

Stormwater Pollution Prevention Plan

For:

RESIDENCES-REUNION-RESERVE @ BLACKWELL
C/O GRIFFIN RILEY PROPERTY GROUP
ATTN: JAKE LOVELESS
21 SE 29TH TERRACE
LEE'S SUMMIT, MO 64082
816-366-7900

Operator(s):

GRIFFIN RILEY PROPERTY GROUP
ATTN: JAKE LOVELESS
21 SE 29TH TERRACE
LEE'S SUMMIT, MO 64082

816-366-7900

SWPPP Contact(s):

GRIFFIN RILEY PROPERTY GROUP
ATTN: JAKE LOVELESS
21 SE 29TH TERRACE
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SWPPP Preparation Date:

January 17, 2023

Estimated Project Dates:

Project Start Date: 05/01/2023
Project Completion Date: 05/02/2025

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Preservation Documentation)

SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 Project/Site Information

Project/Site Name: RESIDENCES-REUNION-RESERVE @ BLACKWELL

Project Street/Location: SE BLUE PARKWAY

City: LEE'S SUMMIT

State: MO ZIP Code: 64063

County or Similar Subdivision: JACKSON COUNTY

Latitude/Longitude (Use **one** of three possible formats, and specify method)

Latitude:

Longitude:

1. 32 ° 54' 22" N (degrees, minutes, seconds)

1. 94 ° 18 ' 50" W (degrees, minutes, seconds)

2. __ ° __ . __ ' N (degrees, minutes, decimal)

2. __ ° __ . __ ' W (degrees, minutes, decimal)

3. __ . __ __ ° N (decimal)

3. __ . __ __ ° W (decimal)

Method for determining latitude/longitude:

☒ USGS topographic map (specify scale: 7.5) ☐ EPA Web site ☐ GPS

☐ Other (please specify): _____

Is the project located in Indian country? ☐ Yes ☒ No

If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable." _____

Is this project considered a federal facility? ☐ Yes ☒ No

NPDES project or permit tracking number* PENDING REVIEW

**(This is the unique identifying number assigned to your project by your permitting authority after you have applied for coverage under the appropriate National Pollutant Discharge Elimination System (NPDES) construction general permit.)*

1.2 Contact Information / Responsible Parties

Owner(s):

GRIFFIN RILEY PROPERTY GROUP

ATTN: JAKE LOVELESS

21 SE 29TH TERRACE

LEE'S SUMMIT, MO 64082

816-366-7900

Insert area of control (if more than one operator at site): _____

Operator(s):

GRIFFIN RILEY PROPERTY GROUP

ATTN: JAKE LOVELESS

21 SE 29TH TERRACE

LEE'S SUMMIT, MO 64082

816-366-7900

Insert Fax/Email: _____

Insert area of control (if more than one operator at site): _____

Responsible Party - Project Manager or Site Supervisor:

GRIFFIN RILEY PROPERTY GROUP

ATTN: JAKE LOVELESS

21 SE 29TH TERRACE

LEE'S SUMMIT, MO 64082

816-366-7900

Insert area of control (if more than one operator at site) : _____

This SWPPP was prepared by:

(Preparer is Not Contracted for SWP2 compliance documentation)

Schlagel & Associates, P.A.

Mark A. Breuer, P.E.

14920 West 107th Street

Lenexa, KS 66215

913-492-5158

mab@schlagelassociates.com

Subcontractor(s): See Appendix H for Subcontractor Certifications

Subcontractor Responsibility: **GRADING/STREET CONTRACTOR**

Company: _____

Project Superintendent: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Subcontractor Responsibility: **SANITARY SEWER CONTRACTOR**

Company: _____

Project Superintendent: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Subcontractor Responsibility: **OTHER CONTRACTOR**

Company: _____

Project Superintendent: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Subcontractor Responsibility: **OTHER CONTRACTOR**

Company: _____

Project Superintendent: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Subcontractor Responsibility: **INSPECTOR**

Company: _____

Project Superintendent: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

1.3 Nature and Sequence of Construction Activity

Describe the general scope of the work for the project, major phases of construction, etc.:

The scope of this project is limited to site grading for RESIDENTIAL development. See erosion and sediment control staging chart on attached erosion and sediment control plan.

What is the function of the construction activity?

☒ Residential ☐ Commercial ☐ Industrial ☒ Road Construction ☐ Linear Utility
☐ Other (please specify):

Estimated Project Start Date: 05/01/2023

Estimated Project Completion Date: 05/01/2024

Estimated Timeline of Activity	Construction Activity and BMP Descriptions
May, 2023 – June, 2023	Before any site grading activities begin <ol style="list-style-type: none">1. Install perimeter silt fences and/or mulch berm (See Section 2, Part 2.7)2. Construct stabilized construction exit (See Section 2, Part 2.9)
June, 2023 – August, 2023	Site grading <ol style="list-style-type: none">1. Begin site clearing and grubbing operations2. Begin overall site grading and topsoil stripping3. Establish topsoil stockpile (See Section 2, Part 2.1)4. Install silt fences around stockpile and cover stockpiles (Section 2, Part 2.1)5. Disturbed areas where construction will cease for more than 14 days will be stabilized with erosion controls (See Section 2, Part 2.4)

August, 2023 – February, 2024	Infrastructure (utilities, streets, etc) <ol style="list-style-type: none">1. Construct staging and materials storage area (See Section 3, Part 3.2)2. Install temporary sanitary facilities and dumpsters (See Section 3, Part 3.1)3. Construct temporary concrete washout area (See Section 3, Part 3.3)4. Install sanitary sewers and storm sewers5. Prepare street pavement subgrade, install curb and gutters, street pavement6. Install water service and street lighting7. Remove temporary concrete washout area (See Section 3, Part 3.3)
February, 2024 – May, 2024	Final Stabilization and Landscaping <ol style="list-style-type: none">1. Prepare final seeding and landscaping2. Remove all temporary control BMP's and stabilize any areas disturbed by their removal with erosion controls3. Monitor stabilized areas until final stabilization is reached

1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns

Soil type(s):

SEE SOILS REPORT

Slopes (describe current slopes and note any changes due to grading or fill activities):

SEE SOILS REPORT

Drainage Patterns (describe current drainage patterns and note any changes dues to grading or fill activities):

The site drains south to north within the Blue River watershed.

Vegetation:

Farmland, wooded

Other:

N/A

1.5 Construction Site Estimates

The following are estimates of the construction site.

Total project area:	60.0 acres
Construction site area to be disturbed :	59.1 Acres
Percentage impervious area before construction:	10%
Runoff coefficient before construction:	.35
Percentage impervious area after construction:	60%
Runoff coefficient after construction	.66

1.6 Receiving Waters

Description of receiving waters:

Blue River

Description of storm sewer systems:

City of Lees Summit, Mo

Description of impaired waters or waters subject to TMDLs:

TMDL Regulated

Other:

INSERT TEXT HERE

Description of unique features that are to be preserved:

Describe measures to protect these features:

1.7 Site Features and Sensitive Areas to be protected

Sensitive or Protected Areas (50' from stream/defined channel)

- a. Floodplains, wetlands, jurisdictional waters
- b. Critical Water Quality management areas
- c. Exceptional Waters
- d. Outstanding Natural Resource Waters

Describe measures to protect these features (if applicable):

INSERT TEXT HERE

1.8 Potential Sources of Pollution

Potential sources of sediment to stormwater runoff:

Clearing and grubbing operations

Grading and site operations

Vehicle tracking

Topsoil stripping and stockpiling

Potential pollutants and sources, other than sediment, to stormwater runoff:

- Combined Staging Area – small fueling activities, minor equipment maintenance, sanitary facilities, and hazardous waste storage.
- Materials Storage Area – general building materials, solvents, adhesives, paving materials, paints, aggregates, trash, and so on.
- Construction Activity – paving, curb/gutter installation, concrete pouring/mortar/stucco, and building construction.
- Concrete Washout Area.

For all potential construction site pollutants, see Table 2 – next page.
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Table 2. Potential Construction Site Pollutants

Material	Physical Description	Stormwater Pollutants	Location*
Pesticides secticides, fungicides, herbicides, rodenticides)	Various colored to colorless liquid, powder, pellets, or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	Herbicides used for noxious weed control
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous	Newly seeded areas
Plaster	White granules or powder	Calcium sulphate, calcium carbonate, sulfuric acid	Building construction
Cleaning solvents	Colorless, blue, or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	No equipment cleaning allowed in project limits
Asphalt	Black solid	Oil, petroleum distillates	Streets and roofing
Concrete	White solid/grey liquid	Limestone, sand, pH, chromium	Curb and gutter, building construction
Glue, adhesives	White or yellow liquid	Polymers, epoxies	Building construction
Paints	Various colored liquid	Metal oxides, Stoddard solvent, talc, calcium carbonate, arsenic	Building construction
Curing compounds	Creamy white liquid	Naphtha	Curb and gutter
Wood preservatives	Clear amber or dark brown liquid	Stoddard solvent, petroleum distillates, arsenic, copper, chromium	Timber pads and building construction
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil	Leaks or broken hoses from equipment
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment/staging area
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes	Second containment/staging area
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates	Secondary containment/staging area
Antifreeze / coolant	Clear green/yellow liquid	Ehtylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment
Sanitary toilets	Various colored liquid	Bacteria, parasites, and viruses	Staging area

1.9 Endangered Species Certification

Are endangered or threatened species and critical habitats on or near the project area?

☐ Yes ☐ No

Describe how this determination was made:

The Missouri Department of Conservation was contacted. MDC issued a Natural Heritage Review Level 2 State Listed Endangered Species and/or State species Conservation Concern in the area. Project type recommendations are contained in this Report. Additional correspondence can be sent to National Fish & Wildlife Service.

See attached letter in Appendix L

If yes, describe the species and/or critical habitat:

N/A

If yes, describe or refer to documentation that determines the likelihood of an impact on identified species and/or habitat and the steps taken to address that impact. (Note, if species are on or near your project site, EPA strongly recommends that the site operator work closely with the appropriate field office of the U.S. Fish and Wildlife Service or National Marine Fisheries Service. For concerns related to state or tribal listing of species, please contact a state or tribal official.)

N/A

1.10 Historic Preservation

Are there any historic sites on or near the construction site?

☐ Yes ☒ No

Describe how this determination was made:

Unknown.

See attached letter in Appendix L

If yes, describe or refer to documentation that determines the likelihood of an impact on this historic site and the steps taken to address that impact.

N/A

1.11 Applicable Federal, Tribal, State or Local Programs

N/A

1.12 Maps

See Appendix B – Site Maps

SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

The SWPPP Operator or Delegated Authority must identify the responsible staff for each BMP as either himself/herself or provide the responsible staff, along with their qualifications.

The required BMP devices proposed for this SWPPP, as well as their design specifications, installation, maintenance, and inspection requirements are provided on the attached Erosion Control Plan. The sections below describe the general categories of the BMPs, and identify the Responsible party for each category.

2.1 Minimize Disturbed Area and Protect Natural Features and Soil

Top Soil

BMP Description:

Topsoil stripped from the site will be stockpiled as identified on the site map. Protect existing vegetation and other natural feature areas as indicated on the site map. Establish perimeter sediment controls prior to grading activities per Section 2.7.

Installation Schedule:	See attached Erosion and Sediment Control Plan.
Maintenance and Inspection:	Inspect weekly for erosion and after storm events. Maintenance and inspections procedures are described in Section 2.
Responsible Staff:	

Phase Construction

BMP Description:

This project is intended to take place in one phase, due to the nature of the construction. Once the fills have been placed, the site is to be immediately stabilized with permanent vegetation, as defined by this document.

Installation Schedule:	See attached Erosion and Sediment Control Plan.
Maintenance and Inspection:	Inspect weekly for erosion and after storm events. Maintenance and inspections procedures are described in Section 2.
Responsible Staff:	

Existing Vegetation

BMP Description:

The preserved area of vegetation, as identified on the site map, will be surrounded by a temporary orange colored plastic mesh fence. Clearing and grubbing within 50 feet of a defined drainage channel should be avoided, if feasible. The fencing shall be at least three feet tall and the openings shall not be larger than 2 inches by 2 inches. The fencing shall be installed at the drip lines of the trees and undergrowth vegetation to be protected.

Installation Schedule:	Prior to construction activities
Maintenance and Inspection:	Inspect weekly to insure fence is intact and visible.
Responsible Staff:	

2.2 Phase Construction Activity

See Section 1.3 for Sequence of Construction Activity

PROVIDE ADDITIONAL SITE SPECIFIC PHASE INFORMATION BELOW – REFER TO CONSTRUCTION PHASING FROM PLANS

Phase 1 – Residences at Blackwell

Phase 2 – Reunion at Blackwell

Phase 3 – Blackwell Reserve

- Describe phase
- Duration of phase (start date & end date)
- List BMPs associated with this phase
- Describe stabilization methods for this phase (describe any temporary stabilization methods that will be used before final stabilization)

BMP Description:

This project is intended to take place in one phase, due to the nature of the construction. Once the fills have been placed, the site is to be immediately stabilized with permanent vegetation, as defined by this document.

Installation Schedule:	See attached Erosion and Sediment Control Plan
Maintenance and Inspection:	
Responsible Staff:	

2.3 Control Stormwater Flowing onto and through the Project

Vegetated Swale

BMP Description: A vegetated swale will be installed along the perimeter of the site to capture stormwater run-on from the adjacent property. The swale will convey stormwater to a raised storm drain inlet in the northwest corner of the site. The inlet will be raised 1 foot above the bottom of the swale to allow for infiltration of the run-on. The vegetated swale will have a trapezoidal shape with a slope ratio of 2:1. The bottom of the swale will be at least 2 feet above the seasonal high water table and bedrock. The slopes of the swale will be stabilized with a dense cover of water-tolerant, erosion-resistant grasses, mulch and erosion control blankets immediately after final grade is reached. The vegetated swale will remain as a permanent stormwater structure after construction is complete.

Installation Schedule:	The vegetated swale will be installed before site grading
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	operations begin at the construction site.
Maintenance and Inspection:	The swale will be inspected for erosion and structural failures weekly and immediately after storm events. Before vegetation has been established in the swale, it will be inspected for erosion and accumulation of debris and sediment. Remove debris, sediment, and repair erosion and embankments immediately.
Responsible Staff:	

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

2.3 Stabilize Soils

Temporary Stabilization

BMP Description: Topsoil stock piles and disturbed portions of the site where construction activity temporarily ceases for more than 14 days will be stabilized with temporary seed and mulch no more than 14 days from the last construction activity in that area. The temporary seed shall be as specified below. After seeding, each area shall be mulched with 2,000 pounds per acre of straw. The straw mulch is to be tacked into place by a disk with blades set nearly straight.

Seeding Rate: Dec. 1 - March 1 80 lbs/acre oat grain
March 1 - Dec. 1 80 lbs/acre cereal rye or wheat

<input type="checkbox"/> Permanent	<input checked="" type="checkbox"/> Temporary
Installation Schedule:	Portions of the site where construction activities have ceased for more than 14 days.
Maintenance and Inspection:	Weekly and after rain events. If washout, breakage, or erosion occurs, the area will be repaired and re-seeded and mulched.
Responsible Staff:	

Permanent Stabilization

BMP Description: Stabilization shall be initiated immediately at disturbed portions of the site where construction activities have permanently ceased. The permanent seed mix shall consist of 80 lbs/acre tall fescue, and 40 lbs/acre kobe lespedeza or another mix as determined by the Landscape Architect. After seeding, each area shall be mulched with 4,000 pounds per acre of straw. The straw mulch is to be tacked into place by a disk with blades set nearly straight.

☒ **Permanent**

☐ **Temporary**

Installation Schedule:	Permanent stabilization shall be initiated immediately where construction has permanently ceased.
Maintenance and Inspection:	Weekly and after rain events until a dense cover of vegetation is established. If failure is noticed, the area will be reseeded, fertilized, and mulched immediately.
Responsible Staff:	

Dust Control

BMP Description: Dust from the site will be controlled by using a mobile pressure-type distributor truck to apply potable water to disturbed areas. The mobile unit will apply water at a rate of 300 gallons per acre and minimized as necessary to prevent runoff and ponding.

Installation Schedule:	Dust control will be implemented as needed once site grading has been initiated and during windy conditions (forecasted or actual wind conditions of 20 mph or greater) while site grading is occurring. Spraying of potable water will be performed no more than three times a day during the months of May-September and
Maintenance and Inspection:	
Responsible Staff:	

2.5 Protect Slopes

Geotextile Erosion Control Blanket BMP Description:

Geotextile erosion control blankets will be used to provide stabilization for the slopes in the vegetated swale and sediment trap. The blanket will cover the entire area of the graded slope and bottom channel. The bottom and side slopes will be seeded and mulched before the blanket is applied. The erosion control blanket will always be installed according to the manufacturer's instructions and specifications. For design specifications, see Figure 2.

Installation Schedule:	The erosion control blankets will be installed once the vegetated swale and sediment trap have reached final grade.
Maintenance and Inspection:	The erosion control blanket will be inspected weekly and immediately after storm events to determine if cracks, tears, or breaches have formed in the fabric; if so, the blanket will be repaired or replaced immediately. Good contact with the soil must be maintained and erosion should not occur under the blanket. Any areas where the blanket is not in close contact with the ground will be repaired or replaced.
Responsible Staff:	INSERT information

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

2.5A Protect Steep Slopes

BMP Description:

When construction activities on steep slopes (slopes of forty (40) percent or greater, cannot be avoided, the SWPP Plan must require the contractor to immediately initiate placement of appropriate erosion control BMPs in any exposed steep slope areas where construction activities have permanently or temporarily ceased, and will not resume for a period exceeding 7 calendar days. For vegetative cover areas, in addition to seeding, watering, mulching, and any other required activities related to the planting and establishment of vegetation, other appropriate erosion control practices such as geotextiles or erosion control mats shall be utilized. Diversion of concentrated or channelized stormwater flows around steep slopes or slope drains shall be utilized where feasible

Installation Schedule:	Silt fence shall be installed around steep slope stockpiles at the start of stockpiling. Temporary cover (seeding and mulching, or hydromulching, shall be applied when construction activities have permanently or temporarily ceased, and will not resume for a period exceeding 7 calendar days.
Maintenance and Inspection:	The BMPs will be inspected weekly and immediately after storm events to determine if maintenance or reapplication of cover material is required.
Responsible Staff:	

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

2.6 Protect Storm Drain Inlets

Existing Storm Drain Inlets

BMP Description:

Existing storm drain inlets, as indicated on the site plan, will be protected from sediment by gravel bag filters or other approved commercially available protection devices. Proposed inlets will be protected during site grading activities as well as after street construction using the BMP identified on the site plan.

Installation Schedule:	See attached Erosion and Sediment Control Plan
Maintenance and Inspection:	The catch basin inserts will be inspected weekly and immediately after storm events. If the basin insert becomes clogged with sediment, the insert will be removed and cleaned or replaced per the manufacturer's recommendations. See attached Erosion and Sediment Control Plan
Responsible Staff:	INSERT INFORMATION

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

2.7 Establish Perimeter Controls and Sediment Barriers

Silt Fence

BMP Description:

Silt fences will be installed along the perimeters of the site and around the topsoil stockpile. Mulch berms may also be used where acceptable. See attached Erosion and Sediment Control Plan.

Installation Schedule:	See attached Erosion and Sediment Control Plan.
Maintenance and Inspection:	Silt fences will be inspected weekly and immediately after storm events to ensure it is intact and that there are no gaps where the fence meets the ground or tears along the length of the fence. If gaps or tears are found during the

	inspection, the fabric will be repaired or replaced immediately. Accumulated sediment will be removed from the fence base if it reaches one-third the height of the silt fence and hauled off-site for disposal at an approved landfill. If accumulated sediment is creating noticeable strain on the fabric and the fence might fail from a sudden storm event, the sediment will be removed more frequently. Before the fence is removed from the project area, the sediment will be removed. The anticipated life span of the silt fence is 6 months and will likely need to be replaced after this period. See attached Erosion and Sediment Control Plan
Responsible Staff:	INSERT INFORMATION
BMP Description:	
Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

2.8 Retain Sediment On-Site

Sediment Trap

BMP Description:

A temporary pipe outlet sediment trap will be constructed as indicated on the site map to remove sediment from stormwater runoff for the site for design specifications. See below.

Installation Schedule:	The sediment trap will be installed before over lot grading operations commence at the construction site.
Maintenance and Inspection:	The trap will be inspected weekly and after storm events. The trap will be checked for signs of erosion, seepage, and structural damage. The outlet and trash rack will be checked for any damage or obstructions and any damage present will be repaired and obstructions removed. Sediment will be removed and the trap restored to its original dimensions when the sediment has accumulated to one-half the design depth of the trap. The removed sediments will be hauled off-site for disposal at an approved landfill.
Responsible Staff:	INSERT INFORMATION

SEDIMENT BASIN : The disturbed area on this site is less than 10 acres. Therefore a sediment basin is not proposed.

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

2.9 Establish Stabilized Construction Exits

Stabilized Construction Exits

BMP Description:

Construction exits will be installed at locations indicated on the site plan. The construction exits will be at least 50 feet long, a minimum of 10 feet wide, flared at the end closest to the paved road, and will consist of a 6-inch-thick layer of crushed stone (2 inches in diameter). The crushed stone will be placed over a layer of geotextile filter fabric to reduce the mitigation of sediment from the underlying soil. For design specifications, see erosion control details attached.

Installation Schedule:	The stabilized exits will be installed before construction begins on the site. The stone will remain in place until the subgrade of pavement is installed at the site. See attached Erosion and Sediment Control Plan
Maintenance and Inspection:	The exits will be inspected weekly and after storm events or heavy use. The exits will be maintained in a condition that will prevent tracking or flowing of sediment onto adjacent streets. This could require adding additional crushed stone to the exit. All sediment tracked, spilled, dropped, or washed onto and adjacent streets will be swept up immediately and hauled off-site for disposal at an approved landfill. If excess sediment has clogged the pad, the exit will be topdressed with new crushed stone. Replacement of the entire pad might be necessary when the pad becomes completely filled with sediment. The pad will be reshaped as needed for drainage and runoff control. Broken road pavement as a result of construction activities on roadways immediately adjacent to the project site will be repaired immediately. The stone anti-tracking pad will be removed before the subgrade of pavement is applied to the parking lot.
Responsible Staff:	INSERT INFORMATION

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

2.10 Additional BMPs

Additional BMPs may be required as the project progresses, or if any of the proposed devices are determined to be inadequate. These BMPs will be provided below.

BMP Description:	
Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	
BMP Description:	
Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

SECTION 3: GOOD HOUSEKEEPING BMPS

3.1 Material Handling and Waste Management

Waste Materials

BMP Description:	
All waste materials will be collected and disposed of into two metal trash dumpsters in the materials storage area. Dumpsters will have a secure watertight lid, be placed away from stormwater conveyances and drains, and meet all federal, state, and municipal regulations. Only trash and construction debris from the site will be deposited in the dumpster.	
Installation Schedule:	Trash dumpsters will be installed once the materials storage area has been established
Maintenance and Inspection:	The dumpsters will be inspected weekly and immediately after storm events. The dumpster will be emptied weekly and taken to an approved sanitary landfill. If trash and construction debris are exceeding the dumpster's capacity, the dumpsters will be emptied more frequently.
Responsible Staff:	

Hazardous Waste Materials

BMP Description:

All hazardous waste materials such as oil filters, petroleum products, paint, and equipment maintenance fluids will be stored in structurally sound and sealed shipping containers, within the hazardous materials storage area. Hazardous waste materials will be stored in appropriate and clearly marked containers and segregated from other non-waste materials. Secondary containment will be provided for all waste materials in the hazardous materials storage area and will consist of commercially available spill pallets. Additionally, all hazardous waste materials will be disposed of in accordance with federal, state, and municipal regulations. Hazardous waste materials will not be disposed of into the on-site dumpsters. All personnel will be instructed, during tailgate training sessions, regarding property procedures for hazardous waste disposal. Notices that state these procedures will be posted in the office trailer and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed.

<i>Installation Schedule:</i>	Shipping containers used to store hazardous waste materials will be installed once the site materials storage area has been installed.
<i>Maintenance and Inspection:</i>	The hazardous waste material storage areas will be inspected weekly and after storm events. The storage areas will be kept clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Material safety data sheets, material inventory, and emergency contact numbers will be maintained in the office trailer.
<i>Responsible Staff:</i>	

Sanitary Waste

BMP Description:

Two temporary sanitary facilities (portable toilets) will be provided at the site throughout the construction phase. The toilets will be in the staging area. The portable toilets will be located away from a concentrated flow paths and traffic flow and will have collection pans underneath as secondary containment.

<i>Installation Schedule:</i>	The portable toilets will be brought to the site once the staging area has been established.
<i>Maintenance and Inspection:</i>	All sanitary waste will be collected from the portable facilities a minimum of three times per week by a licensed sanitary waste management contractor. The portable toilets will be inspected weekly for evidence of leaking holding tanks. Toilets with leaking holding tanks will be removed from the site and replaced with new portable toilets.
<i>Responsible Staff:</i>	

Recycling

BMP Description:

Wood pallets, cardboard boxes, and other recyclable construction scraps will be disposed of in a designated dumpster for recycling. The dumpster will have a secure watertight lid, be placed away from stormwater conveyances and drains and meet all local and state solid-waste management regulations. Only solid recyclable construction scraps from the site will be deposited in the dumpster. All personnel will be instructed, during tailgate training sessions, regarding the correct procedure for disposal of recyclable construction scraps. Notices that state these procedures will be posted in the office trailer, and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed.

<i>Installation Schedule:</i>	Designated recycling dumpster will be installed once the combined staging area has been established.
<i>Maintenance and Inspection:</i>	The recycling dumpster will be inspected weekly and immediately after storm events. The recycling dumpster will be emptied weekly and taken to an approved recycling center. If recyclable construction wastes are exceeding the dumpster's capacity, the dumpsters will be emptied more frequently.
<i>Responsible Staff:</i>	

3.2 Establish Proper Building Material Staging Areas

Materials Storage Area

BMP Description: Construction equipment and maintenance materials will be stored at the combined staging area and materials storage areas. Gravel bag berms will be installed around the perimeter to designate the staging and materials storage area. A watertight shipping container will be used to store hand tools, small parts, and other construction materials. Non-hazardous building materials such as packaging material (wood, plastic, and glass), and construction scrap material (brick, wood, steel, metal scraps, and pipe cuttings) will be stored in a separate covered storage facility adjacent to the shipping container. All hazardous-waste materials such as oil filters, petroleum products, paint, and equipment maintenance fluids will be stored in structurally sound and sealed containers under cover within the hazardous materials storage area.

Installation Schedule:	The materials storage area will be installed after grading and before any infrastructure is constructed at the site.
Maintenance and Inspection:	The storage area will be inspected weekly and after storm events. The storage area will be kept clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners will be repaired or replaced as needed to maintain proper function
Responsible Staff:	

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

3.3 Designate Washout Areas

Concrete Washout

BMP Description:

A designated temporary, above-grade concrete washout area will be constructed as detailed on the site map. The temporary concrete washout area will have a recommended minimum length and minimum width of 10 feet, but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The washout area will be lined with plastic sheeting at least 10 mils thick and free of any holes or tears. Signs will be posted marking the location of the washout area to ensure that concrete equipment operators use the proper facility.

Concrete pours will not be conducted during or before an anticipated storm event. Concrete mixer trucks and chutes will be washed in the designated area or concrete wastes will be properly disposed of off-site. When the temporary washout area is no longer needed for the construction project, the hardened concrete and materials used to construct the area will be removed and disposed of according to the maintenance section below, and the area will be stabilized.

Installation Schedule:	The washout area will be constructed before concrete pours occur at the site.
Maintenance and Inspection:	The washout areas will be inspected daily to ensure that all concrete washing is being discharged into the washout area, no leaks or tears are present, and to identify when concrete wastes need to be removed. The washout areas will be cleaned out once the area is filled to 75 percent of the holding capacity. Once the area's holding capacity has been reached, the concrete wastes will be allowed to harden; the concrete will be broken up, removed, and taken to an approved landfill for disposal. The plastic sheeting will be replaced if tears occur during removal of concrete wastes from the washout area.
Responsible Staff:	

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

3.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

Vehicle/Equipment Fueling and Maintenance

BMP Description:

Several types of vehicles and equipment will be used on-site throughout the project, including graders, scrapers, excavators, loaders, paving equipment, rollers, trucks and trailers, backhoes, and forklifts. All major equipment/vehicle fueling and maintenance will be performed off-site. Only minor equipment maintenance will occur on-site. All equipment fluids generated from maintenance activities will be disposed of into designated drums stored on spill pallets in accordance with Part 3.1. Absorbent, spill-cleanup materials and spill kits will be available at the combined staging and materials storage area. Drip pans will be placed under all equipment receiving maintenance and vehicles and equipment parked overnight.

Installation Schedule:	BMPs implemented for equipment and vehicle maintenance and fueling activities will begin at the start of the project.
Maintenance and Inspection:	Inspect equipment/vehicle storage areas and fuel tank weekly and after storm events. Vehicles and equipment will be inspected on each day of use. Leaks will be repaired immediately, or the problem vehicle(s) or equipment will be removed from the project site. Keep ample supply of spill-cleanup materials on-site and immediately clean up spills and dispose of materials properly.
Responsible Staff:	

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

3.5 Control Equipment/Vehicle Washing

BMP Description:

All equipment and vehicle washing will be performed off-site

Installation Schedule:	n/a
Maintenance and Inspection:	n/a
Responsible Staff:	

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

3.6 Spill Prevention and Control Plan

INSERT TEXT HERE or REFERENCE ATTACHMENT

Spill Prevention and Control Procedures

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff.

Hazardous Materials

BMP Description: The following good housekeeping practices will be followed on-site during the construction period.

- An effort will be made to store only enough product required to do the job.
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The site superintendent will inspect daily to ensure proper use and disposal of materials onsite.

These practices are used to reduce the risks associated with hazardous materials.

- Products will be kept in original containers unless they are not resealable.
- Original labels and material safety data will be retained; they contain important product information.

If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

Installation Schedule:	The spill prevention and control procedures will be implemented once construction begins on-site.
Maintenance and Inspection:	All personnel will be instructed, during tailgate training sessions, regarding the correct procedures for spill prevention and control. Notices that state these practices will be posted in the office trailer, and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed.
Responsible Staff:	

Product Specific Practices

The following product specification will be followed onsite:

Petroleum Products

BMP Description:

All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations.

<i>Installation Schedule:</i>	n/a
<i>Maintenance and Inspection:</i>	n/a
<i>Responsible Staff:</i>	n/a

Fertilizers

BMP Description:

Fertilizers, used will be applied only in the minimum amounts as recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

<i>Installation Schedule:</i>	n/a
<i>Maintenance and Inspection:</i>	n/a
<i>Responsible Staff:</i>	n/a

Concrete Trucks

BMP Description:

Concrete trucks are limited to designated controlled area to wash out or discharge surplus concrete or drum wash water on the site. Proper signage shall be installed and maintained on site defining directions to and locations of the specified wash out area. If a wash out area cannot be designated or maintained on site, concrete wash out and disposal may be prohibited at the owner's discretion.

<i>Installation Schedule:</i>	n/a
<i>Maintenance and Inspection:</i>	n/a
<i>Responsible Staff:</i>	n/a

3.7 Any Additional BMPs

BMP Description: No additional BMPs were identified	
Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	
BMP Description:	
Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

3.8 Allowable Non-Stormwater Discharge Management

List allowable non-stormwater discharges and the measures used to eliminate or reduce them and to prevent them from becoming contaminated:

Type of Authorized Non-Stormwater Discharges	Likely to be Present at Your Site?
Discharges from emergency fire-fighting activities	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Fire hydrant flushings	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Landscape irrigation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Waters used to wash vehicles and equipment (soaps/solvents are not used and external surfaces do not contain hazardous substances)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water used to control dust	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Potable water including uncontaminated water line flushings	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
External building washdown (soaps/solvents are not used and external surfaces do not contain hazardous substances)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Pavement wash waters (soaps/solvents are not used and external surfaces do not contain hazardous substances)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Uncontaminated air conditioning or compressor condensate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Uncontaminated, non-turbid discharges of ground water or spring water	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Foundation or footing drains	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Construction dewatering water	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

SECTION 4: INSPECTIONS

4.1 Inspections

- 1. Inspection Personnel:** Identify the person(s) who will be responsible for conducting inspections and describe their qualifications (person meeting all local, state, and federal requirements:

PRIMARY INSPECTOR – NAME: _____

QUALIFICATIONS

- _____
- _____
- _____

In absence of the primary inspector _____ will conduct inspections.

SECONDARY INSPECTOR – NAME: _____

QUALIFICATIONS

- _____
- _____
- _____

2. Inspection Schedule and Procedures:

The permittee shall ensure the entire construction site including but not limited to disturbed areas, BMPs, waste and construction storage areas, drainage areas, locations where stormwater can flow from the construction site, and temporarily stabilized is inspected on a regular schedule and, with the exception of Saturdays, Sundays, established Federal Holidays and the day after Thanksgiving, by the end of the next day following a rain event which results in a rainfall total of 0.5 inches or greater.

Rainfall totals used to establish when a construction site inspection is required shall be determined from local weather station reports of daily rainfall totals such as the 1200 GMT end-of-day totals available through the National Weather Service and their cooperative observers or from regularly scheduled on-site rain gauge monitoring performed and recorded each work day by project personnel. A site inspection is required whenever a rainfall total of 0.5 inches or greater is observed based on a single monitoring event; or based on the cumulative total of two consecutive monitoring events when the rainfall total of the first monitoring event is

less than 0.5 inches.

The permittee shall, upon initiation of construction activities, determine an initial routine inspection monitoring period based on the start date of construction activities and a routine monitoring frequency of either 14 days or a different monitoring frequency established in the SWP2 Plan that does not exceed 14 days. Subsequent routine inspection monitoring periods shall be established based on the chosen routine monitoring frequency and the initial inspection monitoring period determined at the start of construction, without regard to the dates of routine or rain event inspections that are conducted. At a minimum, a single routine or rain event inspection shall be conducted within each routine inspection monitoring period.

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. Locations where stormwater runoff leaves the site shall be inspected for evidence of erosion or sediment deposition. Once a portion of the project area meets the final stabilization criteria specified in Part 9 of the KDHE permit, then no further inspection of that final stabilized portion is required provided that the area is identified in the SWP2 Plan as having obtained final stabilization; however, the permittee shall remain responsible to correct any conditions within such areas that are identified as contributing to the discharge of sediment or other pollutants from the project site.

A report of each regularly scheduled inspection and required rain event inspection shall be documented. The inspection report is to include the following minimum information; inspector's name, date of inspection, observations relative to the effectiveness of the BMPs, actions taken or necessary to correct deficiencies, listing of areas where construction operations have permanently or temporarily stopped, and observations of stormwater discharge locations with respect to the effectiveness of the upgradient BMPs. The inspection report shall be completed within 24 hours of the inspection excluding Saturdays, Sundays and previously specified holidays and shall be signed by the person performing the inspection.

Any deficiencies in the operation or maintenance, effectiveness, adequacy or coverage extent of all installed BMPs, temporary stabilization measures and other pollution control measures identified during the inspection shall be noted in the inspection report and corrected within 7 calendar days of the inspection unless infeasible. The permittee shall promptly notify the site contractors responsible for operation and maintenance of BMPs of deficiencies. When correction of any noted deficiency within 7 calendar days is infeasible, the inspection report shall document the reason why such correction is infeasible and provide a specific timeframe for completing all needed maintenance and repairs of installed control measures and installation or modification of all control measures and management practices identified as missing, ineffective or inadequate as soon as feasible.

If weather or site conditions render access to any portion of the site to be unsafe or infeasible for inspection activities, the inspection report shall document the reason why access is unsafe or infeasible. Weather and site conditions shall then be monitored and recorded daily excluding Saturdays, Sundays and referenced holidays until access for inspection activities is determined to be safe and feasible. Inspection of the affected area shall then be performed by the end of the next day after determining that access is safe and feasible, again excluding Saturdays, Sundays and referenced holidays.

Disturbed project areas that are temporarily stabilized due to ice, frozen soil conditions or consistent snow cover extending across 70 percent or more of the area shall be noted on the inspection report. For such areas, the observation of disturbed soils, sediment and erosion control BMPs, drainage areas and locations where stormwater can flow from the construction site is not required during site inspections while one or more of the listed conditions are present. The thawing of these areas shall be noted during the first subsequent inspection when iced, frozen or snow covered conditions are no longer present.

For inactive project sites where soil disturbing construction activities have permanently ceased and final stabilization activities have been completed and documented as such in the SWP2 Plan but vegetative density does not meet the final stabilization criteria specified in Part 9 of this permit, inspections in response to rain events are not required; however, at a minimum, a single routine inspection shall still be conducted at the inactive project site within each established routine inspection monitoring period.

The permittee shall maintain the site inspection reports on-site or at the records storage location identified in the NOI. The permittee shall provide a copy of the site inspection reports to KDHE or EPA upon request.

Describe the general procedures for correcting problems when they are identified. Include responsible staff and time frames for making corrections:

If corrective actions are identified during the inspection, Permittee or authorized representative shall be responsible for initiating corrective action in accordance with the KDHE stormwater permit.

Attach a copy of the inspection report you will use for your site.

[See Appendix E – Sample Inspection Report](#)

4.2 Delegation of Authority

Duly Authorized Representative(s) or Position(s):

Insert Company or Organization Name:

Insert Name:

Insert Position:

Insert Address:

Insert City, State, Zip Code:

Insert Telephone Number:

Insert Fax/Email:

(Attach a copy of the signed delegation of authority form in Appendix K.)

4.3 Corrective Action Log

Corrective Action Log:

See Appendix "F"

SECTION 5: RECORDKEEPING AND TRAINING

5.1 Recordkeeping

Records will be retained for a minimum period of at least 3 years after the permit is terminated.

Date(s) when major grading activities occur:

INSERT LOG HERE or REFERENCE ATTACHMENT

Date(s) when construction activities temporarily or permanently cease on a portion of the site:

INSERT LOG HERE or REFERENCE ATTACHMENT

Date(s) when an area is either temporarily or permanently stabilized:

INSERT LOG HERE or REFERENCE ATTACHMENT

5.2 Log of Changes to the SWPPP

Log of changes and updates to the SWPPP

See Appendix "G"

5.3 Training

Individual(s) Responsible for Training:

See Appendix "J"

Describe Training Conducted:

- General stormwater and BMP awareness training for staff and subcontractors:
- Detailed training for staff and subcontractors with specific stormwater responsibilities:
- As required to address deficiencies.

SECTION 8: CERTIFICATION AND NOTIFICATION

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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information 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

Print

Name: _____

Print

Title: _____

Permittee

Signature

_____ Date: _____

Repeat as needed for multiple construction operators at the site

SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Appendix A – General Location Map

Appendix B – Site Maps

Appendix C – Construction General Permit

Appendix D – NOI and Acknowledgement Letter from EPA/State

Appendix E – Inspection Reports

Appendix F – Corrective Action Log (or in Part 5.3)

Appendix G – SWPPP Amendment Log (or in Part 6.2)

Appendix H – Subcontractor Certifications/Agreements

Appendix I – Grading and Stabilization Activities Log (or in Part 6.1)

Appendix J – Training Log

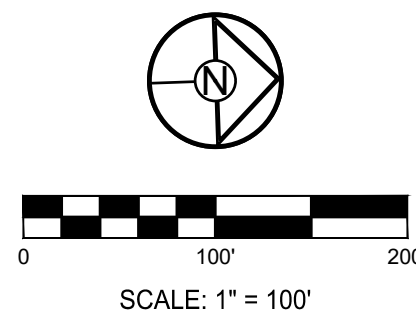
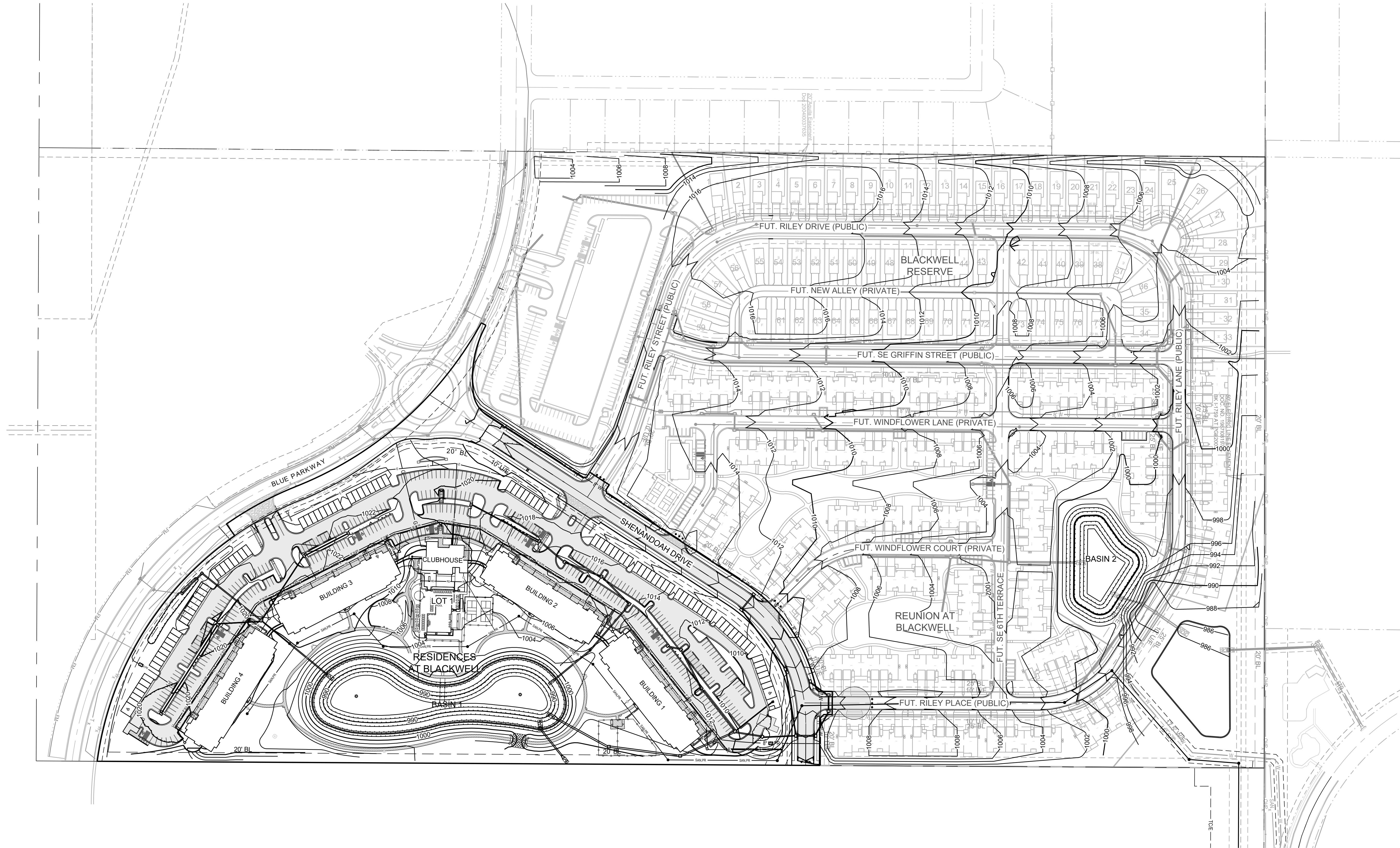
Appendix K – Delegation of Authority

Appendix L – Additional Information (i.e., Endangered Species and Historic Preservation Documentation)

Appendix A: **General Location Map**

Appendix B: **Site Maps**

I:\PROJECTS\2022\22-102\3.0 Design\3.0 DWG Plans\4.0 SDP\22-102 - SDP - GRD FULL SITE.dwg, GRADING PLAN FULL SITE - 11



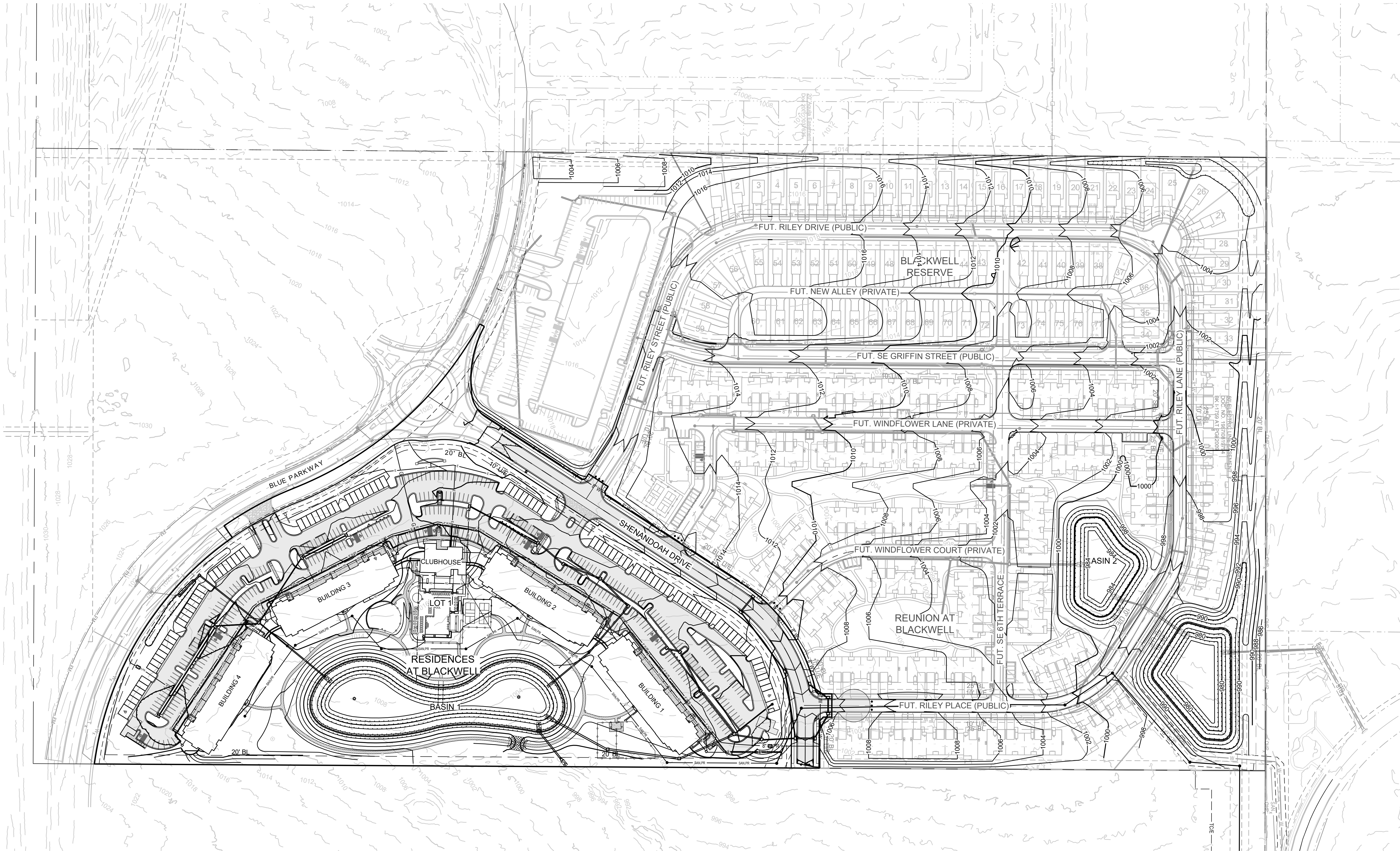
RESIDENCES, REUNION & RESERVE AT BLACKWELL
MASS GRADING & EROSION SEDIMENT CONTROL PLANS
HERITAGE STREET LEE'S SUMMIT, MO

REVISION DATE	DESCRIPTION
1 01/23/2023	PER CITY COMMENTS
2 5/12/2023	PER CITY COMMENTS
3 05/30/2023	PER CITY COMMENTS
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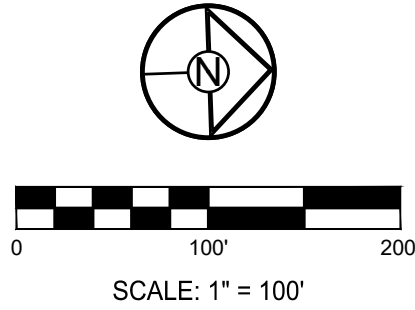
DRAWN BY:	TRC
CHECKED BY:	MAB
DATE PREPARED:	11/30/2022
PROJ. NUMBER:	22-102

GRADING PLAN
FULL SITE

SHEET
2



EARTHWORK
CUT: 133,0890 CY
FILL: 135,267 CY (15% FACTOR)
NET: 1,378 CY CUT
(APPROXIMATE - PAVEMENTS AND TRENCHING NEGLECTED)



DRAWN BY:		REVISION DATE	DESCRIPTION
TRC		1 01/23/2023	PER CITY COMMENTS
CHECKED BY:		2 5/12/2023	PER CITY COMMENTS
MAB		3 05/30/2023	PER CITY COMMENTS
DATE PREPARED:		4	
11/30/2022		5	
		6	
PROJ. NUMBER		7	
22-102		8	

GRADING PLAN
FULL SITE - FINAL
CONFIGURATION

SHEET
3

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MASS GRADING & EROSION SEDIMENT CONTROL PLANS
HERITAGE STREET LEE'S SUMMIT, MO

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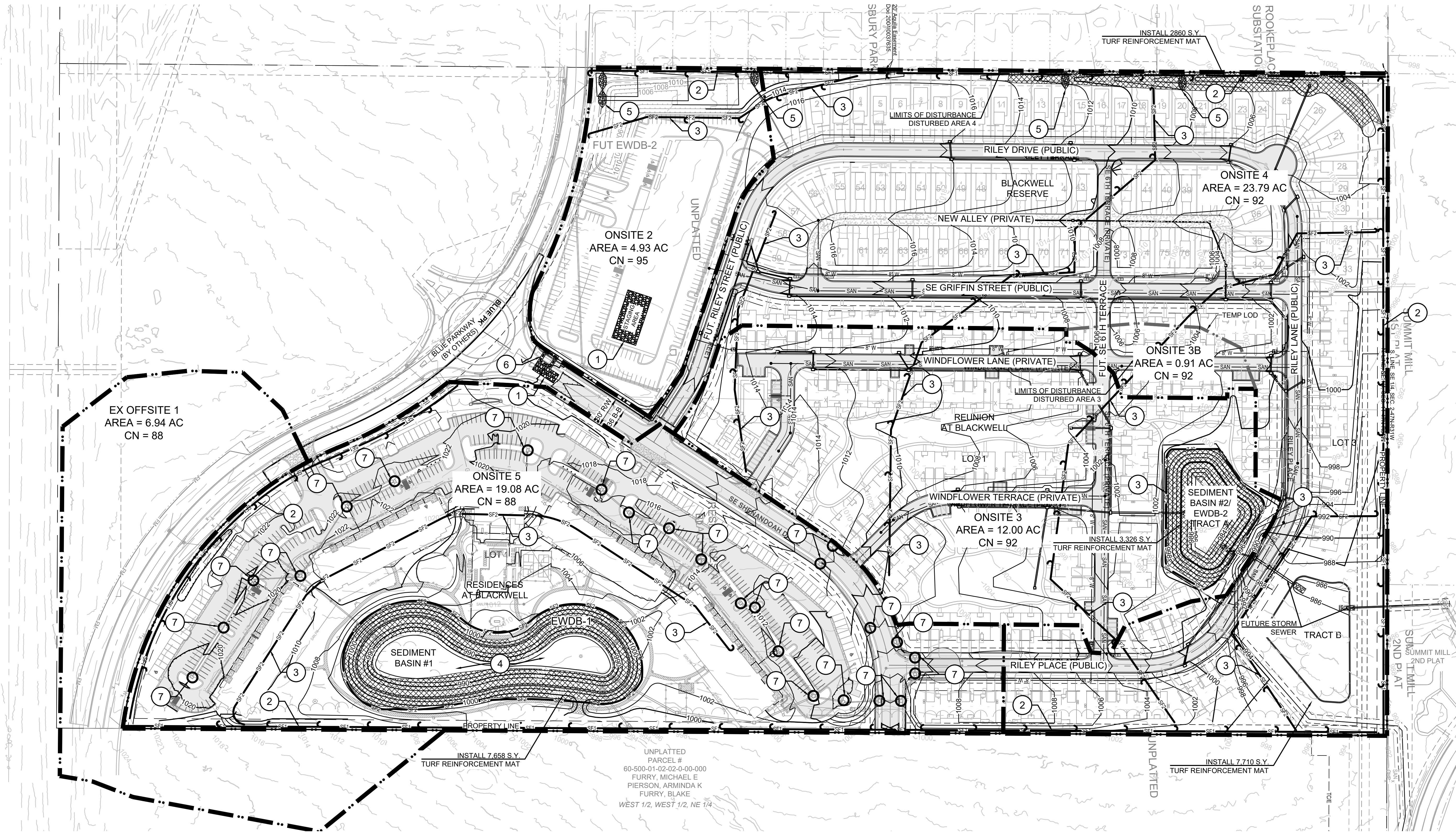


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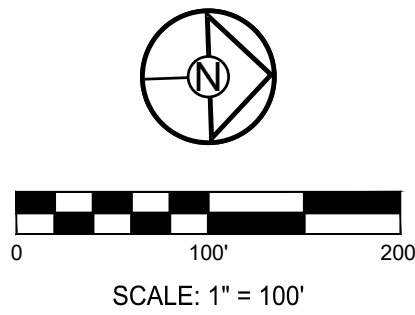
**SCHLAGEL**

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Missouri State Certificates of Authority
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I:\PROJECTS\2022\22-1023.0 Design\3.0 DWG Plans\3.0 EROSION CONTROL PLAN, 1.1



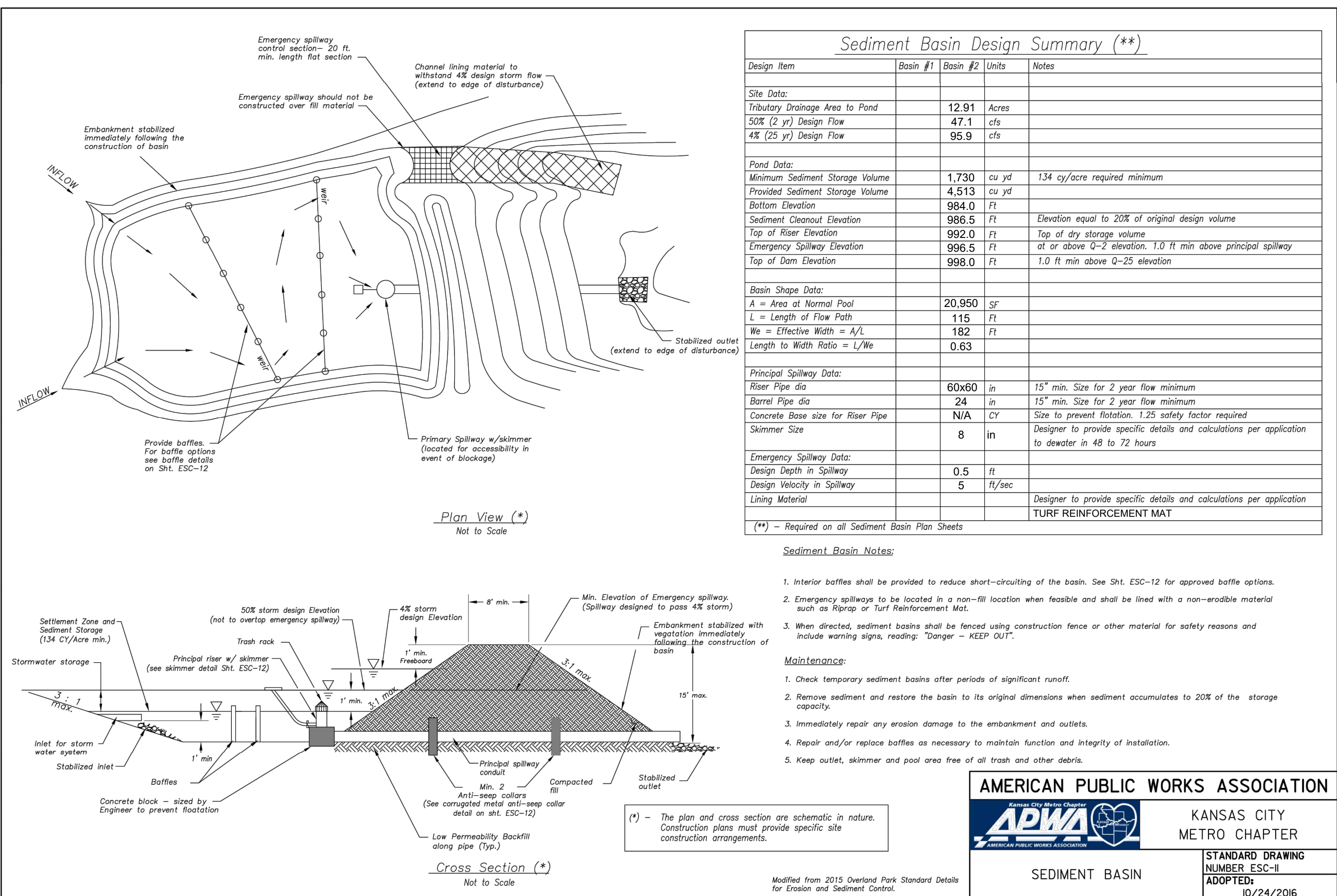
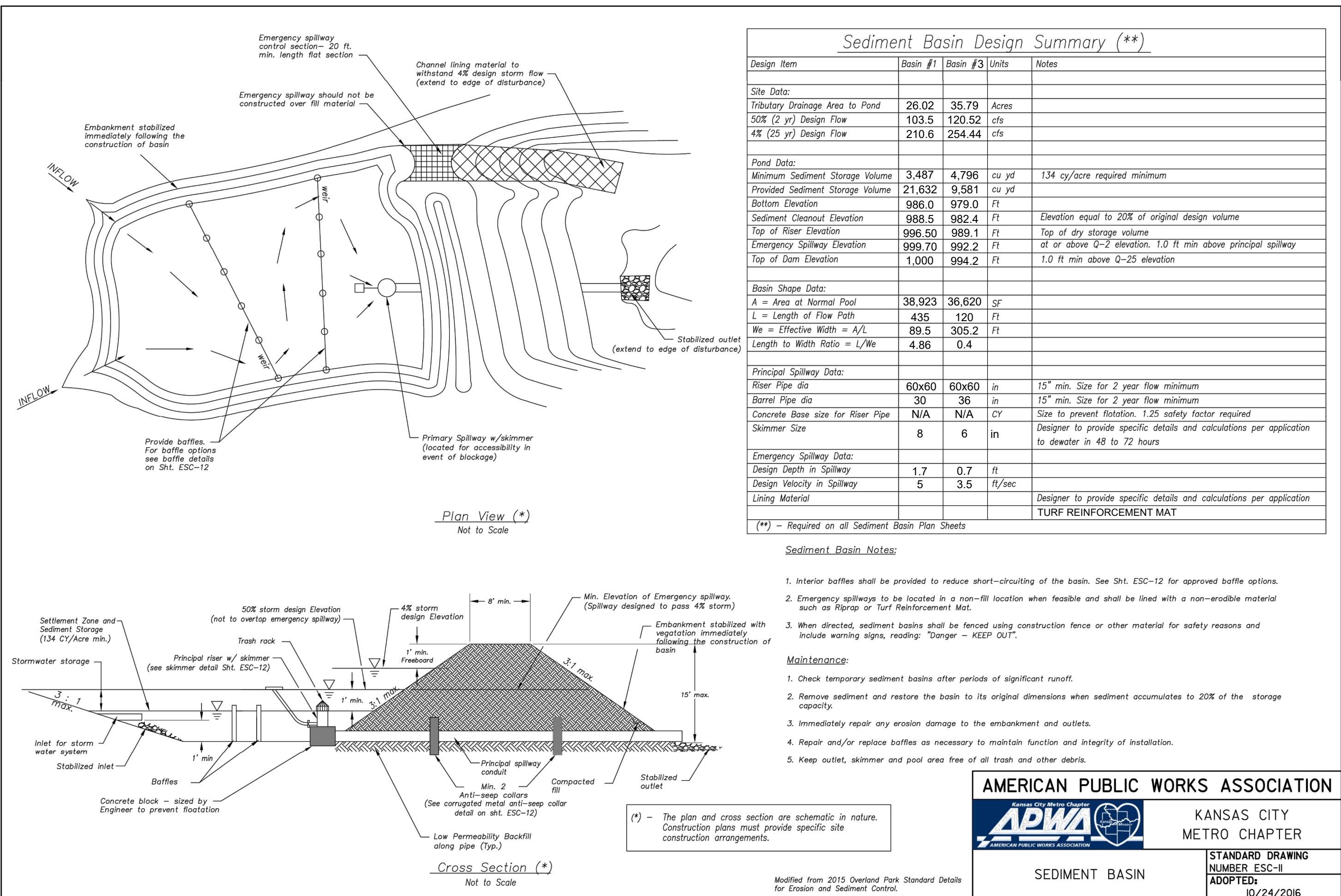
- NOTES:**
- SEE SHEET 4 FOR EROSION CONTROL NOTES, LEGEND AND STAGING CHART.
 - SEDIMENT BASIN #2 SHALL BE INSTALLED AND UTILIZED UNTIL SUCH TIME THAT THE 20' D/E DOWNSTREAM OF SEDIMENT BASIN #3 IS ACQUIRED. UPON DEDICATION OF SAID 20' D/E SEDIMENT BASIN #3 SHALL BE INSTALLED AND SEDIMENT BASIN #2 CONVERTED TO AN EWDB.

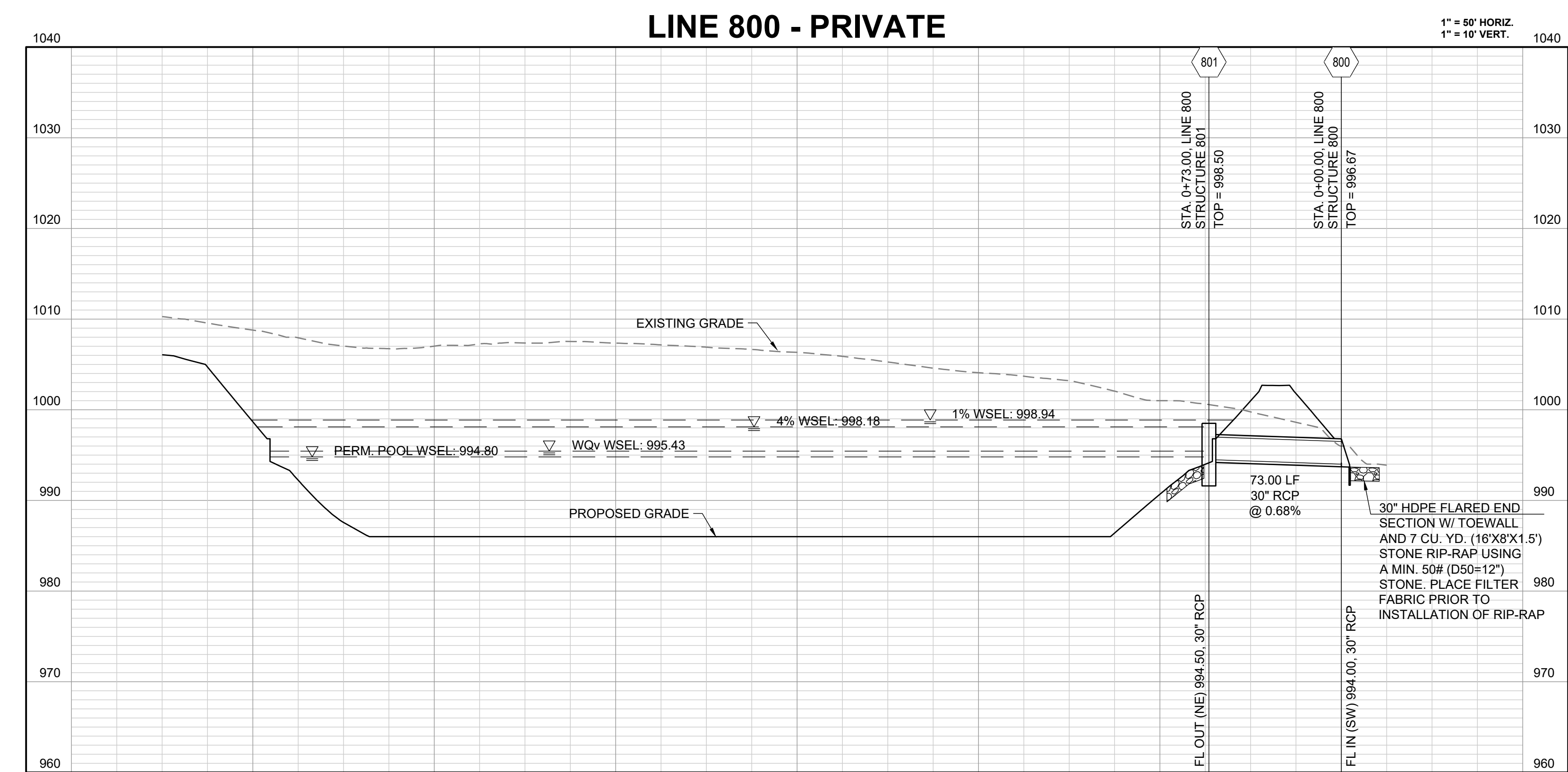
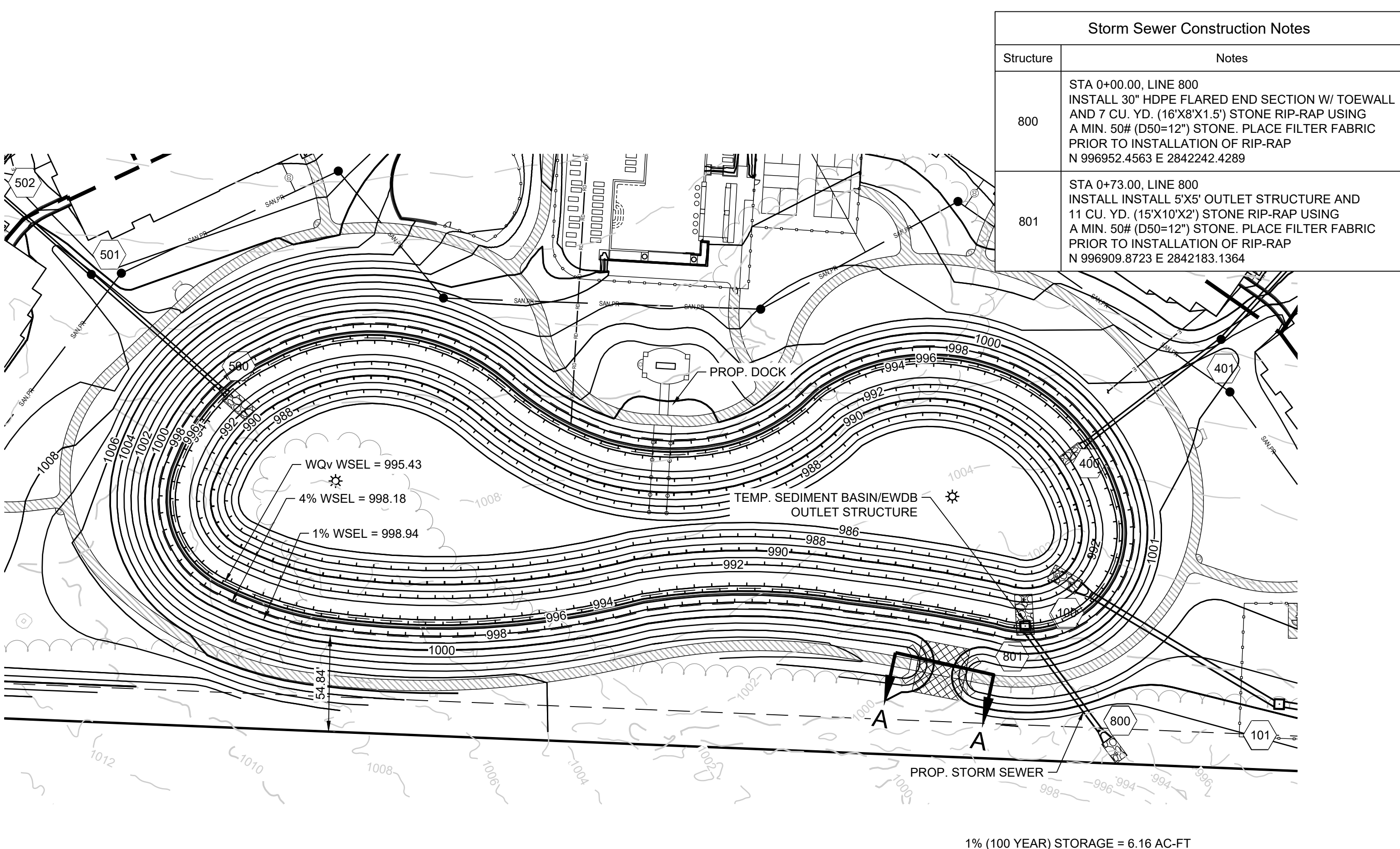


RESIDENCES, REUNION & RESERVE AT BLACKWELL
MASS GRADING & EROSION SEDIMENT CONTROL PLANS
HERITAGE STREET LEE'S SUMMIT, MO

REVISION DATE	DESCRIPTION
01/23/2023	PER CITY COMMENTS
5/12/2023	PER CITY COMMENTS
05/30/2023	PER CITY COMMENTS
11/30/2022	DATE PREPARED
22-102	PROJ. NUMBER

EROSION
CONTROL PLAN





Storm Sewer Construction Notes	
Structure	Notes
800	STA +0+00.00, LINE 800 INSTALL 30" HDPE FLARED END SECTION W/ TOEWALL AND 7 CU. YD. (16'X8'X1.5') STONE RIP-RAP USING A MIN. 50# (D50=12") STONE. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP N 996952.4563 E 2842242.4289
801	STA +0+73.00, LINE 800 INSTALL 30" HDPE FLARED END SECTION W/ TOEWALL AND 7 CU. YD. (16'X8'X1.5') STONE RIP-RAP USING A MIN. 50# (D50=12") STONE. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP N 996909.8723 E 2842183.1364

NOTE:
TEMPORARY SEDIMENT BASIN AND OUTLET STRUCTURE W/ SKIMMER AND PLATE SHALL BE CONSTRUCTED WITH THE FIRST PHASE OF THE EROSION CONTROL PLAN. UPON FINAL STABILIZATION THE SKIMMER, PLATE, AND SEDIMENT SHALL BE REMOVED AND FINAL CONVERSION TO DETENTION BASIN COMPLETED. AN AS-BUILT RECORD DRAWING ACCEPTED BY THE CITY SHALL BE REQUIRED PRIOR TO OCCUPANCY.

AUXILIARY SPILLWAY DESIGN:
 $Q_{100} = 252 \text{ CFS}, Q = CLH^{(3/2)}, C = 3.1, L = 32.0', H = 1.9'$

1% (100 YEAR) STORAGE = 6.16 AC-FT


A-A

LINE 800 - PRIVATE

1" = 50' HORIZ.
1" = 10' VERT.

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PREPARED BY:



05.30.2023

SCHLAGEL & ASSOCIATES, P.A.

RESIDENCES, REUNION & RESERVE AT BLACKWELL
MASS GRADING & EROSION SEDIMENT CONTROL PLANS

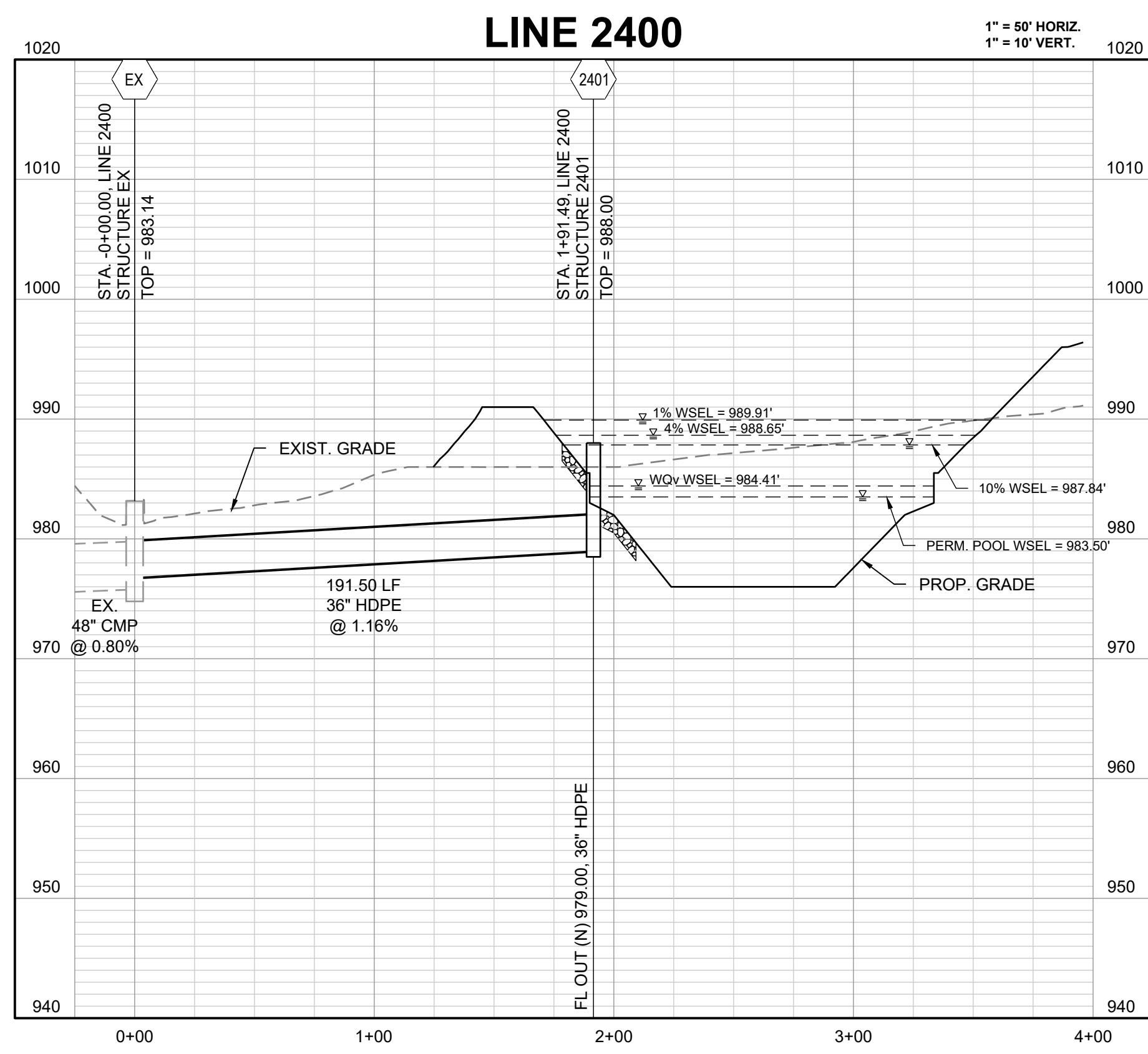
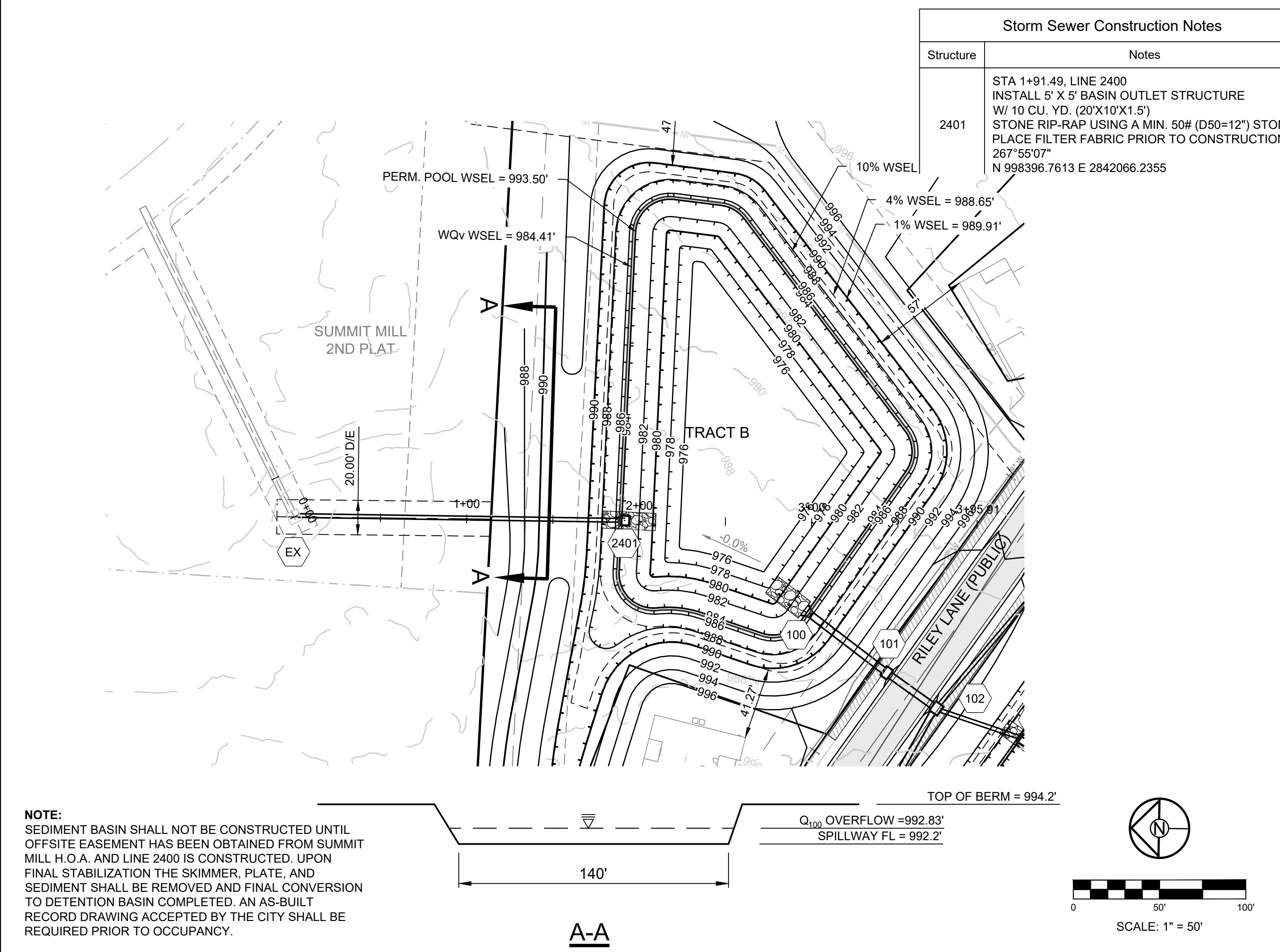
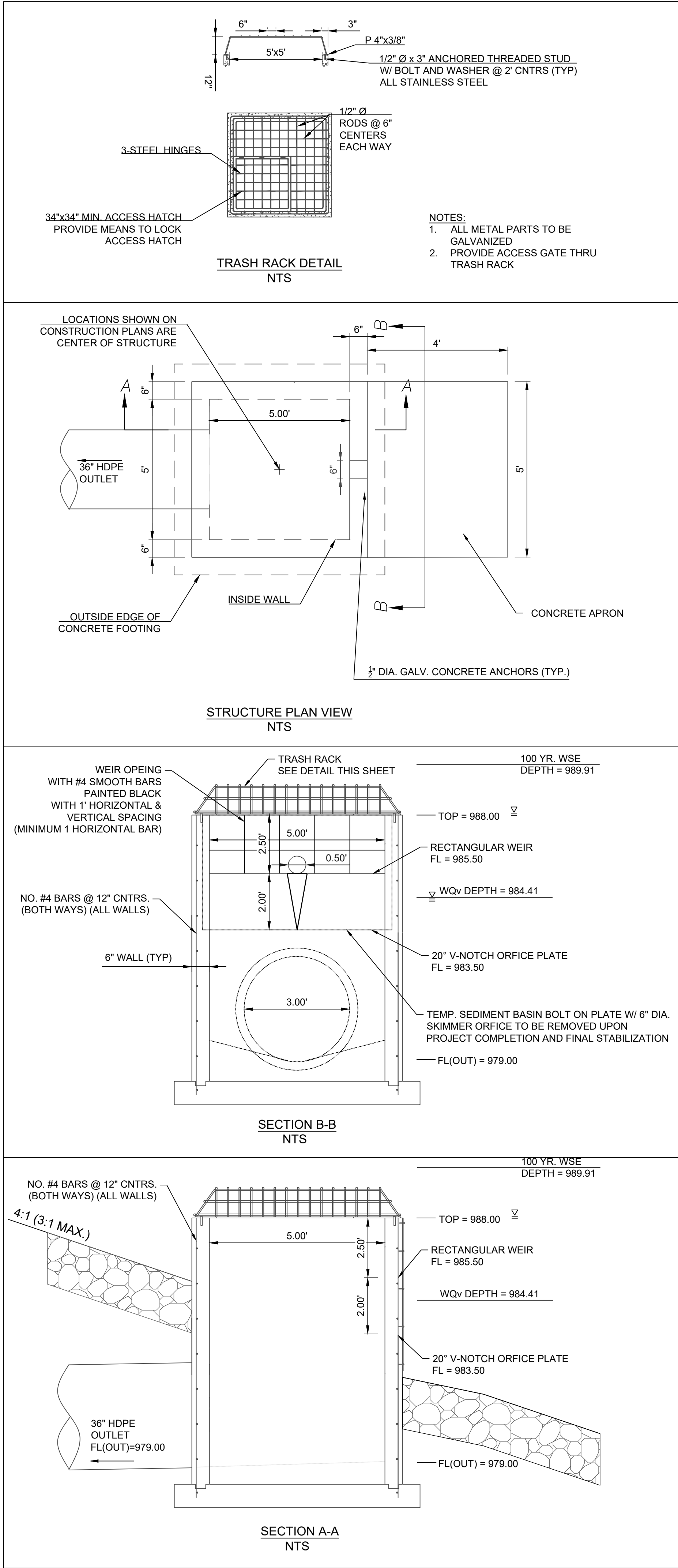
HERITAGE STREET 1 EE'S SUMMIT MO

REVISION DATE:	DESCRIPTION
1 01/23/2023	PER CITY COMMENTS
2 5/2/2023	PER CITY COMMENTS
3 05/30/2023	PER CITY COMMENTS
4	
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8	
9	

OUTLET
STRUCTURE 801

SHEET

9



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PREPARED BY:

STATE OF MISSOURI
MARK ALLEN BREUER
NUMBER
PE-2003007268
05.30.2023
PROFESSIONAL ENGINEER

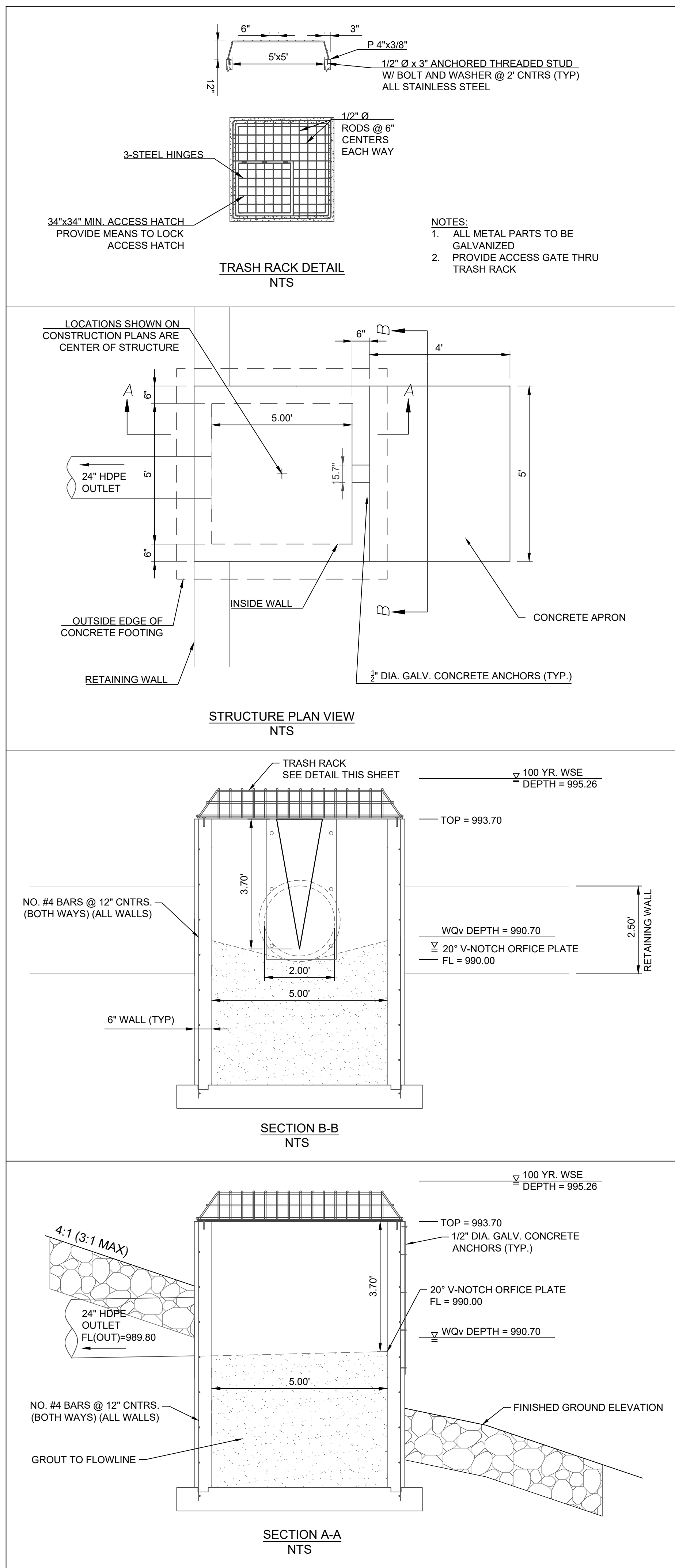
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RESIDENCES, REUNION & RESERVE AT BLACKWELL
MASS GRADING & EROSION SEDIMENT CONTROL PLANS
HERITAGE STREET LEE'S SUMMIT, MO

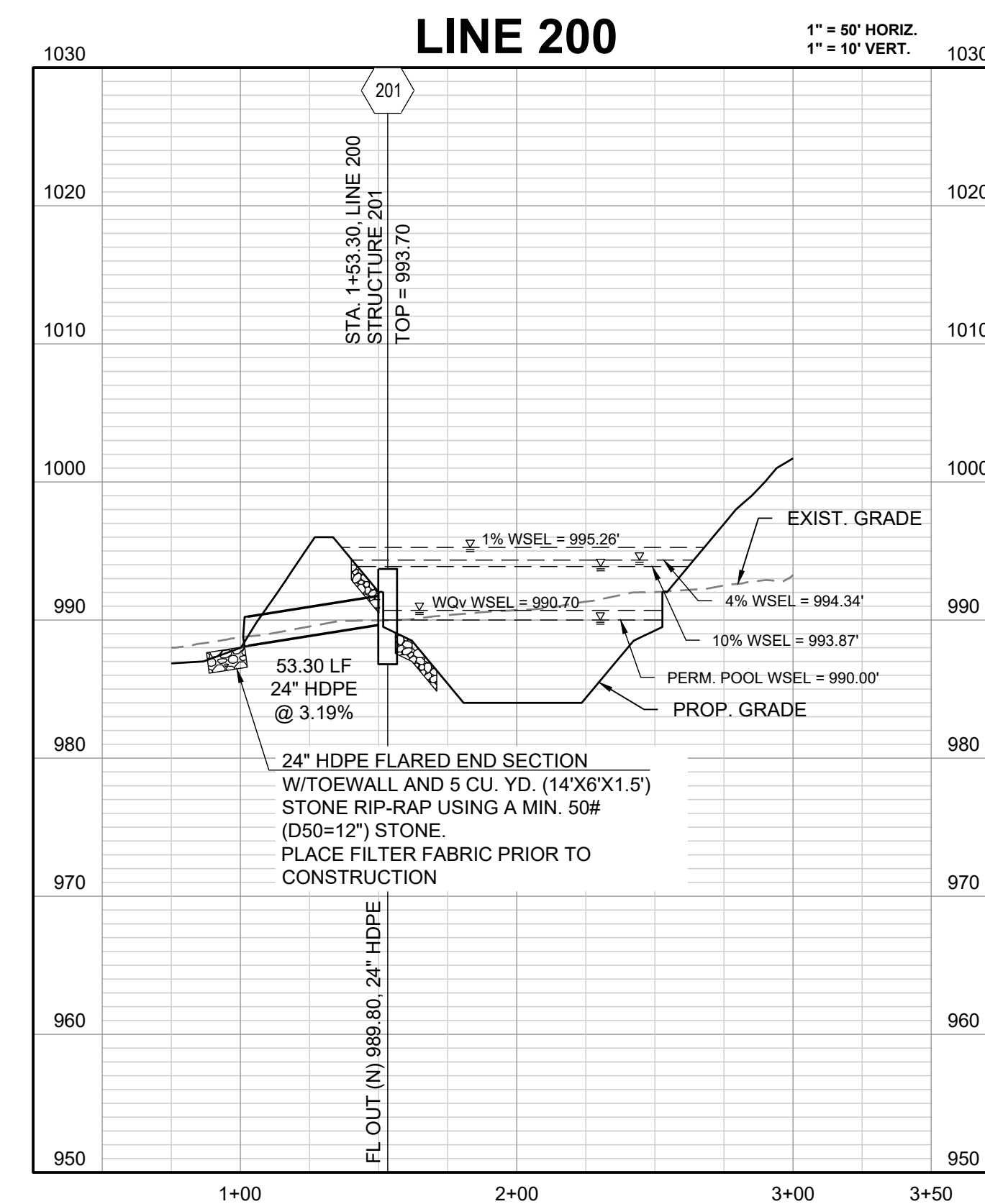
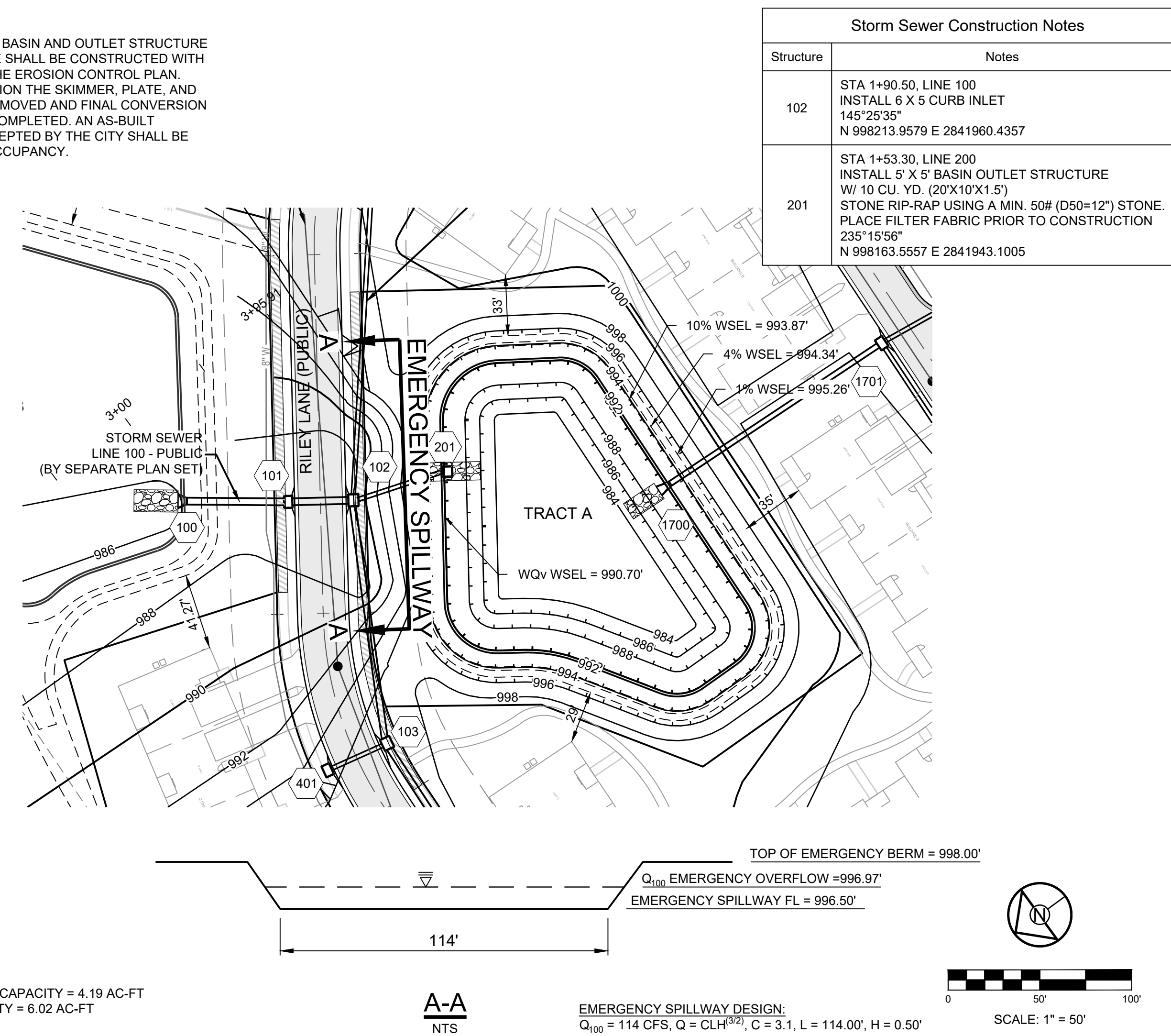
REVISION DATE	DESCRIPTION
1 01/23/2023	PER CITY COMMENTS
2 5/12/2023	PER CITY COMMENTS
3 05/30/2023	PER CITY COMMENTS
4	
5	
6	
7 11/30/2022	DATE PREPARED
22-102	PROJ. NUMBER

OUTLET
STRUCTURE 2401

SHEET
10




NOTE: TEMPORARY SEDIMENT BASIN AND OUTLET STRUCTURE W/ SKIMMER AND PLATE SHALL BE CONSTRUCTED WITH THE FIRST PHASE OF THE EROSION CONTROL PLAN. UPON FINAL STABILIZATION THE SKIMMER, PLATE, AND SEDIMENT SHALL BE REMOVED AND FINAL CONVERSION TO DETENTION BASIN COMPLETED. AN AS-BUILT RECORD DRAWING ACCEPTED BY THE CITY SHALL BE REQUIRED PRIOR TO OCCUPANCY.



Storm Sewer Construction Notes	
Structure	Notes
102	STA 1+90.50, LINE 100 INSTALL 6 X 5 CURB INLET 14S*25/36" N 998213.9579 E 2841960.4357
201	STA 1+53.30, LINE 200 INSTALL 5' X 5' BASIN OUTLET STRUCTURE W/ 10 CU. YD. (20X10X1.5') STONE RIP-RAP USING A MIN. 50# (D50=12") STONE. PLACE FILTER FABRIC PRIOR TO CONSTRUCTION 23S' 15'56" N 998163.5557 E 2841943.1005

SCHLAGEL
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WWW.SCHLAGELASSOCIATES.COM
Mike Schlager, President
#E2002003800-F #LA-C2001 005627 #L52002008859-F

PREPARED BY:



05.30.2023

SCHLAGEL & ASSOCIATES, P.A.

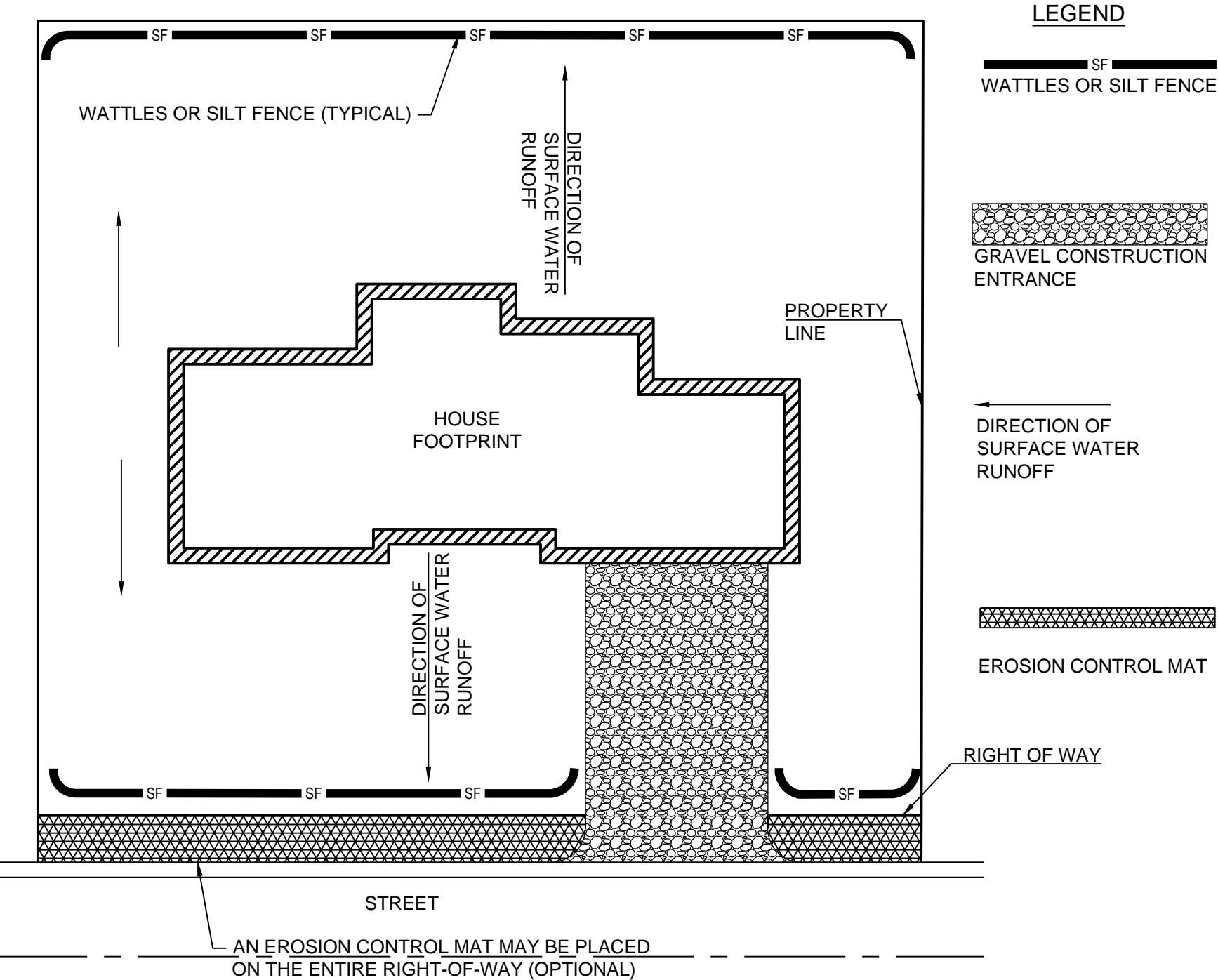
RESIDENCES, REUNION & RESERVE AT BLACKWELL
MASS GRADING & EROSION SEDIMENT CONTROL PLANS

HERITAGE STREET LEE'S SUMMIT, MO

OUTLET STRUCTURE 201		REVISION	DATE	DESCRIPTION
DRAWN BY:	TRC	01/23/2023	PER CITY COMMENTS	
CHECKED BY:	NAB	5/19/2023	PER CITY COMMENTS	
DATE PREPARED:	11/09/2022		PER CITY COMMENTS	
PROJ. NUMBER:	22-102			

SHEET
11

SINGLE FAMILY LOT EROSION CONTROL PLAN - TYPE A



SINGLE FAMILY LOT EROSION CONTROL PLAN - TYPE B

MAY BE REQUIRED
AS INDICATED BY
SITE CONDITIONS

WATTLES OR SILT FENCE (TYPICAL)

LEGEND

— SF —
WATTLES OR SILT FENCE

GRAVEL CONSTRUCTION
ENTRANCE

←
DIRECTION OF
SURFACE WATER
RUNOFF

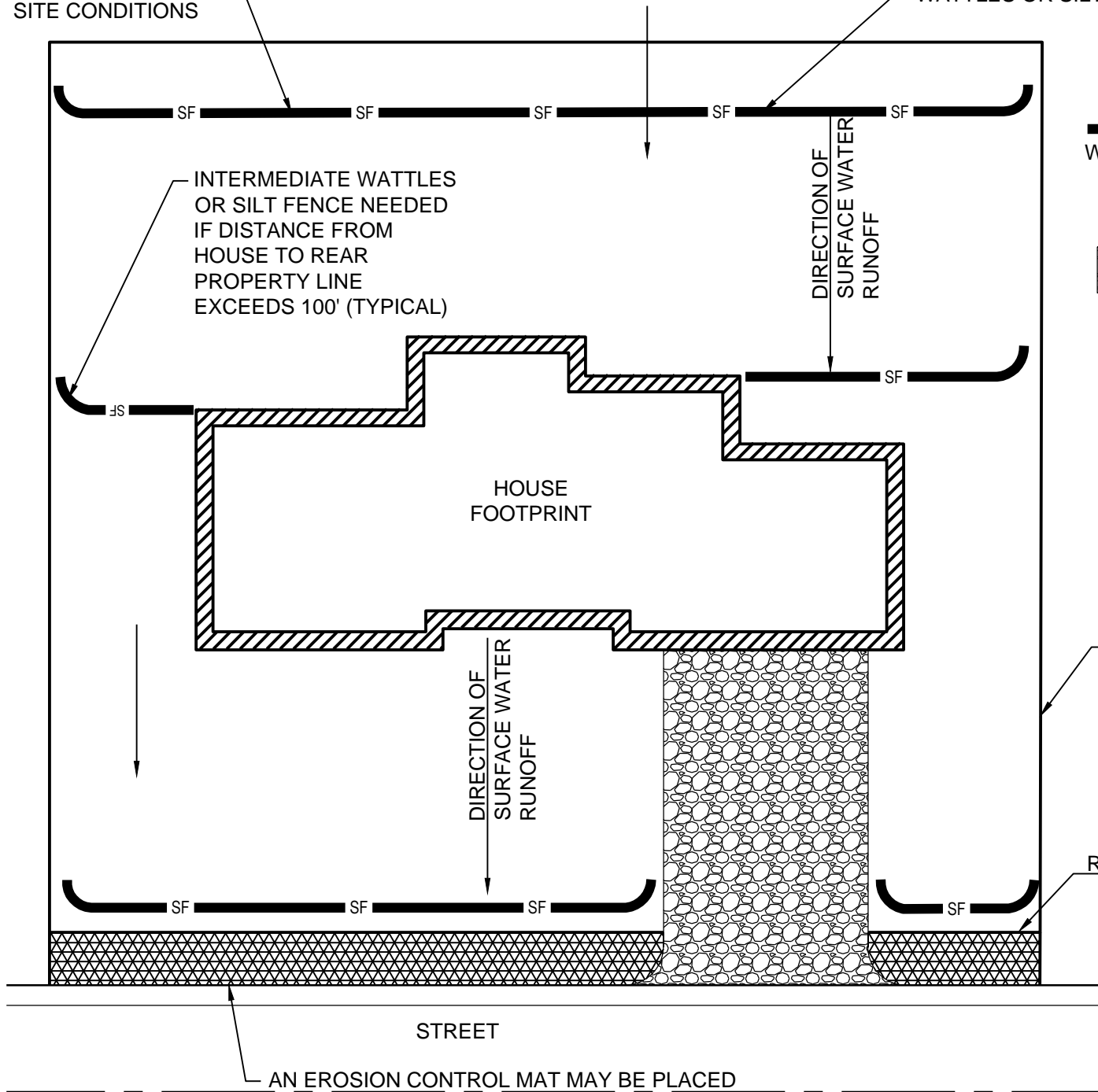
PROPERTY
LINE

EROSION CONTROL MAT

RIGHT OF WAY


STREET

AN EROSION CONTROL MAT MAY BE PLACED
ON THE ENTIRE RIGHT-OF-WAY (OPTIONAL)




SINGLE FAMILY LOT EROSION CONTROL PLAN - TYPE C

LEGEND

 SF
WATTLES OR SILT FENCE

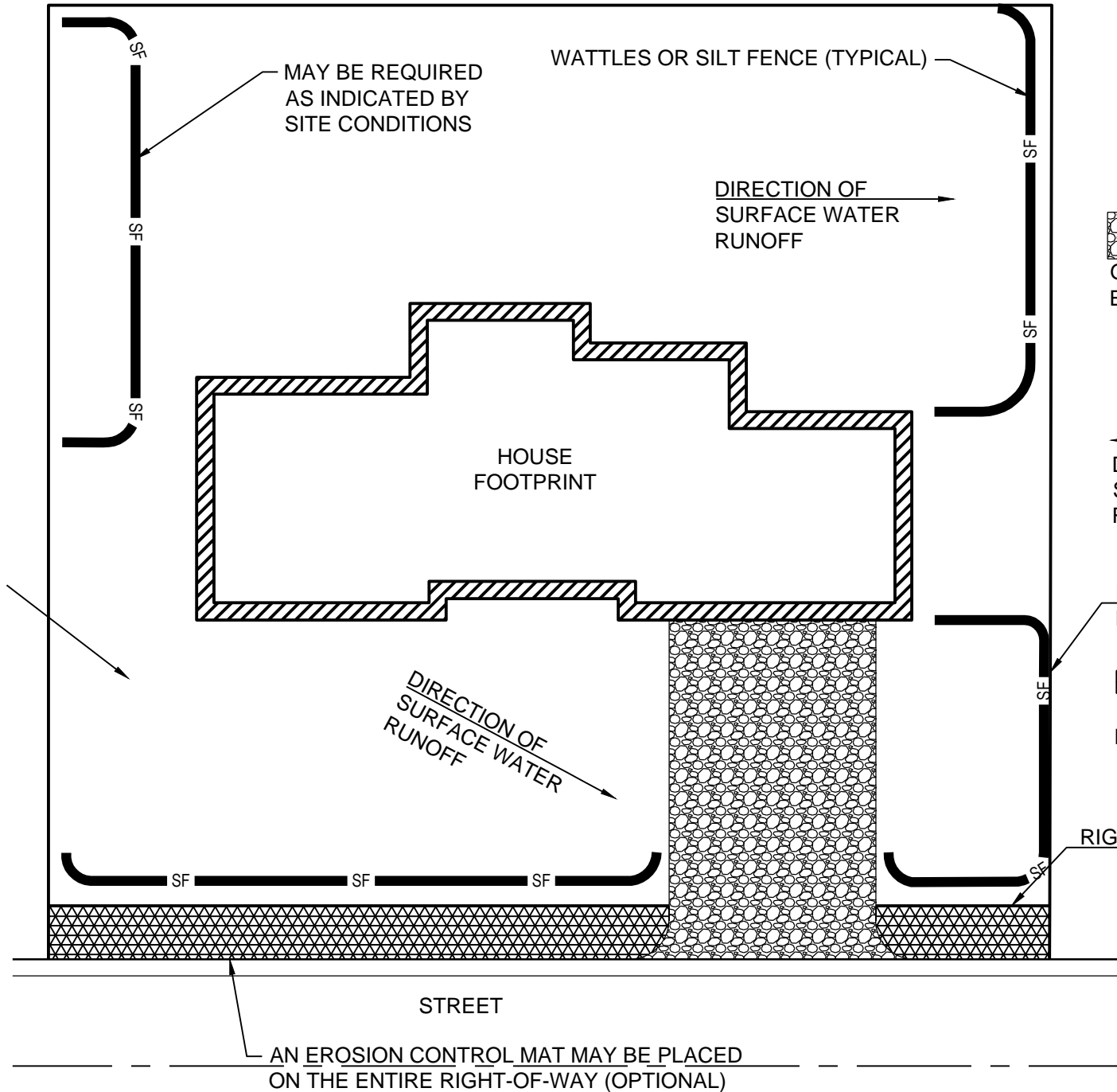

GRAVEL CONSTRUCTION
ENTRANCE


DIRECTION OF
SURFACE WATER
RUNOFF

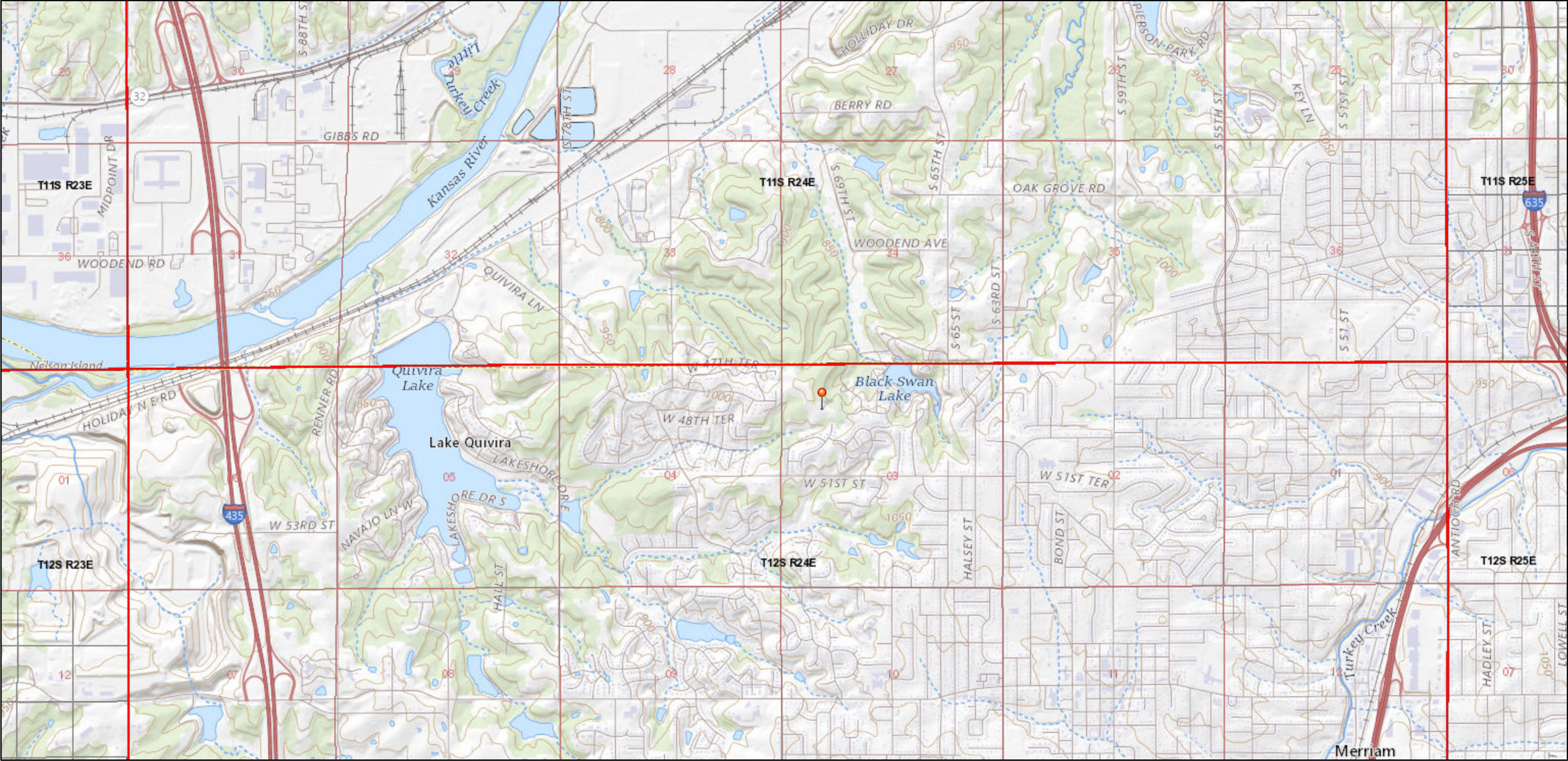

PROPERTY
LINE


EROSION CONTROL MAT






RIGHT OF WAY

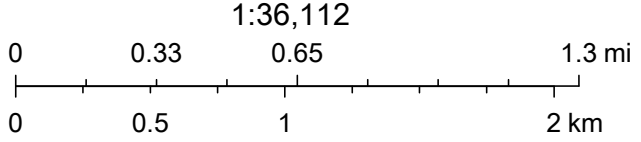


The National Map Advanced Viewer



12/13/2022, 4:31:16 PM

-  Override 1
-  PLSS Intersected
-  PLSS Section
-  PLSS Township



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset;

Appendix C: **Construction General Permit**

Appendix D: **NOI and Acknowledgement Letters**

Appendix E: **Sample Inspection Report**

When conducting the inspection, walk the site by following your site map and numbered BMPs/areas for inspection. Also note whether the overall site issues have been addressed (customize this list according to the conditions at your site). Note any required corrective actions and the date and responsible person for the correction in the Corrective Action Log.

Stormwater Construction Site Inspection Report

General Information			
Project Name			
NPDES Tracking No.		Location	
Date of Inspection		Start/End Time	
Inspector's Name(s)			
Inspector's Title(s)			
Inspector's Contact Information	Address: _____ City, State, Zip Code: _____ Telephone: _____ Email: _____		
Inspector's Qualifications			
Describe present phase of construction			
Type of Inspection: <input type="checkbox"/> Regular <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event			
Weather Information			
Has there been a storm event since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide: Storm Start Date & Time: Storm Duration (hrs): Approximate Amount of Precipitation (in):			
Weather at time of this inspection? <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds <input type="checkbox"/> Other: Temperature:			
Have any discharges occurred since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe:			
Are there any discharges at the time of inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe:			

Site-specific BMPs

- Number the structural and non-structural BMPs identified in your SWPPP on your site map and list them below (add as many BMPs as necessary). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required BMPs at your site.
- Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
6		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
13		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
14		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
15		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
16		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
17		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
18		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
19		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
20		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Overall Site Issues

Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	Are discharge points and receiving waters free of any sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	Are storm drain inlets properly protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6	Is the construction exit preventing sediment from being tracked into the street?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7	Is trash/litter from work areas collected and placed in covered	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
	dumpsters?			
8	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10	Are materials that are potential stormwater contaminants stored inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12	(Other)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Non-Compliance

Describe any incidents of non-compliance not described above:

This Inspection Report shall be completed within 24 hours of the inspection. Permittee shall maintain site inspection reports on-site or at the records storage location identified in the NOI. The Permittee shall provide a copy of the Site Inspection Reports to KDHE or EPA upon request.

Inspector

Print name and title: _____

Inspector

Signature: _____ **Date:** _____

(Signed by person performing the Inspection)

Appendix F – *Sample* Corrective Action Log

Project Name:
SWPPP Contact:

Inspection Date	Inspector Name(s)	Description of BMP Deficiency	Corrective Action Needed (including planned date/responsible person)	Date Action Taken/Responsible person

Appendix G – *Sample* SWPPP Amendment Log

Project Name:
SWPPP Contact:

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

Appendix H – *Sample* Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a 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 at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must 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 BMPs and practices described in the SWPPP.

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

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

Signature: _____

Title: _____

Date: _____

Appendix I – *Sample* Grading and Stabilization Activities Log

Project Name:
SWPPP Contact:

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

Appendix J – *Sample* SWPPP Training Log

Stormwater Pollution Prevention Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- ☐ **Erosion Control BMPs** ☐ **Emergency Procedures**
☐ **Sediment Control BMPs** ☐ **Good Housekeeping BMPs**
☐ **Non-Stormwater BMPs**

Specific Training Objective: _____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Appendix K – *Sample* Delegation of Authority Form

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)

_____ (company)

_____ (address)

_____ (city, state, zip)

_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in _____ (Reference State Permit), and that the designee above meets the definition of a “duly authorized representative” as set forth in _____ (Reference State Permit).

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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information 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: _____

Company: _____

Title: _____

Signature: _____

Date: _____

Appendix L: **Additional Information**