



AT	NUMBER	GPM	GALLONS PER MINUTE	QTY	QUANTITY
AC	ACRE	GR	GRADE	R	RANGE
ACQD	ACQUIRED	GRND	GROUND	RAD	RADIUS
ADJ	ADJUSTABLE	GRNG	GRAATING	RCP	REINFORCED CONCRETE PIPE
ALDOT	ALABAMA DEPARTMENT OF TRANSPORTATION	GRVL	GRAVEL	RD	ROAD
ALT	ALTERNATE	GTV	GATE VALVE	RED	REDUCER
ALUM.	ALUMINUM	GV	GAS VALVE	REF	REFERENCE
APPROX.	APPROXIMATE	HB	HOSE BIBB	REG	REGULAR
ARV	AIR RELEASE VALVE	HDCP	HANDICAPPED	REINF	REINFORCING
ASPH.	ASPHALT	HDPE	HIGH DENSITY POLYETHYLENE	REIN	REMOVE
ASSY	ASSEMBLY	HDWL	HEADWALL	REQD	REQUIRED
AVE	AVENUE	HORIZ.	HORIZONTAL	RES	RESIDENCE
AVG	AVERAGE	HP	HORSE POWER/HIGH PRESSURE	RET	RETAINER/RETAINING
AWWA	AMERICAN WATER WORKS ASSOCIATION	HT	HEIGHT	REV	REVISE/REVISION
BFV	BUTTERFLY VALVE	HVAC	HEATING, VENTILATION AND AIR CONDITIONING	RJ	RESTRAINED JOINT
BLDG.	BUILDING	H.W.L.	HIGH WATER LEVEL	RW	RIGHT-OF-WAY
BLK	BLOCK	HWY	HIGHWAY	RR	RAILROAD
BM	BENCH MARK	HYD	HYDRAULIC	RT	RIGHT
BOC	BACK OF CURB	ID.	INSIDE DIAMETER	S	SOUTH
BOT.	BOTTOM	I.F.	INSIDE FACE	SAN.	SANITARY
BRKT.	BRACKET	IN.	INCH	SCH	SCHEDULE
BR. RES.	BROCK RESIDENCE	INF.	INFLUENT	SD	STORM DRAIN
B.S.	BOTH SIDES	INV.	INVERT	SEC.	SECTION
CB	CATCH BASIN	IPF	IRON PIN FOUND	SHLDR.	SHOULDER
C.C.	CARRYING CAPACITY	JB	JUNCTION BOX	SHT	SHEET
C & G	CURB AND GUTTER	JCT	JUNCTION	SIM	SIMILAR
C.I.	CAST IRON	JO	JOINT	SL	SURVEY LINE
C.I.P.	CAST IRON PIPE	JT	JOINT	SLV	SLEEVE
CR	CIRCLE	LAT.	LATTITUDE	SPEC	SPECIFICATIONS
C	CENTER LINE	LB	POUND	SQ	SQUARE
CONC.	CONCRETE	LBL	LABEL	SQ. FT.	SQUARE FEET
CONN.	CONNECTION	L.F.	LINEAR FEET	SQ. YD.	SQUARE YARD
CONT.	CONTINUOUS	LN	LINEAL, LINEAR	SS	SANITARY SEWER
COR.	CORNER	LONG.	LONGITUDE	ST	STREET
CU. FT.	CUBIC FEET	LP	LOW POINT/LONG PATTERN	STA.	STATION
CU. YD.	CUBIC YARD	LT	LEFT	STD.	STANDARD
CV	CHECK VALVE	LVR	LOUVER	ST. STL.	STAINLESS STEEL
CLR	CLEARANCE	MAX.	MAXIMUM	STM.	STORM
C.M.P.	CORRUGATED METAL PIPE	MB	MAIL BOX	STM. SEW.	STORM SEWER
CMU	CONCRETE MASONRY UNIT	MCC	MOTOR CONTROL CENTER	STR	STRAIGHT
CO	CLEAN OUT	MFG	MANUFACTURER/MANUFACTURING	STRUC	STRUCTURAL
COL.	COLUMN	MGD	MILLION GALLONS PER DAY	SW	SIDE WALK
CTSK	COUNTERSINK	M.H.	MANHOLE	SWD	SIDE WATER DEPTH
CTV	CABLE TELEVISION	MI	MILE/MILES	SYS	SYSTEM
D.A.	DRAINAGE AREA	MIN.	MINIMUM	T	TELEPHONE
DBL	DOUBLE	MISC.	MISCELLANEOUS	T.	TOWNSHIP
D.F.	DESIGN FLOW	MJ	MECHANICAL JOINT	T&B	TOP AND BOTTOM
D.I.	DUCTILE IRON	MT.	MOULT	TAN.	TANGENT
D.I.P.	DUCTILE IRON PIPE	MTL	METAL	TAN. TO C.	TANGENT TO CURVE
DIA.	DIAMETER	MTR	MOTOR	TBM	TEMPORARY BENCHMARK
DIAG.	DIAGRAM	N	NORTH	TEMP	TEMPORARY
DIST.	DISTANCE	NIC	NOT IN CONTRACT	THK.	THICK/THICKNESS
DET.	DETAIL	NO.	NUMBER	THRU	THROUGH
DN	DOWN	NOM	NOMINAL	TOC	TOP OF CURB
E	EAST	NORM	NORMAL	TOW	TOP OF WALL
EA	EACH	NTS	NOT TO SCALE	TYP.	TYPICAL
E.F.	EACH FACE	O.C.	ON CENTER	UNO	UNLESS NOTED OTHERWISE
EFF. WTR.	EFFLUENT WATER	O.D.	OUTSIDE DIAMETER	UP	UNDERGROUND POWER
EL.	ELEVATION	O.F.	OUTSIDE FACE	UT	UNDERGROUND TELEPHONE
EOP	EDGE OF PAVEMENT	OVFL.	OVERFLOW	UTIL	UTILITY
ESMT.	EQUIPMENT	P	POWER	UV	ULTRAVIOLET
E.W.	EACH WAY	P.C.	POINT OF CURVE	V	VALVE
EX.	EXISTING	PE	PLAIN END	V.C.P.	VITRIFIED CLAY PIPE
EXP.	EXPANSION	PEJ	PIPE EXPANSION JOINT	VERT.	VERTICAL
EXT.	EXTRUDED	PH.	PHASE	V.F.	VERTICAL FEET
FOA	FLANGED COUPLING ADAPTER	P.I.	POINT OF INTERSECTION	VFD	VARIABLE FREQUENCY DRIVE
FD	FLOOR DRAIN	PKWY	PARKWAY	V.G.	VALLEY CUTTER
F.F.	FINISH FLOOR	P	PROPERTY LINE	V.P.C.	VERTICAL POINT OF CURVE
FH	FIRE HYDRANT	PLBG	PLUMBING	V.P.I.	VERTICAL POINT OF INTERSECTION
FIG	FIGURE	P.O.	PUSH ON	V.P.T.	VERTICAL POINT OF TANGENT
FIN.	FINISH-FINISHED	PP	POWER POLE	W	WATER
FIN. GR.	FINISH GRADE	PRBS	PRESSURE	W	WEST
F.L.	FLOW LINE	PRK	PARKING	W	WITH
FLG	FLANGED	PRJ	PROJECT	W/O	WITHOUT
FM	FORCE MAIN	PRV	PRESSURE REDUCING VALVE	WM	WATER METER
FR. RES.	FRAME RESIDENCE	PSI	POUNDS PER SQUARE INCH	WS	WATERSTOP
FT.	FOOT/FEET	P.T.	POINT OF TANGENT	WT.	WEIGHT
G	GAS	PV	PLUG VALVE	WTM	WATER TRANSMISSION MAIN
GA	GAUGE	PVC	POLYVINYL CHLORIDE	WV	WATER VALVE
GALV	GALVANIZED	PNL	PANEL	W.W.	WING WALL
GM	GAS METER	PSF	POUNDS PER SQUARE FOOT	WWF	WELDED WIRE FABRIC
		PMT	PAVEMENT	YD.	YARD
		QTR	QUARTER	YR.	YEAR

SS	SANITARY SEWER (GRAVITY)	⊙	MANHOLE
FM	SANITARY SEWER (FORCEMAIN)	⊙	CLEANOUT
W	WATER LINE (SIZE NOTED)	—	UTILITY LINE (SIZE AND TYPE NOTED)
NC	NON-CONNECTING PIPING	—	ENCASED PIPE (I.D. OF CASING & CARRIER NOTED)
W.M.	WATER METER (SIZE NOTED IF LARGER THAN 3/4")	—	NON-CONNECTING PIPING
V	VALVE (TYPE NOTED)	—	WATER METER (SIZE NOTED IF LARGER THAN 3/4")
FD	FIRE HYDRANT	—	VALVE (TYPE NOTED)
ARV	AIR RELEASE VALVE	—	FIRE HYDRANT
GL	GAS LINE (SIZE NOTED)	—	AIR RELEASE VALVE
GM	GAS METER	—	TAPPING SLEEVE AND VALVE
GL	GAS LAMP	—	TAPPING SADDLE AND VALVE
GV	GAS VALVE	—	SLEEVE
GR	GAS REGULATOR	—	CONCRETE BRACE
ULM	UTILITY LINE MARKER	—	PLUG W/CONCRETE CROSS ANCHOR
OPL	OVERHEAD POWER LINE	—	METER
UPL	UNDERGROUND POWER LINE	—	GAS LAMP
PT	POWER/TELEPHONE LINE	—	GAS REGULATOR
HVTLT	HIGH VOLTAGE TRANSMISSION TOWER/POLE		
LP	LIGHT POLE		
GW	GUY WIRE		
PM	POWER MANHOLE		
OTL	OVERHEAD TELEPHONE LINE		
UT	UNDERGROUND TELEPHONE LINE		
FOC	FIBER OPTIC CABLE (UNDERGROUND)		
UT	UNDERGROUND TELEPHONE LINE		
CTV	CABLE TV (UNDERGROUND)		
TMH	TELEPHONE MANHOLE		
TP	TELEPHONE PEDESTAL		
JB	JUNCTION BOX (LETTER DENOTES UTILITY)		
P	P - POWER		
T	T - TELEPHONE		
C	C - CABLE TV		
F	F - FIBER OPTIC		

E7	PROPOSED UTILITIES	E9	GENERAL NOTES
	TREE		MAILBOX
	SHRUB		TRAFFIC/STREET SIGN
	HERDROW		OUTDOOR ADVERTISING SIGN (BILLBOARD)
	TREE LINWOOD AREA		EXISTING BUILDING/STRUCTURE
	ROCK OUTCROPPING		EXISTING STORM DRAIN W/HEADWALL (SIZE AND TYPE NOTED)
	SLOPE		NEW STORM DRAIN W/HEADWALL (SIZE AND TYPE NOTED)
	FLOWER BED, GARDEN, ROCK GARDEN (NOTED)		EXISTING BRIDGE OR CULVERT
	RIVER/STREAM (ARROW INDICATES FLOW)		EXISTING ASPHALT ROAD OR DRIVE
	INTERMITTENT DITCH OR STREAM		NEW ASPHALT ROAD OR DRIVE
	LAKE OR POND		EXISTING ASPHALT ROAD WITH CURB AND GUTTER (DRAINAGE INLET SHOWN)
	SWAMP OR MARSH		NEW ASPHALT ROAD WITH CURB AND GUTTER (DRAINAGE INLET SHOWN)
	EXISTING GROUND CONTOUR		EXISTING CONCRETE ROAD OR DRIVE
	FINISH GROUND CONTOUR		NEW CONCRETE ROAD OR DRIVE
	RAILROAD		EXISTING UNPAVED ROAD OR DRIVE
	FENCE (TYPE NOTED)		NEW UNPAVED ROAD OR DRIVE

A1	GENERAL SYMBOLS
	SECTION NUMBER
	SHEET NUMBER
	SECTION MARKER
	DETAIL MARKER
	BUILDING SECTION
	WALL SECTION
	B-1 SOFT TEST BORING
	DEMOLITION AND DISPOSAL (ABANDONED WHERE NOTED)

A3	SURVEYING SYMBOLS
	SECTION LINE
	1/4 SECTION LINE
	1/4-1/4 SECTION LINE
	SECTION CORNER OR 1/4 SECTION CORNER (TYPE AND DESCRIPTION NOTED)
	CITY OR TOWN LIMITS
	PROPERTY LINE
	IRON PIN FOUND (SIZE AND TYPE NOTED)
	IRON PIN SET (SIZE AND TYPE NOTED)

C5	EXISTING UTILITIES
	SURVEY LINE AND POINT OF INTERSECTION
	BENCHMARK
	MONUMENT (SIZE AND TYPE NOTED)
	RIGHT-OF-WAY LINE
	PERMANENT EASEMENT BOUNDARY
	LAND HOOK

A7	TOPOGRAPHY & INFRASTRUCTURE SYMBOLS
	EXISTING GROUND CONTOUR
	FINISH GROUND CONTOUR
	RAILROAD
	FENCE (TYPE NOTED)

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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**KREBS**  
ENGINEERING

05/25/18  
No. 35881  
PROFESSIONAL  
ENGINEER  
CROSS STATE  
LIC. 22200  
*James Ross Wright*

ISSUE	DATE
ISSUE FOR BID	2018.05.25

DRAWN BY: JHL  
CHECKED BY: JRT

SIMULATION LABORATORY  
BUILDING - USA JOB #16-07  
MOBILE, ALABAMA  
ABC #2017372  
GMC # AMOB160019

STANDARD SYMBOLS  
& ABBREVIATIONS  
**C1.01**

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