STORMWATER POLLUTION PREVENTION PLAN

Designed in accordance with the Missouri State Operating Permit

Lee's Summit Logistics

Permit Tracking # TBD

Owner/Operator:

Scannell Properties #436, LLC
8801 River Crossing Blvd, Suite 300
Indianapolis, IN 46240
317.218.1648

Prepared by:

Olsson
7301 W 133rd Street, Suite 200
Overland Park, KS 66213
913.381.1170

January 2022

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

Scannell Properties #436, LLC
Shaun Cofer
8801 River Crossing Blvd, Suite 300
Indianapolis, IN 46240
317-218-1648
ShaunC@scannellproperties.com

General Contractor

Kaden Construction
Josh Moore
1821 McGee Street
Kansas City, MO 64108
816-686-4552
JMoore@kadean.com

SWPPP Preparer

Olsson
Luke Moore
7301 W. 133rd Street, Suite 200
Overland Park, KS 66213
913-381-1170
lmoore@olsson.com

SWPPP Inspections

Best Management Practices (BMP) Installation

BMP Maintenance

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 Logistics

Project Location: NW Corner of Tudor Road and Main Street

Total project area: 34.24 acres

Area to be disturbed: 37.72 acres

Anticipated start date: January 2022

Anticipated end date: January 2024

Past use: Undeveloped Site.

Historic Preservation Information: Under review.

Endangered Species Information: Under review.

Existing conditions: Undeveloped Site. Under current conditions, outfall flows west and north from the site and drains to Cedar Creek.

Description of Construction Activity: Site work to include a distribution warehouse including grading, site improvements, building construction and utility installation.

Table 1. Anticipated Sequence of Construction.

EROSION CONTROL STAGING CHART				
PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE-CONSTRUCTION	A1	INSTALL SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
	A2	TEMPORARY CONSTRUCTION ENTRANCE	C	INSTALL AS INDICATED ON PLANS
	A3	TEMPORARY CONCRETE WASHOUT	C	INSTALL AS INDICATED ON PLANS
	A4	TEMPORARY STAGING/STOCKPILE AREA	C	INSTALL AS INDICATED ON PLANS
	A5	TEMPORARY SEDIMENT FENCE	C	INSTALL AS INDICATED ON PLANS
	A6	TEMPORARY SEDIMENT BASIN	C	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A7	END SECTION PROTECTION (RIPRAP)	C	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A8	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
	A9	EXISTING INLET PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	A10	TEMPORARY WATTLE/BIODEGRADABLE LOG	C	INSTALL AS INDICATED ON PLANS
	A11	TEMPORARY DIVERSION BERM	C	INSTALL AS INDICATED ON PLANS
	A12	TEMPORARY REINFORCED SILT FENCE SLOPE BARRIER	C	INSTALL AS INDICATED ON PLANS
	A13	TEMPORARY SWALE	B	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A14	TEMPORARY STREAM CROSSING	B	INSTALL AS INDICATED ON PLANS
B – CLEARING, MASS GRADING, AND CONSTRUCTION OF SANITARY SEWER	B1	TEMPORARY DIVERSION BERM	B	INSTALL AS INDICATED ON PLANS
	B2	TEMPORARY SEDIMENT FENCE	C	INSTALL AS INDICATED ON PLANS
	B3	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
C – CONSTRUCTION: BUILDING, PAVEMENT & STORM SEWER AND UTILITIES	C1	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
	C2	TEMPORARY CURB INLET PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C3	TEMPORARY AREA INLET/JUNCTION BOX PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C4	TEMPORARY LANDSCAPE DRAIN PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C5	TEMPORARY CURB INLET PROTECTION (CONDITION B)	C	REMOVE AS INDICATED ON PLANS
	C6	TEMPORARY AREA INLET/JUNCTION BOX PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C7	TEMPORARY LANDSCAPE DRAIN PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C8	END SECTION PROTECTION (RIPRAP)	N/A	REFERENCE STORM SEWER SHEETS FOR DESIGN AND INSTALLATION INFORMATION
	C9	REMOVE SEDIMENT BASIN	N/A	REMOVE AS INDICATED ON PLANS
D – POST CONSTRUCTION: FINAL STABILIZATION	D1	CONVERT SEDIMENT BASINS TO FINAL CONDITION (DRY DETENTION BASIN)	N/A	REFERENCE GRADING AND STORM SHEETS FOR FINAL DESIGN INFORMATION
	D2	REPLACE TOP SOIL, SEED MULCH, SOD, LANDSCAPE	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF THE DISTURBED AREA. REFERENCE LANDSCAPE UNDERSTORY PLANS FOR DETAILS INTERNAL TO THE LIMITS OF SEEDING PER THE LEGEND ABOVE.

Location of nearby or on-site surface waters: Cedar Creek

Table 2. Outfalls.

#	Type	Location	Drainage Area
1	Storm Drain into Sediment Basin	NE,NW,SW	Cedar Creek

Receiving Waters: All outfall from the project is received by Cedar 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
Extended Dry Detention Basin	NW,NE,SW corner of Building 1 or A.		Reference Land Disturbance Plans

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:

<u>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</u>
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. (Lee's Summit, Missouri) Contact.

Name/Position	Contact Number
Kara Taylor, Public Works	816.989.1800

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:

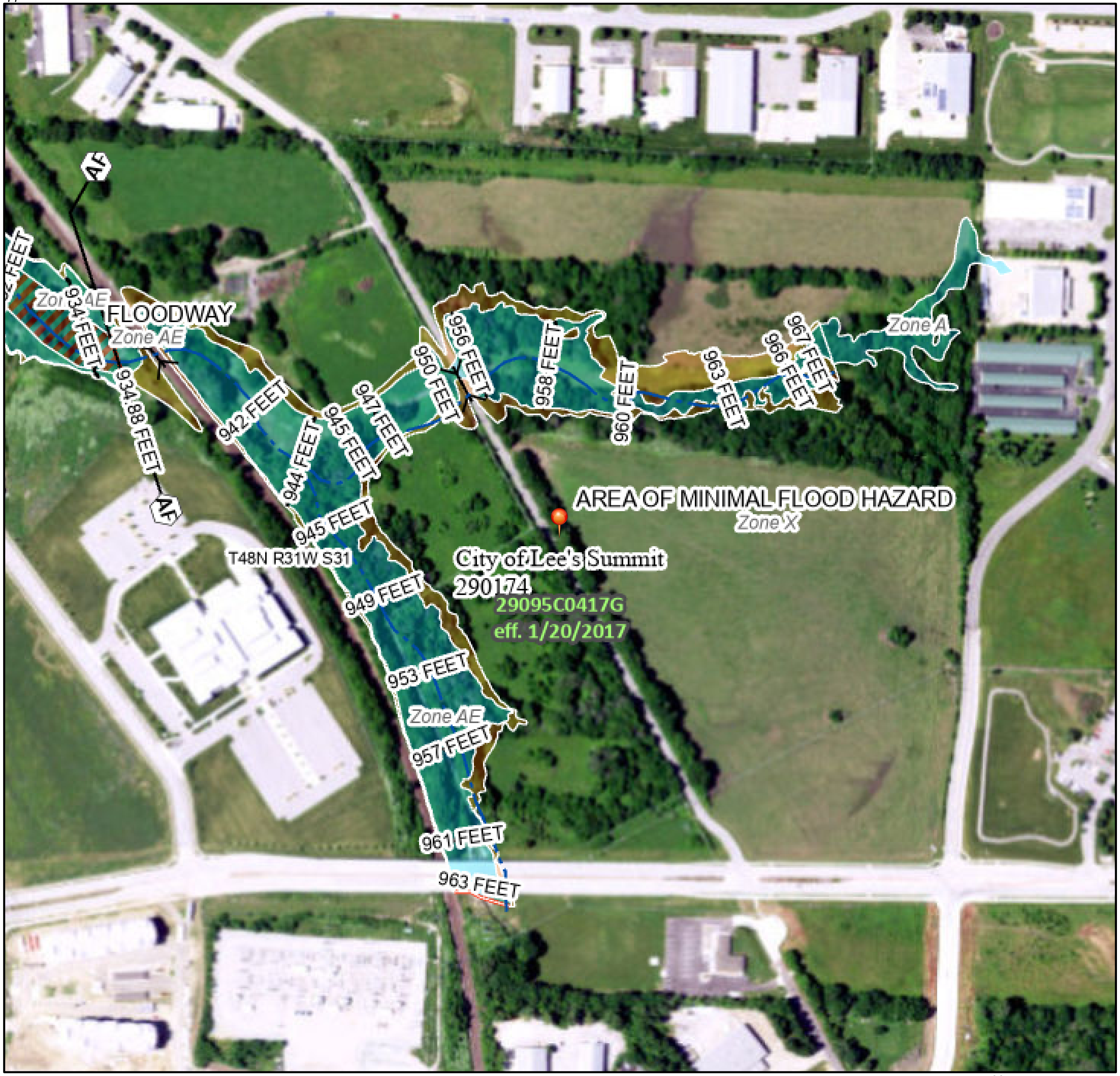
-Required Location, Vicinity and Topographical Maps (as needed)

-FIRM Maps

-Soils Maps if needed

1DWLRQDO)ORRG+D]DUG/DHU)5LWWH

FEMA



)HHW

/HJHQG

6(( )(5)25 '(7$,/(' /(*(1' $1' ,1'(; 0$3)25),50 3$1(/ /$<287

SPECIAL FLOOD HAZARD AREAS: :LWKRXW %DVH)ORRG (OHYDWLRQ %)(=RQH $ 9 $ / :LWK %)(RU 'HSWK =RQH $($2 $+ 9($5 / 5HJXODWRU\ )ORRGZD\

OTHER AREAS OF FLOOD HAZARD: $QQXDO &KDQFH)ORRG +D]DUG $UHDV RI DQQXDO FKDQFH IORRG ZLWK DYHUDJH GHSWK OHVV WKDQ RQH IRRW RU ZLWK GUDLQDJH DUHDV RI OHVV WKDQ RQH VTXDUH PLOH =RQH ; /)XWXUH &RQGLWLRQV $QQXDO &KDQFH)ORRG +D]DUG =RQH ; / $UHD ZLWK 5HGXFHG)ORRG 5LVN GXH WR /HYHH 6HH 1RWHV =RQH ; / $UHD ZLWK)ORRG 5LVN GXH WR /HYHH =RQH '

OTHER AREAS: 12 6&5((1 $UHD RI 0LQLPDO)ORRG +D]DUG =RQH ; / (IIHFWLYH /20&V / $UHD RI 8QGHWHUPLQHG)ORRG +D]DUG =RQH '

GENERAL STRUCTURES: &KDQQHO &XOYHUW RU 6WRUP 6HZHU / /HYHH 'LNH RU)ORRGZDOO

OTHER FEATURES: &URVV 6HFWLRQV ZLWK $QQXDO &KDQFH / :DWHU 6XUIDFH (OHYDWLRQ / &RDVWDO 7UDQVHFW / %DVH)ORRG (OHYDWLRQ /LQH %)(/ /LPLW RI 6WXG\ / -XULVGLFWLRQ %RXQGDU\ / &RDVWDO 7UDQVHFW %DVHOLQH / 3URILOH %DVHOLQH / +\GURJUDSKLF)HDWXUH

MAP PANELS: 'LJLWDO 'DWD $YDLODEOH / 1R 'LJLWDO 'DWD $YDLODEOH / 8QPDSSHG

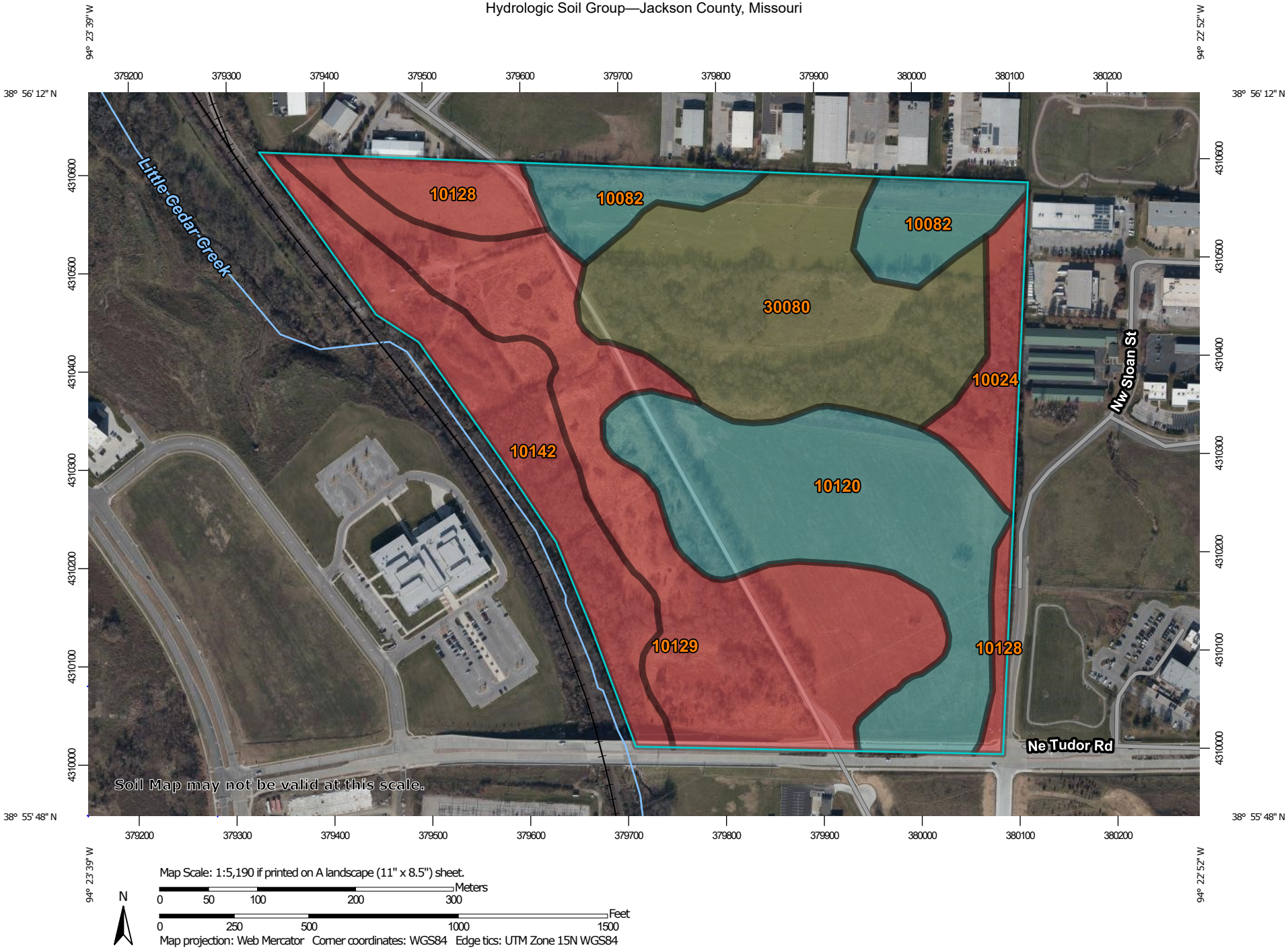
7KH SLQ GLVSOD\HG RQ WKH PDS LV DQ DSSUR[LPDWH SRLQW VHOHFWHG E\ WKH XVHU DQG GRHV QRW UHSUHVHQW DQ DXWKRULWDWLYH SURSHUW\ ORFDWLRQ

7KLV PDS FRPSOLHV ZLWK)(0$ V VWDQGDUGV IRU WKH XVH RI GLJLWDO IORRG PDSV LI LW LV QRW YRLG DV GHVFULEHG EHORZ 7KH EDVHPDS VKRZQ FRPSOLHV ZLWK)(0$ V EDVHPDS DFFXUDF\ VWDQGDUGV

7KH IORRG KD]DUG LQIRUPDWLRQ LV GHULYHG GLUHFWO\ IURP WKH DXWKRULWDWLYH 1)+/ ZHE VHUYLFHV SURYLGHG E\ )(0$ 7KLV PDS ZDV H[SRUWHG RQ DW $0 DQG GRHV QRW UHIOHFW FKDQJHV RU DPHQGPHQWV VXEVHTXHQW WR WKLV GDWH DQG WLPH 7KH 1)+/ DQG HIIHFWLYH LQIRUPDWLRQ PD\ FKDQJH RU EHFRPH VXSHUVHGHG E\ QHZ GDWD RYHU WLPH

7KLV PDS LPDJH LV YRLG LI WKH RQH RU PRUH RI WKH IROORZLQJ PDS HOHPHQWV GR QRW DSSHDU EDVHPDS LPDJHU\ IORRG]RQH ODEHOV OHJHQG VFDOH EDU PDS FUHDWLRQ GDWH FRPPXQLW\ LGHQWLILHUV),50 SDQHO QXPEHU DQG),50 HIIHFWLYH GDWH 0DS LPDJHV IRU XQPDSSHG DQG XQPRGHUQL]HG DUHDV FDQQRW EH XVHG IRU UHJXODWRU\ SXUSRVHV

%DVHPDS 86*6 1DWLRQDO 0DS 2UWKRLPDJHU\ GDWD UHIUHVKHG 2FWREHU



Map Scale: 1:5,190 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

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 23, Sep 1, 2021

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
10024	Greenton-Urban land complex, 5 to 9 percent slopes	D	3.4	4.2%
10082	Arisburg-Urban land complex, 1 to 5 percent slopes	C	6.4	7.9%
10120	Sharpsburg silt loam, 2 to 5 percent slopes	C	17.3	21.6%
10128	Sharpsburg-Urban land complex, 2 to 5 percent slopes	D	4.0	5.0%
10129	Sharpsburg-Urban land complex, 5 to 9 percent slopes	D	21.2	26.4%
10142	Snead-Rock outcrop complex, 5 to 14 percent slopes	D	9.7	12.1%
30080	Greenton silty clay loam, 5 to 9 percent slopes	C/D	18.3	22.8%
Totals for Area of Interest			**80.4**	**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
SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS

AN UNPLATTED PARCEL IN THE WEST HALF OF SECTION 31, TOWNSHIP 48 NORTH, RANGE 31 WEST, IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

UTILITY AND GOVERNING AGENCY CONTACT INFORMATION	
CITY OF LEE'S SUMMIT, MO	
CITY OF LEE'S SUMMIT: CITY HALL	220 SE GREEN STREET LEE'S SUMMIT, MO 64063 PH: 816-969-1200
LEE'S SUMMIT DEVELOPMENT SERVICES:	220 SE GREEN STREET LEE'S SUMMIT, MO 64063 PH: 816-969-1800
LEE'S SUMMIT PUBLIC WORKS:	220 SE GREEN STREET LEE'S SUMMIT, MO 64063 PH: 816-969-1800
LEE'S SUMMIT UTILITIES SERVICE CENTER:	1200 SE HAMBLEN ROAD LEE'S SUMMIT, MO 64081 PH: 816-969-1900
LEE'S SUMMIT R-7 SCHOOL DISTRICT	KINZIE WOODERSON 301 NE TUDOR ROAD LEE'S SUMMIT, MO 64086 PH: 816-986-1050 KINZIE.WOODERSON@LRS7.NET
CABLE/FIBER/TELEPHONE SERVICE	
AT&T	RON GIPFERT 500 E. 8TH STREET, ROOM 1146 KANSAS CITY, MO 64106 PH: 816-275-1550 EMAIL: RG7910@ATT.COM
CONSOLIDATED COMMUNICATIONS	JOHN CASTILOW 14859 W. 95TH STREET LENEXA, KS 66215 PH: 913-322-9785 EMAIL: JOHNCASTILOW@CONSOLIDATED.COM
GOOGLE FIBER	LAUREN MARCUCCI 1814 WESTPORT ROAD KANSAS CITY, MO 64111 PH: 913-663-1900 EMAIL: LMARCUCCI@GOOGLE.COM
CHARTER/SPECTRUM	TROY PREWITT 8221 W. 119TH STREET OVERLAND PARK, KS 66213 PH: 816-401-3573 EMAIL: TROY.PREWITT@CHARTER.COM
ELECTRIC SERVICE	
EVERGY	JEFF R. WILLIAMS - ENGINEER CENTRAL DIVISON 401 SE BAILEY ROAD LEE'S SUMMIT, MO 64081 PH: 816-347-4310 EMAIL: JEFF.WILLIAMS@KCPL.COM
GAS SERVICE	
SPIRE GAS	RICHARD FROCK 3025 SE CLOVER DRIVE LEE'S SUMMIT, MO 64082 PH: 816-472-3489 EMAIL: RICHARD.FROCK@SPIREENERGY.COM

DEVELOPMENT TEAM CONTACT INFORMATION	
OWNER/DEVELOPER	
SHAUN COFER SCANNELL PROPERTIES #436, LLC	8801 RIVER CROSSING BLVD SUITE 300 INDIANAPOLIS, IN 46240 PH: 317-218-1648 EMAIL: Shaunc@scannellproperties.com
CIVIL ENGINEER	
SETH REECE/LUKE MOORE CJ SHIPWRIGHT, PE OLSSON	7301 W. 133RD STREET SUITE 200 OVERLAND PARK, KS 66213 PH: 913.381.1170 EMAIL: sreece@olsson.com /lmoore@olsson.com EMAIL: cshipwright@olsson.com

LOCATION MAP
NOT TO SCALE

Sheet List Table	
Sheet Number	Sheet Title
LD0.0	COVER SHEET
LD0.1	GENERAL NOTES
LD1.0	PHASE A - EROSION CONTROL PLAN
LD1.1	PHASE B - EROSION CONTROL PLAN
LD1.2	PHASE C - EROSION CONTROL PLAN
LD1.3	PHASE D - EROSION CONTROL PLAN
LD1.4	SEDIMENT BASIN #1 DETAIL
LD1.5	SEDIMENT BASIN #2 DETAIL
LD2.0	EROSION CONTROL DETAILS
LD2.1	EROSION CONTROL DETAILS
LD2.2	EROSION CONTROL DETAILS
LD2.3	EROSION CONTROL DETAILS
LD2.4	EROSION CONTROL DETAILS

PROPERTY DESCRIPTION:

TRACT 1:

THE NORTH 25.5 ACRES OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 LYING EAST OF MISSOURI PACIFIC RAILROAD RIGHT-OF-WAY IN SECTION 31, TOWNSHIP 48, RANGE 31, IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, EXCEPT A TRACT DESCRIBED AS FOLLOWS:

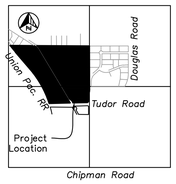
ALL THAT PORTION OF THE NORTH 25.5 ACRES OF THE NORTHEAST 1/4 OF SOUTHWEST 1/4, LYING EAST OF MISSOURI-PACIFIC RAILROAD RIGHT OF WAY IN SECTION 31, TOWNSHIP 48, RANGE 31 DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF THE NORTHEAST 1/4 OF SOUTHWEST 1/4 OF SECTION 31, TOWNSHIP 48, RANGE 31, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI; THENCE SOUTH ALONG THE EAST LINE OF SAID 1/4 1/4 SECTION, A DISTANCE OF 914.5 FEET; THENCE WEST PARALLEL TO THE NORTH LINE OF SAID 1/4 1/4 SECTION, 411.0 FEET TO THE TRUE POINT OF BEGINNING OF THE TRACT HEREIN DESCRIBED, SAID TRUE POINT OF BEGINNING BEING IN THE WESTERLY LINE OF PUBLIC ROAD; THENCE NORTH 31 DEGREES 00 MINUTES WEST ALONG AND WITH THE WESTERLY LINE OF PUBLIC ROAD, A DISTANCE OF 267.0 FEET TO A POINT 688.79 FEET SOUTH OF THE NORTH LINE OF SAID NORTHEAST 1/4 OF SOUTHWEST 1/4 SECTION; THENCE WEST PARALLEL TO SAID NORTH LINE OF 1/4 1/4 SECTION, 731.4 FEET TO A POINT IN THE EASTERLY LINE OF MISSOURI-PACIFIC RAILROAD RIGHT OF WAY; THENCE SOUTHEASTERLY WITH SAID RAILROAD RIGHT OF WAY, ALONG A CURVE TO THE RIGHT (HAVING A RADIUS OF 3175.4 FEET), A DISTANCE OF 234.0 FEET TO A POINT 914.5 FEET SOUTH OF THE NORTH LINE OF SAID NORTHEAST 1/4 OF SOUTHWEST 1/4 SECTION: THENCE EAST ALONG THE SOUTH LINE OF 25.5 ACRES TRACT, 812.7 FEET TO THE TRUE POINT OF BEGINNING, AND EXCEPT THAT PART IN STREETS AND ROADS.

TRACT 2:

ALL THAT PART OF LOT 2 OF THE SOUTHEAST QUARTER (SW 1/4) (AS SHOWN ON THE GOVERNMENT SURVEY) OF SECTION 31, TOWNSHIP 48, RANGE 31 IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, LYING EAST OF THE MISSOURI PACIFIC RAILROAD COMPANY RIGHT-OF-WAY, EXCEPT THAT PART IN STREETS AND ROADS.

TRACT 3:

ALL OF THE SOUTH 1/2 OF THE NORTHWEST 1/4 LYING EAST OF RAILROAD RIGHT-OF-WAY IN SECTION 31, TOWNSHIP 48, RANGE 31, IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, EXCEPT THAT PART IN STREETS AND ROADS.



Section 31, T48N, R31W

VICINITY MAP

Scale: 1" = 2000'

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.

COLIN JENNINGS SHIPWRIGHT, P.E.
CIVIL ENGINEER
MO # PE-2021039302

DATE

☐ NOT FOR CONSTRUCTION

☒ REVIEWED FOR CONSTRUCTION

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

SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS SHIPWRIGHT
NUMBER PE-2021039302
PROFESSIONAL ENGINEER
06/21/22

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

COVER SHEET
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_TTL_02104157.dwg
date:

SHEET
LD0.0

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\GNCV\PHASE 1\Land Disturbance\C_TTL_02104157.dwg USER: lmoore
DATE: Jan 20, 2022 9:31pm XREFS: C_TBLK_02104157

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.
19. EXISTING TOPSOIL SHALL BE STRIPPED TO A POINT WHERE ALL VEGETATION IS REMOVED. REFER TO CITY STANDARDS.
20. THE CONTRACTOR SHALL, BY HIS OWN INVESTIGATION, AND PRIOR TO COMMENCING WORK, SATISFY HIMSELF AS TO THE SURFACE AND SUBSURFACE CONDITIONS TO BE ENCOUNTERED.
21. 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.
22. 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.
23. THE CONTOUR LINES SHOWN ARE FOR MASS GRADING PURPOSES.
24. EXISTING CONTOURS REPRESENT MASS FINISH GRADE ELEVATIONS.
25. 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.
26. THE CONTRACTOR SHALL GRADE LANDSCAPED AREAS TO PROVIDE POSITIVE DRAINAGE IN THE BORROW AREA.
27. 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.
28. 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.
29. 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.
30. 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.
31. 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.
32. 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 AND ADA RAMP HAVE A MAXIMUM CROSS SLOPE OF 2 PERCENT AND A MAXIMUM LONGITUDINAL SLOPE OF 8.33 PERCENT.
33. 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.
34. 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.
35. 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.
36. ALL ON-SITE WIRING AND CABLES SHALL BE PLACED UNDERGROUND.
37. 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.

GENERAL UTILITY NOTES

39. THE SIZE AND LOCATION OF SERVICES SHALL BE VERIFIED WITH THE ARCHITECTURAL AND MEP PLANS PRIOR TO CONSTRUCTION. IF DISCREPANCIES EXIST, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
40. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING SLEEVING UNDER PAVING AREAS WHERE NECESSARY.
41. INSTALL ALL PIPE LENGTHS, BENDS AND FITTINGS NECESSARY FOR UTILITY CONNECTIONS.
42. CONTRACTOR SHALL VERIFY ALL CROSSING ELEVATIONS AND LOCATIONS, SIZES, AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION OF STORM LINES AND ALL UTILITY SERVICE CONNECTIONS. ANY CONFLICTS SHALL BE MADE KNOWN TO THE ENGINEER AND RESOLVED PRIOR TO CONSTRUCTION.
43. CONTRACTOR TO VERIFY FIRE SERVICE SIZE WITH SPRINKLER DESIGNER/CONTRACTOR PRIOR TO CONSTRUCTION AND INSTALLATION OF METER/BACKFLOW PREVENTER AND SERVICES. NOTIFY ENGINEER OF ALTERATIONS.
44. CONTRACTOR RESPONSIBLE FOR PAYING ALL TAP AND CONNECTION FEES AND SHALL CONTRACT AND PAY FOR ANY REQUIRED SUB CONTRACTORS BY UTILITY COMPANIES.
45. REFERENCE MEP PLANS FOR BUILDING CONNECTIONS.
46. CONTRACTOR TO REPAIR ALL AREA DAMAGED BY CONSTRUCTION TO EXISTING CONDITIONS OR BETTER.
47. BACK FLOW PREVENTION TO BE PROVIDED INSIDE BUILDING. SEE MEP AND ARCHITECTURAL PLANS FOR DETAILS.
48. LOCATION FOR POWER SHOWN IS APPROXIMATE AND SUBJECT TO CHANGE. CONTRACTOR TO VERIFY FINAL LOCATION AND DESIGN WITH UTILITY COMPANY PRIOR TO CONSTRUCTION.
49. CONTRACTOR TO COORDINATE LIGHT POLE LOCATIONS WITH OWNER, STORM SEWER INSTALLATION AND UTILITY COMPANIES PRIOR TO INSTALLATION TO AVOID CONFLICTS. NOTIFY ENGINEER AND ARCHITECT OF ANY CONFLICTS PRIOR TO INSTALLATION.
50. WATER METER CANNOT BE INSTALLED IN THE BUILDING.
51. CONTRACTOR SHALL COORDINATE CABLE/FIBER OPTIC CONDUIT AND SERVICE INSTALLATION WITH UTILITY COMPANY.
52. ALL TAPS AND CONNECTIONS FOR FIRE AND DOMESTIC WATER SERVICES ARE TO BE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT, MO, STANDARDS AND SPECIFICATIONS.
53. CONTRACTOR TO COORDINATE POWER ROUTING TO MONUMENT SIGNS NOT SHOWN ON PLANS.
54. ALL ROOF DRAIN AND DOWNSPOUT HEADER PIPES SHALL BE 12" HDPE PIPE AND INSTALLED AT 1.00% MINIMUM SLOPE UNLESS OTHERWISE NOTED WITHIN THIS PLAN. ALL BENDS AND FITTINGS NEEDED TO BUILD ROUTING AS SHOWN SHALL BE INCLUDED IN BID.
55. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY FITTINGS TO COMPLETE ROOF DRAIN AND DOWNSPOUT CONNECTIONS TO BUILDINGS. ALL ROOF DRAIN AND DOWNSPOUT CONNECTIONS / FITTINGS, INCLUDING BUT NOT LIMITED TO BENDS AND TEES, SHALL BE MADE OF HDPE PIPE UNLESS OTHERWISE NOTED WITHIN THIS PLAN.
56. THE CONTRACTOR SHALL CONTACT THE CITY;S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH AN INSPECTOR (816.969.1200) PRIOR TO ANY LAND DISTURBANCE WORK.
57. WHERE REQUIRED BY THE FIRE CODE OFFICIAL, APPROVED SIGNS OR OTHER APPROVED NOTICES OR MARKINGS THAT INCLUDE THE WORDS NO PARKING-FIRE LANE SHALL BE PROVIDED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS OR PROHIBIT THE OBSTRUCTION THEREOF. THE MEANS BY WHICH FIRE LANES ARE DESIGNATED SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION AT ALL TIMES AND BE REPLACED OR REPAIRED WHEN NECESSARY TO PROVIDE ADEQUATE VISIBILITY.

DEMOLITION NOTES:

1. CONTRACTOR TO PRESERVE ALL SURVEY CONTROL.
2. CONTRACTOR TO COMPLETE DEMOLITION PER THE INTENT OF THESE PLANS AND PROPOSED IMPROVEMENTS.
3. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE ENGINEER MAKES NO GUARANTEES THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THIS INCLUDES PRIVATE AND PUBLIC UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT KANSAS ONE CALL AT 1-800-344-7233 IN ADVANCE OF ANY EXCAVATION TO COORDINATE UTILITY LOCATIONS.
4. CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER EXISTING LINES NOT OF RECORD OR SHOWN ON THESE PLANS.
5. REMOVAL AND DISPOSAL OF BUSHES AND TREES SMALLER THAN 12" IN DIAMETER SHALL BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR CLEARING AND GRUBBING.
6. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OFF SITE BY THE CONTRACTOR.
7. DO NOT DISRUPT UTILITY SERVICE TO ADJACENT BUSINESSES OR RESIDENCES WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER.
8. DO NOT DISRUPT TRAFFIC ON ADJACENT PUBLIC STREETS WITHOUT PRIOR WRITTEN APPROVAL BY THE CITY.
9. ALL SIDEWALK AND PAVEMENT TO REMAIN SHALL BE PROTECTED IN PLACE INCLUDING PROTECTION FROM DAMAGE CAUSED BY REMOVAL OF ABUTTING PAVEMENT. CONTRACTOR SHALL SAW CUT WHERE NECESSARY.
10. CONTRACTOR SHALL GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DISCONNECTION, DEMOLITION, AND REMOVAL OF SERVICE LINES. CAP ALL LINES BEFORE PROCEEDING WITH WORK ON THIS CONTRACT.
11. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANIES WORK FORCE AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES.
12. CONTRACTOR SHALL PROTECT THE PUBLIC AT ALL TIME WITH FENCING, BARRICADES, ENCLOSURES, ETC. TO THE BEST PRACTICES AND AS APPROVED BY THE ENGINEER AND THE CITY.
13. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
14. DEMOLITION OF BUILDINGS SHALL INCLUDE THE BUILDING STRUCTURE, PAD, FOOTINGS, FOUNDATIONS, BASEMENT WALLS, BASEMENT FLOORS, TRUCK DOCKS, STEPS, DECKS, ALL ITEMS REMAINING IN BUILDING, ALL BUILDING UTILITY SERVICES, SIDEWALKS, AND BACKFILLING AND RESTORING REMAINING EXCAVATIONS, BASEMENTS AND TRENCHES PER SPECIFICATIONS.
15. ALL LIGHT POLE DEMOLITION SHALL INCLUDE FIXTURES, BASES AND WIRING.
16. ALL UTILITY DEMOLITION SHALL INCLUDE METERS, MANHOLES AND OTHER STRUCTURES ASSOCIATED WITH THE UTILITY SERVICE LINE.

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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SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS
SHIPWRIGHT
NUMBER
PE-2021035302
01/21/2022

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL NOTES
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.C_TTL_02104157.dwg
date:

SHEET
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DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\GNCV\PHASE 1\Land Disturbance\C_TTL_02104157.dwg USER: lmoore
DATE: Jan 20, 2022 9:32pm XREFS: C_TBLK_02104157

LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- 830 EXISTING CONTOUR
- 830 PROPOSED CONTOUR
- TEMPORARY SEDIMENT FENCE
- INSTALL TEMPORARY REINFORCED SILT FENCE SLOPE BARRIER
- INSTALL TEMPORARY WATTLE/BIODEGRADABLE LOG
- LIMITS OF DISTURBANCE (34.24 ACRES)
- DRAINAGE BOUNDARIES
- TEMPORARY DIVERSION BERM (REFERENCE DETAILS) (18" DEEP BERM W/ "ECB S32
- INSTALL TEMPORARY SWALE
- STABILIZATION. "LANDLOK (S2)" (EROSION CONTROL BLANKET) SHALL BE USED OR APPROVED EQUAL. CONTACTOR TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. SEED WITH PERENNIAL SEEDING TO MEET SWPPP REQUIREMENTS. INSTALL PER DETAIL AND MANUFACTURER RECOMMENDATIONS.
- TEMPORARY CONSTRUCTION ENTRANCE
- TEMPORARY STAGING/STOCKPILE AREA
- CONCRETE WASHOUT
- TEMPORARY GRAVEL FILTER BAGS
- XX EROSION CONTROL REFERENCE NUMBER

EROSION CONTROL STAGING CHART

PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE–CONSTRUCTION	A1	INSTALL SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
	A2	TEMPORARY CONSTRUCTION ENTRANCE	C	INSTALL AS INDICATED ON PLANS
	A3	TEMPORARY CONCRETE WASHOUT	C	INSTALL AS INDICATED ON PLANS
	A4	TEMPORARY STAGING/STOCKPILE AREA	C	INSTALL AS INDICATED ON PLANS
	A5	TEMPORARY SEDIMENT FENCE	C	INSTALL AS INDICATED ON PLANS
	A6	TEMPORARY SEDIMENT BASIN	C	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A7	END SECTION PROTECTION (RIPRAP)	C	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A8	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
	A9	EXISTING INLET PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	A10	TEMPORARY WATTLE/BIODEGRADABLE LOG	C	INSTALL AS INDICATED ON PLANS
	A11	TEMPORARY DIVERSION BERM	C	INSTALL AS INDICATED ON PLANS
	A12	TEMPORARY REINFORCED SILT FENCE SLOPE BARRIER	C	INSTALL AS INDICATED ON PLANS
	A13	TEMPORARY SWALE	B	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A14	TEMPORARY STREAM CROSSING	B	INSTALL AS INDICATED ON PLANS
B – CLEARING, MASS GRADING, AND CONSTRUCTION OF SANITARY SEWER	B1	TEMPORARY DIVERSION BERM	B	INSTALL AS INDICATED ON PLANS
	B2	TEMPORARY SEDIMENT FENCE	C	INSTALL AS INDICATED ON PLANS
	B3	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
C – CONSTRUCTION: BUILDING, PAVEMENT & STORM SEWER AND UTILITIES	C1	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
	C2	TEMPORARY CURB INLET PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C3	TEMPORARY AREA INLET/JUNCTION BOX PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C4	TEMPORARY LANDSCAPE DRAIN PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C5	TEMPORARY CURB INLET PROTECTION (CONDITION B)	C	REMOVE AS INDICATED ON PLANS
	C6	TEMPORARY AREA INLET/JUNCTION BOX PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C7	TEMPORARY LANDSCAPE DRAIN PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C8	END SECTION PROTECTION (RIPRAP)	N/A	REFERENCE STORM SEWER SHEETS FOR DESIGN AND INSTALLATION INFORMATION
	C9	REMOVE SEDIMENT BASIN	N/A	REMOVE AS INDICATED ON PLANS
D – POST CONSTRUCTION: FINAL STABILIZATION	D1	CONVERT SEDIMENT BASINS TO FINAL CONDITION (DRY DETENTION BASIN)	N/A	REFERENCE GRADING AND STORM SHEETS FOR FINAL DESIGN INFORMATION
	D2	REPLACE TOP SOIL, SEED MULCH, SOD, LANDSCAPE	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF THE DISTURBED AREA. REFERENCE LANDSCAPE UNDERSTORY PLANS FOR DETAILS INTERNAL TO THE LIMITS OF SEEDING PER THE LEGEND ABOVE.

N

0' 40' 80' 160'
SCALE IN FEET

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SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS
SHIPWRIGHT
NUMBER
PE-2021038302
10/21/22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

PHASE A - EROSION CONTROL PLAN
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

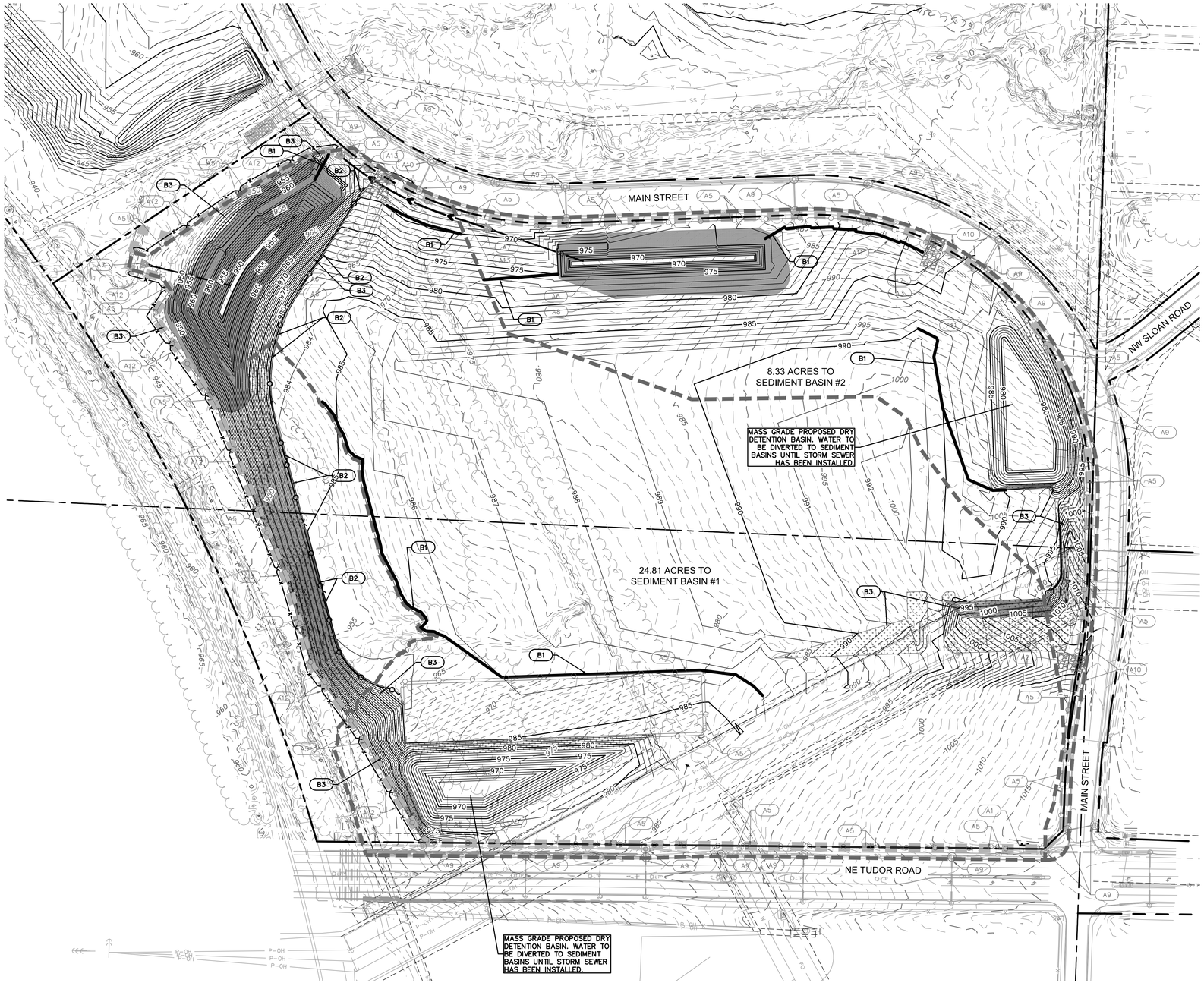
LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing ⧉ERO01_02104157.dwg
date:

SHEET
LD1.0

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\GNCV\PHASE 1\Land Disturbance\C_ERO01_02104157.dwg USER: lmoore
DATE: Jan 20, 2022 9:32pm XREFS: C_PBASE_02104157 C_PSURF_02104157 C_TBLK_02104157 C_XBASE_02104157 C_PSURF_ERO1_02104157 C_ERC_LEGEND_02104157



LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- 830 EXISTING CONTOUR
- 830 PROPOSED CONTOUR
- TEMPORARY SEDIMENT FENCE
- INSTALL TEMPORARY REINFORCED SILT FENCE SLOPE BARRIER
- INSTALL TEMPORARY WATTLE/BIODEGRADABLE LOG
- LIMITS OF DISTURBANCE (34.24 ACRES)
- DRAINAGE BOUNDARIES
- TEMPORARY DIVERSION BERM (REFERENCE DETAILS) (18" DEEP BERM W/ "ECB S32
- INSTALL TEMPORARY SWALE
- STABILIZATION. "LANDLOK (S2)" (EROSION CONTROL BLANKET) SHALL BE USED OR APPROVED EQUAL. CONTACTOR TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. SEED WITH PERENNIAL SEEDING TO MEET SWPPP REQUIREMENTS. INSTALL PER DETAIL AND MANUFACTURER RECOMMENDATIONS.
- STABILIZATION. "LANDLOK (S2)" (EROSION CONTROL BLANKET) SHALL BE USED OR APPROVED EQUAL. CONTACTOR TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. SEED WITH PERENNIAL SEEDING TO MEET SWPPP REQUIREMENTS. INSTALL PER DETAIL AND MANUFACTURER RECOMMENDATIONS.
- TEMPORARY CONSTRUCTION ENTRANCE
- TEMPORARY STAGING/STOCKPILE AREA
- CONCRETE WASHOUT
- TEMPORARY GRAVEL FILTER BAGS
- XX EROSION CONTROL REFERENCE NUMBER

EROSION CONTROL STAGING CHART

PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE–CONSTRUCTION	A1	INSTALL SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
	A2	TEMPORARY CONSTRUCTION ENTRANCE	C	INSTALL AS INDICATED ON PLANS
	A3	TEMPORARY CONCRETE WASHOUT	C	INSTALL AS INDICATED ON PLANS
	A4	TEMPORARY STAGING/STOCKPILE AREA	C	INSTALL AS INDICATED ON PLANS
	A5	TEMPORARY SEDIMENT FENCE	C	INSTALL AS INDICATED ON PLANS
	A6	TEMPORARY SEDIMENT BASIN	C	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A7	END SECTION PROTECTION (RIPRAP)	C	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A8	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
	A9	EXISTING INLET PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	A10	TEMPORARY WATTLE/BIODEGRADABLE LOG	C	INSTALL AS INDICATED ON PLANS
	A11	TEMPORARY DIVERSION BERM	C	INSTALL AS INDICATED ON PLANS
	A12	TEMPORARY REINFORCED SILT FENCE SLOPE BARRIER	C	INSTALL AS INDICATED ON PLANS
	A13	TEMPORARY SWALE	B	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A14	TEMPORARY STREAM CROSSING	B	INSTALL AS INDICATED ON PLANS
B – CLEARING, MASS GRADING, AND CONSTRUCTION OF SANITARY SEWER	B1	TEMPORARY DIVERSION BERM	B	INSTALL AS INDICATED ON PLANS
	B2	TEMPORARY SEDIMENT FENCE	C	INSTALL AS INDICATED ON PLANS
	B3	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
C – CONSTRUCTION: BUILDING, PAVEMENT & STORM SEWER AND UTILITIES	C1	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
	C2	TEMPORARY CURB INLET PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C3	TEMPORARY AREA INLET/JUNCTION BOX PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C4	TEMPORARY LANDSCAPE DRAIN PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C5	TEMPORARY CURB INLET PROTECTION (CONDITION B)	C	REMOVE AS INDICATED ON PLANS
	C6	TEMPORARY AREA INLET/JUNCTION BOX PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C7	TEMPORARY LANDSCAPE DRAIN PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C8	END SECTION PROTECTION (RIPRAP)	N/A	REFERENCE STORM SEWER SHEETS FOR DESIGN AND INSTALLATION INFORMATION
	C9	REMOVE SEDIMENT BASIN	N/A	REMOVE AS INDICATED ON PLANS
D – POST CONSTRUCTION: FINAL STABILIZATION	D1	CONVERT SEDIMENT BASINS TO FINAL CONDITION (DRY DETENTION BASIN)	N/A	REFERENCE GRADING AND STORM SHEETS FOR FINAL DESIGN INFORMATION
	D2	REPLACE TOP SOIL, SEED MULCH, SOD, LANDSCAPE	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF THE DISTURBED AREA. REFERENCE LANDSCAPE UNDERSTORY PLANS FOR DETAILS INTERNAL TO THE LIMITS OF SEEDING PER THE LEGEND ABOVE.

N

0' 40' 80' 160'
SCALE IN FEET

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

SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS
SHIPWRIGHT
NUMBER PE-2021039302
01/21/22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

PHASE B - EROSION CONTROL PLAN
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: ER002_02104157.dwg
date:

SHEET
LD1.1

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\GNCV\PHASE 1\Land Disturbance\C_ER002_02104157.dwg
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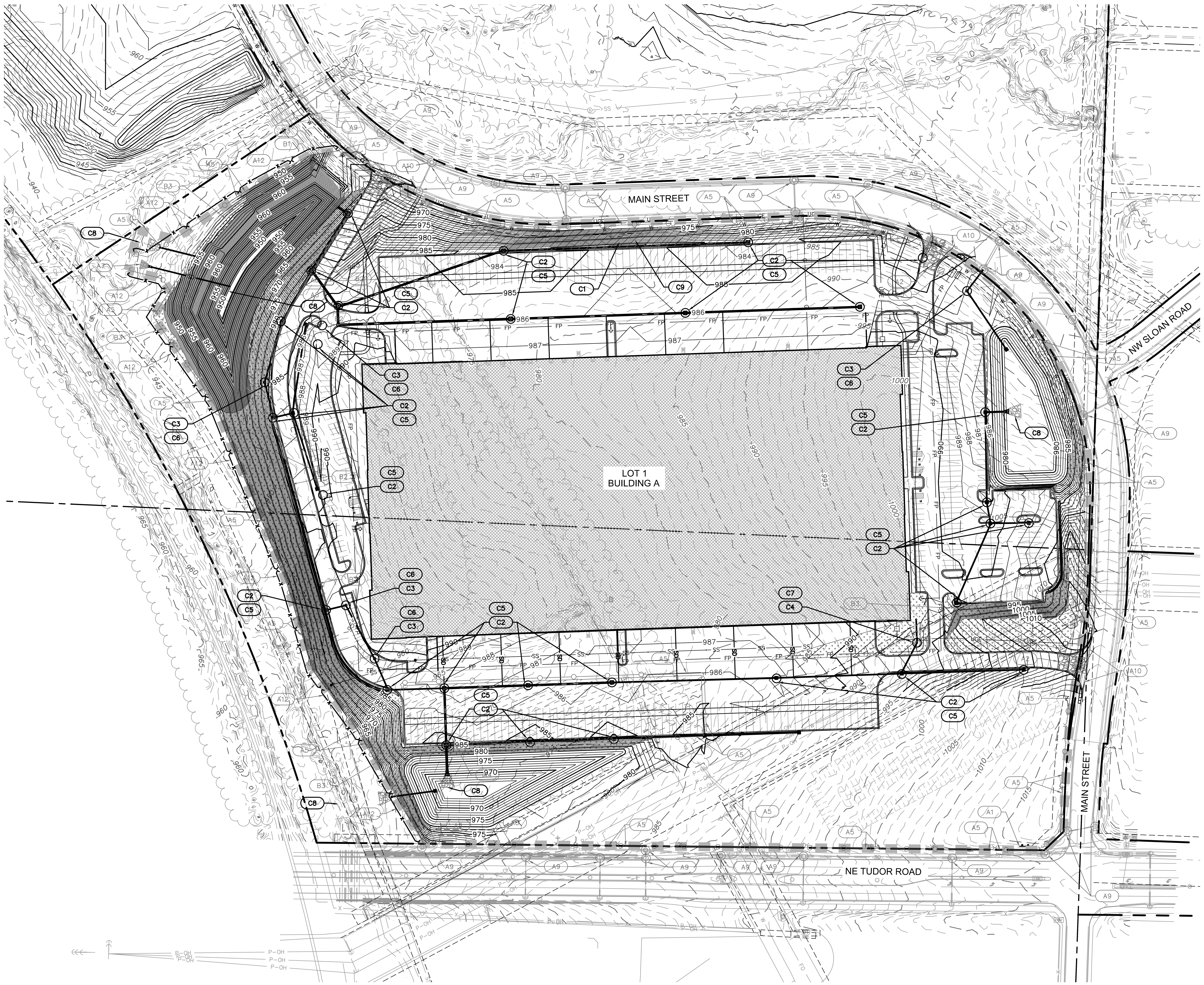
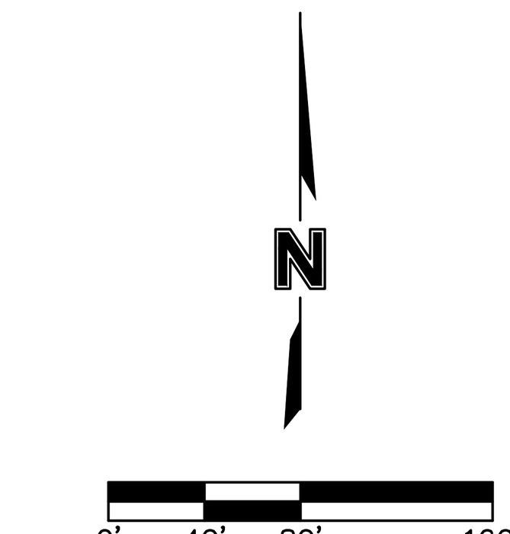


LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- 830 EXISTING CONTOUR
- 830 PROPOSED CONTOUR
- TEMPORARY SEDIMENT FENCE
- INSTALL TEMPORARY REINFORCED SILT FENCE SLOPE BARRIER
- INSTALL TEMPORARY WATTLE/BIODEGRADABLE LOG
- LIMITS OF DISTURBANCE (34.24 ACRES)
- DRAINAGE BOUNDARIES
- TEMPORARY DIVERSION BERM (REFERENCE DETAILS) (18" DEEP BERM W/ "ECB S32
- INSTALL TEMPORARY SWALE
- STABILIZATION. "LANDLOK (S2)" (EROSION CONTROL BLANKET) SHALL BE USED OR APPROVED EQUAL. CONTACTOR TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. SEED WITH PERENNIAL SEEDING TO MEET SWPPP REQUIREMENTS. INSTALL PER DETAIL AND MANUFACTURER RECOMMENDATIONS.
- STABILIZATION. "LANDLOK (S2)" (EROSION CONTROL BLANKET) SHALL BE USED OR APPROVED EQUAL. CONTACTOR TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. SEED WITH PERENNIAL SEEDING TO MEET SWPPP REQUIREMENTS. INSTALL PER DETAIL AND MANUFACTURER RECOMMENDATIONS.
- STABILIZATION. "LANDLOK (S2)" (EROSION CONTROL BLANKET) SHALL BE USED OR APPROVED EQUAL. CONTACTOR TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. SEED WITH PERENNIAL SEEDING TO MEET SWPPP REQUIREMENTS. INSTALL PER DETAIL AND MANUFACTURER RECOMMENDATIONS.
- TEMPORARY CONSTRUCTION ENTRANCE
- TEMPORARY STAGING/STOCKPILE AREA
- CONCRETE WASHOUT
- TEMPORARY GRAVEL FILTER BAGS
- XX EROSION CONTROL REFERENCE NUMBER

EROSION CONTROL STAGING CHART

PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE–CONSTRUCTION	A1	INSTALL SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
	A2	TEMPORARY CONSTRUCTION ENTRANCE	C	INSTALL AS INDICATED ON PLANS
	A3	TEMPORARY CONCRETE WASHOUT	C	INSTALL AS INDICATED ON PLANS
	A4	TEMPORARY STAGING/STOCKPILE AREA	C	INSTALL AS INDICATED ON PLANS
	A5	TEMPORARY SEDIMENT FENCE	C	INSTALL AS INDICATED ON PLANS
	A6	TEMPORARY SEDIMENT BASIN	C	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A7	END SECTION PROTECTION (RIPRAP)	C	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A8	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
	A9	EXISTING INLET PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	A10	TEMPORARY WATTLE/BIODEGRADABLE LOG	C	INSTALL AS INDICATED ON PLANS
	A11	TEMPORARY DIVERSION BERM	C	INSTALL AS INDICATED ON PLANS
	A12	TEMPORARY REINFORCED SILT FENCE SLOPE BARRIER	C	INSTALL AS INDICATED ON PLANS
	A13	TEMPORARY SWALE	B	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A14	TEMPORARY STREAM CROSSING	B	INSTALL AS INDICATED ON PLANS
B – CLEARING, MASS GRADING, AND CONSTRUCTION OF SANITARY SEWER	B1	TEMPORARY DIVERSION BERM	B	INSTALL AS INDICATED ON PLANS
	B2	TEMPORARY SEDIMENT FENCE	C	INSTALL AS INDICATED ON PLANS
	B3	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
C – CONSTRUCTION: BUILDING, PAVEMENT & STORM SEWER AND UTILITIES	C1	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
	C2	TEMPORARY CURB INLET PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C3	TEMPORARY AREA INLET/JUNCTION BOX PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C4	TEMPORARY LANDSCAPE DRAIN PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C5	TEMPORARY CURB INLET PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C6	TEMPORARY AREA INLET/JUNCTION BOX PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C7	TEMPORARY LANDSCAPE DRAIN PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C8	END SECTION PROTECTION (RIPRAP)	N/A	REFERENCE STORM SEWER SHEETS FOR DESIGN AND INSTALLATION INFORMATION
	C9	REMOVE SEDIMENT BASIN	N/A	INSTALL AS INDICATED ON PLANS
D – POST CONSTRUCTION: FINAL STABILIZATION	D1	CONVERT SEDIMENT BASINS TO FINAL CONDITION (DRY DETENTION BASIN)	N/A	REFERENCE GRADING AND STORM SHEETS FOR FINAL DESIGN INFORMATION
	D2	REPLACE TOP SOIL, SEED MULCH, SOD, LANDSCAPE	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF THE DISTURBED AREA. REFERENCE LANDSCAPE UNDERSTORY PLANS FOR DETAILS INTERNAL TO THE LIMITS OF SEEDING PER THE LEGEND ABOVE.



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Overland Park, KS 66213-4750
TEL 913.381.1170 www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS SHIPWRIGHT
NUMBER PE-2021039302
01/21/2022
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

PHASE C - EROSION CONTROL PLAN
LAND DISTURBANCE PLANS

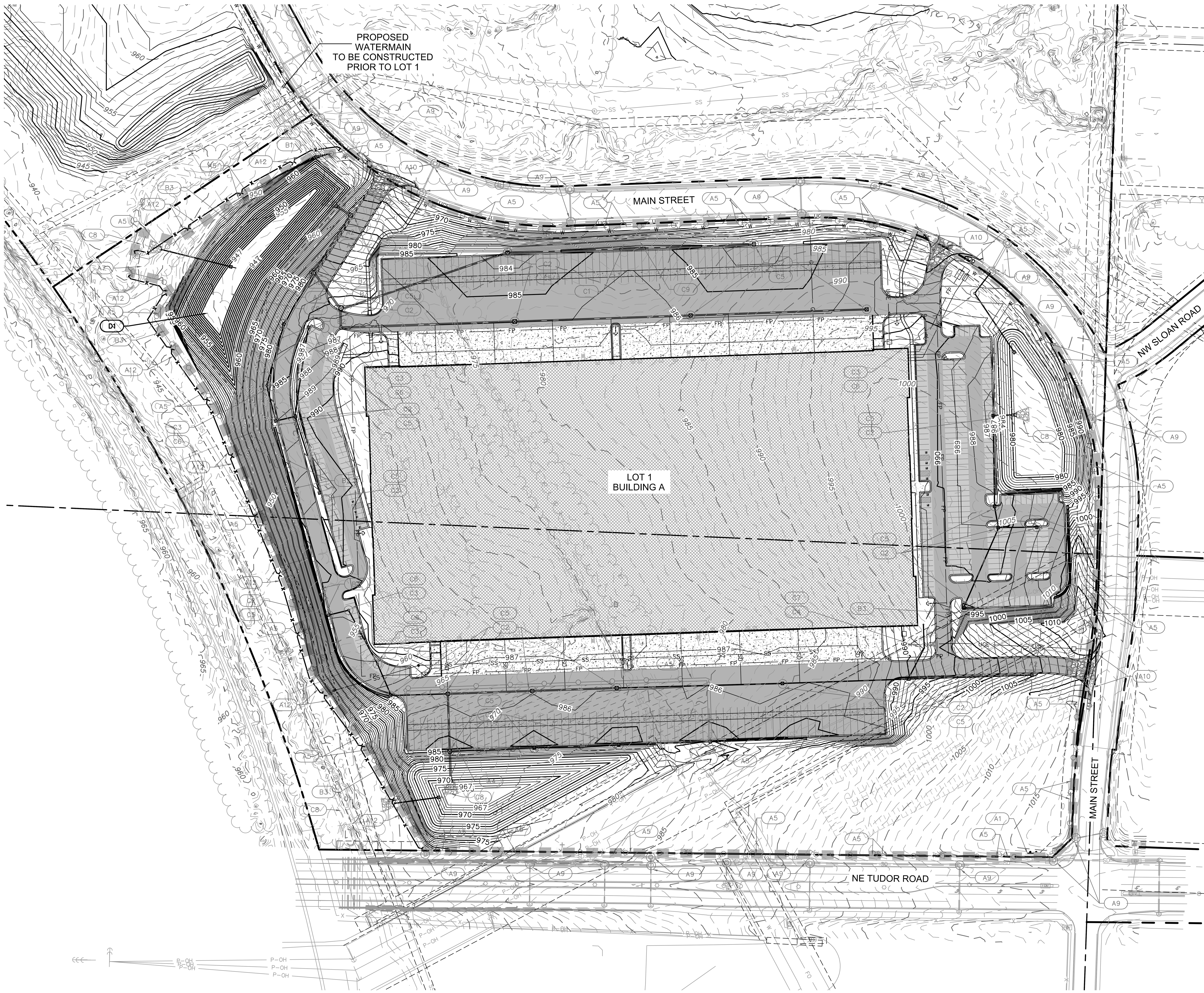
SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

2021

LEE'S SUMMIT, MISSOURI

drawn by:	OLSSON
checked by:	ENG
approved by:	ENG
QA/QC by:	ENG
project no.:	021-04157
drawing no.:	C_ERO03_02104157.dwg
date:	

SHEET
LD1.2



LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- 830 EXISTING CONTOUR
- 830 PROPOSED CONTOUR
- TEMPORARY SEDIMENT FENCE
- INSTALL TEMPORARY REINFORCED SILT FENCE SLOPE BARRIER
- INSTALL TEMPORARY WATTLE/BIODEGRADABLE LOG
- LIMITS OF DISTURBANCE (34.24 ACRES)
- DRAINAGE BOUNDARIES
- TEMPORARY DIVERSION BERM (REFERENCE DETAILS) (18" DEEP BERM W/ "ECB S32
- INSTALL TEMPORARY SWALE
- STABILIZATION. "LANDLOK (S2)" (EROSION CONTROL BLANKET) SHALL BE USED OR APPROVED EQUAL. CONTACTOR TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. SEED WITH PERENNIAL SEEDING TO MEET SWPPP REQUIREMENTS. INSTALL PER DETAIL AND MANUFACTURER RECOMMENDATIONS.
- STABILIZATION. "LANDLOK (S2)" (EROSION CONTROL BLANKET) SHALL BE USED OR APPROVED EQUAL. CONTACTOR TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. SEED WITH PERENNIAL SEEDING TO MEET SWPPP REQUIREMENTS. INSTALL PER DETAIL AND MANUFACTURER RECOMMENDATIONS.
- STABILIZATION. "LANDLOK (S2)" (EROSION CONTROL BLANKET) SHALL BE USED OR APPROVED EQUAL. CONTACTOR TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. SEED WITH PERENNIAL SEEDING TO MEET SWPPP REQUIREMENTS. INSTALL PER DETAIL AND MANUFACTURER RECOMMENDATIONS.
- TEMPORARY CONSTRUCTION ENTRANCE
- TEMPORARY STAGING/STOCKPILE AREA
- CONCRETE WASHOUT
- TEMPORARY GRAVEL FILTER BAGS
- XX EROSION CONTROL REFERENCE NUMBER

EROSION CONTROL STAGING CHART

PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE-CONSTRUCTION	A1	INSTALL SWPPP SIGN	D	INSTALL AS INDICATED ON PLANS
	A2	TEMPORARY CONSTRUCTION ENTRANCE	C	INSTALL AS INDICATED ON PLANS
	A3	TEMPORARY CONCRETE WASHOUT	C	INSTALL AS INDICATED ON PLANS
	A4	TEMPORARY STAGING/STOCKPILE AREA	C	INSTALL AS INDICATED ON PLANS
	A5	TEMPORARY SEDIMENT FENCE	C	INSTALL AS INDICATED ON PLANS
	A6	TEMPORARY SEDIMENT BASIN	C	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A7	END SECTION PROTECTION (RIPRAP)	C	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A8	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
	A9	EXISTING INLET PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	A10	TEMPORARY WATTLE/BIODEGRADABLE LOG	C	INSTALL AS INDICATED ON PLANS
	A11	TEMPORARY DIVERSION BERM	C	INSTALL AS INDICATED ON PLANS
	A12	TEMPORARY REINFORCED SILT FENCE SLOPE BARRIER	C	INSTALL AS INDICATED ON PLANS
	A13	TEMPORARY SWALE	B	INSTALL AS SHOWN. SEE SHEETS LD1.4 & LD1.5 FOR DETAILS.
	A14	TEMPORARY STREAM CROSSING	B	INSTALL AS INDICATED ON PLANS
B – CLEARING, MASS GRADING, AND CONSTRUCTION OF SANITARY SEWER	B1	TEMPORARY DIVERSION BERM	B	INSTALL AS INDICATED ON PLANS
	B2	TEMPORARY SEDIMENT FENCE	C	INSTALL AS INDICATED ON PLANS
	B3	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
C – CONSTRUCTION: BUILDING, PAVEMENT & STORM SEWER AND UTILITIES	C1	TEMPORARY SLOPE STABILIZATION (EROSION CONTROL BLANKET)	C	INSTALL AS INDICATED ON PLANS
	C2	TEMPORARY CURB INLET PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C3	TEMPORARY AREA INLET/JUNCTION BOX PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C4	TEMPORARY LANDSCAPE DRAIN PROTECTION (CONDITION A)	C	INSTALL AS INDICATED ON PLANS
	C5	TEMPORARY CURB INLET PROTECTION (CONDITION B)	C	REMOVE AS INDICATED ON PLANS
	C6	TEMPORARY AREA INLET/JUNCTION BOX PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C7	TEMPORARY LANDSCAPE DRAIN PROTECTION (CONDITION B)	C	INSTALL AS INDICATED ON PLANS
	C8	END SECTION PROTECTION (RIPRAP)	N/A	REFERENCE STORM SEWER SHEETS FOR DESIGN AND INSTALLATION INFORMATION
	C9	REMOVE SEDIMENT BASIN	N/A	REMOVE AS INDICATED ON PLANS
D – POST CONSTRUCTION: FINAL STABILIZATION	D1	CONVERT SEDIMENT BASINS TO FINAL CONDITION (DRY DETENTION BASIN)	N/A	REFERENCE GRADING AND STORM SHEETS FOR FINAL DESIGN INFORMATION
	D2	REPLACE TOP SOIL, SEED MULCH, SOD, LANDSCAPE	N/A	ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF THE DISTURBED AREA. REFERENCE LANDSCAPE UNDERSTORY PLANS FOR DETAILS INTERNAL TO THE LIMITS OF SEEDING PER THE LEGEND ABOVE.

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Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS SHIPWRIGHT
NUMBER PE-2021039302
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

PHASE D - EROSION CONTROL PLAN
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

2021

LEE'S SUMMIT, MISSOURI

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_ERO04_02104157.dwg
date:

SHEET
LD1.3

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\GNCV\PHASE I\Land Disturbance\C_ERO04_02104157.dwg USER: lmoore
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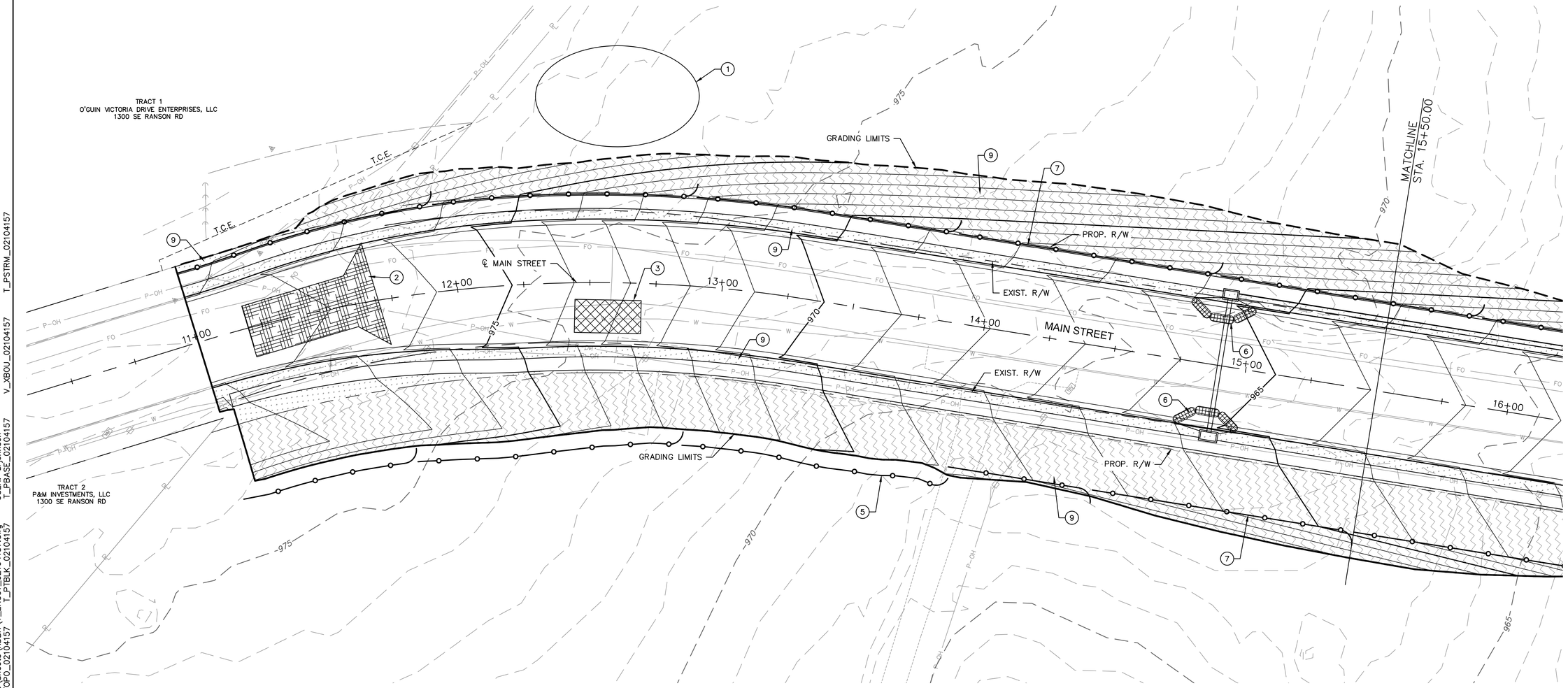

EROSION AND SEDIMENT CONTROL STAGING CHART				
PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
I – STORM SEWER AND RCP INSTALLATION PRIOR TO ROADWAY GRADING	1	STAGING AREA	III	
	2	TEMPORARY CONSTRUCTION ENTRANCE	III	
	3	CONCRETE WASHOUT	III	
	4	DIVERSION BERM	IV	INSTALL BEFORE RCB INSTALLATION (SEE SHEET 58)
	5	SILT FENCE/OR BIODEGRADABLE LOGS (9")	IV	
	6	CURB INLET PROTECTION	III	PER CURB INLET DETAIL
II – ROADWAY GRADING & SWALE GRADING	7	SILT FENCE/OR BIODEGRADABLE LOGS (9")	IV	
III – PAVING	8	CURB INLET/AREA INLET PROTECTION	IV	GRAVEL FILTER BAGS
IV – STABILIZE SITE	9	SOD/SEED	N/A	

LEGEND

- SILT FENCE
- INLET PROTECTION
- TEMPORARY ROCK DITCH CHECKS
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- SOD
- SEED

REFERENCE APPROVED PUBLIC IMPROVEMENT PLANS

N

0' 10' 20' 40'
SCALE IN FEET

olsson

Olsson Engineering - MO State Certificate of Authority #001592
7301 West 133rd Street, Suite 200 TEL 913.381.1170 www.olsson.com
Overland Park, KS 66213-4750 FAX 913.381.1174

STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2003003161
11-16-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	11/16/2021	CITY COMMENTS	ARJ

EROSION CONTROL PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: _____
DRAWN BY: ARJ/AMW
CHECKED BY: XXX
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 021-04157
DWG NO.: T_ERC01_02104157
DATE: 2021-10-12

SHEET
48 OF 105

USER: arjohnson
DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\RDBR\T_ERC01_02104157.dwg T_PBASE_02104157 V_XBOU_02104157 T_PSTRM_02104157
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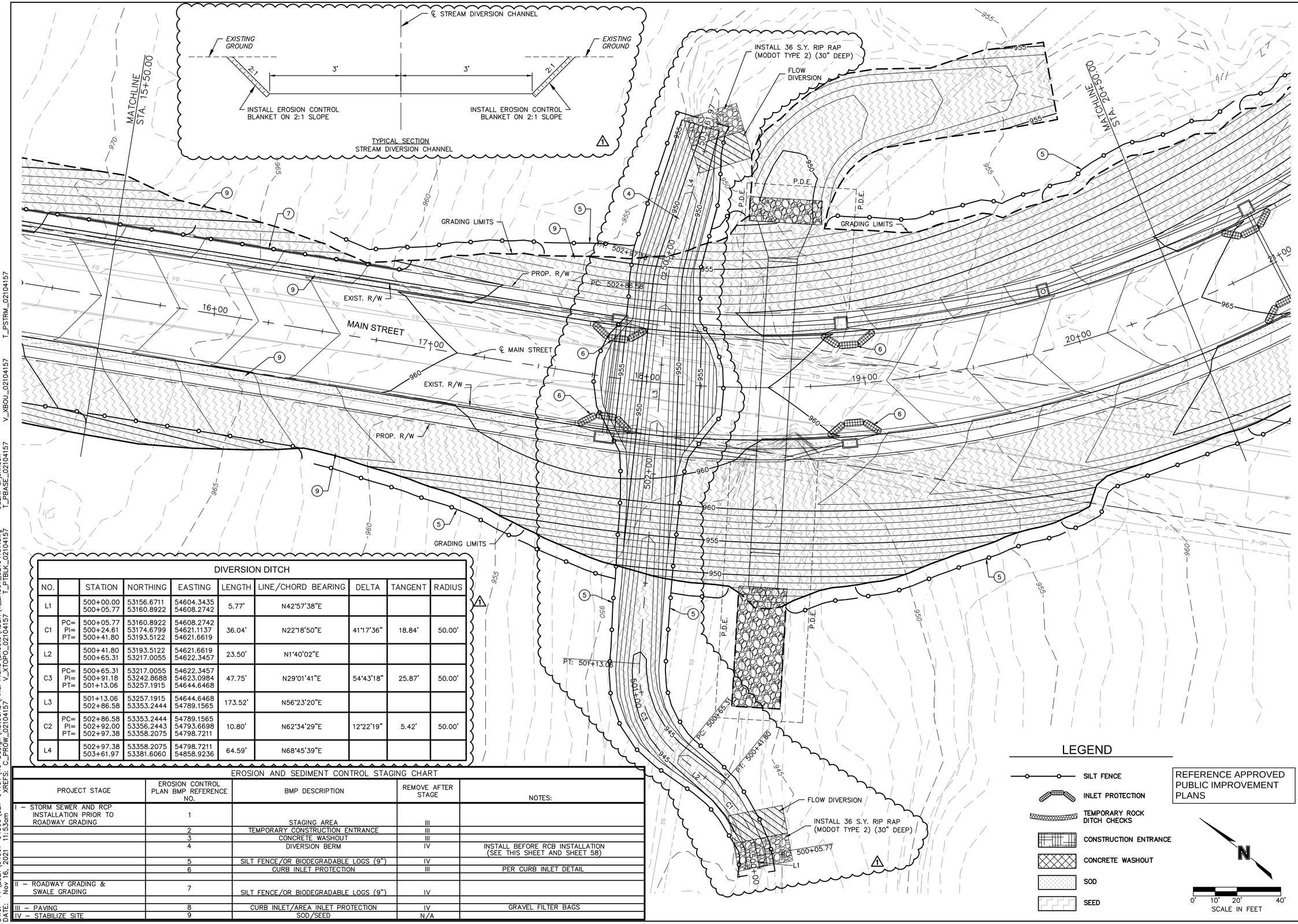

DIVERSION DITCH

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		500+00.00 500+05.77	53156.6711 53160.8922	54604.3435 54608.2742	5.77'	N42°57'38"E			
C1	PC= PI= PT=	500+05.77 500+24.61 500+41.80	53160.8922 53174.6799 53193.5122	54608.2742 54621.1137 54621.6619	36.04'	N22°18'50"E	41°17'36"	18.84'	50.00'
L2		500+41.80 500+65.31	53193.5122 53217.0055	54621.6619 54622.3457	23.50'	N1°40'02"E			
C3	PC= PI= PT=	500+65.31 500+91.18 501+13.06	53217.0055 53242.8688 53257.1915	54622.3457 54623.0984 54644.6468	47.75'	N29°01'41"E	54°43'18"	25.87'	50.00'
L3		501+13.06 502+86.58	53257.1915 53353.2444	54644.6468 54789.1565	173.52'	N56°23'20"E			
C2	PC= PI= PT=	502+86.58 502+92.00 502+97.38	53353.2444 53356.2443 53358.2075	54789.1565 54793.6698 54798.7211	10.80'	N62°34'29"E	12°22'19"	5.42'	50.00'
L4		502+97.38 503+61.97	53358.2075 53381.6060	54798.7211 54858.9236	64.59'	N68°45'39"E			

EROSION AND SEDIMENT CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
I – STORM SEWER AND RCP INSTALLATION PRIOR TO ROADWAY GRADING	1	STAGING AREA	III	
	2	TEMPORARY CONSTRUCTION ENTRANCE	III	
	3	CONCRETE WASHOUT	III	
	4	DIVERSION BERM	IV	INSTALL BEFORE RCB INSTALLATION (SEE THIS SHEET AND SHEET 58)
	5	SILT FENCE/OR BIODEGRADABLE LOGS (9")	IV	
	6	CURB INLET PROTECTION	III	PER CURB INLET DETAIL
II – ROADWAY GRADING & SWALE GRADING	7	SILT FENCE/OR BIODEGRADABLE LOGS (9")	IV	
III – PAVING	8	CURB INLET/AREA INLET PROTECTION	IV	GRAVEL FILTER BAGS
IV – STABILIZE SITE	9	SOD/SEED	N/A	

olsson

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Overland Park, KS 66213-4750 FAX 913.381.1174

STATE OF MISSOURI RYAN B. FLEMING NUMBER PE-2002003161 11-16-21 PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	11/16/2021	CITY COMMENTS	ARJ

REVISIONS

EROSION CONTROL PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: -
DRAWN BY: ARJ/AMW
CHECKED BY: XXX
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 021-04157
DWG NO.: T_ERC01_02104157
DATE: 2021-10-12

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\RDBR\T_ERC01_02104157.dwg
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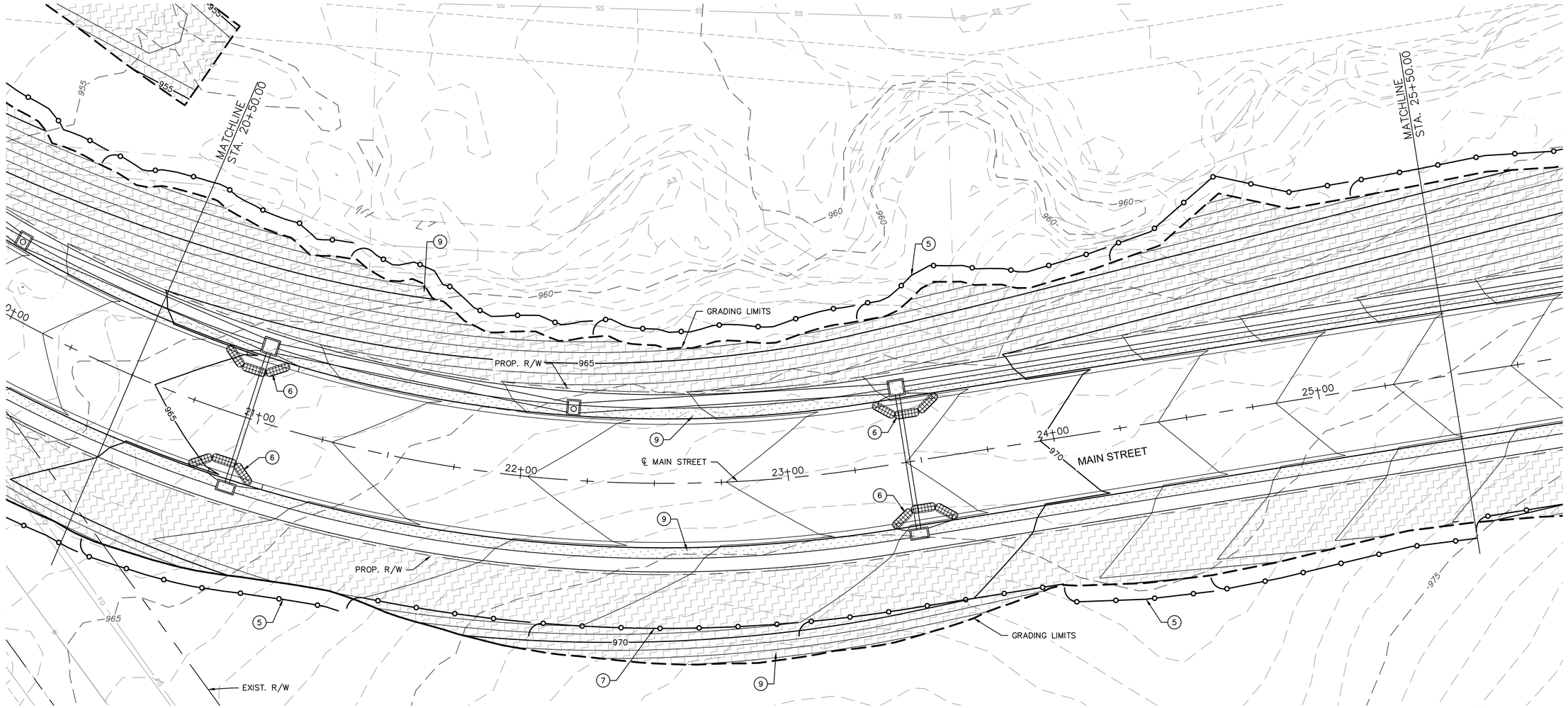

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LEGEND

- SILT FENCE
- INLET PROTECTION
- TEMPORARY ROCK DITCH CHECKS
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- SOD
- SEED

REFERENCE APPROVED PUBLIC IMPROVEMENT PLANS

N

0' 10' 20' 40'
SCALE IN FEET

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11-16-21
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REVISIONS

EROSION CONTROL PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

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SHEET
50 OF 105

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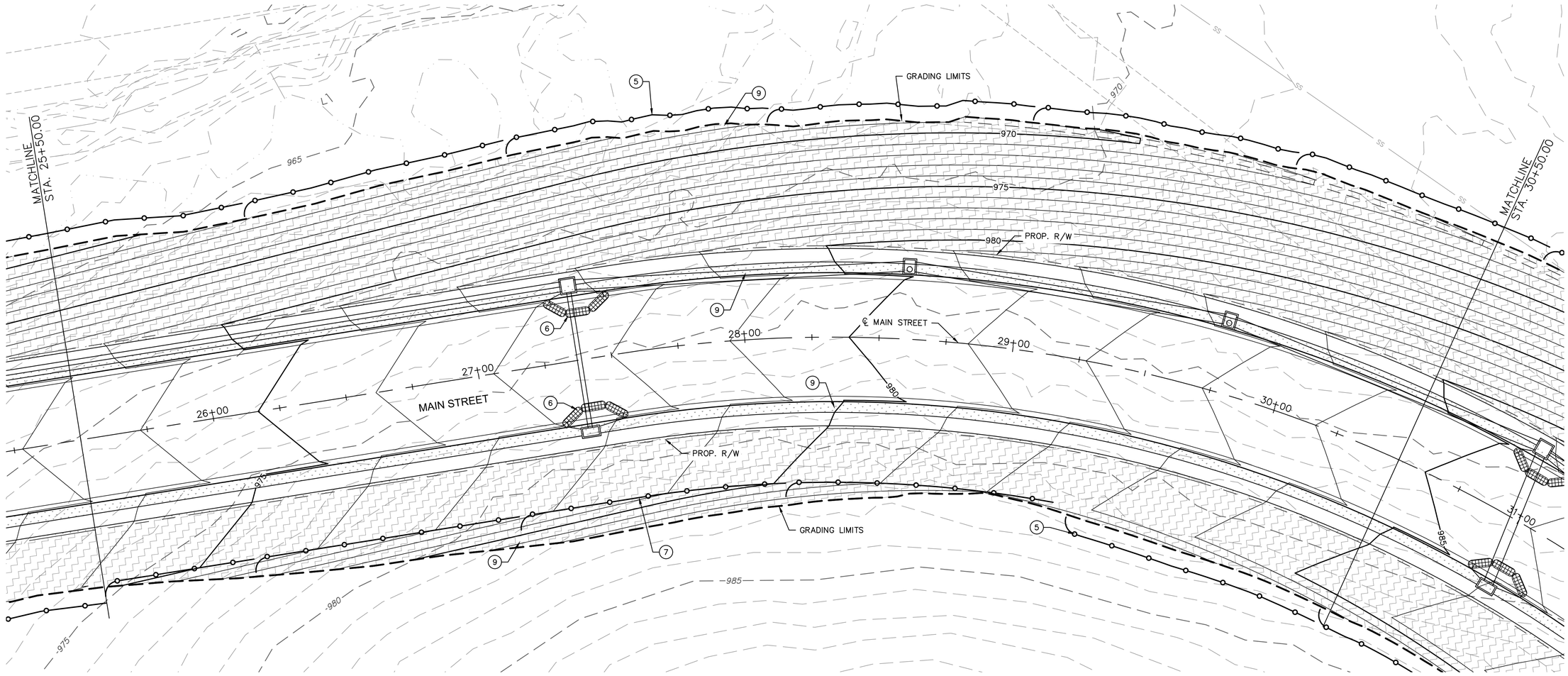

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- INLET PROTECTION
- TEMPORARY ROCK DITCH CHECKS
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- SOD
- SEED

REFERENCE APPROVED PUBLIC IMPROVEMENT PLANS

N

0' 10' 20' 40'
SCALE IN FEET

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11-16-21
PROFESSIONAL ENGINEER

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MO. NO. PE-2002003161

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REVISIONS

EROSION CONTROL PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

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SHEET
51 OF 105

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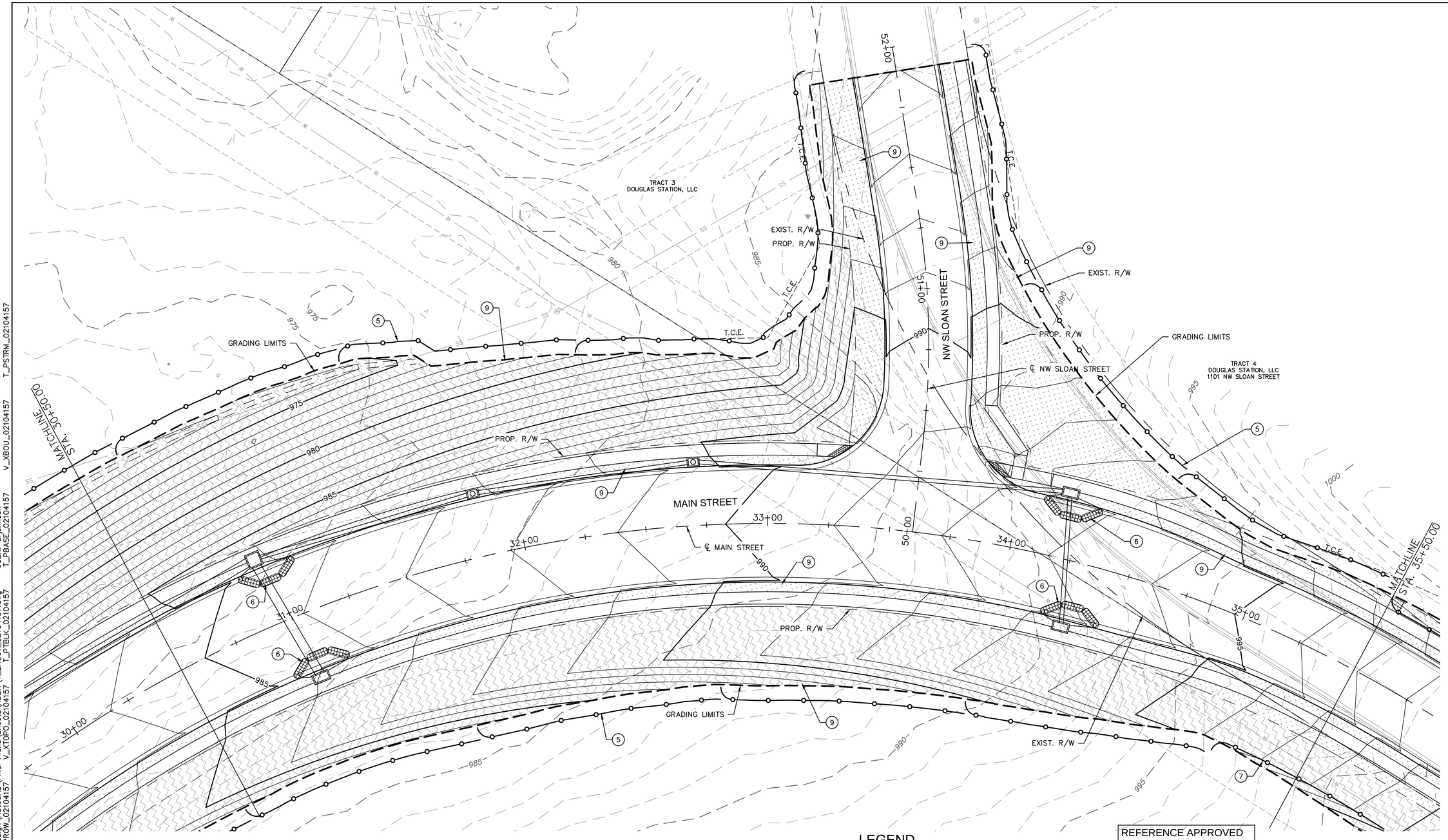

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EROSION AND SEDIMENT CONTROL STAGING CHART

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- INLET PROTECTION
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- SOD
- SEED

N

0' 10' 20' 40'
SCALE IN FEET

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STATE OF MISSOURI
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PROFESSIONAL ENGINEER
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EROSION CONTROL PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

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SHEET
52 OF 105

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\RDBR\T_ERC01_02104157.dwg USER: arjohnson
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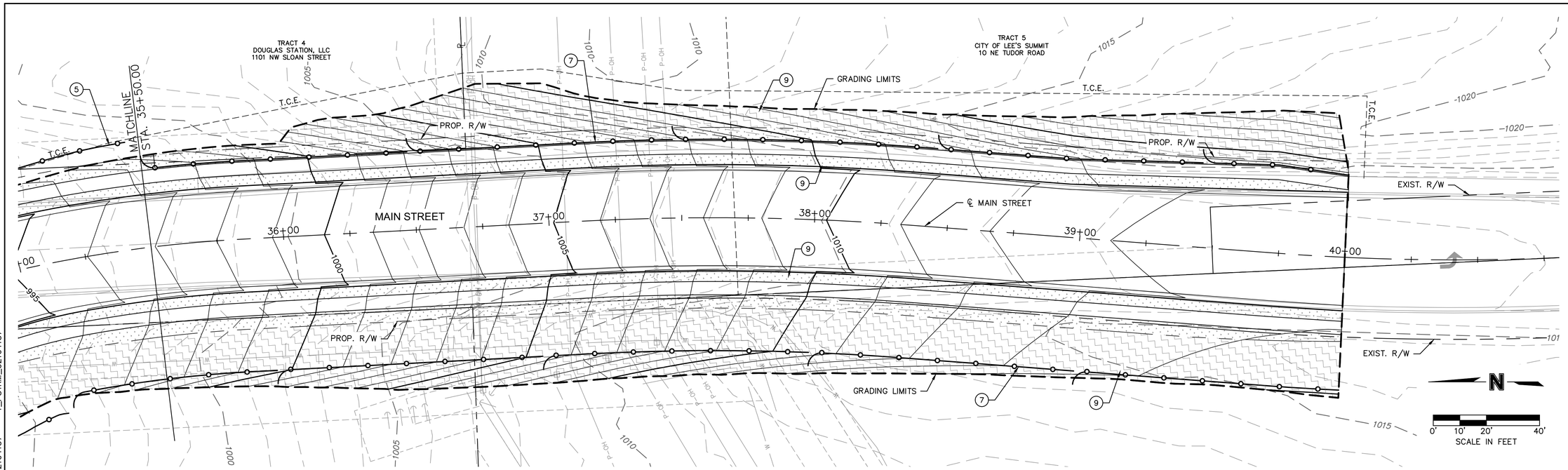

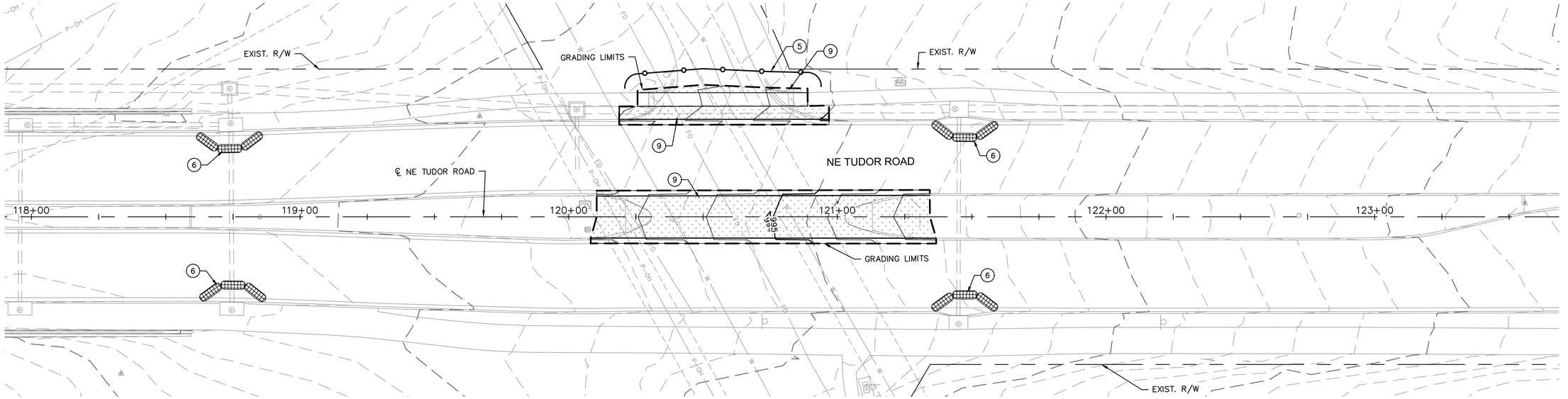

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LEGEND

- SILT FENCE
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- SOD
- SEED

REFERENCE APPROVED PUBLIC IMPROVEMENT PLANS

N

0' 10' 20' 40'
SCALE IN FEET

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STATE OF MISSOURI
RYAN B. FLEMING
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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
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EROSION CONTROL PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

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SHEET
53 OF 105

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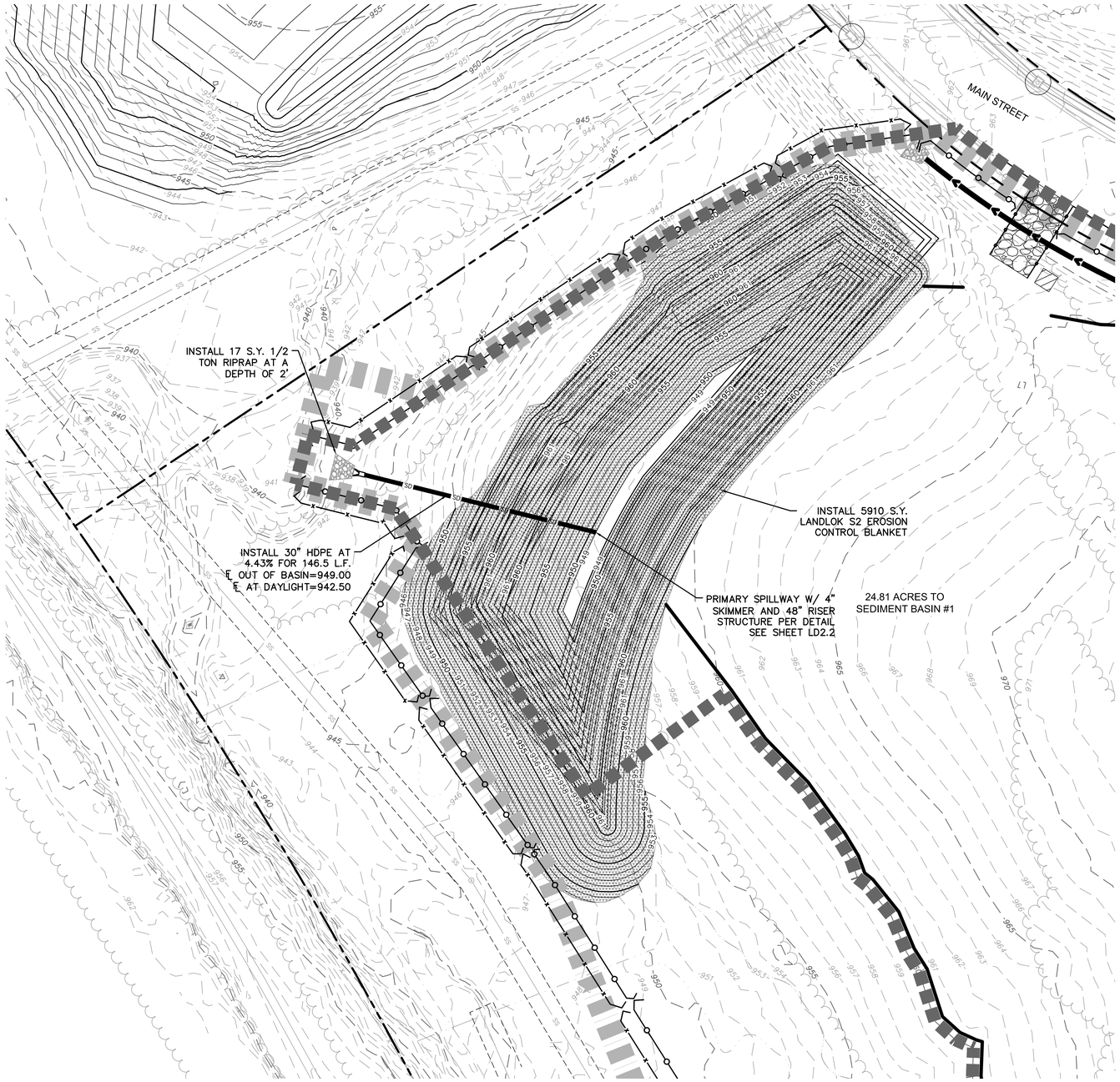
USER: arjohnson

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



SEDIMENT BASIN #1

LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- 830 EXISTING CONTOUR
- 830 PROPOSED CONTOUR
- TEMPORARY SEDIMENT FENCE
- INSTALL TEMPORARY REINFORCED SILT FENCE SLOPE BARRIER
- INSTALL TEMPORARY WATTLE/BIODEGRADABLE LOG
- LIMITS OF DISTURBANCE (34.24 ACRES)
- DRAINAGE BOUNDARIES
- TEMPORARY DIVERSION BERM (REFERENCE DETAILS) (18" DEEP BERM W/ "ECB S32
- INSTALL TEMPORARY SWALE
- STABILIZATION. "LANDLOK (S2)" (EROSION CONTRO BLANKET) SHALL BE USED OR APPROVED EQUAL. CONTACTOR TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. SEED WITH PERENNIAL SEEDING TO MEET SWPPP REQUIREMENTS. INSTALL PER DETAIL AND MANUFACTURER RECOMMENDATIO

N

0' 15' 30' 60'
SCALE IN FEET

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

SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS
SHIPWRIGHT
NUMBER PE-2021035302
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SEDIMENT BASIN #1 DETAIL
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
dwg: ERO_BASIN01_02104157.dwg
date:

SHEET
LD1.4

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LEGEND

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- 830 EXISTING CONTOUR
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INSTALL 17 S.Y. LIGHT 18" RIPRAP AT A DEPTH OF 2'

INSTALL 17 S.Y. LIGHT 18" RIPRAP AT A DEPTH OF 2'

MAIN STREET

INSTALL TEMPORARY STREAM CROSSING UNDERNEATH TEMPORARY CONSTRUCTION ENTRANCE

SWALE FOR BASIN #2 TO BE INSTALLED AT A MINIMUM SLOPE OF 2.50%. SEE SHEET C11.10 FOR SWALE CALCS.
F/L START: 968.00
F/L END: 961.00

INSTALL 30" HDPE AT 0.60% FOR 165.0 L.F.
FL OUT OF BASIN=969.00
FL AT DAYLIGHT=968.00

PRIMARY SPILLWAY W/ 4" SKIMMER AND 42" RISER STRUCTURE PER DETAIL SEE SHEET LD2.2

INSTALL 4085 S.Y. LANDLOK S2 EROSION CONTROL BLANKET

8.33 ACRES TO SEDIMENT BASIN #2

SEDIMENT BASIN #2

0' 15' 30' 60'
SCALE IN FEET

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www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS
SHIPWRIGHT
NUMBER
PE-2021039302
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SEDIMENT BASIN #2 DETAIL
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
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dwg: C_ERO_BASIN01_02104157.dwg
date:

SHEET
LD1.5

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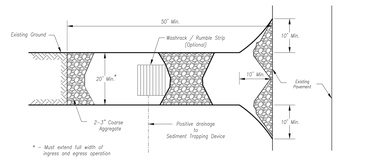
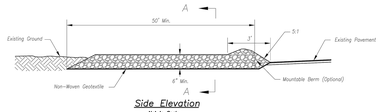
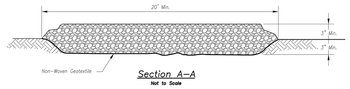


Plan View
Not to Scale



Side Elevation
Not to Scale



Section A-A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
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 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 sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

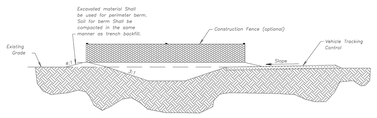
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading to the pit shall be no steeper than 3:1. A vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

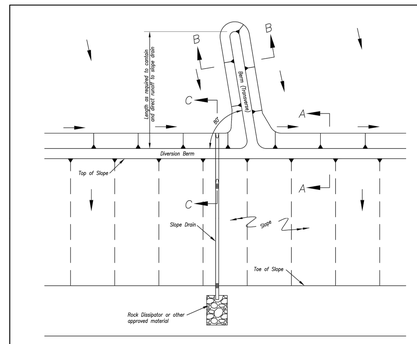
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris shall be disposed of and shall be transported from the job site in a water-tight container and disposed properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



CONCRETE WASHOUT

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control, Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01
	ADOPTED: 10/24/2016



TYPICAL PLAN VIEW OF DIVERSION BERM AND SLOPE DRAIN

Notes for Diversion Berm:

1. Slope drains are optional, but may be required by the engineer if the berm is at the top of a steep slope.
2. Diversion berms must be installed as a first step in the land-disturbing activity and must be functional prior to upslope land disturbance.
3. The berm should be adequately compacted to prevent failure.
4. Temporary or permanent seeding and mulch shall be applied to the berm immediately following its construction.
5. Place the berm so to minimize damages by construction operations and traffic.
6. The berm must discharge to a temporary sediment trap or stabilized area.
7. 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 diversion.
8. 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.
9. 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.

Maintenance:

1. Berm shall be reshaped, compacted, and stabilized as necessary to maintain its function.
2. Breaches in the berm shall be repaired immediately.

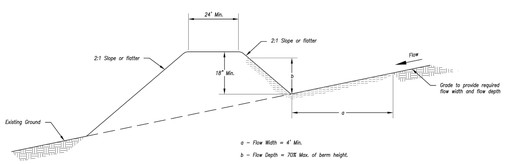
Notes for Slope Drain:

1. Slope Drain and Diversion Berm may be used on either project forebayes or project backslopes.
2. Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.
3. Pipe shall be secured in place as approved by Engineer.

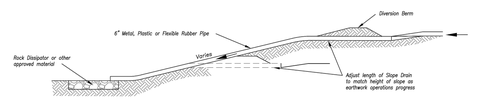
Maintenance:

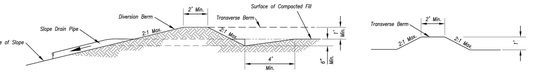
1. Accumulation of any visible sediment at the inlet and outlet shall be removed promptly.
2. Outlet conditions shall be repaired if scour is observed. Leaking or damaged section of pipe shall be repaired immediately.
3. Barriers directing water to the inlet shall be monitored for continuity and effectiveness.

TYPICAL PROFILE OF DIVERSION BEAM
Not to Scale



TYPICAL PROFILE OF DIVERSION BERM





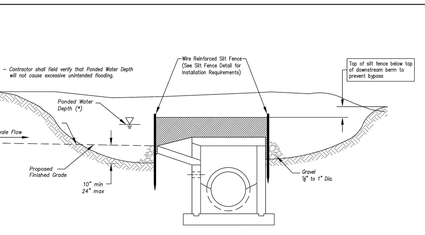
Section C-C

Section B-B

TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
DIVERSION BERMS AND SLOPE DRAINS	STANDARD DRAWING NUMBER ESC-05
	ADOPTED: 10/24/2016



Section A-A
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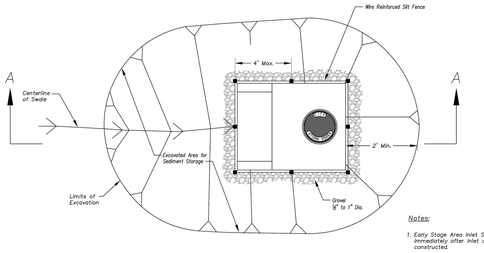
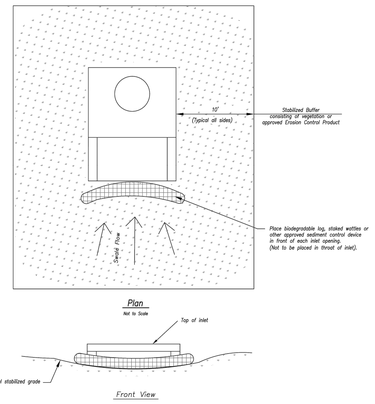


Plan
Not to Scale



EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

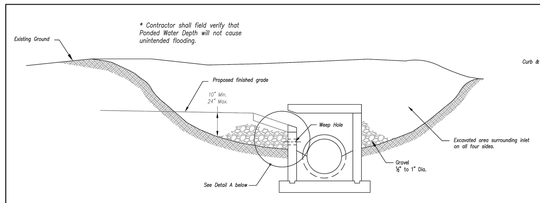
LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

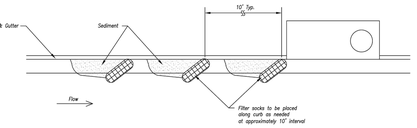
Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

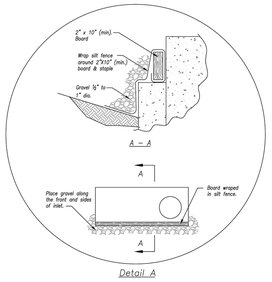
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07
	ADOPTED: 10/24/2016





On Grade Curb Inlet Protection



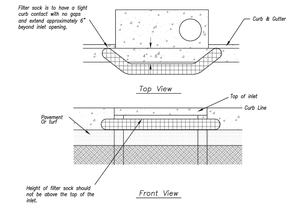
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.



Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06
	ADOPTED: 10/24/2016

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SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS
SHIPWRIGHT
NUMBER PE-2021038302
01/21/22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION

REVISIONS

EROSION CONTROL DETAILS
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing file: C_ERODTL01_02104157.dwg
date:

SHEET
LD2.0

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\GNCV\PHASE 1\Land Disturbance\C_ERODTL01_02104157.dwg USER: lmoore
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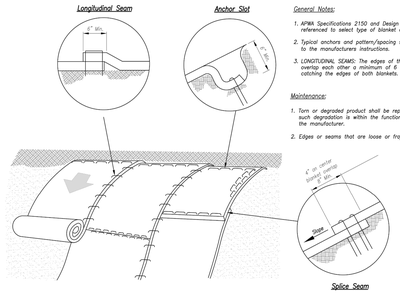

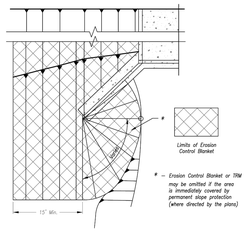

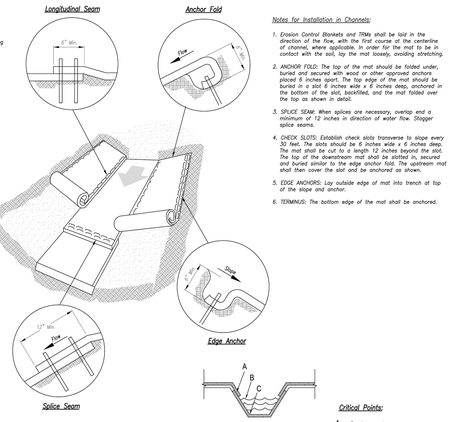

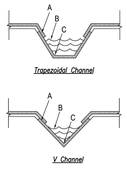

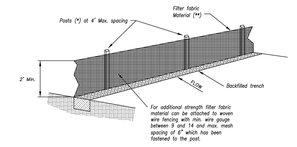

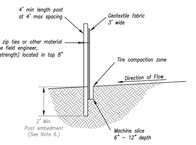

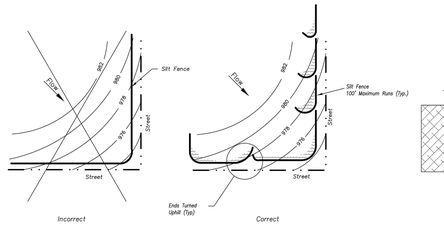

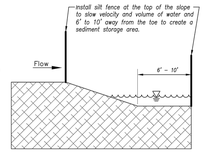

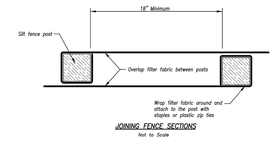

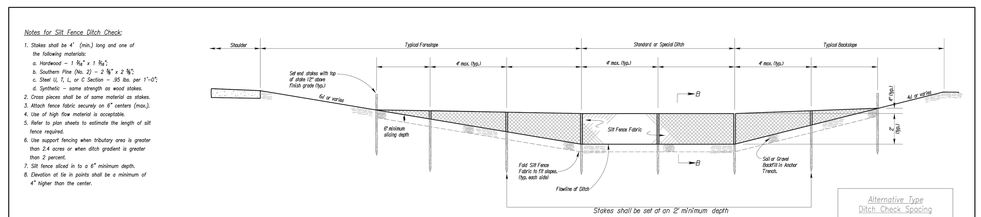

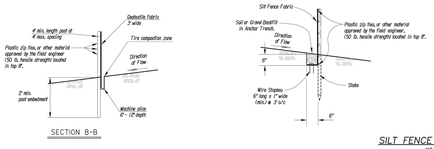

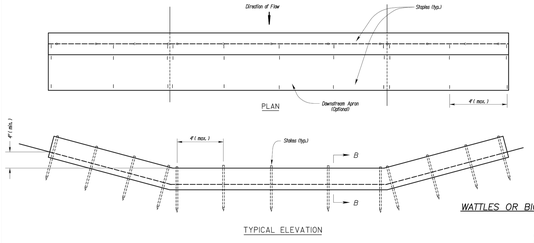

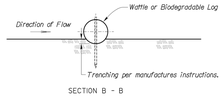

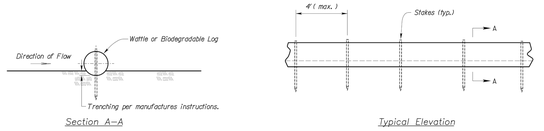

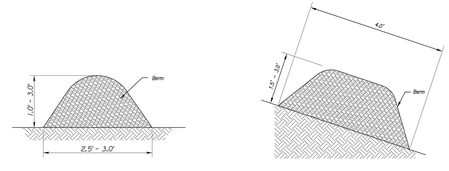

Installation on Slopes

General Notes:

1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

Maintenance:

1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.

Splice Seam

Partial Box Culvert Plan
Not to Scale

Installation Around Culvert Slope

Notes for Installation on Slopes:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
2. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice seams.
4. TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.

Installation in Channels

Critical Points:

A – Overlaps and seams;

B – Projected water line;

C – Channel bottom / side slope vertices;

Notes for Installation in Channels:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
2. ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
4. CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
5. EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.
6. TERMINUS: The bottom edge of the mat shall be anchored.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY
METRO CHAPTER
EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS
STANDARD DRAWING NUMBER ESC-02
ADOPTED: 10/24/2016

For additional strength filter fabric material can be attached to woven wire fencing with min. wire gauge between 9 and 14 and max. mesh spacing of 6" which has been fastened to the post.

(*) POSTS

- MIN, LENGTH 4'
- HARDWOOD 1 3/16" x 1 3/16"
- NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
- STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288

SILT FENCE DETAILS
Not to Scale

Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ⅓ the height of silt fence.
2. Repair as necessary to maintain function and structure.

Figure A

SILT FENCE LAYOUT
Not to Scale

JOINING FENCE SECTIONS
Not to Scale

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY
METRO CHAPTER
SILT FENCE
STANDARD DRAWING NUMBER ESC-03
ADOPTED: 10/24/2016

Notes for Silt Fence Ditch Check:

1. Stakes shall be 4' (min.) long and one of the following materials:
   - a. Hardwood – 1 3/16" x 1 3/16";
   - b. Southern Pine (No. 2) – 2 5/8" x 2 5/8";
   - c. Steel U, T, L, or C Section – .95 lbs. per 1'–0";
   - d. Synthetic – same strength as wood stakes.
2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6" centers (max.).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.
6. Use support fencing when tributary area is greater than 2.4 acres or when ditch gradient is greater than 2 percent.
7. Silt fence sliced in to a 6" minimum depth.
8. Elevation at tie in points shall be a minimum of 4" higher than the center.

Stakes shall be set at an 2' minimum depth

TYPICAL ELEVATION

Alternative Type Ditch Check Spacing	
Ditch Centerline Slope (%)	Spacing Interval (Feet)
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	33
Note: Use this spacing for all except Rock Ditch Checks.	

SECTION B-B

SILT FENCE DITCH CHECK
NO SCALE

PLAN

TYPICAL ELEVATION

Notes for Wattles and Biodegradable Log Ditch Check:

1. Use as many biodegradable log sections as necessary to ensure water does not flow around end of ditch check.
2. Overlap sections a minimum of 18"
3. Stakes shall be per manufacturer's instructions. Length of stakes shall be a minimum of 2 times the diameter of the log or 24" minimum.
4. Use Erosion Control (Class 1) (Type C) as the downstream apron when directed by the Engineer.
5. Use 9" diameter logs when used with Erosion Control (Class 2) (Any Type) channel lining. Smaller diameter logs may be used with Erosion Control (Class 2) (Any Type) channel lining as directed by the Engineer.

SECTION B - B

WATTLES OR BIODEGRADABLE LOG DITCH CHECKS
OR Filter Sock Ditch Check
NO SCALE

Modified from Kansas Department of Transportation Standard Details for Erosion Control and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY
METRO CHAPTER
SILT FENCE AND WATTLE/ BIODEGRADABLE LOG DITCH CHECKS
STANDARD DRAWING NUMBER ESC-09
ADOPTED: 10/24/2016

Section A–A

Typical Elevation

WATTLES AND BIODEGRADABLE LOG

Notes for Wattles and Biodegradable Log Slope Protection:

1. The Slope barriers shall be placed along contour lines, with a short section turned upgrade at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
2. Install wattles and biodegradable logs per manufacturer's instructions.
3. Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".

Figure 1
(Perimeter Control)

Figure 2
(Steep Slopes)

Notes for Mulch and Compost Filter Beam:

1. The sediment control berm shall be placed uncompacted in a windrow at locations shown on the plans or as directed by the engineer.
2. Parallel to the base of the slope, or around the perimeter of other affected areas, construct a 1 to 3 foot high by 2.5 to 3 foot wide berm (see Figure 1). For maximum water treatment ability or for steep slopes, construct a 1.5 to 3 foot high trapezoidal berm that is a minimum of 4 feet wide at the base (see Figure 2). In extreme conditions, or where specified by the engineer, a second berm shall be constructed at the top of the slope. Engineer will specify berm requirements.
3. If berm is to be left as permanent or part of the natural landscape, the compost berm may be seeded during application for permanent vegetation.
4. Do not use compost or wood mulch berms in any runoff channels or concentrated flow areas.
5. Wood mulch shall consist of tree and shrub debris resulting from clearing and grubbing and shall be ground by the mechanical means such as a chipper, hammermill, tub grinder or other approved method. Mulch sizing varies with a maximum width of 2" and a maximum length of 10".

Maintenance for Mulch and Compost Filter Beam:

1. Berm shall be reshaped and material added as necessary to maintain function and dimensions.
2. Breaches in the berm shall be repaired promptly.

MULCH OR COMPOST FILTER BERMS

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY
METRO CHAPTER
WATTLES/BIODEGRADABLE LOG AND MULCH/COMPOST FILTER BERM
STANDARD DRAWING NUMBER ESC-04
ADOPTED: 10/24/2016

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SCANNELL
PROPERTIES

COLIN JENNINGS SHIPWRIGHT
NUMBER PE-2021039302
Colin J. Shipwright
01/21/2022

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

2021

EROSION CONTROL DETAILS
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
LEE'S SUMMIT, MISSOURI

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_ERODTL01_02104157.dwg
date:

SHEET
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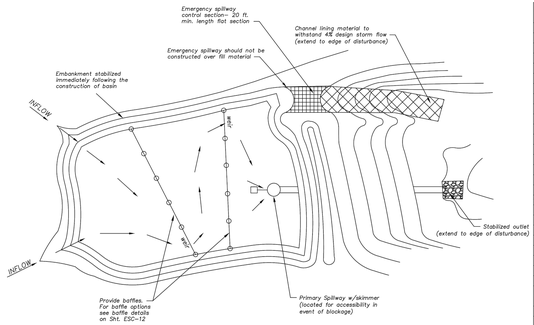
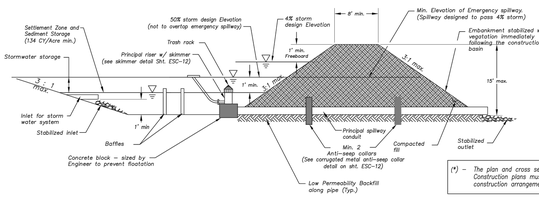


Plan View (*)
Not to Scale



Cross Section (*)
Not to Scale

(*) – The plan and cross section are schematic in nature. Construction plans must provide specific site construction arrangements.

Sediment Basin Design Summary (**)

Design Item	Basin #1	Basin #2	Units	Notes
Site Data:				
Tributary Drainage Area to Pond			Acres	
50% (2 yr) Design Flow			cfs	
4% (25 yr) Design Flow			cfs	
Pond Data:				
Minimum Sediment Storage Volume			cu yd	134 cy/acre required minimum
Provided Sediment Storage Volume			cu yd	
Bottom Elevation			Ft	
Sediment Cleanout Elevation			Ft	Elevation equal to 20% of original design volume
Top of Riser Elevation			Ft	Top of dry storage volume
Emergency Spillway Elevation			Ft	at or above Q-2 elevation. 1.0 ft min above principal spillway
Top of Dam Elevation			Ft	1.0 ft min above Q-25 elevation
Basin Shape Data:				
A = Area at Normal Pool			SF	
L = Length of Flow Path			Ft	
We = Effective Width = A/L			Ft	
Length to Width Ratio = L/We				
Principal Spillway Data:				
Riser Pipe dia			in	15" min. Size for 2 year flow minimum
Barrel Pipe dia			in	15" min. Size for 2 year flow minimum
Concrete Base size for Riser Pipe			CY	Size to prevent flotation. 1.25 safety factor required.
Skimmer Size				Designer to provide specific details and calculations per application to dewater in 48 to 72 hours
Emergency Spillway Data:				
Design Depth in Spillway			ft	
Design Velocity in Spillway			ft/sec	
Lining Material				Designer to provide specific details and calculations per application

(**) – Required on all Sediment Basin Plan Sheets

Sediment Basin Notes:

1. Interior baffles shall be provided to reduce short-circuiting of the basin. See Sht. ESC-12 for approved baffle options.
2. Emergency spillways to be located in a non-fill location when feasible and shall be lined with a non-erodible material such as Riprap or Turf Reinforcement Mat.
3. When directed, sediment basins shall be fenced using construction fence or other material for safety reasons and include warning signs, reading: "Danger – KEEP OUT".

Maintenance:

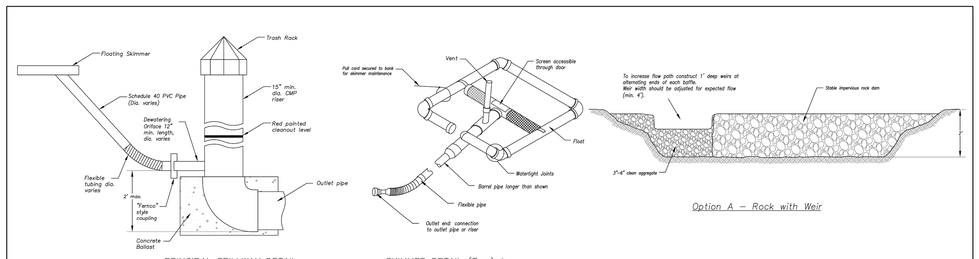
1. Check temporary sediment basins after periods of significant runoff.
2. Remove sediment and restore the basin to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlets.
4. Repair and/or replace baffles as necessary to maintain function and integrity of installation.
5. Keep outlet, skimmer and pool area free of all trash and other debris.

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
SEDIMENT BASIN	STANDARD DRAWING NUMBER ESC-11 ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

SEDIMENT BASIN DESIGN DATA SUMMARY

TITLE:	Lee's Summit - Phase 1			
JOB #:	021-04157			
Design Item:	Basin 1	Basin 2	Units	Notes:
Site Data:				
Tributary Drainage Area to Pond:	25.00	8.50	Acres	
Disturbed Tributary Drainage Area to Pond:	25.00	8.50	Acres	
50% (2 yr) Design Flow:	47.34	16.10	cfs	
4% (25 yr) Design Flow:	82.12	27.93	cfs	
Pond Data:				
Minimum Sediment Storage Volume:	3350	1139	cu. yd.	134 cy/acre minimum
Provided Sediment Storage Volume:	3798	1356	cu. yd.	134 cy/acre minimum
Bottom Elevation:	949.00	969.00	Ft	
Sediment Cleanout Elevation:	952.96	970.57	Ft	Elevation Equal to 20% of Original Design Volume.
Top of Riser Elevation:	958.50	973.50	Ft	Top of Dry Storage Volume
Emergency Spillway Elevation:	960.00	974.25	Ft	at or Above Q-2 elev. 1.0 ft min above principal spillway
Top of Dam Elevation:	961.50	975.50	Ft	1.0 ft min above Q-25 elev.
Basin Shape Data:				
A= Area at Normal Pool	19480.00	11605.00	SF	
L = Length of Flow Path	230.00	320.00	Ft	
We = Effective Width = A/L	84.70	36.27	Ft	
Length to Width Ratio = L/We	2.72	8.82		If Length to Width Ratio is less than 2, baffles are required
Principal Spillway Data:				
Riser Pipe Diameter:	48.00	42.00	in	15-inch min. Size for 2 year flow minimum
Barrell Pipe Diameter:	30	30	in	15-inch min. Size for 2 year flow minimum
Concrete Base size for Riser Pipe	9.18	8.18	cu. yd.	Size to Prevent Flotation. 1.25 safety factor required.
Skimmer Size:	4.00	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:	90.00	90.00	Ft	
Design Depth in Spillway:	0.49	0.24	Ft	Use Q25yr=CsbH^(3/2) where Cs=2.63, b is the Width of Spillway
Design Velocity in Spillway:	1.88	1.31	Ft/sec	
Lining Material:	LANDLOK S2 ERC	LANDLOK S2 ERC	N/A	

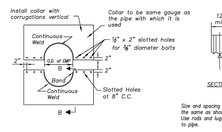


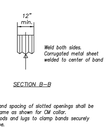
PRINCIPAL SPILLWAY DETAIL

SKIMMER DETAIL (Typ.) *

* Designer to provide specific details per application (e.g. pipe sizes, screen sizes, perforation, etc.) as required.

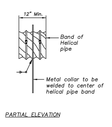
Option A – Rock with Weir



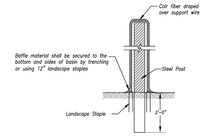


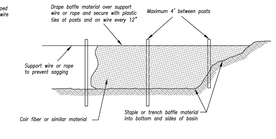
SECTION B–B

Size and spacing of slotted openings shall be the same as shown for CM collar. Use rods and lugs to clamp bands securely to pipe.

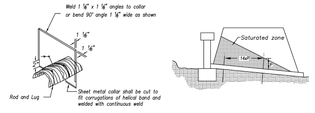


PARTIAL ELEVATION





Option B – Coir Fiber Material



ISOMETRIC VIEW

ANTI-SEEPAGE COLLAR LOCATIONS

CORRUGATED METAL ANTI-SEEPAGE COLLAR DETAIL
Not to Scale

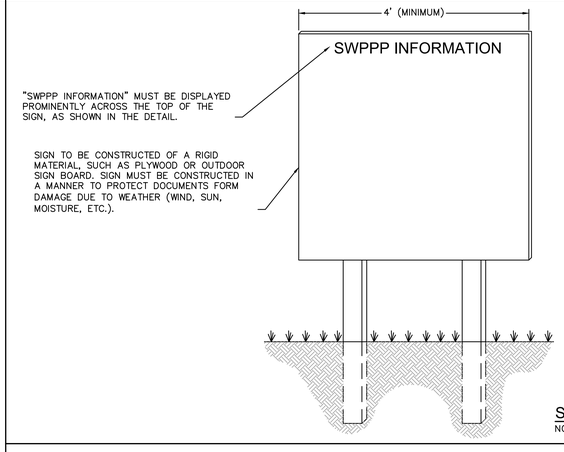
Anti-Seepage Collar Notes:

1. Connections between the anti-seepage collar and the barrel must be watertight.
2. P = projection distance. Sized as required to achieve at least a 10% increase in seepage length.
3. 14d* = Max. spacing between collars.
4. Collars shall generally be placed in the middle third of the embankment, and within the saturated zone.
5. All materials to be in accordance with construction material specifications.
6. When specified on the plans, coating of collars shall be in accordance with construction material specifications.
7. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
8. The lip between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at the time of installation.
9. Each collar shall be furnished with two (2) ¾" diameter rods with standard tank lugs for connecting the collars to the pipe.
10. For bands and collars, modification of the details shown may be used providing equal water tightness is maintained and detailed drawings are submitted and approved by the Engineer prior to delivery.
11. Two other types of anti-seep collars are:
    a. Corrugated metal, similar to above, except shop welded to a 4 ft. section of the pipe and connected to the pipe with connecting bands.
    b. Concrete, 6 inches thick, formed around the pipe with #3 rebar spaced 15".

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

BAFFLE DETAILS
Not to Scale

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
SEDIMENT BASIN – DETAILS	STANDARD DRAWING NUMBER ESC-12 ADOPTED: 10/24/2016



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

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 KANSAS CITY, MISSOURI AND THE MISSOURI DEPARTMENT OF HEALTH & ENVIRONMENT, 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.

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

SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS SHIPWRIGHT
NUMBER PE-2021038302
PROFESSIONAL ENGINEER
01/21/22

REV. NO.	DATE	REVISIONS DESCRIPTION
		BY

REVISIONS

EROSION CONTROL DETAILS
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

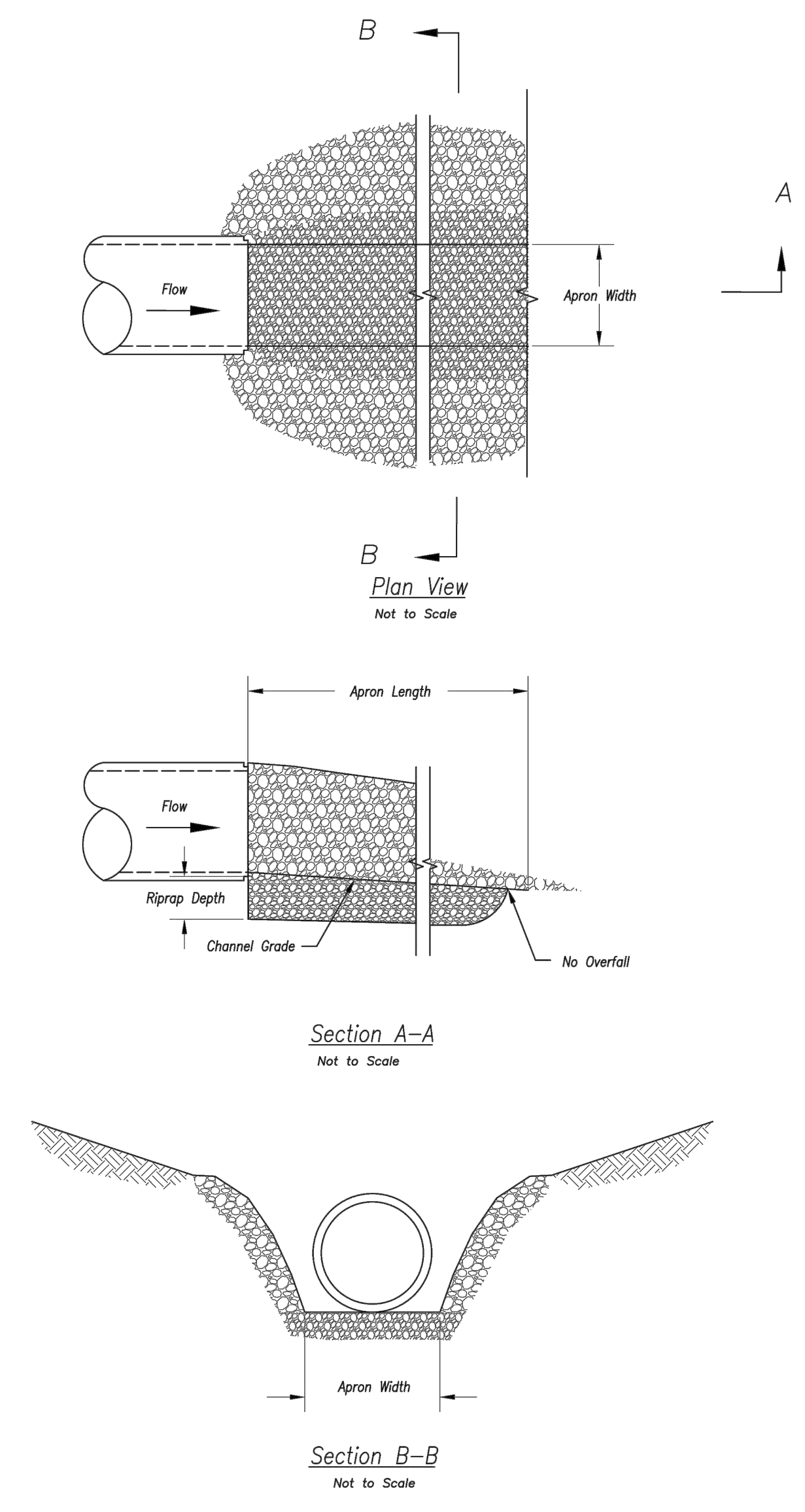
LEE'S SUMMIT, MISSOURI

2021

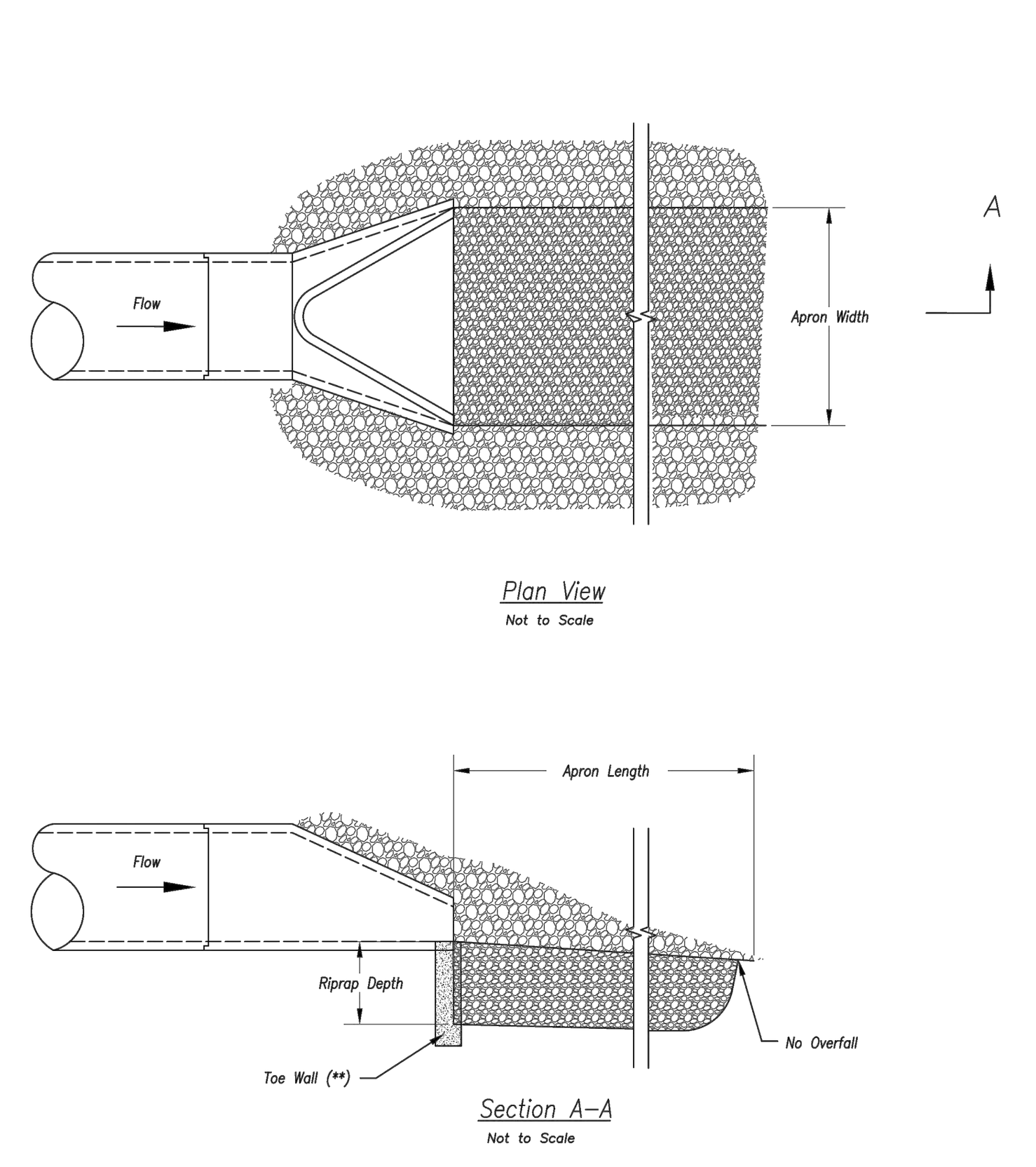
drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing file: C_ERODTL01_02104157.dwg
date:

SHEET
LD2.2

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\GNCV\PHASE 1\Land Disturbance\C_ERODTL01_02104157.dwg USER: lmoore
DATE: Jan 20, 2022 9:38pm XREF'S: C_PBASE_02104157 C_TBLK_02104157 T_PSTRM_02104157 C_PROW_02104157 T_PBASE_02104157



OUTLET PROTECTION W/O END SECTION



OUTLET PROTECTION WITH END SECTION

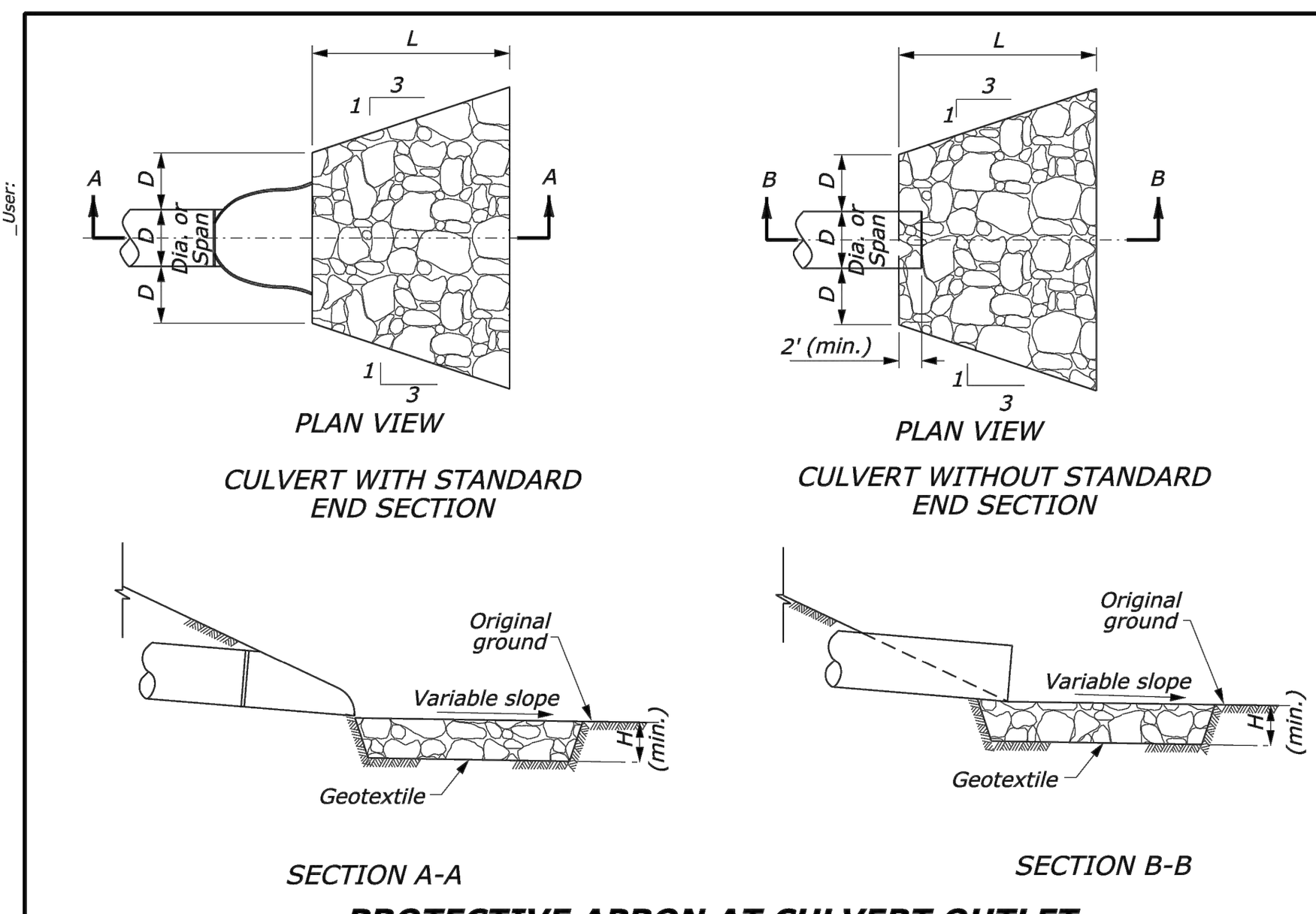
Notes:

1. Rock all sides steeper than 3:1.
2. Stabilize all disturbed areas downstream of outlet to the limits of disturbance.
3. Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.
4. Install riprap apron so that it is no higher than flowline of pipe.
5. Reference APWA Specification 2650 for rock type, size, and placement.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
Kansas City Metro Chapter APWA American Public Works Association	KANSAS CITY METRO CHAPTER
OUTLET PROTECTION	STANDARD DRAWING NUMBER ESC-14 ADOPTED: 10/24/2016

STATE	PROJECT	SHEET NUMBER



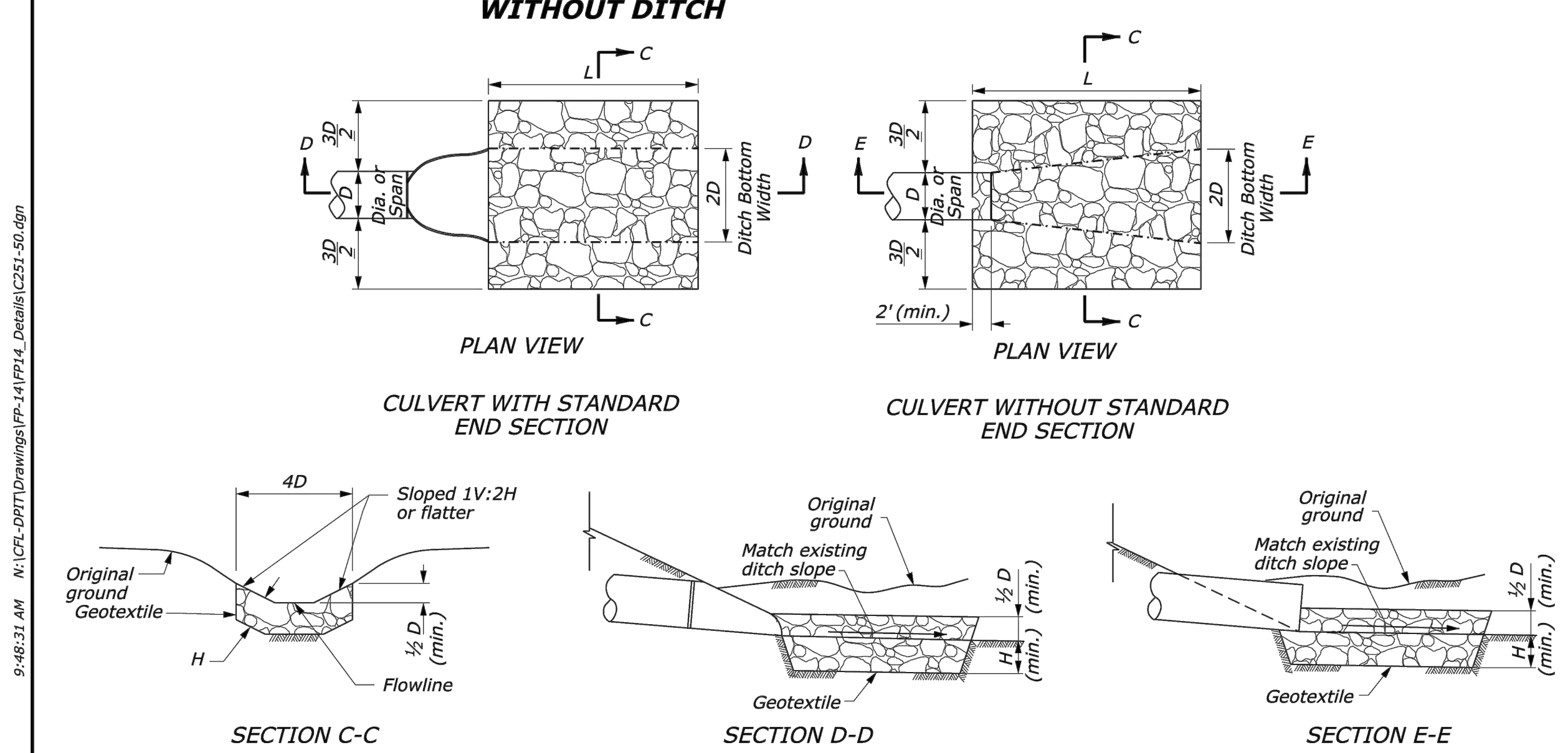
PROTECTIVE APRON AT CULVERT OUTLET WITHOUT DITCH

OUTLET WITHOUT DITCH
PROTECTIVE APRON DIMENSIONS AND ESTIMATED QUANTITIES

	CULVERT SIZE D (inches)	RIPRAP CLASS	LENGTH OF APRON L (feet)	DEPTH OF APRON H (feet)	ESTIMATED RIPRAP QUANTITY (CY)	ESTIMATED GEOTEXTILE QUANTITY (SY)
WITH END SECTION	12	2	4	1.5	1	5
	18	2	6	1.5	2.2	9
	24	2	8	1.5	3.9	14
	30	3	12.5	2	10.9	28
	36	3	16	2	15.6	37
	42	4	21	2.5	34.1	63
	48	4	24	2.5	44.5	79
WITHOUT END SECTION	12	2	6	1.5	1.7	8
	18	2	8	1.5	3.2	12
	24	2	10	1.5	5.2	17
	30	3	14.5	2	13.3	33
	36	3	17	2	18.5	43
	42	4	23	2.5	38.7	70
	48	4	26	2.5	49.8	87

NOTE:

1. Use for aprons serving culverts with slopes of less than 10%.
2. Furnish geotextile conforming to Subsection 714.01(a).
3. Excavation for placement of riprap will not be measured for payment.



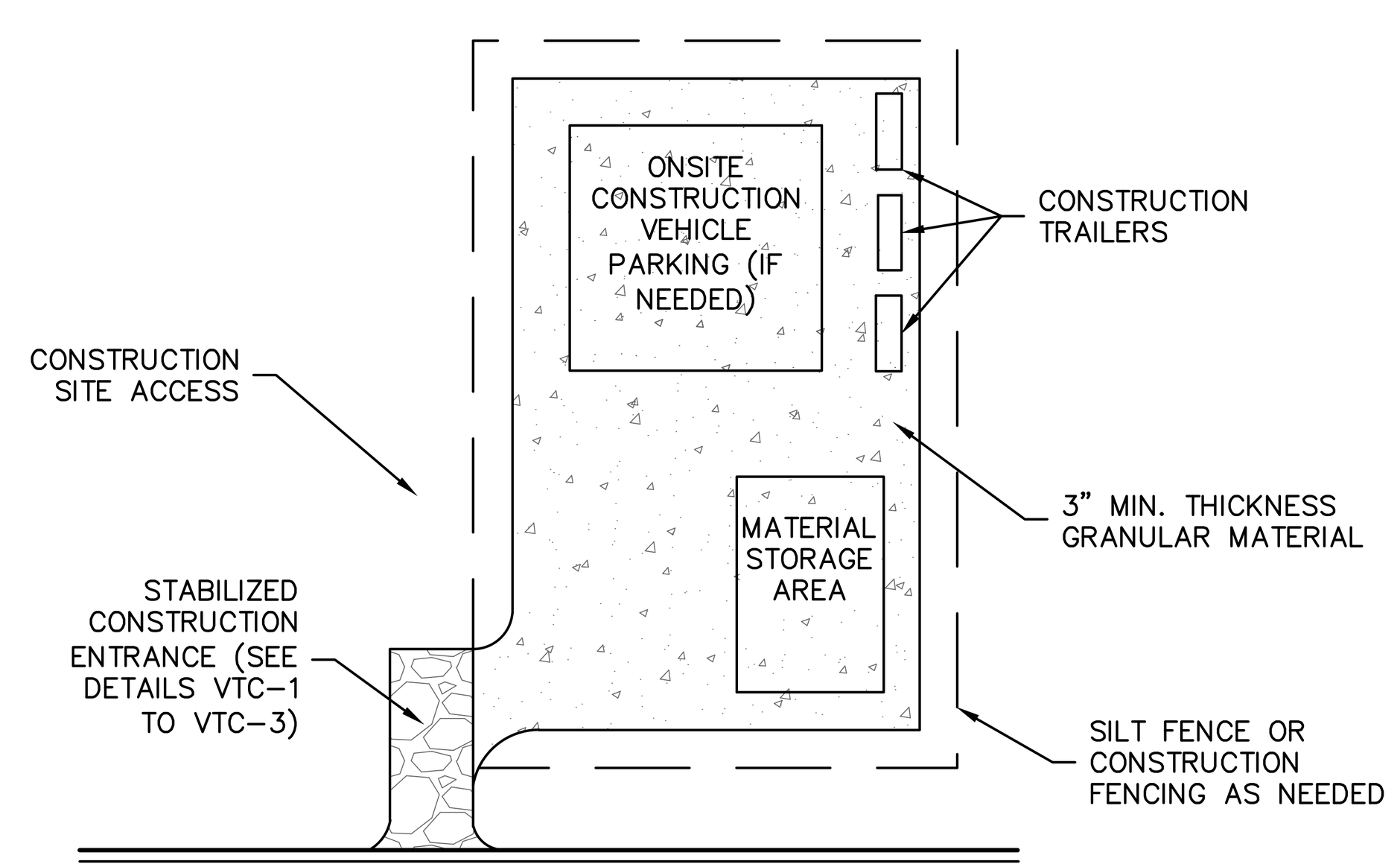
PROTECTIVE APRON AT CULVERT OUTLET WITH DITCH

OUTLET WITH DITCH
PROTECTIVE APRON DIMENSIONS AND ESTIMATED QUANTITIES

	CULVERT SIZE D (inches)	RIPRAP CLASS	LENGTH OF APRON L (feet)	DEPTH OF APRON H (feet)	ESTIMATED RIPRAP QUANTITY (CY)	ESTIMATED GEOTEXTILE QUANTITY (SY)
WITH END SECTION	12	2	4	1.5	0.9	5
	18	2	6	1.5	2	8
	24	2	8	1.5	3.6	13
	30	3	12.5	2	9.3	24
	36	3	15	2	13.4	32
	42	4	21	2.5	27.3	53
	48	4	24	2.5	35.6	65
WITHOUT END SECTION	12	2	6	1.5	1.4	6
	18	2	8	1.5	2.7	10
	24	2	10	1.5	4.5	15
	30	3	14.5	2	10.8	27
	36	3	17	2	15.2	36
	42	4	23	2.5	29.9	57
	48	4	26	2.5	38.6	70

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL **PLACED RIPRAP AT CULVERT OUTLETS**	
DETAIL APPROVED FOR USE REVISED: 08/2014	DETAIL C251-50



SSA–1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   –LOCATION OF STAGING AREA(S)
   –CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM LOCAL JURISDICTION
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703. AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

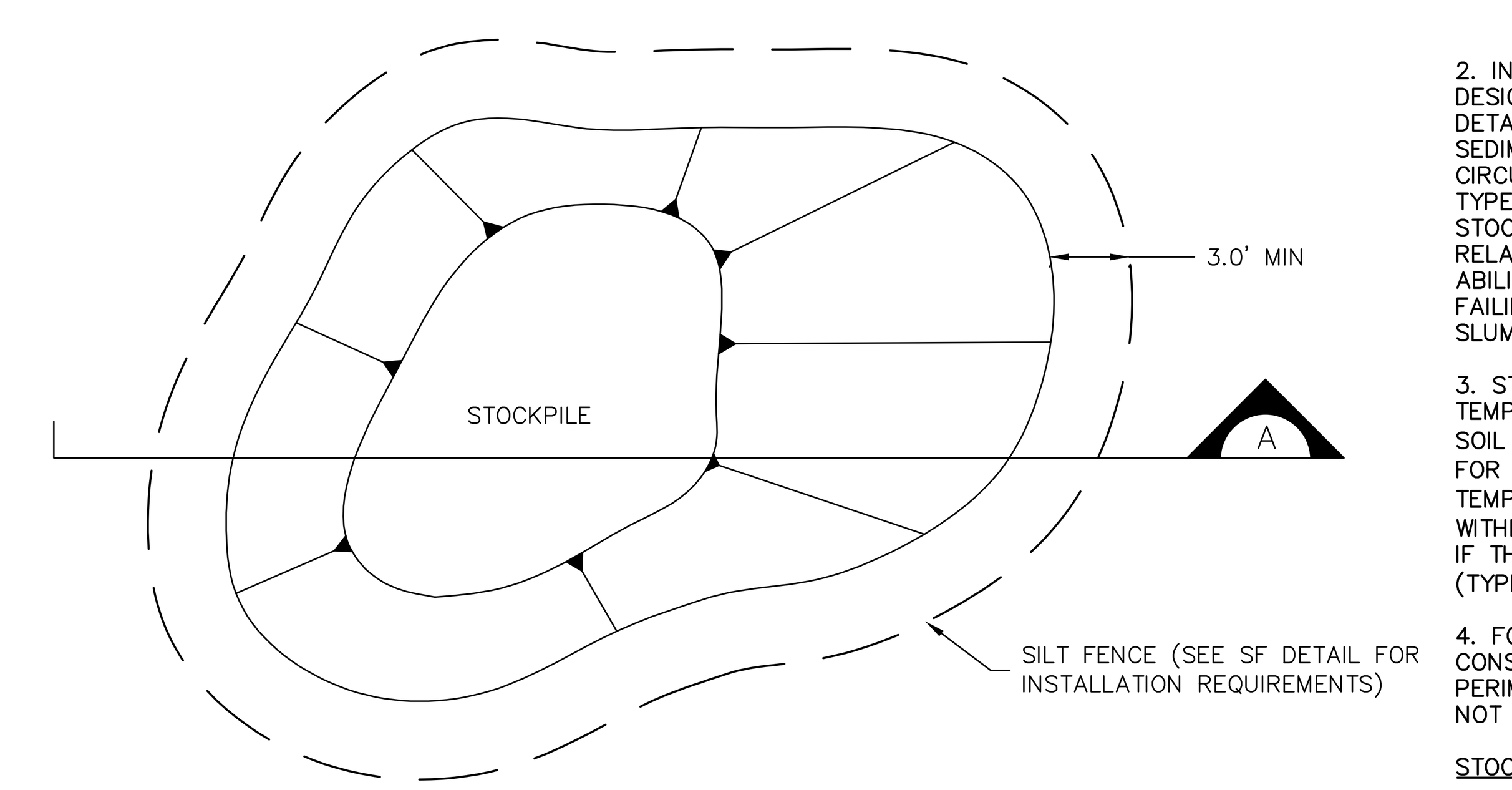
STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITH 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGARDED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE AND UNLOADIN/LOADING OPERATIONS.
6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

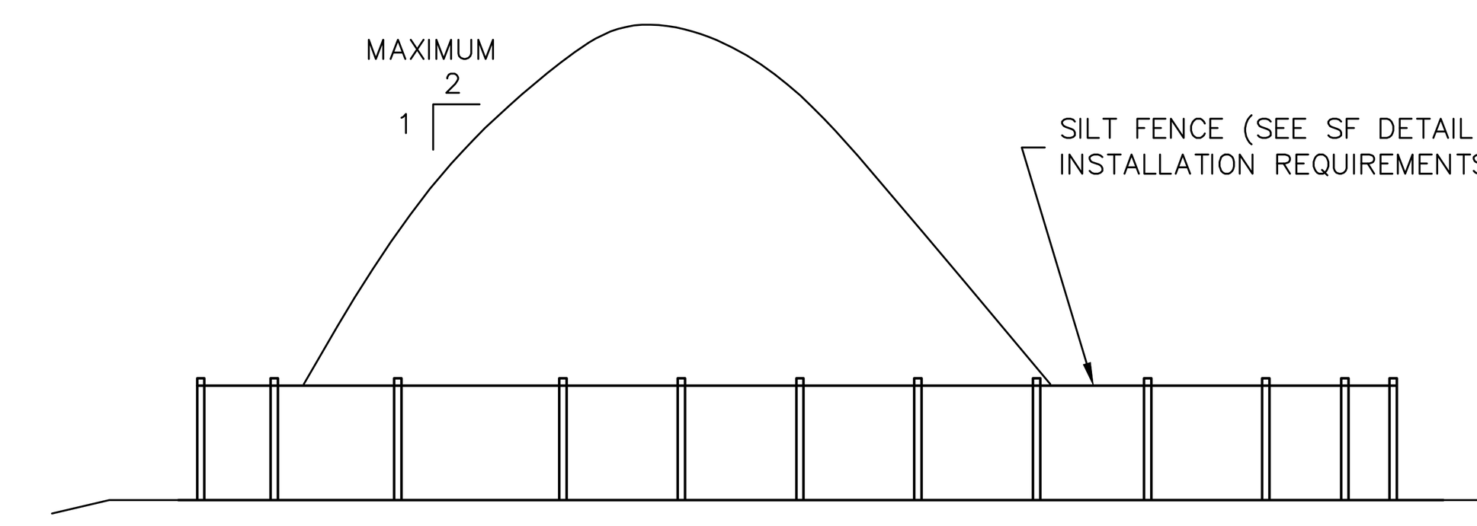
NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE–ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)



STOCKPILE PROTECTION PLAN



SECTION A

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
URBAN STORM DRAINAGE CRITERIA MANUAL VOLUME 3

STOCKPILE PROTECTION INSTALLATION NOTES

1. SEE PLAN FOR:
   –LOCATION OF STOCKPILES
   –TYPE OF STOCKPILE PROTECTION

2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENTS CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

STOCKPILE PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INPSECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

STOCKPILE PROTECTION MAINTENANCE NOTES

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROL BY THE END OF THE WORKDAY.

5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM PARKER, COLORADO)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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SCANNELL PROPERTIES

STATE OF MISSOURI
COLIN JENNINGS SHIPWRIGHT
NUMBER PE-2021039302
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

2021

EROSION CONTROL DETAILS
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
LEE'S SUMMIT, MISSOURI

drawn by:	OLSSON
checked by:	ENG
approved by:	ENG
QA/QC by:	ENG
project no.:	021-04157
drawing no.:	C_ERODTL01_02104157.dwg
date:	

SHEET
LD2.3

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\CNCV\PHASE I\Land Disturbance\C_ERODTL01_02104157.dwg USER: lmoore
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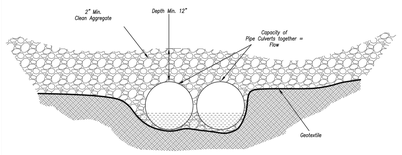


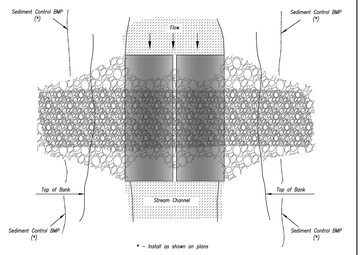
ELEVATION

Maintenance:

1. Repair stream bank erosion by stabilizing with erosion control BMPs such as erosion control blankets.
2. For in-stream degradation, armor the culvert outlet(s) with riprap to dissipate energy.
3. If sediment or debris is accumulating upstream of the crossing, remove as needed to maintain the functionality of the crossing.
4. If a temporary crossing is requiring excessive maintenance, replacement with a larger culvert or alternate design may be necessary.

Notes for Temporary Stream Crossing:

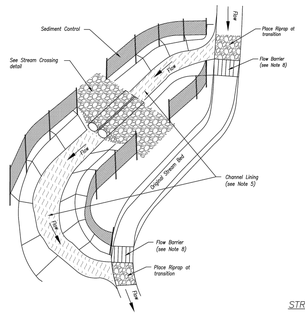
1. Clearing and excavation of the stream bed and banks shall be kept to a minimum.
2. Place one pipe, buried 6" into the stream bottom, at the lowest point of the channel to allow the passage of aquatic organisms. Additional pipes shall be placed along the remainder of the stream channel bottom such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overtopping the crossing. (See Specification for more information).
3. Geotextile shall be placed on the streambed and streambanks prior to placement of the pipe culvert and aggregate. The geotextile shall cover the streambed and extend a minimum of 6 inches and a maximum of 1 foot beyond the end of culvert and bedding material. Filter cloth reduces settlement and improves crossing stability.
4. The culvert shall extend a minimum of 1 foot beyond the upstream and downstream toe of the aggregate placed around the culvert, in no case shall the culvert exceed 40 feet in length.
5. The culvert shall be covered with a minimum of 1 foot of aggregate. If multiple culverts are used, they shall be separated by at least 12" of compacted aggregate fill.
6. As soon as crossing no longer needed, all structures including culverts, bedding and geotextile materials shall be removed. Removal of the structure and clean-up of the area shall be accomplished without construction equipment working in the channel.
7. Upon removal of the structure, the stream and banks shall immediately be shaped to its original cross-section and properly stabilized. Take care to minimize the amount of sediment lost into the stream.



* – Install as shown on plans

PLAN VIEW

TEMPORARY STREAM CROSSING



Notes for Temporary Diversion Channel:

1. The diversion channel crossing must be operational before work is done in the stream. Construction will be performed in the dry.
2. Minimum width of bottom shall be 6 feet or equal to bottom width of existing streambed, whichever is less.
3. Maximum steepness of side slopes shall be 2H:1V. Depth and grade may be variable, dependent on site conditions, but shall be sufficient to ensure continuous flow of water in diversion.
4. Channel must be lined with riprap or turf reinforcement mat depending on the expected velocity and shear stress in the channel.
5. Stream diversion liners shall be secured at the upstream and downstream sides with non-erodible weights such as riprap. These weights shall allow normal flow of the stream. Soil shall not be mixed with stream diversion weights. Weights may also be needed along the diversion's length to secure liner.
6. Stream diversion liners shall be entrenched at the top of slopes along with a sediment control BMP.
7. Non-erodible materials such as riprap, Jersey barriers, sand bags, plywood, or sheet piling shall be used as flow barriers to divert the stream away from it's original channel and prevent or reduce water backup into the construction area.
8. Stream should be re-diverted only after backfilling and re-stabilization of original streambed and banks is completed.

STREAM DIVERSION CHANNEL

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

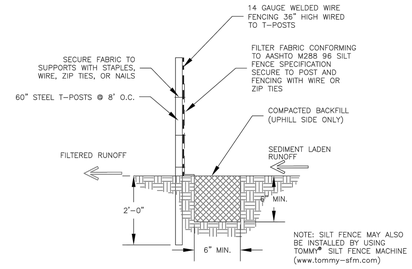
AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

STREAM CROSSINGS AND DIVERSION CHANNELS

STANDARD DRAWING NUMBER: ESC-13

ADOPTED: 10/24/2016



REINFORCED SILT FENCE SLOPE BARRIER DETAIL
NO SCALE

Channel Report

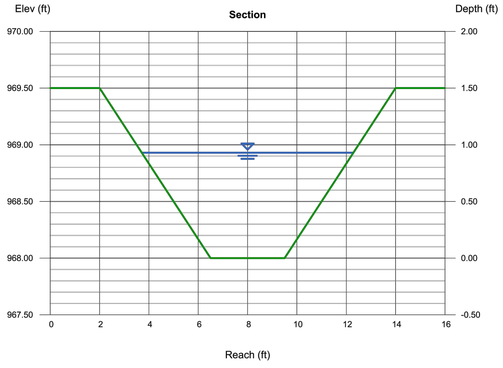
Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Oct 8 2021

Swale for Basin #2

Trapezoidal	
Bottom Width (ft)	= 3.00
Side Slopes (z:1)	= 3.00, 3.00
Total Depth (ft)	= 1.50
Invert Elev (ft)	= 968.00
Slope (%)	= 2.50
N-Value	= 0.030

Calculations	
Compute by:	Known Q
Known Q (cfs)	= 30.00

Highlighted	
Depth (ft)	= 0.93
Q (cfs)	= 30.00
Area (sqft)	= 5.38
Velocity (ft/s)	= 5.57
Wetted Perim (ft)	= 8.88
Crit Depth, Yc (ft)	= 1.05
Top Width (ft)	= 8.58
EGL (ft)	= 1.41



EROSION CONTROL NOTES:

1. ALL WORK IN PUBLIC EASEMENTS AND RIGHT-OF-WAY AND ALL EROSION CONTROL WORK MUST COMPLY WITH THE LATEST EDITION OF THE TECHNICAL PROVISIONS & STANDARD DRAWINGS FOR ROADS AND SEWERS, OF THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS. IF ANY OF THE GENERAL NOTES CONFLICT WITH THE TECHNICAL PROVISIONS & STANDARD DRAWINGS FOR ROADS AND SEWERS, OF THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS (THE UG), THE UG'S STANDARDS SHALL OVERRIDE.
2. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT, AND LABOR AS NECESSARY TO INSTALL AND MAINTAIN ADEQUATE EROSION CONTROL, KEEP THE STREETS CLEAN OF MUD AND DEBRIS, AND PREVENT SOIL FROM LEAVING THE PROJECT SITE. THE CONTRACTOR'S EROSION CONTROL MEASURES SHALL CONFORM TO THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY, KANSAS CITY, KS TECHNICAL PROVISIONS SPECIFICATIONS, AND THE PROJECT'S STORMWATER POLLUTION PREVENTION PLAN, A COPY OF WHICH SHALL BE MAINTAINED AND UPDATED ON SITE AT ALL TIMES.
3. CONTRACTOR SHALL INSTALL EROSION CONTROL DEVICES BEFORE STARTING ANY CONSTRUCTION ACTIVITY. REFERENCE PRE-CONTSTRUCTION PHASE IN STAGING TABLE.
4. GOOD HOUSEKEEPING, INCLUDING SPILL RESPONSE SHALL BE PERFORMED IN ACCORDANCE WITH THE KANSAS CITY CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION STANDARD SPECIFICATIONS, SECTION 2150.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL EROSION CONTROL MEASURES OR MODIFICATIONS IF THE PLAN FAILS TO SUBSTANTIALLY CONTROL EROSION OR OFFSITE SEDIMENTATION.
6. THE CONTRACTOR SHALL TEMPORARILY SEED, MULCH, OR OTHERWISE STABILIZE ANY DISTURBED AREA WHERE THE LAND DISTURBANCE ACTIVITY HAS CEASED FOR A PERIOD OF FOURTEEN (14) CALENDAR DAYS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL DEVICES AND REMOVING SEDIMENT UNTIL A MINIMUM OF 70% OF PERMANENT VEGETATION HAS BECOME STABILIZED AND ESTABLISHED. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE 70% ESTABLISHED VEGETATION IS MET, OR THE DURATION OF THE PROJECT, WHICHEVER IS THE LATER DATE.
8. THE CONTRACTOR SHALL HAVE A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ON SITE AT ALL TIMES. INSPECTION LOGS AND ANY CHANGES TO EROSION CONTROL MEASURES SHALL BE ADDED TO THE SWPPP.
9. REMOVE SEDIMENT AND RESTORE THE SEDIMENT BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO 20% OF THE STORAGE CAPACITY. CONTRACTOR SHALL CLEAN OUT SEDIMENT BASIN BEFORE FINAL GRADING OF DETENTION BASIN AND DRY DETENTION BASINS. CONTRACTOR TO HAVE DETENTION BASIN AND DRY DETENTION BASINS STAKED BEFORE FINAL GRADING PER GRADING PLAN. AFTER CONTRACTOR HAS COMPLETED FINAL GRADING, AS-BUILT SHOTS AND VOLUME STORAGE CAPACITY CALCULATIONS SHALL BE PROVIDED TO THE ENGINEER TO CONFIRM COMPLIANCE WITH DESIGN PLANS AND UG STANDARDS.
10. REMOVE SEDIMENT AND RESTORE THE SEDIMENT TRAP TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO 20% OF THE STORAGE CAPACITY.

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COLIN JENNINGS
SHIPWRIGHT
NUMBER
PE-2021038302
01/21/24
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL DETAILS
LAND DISTURBANCE PLANS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing file: C_ERODTL01_02104157.dwg
date:

SHEET
LD2.4

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\GNCV\PHASE 1\Land Disturbance\C_ERODTL01_02104157.dwg USER: lmoore
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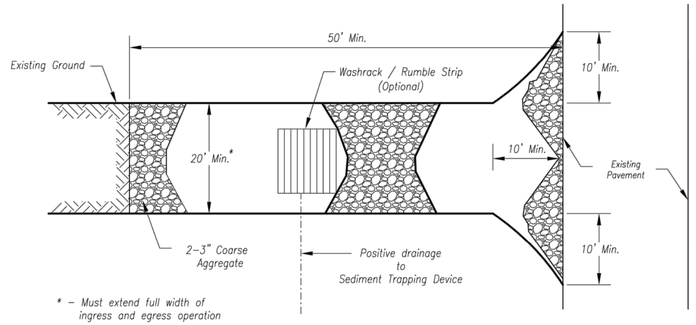
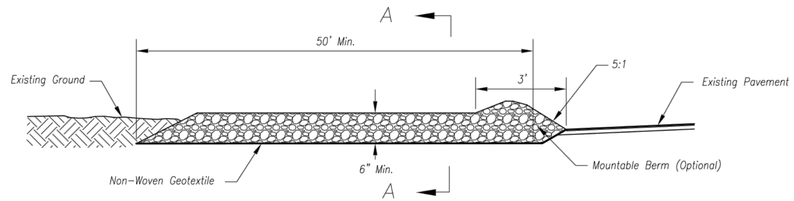


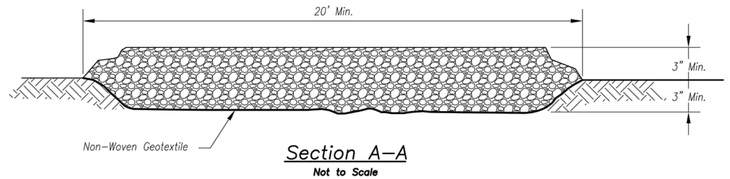
Plan View

Not to Scale



Side Elevation

Not to Scale



Section A-A

Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
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 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 sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of Installation. Top dress with clean aggregate as needed.

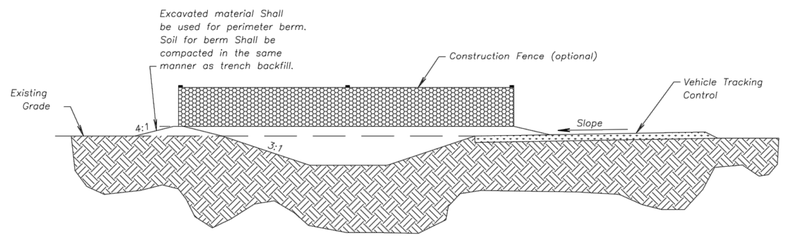
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



CONCRETE WASHOUT

REFERENCE APPROVED PUBLIC IMPROVEMENT PLANS

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION

Kansas City Metro Chapter APWA American Public Works Association

KANSAS CITY METRO CHAPTER

CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT

STANDARD DRAWING NUMBER ESC-01

ADOPTED: 10/24/2016

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STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
PROFESSIONAL ENGINEER
10-14-21

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL DETAILS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: -
DRAWN BY: ARJ/AMW
CHECKED BY: XXX
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 021-04157
DWG NO.: T_ERCD_02104157
DATE: 2021-10-14

DWG: F:\2021\04001-04500\021-04157\40-Design\AutoCAD\Final Plans\Sheets\RDBR\T_ERCD_02104157.dwg USER: arjohnson
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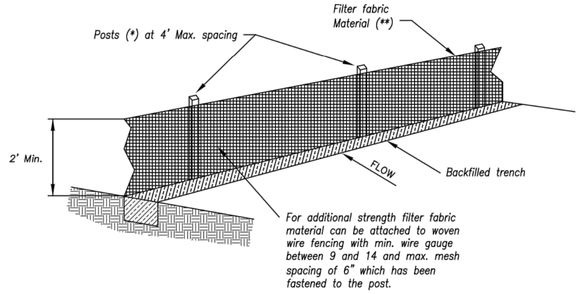
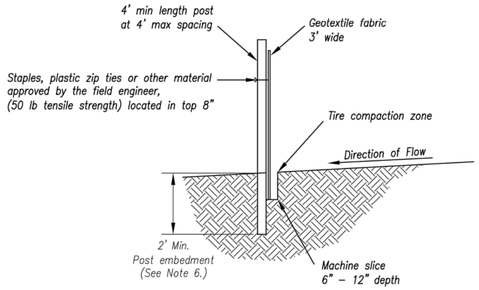




(*) POSTS
– MIN, LENGTH 4'
– HARDWOOD 1 3/16" x 1 3/16"
– NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
– STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288

SILT FENCE DETAILS

Not to Scale

Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ⅓ the height of silt fence.
2. Repair as necessary to maintain function and structure.

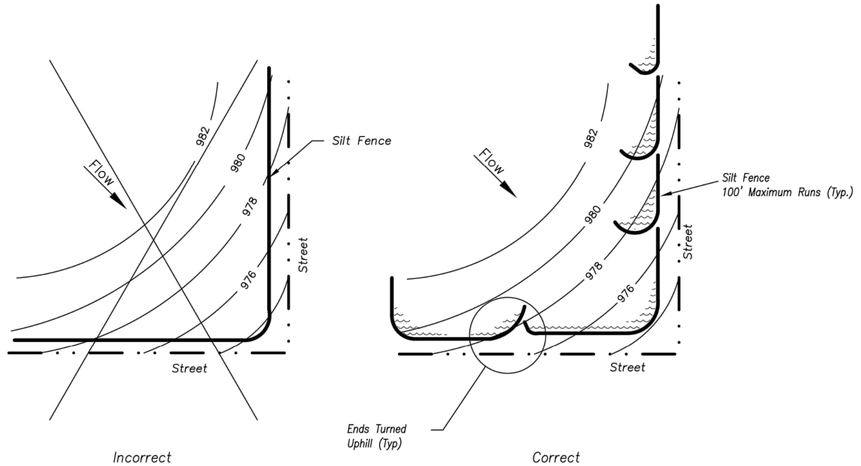
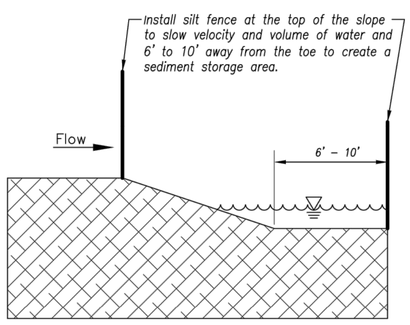
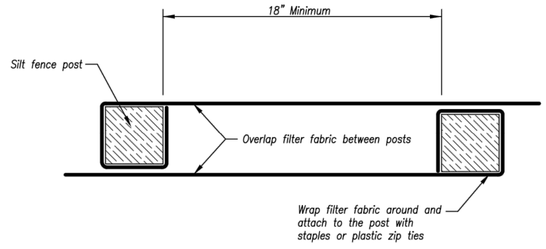


Figure A

SILT FENCE LAYOUT

Not to Scale





JOINING FENCE SECTIONS

Not to Scale

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

REFERENCE APPROVED PUBLIC IMPROVEMENT PLANS

AMERICAN PUBLIC WORKS ASSOCIATION

Kansas City Metro Chapter APWA American Public Works Association

KANSAS CITY METRO CHAPTER

SILT FENCE

STANDARD DRAWING NUMBER ESC-03

ADOPTED: 10/24/2016

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STATE OF MISSOURI RYAN B. FLEMING NUMBER PE-2002003161 10-14-21 PROFESSIONAL ENGINEER

RYAN B. FLEMING
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NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
LEE'S SUMMIT, MISSOURI

2021

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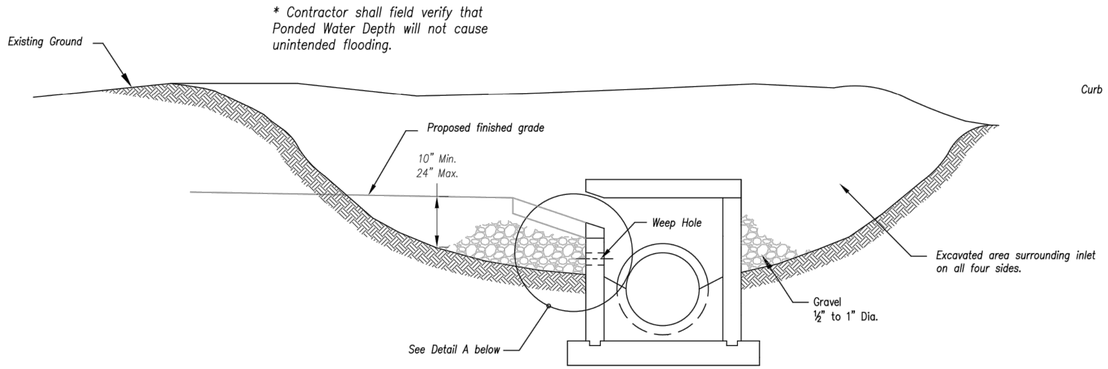
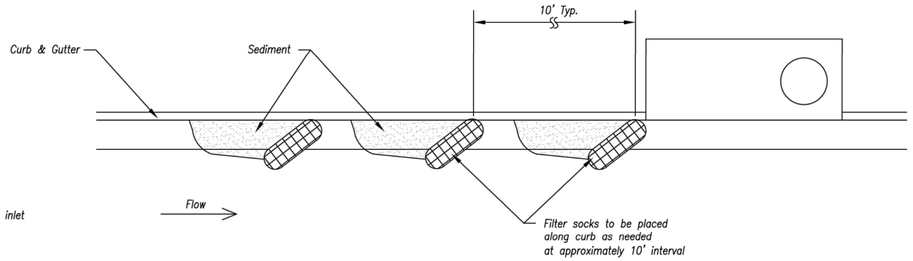
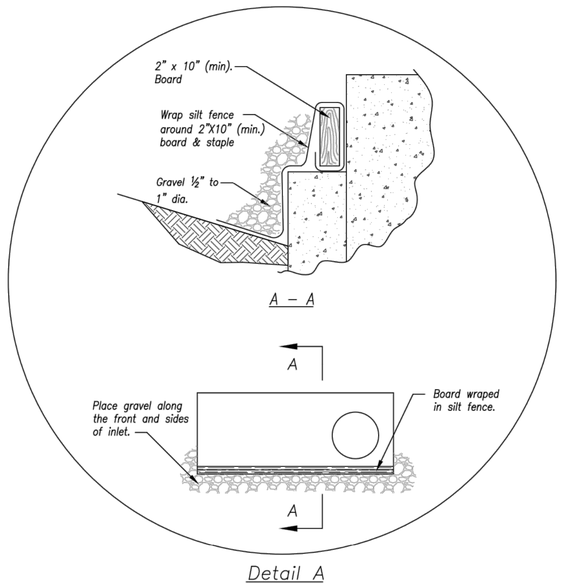




On Grade Curb Inlet Protection



Detail A

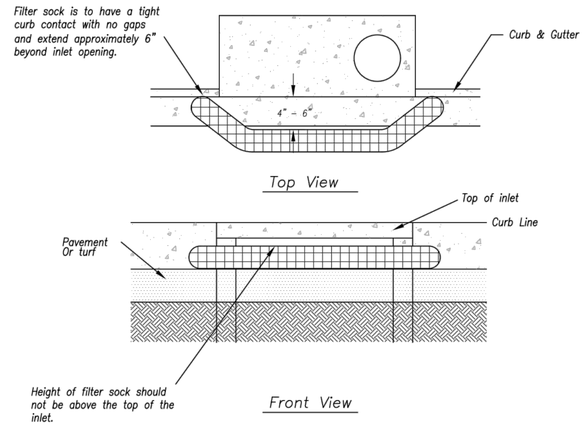
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.



Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

REFERENCE APPROVED PUBLIC IMPROVEMENT PLANS

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER

CURB INLET PROTECTION

STANDARD DRAWING NUMBER ESC-06
ADOPTED: 10/24/2016

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REVISIONS

EROSION CONTROL DETAILS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
LEE'S SUMMIT, MISSOURI
2021

C.O.A. NO.: -
DRAWN BY: ARJ/AMW
CHECKED BY: XXX
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 021-04157
DWG NO.: T_ERCD_02104157
DATE: 2021-10-14

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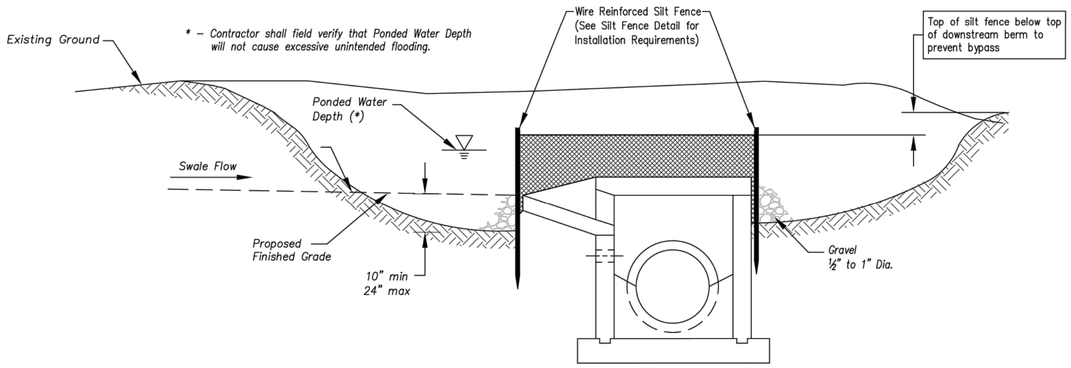

Section A–A

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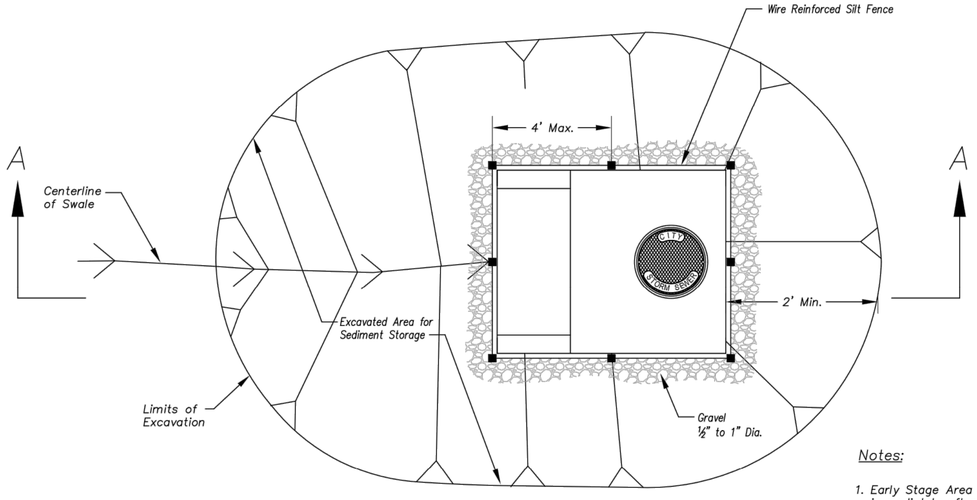

Plan

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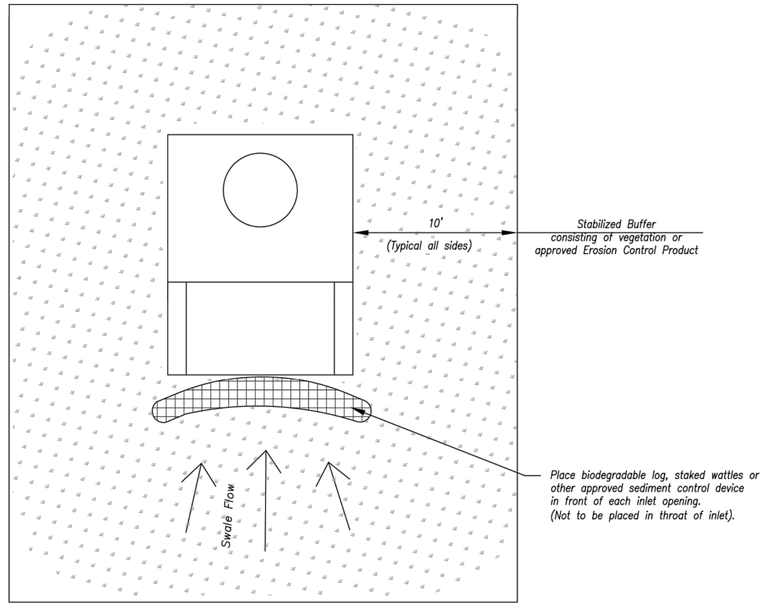
EARLY STAGE AREA INLET

(All open boxes and inlets not at final grade)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.



Plan

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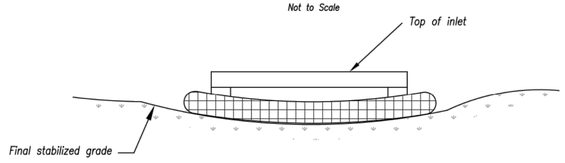

Front View

LATE STAGE AREA INLET

(Area inlets at final grade and existing inlets)

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

REFERENCE APPROVED PUBLIC IMPROVEMENT PLANS

AMERICAN PUBLIC WORKS ASSOCIATION

Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

AREA INLET AND JUNCTION BOX PROTECTION

STANDARD DRAWING NUMBER ESC-07

ADOPTED: 10/24/2016

olsson

Olsson Engineering - MO State Certificate of Authority #001592
7301 West 133rd Street, Suite 200 TEL 913.381.1170 www.olsson.com
Overland Park, KS 66213-4750 FAX 913.381.1174

STATE OF MISSOURI RYAN B. FLEMING NUMBER PE-2002003161 10-14-21 PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

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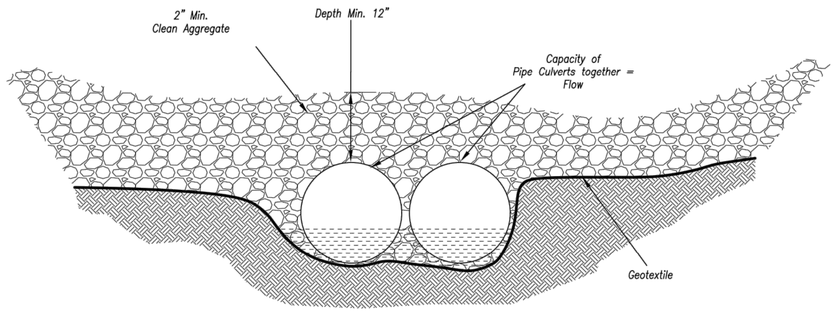


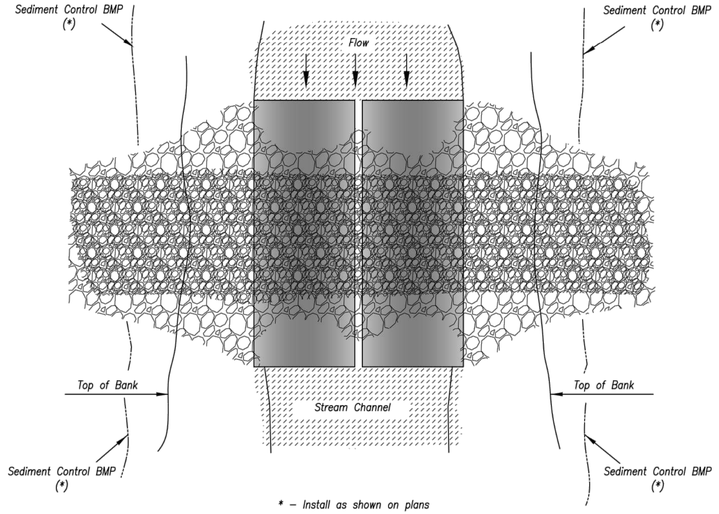
ELEVATION

Maintenance:

1. Repair stream bank erosion by stabilizing with erosion control BMPs such as erosion control blankets.
2. For in-stream degradation, armor the culvert outlet(s) with riprap to dissipate energy.
3. If sediment or debris is accumulating upstream of the crossing, remove as needed to maintain the functionality of the crossing.
4. If a temporary crossing is requiring excessive maintenance, replacement with a larger culvert or alternate design may be necessary.

Notes for Temporary Stream Crossing:

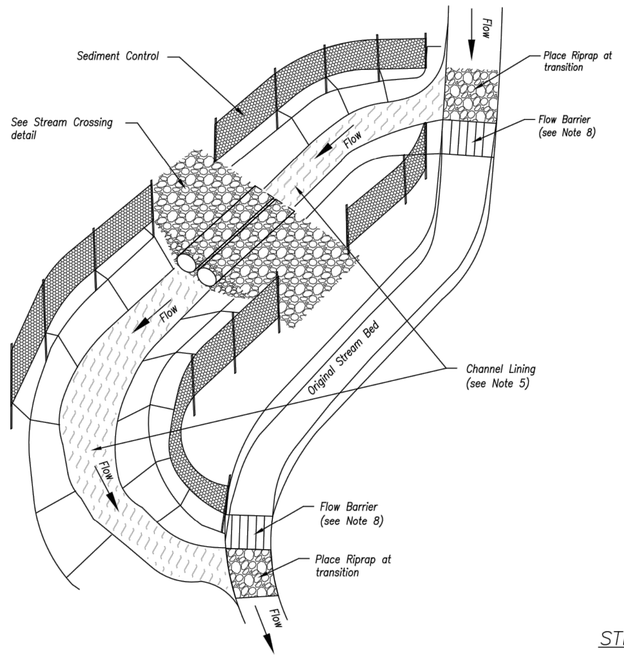
1. Clearing and excavation of the stream bed and banks shall be kept to a minimum.
2. Place one pipe, buried 6" into the stream bottom, at the lowest point of the channel to allow the passage of aquatic organisms. Additional pipes shall be placed along the remainder of the stream channel bottom such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overtopping the crossing. (See Specification for more information).
3. Geotextile shall be placed on the streambed and streambanks prior to placement of the pipe culvert and aggregate. The geotextile shall cover the streambed and extend a minimum of 6 inches and a maximum of 1 foot beyond the end of culvert and bedding material. Filter cloth reduces settlement and improves crossing stability.
4. The culvert shall extend a minimum of 1 foot beyond the upstream and downstream toe of the aggregate placed around the culvert. In no case shall the culvert exceed 40 feet in length.
5. The culvert shall be covered with a minimum of 1 foot of aggregate. If multiple culverts are used, they shall be separated by at least 12" of compacted aggregate fill.
6. As soon as crossing no longer needed, all structures including culverts, bedding and geotextile materials shall be removed. Removal of the structure and clean-up of the area shall be accomplished without construction equipment working in the channel.
7. Upon removal of the structure, the stream and banks shall immediately be shaped to its original cross-section and properly stabilized. Take care to minimize the amount of sediment lost into the stream.



* – Install as shown on plans

PLAN VIEW

TEMPORARY STREAM CROSSING



Notes for Temporary Diversion Channel:

1. The diversion channel crossing must be operational before work is done in the stream. Construction will be performed in the dry.
2. Minimum width of bottom shall be 6 feet or equal to bottom width of existing streambed, whichever is less.
3. Maximum steepness of side slopes shall be 2H:1V. Depth and grade may be variable, dependent on site conditions, but shal be sufficient to ensure continuous flow of water in diversion.
4. Channel must be lined with riprap or turf reinforcement mat depending on the expected velocity and shear stress in the channel.
5. Stream diversion liners shall be secured at the upstream and downstream sides with non-erodible weights such as riprap. These weights shall allow normal flow of the stream. Soil shall not be mixed with stream diversion weights. Weights may also be needed along the diversion's length to secure liner.
6. Stream diversion liners shall be entrenched at the top of slopes along with a sediment control BMP.
7. Non-erodible materials such as riprap, Jersey barriers. sand bags, plywood, or sheet piling shall be used as flow barriers to divert the stream away from it's original channel and prevent or reduce water backup into the construction area.
8. Stream should be re-diverted only after backfilling and re-stabilization of original streambed and banks is completed.

STREAM DIVERSION CHANNEL

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

REFERENCE APPROVED PUBLIC IMPROVEMENT PLANS

AMERICAN PUBLIC WORKS ASSOCIATION

Kansas City Metro Chapter APWA American Public Works Association

KANSAS CITY METRO CHAPTER

STREAM CROSSINGS AND DIVERSION CHANNELS

STANDARD DRAWING NUMBER ESC-13

ADOPTED: 10/24/2016

olsson

Olsson Engineering - MO State Certificate of Authority #001592
7301 West 133rd Street, Suite 200 TEL 913.381.1170 www.olsson.com
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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.

Compliance Checklist

BEST MANAGEMENT PRACTICES (BMPs)	✓
Perimeter Controls - BMPs are installed & maintained downgradient, along back of curb and/or sidewalk and lot line of adjacent properties. Sediment build up is removed, as needed.	
Intermediate Controls - BMPs are installed & maintained in areas of long or steep drainage paths, particularly when perimeter controls fail. Sediment build up is removed, as needed.	
Lot Access - Specific lot entrance is designated and maintained with suitable surface for parking & unloading that prevents tracking of mud &materials onto street. Required for each lot.	
Inlet Protection - BMPs are installed & maintained around all types of inlets to allow water to flow but impede sediment. Sediment build up is removed, as needed.	
Stockpiles - Located away from street, storm inlets, lot access, or adjacent property lines. BMPs are properly installed and maintained.	
Other Pollutants - Trash properly disposed; materials/chemicals properly stored; concrete washout performed in designated area; dewatering does not deposit sediment off-site or cause erosion.	

City Inspections

- City inspectors will inspect ESC BMPs in conjunction with routine inspections. City inspections will ensure proper placement and installation of ESC BMPs as well as continued maintenance.
- The first ESC BMP re-inspection will occur at the time of the footing inspection. If ESC BMPs are not installed correctly or in proper location, the requested inspection will be denied.
- The City expects foundation backfilling and installation of additional ESC BMPs, as needed, will be complete by the time plumbing rough-in inspection is requested. The requested inspection will be denied if the appropriate ESC BMPs are not installed and properly functioning.
- City inspectors are available to discuss ESC BMPs for lots and the proper sequencing for BMP installation.

Questions concerning the City's ESC standards, permits, and/or SWPPPs can be addressed to the Lee's Summit Development Services Department at 816.969.1200.

December 2017 December 2017

Erosion & Sediment Control Standards

Single Family Residential

LEE'S SUMMIT
MISSOURI

Development Services

220 SE Green Street, Lee's Summit, MO 64063
cityofLS.net/development | 816.969.1200

This brochure contains standard plans and procedures for typical residential building construction within the City of Lee's Summit. The primary objective of standards for erosion and sediment control (ESC) is utilization of best management practices (BMPs) at construction site perimeters to minimize erosion, thereby preventing sediment from leaving the construction site and entering the City's storm drainage system.

Permit Holder Responsibilities

The building permit holder is responsible for ensuring that adequate ESC measures and BMPs are in place and functioning prior to and during all construction activities, until construction is complete. This includes:

- Installation of designated perimeter controls, lot access, and inlet protection BMPs prior to any land disturbance.
- Installation of additional perimeter, intermediate, and stockpile protection immediately following wall inspection and backfilling.
- Restriction and maintenance of lot access. Maintenance of designated lot access is required until a permanent driveway is installed.
- Maintenance of all lot-specific ESC and BMPs to prevent sediment, mud, dirt, rock, and other debris from reaching or being tracked to streets, sidewalks, or storm inlets.
- Cleanup of any sediment, mud, dirt, rock, and other debris from the construction site that has reached streets, sidewalks, or inlets.
- Maintenance of waste and pollutant BMPs, including trash, washout areas, portable toilets, chemical storage, and dewatering efforts.
- BMP inspection frequency shall be established to ensure BMPs are functioning as designed. City ordinance requires ESC and BMP inspections to be conducted within 24 hours of a rain event of 1/2 inch or more. Problems noted during any inspection shall be corrected within 7 days unless otherwise noted by a City inspector.

Adjacent Lots

Building permit holders who disturb land adjacent to their permitted building site(s) must:

- Install ESC on and between both lots.
- Remove any construction materials and re-stabilize the disturbed areas with sod or permanent seeding and mulch.

Land disturbance of adjacent lots will be noted as a condition for the Final Certificate of Occupancy for the permitted lot. This condition will need to be resolved before a Certificate of Occupancy is issued for the permitted lot.

Pollutants

The following waste and pollutant BMPs must be addressed on all construction sites:

- Trash and Debris: to be contained so as not to blow or wash into the storm drainage system.
- Portable Toilets: to be provided for sanitary waste; however, should not be located on/near storm inlets.
- Concrete Washout: to be disposed of in a designated washout area.
- Paint, Fuel, and Other Chemicals: to be stored properly. All spills must be cleaned up immediately and disposed of properly.
- "Waste" Water: from construction activities or dewatering of trenches, foundations, and other excavated areas should not cause erosion or deposit sediment off-site. A filter bag, sediment basin, or vegetated area must be used to filter sediment before discharge off-site. Areas of standing water shall not be allowed.

Inactive Sites

Permitted building sites found to be inactive will be required to maintain ESC BMPs and may be required to stabilize all disturbed areas with permanent vegetation.

Inlet Protection

- Curb Inlets: Manufactured products (Gutter buddy, Filter Sox, etc.) are to be properly installed at the opening of curb inlets, as **secondary** ESC BMPs, with primary BMPs installed upstream on-site. Proper installation requires the filter to fully extend beyond each end of the inlet opening, with clearance at the top for water overflow and no gaps between filters or against the curb. Installation is limited to locations where temporary ponding and sediment do not create a safety hazard or cause property damage. Regular inspection and maintenance of filters shall be performed and sediment build up should be removed. Any torn or damaged filters shall be replaced. If using cinder blocks, they must be installed as shown in this picture, to prevent clogging. Any damage to property due to clogged inlets shall be the responsibility of the permit holder.

- Field Inlets: Before construction begins on a lot that drains to a field inlet, regardless if the inlet is located on or off-site, the permit holder will ensure proper inlet protection and perimeter control. Inlet protection shall included a minimum 10' buffer around the entire inlet consisting of grass, sod, or RECP. As an alternative to a stabilized buffer, the inlet can be wrapped with wire-reinforced silt fence or silt fence attached to a wood frame for extra support. The silt fence should completely enclose the inlet and an inlet filter (Gutter Buddy, Filter Sox, etc.) should be properly installed at the inlet opening.

OTHER BMPs

Aside from perimeter controls, building permit holders are required to ensure the following ESC BMPs are properly addressed at each building site:

Stockpiles

Soil stockpiles should not be located near the street, storm inlets, lot access, or adjacent property lines. All stockpiles must either be stabilized, covered, or have ESC and BMPs installed around the base of the pile.

Land Disturbance Permits

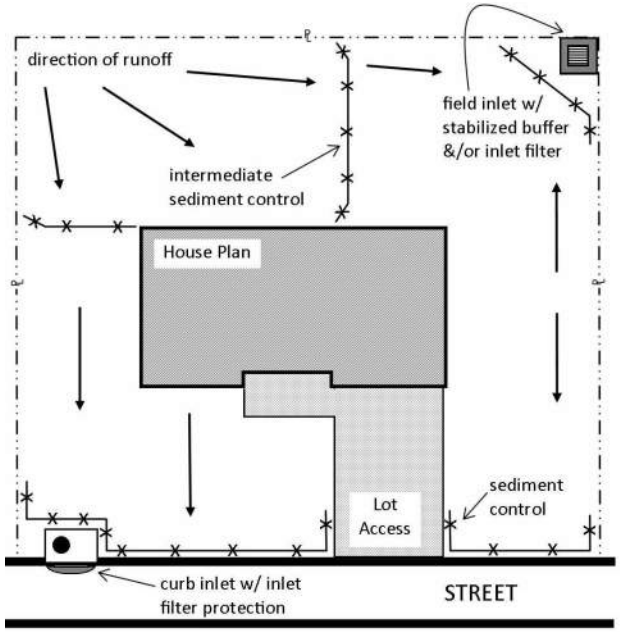
If a construction project disturbs at least 1 acre of land, a land disturbance permit will be required from the Missouri Department of Natural Resources (MDNR) prior to project start up. If a construction project disturbs at least 2,000 square feet of land and a building permit has not been issued, a land disturbance permit will be required from the City prior to project start up.

Stormwater Pollution Prevention Plan (SWPPP)

If a land disturbance permit is required from the City and/or the MDNR, a SWPPP will also be required to be submitted to the City with a copy present on the construction site at all times.

Compliance

Failure to comply with the City's ESC standards, including requirements for land disturbance permits and SWPPPs, is a violation of City ordinances and can result in a substantial fine. Compliance with the City's ESC standards requires developers, builders, and/or contractors to make their own assessment (or seek professional advice) of the conditions and drainage patterns at individual sites. The site conditions should determine the selection and location of appropriate BMPs for each lot.



Sediment Control: silt fence, wattles, grass buffer, rolled erosion control product, etc.

Stabilized Buffer: sod, grass, rolled erosion control product, etc.

Lot Access: aggregate, (geotextile fabric, optimal)

Representative ESC plan for typical single family lot.

NOTE: Intermediate sediment controls may be needed for steep or long drainage paths. Additionally, once sidewalks are installed, BMPs are to be moved to the back of the sidewalk to prevent sediment from reaching the sidewalk.

PERIMETER CONTROL BMPs

Perimeter controls are required to prevent sediment from leaving construction sites and reaching sidewalks, streets, storm inlets, and existing vegetation on adjacent lots. The following are examples of ESC and BMPs for construction site perimeters:

Straw Wattles and Logs

Straw wattles and logs are designed to allow low flows of surface water to pass through, which filters sediment and reduces the risk of under or end cutting. They should be installed per the manufacturer's instructions with care taken to tightly adjoin the ends of each section such that there is no overlap. Ends are to be angled uphill to pond surface water runoff. Regular inspection and maintenance should be performed and sediment build up should be removed. Any torn or damaged sections should be replaced.

Rolled Erosion Control Products

Rolled erosion control products (RECP), also referred to as mats or blankets, can be used to stabilize exposed soil and filter runoff. RECP do not require special equipment for installation and can be installed in all weather conditions. However, RECP should be installed according to manufacturer's specifications with special attention paid to proper anchoring. Grass seed placed under RECP is recommended as it will grow up through the RECP, which will establish a more permanent buffer for ESC.

Silt/Sediment Fence

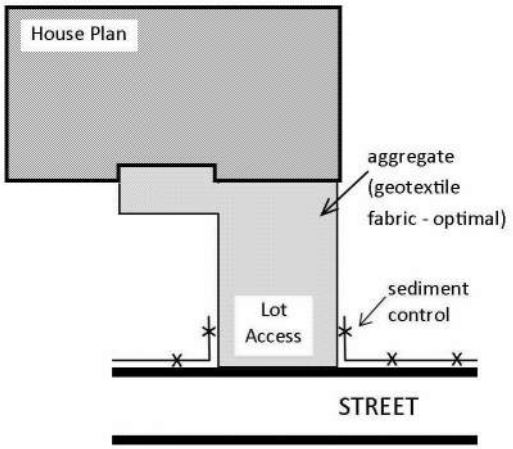
Silt fence is designed to slow and pond low-flowing surface water runoff to allow sediment to settle. Silt fencing should be machine installed, pulled tightly between each post, and overlapped when joining two sections of fence. Ends of fence are to be angled uphill to pond surface water runoff. Regular inspection and maintenance of fencing should be performed and sediment build up should be removed. Any torn, damaged, or collapsed sections should be replaced.

Grass Buffers and Mulch Berms

Utilizing a strip of maintained vegetation as a buffer can be a good BMP for ESC. A mulch buffer can also be used for ESC, particularly when weather prohibits the installation of other BMPs; however, mulch tends to float and wash away in heavy rains. These types of buffers work well with other perimeter controls or in small areas such as the City right-of-way between a sidewalk and curb line.

Lot Access

The intent of designated lot access is to provide a location for off-street material unloading and vehicle parking so mud and other debris are not likely to be tracked onto the street. Lot access must be comprised of aggregate sufficient to prevent tracking (geotextile fabric, optimal) and maintained until a permanent driveway is installed. Silt fence should be angled at the edges of the lot access to prevent sediment from washing over the designated access area. Lot access width shall be minimum of 12 feet and aggregate shall be minimum of 6 inches of 3/4 inch diameter or larger.



NOTE: Lot access must be in accordance with City code and comprised of aggregate sufficient to prevent tracking. Geotextile fabric is an option that can be used under aggregate to provide stability on wet soils.

Representative Lot Access plan for typical single family lot.

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

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.

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 contains the Notice of Termination form for the project. The form should be filled out, signed and sent to the applicable MDNR regional office (see map).

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 the *Water Treatment Plant Closure* -PUB2568 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 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 the 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. Attach photographs of closed lagoons. Also attach any additional information that supports closure of the 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 the 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 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 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, see **dnr.mo.gov/regions.**