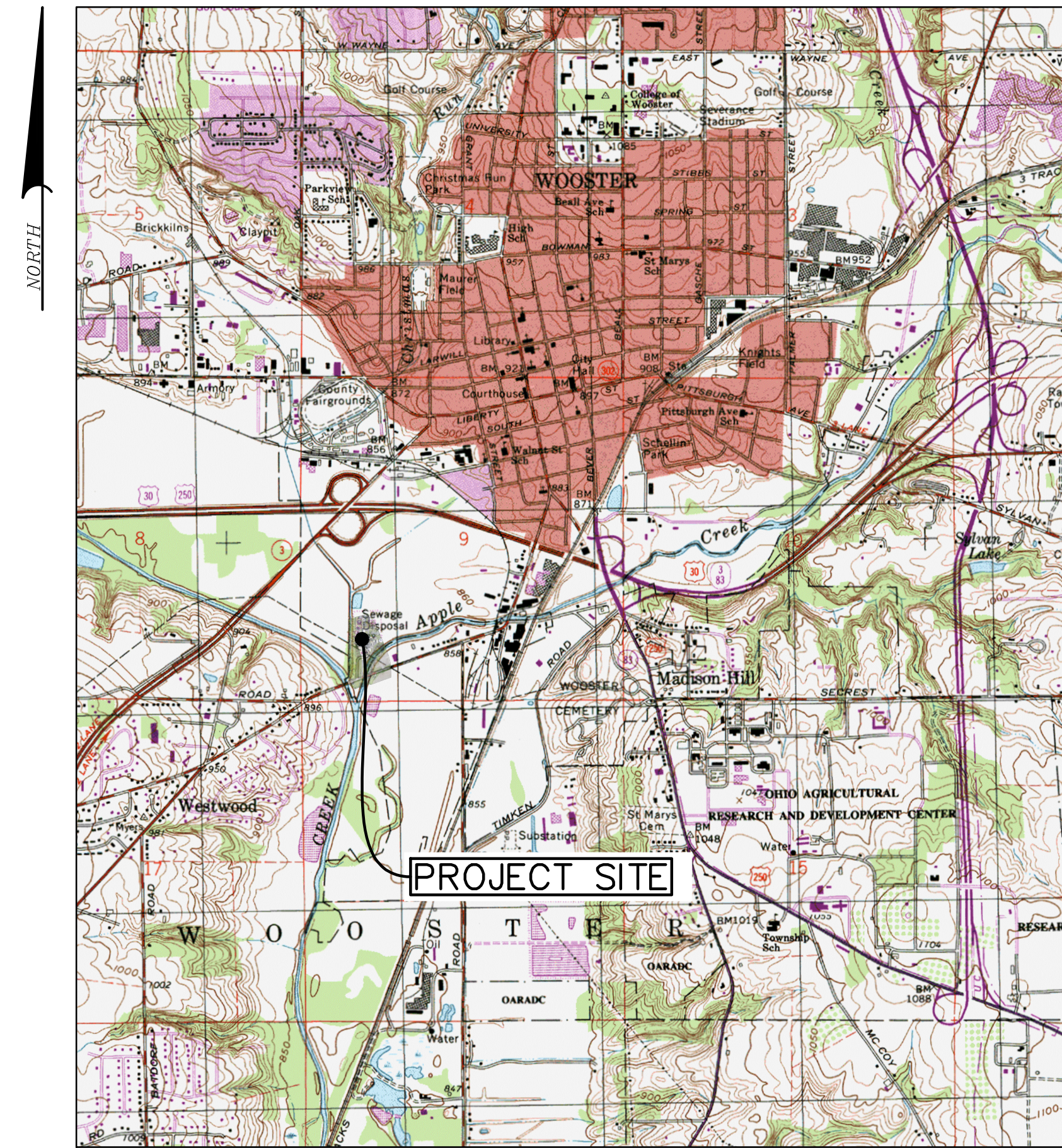


REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY



LOCATION MAP
SCALE: 1"=2000'

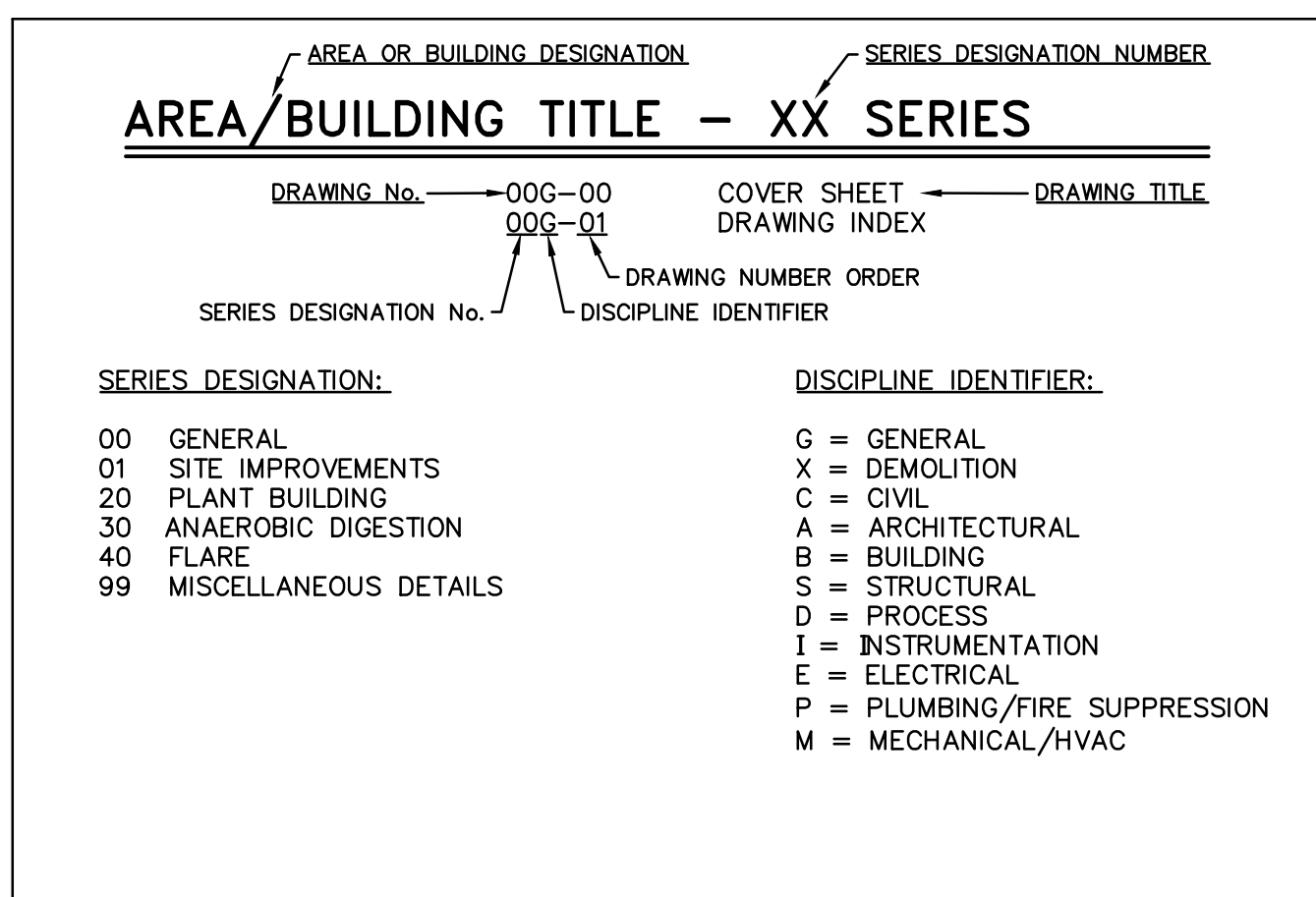


AERIAL MAP
SCALE: 1"=100'

APRIL 2024

<p>REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY COVER SHEET</p> <p style="text-align: right; font-size: small;">CITY OF WOOSTER WAYNE COUNTY, OH</p>	<p style="font-size: x-small;"> RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com </p> <p style="font-size: x-small;"> Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants </p>
<p>THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691</p>	<p>SCALE 0 50' 100' 200' 300'</p>
<p>MANAGER: STEVEN SIEGFRIED DESIGN BY: SSU DRAWN BY: JOG SURV. CHIEF: N/A</p> <p>CHKD BY: JDW CHKD BY: JDW FIELDBOOK NO.: N/A</p>	<p>FOR RETTEW ASSOCIATES BY:</p> <p style="text-align: right; font-size: x-small;"> NO. DATE REVISION A 4/05/24 ISSUED FOR CONSTRUCTION </p>
<p>PROJ. NO. 122022001</p>	<p>DWG. NO. 00G-01</p>

DRAWING INDEX KEY:



00 SERIES – GENERAL

DWG No.	DRAWING TITLE
00G-01	COVER SHEET
00G-02	DRAWING INDEX
00G-03	GENERAL NOTES AND ABBREVIATIONS
00G-04	CIVIL - SYMBOLS, ABBREVIATIONS & NOTES
00I-01	INSTRUMENTAION - SYMBOLS, ABBREVIATION AND NOTES
00E-01	ELECTRICAL - SYMBOLS, ABBREVAITONS AND NOTES

01 SERIES – SITE IMPROVEMENTS

DWG No.	DRAWING TITLE
01A-01	SCHEDULE OF SPECIAL INSPECTIONS
01X-01	SITE DEMOLITION PLAN
01XE-01	EXISTING SITE PLAN - ELECTRICAL DEMOLITION
01C-01	PROPOSED SITE PLAN
01C-02	NOT USED
01C-03	GRADING PLAN
01C-04	E&S PLAN
01C-05	E&S NOTES
01C-06	E&S DETAILS
01E-01	PROPOSED SITE PLAN - ELECTRICAL NEW WORK
01E-10	EXISTING POWER DISTRIBUTION DIAGRAM - NEW WORK
01E-11	NEW MOTOR CONTROL CENTER MCC-7 - POWER DISTRIBUTION DIAGRAM (INCLUDES ADD-ALTERNATE ITEMS)
01E-12	EXISTING PLC/MCC CABINET SINGLE LINE DIAGRAMS
01E-20	CONTROL 1-LINE DIAGRAMS I (INCLUDES ADD-ALTERNATE ITEMS)
01E-30	ELECTRICAL SCHEDULES I (INCLUDES ADD-ALTERNATE ITEMS)
01E-31	ELECTRICAL SCHEDULES II (INCLUDES ADD-ALTERNATE ITEMS)
01E-40	SCADA NETWORK DIAGRAM (INCLUDES ADD-ALTERNATE ITEMS)

ADD ALTERNATE BID

01E-12A	EXISTING PLC/MCC CABINET SINGLE LINE DIAGRAMS
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20 SERIES – PLANT BUILDING

DWG No.	DRAWING TITLE
20X-01	EXISTING PLANT BUILDING - DEMOLITION PLAN & SECTION
20XE-01	EXISTING PLANT BUILDING - ELECTRICAL DEMOLITION PLANS
20D-01	EXISTING PLANT BUILDING - MODIFICATION PLANS
20D-02	EXISTING PLANT BUILDING - MODIFICATION SECTIONS
20E-01	EXISTING PLANT BUILDING - ELECTRICAL MODIFICATION PLANS

30 SERIES – ANAEROBIC DIGESTION

DWG No.	DRAWING TITLE
30X-01	ANAEROBIC DIGESTERS - UPPER DEMOLITION PLAN - SHEET NO. 1
30X-02	ANAEROBIC DIGESTERS - LOWER DEMOLITION PLAN - SHEET NO.1
30X-03	ANAEROBIC DIGESTERS - UPPER DEMOLITION PLAN - SHEET NO. 2
30X-04	ANAEROBIC DIGESTERS - LOWER DEMOLITION PLAN - SHEET NO. 2
30X-05	ANAEROBIC DIGESTERS - DEMOLITION SECTIONS - SHEET NO. 1
30X-06	ANAEROBIC DIGESTERS - DEMOLITION SECTIONS - SHEET NO. 2
30X-07	ANAEROBIC DIGESTERS - DEMOLITION PHOTOS - SECTIONS & DETAILS
30XE-01	ANAEROBIC DIGESTERS - AREA 1 - UPPER LEVEL ELECTRICAL DEMOLITION PLAN
30XE-02	ANAEROBIC DIGESTERS - AREA 1 - LOWER LEVEL ELECTRICAL DEMOLITION PLAN
30XE-03	ANAEROBIC DIGESTERS - AREA 2- UPPER LEVEL ELECTRICAL DEMOLITION PLAN
30XE-04	ANAEROBIC DIGESTERS - AREA 2 - LOWER LEVEL ELECTRICAL DEMOLITION PLAN
30D-01	ANAEROBIC DIGESTERS - UPPER MODIFICATION PLAN - SHEET NO. 1
30D-02	ANAEROBIC DIGESTERS - LOWER MODIFICATION PLAN - SHEET NO. 1
30D-03	ANAEROBIC DIGESTERS - UPPER MODIFICATION PLAN - SHEET NO. 2
30D-04	ANAEROBIC DIGESTERS - LOWER MODIFICATION PLAN - SHEET NO. 2
30D-05	ANAEROBIC DIGESTERS - PIPING SECTION - SHEET NO. 1
30D-06	ANAEROBIC DIGESTERS - PIPING SECTION - SHEET NO. 2
30D-07	ANAEROBIC DIGESTERS - PIPING SECTIONS - SHEET NO. 3
30D-08	FEEDSTOCK HOLDING TANK - PIPING SECTIONS
30E-01	ANAEROBIC DIGESTERS - AREA 1 - UPPER LEVEL ELECTRICAL MODIFICATION PLAN
30E-02	ANAEROBIC DIGESTERS - AREA 1 - LOWER LEVEL ELECTRICAL MODIFICATION PLAN
30E-03	ANAEROBIC DIGESTERS - AREA 2 - UPPER LEVEL ELECTRICAL MODIFICATION PLAN
30E-04	ANAEROBIC DIGESTERS - AREA 2 - LOWER LEVEL ELECTRICAL MODIFICATION PLAN
30E-05	ANAEROBIC DIGESTERS - AREA 1 - TUNNEL PLAN - ELECTRICAL MODIFICATIONS (INCLUDES ADD-ALTERNATE ITEMS)

ADD ALTERNATE BID

30X-04A	ANAEROBIC DIGESTER T-004 - DEMOLITION PLANS
30X-06A	ANAEROBIC DIGESTER T-004 - DEMOLITION SECTION
30D-04A	ANAEROBIC DIGESTER T-004 - MODIFICATION PLANS
30D-06A	ANAEROBIC DIGESTER T-004 - PIPING SECTION
30XE-03A	ANAEROBIC DIGESTERS - AREA 2- UPPER LEVEL ELECTRICAL DEMOLITION PLAN
30XE-04A	ANAEROBIC DIGESTERS - AREA 2 - LOWER LEVEL ELECTRICAL DEMOLITION PLAN
30E-03A	ANAEROBIC DIGESTERS - AREA 2 - UPPER LEVEL ELECTRICAL MODIFICATION PLAN
30E-04A	ANAEROBIC DIGESTERS - AREA 2 - LOWER LEVEL ELECTRICAL MODIFICATION PLAN

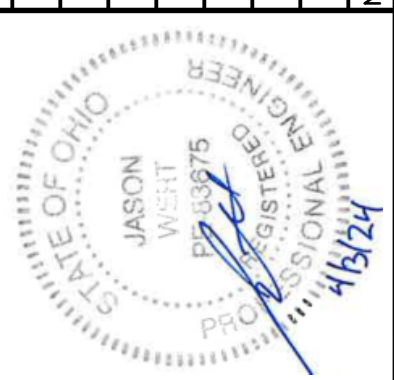
40 SERIES – FLARE

DWG No.	DRAWING TITLE
40D-01	FLARE PIPING PLAN & SECTIONS
40E-01	FLARE ELECTRICAL PLAN & SECTIONS

99 SERIES – MISCELLANEOUS DETAILS

DWG No.	DRAWING TITLE
99D-01	MISCELLANEOUS DETAILS - SHEET NO. 1
99D-02	MISCELLANEOUS DETAILS - SHEET NO. 2
99D-03	PIPE SUPPORT DETAILS
99E-01	ELECTRICAL STANDARD DETAILS - I
99E-02	ELECTRICAL STANDARD DETAILS - II
99E-03	ELECTRICAL STANDARD DETAILS - III

FOR RETTEW ASSOCIATES BY:



MANAGER:	STEVEN SIEGFRIED
DESIGN BY:	SSU
DRAWN BY:	JOC/GRS
SURV. CHIEF:	N/A
CHKD BY:	JDW
CHKD BY:	JDW
FELDBOOK NO.:	N/A

THE CITY OF WOOSTER
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Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
DRAWING INDEX

CITY OF WOOSTER
WAYNE COUNTY, OH

PROJ. NO.	122022001
DWG. NO.	00G-02

BASE BID
CONTRACT No. GC 24-01

DEMOLITION NOTES:

1. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR, EQUIPMENT & SERVICES TO PROPERLY EXECUTE THE DEMOLITION & REMOVAL WORK INDICATED ON THESE CONSTRUCTION DOCUMENTS AND AS SPECIFIED IN SECTION 024100.
2. THE CONTRACTOR SHALL VISIT THE SITE AND INSPECT THE EXISTING STRUCTURES AND VERIFY THAT ALL ITEMS INDICATED TO BE EXISTING AND SO MARKED ARE IN PLACE AND CORRECT.
3. PROVISIONS SHALL BE MADE TO ALLEVIATE THE SPREAD OF DEBRIS, DIRT & DUST TO THE ROADWAY AND ADJACENT PROPERTIES. THE PROPERTY SHALL BE KEPT AS CLEAN AS POSSIBLE AT ALL TIMES.
4. ALL DEBRIS AND MATERIALS FROM THE DEMOLITION WORK SHALL BE DISPOSED OF OFF THE SITE IN A LEGAL MANNER. NO RECLAIMED MATERIALS SHALL BE RE-USED EXCEPT AS SPECIFICALLY APPROVED BY ENGINEER OR OWNER.
5. WHERE DEMOLITION AND CUTTING WORK HAS OCCURRED OR WHERE EXISTING SURFACES, MATERIALS OR OTHER ITEMS HAVE BEEN DAMAGED OR DISTURBED AS A RESULT OF THIS CONTRACT, THE SAID SURFACES AND AREAS SHALL BE CAREFULLY RESTORED AS REQUIRED TO BE CONTIGUOUS TO EXISTING SURROUNDING SURFACES.
6. WHERE ELECTRICAL NEEDS TO BE ABANDONED, REMOVE CONDUIT/WIRE FROM LOCATION ALL THE WAY BACK TO ELECTRICAL PANEL OR SOURCE.
7. WHERE PIPING NEEDS TO BE ABANDONED, REMOVE ALL WATER LINES BACK TO POINT OF ENTRY. CAREFULLY VERIFY IF ANY WATER LINES CAN BE RE-UTILIZED AS A PART OF THE NEW CONSTRUCTION.
8. DEMOLITION TO INCLUDE REMOVAL AND DISPOSAL OF ALL EQUIPMENT UNLESS STATED OTHERWISE.

GENERAL NOTES:

1. ALL ELEVATIONS SHOWN ARE REFERENCED TO PREVIOUS RECORD DRAWINGS AND SHALL BE VERIFIED BY THE CONTRACTOR AT GROUND BREAKING.
2. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN TEMPORARY BENCHMARKS WITHIN THE PROJECT AREA.
3. THE CONTRACTOR SHALL FIELD VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AT THE PROJECT SITE.
4. THE CONTRACTOR SHALL COORDINATE HIS/HER ACTIVITIES WITH THOSE OF ALL OTHER CONTRACTORS ON SITE IN ORDER TO MINIMIZE DELAYS ASSOCIATED WITH CONFLICTS.
5. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF ACT 187. NOTIFICATION OF UTILITIES PRIOR TO CONSTRUCTION.
6. ALL EXISTING INVERT DEPTHS AND EXISTING UTILITY AND STRUCTURE LOCATIONS ARE APPROXIMATE AND HAVE BEEN BASED UPON RECORD DRAWINGS. THE ENGINEER DOES NOT GUARANTEE OR ASSURE THAT SUCH INFORMATION IS TRUE AND ACCURATE. THE CONTRACTOR SHALL VERIFY LOCATIONS, SIZES, INVERTS, ETC. THE CONTRACTOR SHALL ADJUST HIS/HER WORK ACCORDINGLY AND NOTIFY THE ENGINEER OF ANY SUCH CONFLICT.
7. ALL SPOT ELEVATIONS ARE REFERENCED THE FINISHED GROUND SURFACE, UNLESS NOTED OTHERWISE.
8. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICE THROUGHOUT THE CONSTRUCTION SEQUENCE. SEE SECTION 011400 FOR FURTHER DETAILS.
9. LOCATION AND NUMBER OF PIPE SUPPORTS AND PIPE HANGERS IS APPROXIMATE. FINAL SUPPORT REQUIREMENTS SHALL BE DETERMINED IN ACCORDANCE WITH SECTION 402300.
10. LOCATION AND NUMBER OF FLEXIBLE CONNECTIONS AND UNIONS IS APPROXIMATE. PROVIDE ALL FLEXIBLE CONNECTIONS AND UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
11. CONTRACTOR SHALL EXERCISE EXTREME CARE IN EXCAVATION FOR ALL UNDERGROUND PIPELINES AND FACILITIES TO PREVENT ACCIDENTAL DAMAGE TO THE EXISTING UTILITIES AND ADJACENT BUILDINGS & STRUCTURES. THE CONTRACTOR SHALL SUPPORT AND PROTECT ALL EXPOSED LINES OR OTHER FACILITIES, AND SHALL SUPPORT AND MAINTAIN THE SAFETY AND STRUCTURAL INTEGRITY OF ADJACENT BUILDINGS & STRUCTURES WITHIN OR DIRECTLY ADJACENT TO THE WORK. RESTORATION OF DAMAGED BUILDINGS, STRUCTURES, PIPING, CABLES, CONDUITS, WIRING AND APPURTENANCES SHALL BE AT NO COST TO THE OWNERS OF SAID BUILDINGS, STRUCTURES AND UTILITIES, OWNER OR ENGINEER.
12. IN THE EVENT OF DAMAGE OF UTILITIES, BUILDINGS OR STRUCTURES THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY, BUILDING OR STRUCTURE OWNER AND THE ENGINEER, AND BE PREPARED TO IMMEDIATELY MAKE COMPLETE RESTORATION AND REPAIR OF THE DAMAGED FACILITY TO THE SATISFACTION OF THE UTILITY, BUILDING OR STRUCTURE OWNER. NO REPAIR OF THE UTILITY IS TO COMMENCE UNLESS AUTHORIZED BY ENGINEER OR THREAT OF DAMAGE TO PROPERTY OR PERSONS IS IMMINENT.
13. THE CONTRACTOR IS NOTIFIED THAT THE OCCUPATIONAL HEALTH AND SAFETY ACT (OSHA) CLEARANCES MUST BE MAINTAINED TO OVERHEAD POWER LINES FROM ANY CONSTRUCTION EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF OSHA STANDARDS IN THIS REGARD.
14. STRUCTURE LOCATION (NORTHING & EASTING) AND OFFSETS ARE TO OUTSIDE FACE OF CONCRETE WALL OR BUILDING, UNLESS SHOWN OR NOTED OTHERWISE.
15. FOR REFERENCED BACKGROUND INFORMATION AND OTHER TECHNICAL DATA, SEE SECTION 007300.
16. MAPPING AND TOPOGRAPHY SHOWN ON DRAWINGS IS BASED ON A VARIETY OF RECORD DRAWINGS. SEE SECTION 007300 FOR FURTHER INFORMATION.

GENERAL ABBREVIATIONS:

AC	ACRE	FH	FIRE HYDRANT	OF	OUTSIDE FACE
⊙	AT	FLG	FLANGE	PE	PLAIN END
ABD	ABANDONED	GA	GAUGE	PT	PRESSURE TREATED
ADA	AMERICANS WITH DISABILITIES ACT	GM	GAS METER	PVMT	PAVEMENT
AFF	ABOVE FINISHED FLOOR	GRD	GRADE	PW	POTABLE WATER
AFG	ABOVE FINISHED GRADE	GRND	GROUND	QTY	QUANTITY
AWL	AVERAGE WATER LEVEL	GV	GAS VALVE	RD	ROOF DRAIN
BGV	BURIED GATE VALVE	H	POTABLE HOT WATER	REF	REFERENCE
BLDG	BUILDING	HB	HOSE BIBB	REINF	REINFORCED
BOC	BOTTOM OF CURB	HORIZ	HORIZONTAL	REQ/D	REQUIRED
BOP	BOTTOM OF PIPE	HS	HIGH STRENGTH	R/W	RIGHT OF WAY
BOT	BOTTOM OF PIPE	HT&I	HEAT TRACE & INSULATE	SAN	SANITARY
C	POTABLE COLD WATER	HW	HOT WATER	SCH	SCHEDULE
CB	CATCH BASIN	HWL	HIGH WATER LEVEL	SHT	SHEET
CL	CENTERLINE	ID	INSIDE DIAMETER	SQ	SQUARE
⊕	CENTERLINE	INF	INFLUENT	STA	STATION
C/C	CENTER TO CENTER	INT	INTERIOR	STD	STANDARD
C/E	CONSTRUCTION EASEMENT	INV	INVERT	S/W	SIDEWALK
C/O	CLEAN OUT	JT	JOINT	TBD	TO BE DETERMINED
CW	COLD WATER	L	LENGTH	TOC	TOP OF CURB
DIA or ⌀	DIAMETER	LN	LINEAR	TOG	TOP OF GRATE
DIV	DIVISION	LR	LONG RADIUS	TOW	TOP OF WALL
DN	DOWN	LWL	LOW WATER LEVEL	THK	THICK
E	EASTING	MAT'L	MATERIAL	TYP	TYPICAL
EA	EACH	MAX	MAXIMUM	UV	ULTRAVIOLET
EFF	EFFLUENT	MIN	MINIMUM	VERT	VERTICAL
EG	EXISTING GRADE	MH	MANHOLE	VTR	VENT THROUGH ROOF
ELEC	ELECTRIC	MJ	MECHANICAL JOINT	W/	WITH
EL	ELEVATION	MO	MASONRY OPENING	W/O	WITHOUT
EMBED	EMBEDMENT	MWL	MAXIMUM WATER LEVEL	WH	WATER HEATER
EOP	EDGE OF PAVEMENT	N	NORTHING	WM	WATER METER
EQP	EQUIPMENT	N/A	NOT APPLICABLE	WL	WATER LINE
EX	EXISTING	N/F	NOW AND/OR FORMALLY	WT	WATER TIGHT
EXP	EXPANSION	No.	NUMBER	WV	WATER VALVE
EXT	EXTERIOR	NOM	NOMINAL	YD	YARD DRAIN
FD	FLOOR DRAIN	NPW	NON POTABLE WATER	YH	YARD HYDRANT
FF EL	FINISHED FLOOR ELEVATION	NTS	NOT TO SCALE	YR	YEAR
FF FLG	FACE TO FACE FLANGE	OC	ON CENTER		
FG	FINAL GRADE	OD	OUTER DIAMETER		

GENERAL ABBREVIATIONS NOTES:

1. THE ABOVE ABBREVIATION LIST IS SHOWING COMMONLY USED ABBREVIATIONS. ALL ABBREVIATIONS MAY NOT BE USED ON THIS PROJECT. ABBREVIATIONS MAY VARY BY DISCIPLINE, REFER TO DISCIPLINE SPECIFIC ABBREVIATION LIST FOR SPECIFIC ABBREVIATIONS.

MATERIAL ABBREVIATIONS:

AL	ALUMINUM
AGGR	AGGREGATE
BIT	BITUMINOUS
CER	CERAMIC
CI	CAST IRON
CIP	CAST IRON PIPE
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CPVC	CORRUGATED POLYVINYL CHLORIDE
CTS	COPPER TUBE SIZE
Cu	COPPER
DI	DUCTILE IRON
DIP	DUCTILE IRON PIPE
FRP	FIBERGLASS
GALV	GALVANIZED
GI	GALVANIZED IRON
GSTIP	GALVANIZED STEEL PIPE
GYP	GYP SUM
GL	GLASS
GVL	GRAVEL
HDPE	HIGH DENSITY POLYETHYLENE
INSUL	INSULATION
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
RCOP	REINFORCED CONCRETE CYLINDER PIPE
RGS	RIGID GALVANIZED STEEL
RGS-PVC	PVC COATED RGS
SS	STAINLESS STEEL
STL	STEEL
VCP	VITRIFIED CLAY PIPE
VIN	VINYL

UNIT ABBREVIATIONS:

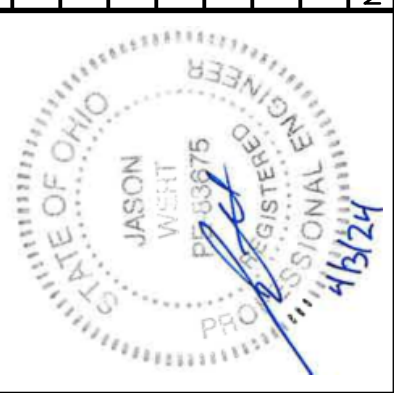
CU FT	CUBIC FOOT/FEET
d	PENNY (NAIL MEASURE)
D or °	DEGREE
FT	FOOT OR FEET
GAL	GALLON
GPM	GALLONS PER MINUTE
HR	HOURLY
IN	INCH
K	KIPS
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
LF	LINEAR FOOT
MGD	MILLION GALLONS PER DAY
MPH	MILES PER HOUR
MU	MASONRY UNIT
PCT or %	PERCENT
PCF	POUNDS PER CUBIC FOOT
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
SF	SQUARE FOOT
SQ IN	SQUARE INCH
SY	SQUARE YARD
VOL	VOLUME

CHEMICAL ABBREVIATIONS:

AM	AMMONIA
C	CARBON
CA	CITRIC ACID
CD	CHLORINE DIOXIDE
CL	CHLORINE
CO	CARBON DIOXIDE
CS	CAUSTIC SODA
F	FLUORIDE
FA	FILTER ACID
FC	FERRIC CHLORIDE
FS	FERRIC SULFATE
HFL	HYDROFLUOSILICIC ACID
HPS	HIGH PRESSURE SODIUM
HP	HYDROGEN PEROXIDE
K	POTASSIUM PERMANGANATE
L	LIME
LPS	LOW PRESSURE SODIUM
O	OXYGEN
OZ	OZONE
PAC	POWERED ACTIVATED CARBON
PACI	POLYALUMINUM CHLORIDE
PVC	POLYVINYL CHLORIDE
SA	SODA ASH
SB	SODIUM BISULFATE
SFA	SULFURIC ACID
SHP	SODIUM HYPOCHLORITE
SHX	SODIUM HYDROXIDE

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION


FOR RETTEW ASSOCIATES BY:



MANAGER:	DESIGNED BY:	CHKD BY:
STEVEN SIEGFRIED	SSU	SSU
DRAWN BY:	CHKD BY:	FILEBOOK NO.
JOG	JDW	N/A
SURV. CHIEF:		
N/A		

THE CITY OF WOOSTER
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NTS



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Engineers • Planners • Surveyors • Landscape Architects
 Environmental Consultants

REBID BIOSOLIDS UPGRADE PROJECT
 FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
 GENERAL NOTES AND ABBREVIATIONS

CITY OF WOOSTER
 WAYNE COUNTY, OH

PROJ. NO.	122022001
DWG. NO.	00G-03

LINE SYMBOLOGY:

	NEW FENCE LINE		Existing Fence Line
	NEW MAJOR CONTOUR LINE		Existing Major Contour Line
	NEW MINOR CONTOUR LINE		Existing Minor Contour Line
	NEW EDGE OF PAVEMENT		Existing Edge of Pavement Line
	NEW RIGHT-OF-WAY LINE		Existing Right-of-Way Line
	NEW PROPERTY LINE		Existing Property Line
	TEMPORARY CONSTRUCTION EASEMENT LINE		Existing Easement Line
	NEW CENTER LINE		Existing Center Line
	NEW OVERHEAD ELECTRIC LINE		Existing Underground Fiber Optic Line
	NEW UNDERGROUND ELECTRIC LINE		Existing Overhead Electric Line
	NEW OVERHEAD TELEPHONE LINE		Existing Underground Electric Line
	NEW UNDERGROUND TELEPHONE LINE		Existing Overhead Telephone Line
	NEW GAS LINE		Existing Underground Telephone Line
	NEW SWALE LINE		Existing Gas Line
	NEW STORM SEWER LINE		Existing Swale Line
	NEW DRAIN LINE		Existing Storm Sewer Line
	NEW SANITARY SEWER LINE		Existing Drain Line
	NEW SANITARY FORCEMAIN SEWER LINE		Existing Sanitary Sewer Line
	NEW WATER LINE		Existing Sanitary Forcemain Sewer Line
	NEW NON-POTABLE WATER LINE		Existing Water Line
	NEW POTABLE WATER LINE		Existing Non-Potable Water Line
	NEW HOT WATER LINE		Existing Potable Water Line
	NEW COLD WATER LINE		Existing Air Line
	NEW AIR LINE		Existing Edge of Stream
	NEW CHLORINE SOLUTION LINE		Existing Brush Line

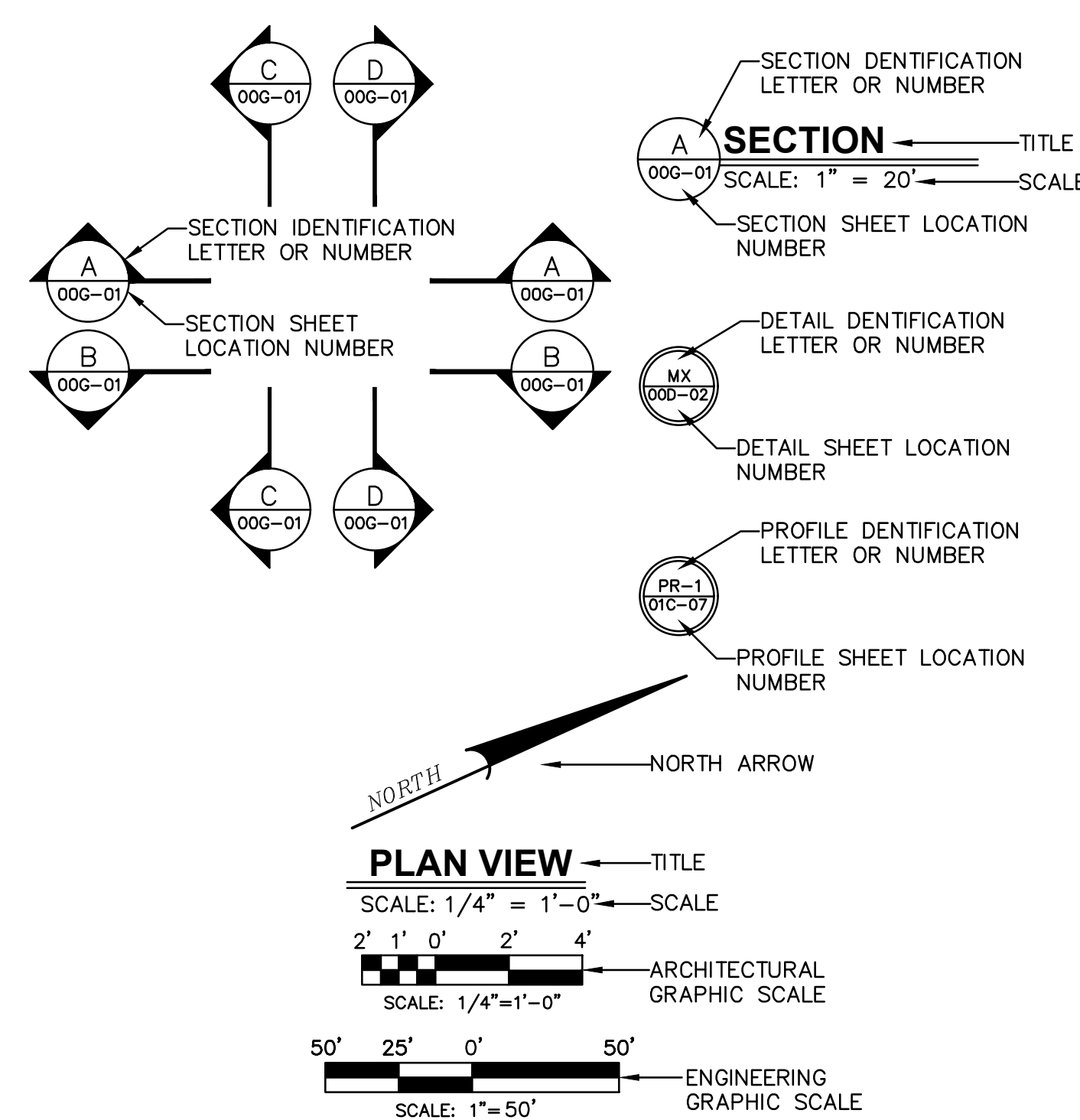
PLAN SYMBOLOGY:

	NEW UTILITY POLE		Existing Utility Pole
	NEW POWER POLE		Existing Power Pole
	NEW LIGHT STANDARD		Existing Light Standard
	NEW WATER VALVE		Existing Water Valve
	NEW GAS VALVE		Existing Gas Valve
	NEW BURIED GATE VALVE		Existing Buried Gate Valve
	NEW FIRE HYDRANT		Existing Fire Hydrant
	NEW YARD HYDRANT		Existing Yard Hydrant
	NEW SIGN		Existing Sign
	NEW SANITARY SEWER MANHOLE		Existing Sanitary Sewer Manhole
	NEW SANITARY SEWER CLEAN OUT		Existing Sanitary Sewer Cleanout
	NEW STORM SEWER INLETS		Existing Storm Sewer Inlet
	NEW STORM SEWER YARD DRAIN		Existing Storm Sewer Yard Drain
			Existing Deciduous Tree
			Existing Evergreen Tree
			Existing Shrub

MATERIAL SYMBOLOGY:

	PAVEMENT LIMITS (PLAN)		GRATING (PLAN)
	PAVEMENT/ROADWAY (SECTION)		GRATING (SECTION)
	NON-PAVED SITE RESTORATION (PLAN)		METAL PLATE (PLAN)
	EXISTING EARTHEN MATERIAL (SECTION/ELEVATION)		METAL CROSS-SECTIONAL (SECTION)
	NEW EARTHEN MATERIAL (SECTION/ELEVATION)		MASONRY BLOCK WALL (SECTION/ELEVATION)
	GRANULAR FILL (SECTION)		SPLIT FACE MASONRY BLOCK WALL (SECTION/ELEVATION)
	RIP RAP APRON (PLAN)		MASONRY BRICK WALL (SECTION/ELEVATION)
	BRICK MASONRY (PLAN)		METAL SIDING (SECTION/ELEVATION)
	CONCRETE MASONRY UNIT (PLAN)		ALUMINUM/VINYL SIDING (SECTION/ELEVATION)
	PRECAST CONCRETE (PLAN/SECTION/ELEVATION)		SHINGLE (SECTION/ELEVATION)
	CONCRETE (PLAN/SECTION/ELEVATION)		GLASS (SECTION/ELEVATION)
	GROUT (SECTION)		WETLANDS (PLAN/SECTION)
	DEMOLITION (PLAN/SECTION/ELEVATION)		LOW STRENGTH MORTAR (PLAN/SECTION/ELEVATION)

GENERAL SYMBOLOGY:



GENERAL SYMBOLOGY NOTES:

- THIS IS A STANDARD SHEET SHOWING COMMONLY USED SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
- PLUMBING/FIRE SUPPRESSION - REFER TO PLUMBING/FIRE SUPPRESSION SYMBOLS, ABBREVIATIONS AND NOTES. (00P-01)
- INSTRUMENTATION - REFER TO INSTRUMENTATION SYMBOLS, ABBREVIATIONS AND NOTES. (00I-01)
- ELECTRICAL - REFER TO ELECTRICAL SYMBOLS, ABBREVIATIONS AND NOTES. (00E-01)

PIPING SYMBOLOGY:

FLANGED:	MECHANICAL JOINT:	SINGLE LINE:	DESCRIPTION:	MISCELLANEOUS:	
			MAIN LINE PIPING		FLEXIBLE CONNECTOR
			PLUG VALVE		PIPE THROUGH SECTION
			BALL VALVE		PIPE CONTINUOUS BREAK
			PINCH VALVE		PIPE BASE SUPPORT
			BUTTERFLY VALVE		MOTOR OPERATOR W/ MANUAL OPERATOR
			CHECK VALVE		PIPE PENETRATION EXISTING WALL/FLOOR
			GATE VALVE		WALL SLEEVE
			KNIFE GATE VALVE		FLGxFLG WALL PIPE
			11 1/2' BEND		FLGxMJ WALL PIPE
			22 1/2' BEND		MJxMJ WALL PIPE
			45' BEND		
			90' BEND		
			WYE FITTING		
			TRUE WYE FITTING		
			TEE FITTING		
			CONCENTRIC REDUCER		
			ECCENTRIC REDUCER		
			UNION		

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION

FOR RETTEW ASSOCIATES BY:

MANAGER: STEVEN SIEGFRIED
 DESIGN BY: CHKO BY: JMW
 555A
 DRAWN BY: CHKO BY: MAM/JDW
 GRS
 SURV. CHIEF: FELBOOK NO. N/A

THE CITY OF WOOSTER
 1123 OLD COLUMBUS ROAD
 WOOSTER, OH 44691

NTS

RETTEW Associates, Inc.
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 Website: www.rettew.com

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 Environmental Consultants

REBID BIOSOLIDS UPGRADE PROJECT
 FOR
 THE CITY OF WOOSTER
 WATER RESOURCE RECOVERY FACILITY
 CIVIL - SYMBOLS, ABBREVIATIONS & NOTES

WAYNE COUNTY, OH
 CITY OF WOOSTER

PROJ. NO.	122022001
DWG. NO.	00G-04

BASE BID
 CONTRACT No. GC 24-01

ANNOTATION

DRAWING DETAIL & NOTE CALLOUTS

- (X) KEYED NOTE
- [X] DEMOLITION KEYED NOTE
- (X) REVISION SEQUENCE NUMBER
- () DETAIL NUMBER
- () DRAWING NUMBER
- () SECTION LETTER
- () SECTION DRAWING NUMBER
- () AREA OF REVISION

EQUIPMENT & DEVICE CALLOUTS

- XXX-NNN EQUIPMENT TAG
- (LLL NNNg) INSTRUMENT TAG
- (XX XX) MECHANICAL/HVAC OR PLUMBING EQUIPMENT TAG. REFER TO DISCIPLINE SHEETS FOR EQUIPMENT ABBREVIATIONS

INSTRUMENTATION LINE DESIGNATIONS

- CONNECTION TO PROCESS
- PNEUMATIC SIGNAL
- ELECTRICAL CONNECTION
- CAPGLARY TUBING
- HYDRAULIC SIGNAL
- ELECTROMAGNETIC, SONIC SIGNAL, OR RADIATION
- SOFTWARE LINK OR MANUFACTURER'S SYSTEM SUPPLIED CONNECTIONS BETWEEN FUNCTIONS
- NN/XX FLOW STREAM No NN TO SHEET No XX
- /// FLOW STREAM TO OR FROM EQUIPMENT NOT SHOWN ON OTHER P&ID DRAWINGS

INSTRUMENTATION TAGGING

EQUIPMENT TAGGING

EQUIPMENT (SEE TABLE)

DEVICE NUMBER

DEVICE MAIN AREA (OPTIONAL)

XXX=FUNCTIONAL INSTRUMENT IDENTIFICATION LETTERS FROM INSTRUMENT IDENTIFICATION TABLE.

X=LETTER SUFFIX TO DISTINGUISH BETWEEN INSTRUMENTS IN LOOP WITH SAME FUNCTIONAL IDENTIFICATION. (USED AS REQ'D)

DEVICE NUMBER

DEVICE MAIN AREA (OPTIONAL)

EQUIPMENT TABLE:

ARV- AIR RELEASE VALVE
 CV- CHECK VALVE
 CP- CONTROL PANEL
 D- DRIVE
 G- GRINDER
 MOV- MOTOR OPERATED VALVE
 P- PUMP
 PSV- PRESSURE SUSTAINING VALVE
 T- TANK
 V- VALVE

XX DENOTES ONE OF THE FOLLOWING:
 AM AUTO/MANUAL
 CAM COMPUTER/AUTO/MANUAL
 CL COMPUTER/LOCAL
 CM COMPUTER/MANUAL
 DOB DRIVE/OFF/BYPASS
 FOS FAST/OFF/SLOW
 FOR FORWARD/OFF/REVERSE
 FR FORWARD/REVERSE
 FS FAST/SLOW
 HOA HAND/OFF/AUTO
 KEY KEYPAD
 LOR LOCAL/OFF/REMOTE
 LOS LOCKOUT/STOP
 MFS MODULATE FASTER/SLOWER
 MOC MODULATE OPEN/CLOSE
 OC OPEN/CLOSE
 OO ON/OFF
 OSC OPEN/STOP/CLOSE
 SS START/STOP
 PB PUSH BUTTON

DEVICES AND COMPONENTS

PRIMARY ELEMENT - FLOW

- (M) MAGNETIC
- (S) CORIOLIS
- () THERMAL DISPERSION
- () ULTRASONIC TRANSIT-TIME OR DOPPLER
- () VENTURI
- () ORIFICE PLATE
- () PGTOT TUBE OR ANNUBAR
- () PROPELLER OR TURBINE
- () VORTEX
- (FI) ROTAMETER
- () FLUME
- (FS) FLOW SWITCH
- () WEIR

PRIMARY ELEMENT - LEVEL

- () BUBBLER TUBE
- () ULTRASONIC
- () CAPACITANCE
- () ELECTRODES (W/HOLDER)
- () FLOAT
- () OPTICAL

HAND SWITCHES

- (HS) SELECTOR SWITCH (MAINTAINED CONTACTS)

EQUIPMENT

- (XX) CENTRIFUGAL PUMP (DRY PGT)
- (XX) CENTRIFUGAL PUMP (WET PGT)
- (XX) EJECTOR, EDUCTOR
- (XX) METERING PUMP-CHEMICAL
- (XX) CENTRIFUGAL COMPRESSOR OR BLOWER
- (XX) RECIPROCATING COMPRESSOR (PD)
- (XX) ROTARY COMPRESSOR (PD) OR BLOWER
- (M) MOTOR
- (XX) MIXER
- (XX) STATIC MIXER
- (XX) VERTICAL TURBINE PUMP
- (XX) VERTICAL CENTRIFUGAL PUMP
- (XX) POSITIVE DISPLACEMENT PUMP

XX DENOTES ONE OF THE FOLLOWING:
 CS = CONSTANT SPEED
 ZS = TWO SPEED
 VS = VARIABLE SPEED
 NO MARKS DENOTES UNDEFINED

ANALYSIS INSTRUMENTS:

- (AE) EXPOSED PROBE OR GAS DETECTION
- (AE) TAPPED OR SAMPLED
- (AE) IN-LINE

XX DENOTES ONE OF THE FOLLOWING:
 CLG=CHLORINE GAS
 CLR=CHLORINE RESIDUAL
 PH=PH
 T=TURBIDITY
 FLR=FLUORIDE
 SCD=STREAMING CURRENT
 PM=PARTICLE MONITOR
 PC=PARTICLE COUNTER
 TOC=TOTAL ORGANIC CARBON
 CON=CONDUCTIVITY
 AM=AMMONIA

VALVES / GATES

- () BALL VALVE
- () BUTTERFLY VALVE
- () CHECK VALVE
- () CHECK BALL VALVE
- () GATE VALVE
- () GLOBE VALVE
- () DIAPHRAM VALVE
- () PGNCH VALVE
- () PLUG VALVE
- () MUD VALVE
- () THREE WAY VALVE (ARROW IF SHOWN INDICATES FAIL OPEN PATH)
- () TELESCOPING VALVE
- () SLUICE GATE
- () PREFABRICATED SLIDE GATE
- () UNCLASSIFIED GATE
- () KNIFE GATE VALVE
- () TWO-WAY VALVE, NORMALLY OPEN
- () TWO-WAY VALVE, NORMALLY CLOSED
- () THREE-WAY VALVE, TOTALLY-FILLED PORT BLOCKED AND PARTIALLY-FILLED PORT OPENED WHEN DEACTIVATED. PORT STATES REVERSE WHEN ACTIVATED.
- () ARV - AIR RELIEF
- () PRV - PRESSURE RELIEF
- () EXPANSION JOINT OR FLEXIBLE CONN.
- () RESTRAINED EXPANSION JOINT
- () UNION
- () THREDOLET
- () WELDOLET
- () DIAPHRAM SEAL
- () CONCENTRIC / ECCENTRIC REDUCER
- () TIE-IN POINT
- () FLOW DIRECTION

ACTUATORS

- (XX) ACTUATOR WITH POSITIONER
- () CYLINDER
- (M) MOTOR
- (E) ELECTROPNEUMATIC
- (E) ELECTROHYDRAULIC
- () MANUAL (SHOWN ONLY FOR CERTAIN HAND OPERATED VALVES)
- (S) SOLENOID
- () DIAPHRAM (SPRING OPPOSED)
- () DIAPHRAM (PRESSURE BALANCED)
- () PRESSURE OR VACUUM RELIEF SPRING OR WEIGHT LOADED

NOTE: ON LOSS OF PRIMARY POWER (PNEUMATIC OR ELECTRICAL)

XX DENOTES ONE OF THE FOLLOWING:
 FO = FAIL OPEN
 FC = FAIL CLOSED
 FI = FAIL TO INTERMEDIATE POSITION
 BLANK = FAIL TO LAST POSITION

MISCELLANEOUS

- () DIAPHRAM SEAL
- () ANNULAR DIAPHRAM
- () RUPTURE DISK (PRESSURE RELIEF)
- () RUPTURE DISK (VACUUM RELIEF)
- () (REGULATED SIDE)
- () PRESSURE REGULATOR
- () VENT TO ATMOSPHERE
- () AIR GAP
- () PURGE SET X DENOTES: W=WATER A=AIR
- () FLOW STRAIGHTENER
- (X) EQUIPMENT CONNECTION WITH ELECTRICAL INTERLOCK
- (XG) SIGHT GLASS X DENOTES: F=FLOW L=LEVEL
- () PRESSURE GAUGE
- () REDUCER
- () CALIBRATION COLUMN
- (MCC) MOTOR CONTROL CENTER

TRANSIENT VOLTAGE SURGE SUPPRESSOR:

- (ESH) TVSS-XX
- XX DENOTES SPECIFIC TYPE IDENTIFIER

EQUIPMENT POWER

- (AC) NNN XXX AC POWERED INSTRUMENTS
- (DC) NNN XXX DC POWERED INSTRUMENTS

NNN DENOTES POWER VOLTAGE, 120V UNLESS OTHERWISE NOTED
 XXX ALPHANUMERIC CHARACTERS TO IDENTIFY THE SOURCE OF POWER, PP (POWER PANEL) UNLESS OTHERWISE NOTED

INSTRUMENTATION GENERAL NOTES

- THESE GENERAL NOTES APPLY TO ALL 'I' SERIES DRAWINGS. NOT ALL SYMBOLS, ABBREVIATIONS AND NOTES MAY APPLY TO THIS PROJECT.
- DRAWINGS ARE DIAGRAMMATIC, CONTRACTOR SHALL VERIFY EXACT DIMENSIONS AND DETERMINE EXACT LOCATION OF SYSTEMS AND COMPONENTS IN FIELD. COORDINATE LOCATION OF FIXTURES, DEVICES, ETC. IN ORDER TO AVOID INTERFERENCES.
- ALL WORK SHALL BE PERFORMED AS REQUIRED BY APPLICABLE SECTION OF THE NATIONAL ELECTRICAL CODE AND ALL GOVERNING LOCAL CODES, LAWS, AND/OR REGULATIONS.
- ONLY EXTERNAL INTERFACE SIGNALS ARE SHOWN FOR MOTOR CONTROLLERS/STARTERS (MCC) AND VARIABLE SPEED DRIVES (VFD).
- PROVIDE DEVICES SHOWN ON THE DRAWING AND AS SPECIFIED.
- ALL INTERCONNECTING WIRING AND TERMINATORS BETWEEN EQUIPMENT, BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
- PROCESS MONITORING AND CONTROL SYSTEM CONTRACTOR SHALL PROVIDE THE ELECTRICAL CONTRACTOR WITH A FULL SIZE SET OF THEIR WIRING DIAGRAMS WITH TERMINAL BLOCK NUMBERS FILLED IN.
- UPON COMPLETION OF THE JOB, THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH A FULL SIZE SET OF AS BUILT DRAWINGS. THE DRAWINGS SHALL CONTAIN ALL TERMINAL BLOCK NUMBERS AND WIRE NUMBERS.
- REFER TO WIRE SEPARATION NOTES ON THE ELECTRICAL DRAWING GENERAL NOTES SHEET FOR COMBINING WIRING.
- UNLESS OTHERWISE NOTED, ALL DIGITAL INPUT/OUTPUT WIRING SHALL BE #14 AWG, AND ANALOG INPUT/OUTPUT WIRING SHALL BE #16 AWG TWISTED, SHIELDED CABLE.

INSTRUMENT IDENTIFICATION TABLE ISA-S5.1-1984

LETTER	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			CONTROL	
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL			
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	GAGING (DIMENSIONAL)		GLASS, VIEWING DEVICE		
H	HAND (MANUALLY INITIATED)				HIGH (OPENED)
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PGLT)		LOW (CLOSED)
M	MOISTURE OR HUMIDITY				MIDDLE OR INTERMEDIATE
N	ON/OFF		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	ORIFICE, RESTRICTION		POINT (TEST) CONNECTION		
P	PRESSURE, VACUUM				
Q	QUANTITY OR EVENT	INTEGRATE, TOTALIZE			
R	RADIOACTIVITY		RECORD		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	USER'S CHOICE		RELAY, COMPUTE, CONVERT		
Z	POSITION		DRIVER, ACTUATOR	UNCLASSIFIED FINAL CONTROL ELEMENT	

INSTRUMENT/FUNCTION & LOCATION SYMBOLS

	FIELD (LOCAL) MOUNTED	PANEL MOUNTED		MOTOR CONTROL CENTER MOUNTED	
		ACCESSIBLE OR EXTERIOR	INACCESSIBLE OR INTERIOR	ACCESSIBLE OR EXTERIOR	INACCESSIBLE OR INTERIOR
DISCRETE INSTRUMENT	()	()	()	()	()
SHARED DISPLAY/CONTROL	()	()	()	()	()
COMPUTER FUNCTION	()	()	()	()	()
PROGRAMMABLE LOGIC CONTROL	()	()	()	()	()
PGLT LIGHT	()	()	()	()	()
COMPOUND INSTRUMENTS (SHARE COMMON HOUSING)	()	()	()	()	()

INPUTS AND OUTPUTS INTERFACED WITH PLC/SCADA

CONTROL PANEL ID

XX DENOTES ONE OF THE FOLLOWING:
 AO ANALOG OUTPUT
 AI ANALOG INPUT
 DO DISCRETE OUTPUT
 DI DISCRETE INPUT

(N) DENOTES QUANTITY OF THE I/O TYPE

- () ANALOG INPUT(S)
- () ANALOG OUTPUT(S)
- () DIGITAL INPUT(S)
- () DIGITAL OUTPUT(S)

NOTE: ABBREVIATIONS & SYMBOLS INDICATED MAY NOT APPEAR ON THESE PROJECT DRAWINGS

FOR RETTEW ASSOCIATES BY:

MANAGER: STEVEN SIEGFRIED
 DESIGN BY: SSU
 DRAWN BY: JOG
 SURV. CHIEF: N/A

CHKO BY: JDW
 CHKO BY: JDW
 FIELDBOOK NO: N/A

THE CITY OF WOOSTER
 1123 OLD COLUMBUS ROAD
 WOOSTER, OH 44691

SCALE: 1"=100'

REBID BIOSOLIDS UPGRADE PROJECT
 FOR THE CITY OF WOOSTER
 WATER RESOURCE RECOVERY FACILITY
 INSTRUMENTATION - SYMBOLS, NOTES AND ABBREVIATIONS

PROJ. NO. 122022001
 DWG. NO. 001-01

SYMBOL GENERAL NOTES	
1.	WHERE DEVICE HEIGHT OF 48" OCCURS AT POINT OF CHANGE OF FINISH, THE DEVICE SHALL BE RAISED OR LOWERED TO OCCUR IN ONE FINISH.
2.	WHERE DEVICES OCCUR IN BRICK, TILE, OR BLOCK WALLS, THEY SHALL BE MOUNTED AT A VERTICAL MASONRY JOINT AND IN EITHER TOP OR BOTTOM HORIZONTAL JOINT, CLOSEST TO THE MOUNTING HEIGHT.
3.	UNLESS OTHERWISE NOTED, ALL MOUNTING HEIGHT DIMENSIONS LISTED ARE TO THE CENTER LINE OF THE WALL BOX OR DEVICE.
4.	EXISTING EQUIPMENT SHOWN SHADED OR DASHED.
5.	SOME LEGEND SYMBOLS MAY NOT BE USED. SEE PLANS FOR APPLICABLE DEVICES.

ELECTRICAL ANNOTATION

DRAWING DETAIL & NOTE CALLOUTS

	KEYED NOTE
	DEMOLITION KEYED NOTE
	REVISION SEQUENCE NUMBER
	DETAIL NUMBER
	DRAWING NUMBER
	SECTION LETTER
	SECTION DRAWING NUMBER
	AREA OF REVISION
	CONNECT/DISCONNECT POINT

EQUIPMENT & DEVICE CALLOUTS

	GENERAL EQUIPMENT TAG
	INSTRUMENT TAG
	MECHANICAL/HVAC OR PLUMBING EQUIPMENT TAG

CONDUIT, FEEDERS & BRANCH CIRCUITS	
CONDUIT & DUCTBANKS	
	CONDUIT - EXPOSED, ABOVE FLOOR/GRADE
	NEW ELECTRICAL DUCTBANK, CONDUITS DIRECT BURIED (UTILIZE PVC UNLESS NOTED OTHERWISE)
	NEW ELECTRICAL DUCTBANK, CONDUITS CONCRETE ENCASED
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	CONDUIT CAPPED
	CONDUIT SEAL OFF
	CONDUIT CALLOUT, REFER TO ELECTRICAL CONDUIT SCHEDULE
	DUCTBANK CALLOUT, REFER TO ELECTRICAL DUCTBANK SCHEDULE

POWER DISTRIBUTION, FEEDERS & BRANCH CIRCUITS

SYMBOL	MOUNTING	DESCRIPTION
	---	EXISTING PANELBOARD (RECESSED OR FLUSH MOUNTED)
	---	EXISTING PANELBOARD (SURFACE MOUNTED)
	---	NEW PANELBOARD (RECESSED OR FLUSH MOUNTED)
	---	NEW PANELBOARD (SURFACE MOUNTED)
	---	UTILITY POLE
	EHH-x	FLUSH HANDHOLE
	EMH-x	FLUSH MANHOLE
	CT-XX	CABLE TRAY W/IDENTIFICATION, REFER TO SCHEDULE
		BUS DUCT
		BRANCH CIRCUITING - (2)#12 PER 1 POLE CIRCUIT
		HOMERUN TO PANELBOARD - PANEL AND CIRCUIT NUMBER AS INDICATED
		IN-LINE HOMERUN - PANEL AND CIRCUIT NUMBER AS INDICATED
	LP1-XX	CIRCUIT HOME RUN EXAMPLE IDENTIFICATION
		CIRCUIT IDENTIFICATION PANEL IDENTIFICATION
	(3)#8, (1)#10 GRD-1" C.	CIRCUIT HOME RUN WIRING IDENTIFICATION
	FX	FEEDER IDENTIFICATION (REFER TO FEEDER SCHEDULE)
		EQUIPMENT ON SAME CIRCUIT BUT SEPARATELY CONTROLLED
		CIRCUITRY MATCH LINE
	C	COMMUNICATION
	EM	EMERGENCY ONLY CIRCUIT
	---GRD---	GROUND
	---NE---	NORMAL/EMERGENCY CIRCUIT
	OHE	OVERHEAD ELECTRIC
	OHT	OVERHEAD TELEPHONE
	P	PRIMARY ELECTRIC SERVICE
	S	SECONDARY ELECTRIC SERVICE
	T	TELEPHONE SERVICE
	TV	TELEVISION SERVICE
	---UE---	UNDERGROUND ELECTRIC SERVICE
	---UT---	UNDERGROUND TELECOMMUNICATIONS SERVICE

SYMBOL	MOUNTING	DESCRIPTION
	CEILING	LIGHT FIXTURE, REFER TO SCHEDULE
	CEILING	REPRESENTS LIGHTING IDENTIFICATION, REFER TO SCHEDULE, TYPICAL
	CEILING	LIGHT FIXTURE, NORMAL AND STANDBY OPERATION, AND/OR BATTERY PACK BACKUP INCLUDED
	WALL	LIGHT FIXTURE, REFER TO SCHEDULE
	CEILING	INDUSTRIAL LIGHT FIXTURE, REFER TO SCHEDULE
	CEILING	CEILING MOUNTED FIXTURE, REFER TO SCHEDULE
	WALL	WALL MOUNTED FIXTURE, REFER TO SCHEDULE
	WALL	EMERGENCY LIGHT BATTERY PACK UNIT, 18" BELOW CLG., MAX. 8'-0" AFF
	WALL	REMOTE HEAD(S) FOR EMERGENCY LIGHT BATTERY UNIT, 18" BELOW CLG., MAX. 8'-0" AFF
	AS NOTED	BEACON LIGHT

EXIT LIGHTING:	
	ARROWS INDICATE DIRECTION OF EXIT, SHADING INDICATES LIGHTED FACES
	CEILING EXIT LIGHT, SINGLE FACED
	CEILING EXIT LIGHT, DOUBLE FACED
	WALL EXIT LIGHT, SINGLE FACED
	WALL EXIT LIGHT, DOUBLE FACED

SITE LIGHTING:	
	REFER TO LIGHTING FIXTURE SCHEDULE OR PLANS FOR FIXTURE TYPES/INFO
	POLE SITE LIGHT FIXTURE, SINGLE ARM, POLE MOUNTED
	POLE SITE LIGHT FIXTURE, DOUBLE ARM, POLE MOUNTED
	POLE SITE TRAFFIC CONTROL LIGHT FIXTURE
	AS NOTED FLOODLIGHT
	POLE FLOOD LIGHTING, MOUNTED ON CROSS ARM, REFER TO SCHEDULE FOR NUMBER OF FIXTURES
	AS NOTED PHOTOELECTRIC CONTROL
	CEILING OCCUPANCY SENSOR
	WALL OCCUPANCY SENSOR

LIGHTING CONTACTOR:	
	LC1 - REPRESENTS LIGHTING CONTACTOR IDENTIFICATION
	48" AFF SWITCH, SINGLE POLE TOGGLE - FLUSH
	48" AFF SWITCH, DPDT - FLUSH
	48" AFF SWITCH, 3 WAY TOGGLE - FLUSH
	48" AFF SWITCH, 4 WAY TOGGLE - FLUSH
	48" AFF DIMMER SWITCH, 1000 WATT UNLESS NOTED OTHERWISE
	48" AFF SWITCHING, SEPARATE CONTROLS ON SAME CIRCUIT
	48" AFF THERMAL SWITCH - FLUSH
	48" AFF THERMAL SWITCH WITH PILOT LIGHT - FLUSH
	48" AFF SWITCH, TOGGLE WITH PILOT LIGHT - FLUSH
	48" AFF SWITCH, MANUAL MOTOR STARTER, RATING AND THERMAL OVERLOADS TO MATCH MOTOR NAME PLATE DATA
	48" AFF SWITCH, MANUAL MOTOR STARTER W/PILOT LIGHT
	48" AFF SWITCH, TOGGLE, MOMENTARY CONTACT - FLUSH
	48" AFF SWITCH, TOGGLE, MOMENTARY CONTACT, RAISE/LOWER - FLUSH
	48" AFF SWITCH, SINGLE POLE TOGGLE, KEY OPERATED - FLUSH
	48" AFF SWITCH, SINGLE POLE TOGGLE, KEY OPERATED W/PILOT LIGHT - FLUSH
	48" AFF SWITCH, 3 WAY TOGGLE, KEY OPERATED - FLUSH
	48" AFF SWITCH, 4 WAY TOGGLE, KEY OPERATED - FLUSH

SYMBOL	MOUNTING	DESCRIPTION
	36" AFF	SINGLE RECEPTACLE-FLUSH
	36" AFF	DUPLEX RECEPTACLE-FLUSH
	6" ABOVE COUNTER BACKSPLASH	DUPLEX RECEPTACLE-FLUSH-MOUNTED ABOVE COUNTER
	3" AFF	DUPLEX RECEPTACLE-WITH CAST OUTLET BOX ON STAND PIPE
	36" AFF	DUPLEX RECEPTACLE, FLUSH WITH GROUND FAULT INTERRUPTER
	24" AFG	DUPLEX RECEPTACLE-EXTERIOR, FLUSH WITH GROUND FAULT INTERRUPTER WITH WEATHERPROOF COVER
	18" AFF	DUPLEX RECEPTACLE-FLUSH-TRANSIENT VOLTAGE SURGE SUPPRESSION TYPE (TVSS)
	18" AFF	DUPLEX RECEPTACLE WITH ISOLATED GROUND-FLUSH
	18" AFF	DOUBLE DUPLEX RECEPTACLE-FLUSH
	6" ABOVE COUNTER BACKSPLASH	DOUBLE DUPLEX RECEPTACLE-FLUSH-MOUNTED ABOVE COUNTER
	18" AFF	DOUBLE DUPLEX RECEPTACLE-FLUSH-TRANSIENT VOLTAGE SURGE SUPPRESSION TYPE (TVSS)
	18" AFF	SPECIAL PURPOSE RECEPTACLE-SINGLE PHASE
	18" AFF	SPECIAL PURPOSE RECEPTACLE-THREE PHASE
	AS NOTED	SURFACE RACEWAY WITH SINGLE RECEPTACLES AS INDICATED
	AS NOTED	SURFACE RACEWAY WITH DUPLEX RECEPTACLES AS INDICATED
	AS NOTED	SURFACE RACEWAY
	CEILING	DUPLEX RECEPTACLE-FLUSH
	FLOOR	DUPLEX RECEPTACLE-FLUSH
	FLOOR	DOUBLE DUPLEX RECEPTACLE-FLUSH
	FLOOR	COMBINATION DUPLEX RECEPTACLE AND DATA OUTLET-FLUSH
	FLOOR	DUPLEX RECEPTACLE-FLUSH-TRANSIENT VOLTAGE SURGE SUPPRESSION TYPE (TVSS)
	AS NOTED	JUNCTION BOX-FLUSH
	AS NOTED	JUNCTION BOX
	AS NOTED	CIRCUIT MONITOR
	AS NOTED	PULL BOX
	AS NOTED	POWER POLE
	AS NOTED	RELAY
	AS NOTED	UNINTERRUPTIBLE POWER SUPPLY
	AS NOTED	TRANSIENT VOLTAGE SURGE SUPPRESSION
	AS NOTED	VOLTAGE REGULATOR
	AS NOTED	CONTACTOR
	48" AFF	DISCONNECT SWITCH WITH DESIGNATION, REFER TO SCHEDULE
	48" AFF	FUSED DISCONNECT SWITCH WITH DESIGNATION, REFER TO SCHEDULE
	48" AFF	COMBINATION DISCONNECT SWITCH/MOTOR STARTER WITH DESIGNATION, REFER TO SCHEDULE
	48" AFF	MOTOR STARTER-NEMA SIZE AS INDICATED (NEMA TYPE 1, UNLESS NOTED OTHERWISE)
	AS NOTED	MOTOR, HORSEPOWER INDICATED ON PLANS
	AS NOTED	TRANSFORMER, W/D NUMBER, REFER TO SCHEDULE
	AS NOTED	GENERATOR
	AS NOTED	3/4"x10'-0" COPPERCLAD GROUND ROD
	CEILING	DROP CORD
	CEILING	CORD REEL
	AS NOTED	MUSHROOM SWITCH
	AS NOTED	PUSHBUTTON STATION TYPE AS NOTED
	48" AFF	PUSHBUTTON-EMERGENCY STOP
	48" AFF	PUSHBUTTON WITH KEY RESET
	48" AFF	PUSHBUTTON-START/STOP

COMMUNICATIONS, SECURITY & FIRE ALARM	
	36" AFF DATA OUTLET
	36" AFF TELEPHONE OUTLET
	36" AFF COMBINATION DATA/TELEPHONE OUTLET
	FLOOR FLOOR MOUNTED DATA OUTLET
	FLOOR FLOOR MOUNTED TELEPHONE OUTLET
	AS NOTED AUTO-DIALER
	AS NOTED DATA CABINET/RACK
	AS NOTED TV WALL OUTLET
	AS NOTED TELEPHONE TERMINAL CABINET

TELECOMMUNICATIONS: # = NUMBER OF VOICE/DATA PORTS, TYPICAL	
	36" AFF DATA OUTLET
	36" AFF TELEPHONE OUTLET
	36" AFF COMBINATION DATA/TELEPHONE OUTLET
	FLOOR FLOOR MOUNTED DATA OUTLET
	FLOOR FLOOR MOUNTED TELEPHONE OUTLET
	AS NOTED AUTO-DIALER
	AS NOTED DATA CABINET/RACK
	AS NOTED TV WALL OUTLET
	AS NOTED TELEPHONE TERMINAL CABINET

ELECTRICAL GENERAL NOTES	
1.	THESE GENERAL NOTES APPLY TO ALL E SERIES DRAWINGS. NOT ALL SYMBOLS, ABBREVIATIONS AND NOTES MAY APPLY TO THIS PROJECT.
2.	DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR SHALL VERIFY EXACT DIMENSIONS AND DETERMINE EXACT LOCATION OF SYSTEMS AND COMPONENTS IN FIELD. COORDINATE LOCATION OF FIXTURES, DEVICES, ETC. IN ORDER TO AVOID INTERFERENCES.
3.	ARCHITECTURAL FEATURES SHOWN ON THESE DRAWINGS ARE FOR BACKGROUND INFORMATION ONLY. REFER TO ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS FOR ACTUAL BUILDING/STRUCTURE CONSTRUCTION. REFER TO EQUIPMENT DRAWINGS FOR ACTUAL LOCATION OF EQUIPMENT.
4.	ALL WORK SHALL BE PERFORMED AS REQUIRED BY APPLICABLE SECTION OF THE NATIONAL ELECTRICAL CODE AND ALL GOVERNING LOCAL CODES, LAWS, AND/OR REGULATIONS.
5.	SYSTEM AND EQUIPMENT GROUNDING CONTINUITY SHALL BE ASSURED AS REQUIRED BY APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE.
6.	ALL WORK TO BE COORDINATED WITH ALL OTHER TRADES/CONTRACTS TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
7.	VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. PROVIDE TRANSITIONS TO MAKE FINAL CONNECTION TO EQUIPMENT, UNLESS OTHERWISE INDICATED. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION OF WORK.
8.	ALL CIRCUIT PROTECTIVE DEVICES SHALL HAVE THE REQUIRED RATING INTERRUPTING CAPACITY EQUAL TO OR GREATER THAN THE AVAILABLE SHORT CIRCUIT CURRENT AT IT'S SUPPLY TERMINAL; MINIMUM INTERRUPTING CAPACITY SHALL BE 10,000 AMPS, SYMMETRICAL A.I.C. FOR 120/208V SYSTEMS AND 14,000 SYMMETRICAL A.I.C. FOR 277/480V SYSTEMS. REFER TO PANEL SCHEDULES FOR A.I.C. RATINGS.
9.	ALL WIRING SHALL BE TYPE "XHHW" UNLESS OTHERWISE NOTED; MINIMUM WIRING SHALL BE #12 AWG FOR POWER OR AS INDICATED FOR OTHER SERVICE. ALL WIRE SHALL BE COPPER. MINIMUM CONDUIT SIZE SHALL BE 3/4".

WIRE SEPARATION NOTES	
1.	SIGNAL CIRCUITS AND ALARM CIRCUITS SHALL BE RUN IN CONDUITS SEPARATE FROM ALL OTHER WIRING.
2.	SERVICE ENTRANCE, GENERATOR AND ALL LARGE FEEDERS SHALL BE IN SEPARATE CONDUITS.
3.	SEPARATE WIRING INTO RACEWAY BY LEVELS AS FOLLOWS: <ul style="list-style-type: none"> A. LEVEL 1) ANALOG SIGNALS LESS THAN 50 VOLTS AND LESS THAN 50 MILLIAMPERES. <ul style="list-style-type: none"> 1. 4-20ma SHIELDED INSTRUMENTATION. 2. SHIELDED LOW LEVEL INSTRUMENTATION. 3. VARIABLE SPEED DRIVE SPEED SIGNALS. 2) DIGITAL SIGNAL AND DATA BUSES <ul style="list-style-type: none"> 1. PROGRAMMABLE LOGIC CONTROLLER BUSES. 2. METERING SYSTEM DATA BUS. 3. INSTRUMENTATION REMOTE TERMINAL UNIT BUS. B. LEVEL 2) ANALOG SIGNAL OVER 50 VOLTS AND LESS THAN 250 VOLTS <ul style="list-style-type: none"> 1. TACHOMETER GENERATORS. 2) DIGITAL AND DISCRETE INPUTS TO PROGRAMMABLE LOGIC CONTROLLERS AND REMOTE TERMINAL UNITS ALL OUTPUTS SUPPLYING RELAY COILS SHALL HAVE PROPER SUPPRESSION. C. LEVEL 3) 1) POWER CIRCUITS OF 20 AMPERES OR LESS AND 120 VOLTS OR LESS <ul style="list-style-type: none"> 1. LIGHTING AND RECEPTACLE CIRCUITS TO BE IN SEPARATE CONDUITS, UON. 2. CLASS 1 CONTROL CIRCUITS ORIGINATING IN A MCC COMPARTMENT OR A MOTOR STARTER CAN BE ROUTED IN THE POWER CONDUIT FROM SAME COMPARTMENT. D. LEVEL 4) 1) POWER CIRCUITS OVER 20 AMPERES UP TO 400 AMPERES, 600 VOLTS. EACH CIRCUIT SHALL BE RUN IN SEPARATE CONDUITS. E. LEVEL 5) 1) FEEDERS OVER 400 AMPERES.
4.	EACH LEVEL MUST BE RUN IN SEPARATE RACEWAYS.
5.	UNLESS OTHERWISE NOTED, SEPARATE ALL PARALLEL RACEWAY RUN 5'-0" OR LONGER WITH DIFFERENT LEVELS AS FOLLOWS:

FIRE ALARM:	
	EXP = EXPLOSION PROOF. NOTE: ALL ALARM DEVICES TO BE MOUNTED AT 6'-8" A.F.F. OR 6" BELOW CEILING, WHICHEVER IS LOWER, U.O.N.
	48" AFF MANUAL PULL STATION
	AS NOTED AUDIBLE/VISUAL ALARM (HORN)
	AS NOTED FIRE ALARM BEACON
	AS NOTED FIRE ALARM STROBE
	CEILING SMOKE DETECTOR

BASE BID CONTRACT No. GC 24-01	
PROJ. NO.	122022001
DWG. NO.	00E-01

ELECTRICAL ABBREVIATIONS

A or AMP	AMPERE	FLA	FULL LOAD AMPERES	MLO	MAIN LUG ONLY	S.S.	STAINLESS STEEL
AC	ALTERNATING CURRENT	FRE	FIBERGLASS REINFORCED EPOXY	MOA	MULTI-OUTLET ASSEMBLY	SW	SWITCH
AF	FRAME AMPERE	FU	FUSE	MOD	MOTOR OPERATED DAMPER	SWBD	SWITCHBOARD
AFF	ABOVE FINISHED FLOOR	G.C.	GENERAL CONTRACTOR	MS	MOTOR STARTER	TBA	TO BE ABANDONED
AFG	ABOVE FINISHED GRADE	GEN	GENERATOR	MTD	MOUNTED	TBR	TO BE REMOVED
AIC	AMPERE INTERRUPTING CAPACITY	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	MV	MEDIUM VOLTAGE	TC	CABLE TRAY-CABLE
AS	AMMETER SELECTOR SWITCH	GFI	GROUND FAULT INTERRUPTER	N/A	NOT APPLICABLE	TCC	TELECOMMUNICATIONS CLOSET
AT	TRIP AMPERE	GND or GRD	GROUND	NE	NORMAL / EMERGENCY	TDG	TELECOMMUNICATIONS DISTRIBUTION CLOSET
ATS	AUTO TRANSFER SWITCH	HID	HIGH INTENSITY DISCHARGE	NEC	NATIONAL ELECTRICAL CODE	TL	TWIST LOCK
AUTO	AUTOMATIC	HP	HORSEPOWER	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	TP	TAMPER PROOF
AWG	AMERICAN WIRE GAUGE	H-O-A	HAND-OFF-AUTOMATIC	NC	NORMALLY CLOSED	TSP	TWISTED SHIELDED PAIR
BFF	BELOW FINISHED FLOOR	HPS	HIGH PRESSURE SODIUM	NID	NETWORK INTERFACE DEVICE	TIB	TELEPHONE TERMINAL BOARD
BFG	BELOW FINISHED GRADE	HT	HEIGHT	NO	NORMALLY OPEN	TTC	TELEPHONE TERMINAL CABINET
BLDG	BUILDING	HVAC	HEAT-VENT-AIR CONDITIONING	No.	NUMBER	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
C	COUNTERTOP RECEPTACLE, 4" ABOVE BACK SPLASH	ID	IDENTIFICATION	NPT	NOMINAL PIPE THREADS	TYP	TYPICAL
C. or COND.	CONDUIT	I.D.	INNER DIAMETER	OC	ON CENTER	UE	UNDERGROUND ELECTRIC
CB	CIRCUIT BREAKER	IG	ISOLATED GROUND	OE	OVERHEAD ELECTRIC	UG	UNDERGROUND
CKT	CIRCUIT	IMC	INTERMEDIATE METALLIC CONDUIT	OT	OVERHEAD TELECOMMUNICATIONS	UL	UNDERWRITER LABORATORIES
CP	CONTROL PANEL	IND	INDUSTRIAL	P	# OF POLES (CIRCUIT BREAKER)	UN	UNLESS OTHERWISE NOTED
CPT	CONTROL POWER TRANSFORMER	JB	JUNCTION BOX	P.C.	PLUMBING CONTRACTOR	UPS	UNINTERRUPTIBLE POWER SUPPLY
CT	CURRENT TRANSFORMER	JIC	JOINT INDUSTRIAL COUNCIL	PH	PHASE	UT	UNDERGROUND TELECOMMUNICATIONS
DESIG	DESIGNATION	KA	KILOAMPERE	PM	POWER MONITOR	UTP	UNSHIELDED TWISTED PAIR
DIA	DIAMETER	KCMIL	KILO CIRCULAR MILS	PML	PANEL	UV	ULTRAVIOLET
DISC	DISCONNECT	KV	KILOVOLT	PT	POTENTIAL TRANSFORMER	V	VOLT
DIV	DIVISION	KVA	KILOVOLT AMPERE	PVC	POLYVINYL CHLORIDE (CONDUIT)	VA	VOLT AMPERES
DPDT	DOUBLE POLE, DOUBLE THROW	KW	KILOWATT	PSI	POUNDS PER SQUARE INCH	VAC	VOLT ALTERNATING CURRENT
DS	DISCONNECT SWITCH	LA	LIGHTNING ARRESTOR	QTY.	QUANTITY	VR	VOLTAGE REGULATOR
E	EMERGENCY	LC	LIGHTING CONTACTOR	RECIP	RECEPTACLES	VS	VOLTMETER SELECTOR SWITCH
E.C.	ELECTRICAL CONTRACTOR	LTG	LIGHTING	RGS	RIGID GALVANIZED STEEL (CONDUIT)	VT	VOLTAGE TRANSFORMER
EHH	ELECTRICAL HANDHOLE	LRA	LOCKED ROTOR AMPERES	RVAT	REDUCED VOLTAGE AUTOTRANSFORMER	W	WIRE

1. STEEL CONSTRUCTION

INSPECTION TASK	FREQ		REF STD	IBC REF
	CONT	PER		
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS: (a) IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS; (b) MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED		X	AISC 360 SECT A3.3 AND APPLICABLE ASTM STANDARDS	
2. INSPECTION OF HIGH-STRENGTH BOLTING:				
a. SNUG-TIGHT JOINTS		X		
b. PRE-TENSION AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION		X	AISC 360 SECT M2.5	1704.3.3
c. PRE-TENSION AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION	X			
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:				
a. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360		X	AISC 360 SECT M5.5	
b. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS		X	APPLICABLE ASTM MATERIAL STANDARDS	
c. MANUFACTURER'S CERTIFIED TEST REPORTS		X		
4. MATERIAL VERIFICATION OF WELD FILLER: MATERIALS: (a) IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS; (b) MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED				
		X	AISC 360 SECT A3.5 AND APPLICABLE AWS AS DOCUMENTS	
5. INSPECTION OF WELDING:				
a. STRUCTURAL: STEEL AND COLD-FORMED STEEL DECK				
i. COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS; MULTIPASS FILLET WELDS; SINGLE-PASS FILLET WELDS > 5/16"; PLUG AND SLOT WELDS	X		AWS D1.1	1704.3.1
ii. SINGLE-PASS FILLET WELDS < 5/16"		X	AWS D1.1	
iii. FLOOR AND ROOF DECK WELDS		X	AWS D1.3	
iv. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS		X		1704.3
b. REINFORCING STEEL:				
i. VERIFICATION OF WELD-ABILITY OF REINFORCING STEEL OTHER THAN ASTM A706		X		
ii. REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES; AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	X		AWS D1.4 ACI 318 SECT 3.5.2	
iii. SHEAR REINFORCEMENT	X			
iv. OTHER REINFORCING STEEL		X		
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE: (a) DETAILS SUCH AS BRACING AND STIFFENING; (b) MEMBER LOCATIONS; (c) APPLICATION OF JOINT DETAILS AT EACH CONNECTION		X		1704.3.2

4. PRECAST AND PRESTRESSED CONCRETE CONSTRUCTION

INSPECTION TASK	FREQUENCY		REF STD	IBC REF
	CONT	PER		
1. INSPECTION OF PRESTRESSED CONCRETE: (A) APPLICATION OF PRESTRESSING FORCES. (B) GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM	X		ACI 350, PART 5 CH 18.18, 18.20	
2. ERECTION OF PRECAST CONCRETE MEMBERS		X	ACI 350, PART 5, CH 16	

2. CONCRETE CONSTRUCTION

INSPECTION TASK	FREQUENCY		REF STD	IBC REF
	CONT	PER		
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT		X	ACI 350, PART 2, CH 3.5, PART 3, CH 7	1913.4
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH IBC TABLE 1704.3, ITEM 5B			AWS D.1.4 ACI 350.1	
3. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED	X		ACI 350, PART 4 - CH 8	1911.5 1912.1
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE			ACI 350, PART 7 APP D.4, D.9	1912.1
5. INSPECTION OF DOWELS INSTALLED IN HARDENED CONCRETE		X	ACI 350, PART 4 CH 9	
6. VERIFYING USE OF REQUIRED DESIGN MIX		X	ACI 350, PART 2, CH 3, PART 3, CH5	1904.2, 1913.2, 1913.3
7. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X		ASTM C 172, ASTM C 31 ACI 350, PART 3, CH 5, PART 2, CH 3	1913.10
8. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X		ACI 350, PART 3, CH 5	1913.6, 1913.7, 1913.8
9. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	ACI 350, PART 3, CH 5.10	1913.9
10. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE, AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		X	ACI 350, PART 3, CH 4, 5, 6	
11. INSPECT FORM WORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 350, PART 3, CH 6.1	

5. MASONRY CONSTRUCTION

INSPECTION TASK	FREQUENCY		REF STD	IBC REF
	CONT	PER		
1. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.		X	ASCE 6 ART 15	
2. VERIFICATIONS OF F'M AND F'AC PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE		X	ASCE 6 ART 1.4B	
3. VERIFICATION SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATION GROUT	X		ASCE 6 ART 1.5B.1 b3	
4. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:				
a. PROPORTIONS OF SITE-PREPARED MORTAR		X	ASCE 6 ART 2.6A	
b. CONSTRUCTION OF MORTAR JOINTS		X	ASCE 6 ART 3.3B	
c. LOCATION OF REINFORCEMENT, CONNECTORS, PRESTRESSING TENDONS AND ANCHORAGES		X	ASCE 6 ART 3.4, 3.6A	
d. PRESTRESSING TECHNIQUE		X	ASCE 6 ART 3.6B	
e. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES.		X	ASCE 6 ART 2.4B 2.4H	
5. THE INSPECTION PROGRAM SHALL VERIFY THE FOLLOWING:				
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X	ASCE 6 ART 3.3F	
b. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAME FOR OTHER CONSTRUCTION		X	ASCE 5 SECT. 1.2-2(e), 1.16-1	
c. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES		X	ASCE 5 SECT. 1.15 ASCE 6 ART 2.4, 3.4	
d. WELDING OF REINFORCING BARS	X		ASCE 2.1, 9, 7.2, 3.3, 3.4B	
e. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 DEG °F) OR HOT WEATHER (TEMPERATURE ABOVE 90 DEG °F)		X	ASCE 6 ART 1.8C, 1.8D	2104.3, 2104.4
f. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X		ASCE 6 ART 3.6B	
6. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:				
a. GROUT SPACE IS CLEAN		X	ASCE 6 ART 3.2D	
b. PLACEMENT OF REINFORCEMENT AND CONNECTOR, AND PRESTRESSING TENDONS AND ANCHORAGES		X	ASCE 5 SECT 1.13 ASCE 6 ART 2.6B	
c. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS		X	ASCE 6 ART 2.6B	
d. CONSTRUCTION OF MORTARS JOINTS		X	ASCE 6 ART 3.3B	
e. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION PROVISIONS	X		ASCE 6 ART 3.5, 3.6C	
f. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED		X	ASCE 6 ART 1.4	2105.2.22, 105.3

7. ARCHITECTURAL COMPONENTS

INSPECTION TASK	FREQUENCY		REF STD	IBC REF
	CONT	PER		
1. ERECTION AND FASTENING OF EXTERIOR CLADDING, INTERIOR AND EXTERIOR NONBEARING WALLS AND INTERIOR AND EXTERIOR VENEER IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F		X		1707.6
EXCEPTIONS:				
a. EXTERIOR CLADDING, INTERIOR AND EXTERIOR NONBEARING WALLS OR VENEER 30 FEET OR LESS IN HEIGHT ABOVE GRADE OR WALKING SURFACE				
b. EXTERIOR CLADDING AND INTERIOR AND EXTERIOR WEIGHING 5 PSF OR LESS				
c. INTERIOR NONBEARING WALLS WEIGHING 15 PSF OR LESS				
2. SPRAYED FIRE-RESISTANT MATERIALS				
a. INSPECTION SHALL BE BASED ON THE FIRE-RESISTANCE DESIGN AS DESIGNATED IN THE APPROVED CONSTRUCTION DOCUMENTS AND SHALL INCLUDE THE FOLLOWING PHYSICAL AND VISUAL TESTS:				
i. CONDITION OF SUBSTRATES		X		1704.12 2
ii. THICKNESS OF APPLICATION		X		1704.12 3
iii. DENSITY IN POUNDS PER CUBIC FOOT		X		1704.12 4
iv. BOND STRENGTH ADHESION/COHESION		X		1704.12 5
v. CONDITION OF FINISHED APPLICATION		X		1704.12 6
3. MASTIC AND INTUMESCENT FIRE-RESISTANT COATING				
a. SPECIAL INSPECTIONS SHALL BE BASED ON THE FIRE-RESISTANCE DESIGN AS DESIGNATED IN THE APPROVED CONSTRUCTION DOCUMENTS				
		X	AWCI 12-B	1704.13
4. EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)				
a. SPECIAL INSPECTIONS ARE REQUIRED FOR ALL EIFS APPLICATIONS EXCEPT FOR APPLICATIONS INSTALLED OVER A WATER-RESISTIVE BARRIER WITH A MEANS OF DRAINING MOISTURE TO THE EXTERIOR OR FOR APPLICATIONS INSTALLED OVER MASONRY OR CONCRETE WALLS A WATER-RESISTIVE BARRIER COATING MUST UNDERGO SPECIAL INSPECTION WHEN INSTALLED OVER A SHEATHING SUBSTRATE				
		X	ASTM E2570	1704.14
6. SMOKE CONTROL				
a. TEST SCOPE SHALL BE AS FOLLOWS:				
i. DURING ERECTION OF DUCTWORK AND PRIOR TO CONCEALMENT FOR THE PURPOSES OF LEAKAGE TESTING AND RECORDING OF DEVICE LOCATION		X		
ii. PRIOR TO OCCUPANCY AND AFTER SUFFICIENT COMPLETION FOR THE PURPOSES OF PRESSURE DIFFERENCE TESTING, FLOW MEASUREMENTS AND DETECTION AND CONTROL VERIFICATION		X		1704.16

NOTES:

- SPECIAL INSPECTIONS ARE REQUIRED DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION TASK TABLES. THE SPECIAL INSPECTOR(S) SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS SPECIFIED IN THE CONTRACT SPECIFICATIONS.
- REQUIRED INSPECTION TABLES ARE BASED ON THE REQUIREMENTS OF CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
- CONTINUOUS INSPECTION REFERS TO THE FULL TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.
- PERIODIC INSPECTION REFERS TO THE PART TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.
- WHERE APPLICABLE, ALSO SEE SECTION 1707 OF THE INTERNATIONAL BUILDING CODE REGARDING SPECIAL INSPECTION FOR SEISMIC RESISTANCE.

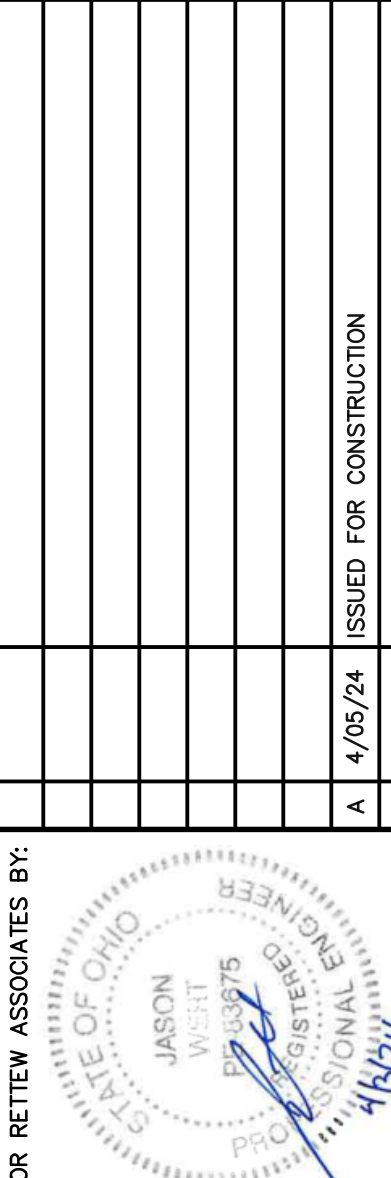
INSPECTION TASK LEGEND

CONT	CONTINUOUS INSPECTION, SEE NOTE 3
PER	PERIODIC INSPECTION, SEE NOTE 4

9. SOILS

INSPECTION TASK	FREQUENCY		REF STD	IBC REF
	CONT	PER		
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X		
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X		
4. VERIFY USED OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X			1704.7
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X		

FOR REVIEW ASSOCIATES BY:



DATE: 4/05/24
NO.:

MANAGER: STEVEN SIEGRIED
DESIGN BY: SSU
DRAWN BY: UNW
SURV. CHIEF: N/A

CHKD BY: JDW
CHKD BY: JDW
FIELDBOOK NO.: N/A

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

NTS

RETTEW
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

RETTEW Associates, Inc.
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Website: www.rettew.com

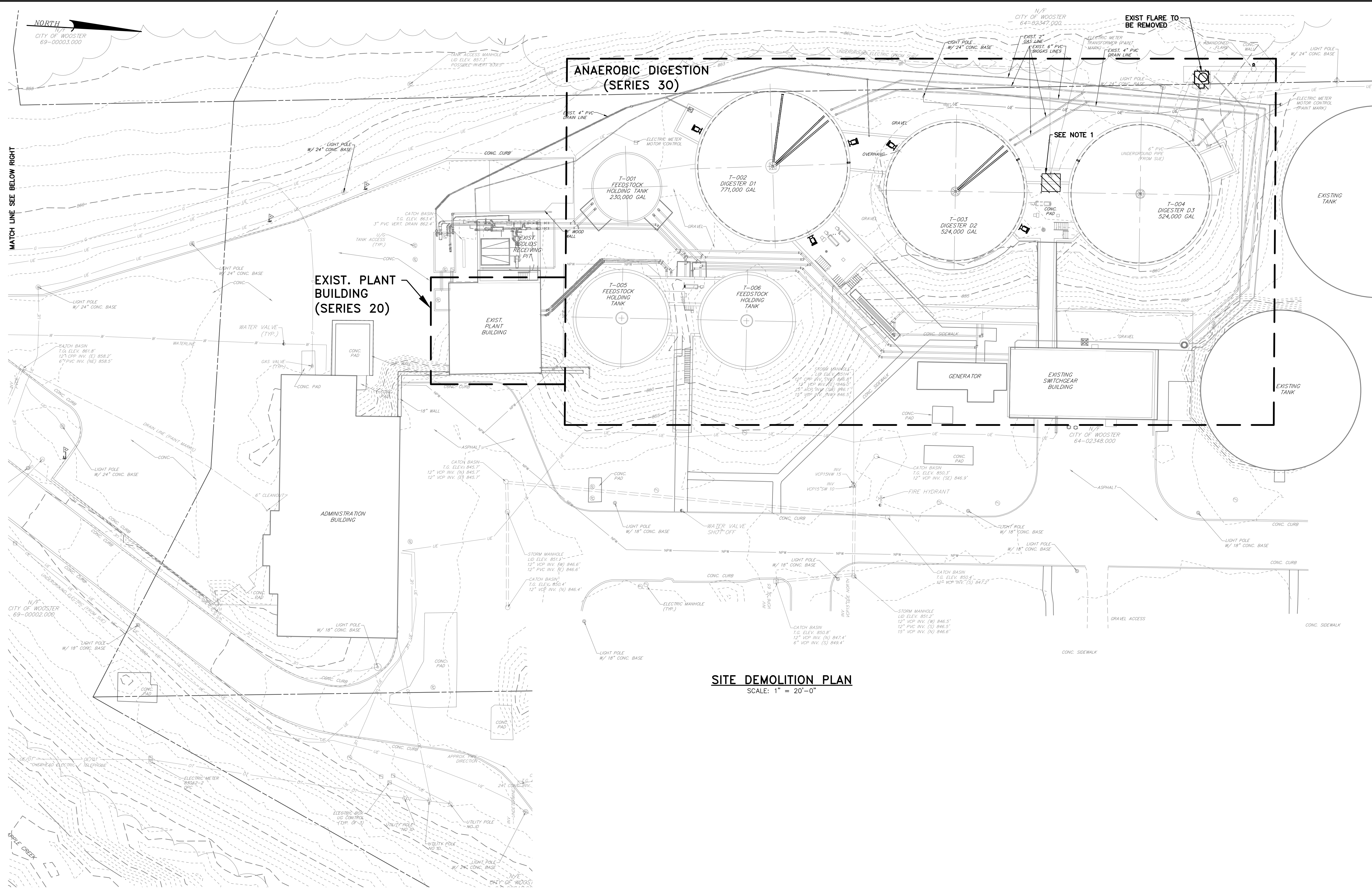
REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
SCHEDULE OF SPECIAL INSPECTIONS

CITY OF WOOSTER
WAYNE COUNTY, OH

**ANAEROBIC DIGESTION
(SERIES 30)**

**EXIST. PLANT
BUILDING
(SERIES 20)**


SITE DEMOLITION PLAN
SCALE: 1" = 20'-0"

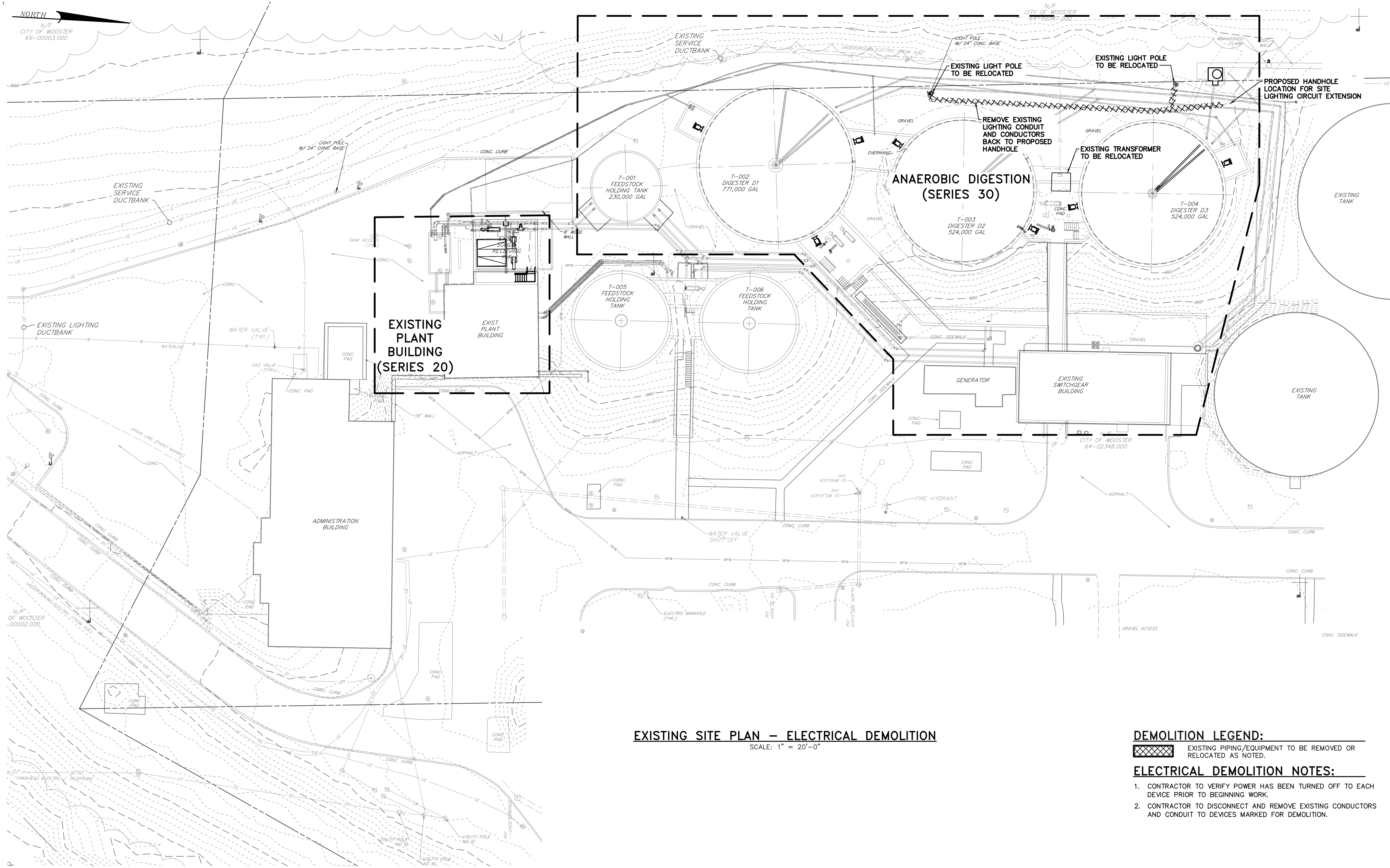


NOTES:

- EXISTING TRANSFORMER TO BE RELOCATED

**BASE BID
CONTRACT No. GC 24-01**

<p>FOR RETTEW ASSOCIATES BY:</p> 		<p>NO. DATE</p> <p>A 4/05/24</p>	<p>ISSUED FOR CONSTRUCTION</p> <p>REVISION</p>
<p>MANAGER: STEVEN SIEGFRIED</p> <p>DESIGN BY: SSU</p> <p>DRAWN BY: JOG</p> <p>SURV. CHIEF: N/A</p>	<p>CHKO BY: JDW</p> <p>CHKO BY: JDW</p> <p>FIELDBOOK NO: N/A</p>	<p>THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691</p>	
<p>RETTEW Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</p> <p>RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com</p>		<p>REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY EXISTING SITE & SITE DEMOLITION PLAN CITY OF WOOSTER WAYNE COUNTY, OH</p>	
<p>PROJ. NO. 122022001</p> <p>DWG. NO. 01X-01</p>		<p>SCALE 0 10' 20' 40' 60'</p> <p>1" = 20'</p>	



EXISTING SITE PLAN – ELECTRICAL DEMOLITION

SCALE: 1" = 20'-0"

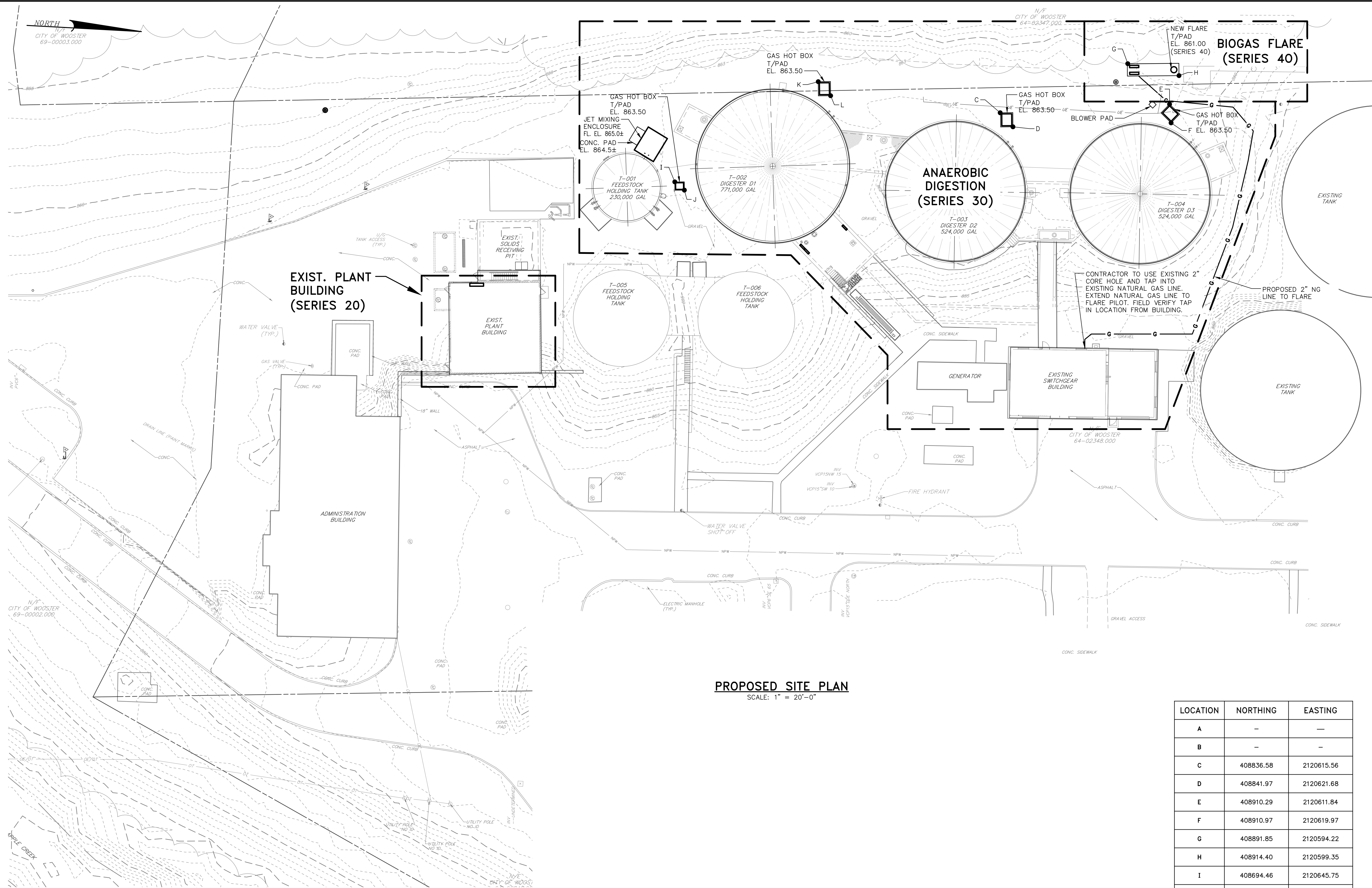
DEMOLITION LEGEND:

EXISTING PIPING/EQUIPMENT TO BE REMOVED OR RELOCATED AS NOTED.

ELECTRICAL DEMOLITION NOTES:

1. CONTRACTOR TO VERIFY POWER HAS BEEN TURNED OFF TO EACH DEVICE PRIOR TO BEGINNING WORK.
2. CONTRACTOR TO DISCONNECT AND REMOVE EXISTING CONDUCTORS AND CONDUIT TO DEVICES MARKED FOR DEMOLITION.

	FOR RETTEW ASSOCIATES BY: MANAGER: STEVEN SIEGFRIED DESIGN BY: RRC DRAWN BY: GRS SURV. CHIEF: N/A	CHECKED BY: JDW CHECKED BY: RRC/KJH FIELDBOOK NO.: N/A	DATE: 4/05/24 NO.: A REVISION: ISSUED FOR CONSTRUCTION	THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691	SCALE
		RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44695 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>		REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY EXISTING SITE PLAN ELECTRICAL DEMOLITION CITY OF WOOSTER WAYNE COUNTY, OH	
BASE BID CONTRACT No. GC 24-01		PROJ. NO. 122022001 DWG. NO. 01XE-01			



PROPOSED SITE PLAN
SCALE: 1" = 20'-0"

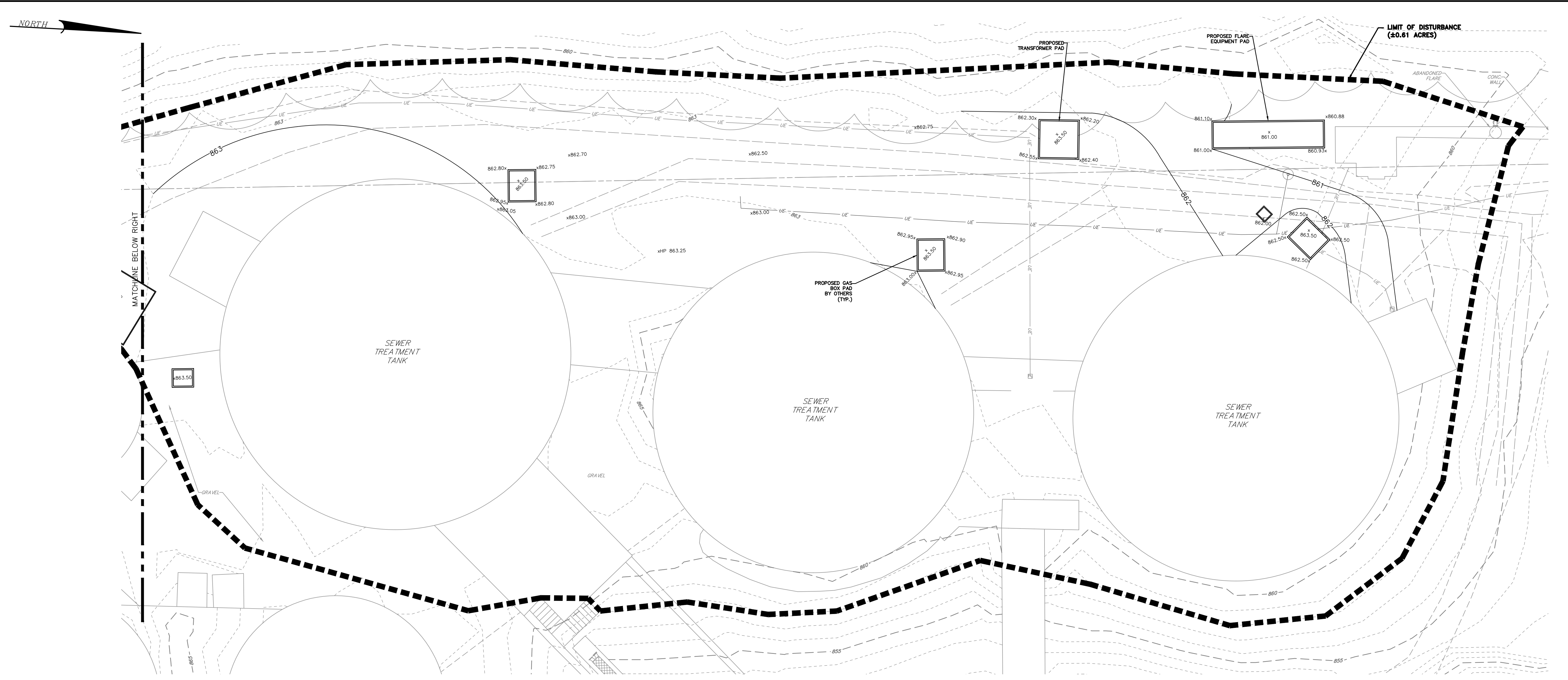
LOCATION	NORTHING	EASTING
A	-	-
B	-	-
C	408836.58	2120615.56
D	408841.97	2120621.68
E	408910.29	2120611.84
F	408910.97	2120619.97
G	408891.85	2120594.22
H	408914.40	2120599.35
I	408694.46	2120645.75
J	408698.63	2120649.28
K	408757.03	2120601.99
L	408762.42	2120608.11

BASE BID
CONTRACT No. GC 24-01

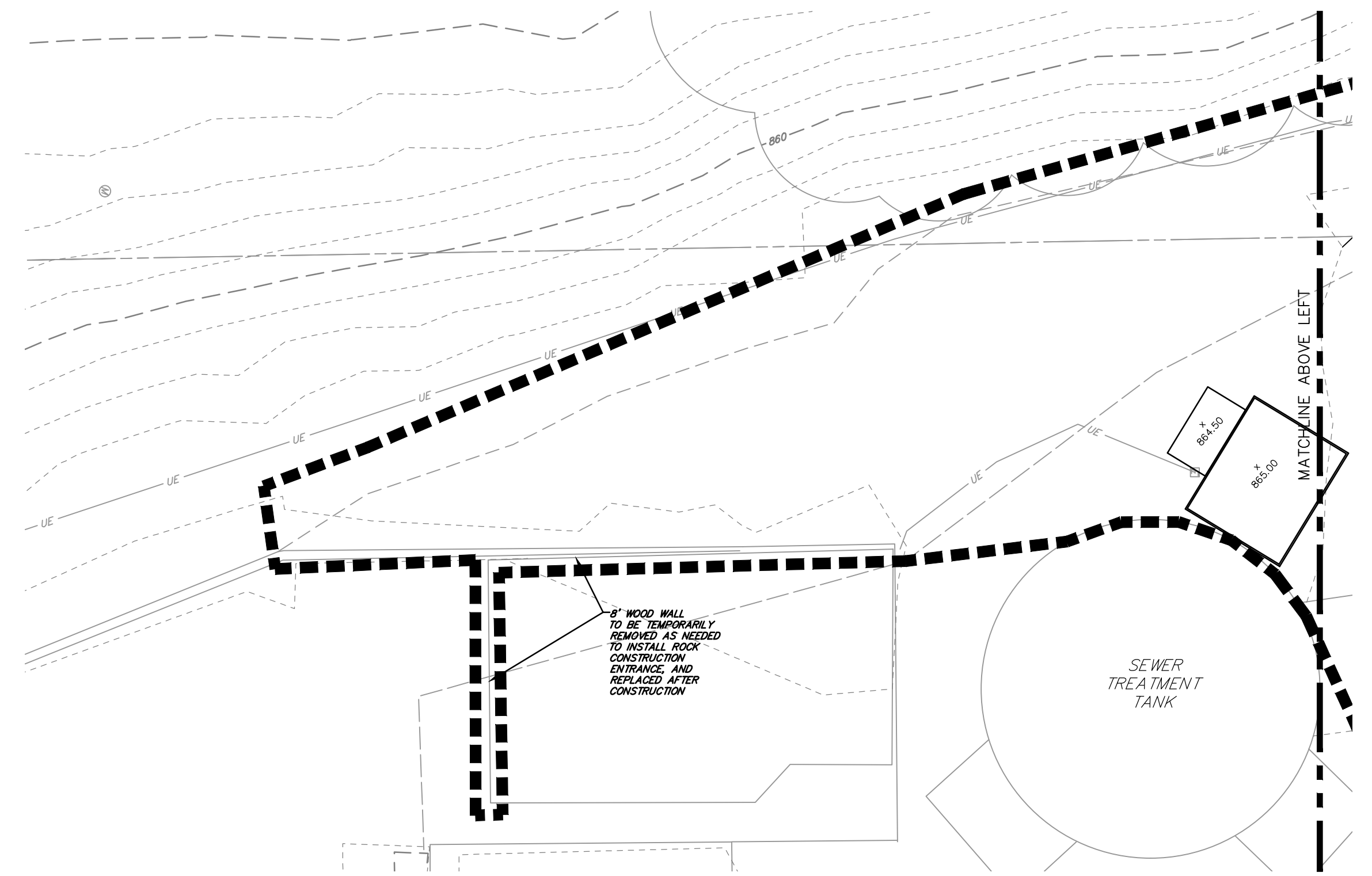
<p>FOR RETTEW ASSOCIATES BY:</p> <p>MANAGER: STEVEN SIEGFRIED DESIGN BY: SSS DRAWN BY: JOG SURV. CHIEF: N/A</p>	<p>CHKD BY: JDW CHKD BY: JDW FELDBOOK NO: N/A</p>	<p>ISSUED FOR CONSTRUCTION</p> <p>DATE: 4/05/24</p> <p>NO. A</p> <p>REVISION</p>
<p>RETTEW Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</p> <p>RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44695 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com</p>		
<p>REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY CITY OF WOOSTER</p>		
<p>PROPOSED SITE PLAN WAYNE COUNTY, OH</p>		
<p>PROJ. NO. 122022001 DWG. NO. 01C-01</p>		

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691








SITE GRADING PLAN
SCALE: 1" = 10'-0"

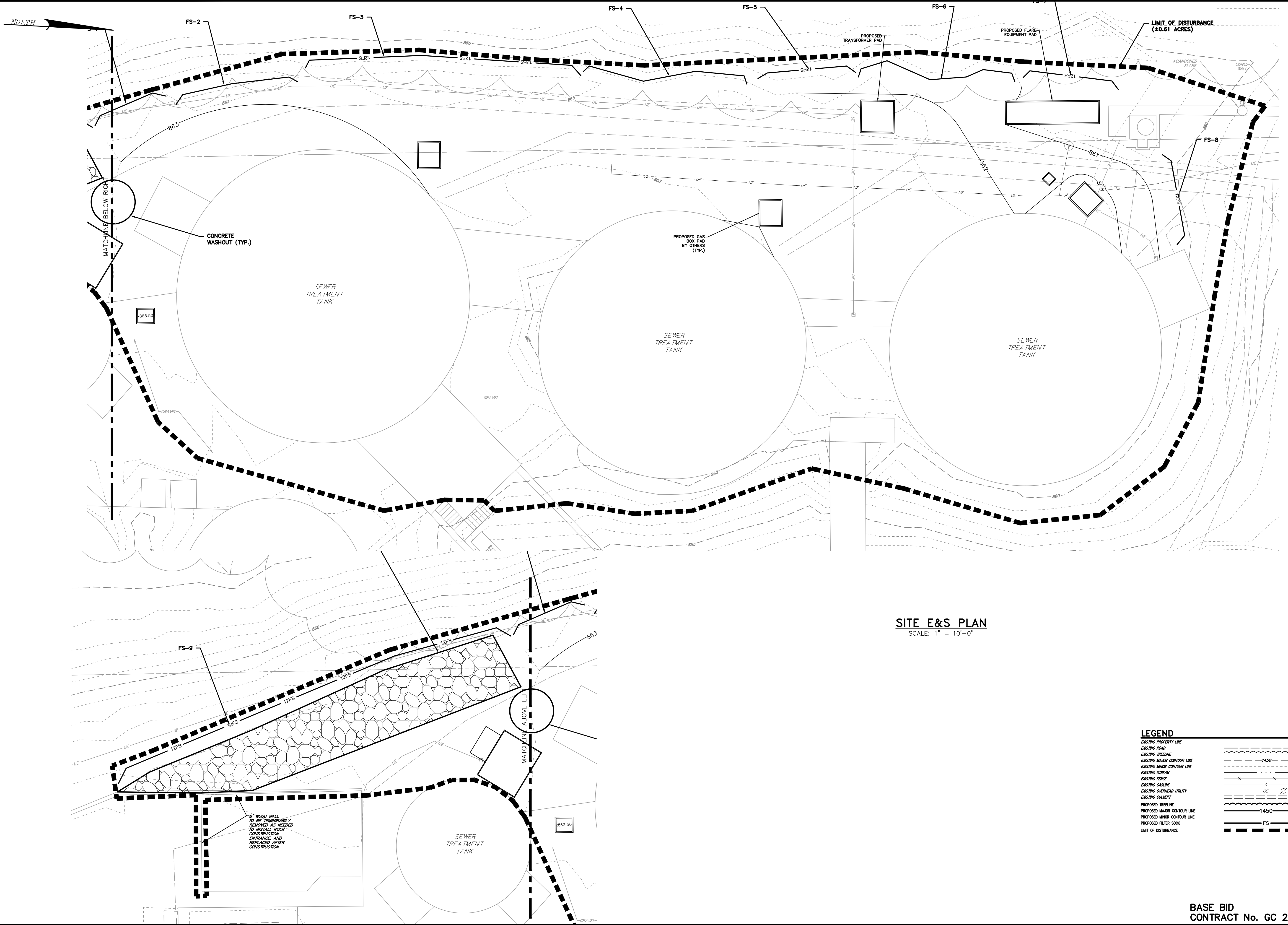


LEGEND

EXISTING PROPERTY LINE	---
EXISTING SECTION LINE	---
EXISTING ROAD	---
EXISTING TIE LINE	---
EXISTING MAJOR CONTOUR LINE	--- 1450 ---
EXISTING MINOR CONTOUR LINE	--- 1450 ---
EXISTING STREAM	---
EXISTING FENCE	---
EXISTING GAS LINE	---
EXISTING OVERHEAD UTILITY	---
EXISTING CALVERT	---
PROPOSED GRAVEL	---
PROPOSED TIE LINE	---
PROPOSED MAJOR CONTOUR LINE	--- 1450 ---
PROPOSED MINOR CONTOUR LINE	--- 1450 ---
LIMIT OF DISTURBANCE	---

BASE BID
CONTRACT No. GC 24-03

FOR RETTEW ASSOCIATES BY:							
							
MANAGER:	STEVEN SIEGFRIED	DESIGN BY:	SSU	CHKD BY:	JDW	DATE:	
DRAWN BY:	JDW	SURV. CHIEF:	N/A	FIELDBOOK NO.:	N/A	ISSUED FOR CONSTRUCTION:	
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691							
							
							
RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>							
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY GRADING PLAN WAYNE COUNTY, OH							
PROJ. NO. 122022001 DWG. NO. 01C-03							



SITE E&S PLAN
SCALE: 1" = 10'-0"

LEGEND

EXISTING PROPERTY LINE	---
EXISTING ROAD	---
EXISTING TREELINE	---
EXISTING MAJOR CONTOUR LINE	---1450---
EXISTING MINOR CONTOUR LINE	---1450---
EXISTING STREAM	---
EXISTING FENCE	---
EXISTING GASLINE	---
EXISTING OVERHEAD UTILITY	---
EXISTING CULVERT	---
PROPOSED TREELINE	---
PROPOSED MAJOR CONTOUR LINE	---1450---
PROPOSED MINOR CONTOUR LINE	---1450---
PROPOSED FILTER SOCK	---
LIMIT OF DISTURBANCE	---FS---

2" WOOD WALL TO BE TEMPORARILY REMOVED AS NEEDED TO INSTALL ROCK CONSTRUCTION ENTRANCES AND REPLACED AFTER CONSTRUCTION

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: CHKO BY: JDW	NO.	DATE
DESIGN BY: SSU	CHKD BY: JDW	A	4/05/24
DRAWN BY: N/A	CHKD BY: JDW	NO.	DATE
SURV. CHIEF: N/A	FIELDBOOK NO: N/A	ISSUED FOR CONSTRUCTION	REVISION

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

SCALE: 1" = 10'-0"
0 5' 10' 20' 30'

RETEW
RETEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
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Email: retew@retew.com
Website: www.retew.com
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
E&S PLAN
CITY OF WOOSTER WAYNE COUNTY, OH

PROJ. NO. 122022001
DWG. NO. 01C-04

BASE BID
CONTRACT No. GC 24-01

EROSION AND SEDIMENT CONTROL NOTES:

- 1. EROSION AND SEDIMENTATION CONTROL PLANS MUST BE AVAILABLE AT THE SITE OF THE CONSTRUCTION ACTIVITY AT ALL TIMES.
2. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS.
3. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE SUBJECT TO APPLICABLE REGULATIONS OF THE WAYNE SOIL AND WATER CONSERVATION DISTRICT AND ODNR.
5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE CONSTRUCTION AND POST CONSTRUCTION PERIODS TO PREVENT SOIL EROSION, SEDIMENT, AND OTHER POLLUTANTS FROM ENTERING STREAMS, NEIGHBORING PROPERTY, ROADS, ETC.
6. THE CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO INCORPORATE ALL APPLICABLE EROSION AND SEDIMENT CONTROL FEATURES INTO THE PROJECT AT THE EARLIEST PRACTICAL TIME.
7. RESPONSIBILITY FOR IMPLEMENTING EROSION AND SEDIMENT CONTROL SHALL BE DESIGNATED TO A MINIMUM OF ONE INDIVIDUAL WHO WILL BE PRESENT AT THE PROJECT SITE DAILY.
8. DURING CONSTRUCTION, THE AMOUNT OF DISTURBED SOILS SHALL BE KEPT TO A MINIMUM AND, WHENEVER POSSIBLE, A SUITABLE VEGETATIVE BUFFER WILL BE MAINTAINED AROUND ALL CONSTRUCTION AREAS.
9. ALL EARTHMOVING ACTIVITIES SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE THE AMOUNT OF DISTURBED AREA.
10. WHENEVER POSSIBLE, PLACE ALL EXCAVATED MATERIAL UPSLOPE FROM DISTURBED AREAS. STOCKPILES SHALL BE SET PARALLEL TO GRADE TO REDUCE RUNOFF.
11. FILTER SOCK SHALL BE PLACED AT CRITICAL EROSION AREAS, AS SHOWN ON THE PLAN, IN ORDER TO PREVENT SEDIMENT FROM ENTERING INTO ADJACENT PROPERTIES, ROADWAY AND WATERWAYS.
12. FILTER SOCK SHALL BE INSTALLED AND MAINTAINED PER THE SUPPLIER'S SPECIFICATIONS.
13. WHERE DUST OR WIND EROSION IS A PROBLEM, THE UNSTABLE SURFACE(S) SHALL BE SPRINKLED WITH WATER OR OTHER SUITABLE DUST SUPPRESSOR; HOWEVER, WASHING OF ROADWAYS IS NOT PERMITTED. PROVISIONS MUST BE MADE TO CONTROL FUGITIVE DUST.
14. ANY WATER PUMPED FROM ANY EXCAVATION, FOR ANY REASON, SHALL BE DIRECTED THROUGH A SEDIMENT FILTER BAG (DEWATERING BAG) CONFORMING TO ODNR REQUIREMENTS.
15. UPON GENERAL COMPLETION OF THE FINAL GRADING, TOPSOIL SHALL BE PLACED AND FINAL GRADING PASSES SHALL BE MADE PERPENDICULAR TO THE DIRECTION OF RUNOFF.
16. SLOPE LINING AND OR HYDRAULICALLY APPLIED SLOPE BLANKET SHALL BE APPLIED TO ALL SLOPES 3H:1V OR STEEPER IMMEDIATELY AFTER COMPLETION OF GRADING. SLOPES AS SLOPES ARE COMPLETED, SLOPE LINING TO BE N.A.G. OR APPROVED EQUIVALENT UNLESS OTHERWISE NOTED ON PLANS.
17. TEMPORARY AND PERMANENT SEEDING SHALL ADHERE TO THE SPECIFICATIONS PROVIDED IN THIS PLAN.
18. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 21 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
19. PERMANENT SEEDING AND MULCHING WILL BE INCORPORATED INTO THE CONSTRUCTION PHASES DURING THE APPROVED PLANTING SEASON IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS PROVIDED IN THIS PLAN.
20. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED BY APPLYING A SEED MIXTURE TO ESTABLISH AN EROSION RESISTANT STAND OF VEGETATION, UNLESS OTHERWISE STABILIZED WITH AN ACCEPTABLE PERMANENT COVER (ROCK, ETC.).
21. SEED AND MULCH ANY BARE SOIL AREAS WITHIN THE LIMITS OF DISTURBANCE.
22. RE-SEED AND RE-ESTABLISH ANY BARREN AND DISTURBED AREAS NOT HAVING ESTABLISHED COVER.
23. THE CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING VEGETATIVE COVER, ONCE THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED, THE CONTRACTOR SHALL REMOVE EROSION AND SEDIMENT CONTROLS, ANY AREA NOT STABILIZED IMMEDIATELY.
24. ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSPECTED ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF ANY STORM EVENT GREATER THAN OR EQUAL TO 0.5 INCHES OF RAIN PER 24-HOUR PERIOD. ANY REQUIRED REPAIRS OR MAINTENANCE SHOULD BE MADE IMMEDIATELY.
25. ALL PREVENTIVE AND RESTORATIVE MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING, MUST BE PERFORMED IMMEDIATELY.
26. ALL E&S BMPs SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED (70% VEGETATIVE COVER). ONCE PERMANENT STABILIZATION HAS BEEN ESTABLISHED TEMPORARY E&S BMPs MAY BE REMOVED. ANY AREAS DISTURBED IN THE ACT OF REMOVING TEMPORARY E&S BMPs SHALL BE IMMEDIATELY STABILIZED.

RECYCLING AND DISPOSAL PROCEDURES:

- WASTES GENERATED BY CONSTRUCTION ACTIVITIES (I.E. PAINTS, SOLVENTS, FUELS, CONCRETE, WOOD, ETC.) MUST BE DISPOSED OF IN ACCORDANCE WITH ORC 3734 AND ORC 3714. MATERIALS WILL BE RE-USED OR RECYCLED AS POSSIBLE, INCLUDING TOPSOIL AND OTHER MATERIALS AS APPROPRIATE.
GENERAL GUIDELINES REGARDING DISPOSAL AND HANDLING OF HAZARDOUS AND CONSTRUCTION WASTE:
- PREVENT SPILLS, USE PRODUCTS COMPLETELY, FOLLOW LABEL DIRECTIONS FOR DISPOSAL, REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH, RECYCLE WASTES WHENEVER POSSIBLY.
- DO NOT POUR WASTES INTO WATERWAYS, STORM DRAINS, ONTO THE GROUND, DOWN THE SINK, FLOOR DRAINS, OR SEPTIC TANKS.
- DO NOT BURY OR BURN CHEMICALS OR CONTAINERS, DO NOT MIX CHEMICALS.
CONTAINERS SHALL BE PROVIDED FOR THE PROPER COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS, AND ANY HAZARDOUS MATERIALS USED ON SITE. CONTAINERS SHALL BE COVERED AND NOT LEAKING. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL. CONSTRUCTION, DEMOLITION, AND DEBRIS WASTE MUST BE DISPOSED OF AT AN OHIO EPA APPROVED LANDFILL.
NO CONSTRUCTION RELATED WASTE MATERIALS ARE TO BE BURIED ON SITE. BY EXCEPTION, CLEAN FILL (BRICKS, HARDENED CONCRETE, SOIL) MAY BE UTILIZED IN A WAY WHICH DOES NOT ENDOUR UPON NATURAL WETLANDS, STREAMS, OR FLOODPLAINS OR RESULT IN THE CONTAMINATION OF WATERS OF THE STATE.
MIXING, PUMPING, TRANSFERRING, OR OTHER HANDLING OF CONSTRUCTION CHEMICALS, SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE CURING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH, OR STORM DRAIN.
EQUIPMENT FUELING AND MAINTENANCE SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES, OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL OIL STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A 0.5 INCH OR GREATER STORM EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORMWATER. A SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN IS REQUIRED FOR SITES WITH ACCUMULATIVE ABOVE GROUND STORAGE OF 1,320 GALLONS OR 42,000 GALLONS OF UNDERGROUND STORAGE.
CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. A SUMP OR PIT WITH NO POTENTIAL FOR DISCHARGE SHALL BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER. FIELD TILE OR OTHER SUBSURFACE DRAINAGE STRUCTURES WITHIN 10 FEET OF THE SUMP SHALL BE CUT AND PLUGGED. FOR SMALL PROJECTS, TRUCK CHUTES MAY BE RINSED AWAY FROM ANY WATER CONVEYANCES.
SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO OHIO EPA (1-800-282-9378). SPILLS OF 25 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO OHIO EPA, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MINUTES OF DISCOVERY OF RELEASE. ALL SPILLS WHICH CONTACT WATERS OF THE STATE MUST BE REPORTED TO OHIO EPA.
IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT A LICENSED SANITARY LANDFILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY. (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). NOTE THAT STORMWATER RUNOFF ASSOCIATED WITH CONTAMINATED SOILS ARE NOT AUTHORIZED UNDER OHIO EPA'S GENERAL STORMWATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
NO MATERIALS CONTAINING RUBBER, GREASE, ASPHALT, OR PETROLEUM PRODUCTS, SUCH AS TIRES, AUTO PARTS, PLASTICS, OR PLASTIC COATED WIRE MAY BE BURNED (OAC 3745-19). OPEN BURNING IS NOT ALLOWED IN RESTRICTED AREAS, WHICH ARE DEFINED AS: 1) WITHIN MUNICIPAL CORPORATION LIMITS; 2) WITHIN 1,000 FEET OUTSIDE A MUNICIPAL CORPORATION HAVING A POPULATION OF 1,000 TO 10,000; AND 3) A ONE MILE ZONE OUTSIDE OF A MUNICIPAL CORPORATION HAVING A POPULATION OF 10,000 OR MORE. OUTSIDE OF RESTRICTED AREAS, NO OPEN BURNING IS ALLOWED WITHIN 1,000 FEET OF AN INHABITED BUILDING ON ANOTHER PROPERTY. OPEN BURNING IS PERMISSIBLE IN A RESTRICTED AREA FOR: HEATING TAR, WELDING, SMOUDER POTS, AND SIMILAR OCCASIONAL NEEDS, AND HEATING FOR WARMTH OR OUTDOOR BARBEQUES. OUTSIDE OF RESTRICTED AREAS, OPEN BURNING IS PERMISSIBLE FOR LANDSCAPE OR LAND-CLEARING WASTES (PLANT MATERIAL, WITH PRIOR WRITTEN PERMISSION FROM OHIO EPA), AND AGRICULTURAL WASTES, EXCLUDING BUILDINGS.
DUST CONTROL OR DUST SUPPRESSANTS SHALL BE USED TO PREVENT NUISANCE CONDITIONS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND IN A MANNER, WHICH WILL PREVENT A DISCHARGE TO WATERS OF THE STATE. SUFFICIENT DISTANCE MUST BE PROVIDED BETWEEN APPLICATIONS AND NEARBY BRIDGES, CATCH BASINS, AND OTHER WATERWAYS. APPLICATION (EXCLUDING WATER) MAY NOT OCCUR WHEN RAIN IS IMMINENT AS NOTED IN THE SHORT TERM FORECAST. USED OIL MAY NOT BE APPLIED FOR DUST CONTROL.

TEMPORARY EROSION & SEDIMENT CONTROL MEASURES - INSTALLATION:

- REFER TO PLAN DRAWINGS AND DETAIL SHEETS FOR LOCATION AND DETAILS OF TEMPORARY EROSION & SEDIMENT CONTROL MEASURES. ALL MEASURES ARE TO BE INSTALLED PER THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL.
ROCK CONSTRUCTION ENTRANCE - ROCK CONSTRUCTION ENTRANCE TO BE PLACED WHERE CONSTRUCTION TRAFFIC LEAVES CONSTRUCTION AREAS AND ENTERS PUBLIC ROADWAYS. CONSTRUCTION ENTRANCE TO BE INSTALLED AS SOON AS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
FILTER SOCK - FILTER SOCKS TO BE INSTALLED DOWNSLOPE ALONG THE SLOPES OF THE UNDISTURBED AREAS. FILTER SOCKS MUST BE PLACED ON THE LEVEL CONTOUR SO THAT FLOWS ARE DISSIPATED. TO PREVENT FLOW AROUND, THE ENDS OF THE FILTER SOCKS MUST BE POINTED UPSLOPE.
SEDIMENT FILTER BAG - DEWATERING MEASURES WILL BE USED FOR WATER REMOVAL FROM EXCAVATIONS AND TRENCHES. SEDIMENT FILTER BAGS SHOULD BE PLACED WITHIN A WELL VEGETATED FILTER AREA AND NOT IN CLOSE PROXIMITY TO THE STREAM OR WATER RESOURCE. THEY MUST SIT ON A RELATIVELY FLAT GRADE SO THAT WATER LEAVING THE BAG DOES NOT CAUSE ADDITIONAL EROSION. PLACING THE BAG ON A FLAT BED OF AGGREGATE WILL MAXIMIZE THE FLOW AND USEFUL SURFACE AREA OF THE BAG. THEY SHOULD BE USED IN CONJUNCTION WITH A LARGE VEGETATIVE BUFFER OR BARRIER.
CONCRETE WASHOUT - THE WASHING OF CONCRETE MATERIAL INTO A STREET, CATCH BASIN, OR OTHER PUBLIC FACILITY, NATURAL RESOURCE OR WATER OF THE STATE IS PROHIBITED. A DESIGNATED AREA FOR CONCRETE WASHOUT SHALL BE PROVIDED AND CLEARLY MARKED FOR USAGE. WASHOUT CONTAINERS ARE TO BE LOCATED AT LEAST 50 FEET FROM ANY STREAM, WETLAND, STORM DRAIN, OR ANY OTHER SENSITIVE RESOURCE. CONCRETE SLURRY FROM SAW-CUTTING ACTIVITIES WILL BE CONTAINED WITH SEDIMENT CONTROL DEVICES AND CLEANED FROM ALL ROADWAYS ON AN AS NEEDED BASIS TO PREVENT SUCH WASTE FROM LEAVING THE IMMEDIATE WORK AREA.
EROSION CONTROL BLANKETS - SLOPE MATTING, HYDROSEEDING OR APPROVED EQUAL IS TO BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER. TEMPORARY LINING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER. TEMPORARY LINING SHALL BE HYDROSEEDED ON ALL SLOPES 3H:1V OR STEEPER. TEMPORARY LINING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS UPON REACHING FINAL GRADE.

EROSION & SEDIMENT CONTROL MEASURES - MAINTENANCE:

- GENERAL - CONSTRUCTION CONTRACTOR PERSONNEL WILL BE PRESENT DURING CONSTRUCTION ACTIVITIES TO INSPECT BMPs, AT A MINIMUM, WEEKLY AND WITHIN 24 HOURS AFTER EACH MEASURABLE RUNOFF EVENT (GREATER THAN OR EQUAL TO 0.5 INCHES IN 24 HOURS). BMPs WILL BE MAINTAINED, AS FOLLOWS:
DAMAGED BMPs WILL BE REPAIRED OR REPLACED AS SOON AS PRACTICAL, BUT NO MORE THAN 72 HOURS AFTER DISCOVERY OF DAMAGE.
BMPs WILL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH MEASURABLE RAINFALL EVENT DURING THE ACTIVE CONSTRUCTION PHASE OF THE PROJECT.
EARTH DISTURBANCE AREAS WILL BE REPAIRED WHERE SIGNS OF ACCELERATED EROSION ARE DETECTED.
IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL OR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR/CONTRACTOR SHALL IMPLEMENT APPROPRIATE BMPs TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
SEDIMENT REMOVED FROM BMPs WILL BE PLACED IN AN UPLAND CONSTRUCTION AREA, SPREAD OUT, AND REVEGETATED BY SEEDING AND MULCHING, OR DISPOSED.
CONTRACTOR SHALL MAINTAIN A LOG OF ALL E&S CONTROL MAINTENANCE AND REPAIR.
OWNERS PERSONNEL WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE WORK AREA, ONCE FINAL STABILIZATION HAS TAKEN PLACE.
THE ROCK CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF THE EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
FILTER SOCK - SOCKS SHOULD BE REGULARLY INSPECTED TO MAKE SURE THEY HOLD THEIR SHAPE. ARE PONDING, AND ALLOWING ADEQUATE FLOW THROUGH. IF PONDING BECOMES EXCESSIVE, FILTER SOCKS SHOULD BE REPLACED. USED FILTER SOCKS MAY BE CUT AND COMPOST DISPERSED AND SEEDED TO PREVENT CAPTURED SEDIMENT FROM BEING RE-SUSPENDED.
SEDIMENT FILTER BAG - INSPECT BEFORE EVERY USE AND THROUGHOUT USE. REMOVE ACCUMULATED DEBRIS AND REPAIR OR REPLACE AS THE FABRIC DEVELOPS TEARS, CLEAN, OR REMOVE AND REPLACE. THE PROTECTION MEASURES AS SEDIMENT ACCUMULATES, THE FILTER BECOMES CLOGGED, AND/OR PERFORMANCE IS COMPROMISED. THE FILTER BAG SHALL BE MAINTAINED OR REPLACED WHEN THE BAG OR STRUCTURE BECOMES HALF FULL OR WHEN THE FLOW CAPACITY HAS BEEN REDUCED.
CONCRETE WASHOUT - INSPECT WEEKLY. CLEAN OUT AND REMOVE EXCESS CONCRETE AND REMOVE EXCESS CONCRETE FROM THE SITE. HARDENED CONCRETE WASTE SHOULD BE REMOVED OR DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO HALF THE CONCRETE WASHOUT CONTAINER'S HEIGHT.
EROSION CONTROL BLANKETS - REPAIR DAMAGED AND REPLACE MISSING BLANKETS. REPAIR EROSION AND UNDERMINING PRIOR TO REPLACING BLANKETS. ASSURE THAT SUBSEQUENT RUNOFF IS DISPERSED AND ADEQUATELY SPREAD. WATER OR FERTILIZE HYDROSEED AREAS.
TEMPORARY SEEDING:
TEMPORARY SEEDING INCLUDES SEEDBED PREPARATION, PLANTING SEED, MULCHING, IRRIGATION, AND MAINTENANCE.
TEMPORARY SEEDING SHOULD BE APPLIED ON EXPOSED SOIL WHERE ADDITIONAL WORK (GRADING, ETC.) IS NOT SCHEDULED FOR MORE THAN 14 DAYS. PERMANENT SEEDING SHOULD BE APPLIED IF THE AREAS WILL BE IDLE FOR MORE THAN ONE YEAR.
FOR DISTURBED AREAS WITHIN 50 FEET OF A STREAM REMAINING DORMANT FOR OVER 14 DAYS, TEMPORARY SEEDING SHALL BE APPLIED WITHIN 2 DAYS. FOR DISTURBED AREAS OVER 50 FEET AWAY FROM A STREAM REMAINING DORMANT FOR OVER 14 DAYS, TEMPORARY SEEDING SHALL BE APPLIED WITHIN 7 DAYS.
FERTILIZER SHALL BE BROADCAST AND WORKED INTO THE TOP INCH OF SOIL AT THE RATE OF 6 LBS/1000 SQ. FT. OR 250 LBS/ACRE OF 10-10-10 OR 12-12-12.
AREAS FAILING TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT EROSION SHALL BE RESEED AS SOON AS SUCH AREAS ARE IDENTIFIED.
SEEDING PERFORMED DURING HOT AND DRY SUMMER MONTHS SHALL BE WATERED AT A RATE OF 1 INCH PER WEEK.

PERMANENT SEEDING:

- PERMANENT SEEDING INCLUDES SEEDBED PREPARATION, PLANTING SEED, MULCHING, IRRIGATION, AND MAINTENANCE.
PERMANENT SEEDING SHOULD BE APPLIED TO ANY DISTURBED AREAS OR PORTIONS OF CONSTRUCTION SITES AT FINAL GRADE. PERMANENT SEEDING SHOULD NOT BE DELAYED ON ANY ONE PORTION OF THE SITE AT FINAL GRADE WHILE CONSTRUCTION ON ANOTHER PORTION OF THE SITE IS BEING COMPLETED. PERMANENT SEEDING SHALL BE COMPLETED IN PHASES, IF NECESSARY.
PERMANENT SEEDING SHOULD BE APPLIED TO AREAS SUBJECT TO GRADING ACTIVITIES BUT WILL REMAIN DORMANT FOR ONE YEAR OR MORE. FOR DISTURBED AREAS WITHIN 50 FEET OF A STREAM AT FINAL GRADE, PERMANENT SEEDING SHALL BE APPLIED WITHIN 2 DAYS OF REACHING FINAL GRADE. FOR DISTURBED AREAS REMAINING DORMANT FOR OVER 1 YEAR OR AT FINAL GRADE, PERMANENT SEEDING SHALL BE APPLIED WITHIN 7 DAYS.
A MINIMUM OF 70% GROUND DENSITY, BASED ON VISUAL INSPECTION, MUST EXIST FOR AN ADEQUATE PERMANENT VEGETATIVE PLANTING.
AGRICULTURAL GROUND LIMESTONE LIME SHALL BE APPLIED AT THE RATE OF 100 LBS/1,000 SQ. FT. OR 2 TONS/ACRE.
FERTILIZER SHALL BE APPLIED AT A RATE OF 25 LBS/1,000 SQ. FT. OR 1,000 LBS/ACRE OF A 10-10-10 OR 12-12-12 ANALYSES.
THE LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING-TOOTH HARROW, OR OTHER SUITABLE FIELD IMPLEMENT TO A DEPTH OF 3 INCHES.
PERMANENT SEEDING SHALL OCCUR BETWEEN MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THE ABOVE PERIOD, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. FOR WINTER SEEDING, SEE DORMANT SEEDING IN THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL.
PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY WEATHER OR ON ADVERSE SITE CONDITIONS, WHICH REQUIRE ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH. IRRIGATION RATES SHALL BE MONITORED TO PREVENT EROSION AND DAMAGE SEEDED AREAS FROM EXCESSIVE RUNOFF.
INSPECT SEEDED AREAS AFTER EACH RAINFALL EVENT. ERODED AREAS SHALL HAVE THE TOPSOIL REPLACED, SEED RESOWN AND MULCH REAPPLIED AND ANCHORED. IF EROSION PERSISTS, THE AREA WILL BE EITHER LINED WITH SOD OR STABILIZED WITH ROCK RIPRAP.
THE FACILITY OWNER MAY ALLOW, IN SPECIAL CIRCUMSTANCES, FERTILIZER AND LIMING RATES TO BE ADJUSTED BASED ON ACTUAL ON-SITE SOIL TESTING.

MULCHING:

- MULCH MATERIAL SHALL BE APPLIED IMMEDIATELY AFTER SEEDING. DORMANT SEEDING SHALL BE MULCHED. 100% OF THE GROUND SURFACE SHALL BE COVERED WITH AN APPROVED MATERIAL.
MATERIALS
STRAW - IF STRAW IS USED, IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/ACRE OR 90 POUNDS/1,000 SQ. FT. (TWO TO THREE BALES). THE MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY APPLIED SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQ. FT. SECTIONS AND SPREAD TWO 45-LB. BALES OF STRAW IN EACH SECTION.
HYDROSEEDERS - IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE APPLIED AT 2,000 LB./AC. OR 46 LB./1,000 SQ. FT.
OTHER - OTHER ACCEPTABLE MULCHES INCLUDE ROLLED EROSION CONTROL MATTINGS OR BLANKETS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 10-20 TONS/ACRE.
STRAW AND MULCH ANCHORING METHODS - STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER RUNOFF.
MECHANICAL - A DISK, CRUMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT, GENERALLY, BE LEFT LONGER THAN 6 INCHES.
MULCH NETTING - NETTING SHALL BE USED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND OR STEEP SLOPES.
SYNTHETIC BINDERS - SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUIVALENT MAY BE USED AT RATES SPECIFIED BY THE MANUFACTURER.
WOOD CELLULOSE FIBER - WOOD CELLULOSE FIBER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER WITH THE MIXTURE CONTAINING A MAXIMUM OF 50 POUNDS CELLULOSE PER 100 GALLONS OF WATER.

WINTER SEEDING:

FROM NOVEMBER 1 THROUGH FEBRUARY 29, WHEN WINTER CONDITIONS ARE NOT CONDSUVE TO SPREADING TOPSOIL, THE CONTRACTOR SHALL INSTALL THE TEMPORARY SEED MIXTURE WITHOUT THE TOPSOIL RE-SPREAD. ONCE THE WINTER SEASON IS OVER, THE CONTRACTOR WILL RETURN PRIOR TO MAY 15TH TO RE-SPREAD THE TOPSOIL AND APPLY THE PERMANENT SEEDING MIXTURE TO THE SITE.

SOIL STABILIZATION:

- STABILIZATION OF DISTURBED AREAS SHALL, AT A MINIMUM, BE INITIATED IN ACCORDANCE WITH THE FRAMES SPECIFIED BELOW.
A. TEMPORARY STABILIZATION:
ANY DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE SHALL BE STABILIZED WITHIN TWO DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE SHALL BE STABILIZED WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA.
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER SHALL BE STABILIZED PRIOR TO THE ONSET OF WINTER WEATHER.
B. PERMANENT STABILIZATION:
ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE SHALL BE STABILIZED WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE.
ANY AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND AT FINAL GRADE SHALL BE STABILIZED WITHIN TWO DAYS OF ANY ANCHING FINAL GRADE.
ANY OTHER AREAS AT FINAL GRADE SHALL BE STABILIZED WITHIN SEVEN DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.

WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED. THESE TECHNIQUES MAY INCLUDE MULCHING, EROSION MATTING, OR PLACEMENT OF STONE.

CONSTRUCTION SEQUENCE:

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

AT LEAST 48 HOURS, BUT NOT MORE THAN 10 WORKING DAYS, PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL VEGETATORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE RESPECTIVE UTILITY ONE CALL CENTER BY CALLING 811 OR 1-811-715-2894 IN OHIO. WHERE NOTED ON PLANS, UTILITY OWNERS OF ADJACENT FACILITIES MUST BE CONTACTED AND WORK SHALL BE SCHEDULED TO ALLOW A DESIGNATED REPRESENTATIVE FROM THE FACILITY OWNER TO BE PRESENT FOR ALL CONSTRUCTION ACTIVITIES ADJACENT TO THEIR OWNED FACILITIES.

IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

- 1. THE CONSTRUCTION CONTRACTOR SHALL FIELD MARK ALL LIMITS OF DISTURBANCE FOR CONSTRUCTION ACTIVITIES AND FLAG ANY OVERHEAD LINES.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCES. ALL VEHICLES ENTERING THE SITE SHALL DO SO VIA THE STABILIZED CONSTRUCTION ENTRANCE. ALL MUD OR SEDIMENT TRACKED ONTO EXISTING ROADWAYS SHALL BE REMOVED BY THE CONTRACTOR AT THE END OF EACH WORKING DAY. WASHING OF THE ROADWAY IS NOT PERMITTED.
3. INSTALL ALL PERIMETER EROSION AND SEDIMENT CONTROL DEVICES. THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICABLE. PRIOR TO LEAVING A CONSTRUCTION SITE, SURFACE WATER RUNOFF FROM DISTURBED AREAS SHALL PASS THROUGH AN APPROPRIATE AND APPROVED SEDIMENT REMOVAL BMP. BMPs INTENDED TO TRAP SEDIMENT ON SITE SHALL BE CONSTRUCTED AS ONE OF THE FIRST STEPS IN GRADING. THESE BMPs SHALL BE FUNCTIONAL BEFORE OTHER LAND DISTURBING ACTIVITIES TAKE PLACE.
4. BEGIN SITE DEMOLITION IN ACCORDANCE WITH CONSTRUCTION PLANS.
5. TOPSOIL AND SOIL SPOOLS SHALL BE STOCKPILED WITHIN THE LIMITS OF DISTURBANCE. FILTER SOCK OR SILT FENCE SHALL BE PLACED DOWNGRADIENT OF STOCKPILES.
6. INSTALL COMPRESSOR BUILDING AND EQUIPMENT PADS IN ACCORDANCE WITH CONSTRUCTION PLANS.
7. DURING CONSTRUCTION ALL EROSION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED AS PRESCRIBED IN THE SCHEDULE OF MAINTENANCE NOTES.
8. PROCEDURES WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE WILL BE UNDERTAKEN IN ACCORDANCE WITH OHIO EPA REGULATIONS.
9. ALL BMPs MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL ALL AREAS WITHIN THE LIMIT OF DISTURBANCE ARE COMPLETED AND PERMANENTLY STABILIZED. MAINTENANCE MUST INCLUDE INSPECTION OF ALL EROSION AND SEDIMENT CONTROLS AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT IN EXCESS OF 0.5" PER 24 HOUR PERIOD. ANY REQUIRED REPAIRS OR MAINTENANCE SHOULD BE MADE IMMEDIATELY.
10. TEMPORARY STABILIZATION SHALL OCCUR WITHIN TWO DAYS OF ANY DISTURBED AREA WITHIN 50 FEET OF STREAM, IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS. FOR ANY DISTURBED AREA THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE, SHALL BE STABILIZED WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA. DISTURBED AREAS THAT WILL BE IDLE OVER WINTER SHALL BE STABILIZED PRIOR TO THE ONSET OF WINTER WEATHER.
11. PERMANENT STABILIZATION SHALL OCCUR IN ANY AREA THAT WILL LIE DORMANT FOR ONE YEAR OR MORE WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE. ANY AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND AT FINAL GRADE SHALL BE STABILIZED WITHIN 2 DAYS OF REACHING FINAL GRADE. ANY OTHER AREAS AT FINAL GRADE SHALL BE STABILIZED WITHIN 7 DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.
12. ALL PERIMETER SEDIMENT CONTROL MEASURES CAN BE REMOVED AFTER THE SITE IS PERMANENTLY STABILIZED.
13. ANY AREAS DISTURBED BY REMOVAL OF CONTROLS SHALL BE REPAIRED, STABILIZED, AND PERMANENTLY SEEDED.

TEMPORARY SEEDING RATES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE:

Table with 4 columns: SEEDING DATES, SPECIES, LBS./1,000 SQ. FT., LB/ACRE. Rows include OATS, TALL FESCUE, ANNUAL RYEGRASS, PERENNIAL RYEGRASS, CREEPING RED FESCUE, KENTUCKY BLUEGRASS, WHEAT, and PERENNIAL RYEGRASS for various dates from March 1 to November 1.

PERMANENT SEEDING RATES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE:

Table with 4 columns: SEED MIX, SEEDING RATE (LBS./ACRE, LBS./1,000 SQ. FT.), NOTES, and DATE. Rows include GENERAL USE, STEEP BANKS OR CUT SLOPES, ROAD DITCHES AND SWALES, and LAWSNS.

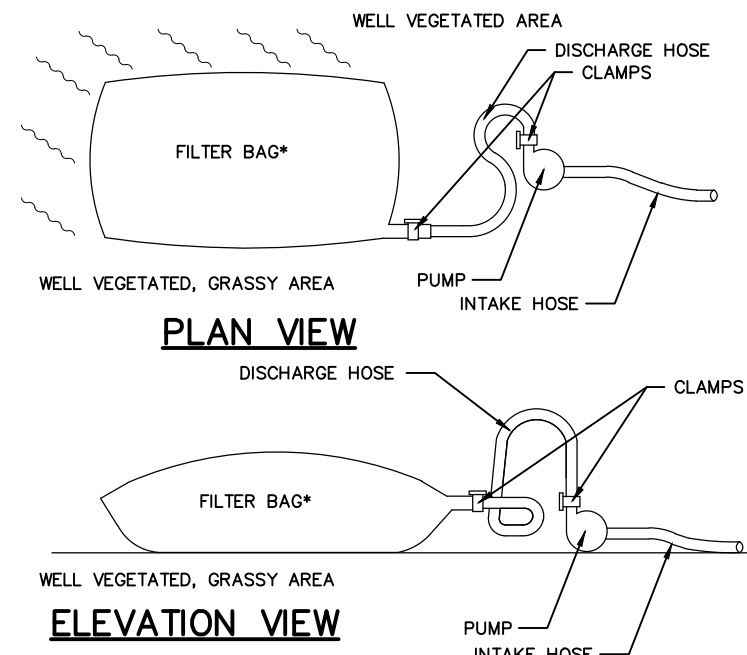
Professional Engineer seal for Jason M. Retten, State of Ohio, License No. 141824. Includes text 'FOR RETTEW ASSOCIATES BY:' and 'ISSUED FOR CONSTRUCTION'.

Table with 4 columns: MANAGER, DESIGN BY, DRAWN BY, SURV. CHIEF. Values include Steven Siegfried, SSU, JDW, N/A.

Project location: THE CITY OF WOOSTER, 1123 OLD COLUMBUS ROAD, WOOSTER, OH 44691. Includes a scale bar (1"=20') and north arrow.

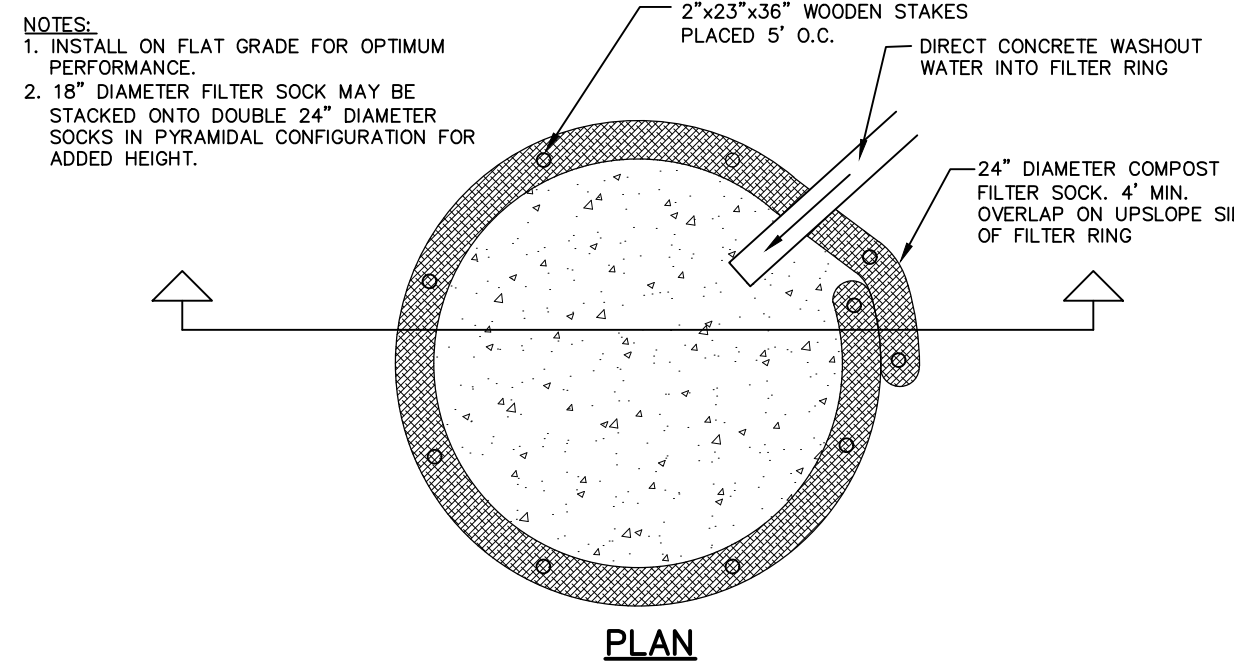
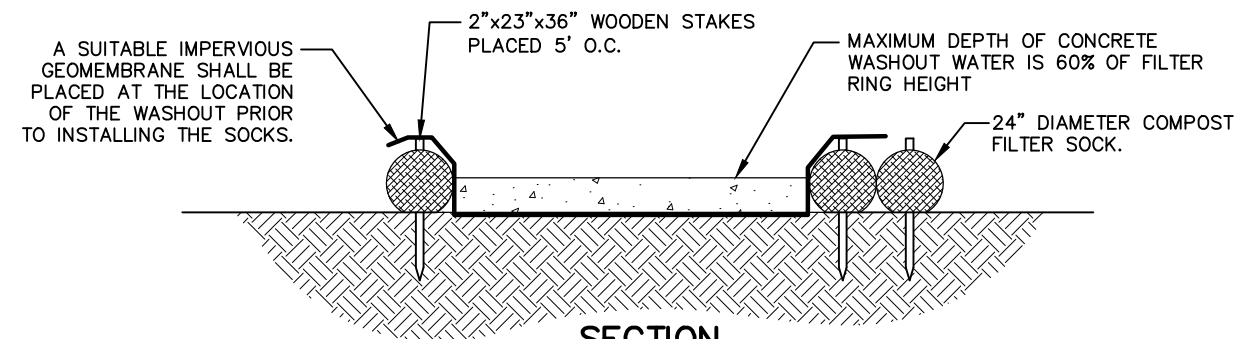
RETTEW logo and contact information: RETTEW Associates, Inc., 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685. Phone (800) 738-8395, Email: rettew@rettew.com, Website: www.rettew.com.

Project title: REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY. Includes 'E&S NOTES' and 'CITY OF WOOSTER' text.



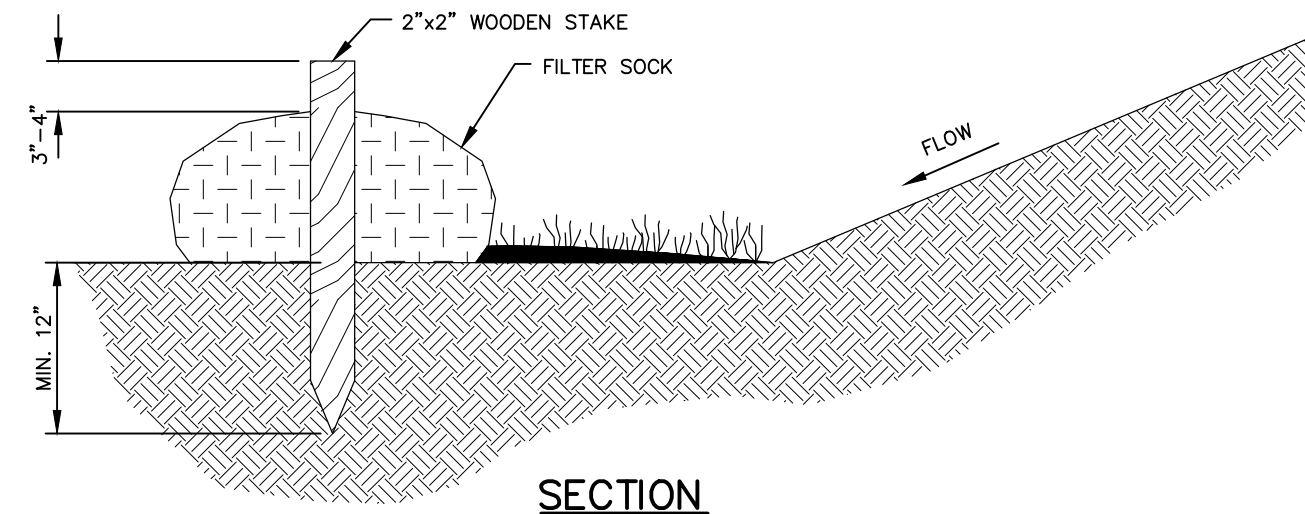
- CONSTRUCTION NOTES:**
1. FILTER BAGS MAY BE USED TO FILTER WATER PUMPED FROM DISTURBED AREAS PRIOR TO DISCHARGING TO SURFACE WATERS. THEY MAY ALSO BE USED TO FILTER WATER PUMPED FROM THE SEDIMENT STORAGE AREAS OF SEDIMENT BASINS.
 2. THE PUMPING RATE SHOULD BE DETERMINED BY THE CONTRACTOR BASED UPON ACTUAL AMOUNT OF GROUNDWATER ENCOUNTERED DURING CONSTRUCTION. PUMPING RATES WILL VARY DEPENDING ON THE SIZE OF THE FILTER BAG, AND THE TYPE AND AMOUNT OF SEDIMENT DISCHARGED TO THE BAG.
 3. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
 4. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
 5. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
 6. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
 7. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.

SEDIMENT FILTER BAG
NOT TO SCALE



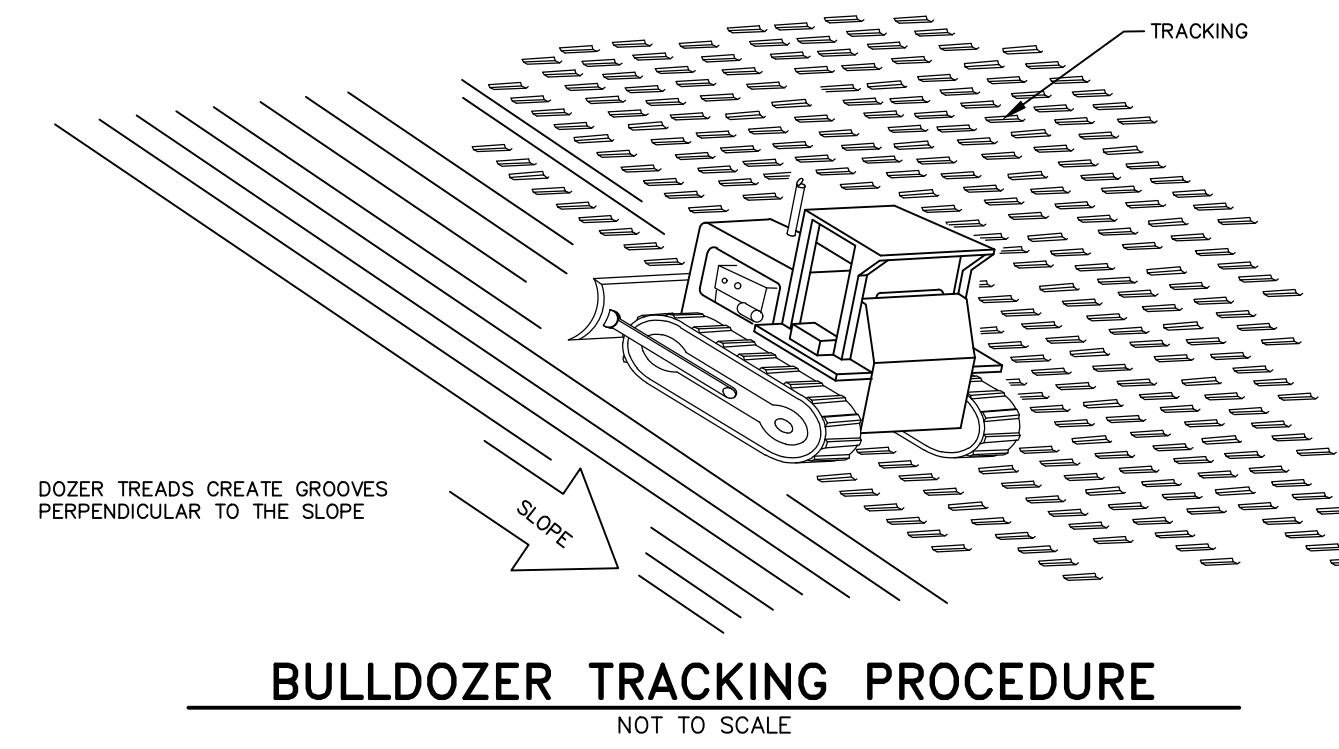
COMPOST SOCK CONCRETE WASHOUT DETAIL
NOT TO SCALE

FILTER SOCK TABLE		
FS#	SIZE	LENGTH
FS-1	12"	19'
FS-2	12"	30'
FS-3	12"	56'
FS-4	12"	15'
FS-5	12"	23'
FS-6	12"	40'
FS-7	12"	24'
FS-8	12"	22'

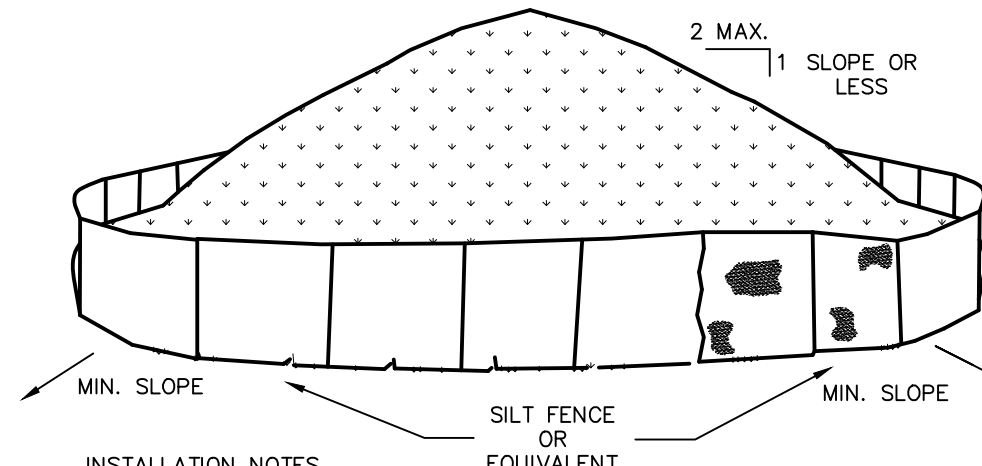


- NOTES:**
1. MATERIALS—COMPOST USED FOR FILTER SOCKS SHALL BE WEED, PATHOGEN, AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS, OR OTHER MATERIALS TOXIC TO PLANT GROWTH. THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
 2. FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.
- INSTALLATION:**
3. FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE.
 4. FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, SHALL BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
 5. FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS.
- MAINTENANCE:**
6. ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAINFALL EVENT, MAINTAIN FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.
 7. REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THEY REACH 2/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
 8. WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
 9. REMOVAL—FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH A WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDINGS.

FILTER SOCK
NOT TO SCALE

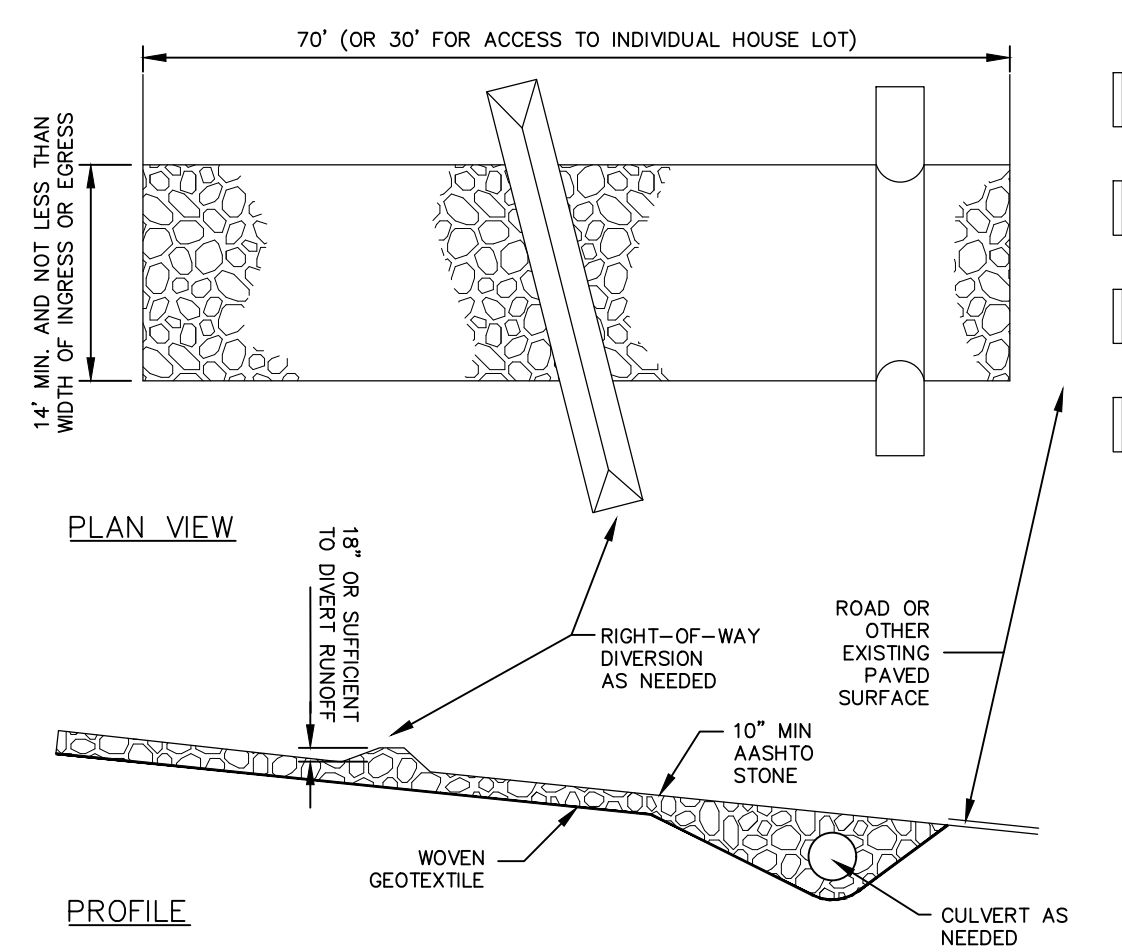


BULLDOZER TRACKING PROCEDURE
NOT TO SCALE

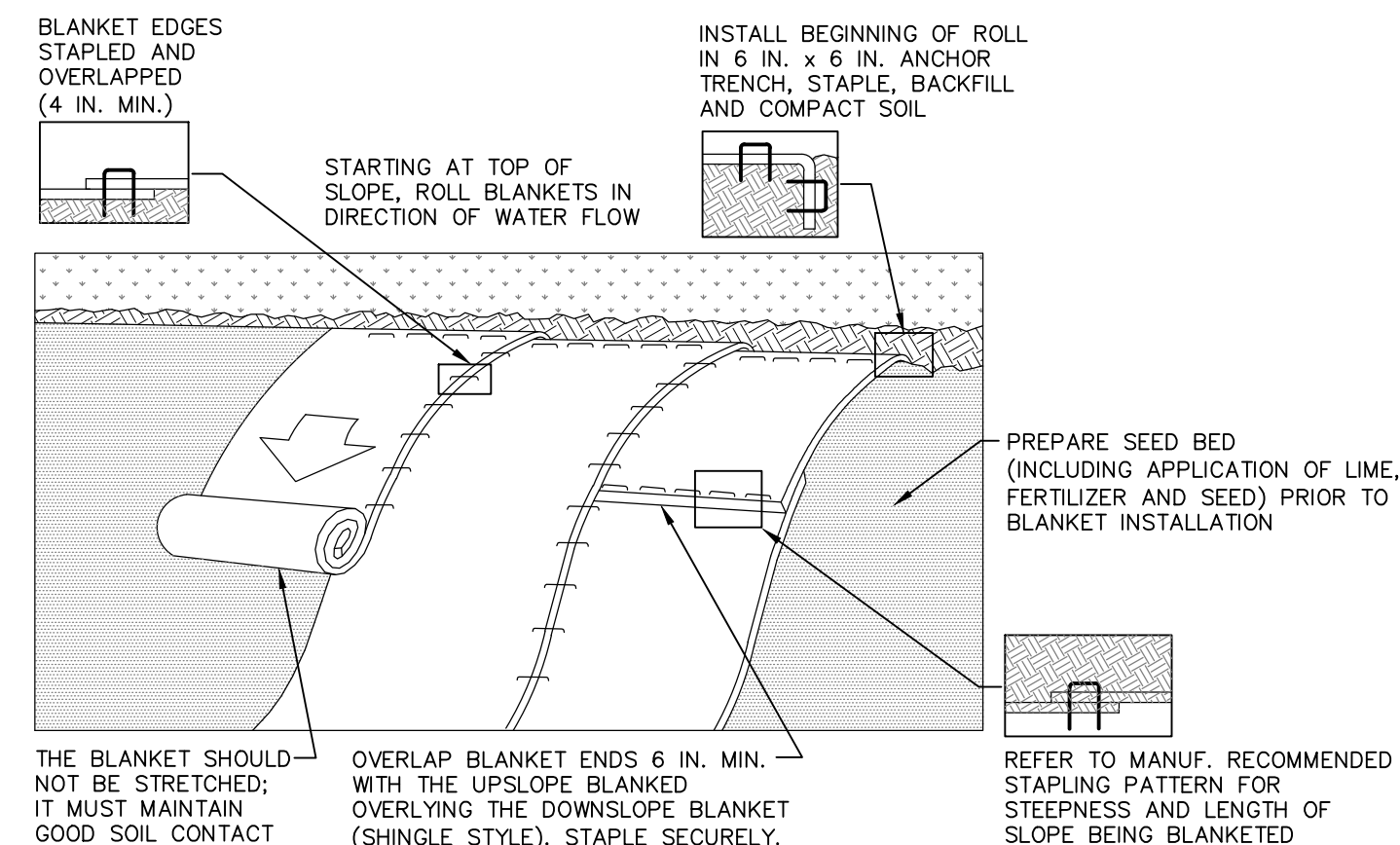


- INSTALLATION NOTES:**
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE. CONSTRUCT STOCKPILES IN ACCESSIBLE LOCATIONS THAT DO NOT INTERFERE WITH NATURAL DRAINAGE.
 2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
 3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH FILTER SOCK THEN STABILIZED WITH VEGETATION OR COVERED WHEN INACTIVE MORE THAN 14 DAYS.
 4. SEE SPECIFICATIONS FOR INSTALLATION OF FILTER SOCK.
 5. ALL ACTIVE STOCKPILES SHALL BE ACCESSED FROM THE UPHILL SIDE.

SOIL STOCKPILE
NOT TO SCALE



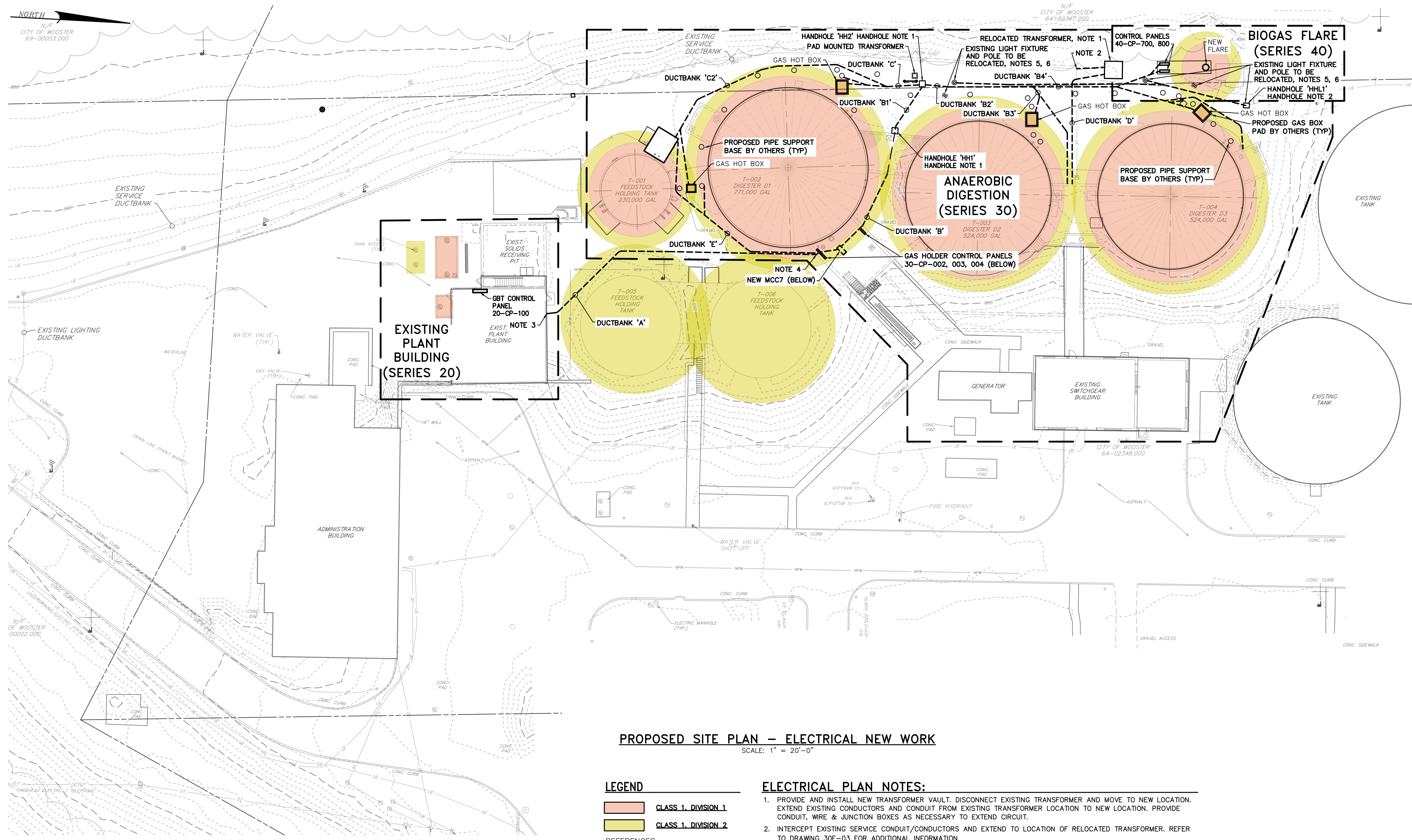
ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE



- NOTES:**
- SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
- PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
- SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
- BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
- THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

STANDARD CONSTRUCTION DETAIL #11-1
EROSION CONTROL BLANKET INSTALLATION
NOT TO SCALE

FOR RETTEW ASSOCIATES BY:		DATE	
MANAGER: STEVEN SIEGFRIED		4/05/24	
DESIGN BY: CHKO BY: SSU JDW	ISSUED FOR CONSTRUCTION	NO.	REVISION
DRAWN BY: CHKO BY: JDW			
SURV. CHIEF: FELDBOOK NO. N/A			
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691			
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY E&S DETAILS CITY OF WOOSTER WAYNE COUNTY, OH			
PROJ. NO. 122022001		DWG. NO. 01C-06	



- HANDHOLE NOTES:**
- POWER/CONTROL HANDHOLES 'HH1' & 'HH2' SHALL BE A POLYMER CONCRETE BOX WITH DIMENSIONS OF 30"W X 48"L X 36"D, OPEN BOTTOM WITH A TIER 8 COVER. QUAZITE PG 3048BA36 WITH PG3048CA0017 COVER OR EQUAL. COVER TO HAVE "ELECTRIC" LOGO.
 - SITE LIGHTING HANDHOLE 'HHL1' SHALL BE A POLYMER CONCRETE BOX WITH DIMENSIONS OF 10"W X 15"L X 12"D, OPEN BOTTOM WITH A TIER 22 COVER. QUAZITE PG 1015BA12 WITH PG1015HH0029 COVER OR EQUAL. COVER TO HAVE "LIGHTING" LOGO.

PROPOSED SITE PLAN – ELECTRICAL NEW WORK
SCALE: 1" = 20'-0"

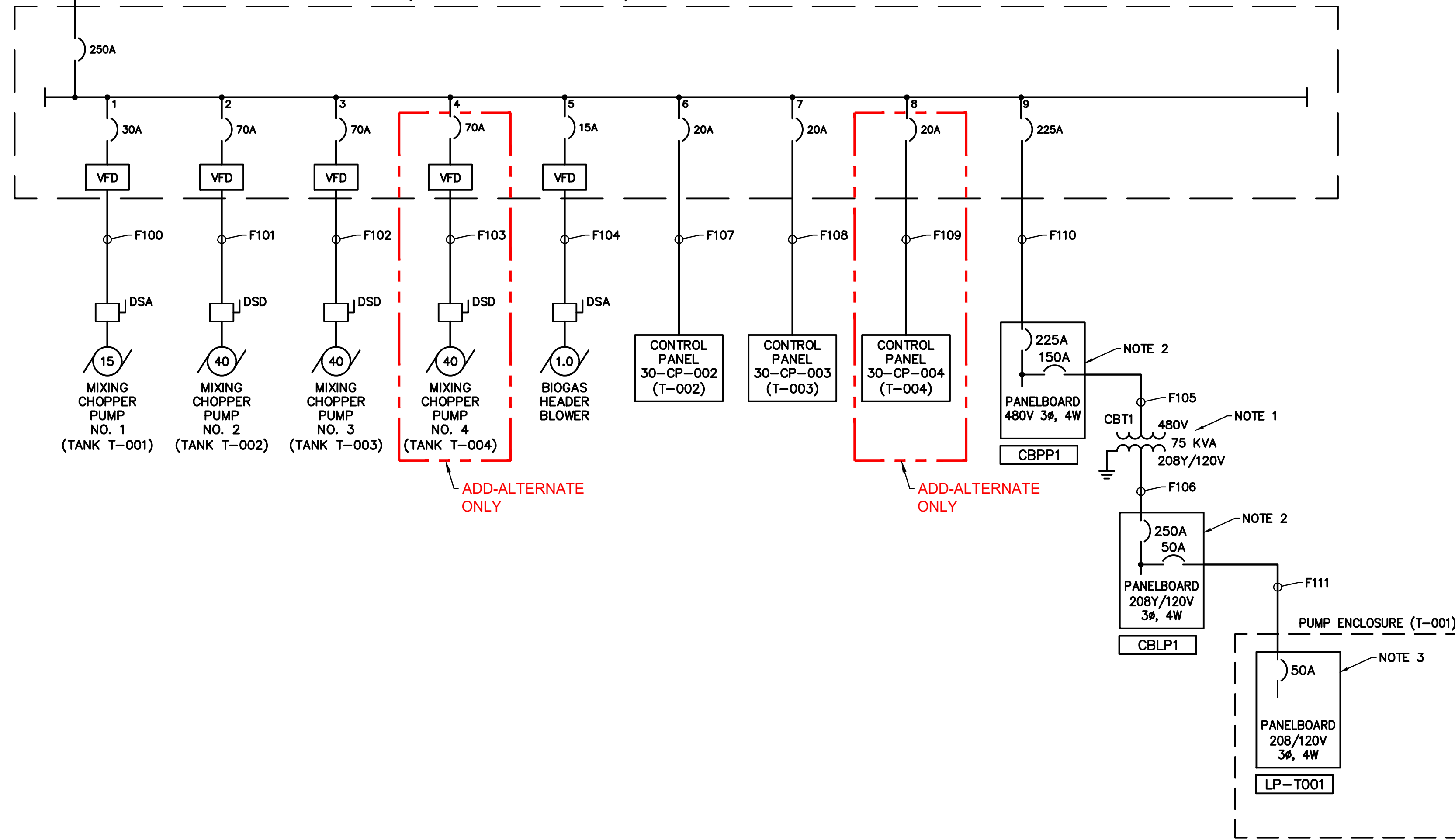
- LEGEND**
- CLASS 1, DIVISION 1
 - CLASS 1, DIVISION 2
- REFERENCES:**
- NFPA 820 – STANDARD FOR FIRE PROTECTION IN WW TREATMENT AND COLLECTION FACILITIES
 - INTERNATIONAL FIRE CODE

- ELECTRICAL PLAN NOTES:**
- PROVIDE AND INSTALL NEW TRANSFORMER VAULT. DISCONNECT EXISTING TRANSFORMER AND MOVE TO NEW LOCATION. EXTEND EXISTING CONDUCTORS AND CONDUIT FROM EXISTING TRANSFORMER LOCATION TO NEW LOCATION. PROVIDE CONDUIT, WIRE & JUNCTION BOXES AS NECESSARY TO EXTEND CIRCUIT.
 - INTERCEPT EXISTING SERVICE CONDUIT/CONDUCTORS AND EXTEND TO LOCATION OF RELOCATED TRANSFORMER. REFER TO DRAWING 30E-03 FOR ADDITIONAL INFORMATION.
 - PANEL DP-1. DUCT BANK WILL STUB UP INTO JUNCTION BOX ON OUTSIDE OF BUILDING. CORE THROUGH BLOCK AND RUN CONDUIT INTO DP-1. JUNCTION BOX TO BE RATED NEMA 3R AND SEAL CONDUIT PENETRATION.
 - CONDUIT TO PENETRATE EXISTING WALL BELOW GRADE INTO INTERIOR OF UPPER LEVEL INSIDE OF BUILDING. THE BELOW GRADE PENETRATIONS TO BE SEALED WATERTIGHT.
 - EXISTING POLE MOUNTED SITE LIGHT FIXTURE TO BE RELOCATED OUT OF PROPOSED CLASSIFIED AREA AS SHOWN. CONTRACTOR TO LOCATE EXISTING UNDERGROUND LIGHTING CIRCUIT AND PROVIDE QUAZITE BOX TO INTERCEPT SITE LIGHTING CIRCUIT. MOUNT HANDHOLE OUTSIDE OF CLASSIFIED AREA AND PROVIDE A WATERPROOF SPLICE WITHIN THE HANDHOLE. EXTEND 3/4" PVC CONDUIT AND 2#10, #10GND CONDUCTORS FROM HANDHOLE TO NEW POLE LOCATION AND CONNECT AS REQUIRED. CONDUIT TO BE DIRECT BURIED AT 18" BFG.
 - CONTRACTOR TO INSTALL POLE BASE FOR RELOCATED LIGHT FIXTURE. REFER TO POLE BASE DETAIL ON 99E-01.
 - PROVIDE A LIGHTNING PROTECTION SYSTEM FOR TANKS T-002, T-003, T-004, THE BIOGAS FLARE AND THE COMPRESSOR BUILDING. THE SYSTEM SHALL BE DESIGNED BY A LIGHTNING PROTECTION INSTITUTE CERTIFIED MASTER DESIGNER. INSTALLATION OF THE APPROVED LIGHTNING PROTECTION DESIGN SHALL BE BY A CERTIFIED LIGHTNING PROTECTION INSTALLER.

<p>FOR RETTEW ASSOCIATES BY:</p> <p>MANAGER: STEVEN SIEGFRIED DESIGN BY: RRC DRAWN BY: GRS SURV. CHIEF: N/A</p>	<p>CHKD BY: JDW RCC/KJH FIELDBOOK NO. N/A</p> <p>DATE: 4/05/24</p> <p>ISSUED FOR CONSTRUCTION</p> <p>REVISION</p>
<p>THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691</p>	
<p>SCALE: 1" = 20'</p>	
<p>RETEW RETEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: retew@retew.com Website: www.retew.com</p> <p>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</p>	
<p>REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY PROPOSED SITE PLAN ELECTRICAL NEW WORK</p> <p>WAYNE COUNTY, OH CITY OF WOOSTER</p>	
<p>PROJ. NO. 122022001 DWG. NO. 01E-01</p>	
<p>BASE BID CONTRACT No. GC 24-01</p>	

FROM EXISTING INDOOR SWITCHGEAR (SEE DRAWING 01E-10)

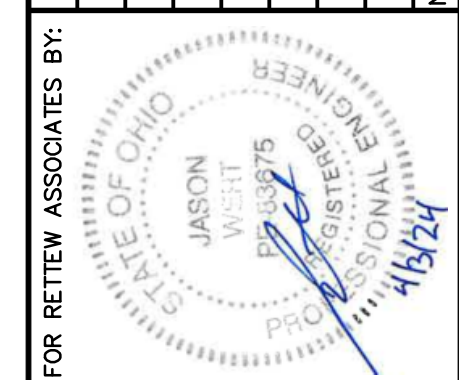
NEW MOTOR CONTROL CENTER 'MCC-7' 800A, 480V, 3Ø, 3W, 42KAIC, NEMA 1
EXISTING DIGESTER 1 CONTROL BUILDING (UPPER LEVEL FLOOR ELEV 854.75')



NEW MCC-7 POWER DISTRIBUTION DIAGRAM
NOT TO SCALE

DISTRIBUTION DIAGRAM NOTES:

1. NEMA 3R TRANSFORMER MOUNTED ON CONCRETE PAD OUTSIDE OF CLASSIFIED AREA.
2. NEMA 3R PANELBOARD MOUNTED ON EQUIPMENT RACK OUTSIDE OF CLASSIFIED AREA. REFER TO DETAIL ON DRAWING 99E-03.
3. PANELBOARD LP-T001 PROVIDED BY THE FABRICATED STRUCTURE/ENCLOSURE MANUFACTURER.



MANAGER:	STEVEN SIEGFRIED	CHKD BY:	JDW
DESIGN BY:	RRC	CHKD BY:	RRC/KJH
DRAWN BY:	GRS	SURV. CHIEF:	FELBOOK NO. N/A
N/A			

FOR RETTEW ASSOCIATES BY:

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

SCALE: AS NOTED

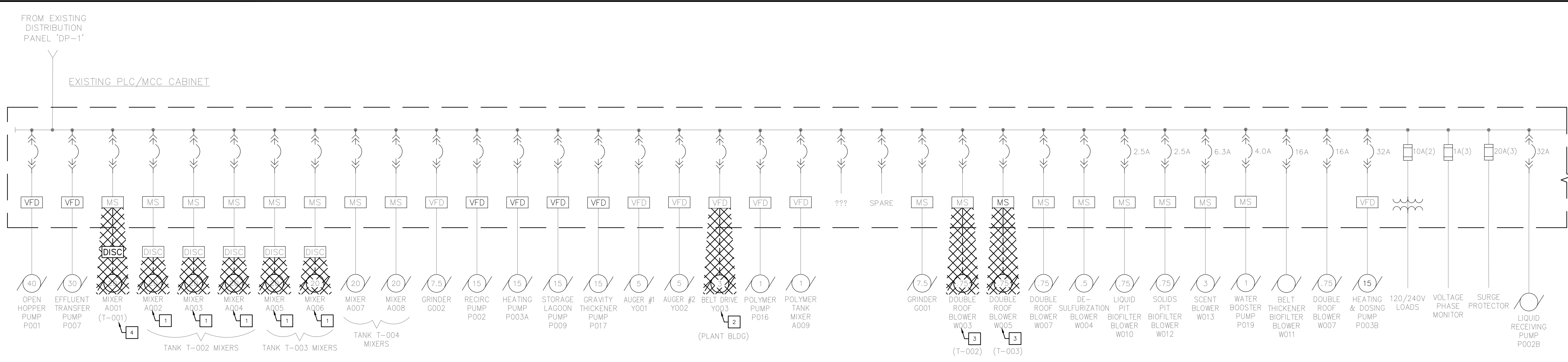
RETTEW
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
NEW MOTOR CONTROL CENTER MCC-7
POWER DISTRIBUTION DIAGRAM
CITY OF WOOSTER
WAYNE COUNTY, OH

PROJ. NO.	122022001
DWG. NO.	01E-11

(ADD-ALTERNATE ITEMS)
BASE BID
CONTRACT No. GC 24-01



- GENERAL ELECTRICAL NOTES:**
1. ALL EQUIPMENT AND DEVICES ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
 2. CONTRACTOR TO VERIFY LOCATION OF ASSOCIATED EQUIPMENT BREAKERS FOR ALL EQUIPMENT TO BE DISCONNECTED AND REMOVED.
 3. CONTRACTOR VERIFY POWER HAS BEEN TURNED OFF TO EACH DEVICE PRIOR TO BEGINNING WORK.

EXISTING PLC/MCC CABINET PARTIAL SINGLE LINE DIAGRAM - DEMOLITION
NOT TO SCALE

- SINGLE LINE DEMOLITION NOTES:**
1. DISCONNECT EXISTING MIXER TO BE REMOVED. REMOVE ASSOCIATED WIRING BACK TO DISCONNECTING DEVICE. DISCONNECTING DEVICE TO BE ABANDONED IN PLACE.
 2. DISCONNECT EXISTING MOTOR TO BE REMOVED. REMOVE DISCONNECTING DEVICE AND ASSOCIATED WIRING BACK TO SOURCE.
 3. DISCONNECT EXISTING ROOF BLOWER TO BE REMOVED. REMOVE DISCONNECTING DEVICE AND ASSOCIATED WIRING BACK TO SOURCE.
 4. DISCONNECT EXISTING FEED STOCK MIXER (TANK T-001) TO BE REMOVED. REMOVE DISCONNECTING DEVICE AND ASSOCIATED WIRING BACK TO SOURCE.

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: RRC	CHKD BY: JDW	DATE: 4/05/24
DRAWN BY: GRS	SURV. CHIEF: N/A	CHKD BY: RRC/KJH	NO. A
		FIELDBOOK NO. N/A	ISSUED FOR CONSTRUCTION
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE: AS NOTED	REVISION
<p>RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com</p> <p>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</p>		PROJ. NO. 122022001	
<p>REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY EXISTING PLC/MCC CABINET SINGLE LINE DIAGRAMS</p> <p>CITY OF WOOSTER WAYNE COUNTY, OH</p>		DWG. NO. 01E-12	

ELECTRICAL DUCTBANK SCHEDULE							
SITE DUCTBANK NUMBER	PURPOSE	FROM	TO	CONDUIT NUMBER(S)	CONDUIT SIZE	CIRCUIT	REMARKS
A	POWER	EXISTING PANEL DP-1	MCC7	1	2" PVC	F001	
	CONTROLS	PLC/MCC CABINET	30CP002	2	.75" RGS	30CP002-1	
	CONTROLS	PLC/MCC CABINET	30CP002.003.004	3	1" PVC	30CP002-22, 30CP003-18, 30CP004-17	CIRCUIT 30CP004-17 IS ADD-ALTERNATE
	SPARE	PLC/MCC CABINET	30CP002	4	2" PVC	SPARE	STUB UP AND CAP WITH PULL STRING
B	POWER	MCC7	PANELBOARD CBPP1		2.5" PVC	F110	
	POWER	MCC7	BIOGAS HEADER BLOWER		.75" RGS	F104	
	POWER	30-CP-003	TANK 3 BLOWERS		1" PVC	30CP003-2,30CP003-3	
	CONTROLS	30CP003	40CP800		.75" RGS	40CP800-1	
	CONTROLS	30CP002	TANK 2 INSTRUMENTS		2" RGS	30CP002-5,6,7,8,9,10,17,19,20,21	ANALOG SIGNALS
	CONTROLS	30CP002	TANK 2 INSTRUMENTS		1" PVC	30CP002-11,12,16,18	DIGITAL SIGNALS
	CONTROLS	30CP003	TANK 3 INSTRUMENTS		2" RGS	30CP003-4,5,6,7,8,9,14,16,17,26,27	ANALOG SIGNALS
	CONTROLS	30CP003	TANK 3 INSTRUMENTS		1" PVC	30CP003-10,11,13,25	DIGITAL SIGNALS
	SPARE	30CP002	HANDHOLE HH1		2" PVC	SPARE	STUB UP AND CAP WITH PULL STRING
	POWER (ADD-ALTERNATE)	MCC7	T-004 MIXING CHOPPER PUMP		1" PVC	F103	ADD-ALTERNATE ITEM ONLY
	POWER (ADD-ALTERNATE)	30-CP-004	TANK 4 BLOWERS		1" PVC	30CP004-1,30CP004-2	ADD-ALTERNATE ITEM ONLY
	CONTROLS (ADD-ALTERNATE)	30CP004	TANK 4 INSTRUMENTS		2" RGS	30CP004-3,4,5,6,7,8	ANALOG SIGNALS (ADD-ALTERNATE)
CONTROLS (ADD-ALTERNATE)	30CP004	TANK 4 INSTRUMENTS		1" PVC	30CP004-9,10	DIGITAL SIGNALS (ADD-ALTERNATE)	
B1	POWER	MCC7	PANELBOARD CBPP1		2.5" PVC	F110	
	POWER	MCC7	BIOGAS HEADER BLOWER		.75" RGS	F104	
	POWER	30-CP-003	TANK 3 BLOWERS		1" PVC	30CP003-2,30CP003-3	
	CONTROLS	30CP003	40CP800		.75" RGS	40CP800-1	
	CONTROLS	30CP002	TANK 2 INSTRUMENTS		2" RGS	30CP002-5,6,7,8,9,10,17,19,20,21	ANALOG SIGNALS
	CONTROLS	30CP002	TANK 2 INSTRUMENTS		1" PVC	30CP002-11,12,16,18	DIGITAL SIGNALS
	CONTROLS	30CP003	TANK 3 INSTRUMENTS		2" RGS	30CP003-4,5,6,7,8,9,14,16,17,26,27	ANALOG SIGNALS
	CONTROLS	30CP003	TANK 3 INSTRUMENTS		1" PVC	30CP003-10,11,13,25	DIGITAL SIGNALS
	SPARE	HANDHOLE HH1	HANDHOLE HH2		2" RGS	SPARE	STUB UP AND CAP WITH PULL STRING
	SPARE	HANDHOLE HH1	HANDHOLE HH2		2" RGS	SPARE	STUB UP AND CAP WITH PULL STRING
	POWER (ADD-ALTERNATE)	MCC7	T-004 MIXING CHOPPER PUMP		1" PVC	F103	ADD-ALTERNATE ITEM ONLY
	POWER (ADD-ALTERNATE)	30-CP-004	TANK 4 BLOWERS		1" PVC	30CP004-1,30CP004-2	ADD-ALTERNATE ITEM ONLY
CONTROLS (ADD-ALTERNATE)	30CP004	TANK 4 INSTRUMENTS		2" RGS	30CP004-3,4,5,6,7,8	ANALOG SIGNALS (ADD-ALTERNATE)	
CONTROLS (ADD-ALTERNATE)	30CP004	TANK 4 INSTRUMENTS		1" PVC	30CP004-9,10	DIGITAL SIGNALS (ADD-ALTERNATE)	
B2	POWER	MCC7	BIOGAS HEADER BLOWER		.75" RGS	F104	
	POWER	30-CP-003	TANK 3 BLOWERS		1" PVC	30CP003-2,30CP003-3	
	POWER	PANELBOARD CBLP1	40CP700		.75" RGS	CBLP1-7	
	POWER	PANELBOARD CBLP1	40CP800		.75" RGS	CBLP1-5	
	POWER	PANELBOARD CBLP1	TANK 4 HOTBOX		.75" RGS	CBLP1-11,17	
	POWER	PANELBOARD CBLP1	TANK 3 HOTBOX		.75" RGS	CBLP1-14,20	
	CONTROLS	30CP003	40CP800		.75" RGS	40CP800-1	
	CONTROLS	30CP003	TANK 3 INSTRUMENTS		2" RGS	30CP003-4,5,6,7,8,9,14,16,17,26,27	ANALOG SIGNALS
	CONTROLS	30CP003	TANK 3 INSTRUMENTS		1" RGS	30CP003-10,11,13,25	DIGITAL SIGNALS
	POWER (ADD-ALTERNATE)	MCC7	T-004 MIXING CHOPPER PUMP		1" PVC	F103	ADD-ALTERNATE ITEM ONLY
	CONTROLS (ADD-ALTERNATE)	30-CP-004	TANK 4 BLOWERS		1" PVC	30CP004-1,30CP004-2	ADD-ALTERNATE ITEM ONLY
	CONTROLS (ADD-ALTERNATE)	30CP004	TANK 4 INSTRUMENTS		2" RGS	30CP004-3,4,5,6,7,8	ANALOG SIGNALS (ADD-ALTERNATE)
CONTROLS (ADD-ALTERNATE)	30CP004	TANK 4 INSTRUMENTS		1" RGS	30CP004-9,10	DIGITAL SIGNALS (ADD-ALTERNATE)	
B3	POWER	MCC7	BIOGAS HEADER BLOWER		.75" RGS	F104	
	POWER	30-CP-003	TANK 3 BLOWERS		1" PVC	30CP003-2,30CP003-3	
	POWER	PANELBOARD CBLP1	TANK 3 HOTBOX		.75" RGS	CBLP1-14,20	
	CONTROLS	30CP003	TANK 3 INSTRUMENTS		2" RGS	30CP003-4,5,6,7,8,9,14,16,17,26,27	ANALOG SIGNALS
	CONTROLS	30CP003	TANK 3 INSTRUMENTS		1" PVC	30CP003-10,11,13,25	DIGITAL SIGNALS
	CONTROLS (ADD-ALTERNATE)	30-CP-004	TANK 4 BLOWERS		1" PVC	30CP004-1,30CP004-2	ADD-ALTERNATE ITEM ONLY
B4	POWER	MCC7	BIOGAS HEADER BLOWER		.75" RGS	F104	
	POWER	PANELBOARD CBLP1	40CP700		.75" RGS	CBLP1-7	
	POWER	PANELBOARD CBLP1	40CP800		.75" RGS	CBLP1-5	
	POWER	PANELBOARD CBLP1	TANK 4 HOTBOX		.75" RGS	CBLP1-11,17	
	CONTROLS	30CP003	40CP800		.75" RGS	40CP800-1	
	POWER (ADD-ALTERNATE)	MCC7	T-004 MIXING CHOPPER PUMP		1" PVC	F103	ADD-ALTERNATE ITEM ONLY
B4.1	POWER	PANELBOARD CBLP1	40CP700		.75" RGS	CBLP1-7	
	POWER	PANELBOARD CBLP1	40CP800		.75" RGS	CBLP1-5	
B4.2	POWER	MCC7	BIOGAS HEADER BLOWER		.75" RGS	F104	
	POWER	PANELBOARD CBLP1	TANK 4 HOTBOX		.75" RGS	CBLP1-11,17	
B5	POWER (ADD-ALTERNATE)	MCC7	T-004 MIXING CHOPPER PUMP		1" PVC	F103	ADD-ALTERNATE ITEM ONLY
	POWER (ADD-ALTERNATE)	MCC7	T-004 MIXING CHOPPER PUMP		1" PVC	F103	ADD-ALTERNATE ITEM ONLY
C	POWER	PANELBOARD CBPP1	PANELBOARD LP-T001		1.5" PVC	F111	
	POWER	PANELBOARD CBLP1	TANK 1 HOTBOX		.75" RGS	CBLP1-1,2	
	POWER	PANELBOARD CBLP1	TANK 2 HOTBOX		.75" RGS	CBLP1-8,21	
	CONTROLS	30CP002	TANK 2 INSTRUMENTS		2" RGS	30CP002-5,6,7,8,9,10,19,21	ANALOG SIGNALS
C1	CONTROLS	30CP002	TANK 2 INSTRUMENTS		1" PVC	30CP002-11,12,18	DIGITAL SIGNALS
	POWER	PANELBOARD CBLP1	TANK 2 HOTBOX		.75" RGS	CBLP1-8,21	
C2	CONTROLS	30CP002	TANK 2 INSTRUMENTS		2" RGS	30CP002-5,6,7,8,9,10,19,21	ANALOG SIGNALS
	CONTROLS	30CP002	TANK 2 INSTRUMENTS		1" PVC	30CP002-11,12,18	DIGITAL SIGNALS
C3	POWER	PANELBOARD CBPP1	PANELBOARD LP-T001		1.5" PVC	F111	
C4	POWER	PANELBOARD CBLP1	TANK 1 HOTBOX		.75" RGS	CBLP1-1,2	
D	POWER	EXIST. ELECTRICAL BLDG. SWITCHGEAR	NEW 1500 KVA TRANSFORMER		5" PVC	F003	
	POWER	MCC7	T-001 MIXING CHOPPER PUMP		.75" RGS	F100	
E	CONTROLS	30CP002	TANK 1 INSTRUMENTS		2" RGS	30CP002-17,20	ANALOG SIGNALS
	CONTROLS	30CP002	TANK 1 INSTRUMENTS		1" PVC	30CP002-16	DIGITAL SIGNALS

NOTE: CONDUITS SHOWN OF TYPE PVC ARE ACCEPTABLE FOR UNDERGROUND INSTALLATION. WHERE THE CONDUITS TRANSITION INTO A BUILDING OR ABOVE GRADE, THE CONDUIT TYPE SHALL CHANGE TO RGS. RGS SWEEPS SHALL BE USED AT ALL LOCATIONS WHERE CONDUITS TRANSITION TO ABOVE GRADE.

ELECTRICAL DISCONNECT SCHEDULE								
DESIGNATION	VOLT	AMP	POLE	PROTECTION			NEMA ENCLOSURE	REMARKS
				FUSIBLE	NON-FUSIBLE	FUSE SIZE		
DSA	480	30	3		X		7	MOUNTED ON WALL OR STANCHION MOUNTED IN HAZARDOUS LOCATIONS
DSB	480	30	3		X		3R	MOUNTED OUTDOORS ON UNISTRUT OR WALL NEAR MOTOR IN NON HAZ. LOCATIONS
DSC	480	30	3		X		12	MOUNTED ON INTERIOR WALL IN NON HAZ. LOCATIONS
DSD	480	100	3		X		7	MOUNTED ON WALL IN HAZ. LOCATIONS

FOR REVIEW ASSOCIATES BY:

MANAGER: STEVEN SIEGFRIED
DESIGN BY: CHKO BY: JDW
RRC
DRAWN BY: CHKO BY: RRC/KJH
GRS
SURV. CHIEF: N/A
FIELDBOOK NO. N/A

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

SCALE AS NOTED

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
ELECTRICAL SCHEDULES - I

CITY OF WOOSTER WAYNE COUNTY, OH

PROJ. NO. 122022001
DWG. NO. 01E-30

REVISION NO. DATE

ISSUED FOR CONSTRUCTION

4/05/24

REVIEW ASSOCIATES, INC.
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

REVIEW ASSOCIATES, INC.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: review@retew.com
Website: www.retew.com

(ADD-ALTERNATE ITEMS)
BASE BID
CONTRACT No. GC 24-01

ELECTRICAL FEEDER SCHEDULE									
DESIG.	FROM	TO	VOLTAGE	CONDUCTORS - QTY/SIZE (NOTE 1)				CONDUIT SIZE/TYPE	REMARKS
				RATING	PHASE	NEUTRAL	GROUND		
F001	DP-1	MCC-7/DIGESTER BLDG	480	600V	(3)#250 KCMIL	-	(1)#4 AWG	2.5" RGS	
F002	DP-1	GBT CONTROL PANEL 20-CP-100	480	600V	(3)#10AWG	-	(1)#10 AWG	.75" RGS	
F003	ELECTRICAL BUILDING SWGR.	1500 KVA WTP TRANSFORMER	480	600V	(4) SETS OF(3) #1000 KCMIL	(4) SETS OF(1) #1000 KCMIL		5" PVC	NOTE 2
F100	MCC-7	T-001 MIXING CHOPPER PUMP	480	600V	(3)#10 AWG	-	(1)#10 AWG	.75" RGS	
F101	MCC-7	T-002 MIXING CHOPPER PUMP	480	600V	(3)#6 AWG	-	(1)#8 AWG	1" RGS	
F102	MCC-7	T-003 MIXING CHOPPER PUMP	480	600V	(3)#6 AWG	-	(1)#8 AWG	1" RGS	
F103	MCC-7 (ADD-ALTERNATE)	T-004 MIXING CHOPPER PUMP	480	600V	(3)#6 AWG	-	(1)#8 AWG	1" RGS	ADD-ALTERNATE ITEM ONLY
F104	MCC-7	BIOGAS HEADER BLOWER	480	600V	(3)#12 AWG	-	(1)#12 AWG	.75" RGS	
F105	PANEL CBPP1	TRANSFORMER CBT1	480	600V	(3)#1/0 AWG	-	(1)#6 AWG	1.5" RGS	
F106	TRANSFORMER CBT1	PANEL CBLP1	480	600V	(3)#250 KCMIL	(1)#250 KCMIL	(1)#4 AWG	2.5" RGS	
F107	MCC-7	30-CP-002	480	600V	(3) #12 AWG	-	(1)#12 AWG	0.75" RGS	
F108	MCC-7	30-CP-003	480	600V	(3) #12 AWG	-	(1)#12 AWG	0.75" RGS	
F109	MCC-7 (ADD-ALTERNATE)	30-CP-004	480	600V	(3) #12 AWG	-	(1)#12 AWG	0.75" RGS	ADD-ALTERNATE ITEM ONLY
F110	MCC-7	PANEL CBPP1	480	600V	(3)#4/0 AWG	-	(1)#4 AWG	2.5" RGS	
F111	PANEL CBPP1	PANEL LP-T001 AT PUMP ENCLOSURE	208/120	600V	(4)#4 AWG	-	(1)#10 AWG	1.5" RGS	
F200	GBT CONTROL PANEL 20-CP-100	BELT DRIVE	480	600V	(3) #12 AWG	-	(1)#12 AWG	0.75" RGS	VFD CABLE
F201	GBT CONTROL PANEL 20-CP-100	HYDRAULIC PUMP	480	600V	(3) #12 AWG	-	(1)#12 AWG	0.75" RGS	
F202	GBT CONTROL PANEL 20-CP-100	WASHWATER PUMP	480	600V	(3) #12 AWG	-	(1)#12 AWG	0.75" RGS	
<p>1. ALL AC WIRING SHALL BE TYPE "XHHW" - COPPER, UNLESS NOTED OTHERWISE.</p> <p>2. CONTRACTOR TO VERIFY NUMBER OF PARALLEL SETS, SIZE OF CONDUITS, SIZE OF UNGROUNDED CONDUCTORS AND SIZE OF GROUNDED CONDUCTORS CURRENTLY INSTALLED. PROVIDE SAME SIZES AND QUANTITIES FOR EXTENSION.</p>									

PANEL CBPP1		MOUNTING SURFACE				BUS AMP 225A				MIN A.I.C. 18,000 WIRE 4				MAIN BREAKER 225				DESCRIPTION	CKT	
LOCATION: COMPRESSOR BUILDING EXTERIOR WALL		PHASE 3				NEMA 3R				VOLTAGE 480										
AMP	POLES	A	B	C	NO	SIZE	GND. SIZE	COND. SIZE	COND. SIZE	GND. SIZE	WIRE NO	A	B	C	POLES	AMP				
150	3	11			3	1/0	6	1 1/2										2		
				11														4		
					11													6		
																		8		
																		10		
																		12		
																		14		
																		16		
																		18		
																		20		
																		22		
																		24		
																		26		
																		28		
																		30		
																		32		
																		34		
																		36		
																		38		
																		40		
																		42		
SUB-TOTAL LOAD KW		11	11	11	SUB-TOTAL LOAD KW				0	0	0	TOTAL LOAD KW				11	11	11		

PANEL CBLP1		MOUNTING SURFACE				BUS AMP 250A				MIN A.I.C. 10,000 WIRE 4				MAIN BREAKER 250A				DESCRIPTION	CKT		
LOCATION: EXTERIOR BACKBOARD - TANKS 2/3		PHASE 3				NEMA 1				VOLTAGE 208Y/120											
AMP	POLES	A	B	C	NO	SIZE	GND. SIZE	COND. SIZE	COND. SIZE	GND. SIZE	WIRE NO	A	B	C	POLES	AMP					
20	2	1			3	12	12	3/4				3/4	12	12	3	0.8		3	20	TANK 1 HOTBOX HEATER	2
																0.8					4
20	1			1.2	2	12	12	3/4								0.8					6
20	1	0.2			2	12	12	3/4				3/4	12	12	3	0.8		3	20	TANK 2 HOTBOX HEATER	8
20	1															0.8					10
20	3				3	12	12	3/4								0.8		3	20	TANK 3 HOTBOX HEATER	14
												3/4	12	12	3	0.8		3	20	TANK 3 HOTBOX HEATER	16
																0.8					18
20	2			1.04	3	12	12	3/4								0.8					20
																					22
20	2			1.04	3	12	12	3/4								1		2	20	TANK 3 HEAT TRACE CONTROLLER	24
																		1	20	SPARE	26
50	3	1.75			4	4	10	1.5													28
																					30
																					32
																					34
																					36
																					38
																					40
																					42
SUB-TOTAL LOAD KW		4.9	4.67	5.87	SUB-TOTAL LOAD KW				3.6	3.6	2.5	TOTAL LOAD KW				8.5	8.2	8.4			

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION

FOR RETTEW ASSOCIATES BY:	MANAGER: STEVEN SIEGFRIED	DESIGN BY: RRC	CHKD BY: JDW	DRWN BY: GRS	CHKD BY: RRC/K/JH	SURV. CHIEF: N/A	FIELDBOOK NO: N/A
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THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

SCALE AS NOTED

RETTEW
RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

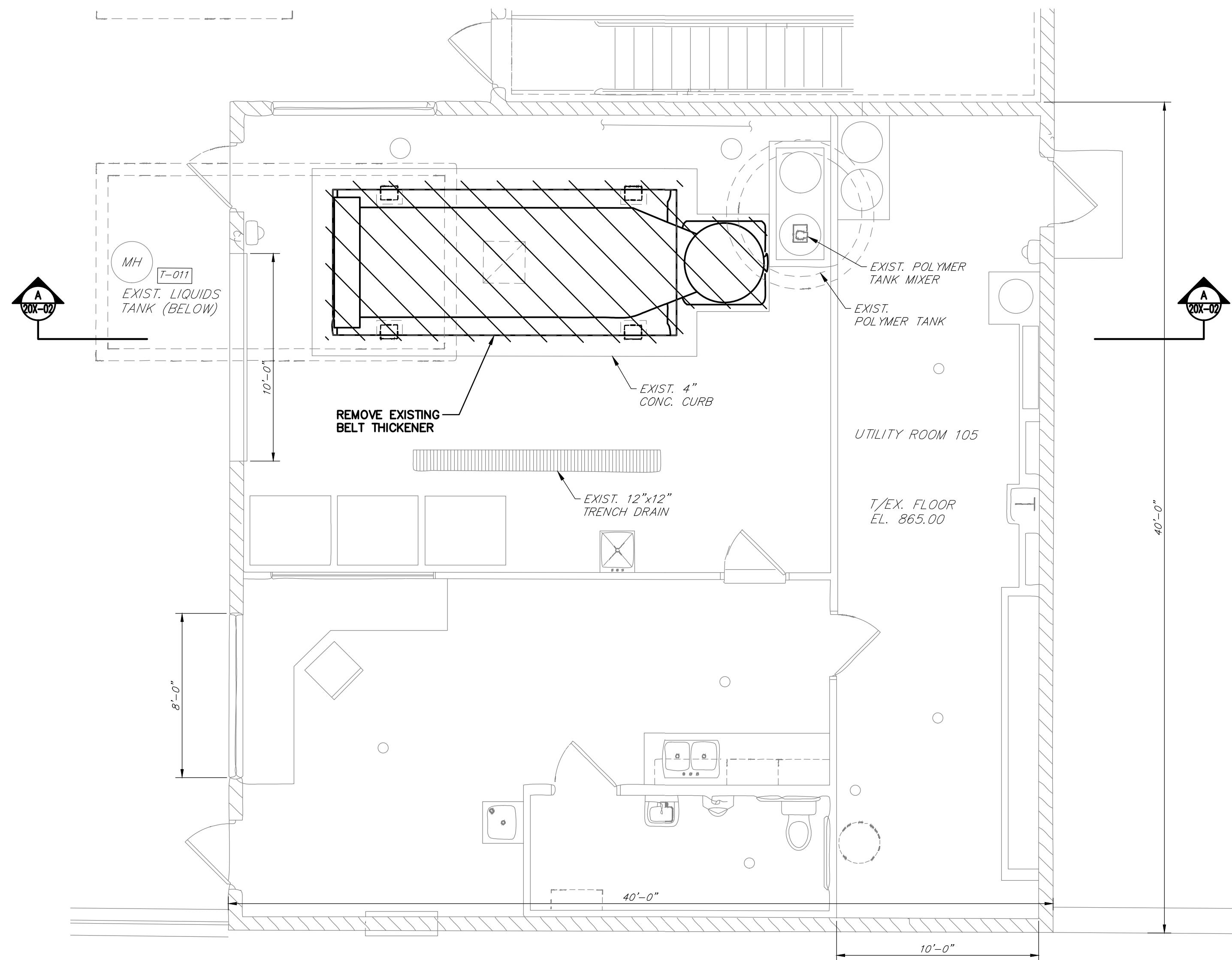
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
ELECTRICAL SCHEDULES - II

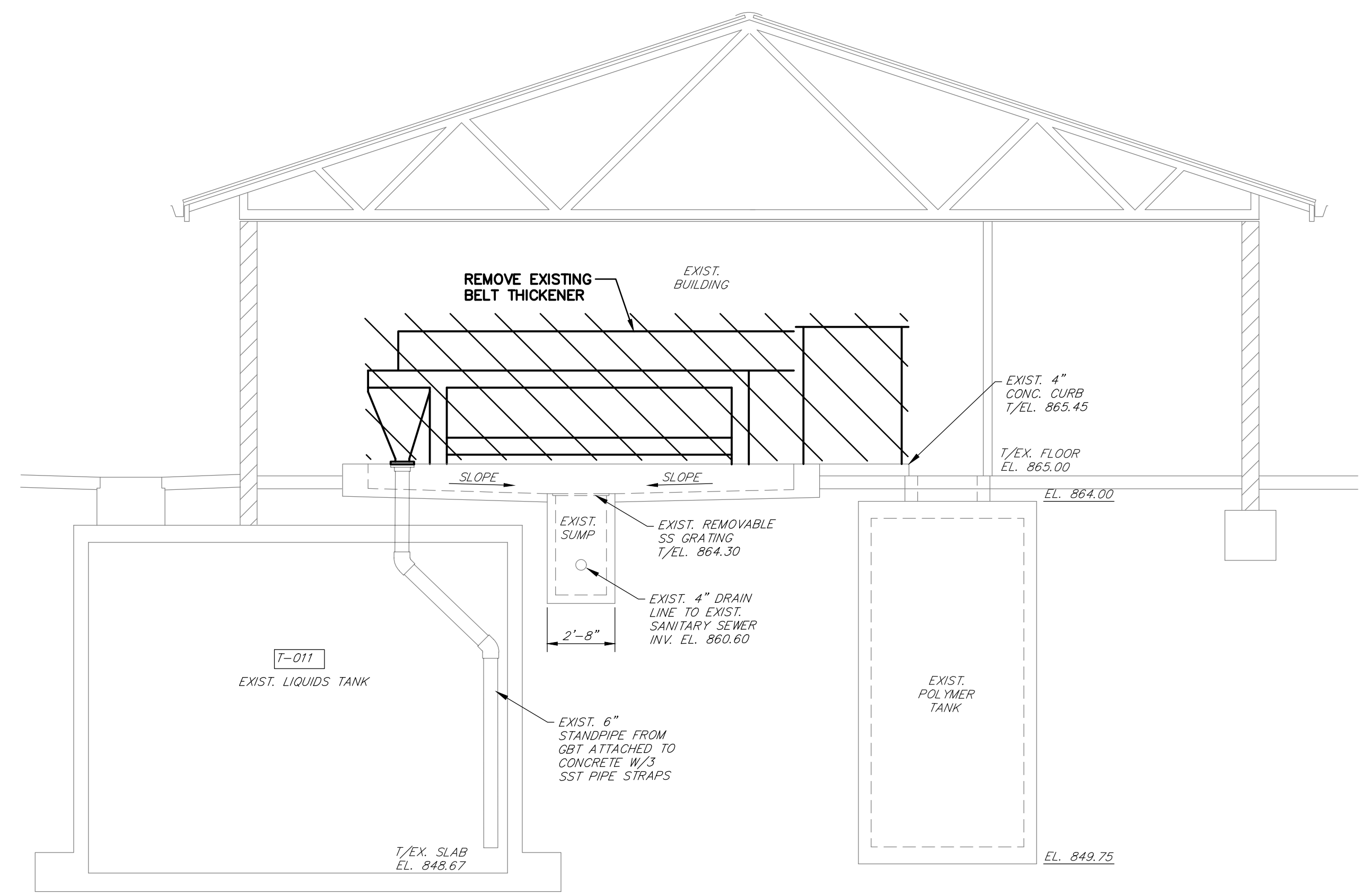
CITY OF WOOSTER
WAYNE COUNTY, OH

PROJ. NO.	122022001
DWG. NO.	01E-31

(ADD-ALTERNATE ITEMS)
BASE BID
CONTRACT No. GC 24-01

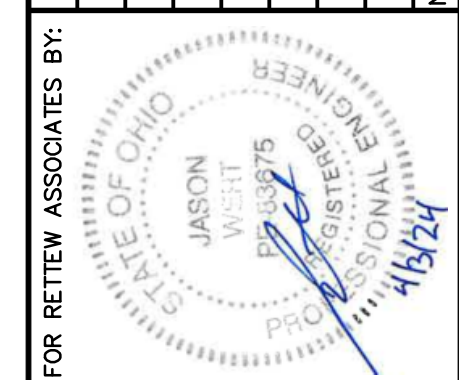


MAIN FLOOR DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



SECTION A-A
SCALE: 1/4" = 1'-0"

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION



MANAGER:	STEVEN SIEGFRIED
DESIGN BY:	SSU
DRAWN BY:	JOG
SURV. CHIEF:	N/A
CHKD BY:	JDW
CHKD BY:	JDW
FELDBOOK NO.:	N/A

FOR RETTEW ASSOCIATES BY:

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

SCALE: 1/4" = 1'-0"

0 2 4 8 12

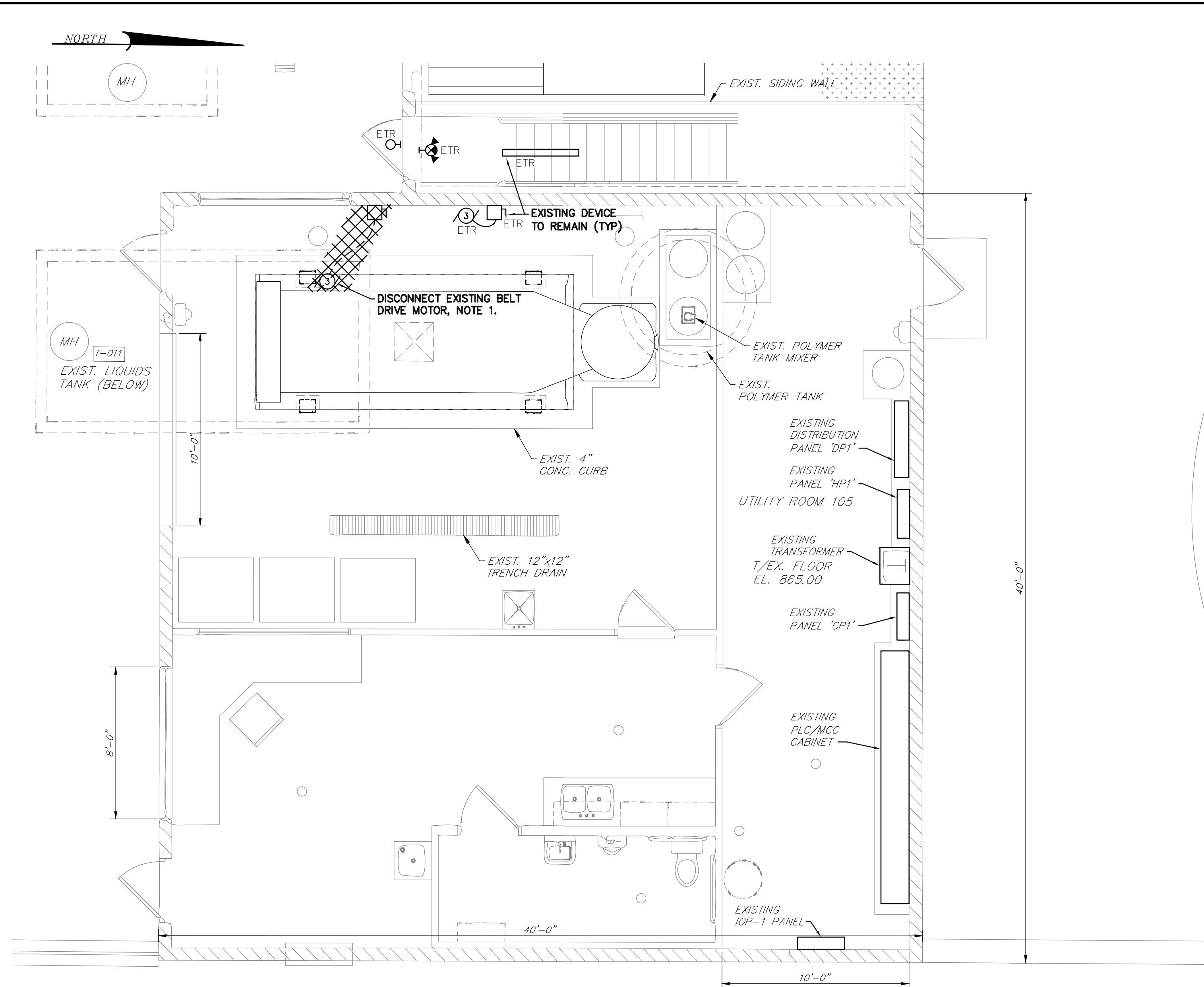
RETTEW
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Environmental Consultants

RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

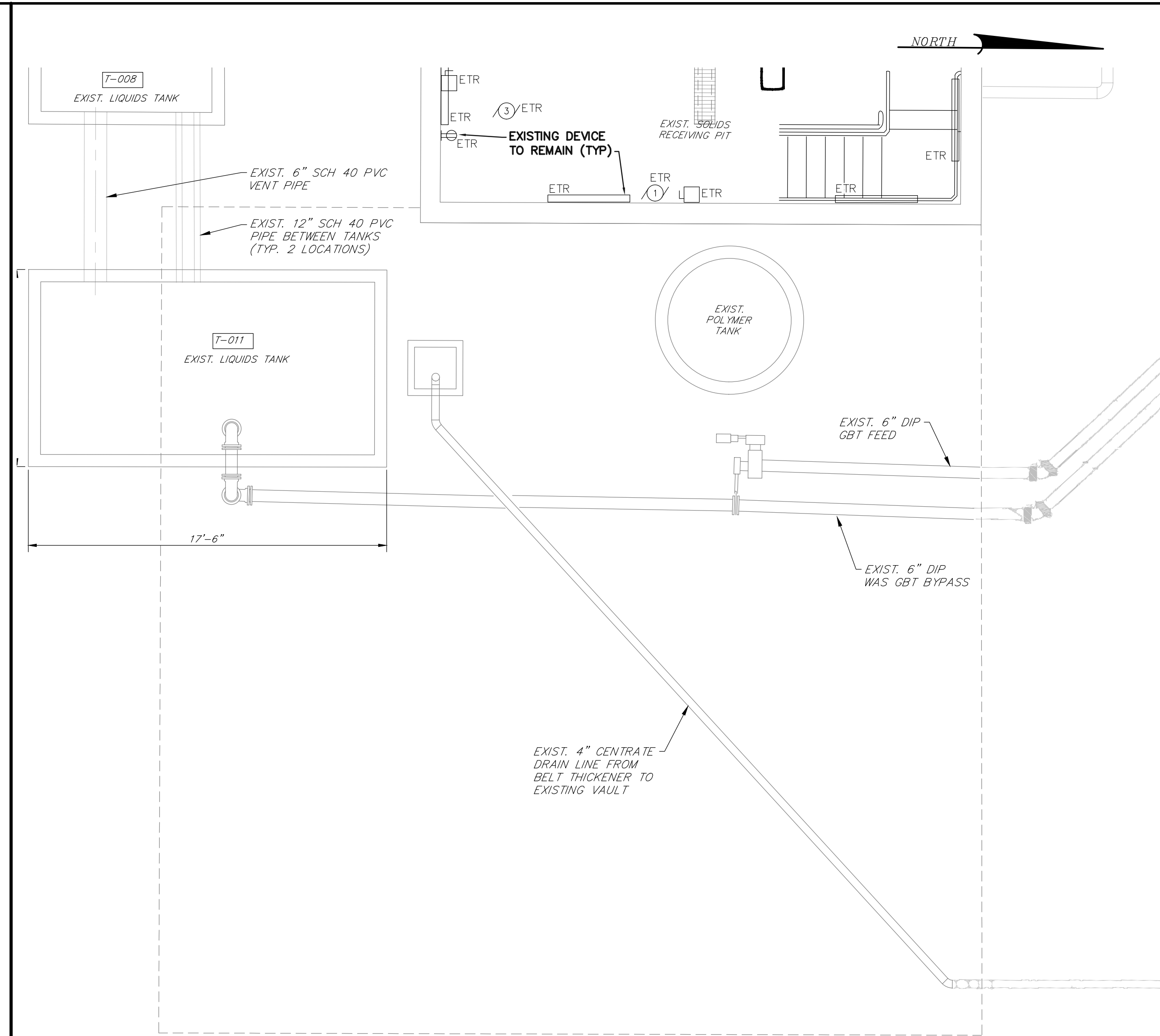
REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
EXISTING PLANT BUILDING
DEMOLITION PLAN & SECTION
CITY OF WOOSTER
WAYNE COUNTY, OH

PROJ. NO.	122022001
DWG. NO.	20X-01

BASE BID
CONTRACT No. GC 24-01



MAIN FLOOR ELECTRICAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



LOWER LEVEL ELECTRICAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

DEMOLITION LEGEND:

EXISTING EQUIPMENT/DEVICES TO BE DISCONNECTED, REMOVED AND/OR ABANDONED IN PLACE AS NOTED.

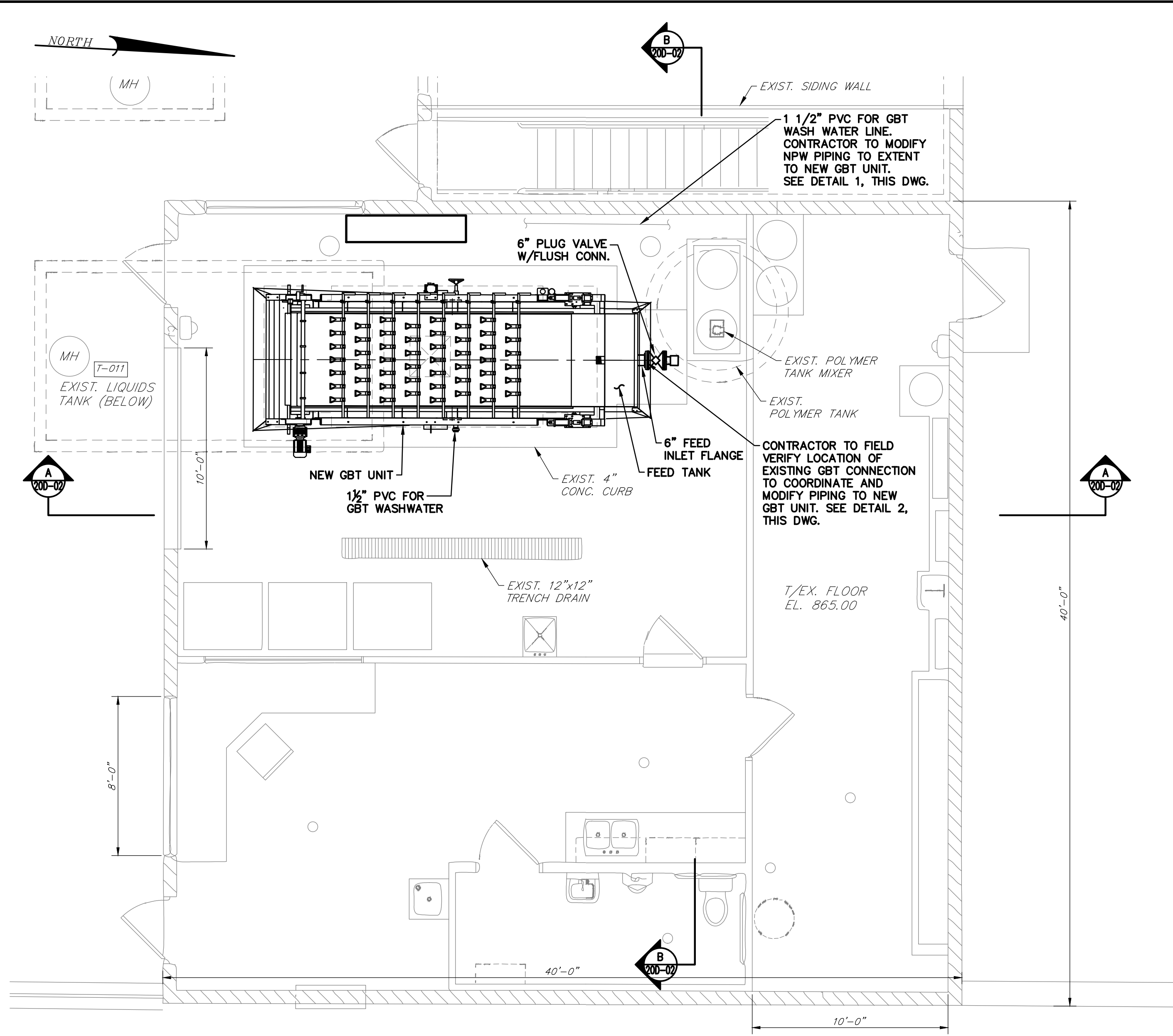
ELECTRICAL DEMOLITION NOTES:

- EXISTING MOTOR/DEVICE TO BE REMOVED BY GENERAL CONTRACT. DISCONNECT AND REMOVE ANY EXISTING DISCONNECTING DEVICES, CONDUIT & WIRING, AND ALL ASSOCIATED APPURTENANCES BACK TO SOURCE.

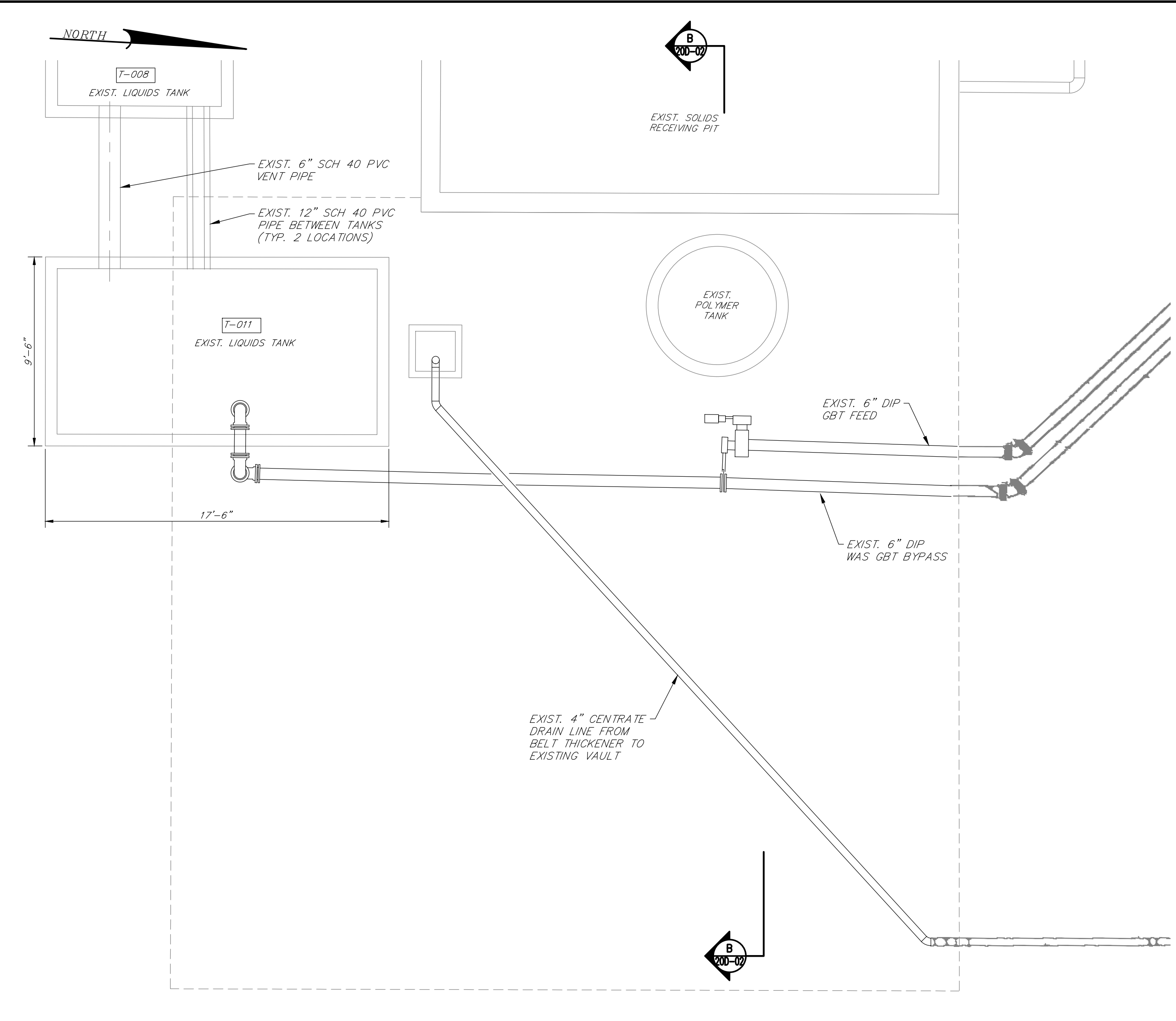
GENERAL DEMOLITION NOTES:

- ALL EQUIPMENT AND DEVICES ARE EXISTING TO REMAIN (ETR) UNLESS NOTED OTHERWISE.
- CONTRACTOR TO VERIFY POWER HAS BEEN TURNED OFF TO EACH DEVICE PRIOR TO BEGINNING WORK.

FOR REVIEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: RRC	CHKD BY: JDW	DATE: 4/05/24
DRAWN BY: GRS	SURV. CHIEF: N/A	CHKD BY: RRC/KJH	NO.:
		FIELDBOOK NO.:	ISSUED FOR CONSTRUCTION
		N/A	REVISION
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE: 1/4" = 1'-0" 0 2 4 8 12	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY EXISTING PLANT BUILDING ELECTRICAL DEMOLITION PLANS CITY OF WOOSTER		PROJ. NO. 122022001 DWG. NO. 20XE-01	
RETTEW RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: retrew@retrew.com Website: www.retrew.com Engineers • Planners • Scientists • Landscape Architects Environmental Consultants		BASE BID CONTRACT No. GC 24-01	

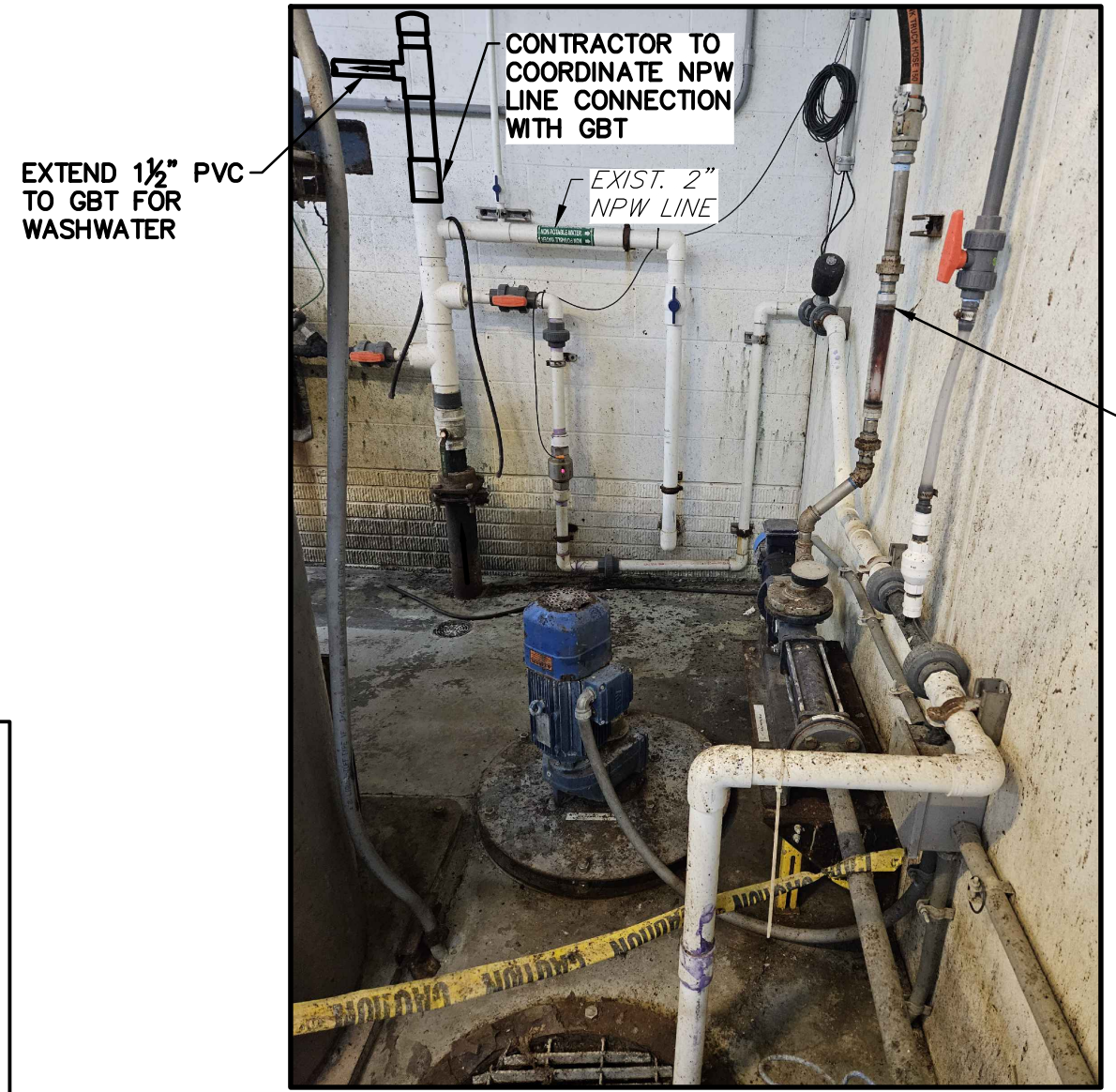


MAIN FLOOR MODIFICATION PLAN
SCALE: 1/4" = 1'-0"

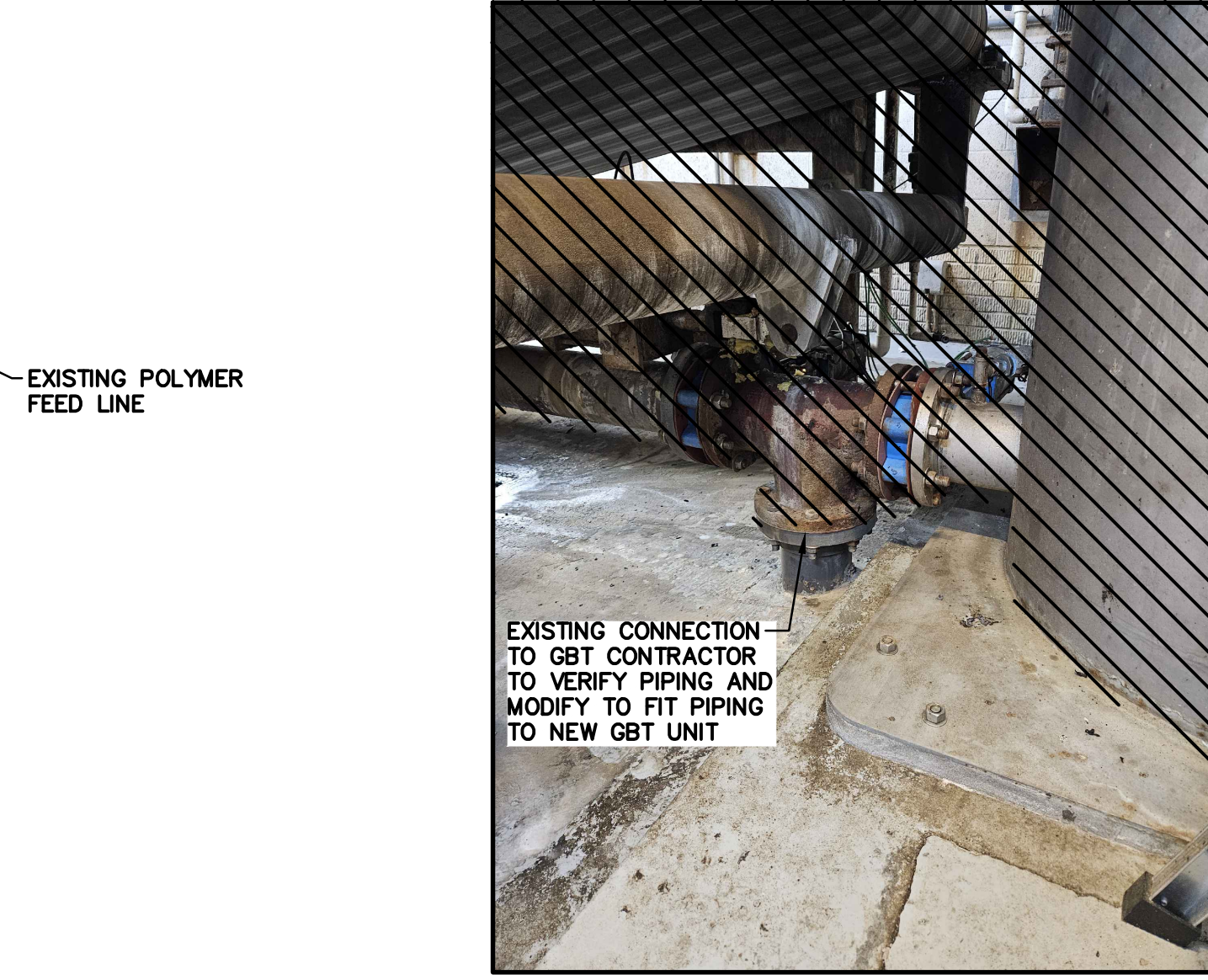


LOWER MODIFICATION PLAN
SCALE: 1/4" = 1'-0"

- NOTES:**
- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
 - CONTRACTOR TO MODIFY CONCRETE CURBING AROUND NEW GBT STRUCTURE. COORDINATE GRAVITY BELT THICKENER SUPPORTS WITH GRAVITY BELT THICKENER MANUFACTURER.



DETAIL 1
SCALE: NONE



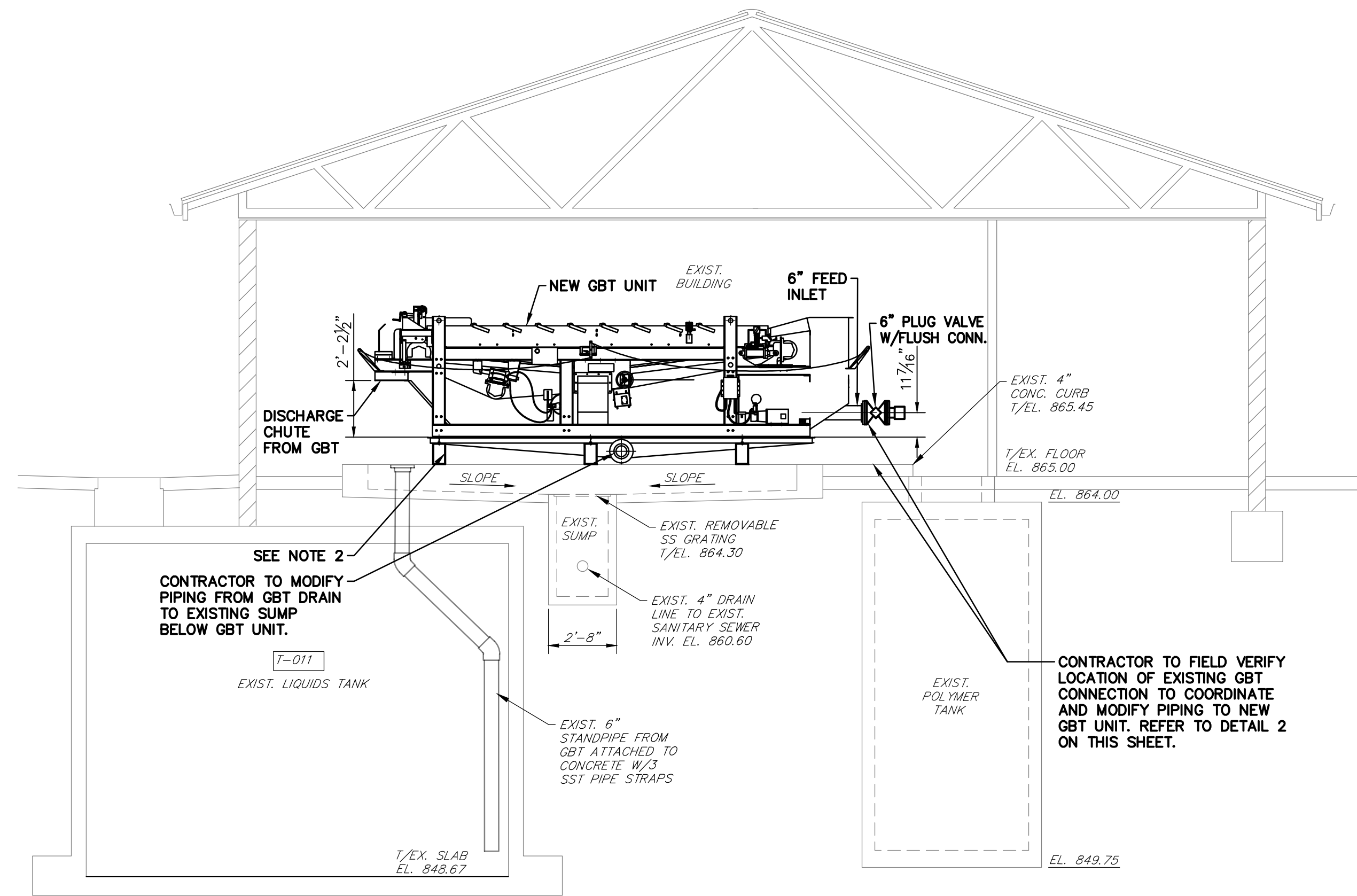
DETAIL 2
SCALE: NONE



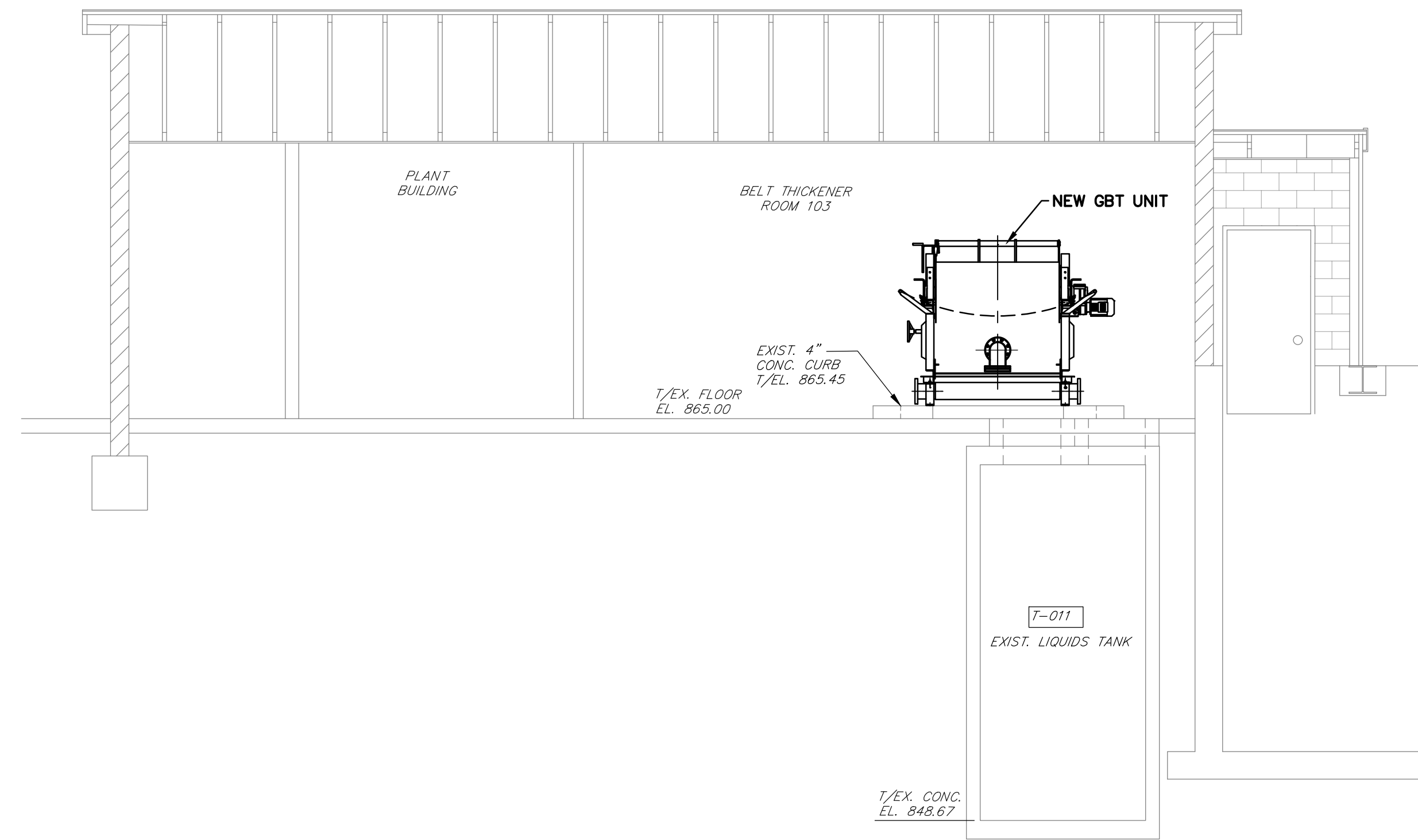
DETAIL 3
SCALE: NONE

BASE BID CONTRACT No. GC 24-01

<p>FOR RETTEW ASSOCIATES BY:</p>		<p>NO. _____</p> <p>DATE 4/05/24</p> <p>ISSUED FOR CONSTRUCTION REVISION</p>
<p>MANAGER: STEVEN SIEGFRIED</p> <p>DESIGN BY: CHKO BY: SSU JDW</p> <p>DRAWN BY: CHKO BY: JDW</p> <p>SURV. CHIEF: N/A</p> <p>FIELDBOOK NO: N/A</p>	<p>THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691</p>	<p>SCALE: 1/4" = 1'-0"</p> <p>0 2 4 8 12</p>
<p>RETTEW Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</p> <p>RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com</p>		<p>REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY EXISTING PLANT BUILDING MODIFICATION PLANS WAYNE COUNTY, OH CITY OF WOOSTER</p>
<p>PROJ. NO. 122022001</p> <p>DWG. NO. 20D-01</p>		



SECTION A-A
SCALE: 1/4" = 1'-0"



SECTION B-B
SCALE: 1/4" = 1'-0"

NOTES:

- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
- CONTRACTOR TO MODIFY CONCRETE CURBING AROUND NEW GBT STRUCTURE, COORDINATE GRAVITY BELT THICKENER SUPPORTS WITH GRAVITY BELT THICKENER MANUFACTURER.

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION

FOR RETTEW ASSOCIATES BY:

MANAGER:	STEVEN SIEGFRIED
DESIGN BY:	CHKD BY: JDW
SSU	SSU
DRAWN BY:	CHKD BY: JDW
JOG	JOG
SURV. CHIEF:	FELDBOOK NO. N/A
N/A	N/A

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

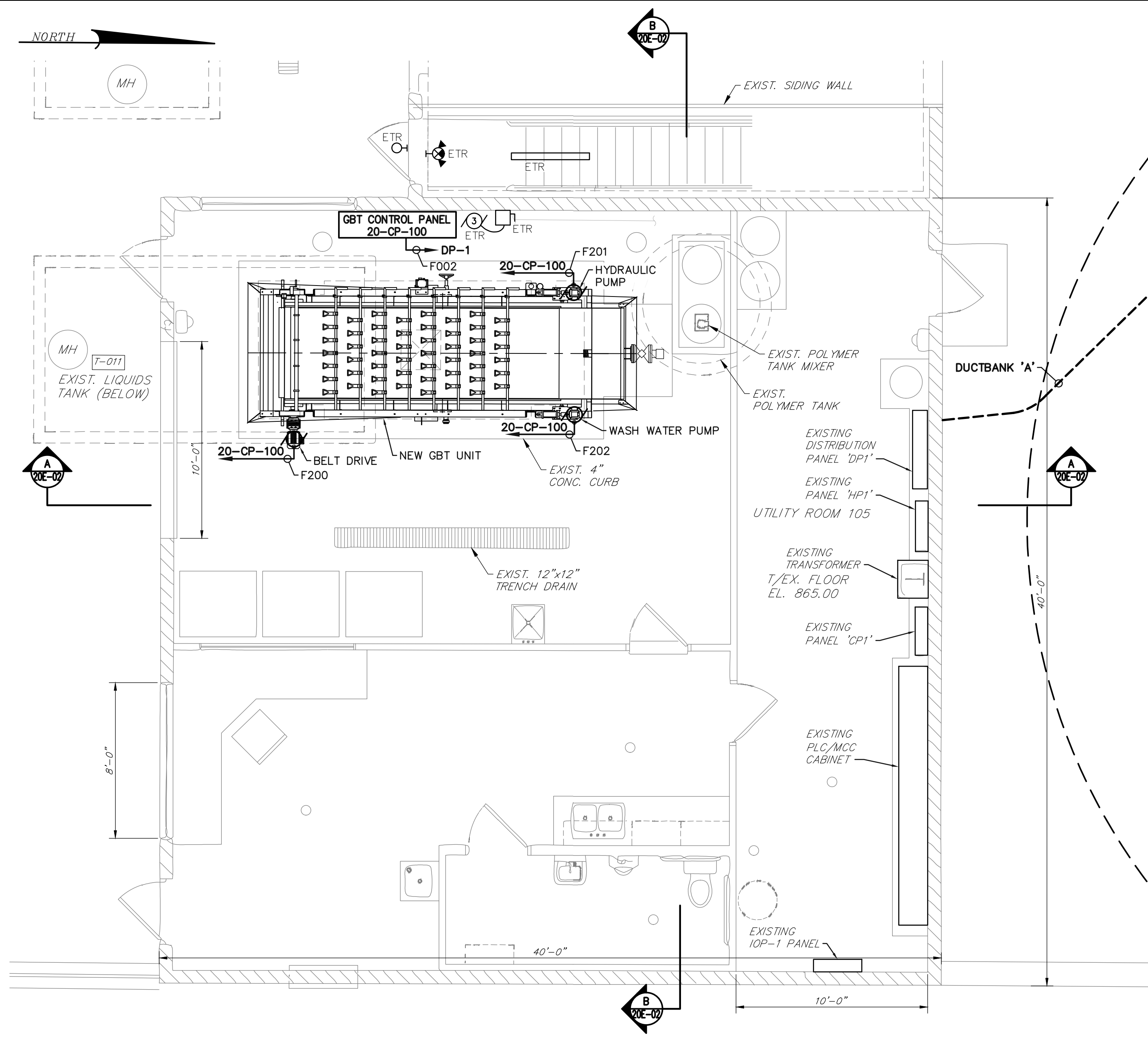
RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
EXISTING PLANT BUILDING
PIPING SECTIONS
CITY OF WOOSTER WAYNE COUNTY, OH

PROJ. NO.	122022001
DWG. NO.	20D-02

BASE BID
CONTRACT No. GC 24-01



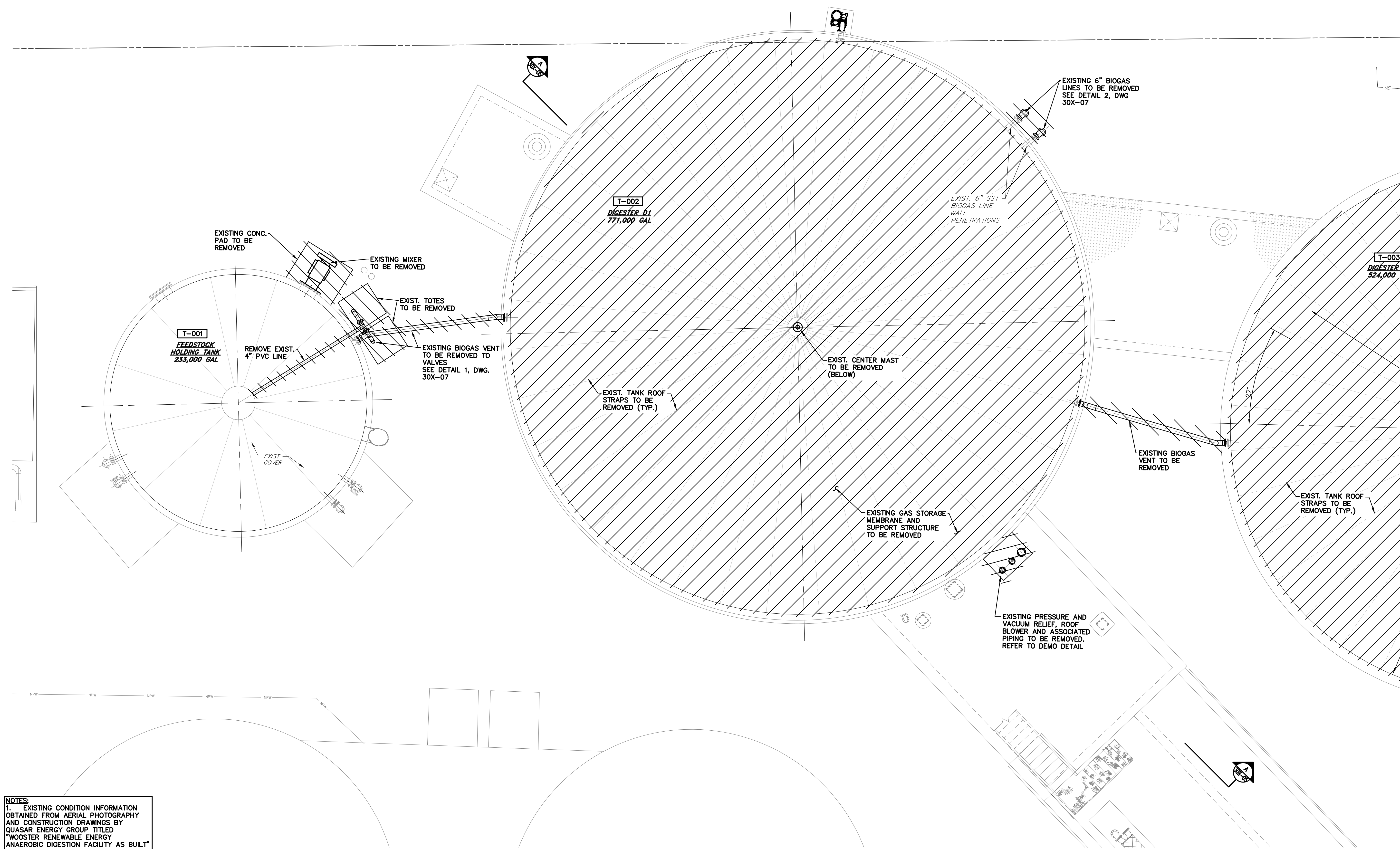
MAIN FLOOR ELECTRICAL MODIFICATION PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

- REFER TO GBT CONTROL PANEL INTERFACE WIRING ON DRAWING 01E-20.

FOR RETTEW ASSOCIATES BY:			
MANAGER:	STEVEN SIEGFRIED	CHKD BY:	JDW
DESIGN BY:	RRC	DRAWN BY:	GRS
SURV. CHIEF:	N/A	FIELDBOOK NO.:	N/A
THE CITY OF WOOSTER		1123 OLD COLUMBUS ROAD WOOSTER, OH 44691	
SCALE		0 2 4 8 12 1/4" = 1'-0"	
		RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY EXISTING PLANT BUILDING ELECTRICAL MODIFICATIONS PLANS CITY OF WOOSTER		PROJ. NO. 122022001 DWG. NO. 20E-01	

BASE BID
CONTRACT No. GC 24-01

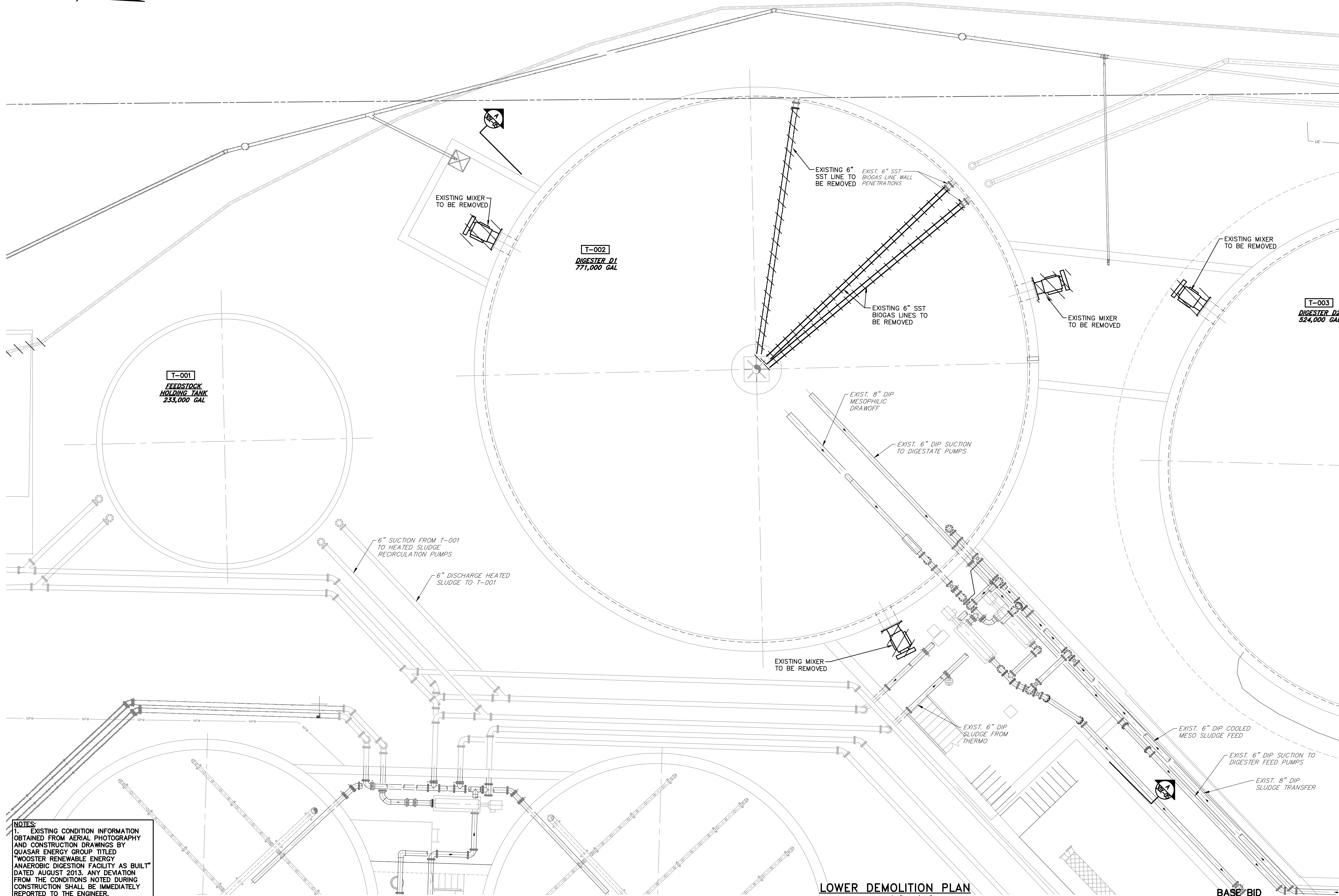


NOTES:
 1. EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEMATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.

UPPER DEMOLITION PLAN
 SCALE: 3/16" = 1'-0"

BASE BID
 CONTRACT No. GC 24-01

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: CHKD BY: JSSU	CHKD BY: JSSU	DATE: 4/05/24
DRAWN BY: JOG	CHKD BY: JSSU	FILEBOOK NO. N/A	NO. A
SURV. CHIEF: N/A	FILEBOOK NO. N/A	ISSUED FOR CONSTRUCTION	REVISION
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691			
		RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS		UPPER DEMOLITION PLAN - SHEET NO. 1 WAYNE COUNTY, OH	
PROJ. NO.	122022001		
DWG. NO.	30X-01		

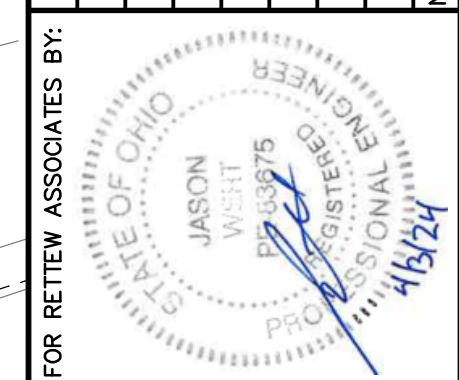


NOTES:
 1. EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.

LOWER DEMOLITION PLAN
 SCALE: 3/16" = 1'-0"

BASE BID
CONTRACT No. GC 24-01

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION



MANAGER:	STEVEN SIEGFRIED
DESIGN BY:	SSU
DRAWN BY:	JOG
SURV. CHIEF:	N/A
CHKD BY:	JDW
CHKD BY:	JDW
FIELDBOOK NO.:	N/A

FOR RETTEW ASSOCIATES BY:

THE CITY OF WOOSTER
 1123 OLD COLUMBUS ROAD
 WOOSTER, OH 44691

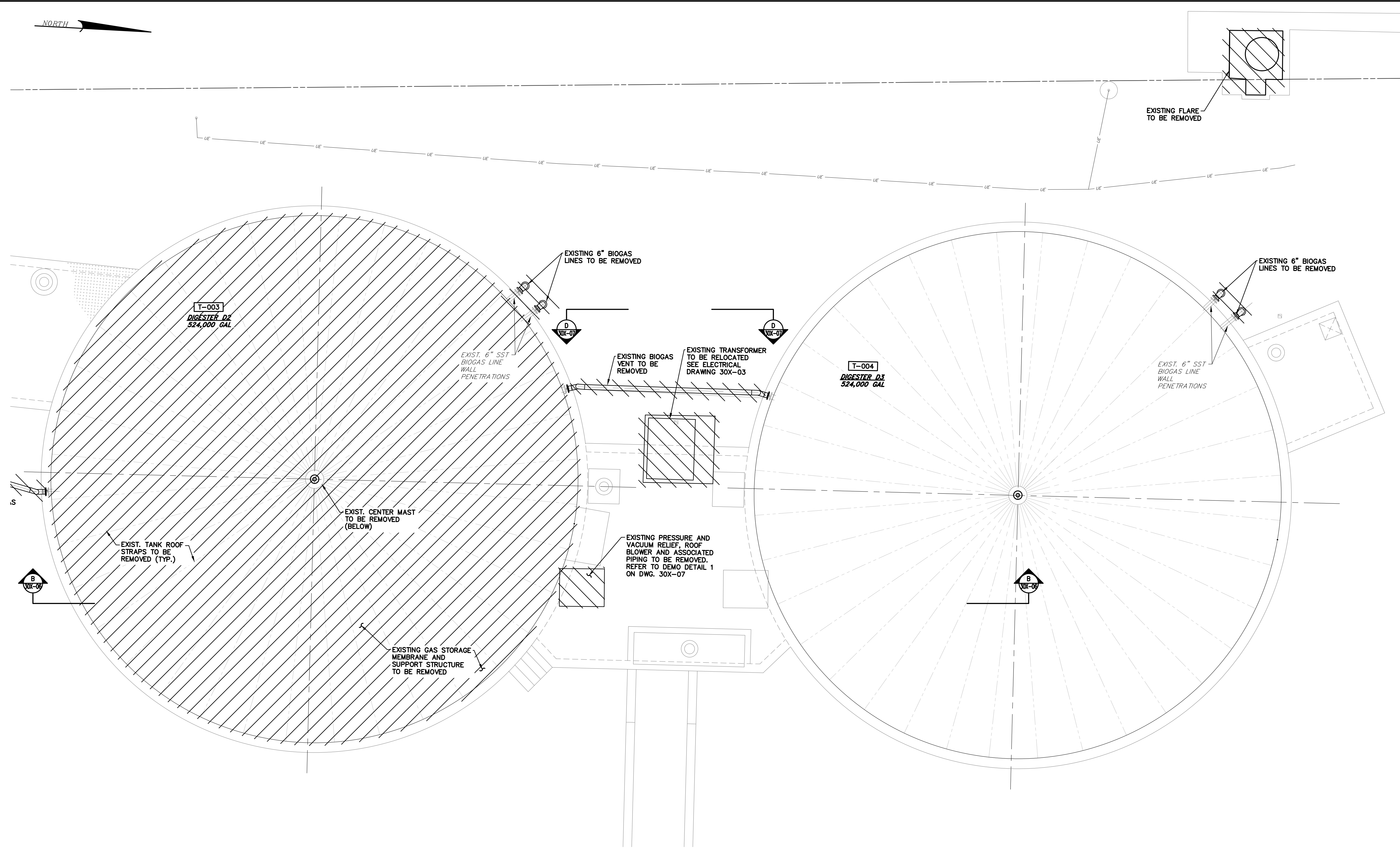
SCALE: 3/16" = 1'-0"
 0' 2' 4' 6' 12' 18'

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 Phone (800) 738-8395
 Email: rettew@rettew.com
 Website: www.rettew.com

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REBID BIOSOLIDS UPGRADE PROJECT
 FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
 ANAEROBIC DIGESTERS
 LOWER DEMOLITION PLAN - SHEET NO. 1
 CITY OF WOOSTER, OH WAYNE COUNTY, OH

PROJ. NO. 122022001
 DWG. NO. 30X-02

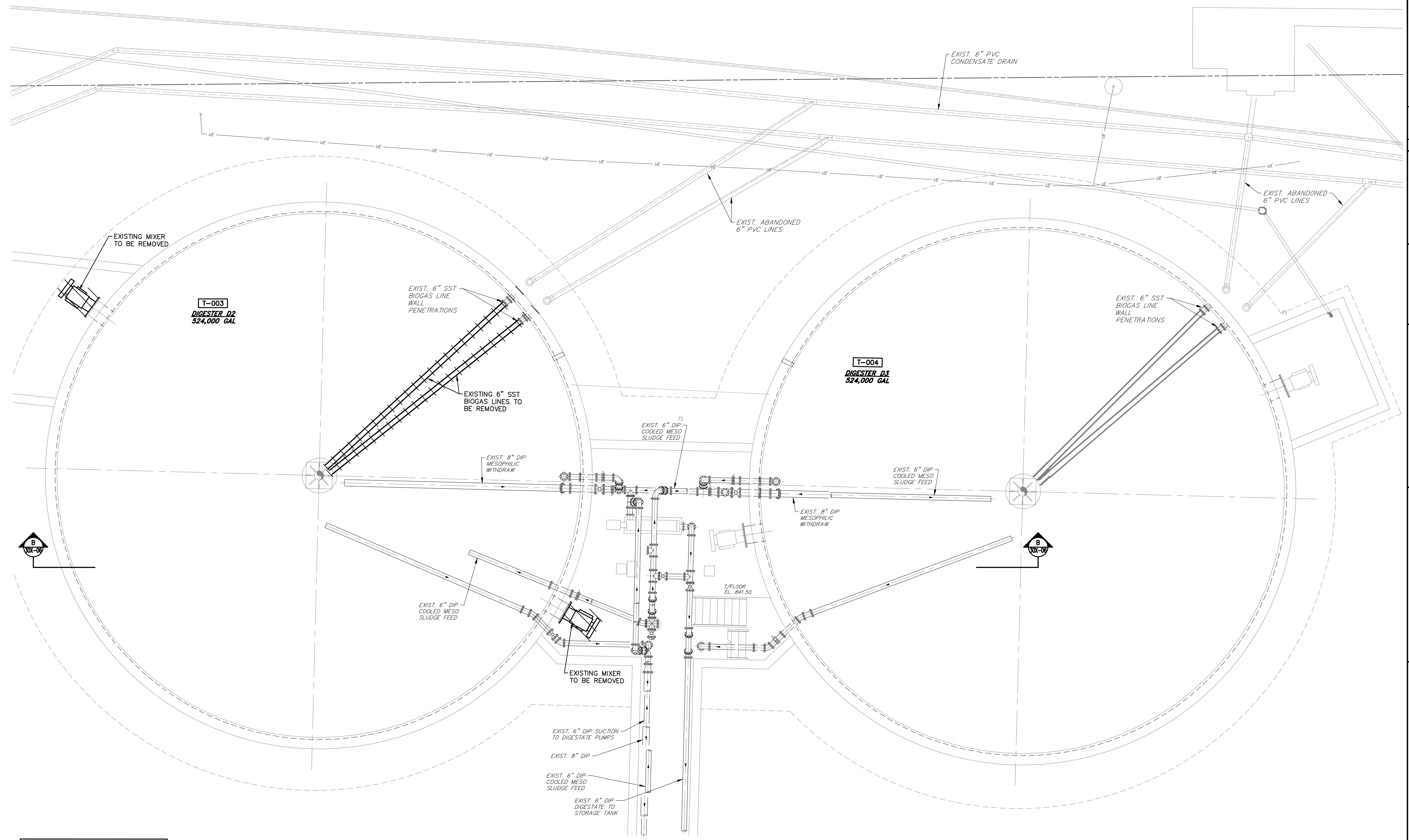


NOTES:
 1. EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.

UPPER DEMOLITION PLAN
 SCALE: 3/16" = 1'-0"

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: CHKD BY: SSU JDW	DATE	NO.
DRAWN BY: JOG	CHKD BY: JDW	4/05/24	A
SURV. CHIEF: N/A	FIELDBOOK NO.: N/A	ISSUED FOR CONSTRUCTION	REVISION
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE 3/16" = 1'-0" 0' 2' 4' 6' 12' 18'	
		RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS UPPER DEMOLITION PLAN - SHEET NO. 2 CITY OF WOOSTER WAYNE COUNTY, OH		PROJ. NO. 122022001 DWG. NO. 30X-03	

BASE BID
 CONTRACT No. GC 24-01



NOTES:
 1. EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.

LOWER DEMOLITION PLAN
 SCALE: 3/16" = 1'-0"

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION

FOR RETTEW ASSOCIATES BY:

MANAGER: STEVEN SIEGFRIED
 DESIGN BY: CHKO BY: JDW
 SSU
 DRAWN BY: CHKO BY: JDW
 JOG
 SURV. CHIEF: FELDBOOK NO. N/A

THE CITY OF WOOSTER
 1123 OLD COLUMBUS ROAD
 WOOSTER, OH 44691

SCALE: 3/16" = 1'-0"
 0' 2' 4' 6' 12' 18'

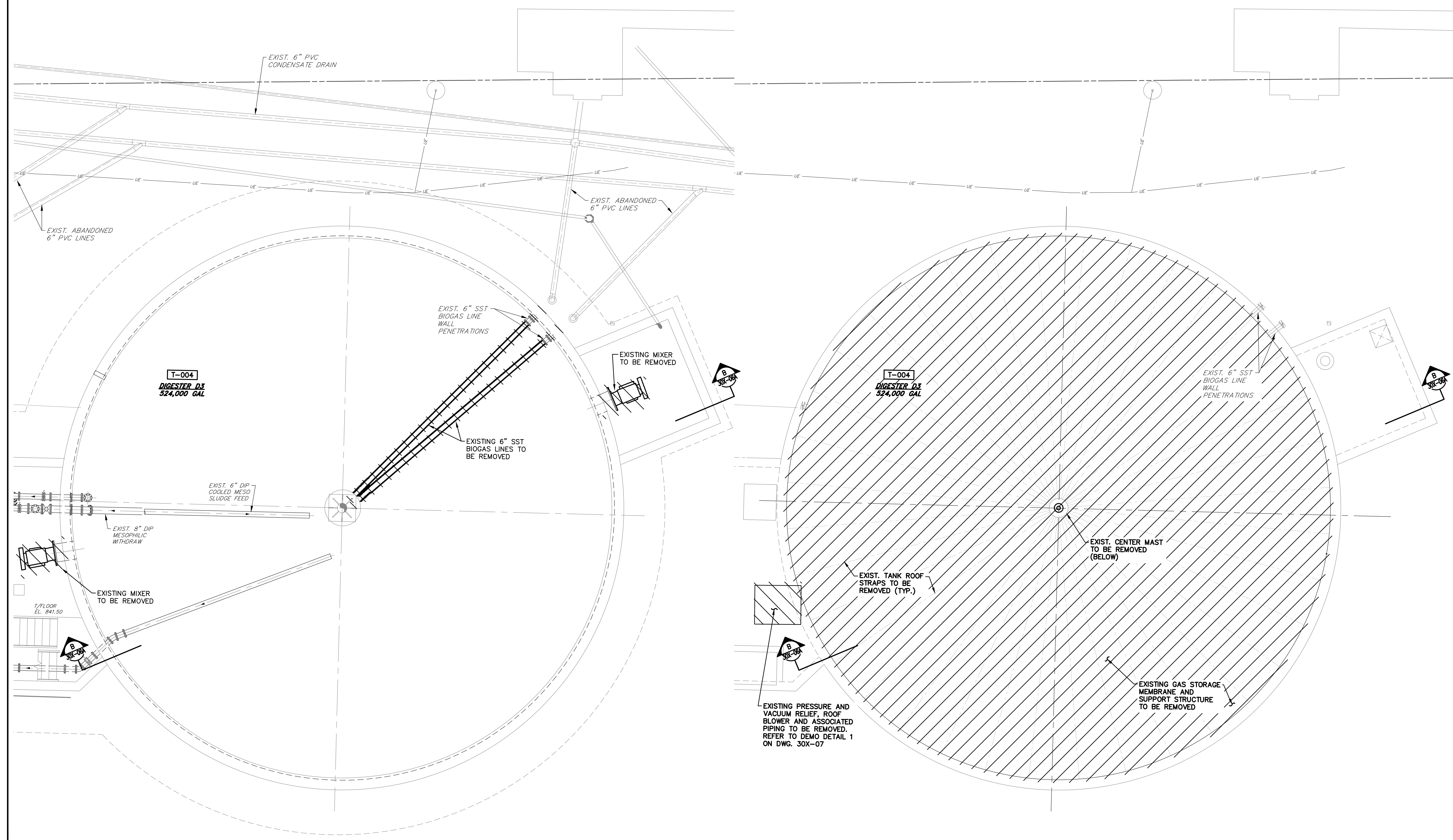
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 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
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 Website: www.rettew.com

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REBID BIOSOLIDS UPGRADE PROJECT
 FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
 ANAEROBIC DIGESTERS
 LOWER DEMOLITION PLAN - SHEET NO. 2
 CITY OF WOOSTER WAYNE COUNTY, OH

PROJ. NO. 122022001
 DWG. NO. 30X-04

BASE BID
 CONTRACT No. GC 24-01



LOWER DEMOLITION PLAN
SCALE: 3/16" = 1'-0"

UPPER DEMOLITION PLAN
SCALE: 3/16" = 1'-0"

NOTES:
1. EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION

FOR RETTEW ASSOCIATES BY:

MANAGER:	STEVEN SIEGFRIED	CHKD BY:	JDW
DESIGN BY:	SSU	CHKD BY:	JDW
DRAWN BY:	JOG	SURV. CHIEF:	FELDBOOK NO. N/A
		N/A	

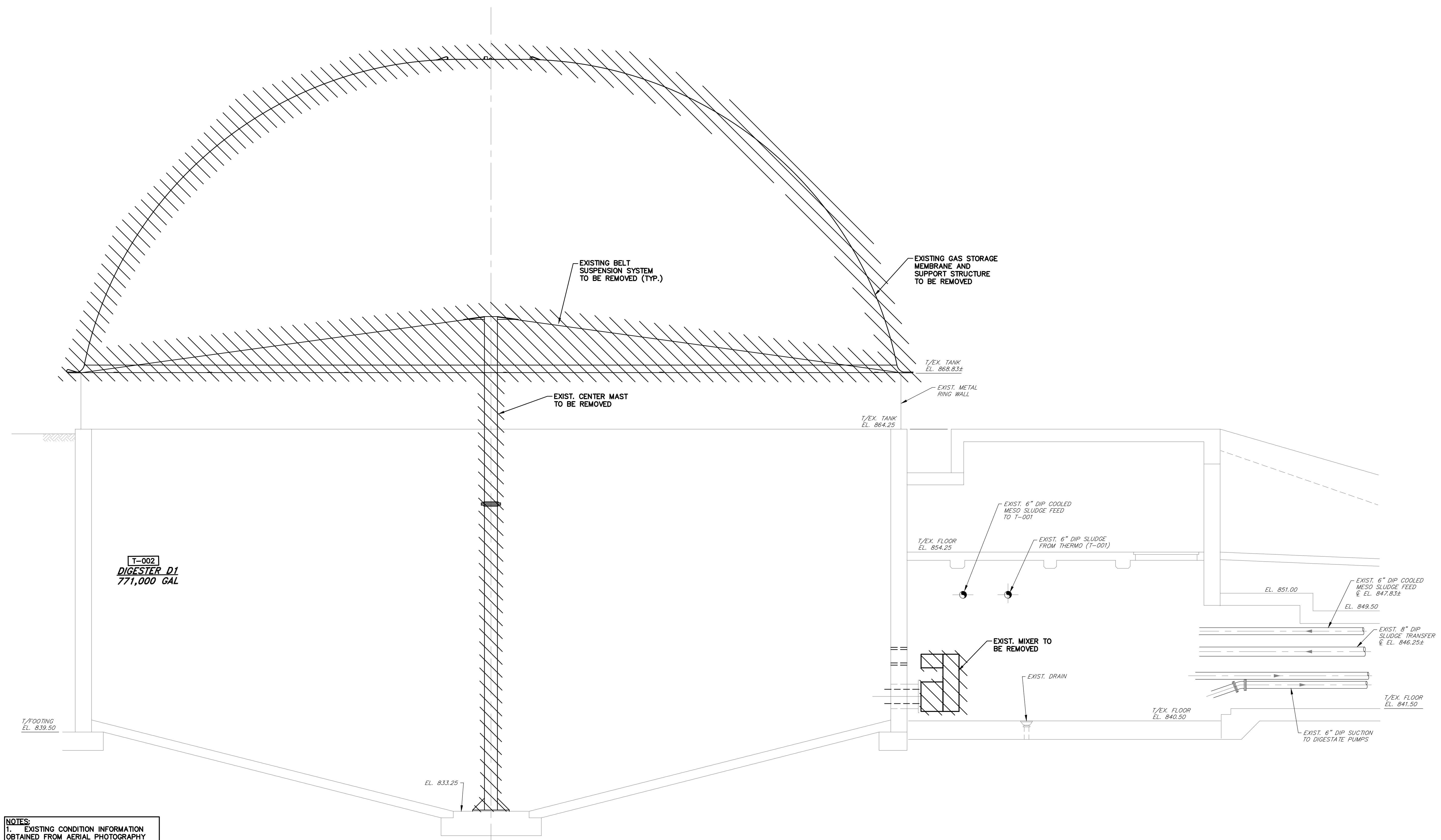
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Environmental Consultants

RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
ANAEROBIC DIGESTER T-004
DEMOLITION PLANS
WAYNE COUNTY, OH
CITY OF WOOSTER

PROJ. NO.	122022001
DWG. NO.	30X-04A

ADD ALTERNATE
CONTRACT No. GC 24-01

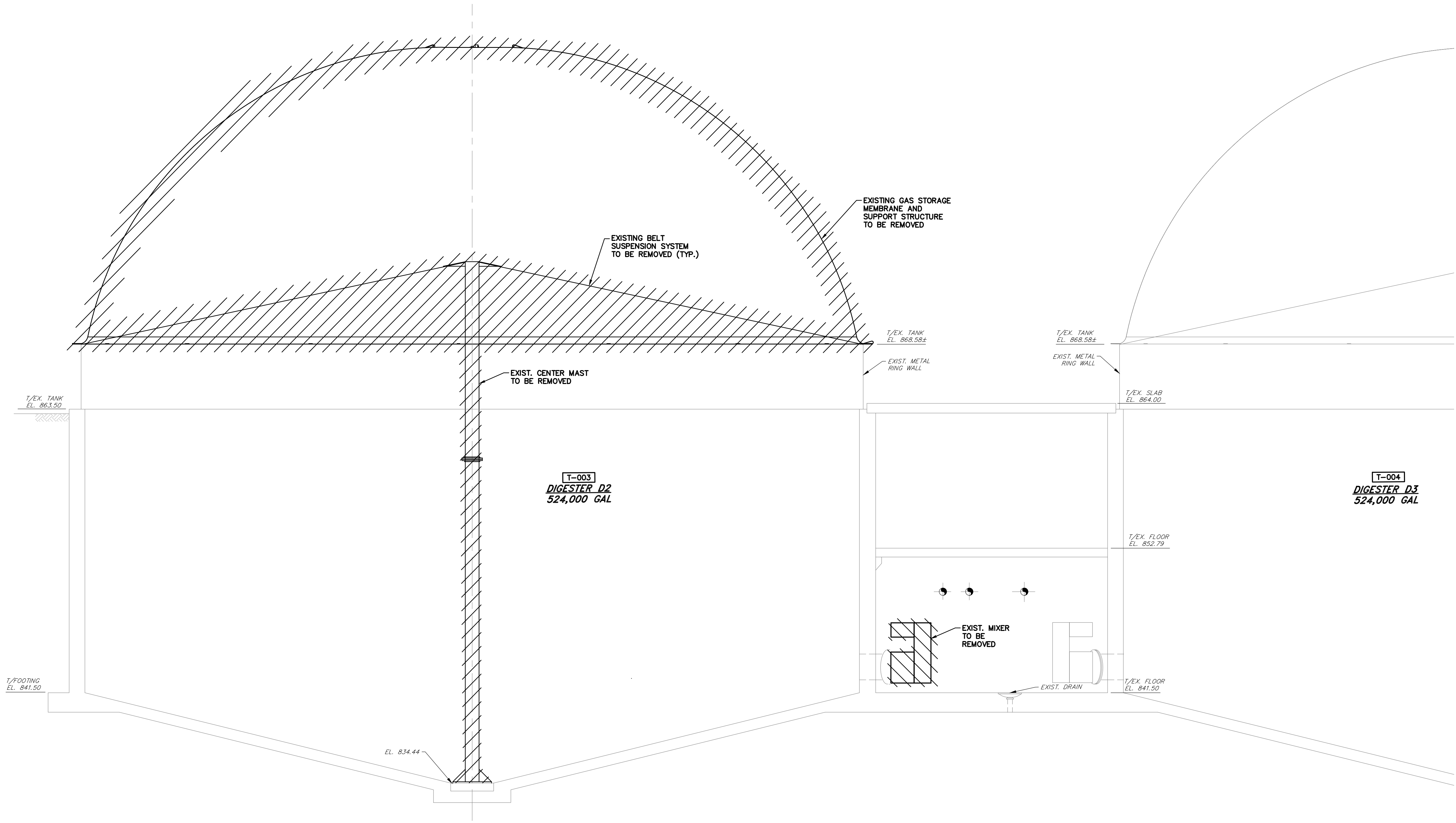


NOTES:
 1. EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.

DEMOLITION SECTION A-A
 SCALE: 1/4" = 1'-0"
 REF: 30X-01
 30X-02

BASE BID
CONTRACT No. GC 24-01

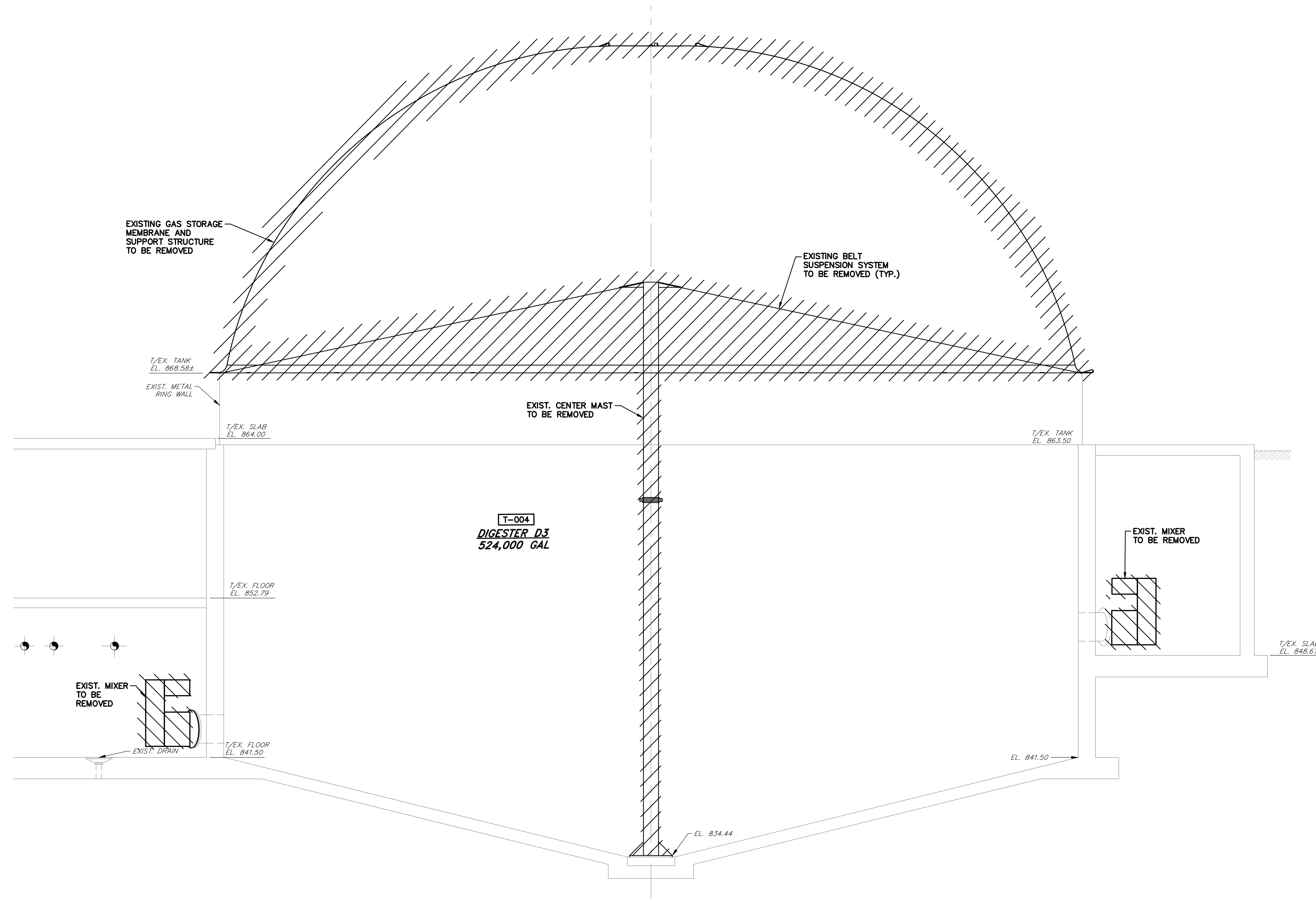
FOR RETTEW ASSOCIATES BY:							
MANAGER:	STEVEN SIEGFRIED	DESIGN BY:	SSU	CHKD BY:	JDW	DATE:	
DRAWN BY:	JOG	CHKD BY:	JDW	SURV. CHIEF:	N/A	ISSUED FOR CONSTRUCTION:	
						NO.	REVISION
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691 SCALE: 1/4" = 1'-0" 0 1.5' 3' 4.5' 9' 13.5'							
RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>							
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS DEMOLITION SECTIONS - SHEET NO. 1 WAYNE COUNTY, OH CITY OF WOOSTER							
PROJ. NO.						122022001	
DWG. NO.						30X-05	



DEMO SECTION B-B
 SCALE: 1/4" = 1'-0"
 REF: 30X-03
 30X-04

NOTES:
 1. EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.

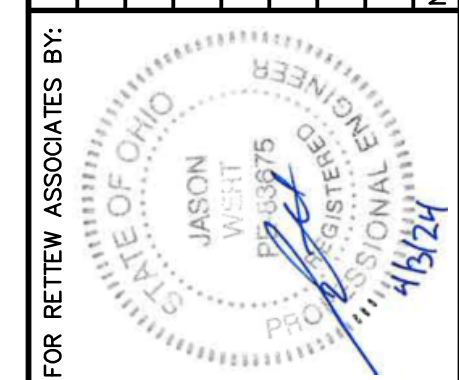
FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: CHKD BY: SSU JDW	NO.	REVISION
DRAWN BY: JOG	CHKD BY: JDW	A	4/05/24
SURV. CHIEF: N/A	FIELDBOOK NO.: N/A	ISSUED FOR CONSTRUCTION	DATE
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE 1/4" = 1'-0" 0 1.5' 3' 4.5' 9' 13.5'	
		RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS DEMOLITION SECTIONS - SHEET NO. 2 CITY OF WOOSTER WAYNE COUNTY, OH		PROJ. NO. 122022001 DWG. NO. 30X-06	



DEMO SECTION B-B
 SCALE: 1/4" = 1'-0"
 REF: 30X-04A

NOTES:
 1. EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION



MANAGER:	STEVEN SIEGFRIED
DESIGN BY:	SSU
DRAWN BY:	JOG
SURV. CHIEF:	N/A
CHKD BY:	JDW
CHKD BY:	JDW
FELDBOOK NO.:	N/A

FOR RETTEW ASSOCIATES BY:

THE CITY OF WOOSTER
 1123 OLD COLUMBUS ROAD
 WOOSTER, OH 44691

SCALE
 1/4" = 1'-0"
 0 1.5' 3' 4.5' 9' 13.5'

RETTEW
 RETTEW Associates, Inc.
 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
 Phone (800) 738-8395
 Email: rettew@rettew.com
 Website: www.rettew.com

Engineers • Planners • Surveyors • Landscape Architects
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REBID BIOSOLIDS UPGRADE PROJECT
 FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
 ANAEROBIC DIGESTER T-004
 ALTERNATE DEMOLITION SECTION
 CITY OF WOOSTER
 WAYNE COUNTY, OH

PROJ. NO.	122022001
DWG. NO.	30X-06A

ADD ALTERNATE
 CONTRACT No. GC 24-01

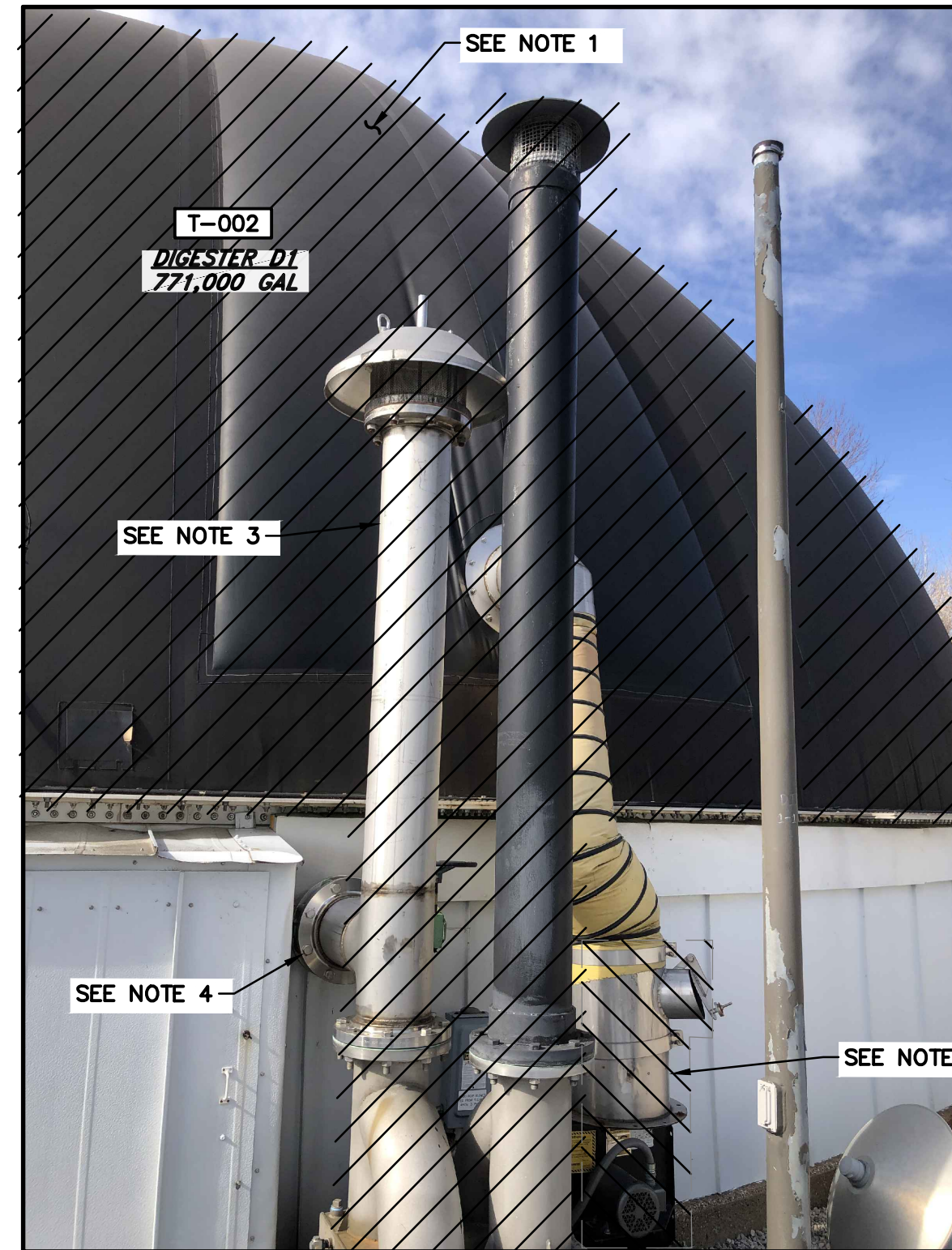


NOTE:

1. REMOVE EXISTING PIPING AND TOTES. SEAL AND PLUG EXISTING PENETRATION.
2. REMOVE EXISTING MIXER. SEAL AND PLUG EXISTING PENETRATION.
3. SEAL AND PLUG EXISTING PENETRATION. INSTALL BLIND FLANGE.

DEMO SECTION C-C
SCALE: NONE

NOTES:
1. EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.



NOTES:

1. EXISTING GAS STORAGE MEMBRANE COVER AND FLEXIBLE AIR PURGE HOSE TO BE REMOVED.
2. EXISTING ROOF BLOWER TO BE REMOVED.
3. REMOVE PRESSURE RELIEF VALVE AND ASSOCIATED PIPING.
4. SEAL AND PLUG EXISTING PIPE PENETRATION. INSTALL BLIND FLANGE.

DEMO DETAIL 1
SCALE: NONE



NOTE:

1. CLOSE VALVES ON BIOGAS LINES. REMOVE EXISTING PVC BIOGAS LINES.
2. INSTALL BLIND FLANGES ON VALVES & RISERS.

DEMO DETAIL 2
SCALE: NONE



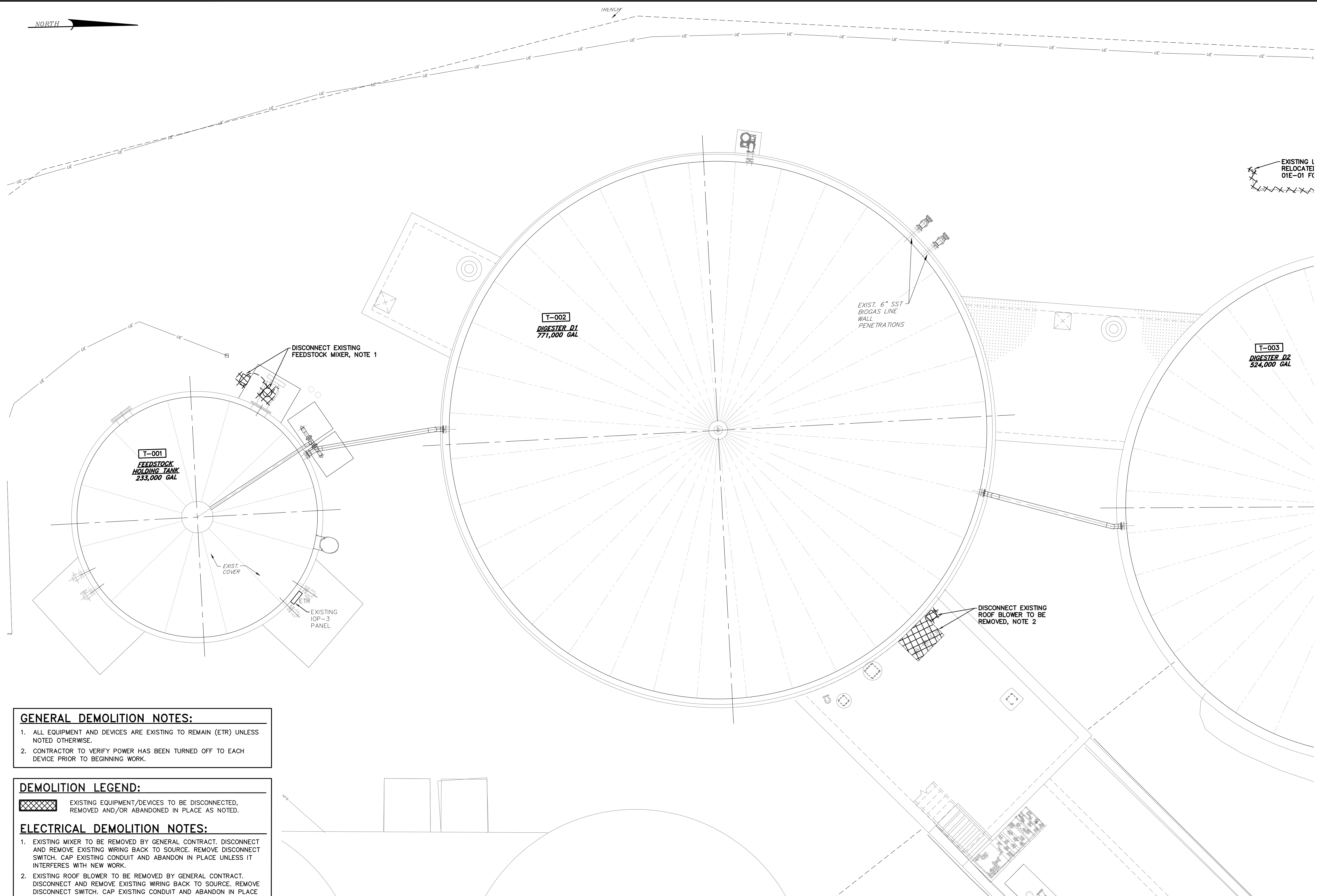
NOTES:

1. TRANSFORMER TO BE RELOCATED. REFER TO ELECTRICAL DRAWINGS FOR COORDINATION.
2. FLEXIBLE AIR PURGE HOSE, PRESSURE/VACUUM RELIEF, ASSOCIATED PIPING TO BE REMOVED.
3. SEAL AND PLUG EXISTING PIPE PENETRATIONS, INSTALL BLIND FLANGES.
4. REMOVE ALL BIOGAS PVC PIPING UP TO FLANGE.

DEMO SECTION D-D
SCALE: NONE

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: CHKD BY: JDW	DATE: 4/05/24	REVISION:
DESIGN BY: SSU	CHKD BY: JDW	NO.:	
DRAWN BY: JOG	CHKD BY: JDW	ISSUED FOR CONSTRUCTION:	
SURV. CHIEF: N/A	FIELDBOOK NO.: N/A	DATE:	
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE: 1/4"=1'-0" 0 1.5' 3' 4.5' 9' 13.5'	
RETEW RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: retew@retew.com Website: www.retew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>			
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS DEMOLITION PHOTO SECTIONS & DETAILS CITY OF WOOSTER WAYNE COUNTY, OH			
PROJ. NO. 122022001		DWG. NO. 30X-07	

NORTH



EXISTING L
RELOCATE
01E-01 FC

T-002
DIGESTER D1
771,000 GAL

T-003
DIGESTER D2
524,000 GAL

T-001
FEEDSTOCK
HOLDING TANK
233,000 GAL

DISCONNECT EXISTING
FEEDSTOCK MIXER, NOTE 1

EXIST. 6" SST
BIOGAS LINE
WALL
PENETRATIONS

EXIST.
COVER

EXISTING
IOP-3
PANEL

DISCONNECT EXISTING
ROOF BLOWER TO BE
REMOVED, NOTE 2

GENERAL DEMOLITION NOTES:

1. ALL EQUIPMENT AND DEVICES ARE EXISTING TO REMAIN (ETR) UNLESS NOTED OTHERWISE.
2. CONTRACTOR TO VERIFY POWER HAS BEEN TURNED OFF TO EACH DEVICE PRIOR TO BEGINNING WORK.

DEMOLITION LEGEND:

EXISTING EQUIPMENT/DEVICES TO BE DISCONNECTED, REMOVED AND/OR ABANDONED IN PLACE AS NOTED.

ELECTRICAL DEMOLITION NOTES:

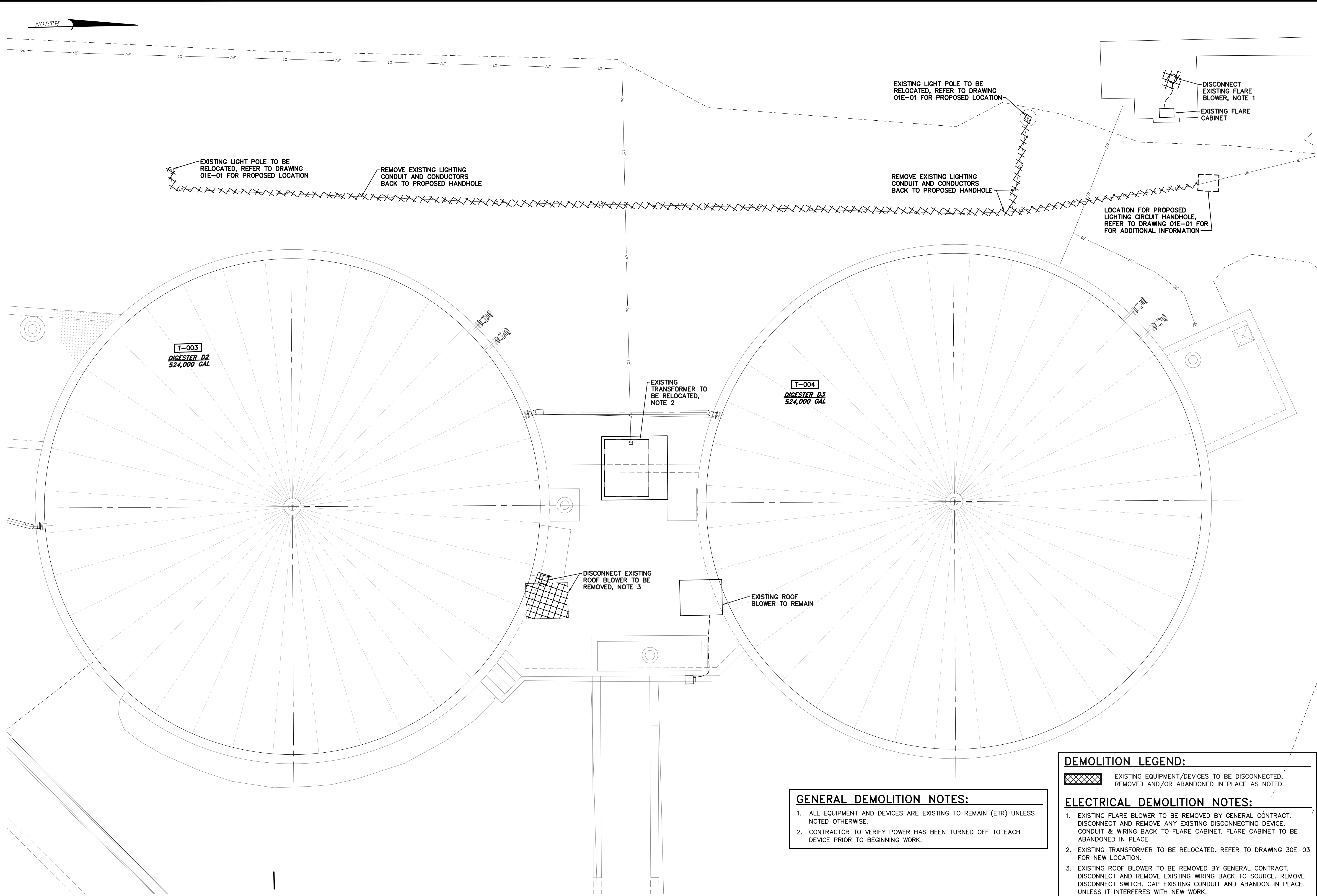
1. EXISTING MIXER TO BE REMOVED BY GENERAL CONTRACT. DISCONNECT AND REMOVE EXISTING WIRING BACK TO SOURCE. REMOVE DISCONNECT SWITCH. CAP EXISTING CONDUIT AND ABANDON IN PLACE UNLESS IT INTERFERES WITH NEW WORK.
2. EXISTING ROOF BLOWER TO BE REMOVED BY GENERAL CONTRACT. DISCONNECT AND REMOVE EXISTING WIRING BACK TO SOURCE. REMOVE DISCONNECT SWITCH. CAP EXISTING CONDUIT AND ABANDON IN PLACE UNLESS IT INTERFERES WITH NEW WORK.

AREA 1 - UPPER LEVEL ELECTRICAL DEMOLITION PLAN

SCALE: 3/16" = 1'-0"

BASE BID
CONTRACT No. GC 24-01

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: RRC	CHKD BY: JDW	ISSUED FOR CONSTRUCTION NO. DATE
DRAWN BY: GRS	SURV. CHIEF: N/A	CHKD BY: RRC/KJH	NO. DATE
		FIELDBOOK NO. N/A	NO. DATE
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691			
		RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS - AREA 1 UPPER LEVEL ELECTRICAL DEMOLITION PLAN CITY OF WOOSTER WAYNE COUNTY, OH		PROJ. NO. 122022001 DWG. NO. 30XE-01	



EXISTING LIGHT POLE TO BE RELOCATED, REFER TO DRAWING 01E-01 FOR PROPOSED LOCATION

REMOVE EXISTING LIGHTING CONDUIT AND CONDUCTORS BACK TO PROPOSED HANDHOLE

EXISTING LIGHT POLE TO BE RELOCATED, REFER TO DRAWING 01E-01 FOR PROPOSED LOCATION

REMOVE EXISTING LIGHTING CONDUIT AND CONDUCTORS BACK TO PROPOSED HANDHOLE

DISCONNECT EXISTING FLARE BLOWER, NOTE 1
EXISTING FLARE CABINET

LOCATION FOR PROPOSED LIGHTING CIRCUIT HANDHOLE, REFER TO DRAWING 01E-01 FOR ADDITIONAL INFORMATION

T-003
DIGESTER D2
524,000 GAL

EXISTING TRANSFORMER TO BE RELOCATED, NOTE 2

T-004
DIGESTER D3
524,000 GAL

DISCONNECT EXISTING ROOF BLOWER TO BE REMOVED, NOTE 3

EXISTING ROOF BLOWER TO REMAIN

- GENERAL DEMOLITION NOTES:**
1. ALL EQUIPMENT AND DEVICES ARE EXISTING TO REMAIN (ETR) UNLESS NOTED OTHERWISE.
 2. CONTRACTOR TO VERIFY POWER HAS BEEN TURNED OFF TO EACH DEVICE PRIOR TO BEGINNING WORK.

- DEMOLITION LEGEND:**
- EXISTING EQUIPMENT/DEVICES TO BE DISCONNECTED, REMOVED AND/OR ABANDONED IN PLACE AS NOTED.
- ELECTRICAL DEMOLITION NOTES:**
1. EXISTING FLARE BLOWER TO BE REMOVED BY GENERAL CONTRACT. DISCONNECT AND REMOVE ANY EXISTING DISCONNECTING DEVICE, CONDUIT & WIRING BACK TO FLARE CABINET. FLARE CABINET TO BE ABANDONED IN PLACE.
 2. EXISTING TRANSFORMER TO BE RELOCATED. REFER TO DRAWING 30E-03 FOR NEW LOCATION.
 3. EXISTING ROOF BLOWER TO BE REMOVED BY GENERAL CONTRACT. DISCONNECT AND REMOVE EXISTING WIRING BACK TO SOURCE. REMOVE DISCONNECT SWITCH. CAP EXISTING CONDUIT AND ABANDON IN PLACE UNLESS IT INTERFERES WITH NEW WORK.

AREA 2 – UPPER LEVEL ELECTRICAL DEMOLITION PLAN
SCALE: 3/16" = 1'-0"

BASE BID
CONTRACT No. GC 24-01


FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: RRC	CHKD BY: JDW	ISSUED FOR CONSTRUCTION
DRAWN BY: GRS	SURV. CHIEF: N/A	DRN/CHKD BY: RRC/KJH	DATE
		FIELDBOOK NO.: N/A	NO.
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691			REVISION
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS – AREA 2 UPPER LEVEL ELECTRICAL DEMOLITION PLAN CITY OF WOOSTER, OH WAYNE COUNTY, OH			
RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com		Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants	
PROJ. NO.	122022001		
DWG. NO.	30XE-03		



GENERAL DEMOLITION NOTES:

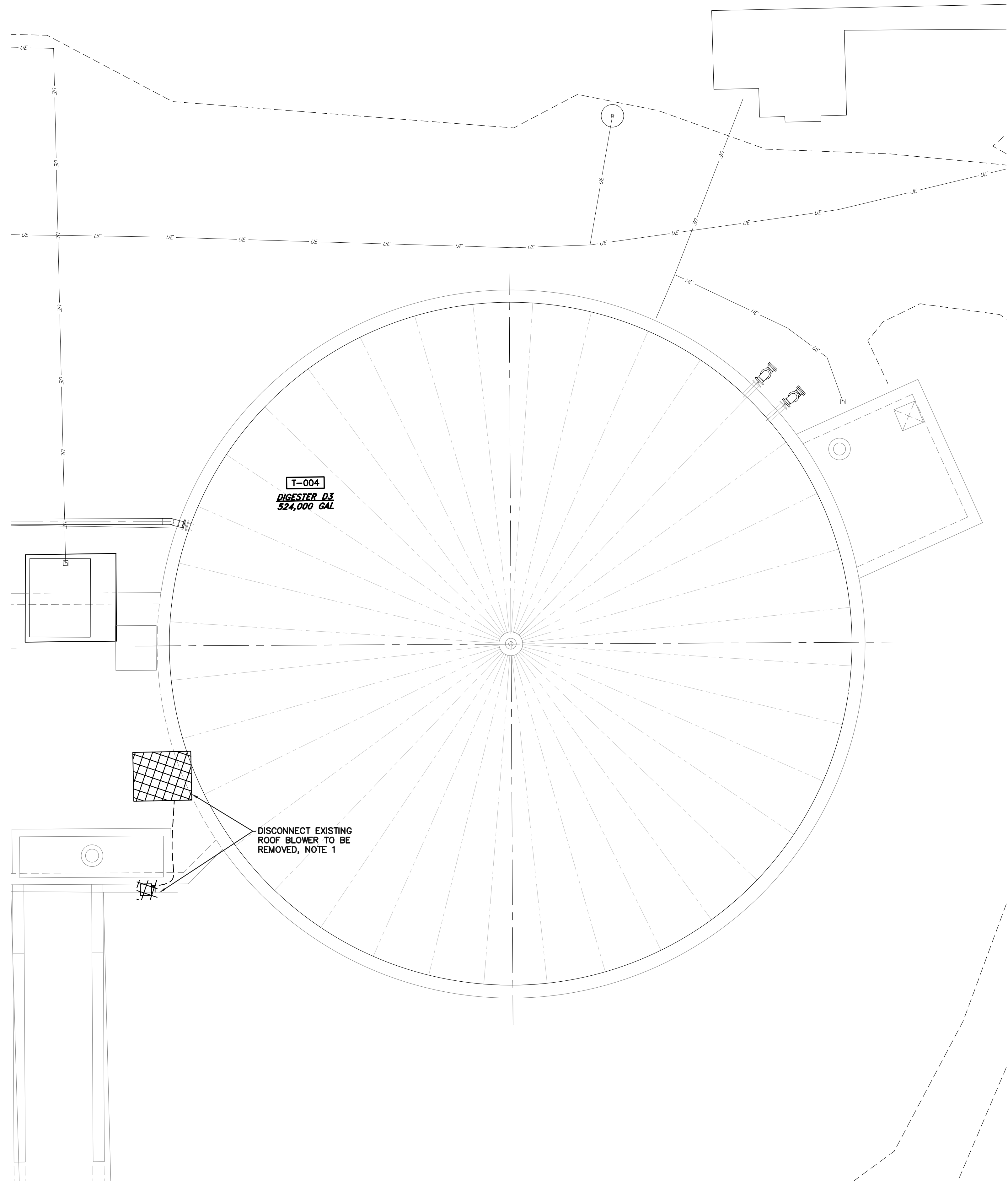
1. ALL EQUIPMENT AND DEVICES ARE EXISTING TO REMAIN (ETR) UNLESS NOTED OTHERWISE.
2. CONTRACTOR TO VERIFY POWER HAS BEEN TURNED OFF TO EACH DEVICE PRIOR TO BEGINNING WORK.

DEMOLITION LEGEND:

 EXISTING EQUIPMENT/DEVICES TO BE DISCONNECTED, REMOVED AND/OR ABANDONED IN PLACE AS NOTED.

ELECTRICAL DEMOLITION NOTES:


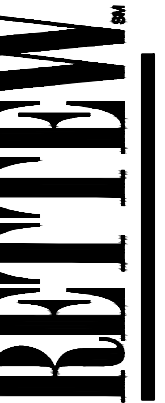
1. EXISTING ROOF BLOWER TO BE REMOVED BY GENERAL CONTRACT. DISCONNECT AND REMOVE EXISTING WIRING BACK TO SOURCE. REMOVE DISCONNECT SWITCH. CAP EXISTING CONDUIT AND ABANDONED IN PLACE UNLESS IT INTERFERES WITH NEW WORK.



AREA 2 – UPPER LEVEL ELECTRICAL DEMOLITION PLAN – ADD ALTERNATE

SCALE: 3/16" = 1'-0"

**ADD-ALTERNATE
CONTRACT No. GC 24-01**

FOR RETTEW ASSOCIATES BY:			
MANAGER:	STEVEN SIEGFRIED	CHKD BY:	JDW
DESIGN BY:	RRC	DRAWN BY:	GRS
SURV. CHIEF:	N/A	FIELDBOOK NO.:	N/A
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE 3/16" = 1'-0" 0 2' 4' 6' 12' 18'	
 RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>			
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS – AREA 2 UPPER LEVEL ELECTRICAL DEMOLITION PLAN CITY OF WOOSTER WAYNE COUNTY, OH			
PROJ. NO.	122022001		
DWG. NO.	30XE-03A		
ISSUED FOR CONSTRUCTION	NO.	DATE	REVISION
A	4/05/24		



GENERAL DEMOLITION NOTES:

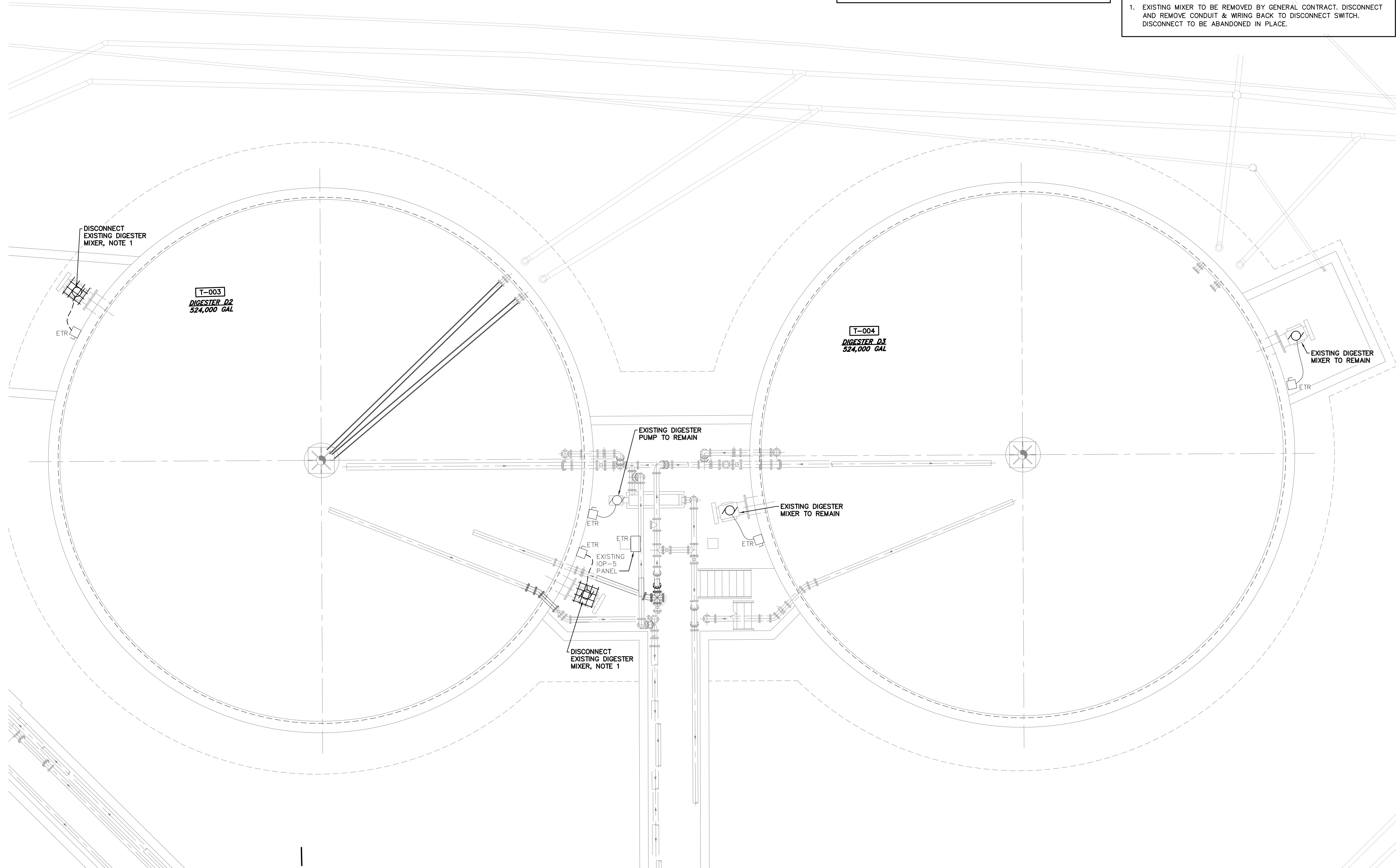
1. ALL EQUIPMENT AND DEVICES ARE EXISTING TO REMAIN (ETR) UNLESS NOTED OTHERWISE.
2. CONTRACTOR TO VERIFY POWER HAS BEEN TURNED OFF TO EACH DEVICE PRIOR TO BEGINNING WORK.

DEMOLITION LEGEND:

 EXISTING EQUIPMENT/DEVICES TO BE DISCONNECTED, REMOVED AND/OR ABANDONED IN PLACE AS NOTED.


ELECTRICAL DEMOLITION NOTES:

1. EXISTING MIXER TO BE REMOVED BY GENERAL CONTRACT. DISCONNECT AND REMOVE CONDUIT & WIRING BACK TO DISCONNECT SWITCH. DISCONNECT TO BE ABANDONED IN PLACE.



NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION

FOR RETTEW ASSOCIATES BY:



MANAGER:	STEVEN SIEGFRIED	CHKD BY:	JDW
DESIGN BY:	RRC	DRAWN BY:	GRS
SURV. CHIEF:	N/A	FIELDBOOK NO.:	N/A

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

SCALE: 3/16" = 1'-0"

0' 2' 4' 6' 12' 18'

RETTEW
Engineers • Planners • Scientists • Landscape Architects
Environmental Consultants

RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
ANAEROBIC DIGESTERS - AREA 2
LOWER LEVEL ELECTRICAL DEMOLITION PLAN
CITY OF WOOSTER
WAYNE COUNTY, OH

PROJ. NO.	122022001
DWG. NO.	30XE-04

AREA 2 - LOWER LEVEL ELECTRICAL DEMOLITION PLAN

SCALE: 3/16" = 1'-0"


BASE BID
CONTRACT No. GC 24-01



GENERAL DEMOLITION NOTES:

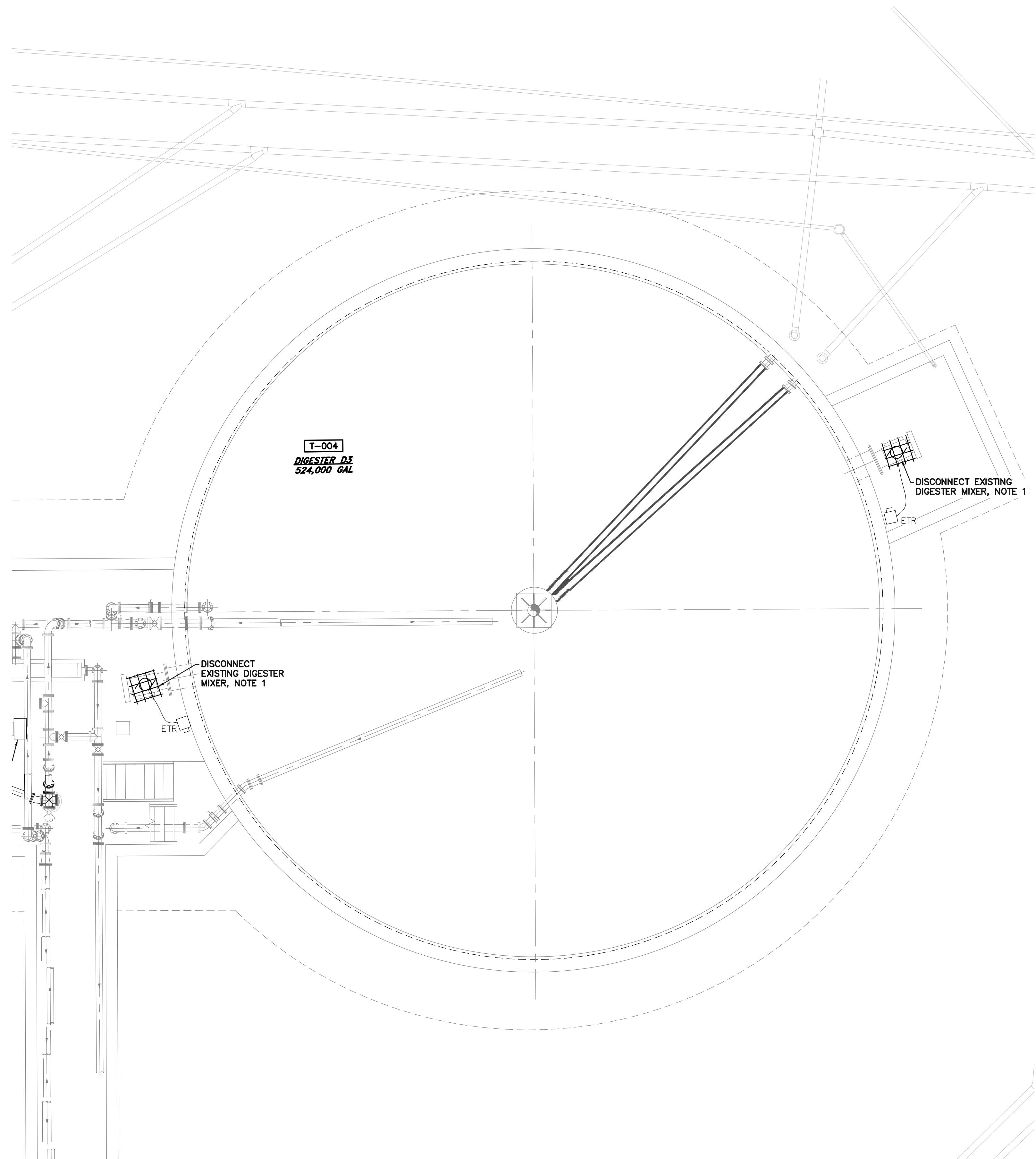
1. ALL EQUIPMENT AND DEVICES ARE EXISTING TO REMAIN (ETR) UNLESS NOTED OTHERWISE.
2. CONTRACTOR TO VERIFY POWER HAS BEEN TURNED OFF TO EACH DEVICE PRIOR TO BEGINNING WORK.

DEMOLITION LEGEND:

 EXISTING EQUIPMENT/DEVICES TO BE DISCONNECTED, REMOVED AND/OR ABANDONED IN PLACE AS NOTED.

ELECTRICAL DEMOLITION NOTES:



1. EXISTING MIXER TO BE REMOVED BY GENERAL CONTRACT. DISCONNECT AND REMOVE CONDUIT & WIRING BACK TO DISCONNECT SWITCH. DISCONNECT TO BE ABANDONED IN PLACE.

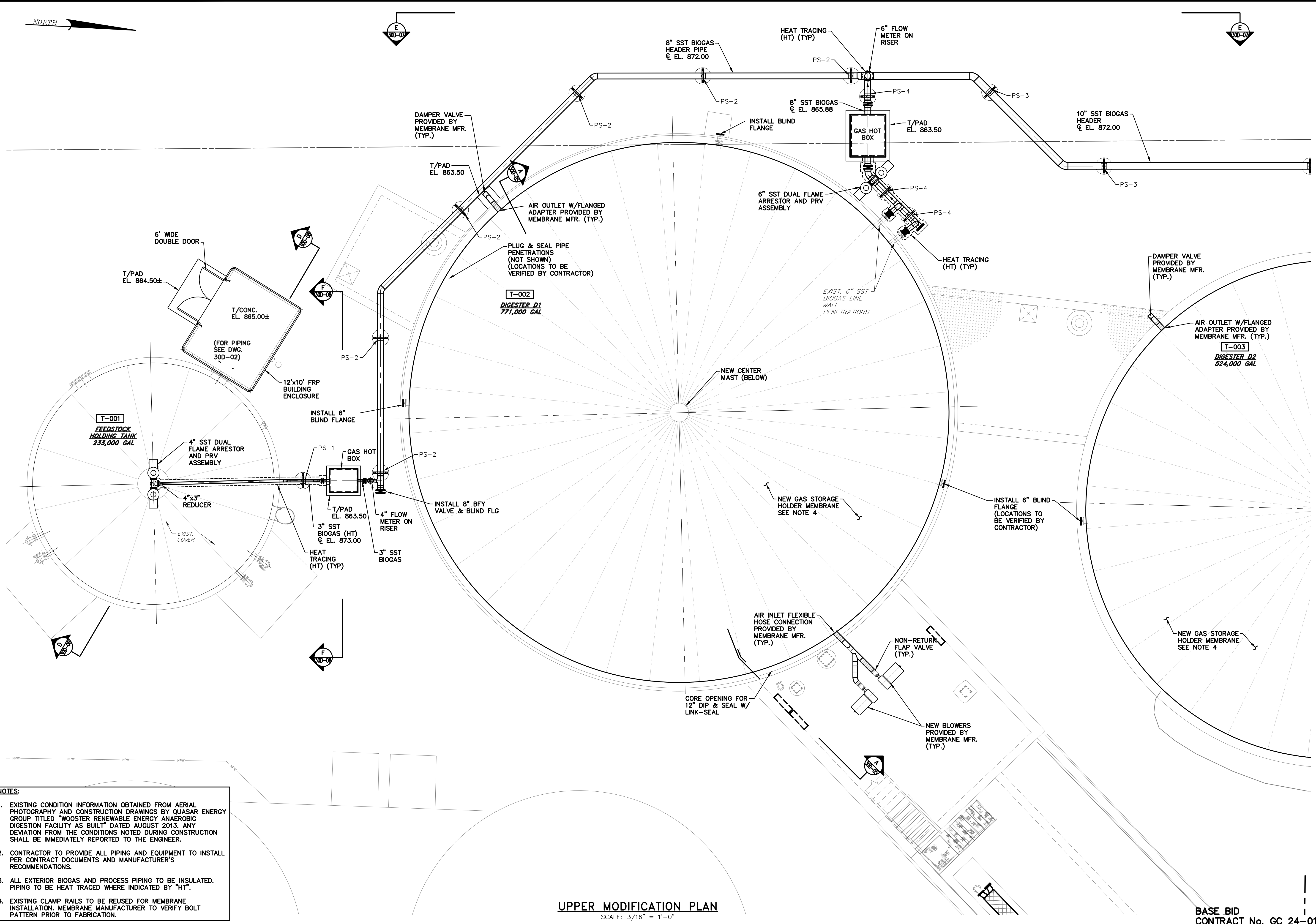


AREA 2 – LOWER LEVEL ELECTRICAL DEMOLITION PLAN – ADD ALTERNATE

SCALE: 3/16" = 1'-0"

**ADD-ALTERNATE
CONTRACT No. GC 24-01**

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: RRC	CHKD BY: JDW	ISSUED FOR CONSTRUCTION NO. DATE
DRAWN BY: GRS	SURV. CHIEF: N/A	CHKD BY: RRC/KJH	DATE A 4/05/24
		FIELDBOOK NO. N/A	REVISION
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE 3/16" = 1'-0" 0 2' 4' 6' 12' 18'	
 RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>			
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS – AREA 2 LOWER LEVEL ELECTRICAL DEMOLITION PLAN CITY OF WOOSTER WAYNE COUNTY, OH			
PROJ. NO. 122022001		DWG. NO. 30XE-04A	

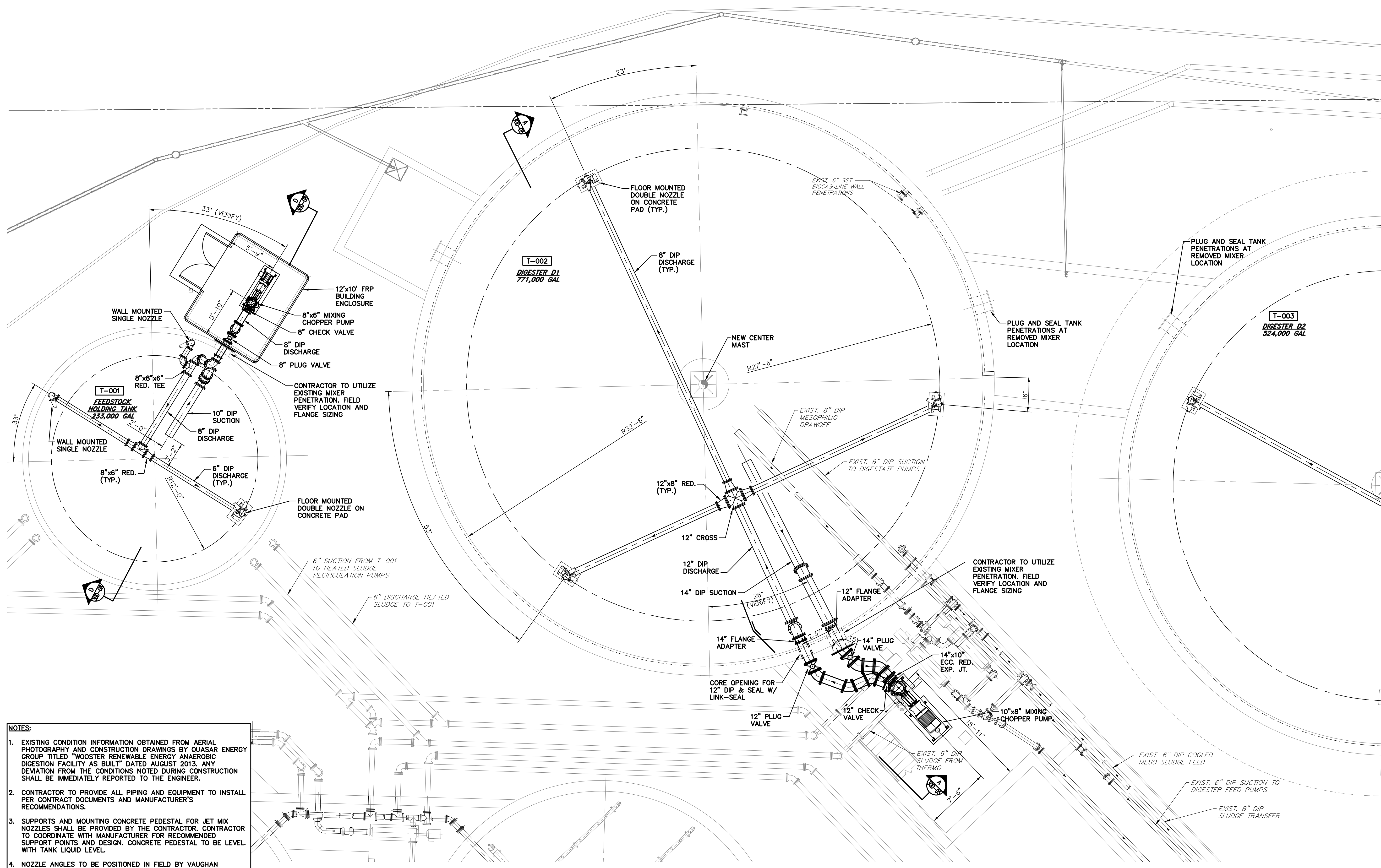


- NOTES:**
1. EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
 2. CONTRACTOR TO PROVIDE ALL PIPING AND EQUIPMENT TO INSTALL PER CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
 3. ALL EXTERIOR BIOGAS AND PROCESS PIPING TO BE INSULATED. PIPING TO BE HEAT TRACED WHERE INDICATED BY "HT".
 4. EXISTING CLAMP RAILS TO BE REUSED FOR MEMBRANE INSTALLATION. MEMBRANE MANUFACTURER TO VERIFY BOLT PATTERN PRIOR TO FABRICATION.

UPPER MODIFICATION PLAN
SCALE: 3/16" = 1'-0"

BASE BID
CONTRACT No. GC 24-01

FOR RETTEW ASSOCIATES BY:			
MANAGER:	STEVEN SIEGFRIED	CHKD BY:	SSU
DESIGN BY:	SSU	CHKD BY:	JDW
DRAWN BY:	JOG	CHKD BY:	JDW
SURV. CHIEF:	N/A	FIELDBOOK NO.:	N/A
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE 	
RETEW RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: retew@retew.com Website: www.retew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>		PROJ. NO. 122022001 DWG. NO. 30D-01	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS UPPER MODIFICATION PLAN - SHEET NO. 1 CITY OF WOOSTER WAYNE COUNTY, OH		DATE 4/05/24 NO. A ISSUED FOR CONSTRUCTION REVISION	

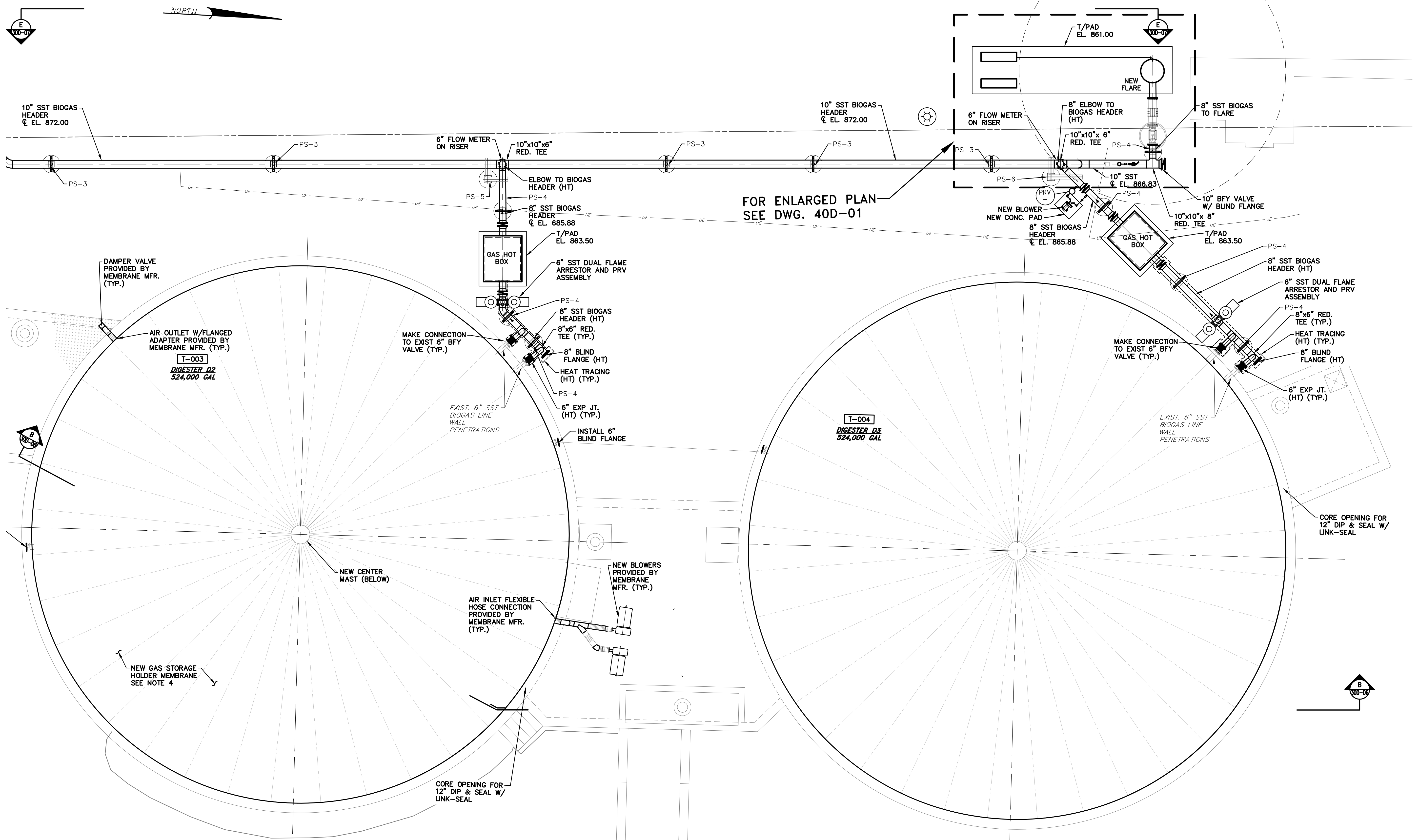


- NOTES:**
- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
 - CONTRACTOR TO PROVIDE ALL PIPING AND EQUIPMENT TO INSTALL PER CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
 - SUPPORTS AND MOUNTING CONCRETE PEDESTAL FOR JET MIX NOZZLES SHALL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE WITH MANUFACTURER FOR RECOMMENDED SUPPORT POINTS AND DESIGN. CONCRETE PEDESTAL TO BE LEVEL WITH TANK LIQUID LEVEL.
 - NOZZLE ANGLES TO BE POSITIONED IN FIELD BY VAUGHAN ENGINEER.
 - CONTRACTOR TO COORDINATE CUT OUTS FOR PUMP SUCTION AND DISCHARGE IN FIBER GLASS ENCLOSURE WITH FIBERGLASS ENCLOSURE MANUFACTURER.

LOWER MODIFICATION PLAN
SCALE: 3/16" = 1'-0"

BASE BID
CONTRACT No. GC 24-01

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: SSU	CHKD BY: JDW	DATE: 4/05/24
DRAWN BY: JOG	CHKD BY: JDW	FIELDBOOK NO: N/A	ISSUED FOR CONSTRUCTION
SURV. CHIEF: N/A	REVISION	NO.	REVISION
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691			
		RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS LOWER MODIFICATION PLAN - SHEET NO. 1 CITY OF WOOSTER WAYNE COUNTY, OH		PROJ. NO. 122022001 DWG. NO. 30D-02	



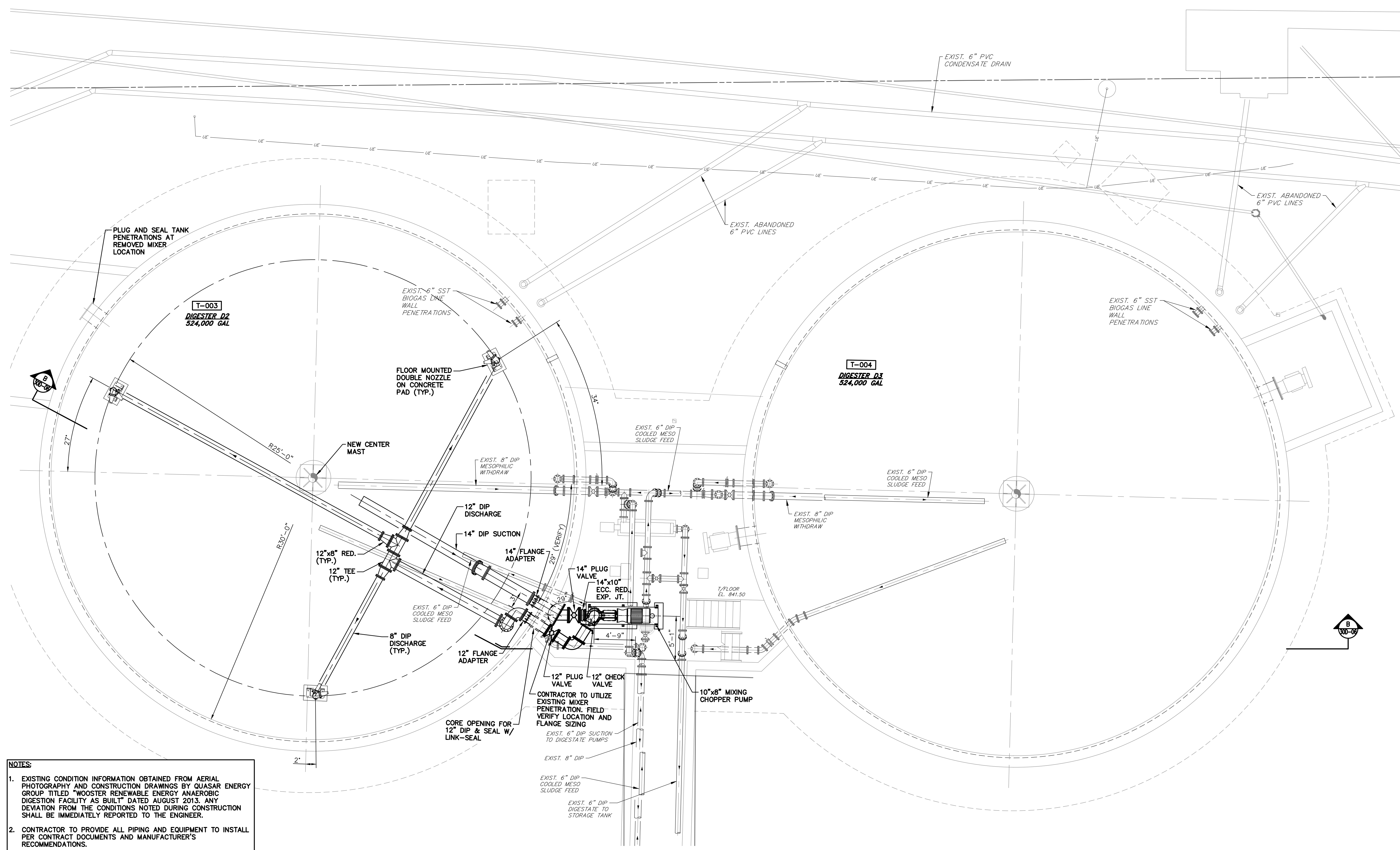
FOR ENLARGED PLAN
SEE DWG. 40D-01

- NOTES:**
- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
 - CONTRACTOR TO PROVIDE ALL PIPING AND EQUIPMENT TO INSTALL PER CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
 - ALL EXTERIOR BIOGAS AND PROCESS PIPING TO BE INSULATED. PIPING TO BE HEAT TRACED WHERE INDICATED BY "HT".
 - EXISTING CLAMP RAILS TO BE REUSED FOR MEMBRANE INSTALLATION. MEMBRANE MANUFACTURER TO VERIFY BOLT PATTERN PRIOR TO FABRICATION.

UPPER MODIFICATION PLAN
SCALE: 3/16" = 1'-0"


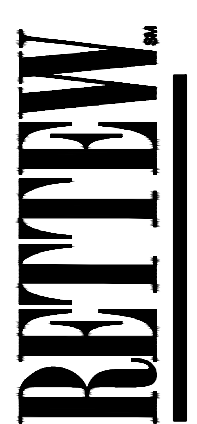
FOR RETTEW ASSOCIATES BY:			
MANAGER:	STEVEN SIEGFRIED	DESIGN BY:	CHKO BY: JDW
DESIGNED BY:	SSU	DRAWN BY:	CHKO BY: JDW
SURV. CHIEF:	JDW	FIELDBOOK NO.:	N/A
N/A		N/A	
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691			
RETTEW RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com		Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS UPPER MODIFICATION PLAN - SHEET NO. 2 CITY OF WOOSTER WAYNE COUNTY, OH		PROJ. NO. 122022001 DWG. NO. 30D-03	

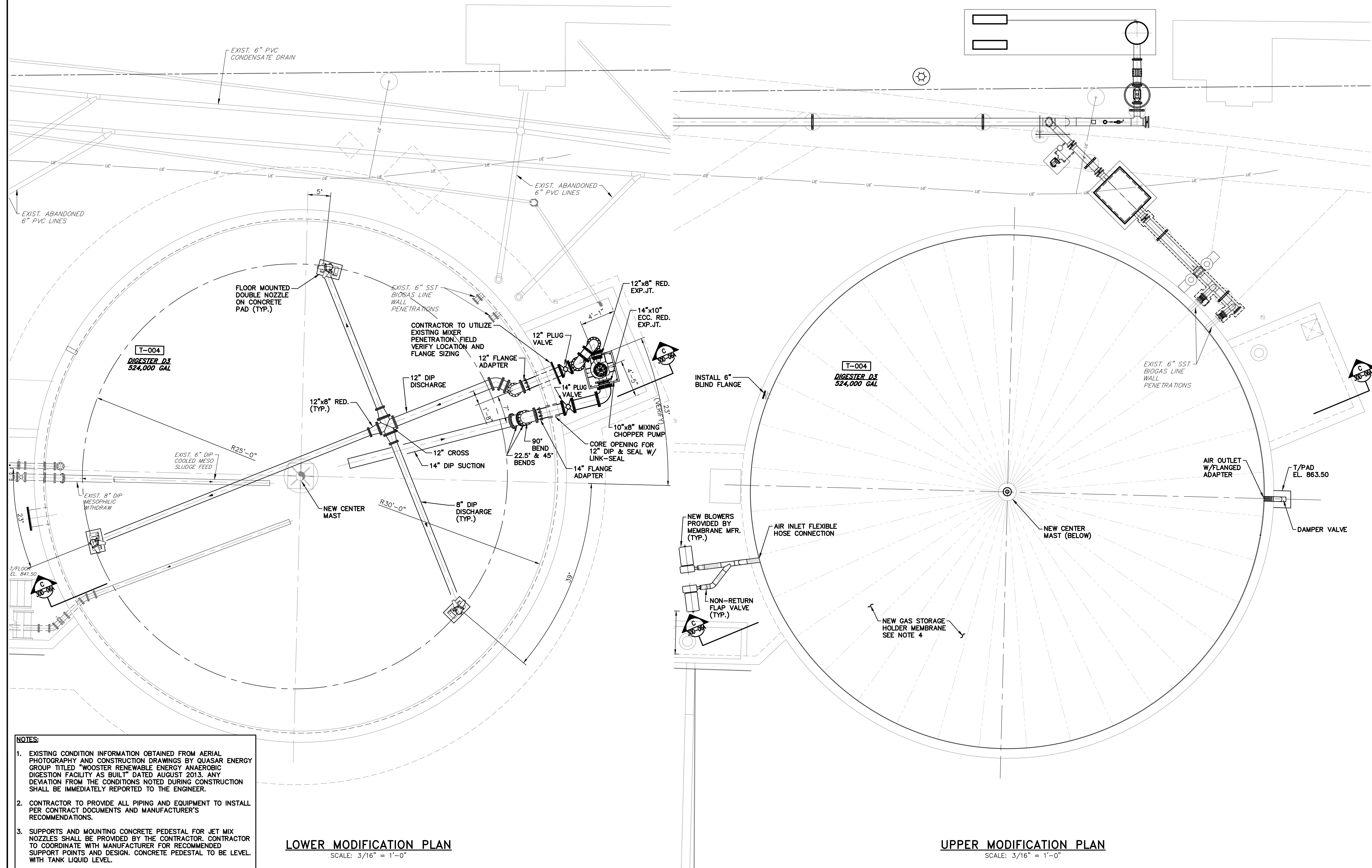
BASE BID
CONTRACT No. GC 24-01



- NOTES:**
- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
 - CONTRACTOR TO PROVIDE ALL PIPING AND EQUIPMENT TO INSTALL PER CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
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 - NOZZLE ANGLES TO BE POSITIONED IN FIELD BY VAUGHAN ENGINEER.

LOWER MODIFICATION PLAN
SCALE: 3/16" = 1'-0"

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: SSU	CHKD BY: JDW	DATE: 4/05/24
DRAWN BY: JOG	SURV. CHIEF: N/A	CHKD BY: JDW	NO.:
		FIELDBOOK NO.:	ISSUED FOR CONSTRUCTION
		N/A	REVISION
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE: 3/16" = 1'-0" 0' 2' 4' 6' 12' 18'	
			
RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: retrew@retrew.com Website: www.retrew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>			
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS LOWER MODIFICATION PLAN - SHEET NO. 2 CITY OF WOOSTER WAYNE COUNTY, OH			
PROJ. NO.	122022001		
DWG. NO.	30D-04		
BASE BID CONTRACT No. GC 24-01			

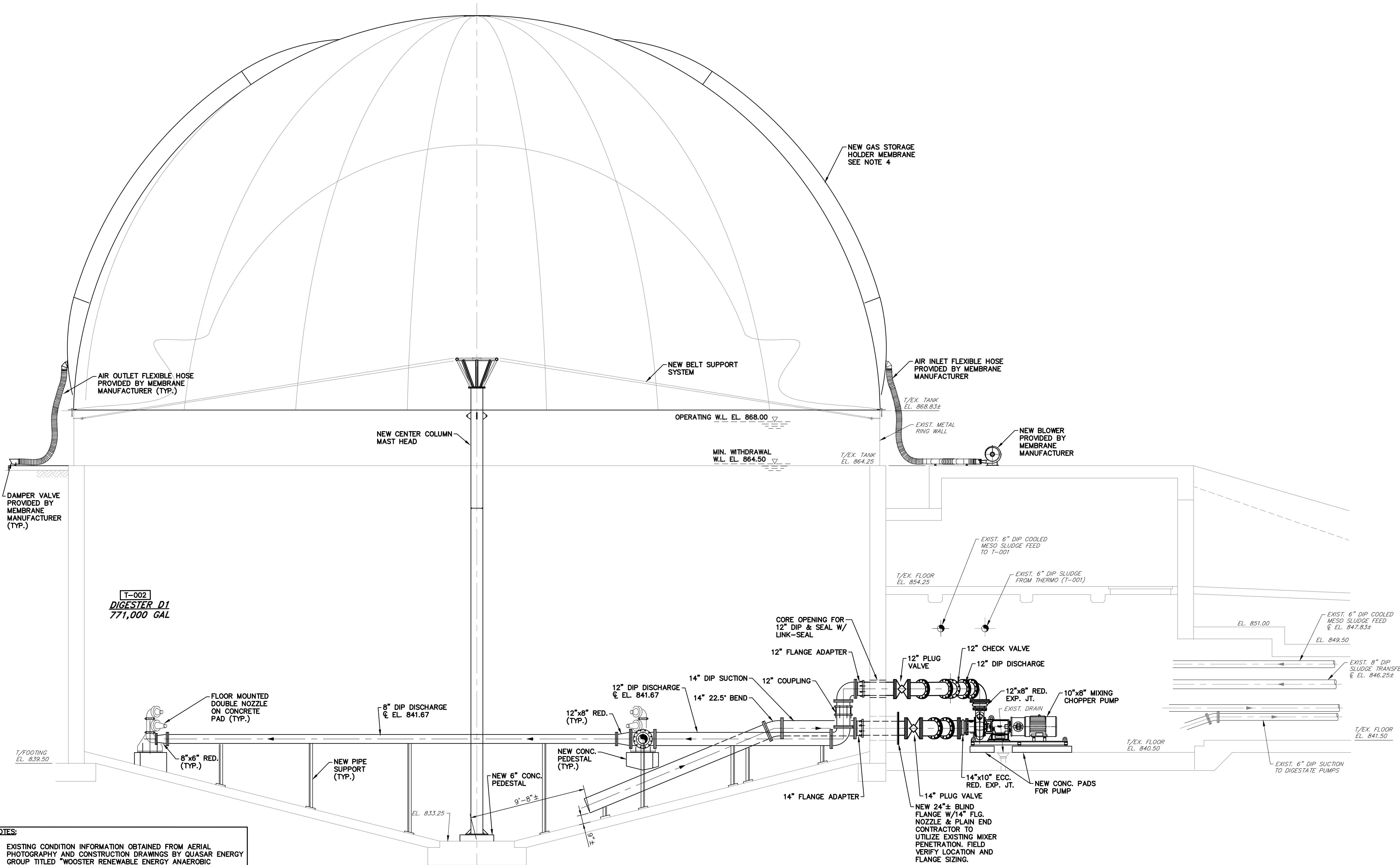


- NOTES:**
- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
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 - NOZZLE ANGLES TO BE POSITIONED IN FIELD BY VAUGHAN ENGINEER.

LOWER MODIFICATION PLAN
SCALE: 3/16" = 1'-0"

UPPER MODIFICATION PLAN
SCALE: 3/16" = 1'-0"

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: CHKD BY: SSU JDW	DATE: 4/05/24	REVISION:
DRAWN BY: JOG	CHKD BY: JDW	NO.:	ISSUED FOR CONSTRUCTION
SURV. CHIEF: N/A	FIELDBOOK NO.: N/A	DATE:	REVISION:
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691			
RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com			
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS ENVIRONMENTAL CONSULTANTS			
REBID BIOSOLIDS UPGRADE PROJECT		WAYNE COUNTY, OH	
FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTER T-004 MODIFICATION PLANS			
PROJ. NO. 122022001	ADD ALTERNATE CONTRACT No. GC 24-01		
DWG. NO. 30D-04A			



SECTION A-A
 SCALE: 1/4" = 1'-0"
 REF: 30D-01
 30D-02

- NOTES:**
- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
 - CONTRACTOR TO PROVIDE ALL PIPING AND EQUIPMENT TO INSTALL PER CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
 - SUPPORTS AND MOUNTING CONCRETE PEDESTAL FOR JET MIX NOZZLES SHALL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE WITH MANUFACTURER FOR RECOMMENDED SUPPORT POINTS AND DESIGN. CONCRETE PEDESTAL TO BE LEVEL WITH TANK LIQUID LEVEL.
 - NOZZLE ANGLES TO BE POSITIONED IN FIELD BY VAUGHAN ENGINEER.

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: CHKO BY: SSU	CHKD BY: JDW	DATE: 4/05/24
DRAWN BY: JOG	CHKD BY: JDW	FIELDBOOK NO: N/A	NO.:
SURV. CHIEF: N/A	FIELDBOOK NO: N/A		ISSUED FOR CONSTRUCTION
			REVISION

THE CITY OF WOOSTER
 1123 OLD COLUMBUS ROAD
 WOOSTER, OH 44691

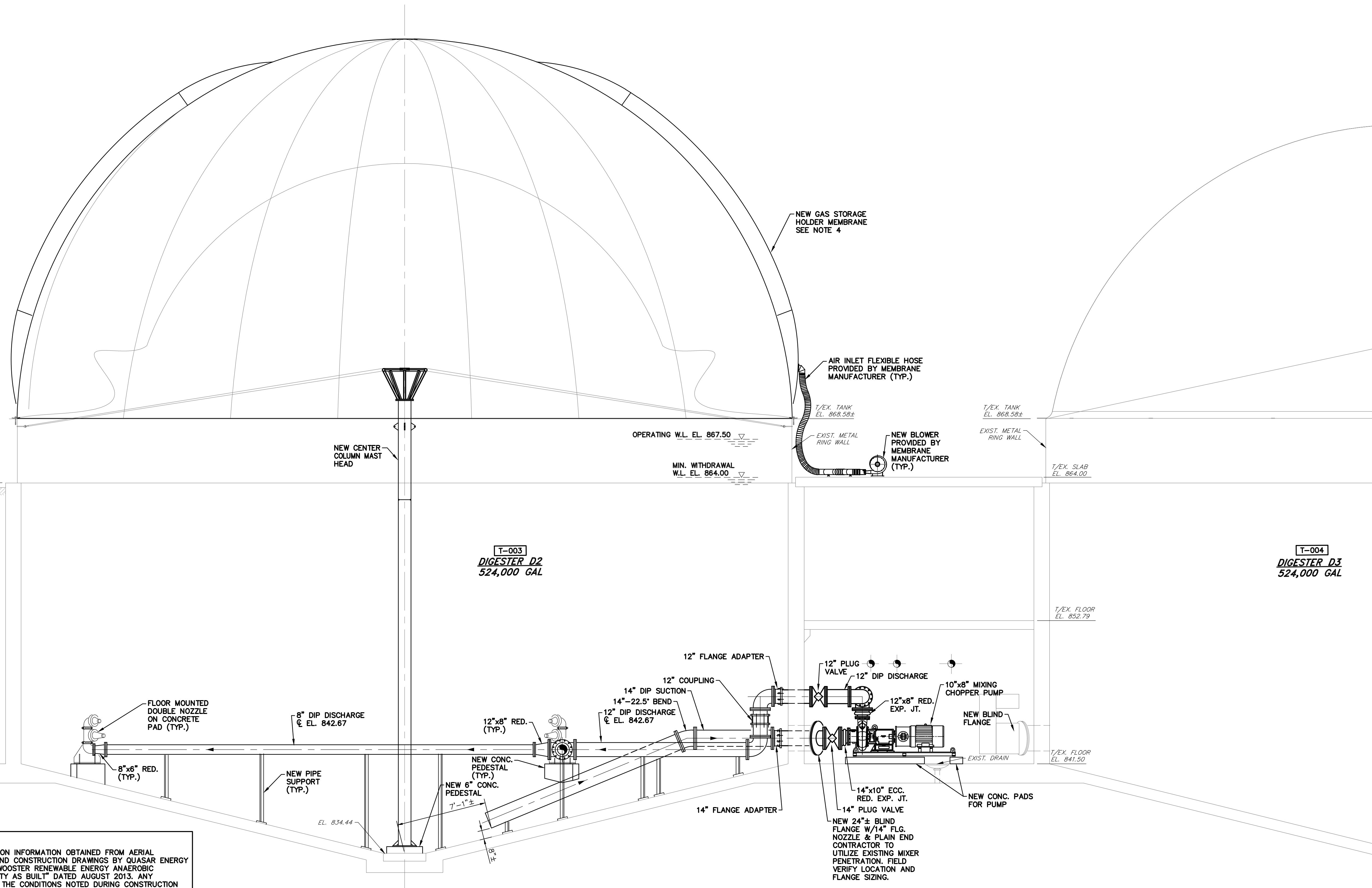
SCALE: 1/4" = 1'-0"
 0 1.5' 3' 4.5' 9'

RETTEW
 RETTEW Associates, Inc.
 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
 Phone (800) 738-8395
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REBID BIOSOLIDS UPGRADE PROJECT
 FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
 ANAEROBIC DIGESTERS
 PIPING SECTION - SHEET NO. 1
 WAYNE COUNTY, OH

PROJ. NO. 122022001
 DWG. NO. 30D-05

BASE BID
 CONTRACT No. GC 24-01



- NOTES:**
- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
 - CONTRACTOR TO PROVIDE ALL PIPING AND EQUIPMENT TO INSTALL PER CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
 - SUPPORTS AND MOUNTING CONCRETE PEDESTAL FOR JET MIX NOZZLES SHALL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE WITH MANUFACTURER FOR RECOMMENDED SUPPORT POINTS AND DESIGN. CONCRETE PEDESTAL TO BE LEVEL WITH TANK LIQUID LEVEL.
 - NOZZLE ANGLES TO BE POSITIONED IN FIELD BY VAUGHAN ENGINEER.

SECTION B-B
SCALE: 1/4" = 1'-0"
REF: 30D-03
30D-04

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION

FOR RETTEW ASSOCIATES BY:

MANAGER: STEVEN SIEGFRIED
DESIGN BY: SSS
DRAWN BY: JOG
SURV. CHIEF: N/A

CHKD BY: JDW
CHKD BY: JDW
FIELDBOOK NO: N/A

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

SCALE
1/4" = 1'-0"
0 1.5' 3' 4.5' 9'

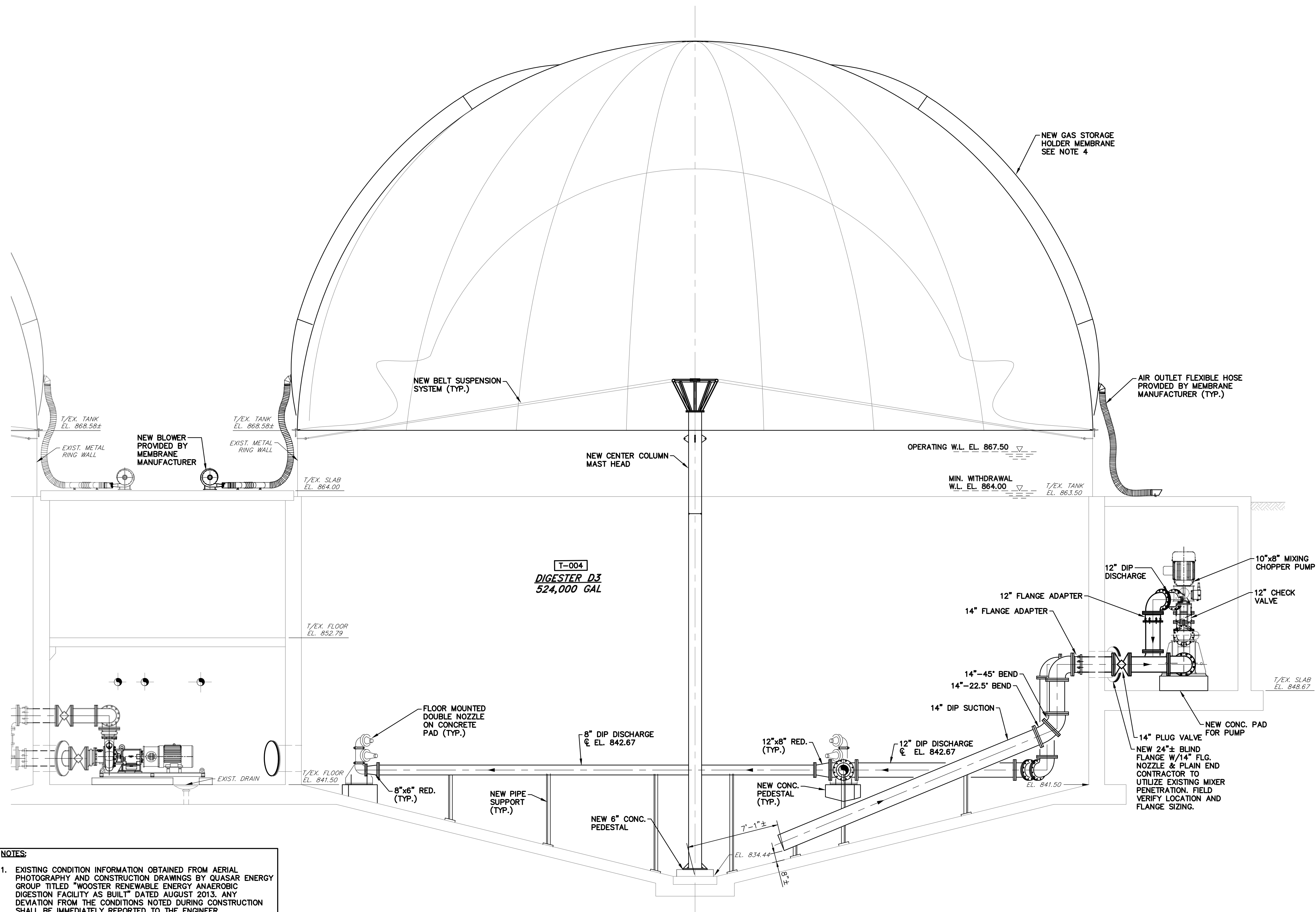
RETTEW
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RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
ANAEROBIC DIGESTERS
PIPING SECTION - SHEET NO. 2
WAYNE COUNTY, OH
CITY OF WOOSTER

PROJ. NO.	122022001
DWG. NO.	30D-06

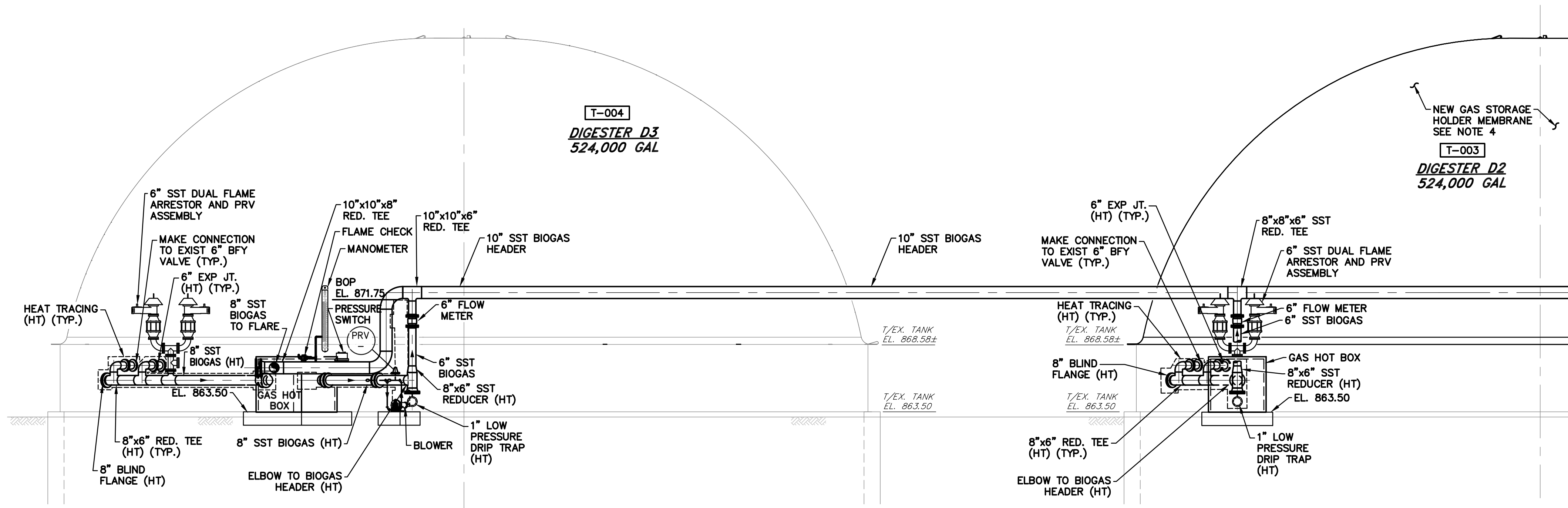
BASE BID
CONTRACT No. GC 24-01



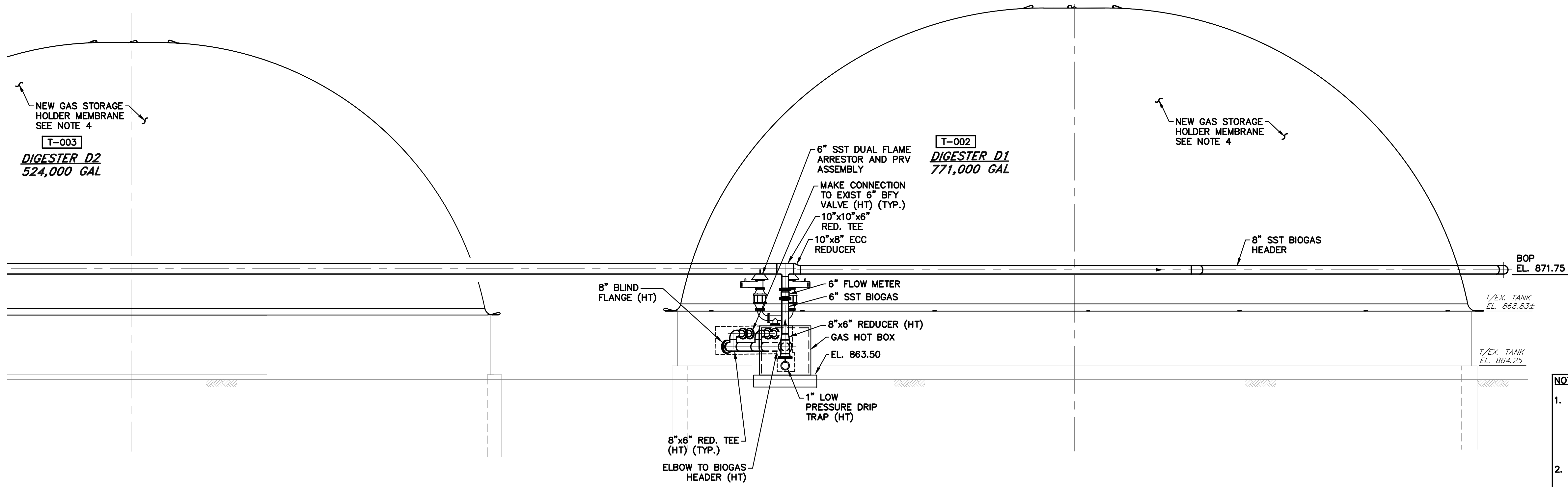
- NOTES:**
- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
 - CONTRACTOR TO PROVIDE ALL PIPING AND EQUIPMENT TO INSTALL PER CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
 - SUPPORTS AND MOUNTING CONCRETE PEDESTAL FOR JET MIX NOZZLES SHALL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE WITH MANUFACTURER FOR RECOMMENDED SUPPORT POINTS AND DESIGN. CONCRETE PEDESTAL TO BE LEVEL WITH TANK LIQUID LEVEL.
 - NOZZLE ANGLES TO BE POSITIONED IN FIELD BY VAUGHAN ENGINEER.

SECTION C-C
SCALE: 1/4" = 1'-0"
REF: 30D-04A

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: SSS	CHKD BY: JDW	DATE: 4/05/24
DRAWN BY: JOG	SURV. CHIEF: N/A	CHKD BY: JDW	NO. A
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		ISSUED FOR CONSTRUCTION	
		REVISION	
		PROJ. NO. 122022001 DWG. NO. 30D-06A	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTER T-004 ALTERNATE PIPING SECTION CITY OF WOOSTER WAYNE COUNTY, OH		RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants	



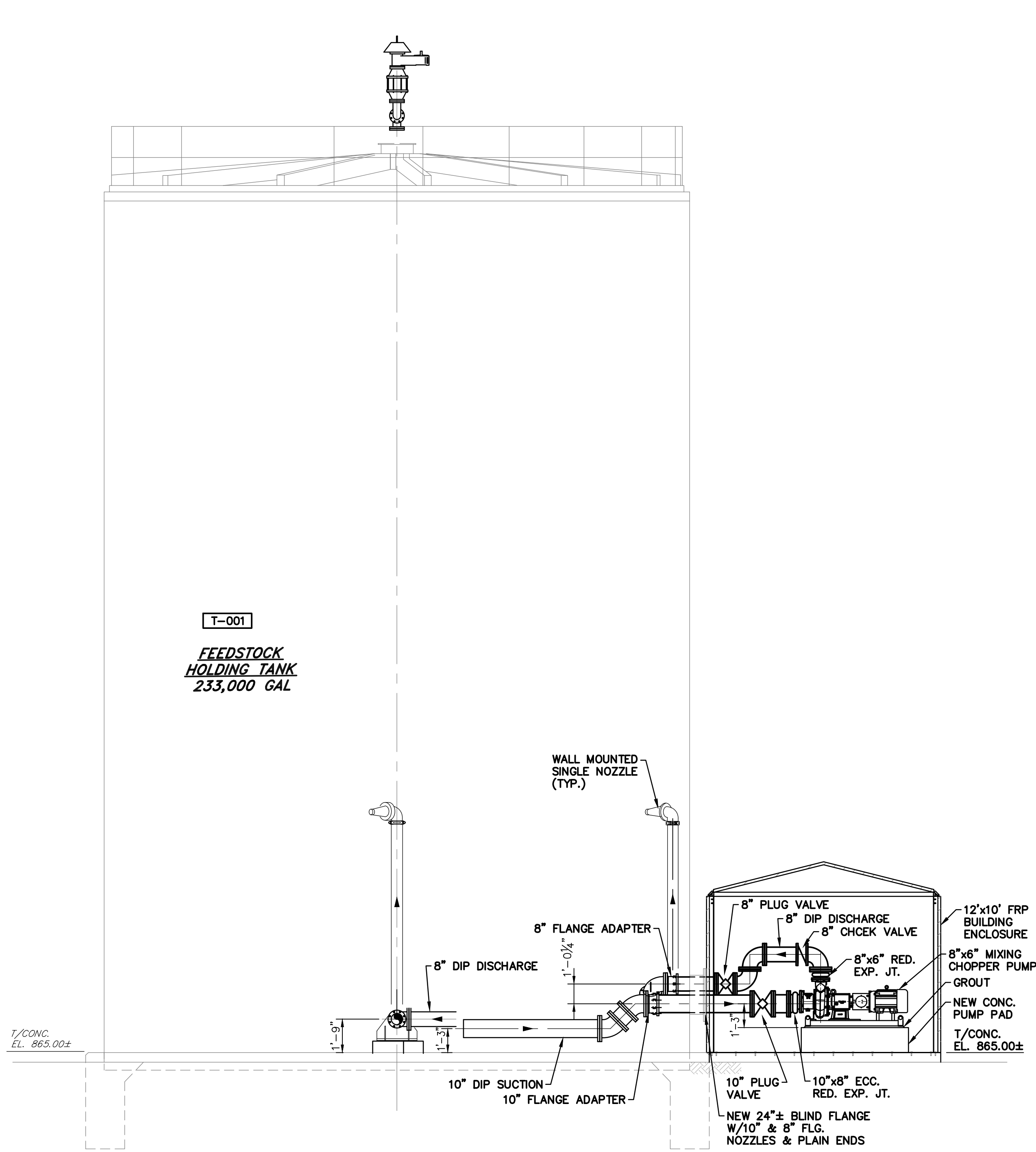
SECTION E-E
SCALE: 3/16" = 1'-0"
REF: 30D-01
30D-03



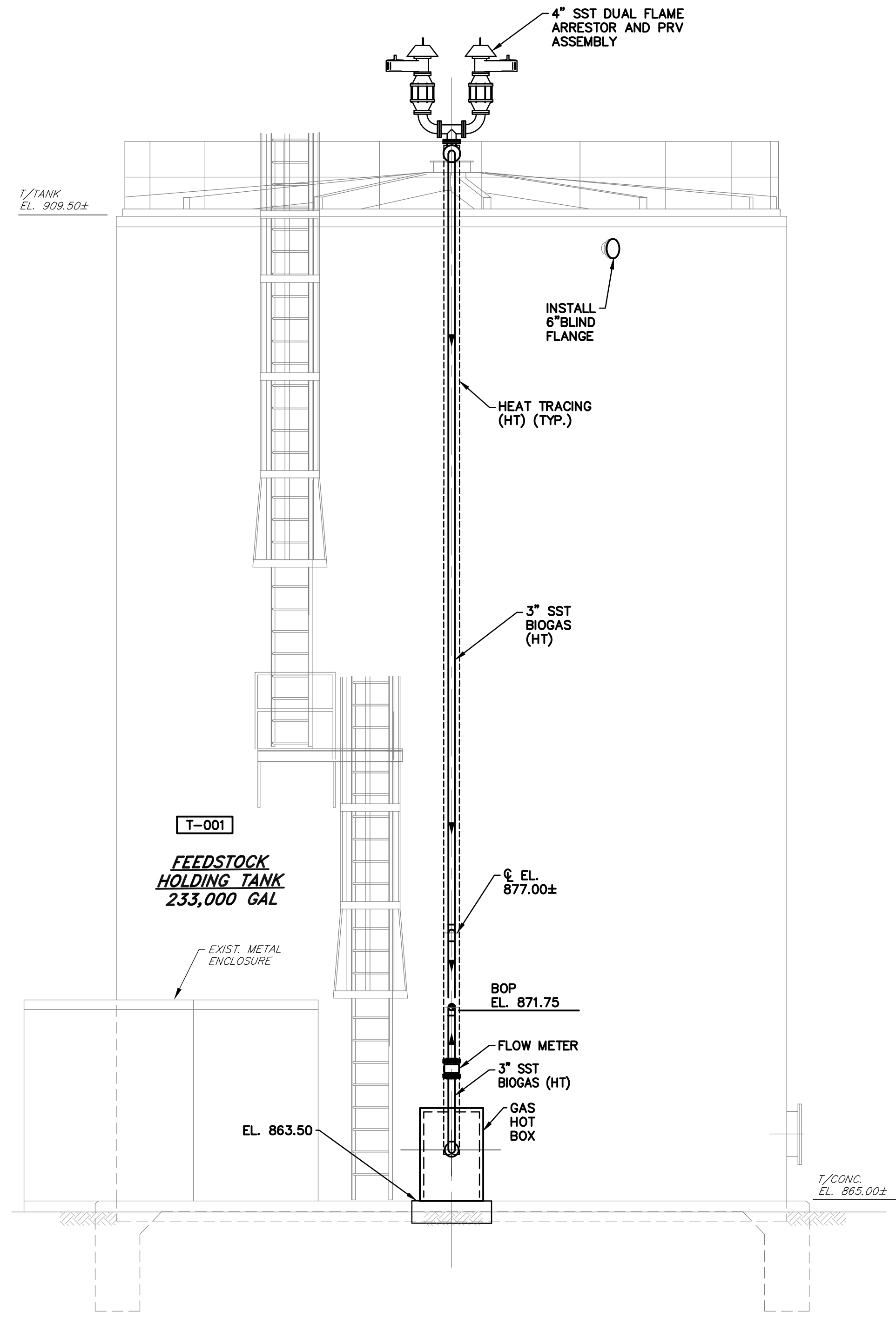
SECTION E-E
SCALE: 3/16" = 1'-0"
REF: 30D-01
30D-03

- NOTES:**
- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
 - CONTRACTOR TO PROVIDE ALL PIPING AND EQUIPMENT TO INSTALL PER CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
 - ALL EXTERIOR BIOGAS AND PROCESS PIPING TO BE INSULATED. PIPING TO BE HEAT TRACED WHERE INDICATED BY "HT".
 - EXISTING CLAMP RAILS TO BE REUSED FOR MEMBRANE INSTALLATION. MEMBRANE MANUFACTURER TO VERIFY BOLT PATTERN PRIOR TO FABRICATION

FOR RETTEW ASSOCIATES BY:							
MANAGER:	STEVEN SIEGFRIED	DESIGN BY:	SSU	CHKD BY:	JDW	DATE:	4/05/24
DRAWN BY:	JOG	CHKD BY:	JDW	FIELDBOOK NO.:	N/A	ISSUED FOR CONSTRUCTION	
SURV. CHIEF:	N/A	DATE:		NO.:		REVISION	
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691							
RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>							
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS PIPING SECTIONS - SHEET NO. 3 CITY OF WOOSTER, WAYNE COUNTY, OH							
BASE BID CONTRACT No. GC 24-01							
PROJ. NO. 122022001 DWG. NO. 30D-07							



SECTION D-D
SCALE: 1/4" = 1'-0"
REF: 30D-01
30D-02



SECTION F-F
SCALE: 1/4" = 1'-0"
REF: 30D-01

- NOTES:**
- EXISTING CONDITION INFORMATION OBTAINED FROM AERIAL PHOTOGRAPHY AND CONSTRUCTION DRAWINGS BY QUASAR ENERGY GROUP TITLED "WOOSTER RENEWABLE ENERGY ANAEROBIC DIGESTION FACILITY AS BUILT" DATED AUGUST 2013. ANY DEVIATION FROM THE CONDITIONS NOTED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
 - CONTRACTOR TO PROVIDE ALL PIPING AND EQUIPMENT TO INSTALL PER CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
 - ALL EXTERIOR BIOGAS AND PROCESS PIPING TO BE INSULATED. PIPING TO BE HEAT TRACED WHERE INDICATED BY "HT".
 - EXISTING CLAMP RAILS TO BE REUSED FOR MEMBRANE INSTALLATION. MEMBRANE MANUFACTURER TO VERIFY BOLT PATTERN PRIOR TO FABRICATION

BASE BID
CONTRACT No. GC 24-01

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: CHKO BY: JDW	DATE: 4/05/24	NO. A
DESIGNED BY: SSU	DRAWN BY: JOG	ISSUED FOR CONSTRUCTION	REVISION
SURV. CHIEF: N/A	FIELDBOOK NO: N/A		
RETTEW RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>		THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691 SCALE: 3/16" = 1'-0" 0' 2' 4' 6' 12' 18'	
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY FEEDSTOCK HOLDING TANK PIPING SECTIONS CITY OF WOOSTER WAYNE COUNTY, OH		PROJ. NO. 122022001 DWG. NO. 30D-08	

ELECTRICAL NOTES:

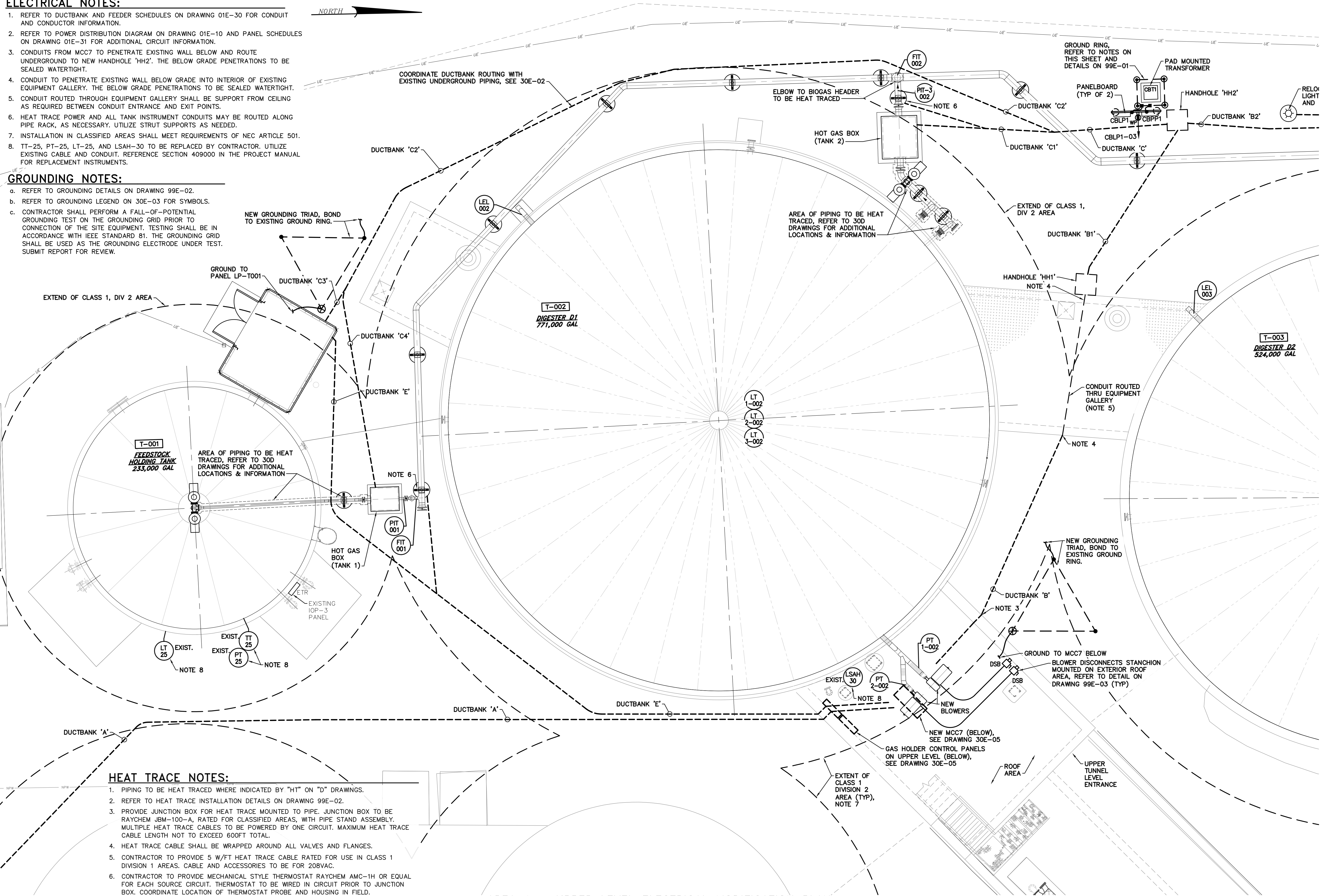
- REFER TO DUCTBANK AND FEEDER SCHEDULES ON DRAWING 01E-30 FOR CONDUIT AND CONDUCTOR INFORMATION.
- REFER TO POWER DISTRIBUTION DIAGRAM ON DRAWING 01E-10 AND PANEL SCHEDULES ON DRAWING 01E-31 FOR ADDITIONAL CIRCUIT INFORMATION.
- CONDUITS FROM MCC7 TO PENETRATE EXISTING WALL BELOW AND ROUTE UNDERGROUND TO NEW HANDHOLE 'HH2'. THE BELOW GRADE PENETRATIONS TO BE SEALED WATERTIGHT.
- CONDUIT TO PENETRATE EXISTING WALL BELOW GRADE INTO INTERIOR OF EXISTING EQUIPMENT GALLERY. THE BELOW GRADE PENETRATIONS TO BE SEALED WATERTIGHT.
- CONDUIT ROUTED THROUGH EQUIPMENT GALLERY SHALL BE SUPPORT FROM CEILING AS REQUIRED BETWEEN CONDUIT ENTRANCE AND EXIT POINTS.
- HEAT TRACE POWER AND ALL TANK INSTRUMENT CONDUITS MAY BE ROUTED ALONG PIPE RACK, AS NECESSARY. UTILIZE STRUT SUPPORTS AS NEEDED.
- INSTALLATION IN CLASSIFIED AREAS SHALL MEET REQUIREMENTS OF NEC ARTICLE 501.
- TT-25, PT-25, LT-25, AND LSAH-30 TO BE REPLACED BY CONTRACTOR. UTILIZE EXISTING CABLE AND CONDUIT. REFERENCE SECTION 409000 IN THE PROJECT MANUAL FOR REPLACEMENT INSTRUMENTS.

GROUNDING NOTES:

- REFER TO GROUNDING DETAILS ON DRAWING 99E-02.
- REFER TO GROUNDING LEGEND ON 30E-03 FOR SYMBOLS.
- CONTRACTOR SHALL PERFORM A FALL-OF-POTENTIAL GROUNDING TEST ON THE GROUNDING GRID PRIOR TO CONNECTION OF THE SITE EQUIPMENT. TESTING SHALL BE IN ACCORDANCE WITH IEEE STANDARD 81. THE GROUNDING GRID SHALL BE USED AS THE GROUNDING ELECTRODE UNDER TEST. SUBMIT REPORT FOR REVIEW.

HEAT TRACE NOTES:

- PIPING TO BE HEAT TRACED WHERE INDICATED BY "HT" ON "D" DRAWINGS.
- REFER TO HEAT TRACE INSTALLATION DETAILS ON DRAWING 99E-02.
- PROVIDE JUNCTION BOX FOR HEAT TRACE MOUNTED TO PIPE. JUNCTION BOX TO BE RAYCHEM JBM-100-A, RATED FOR CLASSIFIED AREAS, WITH PIPE STAND ASSEMBLY. MULTIPLE HEAT TRACE CABLES TO BE POWERED BY ONE CIRCUIT. MAXIMUM HEAT TRACE CABLE LENGTH NOT TO EXCEED 600FT TOTAL.
- HEAT TRACE CABLE SHALL BE WRAPPED AROUND ALL VALVES AND FLANGES.
- CONTRACTOR TO PROVIDE 5 W/FT HEAT TRACE CABLE RATED FOR USE IN CLASS 1 DIVISION 1 AREAS. CABLE AND ACCESSORIES TO BE FOR 208VAC.
- CONTRACTOR TO PROVIDE MECHANICAL STYLE THERMOSTAT RAYCHEM AMC-1H OR EQUAL FOR EACH SOURCE CIRCUIT. THERMOSTAT TO BE WIRED IN CIRCUIT PRIOR TO JUNCTION BOX. COORDINATE LOCATION OF THERMOSTAT PROBE AND HOUSING IN FIELD.

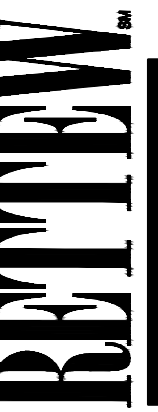


AREA 1 - UPPER LEVEL ELECTRICAL MODIFICATION PLAN

SCALE: 3/16" = 1'-0"

BASE BID
CONTRACT No. GC 24-01

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: RRC	CHKO BY: JDW	DATE: 4/05/24
DRAWN BY: GRS	SURV. CHIEF: N/A	CHKD BY: RRC/KJH	NO.:
FIELDBOOK NO.:	N/A	ISSUED FOR CONSTRUCTION	REVISION
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691			
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS - AREA 1 UPPER LEVEL ELECTRICAL MODIFICATION PLAN CITY OF WOOSTER, OH		PROJ. NO. 122022001 DWG. NO. 30E-01	



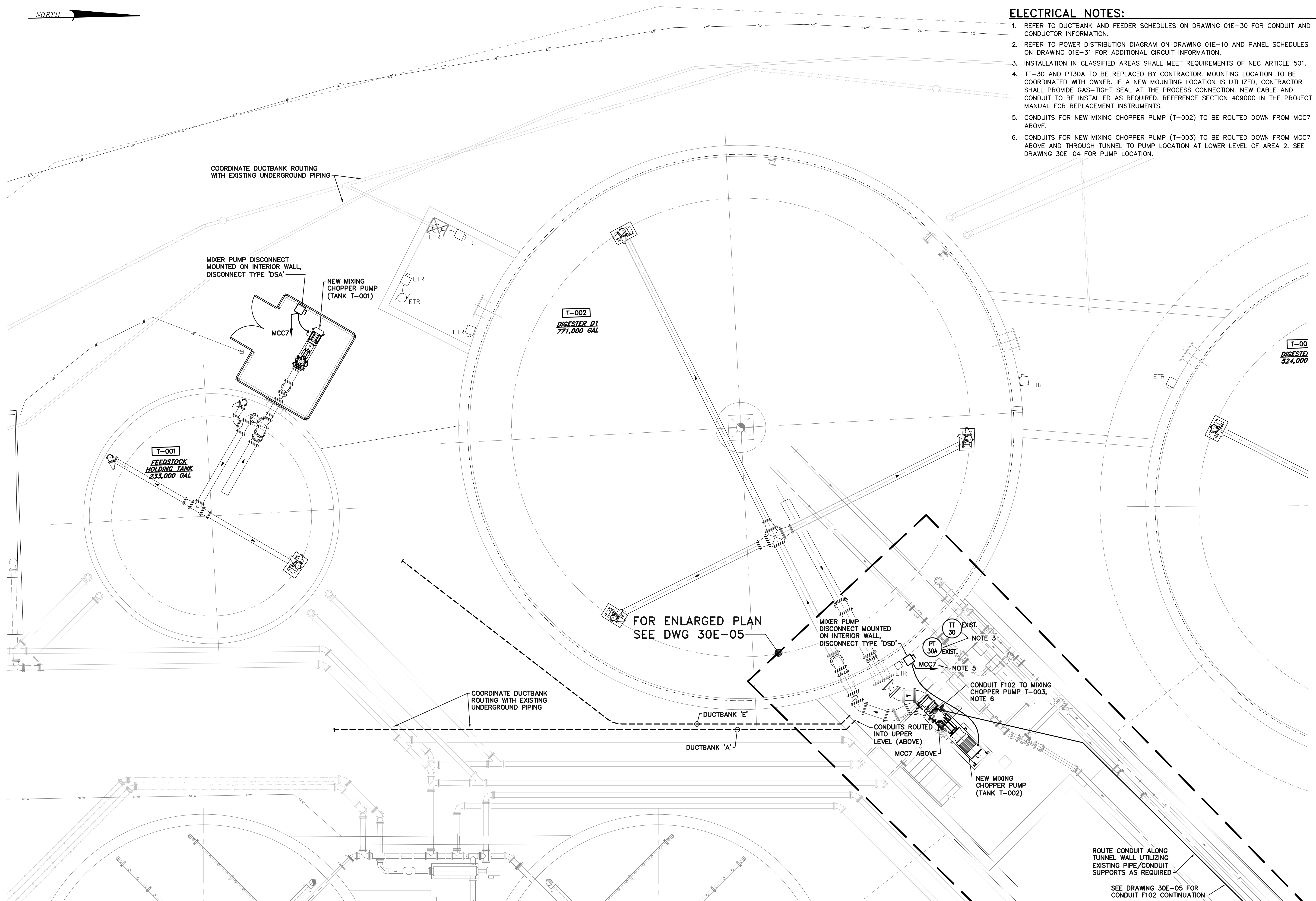
RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: retrew@retrew.com
Website: www.retrew.com

Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants



ELECTRICAL NOTES:

1. REFER TO DUCTBANK AND FEEDER SCHEDULES ON DRAWING 01E-30 FOR CONDUIT AND CONDUCTOR INFORMATION.
2. REFER TO POWER DISTRIBUTION DIAGRAM ON DRAWING 01E-10 AND PANEL SCHEDULES ON DRAWING 01E-31 FOR ADDITIONAL CIRCUIT INFORMATION.
3. INSTALLATION IN CLASSIFIED AREAS SHALL MEET REQUIREMENTS OF NEC ARTICLE 501.
4. TT-30 AND PT30A TO BE REPLACED BY CONTRACTOR. MOUNTING LOCATION TO BE COORDINATED WITH OWNER. IF A NEW MOUNTING LOCATION IS UTILIZED, CONTRACTOR SHALL PROVIDE GAS-TIGHT SEAL AT THE PROCESS CONNECTION. NEW CABLE AND CONDUIT TO BE INSTALLED AS REQUIRED. REFERENCE SECTION 409000 IN THE PROJECT MANUAL FOR REPLACEMENT INSTRUMENTS.
5. CONDUITS FOR NEW MIXING CHOPPER PUMP (T-002) TO BE ROUTED DOWN FROM MCC7 ABOVE.
6. CONDUITS FOR NEW MIXING CHOPPER PUMP (T-003) TO BE ROUTED DOWN FROM MCC7 ABOVE AND THROUGH TUNNEL TO PUMP LOCATION AT LOWER LEVEL OF AREA 2. SEE DRAWING 30E-04 FOR PUMP LOCATION.



AREA 1 - LOWER LEVEL ELECTRICAL MODIFICATION PLAN

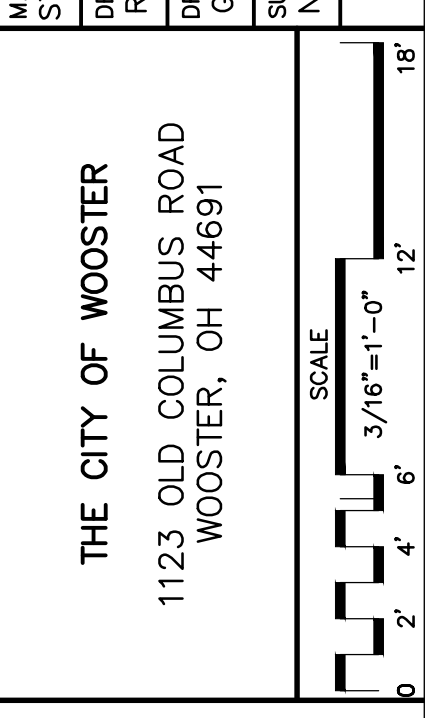
SCALE: 3/16" = 1'-0"

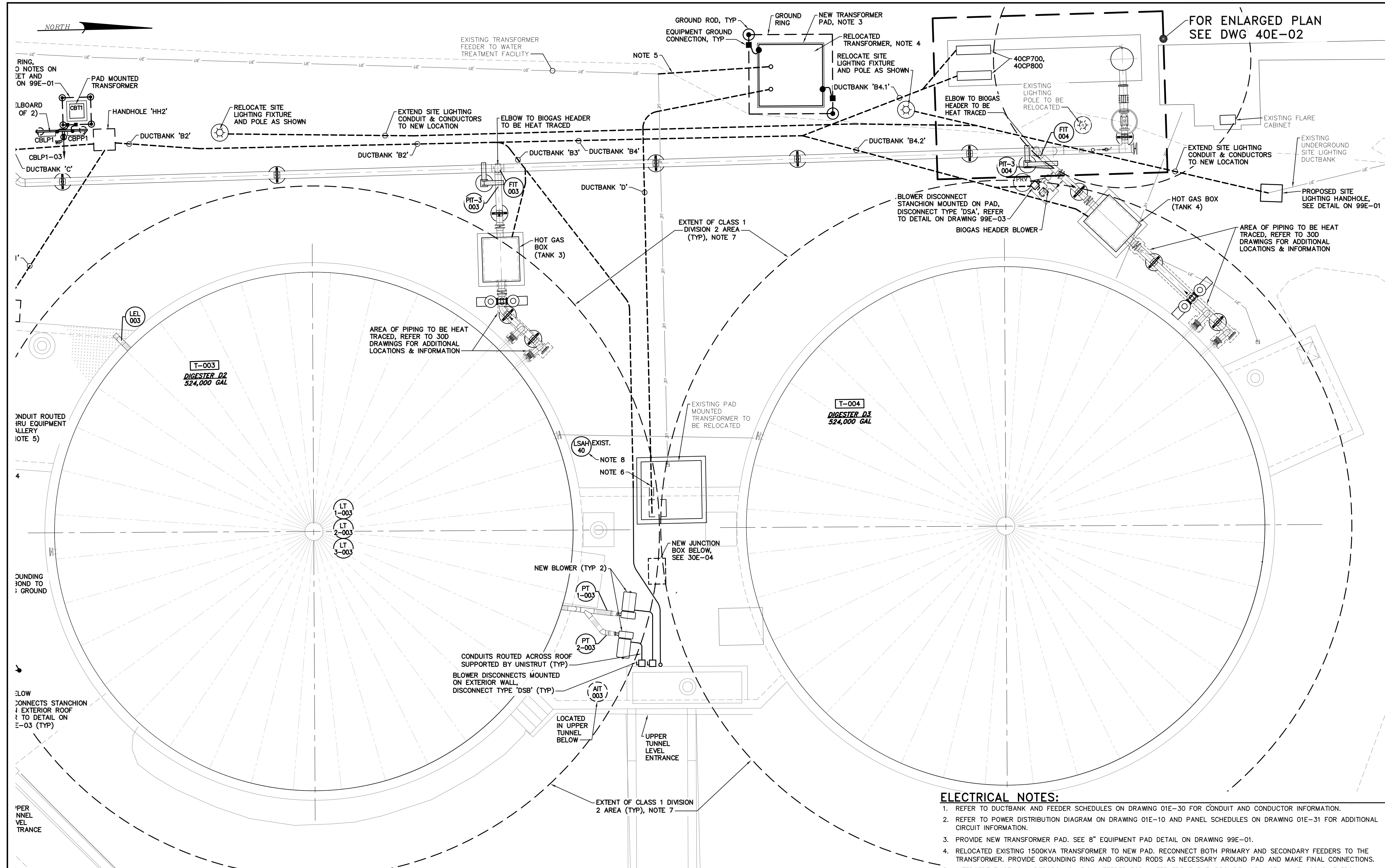
**BASE BID
CONTRACT No. GC 24-01**

FOR RETTEW ASSOCIATES BY:			
MANAGER:	STEVEN SIEGFRIED	CHKD BY:	JDW
DESIGN BY:	RRC	DRAWN BY:	GRS
SURV. CHIEF:	N/A	FIELDBOOK NO.:	N/A
THE CITY OF WOOSTER		1123 OLD COLUMBUS ROAD WOOSTER, OH 44691	
REBID BIOSOLIDS UPGRADE PROJECT		FOR THE CITY OF WOOSTER	
WATER RESOURCE RECOVERY FACILITY		ANAEROBIC DIGESTERS - AREA 1	
LOWER LEVEL ELECTRICAL MODIFICATION PLAN		CITY OF WOOSTER	
PROJ. NO.	122022001	ISSUED FOR CONSTRUCTION	NO.
DWG. NO.	30E-02	DATE	A 4/05/24
REBID BIOSOLIDS UPGRADE PROJECT		WAYNE COUNTY, OH	

RETTEW
 Engineers • Planners • Scientists • Landscape Architects
 Environmental Consultants

RETTEW Associates, Inc.
 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
 Phone (800) 738-8395
 Email: rettew@rettew.com
 Website: www.rettew.com





GROUNDING NOTES:

- a. REFER TO GROUNDING DETAILS ON DRAWING 99E-02.
- b. REFER TO GROUNDING LEGEND ON 30E-03 FOR SYMBOLS.
- c. CONTRACTOR SHALL PERFORM A FALL-OF-POTENTIAL GROUNDING TEST ON THE GROUNDING GRID PRIOR TO CONNECTION OF THE SITE EQUIPMENT. TESTING SHALL BE IN ACCORDANCE WITH IEEE STANDARD 81. THE GROUNDING GRID SHALL BE USED AS THE GROUNDING ELECTRODE UNDER TEST. SUBMIT REPORT FOR REVIEW.

GROUNDING LEGEND:

- GROUND ROD
- GROUND ROD WITH INSPECTION WELL
- GROUND CONDUCTOR, BURIED OR EMBEDDED
- GROUND CONDUCTOR, EXPOSED
- EQUIPMENT GROUNDING CONNECTION
- GROUNDING FITTING, EXOTHERMICALLY WELDED
- GROUND CONNECTION, BOLTED TYPE
- GROUND BOND JUMPER

AREA 2 - UPPER LEVEL ELECTRICAL MODIFICATION PLAN

SCALE: 3/16" = 1'-0"

ELECTRICAL NOTES:

1. REFER TO DUCTBANK AND FEEDER SCHEDULES ON DRAWING 01E-30 FOR CONDUIT AND CONDUCTOR INFORMATION.
2. REFER TO POWER DISTRIBUTION DIAGRAM ON DRAWING 01E-10 AND PANEL SCHEDULES ON DRAWING 01E-31 FOR ADDITIONAL CIRCUIT INFORMATION.
3. PROVIDE NEW TRANSFORMER PAD. SEE 8" EQUIPMENT PAD DETAIL ON DRAWING 99E-01.
4. RELOCATED EXISTING 1500KVA TRANSFORMER TO NEW PAD. RECONNECT BOTH PRIMARY AND SECONDARY FEEDERS TO THE TRANSFORMER. PROVIDE GROUNDING RING AND GROUND RODS AS NECESSARY AROUND PAD AND MAKE FINAL CONNECTIONS.
5. INTERCEPT EXISTING UNDERGROUND 13.2KV FEEDER FOR WATER TREATMENT. PROVIDE AND INSTALL NEW CONDUIT FROM INTERCEPT POINT TO TRANSFORMER.
6. NEW JUNCTION BOX, MOUNTED IN TUNNEL BELOW WITH (4)-5" PVC CONDUITS TRANSFORMER CONDUCTORS. CONTRACTOR TO CORE DRILL EXISTING WALL AND PROVIDE LINK SEALS FOR EACH. EXTEND CONDUITS TO NEW TRANSFORMER LOCATION VIA DUCTBANK 'D'. REFER TO LOWER LEVEL PLAN ON DRAWING 30E-04 FOR ADDITIONAL INFORMATION.
7. INSTALLATION IN CLASSIFIED AREAS SHALL MEET REQUIREMENTS OF NEC ARTICLE 501.
8. LSAH-40 TO BE REPLACED BY CONTRACTOR. UTILIZE EXISTING CABLE AND CONDUIT. REFERENCE SECTION 409000 IN THE PROJECT MANUAL FOR REPLACEMENT INSTRUMENTS.

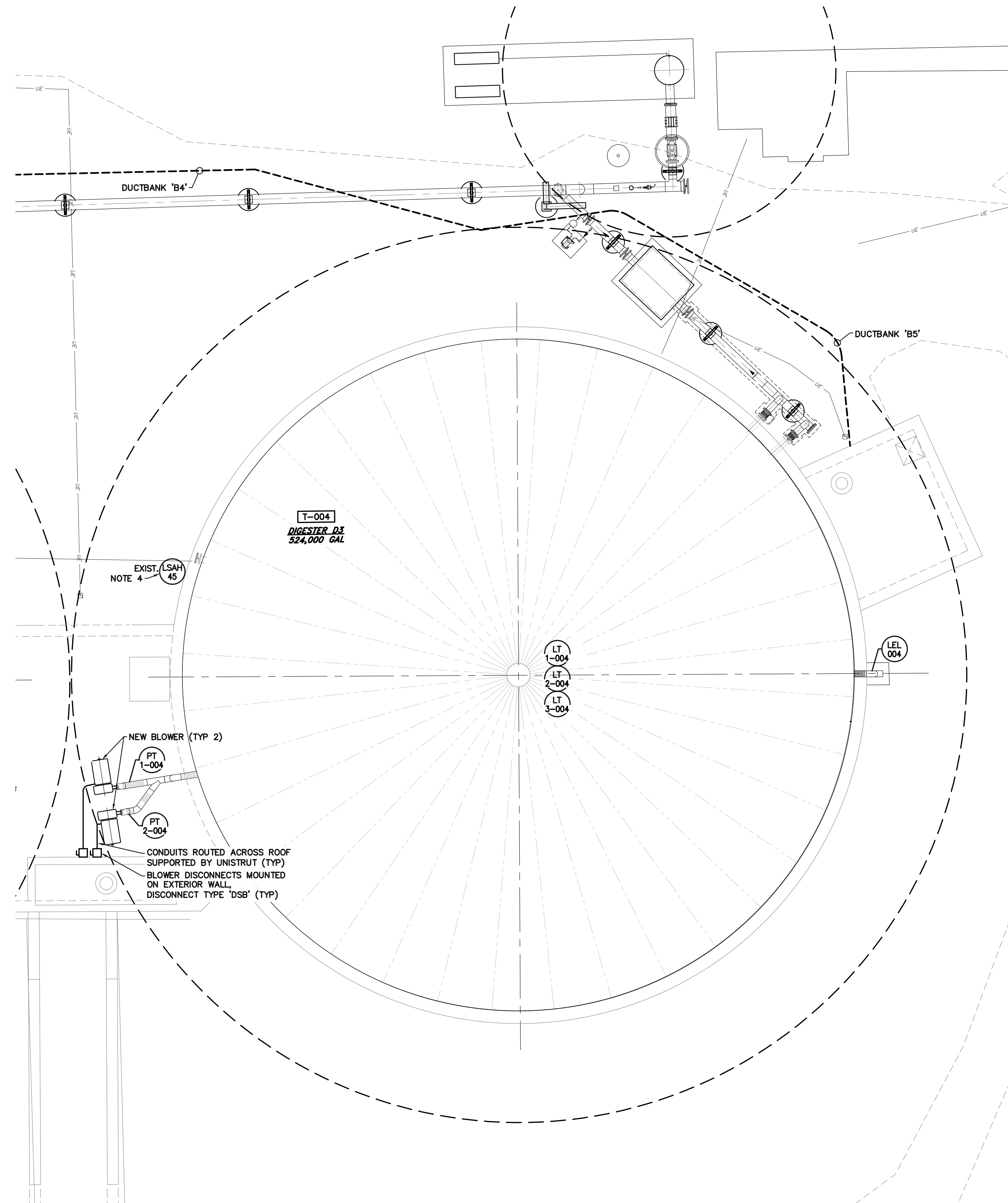
**BASE BID
CONTRACT No. GC 24-01**

FOR RETTEW ASSOCIATES BY:							
MANAGER:	STEVEN SIEGFRIED	DESIGN BY:	CHKO BY:	DRWN BY:	SURV. CHIEF:	FIELDBOOK NO.:	
	RRC	JDW	GRS	N/A	N/A	N/A	
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691							
RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: retrew@retrew.com Website: www.retrew.com							
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS - AREA 2 UPPER LEVEL ELECTRICAL MODIFICATION PLAN WAYNE COUNTY, OH							
PROJ. NO. 122022001 DWG. NO. 30E-03							



ELECTRICAL NOTES:

1. REFER TO DUCTBANK AND FEEDER SCHEDULES ON DRAWING 01E-30 FOR CONDUIT AND CONDUCTOR INFORMATION.
2. REFER TO POWER DISTRIBUTION DIAGRAM ON DRAWING 01E-10 AND PANEL SCHEDULES ON DRAWING 01E-31 FOR ADDITIONAL CIRCUIT INFORMATION.
3. INSTALLATION IN CLASSIFIED AREAS SHALL MEET REQUIREMENTS OF NEC ARTICLE 501.
4. LSAH-45 TO BE REPLACED BY CONTRACTOR. UTILIZE EXISTING CABLE AND CONDUIT. REFERENCE SECTION 409000 IN THE PROJECT MANUAL FOR REPLACEMENT INSTRUMENTS.

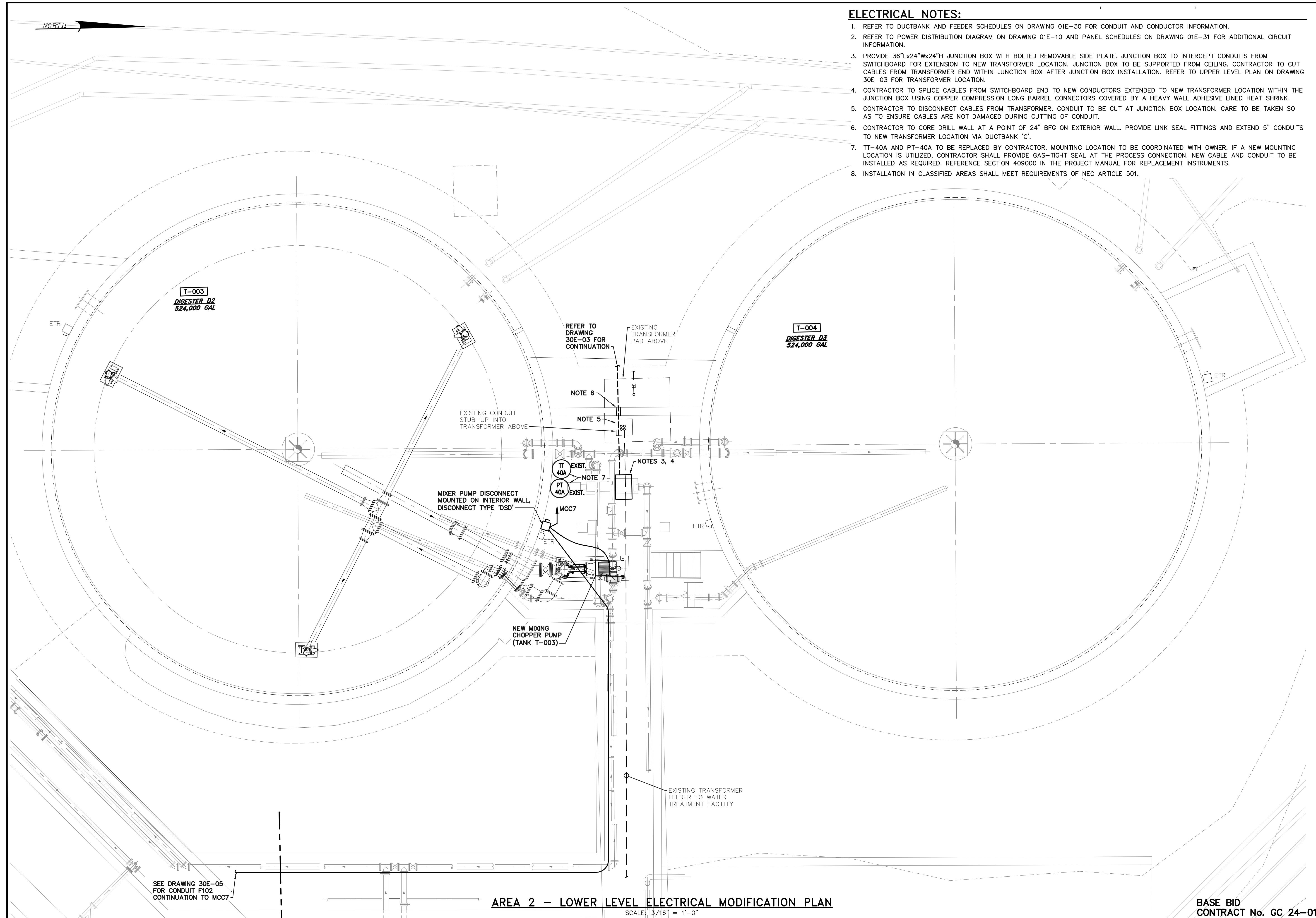


AREA 2 – UPPER LEVEL ELECTRICAL MODIFICATION PLAN – ADD ALTERNATE

SCALE: 3/16" = 1'-0"

**ADD-ALTERNATE
CONTRACT No. GC 24-01**

REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS – AREA 2 UPPER LEVEL ELECTRICAL MODIFICATION PLAN CITY OF WOOSTER		PROJ. NO. 122022001 DWG. NO. 30E-03A
RETTEW RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>		THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691 SCALE 3/16" = 1'-0" 0' 2' 4' 6' 12' 18'
MANAGER: STEVEN SIEGFRIED DESIGN BY: RRC DRAWN BY: GRS SURV. CHIEF: N/A	CHECKED BY: JDW DATE: 4/18/24 SURV. FIELDBOOK NO.: N/A	FOR RETTEW ASSOCIATES BY: JASON WEST PROFESSIONAL ENGINEER STATE OF OHIO NO. 95375 DATE 4/18/24
ISSUED FOR CONSTRUCTION NO. A DATE 4/05/24 REVISION		



ELECTRICAL NOTES:

1. REFER TO DUCTBANK AND FEEDER SCHEDULES ON DRAWING 01E-30 FOR CONDUIT AND CONDUCTOR INFORMATION.
2. REFER TO POWER DISTRIBUTION DIAGRAM ON DRAWING 01E-10 AND PANEL SCHEDULES ON DRAWING 01E-31 FOR ADDITIONAL CIRCUIT INFORMATION.
3. PROVIDE 36"Lx24"Wx24"H JUNCTION BOX WITH BOLTED REMOVABLE SIDE PLATE. JUNCTION BOX TO INTERCEPT CONDUITS FROM SWITCHBOARD FOR EXTENSION TO NEW TRANSFORMER LOCATION. JUNCTION BOX TO BE SUPPORTED FROM CEILING. CONTRACTOR TO CUT CABLES FROM TRANSFORMER END WITHIN JUNCTION BOX AFTER JUNCTION BOX INSTALLATION. REFER TO UPPER LEVEL PLAN ON DRAWING 30E-03 FOR TRANSFORMER LOCATION.
4. CONTRACTOR TO SPLICE CABLES FROM SWITCHBOARD END TO NEW CONDUCTORS EXTENDED TO NEW TRANSFORMER LOCATION WITHIN THE JUNCTION BOX USING COPPER COMPRESSION LONG BARREL CONNECTORS COVERED BY A HEAVY WALL ADHESIVE LINED HEAT SHRINK.
5. CONTRACTOR TO DISCONNECT CABLES FROM TRANSFORMER. CONDUIT TO BE CUT AT JUNCTION BOX LOCATION. CARE TO BE TAKEN SO AS TO ENSURE CABLES ARE NOT DAMAGED DURING CUTTING OF CONDUIT.
6. CONTRACTOR TO CORE DRILL WALL AT A POINT OF 24" BFG ON EXTERIOR WALL. PROVIDE LINK SEAL FITTINGS AND EXTEND 5" CONDUITS TO NEW TRANSFORMER LOCATION VIA DUCTBANK 'C'.
7. TT-40A AND PT-40A TO BE REPLACED BY CONTRACTOR. MOUNTING LOCATION TO BE COORDINATED WITH OWNER. IF A NEW MOUNTING LOCATION IS UTILIZED, CONTRACTOR SHALL PROVIDE GAS-TIGHT SEAL AT THE PROCESS CONNECTION. NEW CABLE AND CONDUIT TO BE INSTALLED AS REQUIRED. REFERENCE SECTION 409000 IN THE PROJECT MANUAL FOR REPLACEMENT INSTRUMENTS.
8. INSTALLATION IN CLASSIFIED AREAS SHALL MEET REQUIREMENTS OF NEC ARTICLE 501.

AREA 2 - LOWER LEVEL ELECTRICAL MODIFICATION PLAN

SCALE: 3/16" = 1'-0"

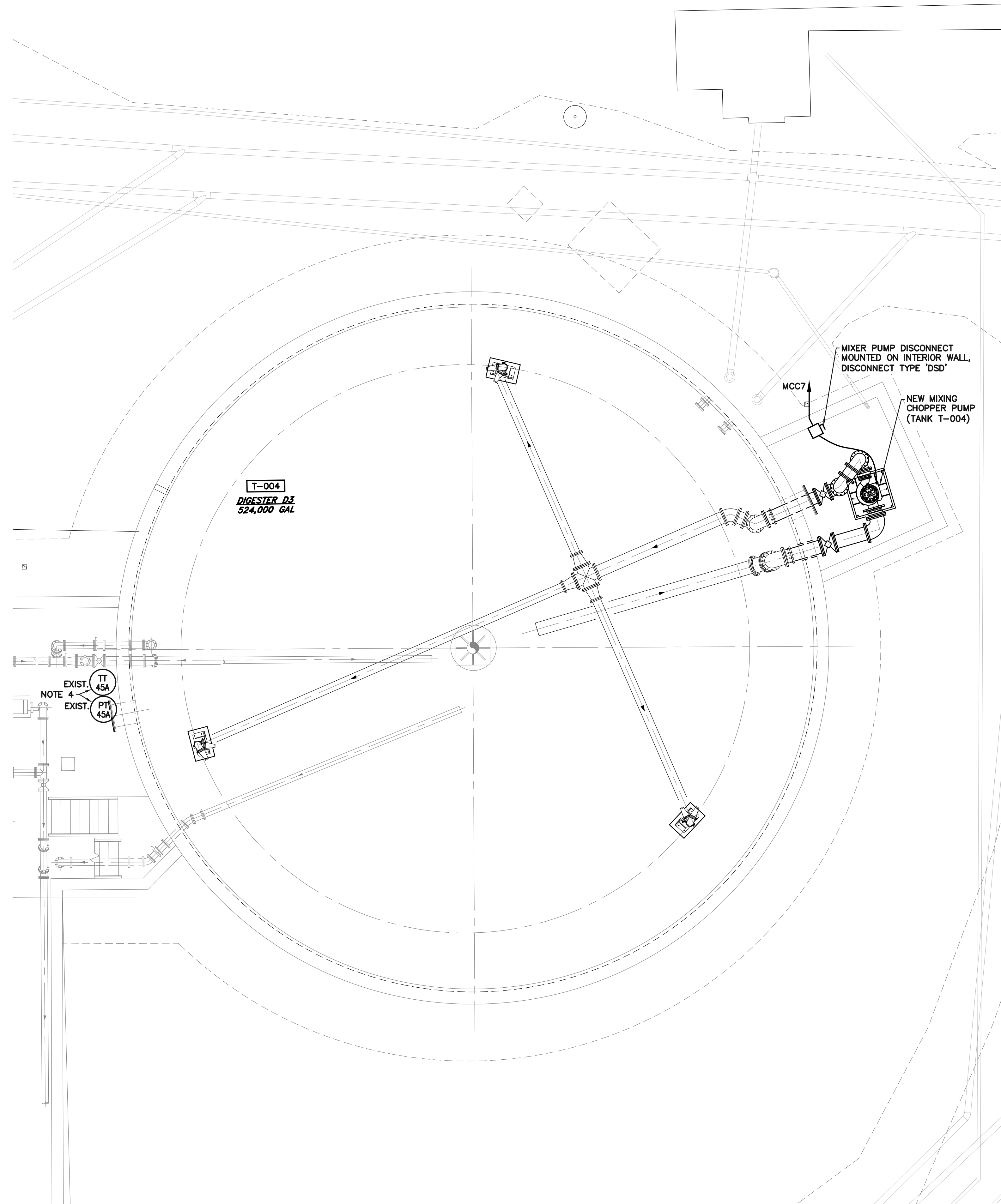
SEE DRAWING 30E-05 FOR CONDUIT F102 CONTINUATION TO MCC7

FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: RRC	CHKD BY: JDW	ISSUED FOR CONSTRUCTION NO.:
DRAWN BY: GRS	SURV. CHIEF: N/A	CHKD BY: RRC/KJH	DATE: 4/05/24
FIELDBOOK NO.:	N/A	REVISION:	
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE 3/16" = 1'-0" 0' 2' 4' 6' 12' 18'	
RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com Engineers • Planners • Surveyors • Scientists • Landscape Architects Environmental Consultants			
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS - AREA 2 LOWER LEVEL ELECTRICAL MODIFICATION PLAN CITY OF WOOSTER, WAYNE COUNTY, OH			
PROJ. NO.	122022001		
DWG. NO.	30E-04		
BASE BID CONTRACT No. GC 24-01			



ELECTRICAL NOTES:

1. REFER TO DUCTBANK AND FEEDER SCHEDULES ON DRAWING 01E-30 FOR CONDUIT AND CONDUCTOR INFORMATION.
2. REFER TO POWER DISTRIBUTION DIAGRAM ON DRAWING 01E-10 AND PANEL SCHEDULES ON DRAWING 01E-31 FOR ADDITIONAL CIRCUIT INFORMATION.
3. INSTALLATION IN CLASSIFIED AREAS SHALL MEET REQUIREMENTS OF NEC ARTICLE 501.
4. TT-45A AND PT-45A TO BE REPLACED BY CONTRACTOR. MOUNTING LOCATION TO BE COORDINATED WITH OWNER. IF A NEW MOUNTING LOCATION IS UTILIZED, CONTRACTOR SHALL PROVIDE GAS-TIGHT SEAL AT THE PROCESS CONNECTION. NEW CABLE AND CONDUIT TO BE INSTALLED AS REQUIRED. REFERENCE SECTION 409000 IN THE PROJECT MANUAL FOR REPLACEMENT INSTRUMENTS.

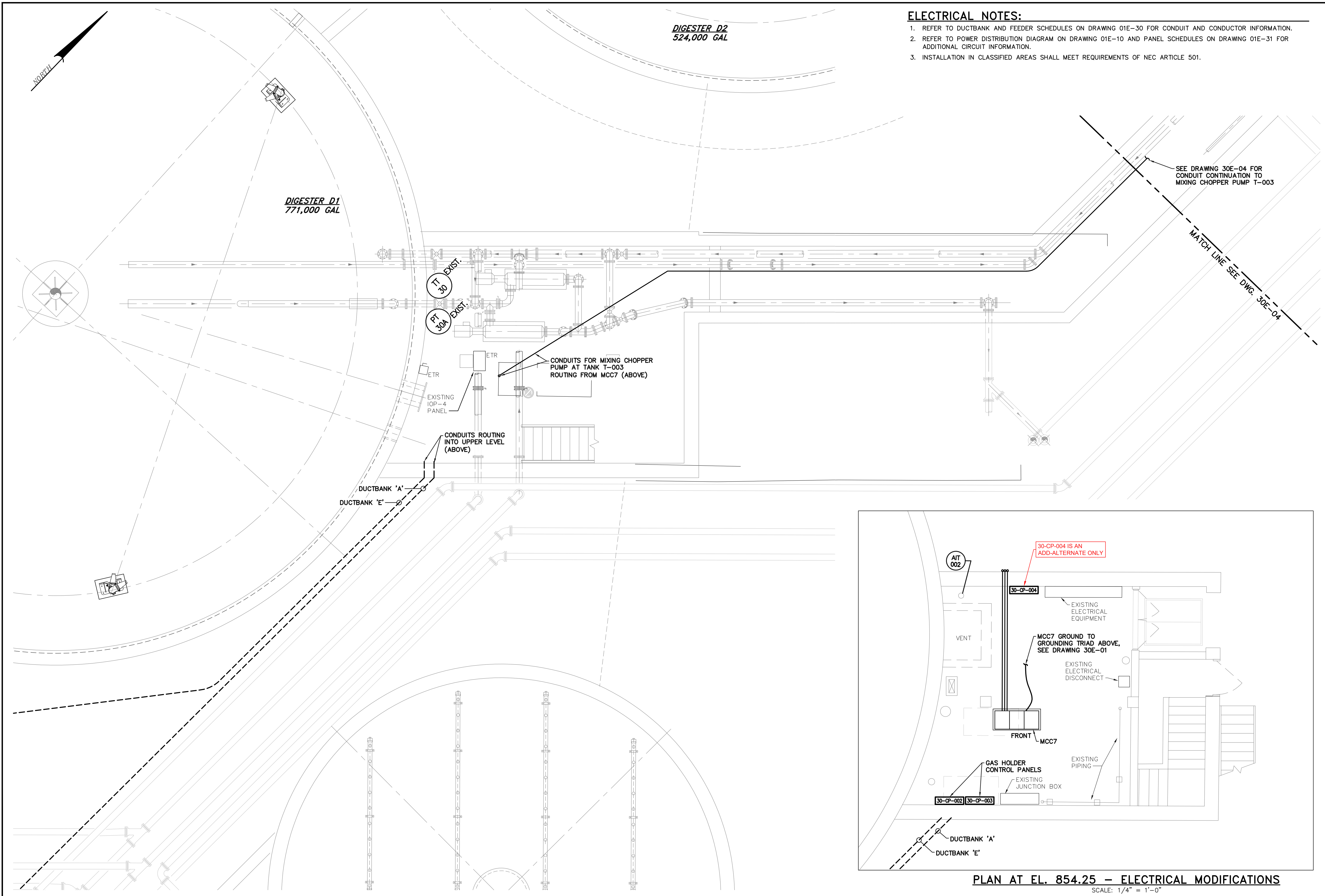


AREA 2 – LOWER LEVEL ELECTRICAL MODIFICATION PLAN – ADD-ALTERNATE

SCALE: 3/16" = 1'-0"

**ADD-ALTERNATE
CONTRACT No. GC 24-01**

REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY ANAEROBIC DIGESTERS – AREA 2 LOWER LEVEL ELECTRICAL MODIFICATION PLAN CITY OF WOOSTER WAYNE COUNTY, OH		PROJ. NO. 122022001 DWG. NO. 30E-04A
RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>		THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691 SCALE 3/16" = 1'-0" 0' 2' 4' 6' 12' 18'
MANAGER: STEVEN SIEGFRIED DESIGN BY: RRC DRAWN BY: GRS SURV. CHIEF: N/A	CHECKED BY: JDW DESIGNED BY: RRC/KJH FIELDBOOK NO.: N/A	FOR RETTEW ASSOCIATES BY:
ISSUED FOR CONSTRUCTION NO. A DATE 4/05/24		REVISION



- ELECTRICAL NOTES:**
- REFER TO DUCTBANK AND FEEDER SCHEDULES ON DRAWING 01E-30 FOR CONDUIT AND CONDUCTOR INFORMATION.
 - REFER TO POWER DISTRIBUTION DIAGRAM ON DRAWING 01E-10 AND PANEL SCHEDULES ON DRAWING 01E-31 FOR ADDITIONAL CIRCUIT INFORMATION.
 - INSTALLATION IN CLASSIFIED AREAS SHALL MEET REQUIREMENTS OF NEC ARTICLE 501.

NO.	DATE	ISSUED FOR CONSTRUCTION	REVISION
A	4/05/24		

FOR RETTEW ASSOCIATES BY:

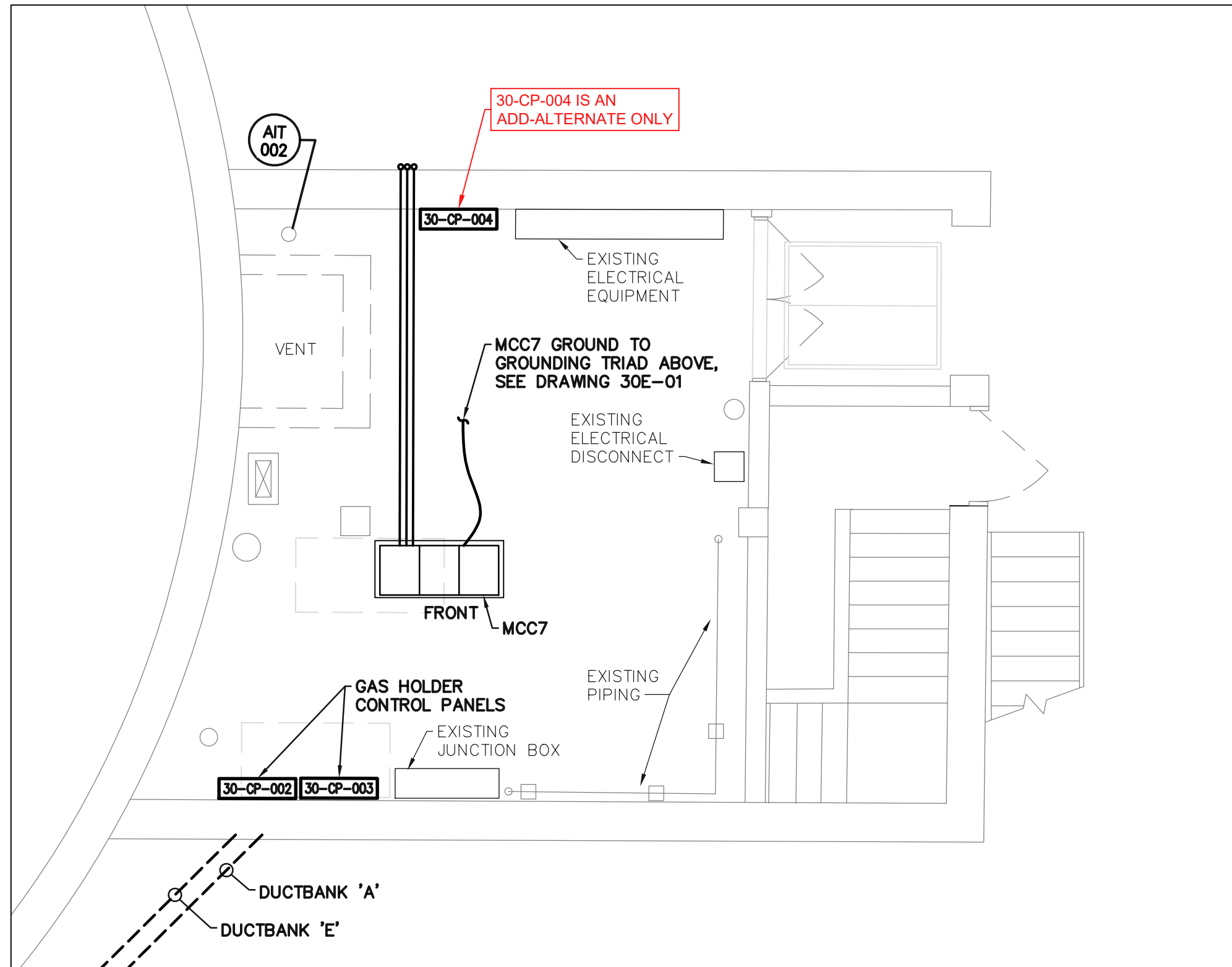
MANAGER: STEVEN SIEGFRIED
DESIGN BY: RRC
DRAWN BY: GRS
SURV. CHIEF: N/A

CHKD BY: JDW
RCC/K/H
FIELDBOOK NO.: N/A

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

SCALE: 1/4" = 1'-0"

0 2 4 8 12



PLAN AT EL. 854.25 - ELECTRICAL MODIFICATIONS
SCALE: 1/4" = 1'-0"

AREA 1 - TUNNEL PLAN ELECTRICAL MODIFICATIONS
SCALE: 1/4" = 1'-0"

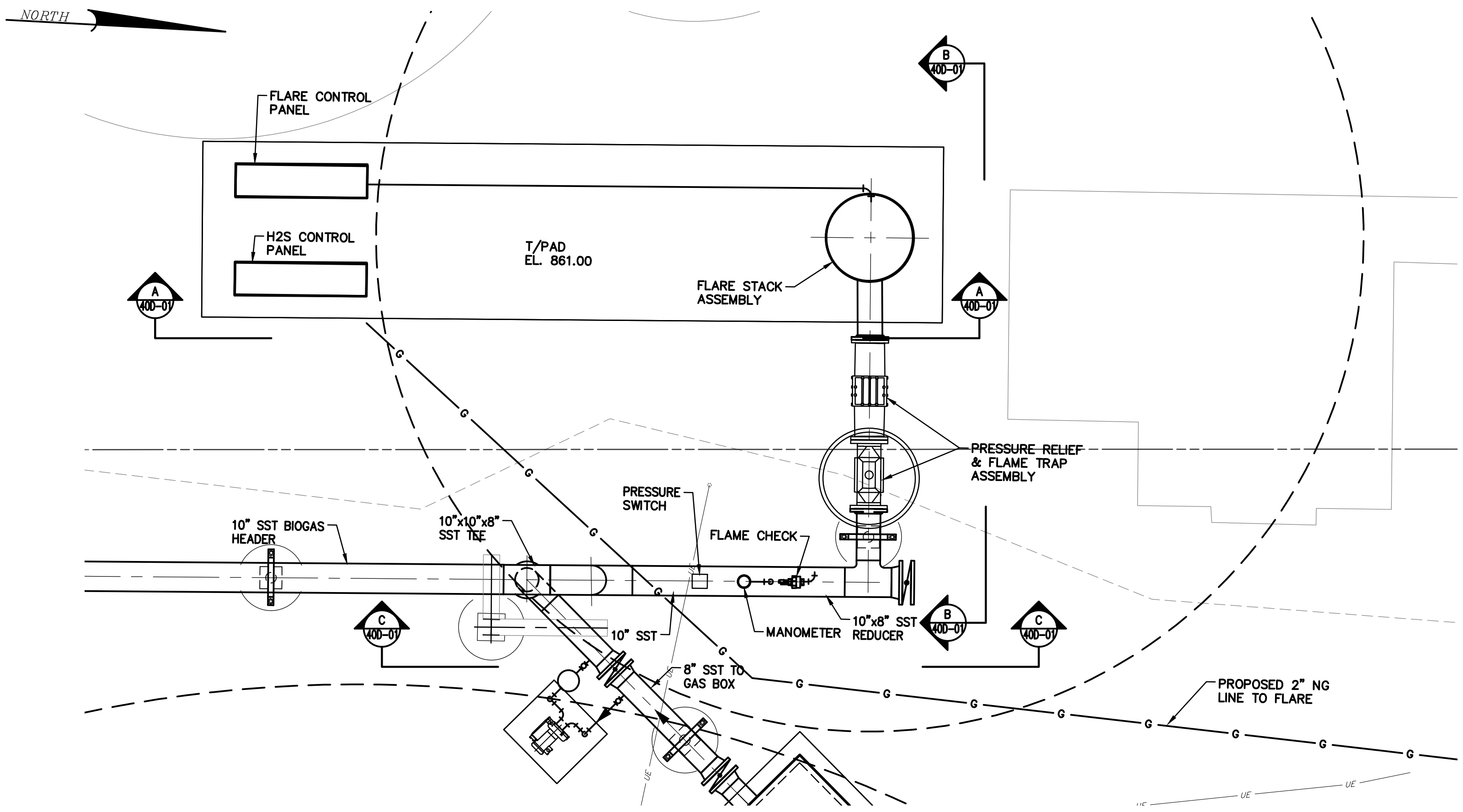
(1 ADD-ALTERNATE ITEM)
BASE BID
CONTRACT No. GC 24-01

RETTEW
Engineers • Planners • Scientists • Landscape Architects
Environmental Consultants

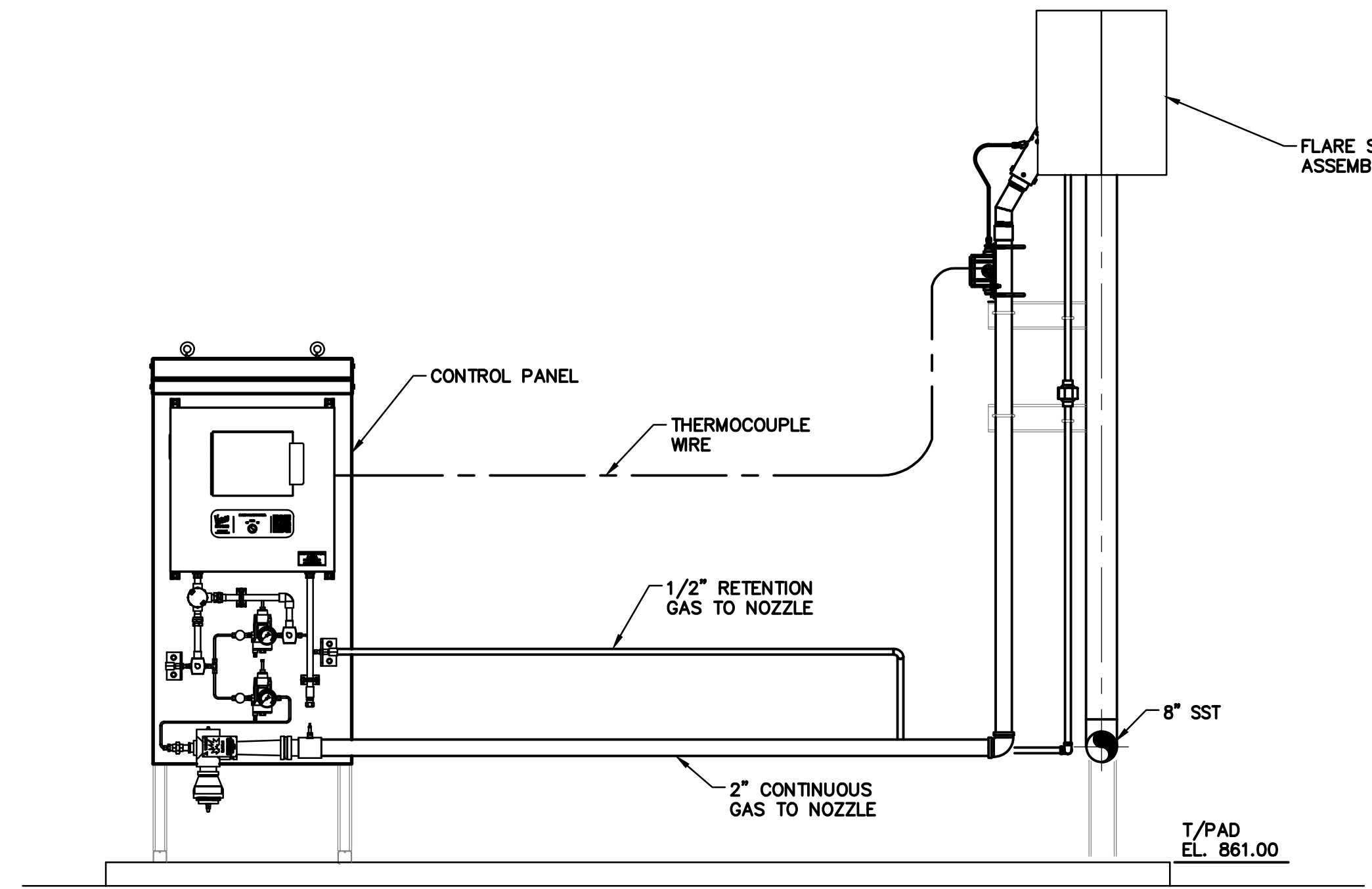
RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: retrew@retrew.com
Website: www.retrew.com

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
ANAEROBIC DIGESTERS - AREA 1
TUNNEL PLAN - ELECTRICAL MODIFICATIONS
CITY OF WOOSTER
WAYNE COUNTY, OH

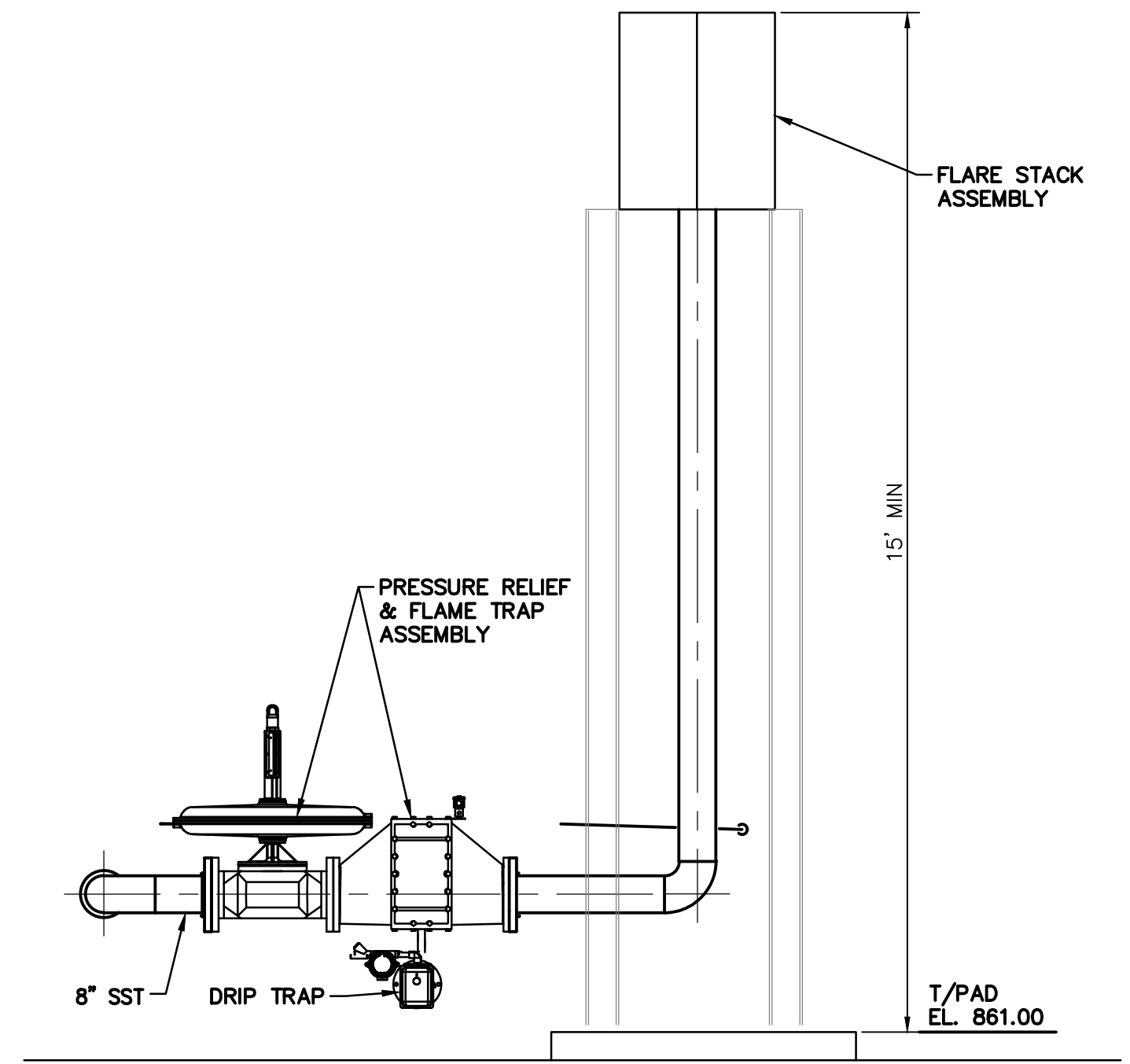
PROJ. NO. 122022001
DWG. NO. 30E-05



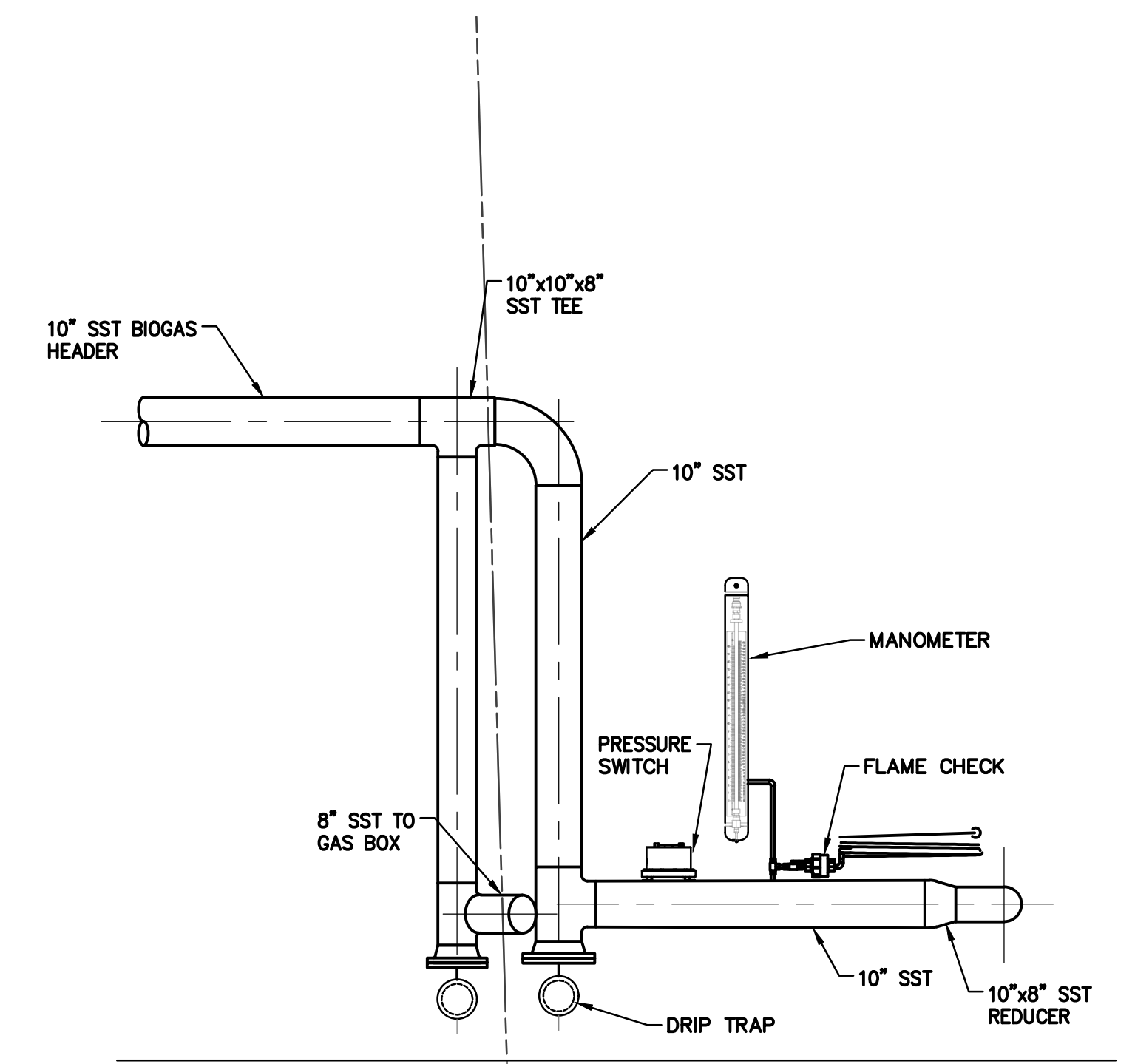
FLARE PIPING PLAN
SCALE: 3/8" = 1'-0"



FLARE PIPING SECTION A-A
SCALE: 3/8" = 1'-0"



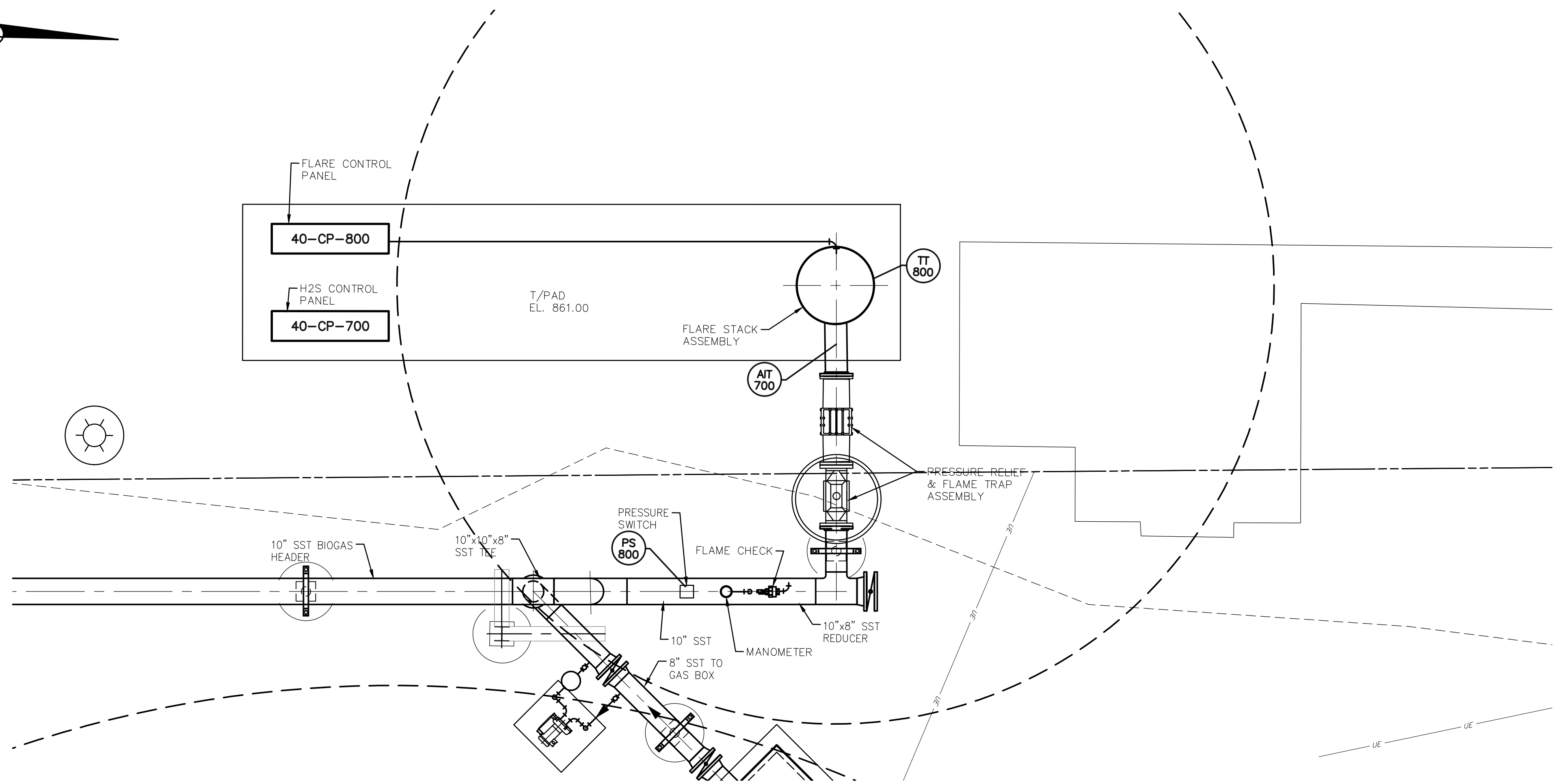
FLARE PIPING SECTION B-B
SCALE: 3/8" = 1'-0"



FLARE PIPING SECTION C-C
SCALE: 3/8" = 1'-0"

NOTES:
1. REFER TO 01C-01 FOR DETAILS ON NATURAL GAS ROUTING TO FLARE.

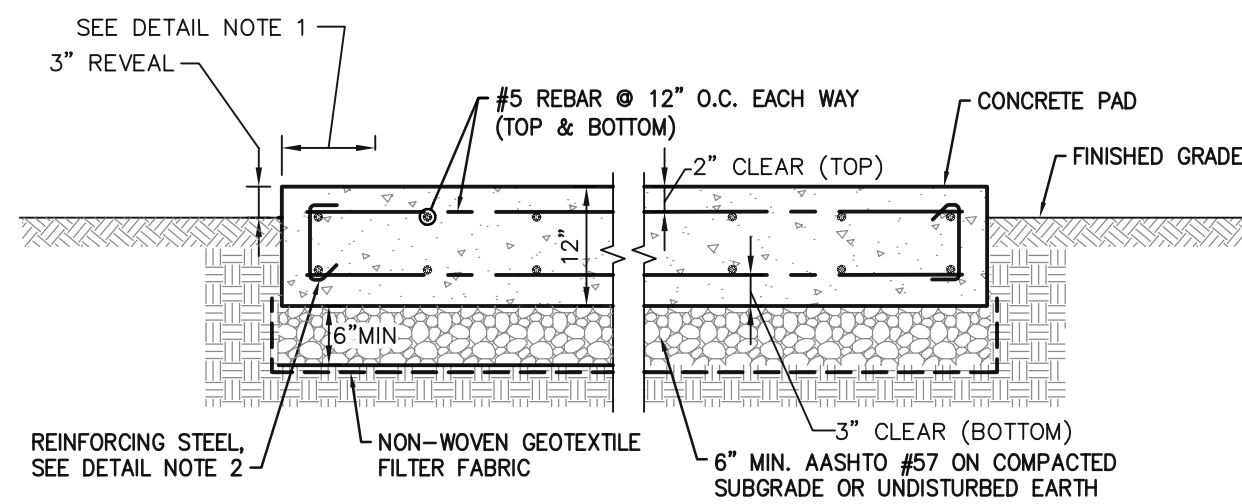
FOR RETTEW ASSOCIATES BY:			
MANAGER: STEVEN SIEGFRIED	DESIGN BY: CHKO BY: JMW	NO.	DATE
DESIGN BY: SSU	CHKD BY: JMW	A	4/05/24
DRAWN BY: JOG	CHKD BY: JMW	ISSUED FOR CONSTRUCTION	REVISION
SURV. CHIEF: N/A	FIELDBOOK NO. N/A		
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691		SCALE 3/8" = 1'-0" 0' 1' 2' 3' 6' 9'	
RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants</small>			
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY BOGAS HANDLING FLARE PIPING PLAN & SECTIONS CITY OF WOOSTER, OH WAYNE COUNTY, OH			
PROJ. NO.	122022001		
DWG. NO.	40D-01		



FLARE ELECTRICAL PLAN
SCALE: 3/8" = 1'-0"

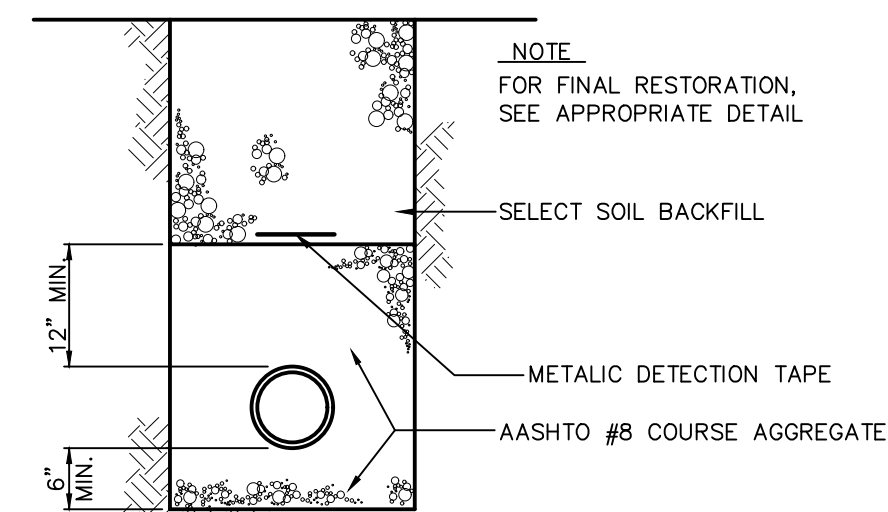
REBID BIOSOLIDS UPGRADE PROJECT FOR THE CITY OF WOOSTER WATER RESOURCE RECOVERY FACILITY BIOGAS HANDLING & SECTIONS FLARE ELECTRICAL PLAN & SECTIONS CITY OF WOOSTER WAYNE COUNTY, OH		RETTEW RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com <small>Engineers • Planners • Scientists • Landscape Architects Environmental Consultants</small>	THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691 SCALE 3/8"=1'-0" 0 1' 2' 3' 6' 9'	MANAGER: STEVEN SIEGFRIED DESIGN BY: RRC DRAWN BY: GRS SURV. CHIEF: N/A CHECK BY: JDW RRC/KJH FIELDBOOK NO. N/A	FOR RETTEW ASSOCIATES BY: 	PROJ. NO. 122022001 DWG. NO. 40E-01	A 4/05/24 NO. DATE ISSUED FOR CONSTRUCTION REVISION
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BASE BID
CONTRACT No. GC 24-01

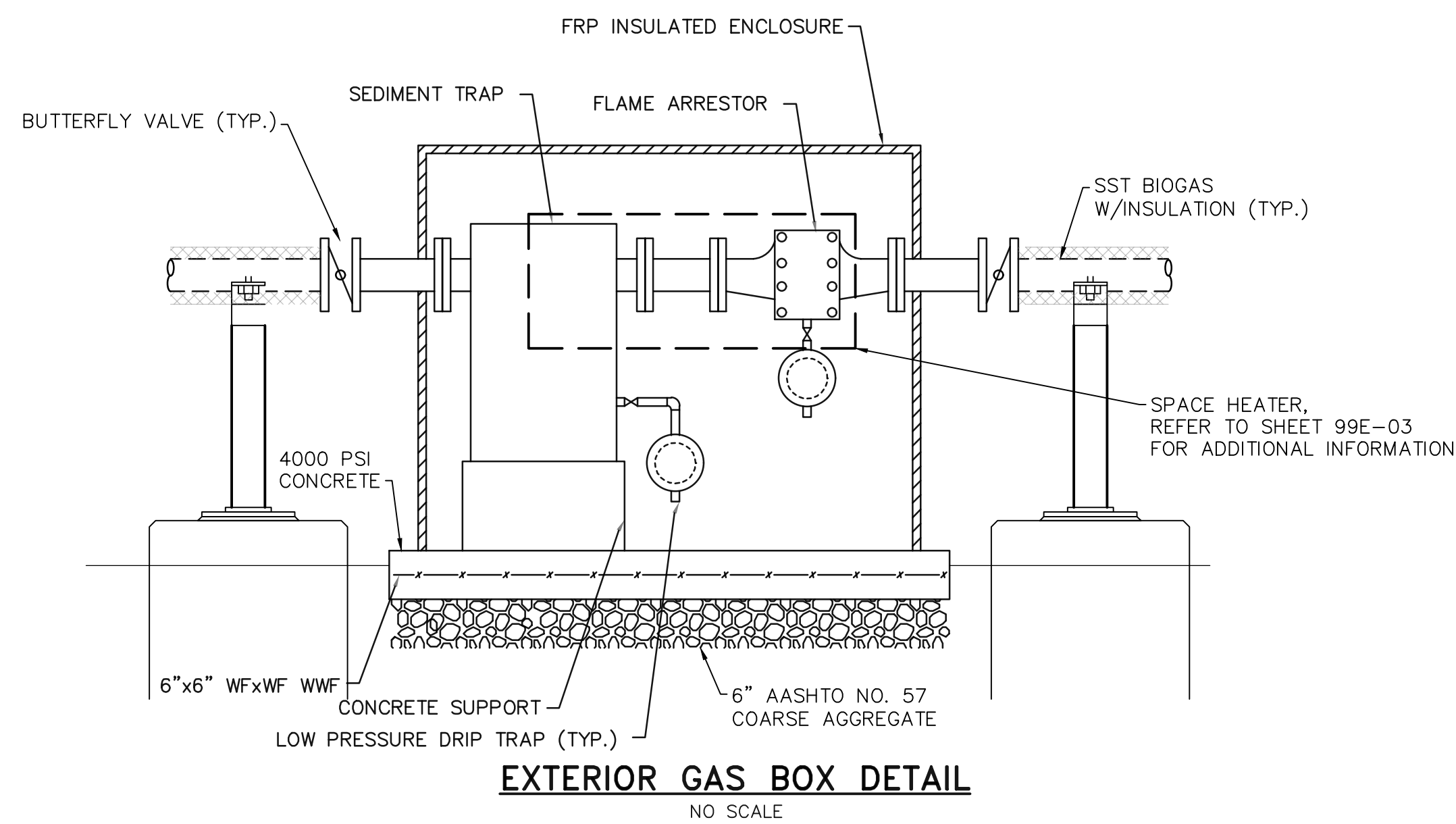


- DETAIL NOTES:
1. CONCRETE PAD SHALL EXTEND BEYOND EDGES OF EQUIPMENT AS SHOWN ON PLANS OR NO LESS THAN 4" MINIMUMS:
 2. TIE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MINIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOKS AT TOP IN ALTERNATE TIES.

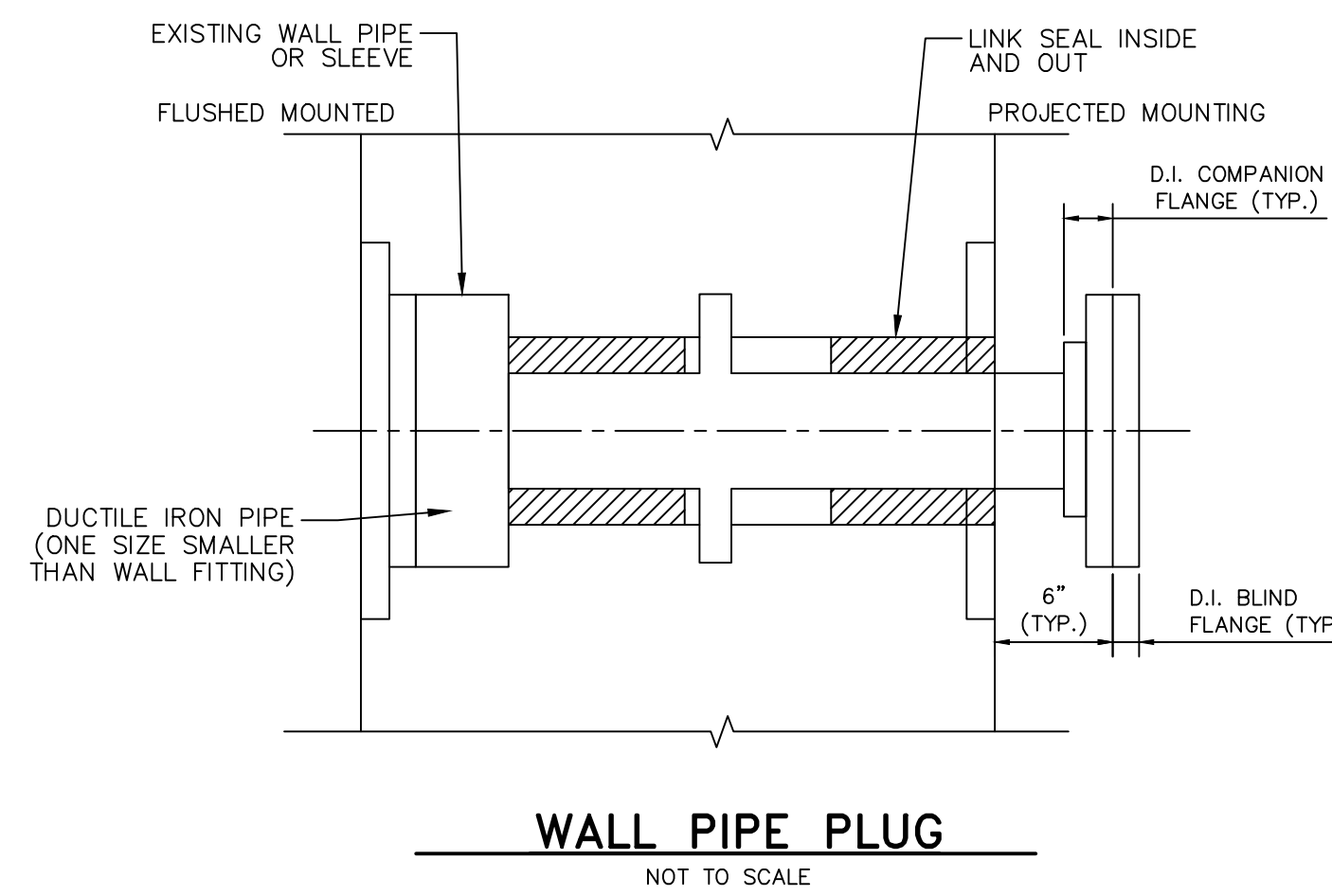
CONCRETE EQUIPMENT PAD DETAIL
NOT TO SCALE



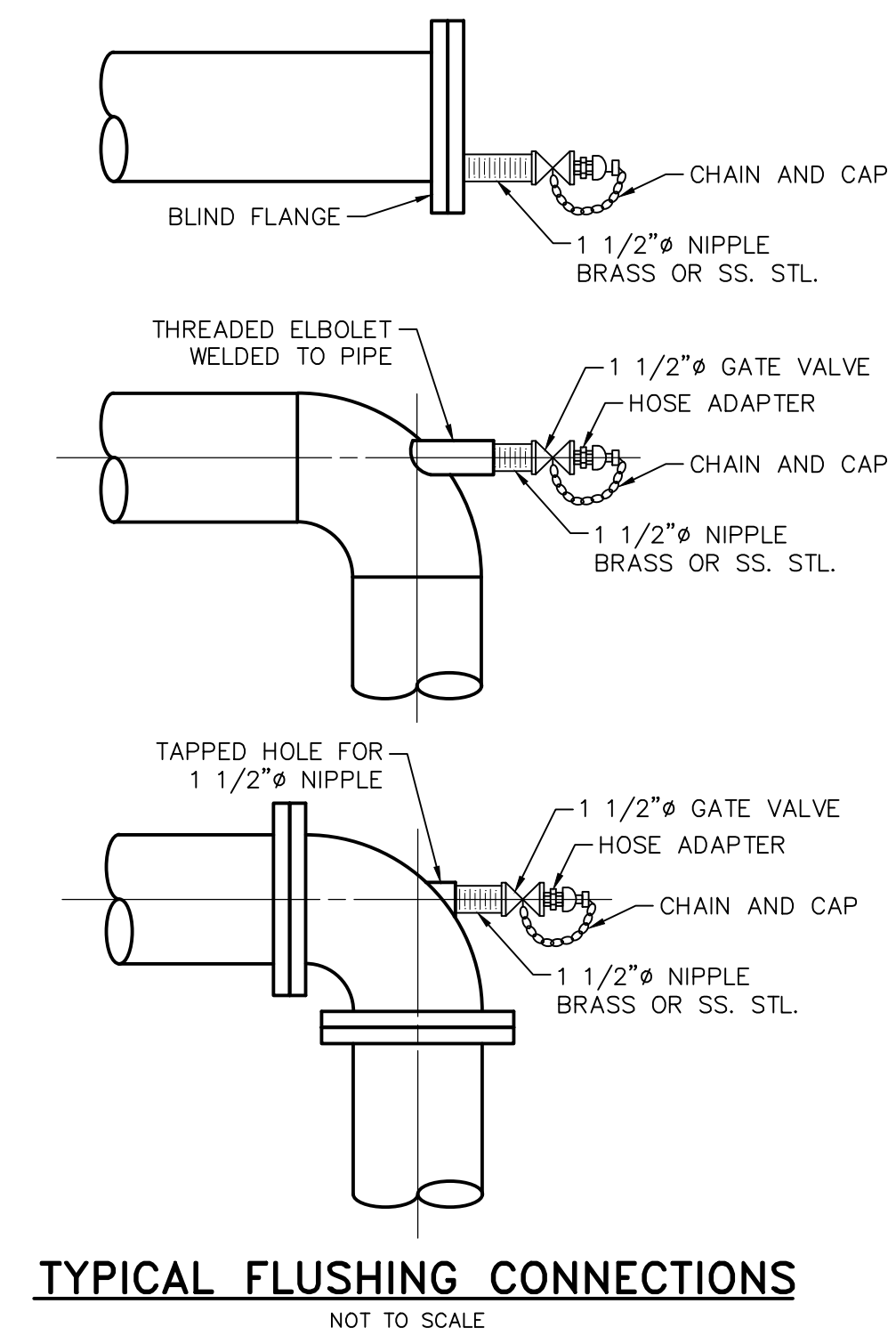
TYPICAL BACKFILL
(OTHER THAN PAVED AREAS)
TYPICAL TRENCH BACKFILL
NOT TO SCALE



EXTERIOR GAS BOX DETAIL
NO SCALE



WALL PIPE PLUG
NOT TO SCALE



TYPICAL FLUSHING CONNECTIONS
NOT TO SCALE

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION

FOR RETTEW ASSOCIATES BY:

MANAGER:	STEVEN SIEGFRIED	CHKD BY:	JKD
DESIGN BY:	SSU	CHKD BY:	JKD
DRAWN BY:	JOG	SURV. CHIEF:	JKD
SURV. CHIEF:	N/A	FIELDBOOK NO.:	N/A

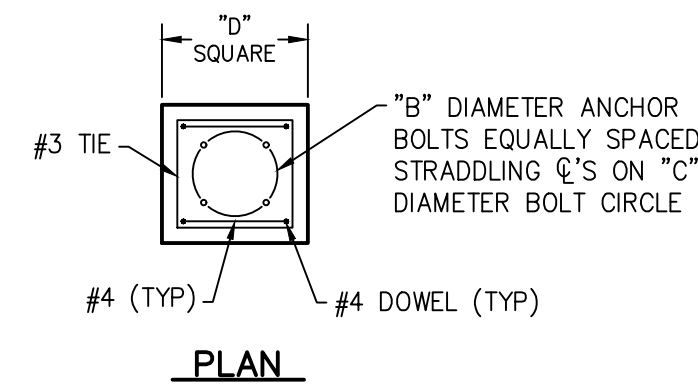
THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

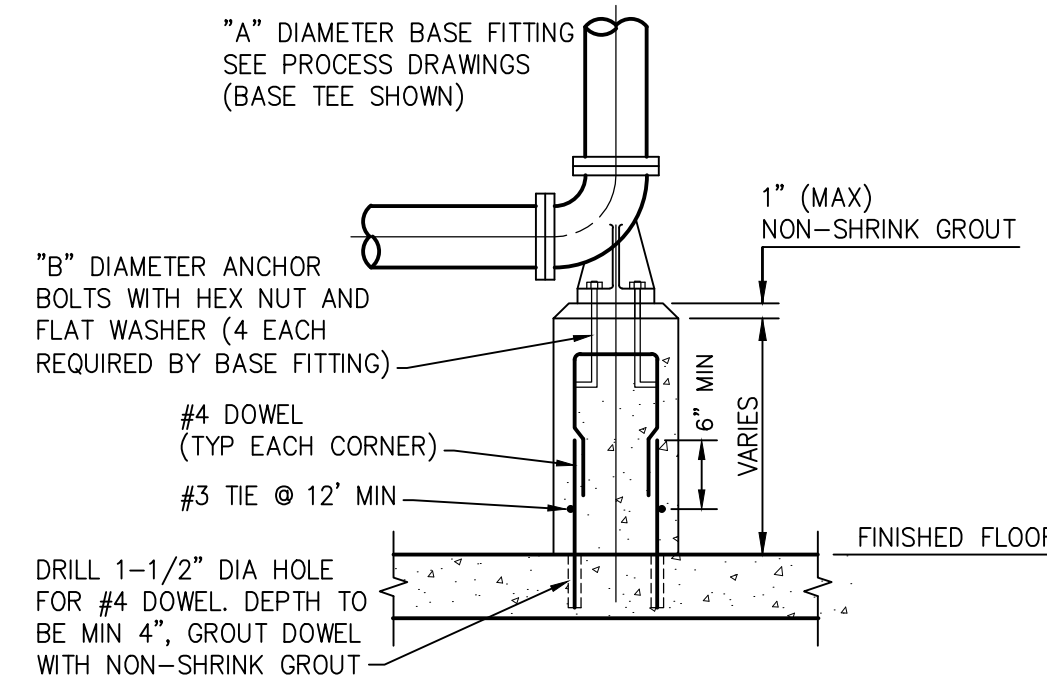
REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
MISCELLANEOUS DETAILS
SHEET NO. 1
WAYNE COUNTY, OH
CITY OF WOOSTER

PROJ. NO.	122022001
DWG. NO.	99D-01



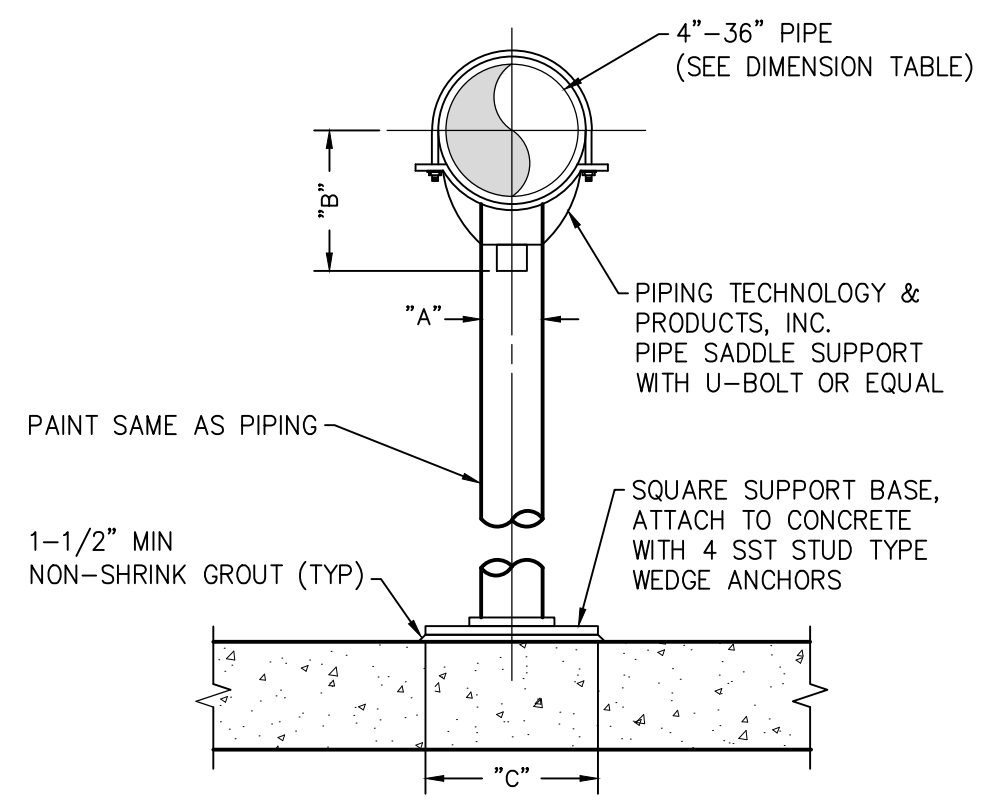
- NOTES:**
1. WHEN USING A REDUCING BASE FITTING, USE THE LARGER DIAMETER TO DETERMINE "A".
 2. WHEN COLUMN HEIGHT IS 12" OR LESS, OMIT ALL REINFORCING STEEL.
 3. ROUGHEN CONTACT SURFACE. THOROUGHLY SATURATE PRIOR TO PLACING BASE CONCRETE.

SCHEDULE OF BASE FITTING SUPPORT DIMENSIONS			
"A"	"B"	"C"	"D"
4"	5/8"	4 3/4"	9"
6"	5/8"	5 1/2"	10"
8" & 10"	5/8"	7 1/2"	12"
12"-16"	3/4"	9 1/2"	14"
18"-24"	3/4"	11 3/4"	16 1/2"
30"	7/8"	14 1/4"	19"
36"	7/8"	17"	22"
42"	1"	21 1/4"	26 1/2"
48"	1 1/8"	22 3/4"	28"



SECTION

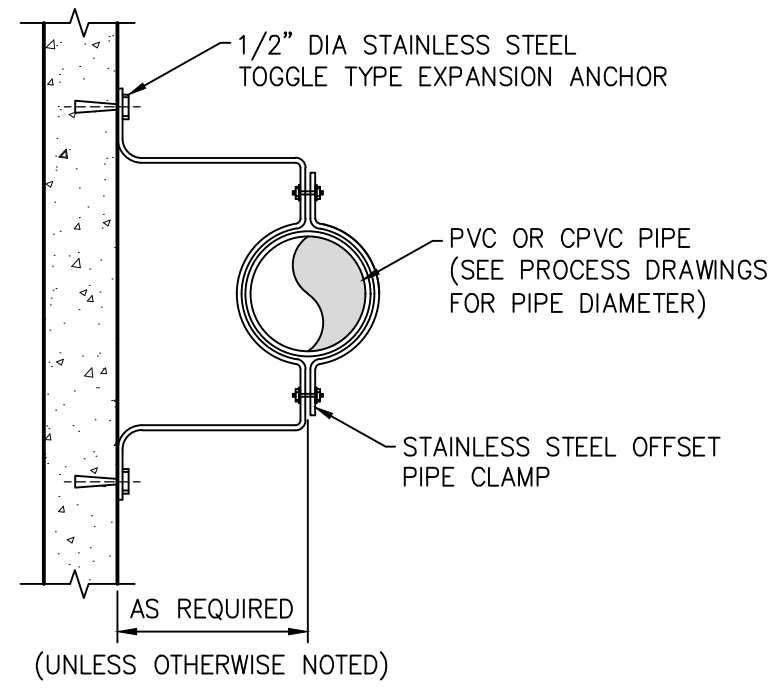
BASE ELBOW ON CONCRETE SUPPORT DETAIL
NOT TO SCALE



- NOTES:**
1. PROVIDE HALF ROUND RIGID INSULATION AND INSULATION PROTECTION SHIELD, SIMILAR TO PIPING TECHNOLOGY & PRODUCTS, INC. FIGURE 183, WHERE PIPING IS INSULATED.
 2. PROVIDE NEOPRENE WAFFLE ISOLATION PAD, SIMILAR TO MASON TYPE "W" OR KORFUND KORPAD 40, UNDER SUPPORT FOOT WHEN PIPING IS ISOLATED OR SUPPORT IS ADJACENT TO MECHANICAL EQUIPMENT.
 3. FOR BASE, HEIGHT AND PIPE DIMENSIONS, SEE DIMENSION TABLE.

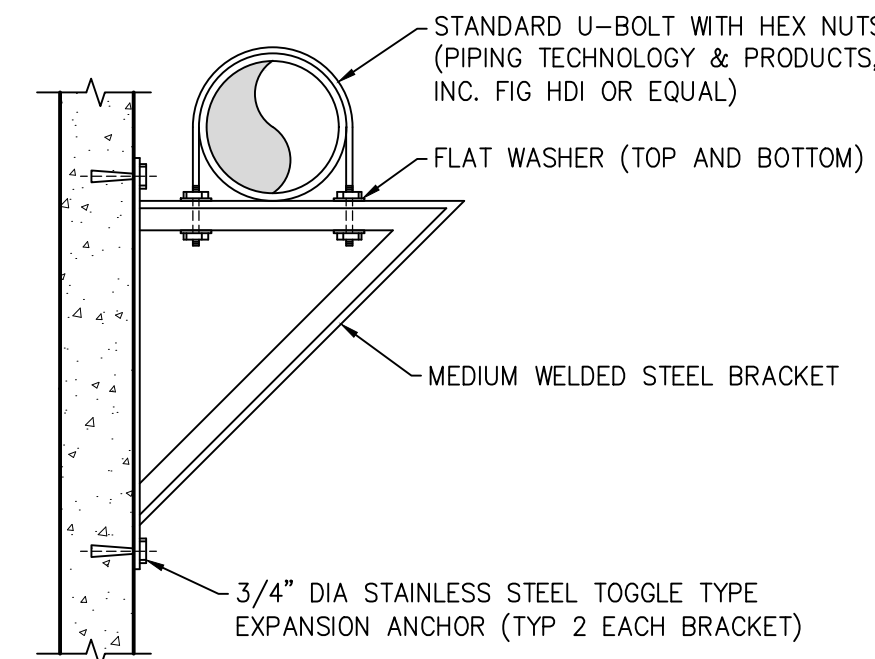
PIPE SUPPORT DETAIL PS-1
NOT TO SCALE

DIMENSION TABLE			
PIPE SIZE	"A"	"B"	"C"
4"	3"	4-3/16"	9"
5"	3"	4-13/16"	9"
6"	3"	5-7/16"	9"
8"	3"	6-15/16"	9"
10"	3"	8-7/16"	9"
12"	4"	9-15/16"	9"
14"	4"	10-15/16"	11"
16"	4"	12-3/8"	11"
18"	4"	13-7/8"	13 1/2"
20"	6"	15-3/8"	13 1/2"
24"	6"	17-15/16"	13 1/2"
26"	6"	19-1/8"	13 1/2"
30"	6"	21-5/16"	13 1/2"
32"	8"	22-1/2"	13 1/2"
36"	8"	24-1/2"	13 1/2"

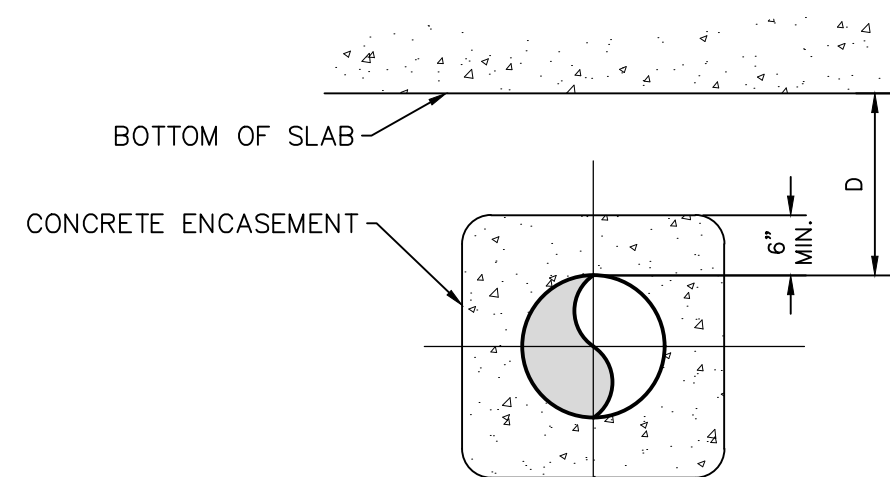


- NOTE:**
1. MAXIMUM CENTER TO CENTER SPACING OF PIPE STANDOFF SHALL BE 4'-0".

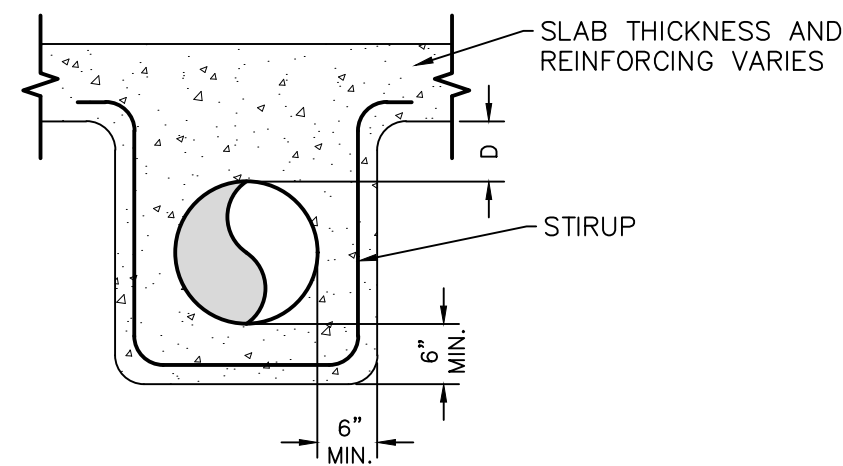
PIPE STANDOFF BRACKET
NOT TO SCALE



PIPE SUPPORT BRACKET
NOT TO SCALE



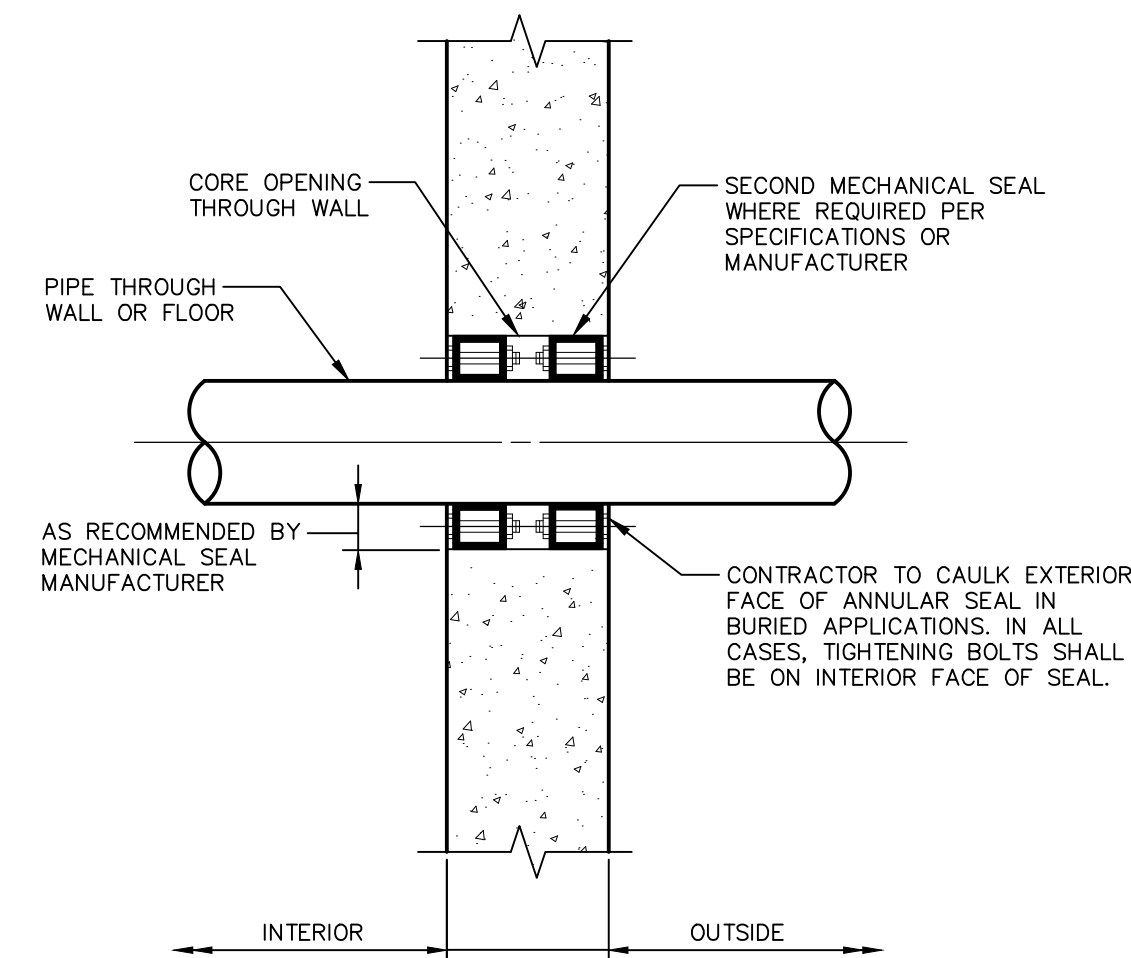
- NOTE:**
1. FOR ALL UNDERSLAB PIPE ENCASEMENT WHEN D > 4'-0".



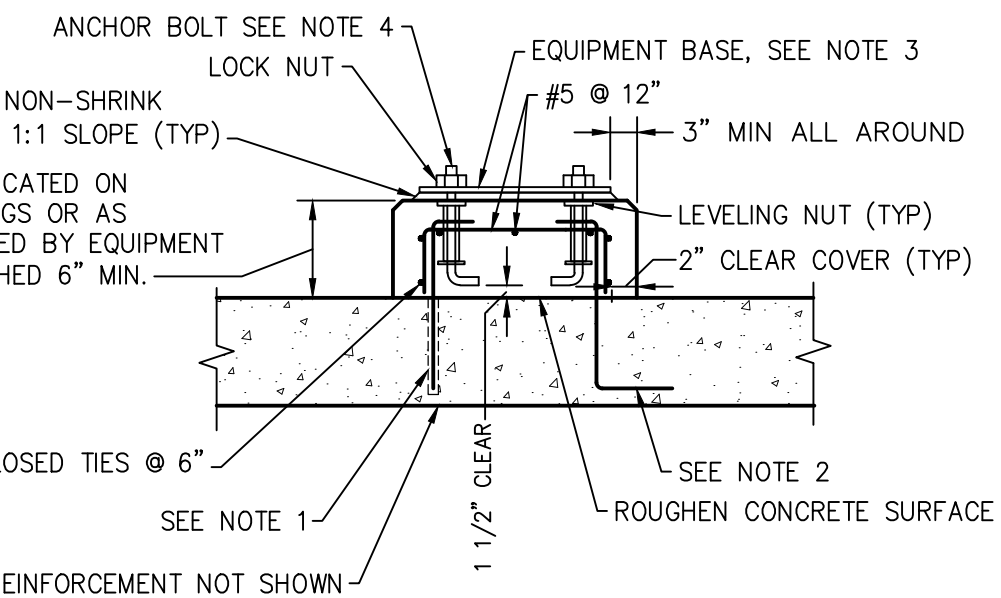
- NOTE:**
1. FOR ALL UNDERSLAB PIPE ENCASEMENT WHEN D < 4'-0".

PIPE ENCASEMENT REINFORCING TABLE		
PIPE SIZE	STIRUPS	BOTTOM BARS
4"-14"	#3 @ 12	3#4
16"-20"	#3 @ 12	4#4
24"-30"	#4 @ 12	4#4
36"-48"	#4 @ 8	5#4

UNDERSLAB PIPE ENCASEMENT DETAILS
NOT TO SCALE



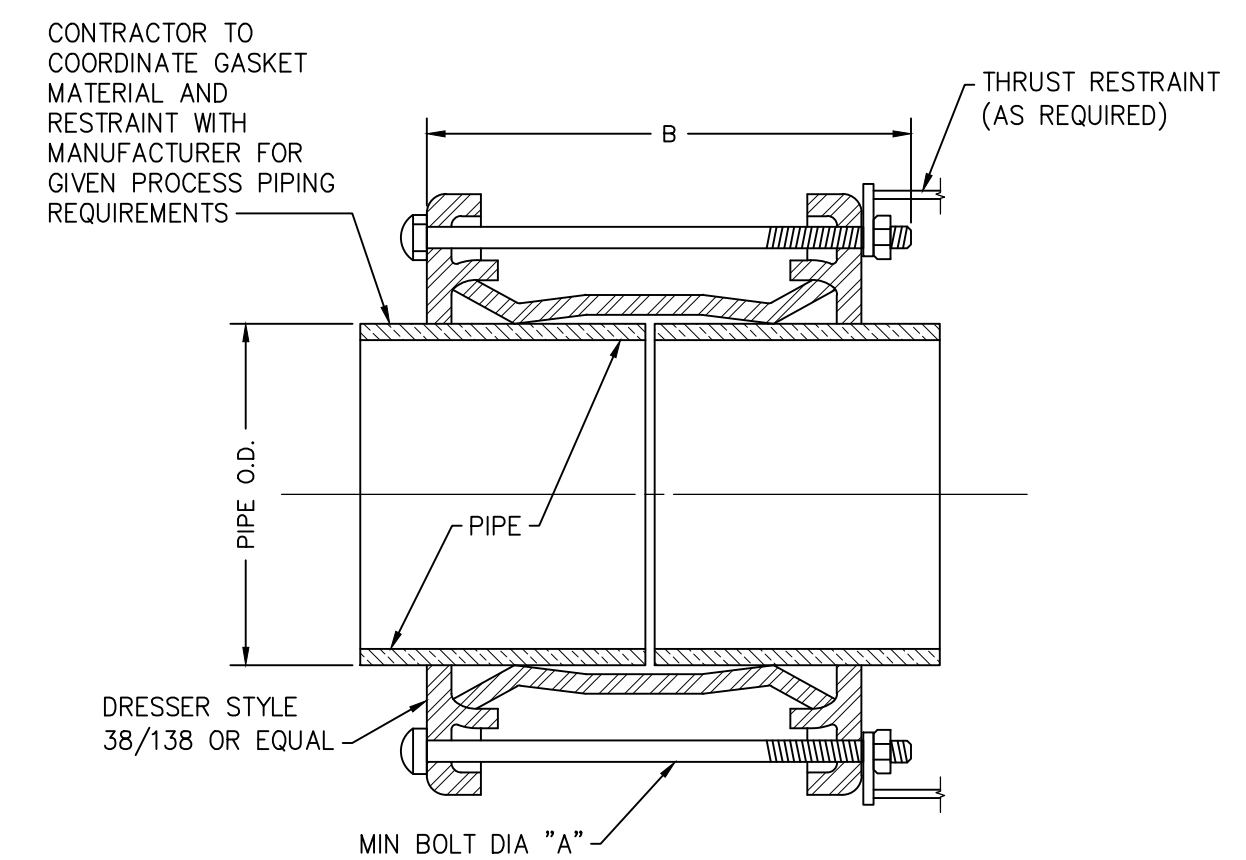
PIPE SLEEVE WITH ANNULAR SEAL
NOT TO SCALE



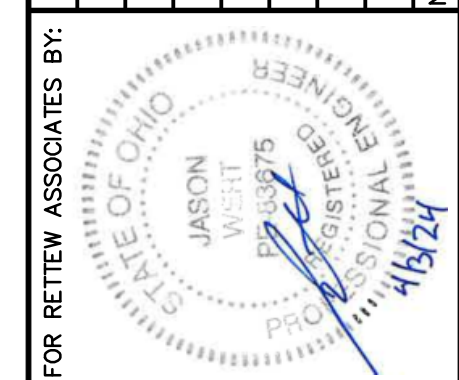
- NOTES:**
1. FOR NEW EQUIPMENT BASES ON SLABS, DRILL INTO EXISTING SLAB TO DEVELOPMENT DEPTH AT 12" CENTERS AROUND PERIMETER OF EQUIPMENT BASE AND SET #5 HOOKED DOWELS IN EPOXY GROUT.
 2. FOR EQUIPMENT BASES ON NEW SLABS, PROVIDE #5 DOWELS HAVING TWO HOOKED ENDS AT 12" CENTERS AROUND PERIMETER OF EQUIPMENT BASE.
 3. EQUIPMENT BASE DIMENSIONS SHALL BE AS INDICATED ON THE DRAWINGS OR AS DETERMINED BY THE EQUIPMENT MANUFACTURER AND APPROVED BY THE ENGINEER.
 4. ANCHOR BOLTS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER. BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE WHILE EQUIPMENT BASE IS BEING CAST.
 5. PIPE SLEEVES SHALL BE USED TO PROVIDE THE ANCHOR BOLT A MINIMUM MOVEMENT OF 1/2" IN ALL DIRECTIONS. MINIMUM SLEEVE LENGTH SHALL BE 8 TIMES THE BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT. PIPE SLEEVES SHALL HAVE A MINIMUM INTERNAL DIAMETER 1" GREATER THAN BOLT DIAMETER AND A MAXIMUM INTERNAL DIAMETER OF 3" GREATER THAN BOLT DIAMETER.
 6. EQUIPMENT BASES SHALL BE INSTALLED LEVEL. TOLERANCE IS 1/16".

EQUIPMENT BASE
NOT TO SCALE

PIPE SIZE	A (IN)	B (IN)
3"-8"	5/8	8-1/4
10"-24"	5/8	10-3/4
30"-48"	5/8	15



FLEXIBLE CONNECTOR DETAIL
NOT TO SCALE



MANAGER:	STEVEN SIEGFRIED	DESIGN BY:	SSU	CHKD BY:	JDW
DRAWN BY:	JOC	CHKD BY:	JDW	SURV. CHIEF:	FELDBOOK
	N/A		N/A		N/A

FOR RETTEW ASSOCIATES BY:

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

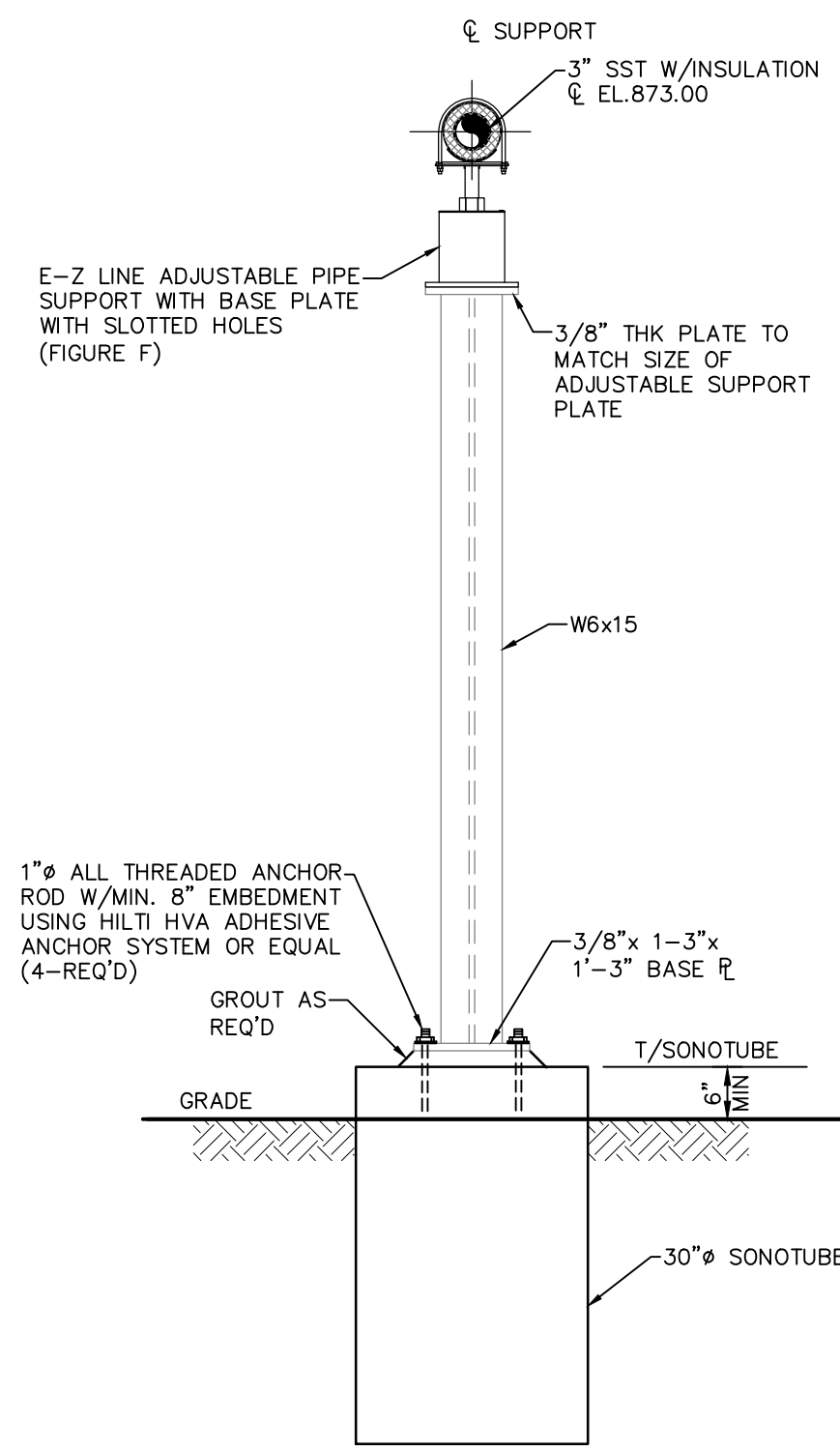
RETTEW
Engineers • Planners • Surveyors • Landscape Architects
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RETTEW Associates, Inc.
3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
Phone (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

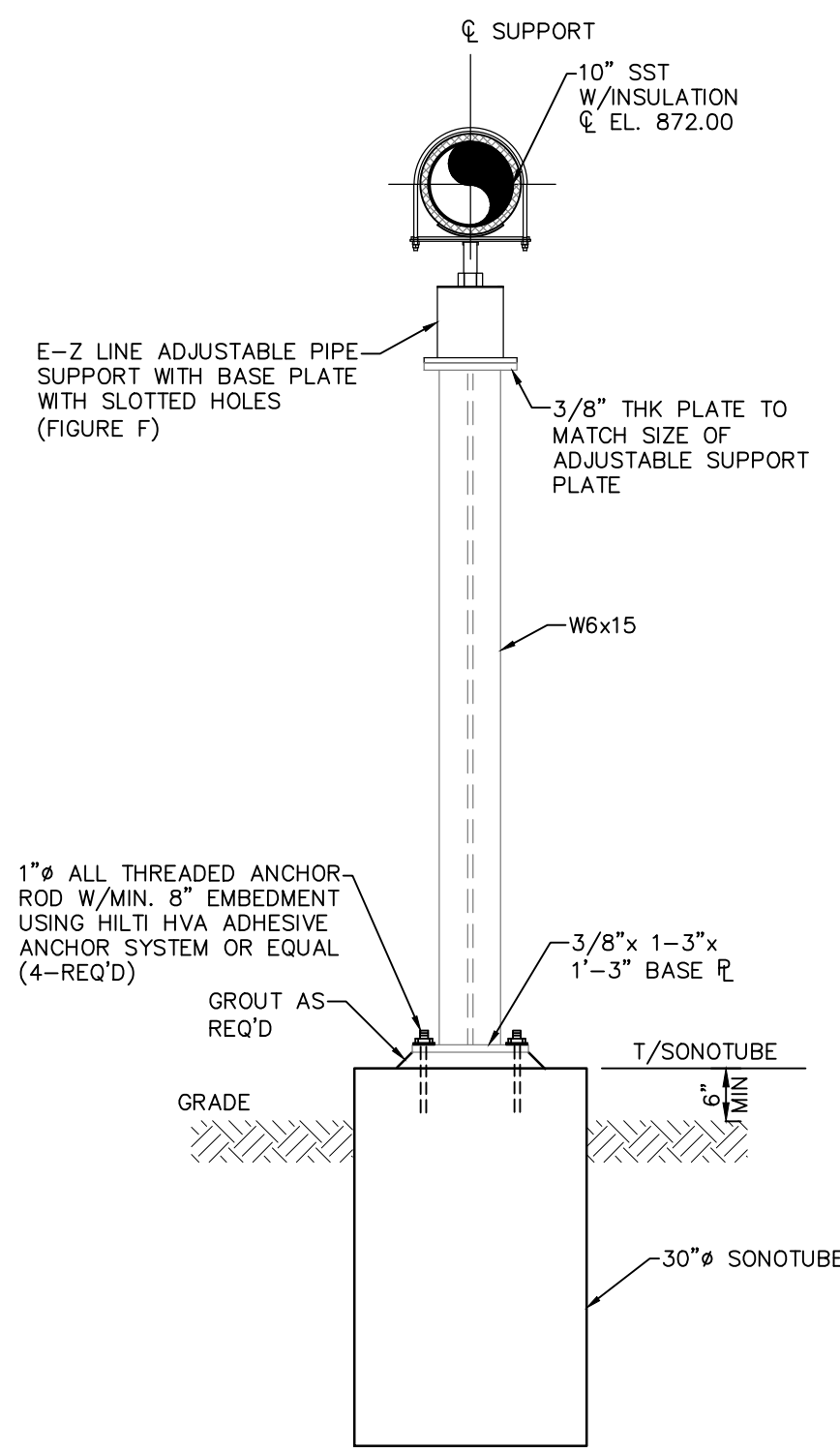
REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
MISCELLANEOUS DETAILS
SHEET NO. 2

CITY OF WOOSTER
WAYNE COUNTY, OH

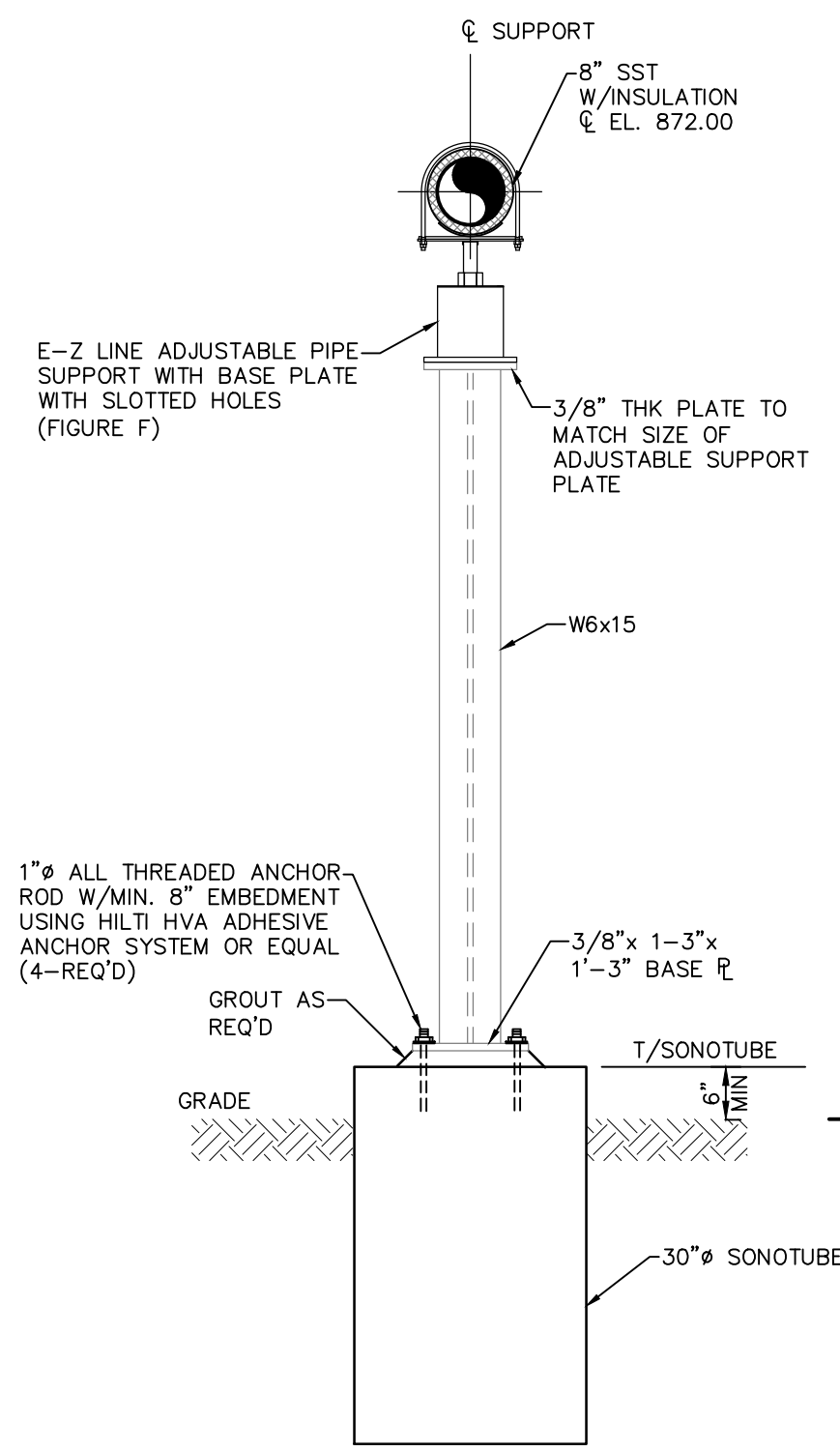
PROJ. NO.	122022001
DWG. NO.	99D-02



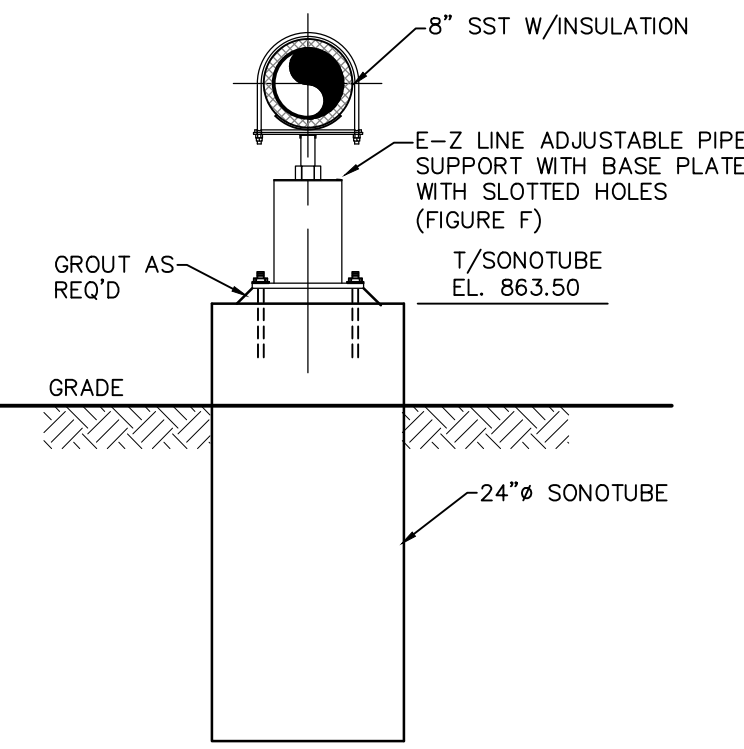
PS-1
PIPE SUPPORT
SCALE: 1/2"=1'-0"



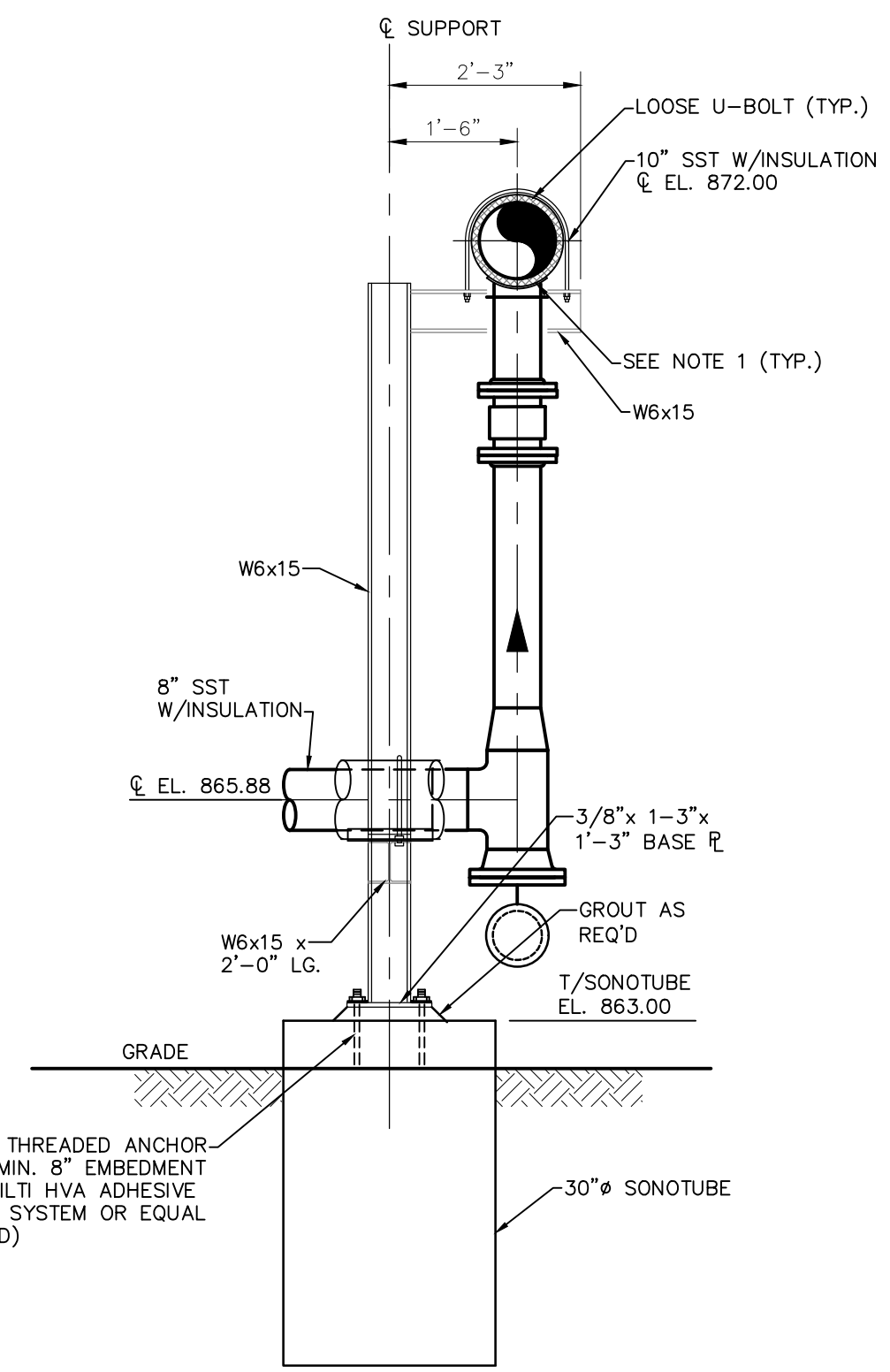
PS-2
PIPE SUPPORT
SCALE: 1/2"=1'-0"



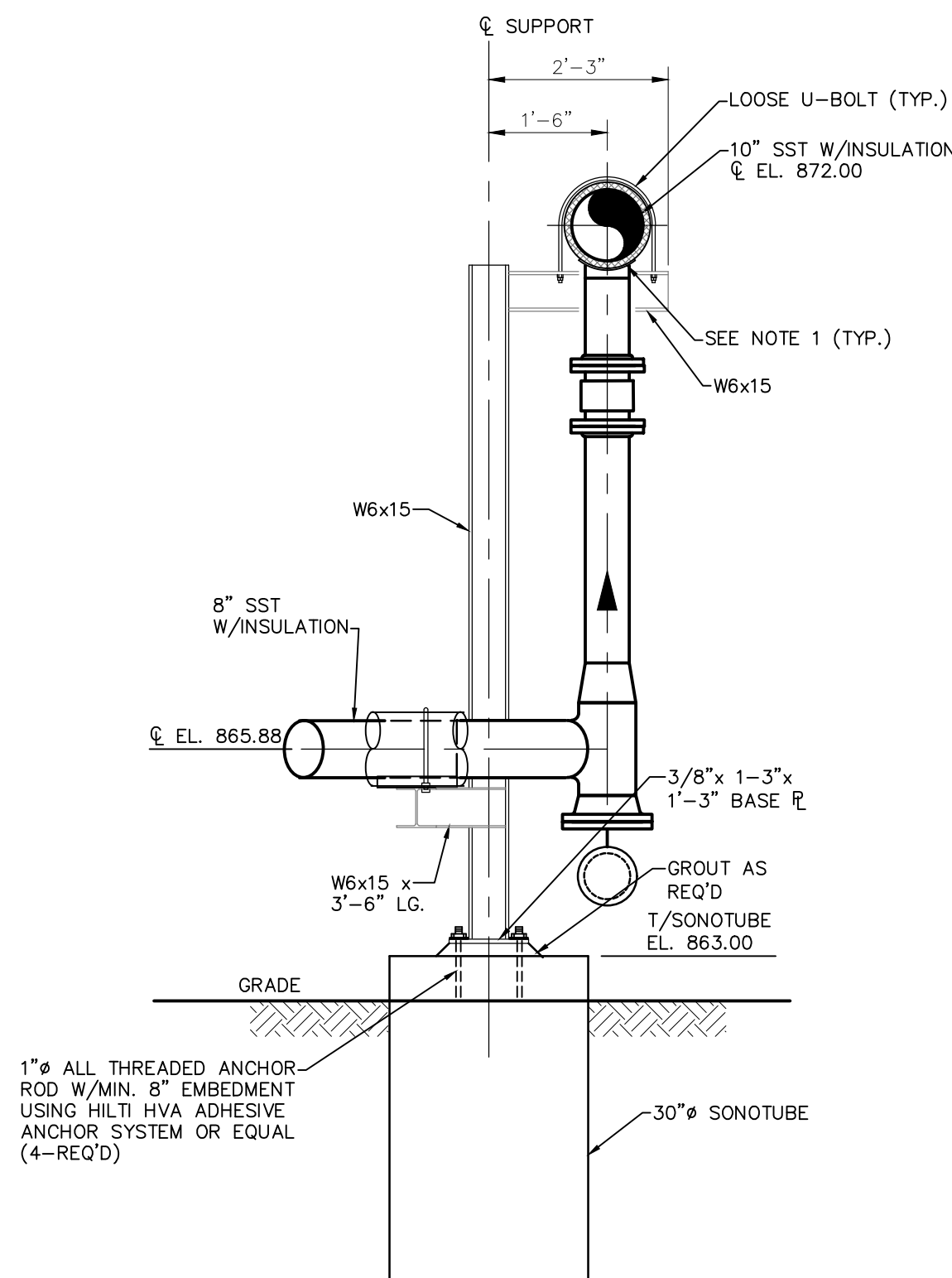
PS-3
PIPE SUPPORT
SCALE: 1/2"=1'-0"



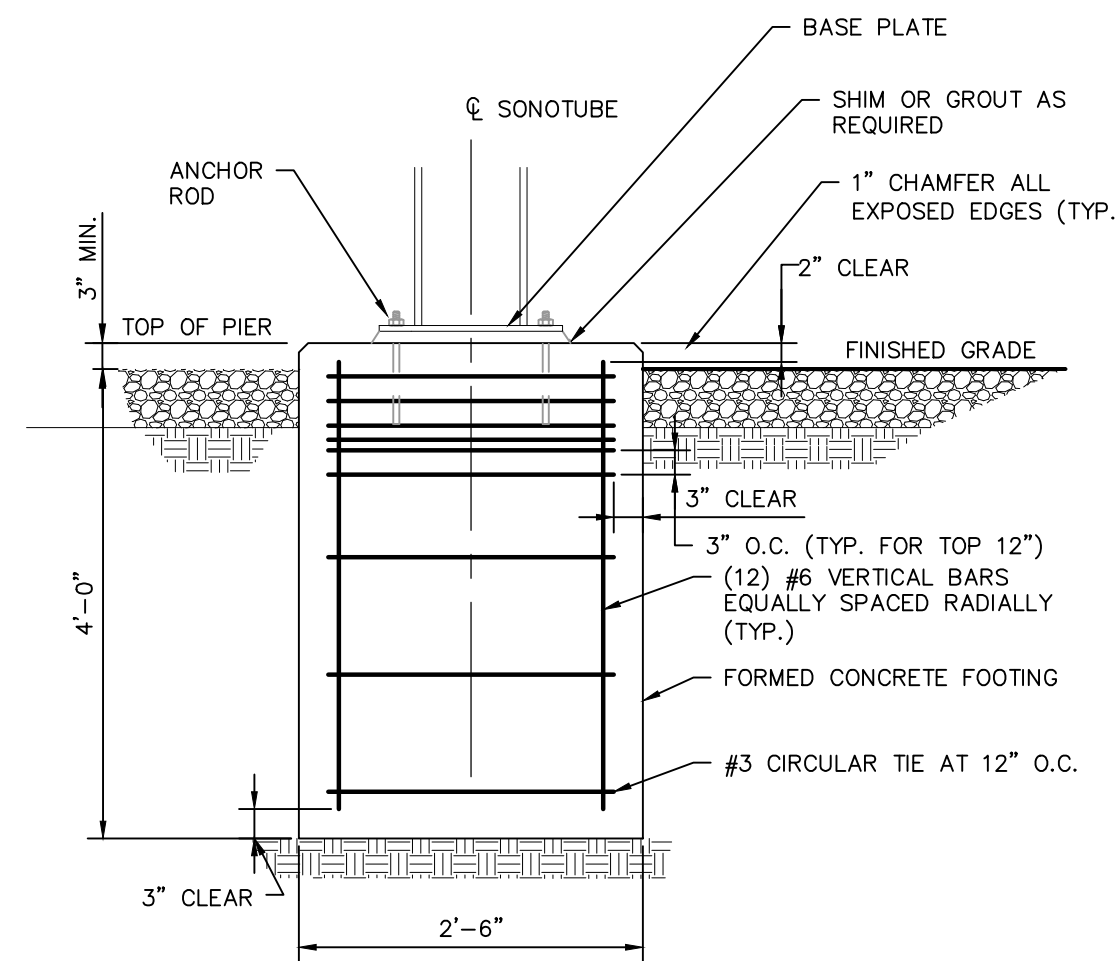
PS-4
PIPE SUPPORT
SCALE: 1/2"=1'-0"



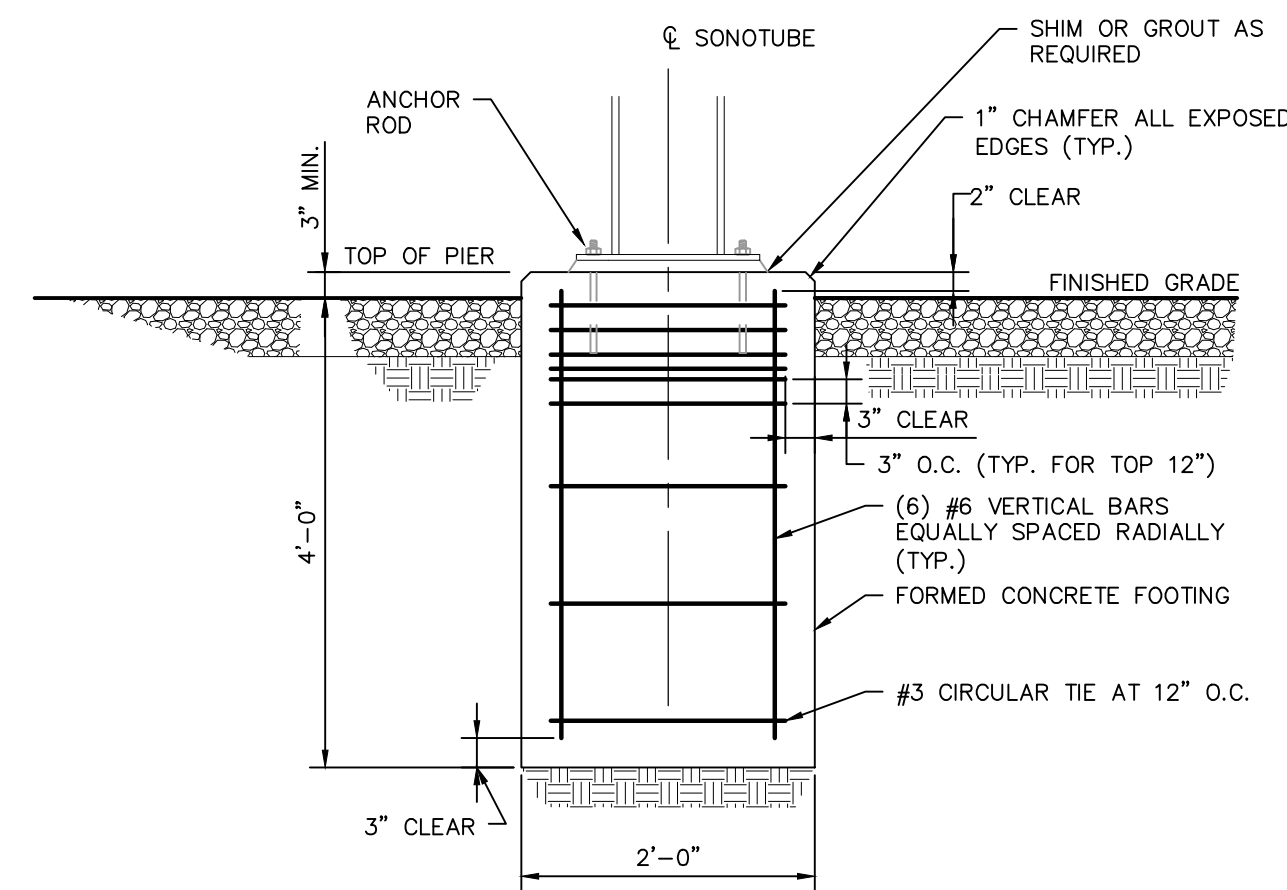
PS-5
PIPE SUPPORT
SCALE: 1/2"=1'-0"



PS-6
PIPE SUPPORT
SCALE: 1/2"=1'-0"



DETAIL - 30" DIAMETER SONOTUBE
SCALE: NONE



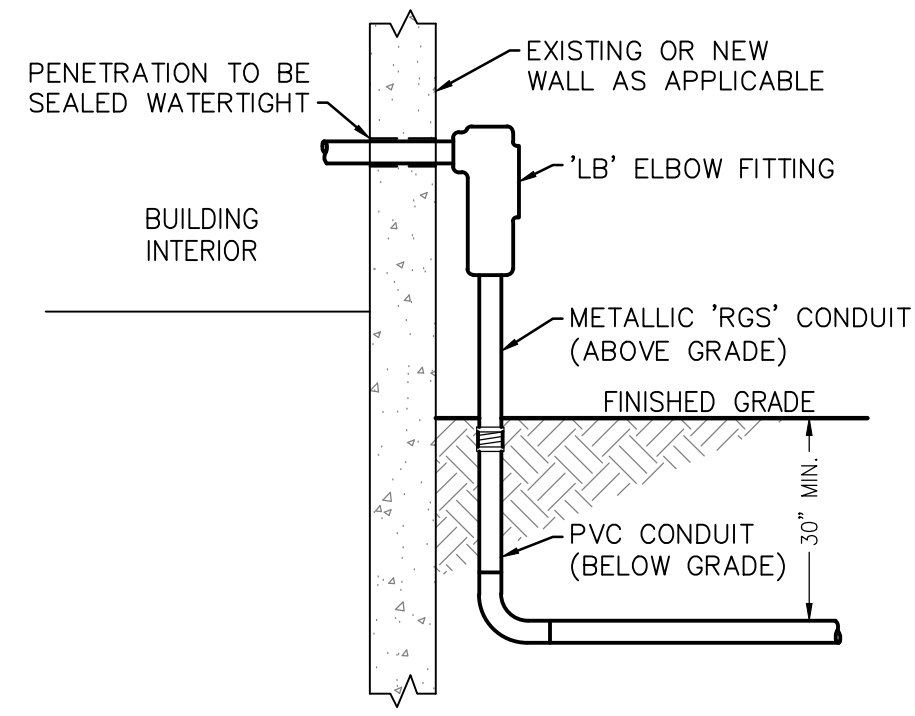
DETAIL - 24" DIAMETER SONOTUBE
SCALE: NONE

NOTES:

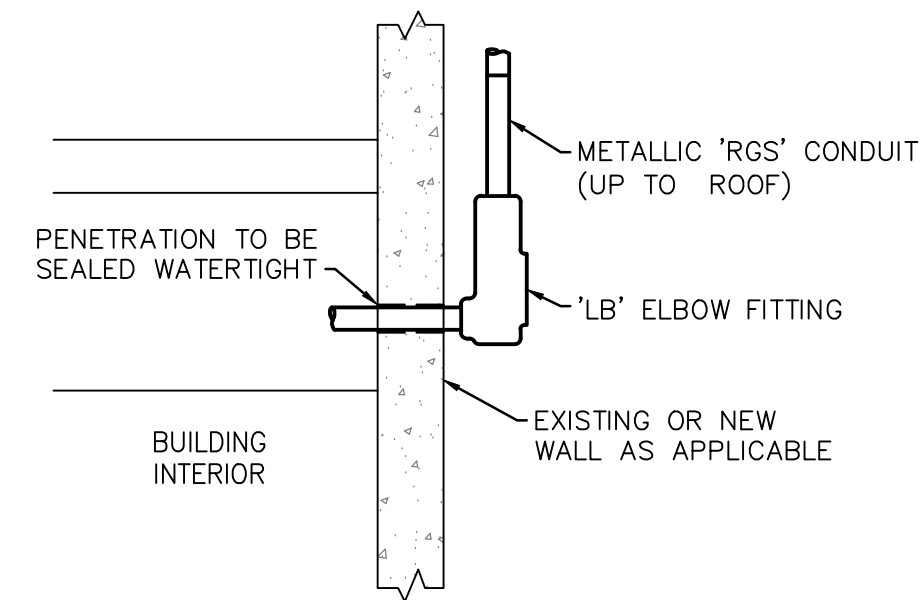
1. PROVIDE HALF ROUND RIGID INSULATION AND INSULATION PROTECTION SHIELD, SIMILAR TO PIPING TECHNOLOGY & PRODUCTS, INC. FIGURE 183, WHERE PIPING IS INSULATED.

BASE BID
CONTRACT No. GC 24-01

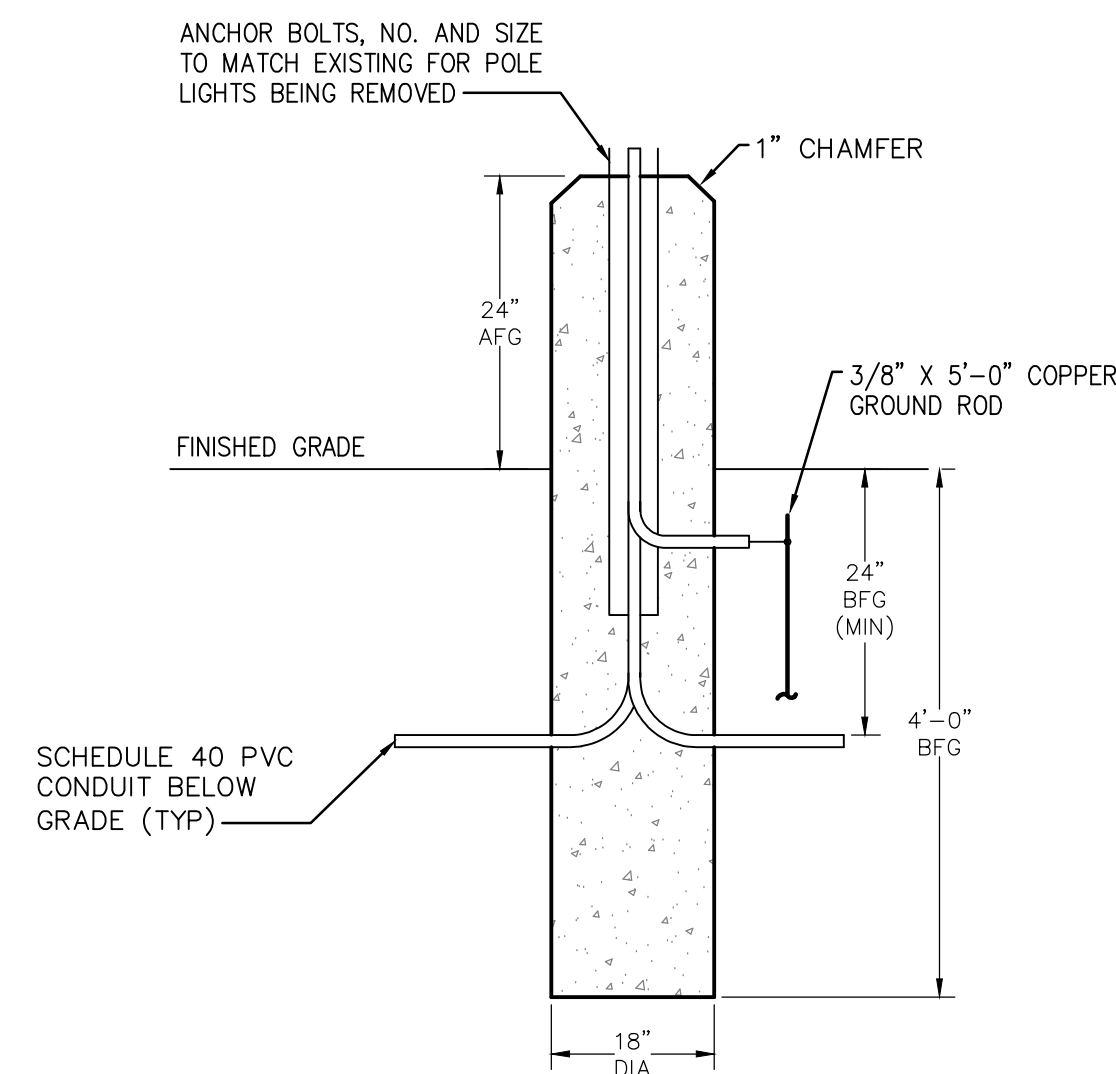
REBID BIOSOLIDS UPGRADE PROJECT		CITY OF WOOSTER	
FOR THE CITY OF WOOSTER		WAYNE COUNTY, OH	
WATER RESOURCE RECOVERY FACILITY		PIPE SUPPORT DETAILS	
PROJ. NO.	122022001	ISSUED FOR CONSTRUCTION	NO.
DWG. NO.	99D-03	DATE	4/05/24
		FOR RETTEW ASSOCIATES BY: MANAGER: STEVEN SIEGFRIED DESIGN BY: SSU DRAWN BY: JOG SURV. CHIEF: N/A CHECKED BY: JDW FIELDBOOK NO.: N/A	
THE CITY OF WOOSTER 1123 OLD COLUMBUS ROAD WOOSTER, OH 44691			
		SCALE: 1/2"=1'-0"	
RETTEW RETTEW Associates, Inc. 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44691 Phone (800) 738-8395 Email: rettew@rettew.com Website: www.rettew.com Engineers • Planners • Surveyors • Landscape Architects Environmental Consultants			



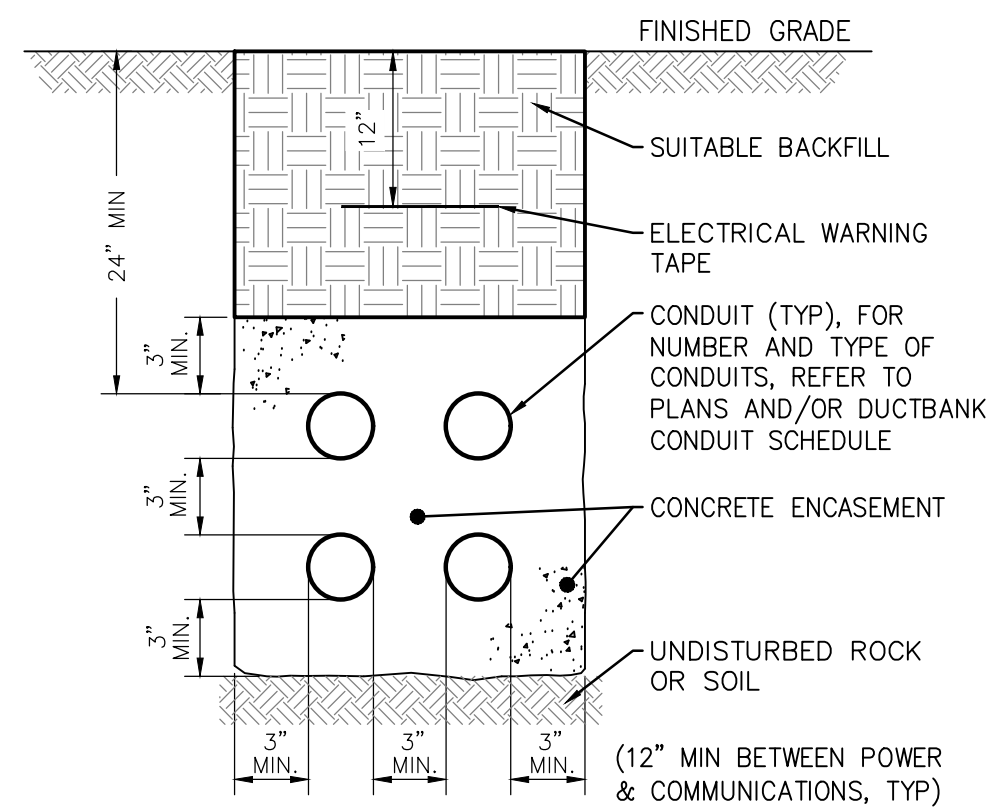
F CONDUIT TRANSITION DETAIL
NOT TO SCALE



F2 CONDUIT TRANSITION DETAIL
NOT TO SCALE

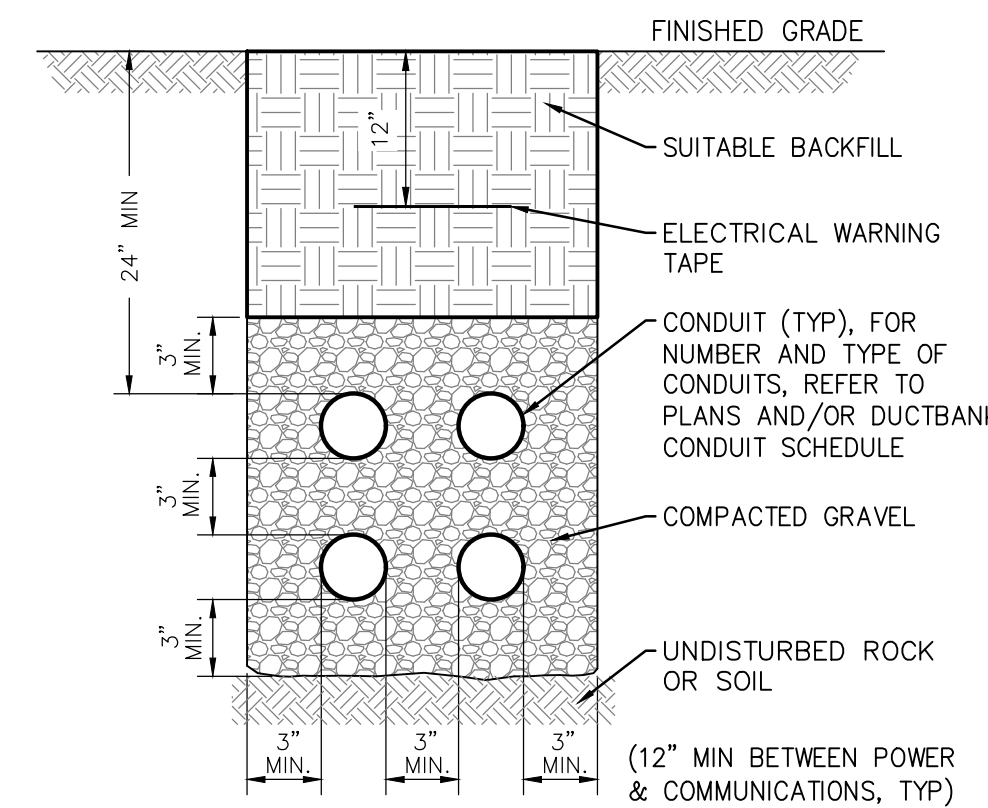


E CONCRETE POLE BASE DETAIL
NOT TO SCALE



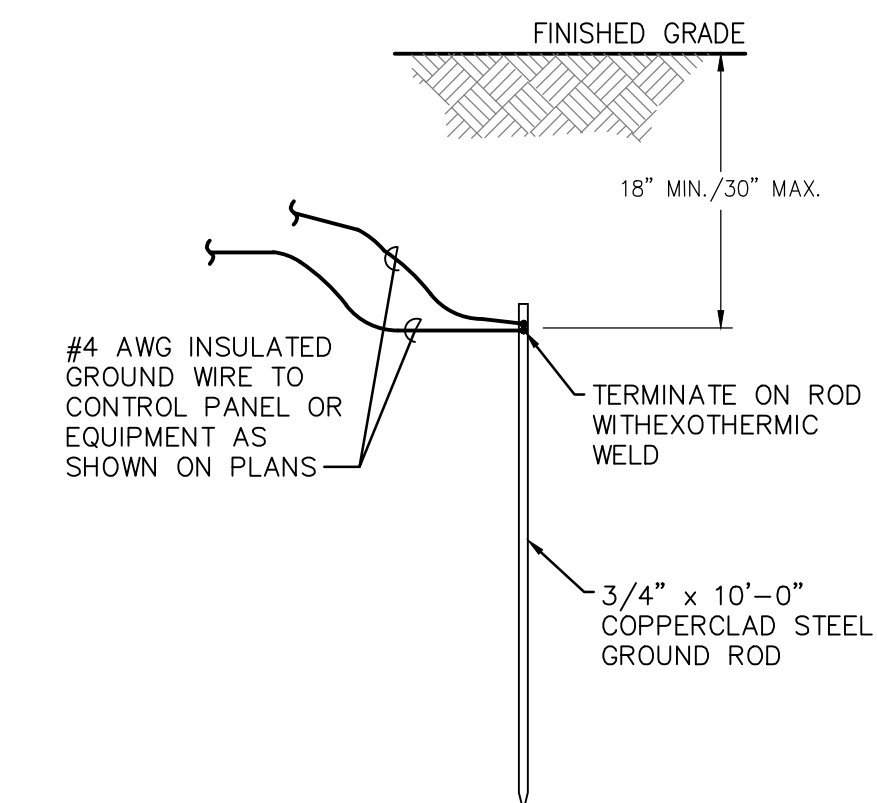
NOTES:
 1. TRENCHING BEDDING AND BACK FILLING BY ELECTRICAL CONTRACTOR.
 2. ELECTRICAL CONTRACTOR TO RESTORE SITE TO EXISTING CONDITION.
 3. CONCRETE ENCASED DUCTBANK TO BE PROVIDED UNDER ALL DRIVES/ROADWAYS SUBJECT TO VEHICULAR LOADING. ENCASEMENT TO EXTENT TO A POINT 24\"/>

D CONCRETE ENCASED DUCTBANK DETAIL
NOT TO SCALE



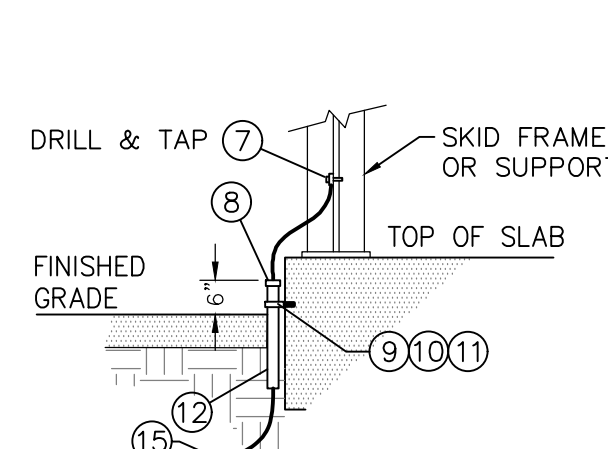
NOTES:
 1. TRENCHING BEDDING AND BACK FILLING BY ELECTRICAL CONTRACTOR.
 2. ELECTRICAL CONTRACTOR TO RESTORE SITE TO EXISTING CONDITION.

C DIRECT BURIED ELECTRICAL TRENCH DETAIL
NOT TO SCALE

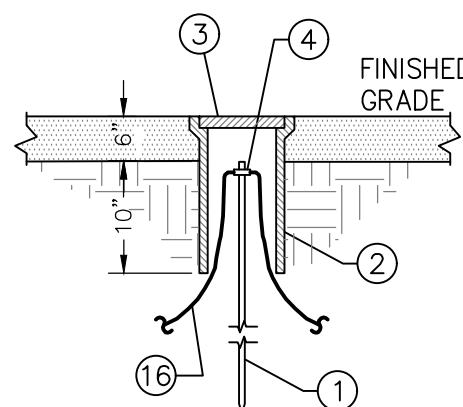


B GROUNDING ROD DETAIL
NOT TO SCALE

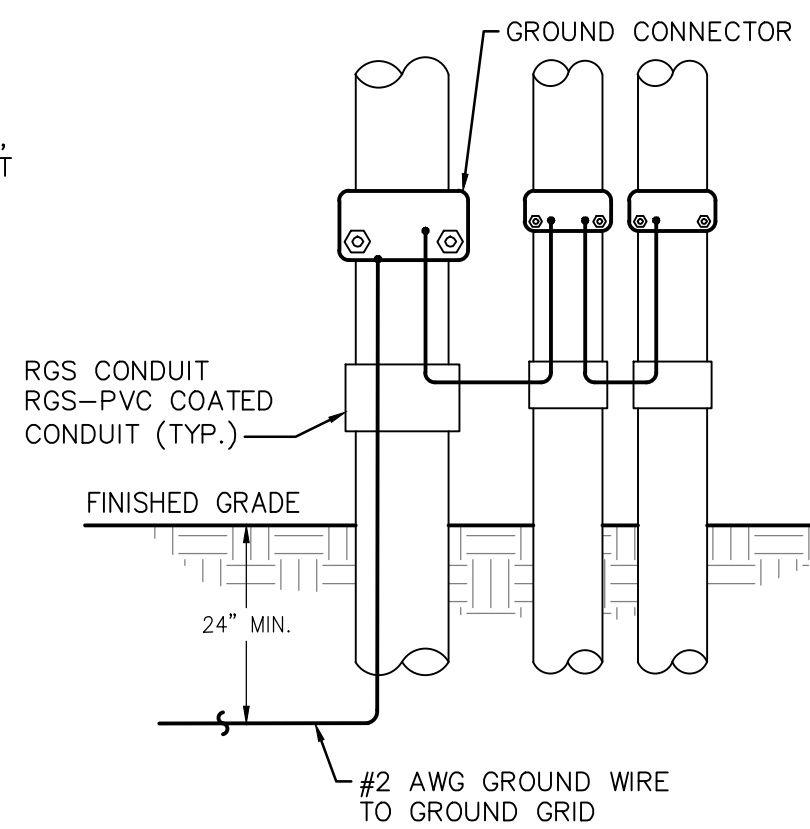
GROUNDING EQUIPMENT LEGEND				
ITEM	QTY	DESCRIPTION	MANUFACTURER	PART NO.
1	AS RED/D	3/4" DIA.X10 LG. COPPERCLAD STEEL GROUND ROD	-	-
2	AS RED/D	9" DIA. X24"	BROOKS	SERIES 9
3	AS RED/D	NO.9 CAST IRON TRAFFIC COVER MARKED "GROUND"	BROOKS	-
4	AS RED/D	GROUNDING MOLD	CADWELD	GTC-1820
5	AS RED/D	CABLE TO ROD/ TUBE GROUND CONNECTOR	BURNDY	TYPE GD
6	AS RED/D	FENCE POST GROUNDING CONNECTOR	BURNDY	TYPE GAR
7	AS RED/D	SERVIT CONNECTOR	BURNDY	KC 26
8	AS RED/D	3/4" BUSHING	APPLETON	LB-BU75
9	AS RED/D	3/4" ONE-HOLE CONDUIT CLAMP	APPLETON	CF-17151
10	AS RED/D	ON-HOLE CLAMP BACK	APPLETON	CF-17151
11	AS RED/D	1/4" GINCH ANCHOR	-	-
12	AS RED/D	3/4"CONDUIT, RIGID GALVANIZED	-	-
13	AS RED/D	CADWELD CARTRIDGE	CADWELD	NO.9
14	AS RED/D	ADAPTOR SLEEVE	CADWELD	S-750
15	AS RED/D	#3/0 THWN STRANDED COPPER (BRANCH)	-	-
16	AS RED/D	#3/0 THWN STRANDED COPPER (MAIN GROUND LOOP)	-	-
17	AS RED/D	1" SCH 40 PVC CONDUIT	-	-



DETAIL "A"

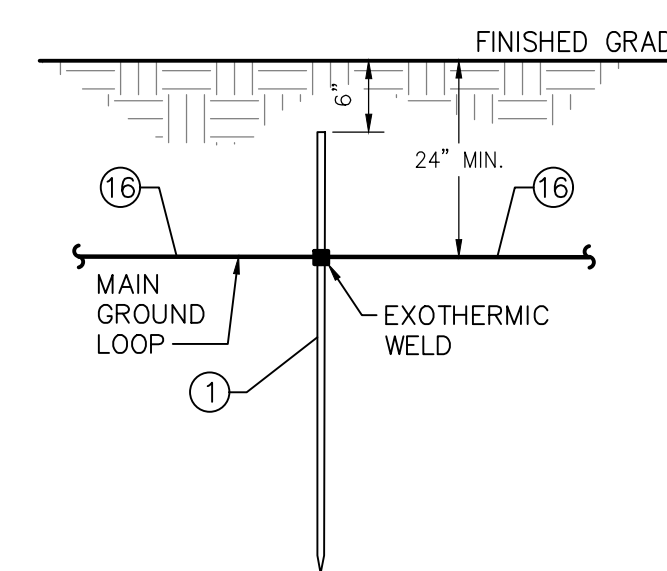


DETAIL "B"

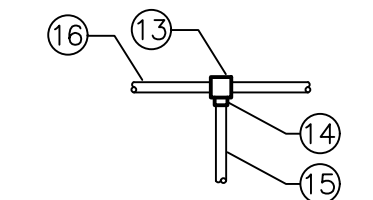


DETAIL "C"

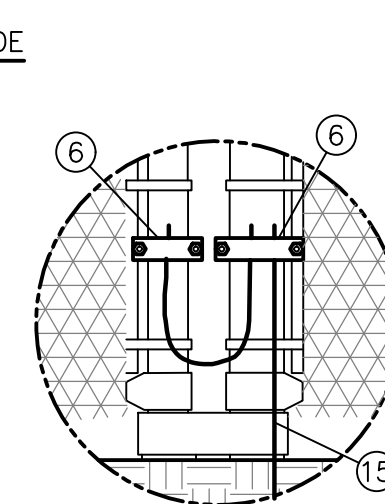
NOTE:
 IN HAZARDOUS AREAS AND WHEN STUBBING UP COMING FROM HAZARDOUS AREAS, THE CONDUIT SHALL BE RGS UP TO THE SEAL. GROUNDING SHALL THEN TAKE ABOVE THE SEALS.



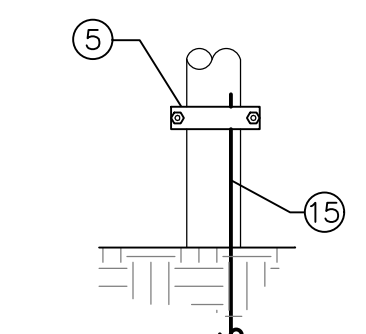
DETAIL "D"



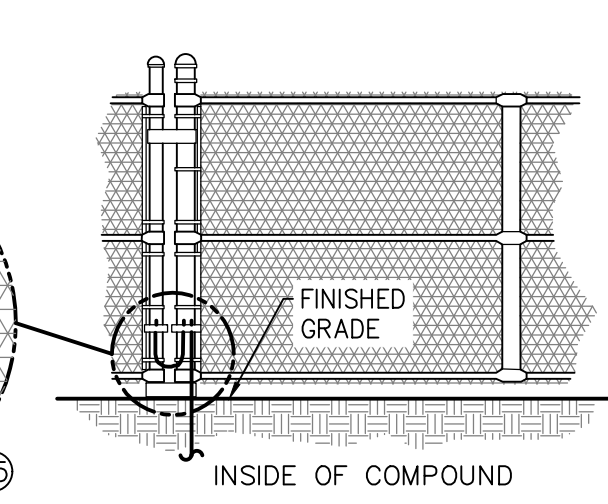
DETAIL "E"



DETAIL "F"

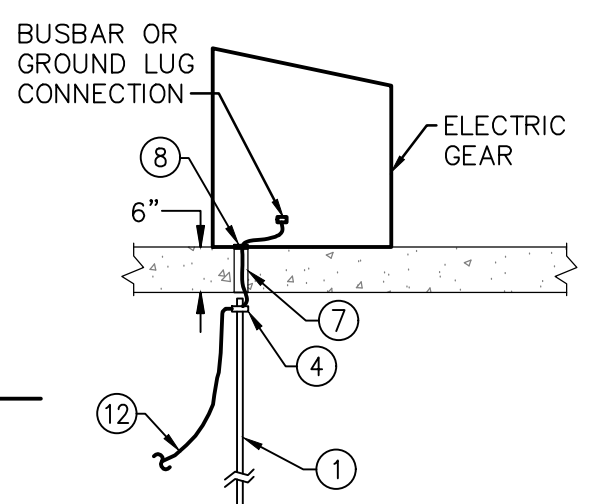


DETAIL "G"

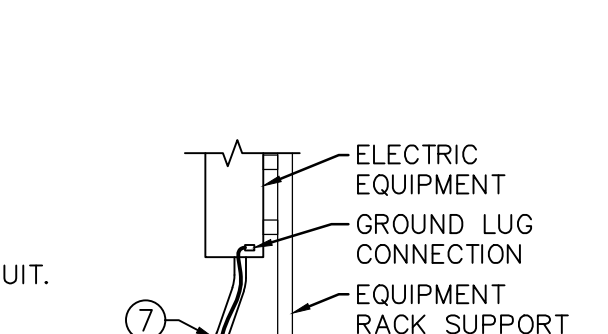


DETAIL "H"

NOTE:
 ALL PAD PENETRATIONS TO BE SLEEVED WITH 1" RIGID PVC CONDUIT. ALL GROUNDS FOR PAD MOUNTED EQUIPMENT TO BE SLEEVED.



DETAIL "I"



DETAIL "J"

A GROUNDING DETAILS
NOT TO SCALE
NOTE: DETAILS INDICATED MAY NOT BE USED ON THESE PROJECT DRAWINGS

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION

MANAGER:	STEVEN SIEGFRIED	CHKD BY:	JDW
DESIGN BY:	RRC	CHKD BY:	RRC/KJH
DRAWN BY:	GRS	SURV. CHIEF:	N/A
FIELDBOOK NO.:	N/A		

FOR RETTEW ASSOCIATES BY:
 JASON WEST
 PROFESSIONAL ENGINEER
 STATE OF OHIO
 LICENSE NO. 95775
 4/15/24

THE CITY OF WOOSTER
 1123 OLD COLUMBUS ROAD
 WOOSTER, OH 44691

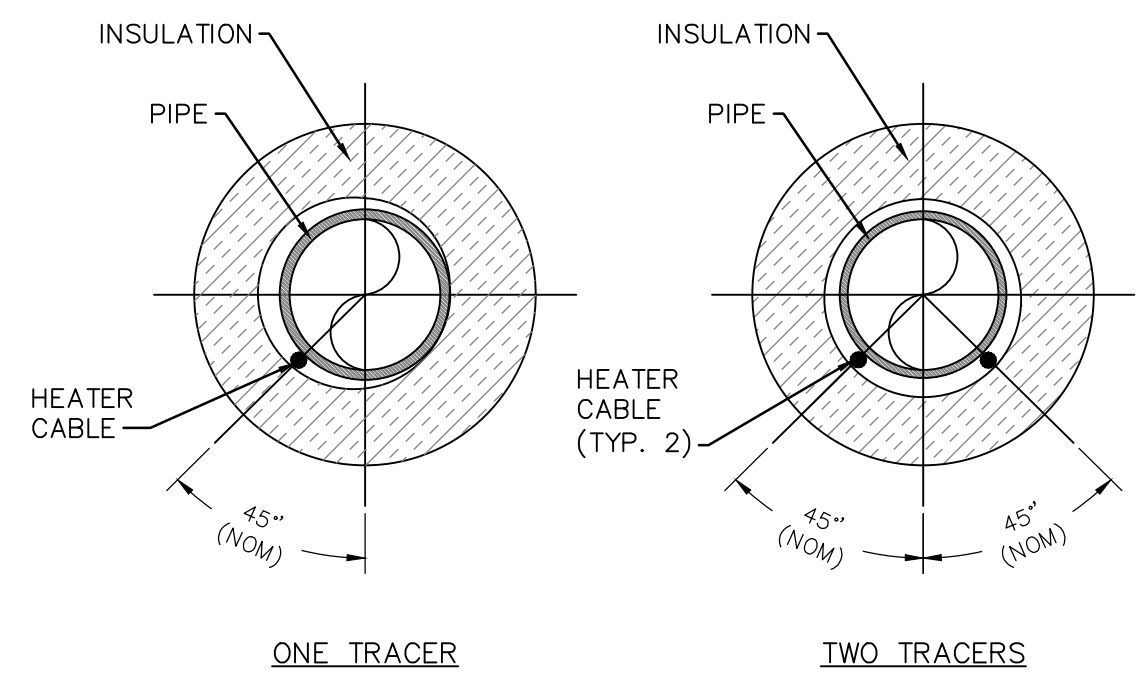
SCALE AS NOTED

RETTEW
 RETTEW Associates, Inc.
 3475 Forest Lake Dr., Suite 100, Uniontown, OH 44685
 Phone (800) 738-8395
 Email: rettew@rettew.com
 Website: www.rettew.com
 Engineers • Planners • Surveyors • Landscape Architects
 Environmental Consultants

REBID BIOSOLIDS UPGRADE PROJECT
 FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
 ELECTRICAL STANDARD DETAILS - I
 CITY OF WOOSTER, OH

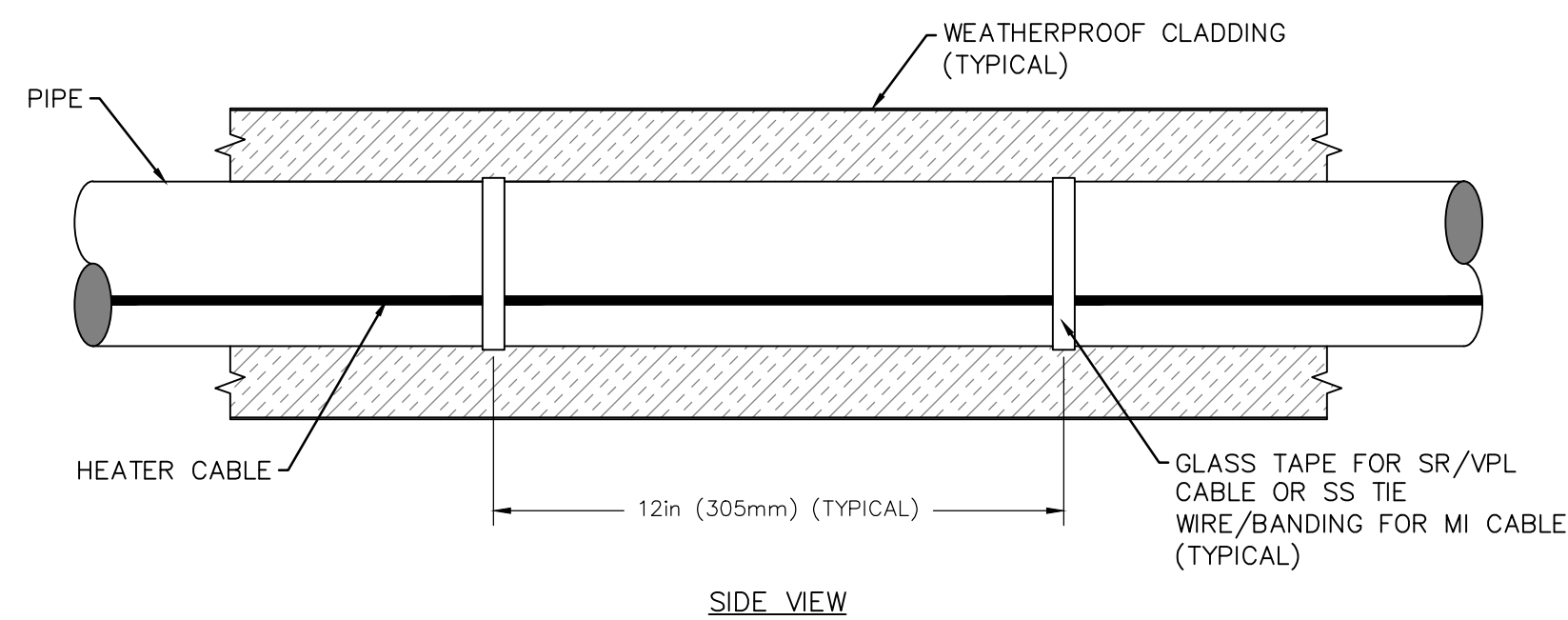
PROJ. NO.	122022001
DWG. NO.	99E-01

BASE BID
 CONTRACT No. GC 24-01



ONE TRACER

TWO TRACERS



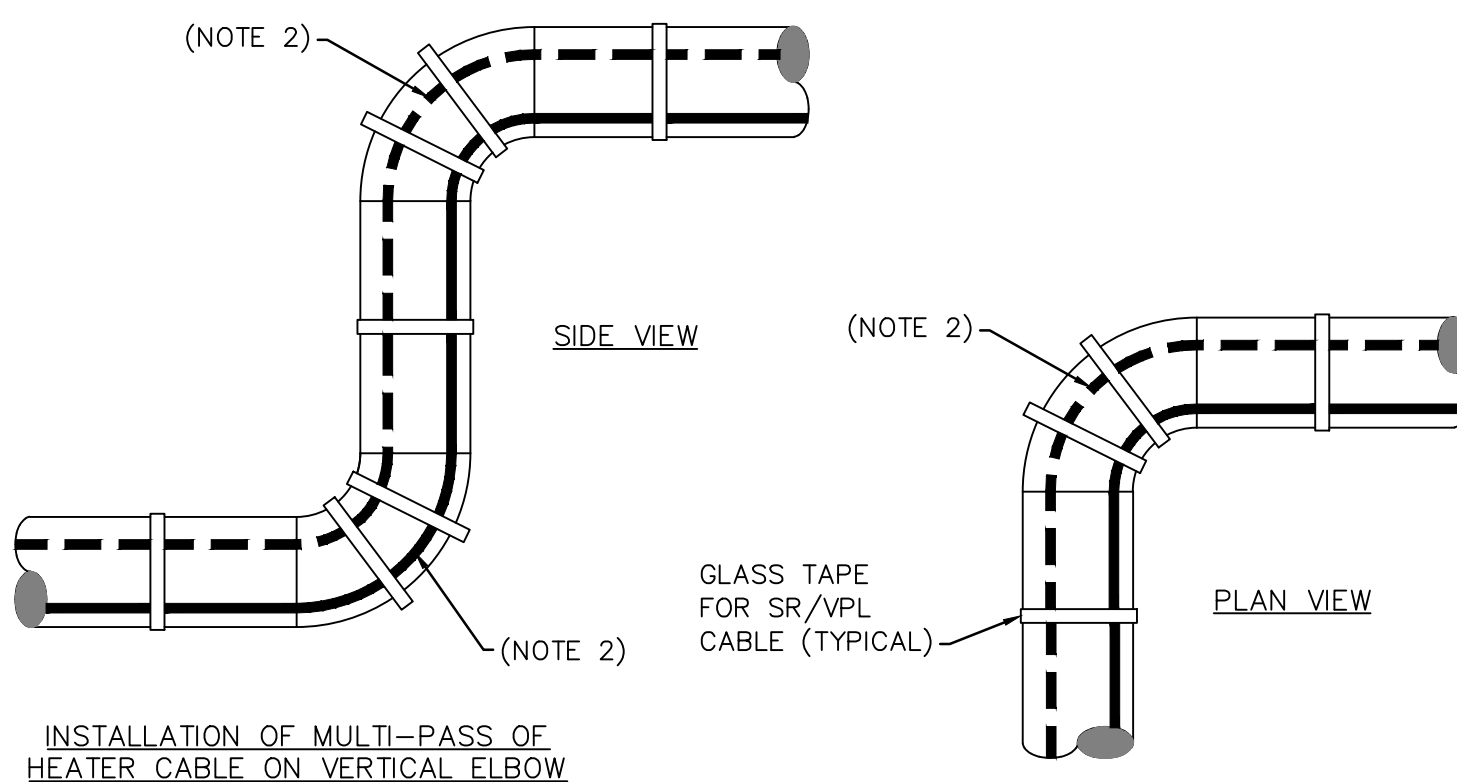
SIDE VIEW

TECHNICAL NOTES:

1. THIS IS A GENERAL INSTALLATION INSTRUCTION. THE EHT ISOMETRIC/DRAWING MAY HAVE MORE SPECIFIC INSTRUCTIONS THAT WOULD SUPERSEDE THIS DETAIL.
2. INSTALL CABLE SPACED EVENLY AROUND THE CIRCUMFERENCE OF THE PIPE FOR MORE THAN 4 PASSES.

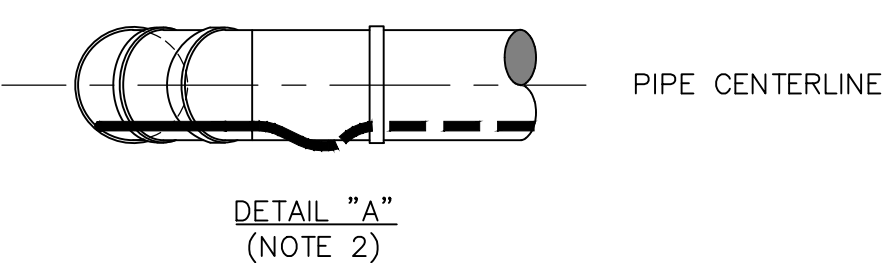
A TYPICAL PLACEMENT OF HEATER CABLE DETAIL

NOT TO SCALE



INSTALLATION OF MULTI-PASS OF HEATER CABLE ON VERTICAL ELBOW

INSTALLATION OF MULTI-PASS OF HEATER CABLE ON HORIZONTAL ELBOW



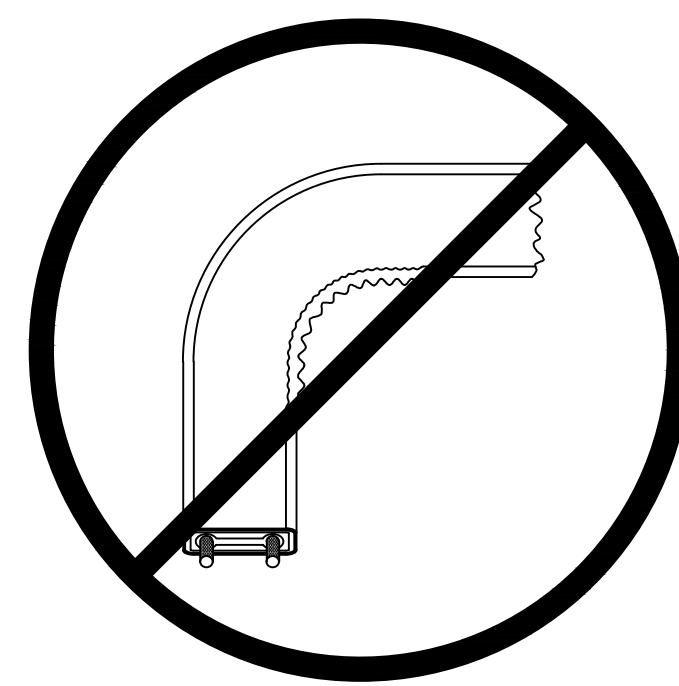
DETAIL "A" (NOTE 2)

TECHNICAL NOTES:

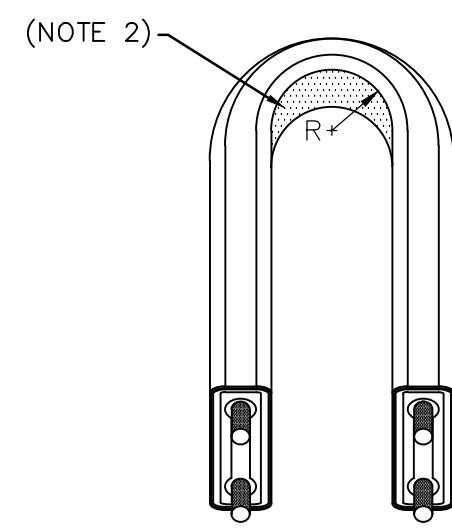
1. THIS IS A GENERAL INSTALLATION INSTRUCTION. THE EHT ISOMETRIC/DRAWING MAY HAVE MORE SPECIFIC INSTRUCTIONS THAT WOULD SUPERSEDE THIS DETAIL.
2. HEATER CABLE TO BE INSTALLED ON OUTSIDE DIAMETER OF PIPE ELBOW BELOW THE PIPE CENTERLINE. DO NOT INSTALL HEATER CABLE ON THE VERY BACK OR THROAT OF AN ELBOW (SEE DETAIL "A").

E TYPICAL ELBOW INSTALLATION DETAIL

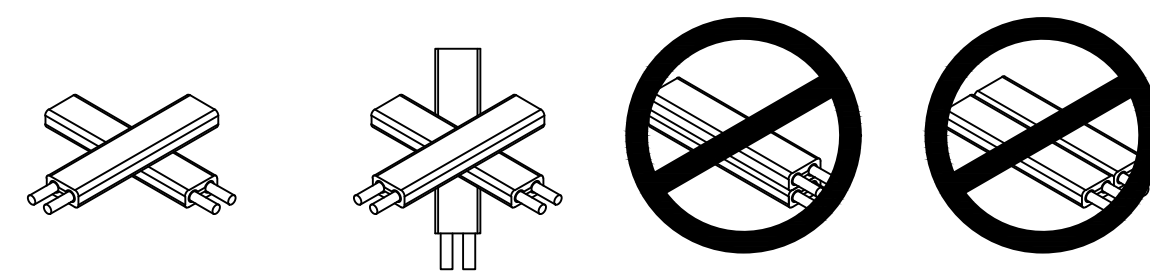
NOT TO SCALE



FOR IN-PLANE DIRECTIONS SR CABLE



FOR OUT-OF PLANE DIRECTIONS SR CABLE



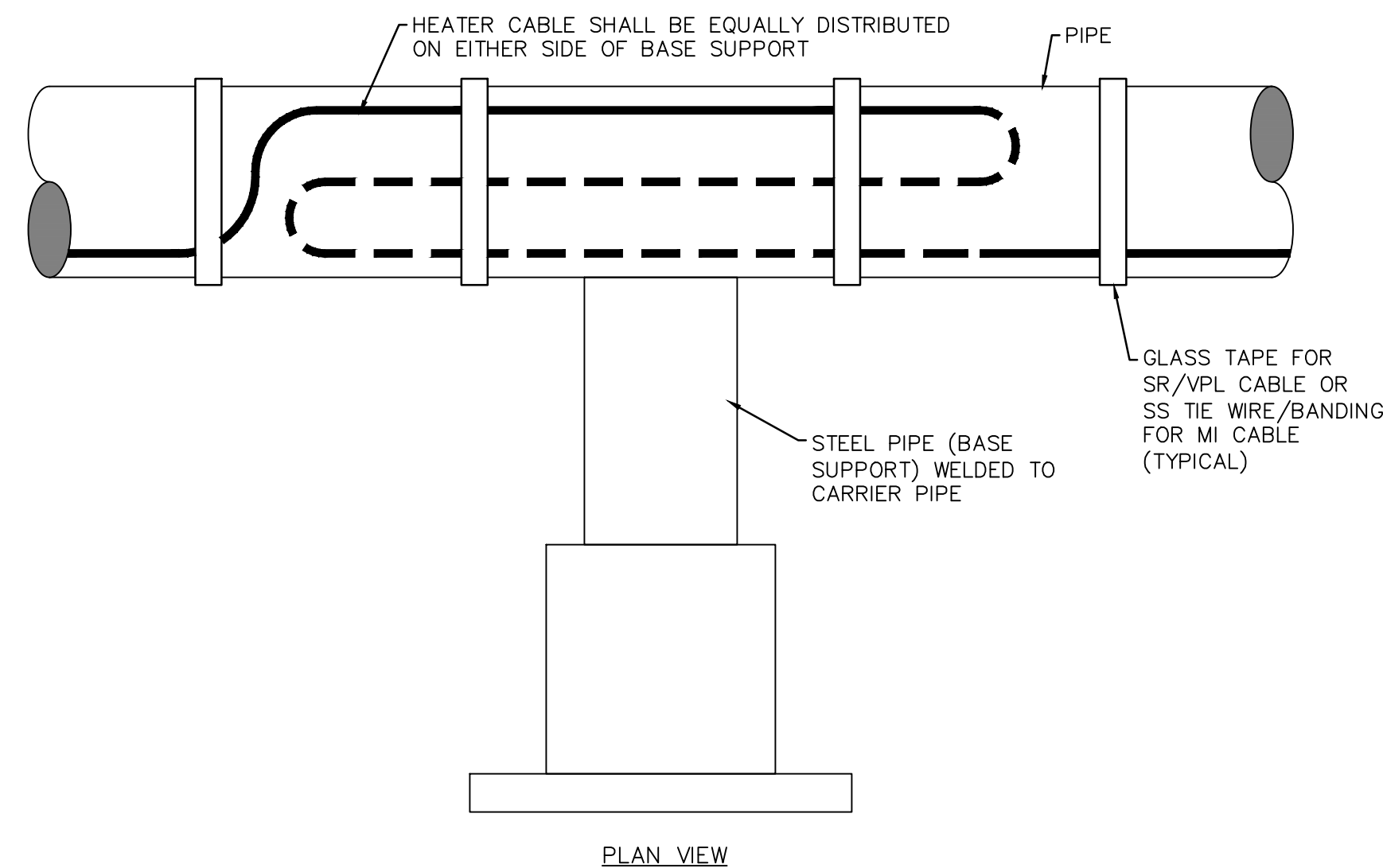
SR CABLE (NOTE 3)

TECHNICAL NOTES:

1. THIS IS A GENERAL INSTALLATION INSTRUCTION. THE EHT ISOMETRIC/DRAWING MAY HAVE MORE SPECIFIC INSTRUCTIONS THAT WOULD SUPERSEDE THIS DETAIL.
2. TO PREVENT CONDUCTOR DAMAGE AND POSSIBLE SHORTING, HEATER CABLE SHALL NOT BE BENT TO A RADIUS OF LESS THAN 1/2in (13mm) FOR SR CABLE.
3. SELF-REGULATING CABLES ALLOW FOR MULTIPLE OVERLAPPING OF THE HEATING CABLE. OVERLAPPING MUST BE KEPT TO A MINIMUM.

B MINIMUM BEND RADIUS AND SPACING DETAIL

NOT TO SCALE



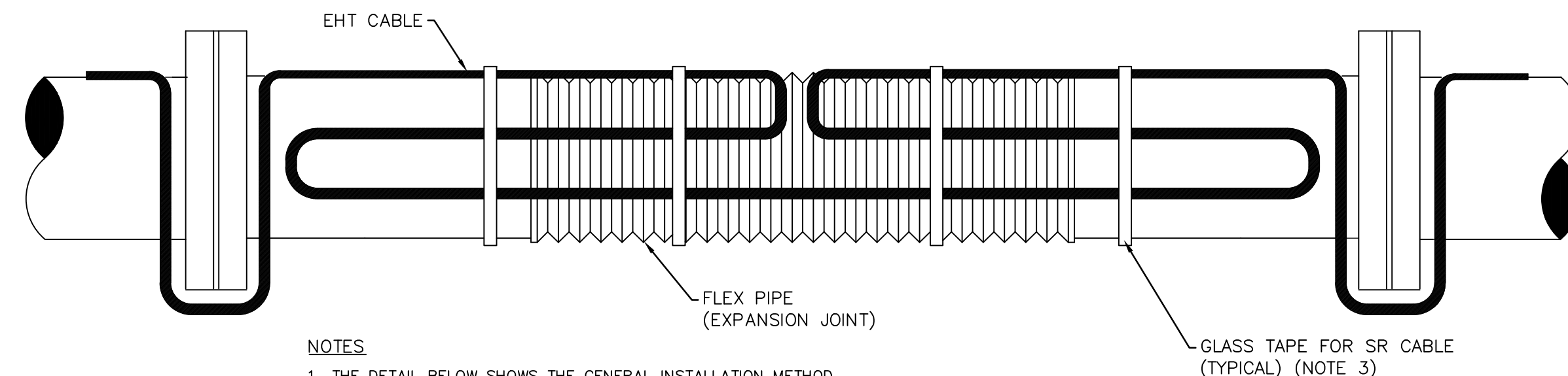
PLAN VIEW

TECHNICAL NOTES:

1. THIS IS A GENERAL INSTALLATION INSTRUCTION. THE EHT ISOMETRIC/DRAWING MAY HAVE MORE SPECIFIC INSTRUCTIONS THAT WOULD SUPERSEDE THIS DETAIL.
2. SEE DETAIL NO. SD-01-004-000000 FOR MINIMUM BEND RADIUS AND SPACING FOR HEATER CABLES.
3. SEE EHT ISOMETRIC/DRAWING FOR THE ADDER AMOUNT.

F TYPICAL BASE SUPPORT INSTALLATION DETAIL

NOT TO SCALE

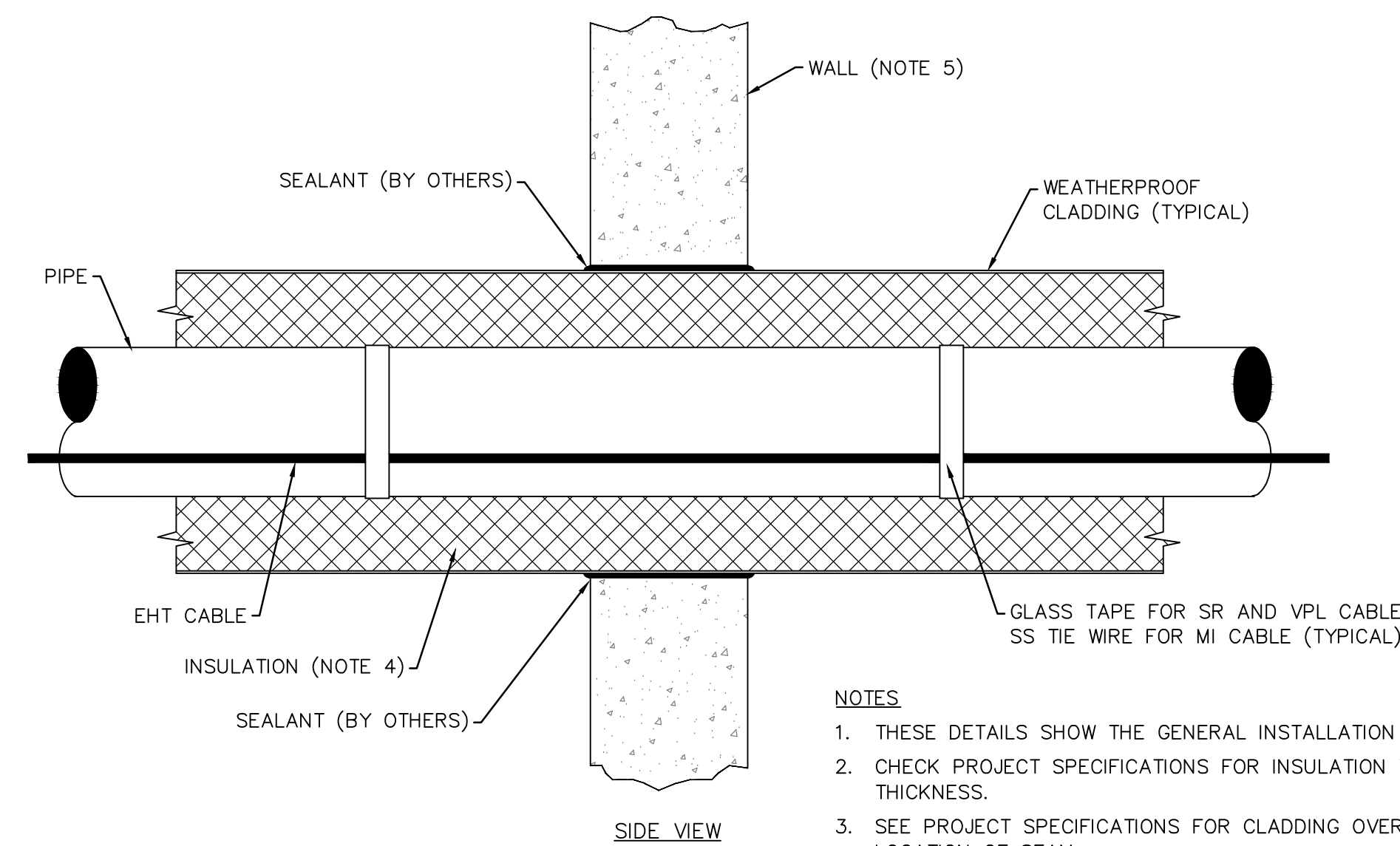


NOTES

1. THE DETAIL BELOW SHOWS THE GENERAL INSTALLATION METHOD.
2. SEE DETAIL NO. SD-01-004-000000 FOR THE MINIMUM BEND RADIUS AND SPACING OF SR CABLE.
3. INSTALL GLASS TAPE AROUND EHT CABLE ADJACENT TO EXPANSION FLEX PIPE.

C TYPICAL FLEX SEAL PIPE INSTALLATION DETAIL

NOT TO SCALE



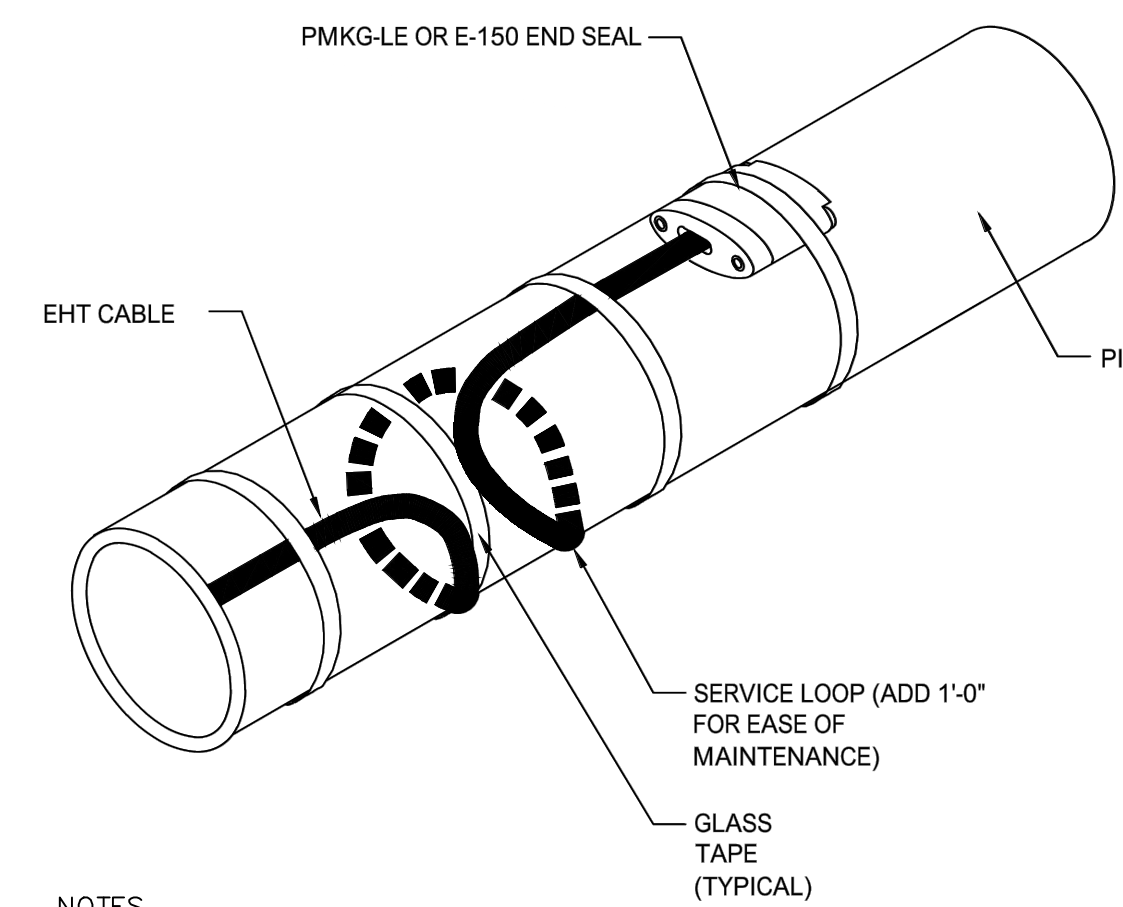
SIDE VIEW

NOTES

1. THESE DETAILS SHOW THE GENERAL INSTALLATION METHOD.
2. CHECK PROJECT SPECIFICATIONS FOR INSULATION TYPE AND THICKNESS.
3. SEE PROJECT SPECIFICATIONS FOR CLADDING OVERLAP & LOCATION OF SEAM.
4. INSULATION MUST BE CONTINUOUS THROUGH WALL PENETRATION WHERE EHT CABLE IS CONTINUOUS THROUGH WALL PENETRATION.
5. THIS DETAIL APPLIES TO ALL WALL TYPES.

D TYPICAL WALL PENETRATION DETAIL

NOT TO SCALE



NOTES

1. THIS DETAIL SHOWS THE GENERAL INSTALLATION METHOD. DETAILED INSTALLATION INSTRUCTIONS ARE SUPPLIED WITH THE END SEAL KIT.

G END SEAL DETAIL

NOT TO SCALE

NO.	DATE	ISSUED FOR CONSTRUCTION	REVISION
A	4/05/24		

MANAGER	DESIGN BY	CHKD BY	DRWN BY	SURV. CHIEF	FIELDBOOK NO.
STEVEN SIEGFRIED	RRC	JDW	GRS	N/A	N/A

FOR RETTEW ASSOCIATES BY:

THE CITY OF WOOSTER
1123 OLD COLUMBUS ROAD
WOOSTER, OH 44691

SCALE AS NOTED

RETTEW
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

RETTEW Associates, Inc. Suite 100, Uniontown, OH 44685
3475 Forest Lake Dr. Phone (800) 738-8395
Email: rettew@rettew.com Website: www.rettew.com

REBID BIOSOLIDS UPGRADE PROJECT
FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
ELECTRICAL STANDARD DETAILS - II
WAYNE COUNTY, OH
CITY OF WOOSTER

PROJ. NO.	122022001
DWG. NO.	99E-02

BASE BID
CONTRACT No. GC 24-01

BTV SELF-REGULATING HEATING CABLE



nVent RAYCHEM BTV self-regulating trace heating cables provide freeze protection and process temperature maintenance, up to 150 °F/65 °C, of pipes/vessels without steam cleaning requirements. They withstand intermittent exposure to 185 °F/85 °C and are hazardous area approved. The polyolefin outer jacket (-CR) is suitable for mild inorganic solutions. The fluoropolymer outer jacket (-CT) provides high chemical resistance against aggressive organics and corrosives.

FEATURES

- Simplified design in hazardous area: unconditional T6 class
- Fast installation: cut-to-length, multiple overlaps allowed, meter markings, user-friendly connections kits
- Safe and efficient in operation: no overheating, uniform pipe temperatures, energy saving technology
- Reliable during long life: 10 year product warranty available, maintenance free

SPECIFICATIONS

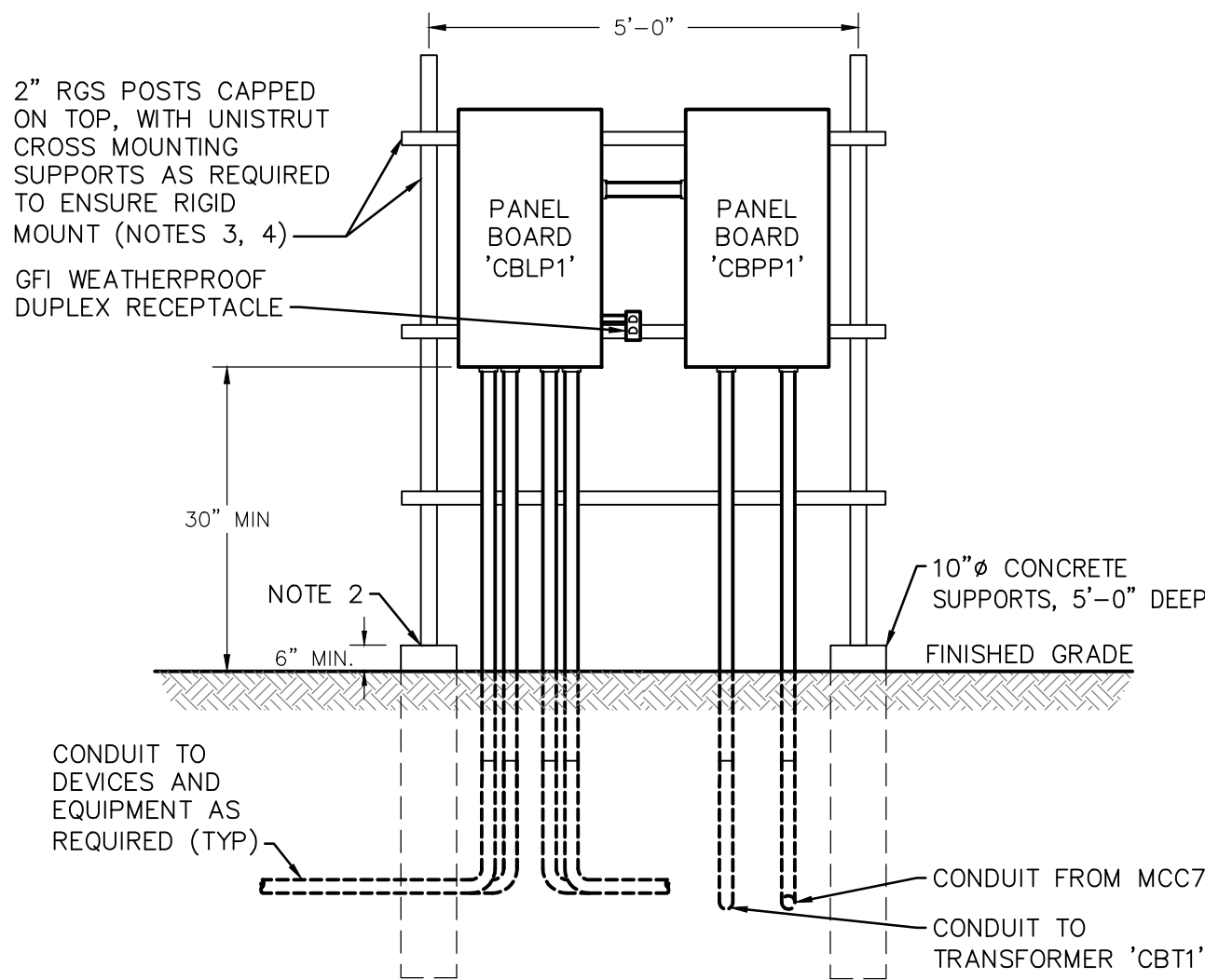
Max Maintain or Continuous Exposure Temperature, Power On/Off: 150 °F
Max Intermittent Exposure Temperature, Power On/Off: 185 °F
Ground Path Type: Braid
Area Classification: Non-Hazardous; Hazardous

Catalog Number	Item Name	Supply Voltage	Outer Jacket Material	Nominal Power Output @ 50°F, 120V	Nominal Power Output @ 50°F, 240V
013331-000	38TV1-CR	100 - 130 V	Modified Polyolefin	3 W/ft	W/ft
* 208499-000	58TV1-CR	100 - 130 V	Modified Polyolefin	5 W/ft	W/ft

HEAT TRACE CABLE SPECIFICATION
 NOT TO SCALE

HEAT TRACE NOTES:

- HEAT TRACING TO BE RATED FOR CLASS I, DIVISION I INSTALLATION. INSTALLATION SHALL MEET CLASS I, DIVISION I REQUIREMENTS.
- GAS STORAGE TANK CONDENSATE PIPING SHALL HAVE 'RAYCHEM 8BTV' (8W/FT) HEAT TRACE OR EQUAL.
- CONTRACTOR SHALL PROVIDE 1.5" THICK CALCIUM SILICATE INSULATION, RATED FOR OUTDOOR INSTALLATION, AFTER HEAT TRACE IS INSTALLED & OPERATIONAL.
- HEAT TRACE SHALL BE INSTALLED PER RAYCHEM SPECIFICATIONS, AFFIXED TO PIPE EVERY 12".
- RAYCHEM END SEALS 'E-100A' TO BE INSTALLED FOR EACH HEAT TRACED PROCESS PIPE.
- RAYCHEM CONTROLLERS '910' TO BE INSTALLED FOR EACH HEAT TRACED PROCESS PIPE. CONTROLLERS TO BE RATED FOR CLASS I, DIVISION I INSTALLATION.



FRONT ELEVATION

EQUIPMENT RACK DETAIL NOTES:

- PROVIDE VERTICAL STRUT SUPPORTS AS REQUIRED TO ACCOMMODATE MOUNTING OF SMALLER EQUIPMENT.
- PROVIDE BITUMASTIC PAINT TO ACT AS ISOLATION BARRIER BETWEEN ALUMINUM AND STEEL.
- STAINLESS STEEL FASTENERS SHOULD BE USED FOR ALL CONNECTIONS.
- UNISTRUT TO BE HOT DIPPED GALVANIZED.
- REFER TO DUCTBANK SCHEDULE ON 01E-30 AND FEEDER SCHEDULE ON 01E-31 FOR CONDUIT AND WIRING SIZE/TYP.

EQUIPMENT MOUNTING RACK DETAIL
 NOT TO SCALE

E507S-LS MECHANICAL THERMOSTAT



nVent RAYCHEM E507S-LS is a line-sensing thermostat designed to control heat tracing systems in hazardous locations. The E507S-LS senses pipe or tank wall temperatures, used to control a single heat tracing circuit or switch multiple circuits with a contactor, it has an adjustable set point. Also used to indicate low temperature or high temperature alarm conditions.

FEATURES

- Simple to install and operate, single cable entry through 3/4"/19 mm NPT conduit hub
- Energy saving, line sensing control thermostat
- Adjustable set point: 25 °F to 325 °F/-4 °C to 163 °C
- Electrical rating and switch: 22 A at 125/250/480 VAC, SPDT switch
- Enclosure: NEMA 4, 7, 9 lacquer-coated cast aluminum housing, stainless steel hardware
- Reliable during long life

SPECIFICATIONS

Table 1/2

Catalog Number	Item Name	Material	NEMA Rating	Thermostat Type	Current Rating	Controller Temperature Setting
625725-000	E507S-LS	Aluminum	4, 7, 9	Mechanical Thermostat	22 A	-40 to 325 °F

Table 2/2

Catalog Number	Item Name	Max Measuring Range	Height	Width	Depth
625725-000	E507S-LS	420 °F	6.6 in	4.5 in	4 in

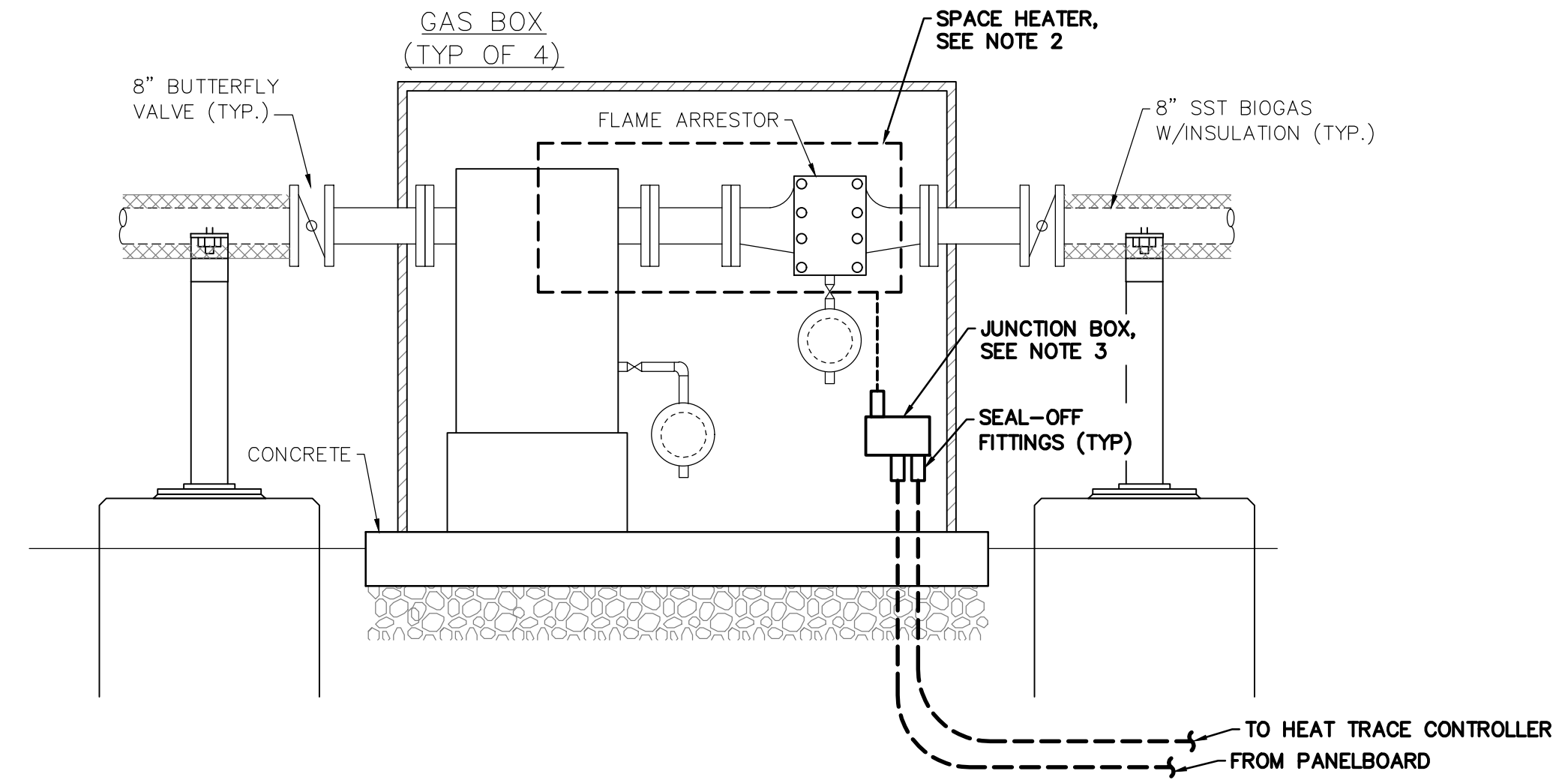
WARNING

nVent products shall be installed and used only as indicated in nVent's product instruction sheets and training materials. Instruction sheets are available at www.nvent.com and from your nVent customer service representative. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and death and/or void your warranty.

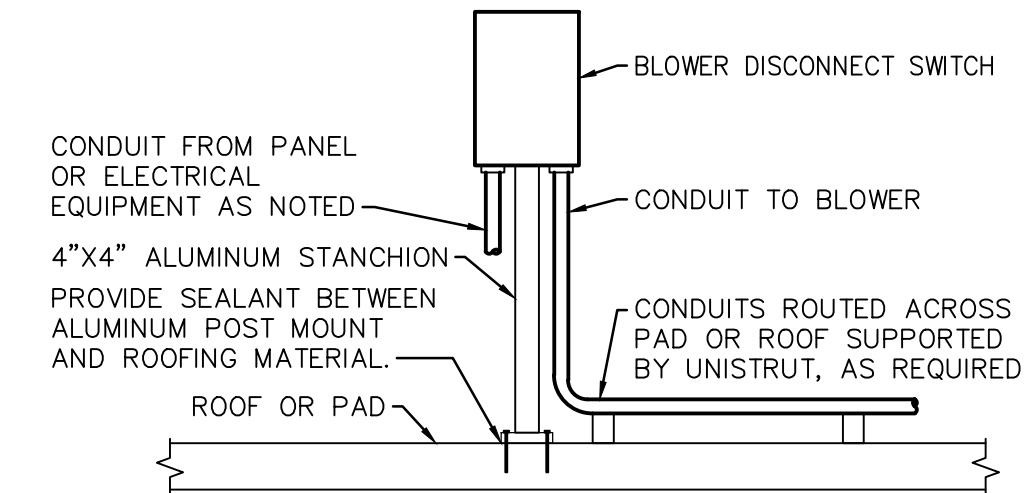
HEAT TRACE THERMOSTAT SPECIFICATION
 NOT TO SCALE

GAS HOT BOX ELECTRICAL NOTES:

- HOT GAS BOX ELECTRICAL INSTALLATION TO MEET CLASS I, DIVISION I EXPLOSION PROOF AREA.
- PROVIDE SPACE HEATER INDEECO 2.3KW, 208VAC, 3ø, RATED FOR CLASS I, DIVISION I, MODEL 254-F06 30233D WITH BUILT IN THERMOSTAT. MOUNT TO INSIDE WALL OF GAS BOX, COORDINATE MOUNTING LOCATION TO AVOID INTERFERENCES.
- PROVIDE JUNCTION, SIZED AS REQUIRED, MOUNTED TO INSIDE WALL OF GAS BOX. COORDINATE MOUNTED TO AVOID INTERFERENCES.
- ROUTE HOT BOX HEAT TRACE AND HEATER POWER CONDUCTORS UNDER PLATFORM STRUCTURE VIA DUCTBANK AS SHOWN ON PLANS. WIRING WITHIN HOTBOX SHALL MEET CLASS I DIVISION I REQUIREMENTS.



GAS HOT BOX ELECTRICAL DETAIL
 NOT TO SCALE



STANCHION MOUNTED DISCONNECT SWITCH DETAIL
 NOT TO SCALE

NO.	DATE	REVISION
A	4/05/24	ISSUED FOR CONSTRUCTION

FOR RETTEW ASSOCIATES BY:

MANAGER: STEVEN SIEGFRIED
 DESIGN BY: CHKO BY: JDW
 RRC
 DRAWN BY: CHKO BY: RRC/KJH
 GRS
 SURV. CHIEF: FELDBOOK NO. N/A
 N/A

THE CITY OF WOOSTER
 1123 OLD COLUMBUS ROAD
 WOOSTER, OH 44691

SCALE AS NOTED

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 RETTEW Associates, Inc.
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REBID BIOSOLIDS UPGRADE PROJECT
 FOR
THE CITY OF WOOSTER
WATER RESOURCE RECOVERY FACILITY
 ELECTRICAL STANDARD DETAILS - III
 CITY OF WOOSTER WAYNE COUNTY, OH

PROJ. NO.	122022001
DWG. NO.	99E-03

BASE BID
 CONTRACT No. GC 24-01