

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

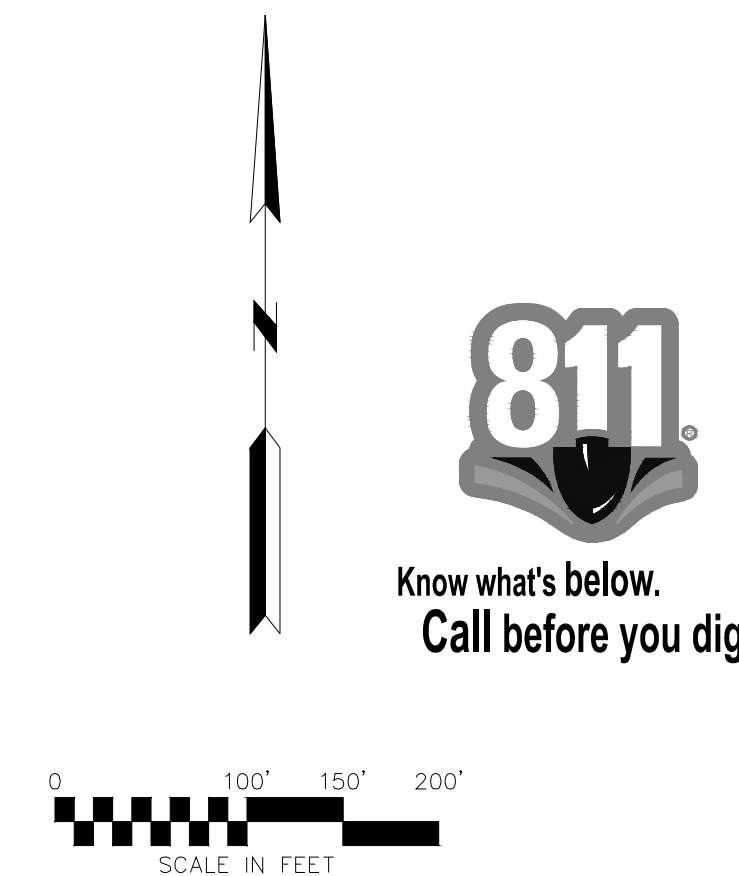
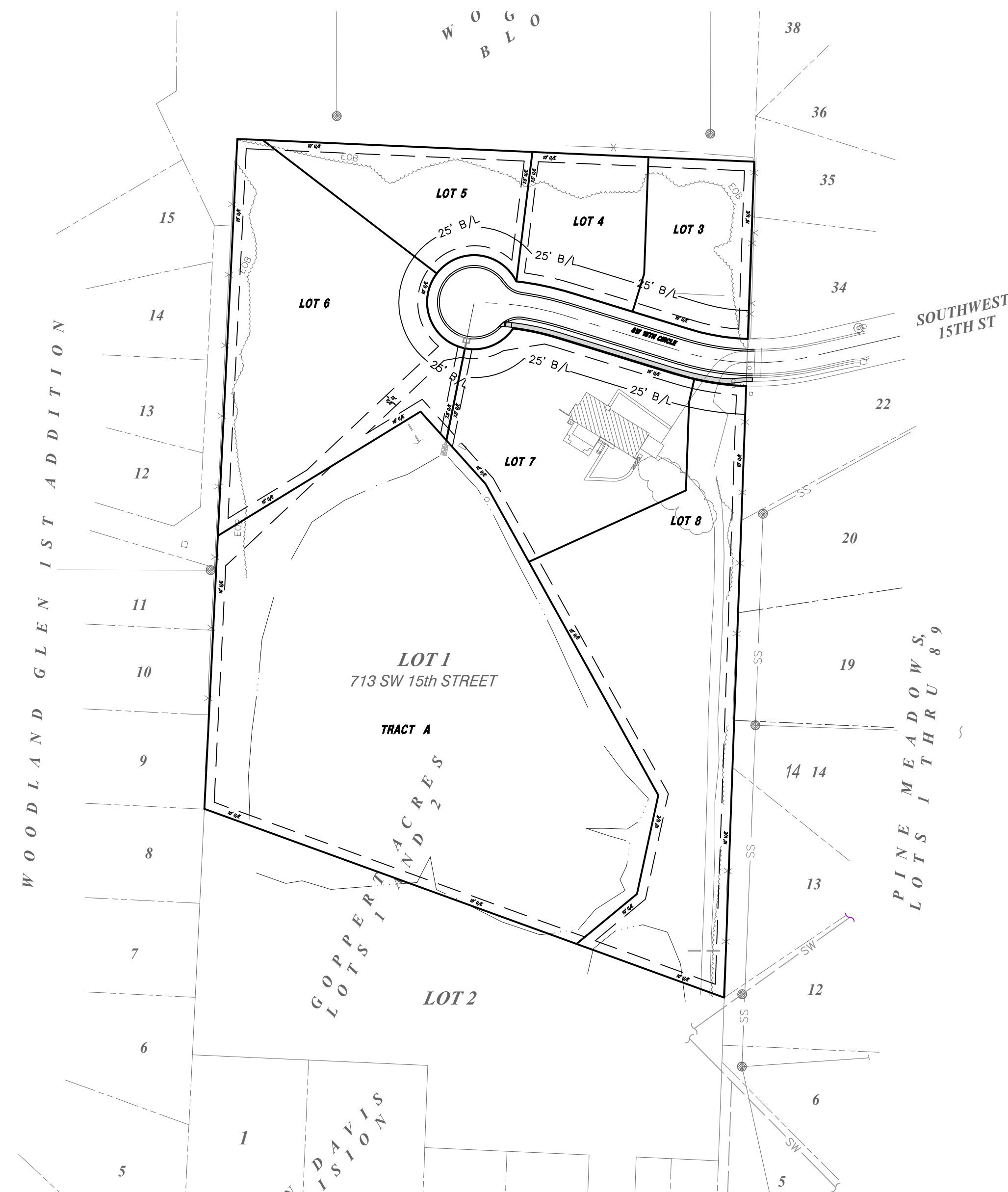
KCPL
130 SE Hamblen Road
Lee's Summit, Mo.
816-347-4320

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



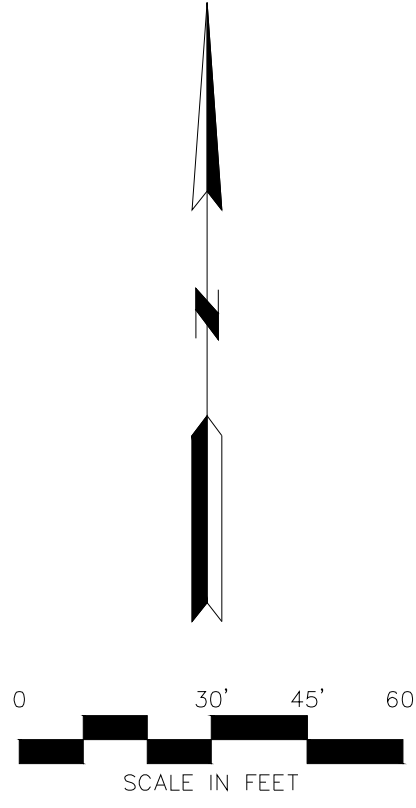
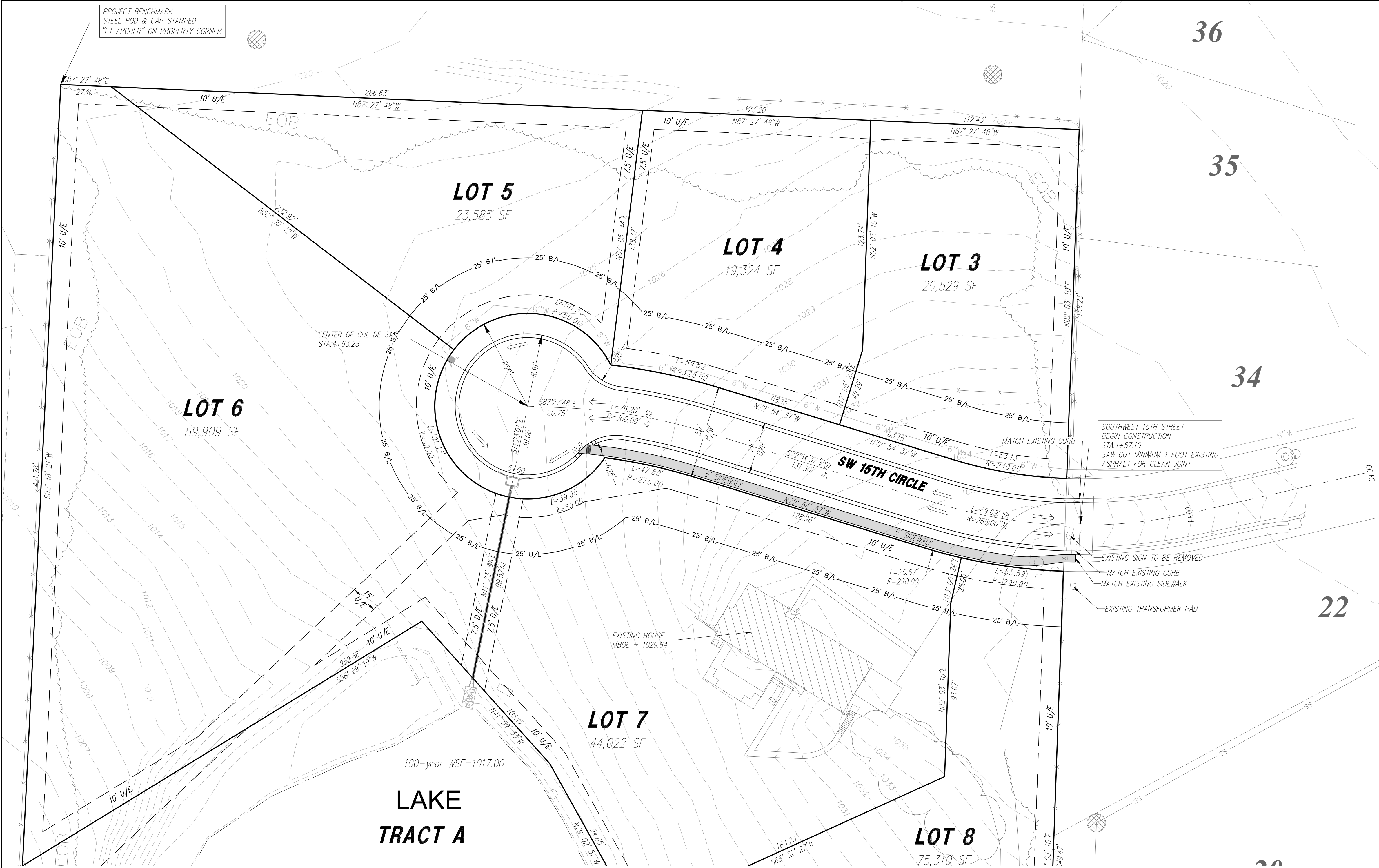
1. The underground utilities shown herein have been plotted from available information and do not necessarily reflect the actual existence, or nonexistence, size, type, number, or locations of these or other utilities. The contractor shall be responsible for verifying the actual locations of all underground 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 sanitary and storm sewers, including sanitary laterals.
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. "Controlled 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

A map showing the project location in the SW 1/4 of Section 16, Township 36N, Range 12E. The map displays a network of roads: SW Persel Rd at the top, SW Jefferson St on the right, SW Schermer Rd at the bottom, and SW Meadows Rd on the left. A road labeled SW Jeffrey Rd runs vertically through the center. A shaded rectangular area, representing the project location, is situated between SW Meadows Rd and SW Jeffrey Rd. A black arrow points from the text 'Project Location' to this shaded area. The map also shows a creek or waterway flowing through the area, and a small structure or building is depicted near the bottom center.

[illegible]



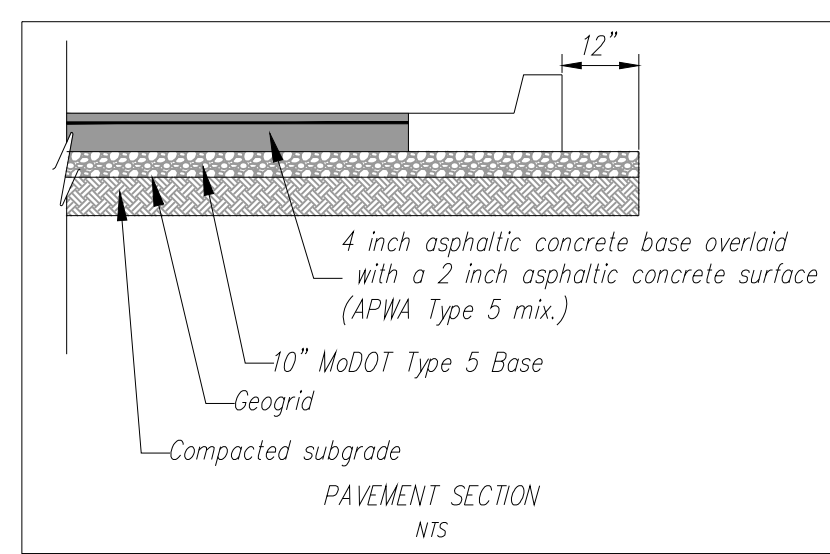
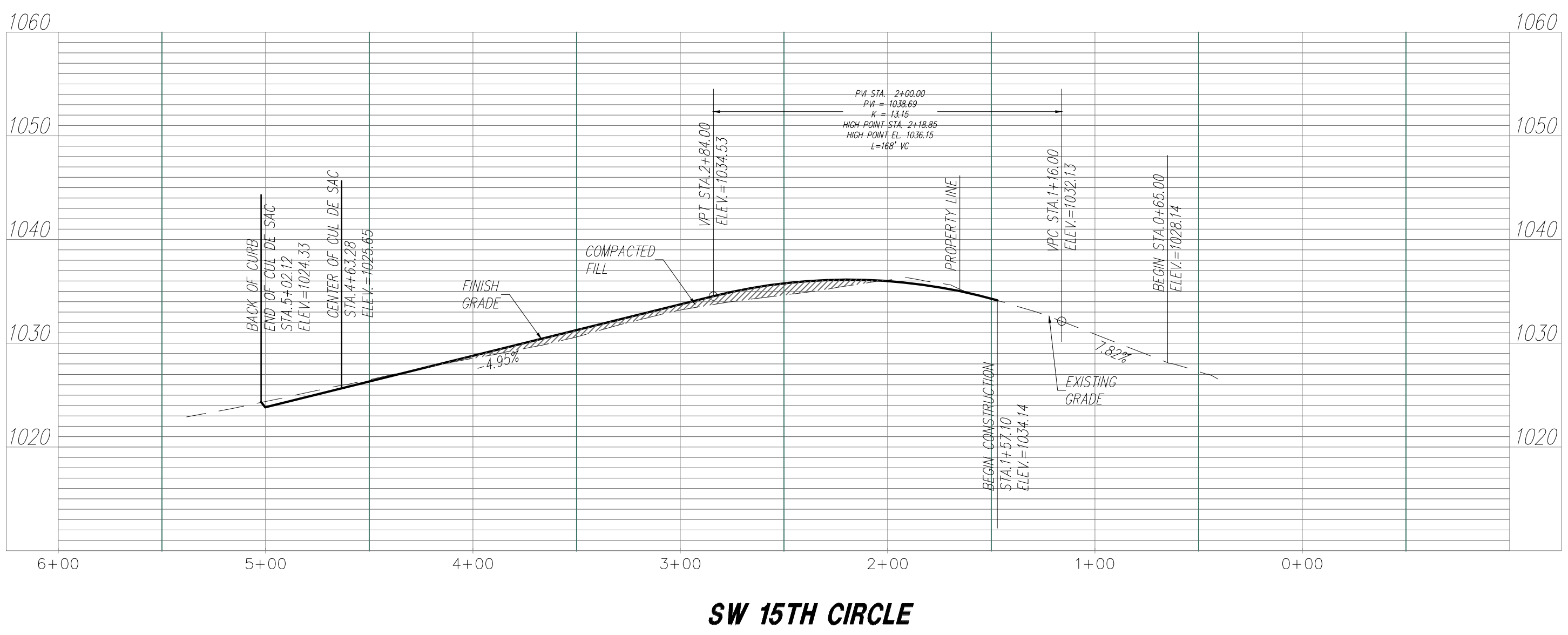
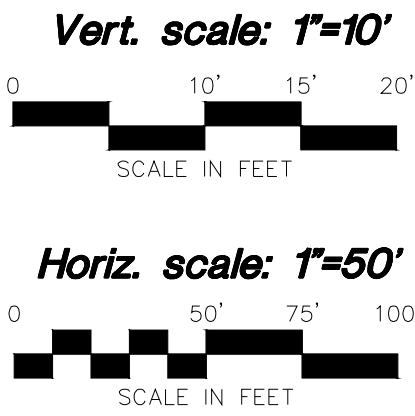
KEY
U/E Utility Easement
D/E Drainage Easement
B/L Building Line
— Sidewalk
--- Utility Easement



- 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.

SOUTHWEST 15TH STREET
BEGIN CONSTRUCTION
STA 1+57.10
SAW CUT MINIMUM 1 FOOT EXISTING
ASPHALT FOR CLEAN JOINT.

EXISTING SIGN TO BE REMOVED
MATCH EXISTING CURB
MATCH EXISTING SIDEWALK
EXISTING TRANSFORMER PAD



NO.	BY	REVISION	DATE

5/16/19

Consult
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engineers
planners

811

SW 15TH CIRCLE
STA. 1+57.10 - STA. 5+02.12

GOPPERT ACRES, 2ND PLAT

LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

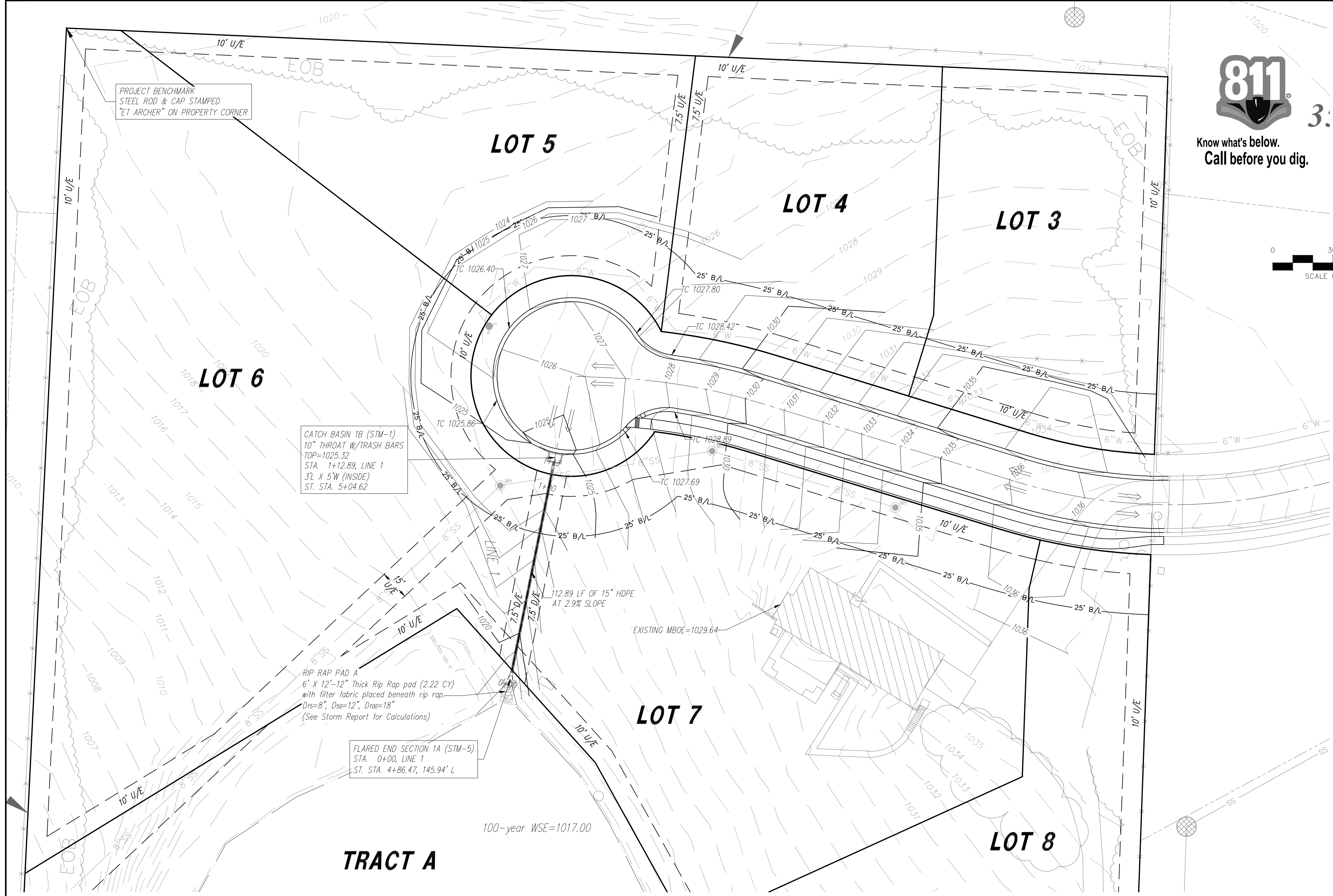
X-REF NO.
42259_TPO0

DRAWING NO.
18028

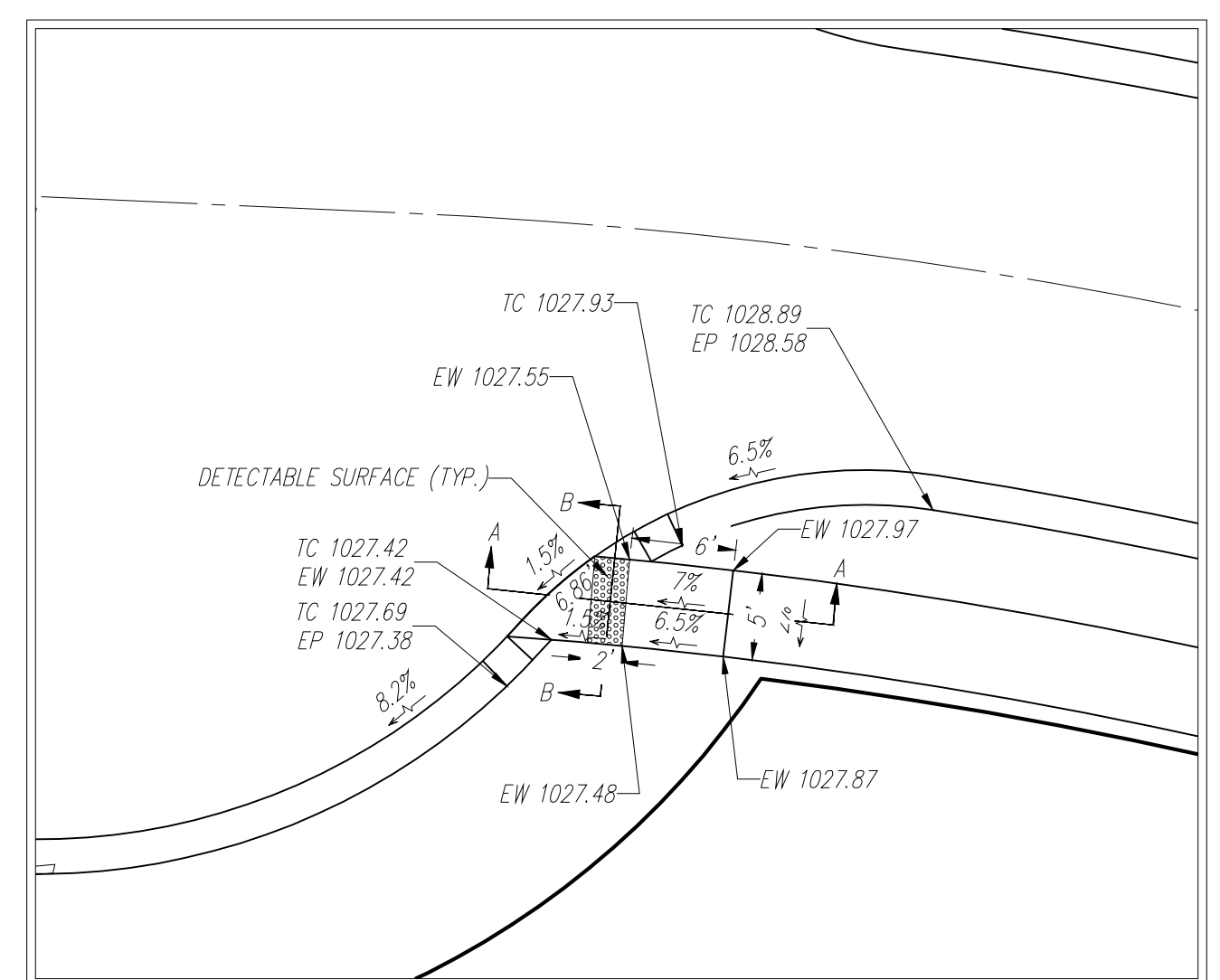
DATE
FEBRUARY 7, 2019

JOB NO.
18028

2 OF 11



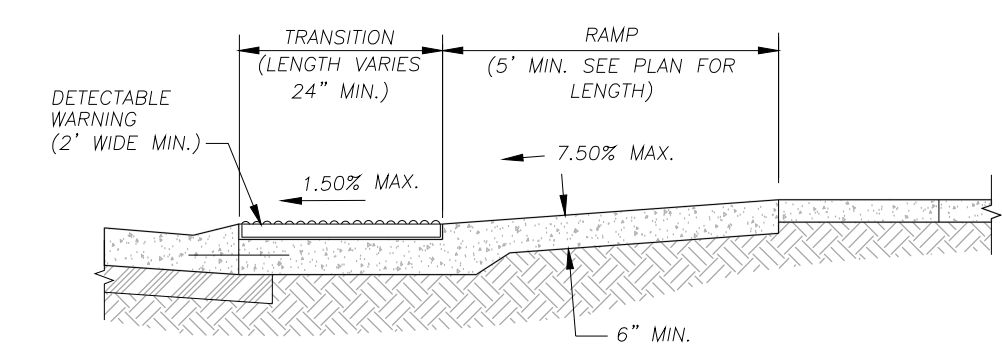
- GENERAL NOTES.**
1. This sheet is for informational purposes only. See individual sheets for exact utility locations.
 2. See Sanitary Sewer sheets and Utility Map for Minimum Basement Floor elevations (MBF) and Minimum Low Opening elevations (MLO).
 3. Grading plan represents general site grading 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.



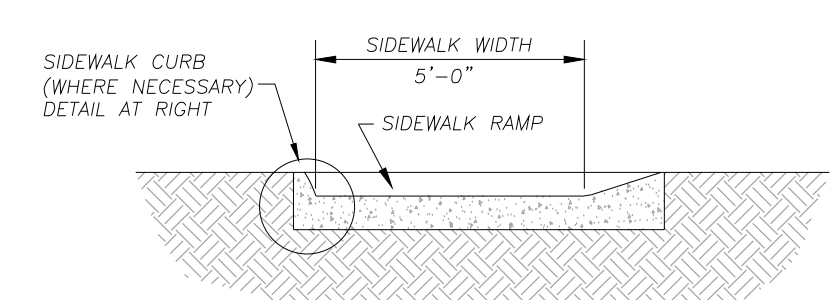
DETAIL OF ADA
SIDEWALK RAMP
1"=10'

GRADING AND DRAINAGE NOTES:

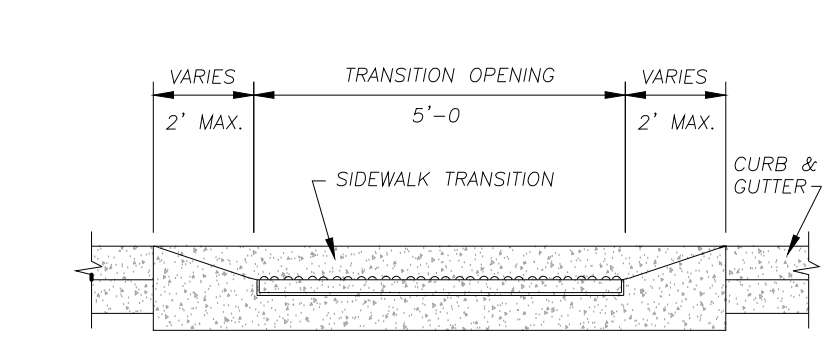
Information pertaining to under ground utilities was obtained from available records and field locations when possible, but the contractor must determine the exact location and elevation of all existing utilities by digging test pits by hand at all utility crossings in advance of machine trenching. If 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 (STAT ELEC CALL system) and locate all utilities prior to grading start. 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.



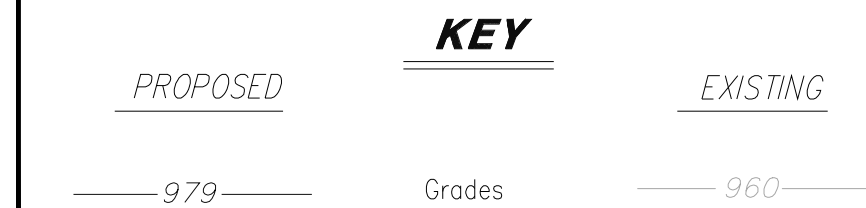
SECTION A-A



SECTION B-B



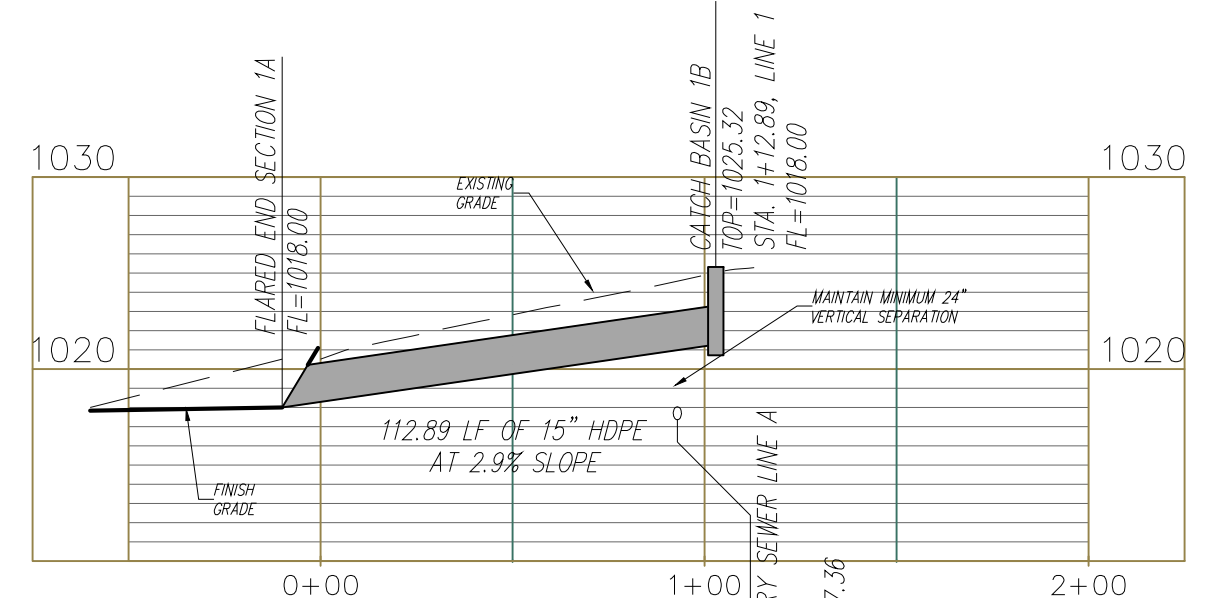
SECTION C-C



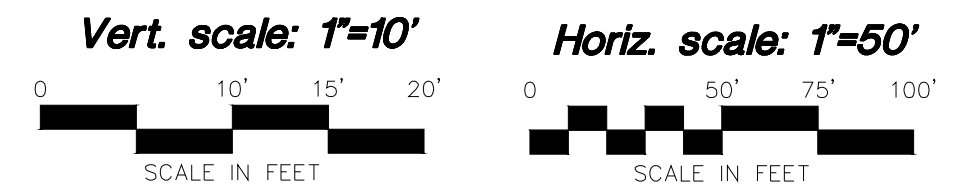
PROJECT BENCHMARK:
Steel rod and cap stamped "ET ARCHER" on North West property corner

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



NO.

BY

CK/APP

DATE

REVISION

OF MISSOURI

REGISTERED PROFESSIONAL ENGINEER

5/16/19

Consult Inc

engineers planners

GRADING, EROSION CONTROL 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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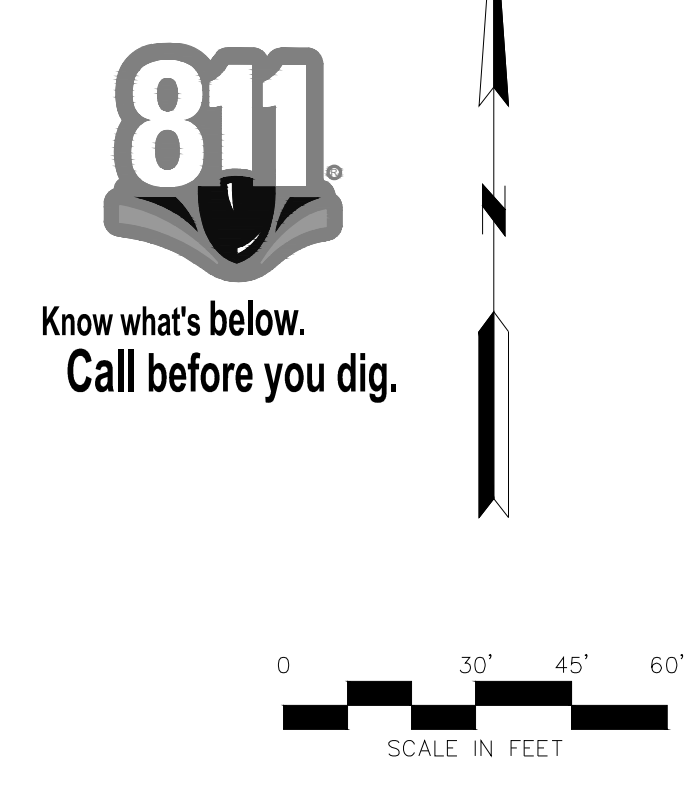
SHEET OF

11

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R. KEVIN STERRETT, NO. E-26440

CORPORATE LICENSE NO. E2010005873



0 30' 45' 60'

SCALE IN FEET

EROSION CONTROL GENERAL NOTES:

contractor shall inspect, report and add tie downs to the slope construction entrance when slopes saturated with mud to assure it function as it was intended.

topsoil stockpile shall be graded to drain and seeded with a temporary seed mix.

erosion and sediment control devices shall be inspected, cleaned regularly in accordance with Storm Water Pollution Prevention Manual.

erosion sediment control measures (silt fence, construction entrance, etc.) shall be placed until all contributing areas are graded and stabilized.

complete plan for maintenance of control devices is contained within the Storm Water Pollution Prevention Manual.

erosion control devices shall be installed and maintained so that the erosion control on site shall be minimized by spraying water on dry areas of the site. the use of water and other petroleum based or toxic liquids for dust suppression is strictly prohibited.

erosion control devices shall be removed from existing facilities, contractor shall establish tie wash areas of construction facility end points and vehicle operation shall be capped and trapped before project water is allowed to be discharged offsite. rinse-out will be allowed outside the project construction limits.

erosion control devices immediately, necessary to maintain good vegetative cover, vegetative cover to maintain a maximum height of six inches, and remove trash as tied.

inspect and report the collection system (i.e. catch basins, piping, swales, rip rap, etc.) in existing rainfall to maintain proper functioning.

signifying structures, fencing, trees, etc., within the construction area shall be removed.

washed off of site per state and local ordinances. any burning on site shall be to local ordinances.

dispose water (concrete truck, vehicle cleaning, equipment cleaning, etc.) shall be disposed of in a manner that prevents contact between these materials and storm water is discharged from the site.

maintainding silt fence, erosion control, or tracked from vehicles onto roadways or into storm is must be removed immediately.

tractor shall remove all temporary erosion control devices/fences and dispose of per local ordinances. the site has been stabilized. Contractor shall refer to the grading plan for final grades.

disturbing activities shall not commence until approval to do so has been received from a permitting authority.

erosion control devices shall strictly adhere to the SWPPP during construction operations and clearing or grading shall begin until all erosion control measures have been installed.

erosion devices shall be seeded as specified within 14 days of final grading.

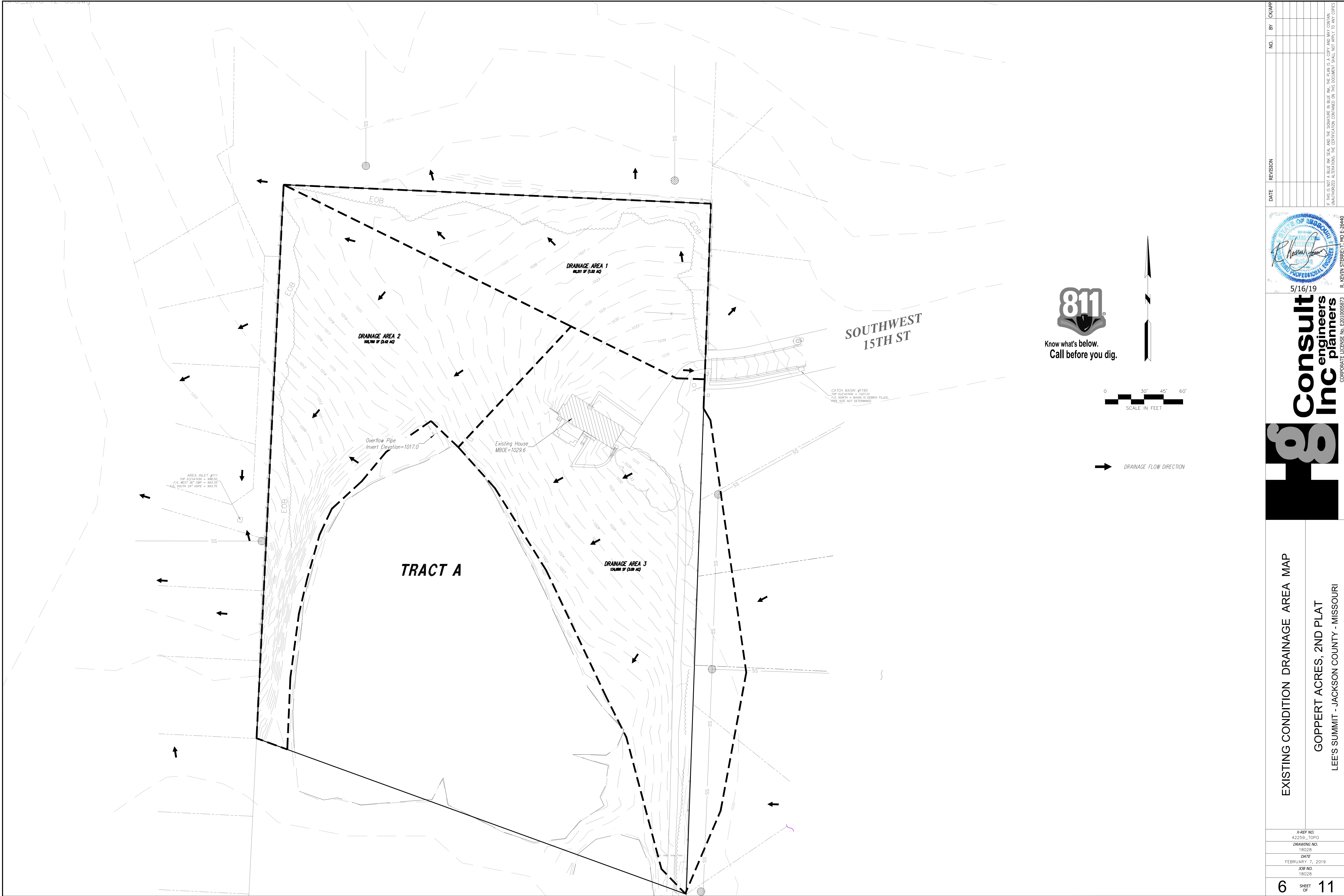
and construction stop for longer than 14 days, the site shall be seeded as specified.

every 1000' linear road producing runoff area of 1/2" or greater and at least once every 1000'.

inspect the storm system for sediment accumulation.

Area of Disturbance: 1.36 AC

5	SHEET OF	11	JOB NO. 18028	DATE FEBRUARY 7, 2019	DRAWING NO. 18028 X-REF NO. 42259_TOPO	GRADING, EROSION CONTROL AND STORM SEWER LINE 1 GOPPERT ACRES, 2ND PLAT LEE'S SUMMIT - JACKSON COUNTY - MISSOURI			5/16/19	R. KEVIN STERRETT, MO E-26440 CORPORATE LICENSE NO. E2010005873	IF THIS IS NOT A BLUE INK SEAL AND THE SIGNATURE IN BLUE INK, THE PLAN IS A COPY AND MAY CONTAIN UNAUTHORIZED ALTERATIONS. THE CERTIFICATION CONTAINED IN THIS DOCUMENT SHALL NOT APPLY TO ANY COPIES.	NO. 	BY 	CK/APP
									DATE 	REVISION 				



EXISTING CONDITION DRAINAGE AREA MAP

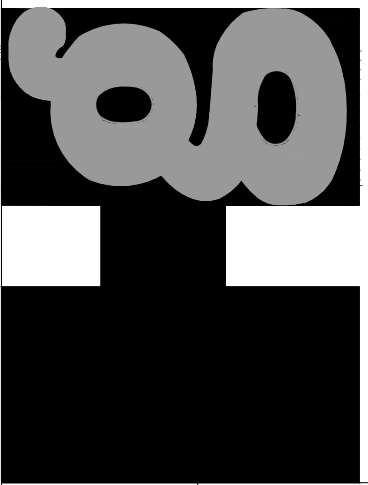
GOPPERT ACRES, 2ND PLAT
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

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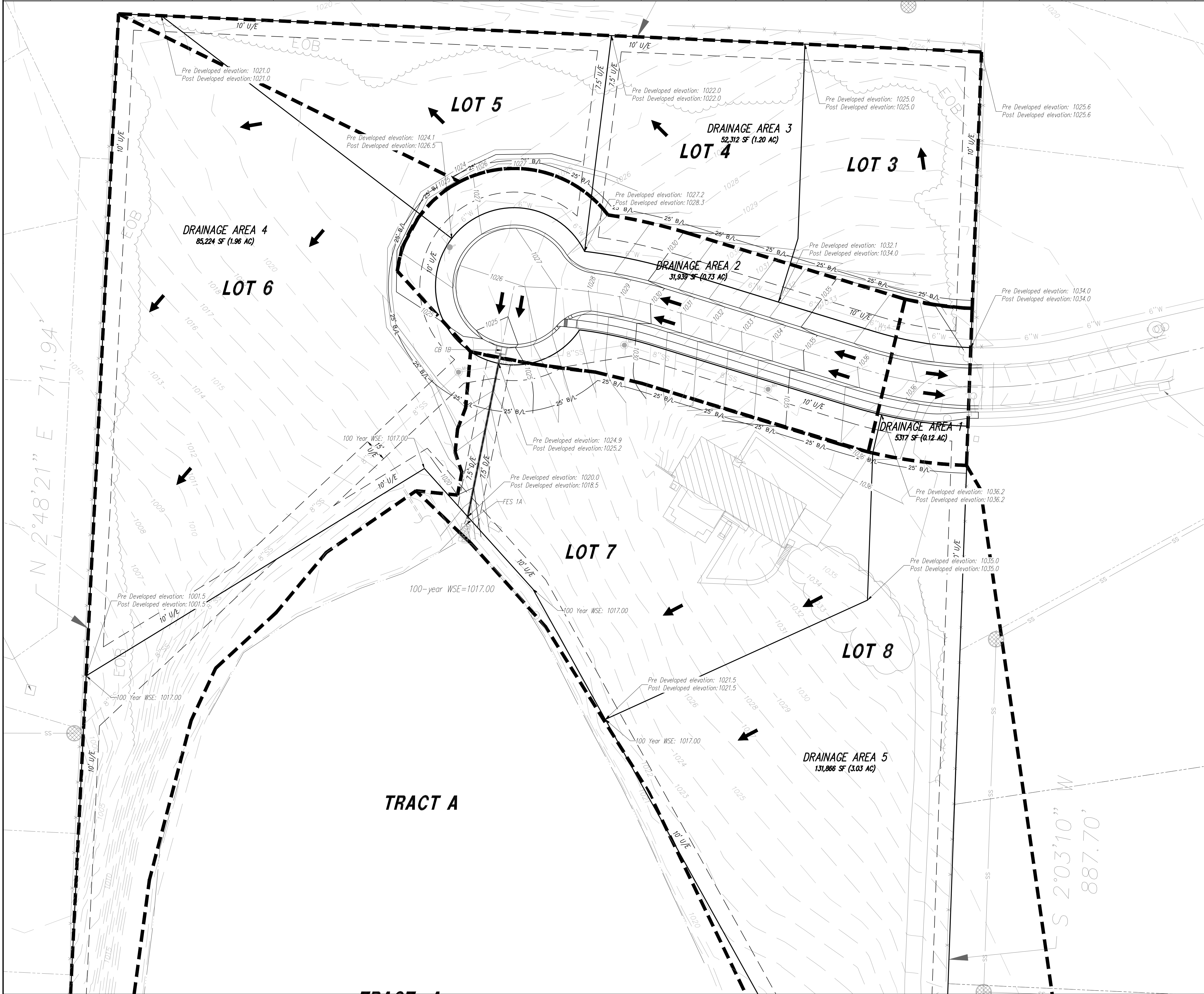
6 SHEET OF 11

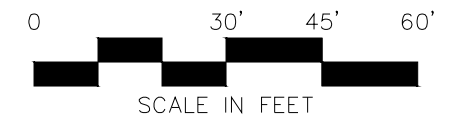
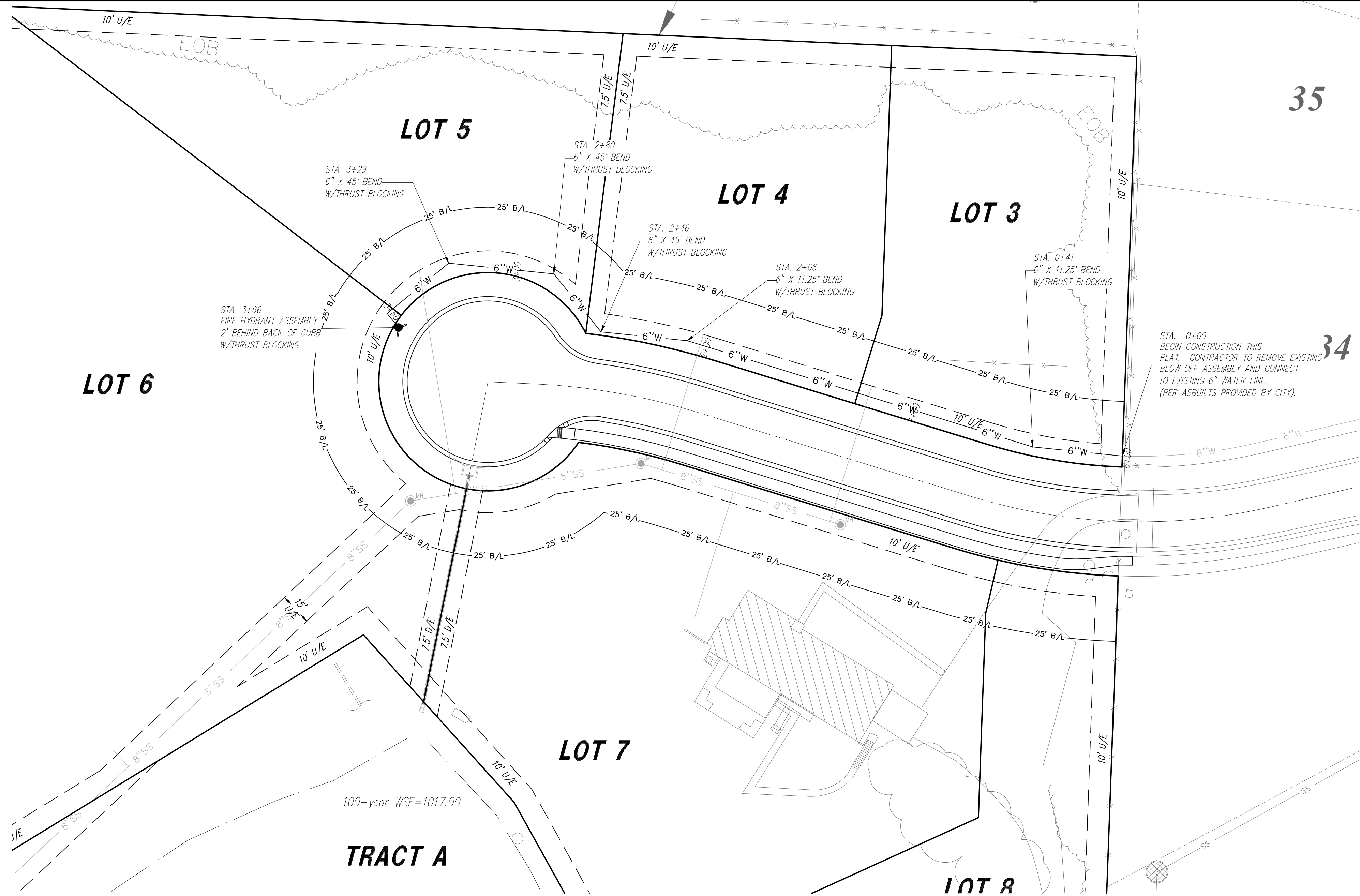
5/16/19
Professional Engineer
R. KEVIN STERRETT, NO. E-2640

Consult
Inc
engineers
planners



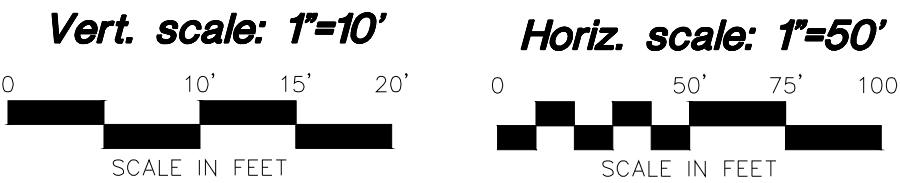
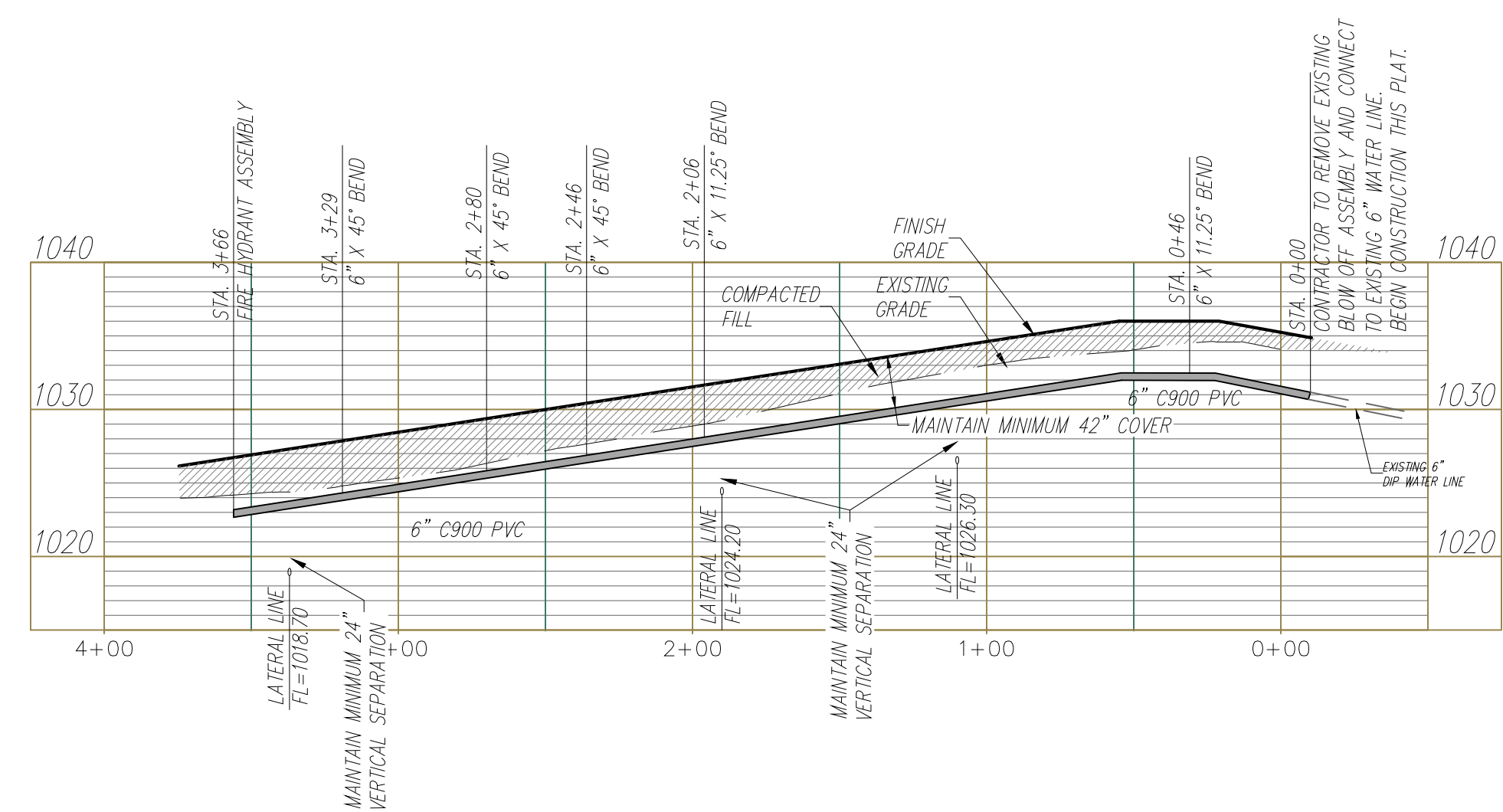
STORM SEWER CALCULATIONS																																		
PROJECT																																		
STORM SEWER NO.	SEWER LOCATION		TRIBUTARY AREA (AC.)			COMPOSITE RUNOFF COEFFICIENT	TIME OF FLOW			10 YEAR DESIGN					100 YEAR DESIGN					In Pipe Downstream [cfs]	By Pass Out [cfs]	GUTTER SLOPE [%]	GUTTER CAPACITY [cfs]	Inlet Length	CURB INLET				PIPE DESIGN					
	FROM STRUCTURE NO.	TO STRUCTURE NO.	AREA DESIGNATION	ACRES	TOTAL		Ti	Tt	Tc	INTENSITY [in/hr] I[10]	RUNOFF [cfs]				INTENSITY [in/hr] I[100]	RUNOFF [cfs]									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 In (cfs)	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





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



- 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	DATE	REVISION

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CONSULT
Inc
engineers
planners

5/16/19

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6" WATER LINE
STA. 0+00 - STA. 3+66
GOPPERT ACRES, 2ND PLAT
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.
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DRAWING NO.
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