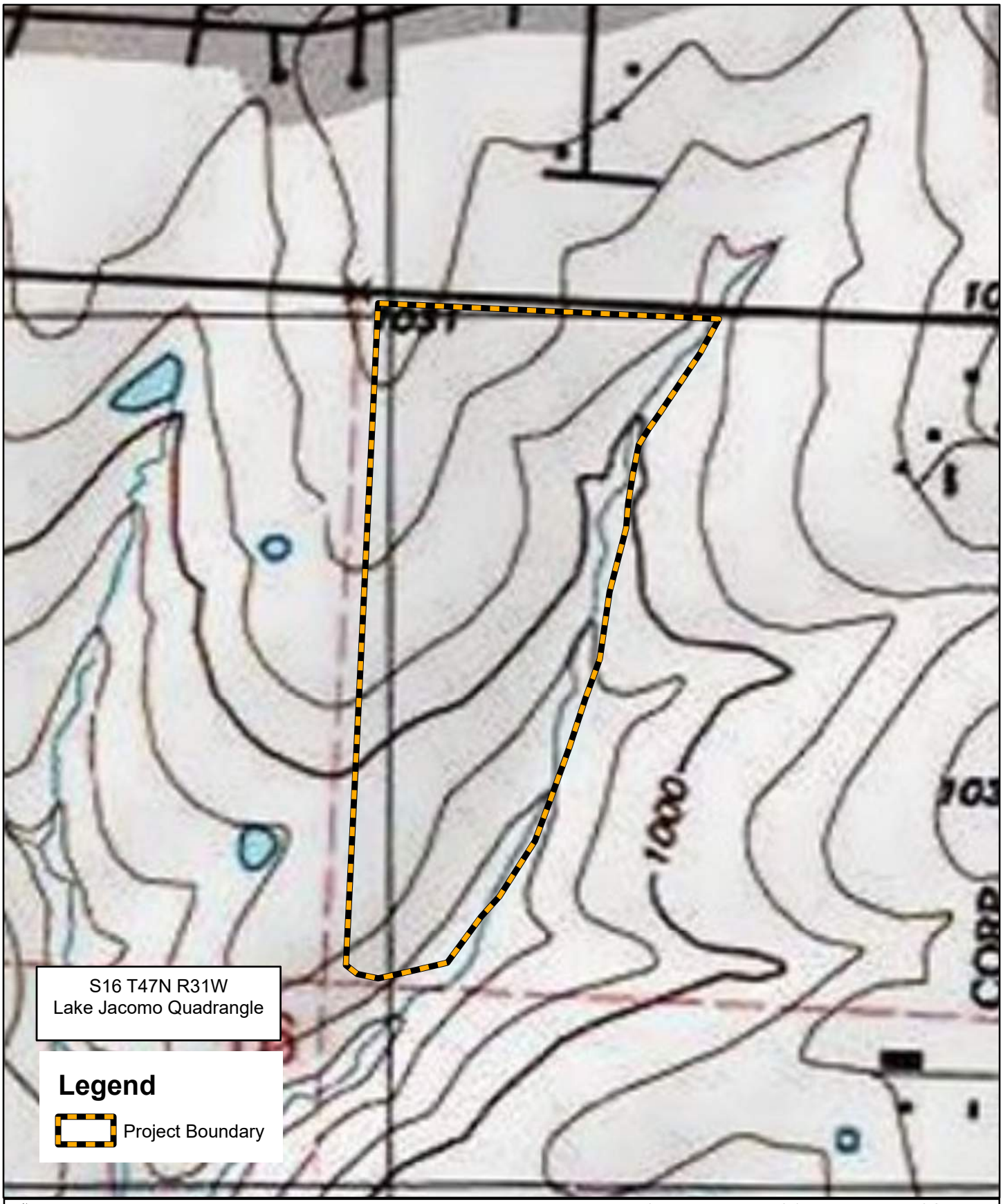

Project Number: 020-0103	**Topographic Map** Lee's Summit Middle School #4	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson	Figure
Drawn By: KK			7301 West 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	
Revision Date: 6/30/2020	Lee's Summit, Missouri			**2**

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SITE DATA		
ZONING & SITE AREA		
PROPOSED USE: PUBLIC MIDDLE SCHOOL/ BALLFIELD COMPLEX		PROPOSED/EXISTING ZONING: AG AGRICULTURE
SITE AREA		
XX ACRES (XX SQ.FT.)		51.66 AC. (2,250,248.11 SF)
IMPERVIOUS		14.99 AC. (652,941 SF)
PERVIOUS		36.67 AC. (1,597,307.11 SF)
FAR (0.55 MAX):		0.084
BUILDING AREA		
BUILDING TYPE	# STORIES	AREA
BUILDING 1	2	1ST FLOOR: 129,739 SQ.FT.
		2ND FLOOR: 60,256 SQ.FT. (54,971 _ 5,285 SQ.FT. MECH MEZZANINE
BUILDING 2 (CONCESSIONS)	1	5,000 SQ.FT.
		TOTAL 189,995 SQ.FT.
PARKING		
USE	REQUIRED	PROVIDED
SCHOOL (36 CLASSROOMS)	2 SPACES PER CLASSROOM (72)	191
GYM OCCUPANCY (600)	1 SPACE PER 3 SEATS (200)	200
BALLFIELD COMPLEX OCCUPANCY(600)	1 SPACE PER 3 SEATS (200)	200
VAN ACCESSIBLE ADA		4
STANDARD ADA	13	9
TOTAL	472	604

LEGEND

- PROPERTY LINE
- LOT LINE
- UTILITY EASEMENT
- CONSTRUCT CONCRETE CURB & GUTTER
- SAWCUT PAVEMENT FULL DEPTH
- ADA PATH – SIDEWALKS NOT DELINEATED AS ADA PATHS WILL NOT BE ADA COMPLIANT.
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD DUTY ASPHALT PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- CONCRETE PAVEMENT
- STORM SEWER
- SS — SANITARY SERVICE LINE
- W — WATER SERVICE LINE
- P–UG — UNDERGROUND POWER SERVICE LINE
- FP — FIRE PROTECTION LINE
- COMM — COMMUNICATIONS SERVICE LINE
- SD — LANDSCAPE/ROOF DRAIN
- ADA CONCRETE SIDEWALK AND RAMP
- SS — EXISTING SANITARY SEWER MAIN
- W — EXISTING WATER MAIN
- TEL — EXISTING COMMUNICATIONS LINE
- P–UG — EXISTING ELECTRIC LINE
- G — EXISTING GAS MAIN

SE WARREN DRIVE

R-1 RESIDENTIAL

SE DALEY ROAD

SE COUNTRY LANE

LEE'S SUMMIT HIGH SCHOOL BASEBALL AND SOFTBALL COMPLEX

STREAM BUFFER

AG- AGRICULTURE

CENTERLINE OF EXISTING STREAMWAY

EXISTING TREE LINE

PROPOSED BUILDING
FFE=1017.75

6 LANE TRACK AND FOOTBALL/ FIELD

FUTURE SE CAPE DRIVE EXTENSION

PRACTICE FIELD AND TRACK THROWING EVENTS

80' R/W

56'

AG- AGRICULTURE

BUS PARKING AND OVERFLOW PARKING

R-1 RESIDENTIAL

SE 13TH STREET

SE DALTON COURT

SE DALTON DRIVE

SE 14TH TERRACE

SE 15TH STREET

SE CAPE DRIVE

SE HOCKER CIRCLE

SE DALTON DRIVE

N

0' 50' 100' 200'
SCALE IN FEET

DWG: F:\2020\0001-0500\020-0103\40-design\AutoCAD\preliminary plans\Sheets\GNCV\C_GEN01_0200103.dwg USER: sgillard
DATE: May 08, 2020 11:17am XREFS: C_XBASE_0200103 C_PBASE_0200103 V_XBOU_00103 C_PTBLK_0200103

DLR Group
© DLR Group

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170 www.olsson.com

LEE'S SUMMIT MIDDLE SCHOOL #4

Lee's Summit, MO

PRELIMINARY DEVELOPMENT PLAN

Issue Date 05.08.20

REVISIONS

13-20102-00

GENERAL LAYOUT PLAN

1000

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE

SECTION 106 PROJECT INFORMATION FORM

Submission of a completed Project Information Form with adequate information and attachments constitutes a request for a review pursuant to Section 106 of the National Historic Preservation Act of 1966 (as amended). We reserve the right to request more information. **Please refer to the CHECKLIST on Page 2 to ensure that all basic information relevant to the project has been included.** For further information, refer to our website at: http://dnr.mo.gov/shpo and follow the links to Section 106 Review.

NOTE: Section 106 regulations provide for a 30-day response time by the Missouri State Historic Preservation Office from the date of receipt.

PROJECT NAME

Lee's Summit Middle School #4

FEDERAL AGENCY PROVIDING FUNDS, LICENSE, OR PERMIT

APPLICANT	TELEPHONE
DLR Group	
CONTACT PERSON	TELEPHONE
Kyleen Kelly (Olsson Inc)	(913) 748-2620

ADDRESS FOR RESPONSE

7301 W. 133rd Street, Suite 200
Overland Park KS 66213

LOCATION OF PROJECT

COUNTY

Jackson

STREET ADDRESS	CITY
Southeast of intersection of Country Lane and SE Bailey Road	Lee's Summit

LEGAL DESCRIPTION OF PROJECT AREA (TOWNSHIP, RANGE, SECTION, ¼ SECTION)

USGS TOPOGRAPHIC MAP QUADRANGLE NAME (SEE MAP REQUIREMENTS ON PAGE 2)

Lake Jacomo

YEAR	TOWNSHIP	RANGE	SECTION
2015	47N	31W	16

PROJECT DESCRIPTION

DESCRIBE THE OVERALL PROJECT IN DETAIL. IF IT INVOLVES EXCAVATION, INDICATE HOW WIDE, HOW DEEP, ETC. IF THE PROJECT INVOLVES DEMOLITION OF EXISTING BUILDINGS, MAKE THAT CLEAR. IF THE PROJECT INVOLVES REHABILITATION, DESCRIBE THE PROPOSED WORK IN DETAIL. USE ADDITIONAL PAGES IF NECESSARY.

Construction of a 210,000 SF New Middle School in Lee's Summit, Missouri on 52 acre site at the SE corner of Country Lane & SE Bailey Road. Other improvements will include 4 baseball/softball fields, 6 lane track and football field, practice fields, access drives, parking lots. Construction is expected to begin late summer of '20 with the school opening fall of '22.

ARCHAEOLOGY (EARTHMOVING ACTIVITIES)

HAS THE GROUND INVOLVED BEEN GRADED, BUILT ON, BORROWED, OR OTHERWISE DISTURBED? PLEASE DESCRIBE IN DETAIL (USE ADDITIONAL PAGES, IF NECESSARY) PHOTOGRAPHS ARE HELPFUL:

N/A

WILL THE PROJECT REQUIRE FILL MATERIAL? ☐ YES ☑ NO

IF **YES**, INDICATE PROPOSED BORROW AREAS (SOURCE OF FILL MATERIAL) ON TOPOGRAPHIC MAP

ARE YOU AWARE OF ARCHAEOLOGICAL SITES ON OR ADJACENT TO PROJECT AREA? ☐ YES ☑ NO

IF **YES**, IDENTIFY THEM ON THE TOPOGRAPHIC MAP

STRUCTURES (REHABILITATION, DEMOLOTION, ADDITIONS TO, OR CONTRUCTION NEAR EXISTING STRUCTURES)

TO THE BEST OF YOUR KNOWLEDGE, IS THE STRUCTURE LOCATED IN ANY OF THE FOLLOWING?

☐ AN AREA PREVIOUSLY SURVEYED FOR HISTORIC PROPERTIES.	☐ A NATIONAL REGISTER DISTRICT	☐ A LOCAL HISTORIC DISTRICT
IF YES, PLEASE PROVIDE THE NAME OF THE SURVEY OR DISTRICT:	IF YES, PLEASE PROVIDE THE NAME OF THE SURVEY OR DISTRICT:	IF YES, PLEASE PROVIDE THE NAME OF THE SURVEY OR DISTRICT:

- PLEASE PROVIDE PHOTOGRAPHS OF ALL STRUCTURES, SEE PHOTOGRAPHY REQUIREMENTS
- **NOTE:** ALL PHOTOGRAPHS SHOULD BE LABELED AND KEYED TO ONE MAP OF THE PROJECT AREA
- PLEASE PROVIDE A BRIEF HISTORY OF THE BUILDING(S), INCLUDING CONSTRUCTION DATES AND BUILDING USES. (USE ADDITONAL PAGES, IF NECESSARY.)

ADDITIONAL REQUIREMENTS

Map Requirements: Attach a copy of the relevant portion (8 ½ x 11) of the current USGS 7.5 min. topographic map **and**, if necessary, a large scale project map. Please do not send an individual map with each structure or site. While an original map is preferable, a good copy is acceptable. For a list of sites from which to order, download or print the required USGS 7.5 min. topographic maps at little or no cost, consult http://dnr.mo.gov/shpo/sectionrev.htm .

Photography Requirements: Clear black and white or color photographs (minimum 3" x 5") are acceptable. Polariods, photocopies, emailed or faxed photographs are not acceptable. **Good quality photographs are important for expeditious project review**. Photographs of neighboring or nearby buildings are also helpful. All photographs should be labeled and keyed to one map of the project area.

CHECKLIST-DID YOU PROVIDE THE FOLLOWING INFORMATION?

☑ Topographic map 7.5 min. (per project, not structure)	☑ Other supporting documents (If necessary to explain the project)
☑ Thorough description (all projects)	☑ For new construction, rehabilitations, etc., attach work write-ups, plans, drawings, etc.
☐ Photographs (all structures)	☑ Is topographic map identified by quadrangle and year?

Return this Form and Attachments to:

MISSOUR DEPARTMENT OF NATURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
Attn: Section 106 Review
P.O. BOX 176
JEFFERSON CITY, MISSOURI 65102-0176

SECTION 12

Inspection Reports

-Log of Inspections
-Inspection Reports
-Inspector Credentials

Stormwater Construction Site Inspection Report

General Information			
Project Name		**Date of Inspection**	
Permit Number		**Time of Inspection**	
Inspector's Name(s)		**Inspector's Title**	
Inspector's Contact Information			
Describe present phase of construction			
Type of Inspection:	❑ Routine ❑ Post-storm event		

Weather Information
Has there been a storm event since the last inspection? ❑Yes ❑No **If yes, provide:** Storm Start Date: Approximate Amount of Precipitation (in):
Weather at time of this inspection? ❑ Clear ❑Cloudy ❑ Rain ❑ Sleet ❑ Fog ❑ Snowing ❑ High Winds ❑ Other: Temperature:
Were any discharges noted at the time of inspection? ❑Yes ❑No **If yes, describe:**

BMP Effectiveness
Were BMPs operating effectively during inspection? ❑Yes ❑No **If no, does SWPPP need to be amended?**
List any non-effective BMPs in the corrective action log on the next page.
List any amendments to the SWPPP that were identified as being necessary during inspection:

Areas Where Land Disturbance Operations Have Permanently or Temporarily Stopped

INSPECTOR CERTIFICATION

I verify that, to the best of my knowledge and belief, all corrective action items identified during the inspection are complete and accurate.

Inspector Signature: _____ **Date:** _____

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print name and title: _____

Signature: _____ **Date:** _____

#	BMP Location	Corrective Action Needed	Date Corrected	Corrective Actions Taken

Log of Inspections

Inspection Date	Inspector Name	Type of Inspection

Inspection Date	Inspector Name	Type of Inspection

SECTION 13

Regulatory Correspondence

Pertinent correspondence from regulatory agencies relating to this project can be located here.

SECTION 14

Notice of Termination

This section should contain the completed Notice of Termination for the project that can be accessed through the Missouri Gateway for Environmental Management at https://dnr.mo.gov/mogem/.

Documentation of acceptance from the DNR should also be kept here and all documents must be retained for 3 years after the date of NOT acceptance.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH

REQUEST FOR TERMINATION OF OPERATING PERMIT

(REPLACES TERMINATION FORMS H AND J)

FOR OFFICE USE ONLY
DATE RECEIVED

IF A FACILITY OR SITE HAS BEEN SOLD, BUT PERMITTED ACTIVITIES HAVE NOT CEASED, A TRANSFER OF OWNERSHIP FORM (MO 780-1517) MUST BE COMPLETED RATHER THAN A TERMINATION FORM.

ALL APPLICABLE SECTIONS OF THIS FORM MUST BE COMPLETED.

1. FACILITY INFORMATION

PERMIT NUMBER	COUNTY		
NAME OF FACILITY			
PHYSICAL ADDRESS	CITY	STATE	ZIP CODE

FACILITY CONTACT NAME	FACILITY CONTACT TELEPHONE NUMBER	FACILITY CONTACT EMAIL

2. OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE		
ADDRESS	CITY	STATE	ZIP CODE
EMAIL			

3. CONTINUING AUTHORITY

NAME	TELEPHONE NUMBER WITH AREA CODE		
ADDRESS	CITY	STATE	ZIP CODE
EMAIL			

4. REASON FOR TERMINATION REQUEST (CHECK ONE)

☐ Permitted activities have ceased, or facility is closed (must select facility type in section five and attach photographs or any other supporting documents as required)

☐ General Permit MO-G _____or MO-R _____ has been issued and covers all regulated activities

☐ Site specific permit MO- _____ has been issued and covers all regulated activities

☐ Facility has obtained a “No Exposure” certification, MO-NX_____

☐ Industrial activity (SIC Code # _____) is not regulated

☐ For CAFOs, facility size is unregulated (Class II and smaller operations only)

☐ Other (Specify)

5. FACILITY TYPE (CHECK ONE FACILITY TYPE, COMPLETE ONLY IF PERMITTED ACTIVITY HAS CEASED OR FACILITY HAS CLOSED)

☐ For land disturbance sites, the area is stabilized; perennial vegetation, pavement, buildings, or other permanent structures cover all areas that have been disturbed; no further land disturbance activities are planned; all building construction (commercial or residential) is completed; temporary best management practices are removed, and construction equipment is removed. With respect to areas that have been vegetated, vegetation cover shall be at least 70 percent over 100 percent of the site not covered in impervious material. Attach photographs showing stabilized areas.

☐ For wastewater treatment plants, the treatment plant is removed and sludge was removed and properly disposed of, and a closure plan in accordance with 10 CSR 20-6.010(12) or 10 CSR 20-6.015(5) was approved and implemented. Attach documentation required by the approved closure plan and photographs of the closed area. See facility closure fact sheet at dnr.mo.gov/pubs/pub2568.htm for more information on closure requirements for wastewater treatment plants.

☐ For industrial facilities, regulated activities have ceased, no "significant materials" remain on site, and disturbed areas are properly stabilized and/or vegetated. The area is stabilized when perennial vegetation, pavement, buildings, or structures using permanent materials cover all areas that have been disturbed. Vegetation cover shall be at least 70 percent over 100 percent of the site not covered in impervious material. Attach applicable closure documents and photographs of the closed area that demonstrate no permitted activities or materials remain.

☐ For quarries or sand and gravel operations, submit documentation of release from the department's Land Reclamation Program.

☐ For landfills, official closure has been received from department's Solid Waste Management Program (SWMP); cap is vegetated as required by SWMP; and any additional industrial activities are permitted appropriately (i.e. transfer stations, mulching operations, land disturbance, etc.). Attach official SWMP closure letter and permit numbers of any continuing active industrial or land disturbance activities.

☐ For CAFOs

- ☐ Class I CAFOs must properly close lagoons and waste storage structures per a closure plan in accordance with 10 CSR 20-6.300(6) and approved by the department. Please attach photographs of closed lagoons. Also attach any additional information which supports closure of facility.
- ☐ Class II CAFOs must close waste storage structures in accordance with 10 CSR 20-6.300(6)(B), or shall continue to maintain all storage structures so there is no discharge to waters of the state. Attach photographs of closed or re-purposed lagoons, or an explanation of "no discharge" methods. Also attach any additional information that supports closure of facility.

6. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE NUMBER WITH AREA CODE
SIGNATURE	DATE SIGNED

7. MAIL COMPLETED COPY TO:

For Site Specific (MO-), Abandoned Mine And Land Reclamation (MO-G05), Land Disturbance By County Or City (MO-R100), Pesticide Application (MO-G87), Sewer Extension Construction (MO-GC) and CAFO (MO-G01, MO-GS1) Permit Terminations:

Missouri Department of Natural Resources
Water Protection Program
Water Pollution Control Branch
Attn: Operating Permits Section
P.O. Box 176
Jefferson City, MO 65102-0176

For General Permit Terminations (MO-G or MO-R):

Send to the appropriate regional office.
Regional office is determined based on the county where the facility is physically located.

To determine the correct regional office for the permitted facility, please see **dnr.mo.gov/regions/**