

**CIVIL SUBMITTAL**

1. COVER SHEET
2. EAST 15TH STREET STA. 1+57.10 - STA. 5+02.12
3. SANITARY SEWER LINE A STA. 0+00 - STA. 5+34.98
4. GRADING AND STORM SEWER LINE 1
5. EROSION AND SEDIMENT CONTROL PLAN
6. EXISTING CONDITION DRAINAGE AREA MAP
7. POST DEVELOPED DRAINAGE AREA MAP
8. 6" WATER LINE STA. 0+00 - STA. 3+66
9. SITE DETAIL SHEET
10. SITE DETAIL SHEET
11. SITE DETAIL SHEET

***GOPPERT ACRES, 2ND PLAT***  
***LOTS 3 thru 8 and TRACT A***  
***LEE'S SUMMIT, JACKSON COUNTY, MISSOURI***

City of Lee's Summit  
Department of Public Works  
220 SE Green  
Lee's Summit, Mo.  
816-969-1800

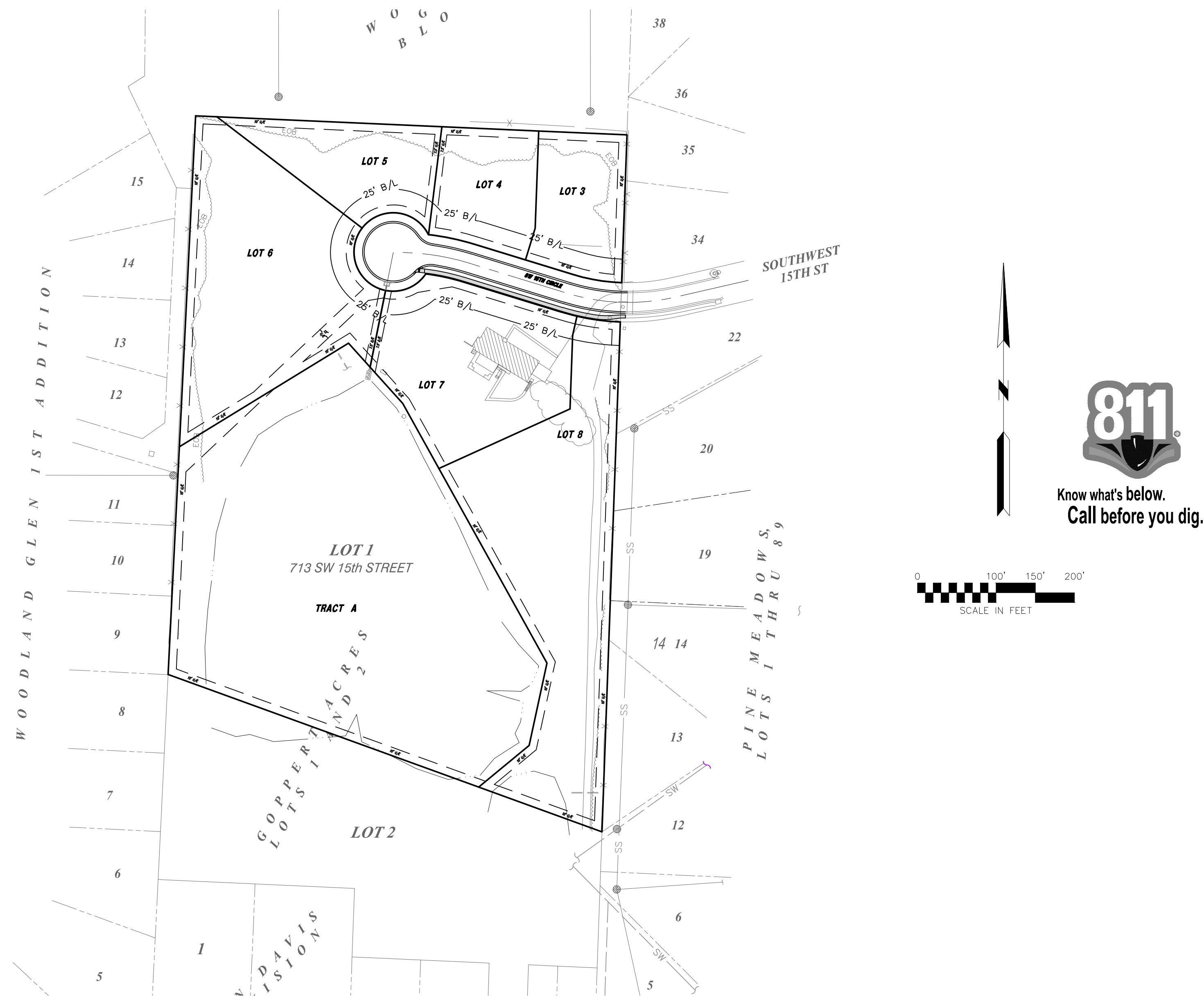
KCPL  
130 SE Hamblen Road  
Lee's Summit, Mo.  
816-347-4320

Spire (formerly MGE)  
(Administrative Offices)  
3025 SE Clover Road  
Lee's Summit, MO  
816-537-4681

AT&T  
Craig Perkins  
500 E. 8th Street  
Kansas City, MO 64106  
816-275-2721

Comcast  
New Construction Hotline  
866-771-2281

Missouri One Call  
1-800-344-7483



**PROJECT BENCHMARK.**

Steel rod and cap stamped "ET ARCHER"  
on North West property corner.  
Elev.=1020.29

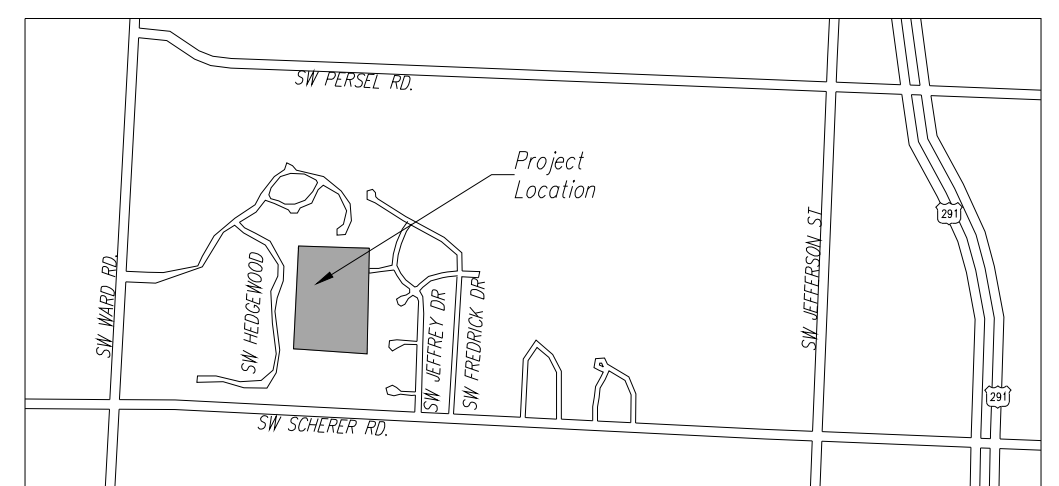
**GENERAL NOTES:**

1. The underground utilities shown herein have been plotted from available information and do not necessarily reflect the actual existence, or nonexistence, size, type, number, or locations of these or other utilities. The contractor shall be responsible for verifying the actual locations of all underground utilities, shown or not shown, and said utilities shall be located in the field prior to any grading, excavation, or construction of improvements. These provisions shall in now way absolve any party from complying with the "UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT", Chapter 319, RSMo.
2. Gas, Water, and other Utilities shall not conflict with the depth or horizontal location of existing and proposed structures or existing and proposed utilities.
3. The Contractor shall secure all required permits and notify the Development Engineering Inspections of the City of Lee's Summit (816-969-1200) at least 48 hours prior to any construction.
4. Prior to submittal of construction bids, the Contractor shall be required to visit the site to verify existing conditions and proposed improvements.
5. All construction materials and methods used shall comply with the latest editions of the City of Lee's Summit "DESIGN AND CONSTRUCTION MANUAL" as adopted by City Ordinance NO. 5813. See said Manual for standard details.
6. The Contractor shall be responsible for notification and coordination with all Utility Companies.
7. The Contractor shall notify the Engineer immediately of any discrepancies in the plans.
8. "Compacted Fill" indicates fill to be placed in accordance with APWA Section 2100 for grading and site preparation, with APWA Section 2200 for street construction (paving), with APWA Section 2500 for sanitary sewer construction and with APWA Section 2600 for storm sewer construction unless otherwise noted.
9. The City Standard Drawings are hereby incorporated into and made part of these plans by reference, unless otherwise provided.
10. Sidewalk in front of all lots installed by Lot Owner unless otherwise noted.
11. All disturbed areas to be seeded upon completion of construction.
12. ADA sidewalk ramp shall be constructed with the public infrastructure.

**PLANS PREPARED BY**  
***HG CONSULT***  
***11010 HASKELL ST. #210,***  
***KANSAS CITY, KS 66109***  
***CONTACT: KEVIN STERRETT***  
***816-703-7098***

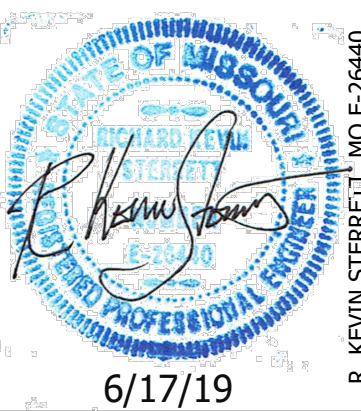
***PLANS PREPARED FOR  
DUSTY GOPPERT  
708 SW SCHERER ROAD  
LEE'S SUMMIT, MO 64081  
CONTACT: DUSTY GOPPERT  
816-808-8383***

## VICINITY MAP



DATE	REVISION	NO.	BY	CAUSE
5/16/19	REVISED PER CITY COMMENTS 05/03/19	1	EDH	RKS
6/11/19	REVISED PER COMMENTS FROM SUE PILES 6/10/19	2	EDH	RKS

IF, THERE IS ANY 1. BLUE INK PLAN, AND THE SIGNATURE IN BLUE INK, THE PLAN IS A COPY AND MAY CONTAIN UNAUTHORIZED ALTERATIONS. THE CERTIFICATION CONTAINED ON THIS DOCUMENT SHALL NOT APPLY TO ANY COPIES



6/17/19

**Consult  
Inc** engineers  
planners  
CORPORATE LICENSE NO. E7010005873



COVER SHEET

GOPPERT ACRES, 2ND PLAT  
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.

DRAWING NO.

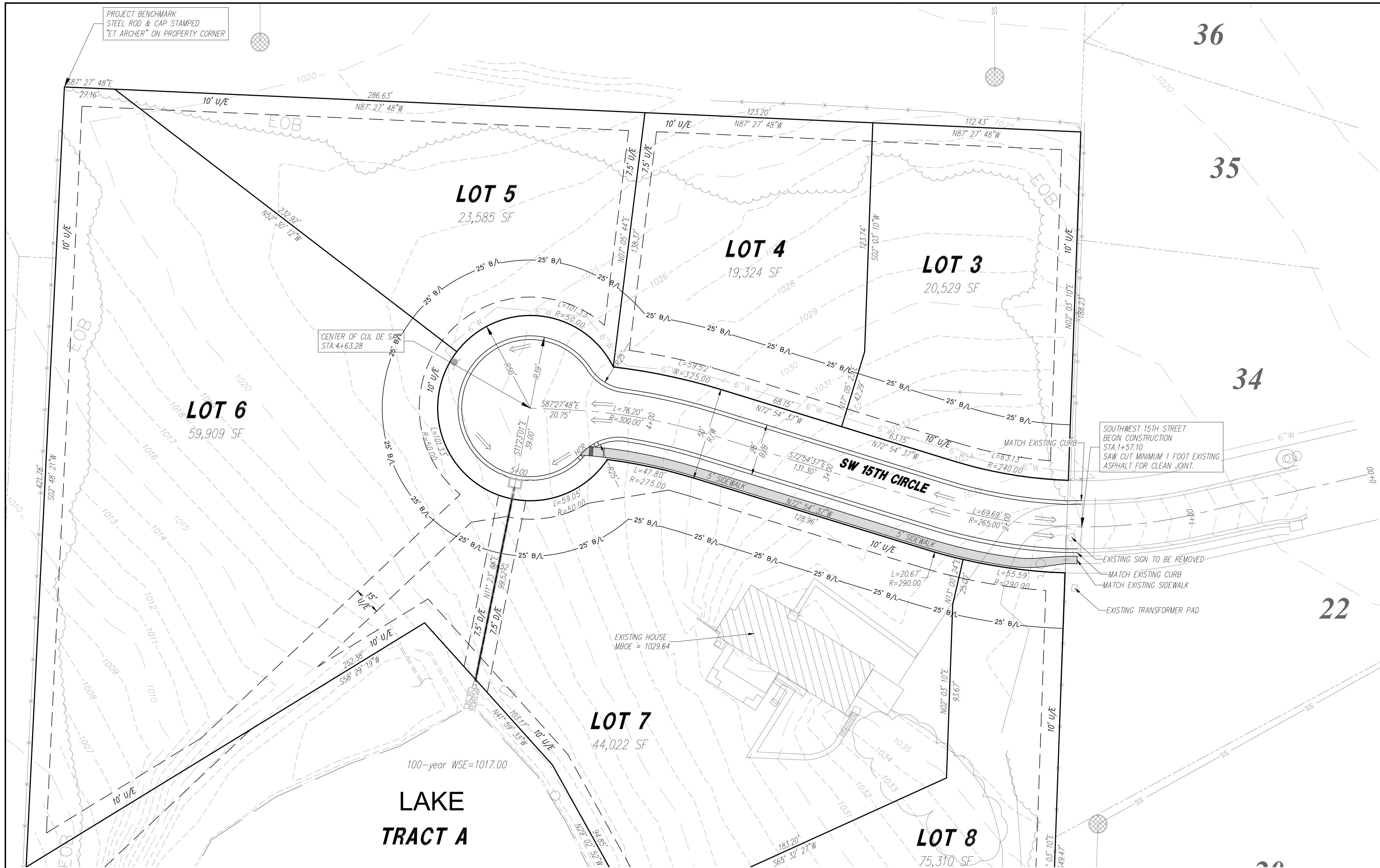
DATE

JOB NO.  
10020

1

SHEET OF 1





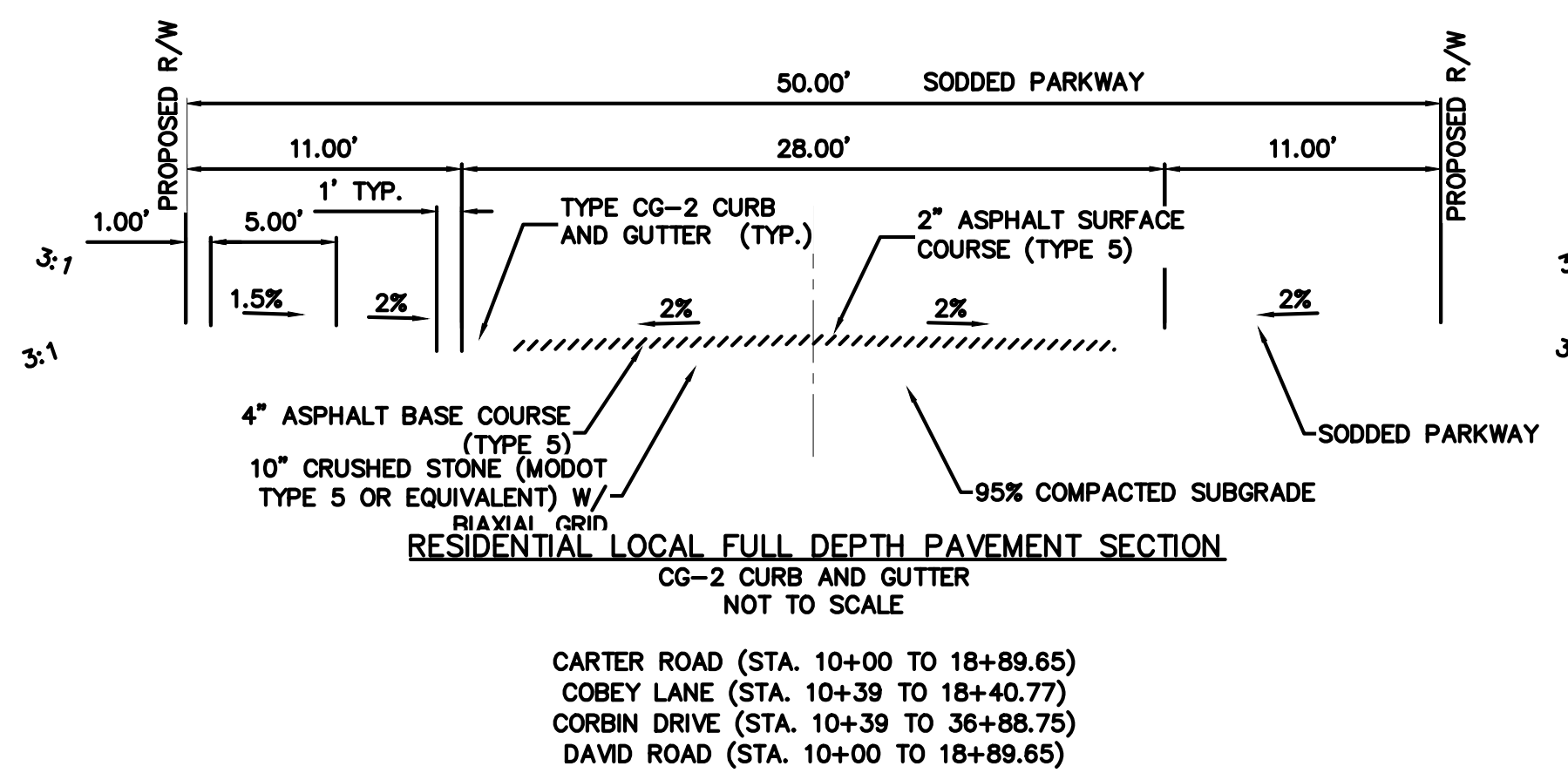
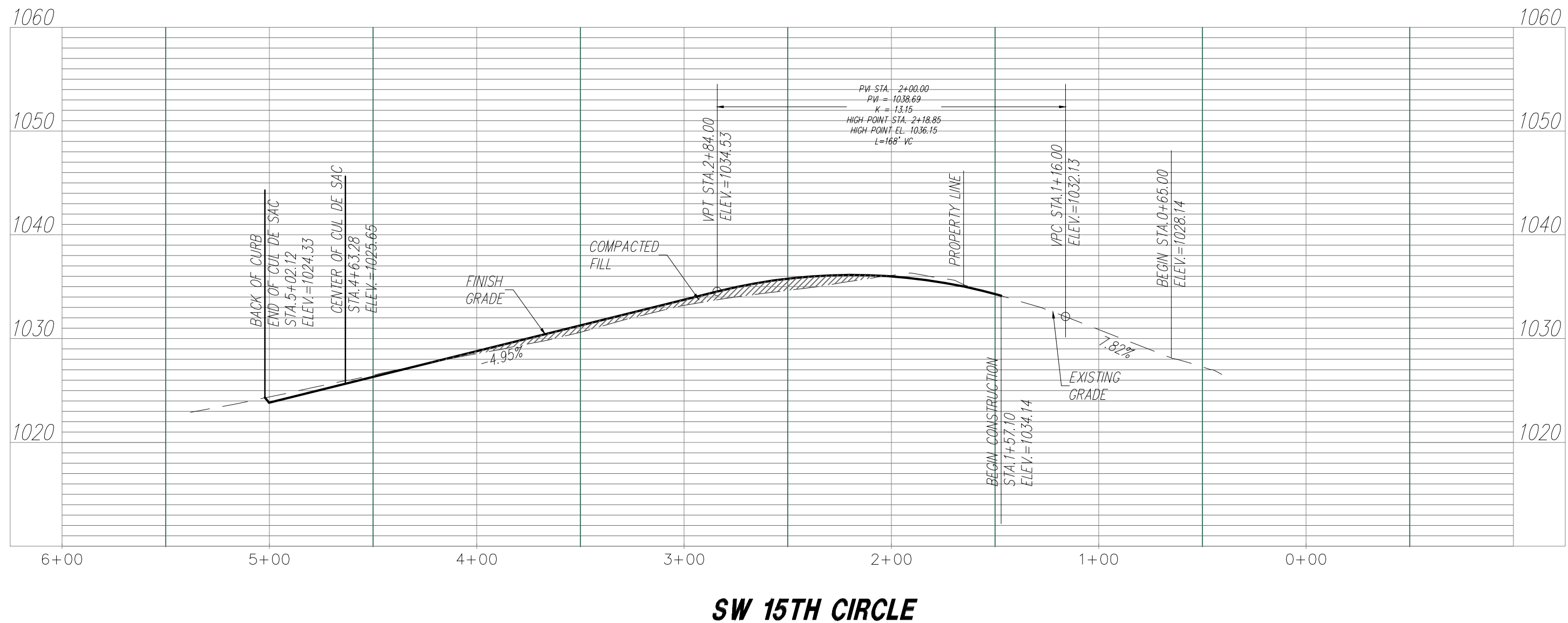
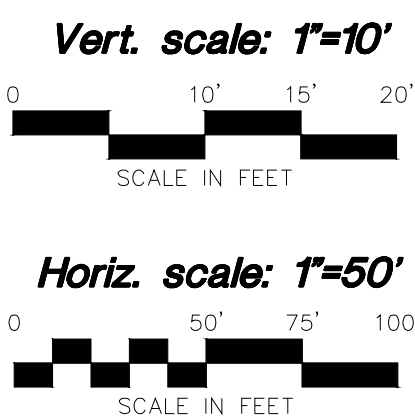
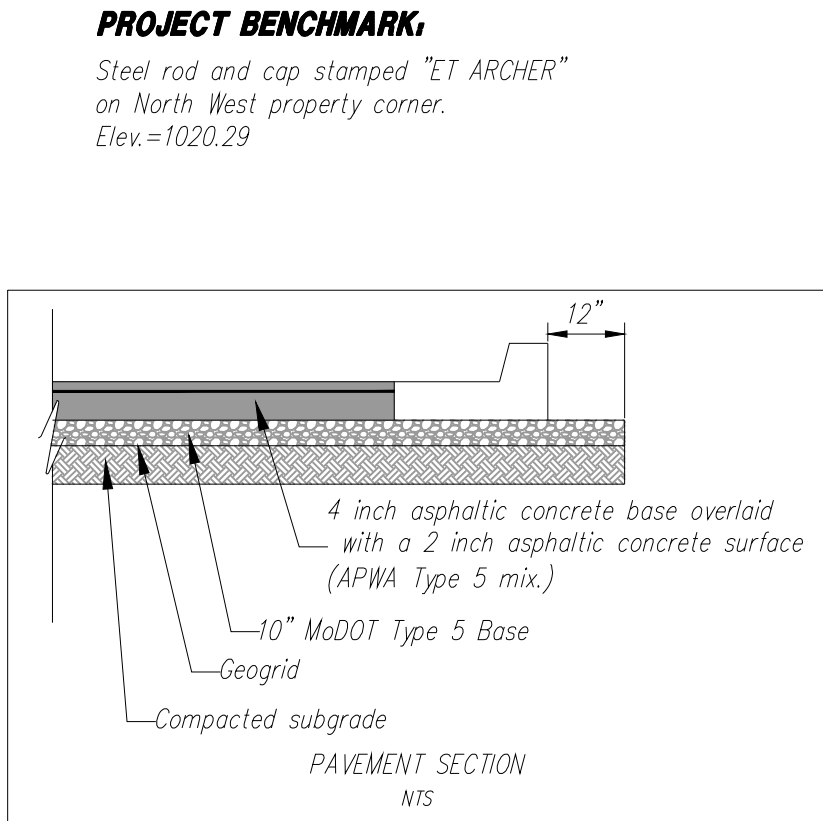
PROJECT BENCHMARK  
STEEL ROD & CAP STAMPED  
"ET ARCHER" ON PROPERTY CORNER

0 30' 45' 60'  
SCALE IN FEET

**KEY**  
U/E Utility Easement  
D/E Drainage Easement  
B/L Building Line  
Sidewalk  
Utility Easement

**STREET NOTES:**  
1. All street construction shall meet APWA or City of Lee's Summit Standards and Specifications.  
2. All inspection of street construction shall be the responsibility of the City of Lee's Summit.  
3. All subdivision streets shall be Residential Streets with a Right-of-Way width of 50.00 feet and a pavement width of 28.00 feet back of curb to back of curb.  
4. Curb return radii shall be 25' at back of curb unless otherwise noted.  
5. Curb and Gutter shall be City of Lee's Summit Type 2, Roll Back curb and gutter.  
6. Subgrade to be compacted to 95% Standard Proctor Density.  
7. Assumed Design Speed = 25, MPH (Residential)  
8. Minimum K, Sag = 26. Crest = 12  
9. HCR = Handicap Ramp  
10. Finish Drainage Flow (→)  
11. Finish grade to be 2% from Right of way to curb.  
12. ADA sidewalk ramp shall be constructed with the public infrastructure.  
13. Compacted Fill shall be placed to a minimum 18" above the top of the pipe prior to installation.

**811**  
Know what's below.  
Call before you dig.



NO. BY CKAPP

REVISION

DATE

6/17/19

**Consult**  
Inc  
engineers  
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SW 15TH CIRCLE  
STA. 1+57.10 - STA. 5+02.12

GOPPERT ACRES, 2ND PLAT

LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.  
42259\_T0P0

DRAWING NO.  
18028

DATE  
FEBRUARY 7, 2019

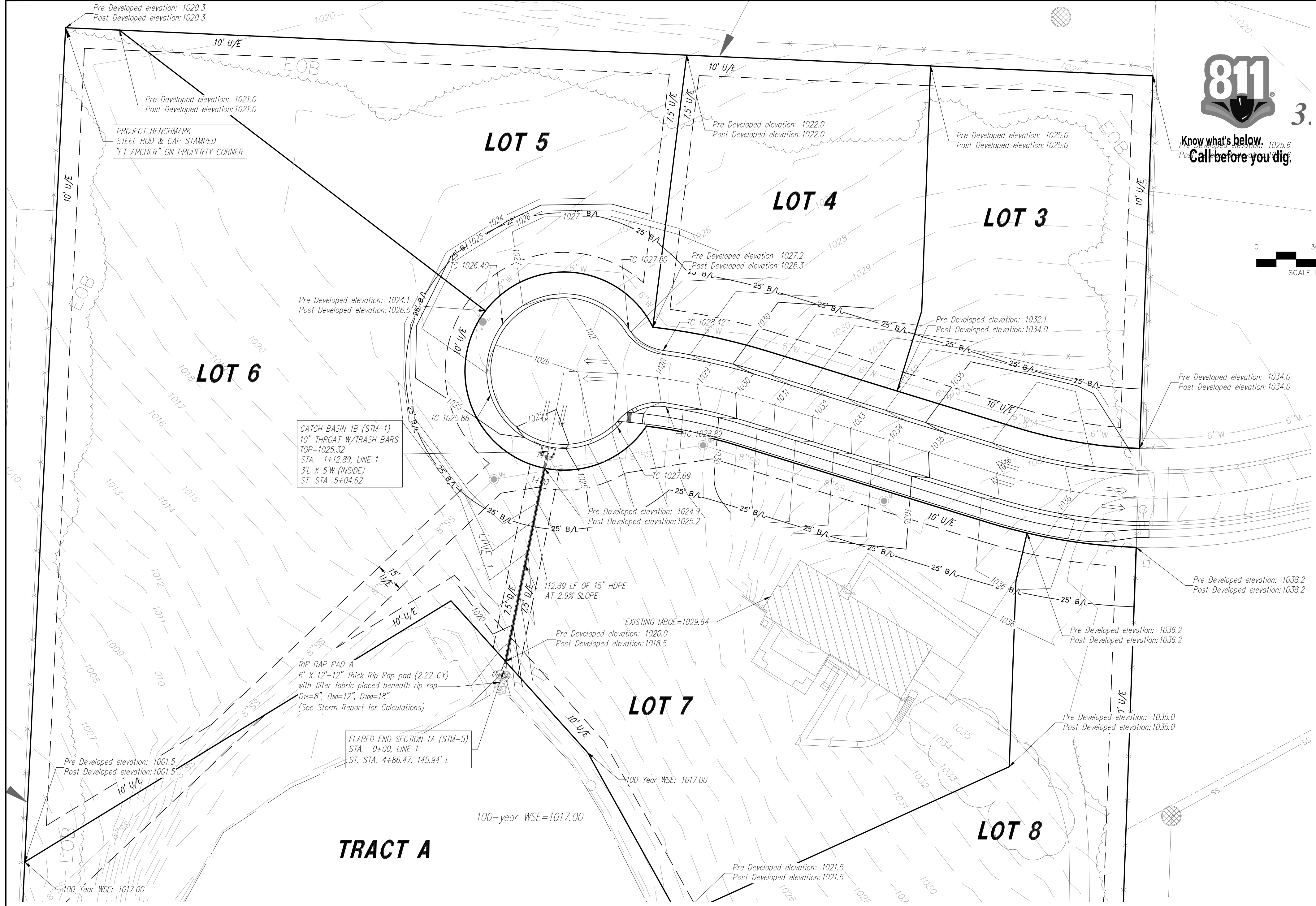
JOB NO.  
18028

2 SHEET OF 11



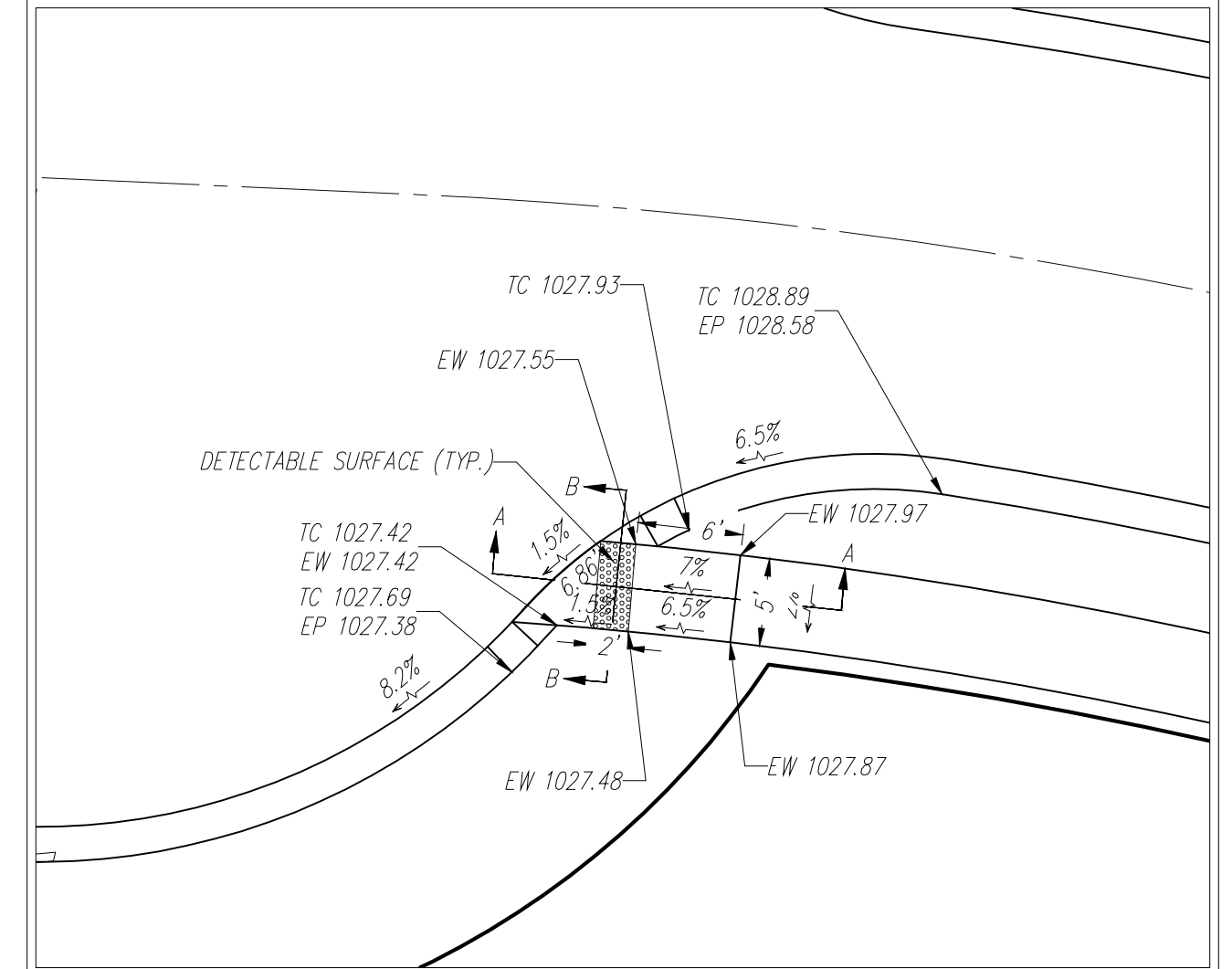






- GENERAL NOTES:**
1. This sheet is for informational purposes only. See individual sheets for exact utility locations.
  2. See Sanitary Sewer sheets and Utility Map for Minimum Basement Floor elevations (MBF) and Minimum Low Opening elevations (MLO).
  3. Grading plan represents general site grading prior to the development of lots.
  4. Existing grades acquired from topographic survey provided by Anderson Surveying. Existing street grades to be verified in field.
  5. All excess dirt or deficiencies of dirt to be handled on site.
  6. Tract A shall be "Common Area" to be owned and maintained by the Homeowner's Association.
  7. The swales located on or near the lots designated Lots 6 and 7 are to carry excess storm water runoff and shall be maintained by the Owners of said lots. Minimum Low Openings (MLO) of said lots on the swale side of said lots shall be a minimum of one (1) foot above the adjacent top of finish swale elevation unless a higher MLO elevation is required by other restrictions.
  8. The Minimum Low Opening (MLO) for the front of all lots shall be a minimum of one (1) foot above the top of corresponding curb elevation.

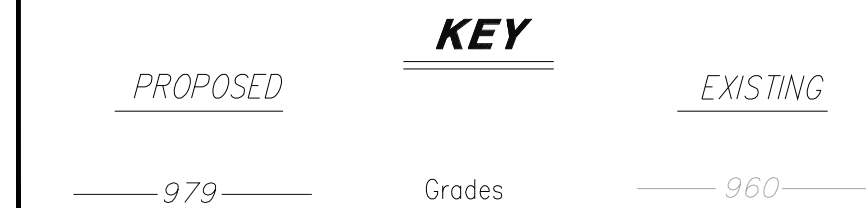
- STORM SEWER NOTES:**
- All construction shall meet APWA and City of Lee's Summit Standards and Specifications.
  - All inspections of storm sewer construction shall be performed by the City of Lee's Summit Development Engineering Inspection (816-968-1200).
  - All pipe lengths, slopes and stationing are from center of structure to center of structure.
  - Storm Sewer stationing is shown at centerline of inlets.
  - Curb inlet location point is the centerline of the center of the inlet.
  - Seeding, sodding and rip rap shall conform to Kansas City Chapter of APWA, Standard Design Criteria and Specifications.
  - Contractor shall verify exact location and depth of all utilities prior to construction.
  - See Storm Sewer Detail Sheet for structure details.
  - HDPE shall be smooth interior, corrugated exterior, high density polyethylene storm sewer pipe with a minimum Manning's "n" value of 0.011. Alternate shall be any other storm sewer piping with a minimum Manning's value of 0.011 as approved by the City, unless "No Alternate" is specified.
  - Areas with less than eighteen (18) inches of depth from the proposed top of pipe to finish grade shall be filled to an elevation of eighteen (18) inches above the proposed top of pipe, compacted to 95% density, then trenched for pipe installation.
  - Finish drainage flow (==>)
  - All trenching under proposed driving surfaces shall have rock backfill.
  - Compacted fill shall be placed to a minimum 18" above the top of the pipe prior to installation.



DETAIL OF ADA  
SIDEWALK RAMP  
1"=10'

**GRADING AND DRAINAGE NOTES:**

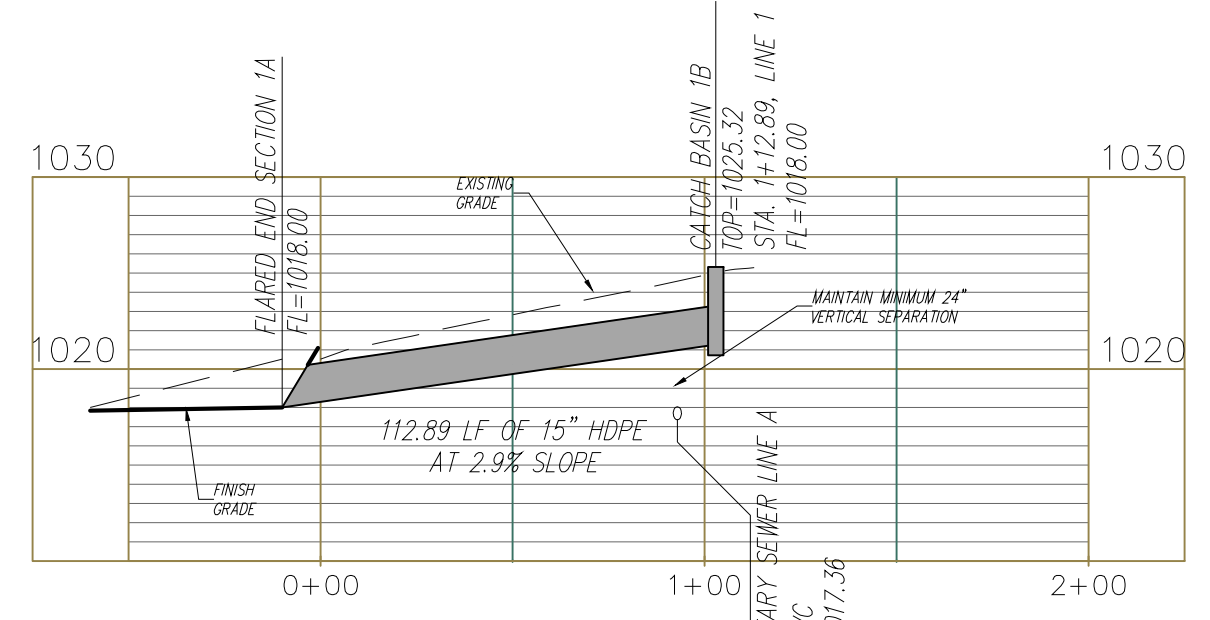
Information pertaining to under ground utilities was obtained from available records and field locations when possible, but the contractor must determine the exact location and elevation of all existing utilities by digging test pits by hand at all utility crossings in advance of machine trenching. If clearances are less than specified on these plans or 24", which ever is less, contact the Engineer and the Owner/Developer prior to proceeding with construction. All structures located within Right Of Way or otherwise noted on these plans shall be constructed per City Standards. If structure(s) are not prototypical or construction cannot be achieved contractor shall submit shop drawing to HC Consult, for review and approval. Contractor shall be responsible for relocation or removal of existing underground utilities shown or not shown at no additional cost to the owner. Contractor shall coordinate with utility companies on adjusting existing utility line as required by cut and fill at no additional cost to the owner. Contractor shall be held responsible for the design and implementation of sheeting, shoring, bracing and special excavation measures required to meet OSHA, Federal, State and Local regulations pursuant to the installation of the work indicated on these drawings. All disturbed areas and slopes shall be graded smooth and (4") of top soil applied. The area shall be seeded and watered until hardy grass growth has been established. Storm drain pipe bedding shall be installed per APWA, section 2100. Elevations are called out to top of curb, top of pavement, or top of structure, unless otherwise noted. All curbs shall be CG-1. Clear and grub areas to be filled, remove trees, vegetation, roots, or other debris, and other materials that would affect the stability of the fill. Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills. Do not incorporate frozen material or soft, muck, or highly compressible materials into fill slopes. Permanently stabilize all graded areas after final grading is completed on each area of the grading plan, apply temporary stabilization measures on all graded areas when work is to be interrupted or delayed (see Erosion Control Plan). Contractor shall match top of proposed drainage structures with proposed grades. If a discrepancy occurs between proposed grades and proposed structure tops, the grading shall govern. If the discrepancy is more than 4 inches the contractor shall contact the Engineer of Record. All utilities, including storm sewer, shown within public easements or right of ways shall be constructed to the governing agency's specifications. All other utilities shall be constructed to the client's or the governing agency's specifications, whichever is more stringent, if there is a question as to which specifications should apply the contractor shall contact the Engineer of Record. All existing structures, unless otherwise noted to remain, all fencing, trees, & etc., within construction area shall be removed & disposed of off site, unless otherwise noted. any burning on site shall be subject to local ordinances and/or the owner/developers standards and specifications. All drainage structures shall be pre-cast. All drainage structures and storm sewer pipes shall meet heavy duty traffic (H20) loading and be installed accordingly. Contractor shall notify all utility companies having underground utilities on site or in right-of-way prior to excavation. Contractor shall contact utility locating company (STATIE) for "CALL" system and locate all utilities prior to grading starts. Site grading shall not proceed until Erosion Control measures have been installed. After permits have been obtained and Erosion Control measures installed, the contractor shall grade building pad & aprons to 0' to - 1/2" of subgrade.



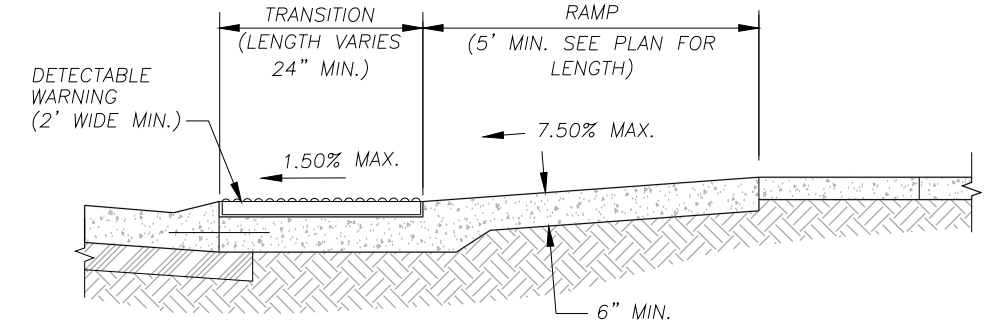
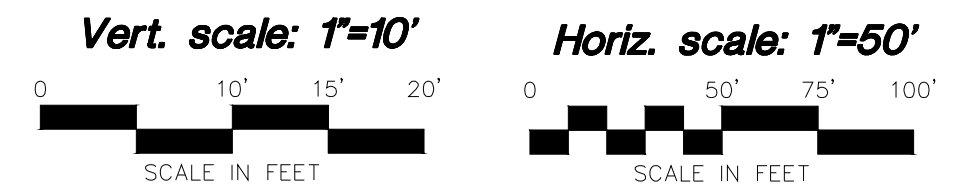
**PROJECT BENCHMARK:**  
Steel rod and cap stamped "ET ARCHER"  
on North West property corner.  
Elev.=1020.29

Lot Corner Elevations and MBOEs						
LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
3	1032.0	1034.5	1025.0	1025.6	1028.0	WALKOUT
4	1027.0	1032.0	1022.0	1025.0	1027.0	WALKOUT
5	1026.5	1027.0	1021.0	1022.0	1024.0	WALKOUT
6	1025.3	1026.5	1001.5	1021.0	1019.0	WALKOUT
7	1036.1	1025.3	1021.5	1019.1	1019.0	WALKOUT
8	1038.1	1036.1	1024.0	1021.8	1019.0	WALKOUT

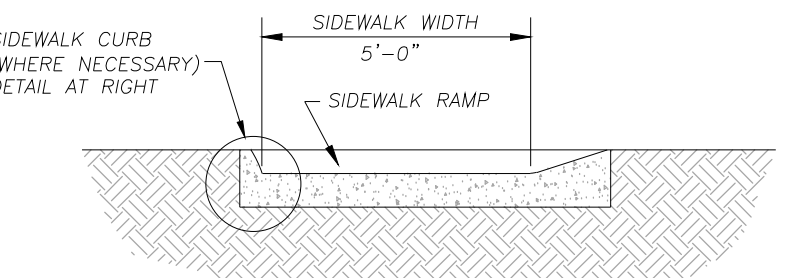
- Left and Right is based on facing the lot from the street.
- MBOE is based on being 2' minimum above the highest back corner or 2' above the maximum WSE for a walkout basement
- Lot 7 has an existing house with walkout basement



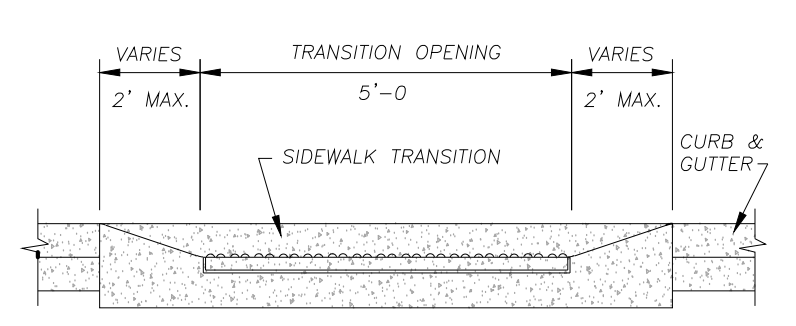
**STORM SEWER LINE 1**



SECTION A-A



SECTION B-B



SECTION C-C

SIDEWALK CURB

NO.

BY

CK/APP

REVISION

DATE

OF MISSOURI

REGISTERED PROFESSIONAL ENGINEER

6/17/19

Consult Inc

engineers

planners

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GRADING PLAN AND

STORM SEWER LINE 1

GOPPERT ACRES, 2ND PLAT

LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.

42259\_T0P0

DRAWING NO.

18028

DATE

FEBRUARY 7, 2019

JOB NO.

18028

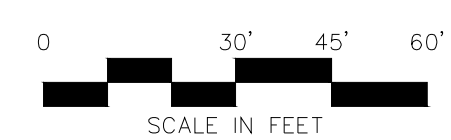
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11

OF

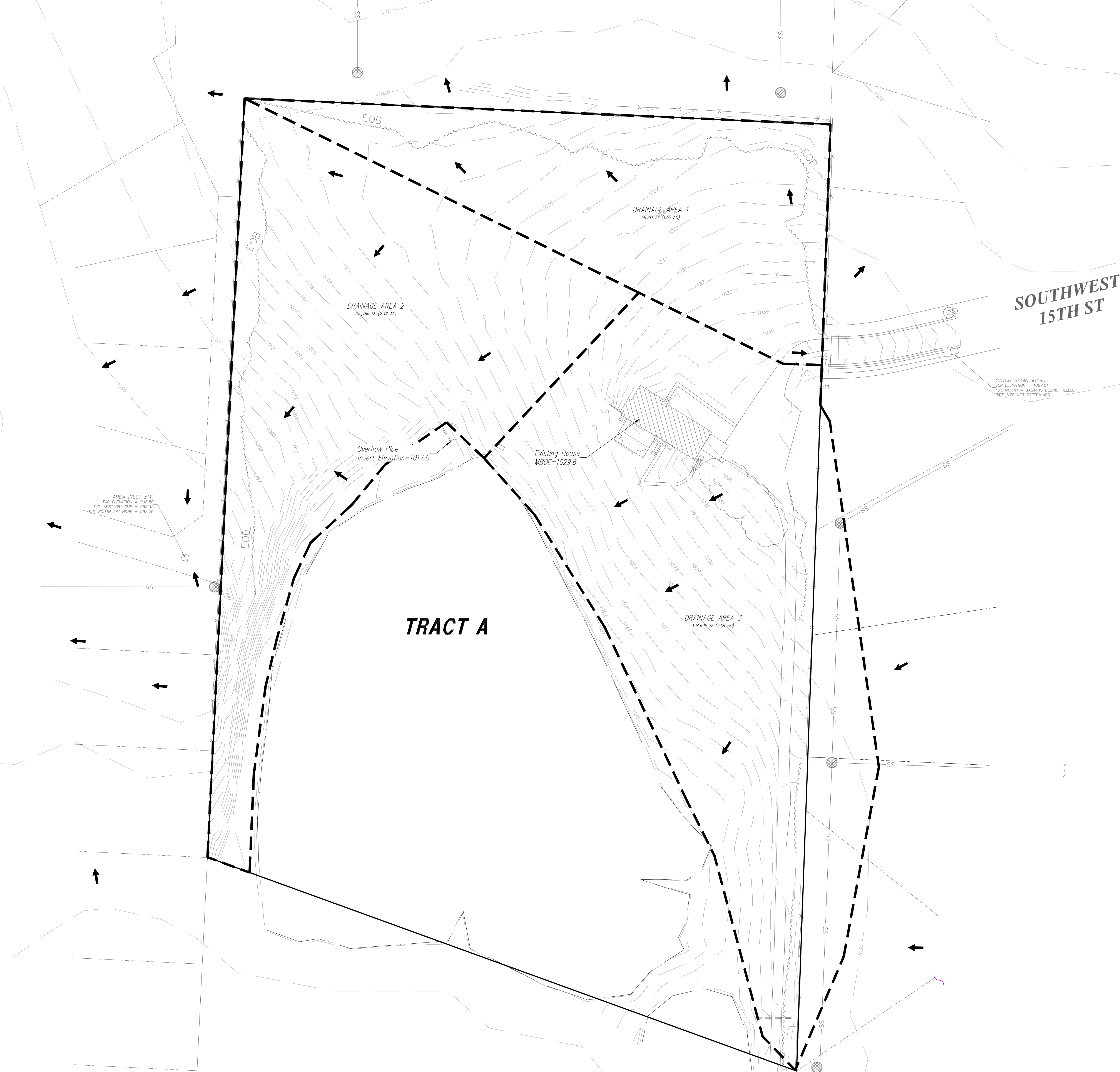




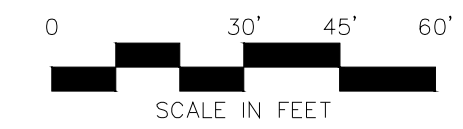
Area of Disturbance: 1.36 AC

X-REF NO. 42259 _TOP0	
DRAWING NO. 18028	
DATE FEBRUARY 7, 2019	
JOB NO. 18028	
5	SHEET OF 11





Know what's below.  
**Call before you dig.**



**PROJECT BENCHMARK:**

Steel rod and cap stamped "ET ARCHER"  
on North West property corner.  
Elev.=1020.29

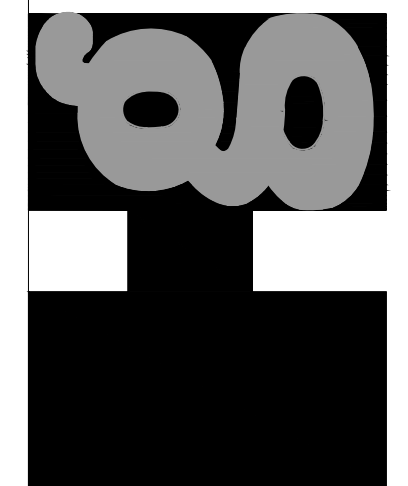
DATE	REVISION	NO.	BY	CV/APPR

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6/17/19

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Inc** engineers  
planners  
CORPORATE LICENSE NO. E7010005873



EXISTING CONDITION DRAINAGE AREA MAP

GOPPERT ACRES, 2ND PLAT  
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.  
10050-1000

DRAWING NO.

18028  
DATE

FEBRUARY 7, 2019

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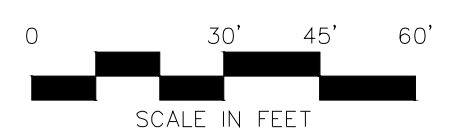
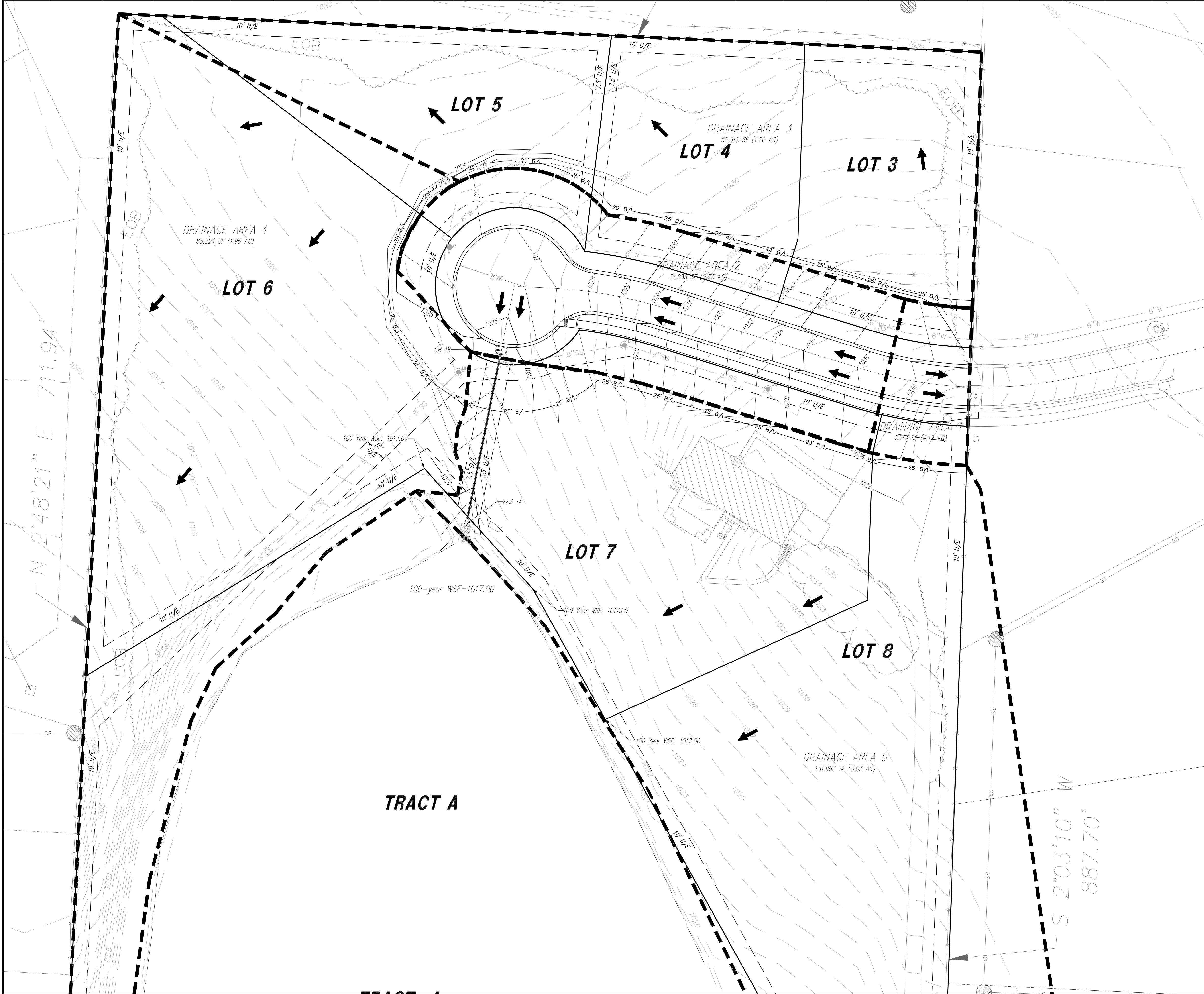
JOB NO.

18028

6 SHEET 11 OF



STORM SEWER CALCULATIONS																																		
PROJECT																																		
STORM SEWER NO.	SEWER LOCATION		TRIBUTARY AREA (AC.)		COMPOSITE RUNOFF COEFFICIENT	TIME OF FLOW			10 YEAR DESIGN					100 YEAR DESIGN					In Pipe Downstream [cfs]	By Pass Out [cfs]	GUTTER SLOPE [%]	GUTTER CAPACITY [cfs]	CURB INLET					PIPE DESIGN						
	FROM STRUCTUR E NO.	TO STRUCTUR E NO.	AREA DESIGNATION ACRES	TOTAL		Ti	Tt	Tc	INTENSITY [in/hr] I[10]	RUNOFF [cfs]				INTENSITY [in/hr] I[100]	RUNOFF [cfs]								Inlet Length	INLET CAPACITY [cfs]	INLET CAPACITY 80% [cfs]	Pipe Size [in]	Pipe Slope [%]	Pipe Type	Rough Coeff [MANNING]	Design Velocity [fps]	Depth Flow (inches) Q[100]	Full Velocity [fps]	Full Flow [cfs]	
										AREA Q[10]	In Pipe Upstream (cfs)	By Pass (cfs)	In Total Q[10]		AREA Q[100]	In Pipe Upstream (cfs)	By Pass (cfs)	In Total Q[100]																
LINE 1	CB 1B	FES 1A	2.00	0.73	0.73	0.51	5.0	0.0	5.0	7.35	2.7	0.0	0.0	2.7	10.32	4.8	0.0	0.0	4.8	4.8	0.0	4.95	4.41	5	11.5	9.2	15	2.90	HDPE	0.011	5.85	6.3	5.9	13.0



→ DRAINAGE FLOW DIRECTION

**PROJECT BENCHMARK:**  
Steel rod and cap stamped "ET ARCHER"  
on North West property corner.  
Elev.=1020.29

BY: CVAPP

NO.

REVISION

DATE

**Consult Inc**  
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POST DEVELOPED DRAINAGE AREA MAP  
GOPPERT ACRES, 2ND PLAT  
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.  
42259\_TPO0

DRAWING NO.  
18028

DATE  
FEBRUARY 7, 2019

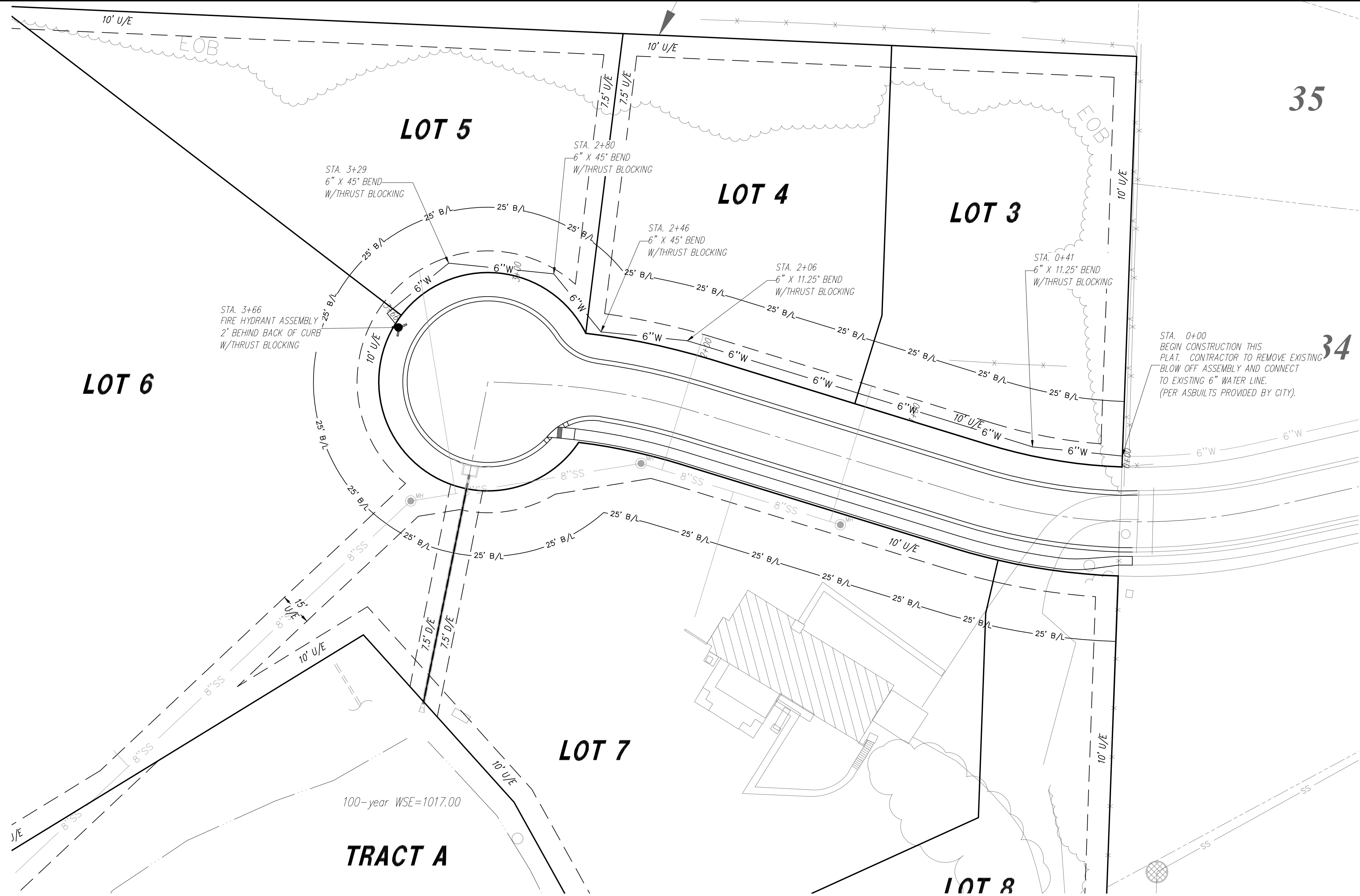
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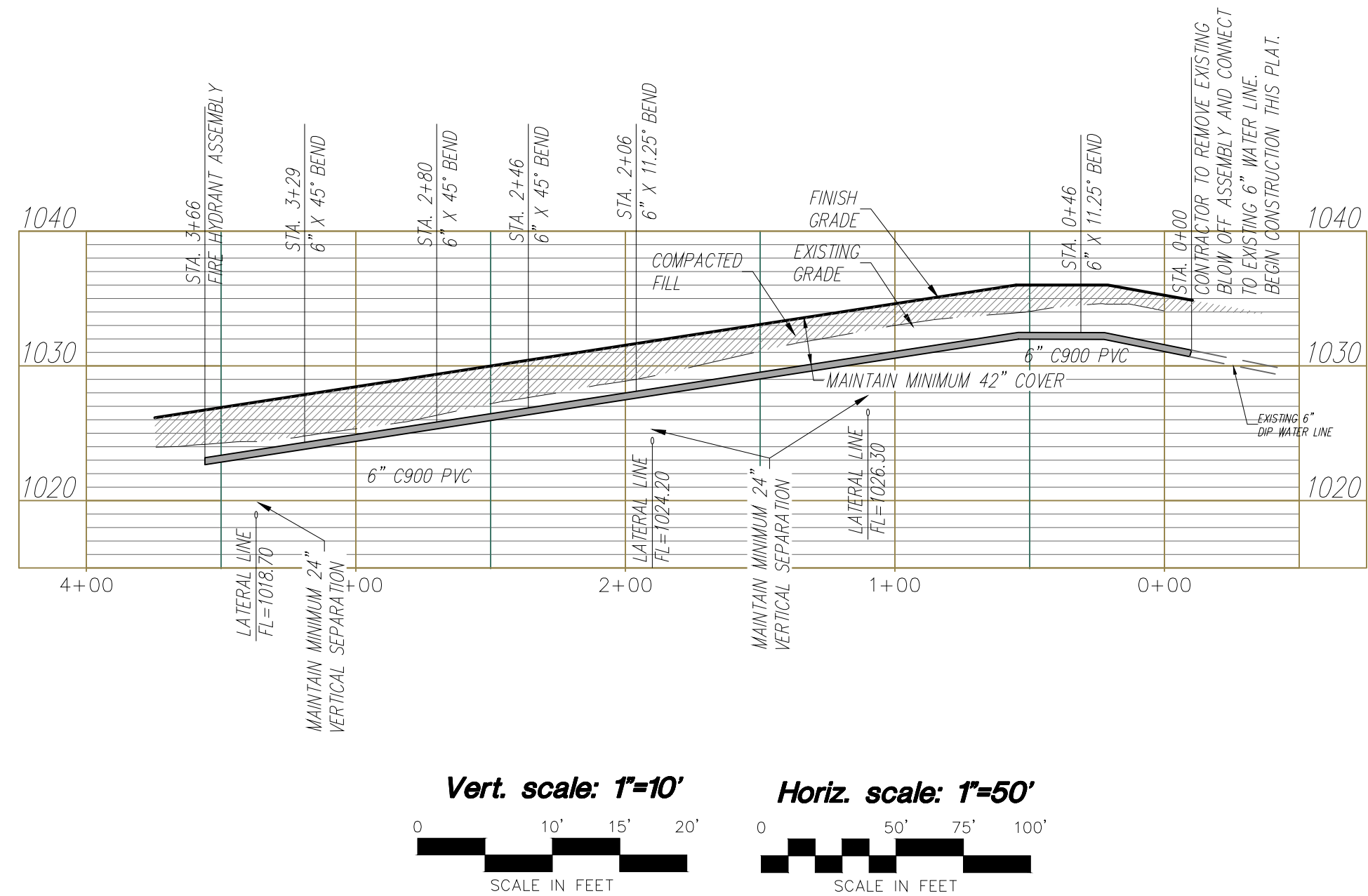
11





Contractor to verify all invert elevations for existing sewer connections. Contact civil engineer if conflict arises.

**PROJECT BENCHMARK.**  
Steel rod and cap stamped "ET ARCHER"  
on North West property corner.  
Elev.=1020.29



- NOTES**
- Materials and construction shall conform with city of Lee's Summit, Missouri Standards for water main installation, in current use.
  - All pipes shall be laid to a depth of at least 42 inches but no more than 84 inches below proposed finish street pavement grade or proposed finish grade of ground over pipe ditch, whichever is lower. The measurement will be to the barrel of the pipe.
  - All pipe fittings, fire hydrant leads and valves shall have polyethylene encasements provided and installed in accordance with AWWA Standards.
  - All pipe and fittings to be AWWA C900.
  - All bends and fittings in the line shall have a thrust block or field lock gaskets as required (See Detail).
  - All valves to have a 4"x4" stake next to them in a vertical position.
  - The centerline of water main must be staked with cut stakes every 100' by the contractor or developer before construction may begin.
  - Contractor responsible for vertical and horizontal alignment with existing main.
  - No inspection of waterline installation shall be performed by the City of Lee's Summit Water Department.
  - All existing utilities have been located by this office, this date. It is the responsibility of the contractor to determine exact location and depth of all utilities prior to construction.
  - Maintain 10' separation from all sanitary sewer lines and structures and storm sewer line and structures.
  - Size and location of proposed water line and proposed appurtenances provided by City of Lee's Summit Water Department.
  - All water line construction shall be done in accordance with the Standards and Specifications of the Design and Construction Manual of the City of Lee's Summit.
  - Water line installed 4' back of curb (typical)
  - Compacted Fill shall be placed to a minimum 18" above the top of the pipe prior to installation.

NO.		BY		CK/APP	
REVISION					
DATE					

6/17/19

**Consult**  
**Inc**  
engineers  
planners

**811**

6" WATER LINE  
STA. 0+00 - STA. 3+66

GOPPERT ACRES, 2ND PLAT

LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO. 42259_TPO	
DRAWING NO. 18028	
DATE FEBRUARY 7, 2019	
JOB NO. 18028	
8	11
SHEET OF	











