SUMMIT VIEW FARMS 4TH PLAT LOTS 75-120 AND TRACT D

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS LEE'S SUMMIT, JACKSON COUNTY, MISSOURI SECTION 26, TOWNSHIP 47 N, RANGE 32 W LAMP RYNEARSON NO. 0318050.02

PROJECT VICINITY STATE LOCATION MAP

OWNER CONTACT BILL KENNEY SUMMIT VIEW FARMS DEVELOPMENT GROUP, LLC P.O. BOX 291 LEE'S SUMMIT, MO 64063 billkenney9@gmail.com

(816) 838-0552

CONSULTANT CONTACT

DAN MCGHEE

LAMP RYNEARSON

9001 STATE LINE ROAD, SUITE 200

KANSAS CITY, MO 64114

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(816) 361-0440

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RECORD DRAWING

The information provided on this drawing conforms to construction records; it is not intended for construction, implementation or recording purposes; and it is solely based on information provided by others and information obtained by my firm.

"100.00 100.10", "1.00% 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 05-13-2022

Certified by: <u>Mark Daniel McGhee Jr.</u>
Title: <u>Senior Project Manager</u>

Firm: <u>Lamp Rynearson</u>



9001 State Line Rd., Ste. 200 Kansas City, MO 64114 816.361.0440 LampRynearson.com

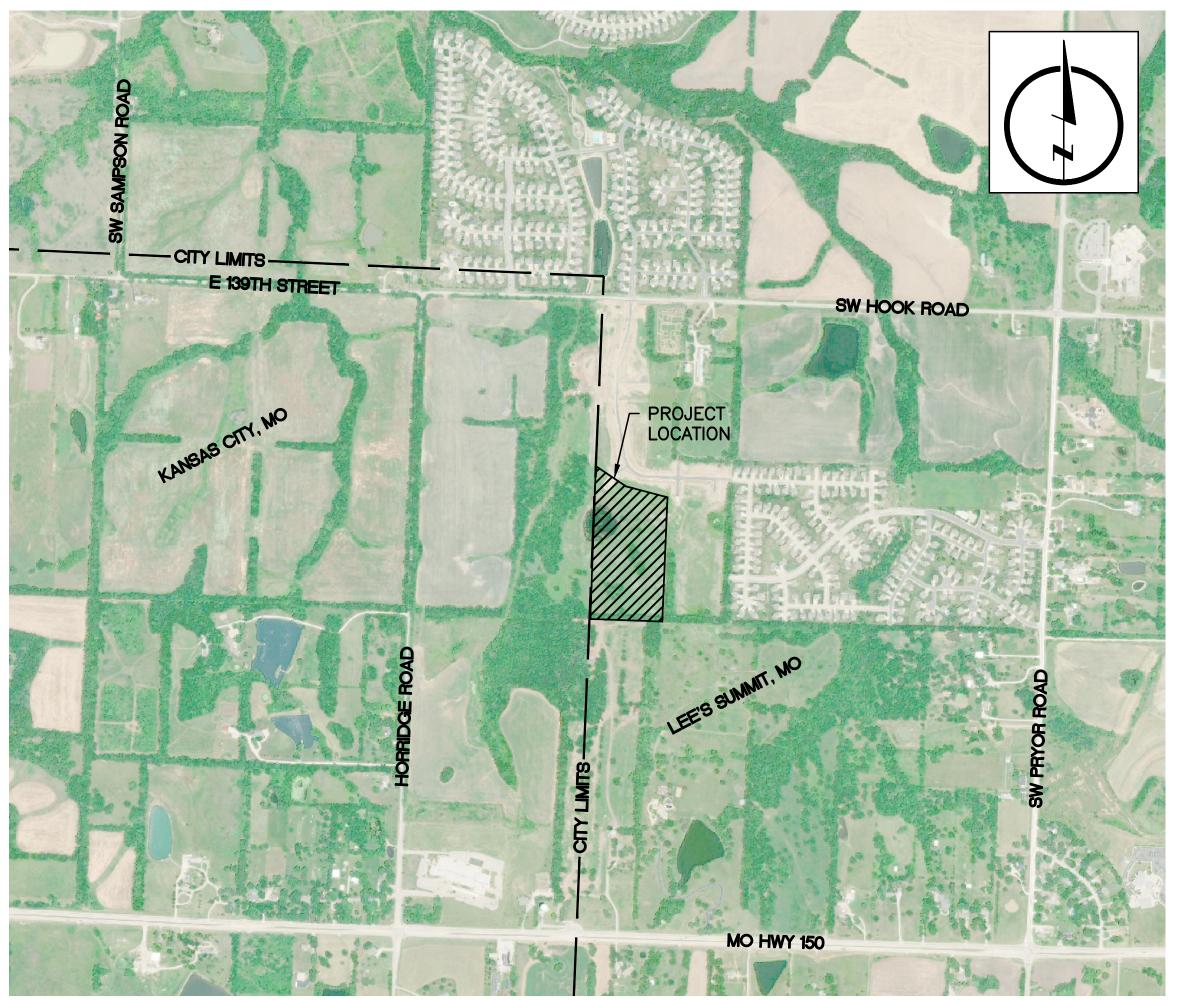
Accepted

Record Drawings

These plans have been reviewed for accuracy and are accepted for basic

conformance to the approved

construction drawings.



LOCATION MAP

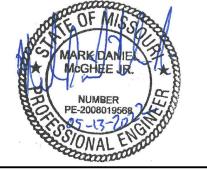
ESTIMATED SUMMARY OF QUANTITIES							
ITEM		ESTIMATED					
NO.	ITEM DESCRIPTION	QUANTITY	UNIT				
1	EARTHWORK (STRIP / CUT) (BANK QUANTITY)	10,410	CY				
2	EARTHWORK (FILL) (EXCLUDES FINISH GRADING QUANTITY)	13,485	СҮ				
3	TEMPORARY CONSTRUCTION ENTRANCE	1	EA				
4	MULCH BERMS / SEDIMENT FENCE	1,330	LF				
5	TEMPORARY DITCH CHECKS	19	EA				
6	MAINTAIN TEMPORARY SEDIMENT BASIN	1	EA				
7	INLET PROTECTION	22	EA				
8	TEMPORARY SEEDING	13	AC				
9	EARTHWORK (FINISH GRADING)	4,000	СҮ				
10	PERMANENT SEEDING	13	AC				
11	NATIVE SWALE PLANTINGS AND DITCH CHECKS W/ 4" PIPE	945	LF				
12	2" TYPE 5 (APWA) VIRGIN AC SURFACE COURSE	9,358	SY				
13	4" TYPE 5 (APWA) AC BASE COURSE	6,843	SY				
14	5.5" TYPE 5 (APWA) AC BASE COURSE	2,515	SY				
15	6" MODOT TYPE 5 BASE	11,246	SY				
16	6" SUBGRADE STABILIZATION	8,259	SY				
17	9" SUBGRADE STABILIZATION	2,987	SY				
18	2' CONCRETE CURB & GUTTER (TYPE CG-1)	1,434	LF				
19	2' CONCRETE CURB & GUTTER (TYPE CG-2)	4,229	LF				
20	4" CONCRETE SIDEWALK (ALL SIDEWALK IN PLAT)	15,950	SF				
21	ADA SIDEWALK RAMPS	985	SF				
22	15" STORM SEWER PIPE (HDPE)	558	LF				
23	15" STORM SEWER PIPE (PP OR RCP)	132	LF				
24	18" STORM SEWER PIPE (HDPE)	285	LF				
25	24" STORM SEWER PIPE (HDPE)	434	LF				
26	30" STORM SEWER PIPE (HDPE)	196	LF				
27	36" STORM SEWER PIPE (HDPE)	89	LF				
28	36" STORM SEWER PIPE (PP OR RCP)	211	LF				
29	42" STORM SEWER PIPE (HDPE)	391	LF				
30	5' X 3' CURB INLET (LS STM-1)	11	EA				
31	5' X 4' CURB INLET (LS STM-1)	2	EA				
32	5' X 4' CURB INLET (SPECIAL LS STM-1)	1	EA				
33	5' X 5' CURB INLET (LS STM-1)	3	EA				
34	5' X 7' CURB INLET (SPECIAL LS STM-1)	1	EA				
35	8' X 5' CURB INLET (SPECIAL LS STM-1)	1	EA				
36	5' X 5' JUNCTION BOX (SPECIAL LS STM-3)	2	EA				
37	4' X 4' FIELD INLET (LS STM-2)	3	EA				
38	6' DIA. HYDRODYNAMIC SEPARATOR UNIT	200	EA				
39	6" PIPE UNDERDRAIN	300	LF				

<u>UTILITIES</u>		
ELECTRIC:	EVERGY	(816) 471-5275
GAS:	SPIRE ENERGY	(816) 756-5252
TELEPHONE:	AT&T	(816) 325-5607
CABLE:	SPECTRUM	(816) 358-8833
	GOOGLE	(415) 736-9962
WATER:	LEE'S SUMMIT WATER UTILITIES	(816) 969-1900

CALL OR CLICK 3 DAYS BEFORE YOU DIG!



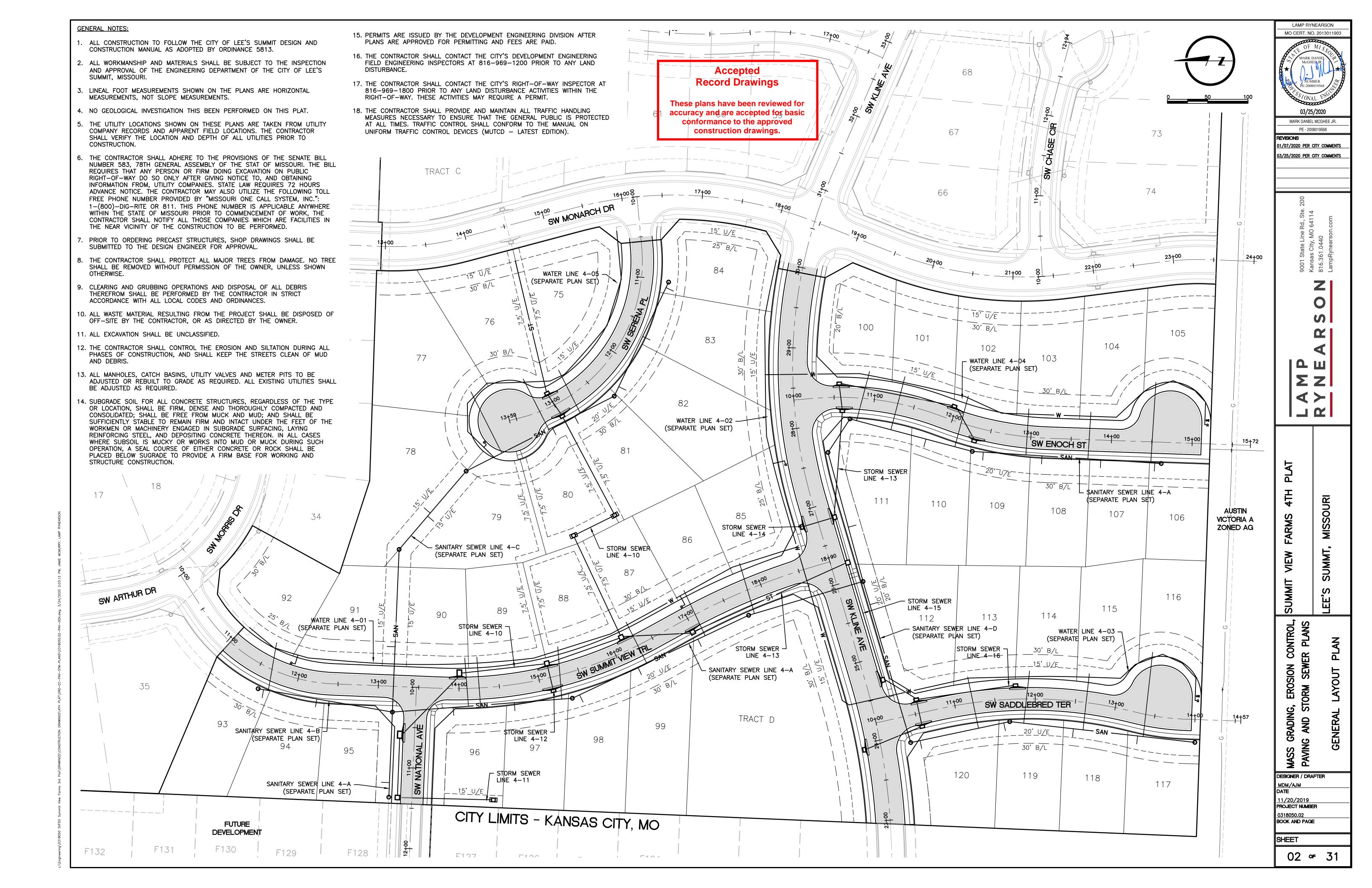
ALL UTILITIES ARE SHOWN BASED ON THE INFORMATION AVAILABLE TO THE ENGINEER. THERE IS NO GUARANTEE ALL FACILITIES ARE SHOWN OR THAT THE LOCATION, DEPTH, AND SIZE OF EACH FACILITY IS CORRECT. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND SERVICE LINES PRIOR TO CONSTRUCTION. COORDINATE NECESSARY RELOCATIONS WITH UTILITY COMPANIES.

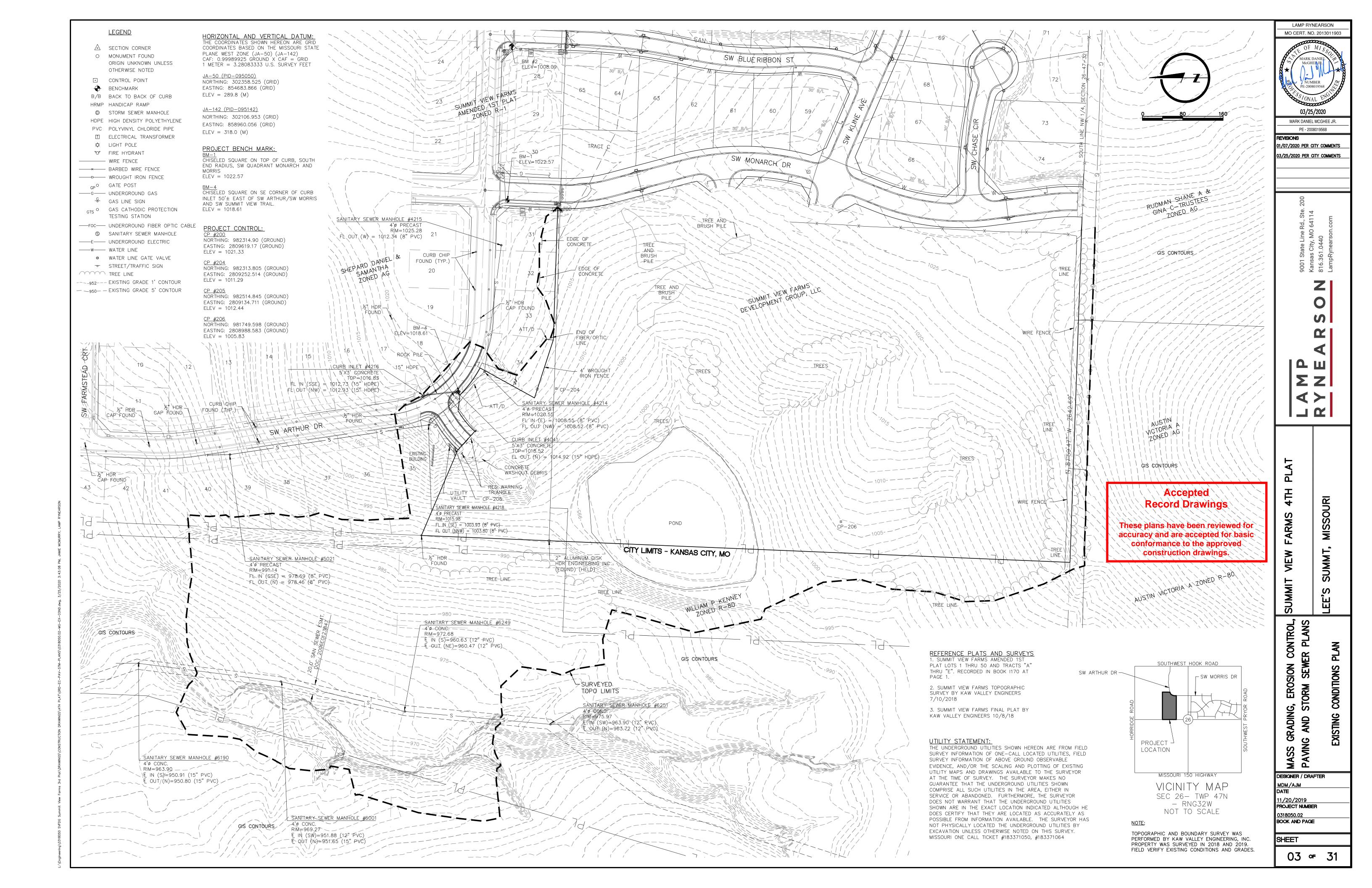


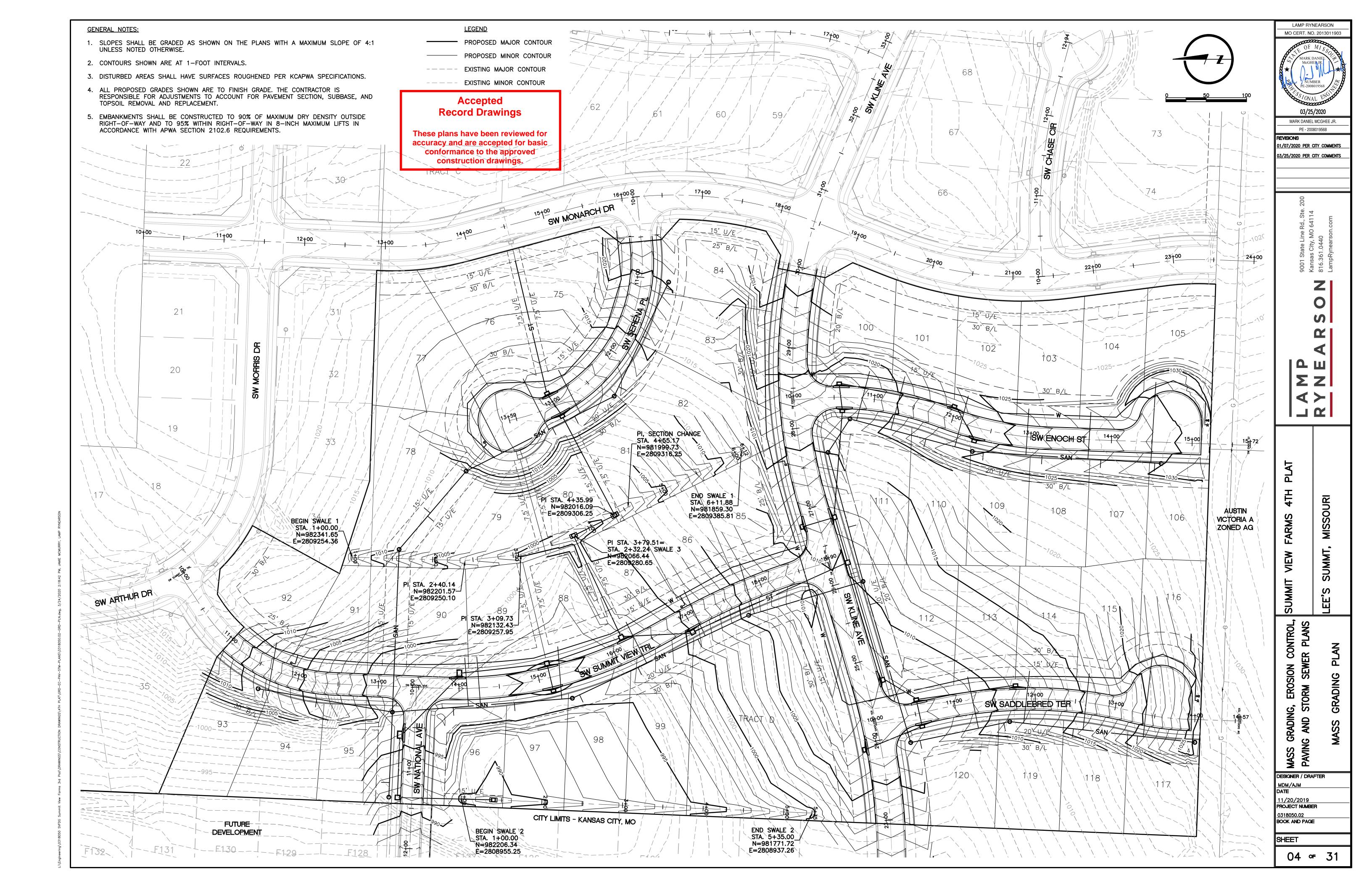
PPROVED: _______MARK DANIEL MCGHEE JR., PE

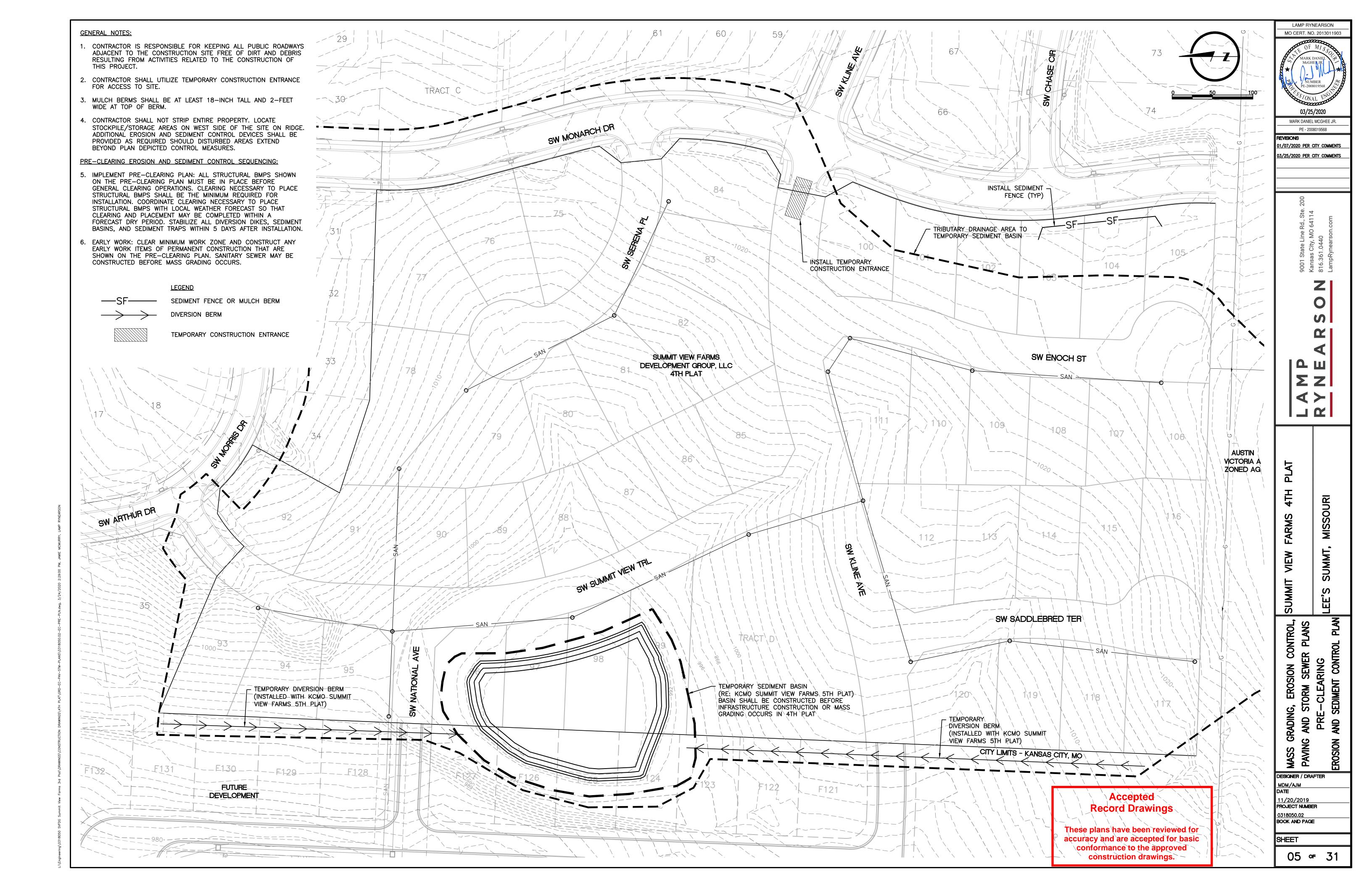
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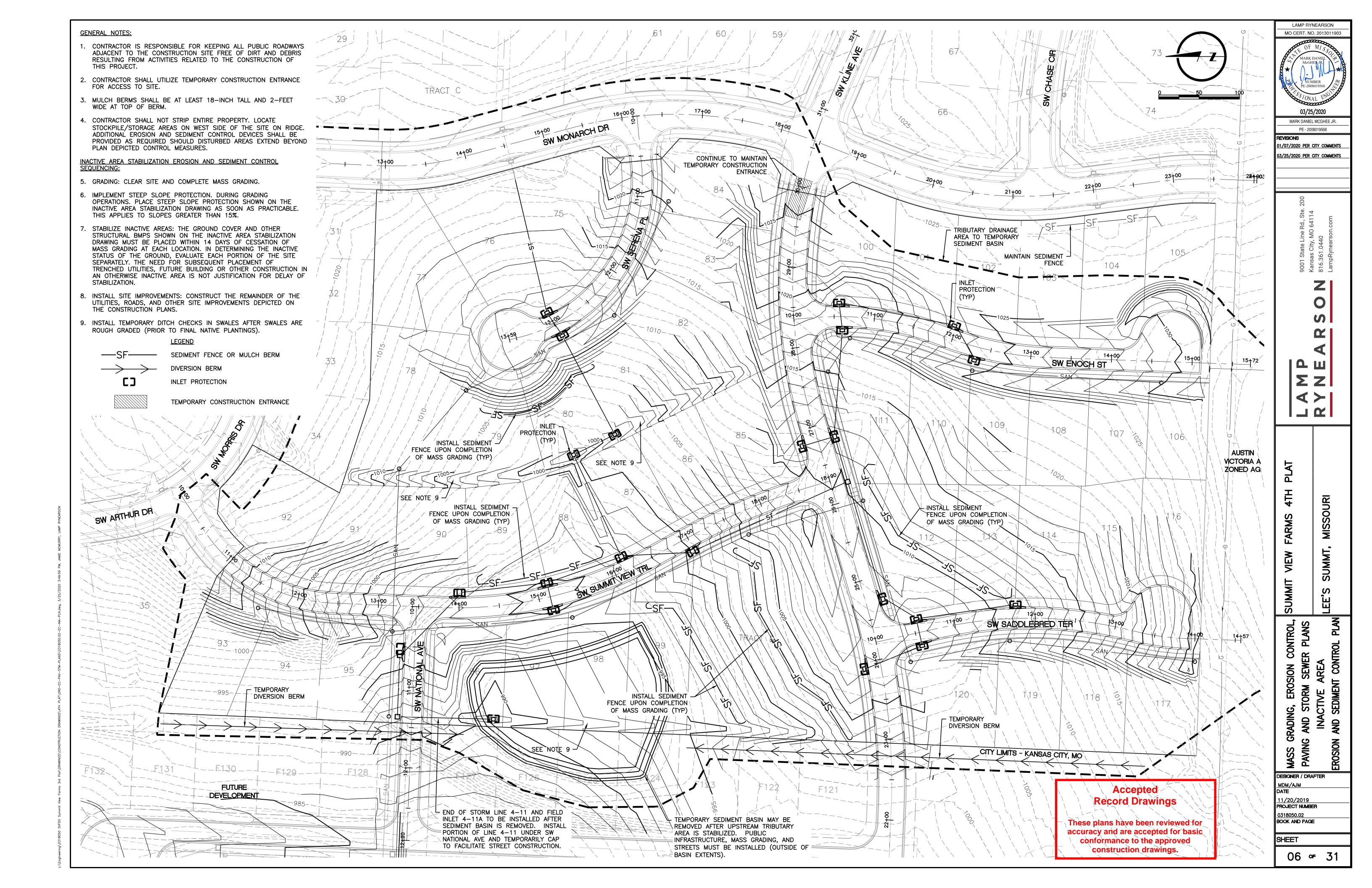
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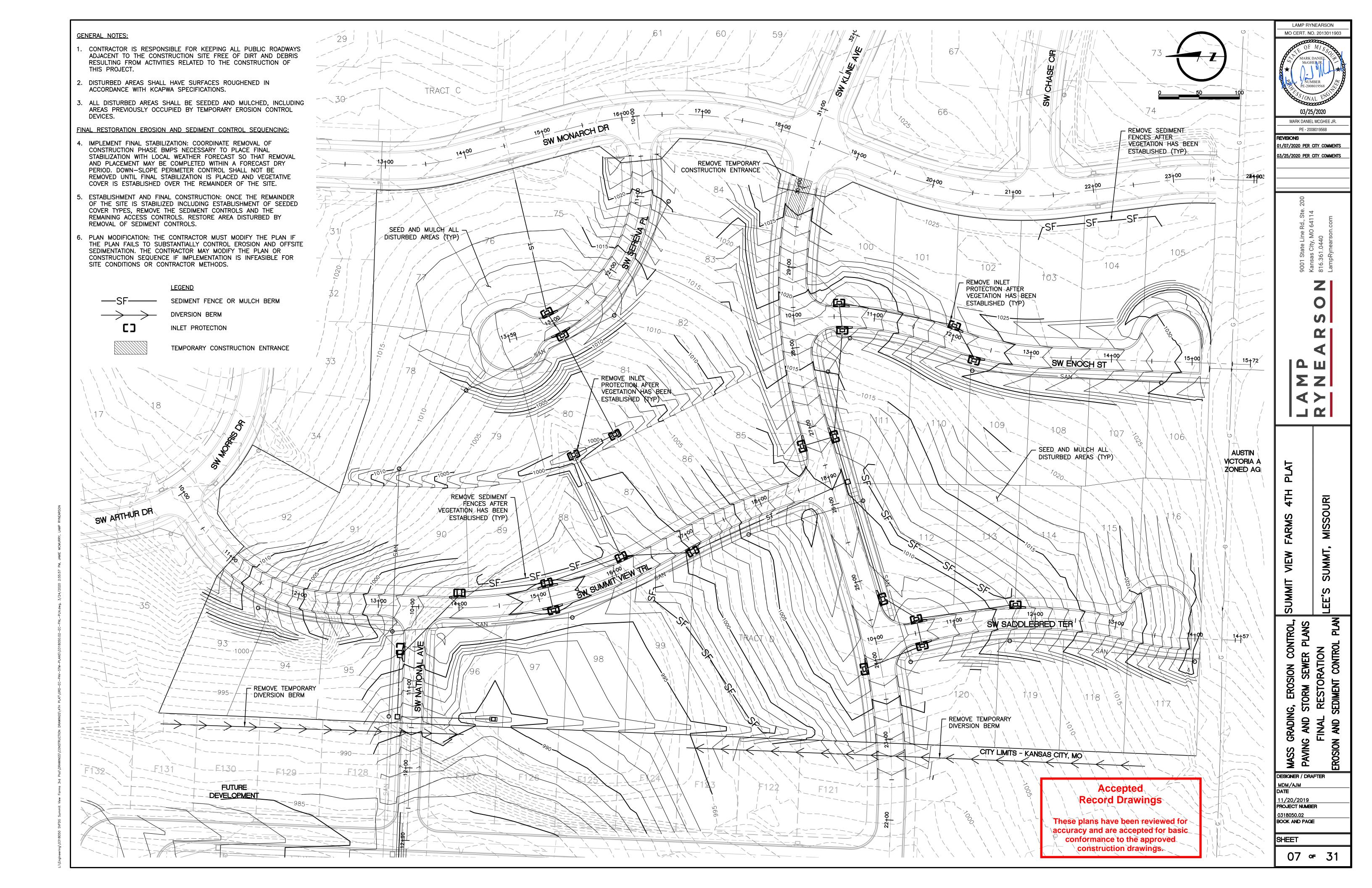


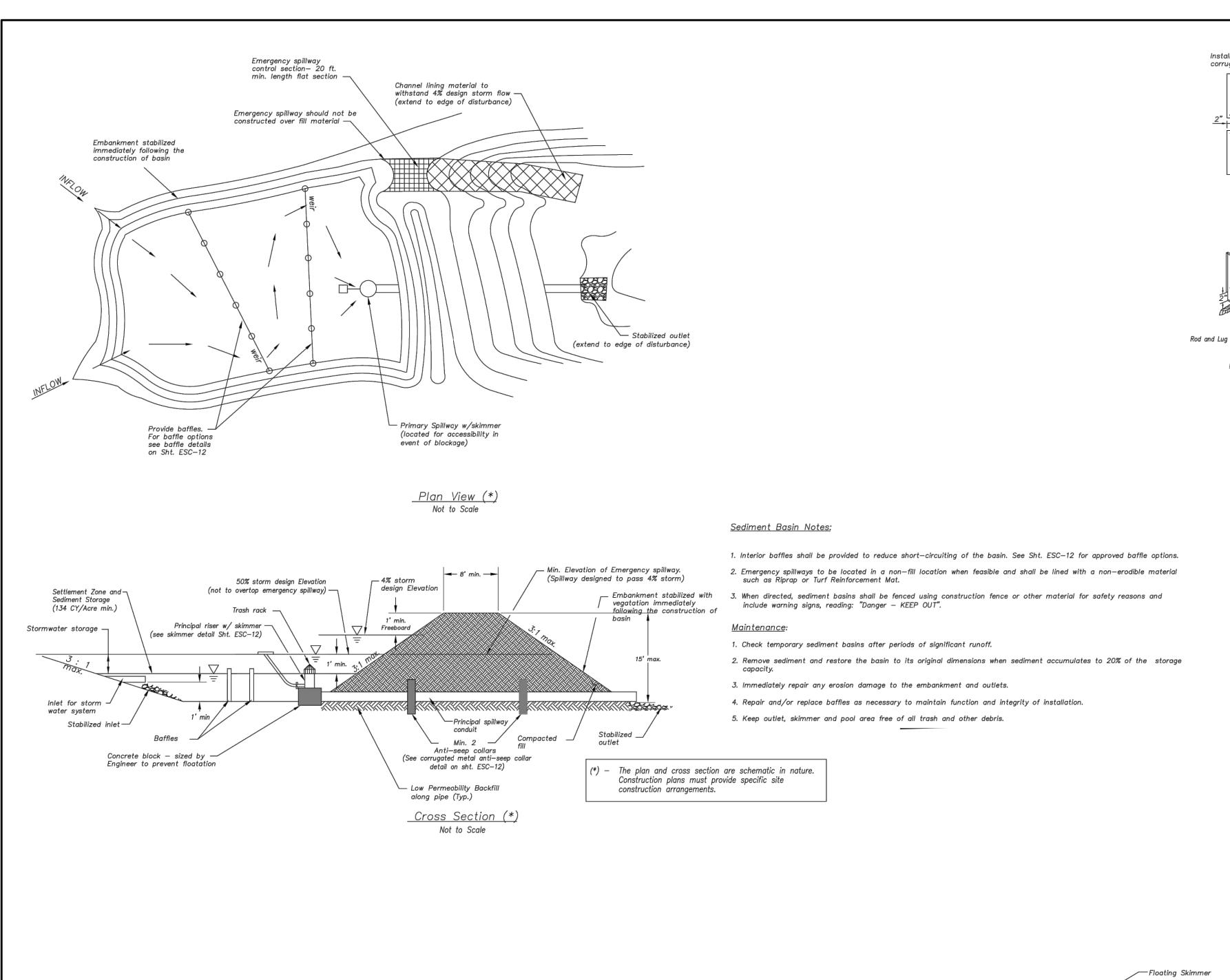


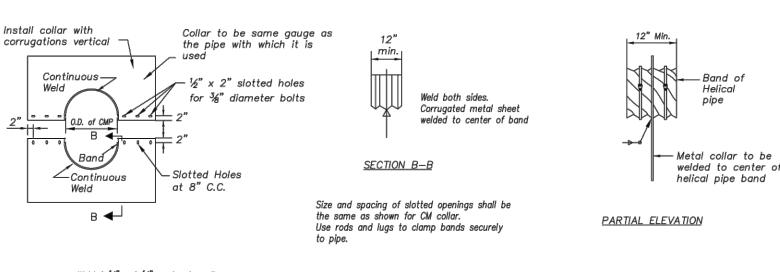












Weld 1 1/6" x 1 1/6" angles to collar or bend 90° angle 1 16" wide as shown Sheet metal collar shall be cut to fit corrugations of helical band and welded with continuous weld

ISOMETRIC VIEW

3. 14xP = Max. spacing between collars.

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

4. Collars shall generally be placed in the middle third of the embankment, and within the saturated zone.

5. All materials to be in accordance with construction material specifications.

6. When specified on the plans, coating of collars shall be in accordance with construction material specifications.

7. Unassembled collars shall be marked by painting or tagging to identify matching pairs. 8. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at the time of

9. Each collar shall be furnished with two (2) 1/2" diameter rods with standard tank lugs for connecting the collars to the pipe.

LAMP RYNEARSON MO CERT. NO. 2013011903

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VIEW

SUMMIT

REVISIONS

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

11. Two other types of anti-seep collars are: a. Corrugated metal, similar to above, except shop welded to a 4 ft. section of

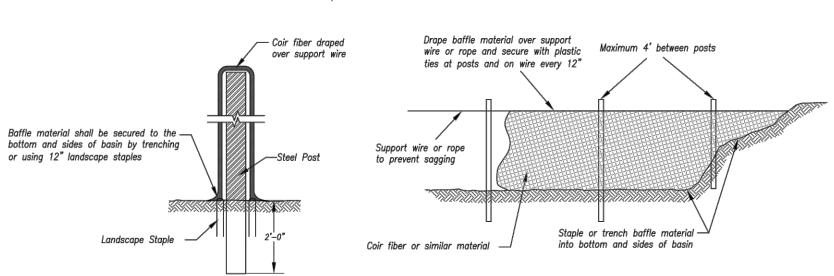
Engineer prior to delivery.

b. Concrete, 6 inches thick, formed around the pipe with #3 rebar spaced 15".

the pipe and connected to the pipe with

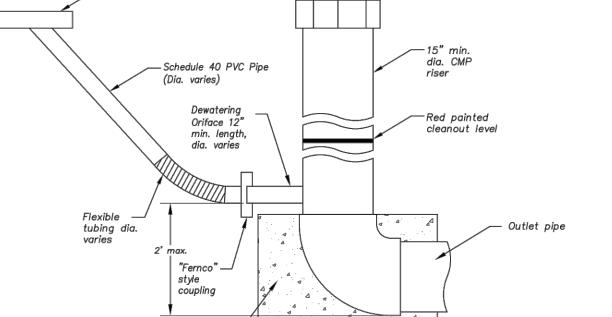
To increase flow path construct 1' deep weirs at alternating ends of each baffle. Weir width should be adjusted for expected flow Stable impervious rock dam (min. 4'). 3"-6" clean aggregate -

Option A - Rock with Weir



<u>Option B — Coir Fiber Material</u>

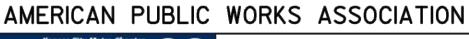
BAFFLE DETAILS Not to Scale



PRINCIPAL SPILLWAY DETAIL

Accepted Record Drawings

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.





SEDIMENT BASIN - DETAILS

SEDIMENT BASIN

KANSAS CITY METRO CHAPTER STANDARD DRAWING NUMBER ESC-II ADOPTED:

IO/24/2016
STANDARD DRAWING
NUMBER ESC-12
ADOPTED: 10/24/2016

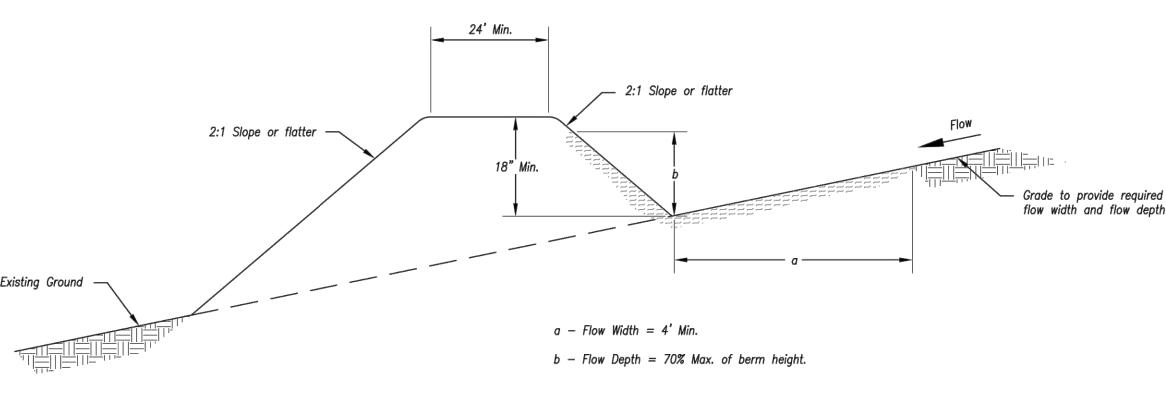
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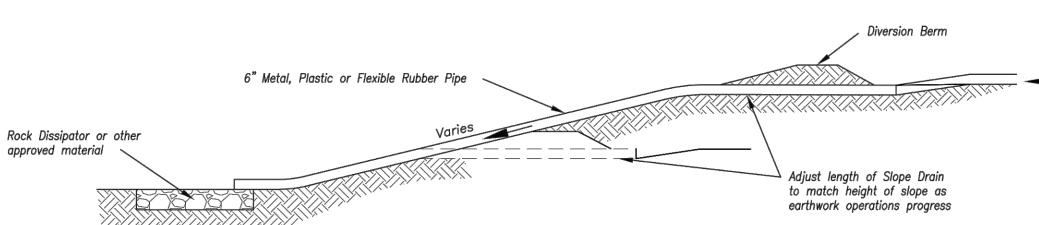
ASS GRADING, EROSION CONTROL, SAVING AND STORM SEWER PLANS EROSION AND SEDIMENT CONTROL DETAILS MASS GF PAVING

DESIGNER / DRAFTER MDM/AJM DATE 11/20/2019 PROJECT NUMBER 0318050.02 BOOK AND PAGE

SHEET

TYPICAL PROFILE OF DIVERSION BEAM





Surface of Compacted Fill

TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN

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.
- 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.
- 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.

<u>Maintenance:</u>

- 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:

 Slope Drain and Diversion Berm may be used on either project foreslopes or project backslopes. Slope Drain Pipe

Face of Slope

- 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.

<u>Maintenance:</u>

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

Stakes (typ.) A A

Section C-C

Typical Elevation

Direction of Flow Trenching per manufactures instructions.

Section B-B

Section A-A

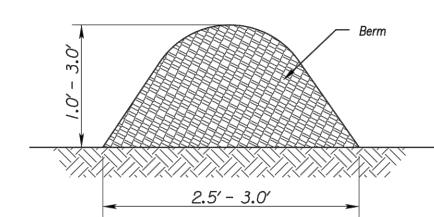
Notes for Wattles and Biodegradable Log Slope Protection:

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

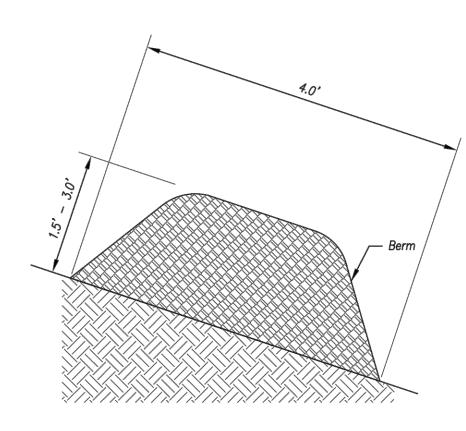
WATTLES AND BIODEGRADABLE LOG

Accepted Record Drawings

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.



<u>Figure 1</u> (Perimeter Control)



<u>Figure 2</u> (Steep Slopes)

Notes for Mulch and Compost Filter Beam:

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

Maintenance for Mulch and Compost Filter Beam:

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

MULCH OR COMPOST FILTER BERMS

AMERICAN PUBLIC WORKS ASSOCIATION



KANSAS CITY METRO CHAPTER

DIVERSION BERMS AND SLOPE DRAINS

WATTLES/BIODEGRADABLE LOG NUMBER E
AND
MULCH/COMPOST FILTER BERM

NUMBER ESC-05
ADOPTED:
10/24/2016
STANDARD DRAWING
NUMBER ESC-04

10/24/2016

STANDARD DRAWING

SHEET 09 **∘** 31

MO CERT. NO. 2013011903

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MARK DANIEL MCGHEE JR.

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SSION CONTROL,
SEWER PLANS
SEDIMENT
DETAILS

GRADING, EROSIG AND STORM

MASS GI PAVING

DESIGNER / DRAFTER

MDM/AJM

11/20/2019

0318050.02

PROJECT NUMBER

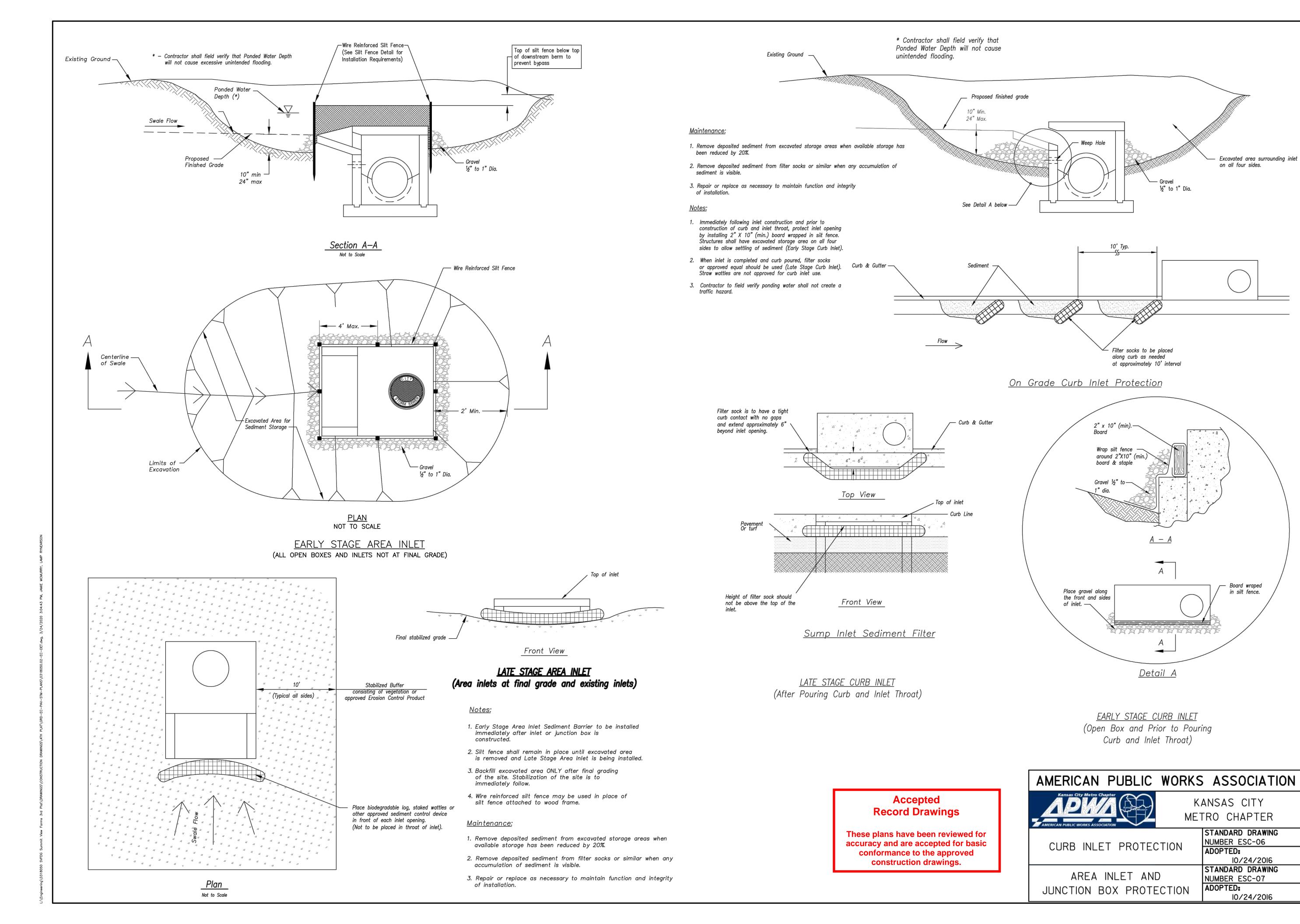
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,0318050 SVFDG Summit View Farms 3rd Plat\DRAWINGS\CONSTRUCTION DRAWINGS\4TH PLAT\



MO CERT. NO. 2013011903 03/25/2020

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Excavated area surrounding inlet

on all four sides.

½" to 1" Dia.

Filter socks to be placed

<u>Detail A</u>

EARLY STAGE CURB INLET

(Open Box and Prior to Pouring

Curb and Inlet Throat)

KANSAS CITY

METRO CHAPTER

ADOPTED:

ADOPTED:

STANDARD DRAWING

STANDARD DRAWING

NUMBER ESC-07

10/24/2016

10/24/2016

NUMBER ESC-06

along curb as needed at approximately 10' interval

2" x 10" (min).

around 2"X10" (min. board & staple

01/07/2020 PER CITY COMMENTS 03/25/2020 PER CITY COMMENTS

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ROSION CONTROL,

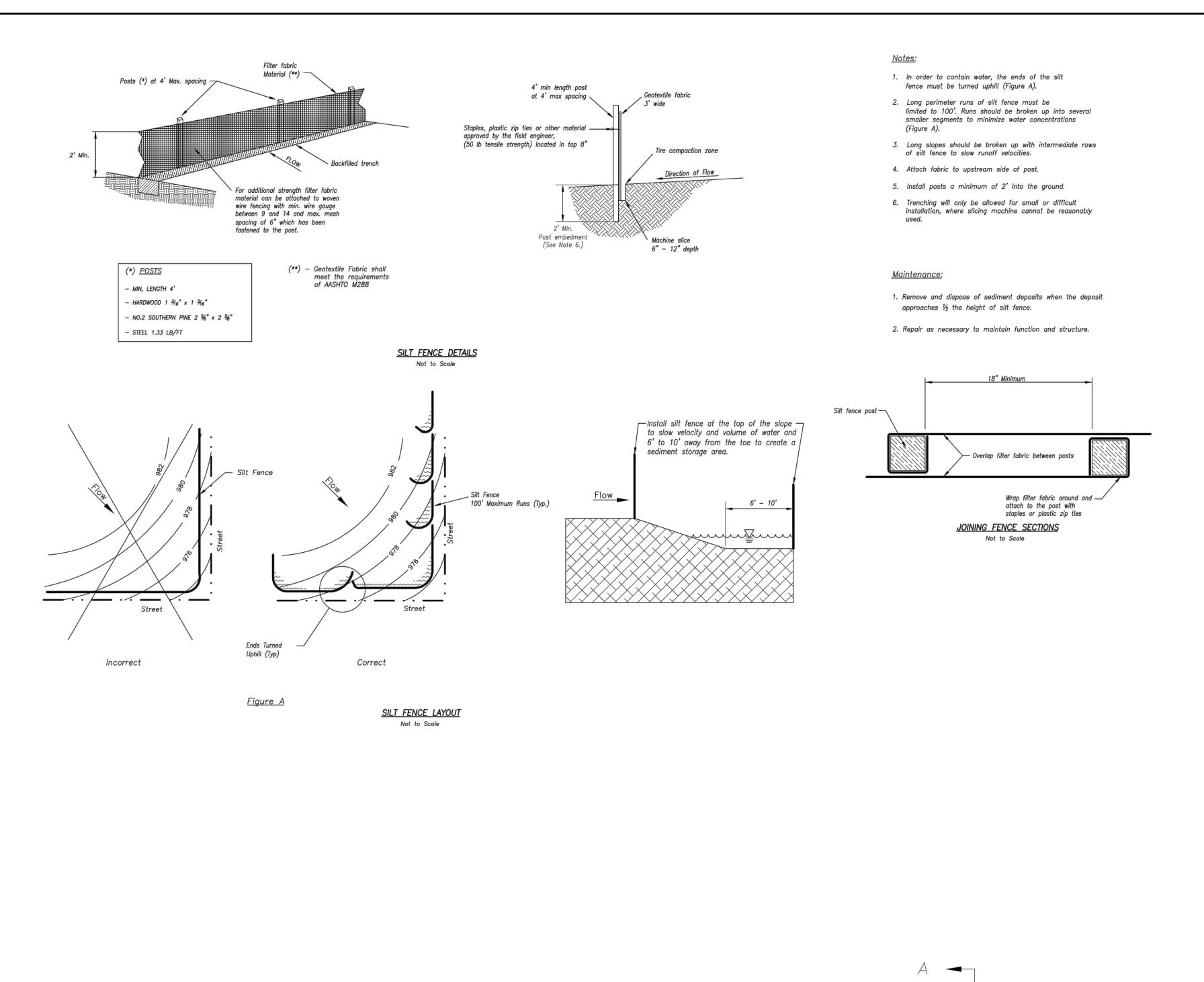
M SEWER PLANS

D SEDIMENT

DETAILS GRADING, EROSIG AND STORM

MASS GI PAVING DESIGNER / DRAFTER MDM/AJM DATE 11/20/2019 PROJECT NUMBER

0318050.02 BOOK AND PAGE SHEET



Existing Ground —

CONSTRUCTION ENTRANCE

Existing Pavement

Non-Woven Geotextile

Non-Woven Geotextile

50' Min.

2-3" Coarse

* - Must extend full width of

ingress and egress operation

- Washrack / Rumble Strip

(Optional)

Positive drainage

<u>Plan View</u>

Not to Scale

Sediment Trapping Device

Existing Ground —

50' Min.

6" Min.

Side Elevation

20' Min.

Section A-A

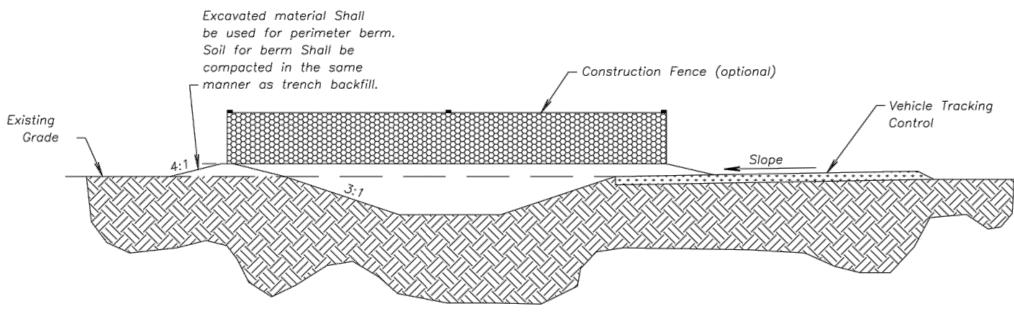
Not to Scale

Notes for Concrete Washout:

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

Maintenance for Concrete Washout:

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



CONCRETE WASHOUT

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.

— Mountable Berm (Optional)

- 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.

Accepted Record Drawings

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.

AMERICAN PUBLIC WORKS ASSOCIATION



SILT FENCE

CONSTRUCTION ENTRANCE

AND CONCRETE WASHOUT

KANSAS CITY METRO CHAPTER

STANDARD DRAWING NUMBER ESC-03 ADOPTED:

10/24/2016 STANDARD DRAWING NUMBER ESC-OI

ADOPTED: 10/24/2016 MDM/AJM DATE 11/20/2019 0318050.02 BOOK AND PAGE SHEET

PE - 2008019568 REVISIONS 01/07/2020 PER CITY COMMENTS 03/25/2020 PER CITY COMMENTS

MO CERT. NO. 2013011903

03/25/2020

MARK DANIEL MCGHEE JR.

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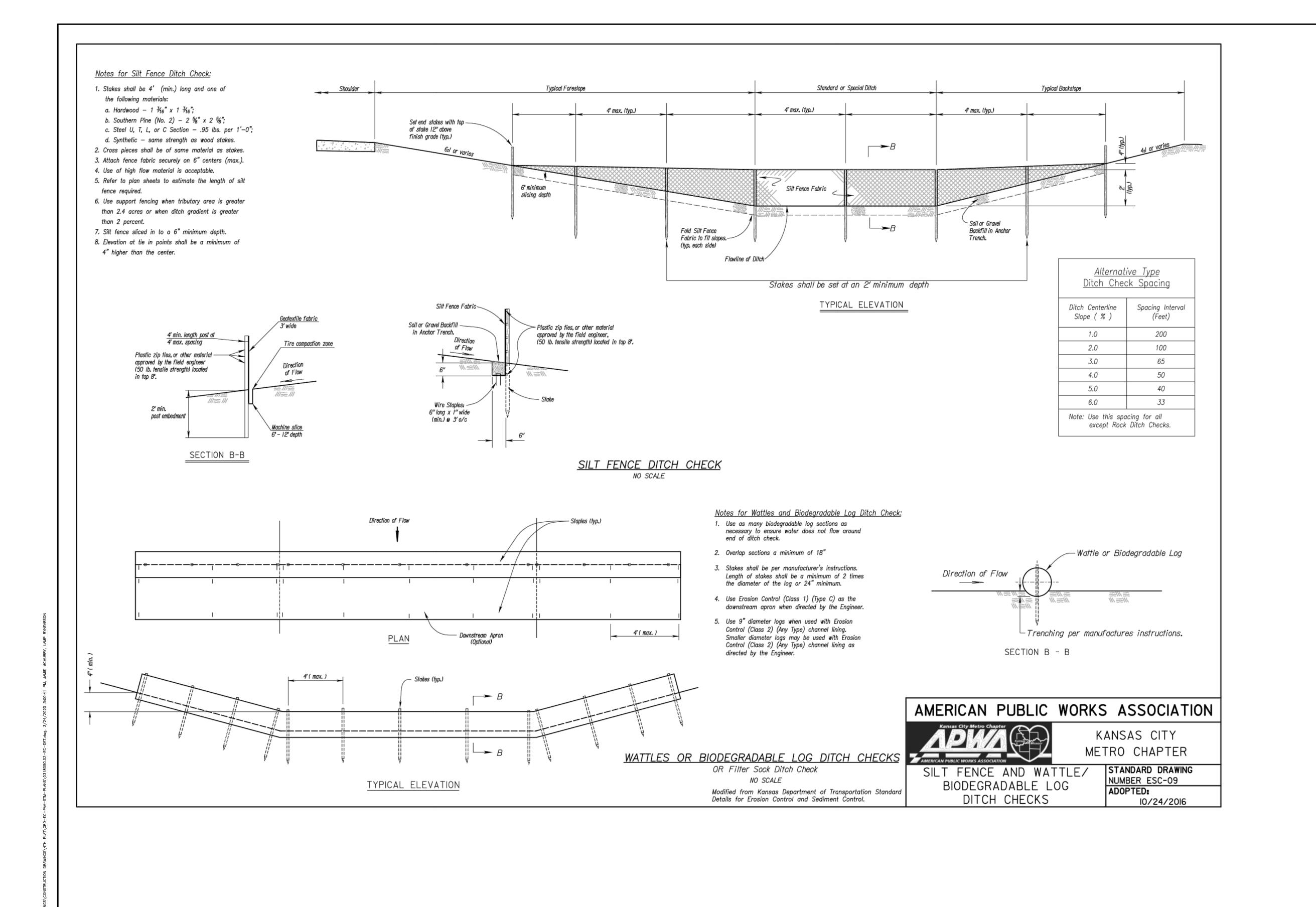
ROSION CONTROL,

M SEWER PLANS

D SEDIMENT

DETAILS GRADING, EROSIG AND STORM EROSION AND

DESIGNER / DRAFTER PROJECT NUMBER



Accepted Record Drawings

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.

DESIGNER / DRAFTER

MASS GRADING, EROS

DESIGNER / DRAFTER

MMASS GRADING, EROS

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MMASS GRADING, EROS

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EROSION CONTROL,
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AND SEDIMENT
OL DETAILS

MO CERT. NO. 2013011903

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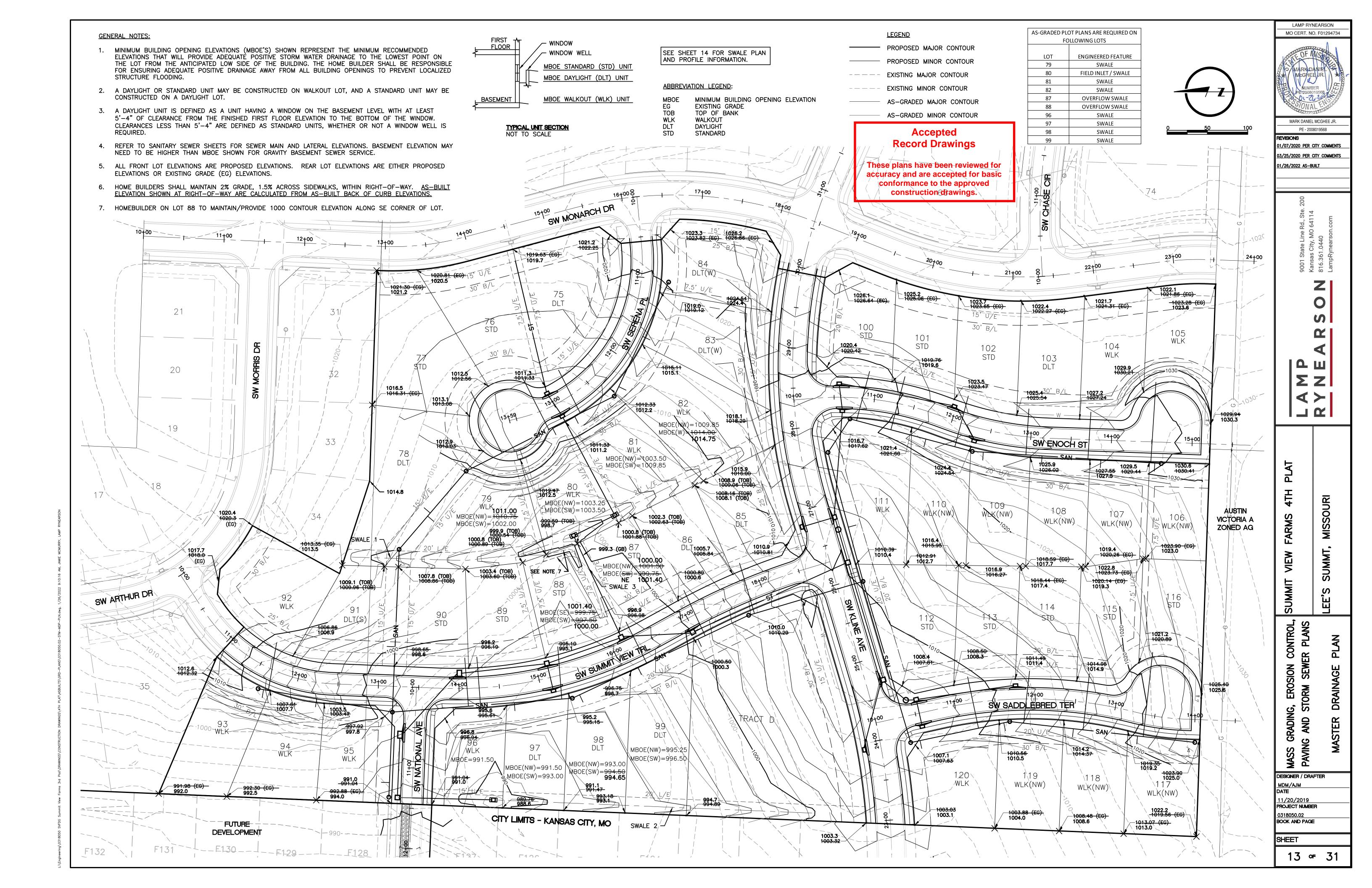
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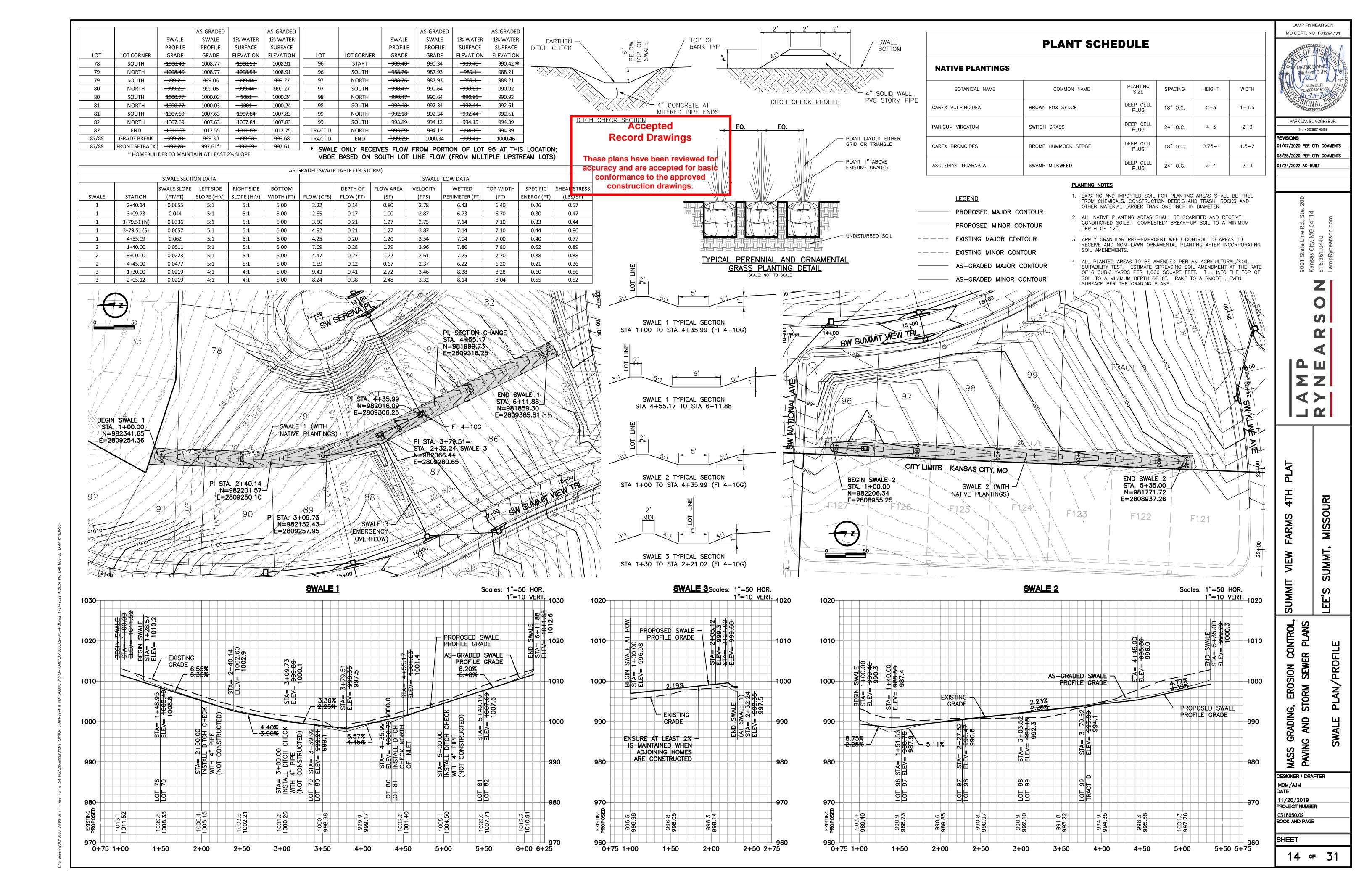
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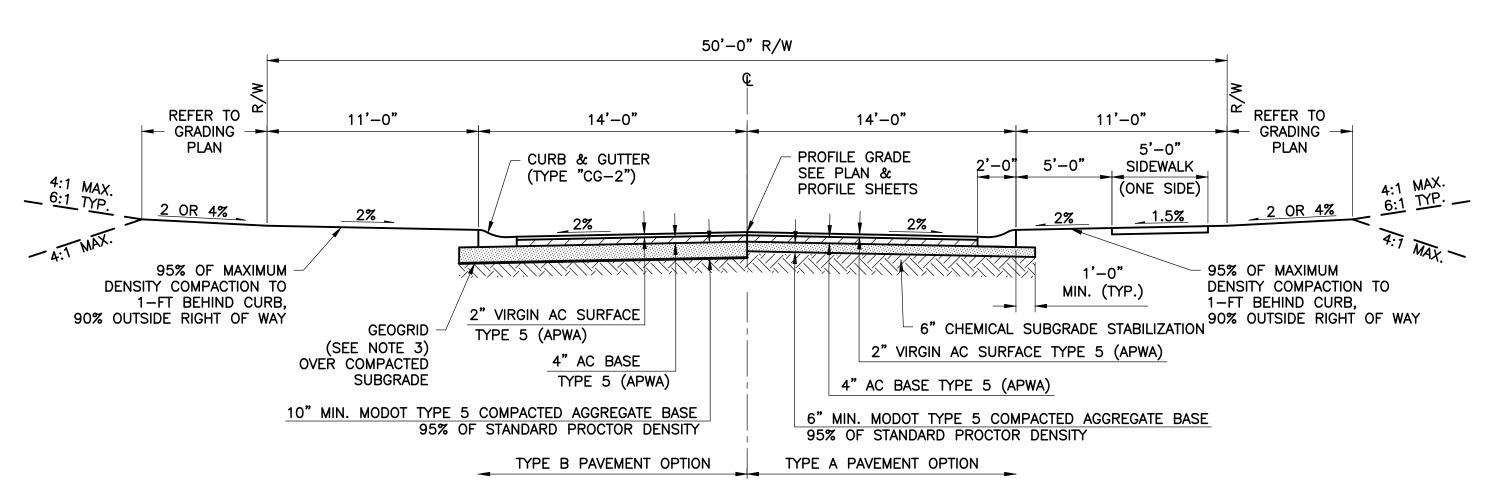
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REVISIONS

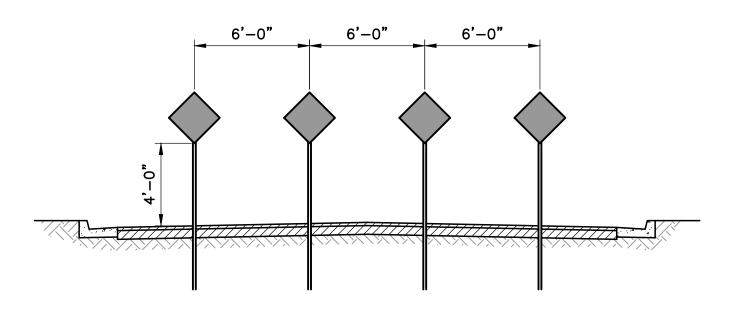




TYPICAL 36' COLLECTOR STREET SECTION NOT TO SCALE



TYPICAL 28' LOCAL/ACCESS STREET SECTION
NOT TO SCALE



TYPE OM4-3 END PAVEMENT MARKERS NOT TO SCALE

- 1. TYPE OM4-3 OBJECT MARKERS (SIZE 18"x18") ARE TO BE INSTALLED AT THE TERMINATION POINTS OF SW NATIONAL AVE. AND SW KLINE AVE.
- 2. SIGN INSTALLATION AND MATERIALS TO CONFORM TO THE CITY OF LEE'S SUMMIT STANDARD DESIGN CRITERIA.

GENERAL NOTES

- 1. REFER TO LEE'S SUMMIT STANDARD DETAIL GEN-4 FOR CURB SECTIONS AND ADDITIONAL NOTES. SEE SHEET 29 OF 31.
- 2. GEOGRID MUST MEET SPECIFICATIONS OF LEE'S SUMMIT SECTION 2200, 2201.6.C.
- 3. MATERIAL DEPTHS PROVIDED ARE CITY'S ABSOLUTE MINIMUM ACCEPTABLE DEPTHS.
- 4. ALL SIDEWALK SHOWN ALONG TRACTS SHALL BE CONSTRUCTED DURING PUBLIC INFRASTRUCTURE CONSTRUCTION.
- 5. ADA ACCESSIBLE RAMPS SHALL BE CONSTRUCTED DURING PUBLIC INFRASTRUCTURE CONSTRUCTION.

MO CERT. NO. 2013011903

OF MISSON
MARK DANIEL
McGHER IR

NUMBER
PE-2008019568

LAMP RYNEARSON

03/25/2020

MARK DANIEL MCGHEE JR.

PE - 2008019568

REVISIONS

01/07/2020 PER CITY COMMENTS

03/25/2020 PER CITY COMMENTS

001 State Line Rd., Ste. 20 ansas City, MO 64114 16.361.0440

LAMP RYNEARSO

MIT VIEW FARMS 4TH PLAT S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL,
PAVING AND STORM SEWER PLANS
TYPICAL STREET SECTION
AND DETAILS

DESIGNER / DRAFTER
MDM/AJM
DATE

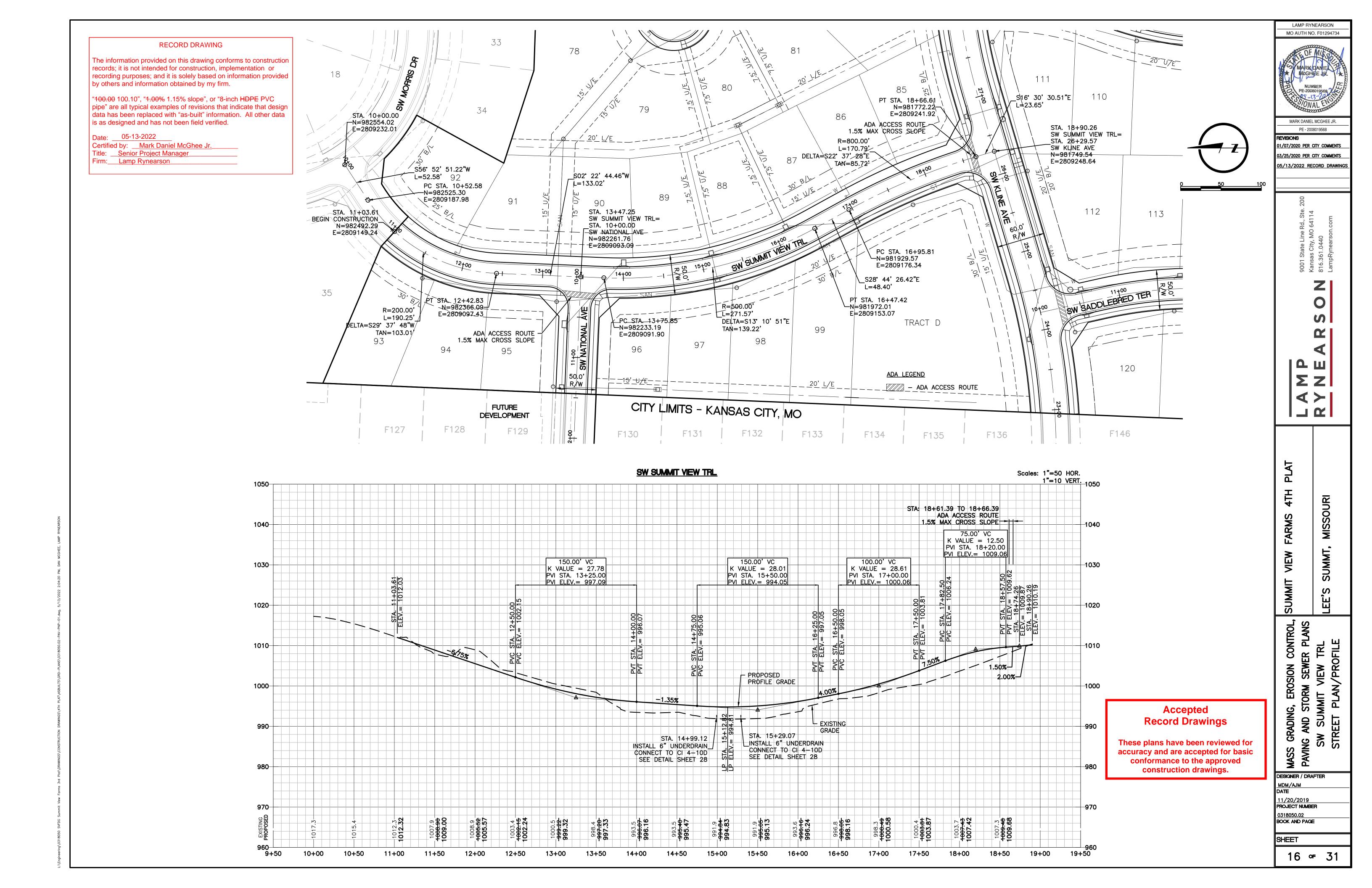
11/20/2019 PROJECT NUMBER 0318050.02 BOOK AND PAGE

SHEET

15 ∘ 31

Accepted Record Drawings

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.



RECORD DRAWING

The information provided on this drawing conforms to construction records; it is not intended for construction, implementation or recording purposes; and it is solely based on information provided by others and information obtained by my firm.

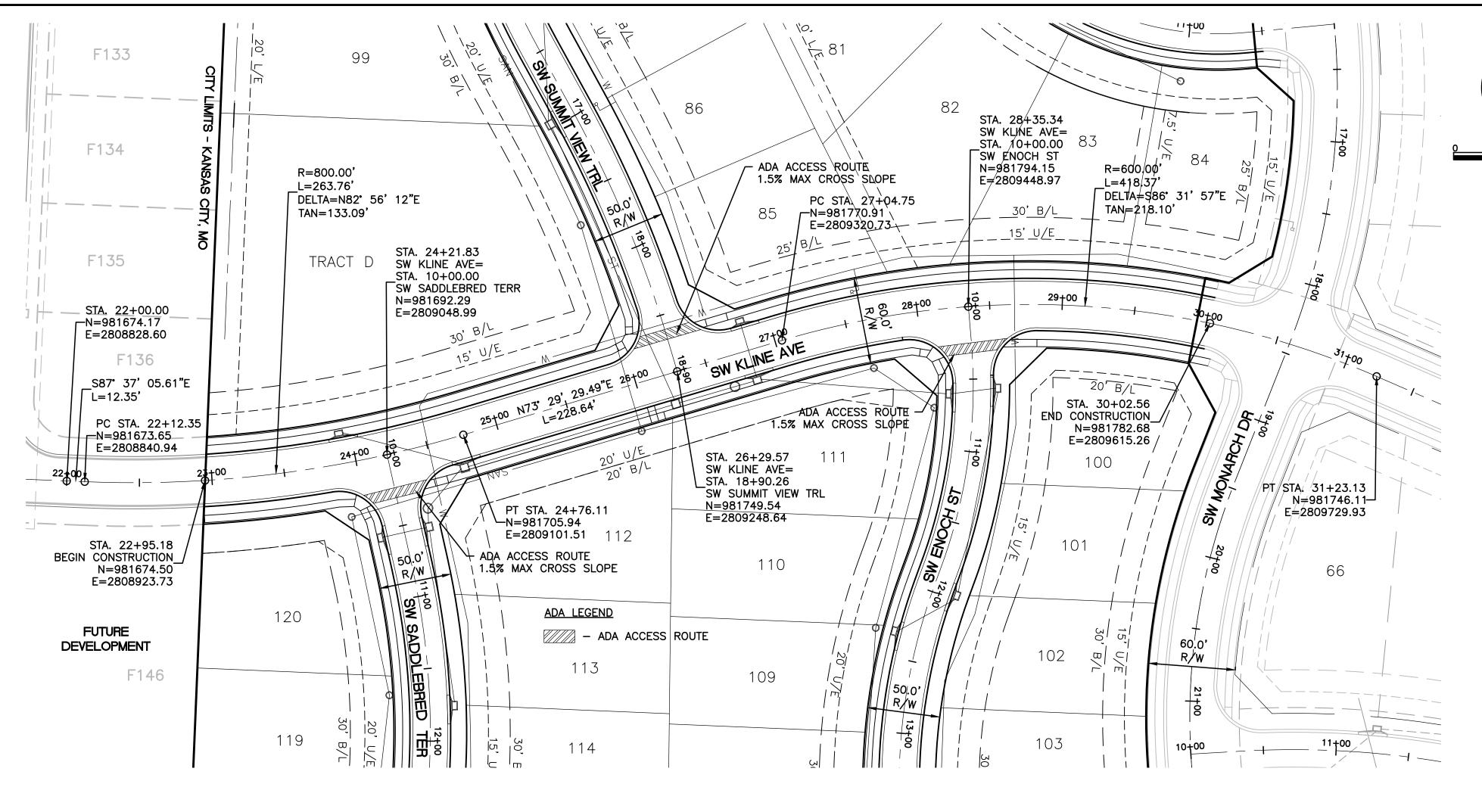
"100.00 100.10", "1.00% 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

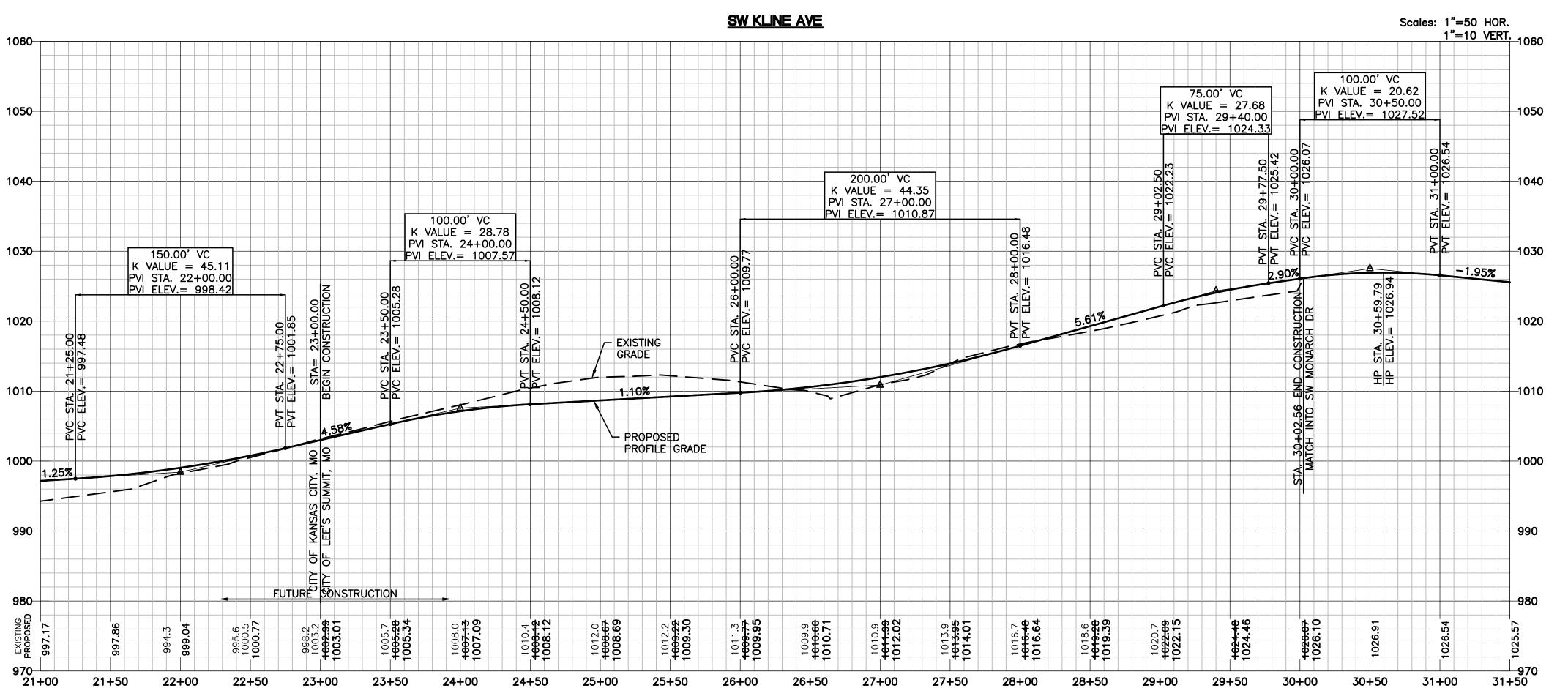
Date: 05-13-2022

Certified by: __Mark Daniel McGhee Jr.

Title: __Senior Project Manager_

Firm: <u>Lamp Rynearson</u>





Accepted **Record Drawings**

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.

LAMP RYNEARSON MO AUTH. NO. F01294734

MARK DANIEL MCGHEE JR. PE - 2008019568 REVISIONS

01/07/2020 PER CITY COMMENTS 03/25/2020 PER CITY COMMENTS 05/13/2022 RECORD DRAWINGS

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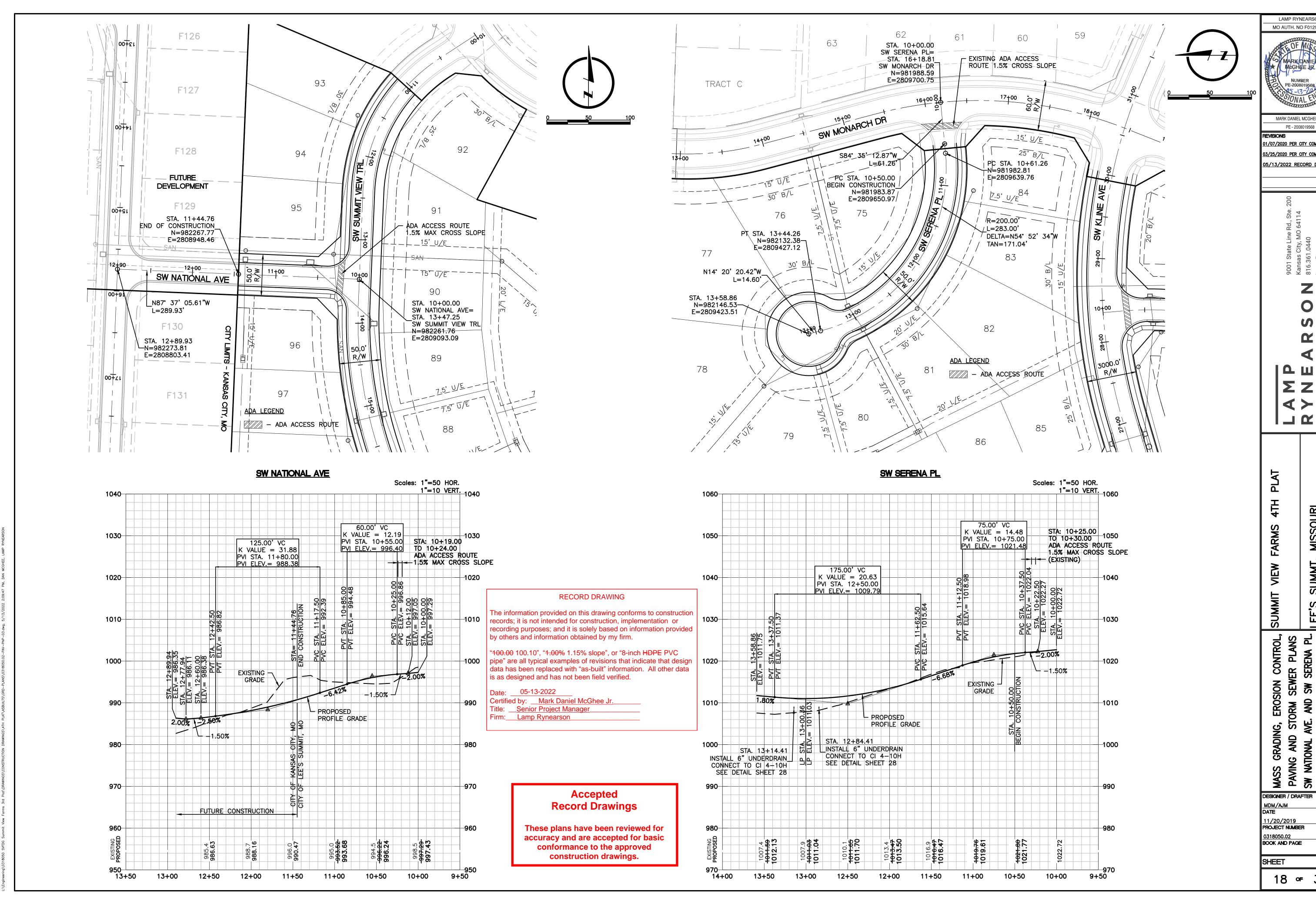
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STROM AND **PAVING**

DESIGNER / DRAFTER MDM/AJM 11/20/2019 PROJECT NUMBER

0318050.02 BOOK AND PAGE

SHEET 17 ∘ 31



LAMP RYNEARSON MO AUTH. NO F01294734

MARK DANIEL MCGHEE JR. PE - 2008019568

01/07/2020 PER CITY COMMENTS 03/25/2020 PER CITY COMMENTS 05/13/2022 RECORD DRAWING

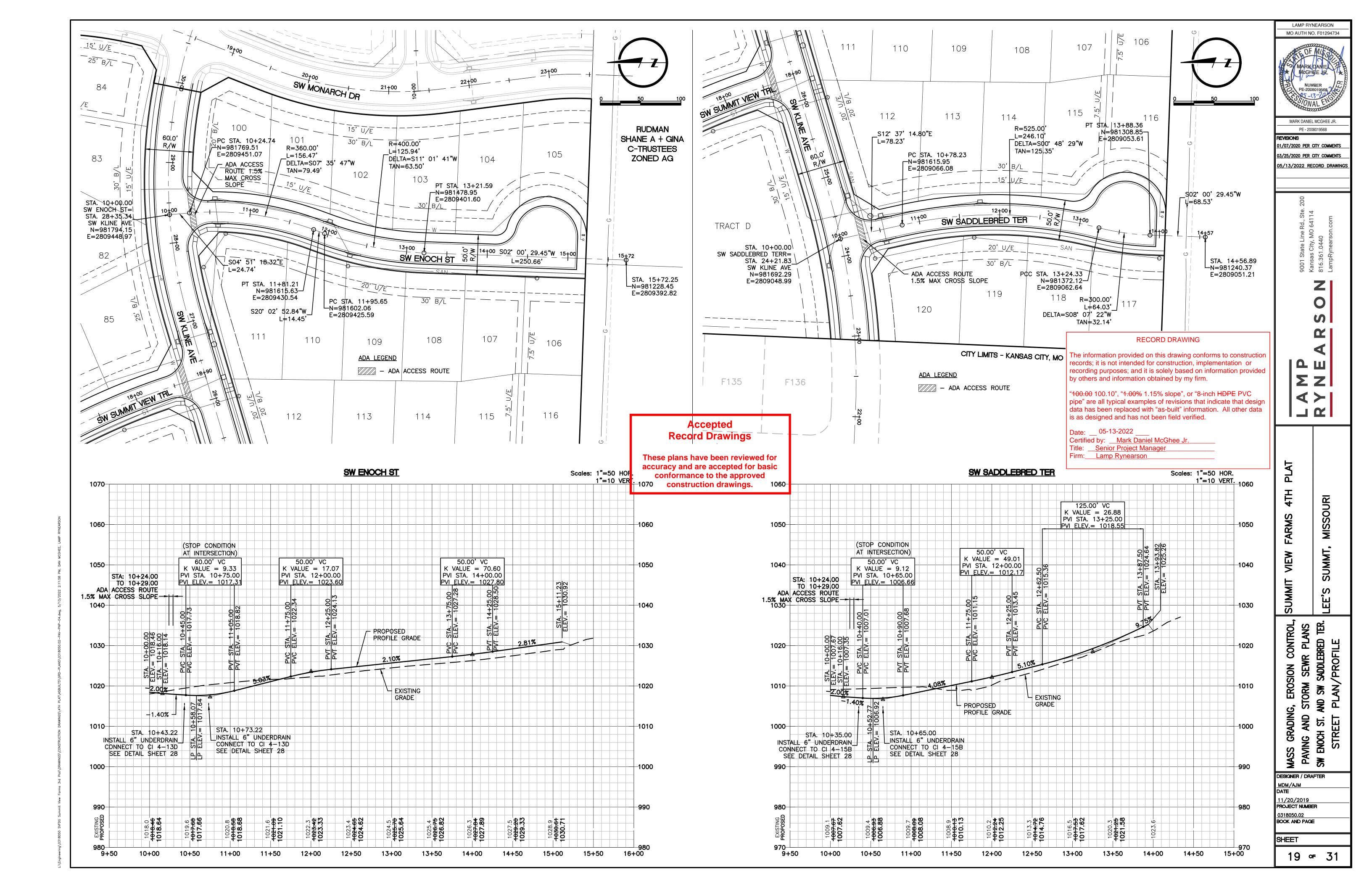
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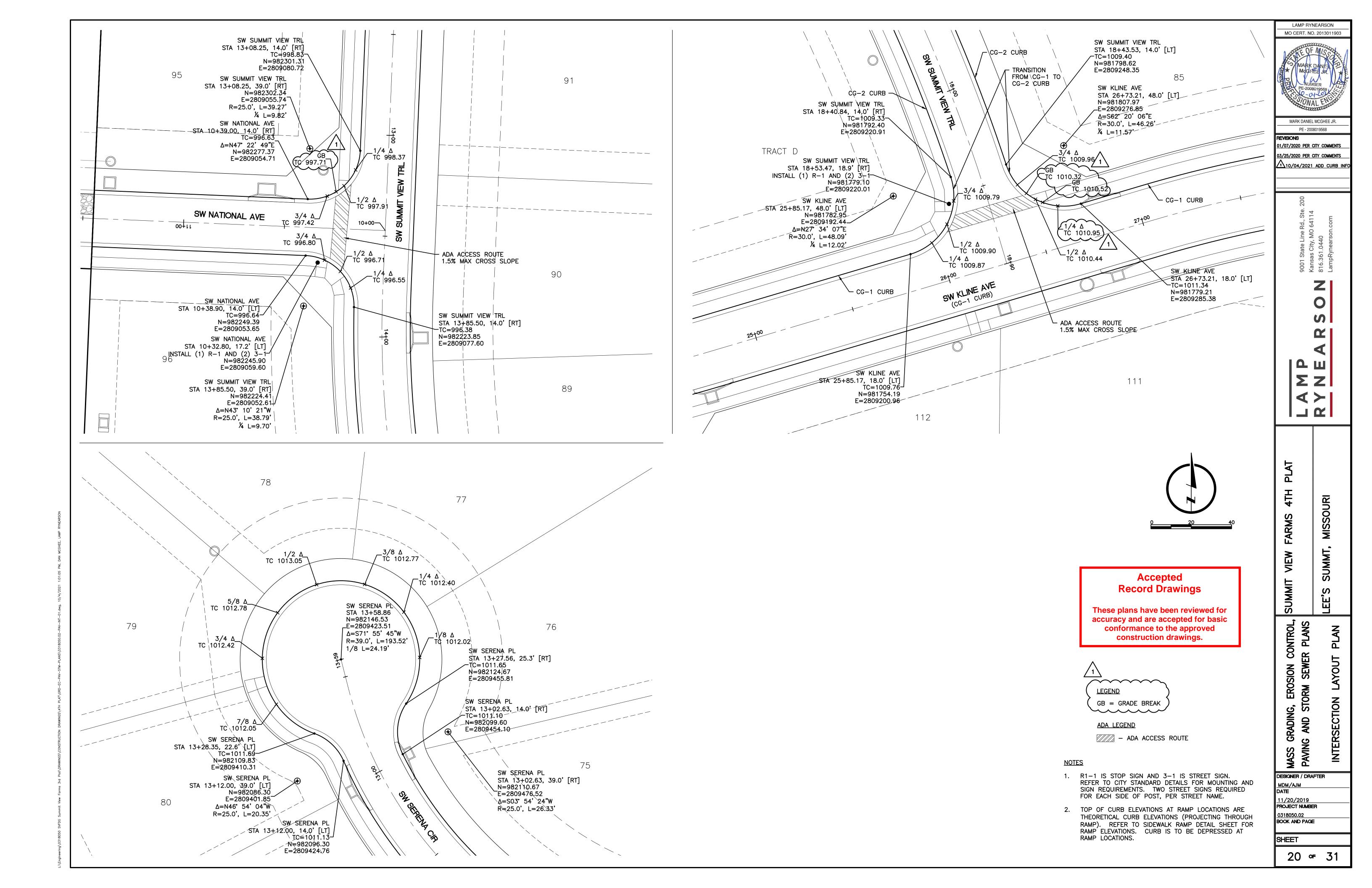
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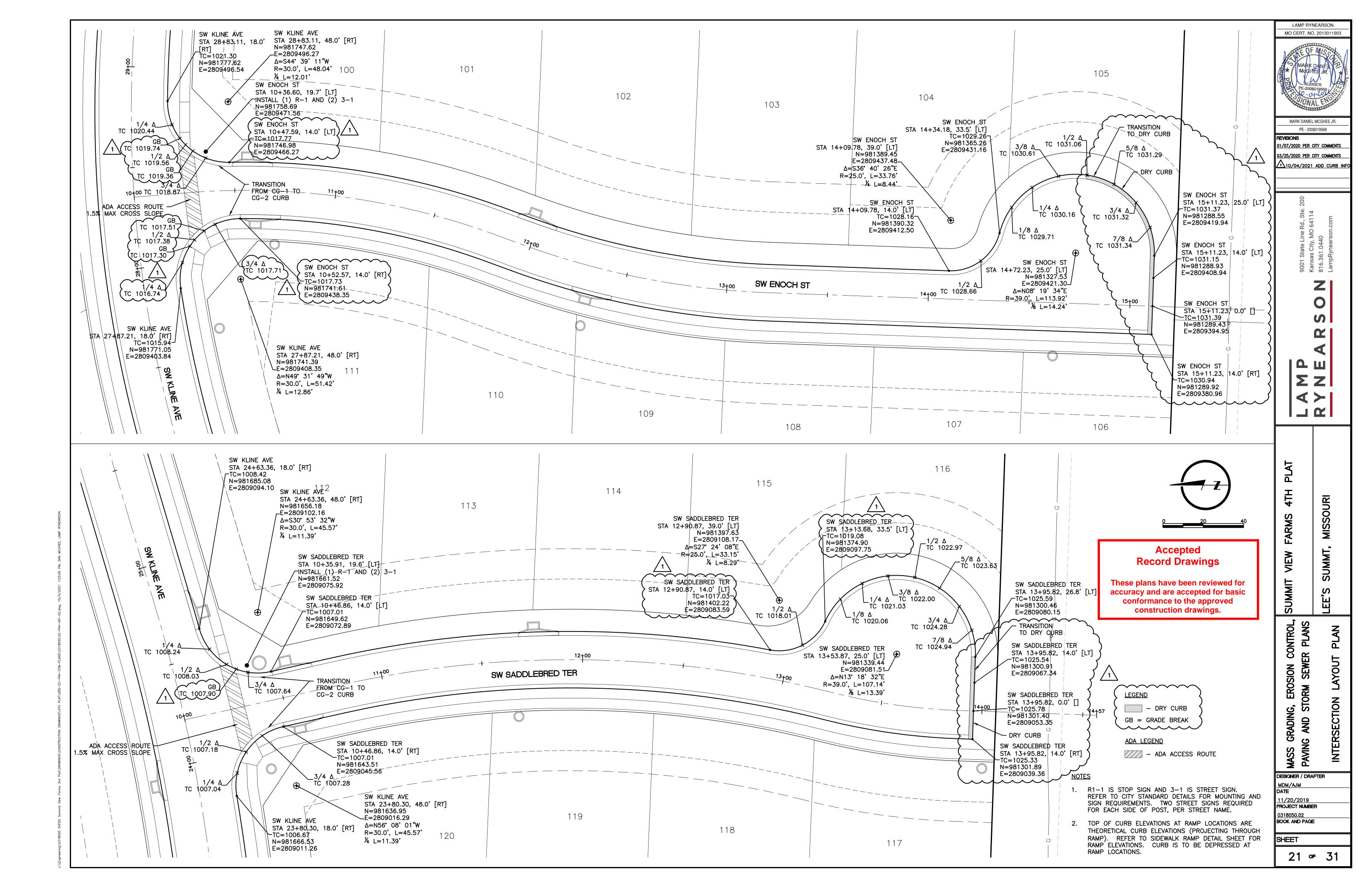
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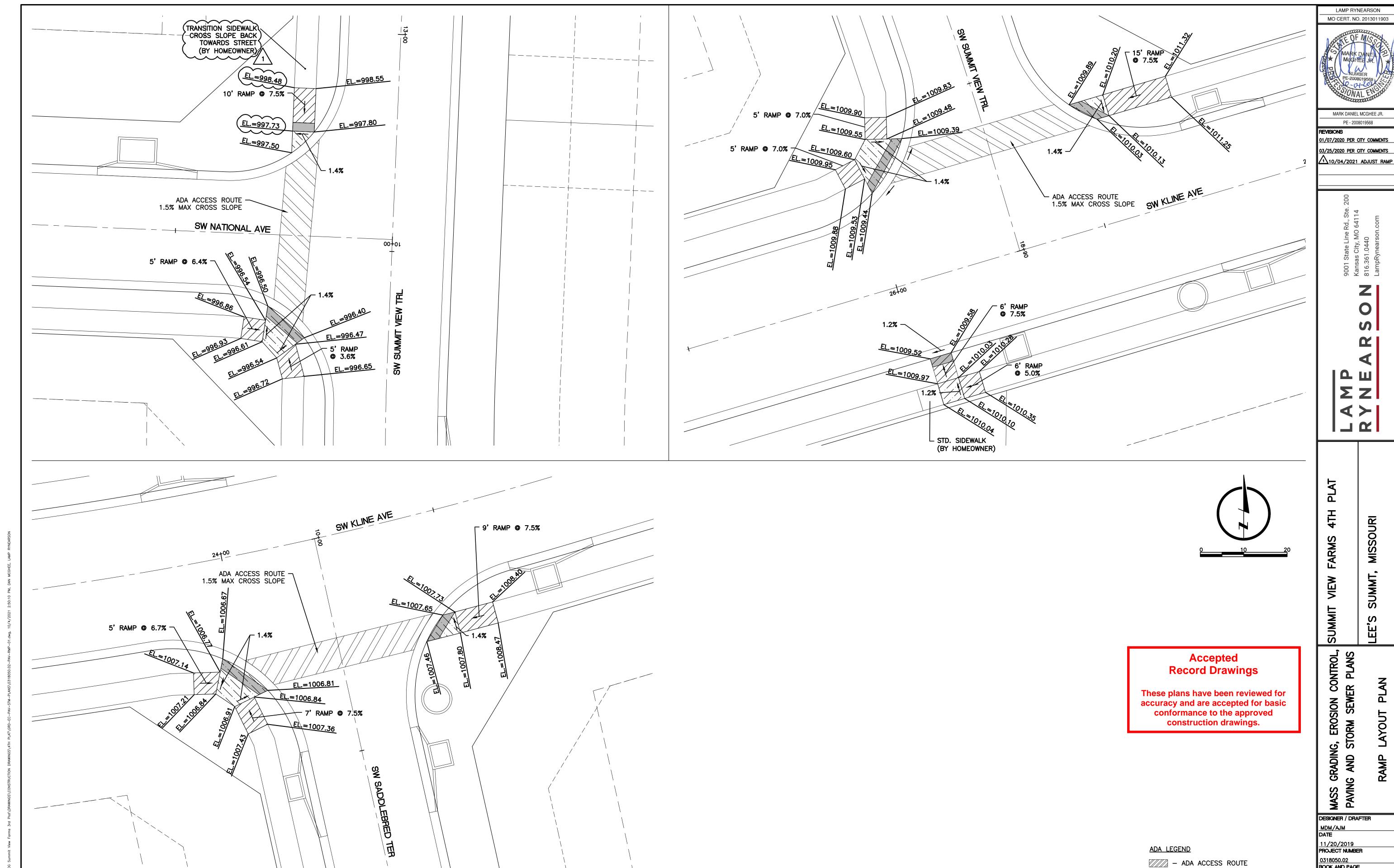
DESIGNER / DRAFTER

11/20/2019 PROJECT NUMBER BOOK AND PAGE





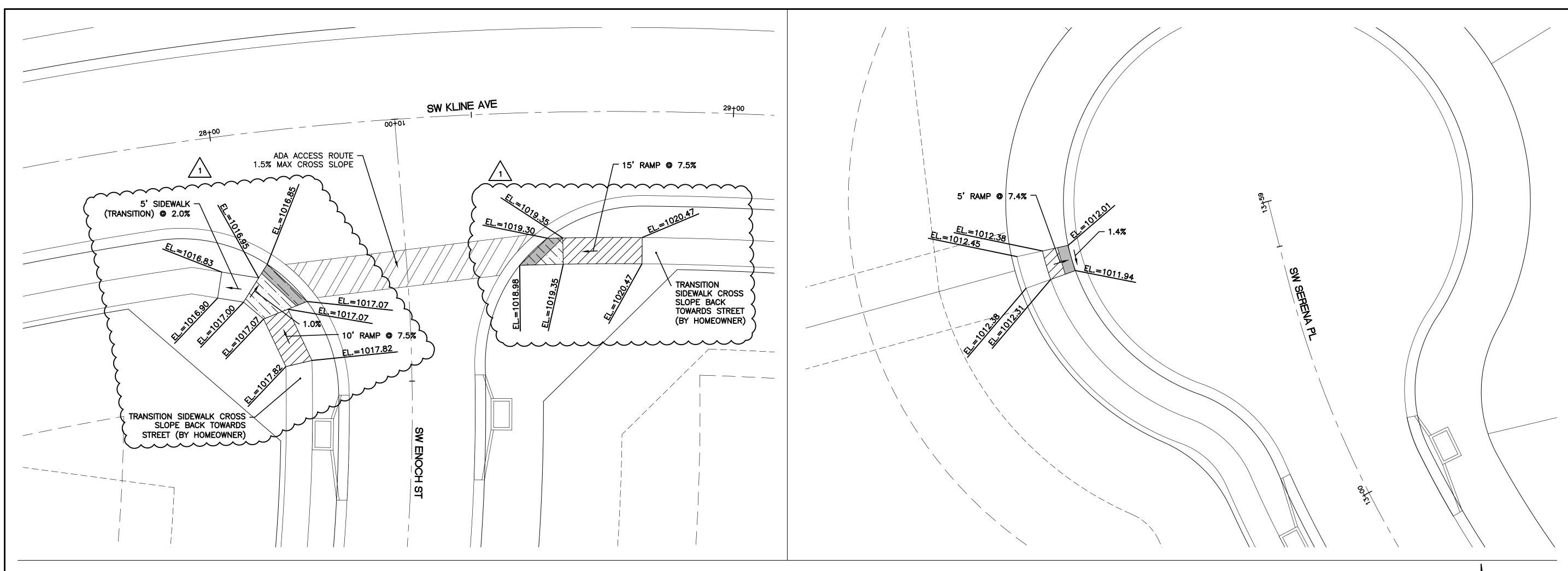


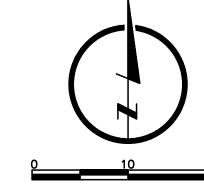


01/07/2020 PER CITY COMMENTS 03/25/2020 PER CITY COMMENTS

0318050.02 BOOK AND PAGE

SHEET





Accepted Record Drawings

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.

ADA LEGEND — ADA ACCESS ROUTE MO CERT. NO. 2013011903

LAMP RYNEARSON

PE - 2008019568

REVISIONS 01/07/2020 PER CITY COMMENTS 03/25/2020 PER CITY COMMENTS 10/04/2021 ADJUST RAMP

0 S

4TH FARMS VIEW

SUMMIT

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS

DESIGNER / DRAFTER

11/20/2019 PROJECT NUMBER 0318050.02 BOOK AND PAGE

SHEET



0.37

1.44

0.00

0.00

1.00

0.35

12.00 0.25 0.27 0.60 5.00 7.35 1.0 1.19

0.19

0.73

0.00

0.00

0.45

6.75

6.75

6.75

7.60

97.65

106.14

77.84

170.56

0.0092

0.0085

0.0347

0.0103

0.013

0.013

0.013

0.013

0.013

96.50

187.42

10.03

9.64

19.48

10.61

0.18

0.18

0.07

0.27

42

0.51

0.51

0.51

0.00

0.45

4-10E

4-10D

4-10B

SPREAD CALCULATIONS

5-10B W KCMO

G	216.09	0.0104 48	0.013	146.49 11.66	0.31	9.10 0.20	40.90		80.32	7.37	981.39	980.53	985.08	983.18
돐 <u>5-10C</u> 0.51 5.69 2.90 10.71	173.42	0.0202 48	0.013	204.16 16.25	0.18	9.47 6.19	66.33	8.75 1	117.14	7.74	978.72	976.21	980.92	979.22
S 5-10B 0.53 0.00 0.00 10.71						9.65 6.15	65.91	8.69 1	116.43	9.38	974.29	973.62	978.35	+
∑ 5-10A	83.81	0.006 48	0.013	111.27 8.85	0.16	9.80				9.38	974.29	973.62	978.35	977.44
								01 1		c N				
Cross 10-yr Allowable Road Drainage Weighted Total Inlet intensity 10-yr Cross Cro	10-yr Byp	ass to Bypass to	Total	Inlet	Manning's Sti	eet Street Dista	Total nce Length of	Street Grade on Stre	Depth of Elow at		Spread of Flow at Inl		Intercept Ratio Inl	nlet Bypass
Inlet Street Street Station Spread Slope Area C Time (in/hr) Value		ass to Bypass to et (ID) Inlet (cfs)		pe Condition Curb Type	9	e PC Grade PT to P	_	Curve at X Slope			Curb Len		27.07	nlet Bypass acity Flow
4-10I S Serena 13+01.50, 15.5' RT 12.00 0.25 0.52 0.51 5.00 7.35 1.0	1.95	ot (IB) milet (OIS)	1.95 CI	1 A		180 0.0668 86.0					8.80 5	5 4		.95 0.00
4-10I N Serena 13+01.50, 15.5' RT 12.00 0.25 1.14 0.51 6.97 6.79 1.0	3.95		3.95 CI	1 A		180 -0.0180 1.0		-0.018 0.0			11.52 5	5 4		.95 0.00
4-10H S Serena 12+97.62, 15.5' LT 12.00 0.25 0.74 0.60 5.00 7.35 1.0	3.26		3.26 CI	1 A		180 0.0668 89.8		0.025553 0.0	0.182		10.24 5	4 د	1.000 3.2	
4-10H N Serena 12+97.62, 15.5' LT 12.00 0.25 0.65 0.60 5.00 7.35 1.0	2.87		2.87 CI	1 A		180 -0.0180 1.0		-0.018 0.0		_	10.39 5	' 4	1.000 2.8	
4-10G Summit View 16+82.42, 155.5' LT 12.00 0.25 0.85 0.45 7.32 6.70 1.0	2.56		2.56 FI	1 A		100 0.0100 1.0		0.01 0.0			N/A 5	5 4		.56 0.00
4-10F Summit View 16+15.56, 157.2' LT 12.00 0.25 0.74 0.45 6.56 6.90 1.0	2.30		2.30 FI	1 A	0.014 0.0	100 0.0100 1.0	0 1.00	0.01 0.0	0.190	0.219	N/A 5	5 4	1.000 2.3	.30 0.00
4-13G Enoch 12+32.92, 15.5' RT 12.00 0.25 0.55 0.60 5.00 7.35 1.0	2.43		2.43 CI	2 1	0.014 0.0	210 0.0210 1.0	0 1.00	0.021 2.1	0 0.169	0.219	9.61 5	5 5	0.779 1.8	.89 0.54
4-13G Enoch 12+32.92, 13.5 KT 12.00 0.25 0.35 0.60 5.00 7.35 1.0 4-13F Enoch 11+96.78, 15.5 LT 12.00 0.25 0.84 0.51 5.46 7.21 1.0	3.09		3.09 CI	2 A		210 0.0210 1.0		0.021 2.1			10.38	5 5		.25 0.84
4-13E Enoch 10+56.25, 15.5' LT 12.00 0.25 0.41 0.51 5.08 7.33 1.0		13F 0.84	2.37 CI	1 A		503 0.0503 1.0		0.0503 0.0			8.33	5 4	1.000 2.3	
4-13D Enoch 10+60.37, 15.5' RT 12.00 0.25 0.26 0.60 5.00 7.35 1.0		13G 0.54	1.68 CI	1 A		503 0.0503 1.0		0.0503 0.0			7.50 5	5 4	1.000 1.0	
4-13C Kline 26+80.71, 19.5' RT 12.00 0.25 0.35 0.55 5.15 7.31 1.0		13D 0.00	1.41 Ci	2 B		110 0.0561 80.7					6.88 5	5 5		.36 0.05
4-14A Kline 26+80.72, 19.5' LT 12.00 0.25 0.38 0.60 5.00 7.35 1.0	1.68		1.68 CI	2 B	0.014 0.0	110 0.0561 80.7	72 200.00	0.029202 2.9	0.138	0.236	7.31 5	5 5	0.946 1.5	.59 0.09
4404 0 1111 1 44 70 40 45 5117 40 00 005 4 00 0 054 7 04 0 70	5.40		5 40 01		0.044	100 00510 1.1	0 50.00	0.044007	0.000	0.040	11.01		0.400	44 0.00
4-16A Saddlebred 11+76.16, 15.5' LT 12.00 0.25 1.60 0.51 7.21 6.73 1.0	5.49		5.49 CI	2 A	0.014 0.0	408 0.0510 1.1	6 50.00	0.041037 4.1	0.202	0.219	11.21	5 5	0.439 2.4	41 3.08
4-17A Kline 23+91.77, 19.5' LT 12.00 0.25 0.22 0.60 5.00 7.35 1.0	0.97		0.97 CI	2 R	0.014 0.0	458 0.0110 41.7	77 100.00	0.031264 3.1	3 0 111	0.236	6.01 5	5 5	0.986 0.9	.96 0.01
4-17A Rillie 23+91.77, 19.5 E1 12.00 0.25 0.22 0.00 5.00 7.55 1.0	0.91		0.91	Z D	0.014 0.0	436 0.0110 41.1	100.00	0.031204 3.1	0.111	0.230	0.01	, J	0.980 0.5	90 0.01
4-15C Saddlebred 10+54.86, 15.5' RT 12.00 0.25 0.65 0.60 5.00 7.35 1.0	2.87		2.87 CI	1 A	0.014 0.0	408 0.0408 1.0	0 1.00	0.0408 0.0	0.159	0.219	9.12 5	5 4	1.000 2.8	.87 0.00
4-15B S Saddlebred 10+54.86, 15.67' LT 12.00 0.25 0.82 0.51 7.86 6.56 1.0		16A 3.08	5.82 CI	1 A	0.014 0.0			0.0408 0.0			11.44 5	5 4		.82 0.00
4-15B N Saddlebred 10+54.86, 15.67' LT 12.00 0.25 0.07 0.65 5.00 7.35 1.0	0.33 4-	15A 0.17	0.50 CI	1 A	0.014 -0.0	140 -0.0140 1.0	0 1.00	-0.014 0.0	0.101		6.34 5	4 د	1.000 0.5	.50 0.00
4-15A Kline 24+70.68, 19.5' RT 12.00 0.25 0.82 0.51 7.39 6.68 1.0	2.79 4-	13C 0.05	2.85 CI	2 B	0.014 0.0	110 0.0110 1.0	0 1.00	0.011 1.1	0 0.202	0.236	10.39 5	5 5	0.942 2.0	.68 0.17
4-13B Kline 26+12.30, 21.0' RT 12.00 0.25 0.00 0.51 5.00 7.35 1.0	0.00		0.00 JB	2 B	0.014 0.0						N/A 5	5 5		.00 0.00
4-13A Summit View 16+97.49, 15.5' RT 12.00 0.25 0.17 0.60 5.00 7.35 1.0 4-13A (PIPE) Summit View 16+97.49, 15.5' RT 12.00 0.25 0.45 0.65 5.00 7.35 1.0	0.75 2.15		0.75 Cl 2.15 JB	2 A		400 0.0700 47.7 400 0.0700 47.7					5.87 5 N/A 5	5 1		.65 0.10 .15 0.00
4-13A (FIFE) Sulfillit view 10+97.49, 13.5 KT 12.00 0.25 0.45 0.09 5.00 7.35 1.0	2.10		2.15 JB	I A	0.014 0.0	400 0.0700 47.1	19 100.00	0.054557 0.0	0.133	0.219	IVA	4	1.000 2.	.15 0.00
4-12A S Summit View 15+14.12, 15.5' RT 12.00 0.25 0.28 0.60 5.00 7.35 1.0	1 24 4-	13A 0 10	1.34 CI	1 A	0.014 -0.0	135 0 0400 89	12 150 00	0.018286 0.0	0 0 139	0.219	8 16	5 4	1.000 1.3	34 0.00
4-12A N Summit View 15+14.12, 15.5' RT 12.00 0.25 0.21 0.60 5.00 7.35 1.0	0.93		0.93 CI	1 A		135 -0.0135 1.0		-0.0135 0.0			7.64 5	5 4		.93 0.00
4-11A National 11+36.91, 101.1'LT 12.00 0.25 1.29 0.45 6.39 6.95 1.0	4.03		4.03 FI	1 A	0.014 0.0	100 0.0100 1.0	0 1.00	0.01 0.0	0.235	0.219	N/A 5	4	1.000 4.0	.03 0.00
4-10E Summit View 16+15.59, 15.5' LT 12.00 0.25 0.79 0.51 6.31 6.97 1.0		14A 0.09	2.90 CI	2 A		135 0.0400 140.					9.31 5	5	0.648 1.8	
4-10D S Summit View 15+14.12, 15.5' LT 12.00 0.25 0.36 0.51 5.00 7.35 1.0 4-10D N Summit View 15+14.12, 15.5' LT 12.00 0.25 0.37 0.51 5.00 7.35 1.0		10E 1.02	2.37 CI	1 A			12 150.00			_	9.75	5 4		.37 0.00
4-10D N Summit View 15+14.12, 15.5' LT 12.00 0.25 0.37 0.51 5.00 7.35 1.0 4-10C Summit View 14+00.60, 15.67' LT 12.00 0.25 1.00 0.51 6.59 6.89 1.0	1.39 4- 3.52	10C 0.82	2.21 Cl 3.52 Cl	1 A A		135 -0.0135 1.0 135 -0.0135 1.0				_	10.00 5 11.62 5	5 5		.21 0.00 .70 0.82
4-10B National 10+59.54, 15.67' RT 12.00 0.25 0.44 0.60 5.00 7.35 1.0	1.94		1.94 CI	2 A		150 -0.0642 25.0					8.26	5 5		.46 0.49
4-10A National 11+37.38, 17.7' RT 12.00 0.25 0.00 0.51 5.00 7.35 1.0	0.00		0.00 JB	2 A		642 -0.0250 20.0					N/A 5	5 5		.00 0.00
5-11A (FUT) KCMO 13+88.91, 15.5' LT 12.00 0.25 1.00 0.45 6.84 6.82 1.0	3.07		3.07 CI	2 A	0.014 0.0	125 0.0125 1.0	0 1.00	0.0125 1.2	25 0.203	0.219	11.26	5 5	0.803 2.4	.47 0.61
5-10 (FUT) KCMO piped flow from south 12.00 0.25 4.54 0.51 7.67 6.61 1.0	15.30		15.30 JB	1 A		100 -0.0100 1.0		-0.01 0.0			N/A 5	5 4		5.30 0.00
5-10D KCMO 15+56.88, 18.0' RT 12.00 0.25 0.00 0.51 5.00 7.35 1.0	0.00		0.00 JB	2 A		100 -0.0100 1.0		-0.01 1.0			N/A 5	5 5		.00 0.00
5-10C KCMO 13+40.79, 15.5' RT 12.00 0.25 0.35 0.60 5.31 7.26 1.0	1.52		1.52 CI	2 A	0.014 0.0	125 0.0125 1.0	0 1.00	0.0125 1.2	25 0.156	0.219	9.01 5	5 5	0.900 1.3	.37 0.15

8.30

8.46

8.82

8.89

6.42

6.34

6.32

6.26

9.11

76.42

75.94

75.45

84.79

7.24

9.06

9.00

8.94

8.92

991.42

990.07

988.23

985.22

983.11

989.91

983.47

994.19

993.37

991.75

988.88

987.45

993.42

992.36

990.67

988.05

985.40

38.84

43.33

43.04

42.75

48.04

1.19 Cl 1 A 0.014 -0.0302 -0.0302 1.00 1.00 -0.0302 0.00 0.121 0.219 7.30 5 4 1.000 1.19 0.00

Accepted

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.

LAMP RYNEARSON MO CERT. NO. 2013011903 MARK DANIEL
MCGHEE JR
NUMBER
PE-20080195668

MARK DANIEL MCGHEE JR.

PE - 2008019568 REVISIONS 01/07/2020 PER CITY COMMENTS

03/25/2020 PER CITY COMMENTS 10/02/2020 ADDED HDS UNITS

9001 State Line R Kansas City, MO (816.361.0440 LampRvnearson

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PLAT **FARMS**

GRADING, EROSION CONTROL, 3 AND STORM SEWER PLANS

MASS GF PAVING DESIGNER / DRAFTER

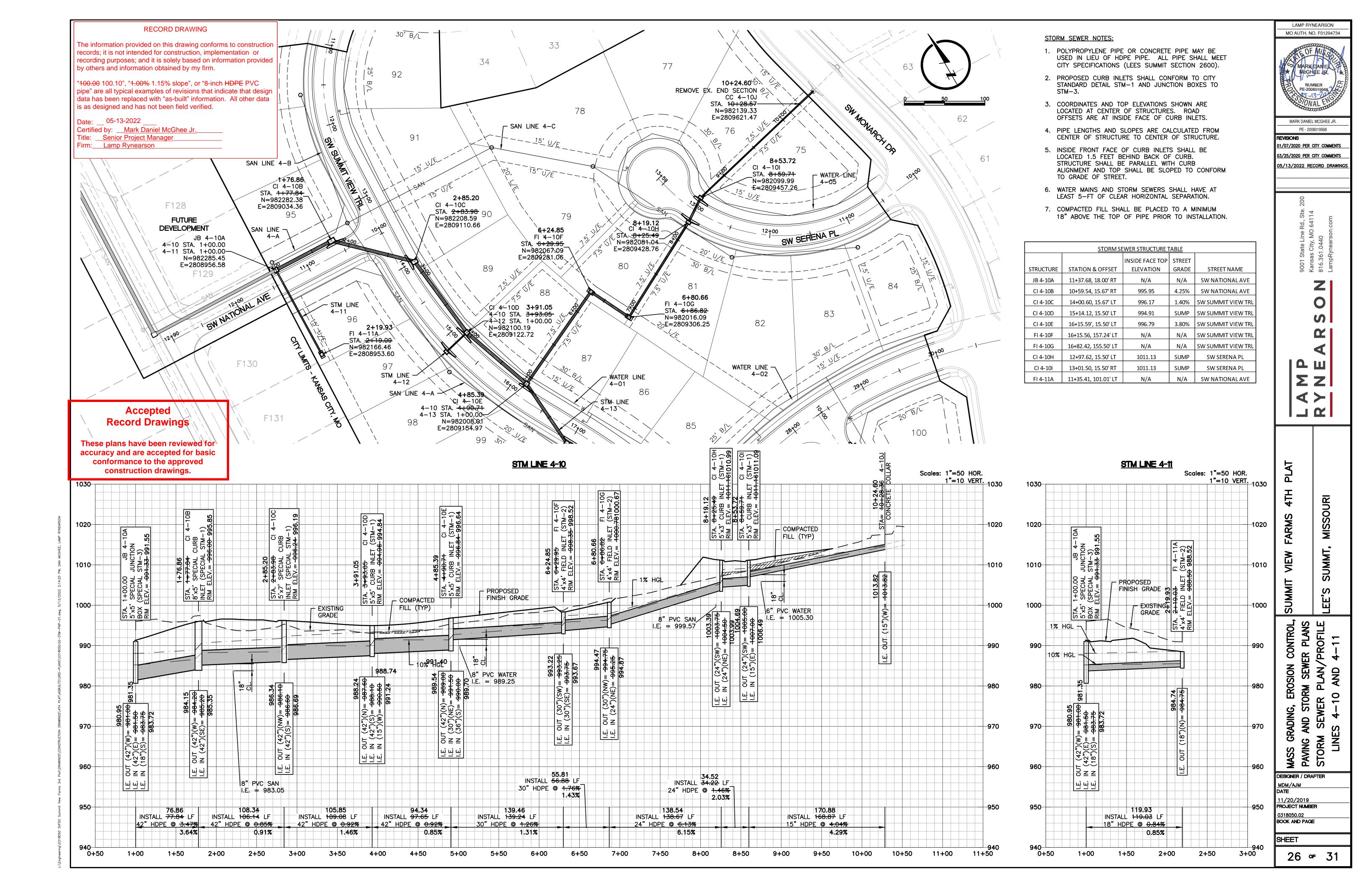
11/20/2019 PROJECT NUMBER

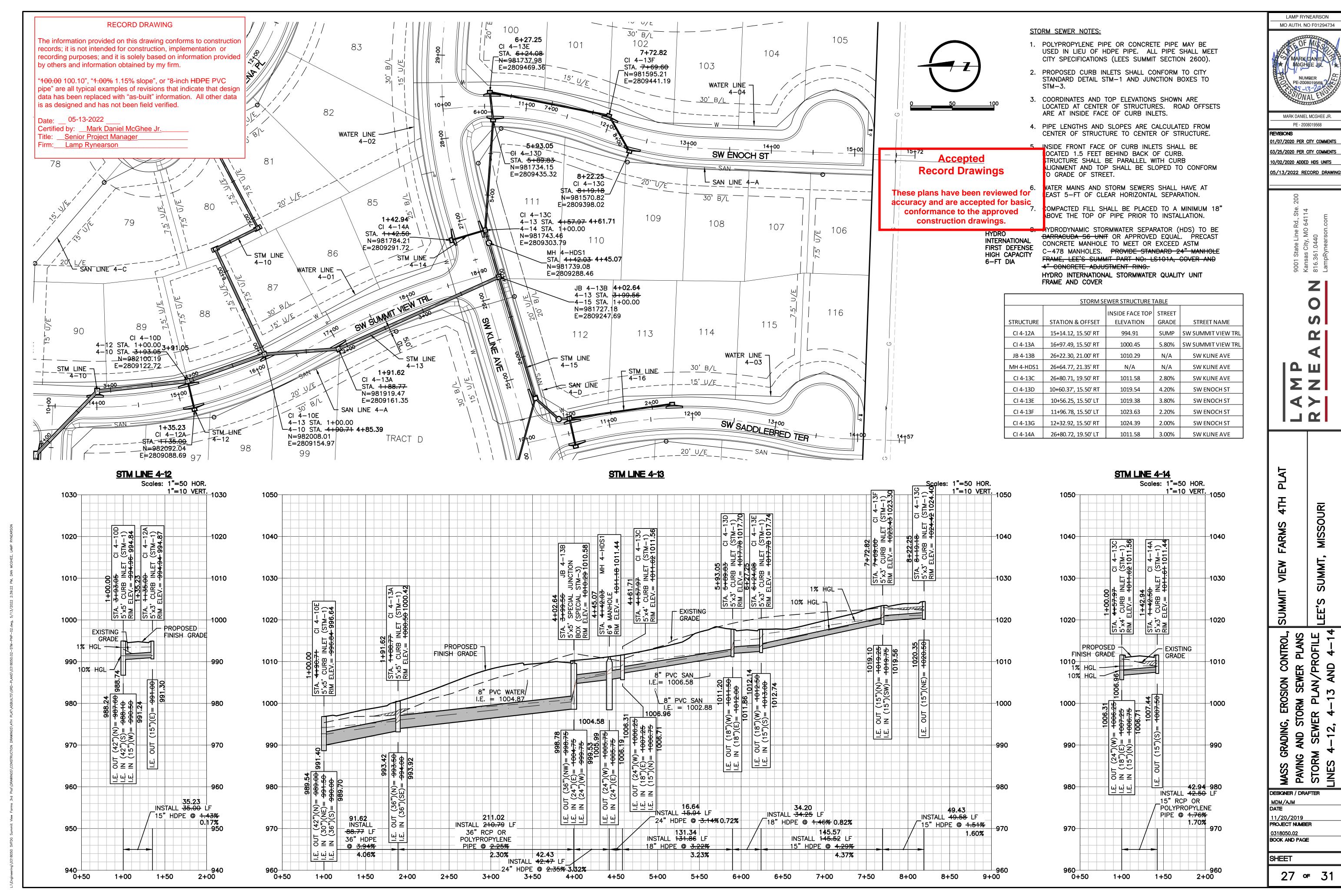
SHEET

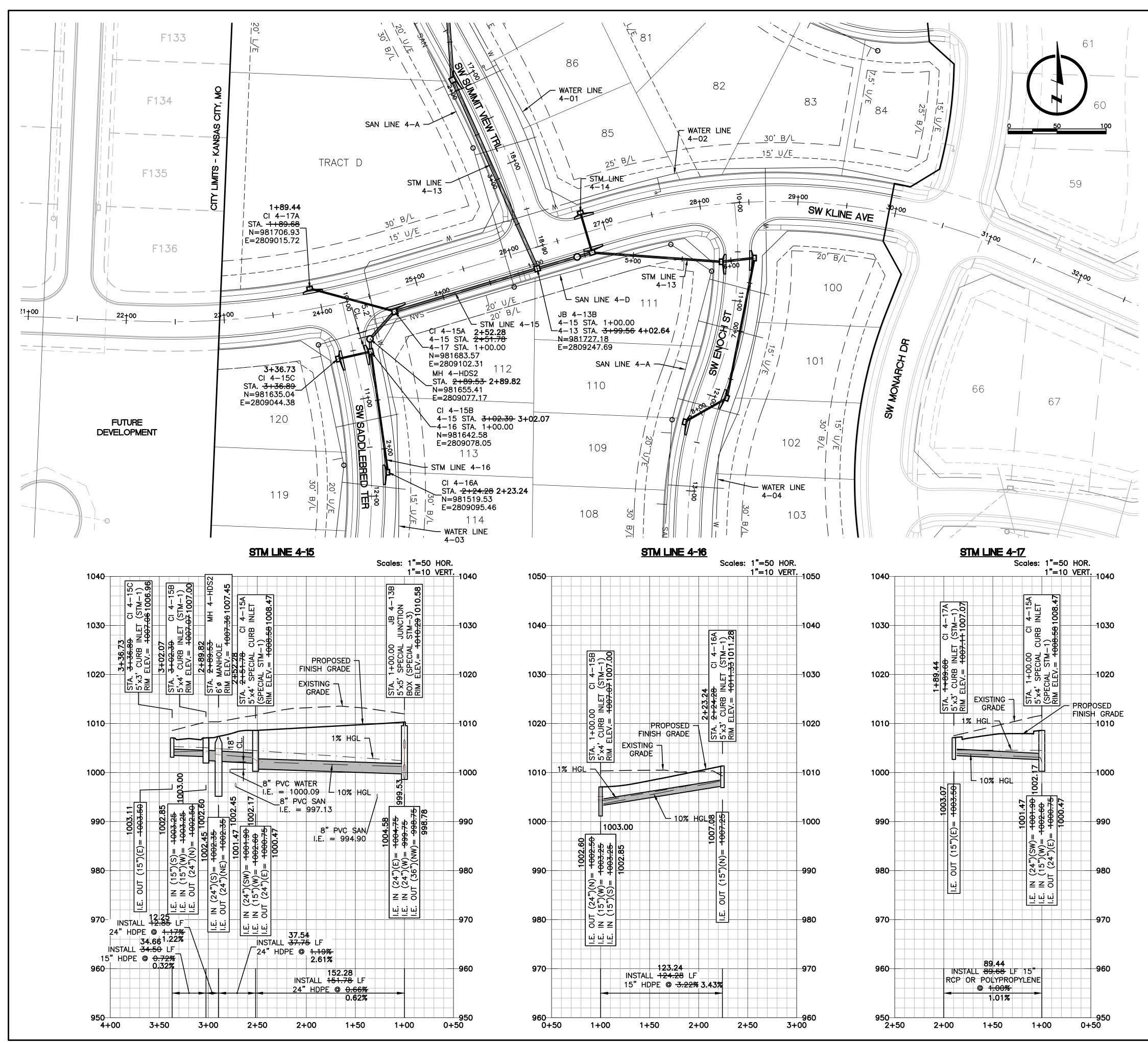
BOOK AND PAGE

25 ∘ 31

Record Drawings







STORM SEWER NOTES:

- POLYPROPYLENE PIPE OR CONCRETE PIPE MAY BE USED IN LIEU OF HDPE PIPE. ALL PIPE SHALL MEET CITY SPECIFICATIONS (LEES SUMMIT SECTION 2600).
- 2. PROPOSED CURB INLETS SHALL CONFORM TO CITY STANDARD DETAIL STM-1 AND JUNCTION BOXES TO STM-3
- 3. COORDINATES AND TOP ELEVATIONS SHOWN ARE LOCATED AT CENTER OF STRUCTURES. ROAD OFFSETS ARE AT INSIDE FACE OF CURB INLETS.
- 4. PIPE LENGTHS AND SLOPES ARE CALCULATED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- 5. INSIDE FRONT FACE OF CURB INLETS SHALL BE LOCATED 1.5 FEET BEHIND BACK OF CURB. STRUCTURE SHALL BE PARALLEL WITH CURB ALIGNMENT AND TOP SHALL BE SLOPED TO CONFORM TO GRADE OF STREET.
- 6. WATER MAINS AND STORM SEWERS SHALL HAVE AT LEAST 5-FT OF CLEAR HORIZONTAL SEPARATION.
- 7. COMPACTED FILL SHALL BE PLACED TO A MINIMUM 18" ABOVE THE TOP OF PIPE PRIOR TO INSTALLATION.

HYDRO
INTERNATIONAL
FIRST DEFENSE
HIGH CAPACITY
6-FT DIA

B. HYDRODYNAMIC STORMWATER SEPARATOR (HDS) TO BE BARRACUDA S6 UNIT OR APPROVED EQUAL. PRECAST CONCRETE MANHOLE TO MEET OR EXCEED ASTM C-478 MANHOLES. PROVIDE STANDARD 24" MANHOLE FRAME, LEE'S SUMMIT PART NO: LS101A, COVER AND 4" CONCRETE ADJUSTMENT RING.
HYDRO INTERNATIONAL STORMWATER QUALITY UNIT FRAME AND COVER

STORM SEWER STRUCTURE TABLE								
		INSIDE FACE TOP	STREET					
STRUCTURE	STATION & OFFSET	ELEVATION	GRADE	STREET NAME				
CI 4-15A	24+70.68, 19.50' RT	1008.53	1.10%	SW KLINE AVE				
MH 4-HDS2	10+42.15, 19.45' LT	N/A	N/A	SW SADDLEBRED TER				
CI 4-15B	10+54.86, 15.67' LT	1007.03	SUMP	SW SADDLEBRED TER				
CI 4-15C	10+54.86, 15.50' RT	1007.03	SUMP	SW SADDLEBRED TER				
CI 4-16A	11+76.16', 15.50' LT	1011.30	4.00%	SW SADDLEBRED TER				
CI 4-17A	23+91.77, 19.50' LT	1007.08	3.20%	SW KLINE AVE				

RECORD DRAWING

The information provided on this drawing conforms to construction records; it is not intended for construction, implementation or recording purposes; and it is solely based on information provided by others and information obtained by my firm.

"100.00 100.10", "1.00% 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

ate: 05-13-2022

Firm: Lamp Rynearson

Certified by: <u>Mark Daniel McGhee Jr.</u>
Title: <u>Senior Project Manager</u>

Accepted Record Drawings

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.

MO AUTH. NO. F01294734

OF MISSAME MCGHEE JR.

NUMBER
PE-2008019568

MARK DANIEL MCGHEE JR.

REVISIONS
01/07/2020 PER CITY COMMENTS
03/25/2020 PER CITY COMMENTS

PE - 2008019568

03/25/2020 PER CITY COMMENTS

10/02/2020 ADDED HDS UNITS

05/13/2022 RECORD DRAWINGS

r Rd., Ste. 200 564114 1.com

You'l State Line Rd., St Kansas City, MO 6411, 816.361.0440 LampRynearson.com

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LAMP RYNEARS

SUMMT, MISSOURI

FARMS

VIEW

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
STORM SEWER PLAN/PROFILES
LINES 4-15, 4-16 AND 4-17

DESIGNER / DRAFTER
MDM/AJM
DATE

DATE

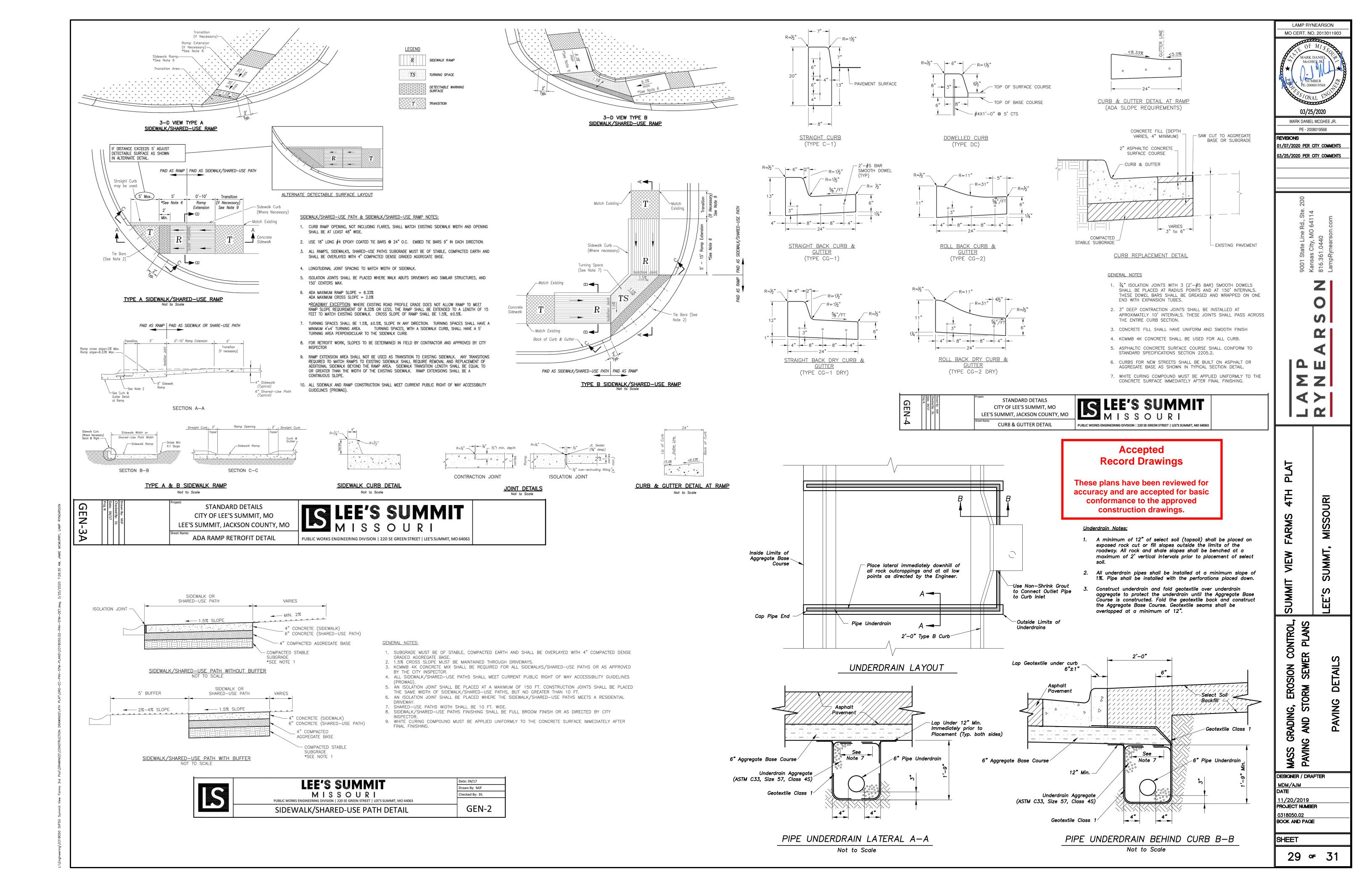
11/20/2019

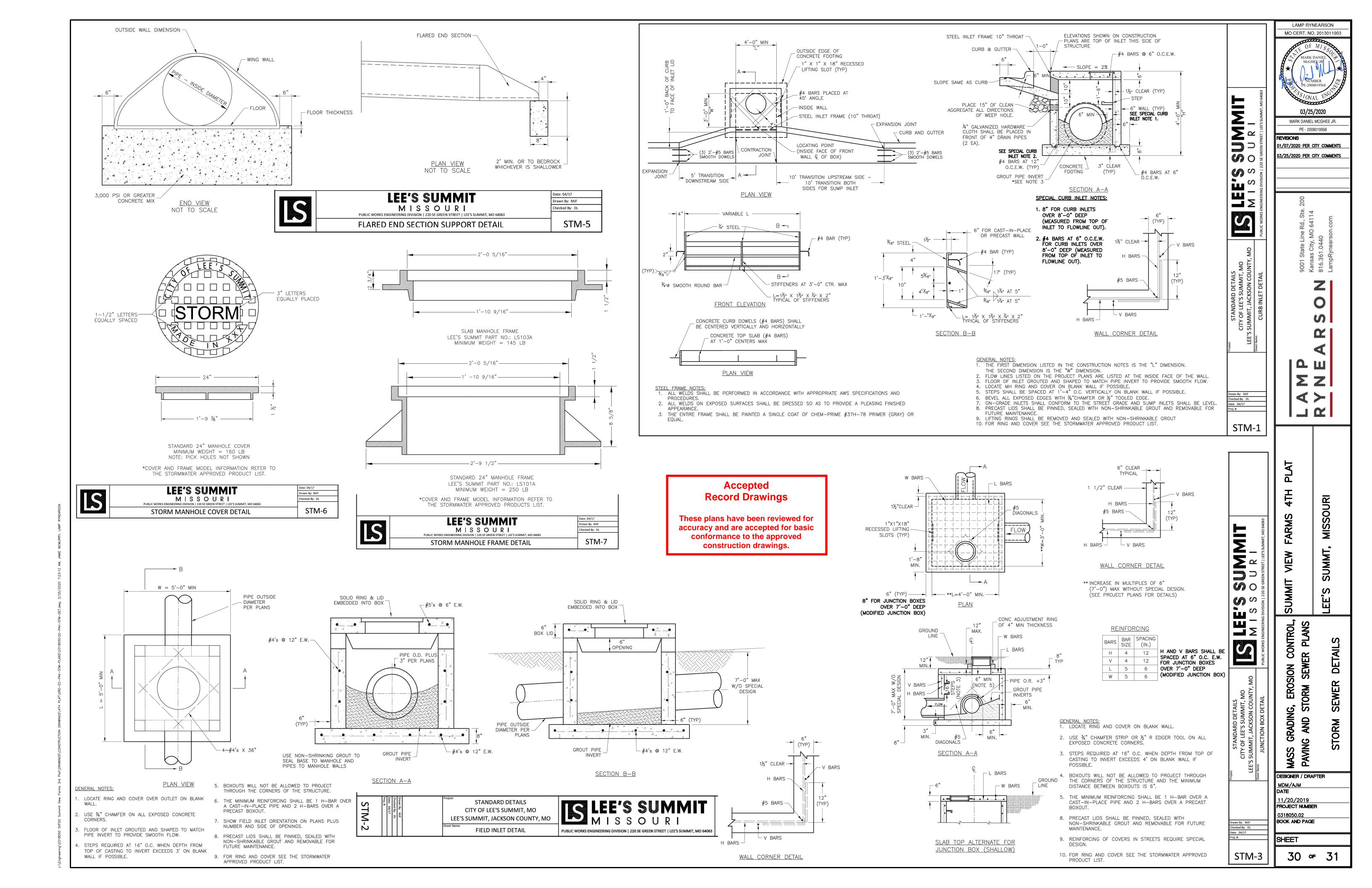
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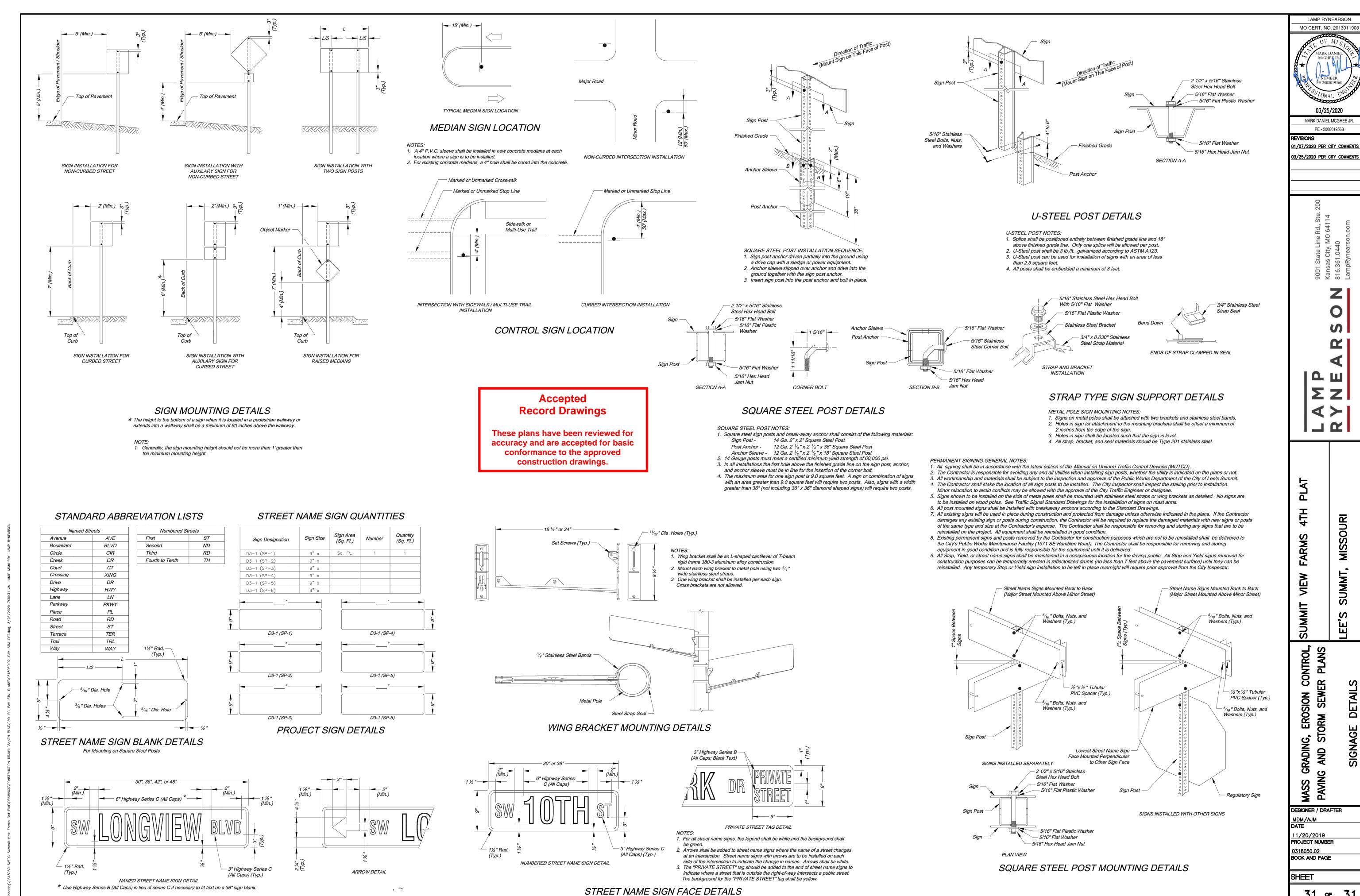
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