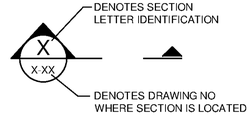
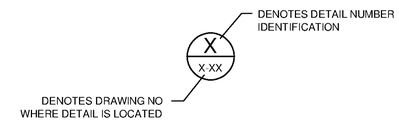
LIST OF STANDARD ABBREVIATIONS

A	
AAP	ALARM ANNUNCIATOR PANEL
AARV	AUTOMATIC AIR RELEASE VALVE
AAV	AUTOMATIC AIR VENT
AB	ANCHOR BOLT
ABAN	ABANDON(ED)
ABRSV	ABRASIVE
ABS	ACRYLONITRILE BUTADIENE STYRENE
ABV	ABOVE
AC	ALTERNATING CURRENT
ACCMP	ASPHALT-COATED CORRUGATED METAL PIPE
ACP	ASBESTOS CEMENT PIPE
ADDM	ADDENDUM
ADH	ADHESIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFS	ABOVE FINISHED SLAB
AHD	AHEAD
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
AMT	AMOUNT
APRX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
AS	ALUM SOLUTION
ASPH	ASPHALT
ASSY	ASSEMBLY
AVE	AVENUE
A/C	AIR CONDITIONING
A/VV	AIR/VACUUM AIR VALVE
B	
BAF	BAFFLE
BCV	BALL CHECK VALVE
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BI	BLACK IRON
BITUM	BITUMINOUS OR BITUMASTIC
B/L	BASELINE
BLDG	BUILDING
BLK	BLOCK
BM	BENCH MARK
BOC	BACK OF CURB
BOT	BOTTOM
BP	BASE PLATE
BRG	BEARING
BSP	BLACK STEEL PIPE
BV	BALL VALVE
BW	BOTH WAYS
BWW	BACKWASH WATER
C	
CAP	CAPACITY
CA	COMPRESSED AIR
CAV	COMBINATION AIR VALVE
CB	CATCH BASIN
CCC	CHLORINE CONTACT CHAMBER
CE	CHLORINATED EFFLUENT
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CV	CHECK VALVE
CI	CAST IRON
CIP	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
C/L	CENTER LINE
CL2	CHLORINE GAS
CLF	CHAIN LINK FENCE
CLR	CLEAR OR CLEARANCE
CLVT	CULVERT
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CMU	CONCRETE MASONRY UNIT
CND	CONDUIT
CNR	CORNER
CO	CLEAN OUT
CO2	CARBON DIOXIDE
COAG	COAGULANT
COL	COLUMN
COM	COMMON
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCT(ION)
CONT	CONTINUOUS
CONTR	CONTRACT(OR)
COORD	COORDINATE
CO	COMPANY
CP	CONCRETE PIPE
CPA	CONCRETE PIPE ARCH
CPLG	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE
CR	CONCENTRIC REDUCER
CS	CHLORINE SOLUTION
CSG	CASING
CTV	CABLE TELEVISION
CY	CUBIC YARD
CYL	CYLINDER
C&G	CURB AND GUTTER
C/C	CENTER TO CENTER
D	
DAT	DATUM
DBL	DOUBLE
DC	DIRECT CURRENT
DEMO	DEMOLITION
DEPT	DEPARTMENT
DESC	DESCRIPTION
DET	DETAIL
DF	DIESEL FUEL
DI	DUCTILE IRON
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH	DISCHARGE
DIR	DIRECTION
DMH	DROP MANHOLE
DN	DOWN
DR	DRAIN
DV	DIAPHRAGM VALVE
DW	DRIVEWAY
DWG	DRAWING
DWV	DRAIN, WASTE, AND VENT
E	
E	EAST
EA	EACH
ECC	ECCENTRIC
EF	EACH FACE
EFF	EFFLUENT
E/L	EASEMENT LINE
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRICAL
EMER	EMERGENCY
EMC	ENCASE(MENT)
ENGR	ENGINEER
EP	EDGE OF PAVEMENT
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPRF	EXPLOSION PROOF
EQUIP	EQUIPMENT
ER	ECCENTRIC REDUCER
ESTM	EASEMENT
EST	ESTIMATE(D)
EW	EACH WAY
EXC	EXCAVATE
EXP	EXPANSION
EXST	EXISTING
EXST GR	EXISTING GRADE
EXT	EXTERIOR
EXTN	EXTENSION
F	
FAB	FABRICATE(D)
FCA	FLANGED COUPLING ADAPTER
FB	FLAT BAR
FCV	FLOW-CONTROL VALVE
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FILTER(ED) EFFLUENT
FHY	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH(ED)
FIN FLR	FINISH FLOOR
FIN GR	FINISH GRADE
FL	FLUORIDE
FLG	FLANGE(D)
FLL	FLOW LINE
FLTR	FILTER
FM	FORCE MAIN
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT OR FEET
FUT	FUTURE
FV	FOOT VALVE
FW	FINISHED WATER
FWP	FACTORY WIRED PANEL
F/F	FACE TO FACE
G	
GA	GAUGE
GAL	GALLON(S)
GALV	GALVANIZED
GIP	GALVANIZED IRON PIPE
GJ	GROOVE JOINT
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GALLONS PER SECOND
GR	GRADE
GRTG	GRATING
GS	GALVANIZED STEEL
GSP	GALVANIZED STEEL PIPE
GSR	GROUND STORAGE RESERVOIR
GST	GROUND STORAGE TANK
GT	GROUT
GV	GATE VALVE
H	
HB	HOSE BIBB
HD	HEAVY-DUTY
HDPE	HIGH-DENSITY POLYETHYLENE
HDR	HYDRAULIC
HFA	HYDROFLUOSILICIC ACID
HGR	HANGER
HGT	HEIGHT
HNDRL	HAND RAIL
HOA	HAND-OFF-AUTO
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPA	HIGH PRESSURE AIR
HR	HOUR
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HZ	HERTZ
I	
ID	INSIDE DIAMETER
IN	INCH(ES)
INF	INFLUENT
INT	INTERSECTION
INTR	INTERIOR
INV	INVERT
IP	IRON PIPE
IPS	INTERNATIONAL PIPE STANDARD
IR	INTERNAL RECYCLE
IW	IRRIGATION WATER
J	
JB	JUNCTION BOX
JT	JOINT
K	
K	KIP (1,000 LB)
KPL	KICK PLATE
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KW	KILOWATT
KWH	KILOWATT-HOUR
L	
L	LEFT
LAB	LABORATORY
LAM	LAMINATE OR LAMINATION
LATL	LATERAL
LAV	LAVATORY
LEN	LENGTH
LB	POUND(S)
LF	LINEAR FEET
LP	LIGHT POLE
LS	LIME SLURRY
LSS	LIME STABILIZED SLUDGE
LVR	LOUVER
LWL	LOW WATER LEVEL
M	
M	METER
MAINT	MAINTAIN OR MAINTENANCE
MAN	MANUAL(LY)
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
ME	MITERED END
MECH	MECHANICAL
MEG	MATCH EXISTING GRADE
MFR	MANUFACTURE(R)
MG	MILLION GALLONS
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MI	MILE(S)
MIN	MINIMUM, MINUTE(S)
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
ML	MIXED LIQUOR
MO	MASONRY OPENING
MON	MONUMENT
MPH	MILES PER HOUR
MPT	MALE PIPE THREAD
MS	MOTOR STARTER
MSP	MOTOR STARTER PANEL
MTD	MOUNTED
MV	MOTORIZED VALVE
MW	MANWAY
MWL	MEAN WATER LEVEL
MWP	MAXIMUM WORKING PRESSURE
N	
N	NORTH
NaOCl	SODIUM HYPOCHLORITE
NE	NORTHEAST
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NPF	NATIONAL PIPE THREAD
NPT	NATIONAL PIPE TAPER (THREAD)
NPW	NON-POTABLE WATER
NRS	NON-RISING SYSTEM
NTS	NOT TO SCALE
NW	NORTHWEST
N/A	NOT APPLICABLE
O	
O2	OXYGEN
OC	ON CENTER
OD	OUTSIDE DIAMETER
ODP	OPEN DRIP PROOF
OF	OUTSIDE FACE
OH	OVER HEAD
OHW	OVER HEAD WIRE
OPP	OPPOSITE
OPT	OPTIONAL
OR	OFFICIAL RECORDS
OSY	OUTSIDE SCREW AND YOKE
O&M	OPERATION AND MAINTENANCE
P	
PA	PROCESS AIR
PC	POINT OF CURVE
PCM	PERMANENT CONTROL MONUMENT
PE	PLAIN END
PG	PRESSURE GAGE
PI	POINT OF INTERSECTION
PL	PLATE
P/L	PROPERTY LINE
PNV	PINCH VALVE
POB	POINT OF BEGINNING
POJ	PUSH-ON JOINT
POL	POLYMER
PP	POWER POLE
PPD	POUNDS PER DAY
PPM	PARTS PER MILLION
PREFAB	PREFABRICATED
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PRW	PROCESS WATER
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PT	POINT OF TANGENCY
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PW	POTABLE WATER
PWR	POWER
Q	
Q	FLOW
QTY	QUANTITY
R	
RAD	RADIUS
RAS	RETURN ACTIVATED SLUDGE
RC	REINFORCED CONCRETE
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
RDCR	REDUCER
REBAR	REINFORCING STEEL
REF	REFERENCE
REINF	REINFORCE(D)(ING)(MENT)
REM	REMOVE(ABLE)
REQ'D	REQUIRED
RF	RAISED FACE
RJ	RESTRAINED JOINT
RM	ROOM
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RT	RIGHT
RVT	RIVETED
RWM	RAW WATER
RWW	RAW WASTEWATER
R/W	RIGHT-OF-WAY
S	
S	SOUTH
SA	SAMPLE LINE
SAN	SANITARY
SCHED	SCHEDULE
SD	STORM DRAIN
SE	SOUTHEAST
SECT	SECTION
SEFF	SECONDARY EFFLUENT
SF	SQUARE FOOT OR FEET
SHT	SHEET(ED)(ING)
SIG	SIGNAL
SIM	SIMILAR
SL	SLUDGE
SLV	SLEEVE
SM	SHEET METAL
SOLN	SOLUTION
SP	SOIL PIPE, SPACE(ING)
SPEC	SPECIFICATION
SPRT	SUPPORT
SQ	SQUARE
SS	SANITARY SEWER
SSE	SUBSTANDARD EFFLUENT
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STK	STAKE
STL	STEEL
STR	STRAIGHT
STRUCT	STRUCTURAL
SURF	SURFACE
SV	SOLENOID VALVE
SVCE	SERVICE
SVW	SERVICE WATER
SW	SOUTHWEST
SWD	SIDEWATER DEPTH
SWSH	SURFACE WASH
SYM	SYMBOL
SYMM	SYMMETRICAL
S/W	SIDEWALK
T	
TAN	TANGENT
TB	TOP OF BEAM
TBM	TEMPORARY BENCH MARK
TB-xx	TEST BORING-xx (e.g. TB-1)
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TE	TOTALLY ENCLOSED
TEFC	TOTALLY ENCLOSED FAN COOLED
TEL	TELEPHONE
TENV	TOTALLY ENCLOSED NON-VENTILATED
THD	THREAD(ED)
THK	THICK(NESS)
TLM	TELEMETRY
TOB	TOP OF BANK
TOC	TOP OF CURB
TOS	TOE OF SLOPE
TOT	TOTAL
TP	TELEPHONE POLE
TS	THICKENED SLUDGE
TV	TELEVISION
TYP	TYPICAL
T&B	TOP AND BOTTOM
U	
UDR	UNDERDRAIN
UG	UNDERGROUND
ULT	ULTIMATE
UN	UNION
UON	UNLESS OTHERWISE NOTED
UGE	UNDERGROUND ELECTRIC
UTC	UNDERGROUND TELEPHONE CABLE
UTIL	UTILITY
V	
V	VOLT(S)
VAC	VACUUM
VAR	VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	
W	WATT, WEST
WAS	WASTE ACTIVATED SLUDGE
WCO	WALL CLEAN OUT
WF	WIDE FLANGE
WH	WALL HYDRANT
WL	WATER LINE
WM	WATER MAIN
WP	WATER PROOF(ING), WORKING POINT
WPR	WORKING PRESSURE
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
WT	WEIGHT
WTP	WATER TREATMENT PLANT
WW	WASH WATER
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
WWTP	WASTEWATER TREATMENT PLANT
W/	WITH
W/O	WITHOUT
X	
XFER	TRANSFER
Y	
YD	YARD(S)
YH	YARD HYDRANT
YR	YEAR(S) YR

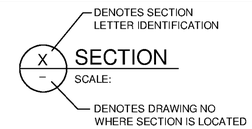
REFERENCE SYMBOLS



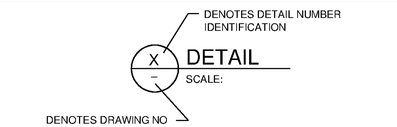
SECTION REFERENCE



DETAIL REFERENCE



SECTION TITLE



DETAIL TITLE

HATCHING LEGEND

- ASPHALT OR CONCRETE SURFACE (SIDEWALK OR ROADWAY)
- ROADWAY/SIDEWALK OPEN CUT RESURFACE
- SODDED OR SEEDED AND MULCHED AREA OR EXISTING WETLAND
- EARTH
- EXISTING PIPES, STRUCTURES, EQUIPMENT TO BE REMOVED
- CONCRETE PAVEMENT
- PRECAST CONCRETE
- GROUT
- CONCRETE UNIT MASONRY (PLAN)
- CONCRETE WALK
- PROPOSED STRUCTURE
- GRATING

MECHANICAL/DRAFTING LEGEND

	EXISTING	PROPOSED
VISIBLE LINE		
HIDDEN LINE		
CENTER LINE		
PHANTOM LINE		
MATCHLINE		
BREAK LINE		
DIMENSION LINES AND LEADERS	1 3/32"	NOTE

CIVIL LEGEND

- PROPERTY LINE
- R/W — RIGHT OF WAY LINE (R-O-W)
- LIMITS OF CONTRUCTION
- EASEMENT
- 130 — PROPOSED CONTOUR MAJOR
- 129 — PROPOSED CONTOUR MINOR (LABEL OPTIONAL)
- WATER
- STORM SEWER
- SANITARY SEWER
- SANITARY SEWER (FORCE MAIN)
- GUARD RAIL
- xx xx xx xx — STEEL FENCE
- x x x x — WOOD FENCE
- VEGETATION
- ×XXXX.XX SPOT ELEVATION
- TOP / BOTTOM EMBANKMENT
- TREE - EVERGREEN
- TREE - PALM TREE
- TREE - DECIDUOUS
- LIGHT POLE
- POWER POLE
- UTILITY POLE
- MH-?? MANHOLE
- SS SEWER MANHOLE
- SV SEWER VALVE
- CO SEWER CLEANOUT
- MW-X MONITORING WELL
- WV WATER VALVE
- WELL WATER WELL
- WM WATER METER
- FH HYDRANT
- SD STORM MANHOLE
- STORM CULVERT END
- FLARED END - RCP
- MONUMENT

TETRA TECH
www.tetratech.com
101 QUALITY CIRCLE, SUITE 140
HUNTSVILLE, ALABAMA 35806
PHONE: (256) 424-4077 FAX: (256) 424-4097

BID SET

ALABAMA LICENSED PROFESSIONAL ENGINEER CHRISTIAN R. CRAWFORD 10124 14

MARK	DATE	DESCRIPTION	BY

HUNTSVILLE UTILITIES
SOUTHEAST WATER TREATMENT PLANT

LEGEND AND ABBREVIATIONS

Project No.:	200-11740-10003
Designed By:	JPT
Drawn By:	JTE
Checked By:	JEC

G-0005

Copyright: Tetra Tech

Bar Measures 1 inch

10/17/2014 3:11:55 PM P:\IER\11740\200-11740-10003\CAD\SHEETFILES\TREATMENT PLANT\WTP-G-0005 LEGEND AND ABBREVIATIONS.DWG - EVANS, JON