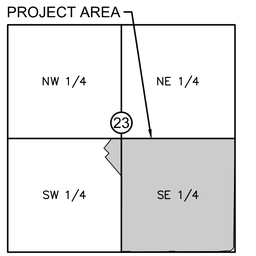
HOOK FARMS
FIRST PLAT
SITE DISTURBANCE PLANS

SECTION 23, TOWNSHIP 47 N, RANGE 32 W
IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
DISTURBED AREA = 23.75 AC



VICINITY MAP
S23, T47N, R32W
SCALE 1"=2000'

PROJECT TEAM & UTILITY CONTACT LIST	
OWNER / DEVELOPER HUNT MIDWEST REAL ESTATE DEVELOPMENT, INC. 8300 NE UNDERGROUND DRIVE KANSAS CITY, MO 64161 CONTACT: AARON SCHMIDT PHONE: 816.459.4285 EMAIL: ASCHMIDT@HUNTMIDWEST.COM	UTILITY SERVICE NUMBERS NAME: LEE'S SUMMIT PUBLIC WORKS PHONE: 816-969-1800 NAME: LEE'S SUMMIT WATER SERVICES DEPT. PHONE: 816-969-1940 NAME: SPIRE PHONE: 816-756-5252 NAME: AT&T PHONE: 800-286-8313 NAME: EVERGY PHONE: 888-471-5275 NAME: SPECTRUM: PHONE: 816-358-5360 NAME: GOOGLE FIBER PHONE: 877-454-6959
ENGINEER OLSSON 1301 BURLINGTON STREET, SUITE 100 NORTH KANSAS CITY, MISSOURI 64116 CONTACT: JULIE E. SELLERS, P.E. PHONE: 816.361.1177	
SURVEYOR OLSSON 1301 BURLINGTON STREET, SUITE 100 NORTH KANSAS CITY, MISSOURI 64116 CONTACT: JASON ROUDEBUSH, P.L.S. PHONE: 816.361.1177	

☐ NOT FOR CONSTRUCTION

☒ REVIEWED FOR CONSTRUCTION

CALL BEFORE YOU DIG 1-800-DIG-RITE MISSOURI ONE CALL SYSTEM

PROPERTY DESCRIPTION:

(AS PROVIDED BY CHICAGO TITLE INSURANCE COMPANY, NOVEMBER 1, 2018)

ALL THAT PART OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 47, RANGE 32, IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, BEING BOUNDED AND DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER; THENCE SOUTH 89 DEGREES 45 MINUTES 34 SECONDS EAST, ALONG THE NORTH LINE OF SAID SOUTHEAST QUARTER, 2613.19 FEET TO ITS INTERSECTION WITH THE WEST RIGHT-OF-WAY LINE OF PRYOR ROAD AS NOW ESTABLISHED; THENCE SOUTH 02 DEGREES 45 MINUTES 31 SECONDS WEST, ALONG SAID WEST RIGHT-OF-WAY LINE, 2520.50 FEET; THENCE SOUTH 47 DEGREES 23 MINUTES 30 SECONDS WEST, ALONG SAID WEST RIGHT-OF-WAY LINE, 135.21 FEET TO ITS INTERSECTION WITH THE NORTH RIGHT-OF-WAY LINE OF HOOK ROAD, AS NOW ESTABLISHED; THENCE NORTH 87 DEGREES 58 MINUTES 31 SECONDS WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 2264.70 FEET; THENCE NORTH 02 DEGREES 43 MINUTES 25 SECONDS EAST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 10.00 FEET; THENCE NORTH 87 DEGREES 58 MINUTES 31 SECONDS WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 252.00 FEET TO A POINT ON THE WEST LINE OF SAID SOUTHEAST QUARTER; THENCE NORTH 02 DEGREES 43 MINUTES 25 SECONDS EAST ALONG SAID WEST LINE, 2615.22 FEET TO THE POINT OF BEGINNING.

OIL/GAS WELLS:

NO OIL OR GAS WELLS ARE LOCATED WITHIN PROJECT LIMITS.
INFORMATION OBTAINED FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, GEOLOGICAL SURVEY GEOSCIENCES TECHNICAL RESOURCE ASSESSMENT TOOL (GEOSTRAT).

FLOOD CERTIFICATION:

PORTIONS OF THE SITE ARE LOCATED WITHIN ZONE AE "BASE FLOOD ELEVATIONS DETERMINED", ZONE X (SHADED) "AREAS OF 0.2% CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD, AND ZONE X (UNSHADED) " AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AS DEPICTED ON THE FEMA FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 29095C0531G, REVISION DATE JANUARY 20, 2017.

REVIEWED BY:

CITY OF LEE'S SUMMIT — DATE

Julie Sellers — 4/20/2020
JULIE E. SELLERS, P.E. — DATE
CIVIL ENGINEER
MO# PE-2017000367

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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
4/20/2020
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TITLE SHEET
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

2020

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C501

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Site Disturbance Plans\C_TTL01_0194061.dwg USER: nheiser
DATE: Apr 20, 2020 2:25pm XREFS: C_PTBLK_0194061_34x22 C_PBNDY_0194061

GENERAL NOTES:

1. THE INTENT OF THIS LAND DISTURBANCE PLAN IS TO ASSIST THE DEVELOPER IN HIS RESPONSIBILITY TO PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT AND LABOR NECESSARY TO CONTROL EROSION, SILTATION AND DISCHARGES OF SOIL MATERIAL (SEDIMENT) INTO DOWNSTREAM SYSTEMS OR RECEIVING CHANNELS. THIS SHALL BE REQUIRED DURING ALL PHASES OF CONSTRUCTION AND UNTIL SUITABLE GROUND COVER IS ESTABLISHED FOR ALL DISTURBED AREAS. IF ANY METHOD OF CONTROL FAILS, THE DEVELOPER SHALL NOTIFY THE OWNER IMMEDIATELY, SO THAT THE OWNER OR HIS AGENT CAN REVIEW THE DEVELOPER'S PROPOSED METHOD OF REPAIR.

THIS PLAN INDICATES THE CRITICAL AREA(S) OF CONCERN AND THESE AREA(S) WILL BE CONTROLLED AS A MINIMUM. THE CONTROL MAY CONSIST OF TEMPORARY CONTROL MEASURES AS SHOWN ON THE PLANS OR ORDERED BY THE OWNER DURING THE LIFE OF THE CONTRACT TO CONTROL EROSION OR WATER POLLUTION, THROUGH THE USE OF BERMS, DIKES, DAMS, SEDIMENT BASINS, FIBER MATS, NETTING, STRAW BALES, GRAVEL, MULCHES, GRASSES, SLOPE DRAINS, DIVERSION SWALES OR OTHER EROSION CONTROL DEVICES OR METHODS. THE OWNER HAS THE AUTHORITY TO LIMIT THE SURFACE AREA OF ERODIBLE EARTH MATERIAL EXPOSED BY THE CONSTRUCTION OPERATIONS AND TO DIRECT THE DEVELOPER TO PROVIDE IMMEDIATE PERMANENT OR TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS OR OTHER WATER COURSES, LAKES, PONDS, OR OTHER AREAS OF WATER IMPOUNDMENT OR CONVEYANCES.

THE TEMPORARY POLLUTION CONTROL PROVISIONS CONTAINED HEREIN SHALL BE COORDINATED WITH ANY PERMANENT EROSION CONTROL FEATURES SPECIFIED ELSEWHERE IN THE CONTRACT TO THE EXTENT PRACTICAL TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS EROSION CONTROL THROUGHOUT THE CONSTRUCTION AND POST CONSTRUCTION PERIOD.

2. THIS SEDIMENTATION CONTROL PLAN MAKES USE OF THE FOLLOWING APPLICATIONS:
- ___PRESERVATION OF EXISTING VEGETATION
- _X_SEDIMENT BARRIERS
- _X_SEDIMENT TRAPS
- _X_INLET PROTECTION
- ___OUTLET PROTECTION
- ___SOIL RETAINING SYSTEMS
- ___SLOPE DRAINS
- ___SUBSURFACE DRAINS

PHYSICAL DESCRIPTION OF EACH SPECIFIC SEDIMENT CONTROL DEVICE TO BE UTILIZED IS CALLED OUT ON THE PLANS WITH INSTALLATION PROCEDURES, CONSTRUCTION SPECIFICATIONS AND MAINTENANCE ARRANGEMENT AS CALLED FOR ON THE DETAIL SHEET. IN ADDITION TO THE MEASURES SPECIFIED, THE FOLLOWING GENERAL PRACTICES SHALL BE ADHERED TO WHEN APPLICABLE.

A) CLEARING AND GRUBBING WITHIN 50' OF A DEFINED DRAINAGE COURSE SHOULD BE AVOIDED WHEN POSSIBLE. WHERE CHANGES TO A DEFINED DRAINAGE COURSE OCCUR, WORK SHOULD BE DELAYED UNTIL ALL MATERIALS AND EQUIPMENT NECESSARY TO PROTECT AND COMPLETE THE DRAINAGE CHANGE ARE ON SITE. CHANGES SHALL BE COMPLETED AS QUICKLY AS POSSIBLE ONCE THE WORK HAS BEEN INITIATED. THE AREA IMPACTED BY THE CONSTRUCTION ACTIVITIES SHALL BE REVEGETATED OR PROTECTED FROM EROSION AS SOON AS POSSIBLE, AREAS WITHIN 50' OF A DEFINED DRAINAGE WAYS SHOULD BE RECONTOURED AS NEEDED OR OTHERWISE PROTECTED WITHIN FIVE (5) WORKING DAYS AFTER GRADING HAS CEASED.

B) WHERE SOIL DISTURBING ACTIVITIES CEASE IN AN AREA FOR MORE THAN 14 DAYS, THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE EROSION CONTROL MEASURES. IF THE SLOPE OF THE AREA IS GREATER THAN 3:1 OR IF THE SLOPE IS GREATER THAN 3% AND GREATER THAN 150 FEET IN LENGTH, THEN THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE EROSION CONTROL MEASURES IF ACTIVITIES CEASE FOR MORE THAN SEVEN (7) DAYS.

C) EXISTING VEGETATION SHALL BE PRESERVED TO THE EXTENT AND WHERE PRACTICAL. IN NO CASE SHALL DISTURBED AREAS REMAIN WITHOUT VEGETATIVE GROUND COVER FOR A PERIOD IN EXCESS OF 60 DAYS.

D) ADDITIONAL SITE MANAGEMENT PRACTICES WHICH SHALL BE ADHERED TO DURING THE CONSTRUCTION PROCESS SHALL INCLUDE:

SOLID AND HAZARDOUS WASTE MANAGEMENT INCLUDING PROVIDING TRASH CONTAINERS AND REGULAR SITE CLEAN UP FOR PROPER DISPOSAL OF SOLID WASTE SUCH AS BUILDING MATERIAL, PRODUCT/MATERIAL SHIPPING WASTE, FOOD CONTAINERS AND CUPS, AND PROVIDING CONTAINERS FOR THE PROPER DISPOSAL OF WASTE PAINTS SOLVENTS, AND CLEANING COMPOUNDS.

PROVISIONS OF PORTABLE TOILETS FOR PROPER DISPOSAL OF SANITARY SEWAGE.

STORAGE OF CONSTRUCTION MATERIALS AWAY FROM DRAINAGE COURSES AND LOW AREAS.

INSTALLATION OF CONTAINMENT BERMS AND USE OF DRIP PANS AT PETROLEUM PRODUCT AND LIQUID STORAGE TANKS AND CONTAINERS.

3. ALL DISTURBED AREAS SHALL BE SEEDED, FERTILIZED AND MULCHED, OR SODDED, IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS ADOPTED BY THE CITY OF LEE'S SUMMIT AND GOOD ENGINEERING PRACTICES. THIS SHALL BE COMPLETED WITHIN FOURTEEN (14) DAYS AFTER COMPLETING THE WORK, IN ANY AREA. IF THIS IS OUTSIDE OF THE SEEDING PERIOD, SILT BARRIERS OR OTHER SIMILARLY EFFECTIVE MEASURES SHALL BE PROVIDED UNTIL SUCH TIME THAT THE AREAS CAN BE SEEDED.

4. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY THE CITY OF LEE'S SUMMIT. THE DEVELOPER WILL BE RESPONSIBLE FOR DETERMINING ALL ADDITIONAL STANDARDS, SPECIFICATIONS OR REQUIREMENTS WHICH ARE REQUIRED BY GOVERNING AGENCIES (INCLUDING LOCAL, STATE AND FEDERAL AUTHORITIES) HAVING JURISDICTION OVER THE WORK PROPOSED BY THESE CONSTRUCTION DRAWINGS.

5. ALL EROSION CONTROL MEASURES, TEMPORARY OR PERMANENT, REQUIRE MAINTENANCE TO PRESERVE THEIR EFFECTIVENESS. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED IMMEDIATELY AFTER EACH HEAVY RAINSTORM AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHOULD BE MADE IMMEDIATELY. ALL COSTS ASSOCIATED WITH THE REPAIR WORK INCLUDING RELATED INCIDENTALS WILL BE THE DEVELOPER'S RESPONSIBILITY AND SHALL BE INCLUDED IN THE DEVELOPER'S BID FOR THE PROPOSED WORK.

6. ALL EROSION CONTROL MEASURES TO BE PER APWA KANSAS CITY METRO CHAPTER STANDARD DETAILS.

7. THE DEVELOPER MUST REMOVE AT HIS COST ANY BAD SUBSURFACE SOIL WHICH WOULD NOT BE ABLE TO SUPPORT ANY PROPOSED PUBLIC IMPROVEMENT. BACKFILL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL SECTIONS 2100 AND 2201 ENTITLED "GRADING AND SITE PREPARATION" AND "SUBGRADE PREPARATION".

8. THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTORS 48 HOURS PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200

9. TREE CLEARING TO HAPPEN BETWEEN NOVEMBER 1 AND MARCH 31. TREES CLEARED BETWEEN APRIL 1 AND OCTOBER 31 MUST BE TREES GREATER THAN 1,000 FEET FROM FORESTED OR WOODED AREAS OR TREES LESS THAN 3 INCHES IN DIAMETER, AT BREAST HEIGHT, AND NOT MIXED WITH LARGER TREES. IF LARGER TREES NEED TO BE CLEARED, A SURVEY OF THE TREES MUST BE CONDUCTED TO MAKE SURE THERE ARE NO BAT ROOSTS IN THE TREES.
TREE CLEARING TO BE CONDUCTED BY CUTTING DOWN AND MULCHING OR BY PUSHING OVER AND MULCHING. TREES SHALL NOT BE BURNED DOWN.

ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
	PRIVATE GRADING			
1	EXCAVATION	C.Y.	39,039	
2	EMBANKMENT	C.Y.	57,214	
	PUBLIC GRADING			
3	EXCAVATION	C.Y.	5,854	
4	EMBANKMENT	C.Y.	15,100	
	SITE DISTURBANCE			
5	CONSTRUCTION ENTRANCE	EA.	1	
6	CONCRETE WASHOUT	EA.	1	
7	CURB INLET PROTECTION	EA.	22	
8	AREA INLET PROTECTION	EA.	5	
9	SILT FENCE	L.F.	1,998	
10	DIVERSION BERM	L.F.	4,337	
11	ROCK DITCH CHECK	EA.	7	
12	SEDIMENT TRAP	EA.	2	
13	SEDIMENT BASIN	EA.	1	
14	DISTURBED AREA	AC.	23.75	
15	PERMANENT SEEDING	AC.	21.06	

SUMMARY OF QUANTITIES AS INDICATED ABOVE AND ANY QUANTITIES AS SHOWN WITHIN THE PLANS HAVE BEEN PROVIDED FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR USE IN PREPARATION OF CONTRACT DOCUMENTS. QUANTITIES INTENDED FOR, BUT NOT LIMITED TO, THE PREPARATION OF PROPOSALS AND BID DOCUMENTS SHALL BE INDEPENDENTLY EVALUATED BY THE ESTIMATING PARTY BASED UPON THE CONTENTS OF THESE PLANS.

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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
4/20/2020
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL NOTES
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

2020

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C502

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Site Disturbance Plans\C_TTL01_0194061.dwg USER: nheiser
DATE: Apr 20, 2020 2:25pm XREFS: C_PTBLK_0194061_34x22 C_PBND1_0194061

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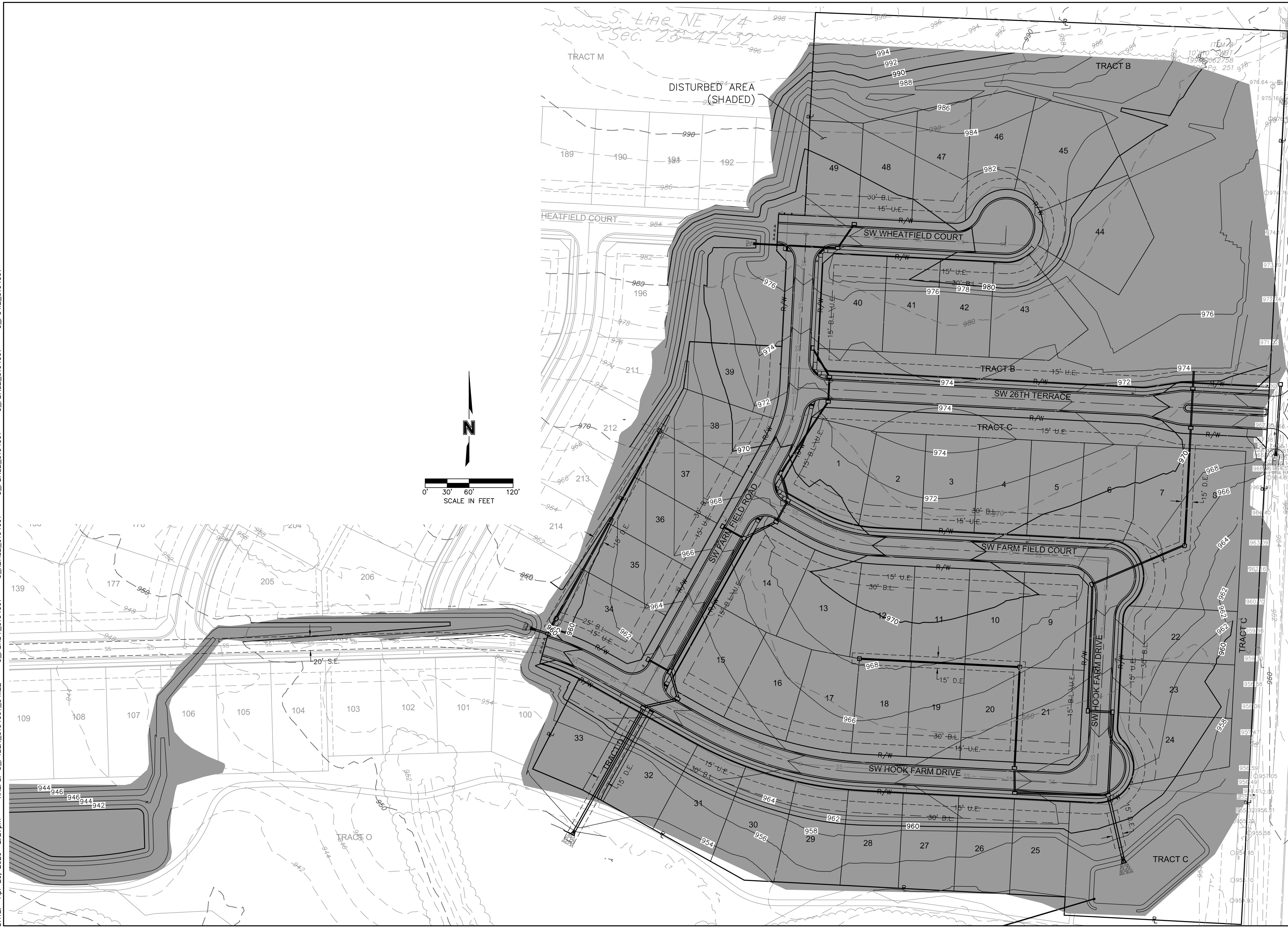

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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
4/20/2020
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL LAYOUT
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

2020

drawn by:	CGW
checked by:	JES
approved by:	NDH
QA/QC by:	JES
project no.:	019-4061
drawing no.:	
date:	04/20/2020

SHEET
C503

GENERAL NOTES:

1. CONTRACTOR SHALL ADHERE TO THE "DESIGN AND CONSTRUCTION MANUAL" SECTION 2100 AS ADOPTED BY THE CITY OF LEE'S SUMMIT (LATEST EDITION), FOR EXCAVATION AND EMBANKMENT WORK WITHIN THE PROPOSED RIGHT-OF-WAY.

2. AREAS OF CONSTRUCTION SHALL BE STRIPPED OF ALL VEGETATION, ORGANIC MATTER AND TOPSOIL TO A DEPTH AS RECOMMENDED BY GEOTECHNICAL ENGINEER AND OR TESTING AGENCY. SOILS REMOVED DURING SITE STRIPPING SHOULD BE EVALUATED TO DETERMINE IF PORTIONS OF THE TOPSOIL STRATUM MAY BE UTILIZED AS STRUCTURAL FILL WITHIN PAVEMENT AREAS. ANY MATERIAL NOT DEEMED AS SUITABLE FILL MATERIAL BY THE GEOTECHNICAL ENGINEER AND OR TESTING AGENCY SHALL BE REMOVED FROM THE JOB SITE BY THE CONTRACTOR AT HIS EXPENSE.

3. ALL EMBANKMENT OUTSIDE OF RIGHT-OF-WAY SHOULD BE PLACED IN CONTROLLED LIFTS HAVING A MAXIMUM LOOSE LIFT THICKNESS OF 8". EMBANKMENT SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR COMPACTION). MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN A RANGE OF -0 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT.

LEGEND	
-100-	EXISTING INDEX CONTOURS
-100-	EXISTING INTERMEDIATE CONTOURS
100	PROPOSED INDEX CONTOURS
100	PROPOSED INTERMEDIATE CONTOURS

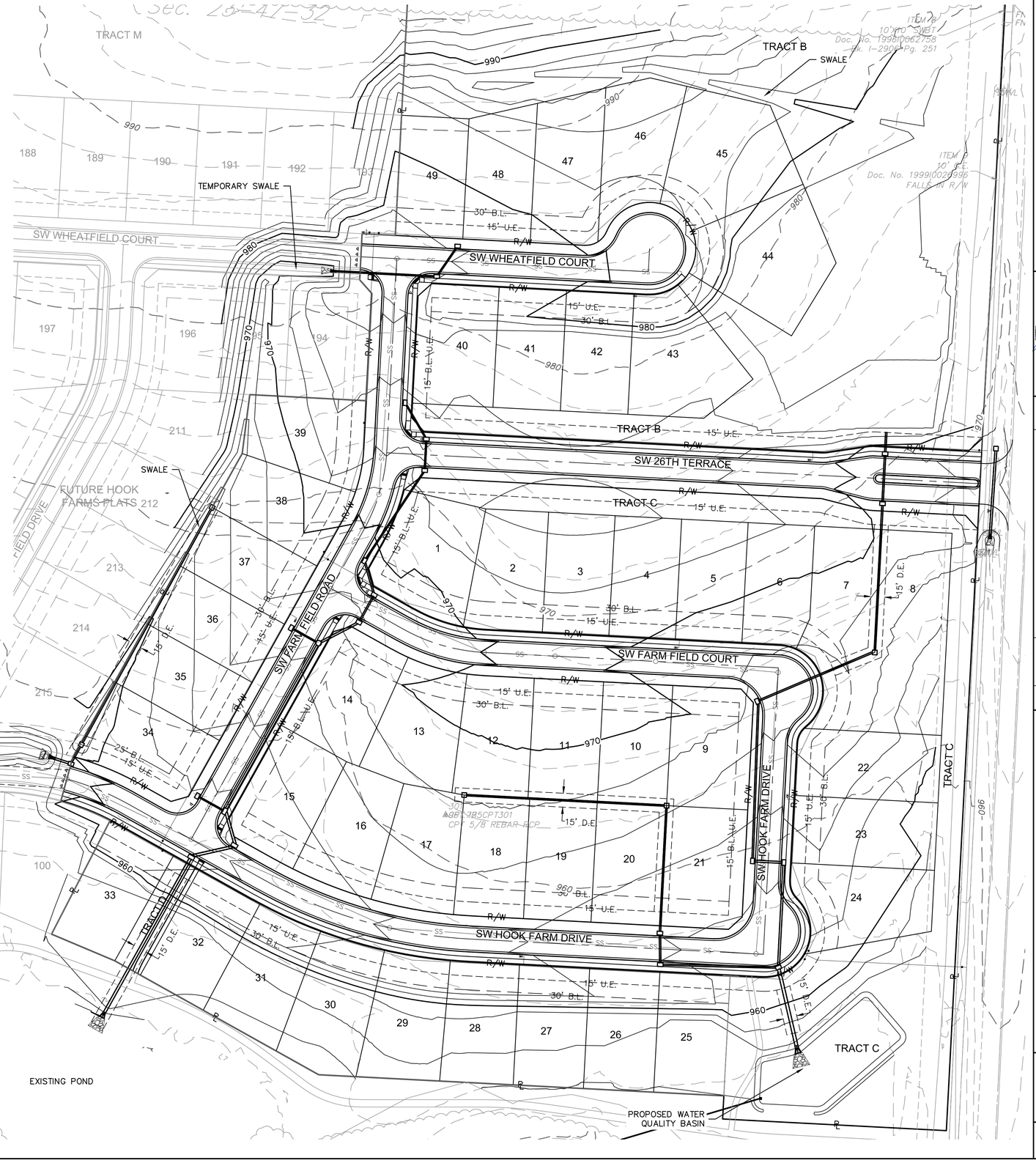
EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
STREET	5,854	15,100
SITE	39,039	57,214
TOTAL	44,893	72,314

EARTHWORK QUANTITIES NOTES:
1. EARTHWORK QUANTITIES BASED ON FINISHED GRADE SURFACE AND DO NOT INCLUDE ADJUSTMENTS FOR TOPSOIL AND SHRINKAGE.

2. EARTHWORK QUANTITIES DO NOT TAKE INTO CONSIDERATION EXCAVATION, REMOVAL AND DISPOSAL OF MATERIAL DEEMED UNSUITABLE BY A GEOTECHNICAL ENGINEER. THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL AND FOR REPLACING IT WITH SUITABLE MATERIAL.

N

0' 30' 60' 120'
SCALE IN FEET



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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
PROFESSIONAL ENGINEER
4/20/2020

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

GRADING PLAN
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

2020

LEE'S SUMMIT, MO

drawn by:	CGW
checked by:	JES
approved by:	NDH
QA/QC by:	JES
project no.:	019-4061
drawing no.:	
date:	04/20/2020

SHEET
C504

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Site Disturbance Plans\C_GRD01_0194061.dwg USER: nheiser
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EROSION CONTROL STAGING CHART

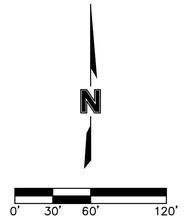
PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE–MASS GRADING	A1	CONSTRUCTION ENTRANCE	C	INSTALL PER APWA DETAIL ESC–01
	A2	SILT FENCE	B	INSTALL PER APWA DETAIL ESC–03
	A3	DIVERSION BERM	C	INSTALL PER APWA DETAIL ESC–05
	A4	SEDIMENT TRAP 1	C	INSTALL PER APWA DETAIL ESC–08
	A5	SEDIMENT TRAP 2	C	INSTALL PER APWA DETAIL ESC–08
	A6	SEDIMENT BASIN	C	INSTALL PER APWA DETAIL ESC–11&12
B – INTERIM	B1	SILT FENCE	C	INSTALL PER APWA DETAIL ESC–03
	B2	CURB INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC–06
	B3	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC–07
	B4	ROCK DITCH CHECK	D	INSTALL PER APWA DETAIL ESC–10
	B5	CONCRETE WASHOUT	C	INSTALL PER APWA DETAIL ESC–01
UPON REMOVAL CONTRACTOR TO OVER–EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
C – DISTURBED AREA STABILIZATION	C1	FILL IN SEDIMENT TRAP 2		
	C2	CONVERT SEDIMENT TRAP 1 TO WATER QUALITY BASIN		
D – FINAL STABILIZATION	D1	SEED, SOD AND STABILIZE ALL DISTURBED AREAS BY REMOVAL OF SEDIMENT TRAPS		SEE SHEET C509 – SITE DISTURBANCE PHASE 4 FOR DETAILS ON SOD AND PLANTINGS; SEED ALL OTHER DISTURBED AREAS

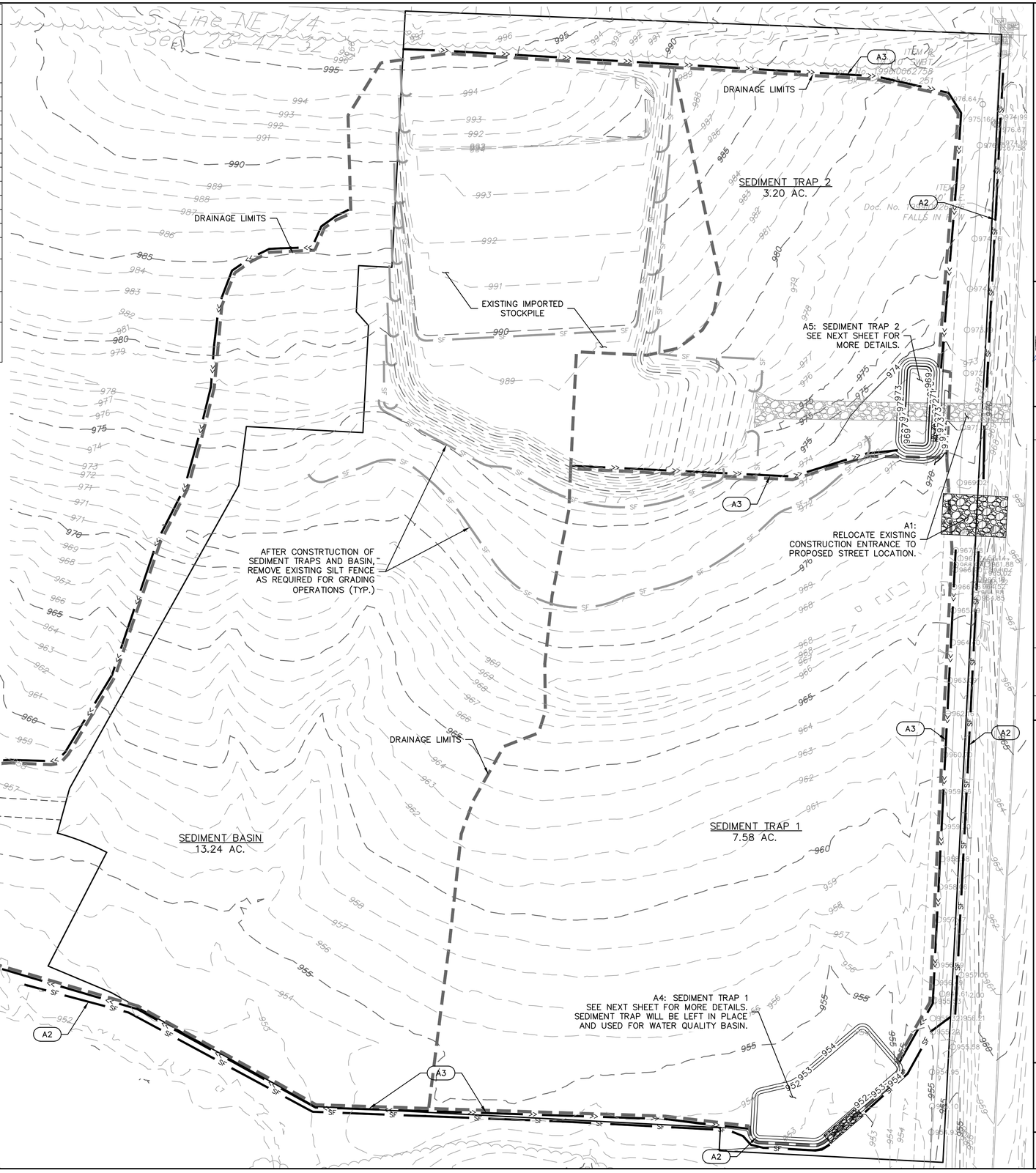
NOTE:

1. THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.

2. SEDIMENT BASIN TO BECOME PERMANENT DETENTION BASIN. THE OUTLET STRUCTURE SHOULD BE INSTALLED AT TIME OF SEDIMENT BASIN INSTALLATION TO BE UTILIZED AS SEDIMENT BASIN OUTLET. ONCE STRUCTURE IS TO BE CONVERTED TO FINAL CONFIGURATION, INSTALL PER DETENTION BASIN PLAN IN STREET & STORM SEWER PLANS.

LEGEND	
PHASE A	
SF	SILT FENCE
	STORM DRAIN INLET PROTECTION
<<	TEMPORARY DIVERSION BERM
	TEMPORARY STONE CONSTRUCTION ENTRANCE
	DRAINAGE AREA TO BASIN/TRAP





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REVISIONS

SITE DISTURBANCE PHASE 1
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

2020

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
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SHEET
C505

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Site Disturbance Plans\C_ERC01_0194061.dwg USER: nheiser
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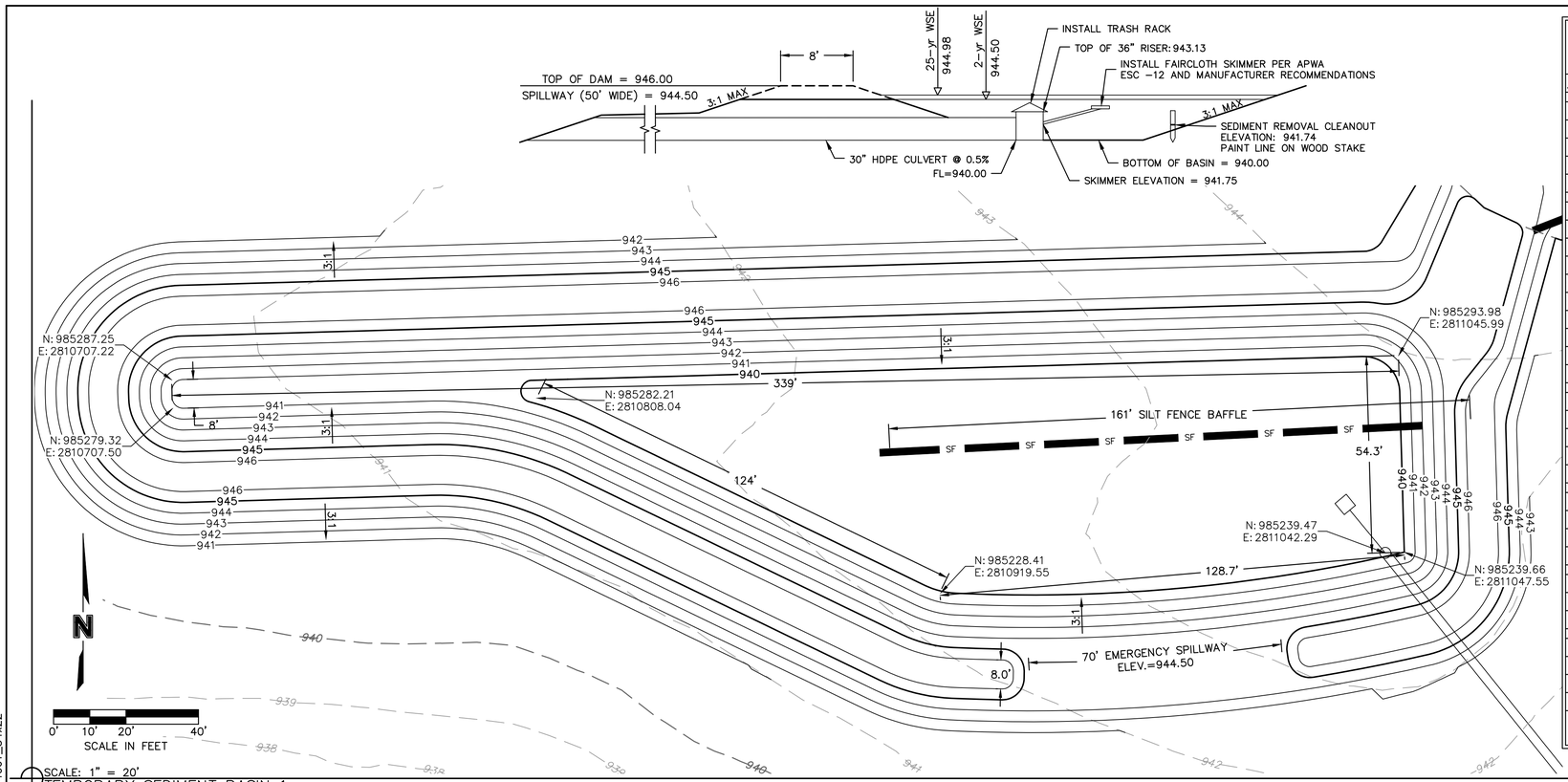


SCALE: 1" = 20'

1 TEMPORARY SEDIMENT BASIN 1

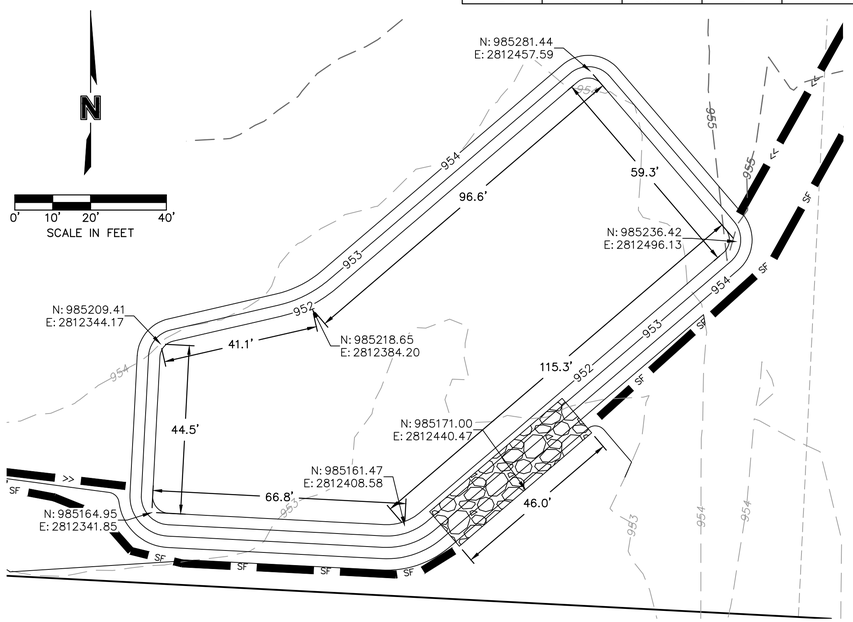
SEDIMENT BASIN DESIGN DATA SUMMARY

TITLE: HOOK FARMS FIRST PLAT

JOB #: 019-4061

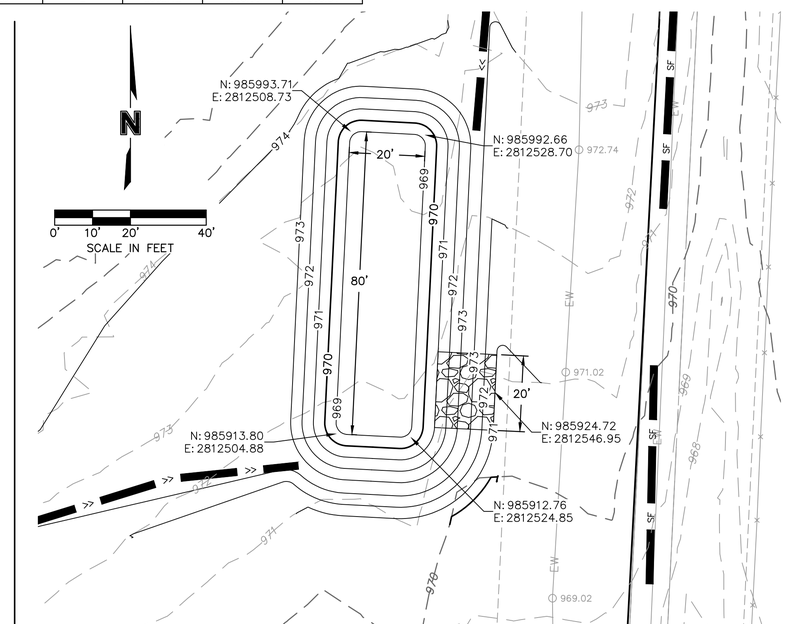
Design Item:	Basin #1	Units	Notes:
Site Data:			
Tributary Drainage Area to Pond:	13.24	Acres	
Disturbed Tributary Drainage Area to Pond:	13.24	Acres	
50% (2 yr) Design Flow:	34.49	cfs	
4% (25 yr) Design Flow:	61.27	cfs	
Pond Data:			
Minimum Sediment Storage Volume:	1775	cu. yd.	134 cy/acre minimum
Provided Sediment Storage Volume:	1775	cu. yd.	134 cy/acre minimum
Bottom Elevation:	940.00	Ft	
Sediment Cleanout Elevation:	941.74	Ft	Elevation Equal to 50% of Original Design Volume.
Sediment Cleanout Volume	888.00	cu. yd.	
Top of Riser Elevation:	943.13	Ft	Top of Dry Storage Volume
Emergency Spillway Elevation:	944.50	Ft	at or Above Q-2 elev. 1.0 ft min above principal spillway
Q-25 year Elevation:	944.98	Ft	
Top of Dam Elevation:	946.00	Ft	1.0 ft min above Q-25 elev.
Basin Shape Data:			
A= Area at Normal Pool	18936.33	SF	
L = Length of Flow Path	30.00	Ft	
We = Effective Width = A/L	631.21	Ft	
Length to Width Ratio = L/We	0.05		If Length to Width Ratio is less than 2, baffles are reguired
Principal Spillway Data:			
Riser Pipe Diameter or Length x Width:	36	in	15-inch min. Size for 2 year flow minimum
Barrell Pipe Diameter:	30	in	15-inch min. Size for 2 year flow minimum
Riser Pipe Base Size:	0.92	cu. yd.	Size to Prevent Flotation. 1.25 safety factor required.
**Skimmer Size:	3.00	in	Skimmer sized to dewater in 48 to 72 hours
**Orifice Diameter (if reduced from standard):		in	**Based on ASP Enterprises Faircloth Skimmer Design Guide
Skimmer Elevation	941.75	Ft	Flowline of skimmer at riser
Emergency Spillway Data:			
Design Width of Spillway:	70.00	Ft	
Design Flow Depth in Spillway:	0.48	Ft	
Design Velocity in Spillway:	1.82	Ft/sec	
Lining Material:	Rip Rap-6"	N/A	

TRAP	TRIBUTARY AREA	REQUIRED VOLUME	BERM HEIGHT "H"	SPILLWAY HEIGHT "HO"	STORAGE VOLUME	BERM TOP WIDTH "W"	SPILLWAY LENGTH	EXCAVATED DEPTH	EXCAVATED VOLUME	SEDIMENT CLEANOUT VOLUME	SEDIMENT CLEANOUT ELEVATION
	(AC.)	(C.F.)	(FT.)	(FT.)	(C.F.)	(FT.)	(FT.)	(FT.)	(C.F.)	(C.F.)	(FT.)
1	7.58	13647.31	1.5	0.5	14154.86	2	46	1	9011.31	2830.97	951.81
2	3.20	5754.41	2	1	7652.52	2	20	2	2532.12	1530.50	969.81



SCALE: 1" = 20'

2 TEMPORARY SEDIMENT TRAP 1



SCALE: 1" = 20'

3 TEMPORARY SEDIMENT TRAP 2

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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
4/20/2020
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

SITE DISTURBANCE PHASE 1 DETAILS
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

2020

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C506

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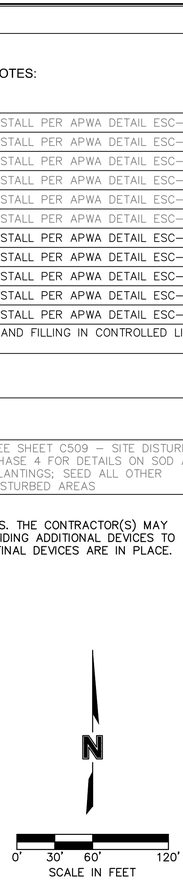
EROSION CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE–MASS GRADING	A1	CONSTRUCTION ENTRANCE	C	INSTALL PER APWA DETAIL ESC–01
	A2	SILT FENCE	B	INSTALL PER APWA DETAIL ESC–03
	A3	DIVERSION BERM	C	INSTALL PER APWA DETAIL ESC–05
	A4	SEDIMENT TRAP 1	C	INSTALL PER APWA DETAIL ESC–08
	A5	SEDIMENT TRAP 2	C	INSTALL PER APWA DETAIL ESC–08
	A6	SEDIMENT BASIN	C	INSTALL PER APWA DETAIL ESC–11&12
B – INTERIM	B1	SILT FENCE	C	INSTALL PER APWA DETAIL ESC–03
	B2	CURB INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC–06
	B3	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC–07
	B4	ROCK DITCH CHECK	D	INSTALL PER APWA DETAIL ESC–10
	B5	CONCRETE WASHOUT	C	INSTALL PER APWA DETAIL ESC–01
UPON REMOVAL CONTRACTOR TO OVER–EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
C – DISTURBED AREA STABILIZATION	C1	FILL IN SEDIMENT TRAP 2		
	C2	CONVERT SEDIMENT TRAP 1 TO WATER QUALITY BASIN		
D – FINAL STABILIZATION	D1	SEED, SOD AND STABILIZE ALL DISTURBED AREAS BY REMOVAL OF SEDIMENT TRAPS		SEE SHEET C509 – SITE DISTURBANCE PHASE 4 FOR DETAILS ON SOD AND PLANTINGS; SEED ALL OTHER DISTURBED AREAS

NOTE:
1. THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.

LEGEND		
PHASE A	PHASE B	
SF	SF	SILT FENCE
		STORM DRAIN INLET PROTECTION
<<		TEMPORARY DIVERSION BERM
		ROCK DITCH CHECK
		TEMPORARY STONE CONSTRUCTION ENTRANCE
		DRAINAGE AREA TO BASIN/TRAP



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JULIE ELAINE SELLERS
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4/20/2020
PROFESSIONAL ENGINEER

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REVISIONS

SITE DISTURBANCE PHASE 2
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

2020

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C507

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EROSION CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE–MASS GRADING	A1	CONSTRUCTION ENTRANCE	C	INSTALL PER APWA DETAIL ESC–01
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LEGEND		
PHASE B	PHASE C	
SF		SILT FENCE
		STORM DRAIN INLET PROTECTION
<<		TEMPORARY DIVERSION BERM
		ROCK DITCH CHECK
		TEMPORARY STONE CONSTRUCTION ENTRANCE

0' 30' 60' 120'
SCALE IN FEET

SEDIMENT BASIN TO REMAIN FOR FUTURE PLAT CONSTRUCTION

C1: FILL IN SEDIMENT TRAP 2

C2: CONVERT SEDIMENT TRAP 1 TO WATER QUALITY BASIN (RE: PUBLIC STREET & STORM SEWER PLANS)

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JULIE ELAINE SELLERS
NUMBER PE-2017000367
4/20/2020
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SITE DISTURBANCE PHASE 3
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

2020

LEE'S SUMMIT, MO

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C508

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USER: nheiser
LK_0194061_34x22

EROSION CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
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B – INTERIM	B1	SILT FENCE	C	INSTALL PER APWA DETAIL ESC–03
	B2	CURB INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC–06
	B3	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC–07
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	B5	CONCRETE WASHOUT	C	INSTALL PER APWA DETAIL ESC–01
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C – DISTURBED AREA STABILIZATION	C1	FILL IN SEDIMENT TRAP 2		
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NOTE:
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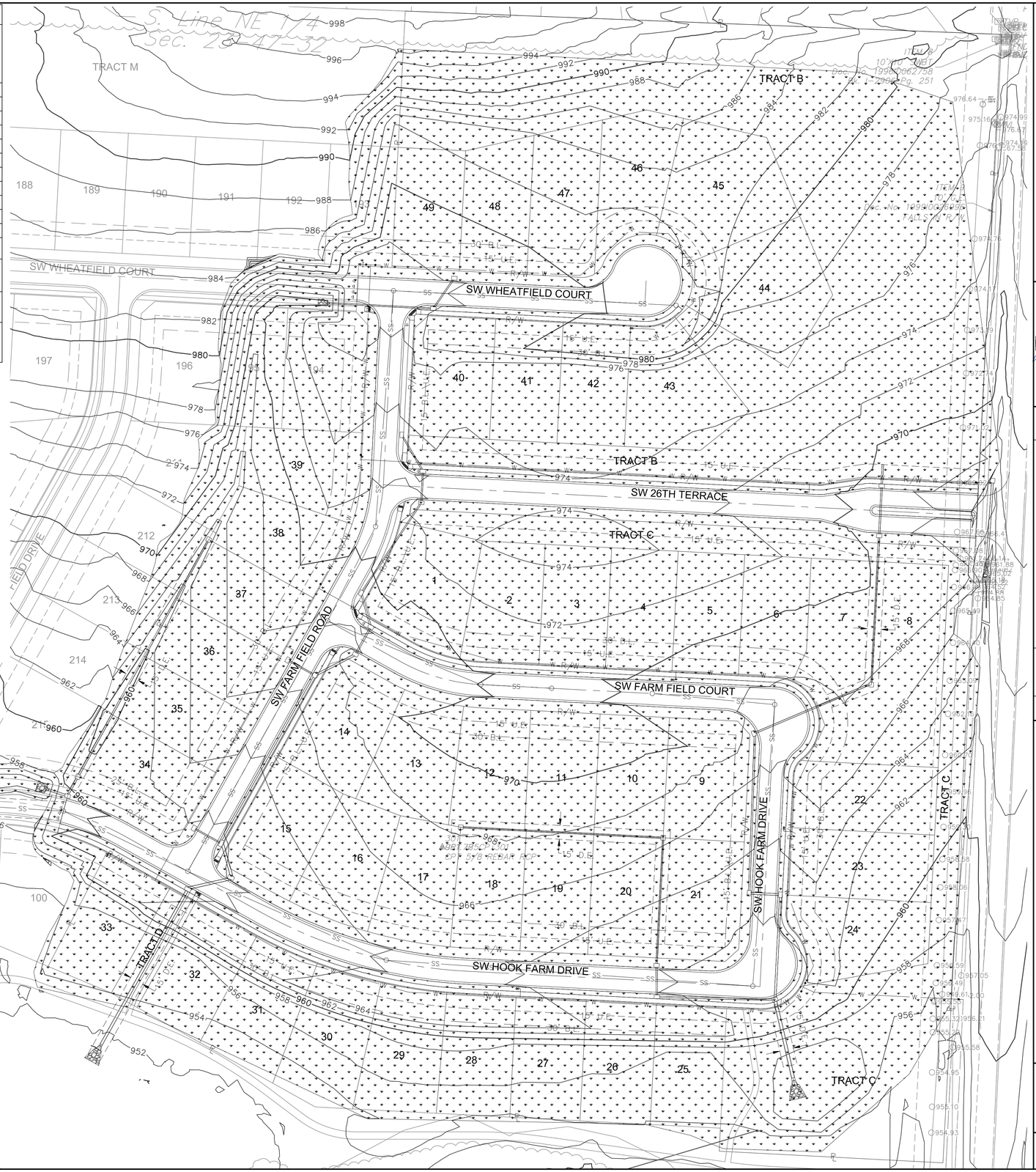
LEGEND	
PHASE D	
	SEEDING & STABILIZATION

N

0' 30' 60' 120'
SCALE IN FEET



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REVISIONS

SITE DISTURBANCE PHASE 4
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

2020

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C509

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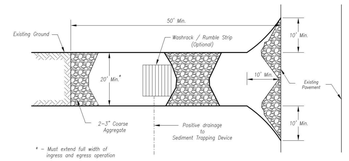
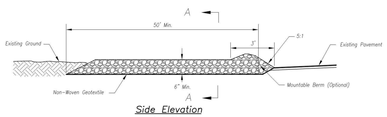


Plan View
Not to Scale



Side Elevation
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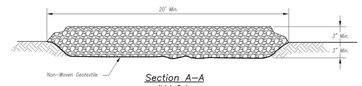


Section A-A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

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

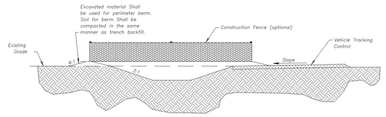
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

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

Maintenance for Concrete Washout:

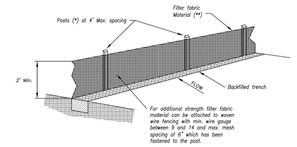
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris shall be disposed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

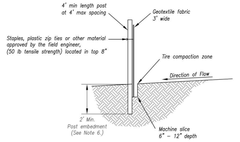


CONCRETE WASHOUT

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

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





(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD: 1 ¾" x 1 ¾"
- NO.2 SOUTHERN PINE 2 ¾" x 2 ¾"
- STEEL 1.33 LB/FT

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

Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 1320'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

SILT FENCE DETAILS
Not to Scale

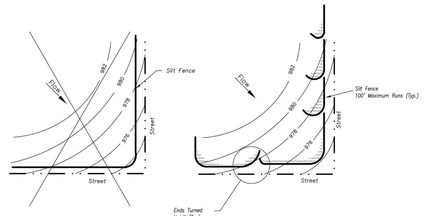
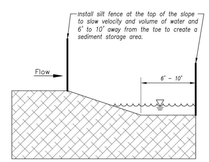
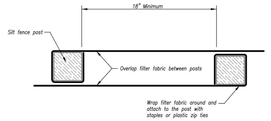


Figure A

SILT FENCE LAYOUT
Not to Scale

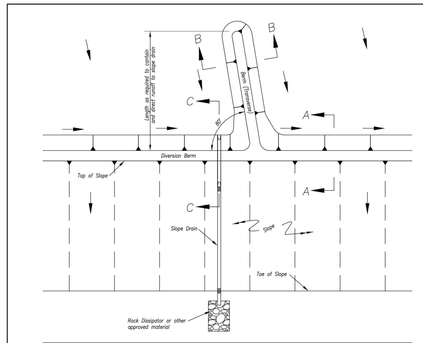




JOINING FENCE SECTIONS
Not to Scale

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

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



TYPICAL PLAN VIEW OF DIVERSION BERM AND SLOPE DRAIN

Notes for Diversion Berm:

1. Slope drains are optional, but may be required by the engineer if the berm is at the top of a steep slope.
2. Diversion berms must be installed as a first step in the land-disturbing activity and must be functional prior to upslope land disturbance.
3. The berm should be adequately compacted to prevent failure.
4. Temporary or permanent seeding and mulch shall be applied to the berm immediately following its construction.
5. Place the berm so to minimize damages by construction operations and traffic.
6. The berm must discharge to a temporary sediment trap or stabilized area.
7. All trees, brush, stumps, obstructions and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of diversion.
8. The diversion shall be excavated or shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.
9. Fills shall be compacted as needed to prevent unequal settlement that would cause damage in the completed diversion. Fill shall be composed of soil which is free from excessive organic debris, rocks or other objectionable materials.

Maintenance:

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

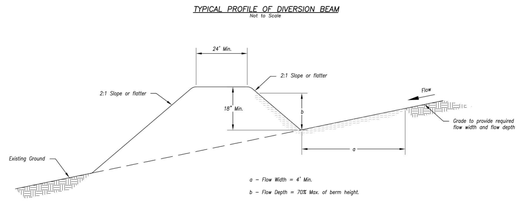
Notes for Slope Drain:

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

Maintenance:

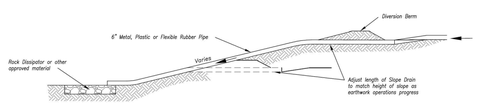
1. Accumulation of any visible sediment at the inlet and outlet shall be removed promptly.
2. Outlet conditions shall be repaired if scour is observed. Leaking or damaged section of pipe shall be repaired immediately.
3. Barriers directing water to the inlet shall be monitored for continuity and effectiveness.

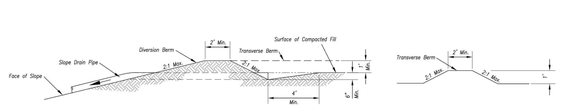
TYPICAL PROFILE OF DIVERSION BEAM
Not to Scale



a = Flow Width = 4' Min.
b = Flow Depth = 70% Max. of berm height.

TYPICAL PROFILE OF DIVERSION BERM





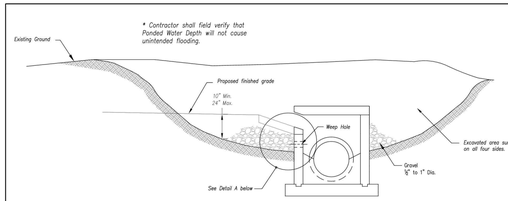
Section C-C

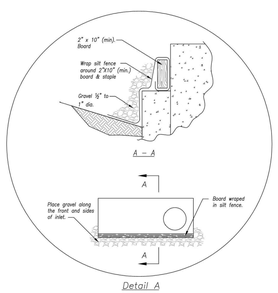
Section B-B

TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN

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

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





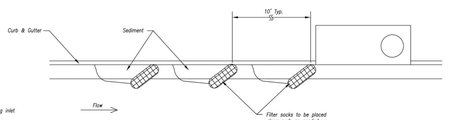
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

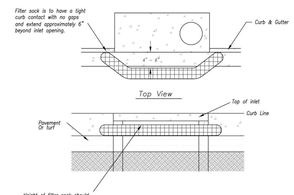
1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When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

Maintenance:

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



On Grade Curb Inlet Protection



Sump Inlet Sediment Filter

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

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

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

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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
4/20/2020
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DETAIL SHEET
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

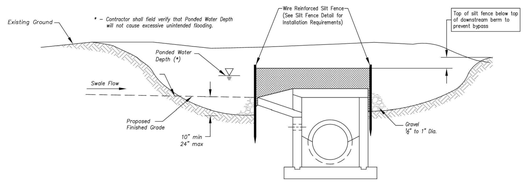
LEE'S SUMMIT, MO

2020

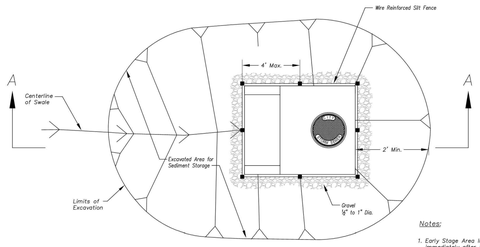
drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
drawing no.:
date: 04/20/2020

SHEET
C510

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Site Disturbance Plans\C_DTL01_0194061.dwg
DATE: Apr 20, 2020 2:41pm XREFS: C_PTBLK_0194061_34x22 USER: nheiser

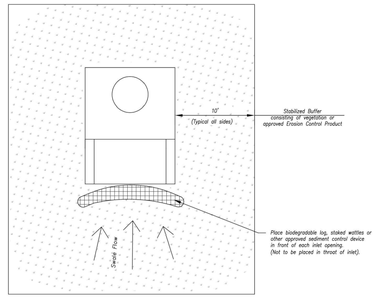


Section A–A
Not to Scale

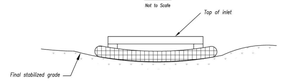


Plan
Not to Scale

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



Plan
Not to Scale



Front View

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

Notes:

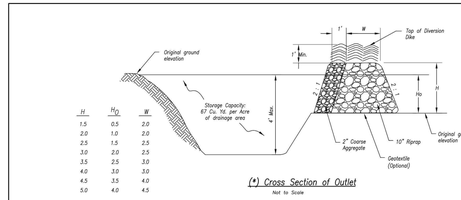
1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization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

Maintenance:

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

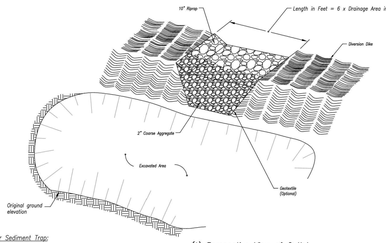
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07
	ADOPTED: 10/24/2016

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



H	Ho	W
1.5	0.5	2.0
2.0	1.0	2.0
2.5	1.5	2.5
3.0	2.0	2.5
3.5	2.5	3.0
4.0	3.0	3.0
4.5	3.5	4.0
5.0	4.0	4.5

(*) Cross Section of Outlet
Not to Scale



(*) Perspective View of Outlet
Not to Scale

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

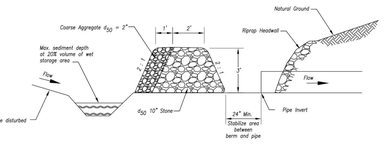
Notes for Sediment Trap:

1. The area under the embankment shall be cleared, grubbed, and stripped of any vegetation and root mat.
2. Fill material for the embankment shall be free of roots or other woody vegetation, organic material, large stones, and other objectionable material. The embankment should be compacted in 6–inch layers by traversing with construction equipment.
3. The earthen embankment shall be stabilized immediately after installation.
4. Construction operations shall be carried out to minimize erosion and water pollution.
5. The structure shall be removed and the area stabilized when the upslope drainage area has been stabilized.
6. All cut and fill slopes shall be 2H : 1V or flatter, except for excavated, wet storage areas which may be at a maximum 1H : 1V grade.

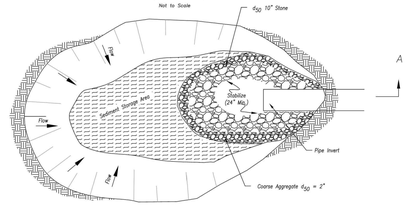
Maintenance for Sediment Trap:

1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

SEDIMENT TRAP



Section A–A
Not to Scale



Plan View
Not to Scale

Notes for Sediment Trap at Culvert Opening:

1. The inlet protection device shall be constructed in a manner that will facilitate clean–out and disposal of trapped sediment and minimize interference with construction activities.
2. The inlet protection devices shall be constructed in such manner that any resultant ponding stormwater will not cause excessive inconvenience or damage to adjacent areas or structures.
3. Geometry of the design will be a horseshoe shape around the culvert inlet.
4. The toe of the riprap shall be no closer than 24" from the culvert opening to provide an acceptable emergency outlet for flows from larger storm events.
5. Storage requirements equivalent to that of temporary sediment trap.
6. 67 CY./Acre wet storage below base of stone.
7. 67 CY./Acre dry storage from base of stone to top of stone berm.

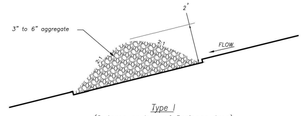
Maintenance for Sediment Trap at Culvert Opening:

1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

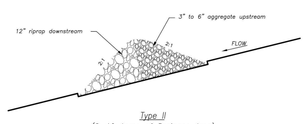
SEDIMENT TRAP AT CULVERT OPENING

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
SEDIMENT TRAPS	STANDARD DRAWING NUMBER ESC-08
	ADOPTED: 10/24/2016

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



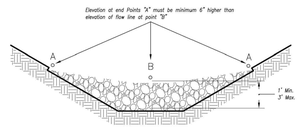
Type I
(2 Acres or less of Drainage Area)
Not to Scale



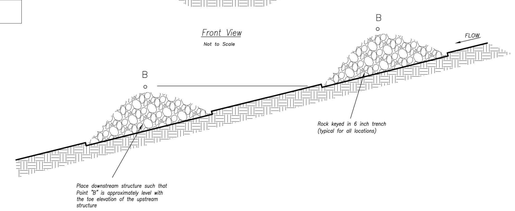
Type II
(2–10 Acres of Drainage Area)
Not to Scale

ROCK DITCH CHECK

Temporary Rock Ditch Check Spacing	
Ditch Centerline Slope (%)	Spacing Interval (Feet)
5.0	60
6.0	50
7.0	43
8.0	36
9.0	33
10.0	29
Note: Use this spacing only for Rock Ditch Checks.	



Front View
Not to Scale



Spacing Between Check Dams (all types)
Not to Scale

Notes:

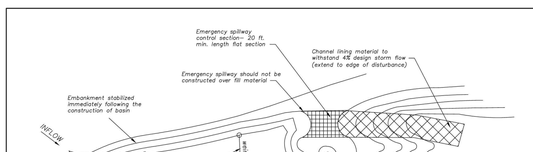
1. Rock check dams shall be used only for drainage areas less that 10 acres unless approved by the City Engineer.
2. Use rock checks only in situations where the ditch slope exceeds 6%.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of the ditch check.
2. Replace and reshape as necessary to maintain function and integrity of installation.

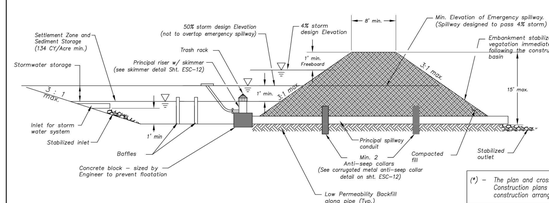
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
ROCK DITCH CHECKS	STANDARD DRAWING NUMBER ESC-10
	ADOPTED: 10/24/2016

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



Plan View (*)
Not to Scale

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



Cross Section (*)
Not to Scale

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

Sediment Basin Notes:

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

Maintenance:

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

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
SEDIMENT BASIN	STANDARD DRAWING NUMBER ESC–11
	ADOPTED: 10/24/2016

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

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NUMBER PE-2017000367
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PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DETAIL SHEET
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

2020

drawn by: CGW
checked by: JES
approved by: NDH
QA/QC by: JES
project no.: 019-4061
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date: 04/20/2020

SHEET
C511

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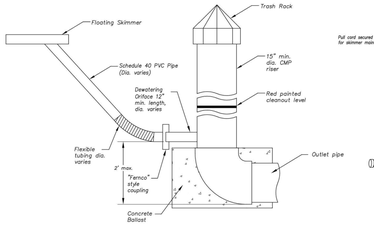
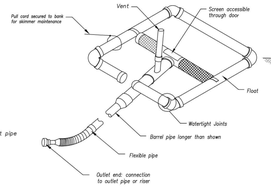
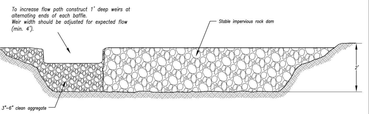


PRINCIPAL SPILLWAY DETAIL

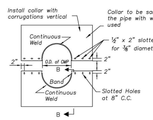


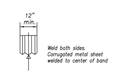
SKIMMER DETAIL (Typ.) *

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



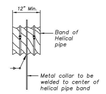
Option A – Rock with Weir



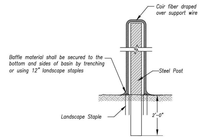


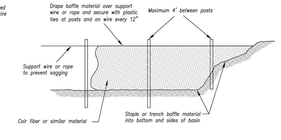
SECTION B–B

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



PARTIAL ELEVATION

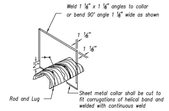




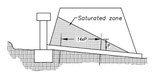
Option B – Coir Fiber Material

BAFFLE DETAILS

Not to Scale



ISOMETRIC VIEW



ANTI-SEEPAGE COLLAR LOCATIONS

CORRUGATED METAL ANTI-SEEPAGE COLLAR DETAIL

Not to Scale

Anti-Seepage Collar Notes:

1. Connections between the anti-seepage collar and the barrel must be watertight.
2. P = projection distance. Sized as required to achieve at least a 10% increase in seepage length.
3. 14d² = Max. spacing between collars.
4. Collars shall generally be placed in the middle third of the embankment, and within the saturated zone.
5. All materials to be in accordance with construction material specifications.
6. When specified on the plans, casting of collars shall be in accordance with construction material specifications.
7. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
8. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at the time of installation.
9. Each collar shall be furnished with two (2) ⅝" diameter rods with standard bank lugs for connecting the collars to the pipe.
10. For bands and collars, modification of the details shown may be used providing equal water tightness is maintained and detailed drawings are Submitted and approved by the Engineer prior to delivery.
11. Two other types of anti-seep collars are:
    a. Corrugated metal, similar to above, except strap welded to a 4 ft. section of the pipe and connected to the pipe with connecting bands.
    b. Concrete, 6 inches thick, formed around the pipe with #3 rebar spaced 15".

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

AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

SEDIMENT BASIN - DETAILS

STANDARD DRAWING NUMBER ESC-12

ADOPTED: 10/24/2016

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DATE: Apr 20, 2020 2:41pm XREFS: C_PTBLK_0194061_34x22 USER: nheiser

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DETAIL SHEET
SITE DISTURBANCE PLANS

HOOK FARMS
FIRST PLAT

LEE'S SUMMIT, MO

2020

drawn by: CGW
checked by: JES
approved by: NDH
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SHEET
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