

May 20, 2019
File No. 27218221.04

Mr. George Binger, III, P.E.
Deputy Director of Public Works/City Engineer
220 SE Green St.
Lee's Summit, MO 64063

Subject: Floodplain Development Permit Application
Landfill Closure Construction Borrow Area
Lee's Summit Landfill, Lee's Summit, MO
City Project Number 40252086-02

Dear Mr. Binger:

On behalf of the Lee's Summit Landfill, we have prepared the enclosed Floodplain Development Permit Application (Attachment A) to request the ability to disturb areas of the floodplain of an unnamed tributary to Big Creek southeast of the Lee's Summit Landfill (see Figure 1 in Attachment B). The area designated as Borrow Source A will be stripped of trees and vegetation so that underlying soil may be used to construct the final cover over the landfill. Borrow Source A is partially located in the 100-year floodplain of the unnamed tributary to Big Creek and is very near the regulatory floodway for this stream as established by Federal Emergency Management Agency. However, no project work will impact the regulatory floodway as described below.

The borrow area is generally divided into three areas, called Borrow Area A1, A2, and A3 as shown on Figure 2 in Attachment B and Drawing 8 included in Attachment C. Drawing 8 has been taken from the Landfill Closure Construction Drawing package issued to the contractor for closure of the landfill. The northern area, A1, has been excavated already.

The landfill closure construction is expected to occur from May through November 2019 with a substantial completion date of October 15, 2019 and a final completion date of December 1, 2019. The project activities and protections for the unnamed tributary to Big Creek that will be implemented in this borrow area are summarized below.

Survey and Access

A Missouri-licensed surveyor will stake the boundary of the borrow area in the field. This work is anticipated to occur during the week of May 13, 2019.

A temporary creek crossing will be required to cross over the small unnamed tributary (flows east to west) that traverses the borrow area approximately 500 feet south of the north end of the borrow area (see Figure 2 attached). A low-water crossing will be required at the southern tributary crossing, located approximately 1,300 feet south of the north end of the borrow area.

The contractor was provided the following instructions related to the temporary and low water crossings (from Landfill Closure Construction Drawings, Sheet 2, Note 47):

Construct one new temporary water crossing and upgrade three water crossing areas in approximate locations identified on Construction Drawing and in agreement

with Owner and Engineer. Location of water crossing activities shall occur in areas that do not require removal of trees. Utilize only natural stone materials in stream channels and construct all water crossing construction activity in accordance with requirements included in US Army Corps of Engineers Nationwide Permit 14. When working within channel (between upper banks), any material to be excavated must be removed with a track hoe or backhoe and placed in a haul truck/dump truck for relocation to an area outside of the water body over which the crossing is being constructed. Use of a bulldozer is strictly prohibited in this area. Impacts to channel (between upper banks) shall be minimized to extent possible and in no case may exceed 4,360 square feet.

Remove Trees and Vegetation

Once access has been established to all areas of the borrow area, trees will be removed from within the surveyed area. Vegetation will be stripped, staying within the surveyed boundary. A 50-foot buffer will be maintained on each side of the small tributaries flowing east-west through Borrow Source A (see Drawing 6 in Attachment C; taken from Landfill Closure Construction Drawings).

Erosion and Sediment Control

A variety of best management practices (BMPs) will be installed to protect against erosion and sediment disturbance. BMPs are described in detail in the Erosion Control Plan, February 2019, included in the Landfill Closure Construction Project Manual. BMPs are shown on Drawing 8 of the Landfill Closure Construction Drawings (included in Attachment C), and include the following:

- Significant buffer to the east of the major unnamed tributary to Big Creek
- Silt fence along the entire western boundary of the borrow area
- Buffer zones along the east-west tributaries
- Silt fence between the excavation areas and the small unnamed tributaries running east-west
- Check dams downstream of the temporary water crossing and low-water crossing
- Silt fence at the south boundary of the borrow area

The contractor has been instructed to complete inspections as follows (from Landfill Closure Construction Drawings, Sheet 2, Note 54):

Inspections will be conducted at the frequency described in the Erosion Control Plan and as follows:

- *Once every 7 days for active areas*
- *Once every 14 days for inactive areas*
- *Within 24 hours of the occurrence of a storm event 0.5 inches or greater, during both active and inactive phases; and*
- *Reports of inspections shall contain information as required in the Erosion Control Plan and Permits.*

Excavation

After site preparatory work is complete and erosion control measurements are in place, the contractor will begin to excavate soil. Soil will be excavated using a tractor and pan system, where a

thin layer is removed with each pass of the tractor/pan. Material will be transported to the landfill to be used in cover construction. As shown on Figure 2 in Attachment B or Drawing 8 in Attachment C, material is to be excavated only – NO FILL WILL OCCUR. The excavation will result in three small ponds. If the ponds fill with precipitation, they will be allowed to discharge through overflow structures that will be reinforced with riprap (locations noted on Drawing 6 in Attachment C).

Restoration

After soil has been removed to design grades for cover construction, the contractor will grade, fertilize, seed, and mulch disturbed areas (exclusive of excavation areas that will hold water and be managed as ponds). Seeding is to occur prior to the substantial completion date of October 15, 2019.

Once access is no longer needed to the borrow area, the temporary water crossing will be removed. This will occur prior to the contract final completion date which is December 1, 2019. The low-water crossing may remain in place.

Completion

In accordance with the contract documents, both SCS Engineers and the City of Lee's Summit will certify final completion of the project area.

We appreciate working with the City to close the landfill and protect the water resources of the City. If you have any questions please do not hesitate to contact us at the numbers below.

Sincerely,



Anastasia Welch, P.E.
Vice President
SCS Engineers
913-749-0703



Tyler Warren, E.I.T.
Project Engineer
SCS Engineers
913-749-0704

AW/TW

cc: Kara Taylor, Environmental Specialist
David Lohe, City of Lee's Summit
Chris Bussen, Superintendent

Attachment A Floodplain Development Permit Application
Attachment B Site Figures
Attachment C Drawings from Landfill Closure Construction Drawings

ATTACHMENT A

Floodplain Development Permit Application

- Application
- Additional Information
- FIRMette

FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

Application # _____

Date: _____

TO THE ADMINISTRATOR: The undersigned hereby makes application for a permit to develop in a floodplain. The work to be performed, including flood protection works, is as described below and in attachments hereto. The undersigned agrees that all such work shall be done in accordance with the requirements of the Floodplain Management Ordinance, with all other applicable county/city ordinances, and the laws and regulations of the State of Missouri.

City of Lee's Summit, Missouri
 Developer/Owner or Agent
 1971 SE Hamblen Road Lee's Summit, MO 64082
 Address
 816-969-1981 chris.bussen@cityofls.net
 Phone eMail Address (required)

Phillips Hardy Inc.
 Builder
 5900F North Tower Drive Columbia, MO 65202
 Address
 573-447-8070
 Phone

SITE INFORMATION

1. Location: _____ 1/4; _____ 1/4; Section 16 & 21; Township 47 North; Range 31 West
 Property Address: 2101 SE Hamblen Road Lee's Summit, MO 64082

2. Type of Development: Filling Grading Excavation Minimum Improvement Substantial Improvement
 Routine Maintenance New Construction Other

3. Description of Development: Activities at the site will include clearing, grubbing, and soil removal from the borrow areas for closure construction activities of the City's Resource Recover Park.

4. Premises: Structure Size: _____ ft. x _____ ft. Area of site: See Additional Info sq. ft.
 Principal Use: Soil Borrow Area Accessory Uses (storage, parking, etc.): _____

5. Value of Improvement (fair market): \$ _____ Pre-Improvement/Assessed Value of Structure: \$ _____

6. Property located in a designated FLOODWAY? Yes No (If Yes to Question 6, certification must be provided prior to permit issuance indicating this project will result in no increase in the 1% base flood elevations.)
 7. Property located in a designated floodplain FRINGE? Yes No (If Yes to Question 6, certification must be provided prior to permit issuance indicating this project will result in no increase in the 1% base flood elevations.)

8. Elevation of the 1% Base Flood / 100-year flood (ID source): See Additional Info, attached MSL/NGVD

9. Elevation of the proposed development site: See Additional Info, attached MSL/NGVD

10. Elevation/floodproofing requirement: _____ MSL/NGVD

11. Other floodplain elevation information/FIRM panel numbers (ID and describe source): _____

12. Other Permits required? Corps of Engineer 404 Permit: Yes No Provided
 MO Dept. of Natural Resources: Yes No Provided

NOTE: All provisions of City of Lee's Summit UDO Article 6, Division II, Floodplain Management Ordinance, shall be in compliance.

APPLICATION APPROVAL/DENIAL

Plans and Specifications Approved / Denied this _____ Day of _____, 20_____

Signature of Developer/Owner _____

Authorizing Official _____

Print Name and Title _____

Print Name and Title _____

IF APPROVED, THIS PERMIT REQUIRES A CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT FLOOR) OF ANY NEW OR SUBSTANTIALLY-IMPROVED RESIDENTIAL BUILDING WILL BE ELEVATED _____ FEET ABOVE THE BASE FLOOD ELEVATION. IF THE PROPOSED DEVELOPMENT IS A NON-RESIDENTIAL BUILDING, PERMIT APPROVAL WILL REQUIRE A CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT) OF A NEW OR SUBSTANTIALLY IMPROVED NON-RESIDENTIAL BUILDING WILL BE ELEVATED OR FLOODPROOFED, _____ FEET ABOVE THE BASE FLOOD ELEVATION.

THIS APPLICATION IS USED WITH THE CONDITION THAT THE DEVELOPER/OWNER WILL PROVIDE CERTIFICATION BY A REGISTERED ENGINEER, ARCHITECT, OR LAND SURVEYOR OF THE "AS-BUILT" LOWEST FLOOR (INCLUDING BASEMENT) ELEVATION OF ANY NEW OR SUBSTANTIALLY-IMPROVED BUILDING COVERED BY THIS PERMIT APPLICATION.



Additional Information
Floodplain Development Permit Application
Lee's Summit Landfill Closure Construction Borrow Source A

4. Area of Site:

Borrow Area	Sub Area	Approximate Acreage
Borrow Source A	A1	1.70
Borrow Source A	A2	1.73
Borrow Source A	A3	1.30
Browning Property	Browning 1	49.30
Browning Property	Browning 2	3.00
Browning Property	Browning 3	8.90

8. Elevation of the 1% Base Flood/ 100-year flood (ID source):

Borrow Area	Sub Area	Elevation (MSL/NGVD)
Borrow Source A	A1	947-949
Borrow Source A	A2	946-947
Borrow Source A	A3	946
Browning Property	Browning 1	N/A
Browning Property	Browning 2	970
Browning Property	Browning 3	N/A

Source: See National Flood Hazard Layer FIRMette, this attachment.

9. Elevation of the proposed development of site:

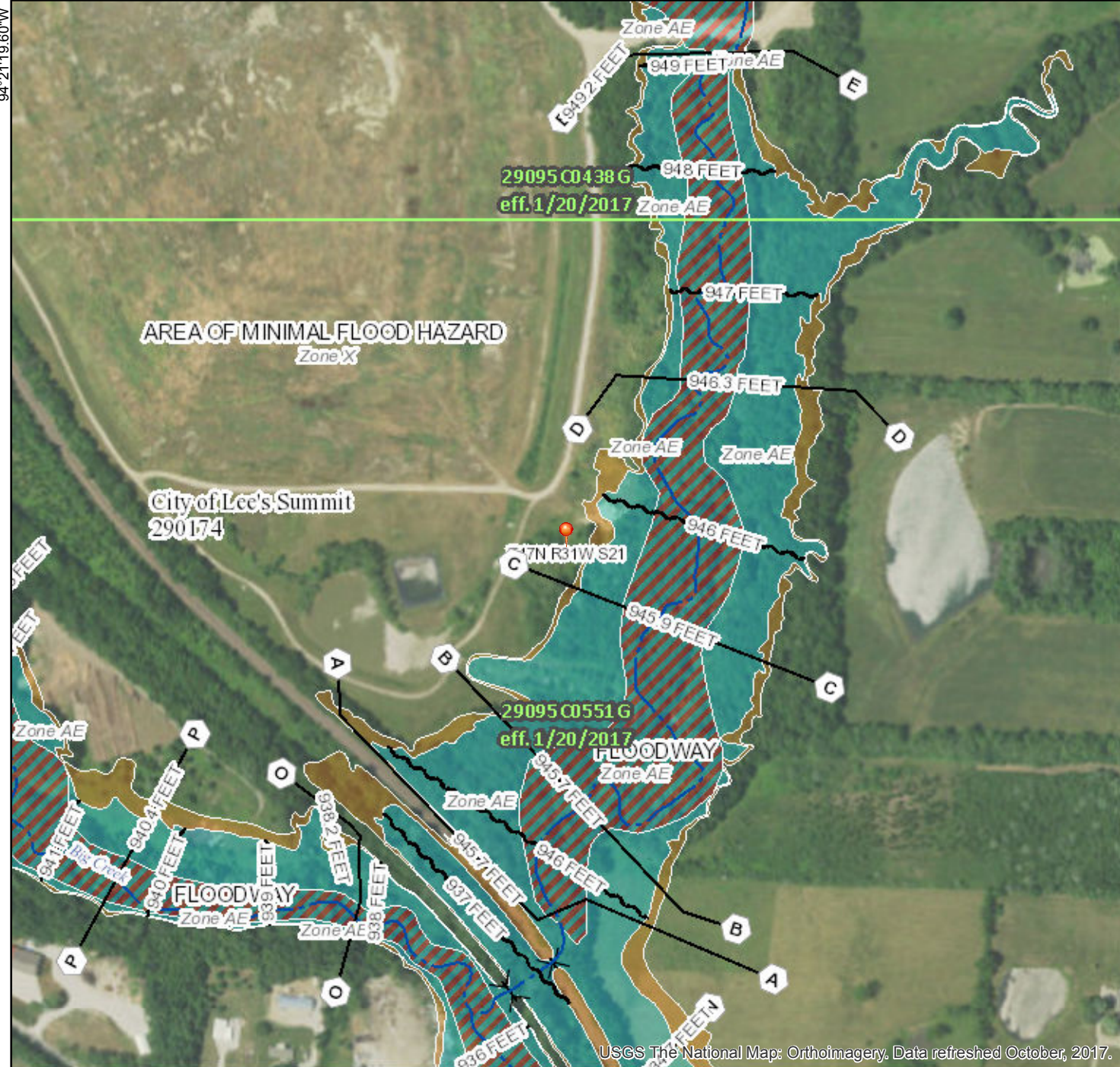
Borrow Area	Sub Area	Elevation (MSL/NGVD)
Borrow Source A	A1	936-946
Borrow Source A	A2	934-947
Borrow Source A	A3	934-946
Browning Property	Browning 1	N/A
Browning Property	Browning 2	970
Browning Property	Browning 3	N/A

Source: See Figure 2 (Attachment B) and Drawings 6 and 8 (Attachment C).

National Flood Hazard Layer FIRMette



38°52'35.75"N



USGS The National Map: Orthoimagery. Data refreshed October, 2017. 38°52'7.74"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|-----------------------------|--|---|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE)
Zone A, V, A99 |
| | | With BFE or Depth Zone AE, AO, AH, VE, AR |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
| | | Future Conditions 1% Annual Chance Flood Hazard Zone X |
| | | Area with Reduced Flood Risk due to Levee. See Notes. Zone X |
| | | Area with Flood Risk due to Levee Zone D |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard Zone X |
| | | Effective LOMRs |
| GENERAL STRUCTURES | | Area of Undetermined Flood Hazard Zone D |
| | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance |
| | | 17.5 Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| MAP PANELS | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| MAP PANELS | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/18/2019 at 9:31:33 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

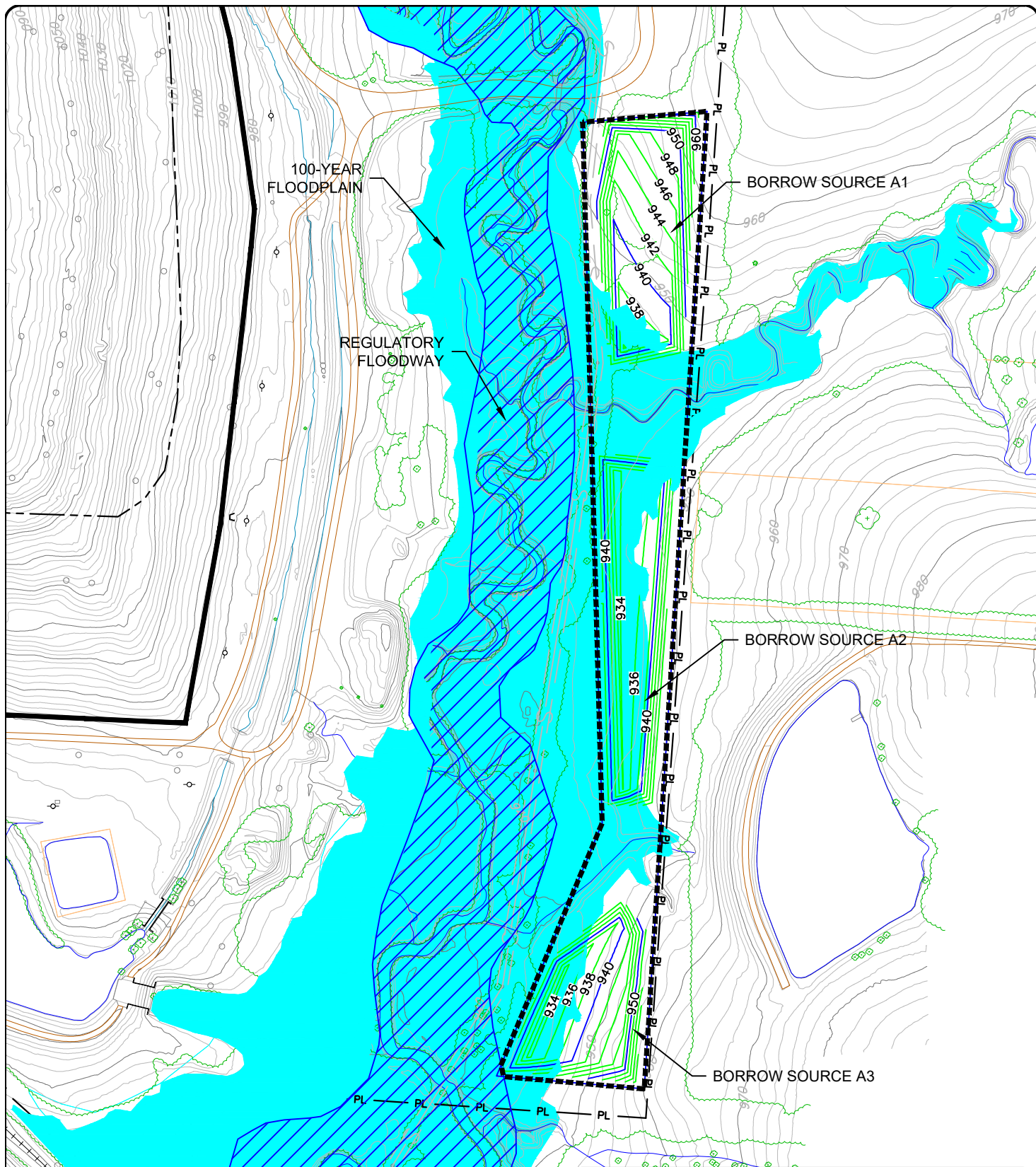
94°21'19.60"W

94°20'42.14"W

0 250 500 1,000 1,500 2,000 Feet 1:6,000

ATTACHMENT B

Figures

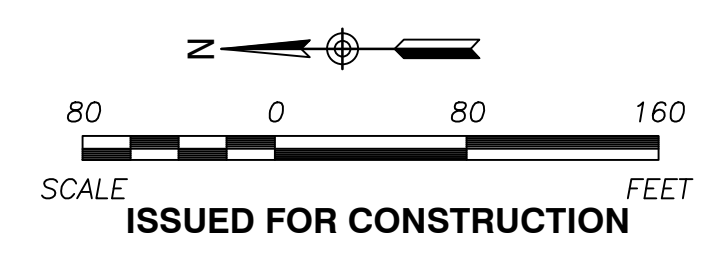
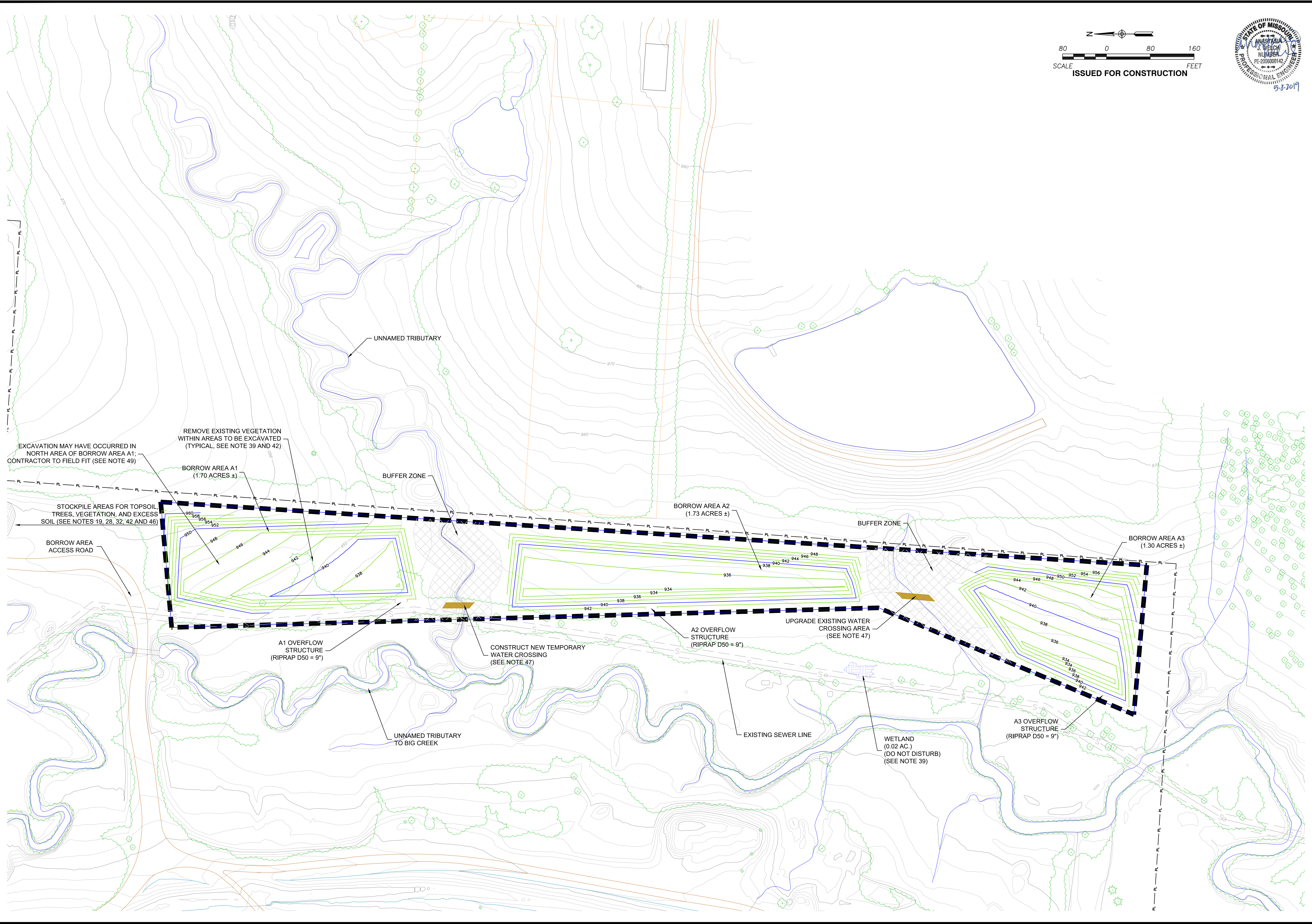


SCS ENGINEERS			
8575 W. 110th St, Ste. 100 Overland Park, Kansas 66210 PH. (913) 681-0030 FAX. (913) 681-0012			
CITY OF LEE'S SUMMIT, MISSOURI			
LEE'S SUMMIT RESOURCE RECOVERY PARK LEE'S SUMMIT, MISSOURI			
DSN. BY: TGW	DWN. BY: TGW	CHK. BY: AJW	PROJ. MGR: AJW
PROJ. NO. 27218221.04	DATE: 5/20/19	FIGURE NO. 2	

ATTACHMENT C

Drawings taken from Landfill Closure Construction Drawings

T:\27219169.00\AutoCAD\Construction Drawings\D6 - Proposed Borrow Source A Grading Plan.dwg May 08, 2019 - 12:57pm Layout Name: 22x34 By: 4338t_w



REV.	DATE	BY	CHK.
1	5/8/19	AJW	ISSUED FOR CONSTRUCTION

SHEET TITLE
PROPOSED BORROW SOURCE A GRADING PLAN

PROJECT TITLE
LANDFILL CLOSURE CONSTRUCTION

CLIENT
CITY OF LEE'S SUMMIT
LEES SUMMIT RESOURCE RECOVERY PARK
2101 SE HAMBLEN ROAD
LEE'S SUMMIT, MISSOURI

SCS ENGINEERS
 8575 W. 110th St. Ste. 100
 Overland Park, Kansas 66210
 PH: (913) 681-0030 FAX: (913) 681-0012
 Missouri Certificate of Authority No. 000935

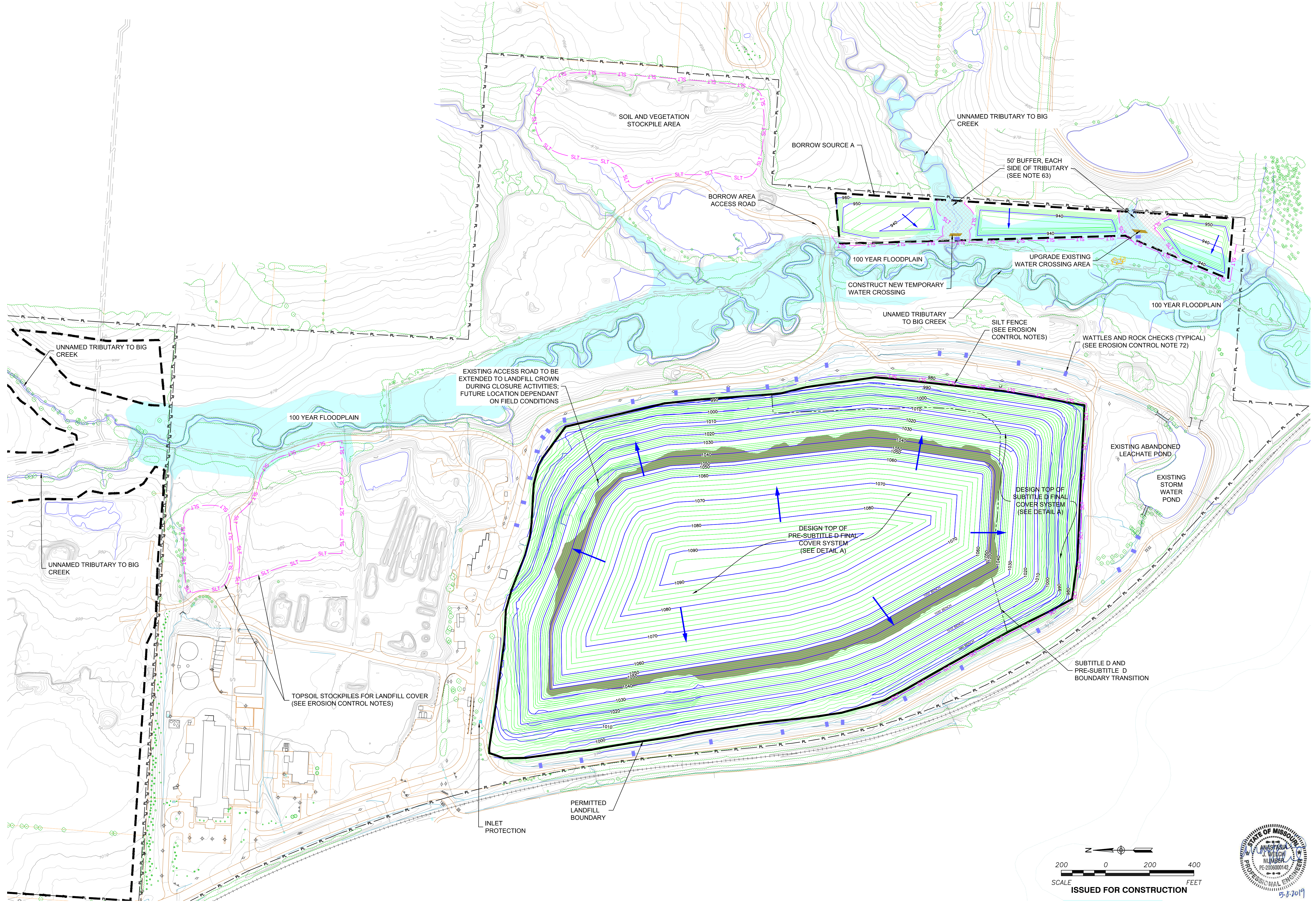
PROJ. NO. 27219169.00
 DSN. BY: RDT
 DWN. BY: TGW
 O/A. RW. BY: AJW
 PROJ. MGR. AJW

CADD FILE:
 D6 - PROPOSED BORROW SOURCE A GRADING PLAN.DWG

DATE:
 5/8/19

DRAWING NO.
6 of 15

T:\27219\169.00\AutoCAD\Construction Drawings\08 - Erosion Control Plan Landfill and Borrow A.dwg May 08, 2019 - 1:34pm Layout Name: 22x34 By: 4338T_W



REV.	DATE	CK.	BY
1	5/8/19		AJW
2	5/8/19		AJW
1	5/1/19		AJW

SHEET TITLE
**EROSION CONTROL PLAN
 LANDFILL & BORROW SOURCE A**

PROJECT TITLE
LANDFILL CLOSURE CONSTRUCTION

CLIENT
CITY OF LEE'S SUMMIT
LEE'S SUMMIT RESOURCE RECOVERY PARK
2101 SE HAMBLEN ROAD
LEE'S SUMMIT, MISSOURI

SCS ENGINEERS
 8575 W. 110th St. Ste. 100
 Overland Park, Kansas 66210
 PH: (913) 681-0030 FAX: (913) 681-0012
 Missouri Certificate of Authority No. 000935

PROJ. NO. 27219169.00
 DSN. BY: RDT
 DWN. BY: TGW
 CHK. BY: RDT
 O/A R/W BY: A.J.W.
 PROJ. MGR. A.J.W.

CADD FILE:
 08 - EROSION CONTROL PLAN LANDFILL AND BORROW A.dwg

DATE:
 5/8/19

DRAWING NO.
8 of 15



SCALE
 0 200 400
 FEET
ISSUED FOR CONSTRUCTION