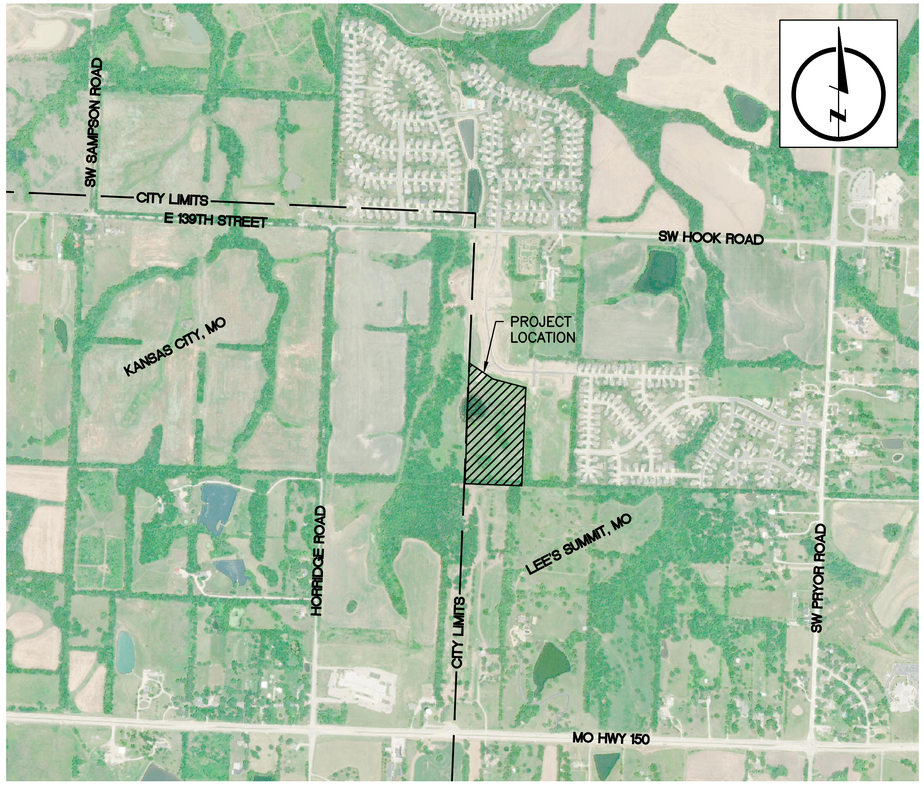
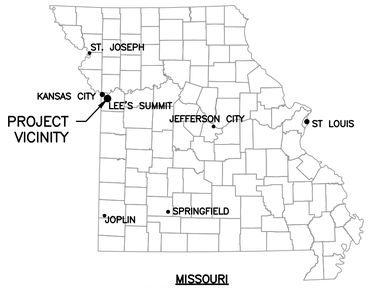
SUMMIT VIEW FARMS 4TH PLAT
LOTS 75-120 AND TRACT D

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



LOCATION MAP



MISSOURI
STATE LOCATION MAP

INDEX OF SHEETS

OWNER CONTACT
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SUMMIT VIEW FARMS DEVELOPMENT GROUP, LLC
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LEE'S SUMMIT, MO 64063
billkenney9@gmail.com
(816) 838-0552

CONSULTANT CONTACT
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LAMP RYNEARSON
9001 STATE LINE ROAD, SUITE 200
KANSAS CITY, MO 64114
Dan.McGhee@lamprynearson.com
(816) 361-0440

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: Lamp Rynearson

ESTIMATED SUMMARY OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT
1	EARTHWORK (STRIP / CUT) (BANK QUANTITY)	10,410	CY
2	EARTHWORK (FILL) (EXCLUDES FINISH GRADING QUANTITY)	13,485	CY
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	CY
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	2	EA
39	6" PIPE UNDERDRAIN	300	LF

UTILITIES		
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!
MISSOURI ONE CALL SYSTEM **1-800-DIG-RITE** OR **811**
www.mo1call.com

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.

APPROVED: _____ DATE: 05-13-2022
MARK DANIEL MCGHEE JR., PE

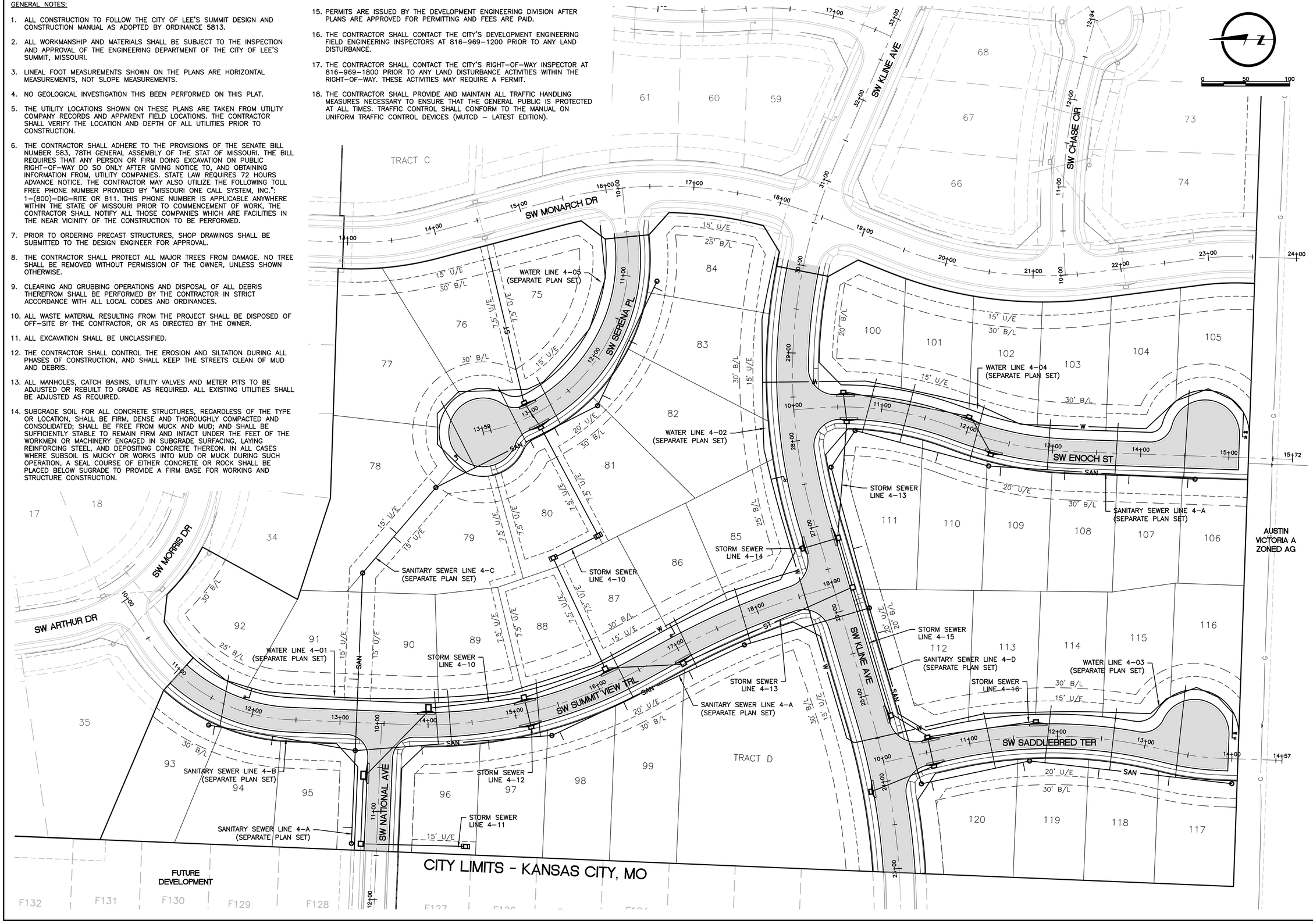
MISSOURI CERTIFICATE OF AUTHORITY NO. 2013011903

LAMP RYNEARSON

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

GENERAL NOTES:

1. ALL CONSTRUCTION TO FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
2. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
3. LINEAL FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS.
4. NO GEOLOGICAL INVESTIGATION THIS BEEN PERFORMED ON THIS PLAT.
5. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND APPARENT FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STAT OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT-OF-WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 72 HOURS ADVANCE NOTICE. THE CONTRACTOR MAY ALSO UTILIZE THE FOLLOWING TOLL FREE PHONE NUMBER PROVIDED BY "MISSOURI ONE CALL SYSTEM, INC.": 1-(800)-DIG-RITE OR 811. THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE OF MISSOURI PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES WHICH ARE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
7. PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWINGS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL.
8. THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.
9. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
10. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, OR AS DIRECTED BY THE OWNER.
11. ALL EXCAVATION SHALL BE UNCLASSIFIED.
12. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
13. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED. ALL EXISTING UTILITIES SHALL BE ADJUSTED AS REQUIRED.
14. SUBGRADE SOIL FOR ALL CONCRETE STRUCTURES, REGARDLESS OF THE TYPE OR LOCATION, SHALL BE FIRM, DENSE AND THOROUGHLY COMPACTED AND CONSOLIDATED; SHALL BE FREE FROM MUCK AND MUD; AND SHALL BE SUFFICIENTLY STABLE TO REMAIN FIRM AND INTACT UNDER THE FEET OF THE WORKMEN OR MACHINERY ENGAGED IN SUBGRADE SURFACING, LAYING REINFORCING STEEL, AND DEPOSITING CONCRETE THEREON. IN ALL CASES WHERE SUBSOIL IS MUCKY OR WORKS INTO MUD OR MUCK DURING SUCH OPERATION, A SEAL COURSE OF EITHER CONCRETE OR ROCK SHALL BE PLACED BELOW SUGRADE TO PROVIDE A FIRM BASE FOR WORKING AND STRUCTURE CONSTRUCTION.
15. PERMITS ARE ISSUED BY THE DEVELOPMENT ENGINEERING DIVISION AFTER PLANS ARE APPROVED FOR PERMITTING AND FEES ARE PAID.
16. THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT ENGINEERING FIELD ENGINEERING INSPECTORS AT 816-969-1200 PRIOR TO ANY LAND DISTURBANCE.
17. THE CONTRACTOR SHALL CONTACT THE CITY'S RIGHT-OF-WAY INSPECTOR AT 816-969-1800 PRIOR TO ANY LAND DISTURBANCE ACTIVITIES WITHIN THE RIGHT-OF-WAY. THESE ACTIVITIES MAY REQUIRE A PERMIT.
18. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC HANDLING MEASURES NECESSARY TO ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD - LATEST EDITION).



LAMP RYNEARSON
MO CERT. NO. 2013011903
STATE OF MISSOURI
MARK DANIEL MCGHEE JR
NUMBER PE-2008019568
PROFESSIONAL ENGINEER
03/25/2020
MARK DANIEL MCGHEE JR.
PE - 2008019568

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

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LAMP RYNEARSON

SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
GENERAL LAYOUT PLAN

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

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LEGEND

- SECTION CORNER
- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- CONTROL POINT
- BENCHMARK
- B/B BACK TO BACK OF CURB
- HRMP HANDICAP RAMP
- STORM SEWER MANHOLE
- HDPE HIGH DENSITY POLYETHYLENE
- PVC POLYVINYL CHLORIDE PIPE
- ELECTRICAL TRANSFORMER
- LIGHT POLE
- FIRE HYDRANT
- WIRE FENCE
- BARBED WIRE FENCE
- WROUGHT IRON FENCE
- GP GATE POST
- G UNDERGROUND GAS
- GAS LINE SIGN
- GTS GAS CATHODIC PROTECTION TESTING STATION
- FOC UNDERGROUND FIBER OPTIC CABLE
- S SANITARY SEWER MANHOLE
- E UNDERGROUND ELECTRIC
- W WATER LINE
- WATER LINE GATE VALVE
- STREET/TRAFFIC SIGN
- TREE LINE
- 952 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR

HORIZONTAL AND VERTICAL DATUM:

THE COORDINATES SHOWN HEREON ARE GRID COORDINATES BASED ON THE MISSOURI STATE PLANE WEST ZONE (JA-50) (JA-142)
CAF: 0.99989925 GROUND X CAF = GRID
1 METER = 3.28083333 U.S. SURVEY FEET

JA-50 (PID-095050)
NORTHING: 302358.525 (GRID)
EASTING: 854683.866 (GRID)
ELEV = 289.8 (M)

JA-142 (PID-095142)
NORTHING: 302106.953 (GRID)
EASTING: 858960.056 (GRID)
ELEV = 318.0 (M)

PROJECT BENCH MARK:

BM-1
CHISELED SQUARE ON TOP OF CURB, SOUTH END RADIUS, SW QUADRANT MONARCH AND MORRIS
ELEV = 1022.57

BM-4
CHISELED SQUARE ON SE CORNER OF CURB INLET 50'± EAST OF SW ARTHUR/SW MORRIS AND SW SUMMIT VIEW TRAIL.
ELEV = 1018.61

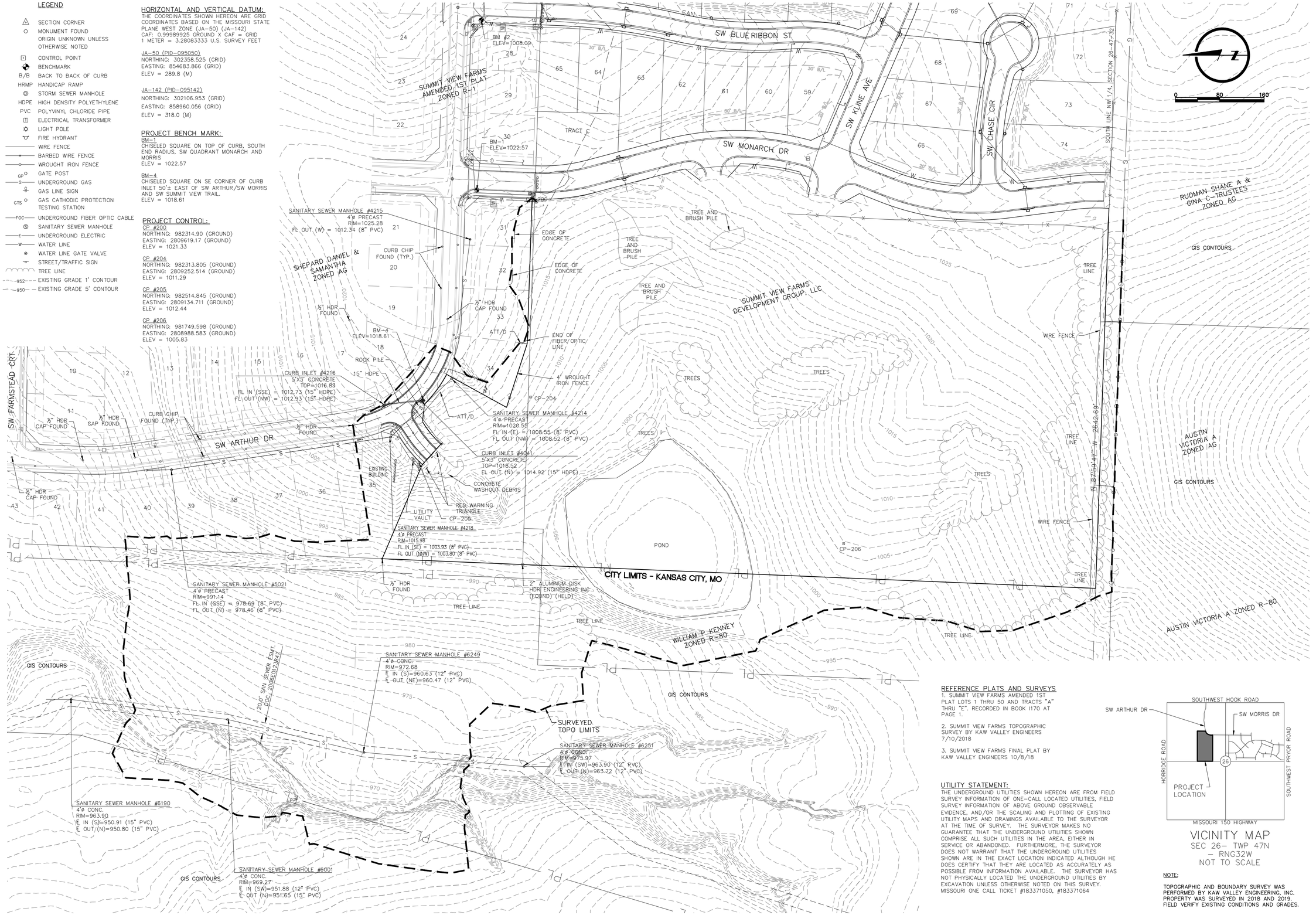
PROJECT CONTROL:

CP #200
NORTHING: 982314.90 (GROUND)
EASTING: 2809619.17 (GROUND)
ELEV = 1021.33

CP #204
NORTHING: 982313.805 (GROUND)
EASTING: 2809252.514 (GROUND)
ELEV = 1011.29

CP #205
NORTHING: 982514.845 (GROUND)
EASTING: 2809134.711 (GROUND)
ELEV = 1012.44

CP #206
NORTHING: 981749.598 (GROUND)
EASTING: 2808988.583 (GROUND)
ELEV = 1005.83



REFERENCE PLATS AND SURVEYS

1. SUMMIT VIEW FARMS AMENDED 1ST PLAT LOTS 1 THRU 50 AND TRACTS "A" THRU "E". RECORDED IN BOOK I170 AT PAGE 1.

2. SUMMIT VIEW FARMS TOPOGRAPHIC SURVEY BY KAW VALLEY ENGINEERS 7/10/2018

3. SUMMIT VIEW FARMS FINAL PLAT BY KAW VALLEY ENGINEERS 10/8/18

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY. MISSOURI ONE CALL TICKET #183371050, #183371064

VICINITY MAP
SEC 26- TWP 47N - RNG32W
NOT TO SCALE

NOTE:

TOPOGRAPHIC AND BOUNDARY SURVEY WAS PERFORMED BY KAW VALLEY ENGINEERING, INC. PROPERTY WAS SURVEYED IN 2018 AND 2019. FIELD VERIFY EXISTING CONDITIONS AND GRADES.

LAMP RYNEARSON
MO CERT. NO. 2013011903
STATE OF MISSOURI
MARK DANIEL McGHEE JR.
NUMBER PE-2008019568
PROFESSIONAL ENGINEER
03/25/2020
MARK DANIEL MCGHEE JR.
PE - 2008019568

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

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SUMMIT VIEW FARMS 4TH PLAT

LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS

EXISTING CONDITIONS PLAN

DESIGNER / DRAFTER
MDM/AJM
DATE
11/20/2019
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03 OF 31

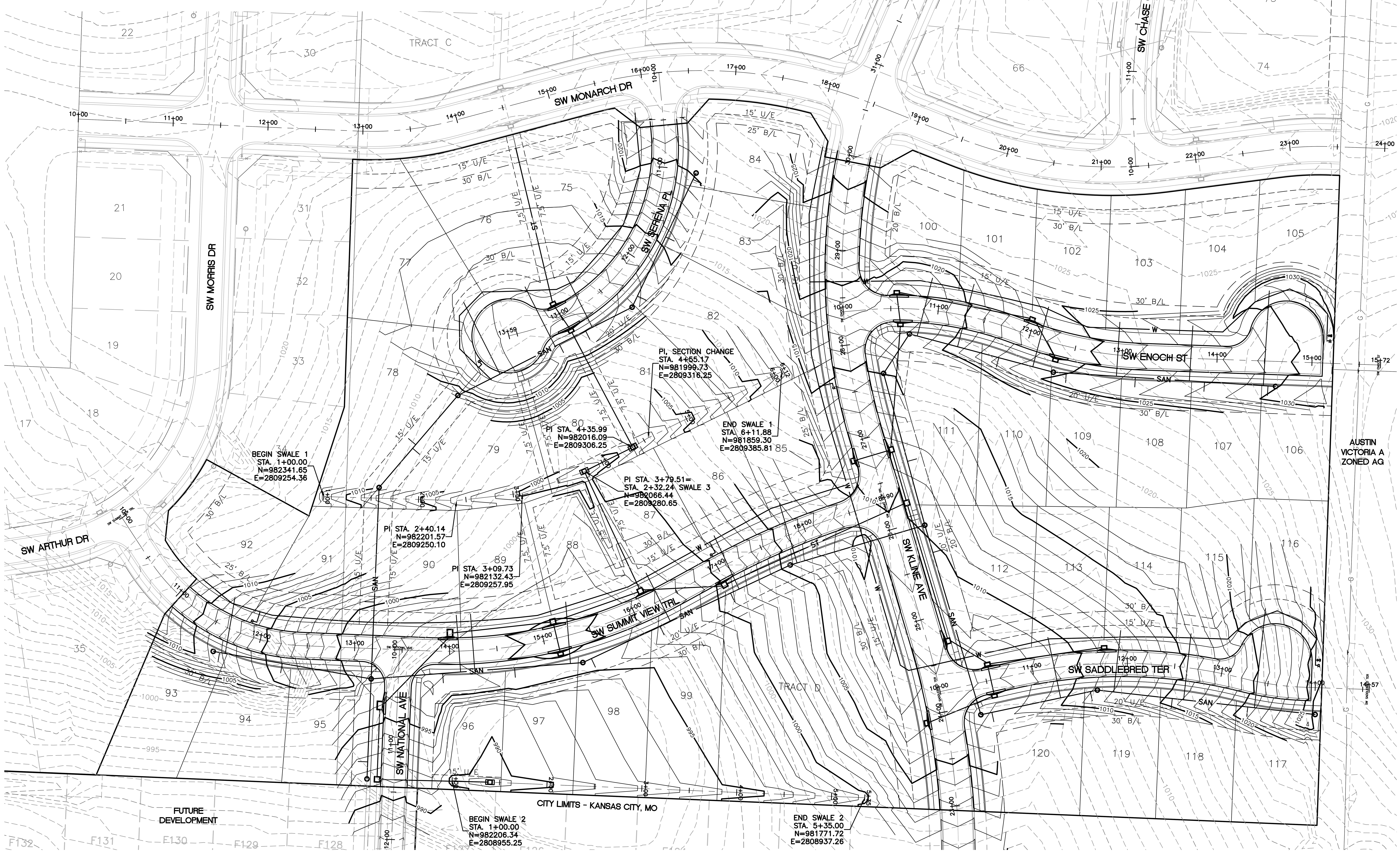
L:\Engineering\0318050 SVFG Summit View Farms 3rd Plat\DRAWINGS\CONSTRUCTION DRAWINGS\4TH PLAT\GRD-EC-PAV-STM-PLANS\0318050.02-GRD-EX-CONS.dwg, 3/25/2020 3:43:08 PM, JAMIE MCMURRY, LAMP RYNEARSON

GENERAL NOTES:

1. SLOPES SHALL BE GRADED AS SHOWN ON THE PLANS WITH A MAXIMUM SLOPE OF 4:1 UNLESS NOTED OTHERWISE.
2. CONTOURS SHOWN ARE AT 1-FOOT INTERVALS.
3. DISTURBED AREAS SHALL HAVE SURFACES ROUGHENED PER KCAPWA SPECIFICATIONS.
4. ALL PROPOSED GRADES SHOWN ARE TO FINISH GRADE. THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTMENTS TO ACCOUNT FOR PAVEMENT SECTION, SUBBASE, AND TOPSOIL REMOVAL AND REPLACEMENT.
5. EMBANKMENTS SHALL BE CONSTRUCTED TO 90% OF MAXIMUM DRY DENSITY OUTSIDE RIGHT-OF-WAY AND TO 95% WITHIN RIGHT-OF-WAY IN 8-INCH MAXIMUM LIFTS IN ACCORDANCE WITH APWA SECTION 2102.6 REQUIREMENTS.

LEGEND

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR



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SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMIT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS

MASS GRADING PLAN

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

GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL PUBLIC ROADWAYS ADJACENT TO THE CONSTRUCTION SITE FREE OF DIRT AND DEBRIS RESULTING FROM ACTIVITIES RELATED TO THE CONSTRUCTION OF THIS PROJECT.

2. CONTRACTOR SHALL UTILIZE TEMPORARY CONSTRUCTION ENTRANCE FOR ACCESS TO SITE.

3. MULCH BERMS SHALL BE AT LEAST 18–INCH TALL AND 2–FEET WIDE AT TOP OF BERM.

4. CONTRACTOR SHALL NOT STRIP ENTIRE PROPERTY. LOCATE STOCKPILE/STORAGE AREAS ON WEST SIDE OF THE SITE ON RIDGE. ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PROVIDED AS REQUIRED SHOULD DISTURBED AREAS EXTEND BEYOND PLAN DEPICTED CONTROL MEASURES.

PRE–CLEARING EROSION AND SEDIMENT CONTROL SEQUENCING:

5. IMPLEMENT PRE–CLEARING PLAN: ALL STRUCTURAL BMPS SHOWN ON THE PRE–CLEARING PLAN MUST BE IN PLACE BEFORE GENERAL CLEARING OPERATIONS. CLEARING NECESSARY TO PLACE STRUCTURAL BMPS SHALL BE THE MINIMUM REQUIRED FOR INSTALLATION. COORDINATE CLEARING NECESSARY TO PLACE STRUCTURAL BMPS WITH LOCAL WEATHER FORECAST SO THAT CLEARING AND PLACEMENT MAY BE COMPLETED WITHIN A FORECAST DRY PERIOD. STABILIZE ALL DIVERSION DIKES, SEDIMENT BASINS, AND SEDIMENT TRAPS WITHIN 5 DAYS AFTER INSTALLATION.

6. EARLY WORK: CLEAR MINIMUM WORK ZONE AND CONSTRUCT ANY EARLY WORK ITEMS OF PERMANENT CONSTRUCTION THAT ARE SHOWN ON THE PRE–CLEARING PLAN. SANITARY SEWER MAY BE CONSTRUCTED BEFORE MASS GRADING OCCURS.

LEGEND

—SF— SEDIMENT FENCE OR MULCH BERM

DIVERSION BERM

TEMPORARY CONSTRUCTION ENTRANCE

SW MONARCH DR
SW KLINE AVE
SW CHASE CIR
SW SERENA PL
SW MORRIS DR
SW ARTHUR DR
SW NATIONAL AVE
SW SUMMIT VIEW TRL
SW ENOCH ST
SW SADDLEBRED TER
TRACT C
TRACT D
SUMMIT VIEW FARMS DEVELOPMENT GROUP, LLC 4TH PLAT
AUSTIN VICTORIA A ZONED AG
FUTURE DEVELOPMENT
CITY LIMITS - KANSAS CITY, MO
SAN
SF

INSTALL SEDIMENT FENCE (TYP)

TRIBUTARY DRAINAGE AREA TO TEMPORARY SEDIMENT BASIN

INSTALL TEMPORARY CONSTRUCTION ENTRANCE

TEMPORARY DIVERSION BERM (INSTALLED WITH KCMO SUMMIT VIEW FARMS 5TH PLAT)

TEMPORARY SEDIMENT BASIN (RE: KCMO SUMMIT VIEW FARMS 5TH PLAT) BASIN SHALL BE CONSTRUCTED BEFORE INFRASTRUCTURE CONSTRUCTION OR MASS GRADING OCCURS IN 4TH PLAT

TEMPORARY DIVERSION BERM (INSTALLED WITH KCMO SUMMIT VIEW FARMS 5TH PLAT)

0 50 100

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SUMMIT VIEW FARMS 4TH PLAT

LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
PRE–CLEARING EROSION AND SEDIMENT CONTROL PLAN

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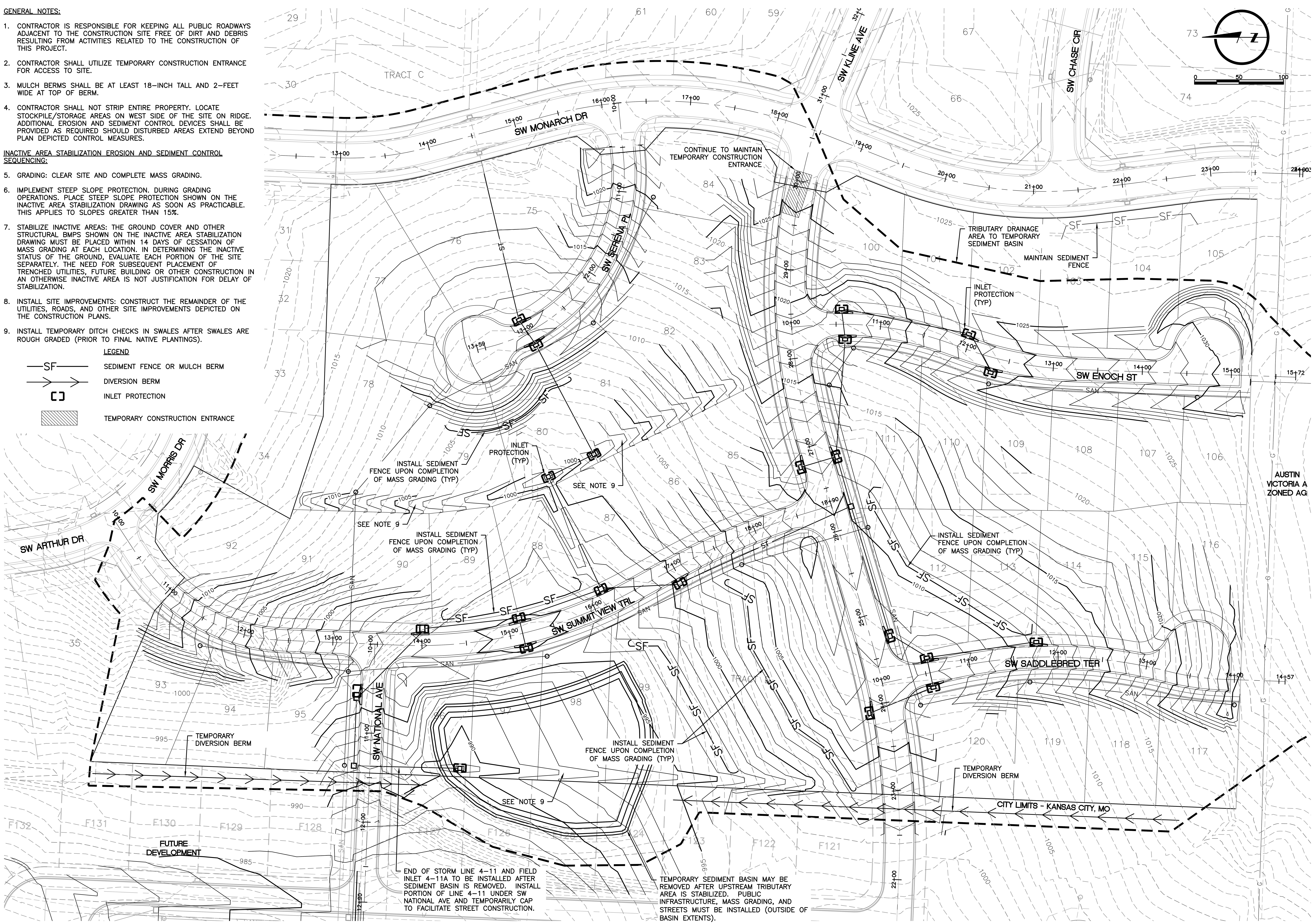
2. CONTRACTOR SHALL UTILIZE TEMPORARY CONSTRUCTION ENTRANCE FOR ACCESS TO SITE.
3. MULCH BERMS SHALL BE AT LEAST 18-INCH TALL AND 2-FEET WIDE AT TOP OF BERM.
4. CONTRACTOR SHALL NOT STRIP ENTIRE PROPERTY. LOCATE STOCKPILE/STORAGE AREAS ON WEST SIDE OF THE SITE ON RIDGE. ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PROVIDED AS REQUIRED SHOULD DISTURBED AREAS EXTEND BEYOND PLAN DEPICTED CONTROL MEASURES.

INACTIVE AREA STABILIZATION EROSION AND SEDIMENT CONTROL SEQUENCING:

5. GRADING: CLEAR SITE AND COMPLETE MASS GRADING.
6. IMPLEMENT STEEP SLOPE PROTECTION. DURING GRADING OPERATIONS, PLACE STEEP SLOPE PROTECTION SHOWN ON THE INACTIVE AREA STABILIZATION DRAWING AS SOON AS PRACTICABLE. THIS APPLIES TO SLOPES GREATER THAN 15%.
7. STABILIZE INACTIVE AREAS: THE GROUND COVER AND OTHER STRUCTURAL BMPS SHOWN ON THE INACTIVE AREA STABILIZATION DRAWING MUST BE PLACED WITHIN 14 DAYS OF CESSATION OF MASS GRADING AT EACH LOCATION. IN DETERMINING THE INACTIVE STATUS OF THE GROUND, EVALUATE EACH PORTION OF THE SITE SEPARATELY. THE NEED FOR SUBSEQUENT PLACEMENT OF TRENCHED UTILITIES, FUTURE BUILDING OR OTHER CONSTRUCTION IN AN OTHERWISE INACTIVE AREA IS NOT JUSTIFICATION FOR DELAY OF STABILIZATION.
8. INSTALL SITE IMPROVEMENTS: CONSTRUCT THE REMAINDER OF THE UTILITIES, ROADS, AND OTHER SITE IMPROVEMENTS DEPICTED ON THE CONSTRUCTION PLANS.
9. INSTALL TEMPORARY DITCH CHECKS IN SWALES AFTER SWALES ARE ROUGH GRADED (PRIOR TO FINAL NATIVE PLANTINGS).

LEGEND

—SF—	SEDIMENT FENCE OR MULCH BERM
→	DIVERSION BERM
[ ]	INLET PROTECTION
(hatched)	TEMPORARY CONSTRUCTION ENTRANCE



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SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
INACTIVE AREA
EROSION AND SEDIMENT CONTROL PLAN

DESIGNER / DRAFTER
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06 OF 31

GENERAL NOTES:

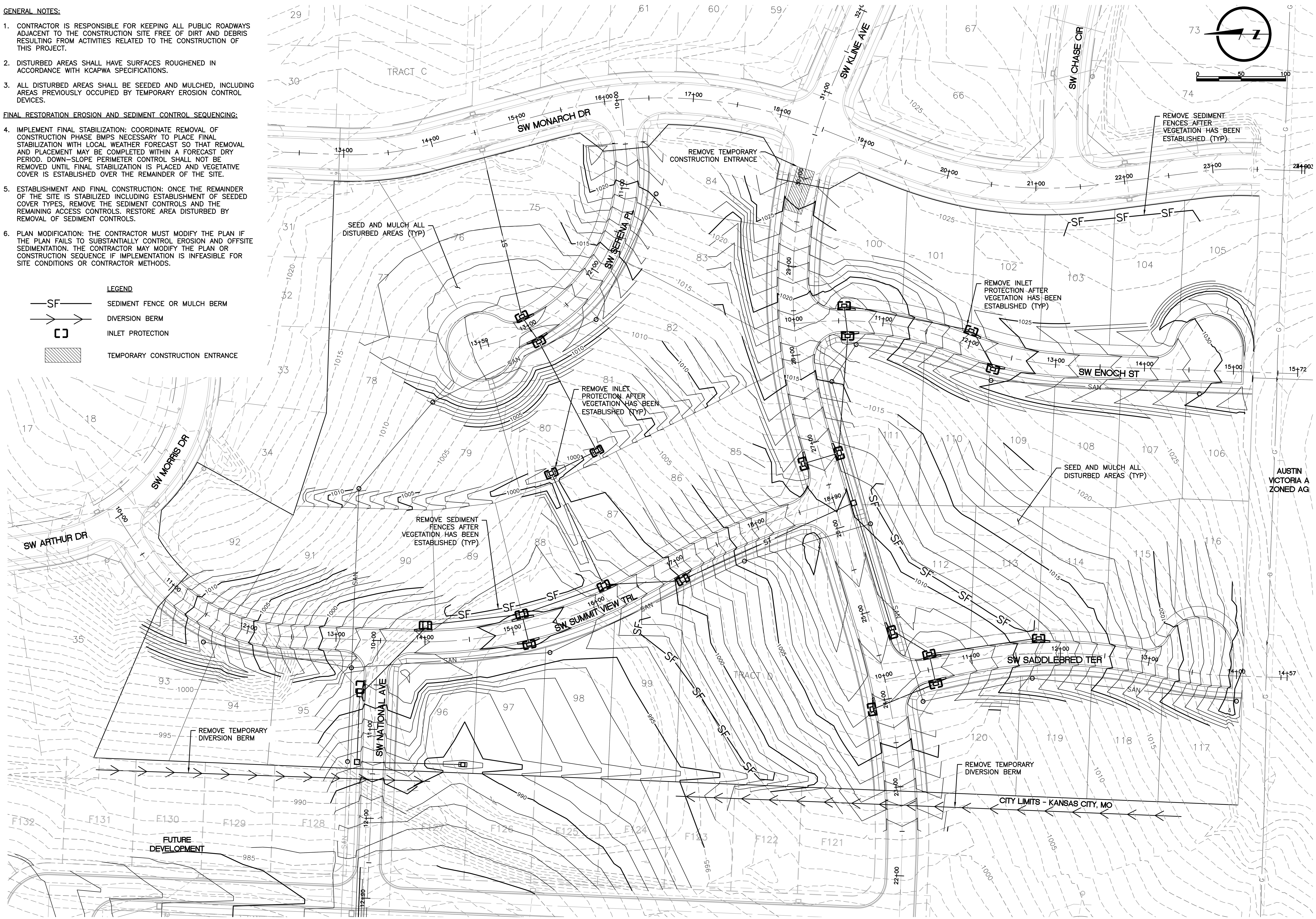
1. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL PUBLIC ROADWAYS ADJACENT TO THE CONSTRUCTION SITE FREE OF DIRT AND DEBRIS RESULTING FROM ACTIVITIES RELATED TO THE CONSTRUCTION OF THIS PROJECT.
2. DISTURBED AREAS SHALL HAVE SURFACES ROUGHENED IN ACCORDANCE WITH KCAPWA SPECIFICATIONS.
3. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED, INCLUDING AREAS PREVIOUSLY OCCUPIED BY TEMPORARY EROSION CONTROL DEVICES.

FINAL RESTORATION EROSION AND SEDIMENT CONTROL SEQUENCING:

4. IMPLEMENT FINAL STABILIZATION: COORDINATE REMOVAL OF CONSTRUCTION PHASE BMPS NECESSARY TO PLACE FINAL STABILIZATION WITH LOCAL WEATHER FORECAST SO THAT REMOVAL AND PLACEMENT MAY BE COMPLETED WITHIN A FORECAST DRY PERIOD. DOWN-SLOPE PERIMETER CONTROL SHALL NOT BE REMOVED UNTIL FINAL STABILIZATION IS PLACED AND VEGETATIVE COVER IS ESTABLISHED OVER THE REMAINDER OF THE SITE.
5. ESTABLISHMENT AND FINAL CONSTRUCTION: ONCE THE REMAINDER OF THE SITE IS STABILIZED INCLUDING ESTABLISHMENT OF SEEDED COVER TYPES, REMOVE THE SEDIMENT CONTROLS AND THE REMAINING ACCESS CONTROLS. RESTORE AREA DISTURBED BY REMOVAL OF SEDIMENT CONTROLS.
6. PLAN MODIFICATION: THE CONTRACTOR MUST MODIFY THE PLAN IF THE PLAN FAILS TO SUBSTANTIALLY CONTROL EROSION AND OFFSITE SEDIMENTATION. THE CONTRACTOR MAY MODIFY THE PLAN OR CONSTRUCTION SEQUENCE IF IMPLEMENTATION IS INFEASIBLE FOR SITE CONDITIONS OR CONTRACTOR METHODS.

LEGEND

—SF—	SEDIMENT FENCE OR MULCH BERM
—>—>—	DIVERSION BERM
[ ]	INLET PROTECTION
(hatched)	TEMPORARY CONSTRUCTION ENTRANCE



LAMP RYNEARSON
MO CERT. NO. 2013011903

STATE OF MISSOURI
MARK DANIEL McGHEE JR.
NUMBER PE-2008019568
PROFESSIONAL ENGINEER
03/25/2020

MARK DANIEL MCGHEE JR.
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01/07/2020 PER CITY COMMENTS
03/25/2020 PER CITY COMMENTS

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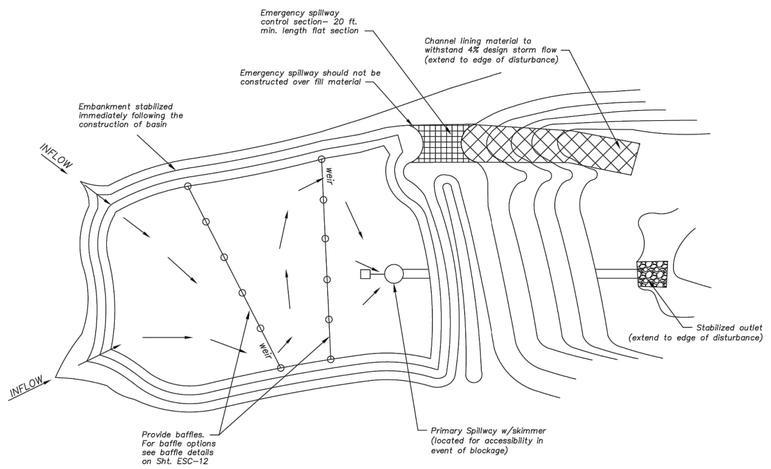
LAMP RYNEARSON

SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
FINAL RESTORATION
EROSION AND SEDIMENT CONTROL PLAN

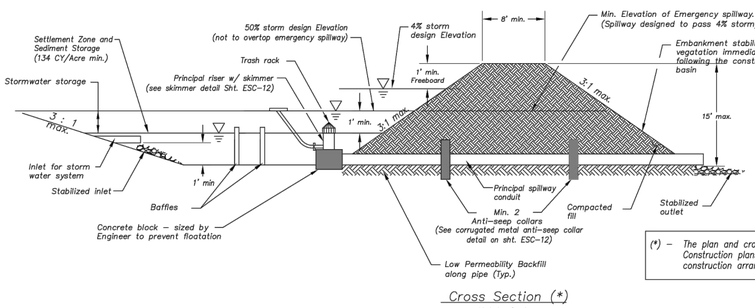
DESIGNER / DRAFTER: MDM/AJM
DATE: 11/20/2019
PROJECT NUMBER: 0318050.02
BOOK AND PAGE

SHEET



Plan View (*)

Not to Scale



Cross Section (*)

Not to Scale

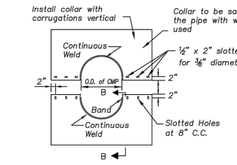
(*) – The plan and cross section are schematic in nature. Construction plans must provide specific site construction arrangements.

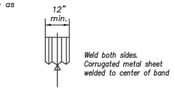
Sediment Basin Notes:

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:

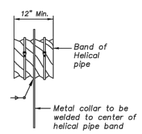
1. Check temporary sediment basins after periods of significant runoff.
2. Remove sediment and restore the basin to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlets.
4. Repair and/or replace baffles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



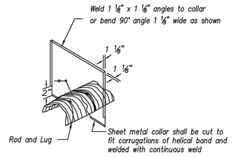


SECTION B–B

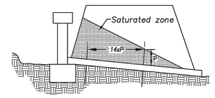
Size and spacing of slotted openings shall be the same as shown for CM collar. Use rods and lugs to clamp bands securely to pipe.



PARTIAL ELEVATION



ISOMETRIC VIEW



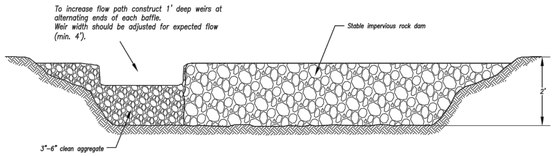
ANTI–SEEPAGE COLLAR LOCATIONS

Anti–Seepage Collar Notes:

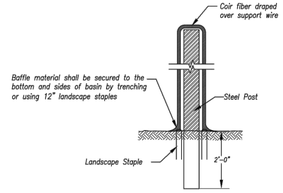
1. Connections between the anti–seepage collar and the barrel must be watertight.
2. P = projection distance. Sized as required to achieve at least a 10% increase in seepage length.
3. 14xP = Max. spacing between collars.
4. Collars shall generally be placed in the middle third of the embankment, and within the saturated zone.
5. All materials to be in accordance with construction material specifications.
6. When specified on the plans, 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 installation.
9. Each collar shall be furnished with two (2) ⅝" diameter rods with standard tank 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 shop 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".

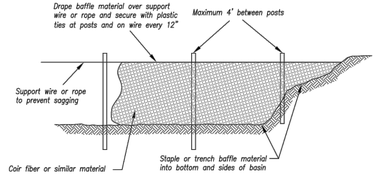
CORRUGATED METAL ANTI–SEEPAGE COLLAR DETAIL

Not to Scale



Option A – Rock with Weir





Option B – Coir Fiber Material

BAFFLE DETAILS

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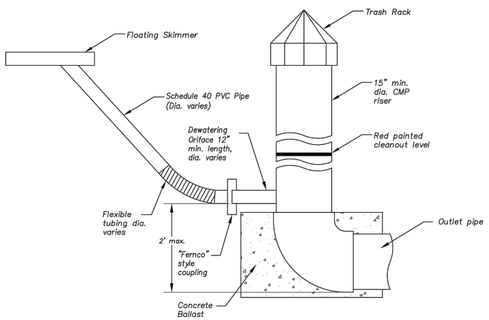

PRINCIPAL SPILLWAY DETAIL

AMERICAN PUBLIC WORKS ASSOCIATION	
Kansas City Metro Chapter APWA American Public Works Association	KANSAS CITY METRO CHAPTER
SEDIMENT BASIN	STANDARD DRAWING NUMBER ESC–11 ADOPTED: 10/24/2016
SEDIMENT BASIN – DETAILS	STANDARD DRAWING NUMBER ESC–12 ADOPTED: 10/24/2016

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LEE'S SUMMT, MISSOURI

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

DESIGNER / DRAFTER: MDM/AJM
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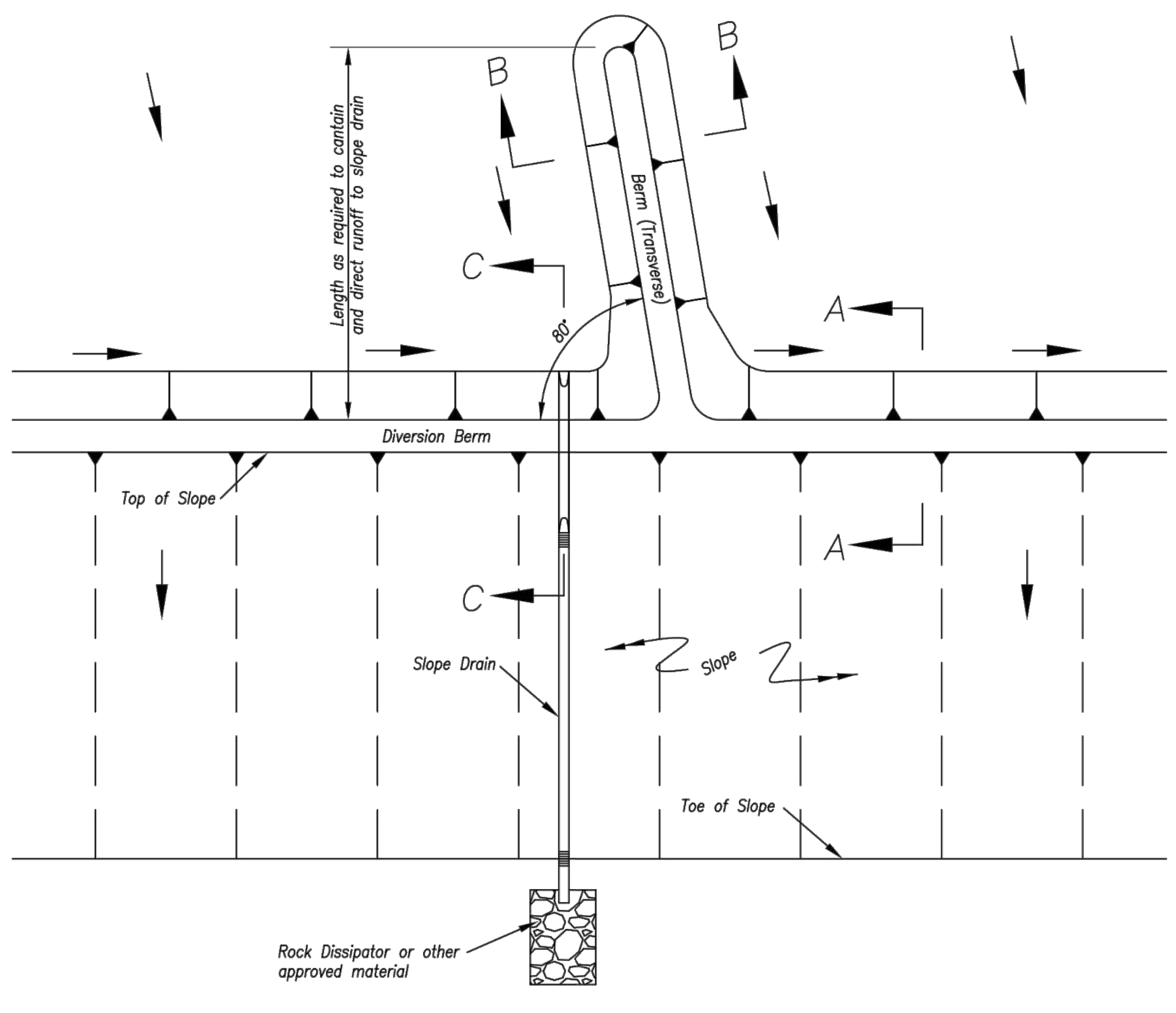
08 OF 31



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:

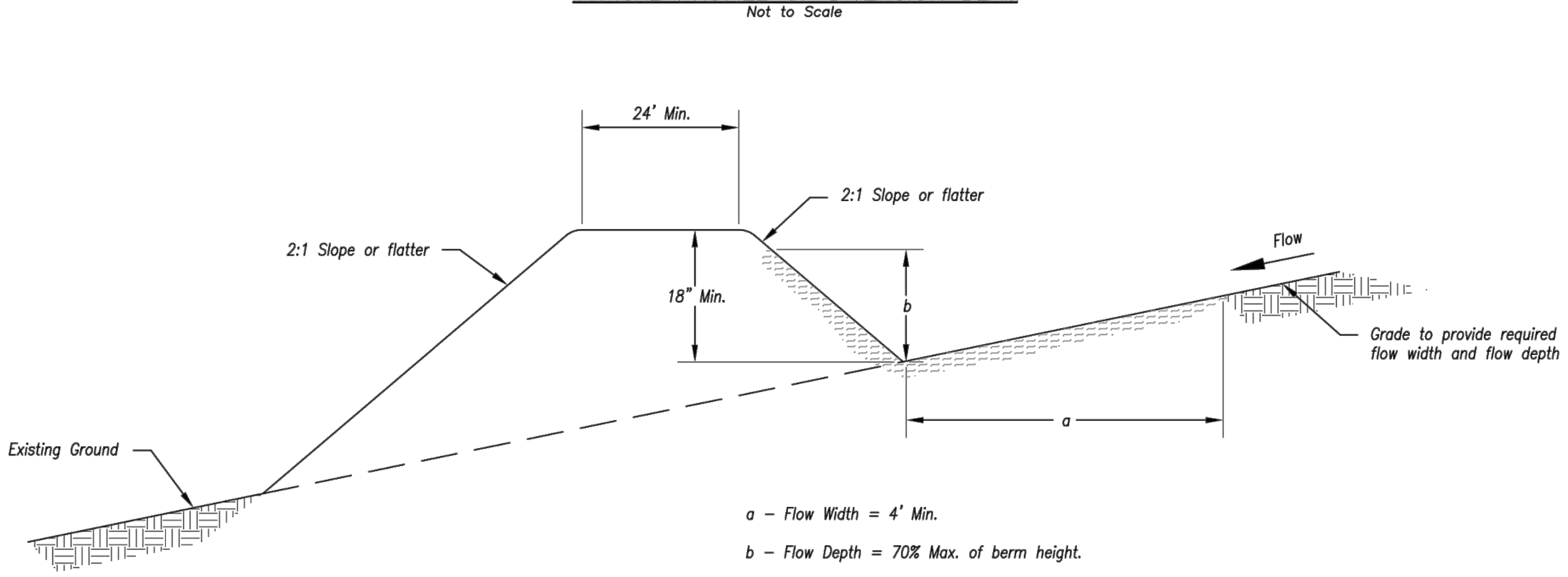
1. Slope Drain and Diversion Berm may be used on either project foreslopes or project backslopes.
2. Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.
3. Pipe shall be secured in place as approved by Engineer.

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.

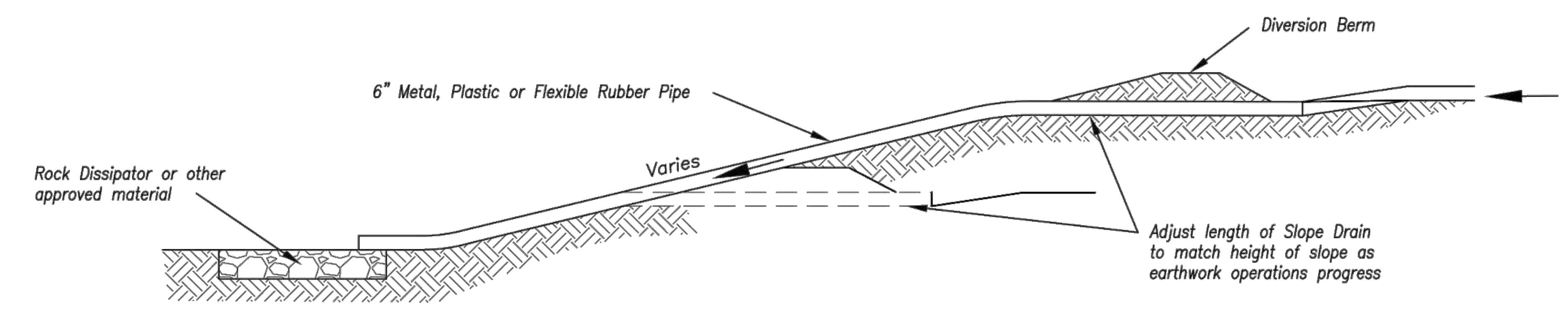
TYPICAL PROFILE OF DIVERSION BEAM

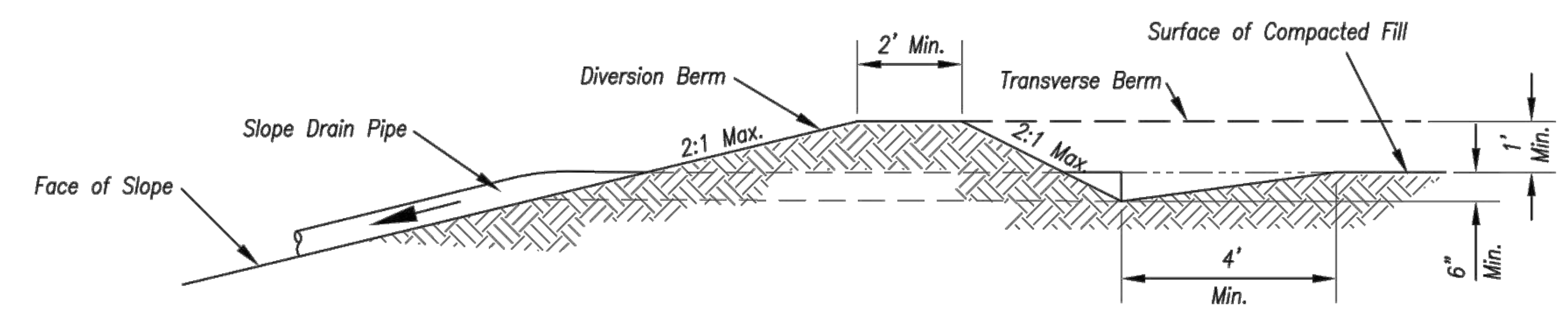
Not to Scale



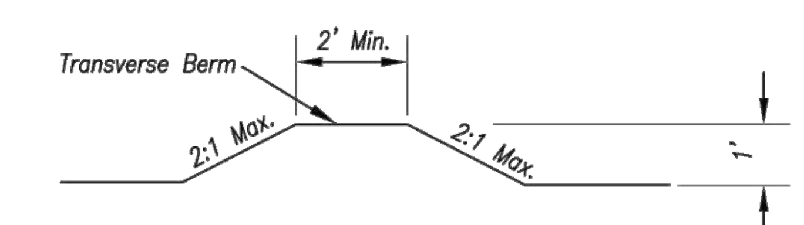
a – Flow Width = 4' Min.

b – Flow Depth = 70% Max. of berm height.



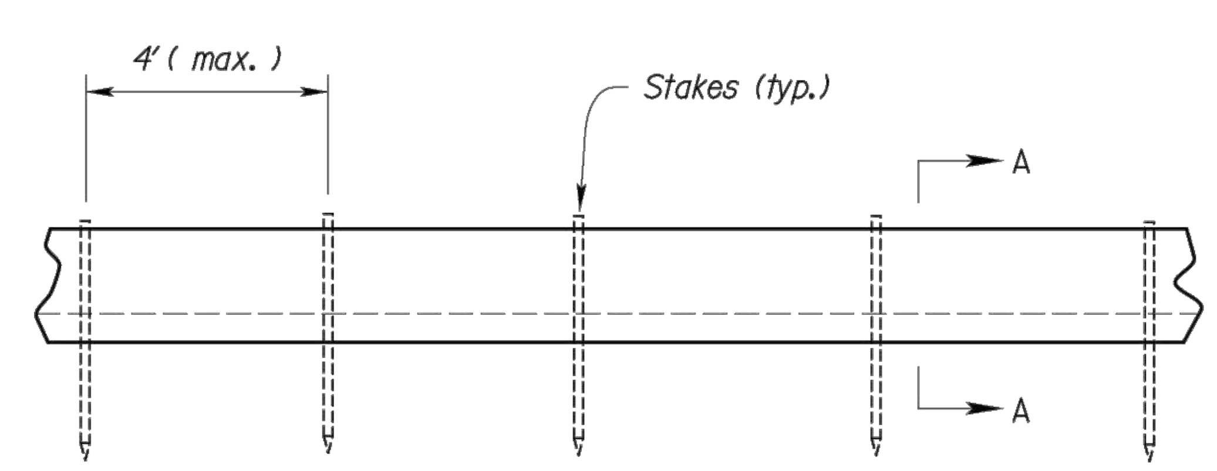


Section C–C

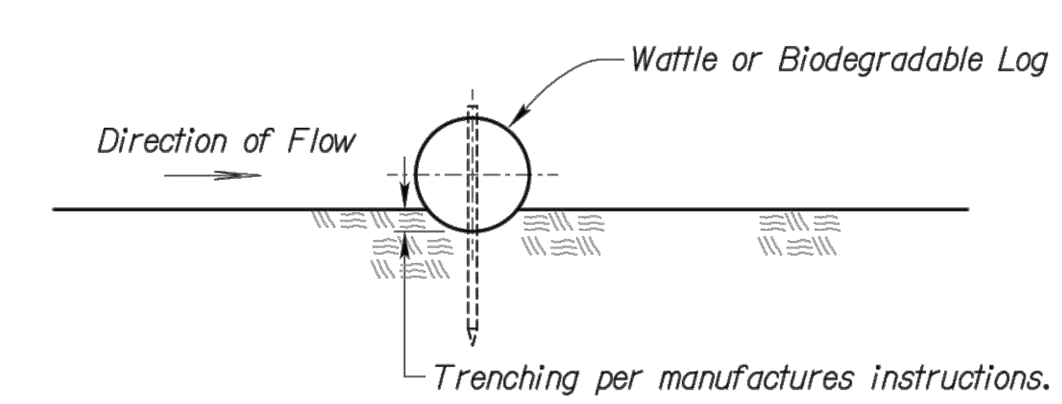


Section B–B

TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN



Typical Elevation



Section A–A

Notes for Wattles and Biodegradable Log Slope Protection:

1. 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.
3. Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".

WATTLES AND BIODEGRADABLE LOG

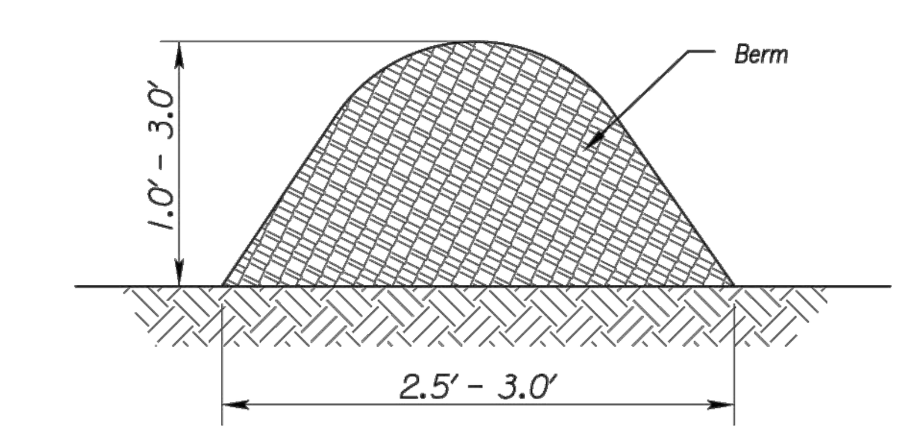


Figure 1

(Perimeter Control)

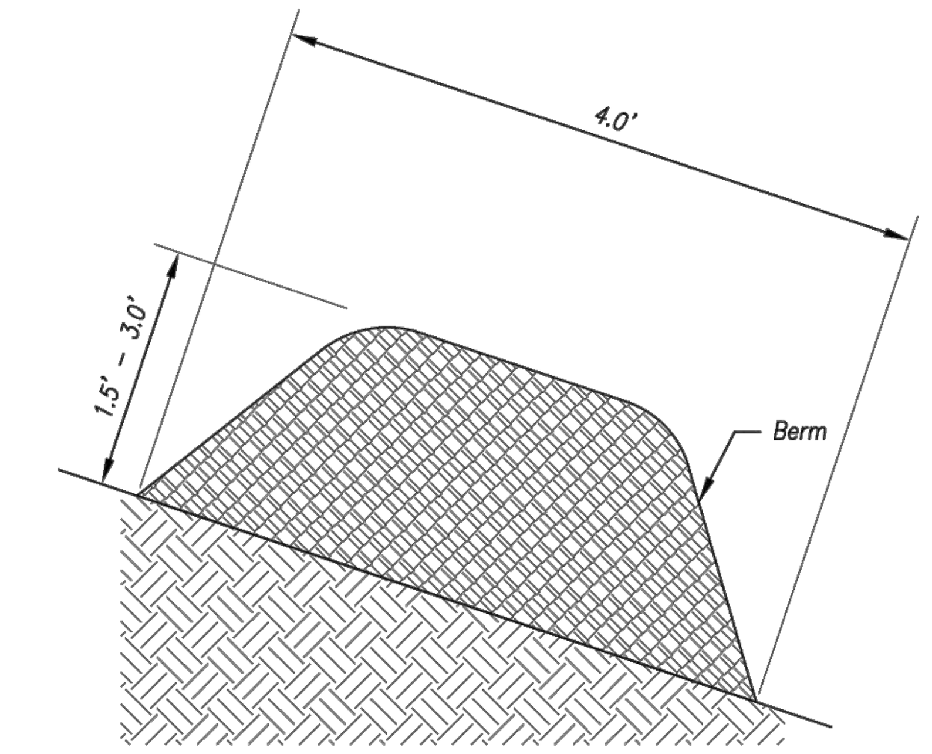


Figure 2

(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.
3. 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:

1. 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	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
DIVERSION BERMS AND SLOPE DRAINS	STANDARD DRAWING NUMBER ESC-05 ADOPTED: 10/24/2016
WATTLES/BIODEGRADABLE LOG AND MULCH/COMPOST FILTER BERM	STANDARD DRAWING NUMBER ESC-04 ADOPTED: 10/24/2016

LAMP RYNEARSON

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LEE'S SUMMIT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS

EROSION AND SEDIMENT CONTROL DETAILS

DESIGNER / DRAFTER: MDM/AJM

DATE: 11/20/2019

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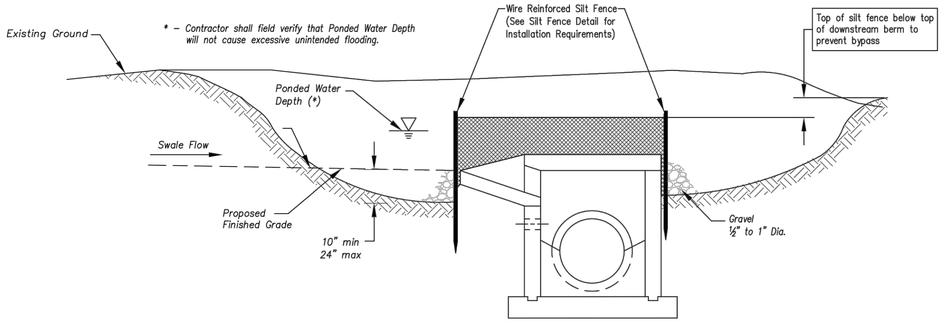

Section A–A
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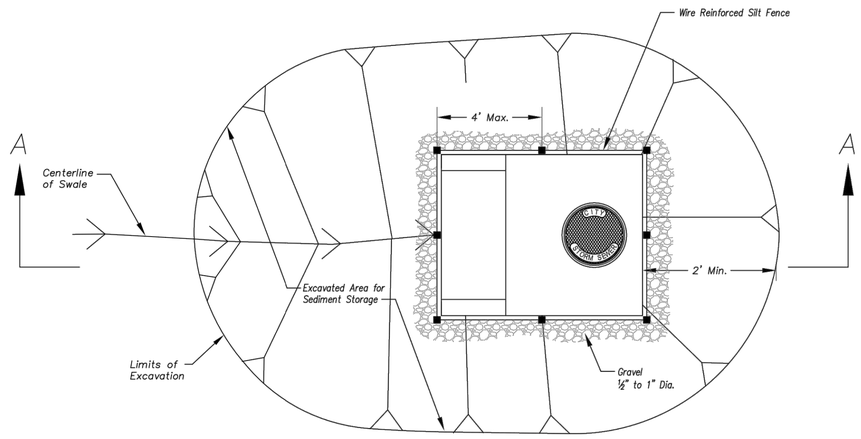
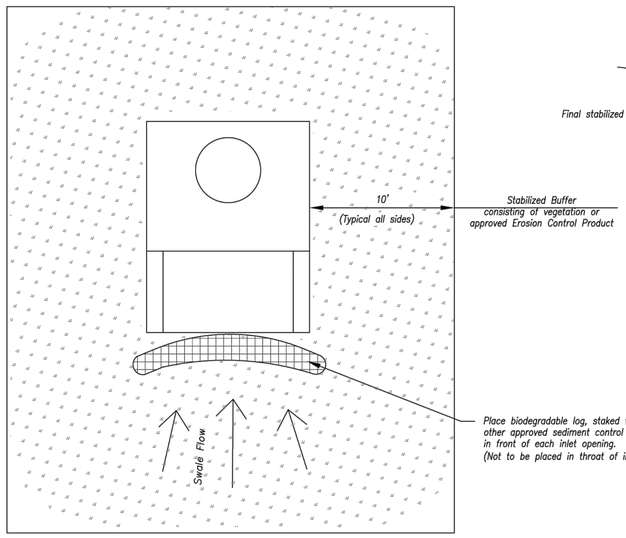


PLAN
NOT TO SCALE

EARLY STAGE AREA INLET
(ALL OPEN BOXES AND INLETS NOT AT FINAL GRADE)



Plan
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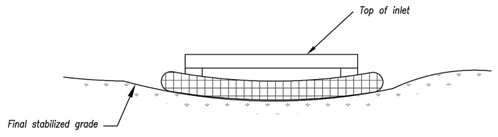


Front View

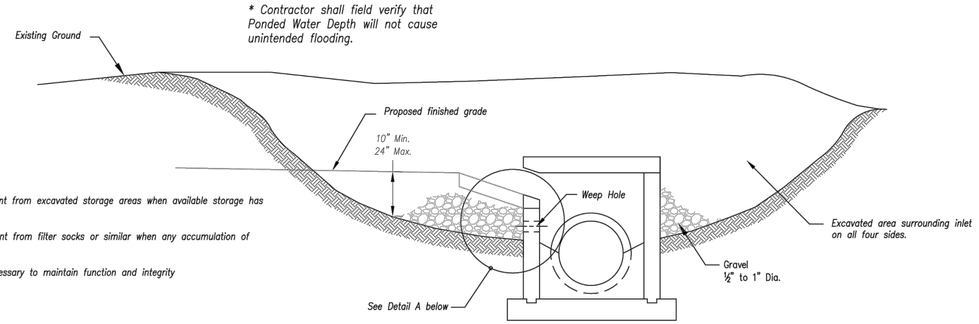
LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

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.

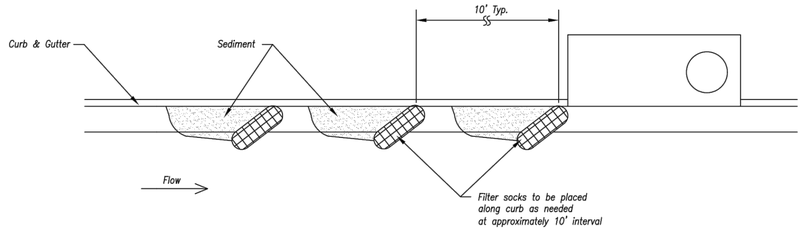


Maintenance:

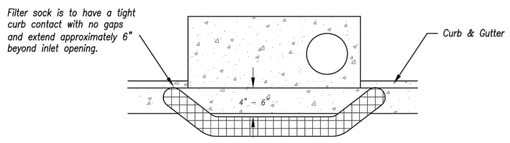
1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Notes:

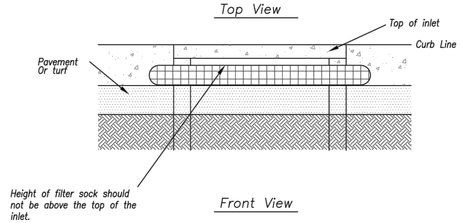
1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When 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.



On Grade Curb Inlet Protection



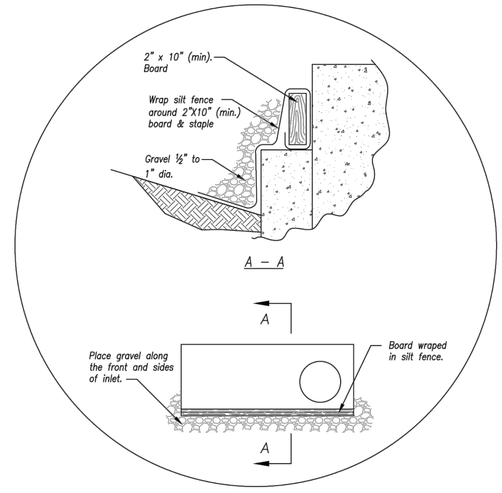
Top View



Front View

Sump Inlet Sediment Filter

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



Detail A

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

AMERICAN PUBLIC WORKS ASSOCIATION	
Kansas City Metro Chapter APWA American Public Works Association	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06 ADOPTED: 10/24/2016
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07 ADOPTED: 10/24/2016

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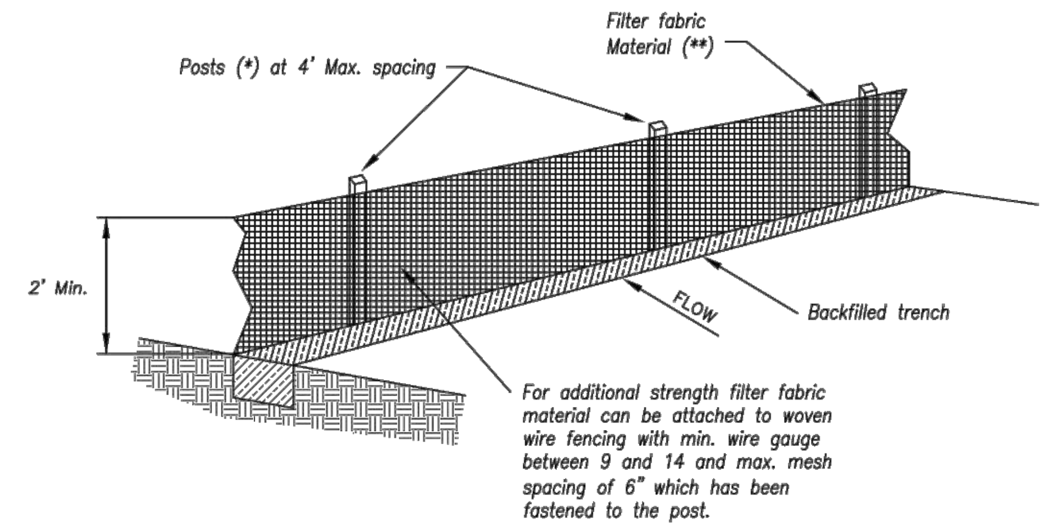
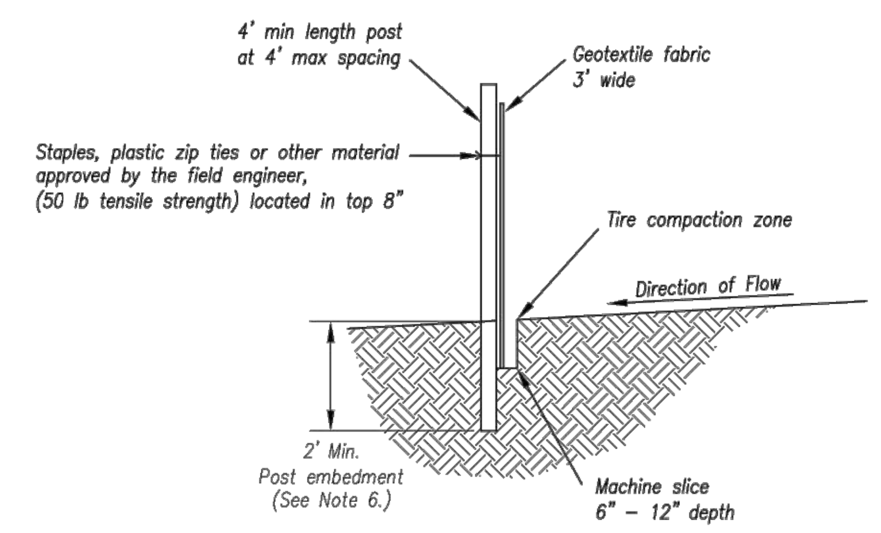




(*) POSTS

- MIN. LENGTH 4'
- HARDWOOD 1 3/16" x 1 3/16"
- NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
- STEEL 1.33 LB/FT

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

SILT FENCE DETAILS
Not to Scale

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 100'. 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 1/3 the height of silt fence.
2. Repair as necessary to maintain function and structure.

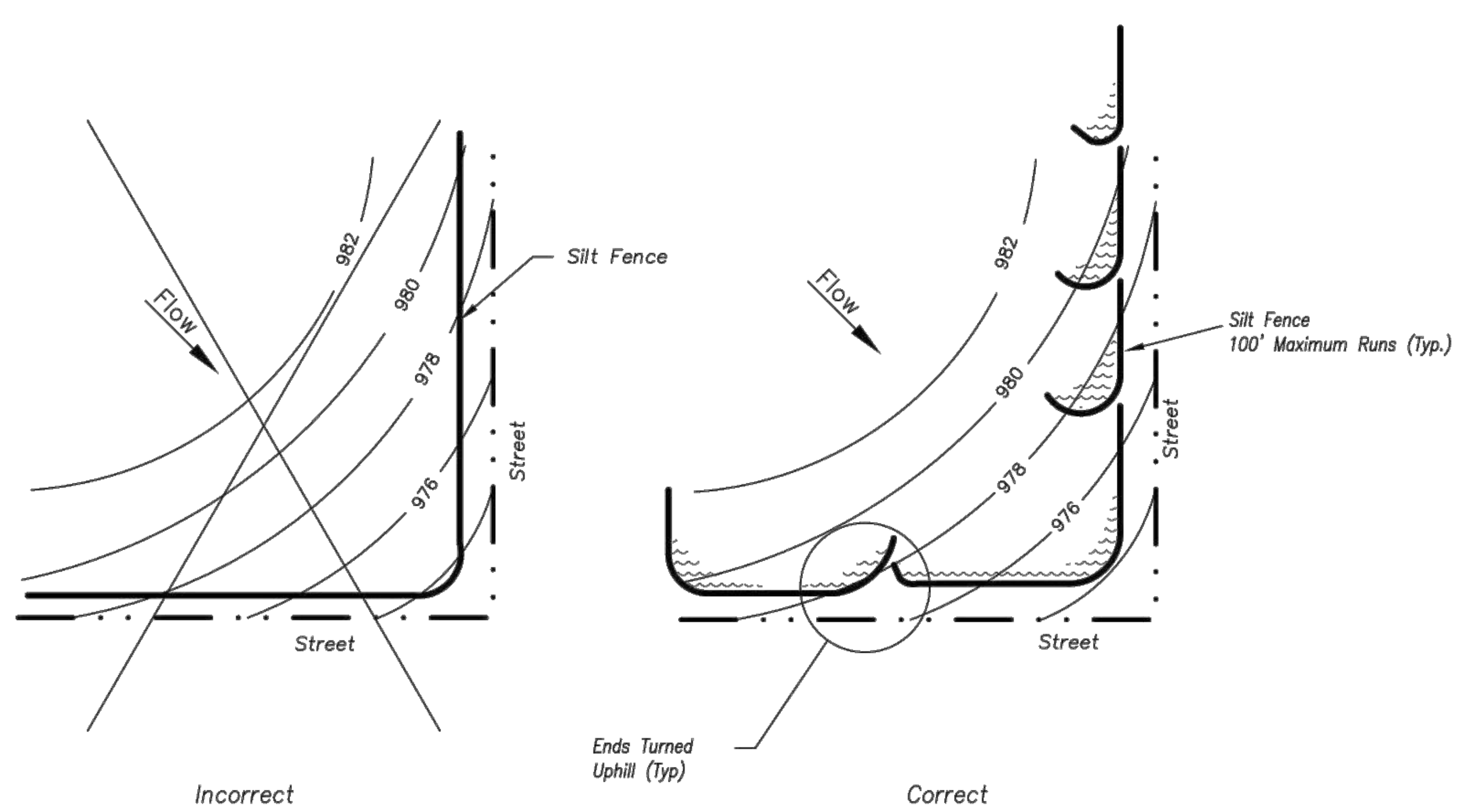
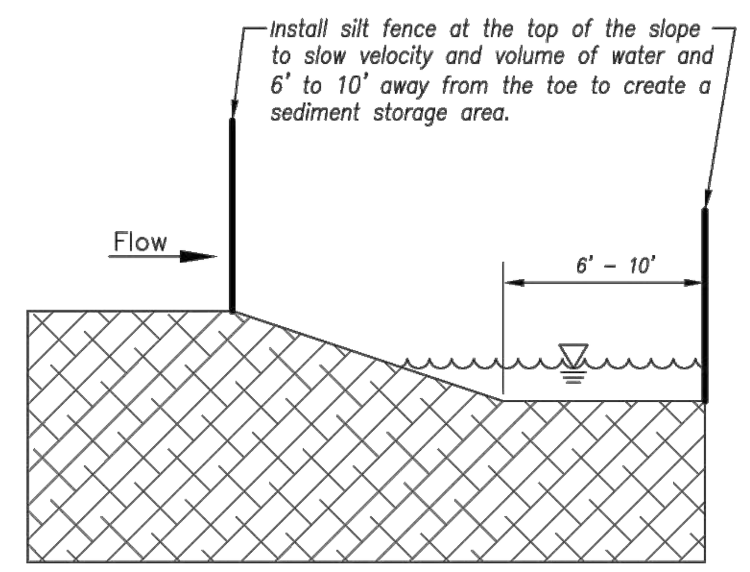
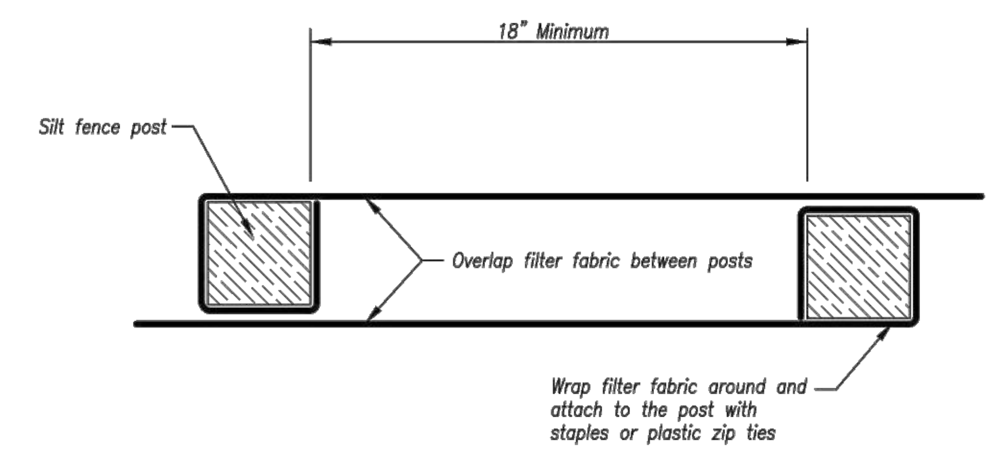


Figure A



SILT FENCE LAYOUT
Not to Scale



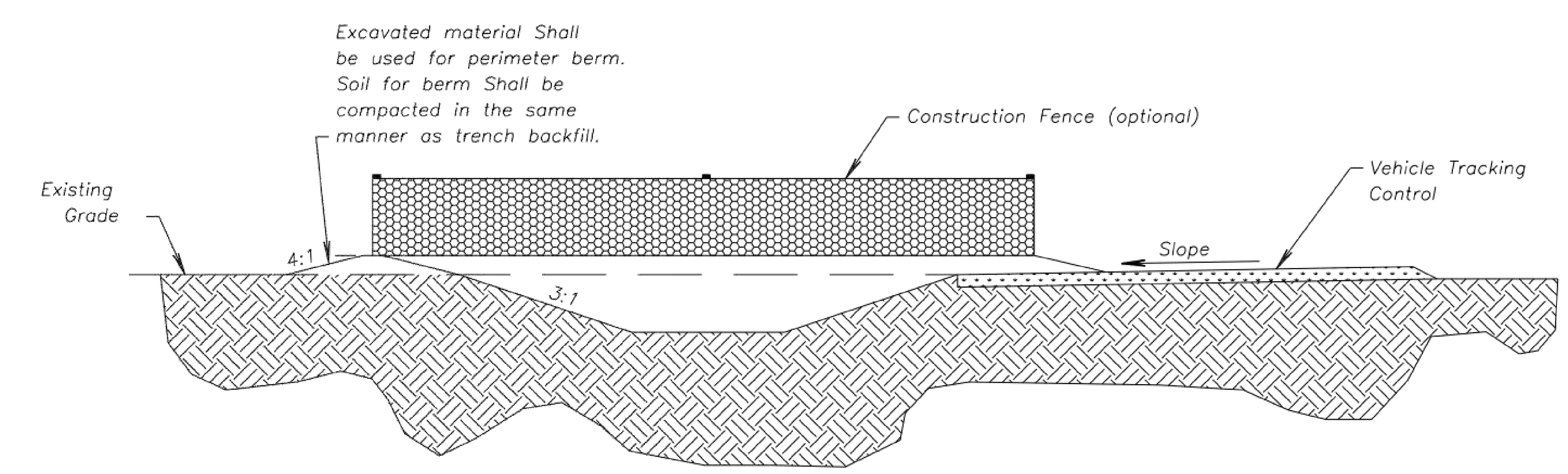
JOINING FENCE SECTIONS
Not to Scale

Notes for Concrete Washout:

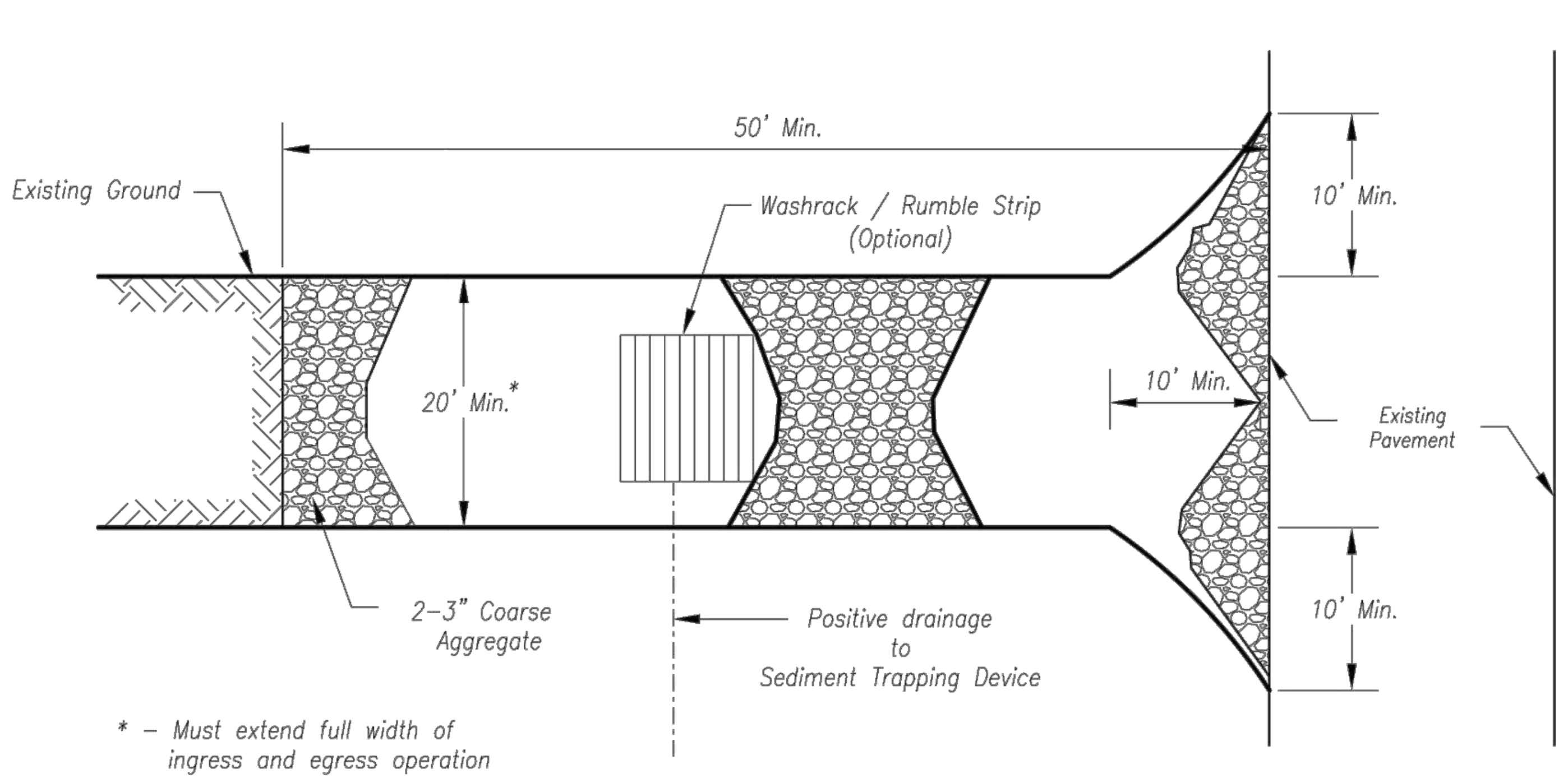
1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be 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 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.

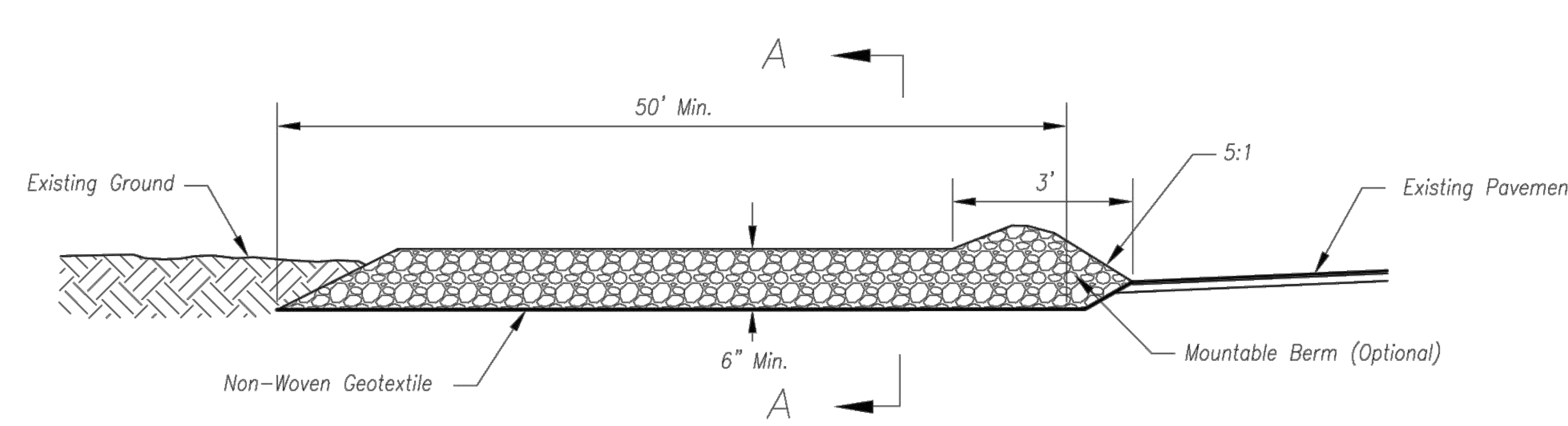


CONCRETE WASHOUT

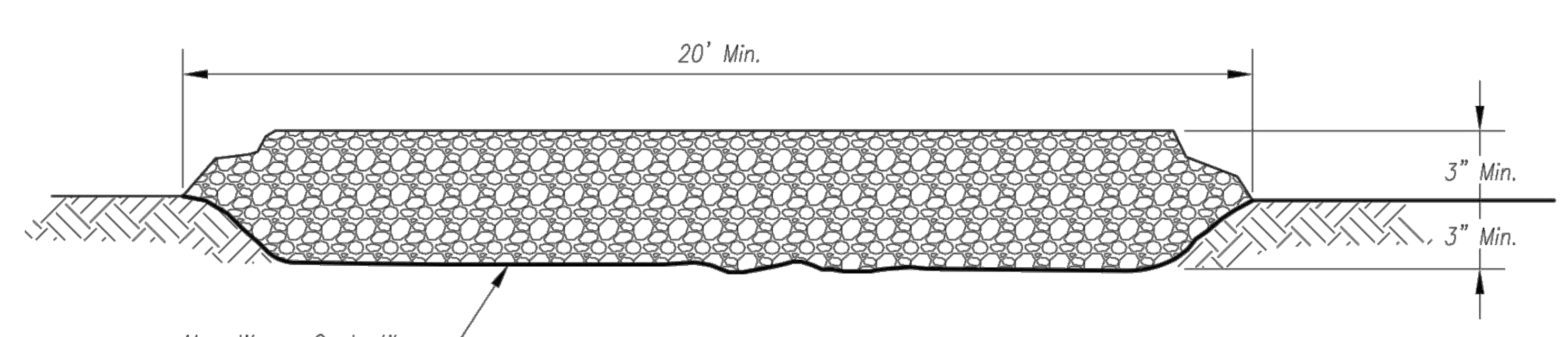


* – Must extend full width of ingress and egress operation

Plan View
Not to Scale



Side Elevation
Not to Scale



Section A–A
Not to Scale

CONSTRUCTION ENTRANCE

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.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
SILT FENCE	STANDARD DRAWING NUMBER ESC-03; ADOPTED: 10/24/2016
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01; ADOPTED: 10/24/2016

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03/25/2020
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01/07/2020 PER CITY COMMENTS
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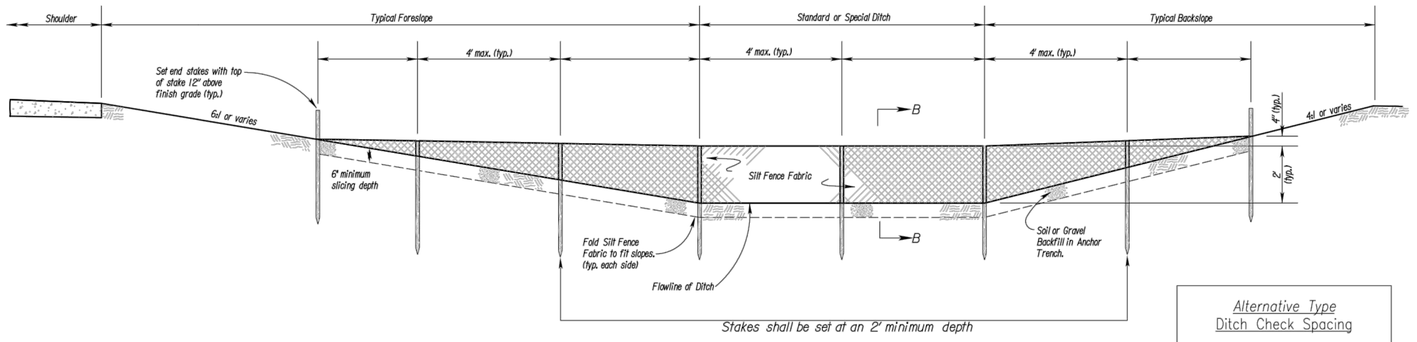
SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMIT, MISSOURI

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

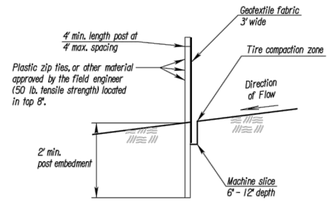
DESIGNER / DRAFTER: MDM/AJM
DATE: 11/20/2019
PROJECT NUMBER: 0318050.02
BOOK AND PAGE:

Notes for Silt Fence Ditch Check:

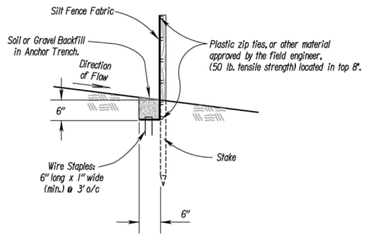
1. Stakes shall be 4' (min.) long and one of the following materials:
   a. Hardwood – 1 9/16" x 1 9/16";
   b. Southern Pine (No. 2) – 2 5/8" x 2 5/8";
   c. Steel U, T, L, or C Section – .95 lbs. per 1'–0";
   d. Synthetic – same strength as wood stakes.
2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6" centers (max.).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.
6. Use support fencing when tributary area is greater than 2.4 acres or when ditch gradient is greater than 2 percent.
7. Silt fence sliced in to a 6" minimum depth.
8. Elevation at tie in points shall be a minimum of 4" higher than the center.



TYPICAL ELEVATION



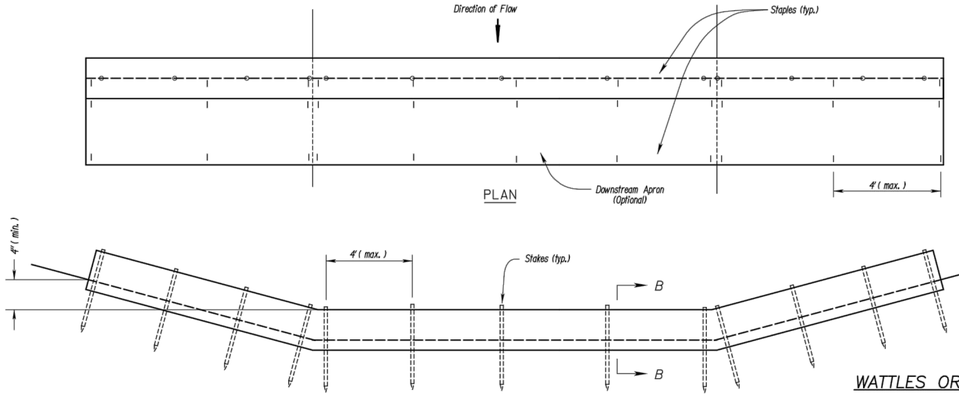
SECTION B-B



Alternative Type Ditch Check Spacing	
Ditch Centerline Slope (%)	Spacing Interval (Feet)
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	33
Note: Use this spacing for all except Rock Ditch Checks.	

SILT FENCE DITCH CHECK

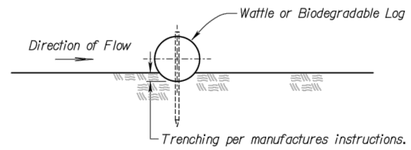
NO SCALE



TYPICAL ELEVATION

Notes for Wattles and Biodegradable Log Ditch Check:

1. Use as many biodegradable log sections as necessary to ensure water does not flow around end of ditch check.
2. Overlap sections a minimum of 18"
3. Stakes shall be per manufacturer's instructions. Length of stakes shall be a minimum of 2 times the diameter of the log or 24" minimum.
4. Use Erosion Control (Class 1) (Type C) as the downstream apron when directed by the Engineer.
5. Use 9" diameter logs when used with Erosion Control (Class 2) (Any Type) channel lining. Smaller diameter logs may be used with Erosion Control (Class 2) (Any Type) channel lining as directed by the Engineer.



SECTION B - B

WATTLES OR BIODEGRADABLE LOG DITCH CHECKS

OR Filter Sock Ditch Check

NO SCALE

Modified from Kansas Department of Transportation Standard Details for Erosion Control and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

SILT FENCE AND WATTLE/ BIODEGRADABLE LOG DITCH CHECKS

STANDARD DRAWING NUMBER ESC-09

ADOPTED: 10/24/2016

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SUMMIT VIEW FARMS 4TH PLAT

LEE'S SUMMT, MISSOURI

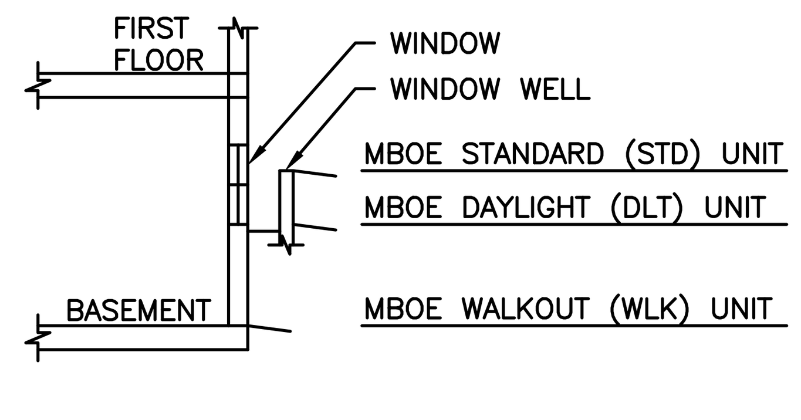
MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
EROSION AND SEDIMENT CONTROL DETAILS

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

SHEET 12 OF 31

GENERAL NOTES:

1. MINIMUM BUILDING OPENING ELEVATIONS (MBOE'S) SHOWN REPRESENT THE MINIMUM RECOMMENDED ELEVATIONS THAT WILL PROVIDE ADEQUATE POSITIVE STORM WATER DRAINAGE TO THE LOWEST POINT ON THE LOT FROM THE ANTICIPATED LOW SIDE OF THE BUILDING. THE HOME BUILDER SHALL BE RESPONSIBLE FOR ENSURING ADEQUATE POSITIVE DRAINAGE AWAY FROM ALL BUILDING OPENINGS TO PREVENT LOCALIZED STRUCTURE FLOODING.
2. A DAYLIGHT OR STANDARD UNIT MAY BE CONSTRUCTED ON WALKOUT LOT, AND A STANDARD UNIT MAY BE CONSTRUCTED ON A DAYLIGHT LOT.
3. A DAYLIGHT UNIT IS DEFINED AS A UNIT HAVING A WINDOW ON THE BASEMENT LEVEL WITH AT LEAST 5'-4" OF CLEARANCE FROM THE FINISHED FIRST FLOOR ELEVATION TO THE BOTTOM OF THE WINDOW. CLEARANCES LESS THAN 5'-4" ARE DEFINED AS STANDARD UNITS, WHETHER OR NOT A WINDOW WELL IS REQUIRED.
4. REFER TO SANITARY SEWER SHEETS FOR SEWER MAIN AND LATERAL ELEVATIONS. BASEMENT ELEVATION MAY NEED TO BE HIGHER THAN MBOE SHOWN FOR GRAVITY BASEMENT SEWER SERVICE.
5. ALL FRONT LOT ELEVATIONS ARE PROPOSED ELEVATIONS. REAR LOT ELEVATIONS ARE EITHER PROPOSED ELEVATIONS OR EXISTING GRADE (EG) ELEVATIONS.
6. HOME BUILDERS SHALL MAINTAIN 2% GRADE, 1.5% ACROSS SIDEWALKS, WITHIN RIGHT-OF-WAY. <u>AS-BUILT ELEVATION SHOWN AT RIGHT-OF-WAY ARE CALCULATED FROM AS-BUILT BACK OF CURB ELEVATIONS.</u>
7. HOMEBUILDER ON LOT 88 TO MAINTAIN/PROVIDE 1000 CONTOUR ELEVATION ALONG SE CORNER OF LOT.



TYPICAL UNIT SECTION
NOT TO SCALE

SEE SHEET 14 FOR SWALE PLAN AND PROFILE INFORMATION.

ABBREVIATION LEGEND:

MBOE	MINIMUM BUILDING OPENING ELEVATION
EG	EXISTING GRADE
TOB	TOP OF BANK
WLK	WALKOUT
DLT	DAYLIGHT
STD	STANDARD

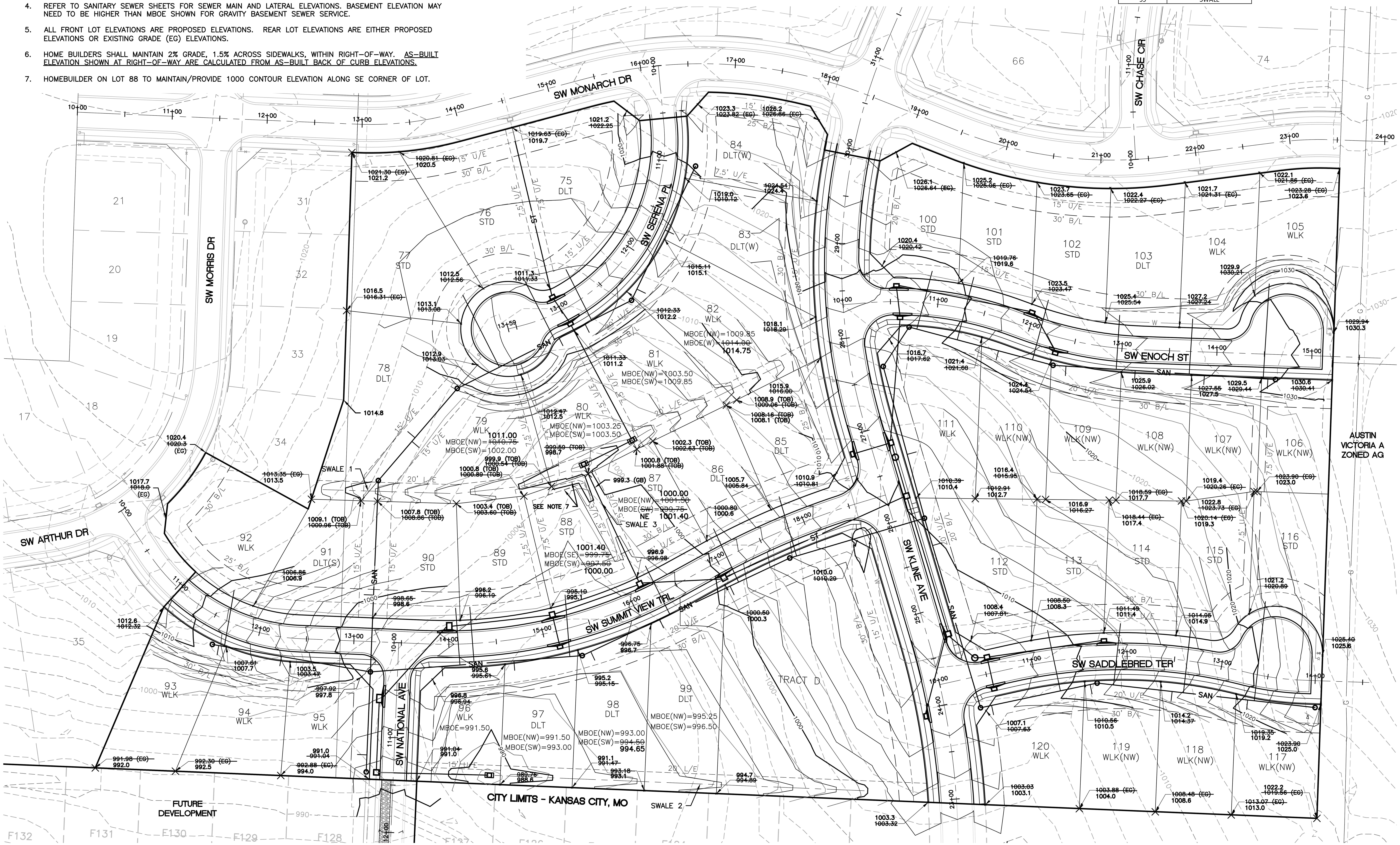
LEGEND

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- AS-GRADED MAJOR CONTOUR
- AS-GRADED MINOR CONTOUR

AS-GRADED PLOT PLANS ARE REQUIRED ON FOLLOWING LOTS

LOT	ENGINEERED FEATURE
79	SWALE
80	FIELD INLET / SWALE
81	SWALE
82	SWALE
87	OVERFLOW SWALE
88	OVERFLOW SWALE
96	SWALE
97	SWALE
98	SWALE
99	SWALE

0 50 100



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SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMIT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
MASTER DRAINAGE PLAN

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

SHEET
13 OF 31

L:\Engineering\0318050 SVFD Summit View Farms 3rd Plat\DRAWINGS\CONSTRUCTION DRAWINGS\4TH PLAT\ASBUILTS\GRD-PLANS\0318050.02-STM-MDP-PLN.dwg, 1/26/2022 9:10:16 AM, JAMIE MCMURRY, LAMP RYNEARSON

LOT	LOT CORNER	SWALE PROFILE GRADE	AS-GRADED SWALE PROFILE GRADE	1% WATER SURFACE ELEVATION	AS-GRADED 1% WATER SURFACE ELEVATION
78	SOUTH	~~1008.40~~	1008.77	~~1008.53~~	1008.91
79	NORTH	~~1008.40~~	1008.77	~~1008.53~~	1008.91
79	SOUTH	~~999.21~~	999.06	~~999.44~~	999.27
80	NORTH	~~999.21~~	999.06	~~999.44~~	999.27
80	SOUTH	~~1000.77~~	1000.03	~~1001~~	1000.24
81	NORTH	~~1000.77~~	1000.03	~~1001~~	1000.24
81	SOUTH	~~1007.69~~	1007.63	~~1007.84~~	1007.83
82	NORTH	~~1007.69~~	1007.63	~~1007.84~~	1007.83
82	END	~~1011.68~~	1012.55	~~1011.83~~	1012.75
87/88	GRADE BREAK	~~999.20~~	999.30	~~999.98~~	999.68
87/88	FRONT SETBACK	~~997.28~~	997.61*	~~997.69~~	997.61

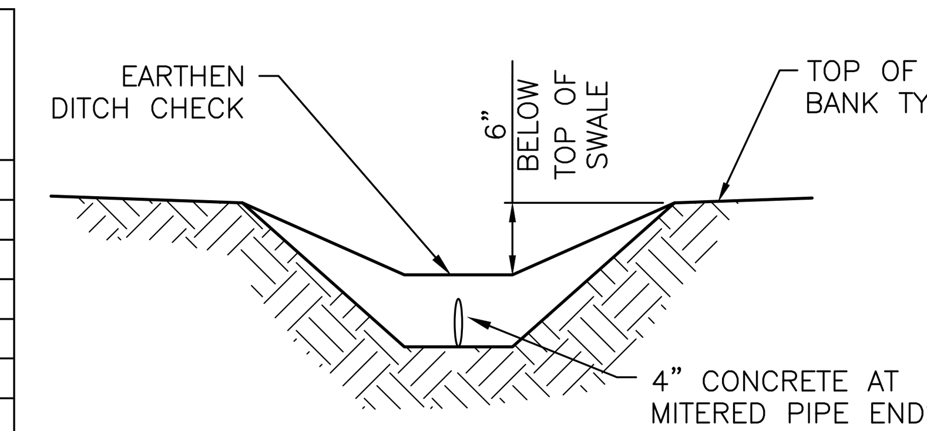
* HOMEBUILDER TO MAINTAIN AT LEAST 2% SLOPE

LOT	LOT CORNER	SWALE PROFILE GRADE	AS-GRADED SWALE PROFILE GRADE	1% WATER SURFACE ELEVATION	AS-GRADED 1% WATER SURFACE ELEVATION
96	START	~~989.40~~	990.34	~~989.48~~	990.42 *
96	SOUTH	~~988.76~~	987.93	~~989.1~~	988.21
97	NORTH	~~988.76~~	987.93	~~989.1~~	988.21
97	SOUTH	~~990.47~~	990.64	~~990.81~~	990.92
98	NORTH	~~990.47~~	990.64	~~990.81~~	990.92
98	SOUTH	~~992.18~~	992.34	~~992.44~~	992.61
99	NORTH	~~992.18~~	992.34	~~992.44~~	992.61
99	SOUTH	~~993.89~~	994.12	~~994.15~~	994.39
TRACT D	NORTH	~~993.89~~	994.12	~~994.15~~	994.39
TRACT D	END	~~999.29~~	1000.34	~~999.41~~	1000.46

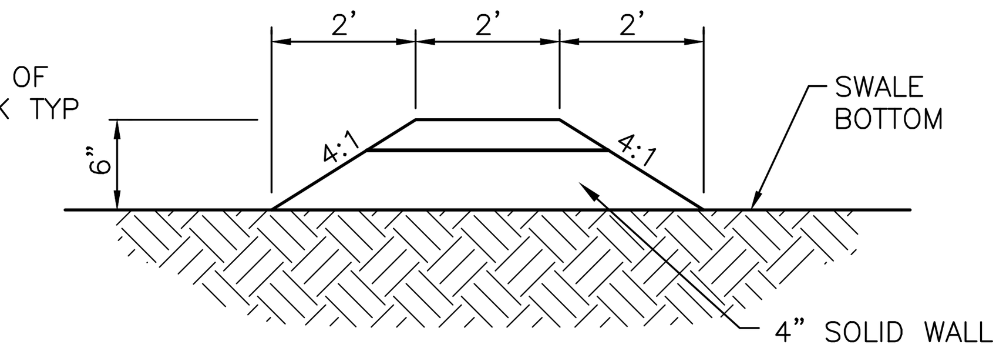
* SWALE ONLY RECEIVES FLOW FROM PORTION OF LOT 96 AT THIS LOCATION; MBOE BASED ON SOUTH LOT LINE FLOW (FROM MULTIPLE UPSTREAM LOTS)

AS-GRADED SWALE TABLE (1% STORM)

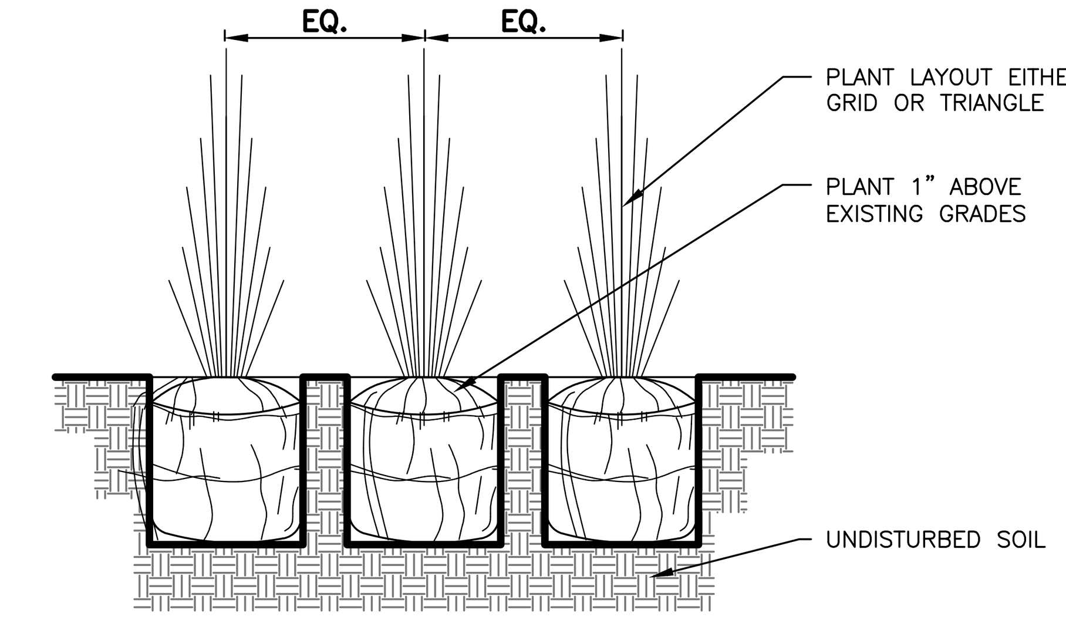
SWALE SECTION DATA						SWALE FLOW DATA							
SWALE	STATION	SWALE SLOPE (FT/FT)	LEFT SIDE SLOPE (H:V)	RIGHT SIDE SLOPE (H:V)	BOTTOM WIDTH (FT)	FLOW (CFS)	DEPTH OF FLOW (FT)	FLOW AREA (SF)	VELOCITY (FPS)	WETTED PERIMETER (FT)	TOP WIDTH (FT)	SPECIFIC ENERGY (FT)	SHEAR STRESS (LBS/SF)
1	2+40.14	0.0655	5:1	5:1	5.00	2.22	0.14	0.80	2.78	6.43	6.40	0.26	0.57
1	3+09.73	0.044	5:1	5:1	5.00	2.85	0.17	1.00	2.87	6.73	6.70	0.30	0.47
1	3+79.51 (N)	0.0336	5:1	5:1	5.00	3.50	0.21	1.27	2.75	7.14	7.10	0.33	0.44
1	3+79.51 (S)	0.0657	5:1	5:1	5.00	4.92	0.21	1.27	3.87	7.14	7.10	0.44	0.86
1	4+55.09	0.062	5:1	5:1	8.00	4.25	0.20	1.20	3.54	7.04	7.00	0.40	0.77
2	1+40.00	0.0511	5:1	5:1	5.00	7.09	0.28	1.79	3.96	7.86	7.80	0.52	0.89
2	3+00.00	0.0223	5:1	5:1	5.00	4.47	0.27	1.72	2.61	7.75	7.70	0.38	0.38
2	4+45.00	0.0477	5:1	5:1	5.00	1.59	0.12	0.67	2.37	6.22	6.20	0.21	0.36
3	1+30.00	0.0219	4:1	4:1	5.00	9.43	0.41	2.72	3.46	8.38	8.28	0.60	0.56
3	2+05.12	0.0219	4:1	4:1	5.00	8.24	0.38	2.48	3.32	8.14	8.04	0.55	0.52



DITCH CHECK SECTION



DITCH CHECK PROFILE



TYPICAL PERENNIAL AND ORNAMENTAL GRASS PLANTING DETAIL

SCALE: NOT TO SCALE

PLANT SCHEDULE

NATIVE PLANTINGS

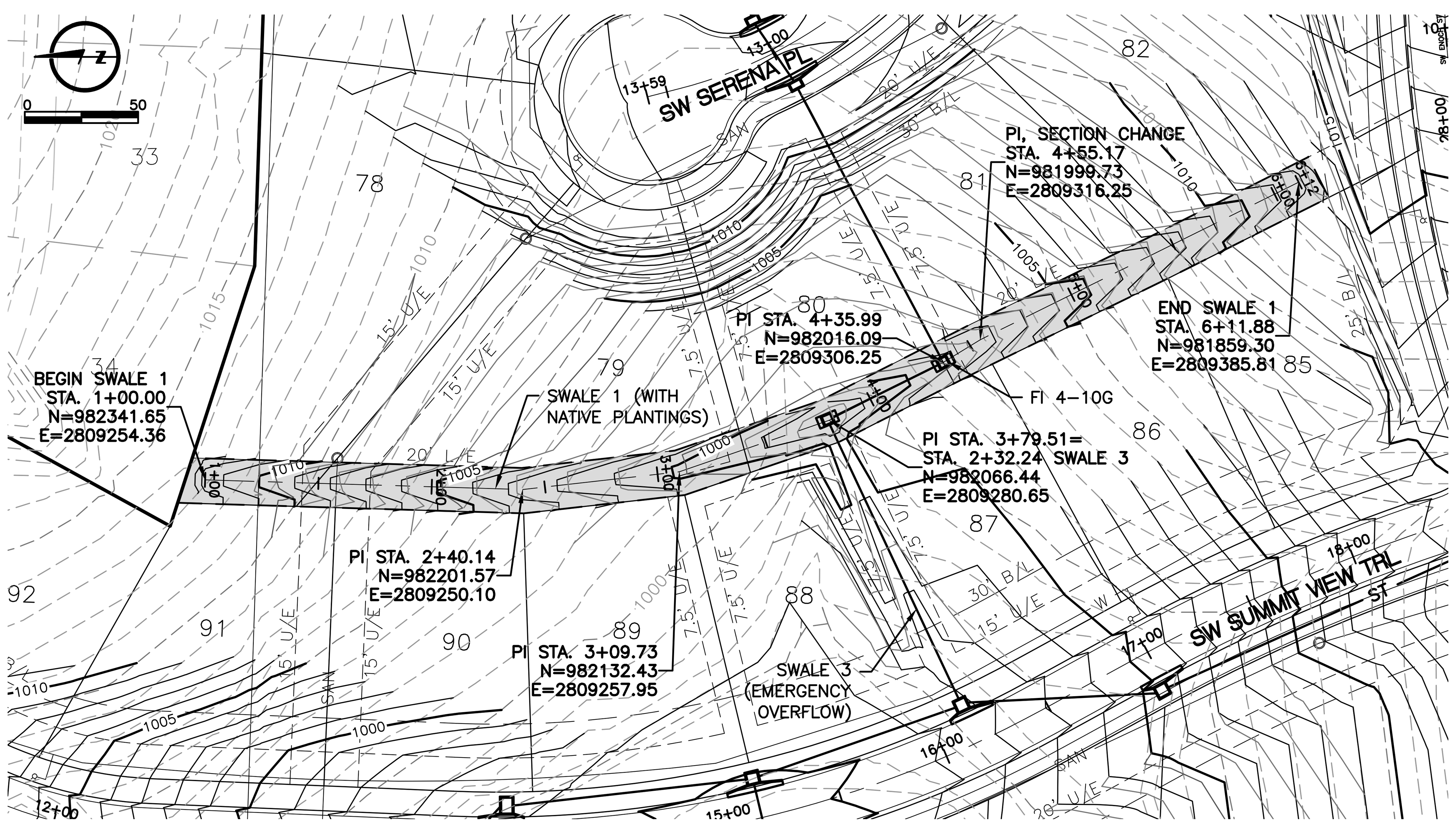
BOTANICAL NAME	COMMON NAME	PLANTING SIZE	SPACING	HEIGHT	WIDTH
CAREX VULPINOIDEA	BROWN FOX SEDGE	DEEP CELL PLUG	18" O.C.	2–3	1–1.5
PANICUM VIRGATUM	SWITCH GRASS	DEEP CELL PLUG	24" O.C.	4–5	2–3
CAREX BROMOIDES	BROME HUMMOCK SEDGE	DEEP CELL PLUG	18" O.C.	0.75–1	1.5–2
ASCLEPIAS INCARNATA	SWAMP MILKWEED	DEEP CELL PLUG	24" O.C.	3–4	2–3

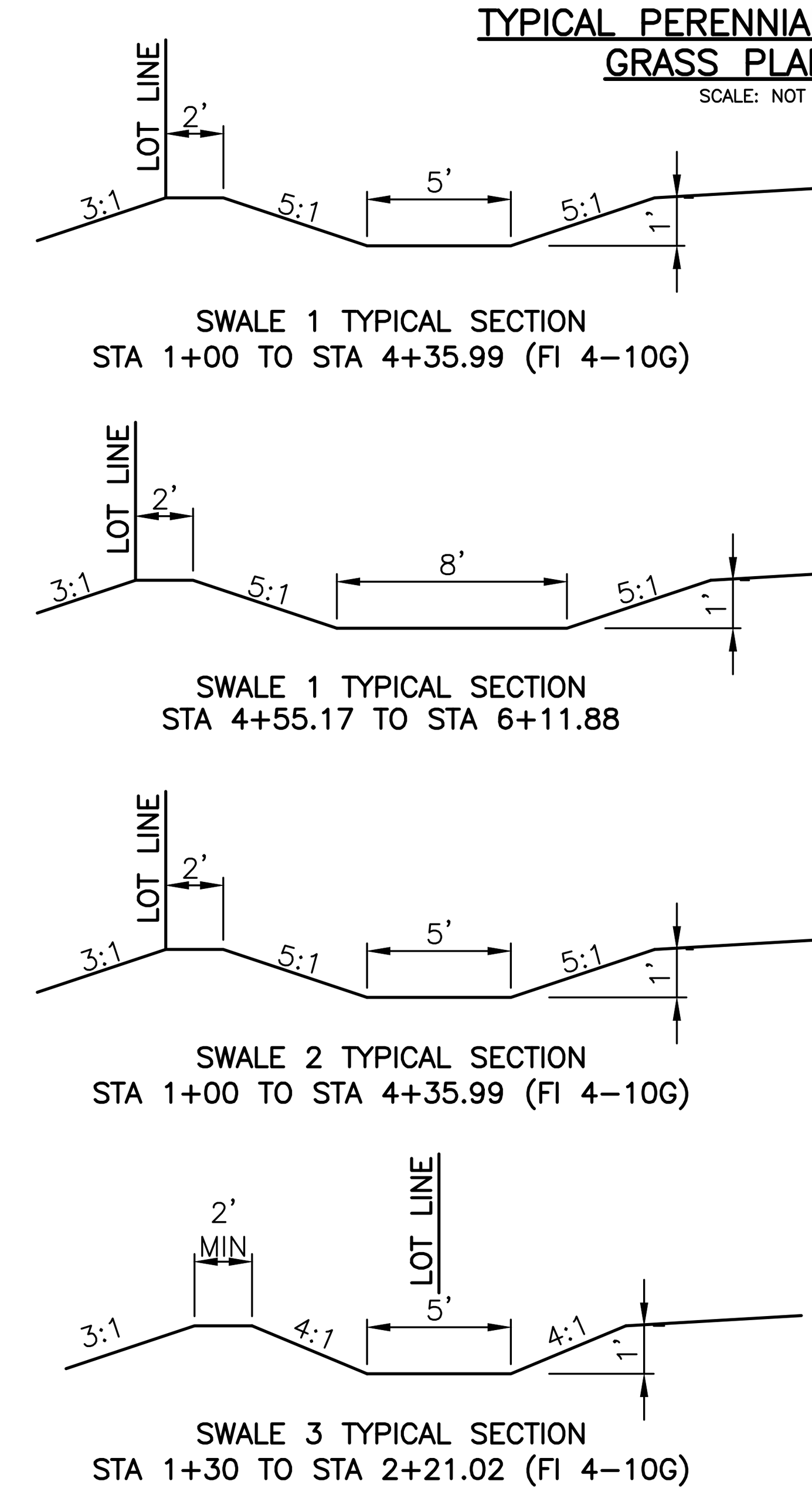
LEGEND

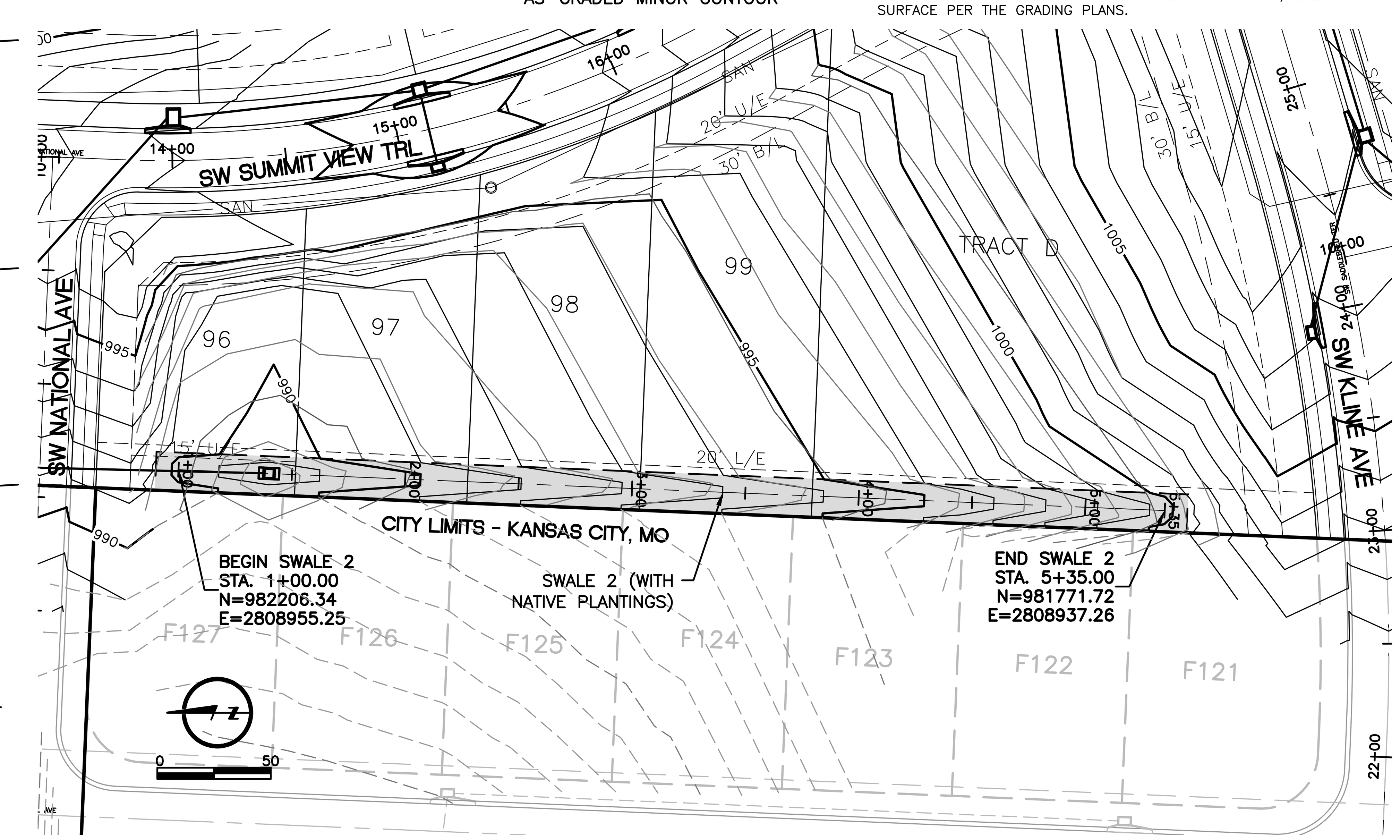
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- AS-GRADED MAJOR CONTOUR
- AS-GRADED MINOR CONTOUR

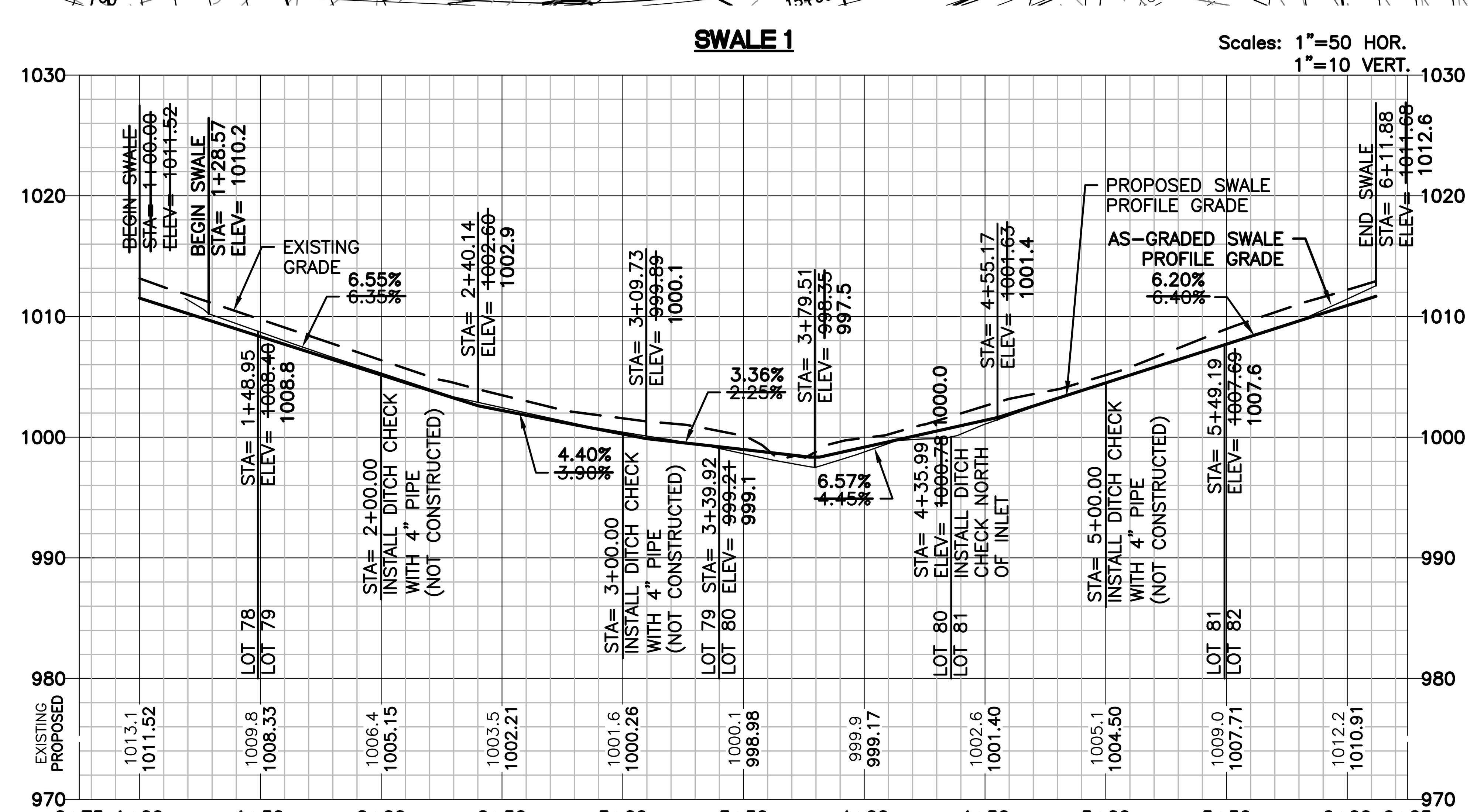
PLANTING NOTES

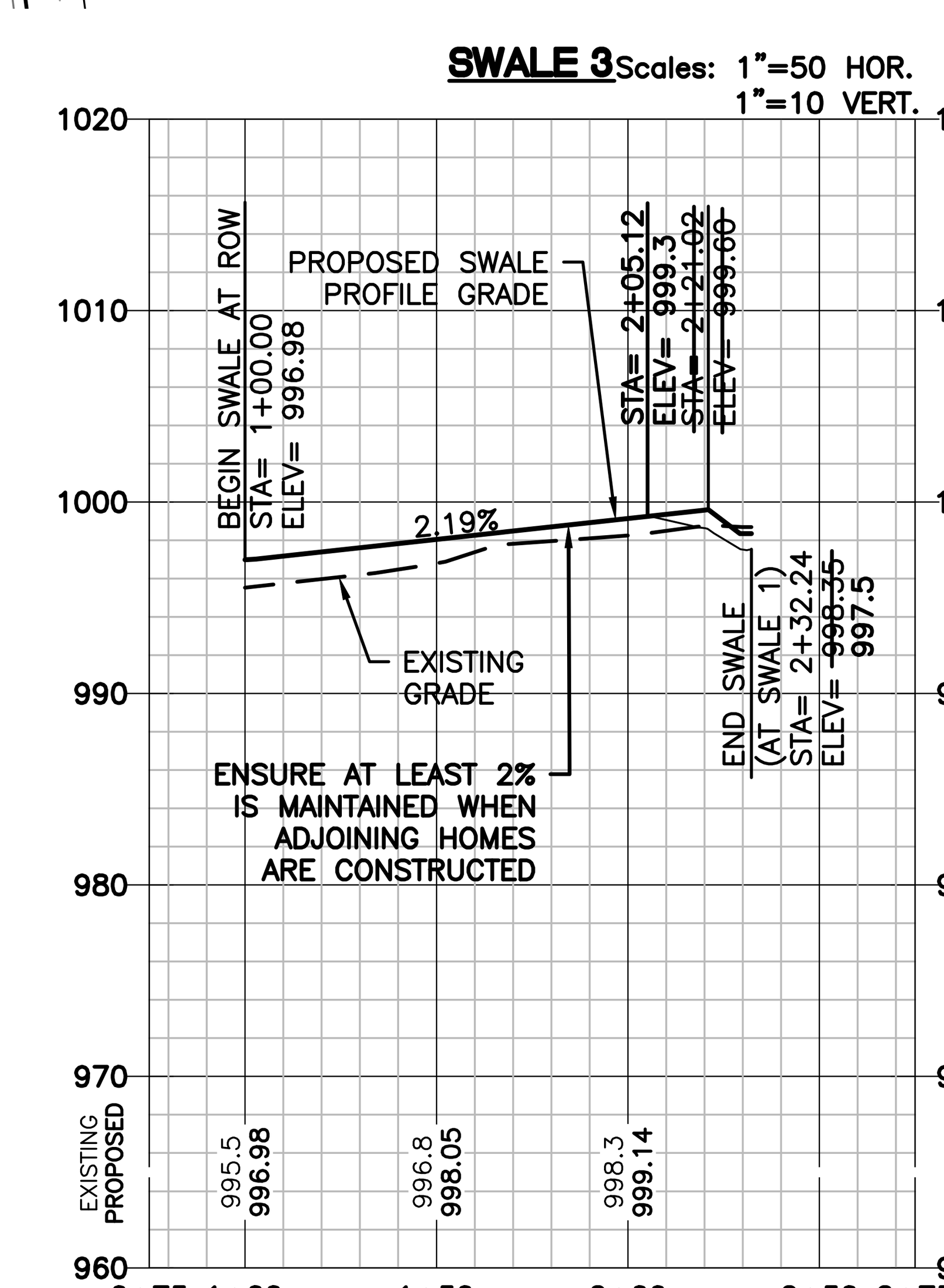
1. EXISTING AND IMPORTED SOIL FOR PLANTING AREAS SHALL BE FREE FROM CHEMICALS, CONSTRUCTION DEBRIS AND TRASH, ROCKS AND OTHER MATERIAL LARGER THAN ONE INCH IN DIAMETER.
2. ALL NATIVE PLANTING AREAS SHALL BE SCARIFIED AND RECEIVE CONDITIONED SOILS. COMPLETELY BREAK-UP SOIL TO A MINIMUM DEPTH OF 12".
3. APPLY GRANULAR PRE-EMERGENT WEED CONTROL TO AREAS TO RECEIVE AND NON-LAWN ORNAMENTAL PLANTING AFTER INCORPORATING SOIL AMENDMENTS.
4. ALL PLANTED AREAS TO BE AMENDED PER AN AGRICULTURAL/SOIL SUITABILITY TEST. ESTIMATE SPREADING SOIL AMENDMENT AT THE RATE OF 6 CUBIC YARDS PER 1,000 SQUARE FEET. TILL INTO THE TOP OF SOIL TO A MINIMUM DEPTH OF 6". RAKE TO A SMOOTH, EVEN SURFACE PER THE GRADING PLANS.

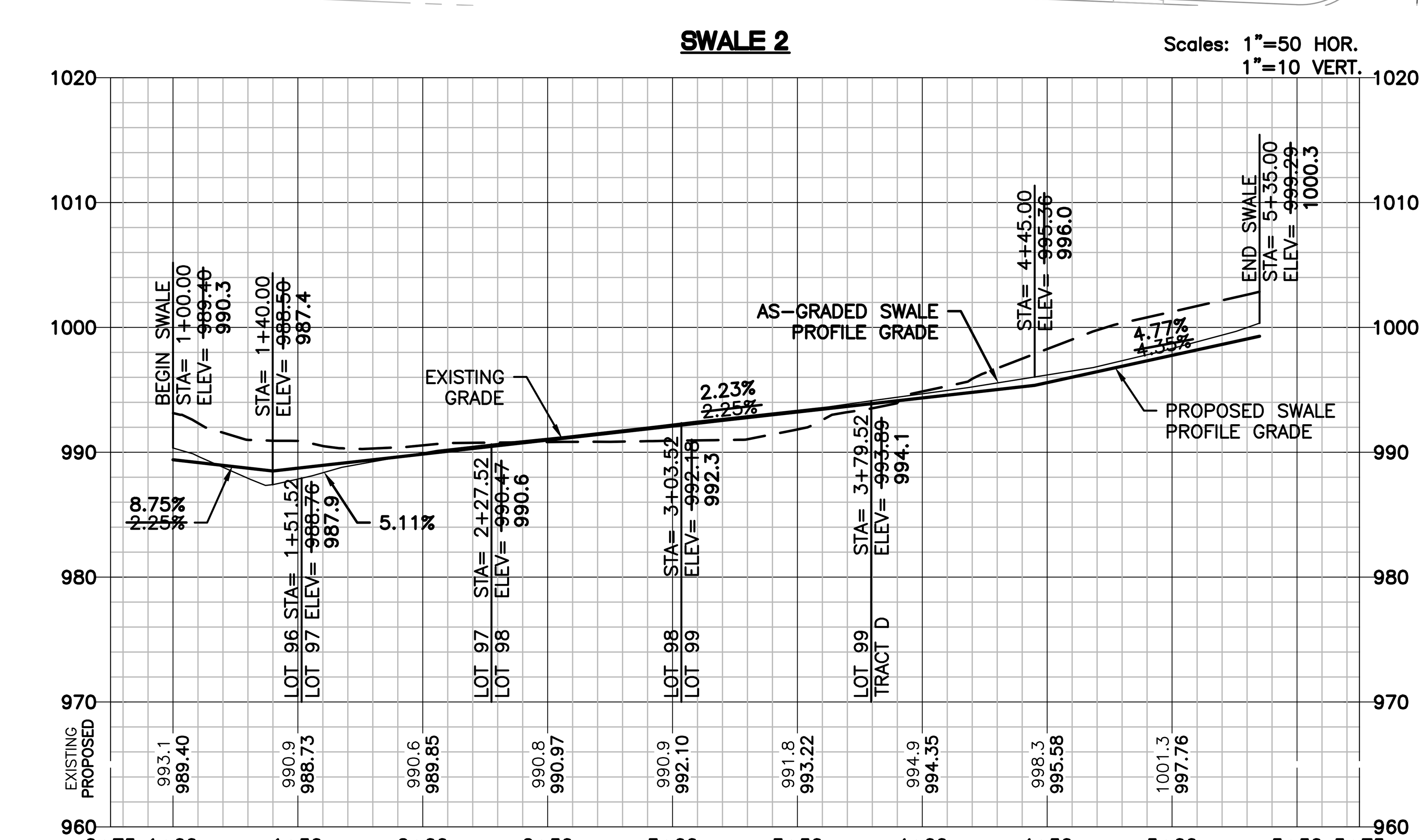












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SUMMIT VIEW FARMS 4TH PLAT

LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS

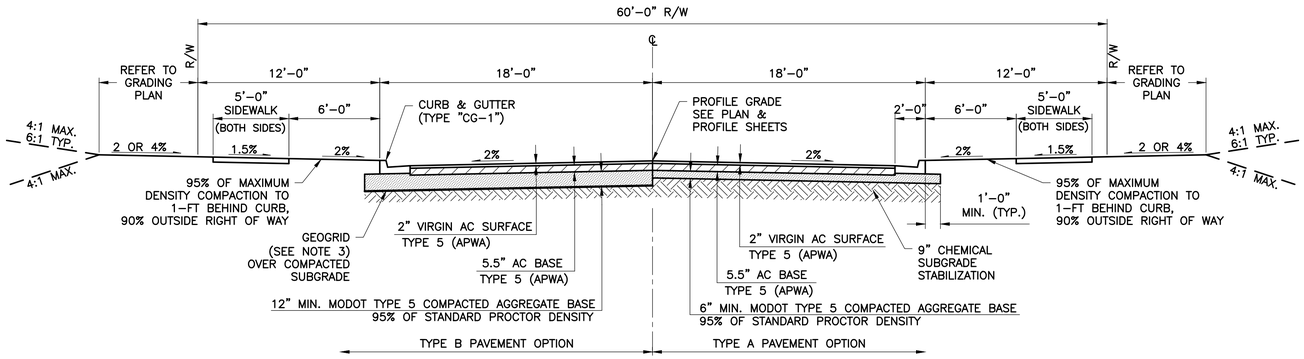
SWALE PLAN/PROFILE

DESIGNER / DRAFTER: MDM/AJM

DATE: 11/20/2019

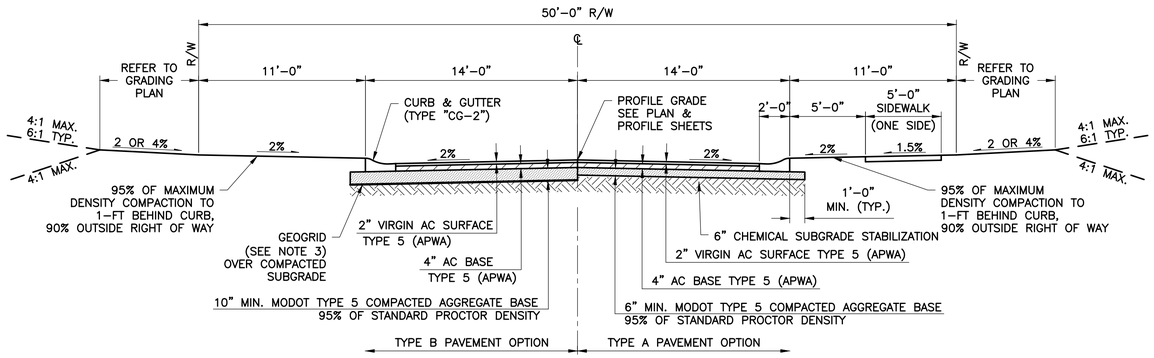
PROJECT NUMBER: 0318050.02

BOOK AND PAGE



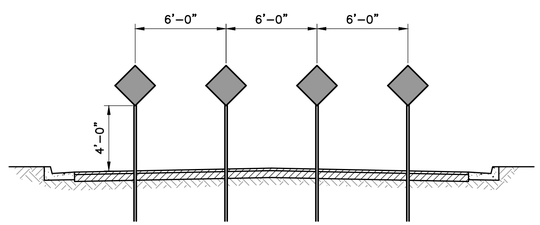
TYPICAL 36' COLLECTOR STREET SECTION

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.

LAMP RYNEARSON
MO CERT. NO. 2013011903
STATE OF MISSOURI
MARK DANIEL McGHEE JR.
NUMBER PE-2008019568
PROFESSIONAL ENGINEER
03/25/2020
MARK DANIEL MCGHEE JR.
PE - 2008019568

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

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

SUMMIT VIEW FARMS 4TH PLAT

LEE'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

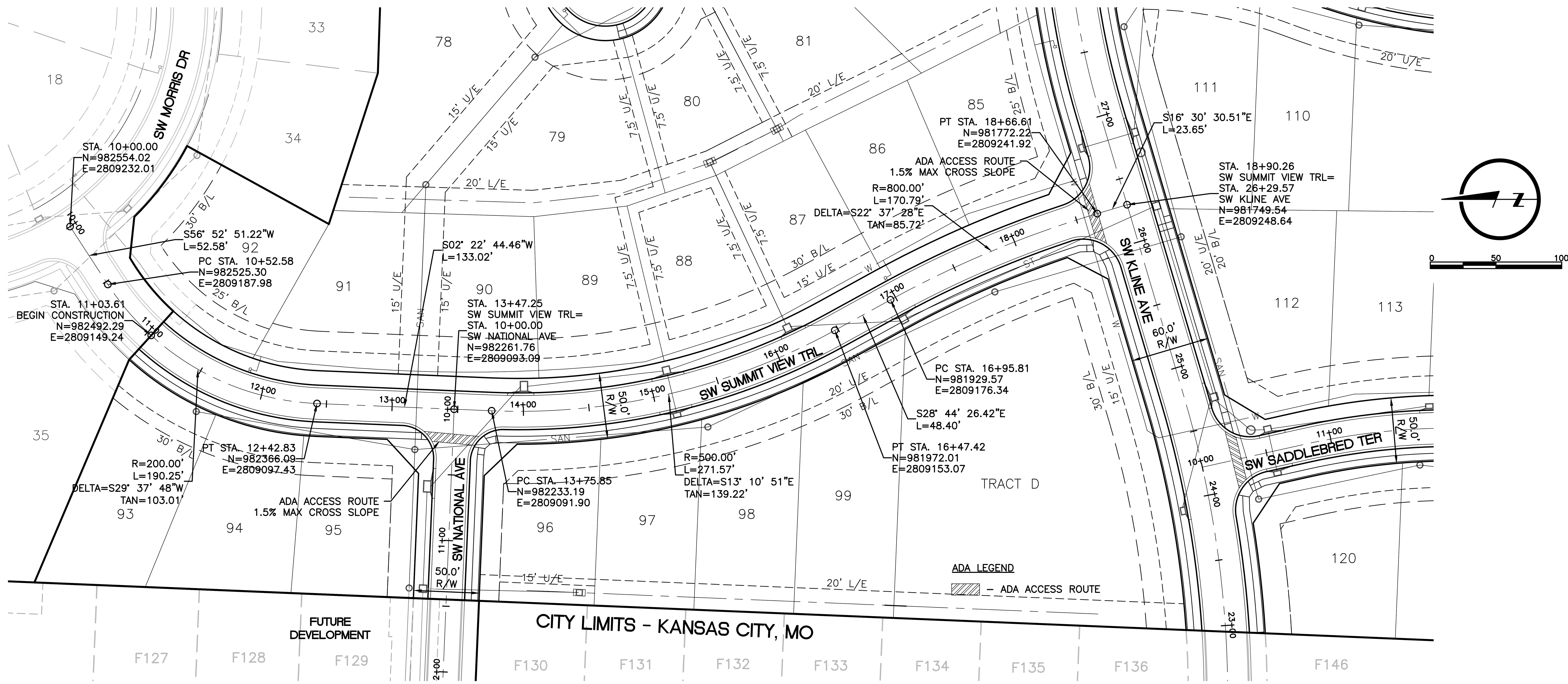
SHEET
15 OF 31

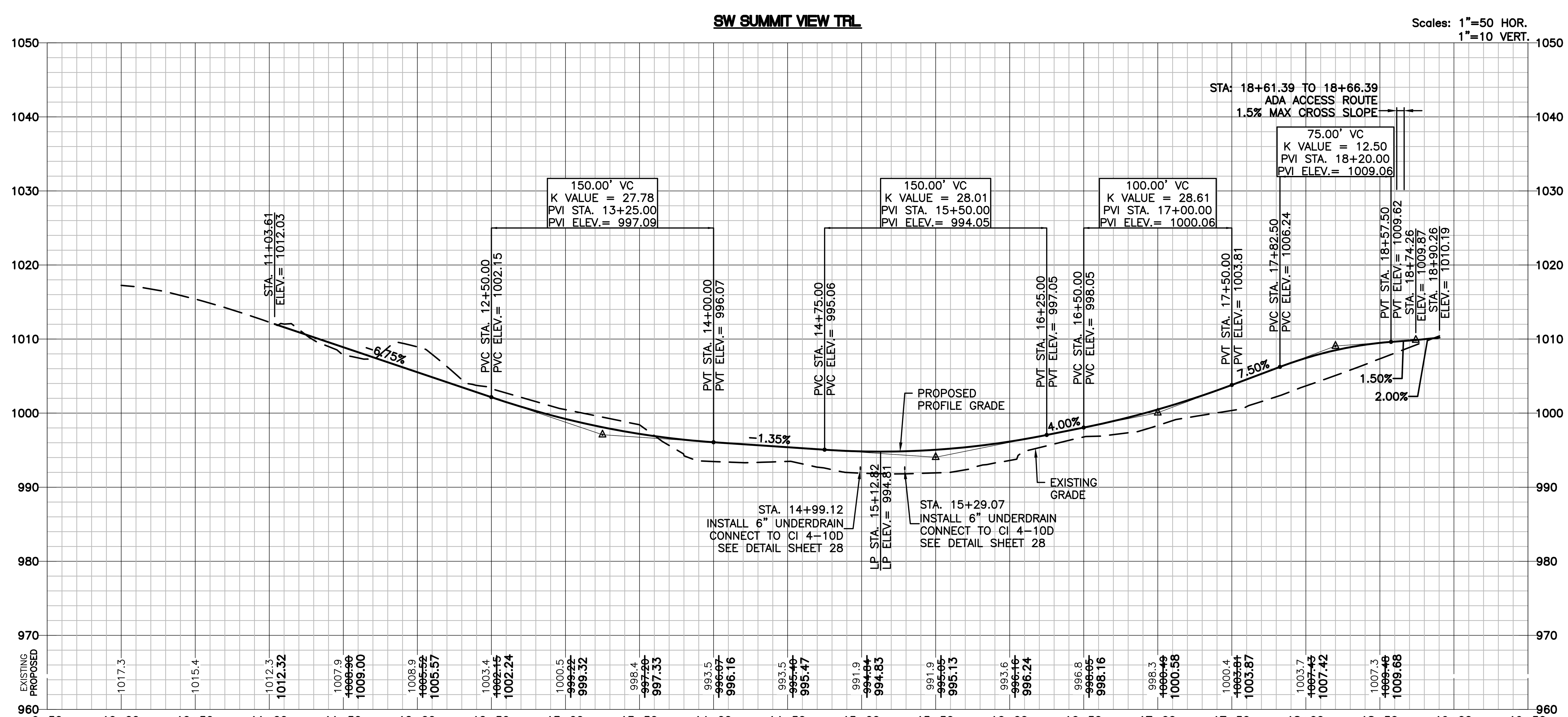
RECORD DRAWING

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: Lamp Rynearson





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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SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMIT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
SW SUMMIT VIEW TRL
STREET PLAN/PROFILE

DESIGNER / DRAFTER: MDM/AJM
DATE: 11/20/2019
PROJECT NUMBER: 0318050.02
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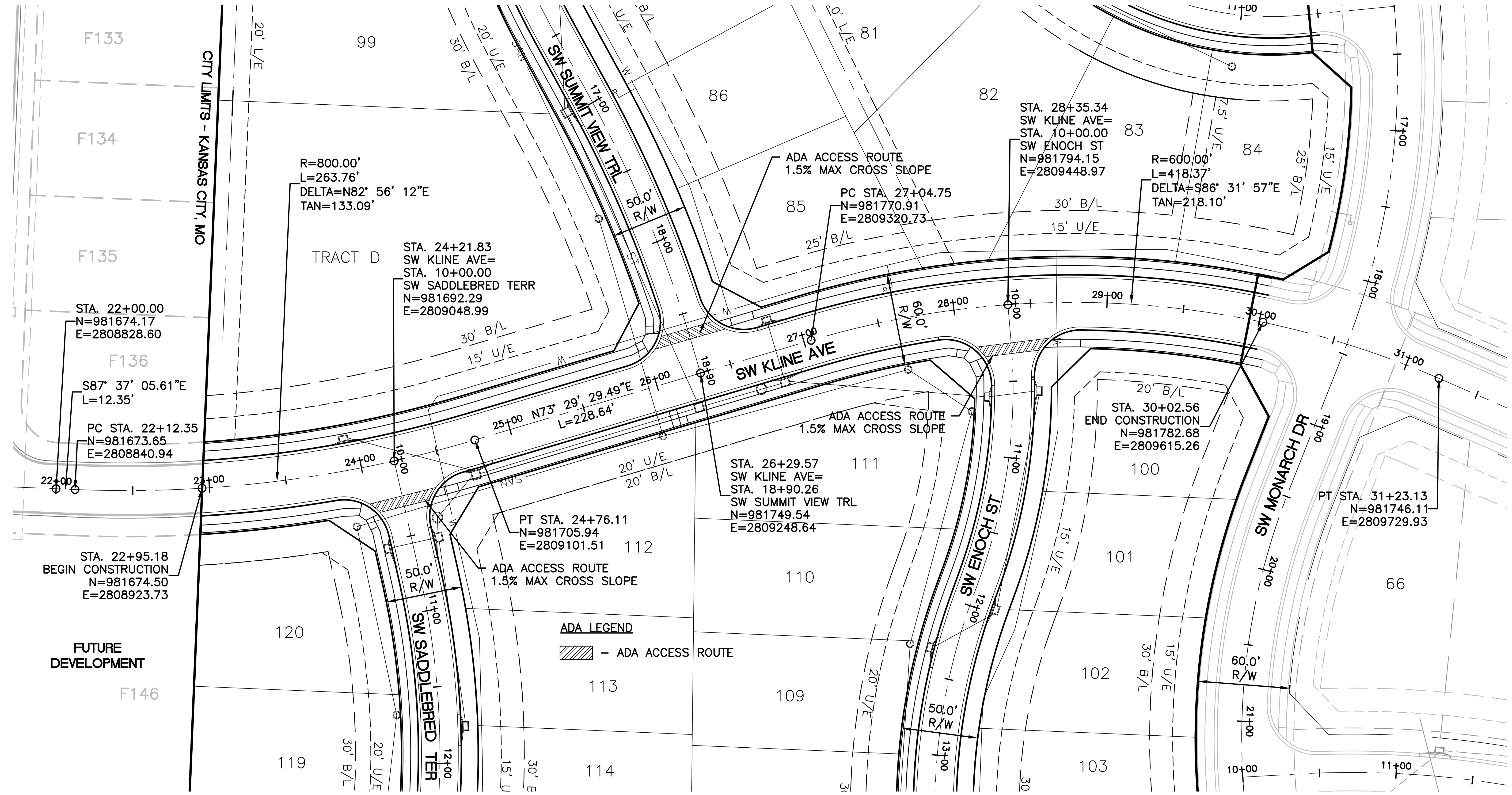
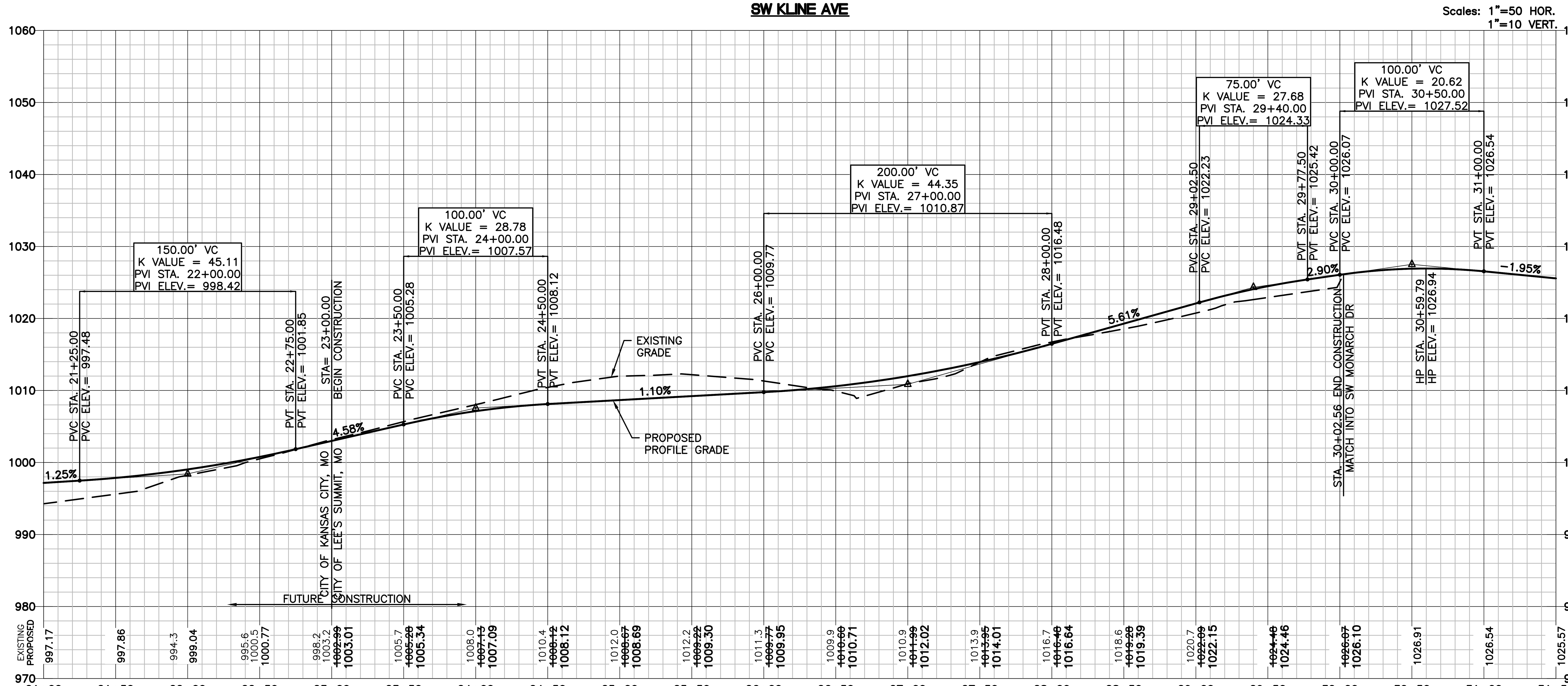


SW KLINE AVE

Scales: 1"=50 HOR. 1"=10 VERT.



LAMP RYNEARSON
MO AUTH. NO. F01294734

STATE OF MISSOURI
MARK DANIEL MCGHEE JR.
NUMBER PE-2008019568
PROFESSIONAL ENGINEER

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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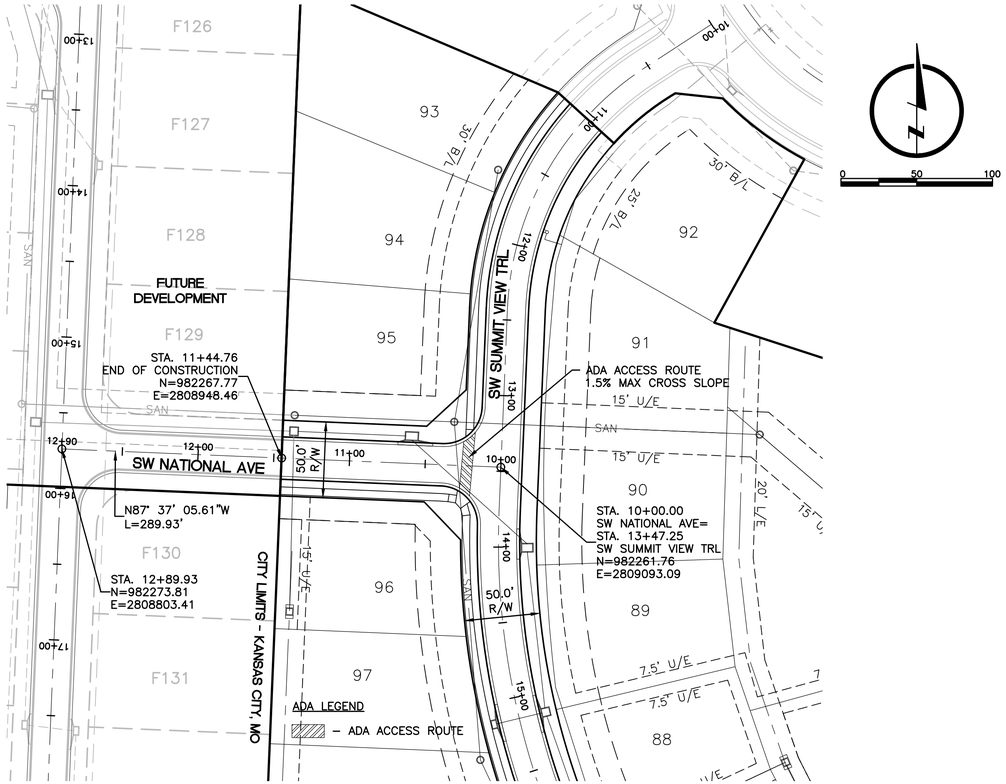
LAMP RYNEARSON

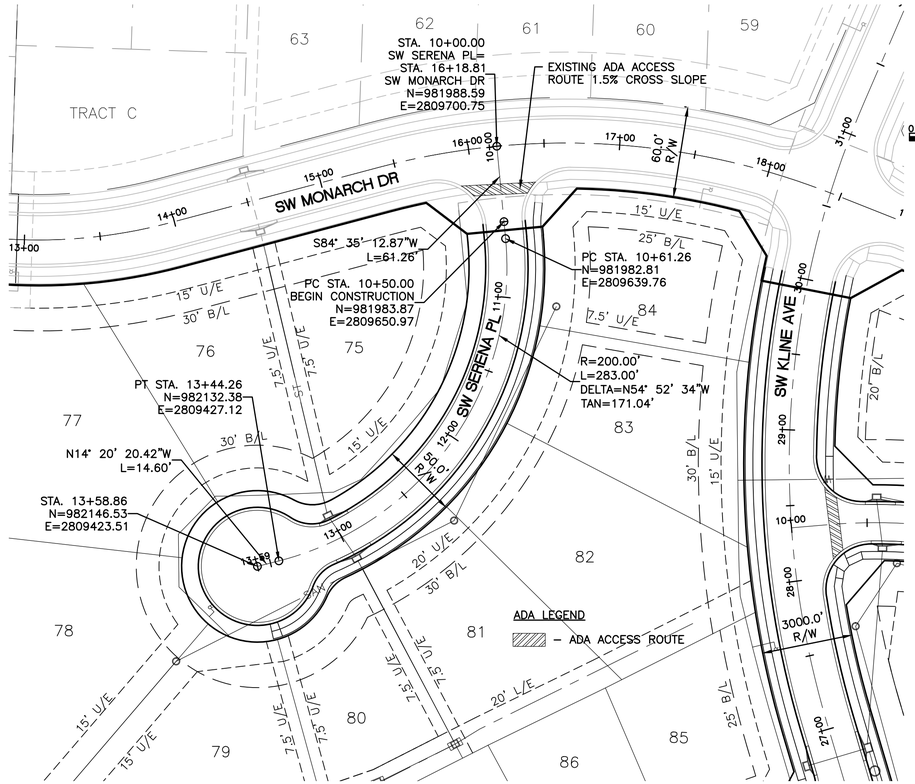
SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMIT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STROM SEWER PLANS
SW KLINE AVE
STREET PLAN/PROFILE

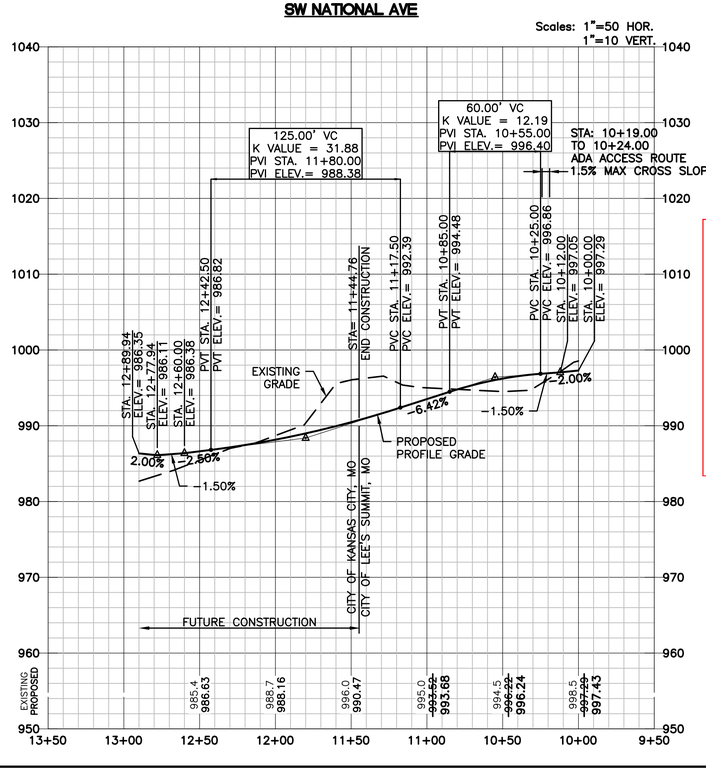
DESIGNER / DRAFTER
MDM/AJM
DATE
11/20/2019
PROJECT NUMBER
0318050.02
BOOK AND PAGE

SHEET
17 OF 31

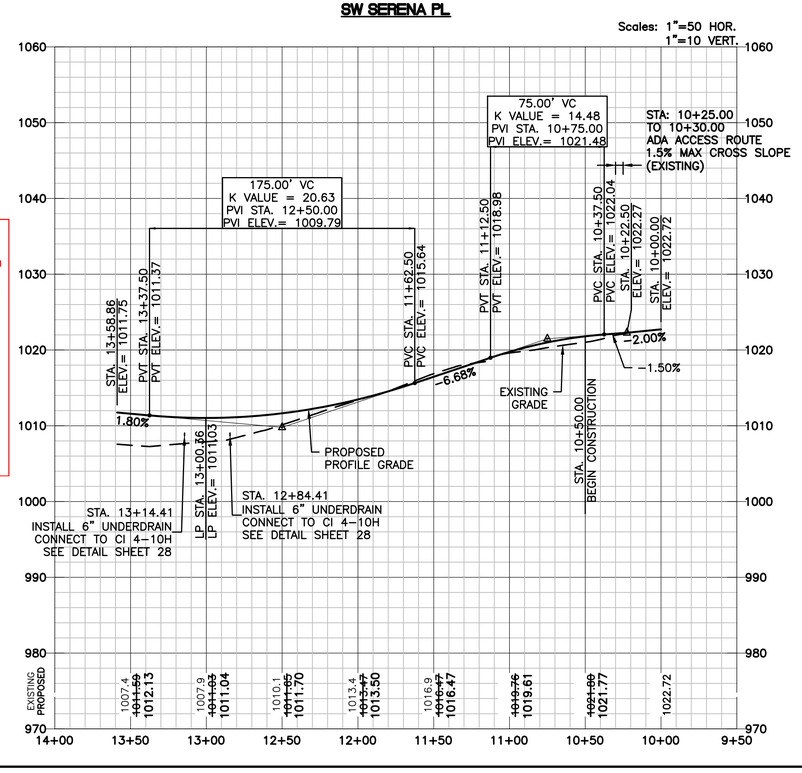




SW NATIONAL AVE



SW SERENA PL



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LAMP RYNEARSON
MO AUTH. NO F01294734

STATE OF MISSOURI
MARK DANIEL MCGHEE JR.
NUMBER PE-2008019568
PROFESSIONAL ENGINEER
05-13-2022

MARK DANIEL MCGHEE JR.
PE - 2008019568

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

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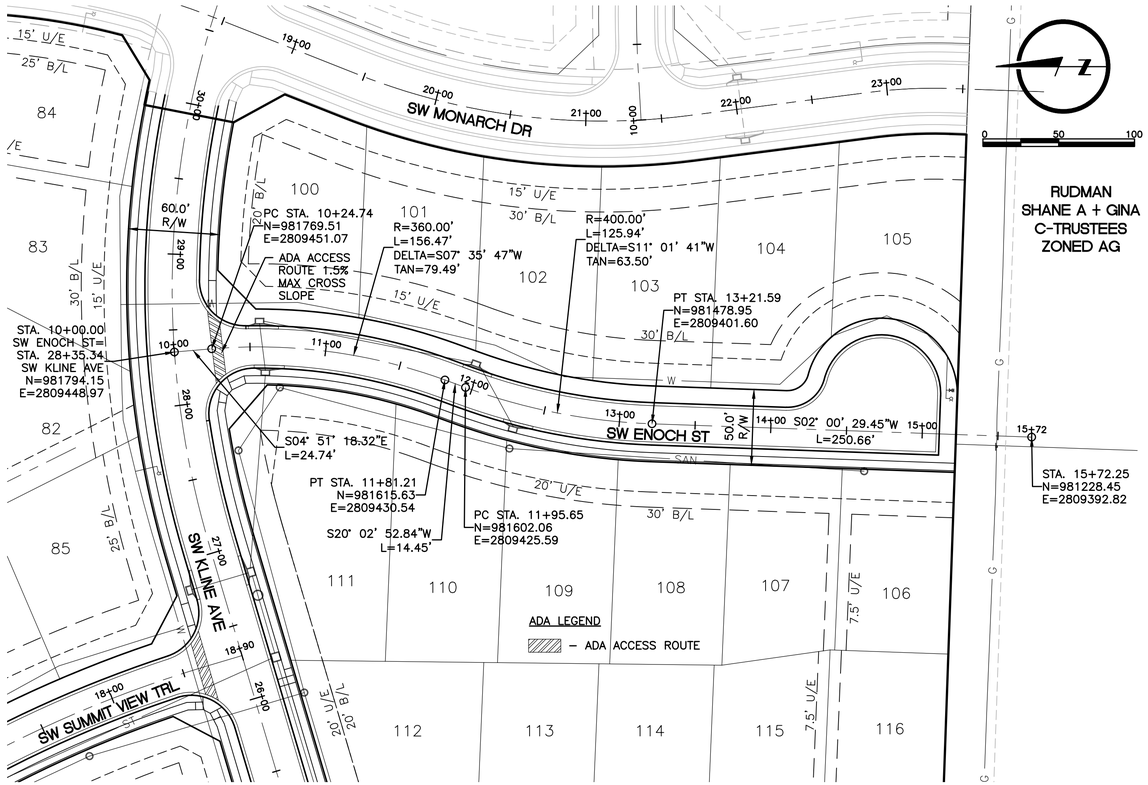
LAMP RYNEARSON

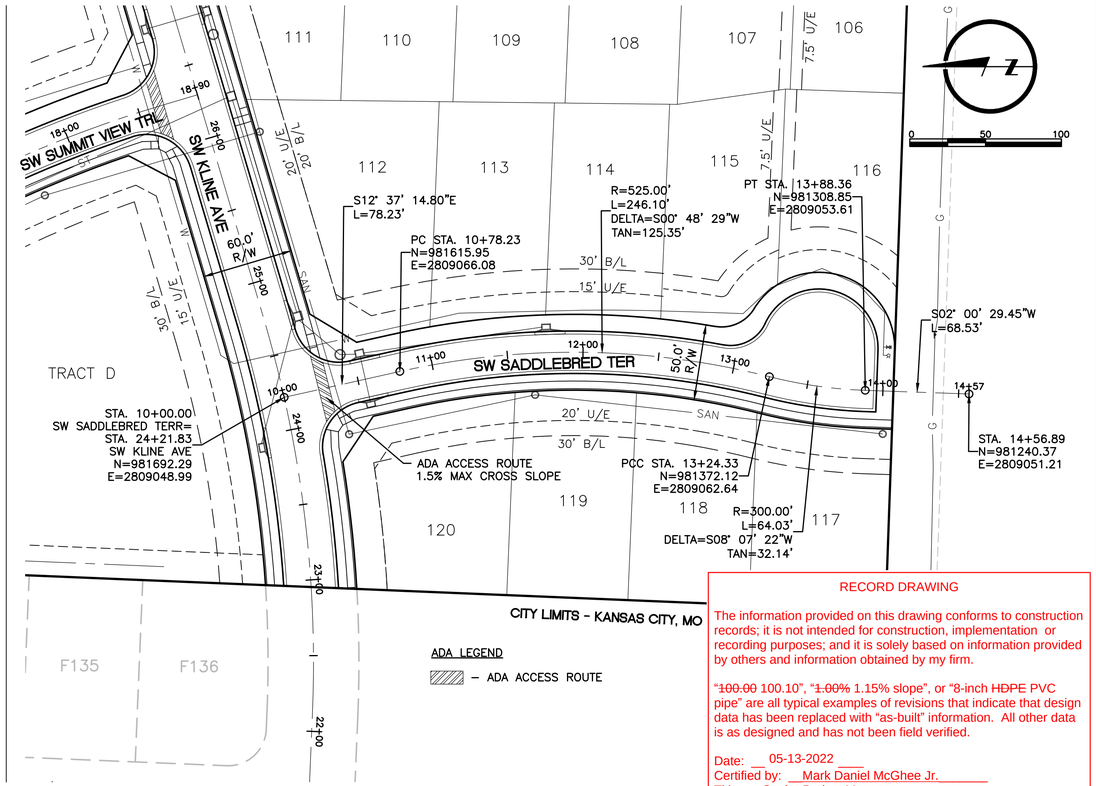
SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

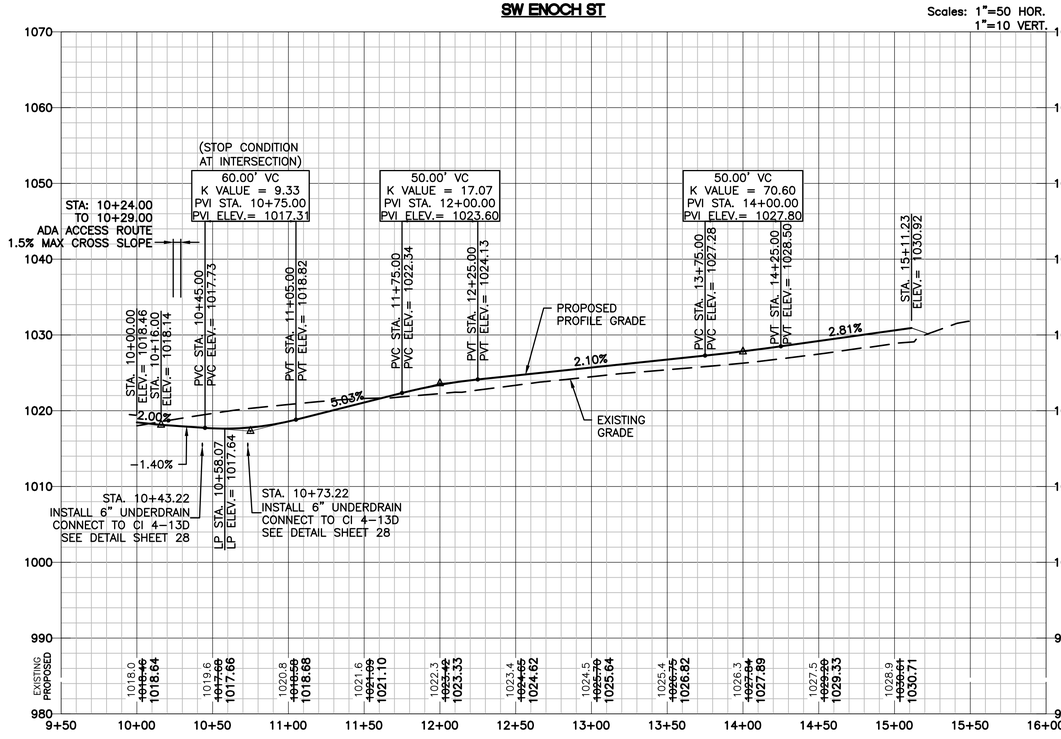
MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
SW NATIONAL AVE. AND SW SERENA PL. STREET PLAN/PROFILE

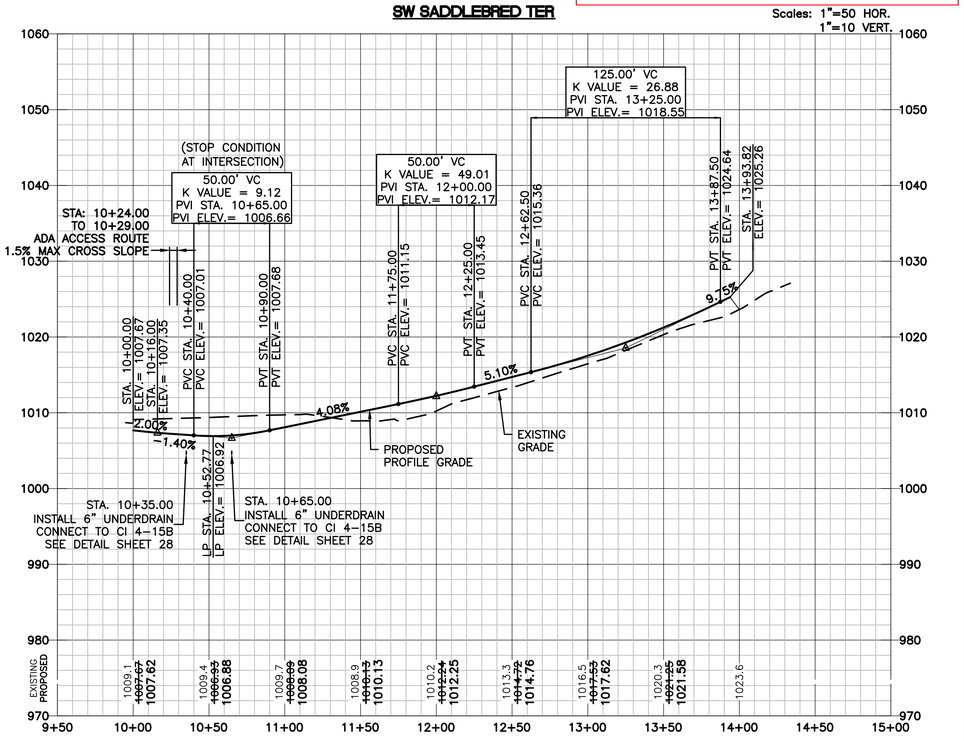
DESIGNER / DRAFTER
MDM/AJM
DATE
11/20/2019
PROJECT NUMBER
0318050.02
BOOK AND PAGE

SHEET
18 OF 31









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Title: Senior Project Manager
Firm: Lamp Rynearson

LAMP RYNEARSON
MO AUTH NO. F01294734
STATE OF MISSOURI
MARK DANIEL MCGHEE JR.
NUMBER PE-2008019568
PROFESSIONAL ENGINEER
05-13-22
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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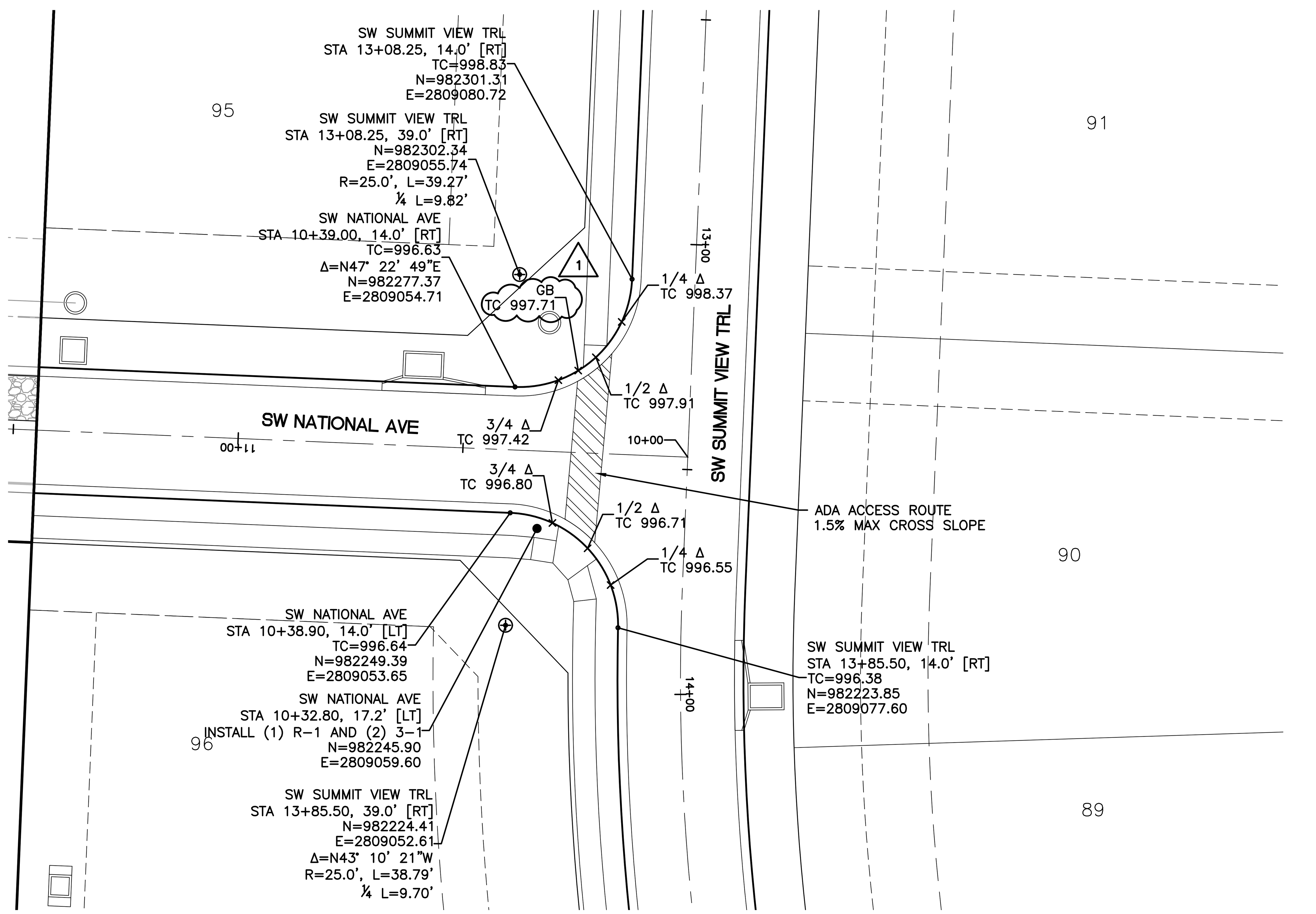
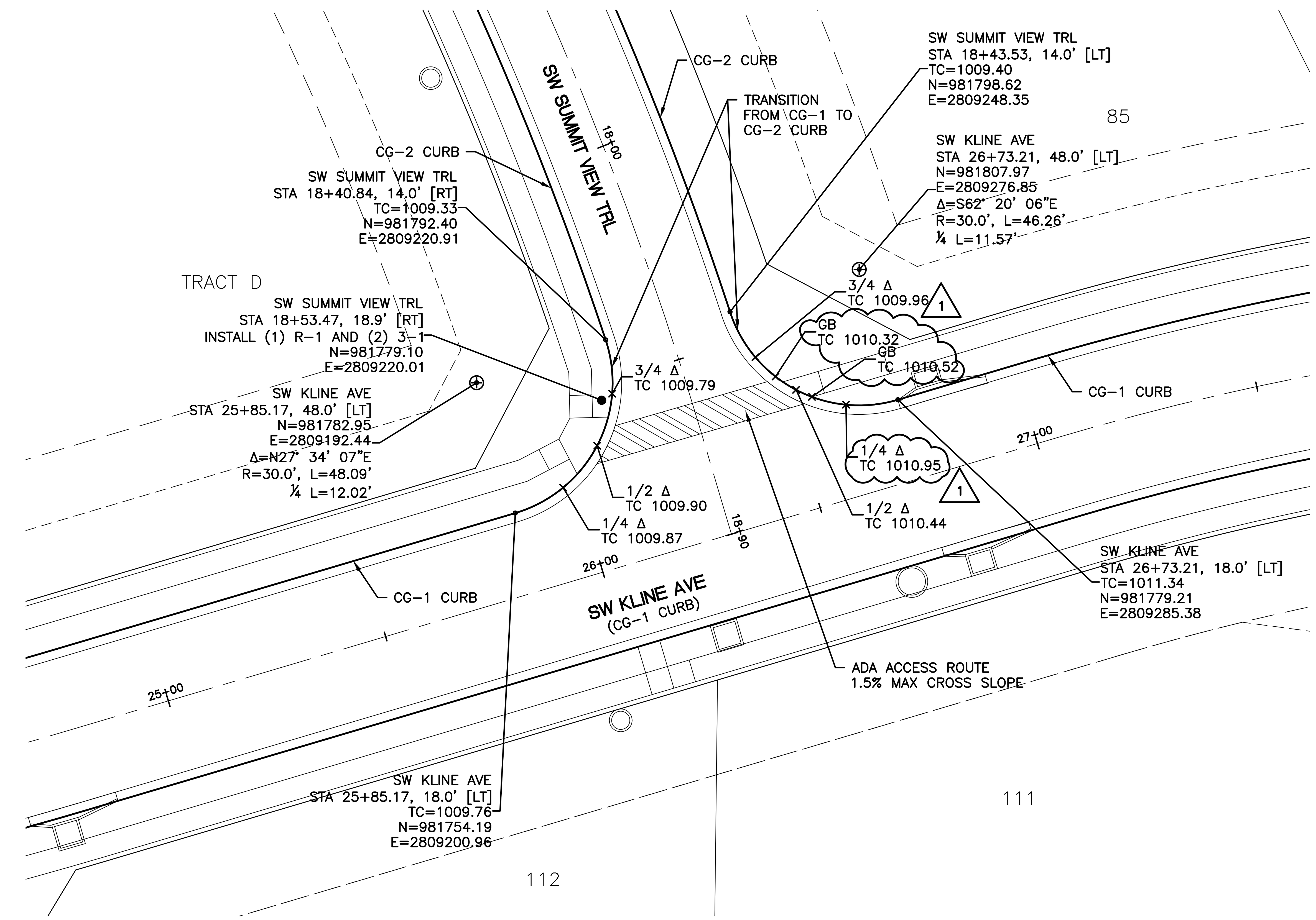
SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

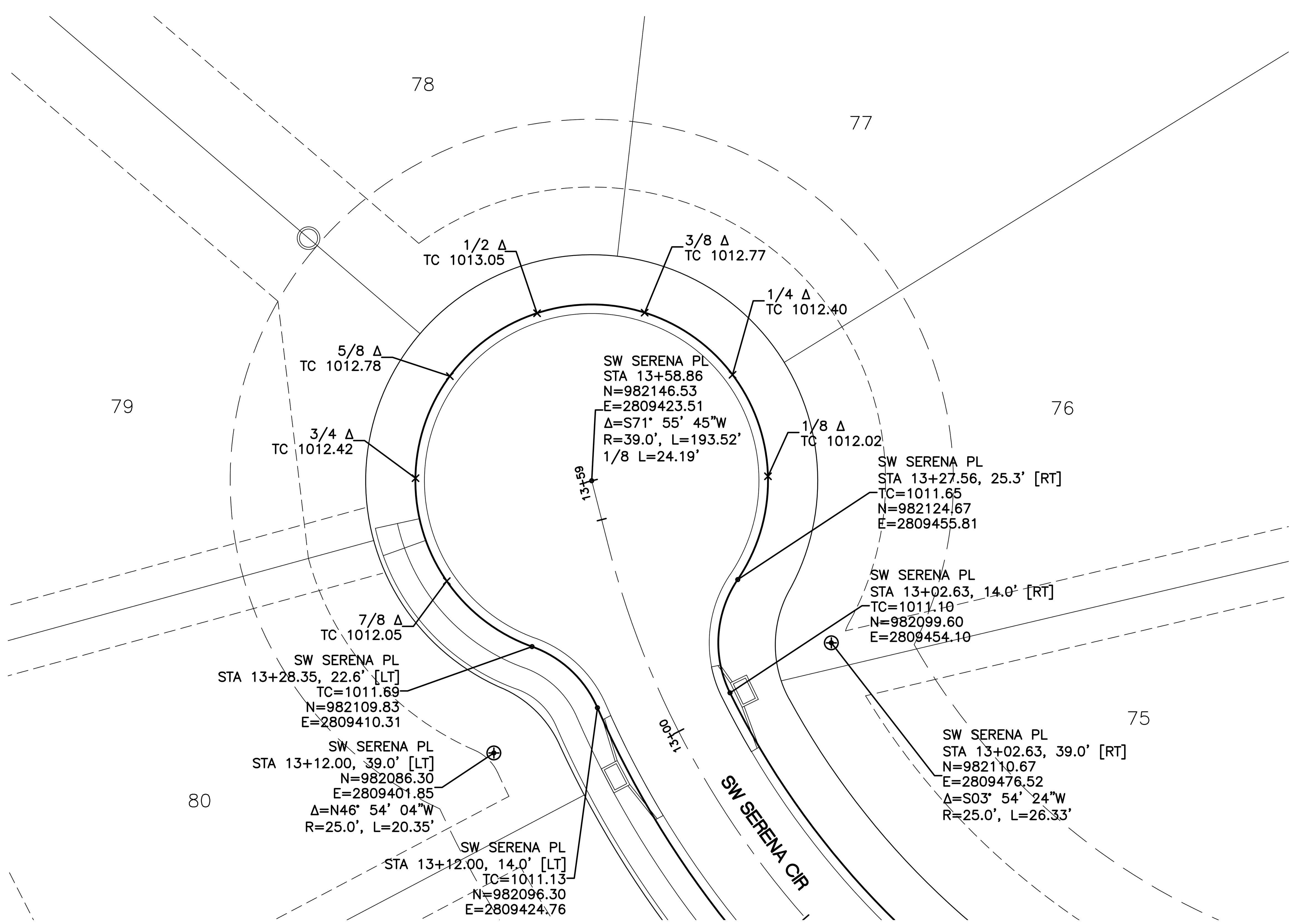
MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWR PLANS
SW ENOCH ST. AND SW SADDLEBRED TER. STREET PLAN/PROFILE

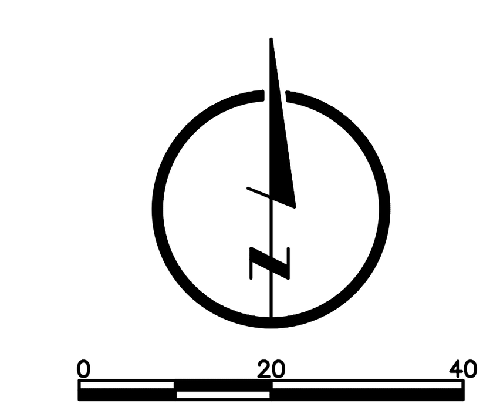
DESIGNER / DRAFTER
MDM/AJM
DATE
11/20/2019
PROJECT NUMBER
0318050.02
BOOK AND PAGE

SHEET
19 OF 31









LEGEND

GB = GRADE BREAK

ADA LEGEND

– ADA ACCESS ROUTE

NOTES

1. R1-1 IS STOP SIGN AND 3-1 IS STREET SIGN. REFER TO CITY STANDARD DETAILS FOR MOUNTING AND SIGN REQUIREMENTS. TWO STREET SIGNS REQUIRED FOR EACH SIDE OF POST, PER STREET NAME.
2. TOP OF CURB ELEVATIONS AT RAMP LOCATIONS ARE THEORETICAL CURB ELEVATIONS (PROJECTING THROUGH RAMP). REFER TO SIDEWALK RAMP DETAIL SHEET FOR RAMP ELEVATIONS. CURB IS TO BE DEPRESSED AT RAMP LOCATIONS.

LAMP RYNEARSON
MO CERT. NO. 2013011903

STATE OF MISSOURI
MARK DANIEL MCGHEE JR.
NUMBER PE-2008019568
PROFESSIONAL ENGINEER

MARK DANIEL MCGHEE JR.
PE - 2008019568

REVISIONS
01/07/2020 PER CITY COMMENTS
03/25/2020 PER CITY COMMENTS
1 10/04/2021 ADD CURB INFO

LAMP RYNEARSON
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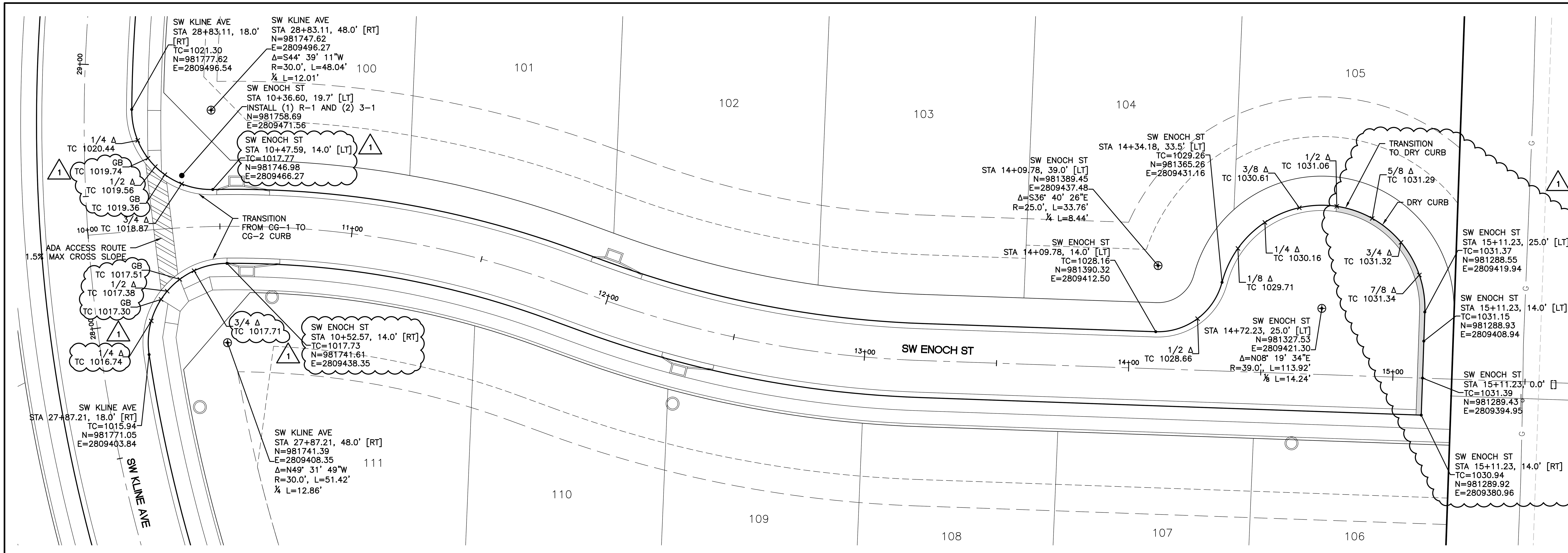
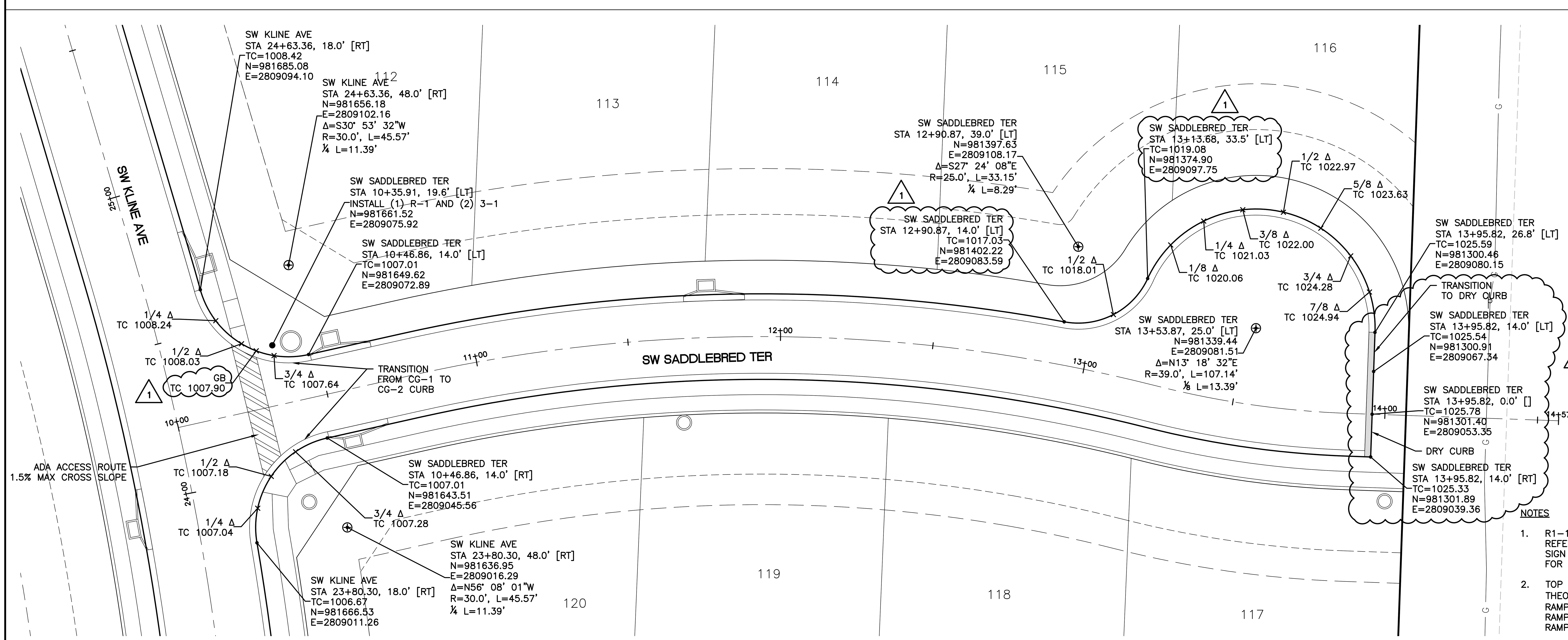
SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMIT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
INTERSECTION LAYOUT PLAN

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





LEGEND

- DRY CURB
GB = GRADE BREAK

ADA LEGEND

- ADA ACCESS ROUTE

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LAMP RYNEARSON
MO CERT. NO. 2013011903
STATE OF MISSOURI MARK DANIEL MCGHEE JR. NUMBER PE-2008019568 PROFESSIONAL ENGINEER
MARK DANIEL MCGHEE JR.
PE - 2008019568

REVISIONS
01/07/2020 PER CITY COMMENTS
03/25/2020 PER CITY COMMENTS
1 10/04/2021 ADD CURB INFO

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SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMIT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
INTERSECTION LAYOUT PLAN

DESIGNER / DRAFTER
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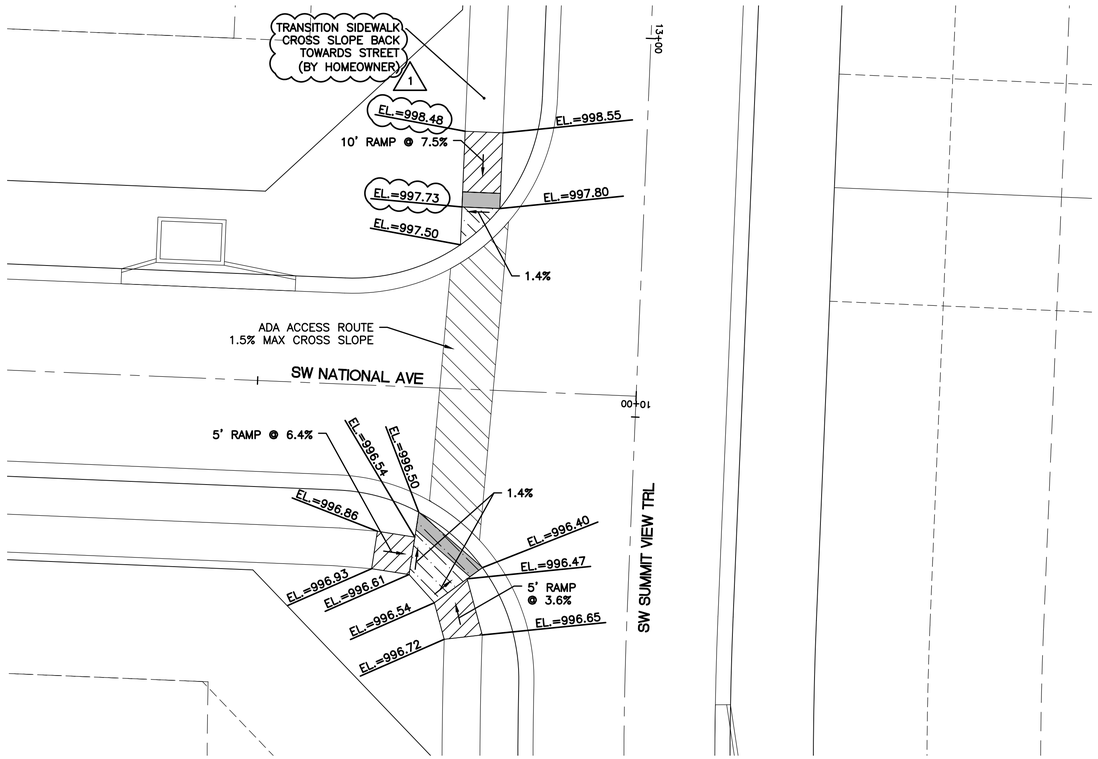
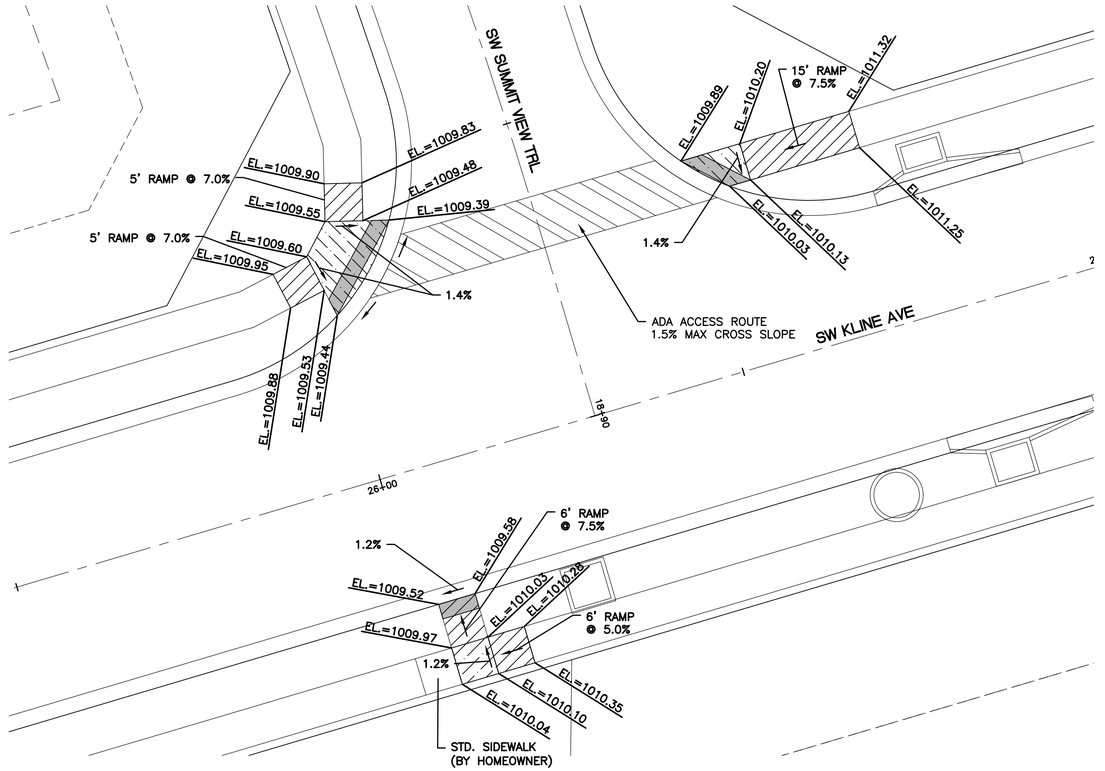
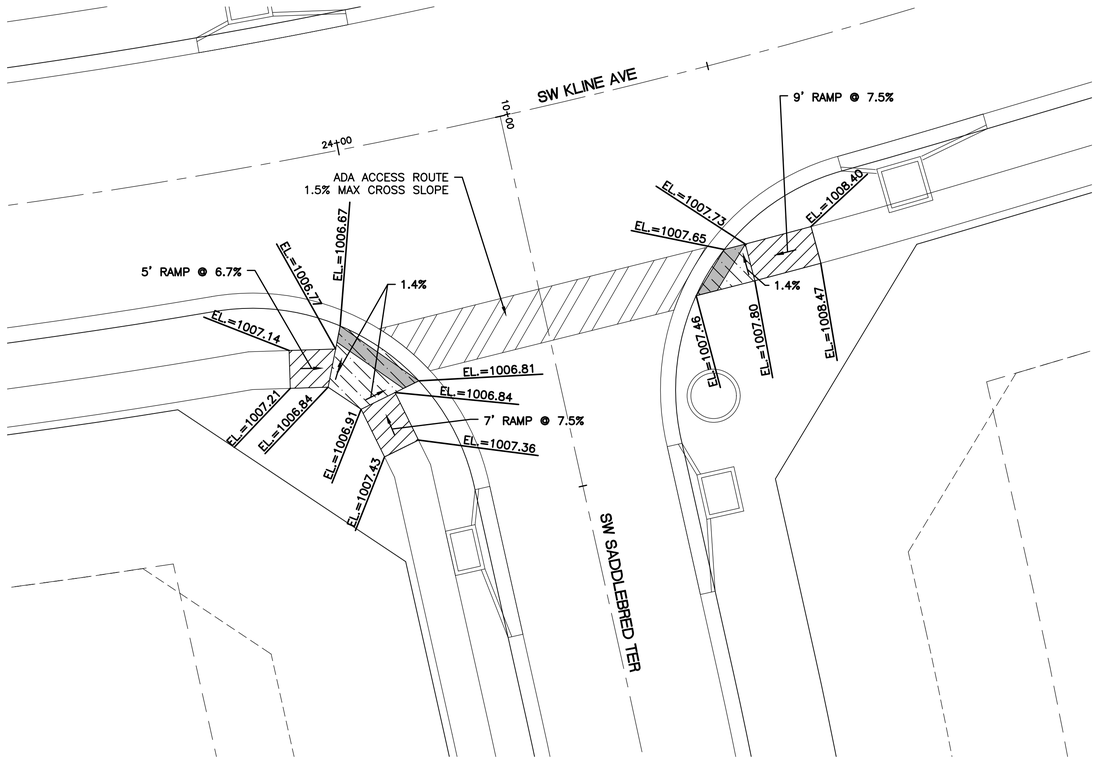
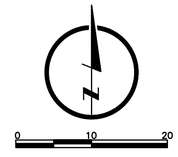
SHEET









ADA LEGEND

▨ – ADA ACCESS ROUTE

LAMP RYNEARSON

MO CERT. NO. 2013011903

STATE OF MISSOURI
MARK DANIEL McGHEE JR.
NUMBER PE-2008019568
10-01-21
PROFESSIONAL ENGINEER

MARK DANIEL MCGHEE JR.

PE - 2008019568

REVISIONS

01/07/2020 PER CITY COMMENTS

03/25/2020 PER CITY COMMENTS

1 10/04/2021 ADJUST RAMP

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SUMMIT VIEW FARMS 4TH PLAT

LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS

RAMP LAYOUT PLAN

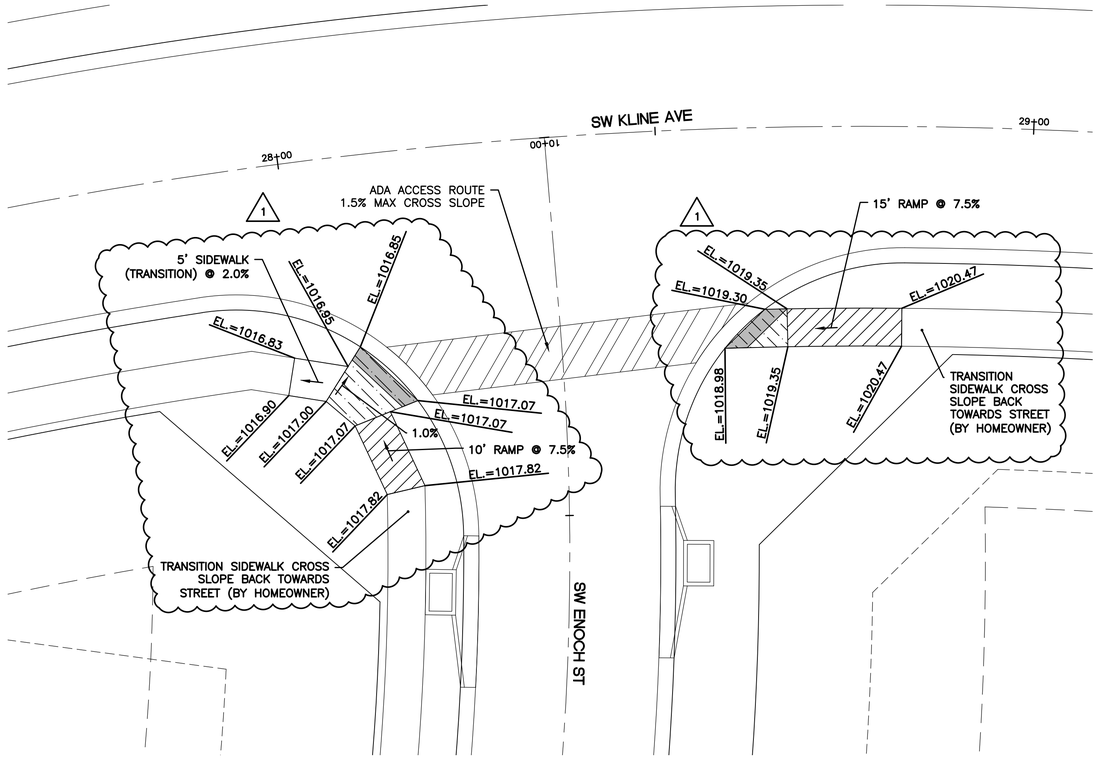
DESIGNER / DRAFTER
MDM/AJM

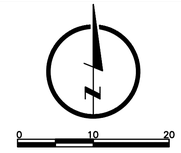
DATE
11/20/2019

PROJECT NUMBER
0318050.02

BOOK AND PAGE

SHEET
22 OF 31





ADA LEGEND

▨ – ADA ACCESS ROUTE

LAMP RYNEARSON
MO CERT. NO. 2013011903

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SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
RAMP LAYOUT PLAN

DESIGNER / DRAFTER
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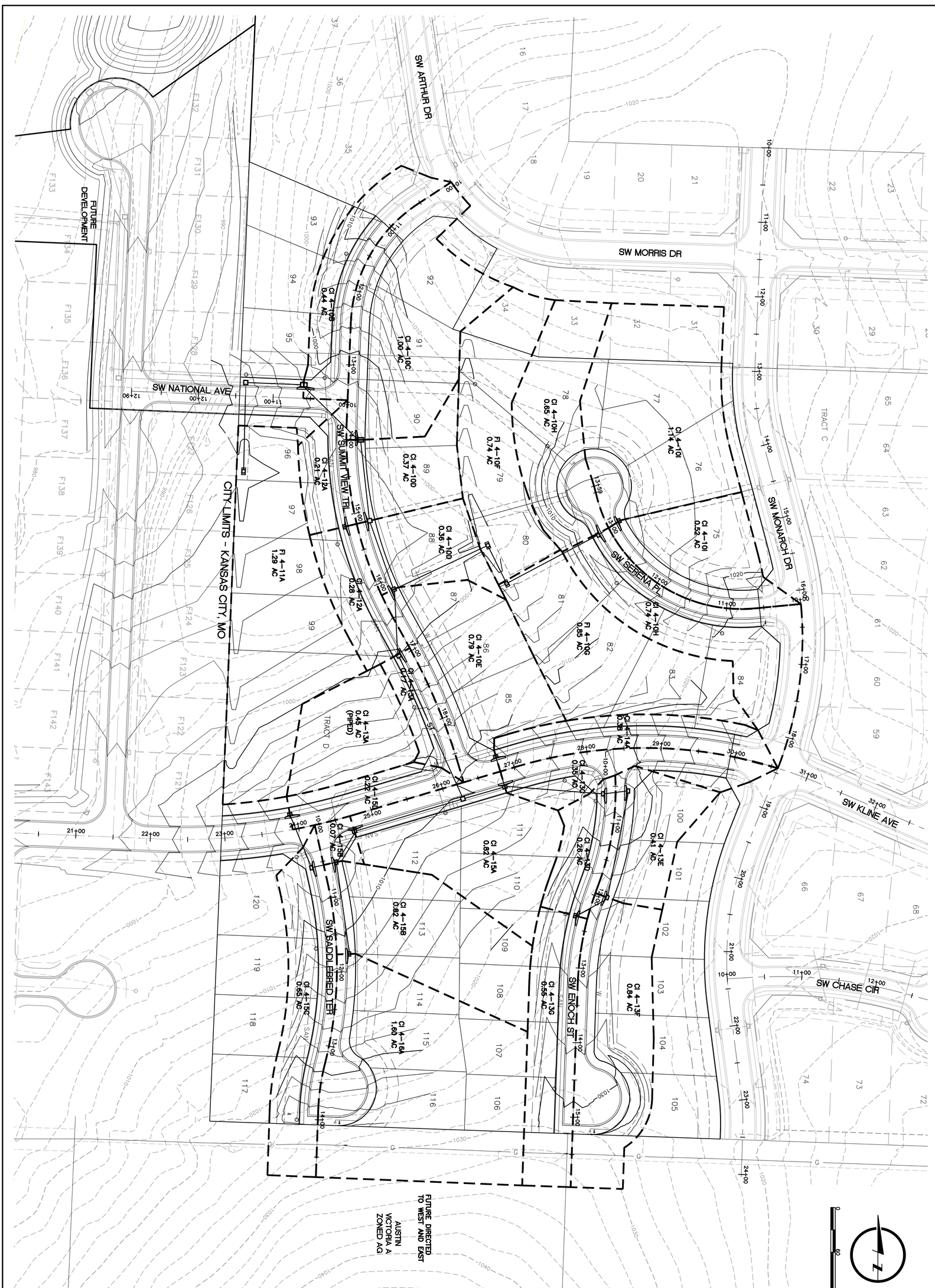
SHEET
23 OF 31



SHEET 24 OF 31	MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS DRAINAGE AREA MAP	SUMMIT VIEW FARMS 4TH PLAT LEE'S SUMMT, MISSOURI	LAMP RYNEARSON 9001 State Line Rd., Ste. 200 Kansas City, MO 64114 816.361.0440 LampRynearson.com	REVISIONS 01/07/2020 PER CITY COMMENTS 02/26/2020 PER CITY COMMENTS	LAMP RYNEARSON MO CERT. NO. 2013011903 STATE OF MISSOURI MARK DANIEL MCGHEE JR. NUMBER PE-2009019568 PROFESSIONAL ENGINEER 03/25/2020
DESIGNER / DRAFTER MDM / AJM DATE 11/20/2019 PROJECT NUMBER 0318050.02 BOOK AND PAGE					

SYSTEM CALCULATIONS

KCMO 5th Plat

Inlet	C	A (acres)	AC	Accumulative AC	Length (ft)	Grade	Size (in)	Manning's n	Capacity (cfs)	Velocity (fps)	Travel Time (min)	Tc (min)	10% Storm Intensity (in/hr)	10% Storm Runoff (cfs)	1% Storm Intensity (in/hr)	1% Storm Runoff (cfs)	10% Storm Velocity	10% Storm HGL Upstream	10% Storm HGL Downstream	1% Storm HGL Upstream	1% Storm HGL Downstream
3-30C	0.70	0.68	0.48	0.48								6.40	6.94	3.31	9.77	5.81					
					42.00	0.019	15	0.013	8.90	7.26	0.10										
3-30B	0.66	0.64	0.42	0.90								6.50	6.92	6.22	9.74	10.93					
					192.31	0.0388	15	0.013	12.72	10.37	0.31						8.09	1014.57	1007.62	1014.76	1009.53
4-10I	0.60	1.39	0.83	1.73								6.81	6.83	11.84	9.62	20.84					
					34.22	0.0146	24	0.013	27.33	8.70	0.07						4.83	1006.44	1006.24	1009.12	1008.82
4-10H	0.45	1.59	0.72	2.45								6.87	6.82	16.69	9.60	29.37					
					138.67	0.0613	24	0.013	56.01	17.83	0.13						6.30	1005.26	997.16	1005.63	998.05
4-10G	0.00	0.00	0.00	2.45								0.00	7.35	18.00	10.32	31.59					
					56.88	0.0176	30	0.013	54.42	11.09	0.09						5.46	996.26	995.84	997.85	997.44
4-10F	0.60	0.55	0.33	2.78								0.09	7.35	20.43	10.32	35.84					
					139.24	0.0126	30	0.013	46.04	9.38	0.25						7.96	994.84	992.72	995.35	994.25
4-10E												0.33									
4-13G	0.51	0.41	0.21	0.21								5.00	7.35	1.54	10.32	2.70					
					49.58	0.0151	15	0.013	7.94	6.47	0.13						2.99	1021.12	1020.96	1022.73	1022.51
4-13F	0.60	0.26	0.16	0.37								5.13	7.31	2.67	10.27	4.69					
					145.52	0.0429	15	0.013	13.38	10.90	0.22						5.04	1020.20	1014.22	1020.43	1016.62
4-13E	0.55	0.35	0.19	0.56								5.35	7.25	4.04	10.18	7.09					
					34.25	0.0146	18	0.013	12.69	7.18	0.08						4.75	1013.52	1013.42	1015.48	1015.01
4-13D	0.00	0.00	0.00	0.56								5.43	7.22	4.03	10.15	7.07					
					131.86	0.0322	18	0.013	18.85	10.67	0.21						6.60	1012.60	1008.15	1012.89	1009.70
4-13C	0.60	0.38	0.23	1.60								5.64	7.16	11.47	10.06	20.15					
					15.94	0.0314	24	0.013	40.09	12.76	0.02						4.63	1007.65	1007.44	1008.80	1008.69
4-HDS1		0.00	0.00	1.60								5.66	7.16	11.46	10.06	20.13					
					42.47	0.0235	24	0.013	34.68	11.04	0.06						7.74	1006.94	1005.53	1007.33	1005.82
4-13B												5.72									
4-14A	0.51	1.60	0.82	0.82								5.00	7.35	6.00	10.32	10.53					
					42.50	0.0176	15	0.013	8.57	6.98	0.10						2.04	1008.15	1008.13	1010.29	1010.20
4-13C												5.10									
4-16A	0.60	0.22	0.13	0.13								7.21	6.73	0.89	9.48	1.56					
					124.28	0.0322	15	0.013	11.59	9.45	0.22						5.07	1008.20	1004.40	1008.43	1005.08
4-15B												7.43									
4-17A	0.60	0.65	0.39	0.39								5.00	7.35	2.87	10.32	5.03					
					89.6	0.0100	15	0.013	6.46	5.26	0.28						2.62	1003.89	1003.08	1004.57	1004.52
4-15A												5.28									
4-15C	0.65	0.07	0.05	0.05								5.00	7.35	0.33	10.32	0.59					
					34.50	0.0072	15	0.013	5.48	4.47	0.13						3.32	1004.40	1004.18	1005.28	1005.08
4-15B	0.51	0.82	0.42	0.60								7.43	6.67	3.97	9.40	7.00					
					12.85	0.0117	24	0.013	24.47	7.79	0.03						4.65	1004.25	1003.70	1005.02	1004.93
4-HDS2		0.00	0.00	0.60								7.46	6.66	3.97	9.39	6.99					
					37.86	0.0119	24	0.013	24.68	7.86	0.08						5.73	1003.55	1003.08	1004.80	1004.52
4-15A	0.51	0.00	0.00	0.99								7.54	6.64	6.55	9.36	11.54					
					151.77	0.0066	24	0.013	18.38	5.85	0.43						6.16	1002.13	1001.22	1004.43	1002.43
4-13B												7.97									
4-13B	0.65	0.45	0.29	2.88								7.97	6.54	18.83	9.22	33.19					
					210.79	0.0225	36	0.013	100.05	14.15	0.25						5.60	1000.35	996.05	1000.89	997.46
4-13A	0.60	0.28	0.17	3.05								8.22	6.48	19.74	9.14	34.81					
					88.77	0.0394	36	0.013	132.39	18.73	0.08						5.26	995.14	992.61	995.74	994.25
4-10E												8.30									
4-12A	0.00	1.29	0.00	0.00								0.00	7.35	0.00	10.32	0.00					
					35.00	0.0143	15	0.013	7.72	6.29	0.09						3.03	991.59	991.42	993.54	993.42
4-10D												0.09									
4-11A	0.51	0.79	0.40	0.40								6.31	6.97	2.81	9.81	4.94					
					119.03	0.0084	18	0.013	9.63	5.45	0.36						3.36	985.52	985.22	998.59	988.05
4-10A												6.67									
4-10E	0.51	0.37	0.19	6.01								8.30	6.46	38.84	9.11	68.50					
					97.65	0.0092	42	0.013	96.50	10.03	0.16						6.62	991.22	991.42	994.19	993.42
4-10D	0.51	1.44	0.73	6.75								8.46	6.42	43.33	9.06	76.42					
					109.08	0.0092	42	0.013	96.50	10.03	0.18						6.90	989.91	990.07	993.37	992.36
4-10C	0.51	0.00	0.00	6.75								8.64	6.38	43.04	9.00	75.94					
					106.14	0.0085	42	0.013	92.76	9.64	0.18						7.40	988.47	988.23	991.75	990.67
4-10B	0.00	0.00	0.00	6.75								8.82	6.34	42.75	8.94	75.45					
					77.84	0.0347	42	0.013	187.42	19.48	0.07						7.24	986.60	985.22	988.88	988.05
4-10A	0.45	1.00	0.45	7.60								8.89	6.32	48.04	8.92	84.79					
					170.56	0.0103	42	0.013	102.11	10.61	0.27						7.54	983.47	983.11	987.45	985.40
5-10D												9.16									
5-10D	0.60	0.35	0.21	7.81								9.16	6.26	48.90	8.84	86.32					
					216.09	0.0104	48	0.013	146.49	11.66	0.31						7.37	981.39	980.53	985.08	983.18
5-10C	0.51	5.69	2.90	10.71								9.47	6.19	66.33	8.75	117.14					
					173.42	0.0202	48	0.013	204.16	16.25	0.18						7.74	978.72	976.21	980.92	979.22
5-10B	0.53	0.00	0.00	10.71								9.65	6.15	65.91	8.69	116.43					
					83.81	0.006	48	0.013	111.27	8.85	0.16						9.38	974.29	973.62	978.35	977.44
5-10A												9.80									

SPREAD CALCULATIONS

Inlet	Street	Street Station	Allowable Spread	Cross Road Slope	Drainage Area	Weighted C	Total Inlet Time	10-yr intensity (in/hr)	10-yr K Value	10-yr Runoff	Bypass to Inlet (ID)	Bypass to Inlet (cfs)	Total Runoff	Inlet Type	Inlet Condition	Curb Type	Manning's 'n'	Street Grade PC	Street Grade PT	Distance to PC	Total Length of Curve	Street Grade on Curve at X	Street Slope %	Depth of Flow at Curb	Max Allowable Depth at	Spread of Flow at Curb	Inlet Length	Effective Inlet Length	Intercept Ratio Percentage	Inlet Capacity	Bypass 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			1.95	CI	1	A	0.014	-0.0180	0.0688	86.00	175.00	0.023673	0.00	0.152	0.219	8.80	5	4	1.000	1.95	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	0.014	-0.0180	-0.0180	1.00	1.00	-0.018	0.00	0.209	0.219	11.52	5	4	1.000	3.95	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	0.014	-0.0180	0.0688	89.88	175.00	0.025553	0.00	0.182	0.219	10.24	5	4	1.000	3.26	0.00
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	0.014	-0.0180	-0.0180	1.00	1.00	-0.018	0.00	0.185	0.219	10.39	5	4	1.000	2.87	0.00
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	0.014	0.0100	0.0100	1.00	1.00	0.01	0.00	0.198	0.219	N/A	5	4	1.000	2.56	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	0.0100	0.0100	1.00	1.00	0.01	0.00	0.190	0.219	N/A	5	4	1.000	2.30	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	A	0.014	0.0210	0.0210	1.00	1.00	0.021	2.10	0.169	0.219	9.61	5	5	0.779	1.89	0.54
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	0.014	0.0210	0.0210	1.00	1.00	0.021	2.10	0.185	0.219	10.38	5	5	0.728	2.25	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	1.53	4-13F	0.84	2.37	CI	1	A	0.014	0.0503	0.0503	1.00	1.00	0.0503	0.00	0.142	0.219	8.33	5	4	1.000	2.37	0.00
4-13D	Enoch	10+60.37, 15.5' RT	12.00	0.25	0.26	0.60	5.00	7.35	1.0	1.15	4-13G	0.54	1.68	CI	1	A	0.014	0.0503	0.0503	1.00	1.00	0.0503	0.00	0.125	0.219	7.50	5	4	1.000	1.68	0.00
4-13C	Kline	26+80.71, 19.5' RT	12.00	0.25	0.35	0.55	5.15	7.31	1.0	1.41	4-13D	0.00	1.41	CI	2	B	0.014	0.0110	0.0561	80.71	200.00	0.0292	2.92	0.129	0.236	6.88	5	5	0.963	1.36	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	0.0110	0.0561	80.72	200.00	0.029202	2.92	0.138	0.236	7.31	5	5	0.946	1.59	0.09
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	0.0408	0.0510	1.16	50.00	0.041037	4.10	0.202	0.219	11.21	5	5	0.439	2.41	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	B	0.014	0.0458	0.0110	41.77	100.00	0.031264	3.13	0.111	0.236	6.01	5	5	0.986	0.96	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	0.0408	0.0408	1.00	1.00	0.0408	0.00	0.159	0.219	9.12	5	4	1.000	2.87	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	2.74	4-16A	3.08	5.82	CI	1	A	0.014	0.0408	0.0408	1.00	1.00	0.0408	0.00	0.207	0.219	11.44	5	4	1.000	5.82	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	-0.0140	-0.0140	1.00	1.00	-0.014	0.00	0.101	0.219	6.34	5	4	1.000	0.50	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	0.0110	0.0110	1.00	1.00	0.011	1.10	0.202	0.236	10.39	5	5	0.942	2.68	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	0.0110	0.0561	12.30	200.00	0.013774	1.38	0.000	0.236	N/A	5	5	0.000	0.00	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	0.75			0.75	CI	2	A	0.014	0.0400	0.0700	47.79	100.00	0.054337	5.43	0.091	0.219	5.87	5	5	0.862	0.65	0.10
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	2.15			2.15	JB	1	A	0.014	0.0400	0.0700	47.79	100.00	0.054337	0.00	0.135	0.219	N/A	5	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	-0.0135	0.0400	89.12	150.00	0.018286	0.00	0.139	0.219	8.16	5	4	1.000	1.34	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	0.014	-0.0135	-0.0135	1.00	1.00	-0.0135	0.00	0.128	0.219	7.64	5	4	1.000	0.93	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	0.0100	0.0100	1.00	1.00	0.01	0.00	0.235	0.219	N/A	5	4	1.000	4.03	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	2.81	4-14A	0.09	2.90	CI	2	A	0.014	-0.0135	0.0400	140.59	150.00	0.036644	3.66	0.163	0.219	9.31	5	5	0.648	1.88	1.02
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	1.35	4-10E	1.02	2.37	CI	1	A	0.014	-0.0135	0.0400	89.12	150.00	0.018286	0.00	0.172	0.219	9.75	5	4	1.000	2.37	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	1.39	4-10C	0.82	2.21	CI	1	A	0.014	-0.0135	-0.0135	1.00	1.00	-0.0135	0.00	0.177	0.219	10.00	5	4	1.000	2.21	0.00
4-10C	Summit View	14+00.60, 15.67' LT	12.00	0.25	1.00	0.51	6.59	6.89	1.0	3.52			3.52	CI	2	A	0.014	-0.0135	-0.0135	1.00	1.00	-0.0135	1.35	0.211	0.219	11.62	5	5	0.767	2.70	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	0.014	-0.0150	-0.0642	25.00	60.00	-0.0355	3.55	0.141	0.219	8.26	5	5	0.750	1.46	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	0.014	-0.0642	-0.0250	20.00	125.00	-0.05793	5.79	0.000	0.219	N/A	5	5	0.000	0.00	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	0.0125	0.0125	1.00	1.00	0.0125	1.25	0.203	0.219	11.26	5	5	0.803	2.47	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	0.014	-0.0100	-0.0100	1.00	1.00	-0.01	0.00	0.387	0.219	N/A	5	4	1.000	15.30	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	0.014	-0.0100	-0.0100	1.00	1.00	-0.01	1.00	0.000	0.219	N/A	5	5	0.000	0.00	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	0.0125	0.0125	1.00	1.00	0.0125	1.25	0.156	0.219	9.01	5	5	0.900	1.37	0.15
5-10B W	KCMO		12.00	0.25	0.27	0.60	5.00	7.35	1.0	1.19			1.19	CI	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

LAMP RYNEARSON
MO CERT. NO. 2013011903

STATE OF MISSOURI
MARK DANIEL MCGHEE JR.
NUMBER PE-2008019568
12-02-2020
PROFESSIONAL ENGINEER

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 Rd., Ste. 200
Kansas City, MO 64114
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LAMP RYNEARSON

SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
DRAINAGE CALCULATIONS

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

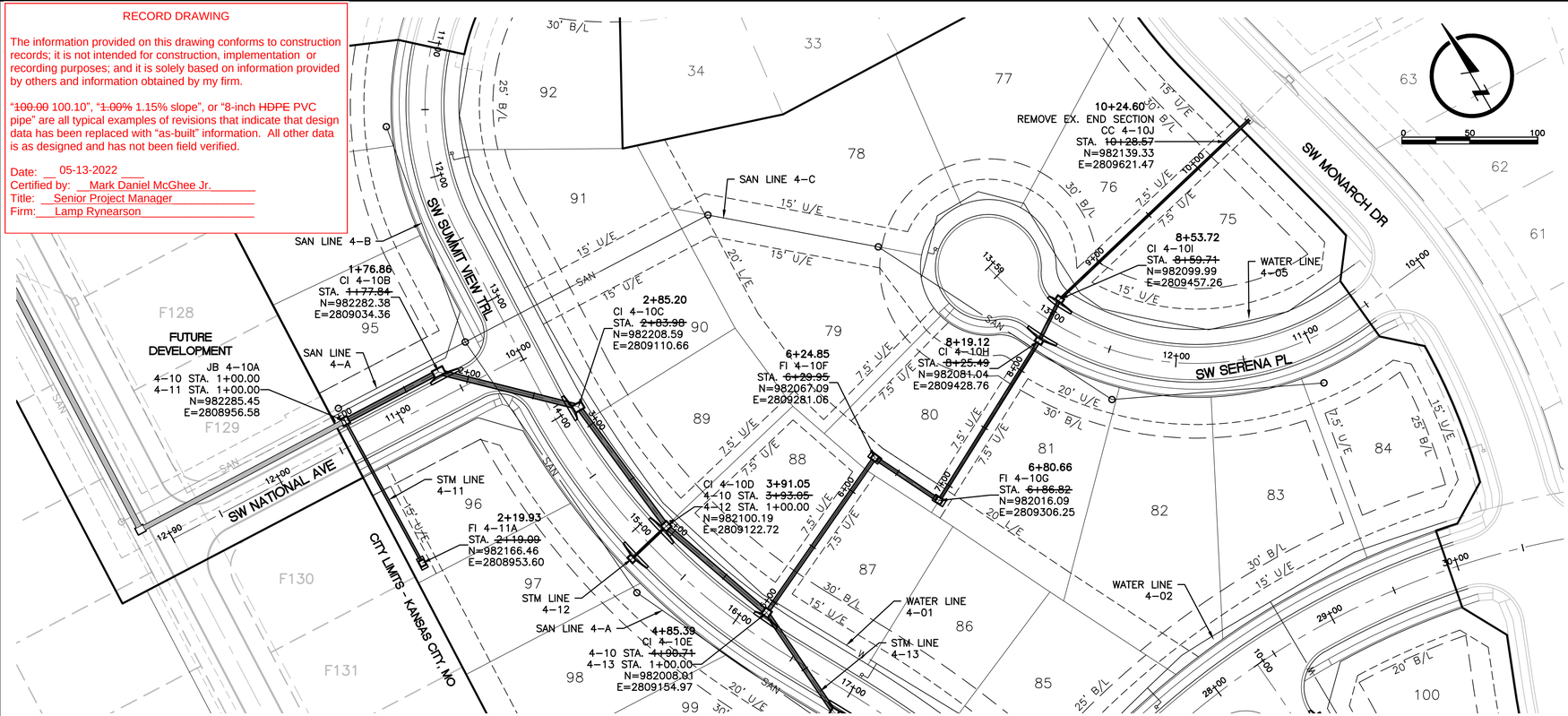
SHEET
25 OF 31

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: Lamp Rynearson

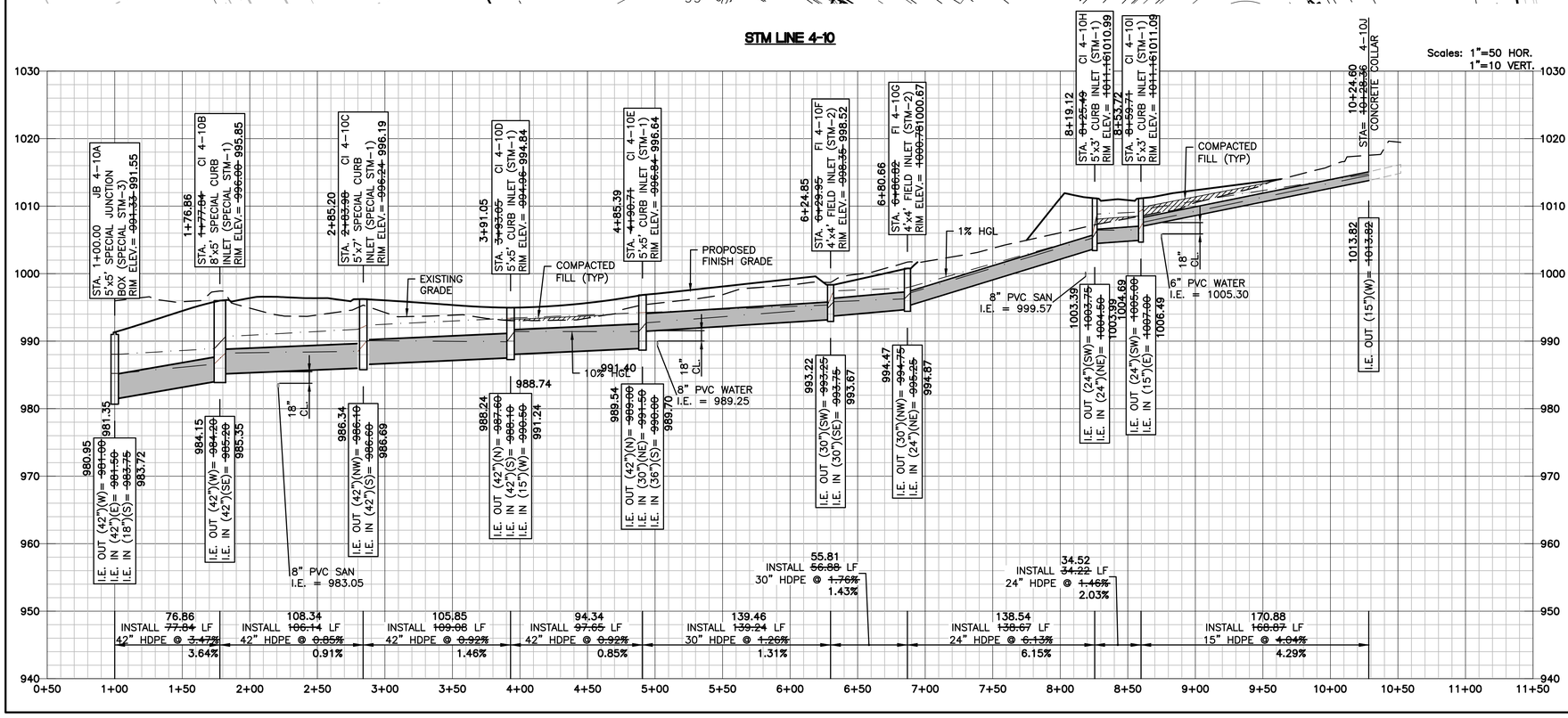


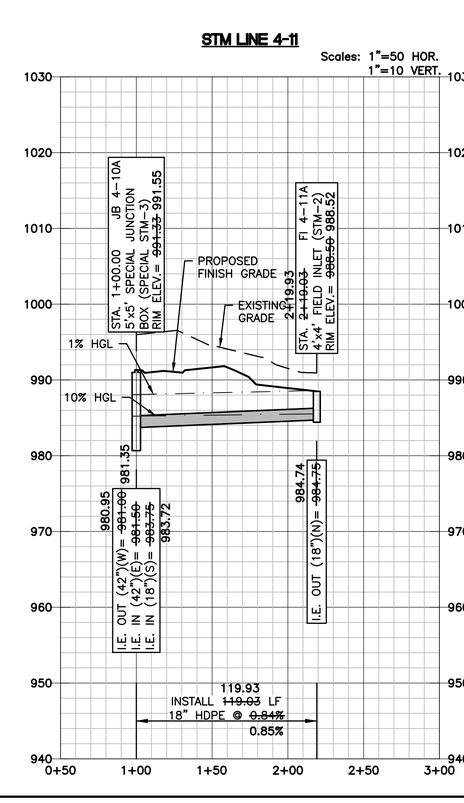
STORM SEWER NOTES:

1. 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.

STORM SEWER STRUCTURE TABLE

STRUCTURE	STATION & OFFSET	INSIDE FACE TOP ELEVATION	STREET GRADE	STREET NAME
JB 4-10A	11+37.68, 18.00' RT	N/A	N/A	SW NATIONAL AVE
CI 4-10B	10+59.54, 15.67' RT	995.95	4.25%	SW NATIONAL AVE
CI 4-10C	14+00.60, 15.67' LT	996.17	1.40%	SW SUMMIT VIEW TRL
CI 4-10D	15+14.12, 15.50' LT	994.91	SUMP	SW SUMMIT VIEW TRL
CI 4-10E	16+15.59', 15.50' LT	996.79	3.80%	SW SUMMIT VIEW TRL
FI 4-10F	16+15.56, 157.24' LT	N/A	N/A	SW SUMMIT VIEW TRL
FI 4-10G	16+82.42, 155.50' LT	N/A	N/A	SW SUMMIT VIEW TRL
CI 4-10H	12+97.62, 15.50' LT	1011.13	SUMP	SW SERENA PL
CI 4-10I	13+01.50, 15.50' RT	1011.13	SUMP	SW SERENA PL
FI 4-11A	11+35.41, 101.01' LT	N/A	N/A	SW NATIONAL AVE





LAMP RYNEARSON
MO AUTH. NO. F01294734

STATE OF MISSOURI
MARK DANIEL MCGHEE JR.
NUMBER PE-2008019568
05-13-2022
PROFESSIONAL ENGINEER

MARK DANIEL MCGHEE JR.
PE - 2008019568

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

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

LAMP RYNEARSON

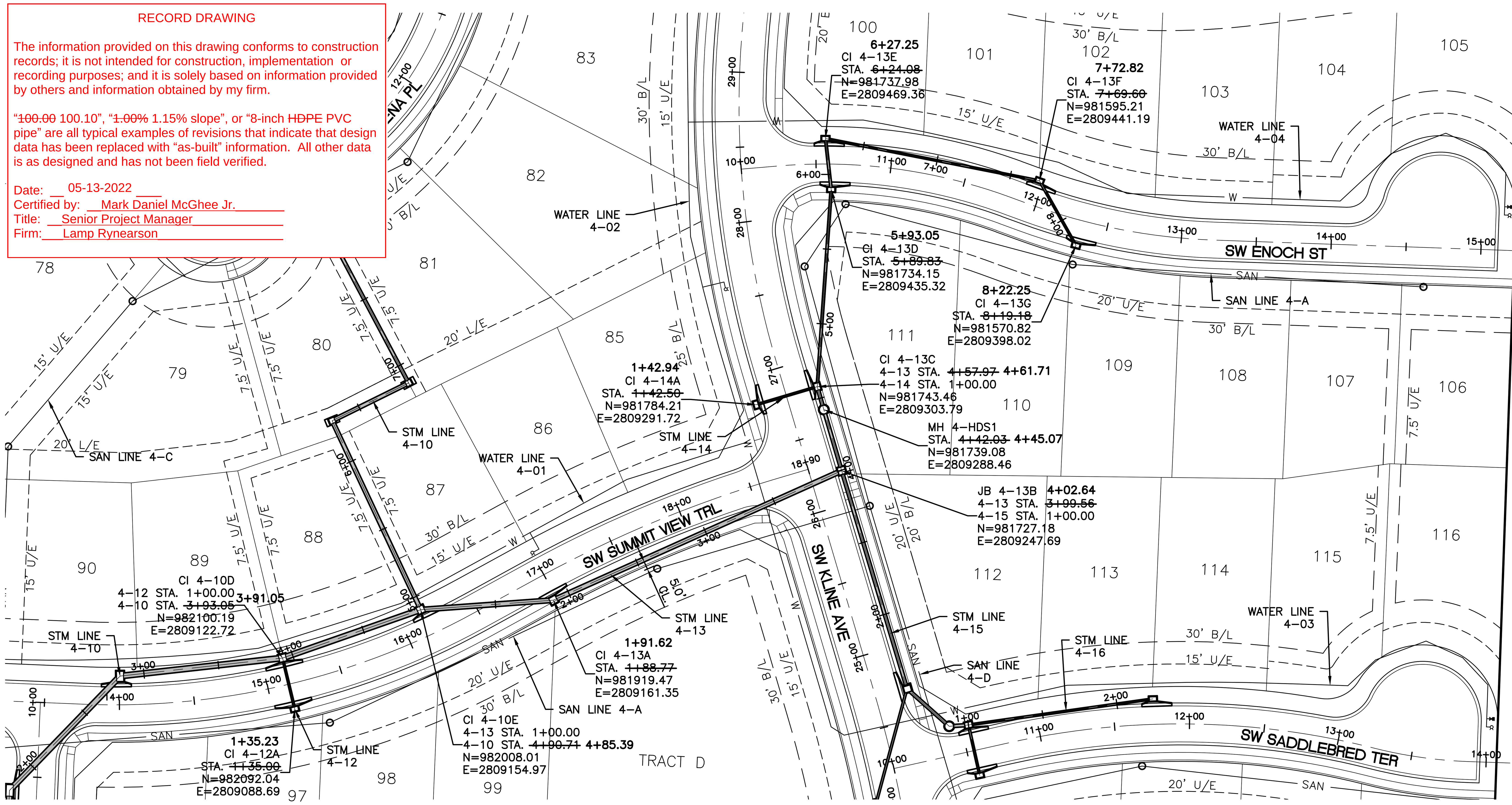
SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
STORM SEWER PLAN/PROFILE LINES 4-10 AND 4-11

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

SHEET
26 OF 31

L:\Engineering\0318050 SVFD\ Summit View Farms 3rd Plat\DRAWINGS\CONSTRUCTION DRAWINGS\4TH PLAT\ASBUILTS\DRG-PLANS\0318050.02-STM-PNP-01.dwg, 5/13/2022 2:14:21 PM, DAN MICHEL, LAMP RYNEARSON



STORM SEWER NOTES:

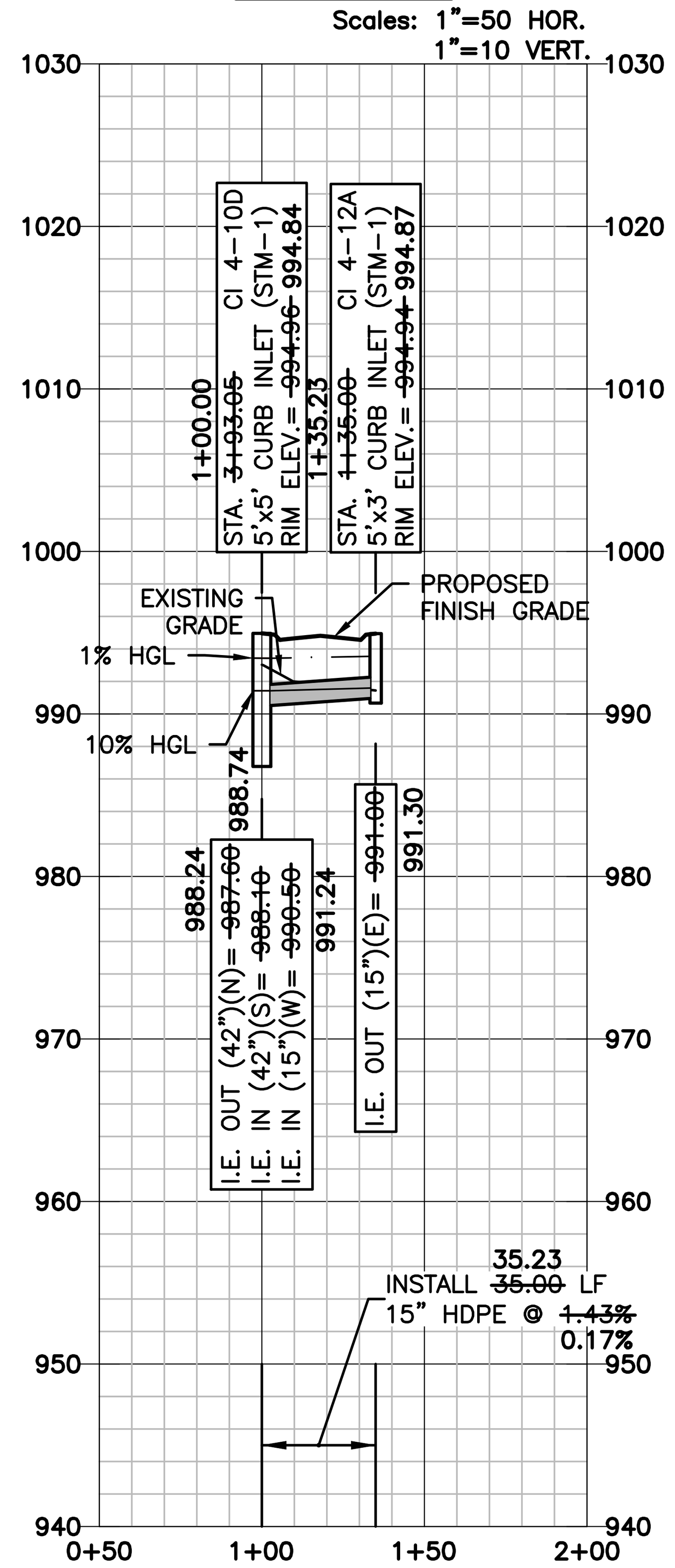
1. POLYPROPYLENE PIPE OR CONCRETE PIPE MAY BE USED IN LIEU OF HDPE PIPE. ALL PIPE SHALL MEET CITY SPECIFICATIONS (LEES SUMMIT SECTION 2600).
2. PROPOSED CURB INLETS SHALL CONFORM TO CITY STANDARD DETAIL STM-1 AND JUNCTION BOXES TO STM-3.
3. COORDINATES AND TOP ELEVATIONS SHOWN ARE LOCATED AT CENTER OF 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.
8. 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

STRUCTURE	STATION & OFFSET	INSIDE FACE TOP ELEVATION	STREET GRADE	STREET NAME
CI 4-12A	15+14.12, 15.50' RT	994.91	SUMP	SW SUMMIT VIEW TRL
CI 4-13A	16+97.49, 15.50' RT	1000.45	5.80%	SW SUMMIT VIEW TRL
JB 4-13B	26+22.30, 21.00' RT	1010.29	N/A	SW KLINE AVE
MH 4-HDS1	26+64.77, 21.35' RT	N/A	N/A	SW KLINE AVE
CI 4-13C	26+80.71, 19.50' RT	1011.58	2.80%	SW KLINE AVE
CI 4-13D	10+60.37', 15.50' RT	1019.54	4.20%	SW ENOCH ST
CI 4-13E	10+56.25, 15.50' LT	1019.38	3.80%	SW ENOCH ST
CI 4-13F	11+96.78, 15.50' LT	1023.63	2.20%	SW ENOCH ST
CI 4-13G	12+32.92, 15.50' RT	1024.39	2.00%	SW ENOCH ST
CI 4-14A	26+80.72, 19.50' LT	1011.58	3.00%	SW KLINE AVE

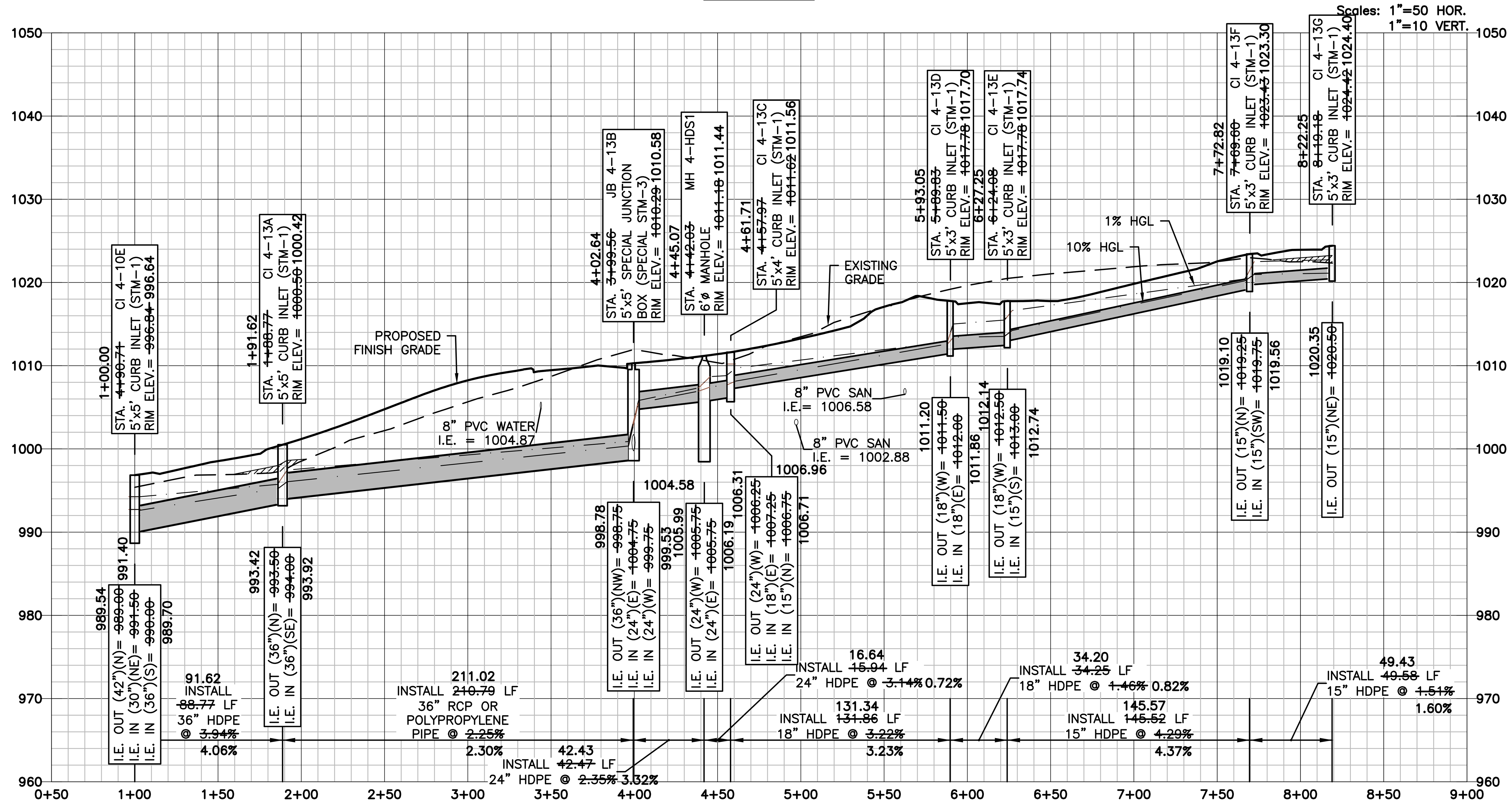
STM LINE 4-12

Scales: 1"=50 HOR. 1"=10 VERT.



STM LINE 4-13

Scales: 1"=50 HOR. 1"=10 VERT.



STM LINE 4-14

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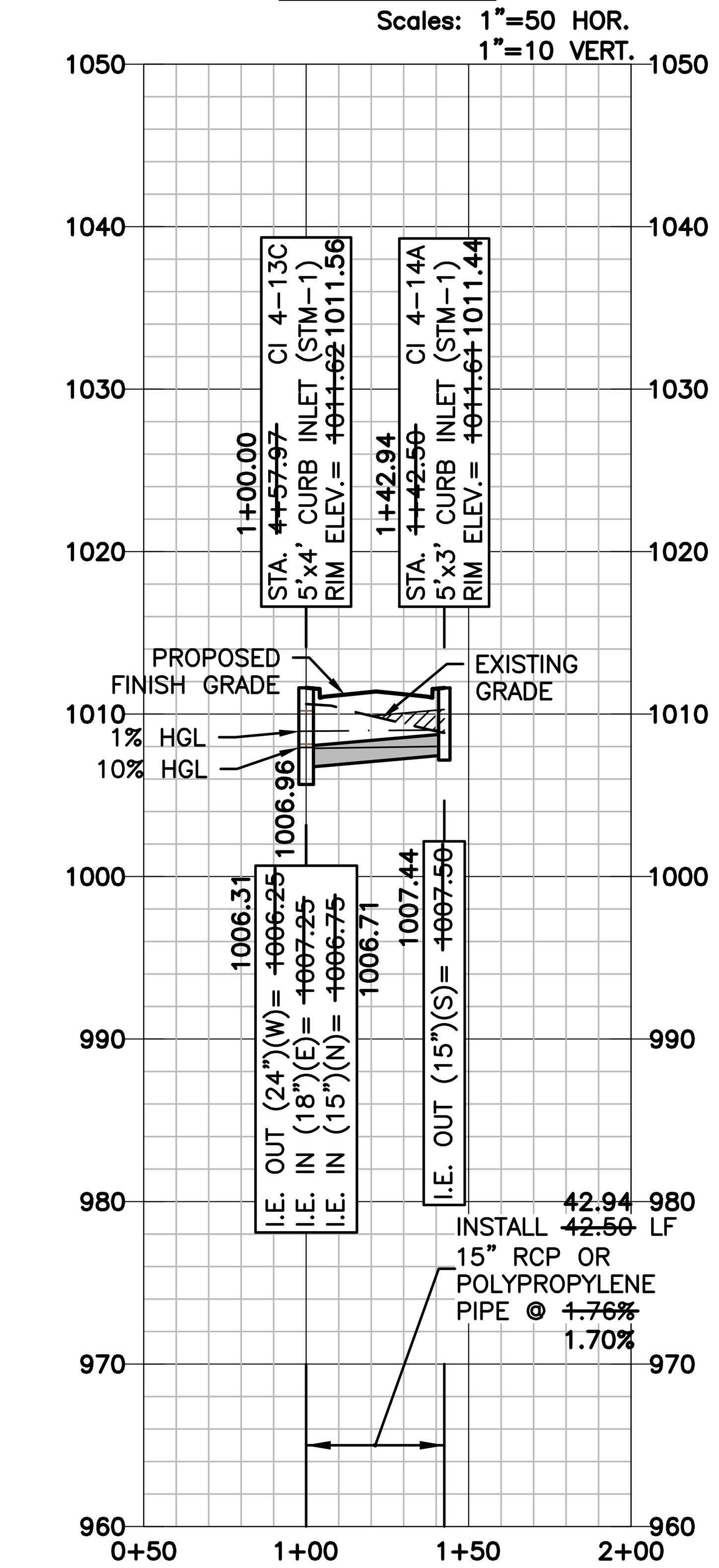

LAMP RYNEARSON
MO AUTH. NO F01294734
MARK DANIEL MCGHEE JR.
PE - 2008019568

REVISIONS
01/07/2020 PER CITY COMMENTS
03/25/2020 PER CITY COMMENTS
10/02/2020 ADDED HDS UNITS
05/13/2022 RECORD DRAWINGS

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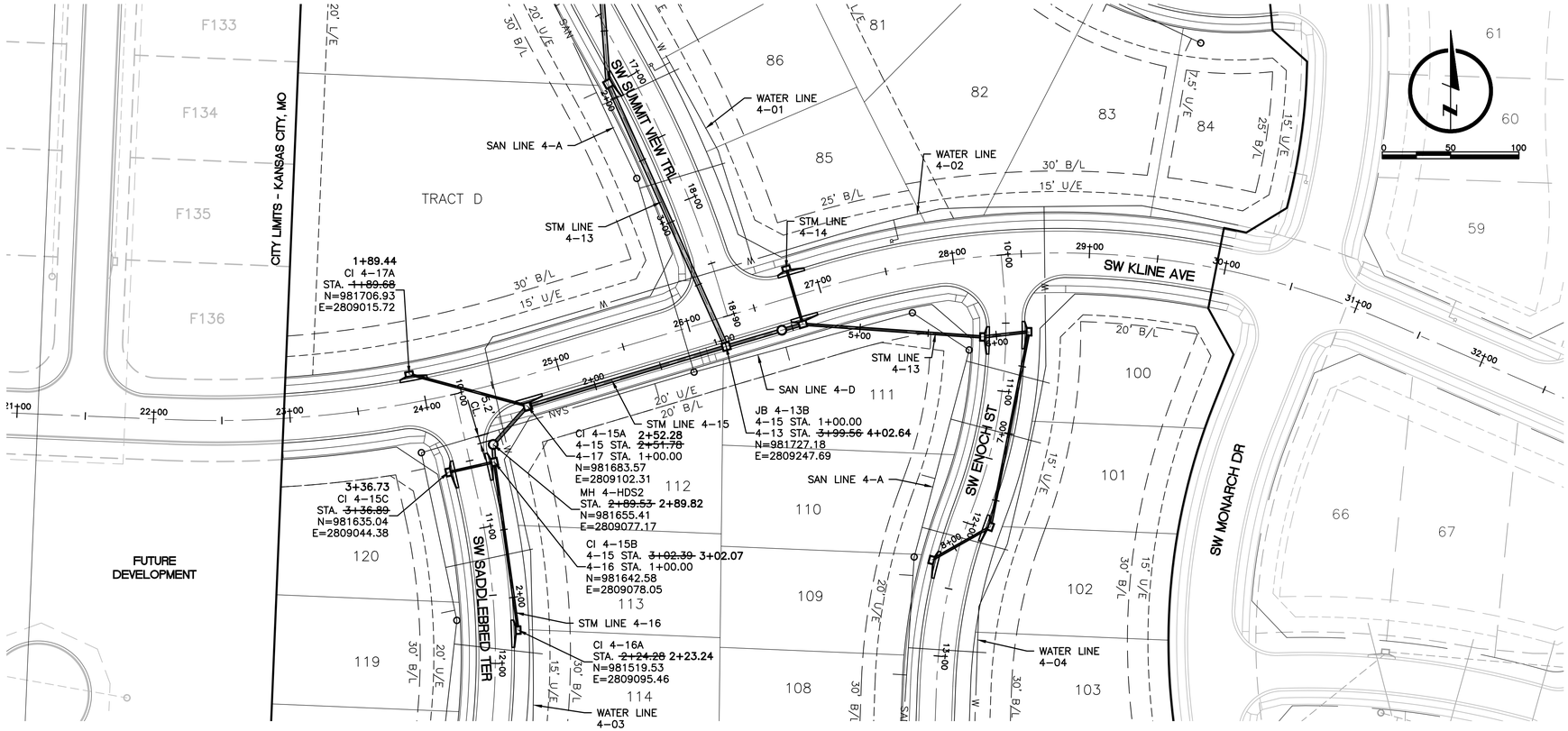
SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
STORM SEWER PLAN/PROFILE LINES 4-12, 4-13 AND 4-14

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



STORM SEWER NOTES:

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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.
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8. HYDRODYNAMIC STORMWATER SEPARATOR (HDS) TO BE ~~BARRACUDA SC 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 FIRST DEFENSE HIGH CAPACITY 6-FT DIA

HYDRO INTERNATIONAL STORMWATER QUALITY UNIT FRAME AND COVER

STORM SEWER STRUCTURE TABLE

STRUCTURE	STATION & OFFSET	INSIDE FACE TOP ELEVATION	STREET 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

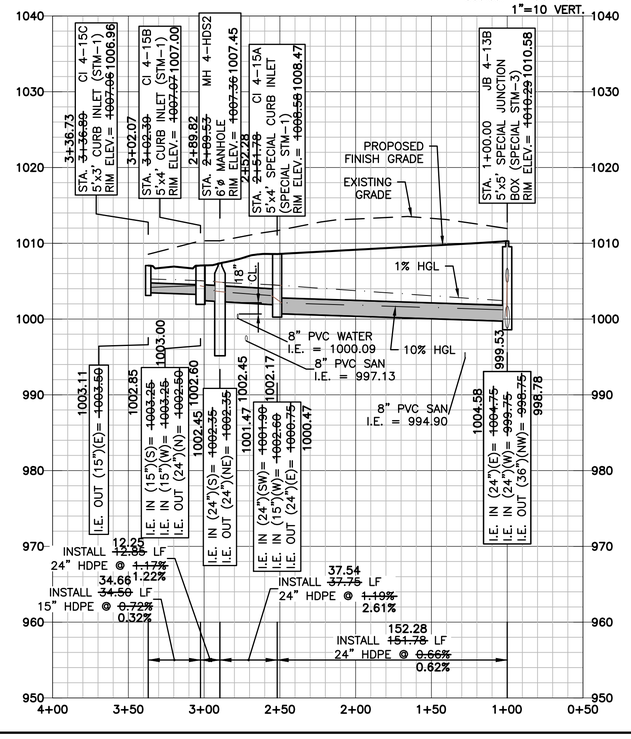
The information provided on this drawing conforms to construction records; it is not intended for construction, implementation or recording purposes; and it is solely based on information provided by others and information obtained by my firm.

"~~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.

Date: 05-13-2022
Certified by: Mark Daniel McGhee Jr.
Title: Senior Project Manager
Firm: Lamp Rynearson

STM LINE 4-15

Scales: 1"=50 HOR. 1"=10 VERT.



STM LINE 4-16

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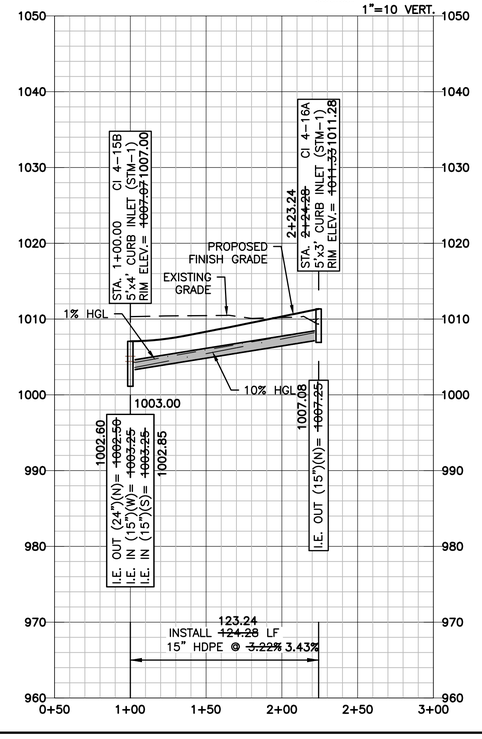

STM LINE 4-17

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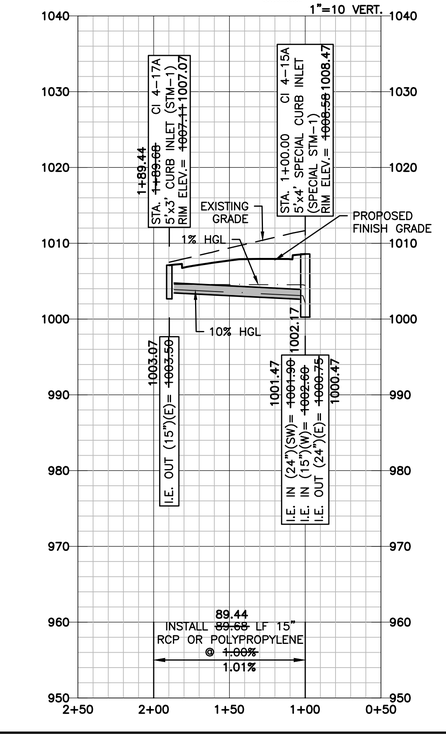

LAMP RYNEARSON
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MARK DANIEL MCGHEE JR.
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PROFESSIONAL ENGINEER
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SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

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

DESIGNER / DRAFTER
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DATE
11/20/2019
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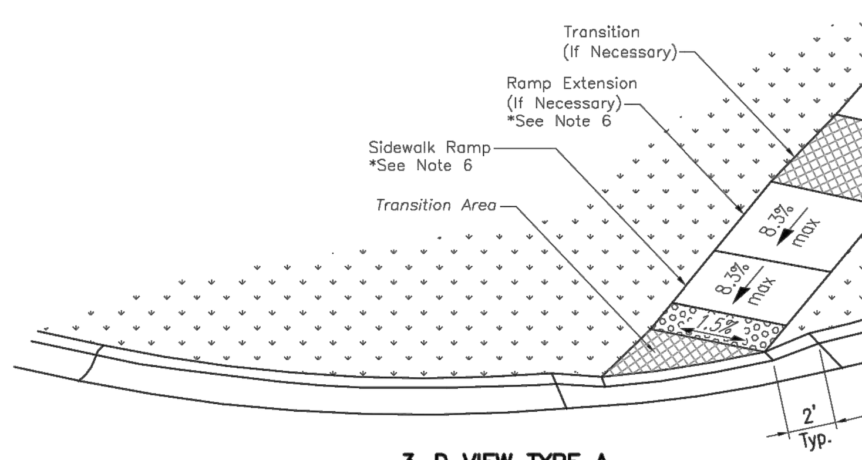
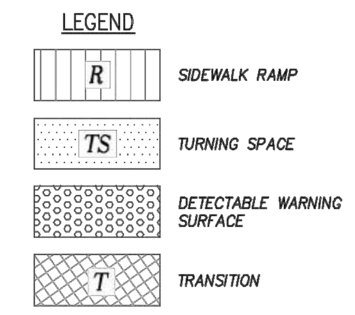
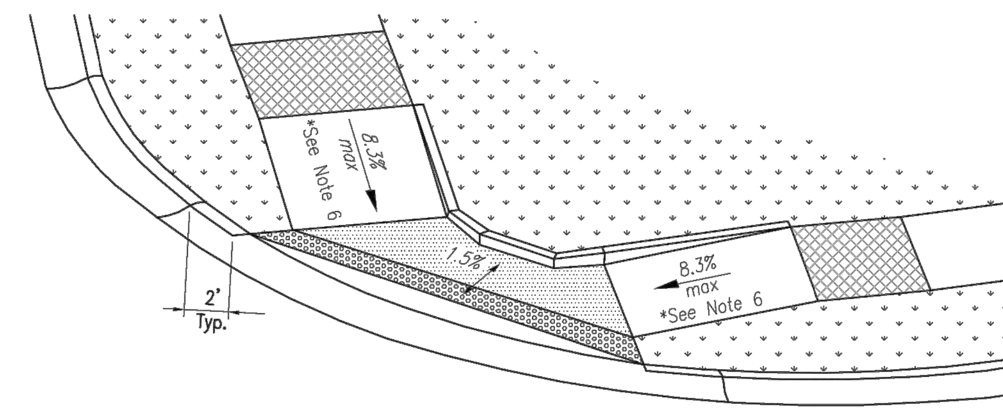
BOOK AND PAGE

SHEET
28 OF 31

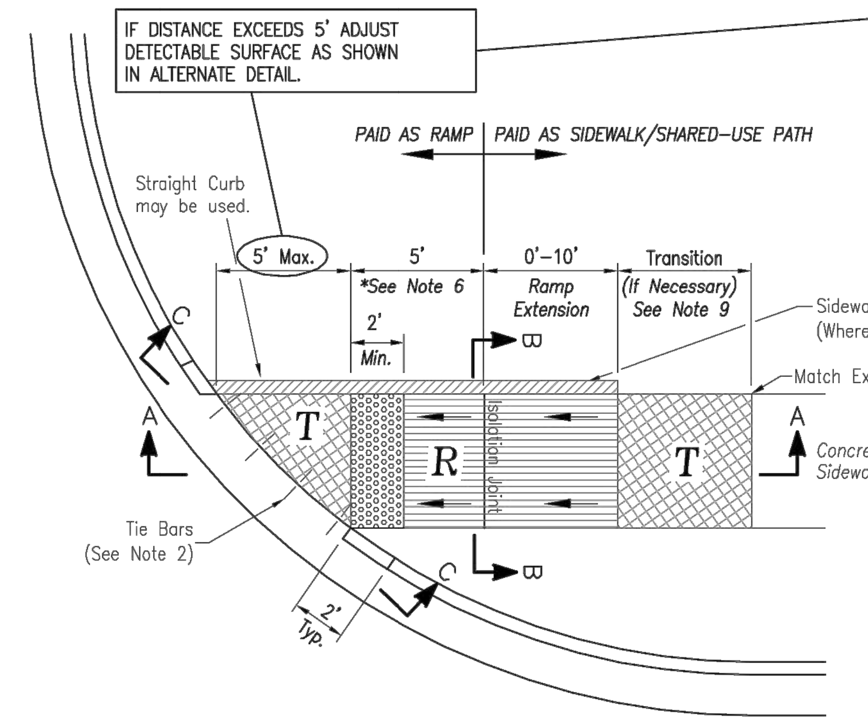


3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

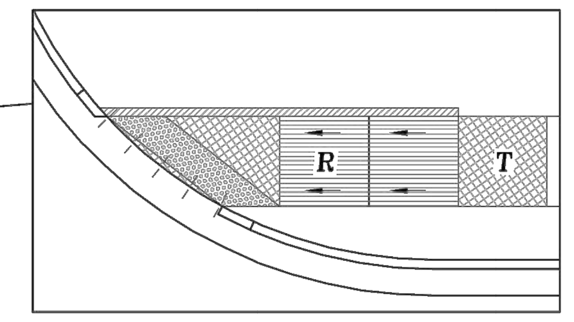




3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP



TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

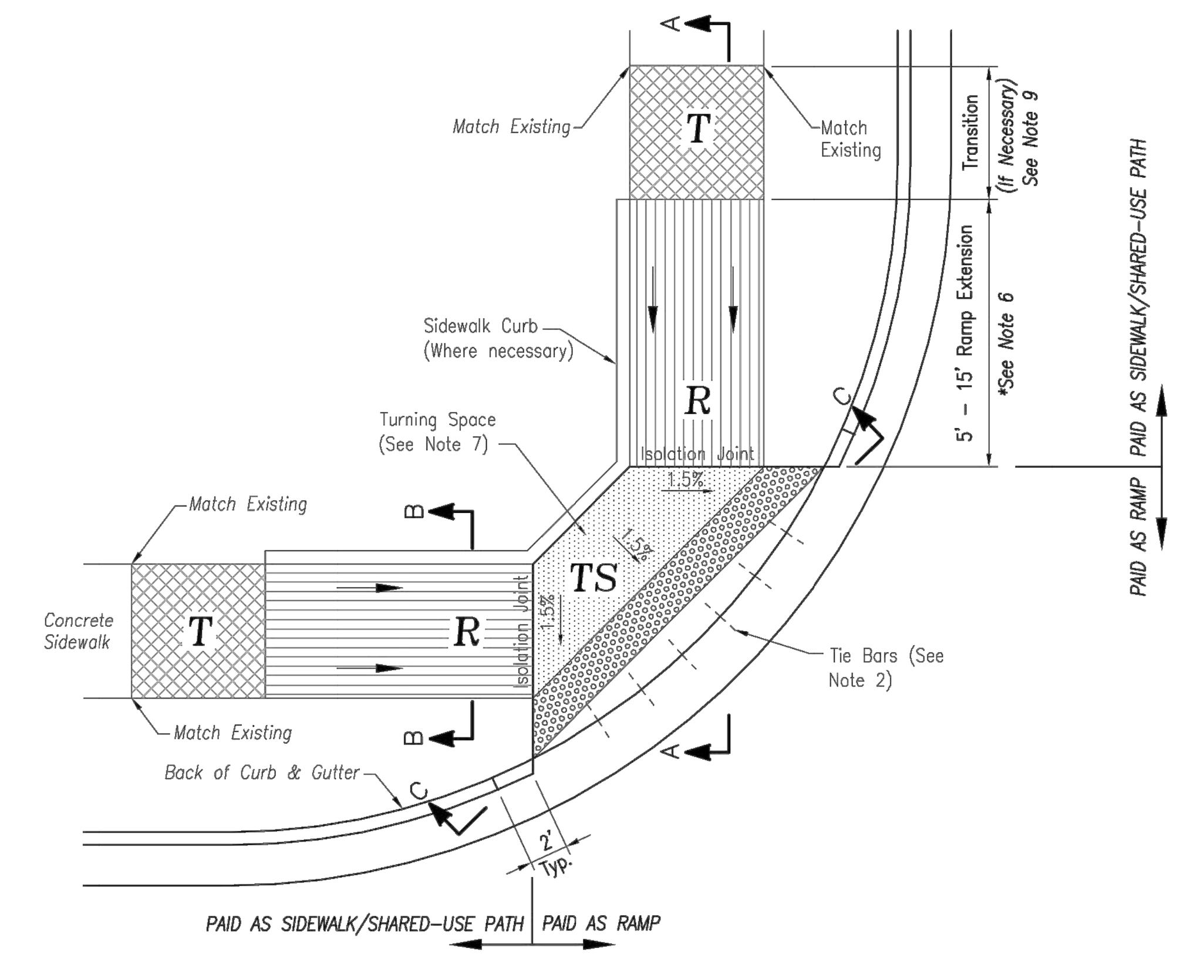


ALTERNATE DETECTABLE SURFACE LAYOUT

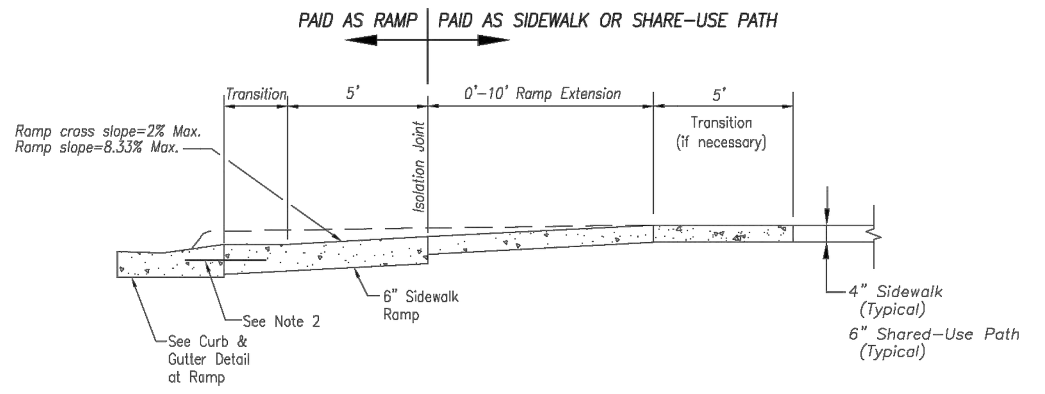
SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%

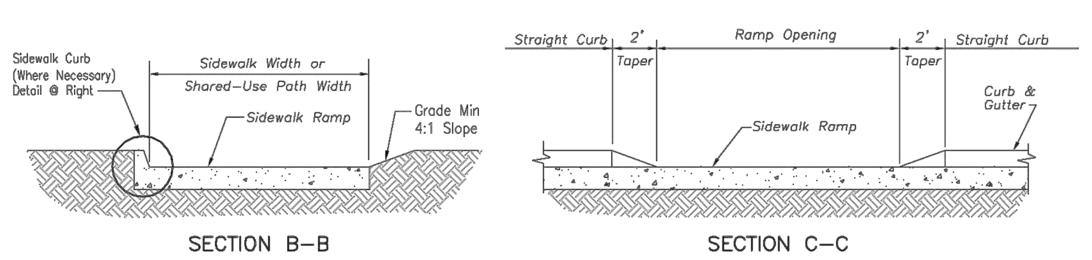
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



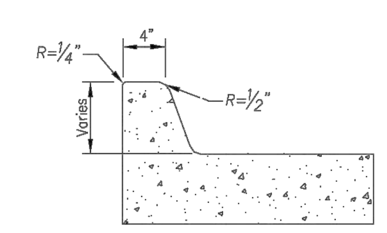
TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale



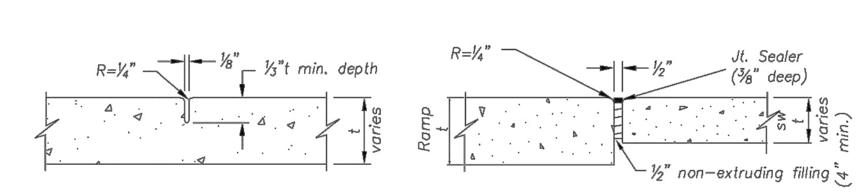
SECTION A–A



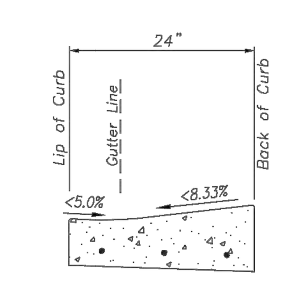
TYPE A & B SIDEWALK RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale

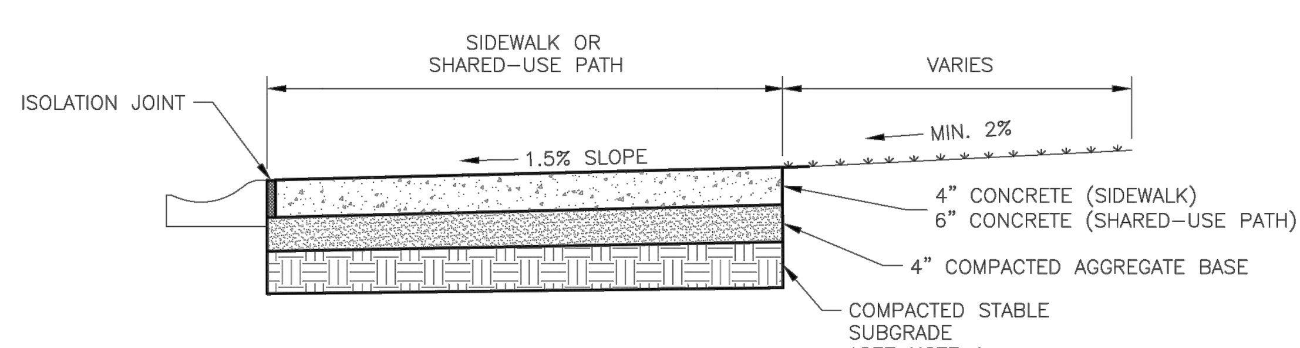


JOINT DETAILS
Not to Scale

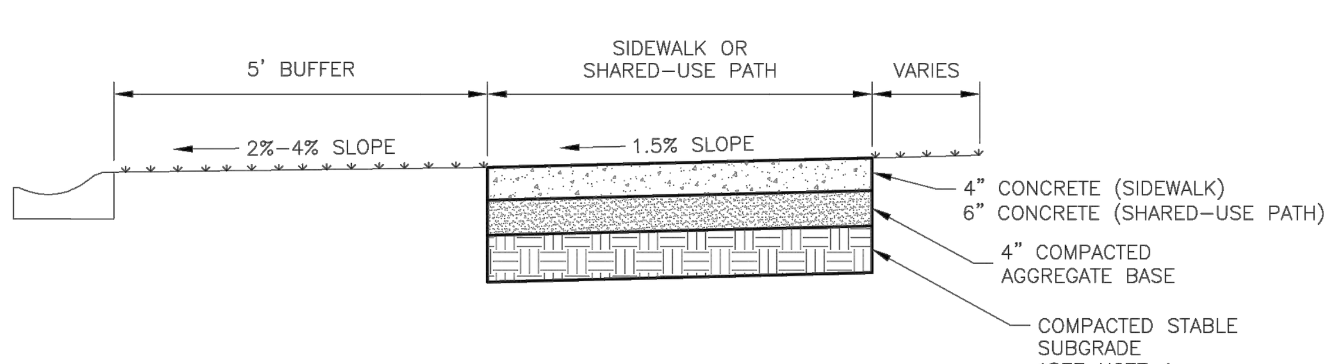


CURB & GUTTER DETAIL AT RAMP
Not to Scale

GEN-3A	Drawn By: MJF Checked By: DL Date: 04/17 Proj. #:	Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
		Sheet Name: ADA RAMP RETROFIT DETAIL	



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE

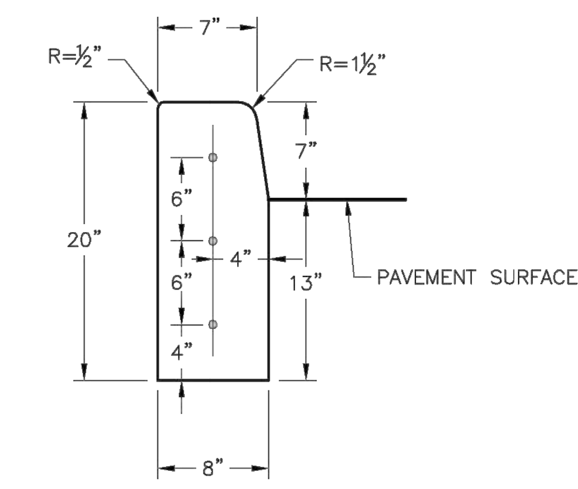


SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

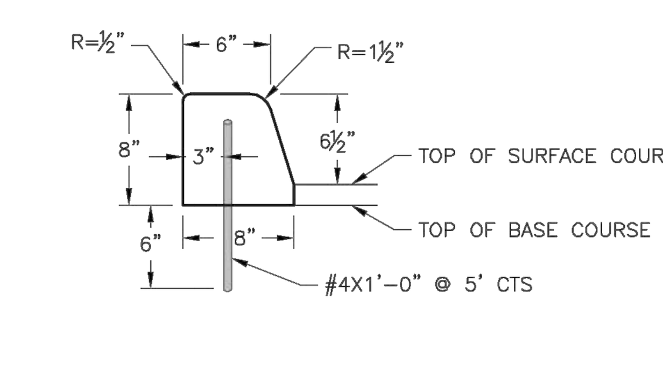
GENERAL NOTES:

1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS/SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALK/SHARED-USE PATHS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN ISOLATION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK/SHARED-USE PATHS, BUT NO GREATER THAN 10 FT.
6. AN ISOLATION JOINT SHALL BE PLACED WHERE THE SIDEWALK/SHARED-USE PATHS MEETS A RESIDENTIAL DRIVEWAY.
7. SHARED-USE PATHS WIDTH SHALL BE 10 FT. WIDE.
8. SIDEWALK/SHARED-USE PATHS FINISHING SHALL BE FULL BROOM FINISH OR AS DIRECTED BY CITY INSPECTOR.
9. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

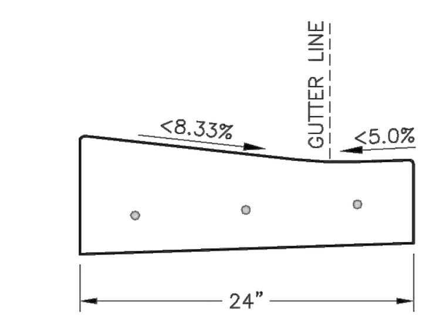
LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 04/17 Drawn By: MJF Checked By: DL
SIDEWALK/SHARED-USE PATH DETAIL	GEN-2



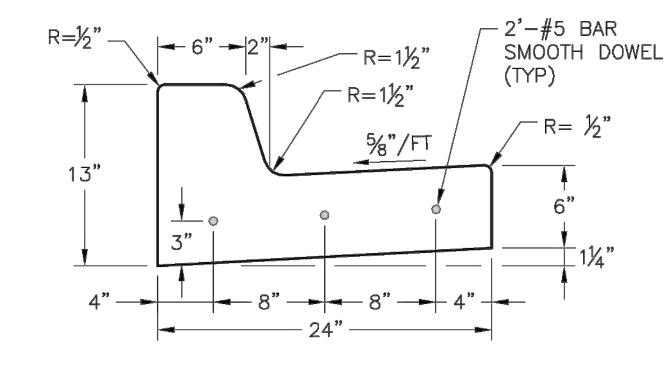
STRAIGHT CURB
(TYPE C–1)



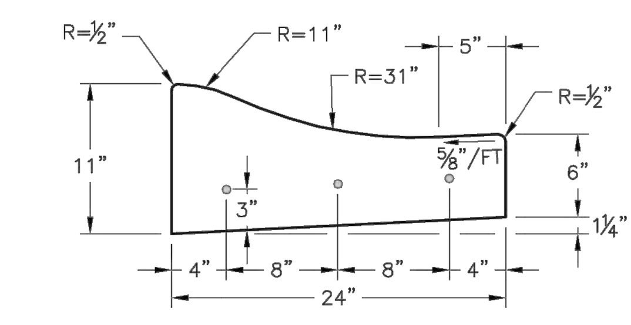
DOWELLED CURB
(TYPE DC)



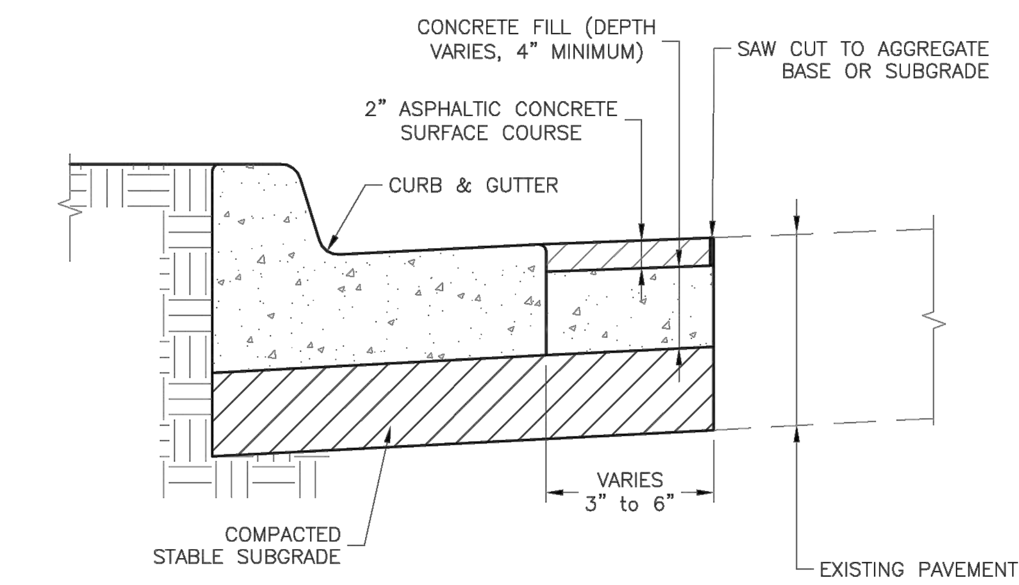
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



STRAIGHT BACK CURB & GUTTER
(TYPE CG–1)



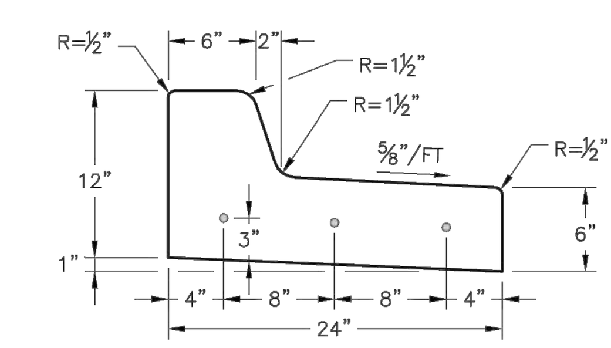
ROLL BACK CURB & GUTTER
(TYPE CG–2)



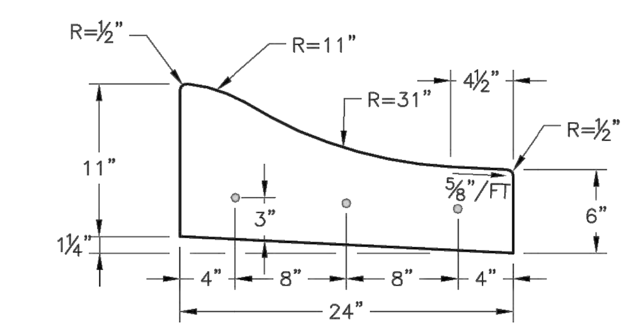
CURB REPLACEMENT DETAIL

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 3 (2'–#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

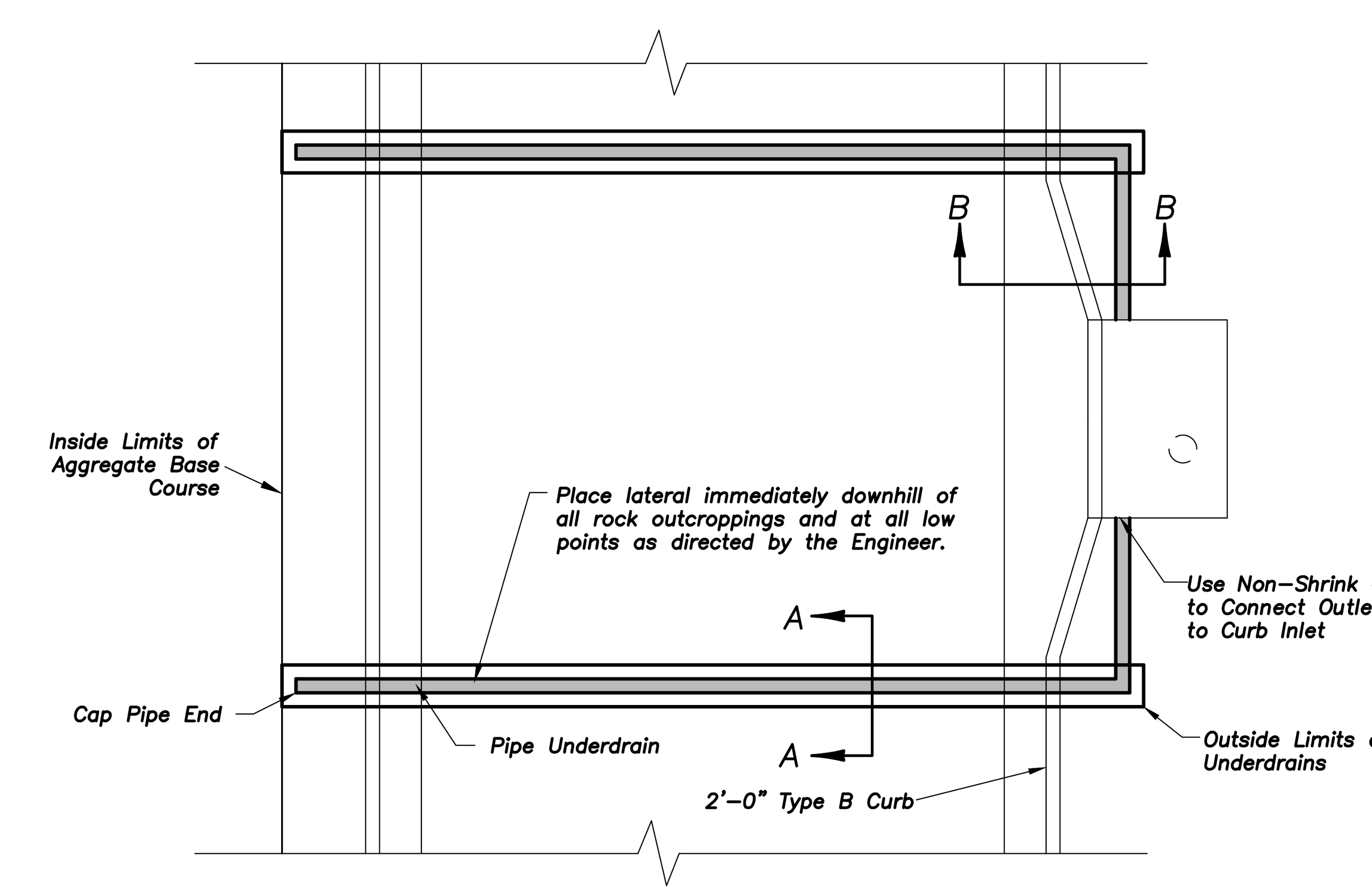


STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG–1 DRY)



ROLL BACK DRY CURB & GUTTER
(TYPE CG–2 DRY)

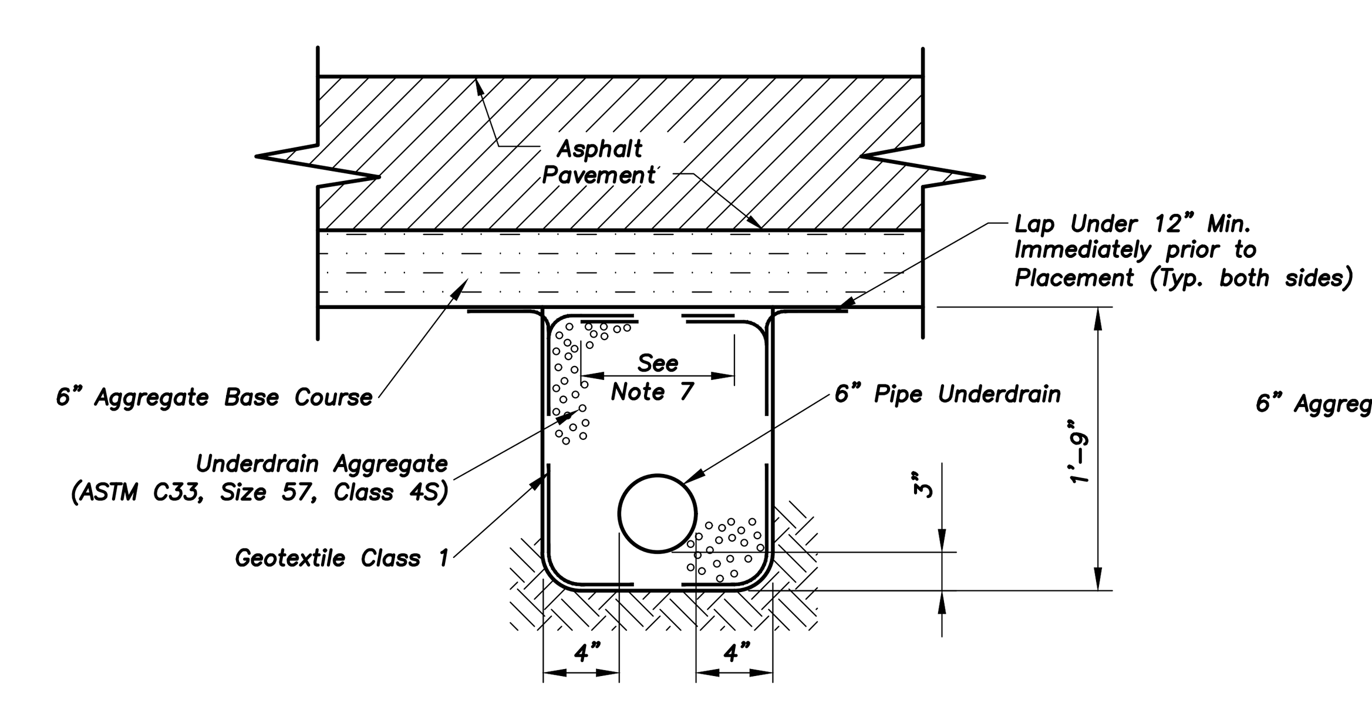
GEN-4	Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
	Sheet Name: CURB & GUTTER DETAIL	



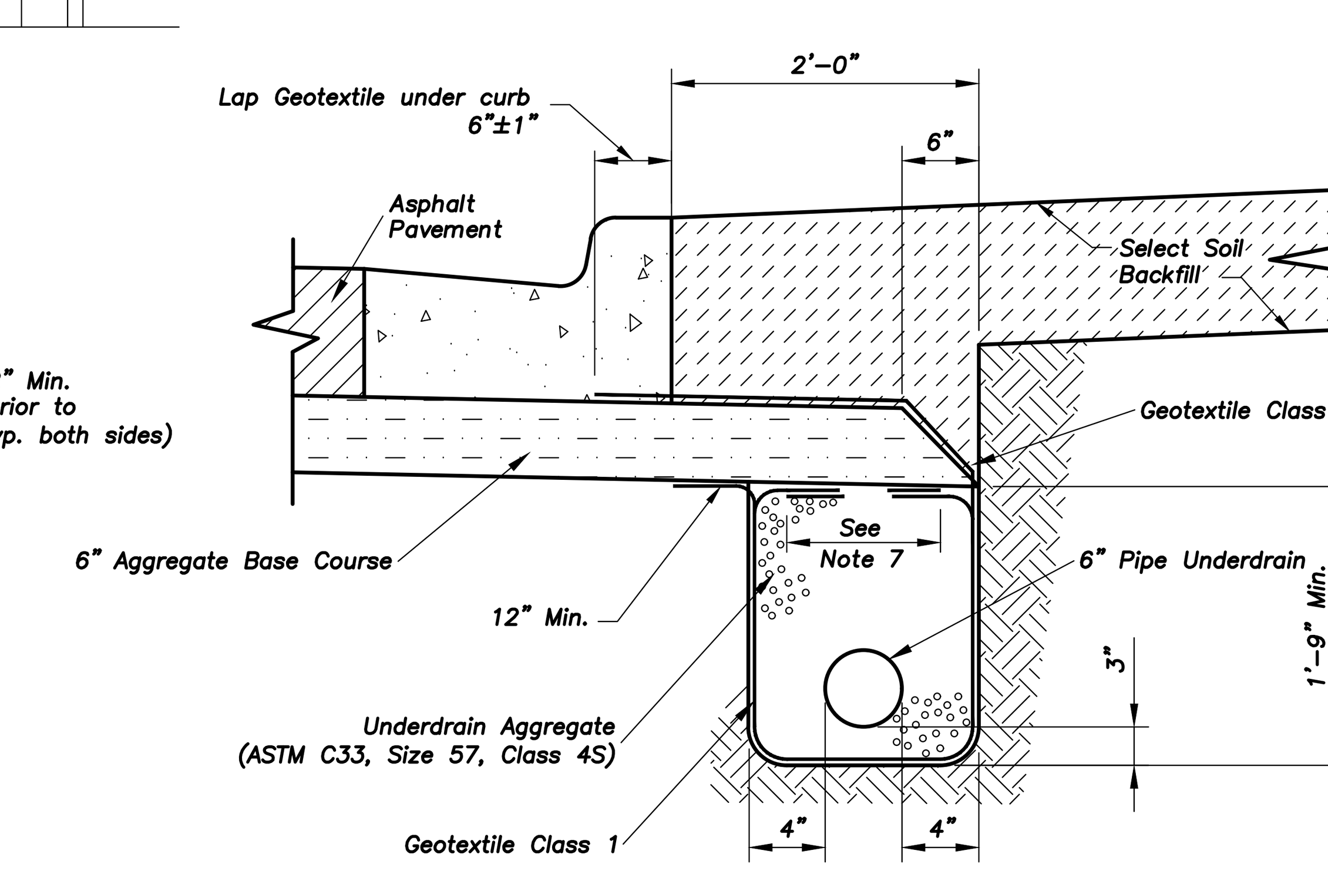
UNDERDRAIN LAYOUT

Underdrain Notes:

1. A minimum of 12" of select soil (topsoil) shall be placed on exposed rock cut or fill slopes outside the limits of the roadway. All rock and shale slopes shall be benched at a maximum of 2' vertical intervals prior to placement of select soil.
2. All underdrain pipes shall be installed at a minimum slope of 1%. Pipe shall be installed with the perforations placed down.
3. Construct underdrain and fold geotextile over underdrain aggregate to protect the underdrain until the Aggregate Base Course is constructed. Fold the geotextile back and construct the Aggregate Base Course. Geotextile seams shall be overlapped at a minimum of 12".



PIPE UNDERDRAIN LATERAL A–A
Not to Scale



PIPE UNDERDRAIN BEHIND CURB B–B
Not to Scale

LAMP RYNEARSON
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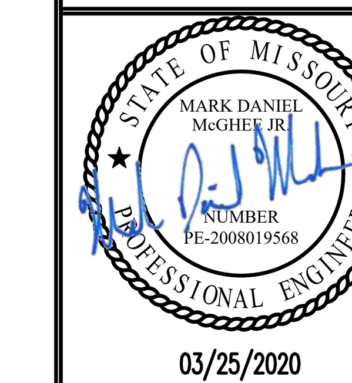


03/25/2020
MARK DANIEL MCGHEE JR.
PE - 2008019568

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

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

SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMT, MISSOURI

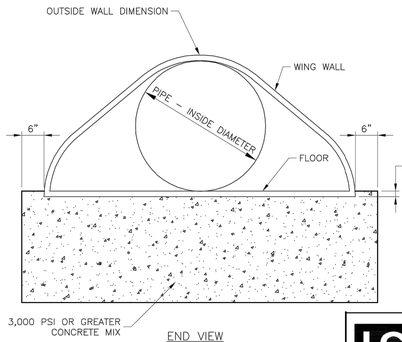
MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS

PAVING DETAILS

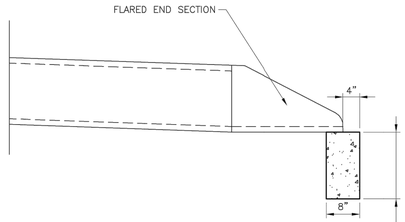
DESIGNER / DRAFTER
MDM/AJM
DATE
11/20/2019
PROJECT NUMBER
0318050.02
BOOK AND PAGE

SHEET
29 OF 31

L:\Engineering\0318050 SVFDC Summit View Farms 3rd Plat\DRAWINGS\CONSTRUCTION DRAWINGS\4TH PLAT\0318050.02-EC-PAV-STM-PLANS\0318050.02-PAV-STM-DET.dwg, 3/25/2020 7:26:30 AM, JAMIE MCMURRY, LAMP RYNEARSON

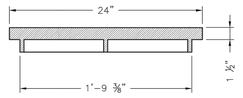


END VIEW
NOT TO SCALE



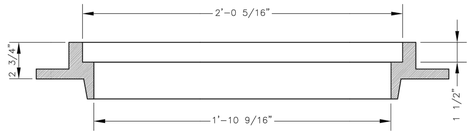
PLAN VIEW
NOT TO SCALE

LEE'S SUMMIT MISSOURI	Date: 04/17
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Drawn By: MJF
FLARED END SECTION SUPPORT DETAIL	Checked By: DL
	STM-5

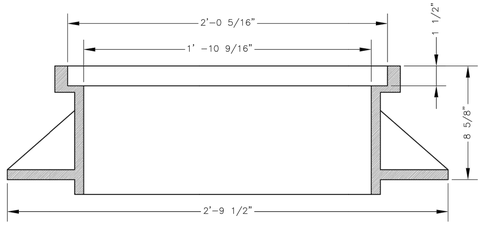


STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.



SLAB MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS103A
MINIMUM WEIGHT = 145 LB

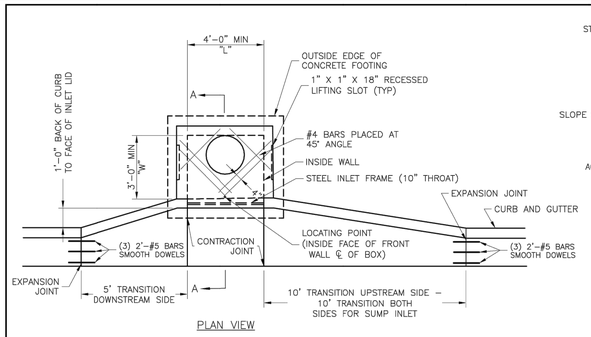


STANDARD 24" MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS101A
MINIMUM WEIGHT = 250 LB

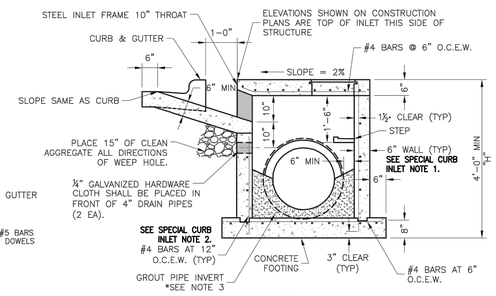
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

LEE'S SUMMIT MISSOURI	Date: 04/17
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Drawn By: MJF
STORM MANHOLE COVER DETAIL	Checked By: DL
	STM-6

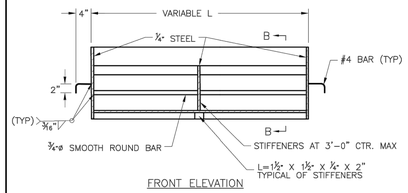
LEE'S SUMMIT MISSOURI	Date: 04/17
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Drawn By: MJF
STORM MANHOLE FRAME DETAIL	Checked By: DL
	STM-7



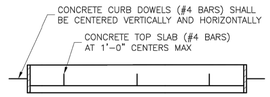
PLAN VIEW



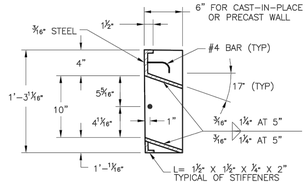
SECTION A–A



FRONT ELEVATION



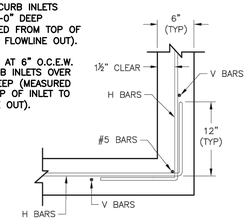
PLAN VIEW



SECTION B–B

SPECIAL CURB INLET NOTES:

1. **8" FOR CURB INLETS OVER 8'–0" DEEP (MEASURED FROM TOP OF INLET TO FLOWLINE OUT).**
2. **#4 BARS AT 6" O.C.E.W. FOR CURB INLETS OVER 8'–0" DEEP (MEASURED FROM TOP OF INLET TO FLOWLINE OUT).**

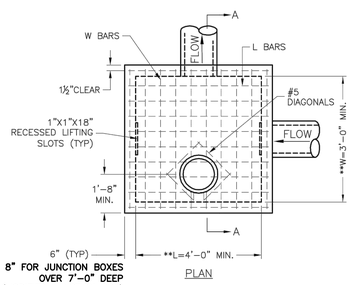


WALL CORNER DETAIL

STEEL FRAME NOTES:
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM–PRIME #37H–78 PRIMER (GRAY) OR EQUAL.

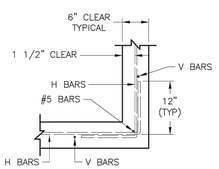
GENERAL NOTES:
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ½" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI	Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Sheet Name: CURB INLET DETAIL
	STM-1



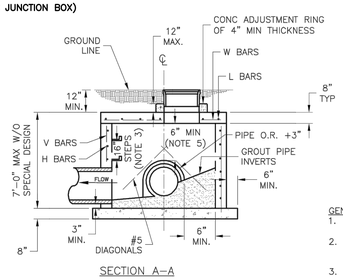
8" FOR JUNCTION BOXES OVER 7'–0" DEEP (MODIFIED JUNCTION BOX)

PLAN

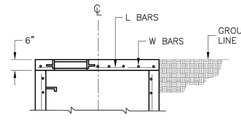


WALL CORNER DETAIL

** INCREASE IN MULTIPLES OF 6" (7'–0") MAX WITHOUT SPECIAL DESIGN. (SEE PROJECT PLANS FOR DETAILS)



SECTION A–A



SLAB TOP ALTERNATE FOR JUNCTION BOX (SHALLOW)

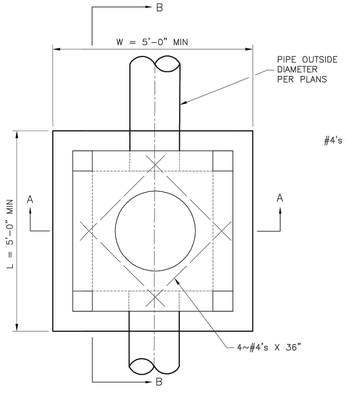
REINFORCING

BARS	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6

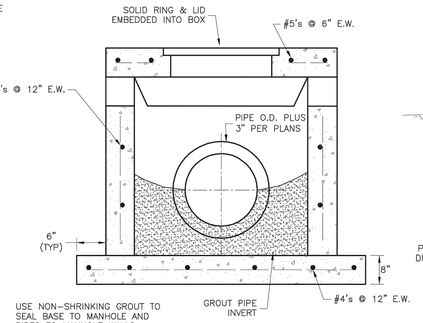
H AND V BARS SHALL BE SPACED AT 6" O.C. E.W. FOR JUNCTION BOXES OVER 7'–0" DEEP (MODIFIED JUNCTION BOX)

GENERAL NOTES:
1. LOCATE RING AND COVER ON BLANK WALL.
2. USE ¾" CHAMFER STRIP OR ½" R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
3. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4' ON BLANK WALL IF POSSIBLE.
4. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE AND THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
5. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

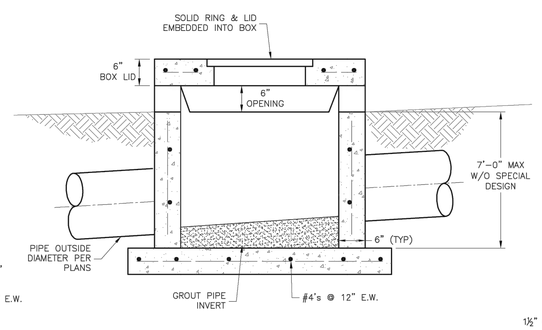
LEE'S SUMMIT MISSOURI	Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Sheet Name: JUNCTION BOX DETAIL
	STM-3



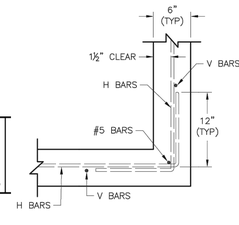
PLAN VIEW



SECTION A–A



SECTION B–B



WALL CORNER DETAIL

GENERAL NOTES:
1. LOCATE RING AND COVER OVER OUTLET ON BLANK WALL.
2. USE ¾" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 3' ON BLANK WALL IF POSSIBLE.
5. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE.
6. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
7. SHOW FIELD INLET ORIENTATION ON PLANS PLUS NUMBER AND SIDE OF OPENINGS.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

STM-2	Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO	LEE'S SUMMIT MISSOURI
Drawn By: MJF Checked By: DL Date: 04/17 Proj. #:	Sheet Name: FIELD INLET DETAIL	PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

LAMP RYNEARSON
MO CERT. NO. 2013011903

STATE OF MISSOURI
MARK DANIEL McGHEE JR.
NUMBER PE-2008019568
PROFESSIONAL ENGINEER

03/25/2020

MARK DANIEL MCGHEE JR.
PE - 2008019568

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

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LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

STM-1

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: JUNCTION BOX DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

STM-3

SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMIT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS
STORM SEWER DETAILS

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

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30 OF 31

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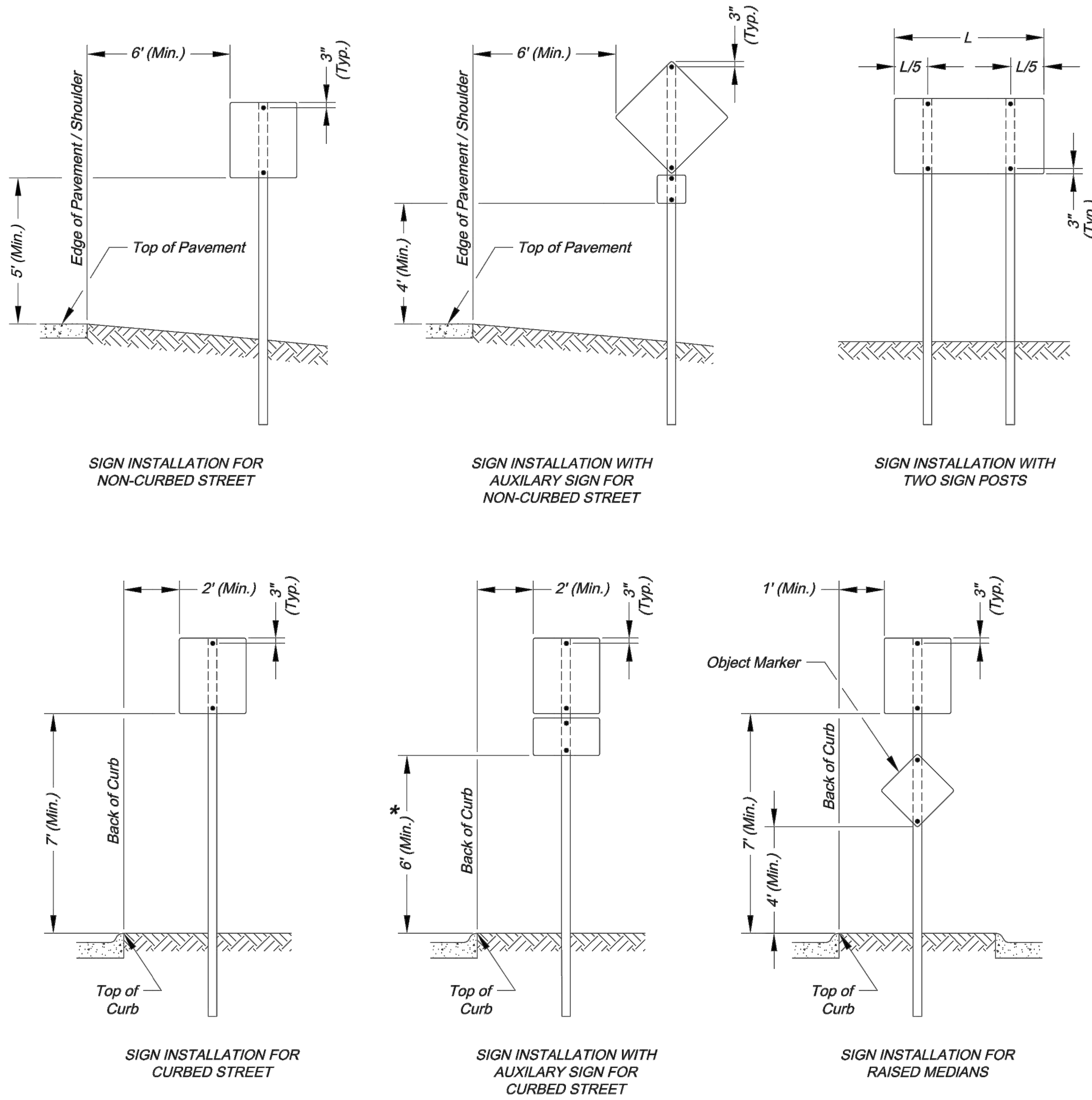
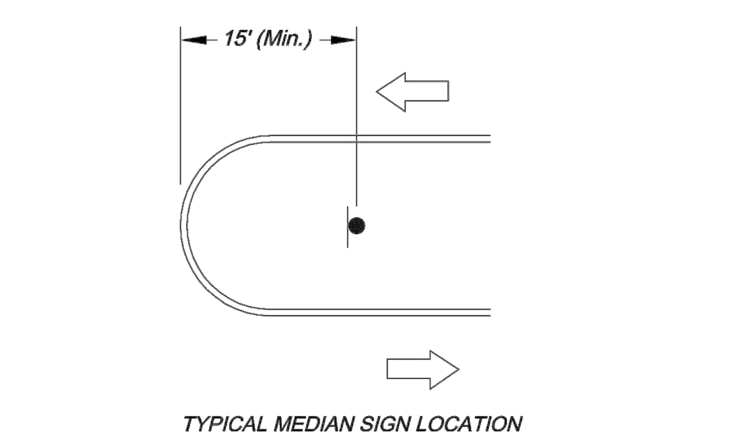


SIGN MOUNTING DETAILS

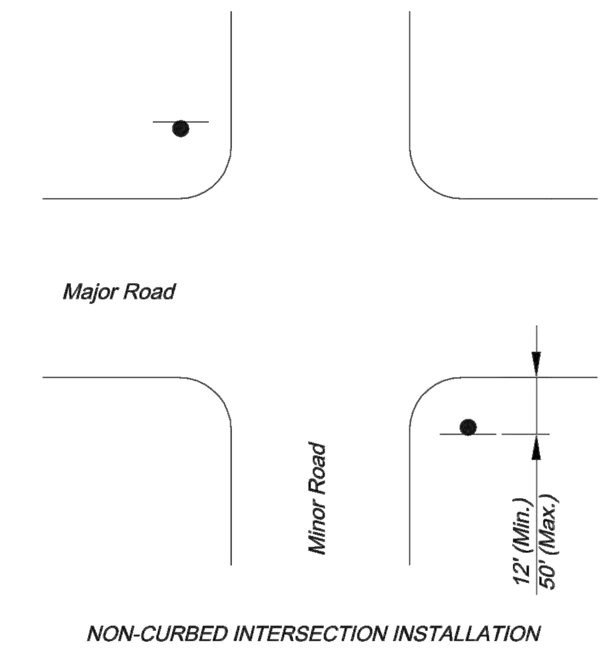
* The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.

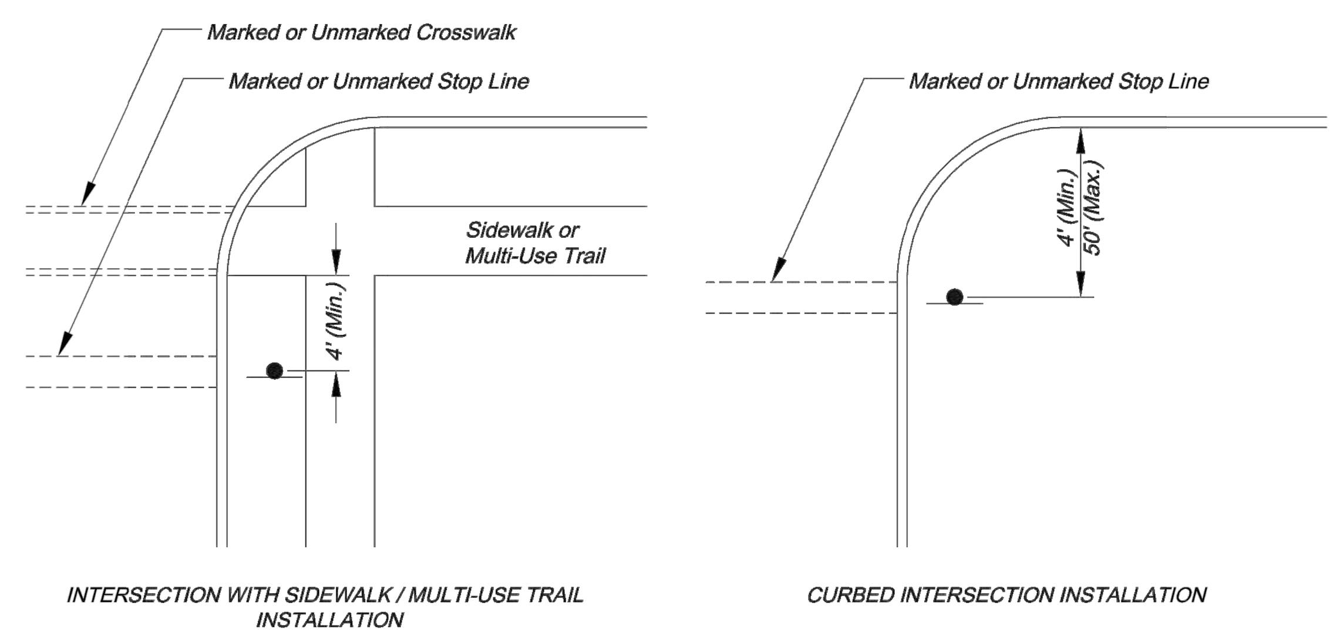
NOTE:
1. Generally, the sign mounting height should not be more than 1' greater than the minimum mounting height.



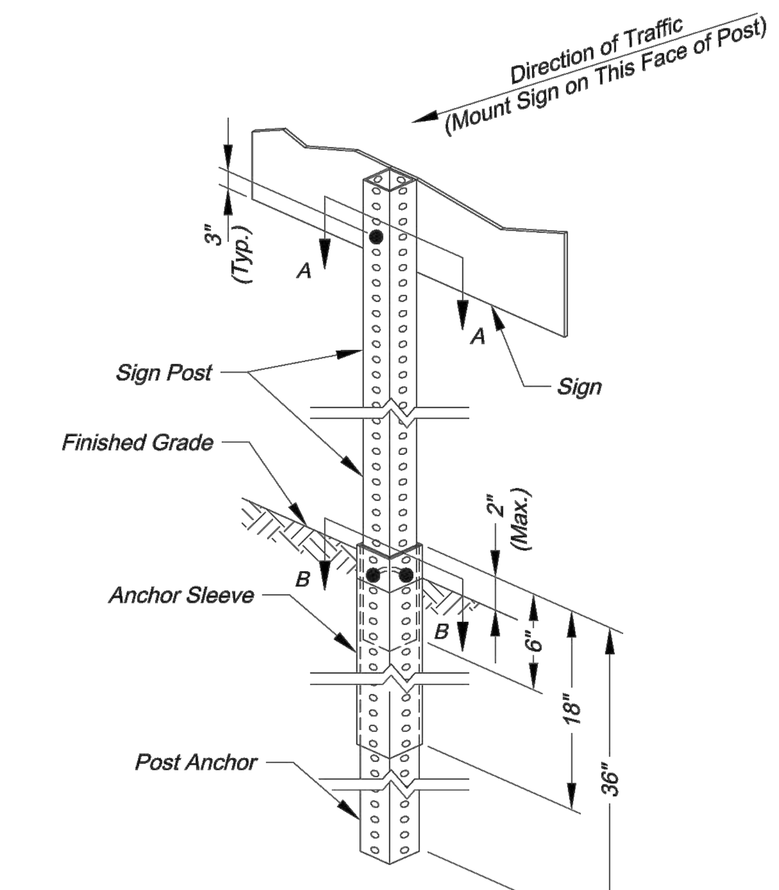
MEDIAN SIGN LOCATION

NOTES:
1. A 4" P.V.C. sleeve shall be installed in new concrete medians at each location where a sign is to be installed.
2. For existing concrete medians, a 4" hole shall be cored into the concrete.

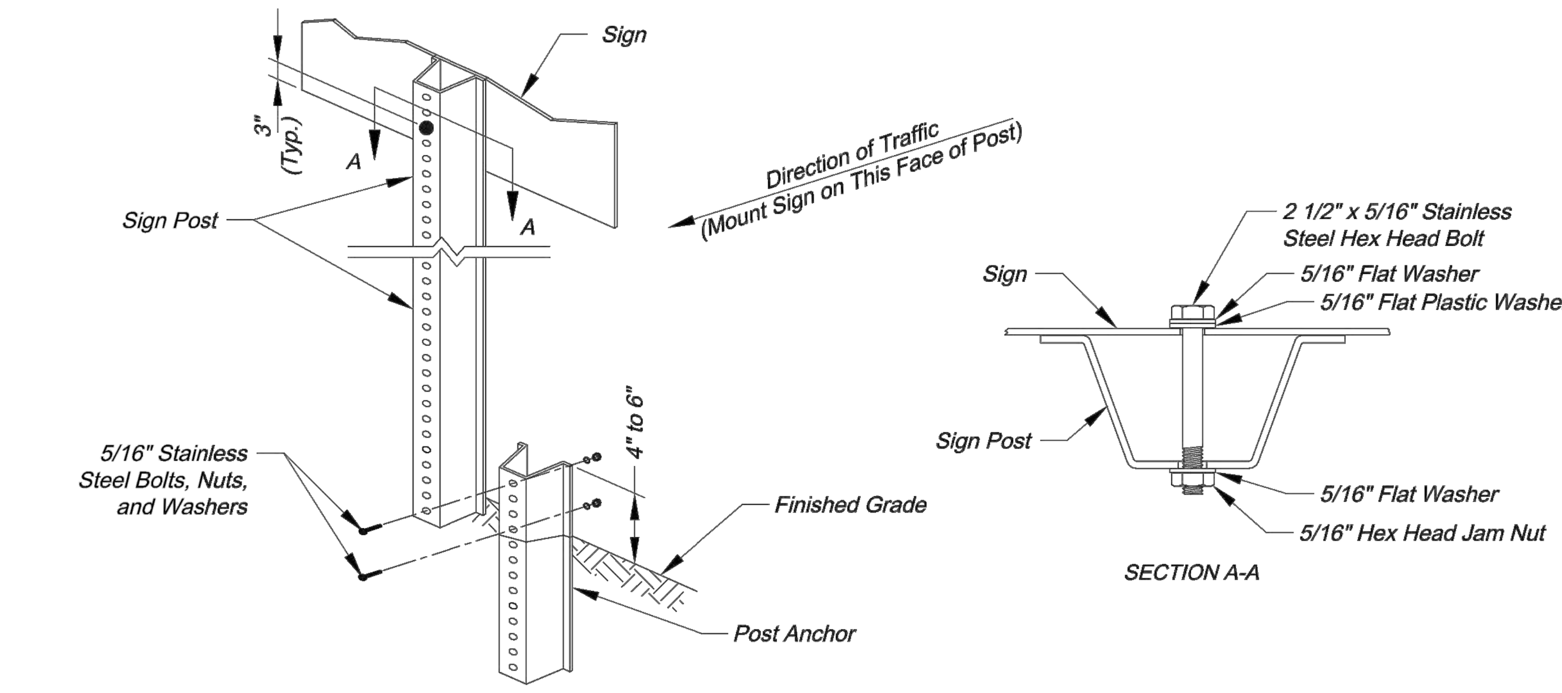




CONTROL SIGN LOCATION

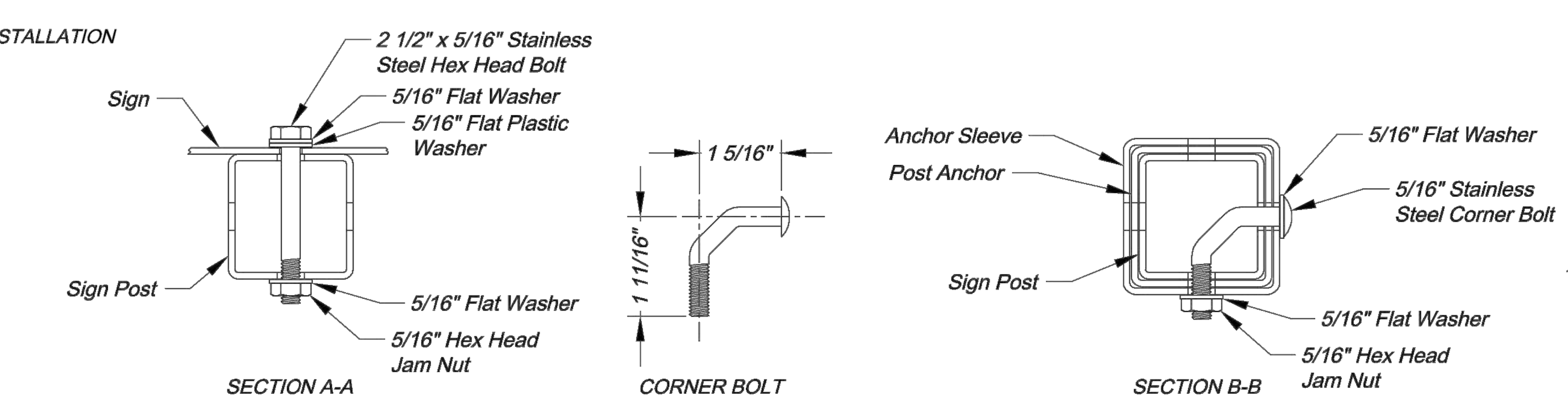


SQUARE STEEL POST INSTALLATION SEQUENCE:
1. Sign post anchor driven partially into the ground using a drive cap with a sledge or power equipment.
2. Anchor sleeve slipped over anchor and drive into the ground together with the sign post anchor.
3. Insert sign post into the post anchor and bolt in place.



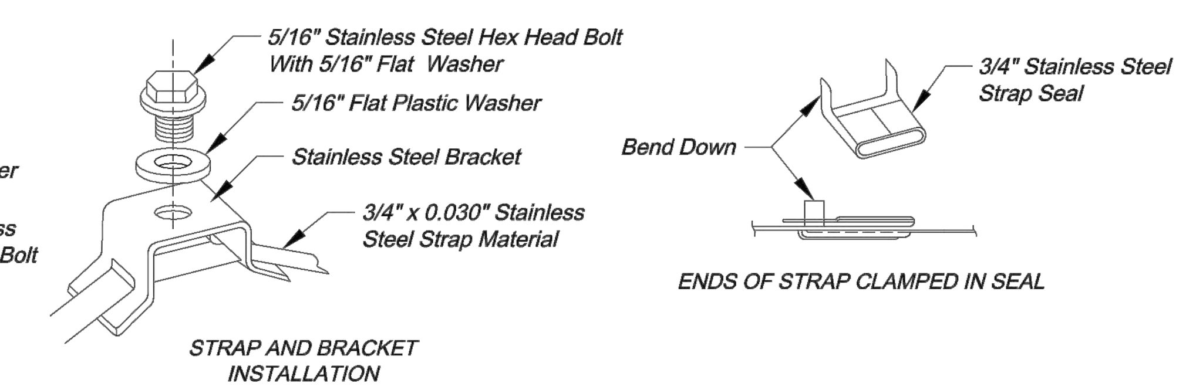
U-STEEL POST DETAILS

U-STEEL POST NOTES:
1. Splice shall be positioned entirely between finished grade line and 18" above finished grade line. Only one splice will be allowed per post.
2. U-Steel post shall be 3 lb./ft., galvanized according to ASTM A123.
3. U-Steel post can be used for installation of signs with an area of less than 2.5 square feet.
4. All posts shall be embedded a minimum of 3 feet.



SQUARE STEEL POST DETAILS

SQUARE STEEL POST NOTES:
1. Square steel sign posts and break-away anchor shall consist of the following materials:
   - Sign Post - 14 Ga. 2" x 2" Square Steel Post
   - Post Anchor - 12 Ga. 2 ¼" x 2 ¼" x 36" Square Steel Post
   - Anchor Sleeve - 12 Ga. 2 ½" x 2 ½" x 18" Square Steel Post
2. 14 Gauge posts must meet a certified minimum yield strength of 60,000 psi.
3. In all installations the first hole above the finished grade line on the sign post, anchor, and anchor sleeve must be in line for the insertion of the corner bolt.
4. The maximum area for one sign post is 9.0 square feet. A sign or combination of signs with an area greater than 9.0 square feet will require two posts. Also, signs with a width greater than 36" (not including 36" x 36" diamond shaped signs) will require two posts.



STRAP TYPE SIGN SUPPORT DETAILS

METAL POLE SIGN MOUNTING NOTES:
1. Signs on metal poles shall be attached with two brackets and stainless steel bands.
2. Holes in sign for attachment to the mounting brackets shall be offset a minimum of 2 inches from the edge of the sign.
3. Holes in sign shall be located such that the sign is level.
4. All strap, bracket, and seal materials should be Type 201 stainless steel.

PERMANENT SIGNING GENERAL NOTES:
1. All signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
2. The Contractor is responsible for avoiding any and all utilities when installing sign posts, whether the utility is indicated on the plans or not.
3. All workmanship and materials shall be subject to the inspection and approval of the Public Works Department of the City of Lee's Summit.
4. The Contractor shall stake the location of all sign posts to be installed. The City Inspector shall inspect the staking prior to installation. Minor relocation to avoid conflicts may be allowed with the approval of the City Traffic Engineer or designee.
5. Signs shown to be installed on the side of metal poles shall be mounted with stainless steel straps or wing brackets as detailed. No signs are to be installed on wood poles. See Traffic Signal Standard Drawings for the installation of signs on mast arms.
6. All post mounted signs shall be installed with breakaway anchors according to the Standard Drawings.
7. All existing signs will be used in place during construction and protected from damage unless otherwise indicated in the plans. If the Contractor damages any existing sign or posts during construction, the Contractor will be required to replace the damaged materials with new signs or posts of the same type and size at the Contractor's expense. The Contractor shall be responsible for removing and storing any signs that are to be reinstalled on the project. All equipment shall be reinstalled in good condition.
8. Existing permanent signs and posts removed by the Contractor for construction purposes which are not to be reinstalled shall be delivered to the City's Public Works Maintenance Facility (1971 SE Hamblen Road). The Contractor shall be responsible for removing and storing equipment in good condition and is fully responsible for the equipment until it is delivered.
9. All Stop, Yield, or street name signs shall be maintained in a conspicuous location for the driving public. All Stop and Yield signs removed for construction purposes can be temporarily erected in reflectorized drums (no less than 7 feet above the pavement surface) until they can be reinstalled. Any temporary Stop or Yield sign installation to be left in place overnight will require prior approval from the City Inspector.

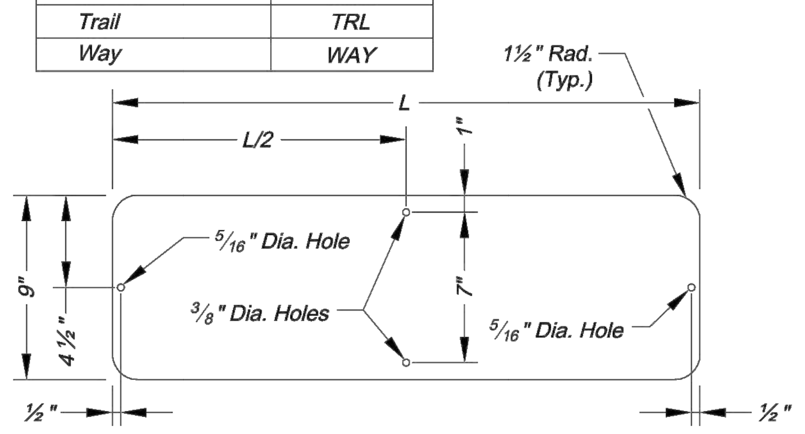
STANDARD ABBREVIATION LISTS

Named Streets	
Avenue	AVE
Boulevard	BLVD
Circle	CIR
Creek	CR
Court	CT
Crossing	XING
Drive	DR
Highway	HWY
Lane	LN
Parkway	PKWY
Place	PL
Road	RD
Street	ST
Terrace	TER
Trail	TRL
Way	WAY

Numbered Streets	
First	ST
Second	ND
Third	RD
Fourth to Tenth	TH

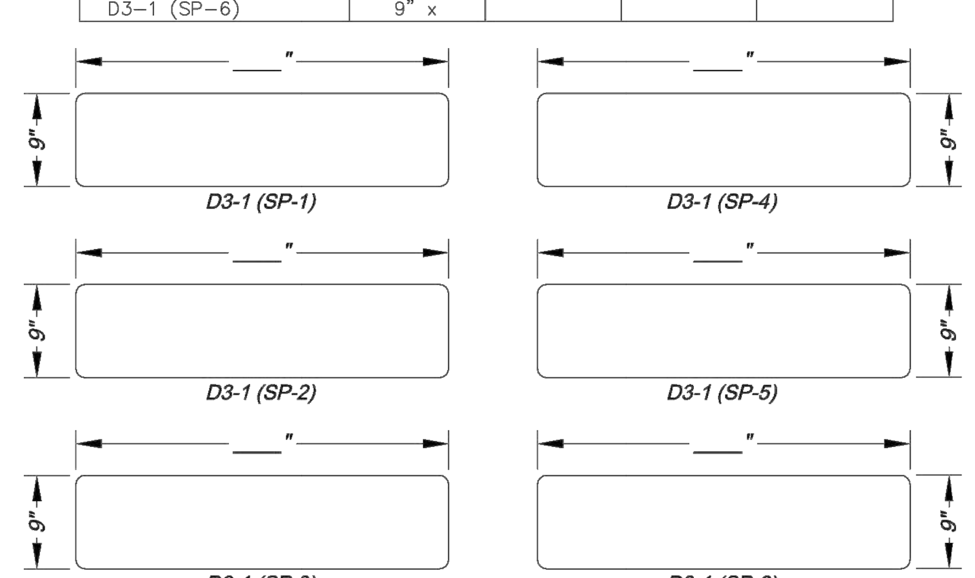
STREET NAME SIGN QUANTITIES

Sign Designation	Sign Size	Sign Area (Sq. Ft.)	Number	Quantity (Sq. Ft.)
D3-1 (SP-1)	9" x	Sq. Ft.	1	1
D3-1 (SP-2)	9" x			
D3-1 (SP-3)	9" x			
D3-1 (SP-4)	9" x			
D3-1 (SP-5)	9" x			
D3-1 (SP-6)	9" x			

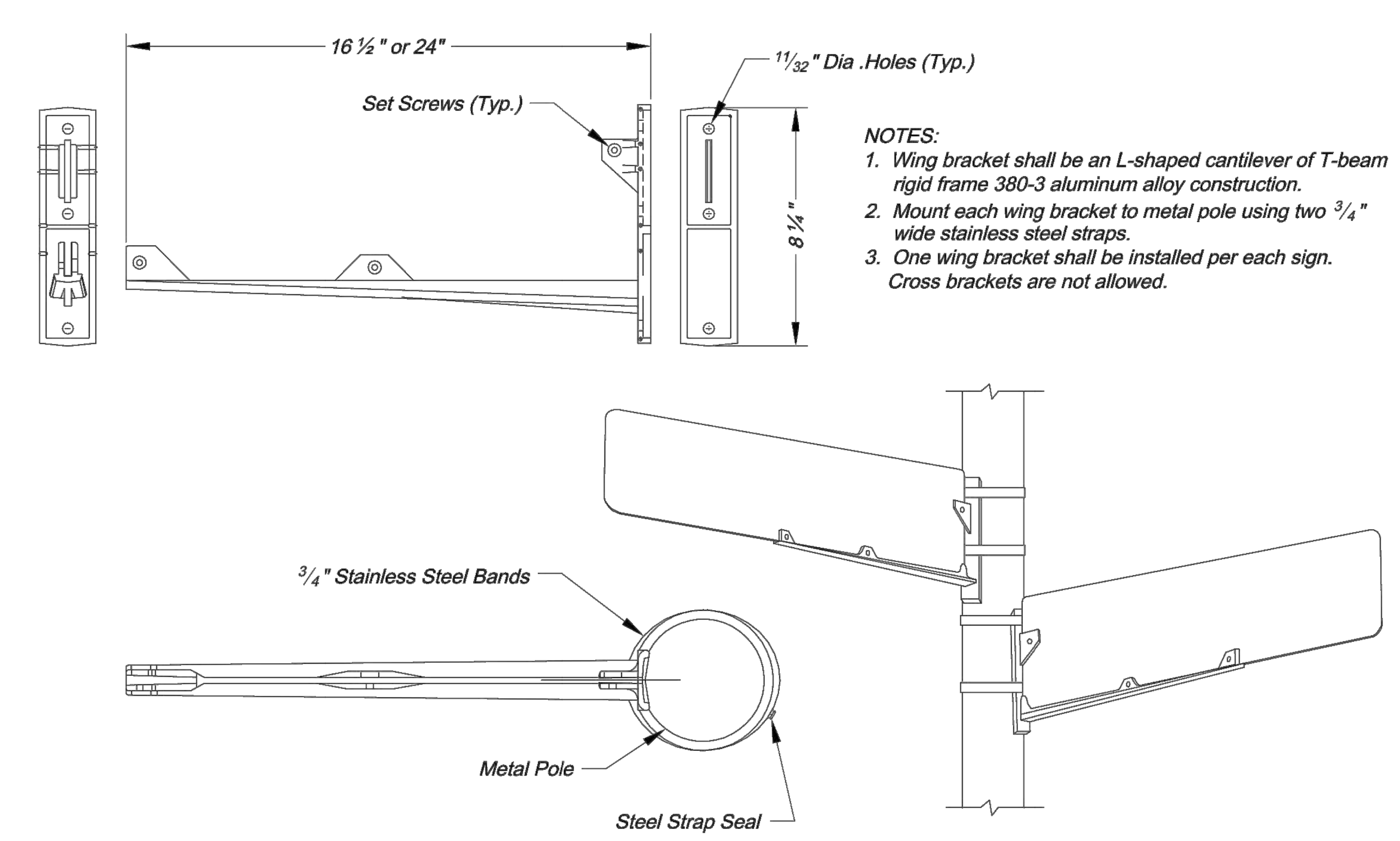


STREET NAME SIGN BLANK DETAILS

For Mounting on Square Steel Posts

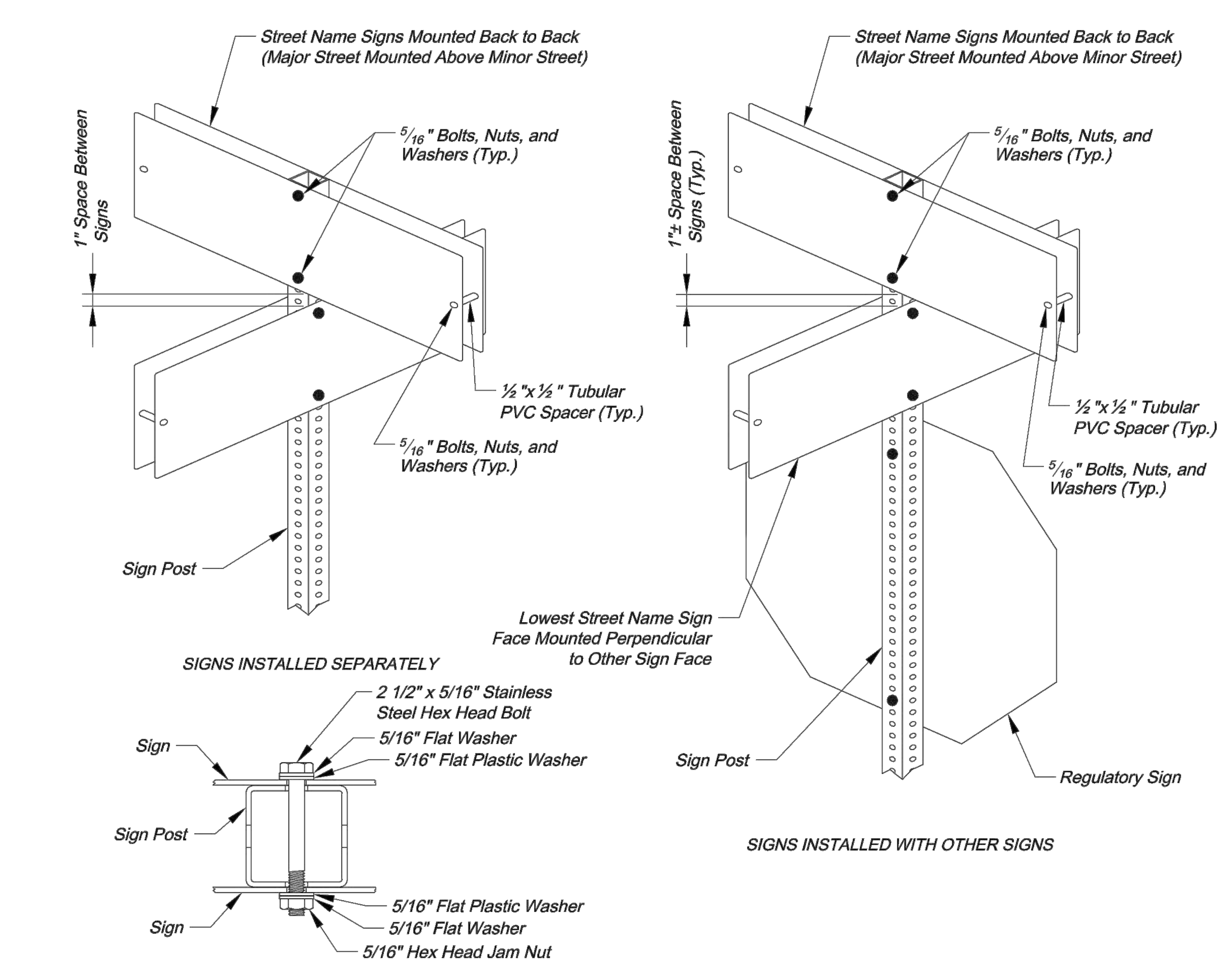


PROJECT SIGN DETAILS

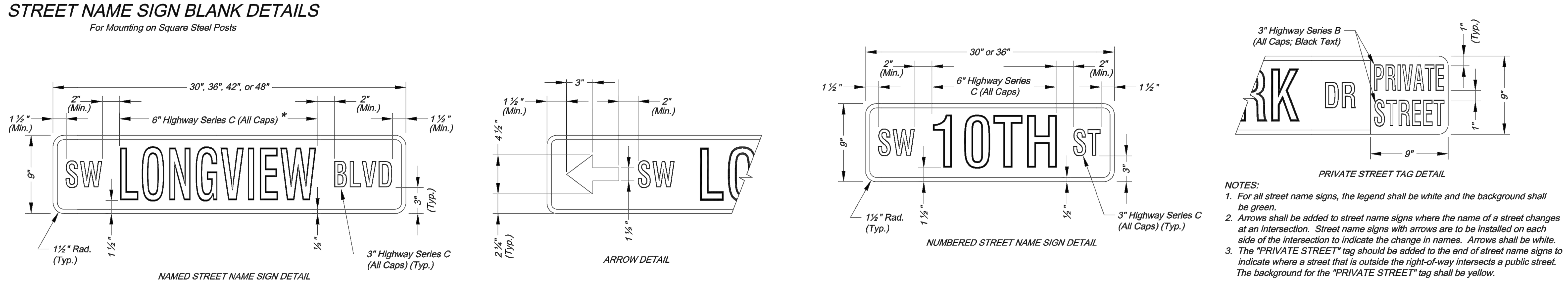


NOTES:
1. Wing bracket shall be an L-shaped cantilever of T-beam rigid frame 380-3 aluminum alloy construction.
2. Mount each wing bracket to metal pole using two ¾" wide stainless steel straps.
3. One wing bracket shall be installed per each sign. Cross brackets are not allowed.

WING BRACKET MOUNTING DETAILS



SQUARE STEEL POST MOUNTING DETAILS



* Use Highway Series B (All Caps) in lieu of series C if necesary to fit text on a 36" sign blank.

NOTES:
1. For all street name signs, the legend shall be white and the background shall be green.
2. Arrows shall be added to street name signs where the name of a street changes at an intersection. Street name signs with arrows are to be installed on each side of the intersection to indicate the change in names. Arrows shall be white.
3. The "PRIVATE STREET" tag should be added to the end of street name signs to indicate where a street that is outside the right-of-way intersects a public street. The background for the "PRIVATE STREET" tag shall be yellow.

STREET NAME SIGN FACE DETAILS

LAMP RYNEARSON
MO CERT. NO. 2013011903
STATE OF MISSOURI
MARK DANIEL McGHEE JR.
NUMBER PE-2008019568
PROFESSIONAL ENGINEER
03/25/2020
MARK DANIEL MCGHEE JR.
PE - 2008019568

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

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Kansas City, MO 64114
816.361.0440
LampRynearson.com
LAMP RYNEARSON

SUMMIT VIEW FARMS 4TH PLAT
LEE'S SUMMIT, MISSOURI

MASS GRADING, EROSION CONTROL, PAVING AND STORM SEWER PLANS

SIGNAGE DETAILS

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

SHEET