

POWELL CWM

ARCHITECTURE/ENGINEERING/SURVEYING

3200 S. State Route 291, Bldg. 1, Independence, MO 64057

(816) 373-4800 | powellcwm.com

Certificates of Authority:

Architecture: MO 310 / KS 73

Engineering: MO 4 / KS 241

Land Surveying: MO 123 / KS 36

DEVELOPER/OWNER

DAVID WARD

NORTH OAK SAFETY STORAGE, LLC

1120 NW EAGLE RIDGE BLVD.

GRAIN VALLEY, MO 64029

(816) 229-8115

LAKEWOOD BUSINESS CENTER ON I-470 - PLAT S

2710 NE HAGEN ROAD

LEE'S SUMMIT, MO 64064

JACKSON COUNTY

STATE OF MISSOURI

JADRIENNE S. RODELL-TIPTON

NUMBER PE-2021032725

1/17/2022

JADRIENNE S. RODELL-TIPTON, PE

PE-2021032725 (MISSOURI #)

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REVISIONS

NO. DATE / DESCRIPTION

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DRAWN BY: JV

CHECKED BY: JRT

PROJECT #: 21-1883

ISSUE DATE: 03/31/2022

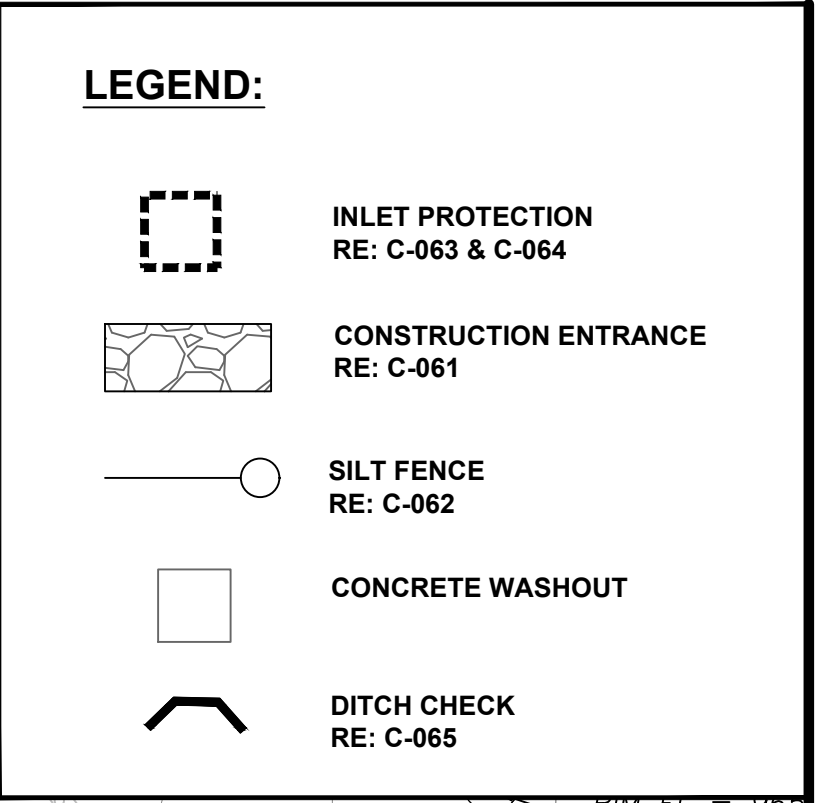
ISSUED FOR: PERMIT

EROSION CONTROL

PHASE 1

051





## **EROSION CONTROL**

### **PHASE 2: CONSTRUCTION ACTIVITIES - INTERIM PROTECTION**

**NOTE:**

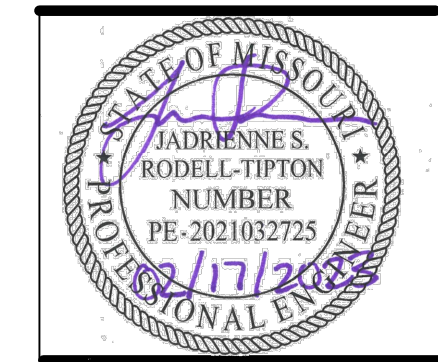
1. EROSION CONTROL IS TO REMAIN UNTIL SITE IS FULLY STABILIZED.
2. PHASE 1 EROSION CONTROL SHALL REMAIN AND BE ADJUSTED FOR PHASE 2 SITE CONDITIONS.
3. TEMPORARY CONSTRUCTION ENTRANCE TO REMAIN UNTIL DRIVE SUB-GRADE PREP.
4. ALL SLOPES STEEPER THAN 5:1 FOR A LENGTH OF 9 FT OR GREATER ARE TO BE PROTECTED WITH EROSION CONTROL BLANKETS. (ROLLMAX ERONET SC150)

**POWELL** **cwm**  
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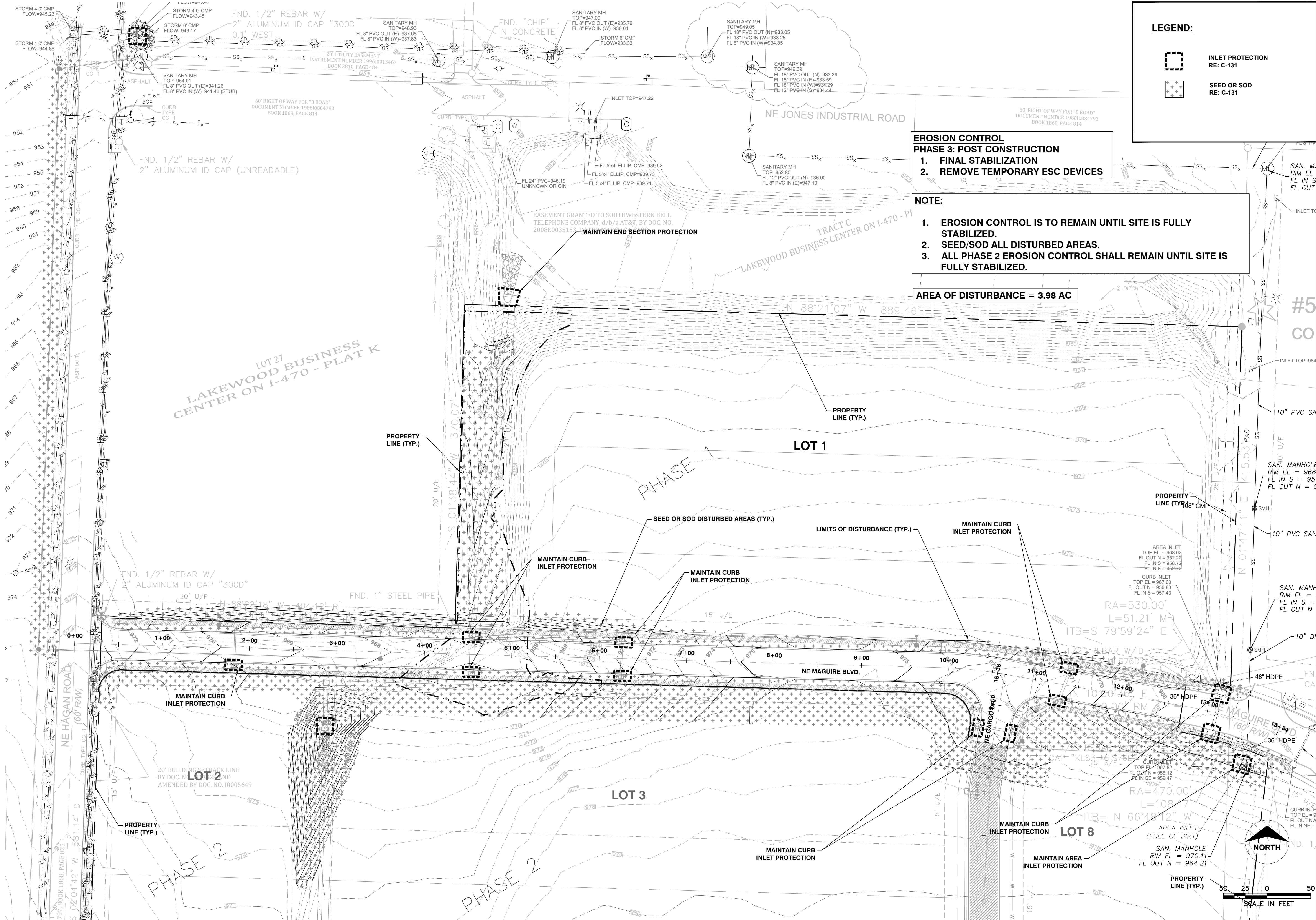


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EROSION CONTROL

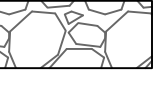
PHASE 3


053





**LEGEND:**


 **INLET PROTECTION**  
RE: C-063 & C-064

 **CONSTRUCTION ENTRANCE**  
RE: C-061

 **SILT FENCE**  
RE: C-062

 **CONCRETE WASHOUT**

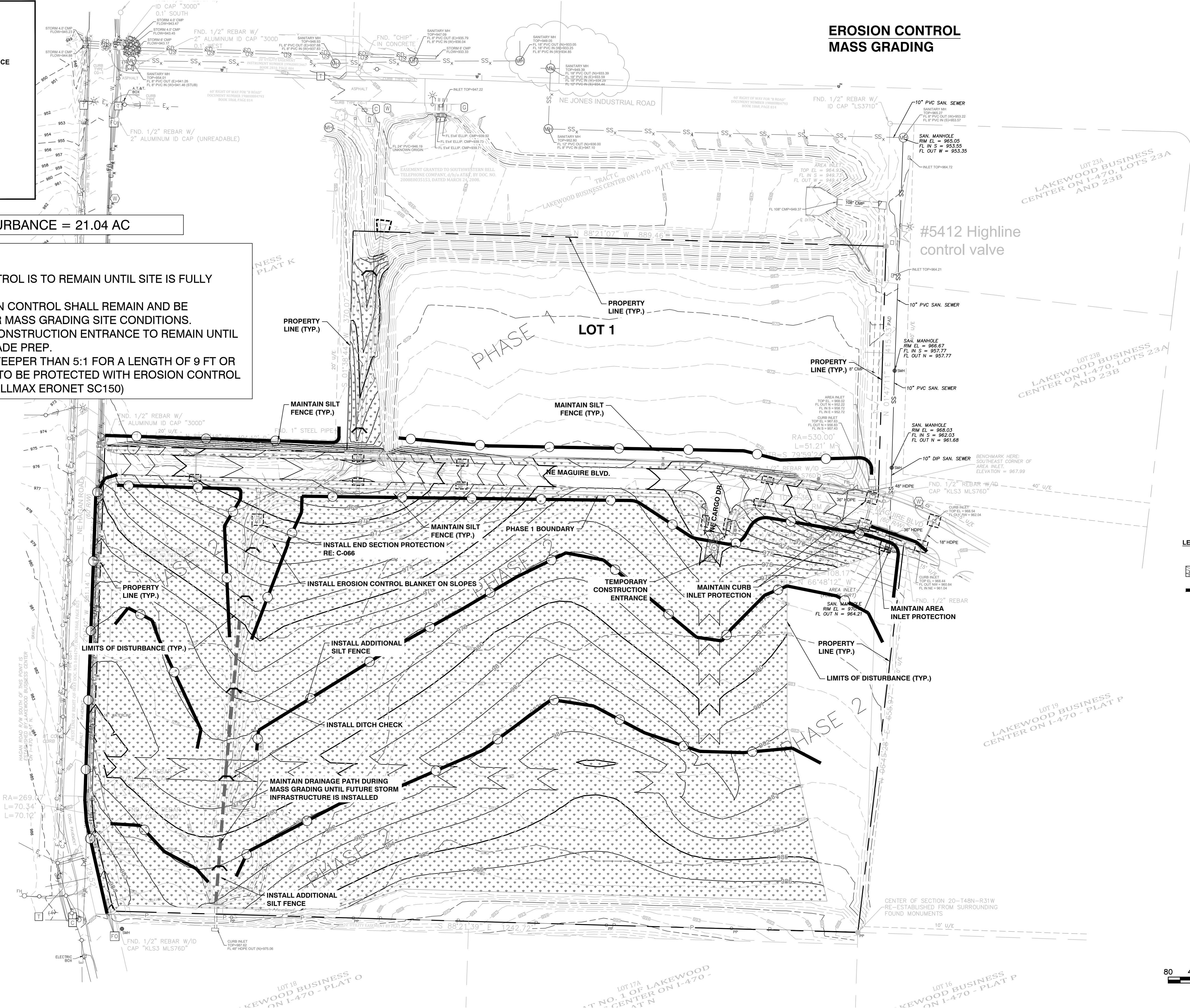
 **DITCH CHECK**  
RE: C-065

 **SEED OR SOD**


AREA OF DISTURBANCE = 21.04 AC

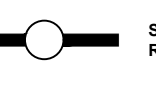
**NOTE:**


1. EROSION CONTROL IS TO REMAIN UNTIL SITE IS FULLY STABILIZED.
2. PRIOR EROSION CONTROL SHALL REMAIN AND BE ADJUSTED FOR MASS GRADING SITE CONDITIONS.
3. TEMPORARY CONSTRUCTION ENTRANCE TO REMAIN UNTIL DRIVE SUB-GRADE PREP.
4. ALL SLOPES STEEPER THAN 5:1 FOR A LENGTH OF 9 FT OR GREATER ARE TO BE PROTECTED WITH EROSION CONTROL BLANKETS. (ROLLMAX ERONET SC150)





**LEGEND:**


 **INLET PROTECTION**  
RE: C-063 & C-064

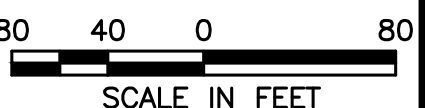
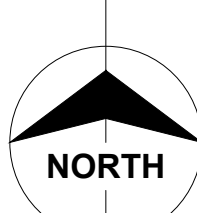
 **CONSTRUCTION ENTRANCE**  
RE: C-061

 **SILT FENCE**  
RE: C-062

 **CONCRETE WASHOUT**

 **DITCH CHECK**  
RE: C-065

 **SEED OR SOD**



**POWELL CWM**

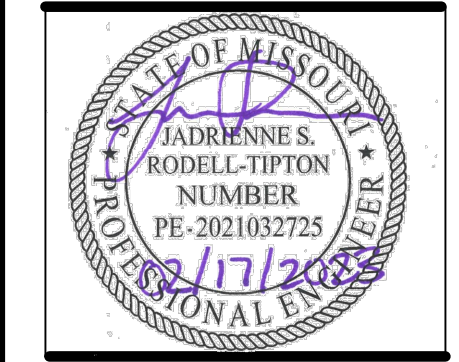
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**LAKEWOOD BUSINESS CENTER ON I-470 - PLAT S**  
**2710 NE HAGEN ROAD**  
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**JACKSON COUNTY**



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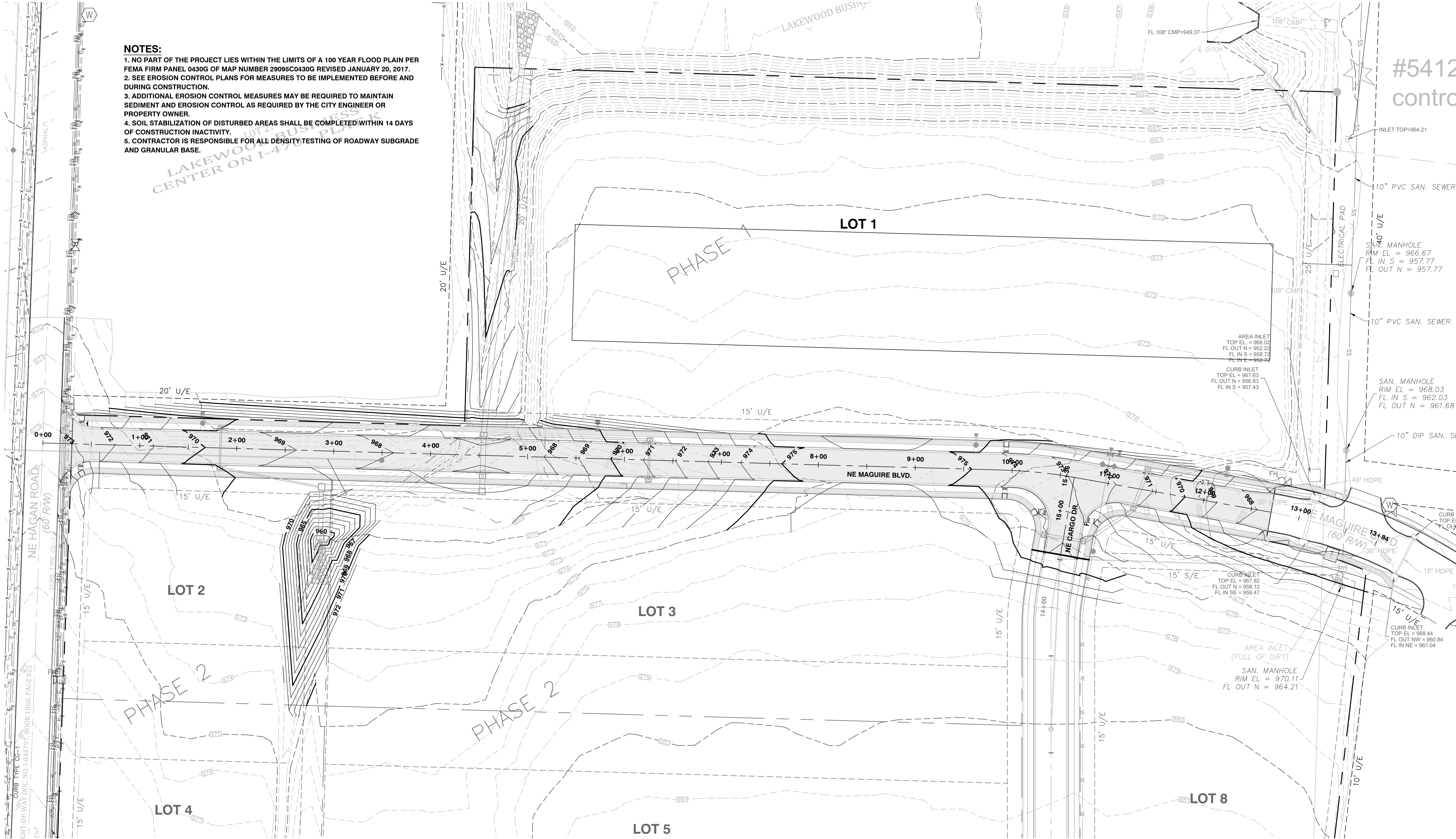
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REVISIONS	NO.	DATE	DESCRIPTION

DRAWN BY: JV  
CHECKED BY: JRT  
PROJECT #: 21-1883  
ISSUE DATE: 03/31/2022  
ISSUED FOR:

PERMIT  
MASS GRADING AND  
EROSION AND  
SEDIMENT CONTROL  
**054**





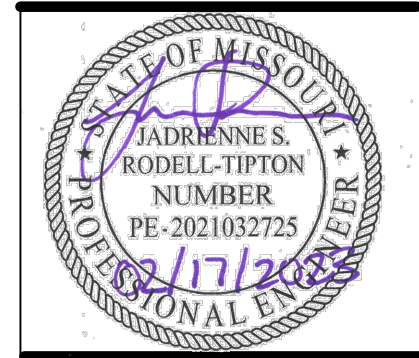
- NOTES:**
1. NO PART OF THE PROJECT LIES WITHIN THE LIMITS OF A 100 YEAR FLOOD PLAIN PER FEMA FIRM PANEL 0430G OF MAP NUMBER 29095C0430G REVISED JANUARY 20, 2017.
  2. SEE EROSION CONTROL PLANS FOR MEASURES TO BE IMPLEMENTED BEFORE AND DURING CONSTRUCTION.
  3. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED TO MAINTAIN SEDIMENT AND EROSION CONTROL AS REQUIRED BY THE CITY ENGINEER OR PROPERTY OWNER.
  4. SOIL STABILIZATION OF DISTURBED AREAS SHALL BE COMPLETED WITHIN 14 DAYS OF CONSTRUCTION INACTIVITY.
  5. CONTRACTOR IS RESPONSIBLE FOR ALL DENSITY TESTING OF ROADWAY SUBGRADE AND GRANULAR BASE.

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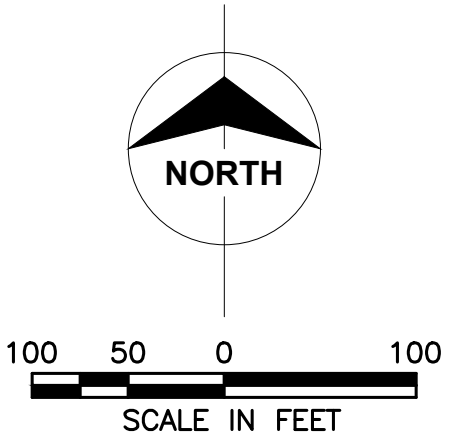
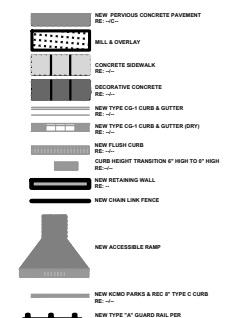
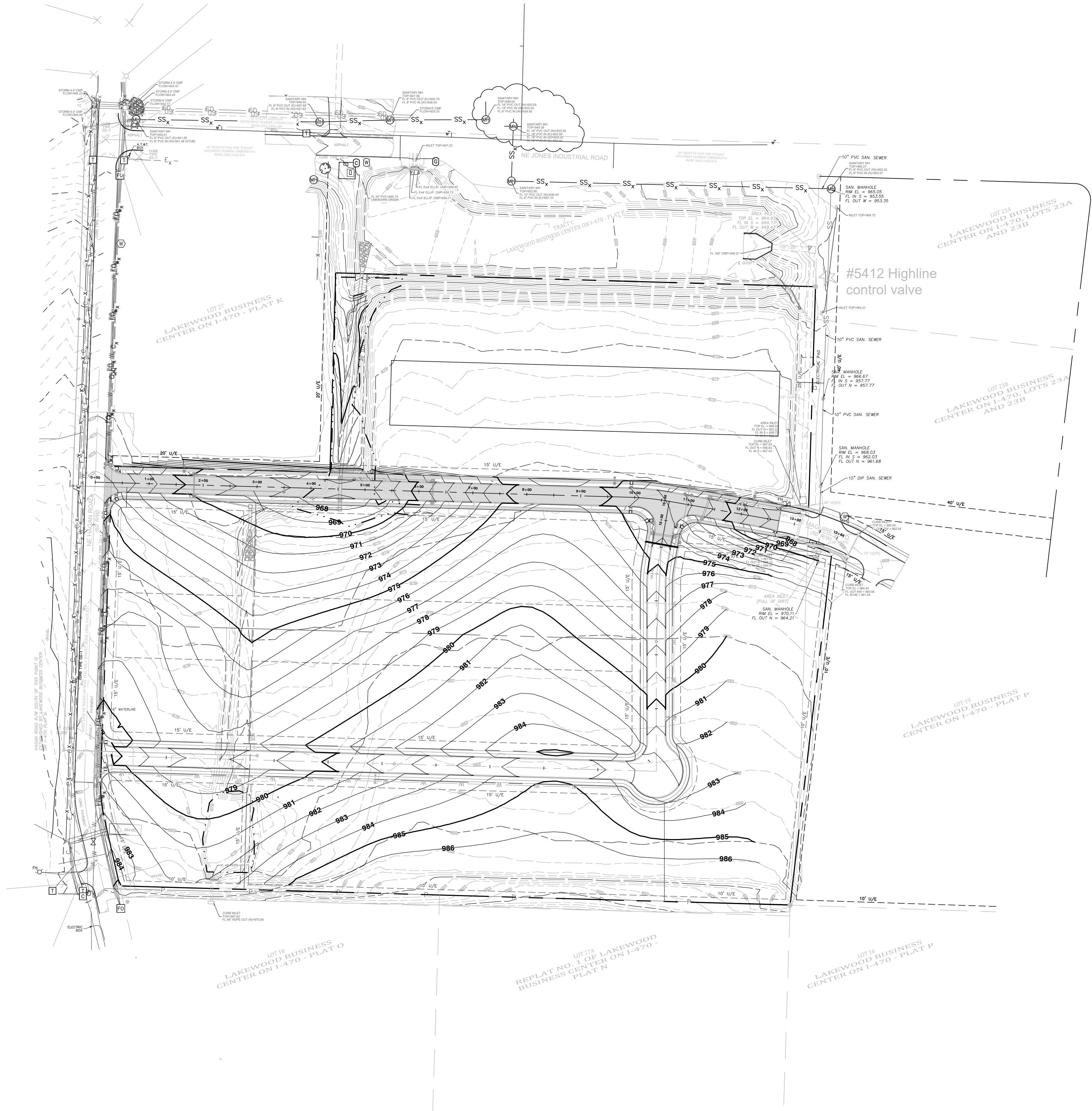
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ISSUE DATE: 03/31/2022  
ISSUED FOR:

PERMIT  
PHASE 1  
GRADING PLAN  
055





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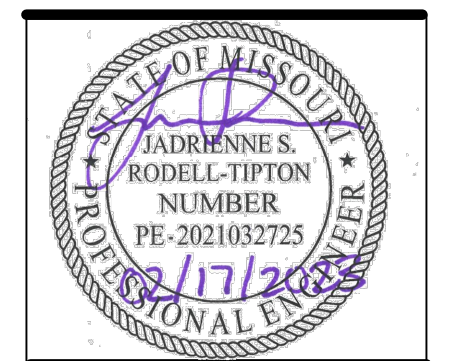
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# LAKEWOOD BUSINESS CENTER ON I-470 - PLAT S

## 2710 NE HAGEN ROAD

### LEE'S SUMMIT, MO 64064

#### JACKSON COUNTY



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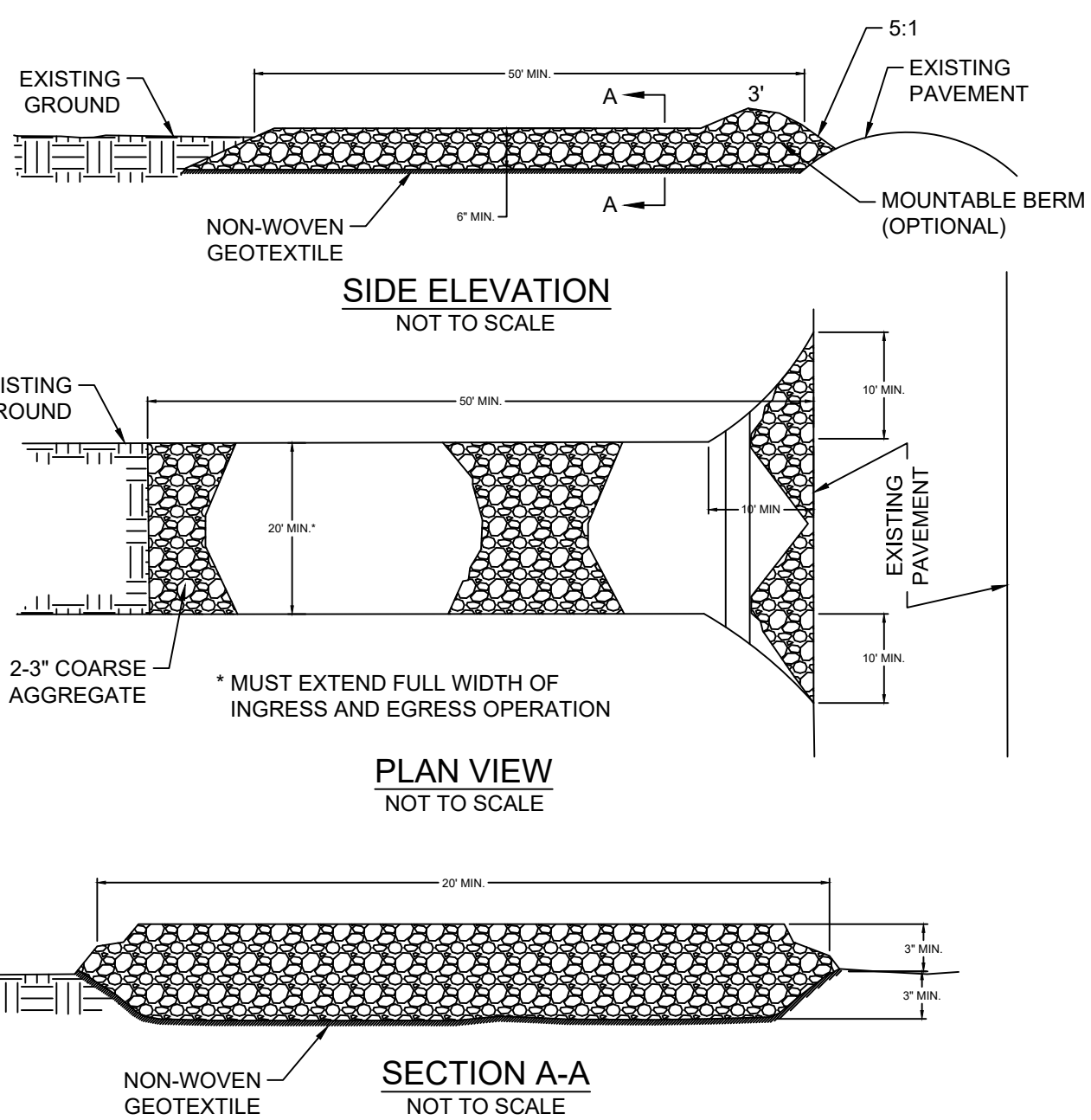
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DRAWN BY: JV  
CHECKED BY: JRT  
PROJECT #: 21-1883  
ISSUE DATE: 03/31/2022  
ISSUED FOR:

PERMIT  
MASS GRADING PLAN





## TEMPORARY CONSTRUCTION ENTRANCE

PER APWA DRAWING ESC-01

### TEMPORARY CONSTRUCTION ENTRANCE PAD NOTES:

#### A) INSTALLATION:

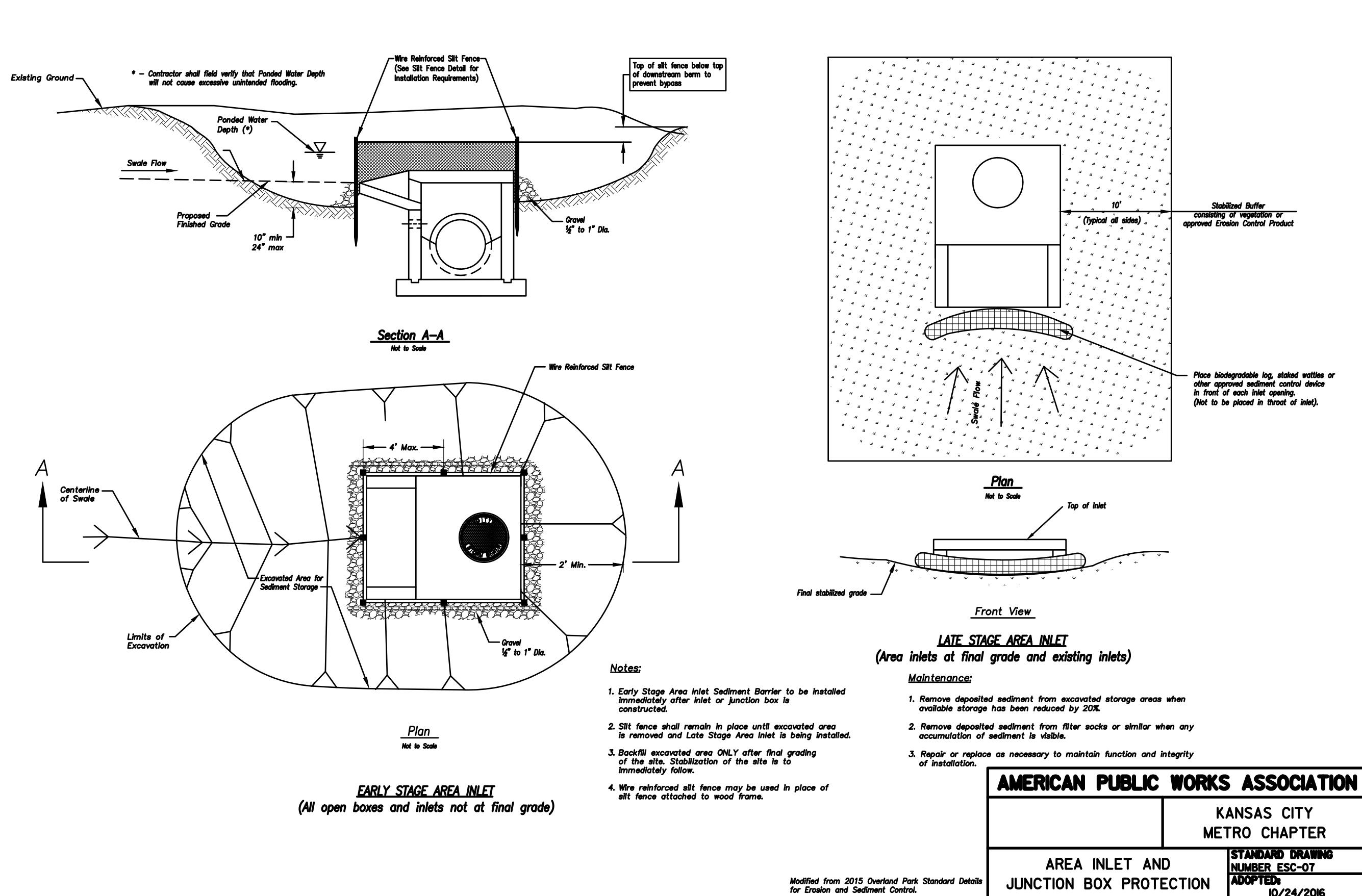
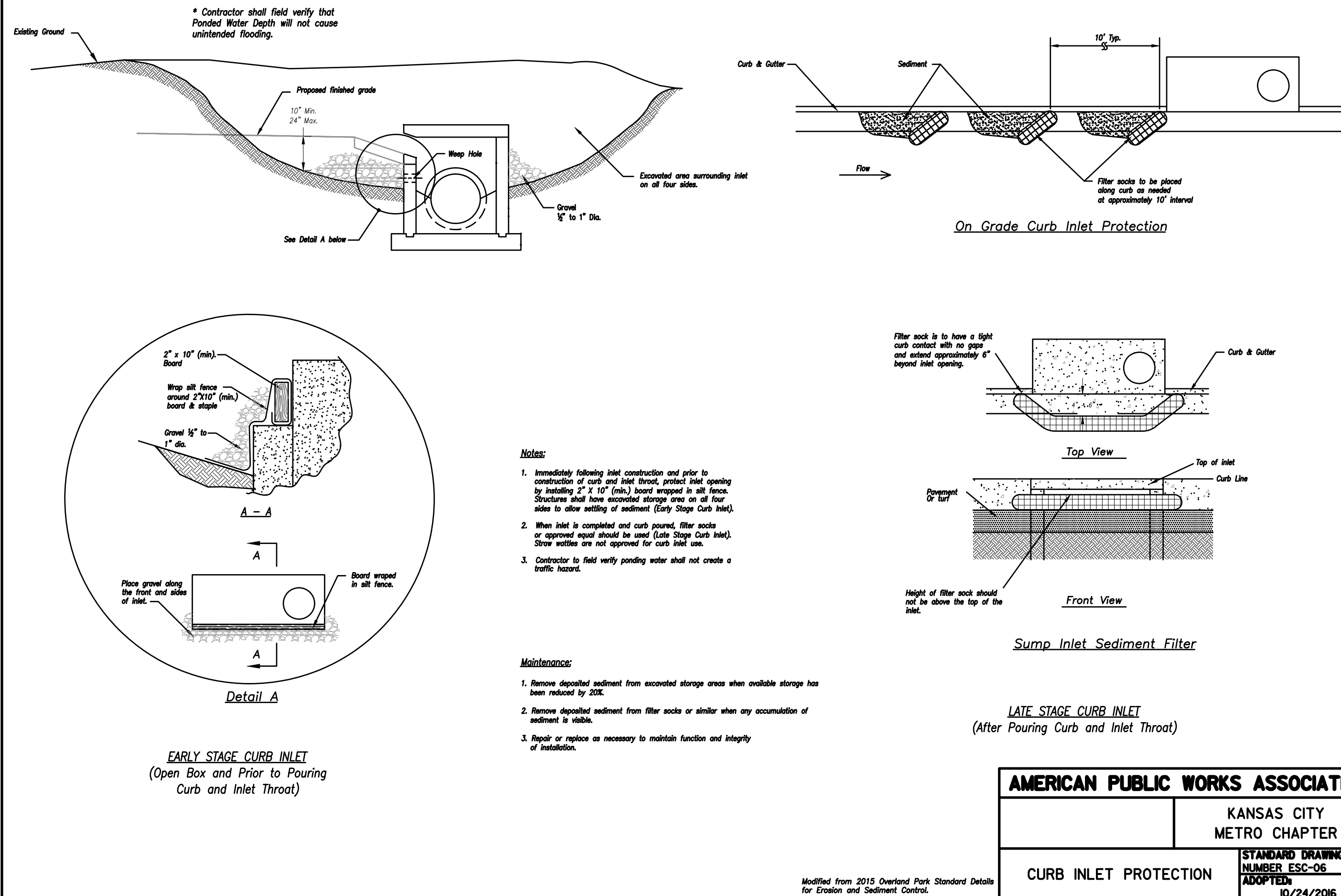
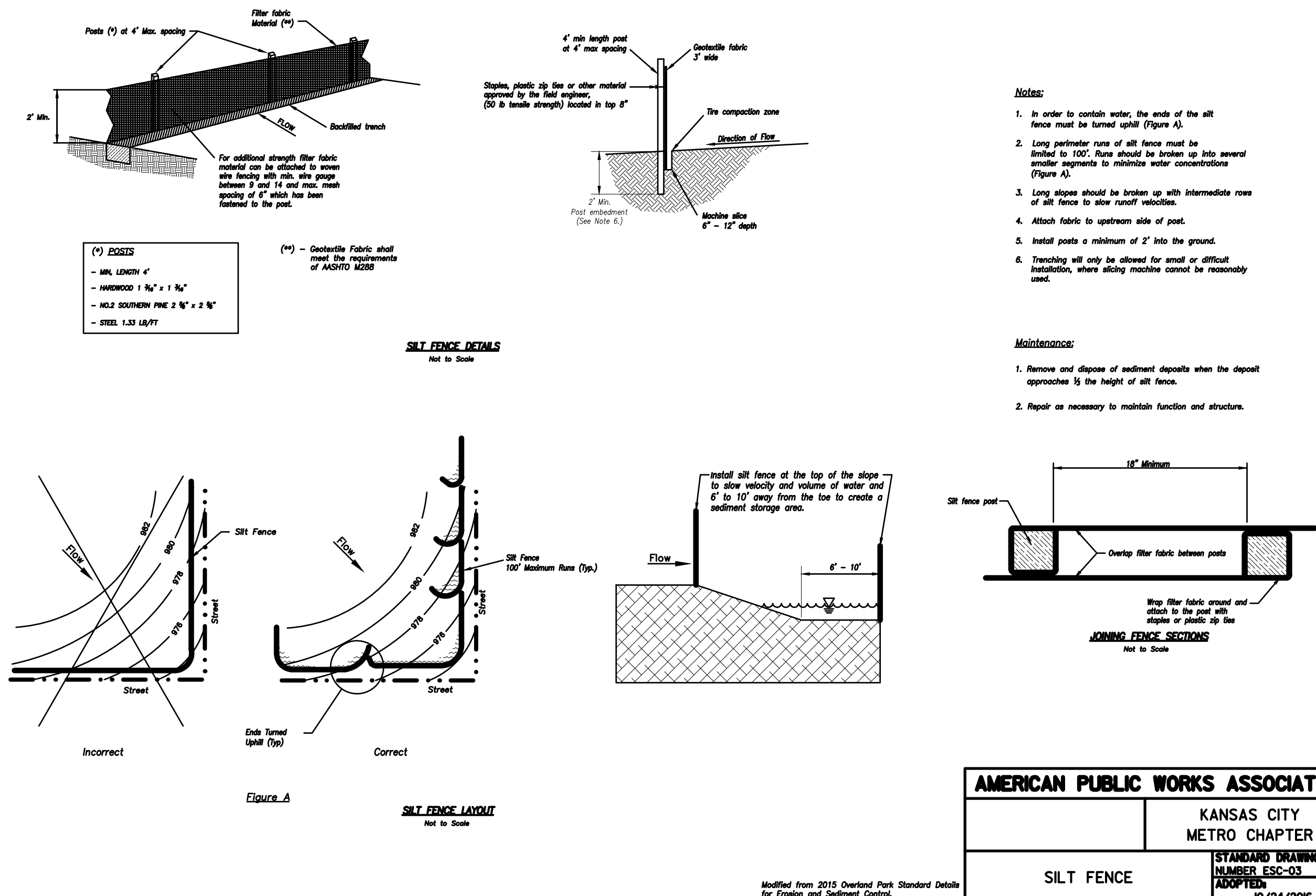
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. IF SLOPE TOWARDS THE PUBLIC ROAD EXCEEDS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

#### B) TROUBLESHOOTING:

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

#### C) INSPECTION AND MAINTENANCE:

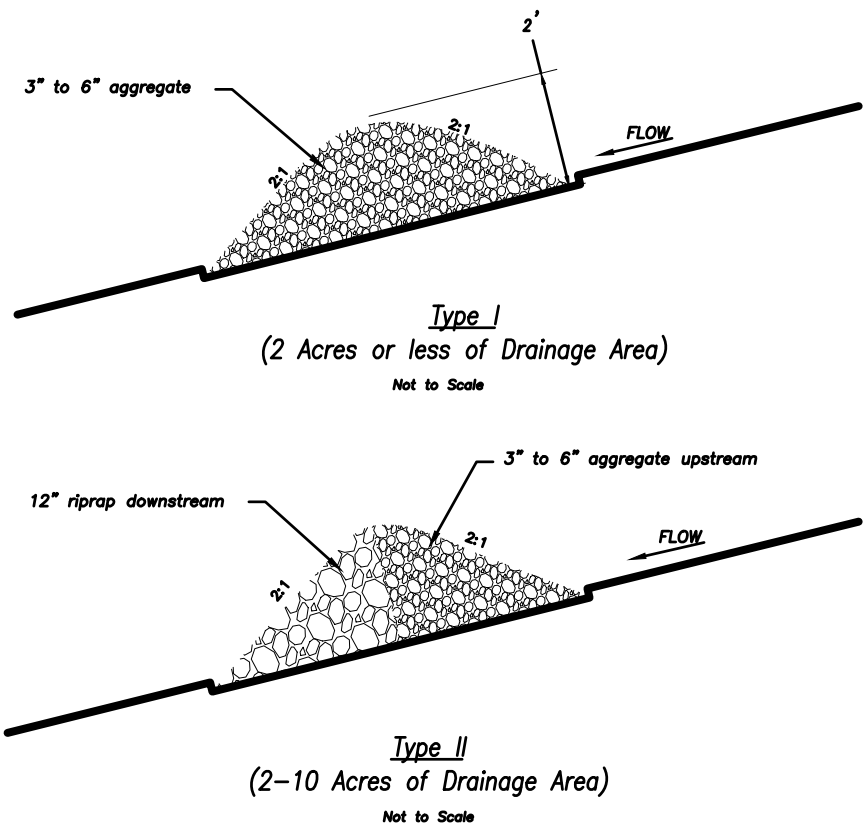
1. INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER 1/2-INCH OR GREATER STORM EVENTS.
2. RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN 2- AND 3-INCH STONE AS NEEDED.
4. IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD. REPAIR ANY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



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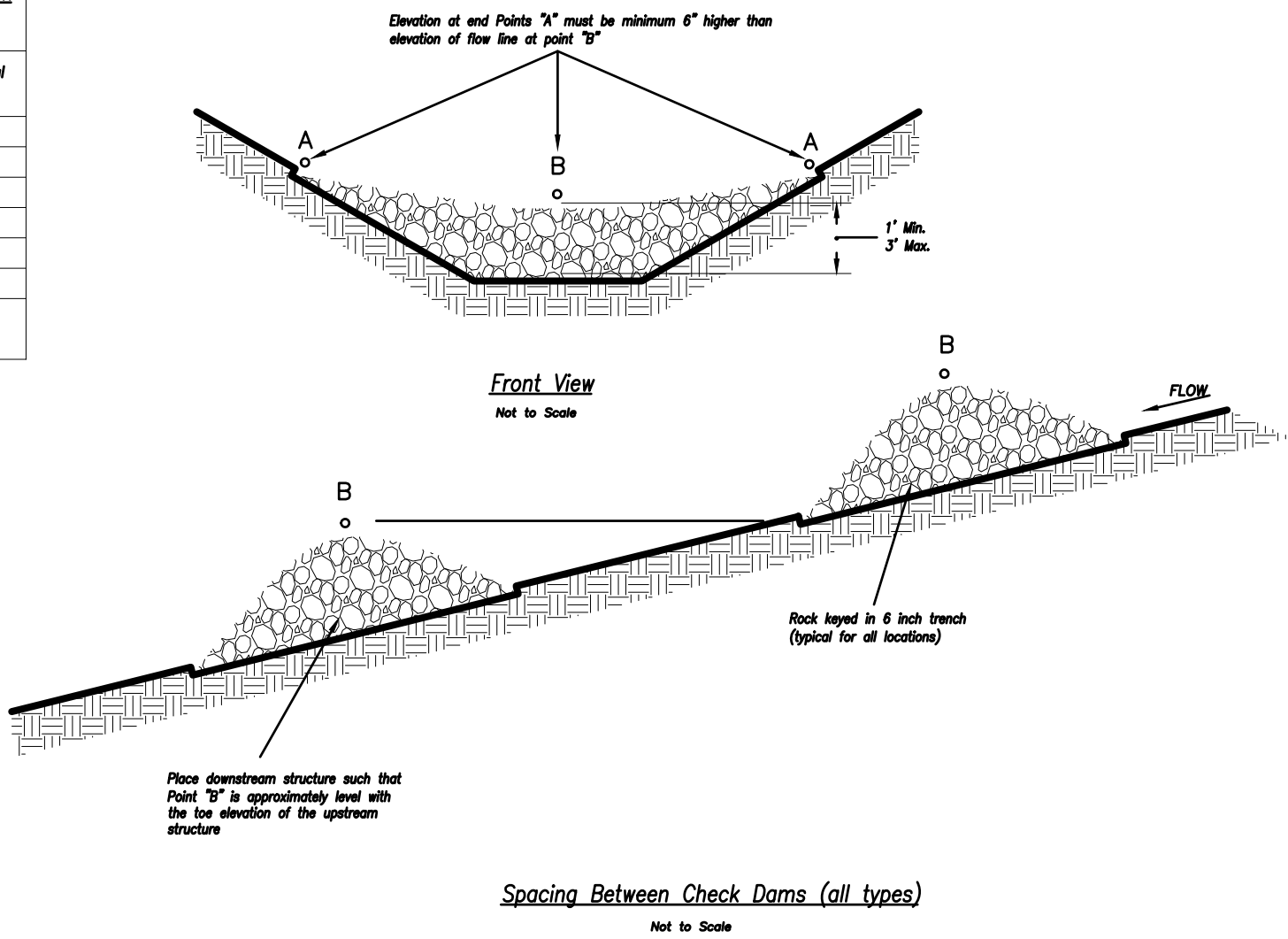
DRAWN BY:	JV
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ISSUED FOR:	PERMIT





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.

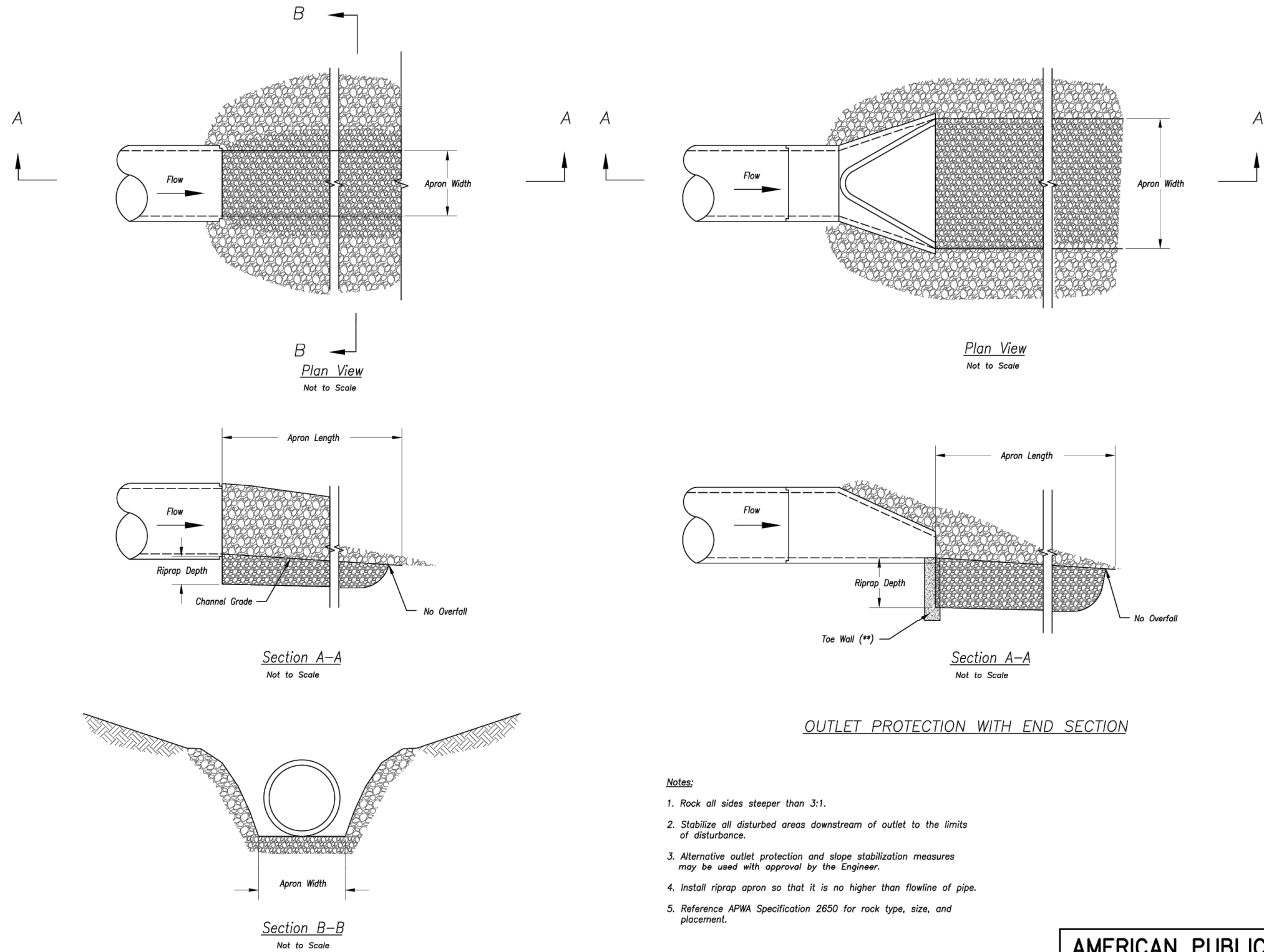


- Notes:
1. Rock check dams shall be used only for drainage areas less than 10 acres unless approved by the City Engineer.
  2. Use rock checks only in situations where the ditch slope exceeds 6%.

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


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

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



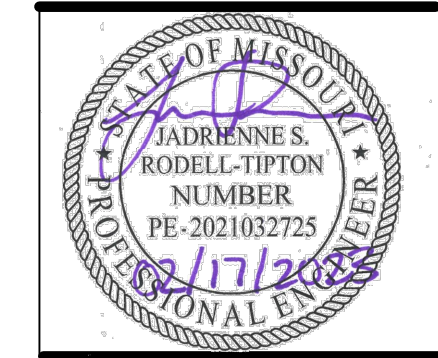
- Notes:
1. Rock all sides steeper than 3:1.
  2. Stabilize all disturbed areas downstream of outlet to the limits of disturbance.
  3. Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.
  4. Install riprap apron so that it is no higher than flowline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

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

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
OUTLET PROTECTION	STANDARD DRAWING NUMBER ESC-14 ADOPTED: 10/24/2016

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DETAILS -2  
062