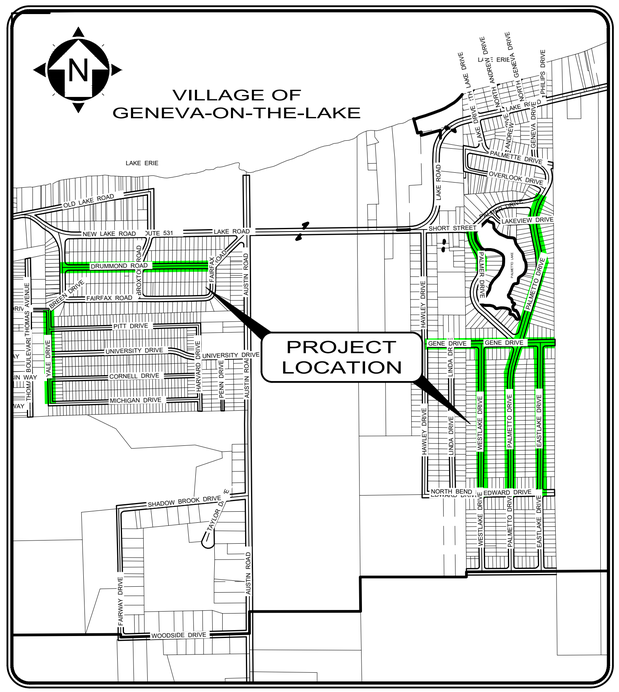
VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY SEWER EXTENSIONS
WPCLF PROJECT
ASHTABULA COUNTY, OHIO

APRIL 2026





LOCATION MAP
SCALE: 1" = 1000'

OHIO Utilities Protection SERVICE
Call Before You Dig

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-925-0988

1. THE SURVEY SHOWN ON THESE PLANS WAS OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR ANY OTHER PURPOSE.
2. UNDERGROUND BUILDING SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING AND REPLACING AS NECESSARY TO ENSURE CONTINUAL SERVICE TO BUILDINGS.
3. THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE @ 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.

verdantas

ENGINEER'S PROJECT No. 230467

GOTL
Geneva-on-the-Lake, Ohio

OFFICIALS

DWAYNE M. BENNETT, Sr. . . . . MAYOR
ALEX IAROCCI . . . . . VILLAGE ADMINISTRATOR
CHRISTOPHER NEWCOMB. . . . . VILLAGE SOLICITOR

GENEVA-ON-THE-LAKE COUNCIL

MATT CAUDILL . . . . . PRESIDENT
RYAN COLBY. . . . . MEMBER
P.J. MACCHIA . . . . . MEMBER
BJ MCMULLAN . . . . . MEMBER
CINDEE DUDECK . . . . . MEMBER
SHAWN FISCHBACH. . . . . MEMBER

STATE OF OHIO
ROBERT L. McNUTT E-58308
REGISTERED PROFESSIONAL ENGINEER

ROBERT McNUTT, P.E. — P.E. No. 58308

04/20/2026
DATE

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 03/13/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

GENERAL

COVER SHEET

PROJECT NO: 230467
DRAWING NAME: 00G-01
SHEET 1 OF 44



Sheet List Table

Sheet Number	Sheet Title	Sheet Name
GENERAL		
1	COVER SHEET	00G-01
2	SHEET INDEX	00G-02
3	SYMBOLS & LEGEND	00G-03
4	GENERAL NOTES	00G-04
5	SURVEY CONTROL - 1	00G-05
6	SURVEY CONTROL - 2	00G-06
7	SURVEY CONTROL - 3	00G-07
8	SURVEY CONTROL - 4	00G-08
PLAN AND PROFILES - 10 SERIES		
9	MANHOLE STRUCTURE TABLE	10C-01
10	YALE - STA 0+00 TO 5+00	10C-02
11	DRUMMOND - STA 0+00 TO 4+00	10C-03
12	DRUMMOND - STA 4+00 TO 6+81	10C-04
13	PALMER - STA 0+00 TO 4+50	10C-05
14	GENE - STA 0+00 TO 4+50	10C-06
15	GENE - STA 4+50 TO 8+50	10C-07
16	GENE - STA 8+50 TO 11+50	10C-08
17	WESTLAKE - STA -0+25 TO 5+00	10C-09
18	WESTLAKE - STA 5+00 TO 10+00	10C-10
19	WESTLAKE - STA 10+00 TO 15+00	10C-11
20	WESTLAKE - PALMETTO - STA 0+00 TO 3+00	10C-12
21	PALMETTO - STA 0+00 TO 4+50	10C-13
22	PALMETTO - STA 4+50 TO 9+50	10C-14
23	PALMETTO - STA 9+50 TO 14+50	10C-15
24	PALMETTO - STA 16+50 TO 21+00	10C-16
25	PALMETTO - STA 21+00 TO 25+50	10C-17
26	PALMETTO - STA 25+50 TO 28+00	10C-18
27	EASTLAKE - STA 0+00 TO 4+50	10C-19
28	EASTLAKE - STA 4+50 TO 9+50	10C-20
29	EASTLAKE - STA 9+50 TO 14+50	10C-21
30	EDWARD - STA 0+00 TO 5+00	10C-22
31	PALMETTO - EASTLAKE - STA 0+00 TO 3+00	10C-23
LIFT STATION - 20 SERIES		
32	LIFT STATION DETAIL	20D-01
33	SITE PLAN	20C-01
34	ELECTRICAL SPECIFICATIONS	20E-01
35	ELECTRICAL SINGLE LINE	20E-02
36	SITE PLAN - ELECTRICAL	20E-03
37	ELECTRICAL RACK DETAIL	20E-04
STANDARD DETAILS - SD SERIES		
38	CONSTRUCTION DETAILS	SD-01
39	CONSTRUCTION DETAILS	SD-02
40	CONSTRUCTION DETAILS	SD-03
41	CONSTRUCTION DETAILS	SD-04
SWPPP - SW SERIES		
42	SWPPP DETAILS & NOTES	SWP-01
43	SWPPP DETAILS & NOTES	SWP-02
44	SWPPP DETAILS	SWP-03

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: 1" = 250'
DATE: 8/25/2025
DESIGNED BY: TJM
DRAWN BY: RLM
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

GENERAL

SHEET INDEX

PROJECT NO: 230467
DRAWING NAME: 00G-02
SHEET 2 OF 44

EXISTING PLAN LINE SYMBOLOGY:

- FENCE, GENERAL
- FENCE, BARBED WIRE
- FENCE, CHAIN LINK
- FENCE, DECORATIVE
- FENCE, ELECTRIC
- FENCE, VINYL
- FENCE, WOOD
- FENCE, WOVEN WIRE
- CABLE RAIL
- GUARDRAIL
- HANDRAIL
- TELEPHONE, ABANDONED
- TELEPHONE
- TELEPHONE, OH
- TELEPHONE, UG
- TELEPHONE, SERVICE
- TELEPHONE, SERVICE OH
- TELEPHONE, SERVICE, UG
- ELECTRIC, ABANDONED
- ELECTRIC, DUCT BANK
- ELECTRIC
- ELECTRIC, OH
- ELECTRIC, UG
- ELECTRIC, SERVICE
- ELECTRIC, SERVICE OH
- ELECTRIC, SERVICE, UG
- GAS, ABANDONED
- GAS
- GAS, SERVICE
- SANITARY, ABANDONED
- SANITARY FORCE MAIN
- SANITARY SEWER
- SANITARY SEWER / PLUG
- SANITARY LEACH LINE
- SANITARY SEWER, DOUBLE
- SANITARY SEWER, SERVICE
- STORM CULVERT
- TELEPHONE, ABANDONED
- TELEPHONE
- TELEPHONE, OH
- TELEPHONE, UG
- TELEPHONE, SERVICE
- TELEPHONE, SERVICE OH
- TELEPHONE, SERVICE, UG
- COMMUNICATION LINE
- WATER LINE, ABANDONED
- WATER LINE
- WATER LINE, SERVICE
- NON-POTABLE WATER LINE
- ALUM SOLUTION LINE
- CHLORINE SOLUTION LINE
- SULFUR DIOXIDE SOLUTION LINE
- BRUSH LINE
- BUSH LINE
- TREE LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- TOP OF BANK
- TOP OF DITCH
- BOTTOM OF DITCH
- STREAM
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- RIGHT-OF-WAY C/L
- PROPOSED EASMENT
- SURVEY STATIONING
- PAVED ROADWAY
- GRAVEL DRIVEWAY
- CURB FACE
- CURB BACK
- CURB BACK
- WETLAND AREA

EXISTING PLAN SYMBOLOGY:

- SANITARY MANHOLE
- SANITARY CLEANOUT
- SANITARY LINE CAP
- SANITARY LINE PAINT MARKING
- SANITARY STRUCTURE NUMBER
- SANITARY VENT PIPE
- STORM MANHOLE (SOLID LID)
- STORM MANHOLE (OPEN GRATE)
- CURB INLET
- CURB INLET (DOUBLE)
- CATCH BASIN
- CATCH BASIN (ROUND LID)
- CATCH BASIN (DOME)
- CATCH BASIN (SIDE INLET)
- DRAIN
- DOWNSPOUT
- STORM CLEANOUT
- STORM LINE CAP
- STORM ENDWALL
- STORM HEADWALL
- STORM LINE PAINT MARKING
- STORM STRUCTURE NUMBER
- ROCK CHANNEL PROTECTION
- SURFACE DRAINAGE FLOW
- STORM FLOOD ROUTING ARROW
- FIRE HYDRANT
- WATER SIAMESE CONNECTION
- WATER VALVE
- WATER VALVE BOX
- WATER METER
- WATER METER PIT
- WATER LINE REDUCER
- WATER LINE CAP
- WATER LINE PLUG
- WATER LINE PAINT MARKING
- POST INDICATOR VALVE
- WATER MANHOLE
- WATER FLUSHING ASSEMBLY
- WATER FIXTURE
- WATER FITTING (TEE)
- WATER FITTING (CROSS)
- WATER FITTING (45° WYE)
- WATER FITTING (11.25°)
- WATER FITTING (22.50°)
- WATER FITTING (45°)
- WATER FITTING (90°)
- IRRIGATION SPRINKLER HEAD
- IRRIGATION CONTROL BOX
- IRRIGATION BOX
- STEAM MANHOLE
- STEAM VENT
- COMBINED SEWER MANHOLE
- GAS LIGHT POST (YARD)
- GAS MANHOLE
- GAS VALVE
- GAS VALVE BOX
- GAS METER
- GAS REGULATOR
- GAS VENT PIPE
- GAS LINE PAINT MARKING
- GAS LINE FIXTURE
- ELECTRIC LIGHT POST (YARD)
- ELECTRIC MANHOLE
- ELECTRIC PULL BOX
- ELECTRIC CONTROL BOX
- ELECTRIC JUNCTION BOX
- ELECTRIC VAULT BOX
- ELECTRIC METER
- ELECTRIC PEDESTAL
- ELECTRIC RISER BOX
- ELECTRIC TRANSFORMER
- ELECTRIC HVAC UNIT
- ELECTRIC GROUND LIGHT
- ELECTRIC LINE PAINT MARKING
- CABLE TV MANHOLE
- CABLE TV PEDESTAL
- CABLE TV PAINT MARKING
- TELEPHONE MANHOLE
- TELEPHONE PULL BOX
- TELEPHONE PEDESTAL
- TELEPHONE RISER BOX
- TELEPHONE LINE PAINT MARKING
- TELEPHONE PAY PHONE
- FIBER OPTIC CABLE MANHOLE
- FIBER OPTIC CABLE PAINT MARKING
- TRAFFIC CONTROL MANHOLE
- TRAFFIC CONTROL BOX
- TRAFFIC CONTROL PAINT MARKING
- TRAFFIC PULL BOX
- TRAFFIC SIGNAL PEDESTAL
- UNKNOWN, PULL BOX
- UNKNOWN, CLEANOUT
- UNKNOWN, MANHOLE
- UNKNOWN, VALVE
- MONITORING WELL
- TEST WELL
- WATER WELL
- SOIL BORING
- SWAMP
- POLE, ELECTRIC
- POLE, TELEPHONE
- POLE, LIGHT
- POLE, LIGHT, DECORATIVE
- POLE, LIGHT-OVERHEAD
- POLE, CABLE TV
- POLE, UTILITY
- POLE, GENERAL
- POLE, TRAFFIC CONTROL
- POLE, GUY
- POLE, BRACE
- POLE, ELECTRIC/TELEPHONE
- POLE, ELECTRIC W/LIGHT
- POLE, ELECTRIC/CABLE TV
- POLE, ELECTRIC/TELEPHONE/LIGHT
- POLE, ELECTRIC/TELEPHONE/CABLE TV
- POLE, ELEC./TELE./LIGHT/CABLE TV
- POLE, TELEPHONE/LIGHT
- POLE, TELEPHONE/CABLE TV
- POLE, TELEPHONE/LIGHT/CABLE TV
- POLE, CABLE TV W/LIGHT
- POLE, GUY WIRE
- SIGN
- SIGN, DOUBLE SIDED
- SIGN, DUAL POST
- SIGN, RAILROAD
- POST
- BOLLARD
- DELINEATOR POST
- PARKING BUMPER BLOCK
- HANDICAP PARKING SYMBOL
- HANDICAP PARKING SYMBOL
- HANDICAP DETECTABLE WARNING
- MAILBOX
- PAPERBOX
- PARKING METER
- GRAVE HEADSTONE
- EX. BARBEQUE GRILL
- FUEL PUMP
- FLAG POLE
- RAISED PAVEMENT MARKER
- GUARDRAIL, CENTER POST
- GUARDRAIL, TERMINAL POST
- GUARDRAIL, BOTTOM POST
- GUARDRAIL, TOP POST
- FENCE POST
- PICNIC TABLE
- BENCH
- DECIDUOUS TREE
- EVERGREEN TREE
- STUMP
- BUSH
- IRON PIN FOUND
- SOLID IRON PIN FOUND
- IRON PIPE FOUND
- DRILL HOLE FOUND
- CHISELED "X" FOUND
- MONUMENT BOX FOUND
- MONUMENT CONCRETE FOUND
- MONUMENT RIGHT-OF-WAY FOUND
- PK NAIL FOUND
- MAG NAIL FOUND
- SPIKE FOUND
- HUB FOUND
- AXLE FOUND
- WOOD POST FOUND
- CORNER STONE FOUND
- AERIAL TARGET FOUND
- GPS CONTROL FOUND
- BENCHMARK FOUND

ADDITIONAL PLAN SYMBOLOGY:

- BORING / RECEIVING PIT
- CLEARING AND GRUBBING AREA, INCLUDING TREE REMOVAL
- PAVEMENT REPLACEMENT
- TO BE REMOVED OR ABANDONED IN PLACE - AS NOTED

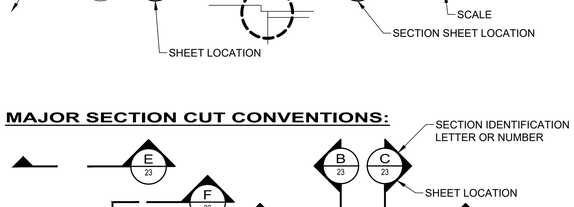
SERIES INFORMATION:

GENERAL - 00 SERIES
CIVIL - 10 SERIES
PUMP STATION - 20 SERIES
EROSION CONTROL - 30 SERIES

DISCIPLINE INFORMATION:

IDENTIFIER:	DISCIPLINE:
G	GENERAL
C	CIVIL
S	STRUCTURAL
A	ARCHITECTURAL
D	PROCESS
M	MECHANICAL (PLUMBING & HVAC)
E	ELECTRICAL
Y	INSTRUMENTATION

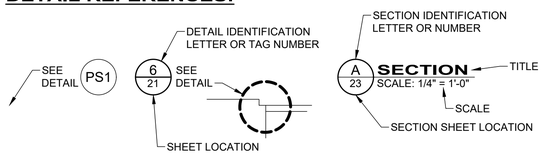
INDEX EXPLAINATION:



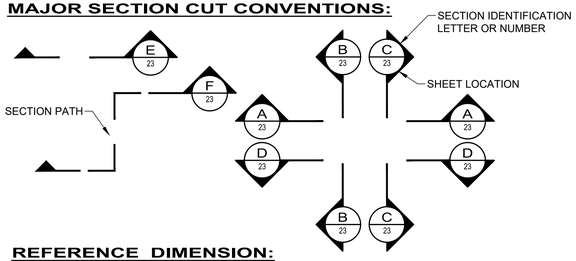
GENERAL SYMBOLOGY NOTES:

1. THIS IS A STANDARD SHEET SHOWING COMMONLY USED SYMBOLOGY.
2. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
3. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE NEW IMPROVEMENTS SO AS TO HIGHLIGHT SPECIFIC TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.
4. SYMBOLOGY OR DIAGRAMMATICAL LEGENDS MAY BE SHOWN ON INDIVIDUAL SHEETS FOR SCHEDULES, DIAGRAMS, DETAILS, SCHEMATICS OR EQUIPMENT.

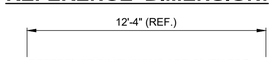
DETAIL REFERENCES:



MAJOR SECTION CUT CONVENTIONS:



REFERENCE DIMENSION:



REFERENCE DIMENSIONS ARE GIVEN FOR INFORMATION ONLY. THEY ARE CALCULATED DIMENSIONS NOT INTENDED TO BE USED WITHOUT FIELD VERIFICATION AND ARE USEFUL IN SHOWING INTENDED DESIGN.

DRAWING CODED NOTE TYPES:

1. CONTRACTUAL NOTES ARE DEPICTED WITH A HEXAGON, SQUARE, CIRCLE OR TRIANGLE. ALL OTHER EXISTING WRITTEN CALLOUTS SHOWN ON THE REUSED SCANNED PLANS, SECTIONS & DETAILS ARE FOR EXISTING CONDITIONS AND REFERENCE ONLY, MANY OF THOSE NOTES FROM THE SCANNED DRAWINGS PERTAIN TO PREVIOUS WORK DONE.

PLAN REVISIONS:

- A REVISION DESCRIPTION
- B REVISION DESCRIPTION

DEMOLITION CODED NOTES:

1. DEMOLITION DESCRIPTION
2. DEMOLITION DESCRIPTION

ABBREVIATIONS

VALVE OPERATOR ID:

CH = CHAIN
EM = ELECTRIC MOTOR
ES = EXTENSION STEM
FB = FLOOR BOX
FS = FLOOR STAND
GE = GEAR
HC = HYDRAULIC CYLINDER
HW = HANDWHEEL
LE = LEVER
LW = "L" WRENCH
ON = OPERATING NUT
PC = PNEUMATIC CYLINDER
PD = PNEUMATIC DIAPHRAGM
TW = "T" WRENCH
VB = VALVE BOX

PIPE END JOINT ID:

BE = BELL
CM = COMPRESSION
FL = FLANGED
GR = GROOVED
LU = LUG
MJ = MECHANICAL JOINT
NPT = NATIONAL PIPE THREAD
RJ = RESTRAINED JOINT
PE = PLAIN END
S = SOLDERED
SJ = SLIP JOINT (PUSH ON)
SW = SOLVENT WELDED
TH = THREADED
W = WELDED

GATE ABBREVIATIONS:

BG - BULKHEAD GATE
SG - SLIDE GATE
SP - STOP PLATE
SL - STOP LOG
ALUM - ALUMINUM
SS - STAINLESS STEEL
CI - CAST IRON
POLY - POLYMER
B/C - BOTTOM OF CHANNEL
T/C - TOP OF CHANNEL
A - HEIGHT
B - WIDTH

PIPE MATERIAL ID:

BR = BRASS
BS = BLACK STEEL
BZ = BRONZE
CI = GRAY CAST IRON
CU = COPPER
CS = CAST IRON
CT = CARBON STEEL TUBING
DIP = DUCTILE IRON PIPE
DR = DIAMETER RATIO
FRP = FIBERGLASS REINFORCED PLASTIC
GS = GALVANIZED STEEL
HDPE = HIGH-DENSITY POLYETHYLENE PIPE
PVC = POLYVINYL CHLORIDE PIPE
SS = STAINLESS STEEL
STL = STEEL PIPE
SDR = STANDARD DIAMETER RATIO
SCH = SCHEDULE

VALVE ID:

AC = AIR CHECK VALVE
AN = ANGLE VALVE
AR = AIR RELEASE VALVE
AV = AIR & VACUUM VALVE
BA = BALL VALVE
B'FLY = BUTTERFLY VALVE
BK = BACKPRESSURE VALVE
BP = BACKFLOW PREVENTER
CV = CHECK VALVE
CO = C0NE VALVE
GV = GATE VALVE
GL = GLOBE VALVE
KG = KNIFE GATE VALVE
KN = KNIFE VALVE
MV = MUD VALVE
PD = PLUG DRAIN VALVE
PF = PRESSURE RELIEF
PG = PRESSURE REGULATOR
PI = PINCH VALVE
PV = PLUG VALVE
PRV = PRESSURE REDUCING VALVE
PT = PRESSURE TEMPERATURE RELIEF
RF = RATE-OF-FLOW CONTROLLER
SV = SOLENOID VALVE
SU = SURGE VALVE
TE = TELESCOPING VALVE
TM = TEMPERATURE CONTROL VALVE

EQUIPMENT ID:

AC = AIR COMPRESSOR
AER = AERATOR
B = BLOWER
BFP = BELT FILTER PRESS
CLS = CLASSIFIER
C = COMMUNITOR
CMP = COMPACTOR
CFD = CHEMICAL FEEDER
CNV = CONVERYOR
CNT = CENTRIGUGE
CC = CALIBRATION CYLINDER
CFD = CHEMICAL FEEDER
CP = CONTROL PANEL
CR = CRANE
D = DECANTER
DR = DRIVE
DFL = DISC FILTER
F = FAN
FL = FILTER
FM = FLOW METER
GBT = GRAVITY BELT THICKENER
GR = GRINDER
GEN = GENERATOR
HB = HOSE BIB
M = MOTOR
MX = MIXER
P = PUMP
PS = PUMP STATION
SMP = SAMPLER
SCR = SCREEN

OTHER:

ADD'L = ADDITIONAL
AGG = AGGREGATE
ALUM. = ALUMINUM
BTWN = BETWEEN
C/L = CWNTERLINE
CLR = CLEAR
CONC = CONCRETE
CONT = CONTINUOUS
DWL = DOWEL(S)
EF = EACH FACE
EL. = ELEVATION
EMBED = EMBEDMENT
EW = EACH WAY
FF = FINISH FLOOR
FG = FINISH GRADE
FND = FOUNDATION
HORIZ = HORIZONTAL
HP = HIGH POINT
LP = LOW POINT
MAX = MAXIMUM
MFR = MANUFACTURER
MIN = MINIMUM
REF = REFERENCE
REINF = REINFORCING
STRC = STRUCTURE
T/ = TOP OF
TYP = TYPICAL
UNO = UNLESS NOTED OTHERWISE
VERT = VERTICAL

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 9/29/23
DESIGNED BY: TJM
DRAWN BY: RLM
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

GENERAL
SYMBOLS & LEGEND

PROJECT NO: 230467
DRAWING NAME: 00G-03
SHEET 3 OF 44

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF GENEVA-ON-THE-LAKE, THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATIONS. WHEN IN CONFLICT THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

2. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS SHALL BE NEW AND BOTH WORKMANSHIP AND MATERIALS SHALL BE OF PREMIUM QUALITY, PROPER AND SUFFICIENT FOR THE PURPOSE CONTEMPLATED. THE CONTRACTOR SHALL FURNISH, IF SO REQUIRED, SATISFACTORY EVIDENCE AS TO TYPE AND QUALITY OF MATERIALS AND WORKMANSHIP.

3. ALL ITEMS OF EQUIPMENT AND/OR MATERIAL PROPOSED BY THE CONTRACTOR FOR SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER IN WRITING AND SHALL BE EQUAL OR SUPERIOR TO THE ITEMS SPECIFIED IN THE CONTRACT DOCUMENTS. IF SAID SUBSTITUTION PROPOSED BY THE CONTRACTOR FOR A SPECIFIED ITEM REQUIRES ENGINEERING REVISIONS, THE TOTAL EXPENSE OF SAID REVISIONS SHALL BE PAID BY THE CONTRACTOR.

4. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY ALL CHARGES AND FEES AS MAY BE NECESSARY AND REQUIRED BY THE VILLAGE OR STATE.

5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM THEIR WORK IN SUCH A MANNER AS NOT TO DAMAGE OR DESTROY ANY EXISTING FEATURE, (I.E. EXISTING INLETS, CONDUITS, ETC.) WHICH IS NOT MARKED FOR REPLACEMENT OR REMOVAL. IF ANY SUCH DAMAGE DOES OCCUR DUE TO THE OPERATIONS OF THE CONTRACTOR, THEY SHALL REPLACE THE DAMAGED PORTION AT HIS EXPENSE.

6. THE CONTRACTOR SHALL EXERCISE DUE CARE DURING CONSTRUCTION SO AS NOT TO DESTROY ANY TREES, PLANTS, SHRUBS OR STRUCTURES OUTSIDE OF THE INDICATED WORK LIMITS AND THOSE NOT SPECIFICALLY MARKED FOR REMOVAL OR RELOCATION WITHIN THE WORK LIMITS.

7. IN SOME INSTANCES, THE CONTRACTOR WILL BE REQUIRED TO EXCAVATE UNDER AND AROUND THE EXISTING UTILITIES. EXTREME CARE SHOULD BE USED NOT TO DAMAGE THE UTILITY DURING THIS OPERATION.

8. ALL EXISTING PAVEMENT SHALL BE SAW CUT WITH A DIAMOND TIPPED BLADE BEFORE REMOVAL TO OBTAIN UNIFORM EDGE.

9. DIMENSIONS ARE TO THE EDGE OF PAVEMENT OR SIDEWALK UNLESS OTHERWISE INDICATED.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A MAINTENANCE OF TRAFFIC PLAN AND SCHEDULE FOR APPROVAL WITH THE ENGINEER.

11. EXISTING CONDITIONS ARE BASED ON A COMBINATION OF FIELD WORK OBTAINED BY CT CONSULTANTS, UTILITY PROVIDED RECORD DRAWINGS, AVAILABLE GIS DATA, AND PRELIMINARY DESIGN INFORMATION.

12. THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE GENEVA ON THE LAKE DEPARTMENT OF UTILITIES DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS AND THE CONTRACTOR IS ULTIMATELY RESPONSIBLE TO CONFIRM THE PRESENCE AND LOCATION OF ANY AND ALL EXISTING UTILITIES.

13. WHERE EXISTING POWER OR TELEPHONE POLES ARE IN CLOSE PROXIMITY TO WORK, THE CONTRACTOR SHALL COORDINATE THEIR WORK EFFORTS WITH THOSE OF THE UTILITY COMPANIES SUCH THAT THEIR EXISTING FACILITIES CAN BE MAINTAINED AND PROTECTED DURING THE TIME WORK IS GOING ON ADJACENT TO THE POLE. THE COST FOR ANY REQUIRED PROTECTION OR RELOCATION OF EXISTING POWER OR TELEPHONE POLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NOT BE THE RESPONSIBILITY OF THE GENEVA ON THE LAKE DEPARTMENT OF UTILITIES.

14. DELAYS TO THE CONTRACTOR AS A RESULT OF TIMING OF POLE RELOCATION OR PROTECTION SHALL NOT BE CONSIDERED COMPENSABLE DELAYS, AS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS WORK WITH THE UTILITY COMPANY'S SCHEDULE.

15. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL THE EXISTING GAS, WATER, ELECTRIC, CABLE, TELEPHONE, OR OTHER UNDERGROUND UTILITIES PRIOR TO THE INSTALLATION OF ANY PROPOSED IMPROVEMENT INDICATED ON THE PLANS. SHOULD A CONFLICT EXIST AT A UTILITY CROSSING, THE PROJECT ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

16. 48 HOURS PRIOR TO ANY EXCAVATION NOTIFY OHIO ONE CALL @ 811.

17. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA): IT SHALL BE THE FULL AND COMPLETE RESPONSIBILITY OF THE CONTRACTOR TO MEET AND COMPLY WITH SAFETY REQUIREMENTS AND REGULATIONS AS ESTABLISHED BY OSHA OR ANY OTHER REGULATORY BODY.

18. ALL MATERIALS TO BE REMOVED FROM THE SITE SHALL BE DISPOSED AT A LICENSED FACILITY PER ALL APPLICABLE STATE, FEDERAL AND LOCAL REGULATIONS.

19. TRENCH BACKFILL SHALL BE COMPACTION TESTED FOR EVERY 1' OF FILL PLACED WITHIN LIMITS OF A DRIVEWAY OR PROVIDE FLOWABLE FILL BACKFILL IN ACCORDANCE WITH SPECIFICATION SECTION 310000.

20. DEWATERING WILL BE REQUIRED ON THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN WATER LEVELS IN OPEN TRENCHES AND DISCHARGE IN ACCORDANCE WITH ASHTABULA COUNTY SOIL AND WATER CONSERVATION DISTRICT. DEWATERING SHALL BE PAID UNDER A LUMP SUM ITEM.

21. CONTRACTOR SHALL DEVELOP A DEWATERING SYSTEM THAT WILL ENSURE WELL WATER SERVICE IS MAINTAINED FOR ALL PROPERTIES WITHIN THE PROJECT LIMITS FOR THE DURATION OF CONSTRUCTION. NO ADDITIONAL PAYMENT SHALL BE MADE IN THE EVENT TEMPORARY WATER IS REQUIRED FOR PRIVATE WELLS AFFECTED BY THE DEWATERING OPERATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO SUPPLY WATER UNTIL WELL SERVICE IS RESESTABLISHED IN ANY AND ALL AFFECTED HOMES.

22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH ODOT ITEM 207 AND AS REQUIRED BY THE ASHTABULA COUNTY SOIL AND WATER CONSERVATION DISTRICT.

23. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY, SUCH AS CALCIUM CHLORIDE, WATER OR A MOTORIZED DUST-FREE STREET SWEEPING DEVICE, AS DIRECTED BY THE ENGINEER, TO MAINTAIN ALL ROADWAYS BEING USED ALONG THE CONSTRUCTION SITE. PAYMENT FOR ALL SOIL EROSION, SEDIMENT AND DUST CONTROL MEASURES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER VARIOUS ITEMS.

24. PROPERTY PINS AND MONUMENTS NEAR THE IMPROVEMENT, WHICH MAY BE DISTURBED BY THE CONTRACTOR, SHALL BE REFERENCED BY A PROFESSIONAL SURVEYOR, SO THEY CAN BE REPLACED IN THE EVENT THAT THEY ARE DISTURBED DURING CONSTRUCTION. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT ALL PINS, MONUMENTS AND REFERENCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF LOCATING AND REFERENCING AND REPLACING THE PROPERTY PINS AND MONUMENTS AS DIRECTED BY THE ENGINEERS.

25. THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM THEIR OPERATION AND RESTORE ALL SURFACES, STRUCTURES, DITCHES AND PROPERTY TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER. ANY DITCHES DISTURBED DURING CONSTRUCTION SHALL BE REGRADED BY THE END OF THE SAME WORK DAY. THE COST FOR THIS WORK SHALL BE COVERED UNDER THE COST PER LINEAL FOOT OF SEWER.

26. ALL EXISTING STORM AND SANITARY SEWER FACILITIES, INCLUDING TILE, DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED OR RECONNECTED TO THE EXISTING OR PROPOSED SYSTEM AS DIRECTED BY THE ENGINEER.

27. RESTORATION SHALL INCLUDE SEEDING AND MULCHING OF DISTURBED AREAS, RESTORATION OF EXISTING DRIVES AND FINAL CLEAN UP.

28. THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL BENCH MARKS, PROPERTY LINE REFERENCES (E.G., PINS, PIPES, MONUMENTS), REFERENCE POINTS, STAKES AND ANY OTHER SURVEY REFERENCE. IN CASE OF DISTURBANCE, THE CONTRACTOR SHALL ENGAGE A REGISTERED SURVEYOR TO REPLACE THEM AT THE CONTRACTOR'S EXPENSE AND SHALL BE RESPONSIBLE FOR ANY ERRORS THAT MAY BE CAUSED BY THEIR LOSS OR DISTURBANCE. ALL NOTES AND CALCULATIONS USED IN RESETTING OR REPLACEMENT OF PROPERTY PINS, MONUMENTS, REFERENCE POINTS, AND ANY OTHER SURVEY REFERENCE SHALL BE STAMPED, SIGNED AND DATED BY THE REGISTERED SURVEYOR AND COPIES PROVIDED TO THE OWNER.

29. SURVEY AND STREET ALIGNMENTS SHOWN ON THESE PLANS WERE OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR OTHER PURPOSES.

SANITARY SEWER NOTES

1. SANITARY SEWERS SHALL MAINTAIN A MINIMUM OF 18" VERTICAL AND 10' HORIZONTAL FROM ANY WATER MAIN.

2. SANITARY SEWER MUST BE A MINIMUM OF 4' HORIZONTALLY, MEASURED EDGE-TO-EDGE, FROM STORM SEWERS AND GAS LINES AND MUST MAINTAIN A MINIMUM 18" VERTICAL CLEARANCE AT ANY UTILITY LINE

3. SANITARY SEWER AND MANHOLE TESTING REQUIREMENTS:
   - 3.1. LEAKAGE TESTING SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH SPECIFICATION SECTION 013319 AND RSFW 33.93 AND 33.94.
   - 3.2. DEFLECTION TESTING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 013319 AND RSFW 33.85.
   - 3.3. MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH SPECIFICATION SECTION 013319 AND RSFW 34.7.

4. TRENCHING, BEDDING, AND BACKFILL SPECIFICATIONS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTIONS 310000 AND 331000 AND CONSTRUCTION DETAILS.

5. SANITARY SEWER FOR OPEN CUT SHALL BE PVC SDR 26 OR SDR 35 PER DEPTH AS OUTLINED IN 333100, ASTM D3034, JOINT SPEC ASTM D3212 OR APPROVED EQUIVALENT

6. CONTRACTOR SHALL INSTALL DROP STRUCTURES IF INVERTS ARE MODIFIED AND PIPE INLET INVERT ABOVE THE MANHOLE INVERT IS 24" OR GREATER.

7. WHEN EMPTY DURING CONSTRUCTION, THE STRUCTURES MAY BECOME BUOYANT. IN THE EVENT THAT THE EXCAVATIONS BECOME FLOODED, THE STRUCTURES MUST BE FILLED WITH WATER TO PREVENT FLOTATION OR THE EXCAVATION IS TO BE KEPT DEWATERED.

8. ALL MANHOLES WITHIN WETLANDS OUTSIDE THE EXISTING ROADWAY SHALL HAVE THE RIM PLACED MIN. 1 FOOT ABOVE GRADE AND SHALL HAVE WATERTIGHT LIDS.

9. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SHALL BE PROHIBITED BY ENFORCEMENT OF LEGALLY ADOPTED RULES BY THE AUTHORITY REGULATING THE USE OF SANITARY SEWERS.

10. PLACE MARKERS AT END OF LATERAL OR STUBS, AT RIGHT OF WAY LOCATION NEAR TERMINATION POINT OF THE STUB.

MAINTENANCE OF TRAFFIC

1. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN PEDESTRIAN AND LOCAL ROADWAY ACCESS AT ALL TIMES. THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY STONE DRIVES WITH A MATERIAL WHICH IS APPROVED IN WRITING BY THE ENGINEER. THE CONTRACTOR SHALL INSTALL TEMPORARY TRENCH TOPPING (SEE DETAIL) IN ALL ROADS AS PART OF THE BACKFILLING OPERATION. THE TEMPORARY PAVEMENT AND STONE DRIVES SHALL BE MAINTAINED TO THE SATISFACTION OF THE ENGINEER. COST FOR ALL MATERIALS, LABOR AND EQUIPMENT FOR CONSTRUCTION MAINTENANCE AND SUBSEQUENT REMOVAL SHALL BE INCLUDED IN THE UNIT PRICES FOR ALL ITEMS OF THE PROPOSAL.

2. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". AS A MINIMUM THE CONTRACTOR SHALL SUBMIT A PROPOSED TRAFFIC CONTROL PLAN FOR REVIEW AND ACCEPTANCE BY THE ENGINEER PRIOR TO BEGINNING WORK.

3. ACCESS MUST BE MAINTAINED FOR RESIDENCES, EMERGENCY VEHICLES AND PEDESTRIANS, INCLUDING PERSONS WITH DISABILITIES, AT ALL TIMES.

4. AT ALL EXCAVATION LOCATIONS THE CONTRACTOR SHALL PROVIDE SUITABLE FLASHERS, BARRICADES, AND TRAFFIC CONTROL DEVICES AS DEEMED NECESSARY BY THE ENGINEER AND IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

5. THE CONTRACTOR SHALL PHASE CONSTRUCTION SUCH THAT AT A MINIMUM, ONE ACCESS LANE IS AVAILABLE FOR LOCAL VEHICULAR TRAFFIC. THE PAVEMENT SURFACE SHALL HAVE A UNIFORM SURFACE TO THE SATISFACTION OF GENEVA-ON-THE-LAKE. THE SAME ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS. ALL OTHER AREAS SHALL BE CLOSED TO TRAFFIC WITH SIGNS AND BARRICADES TO ODOT STANDARDS. THE SURFACES SHALL CONSIST OF THE FOLLOWING MATERIALS:
   - 5.1. EXISTING PAVEMENT SURFACE.
   - 5.2. ODOT 304 LIMESTONE TEMPORARY TRENCH TOPPING

PROHIBITED CONSTRUCTION ACTIVITIES

1. THE USE OF EXPLOSIVES, UNLESS A PERMIT IS ISSUED BY THE OWNER.

2. PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, STREAM CORRIDORS, OR STORM SEWERS; ALL SUCH WATER WILL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE.

3. DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE, OR ANY OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.

4. STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES.

5. RUNNING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT PERMISSION OF THE PROPERTY OWNER AND THE CONSENT OF THE ENGINEER.

6. OPERATION ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS OUTSIDE THE HOURS OF 8:00 AM AND 5:00 PM OR OUTSIDE THE HOURS ALLOWED BY LOCAL ORDINANCES OR REGULATIONS.

7. CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE ENGINEER AND CLOSING CLEAR ACCESS:
   - 7.1. BY FIRE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES;
   - 7.2. BY THE PUBLIC TO ANY COMMERCIAL OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR PLACE OF RESIDENCE; OR
   - 7.3. BY VEHICLES TO DRIVEWAYS WITHOUT THE PROVISION OF ALTERNATIVE MEANS OF BUILDING INGRESS AND EGRESS.

9. DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.

10. LOCATING STOCKPILE STORAGE AREAS IN ENVIRONMENTALLY SENSITIVE AREAS.

11. INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.

12. PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM.

13. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.

14. DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS.

15. DISCHARGING INJURIOUS SILICA DUST CONCENTRATIONS INTO THE ATMOSPHERE RESULTING FROM BREAKING, CUTTING, CHIPPING, RILLING, BUFFING, GRINDING, POLISHING, SHAPING OR SURFACING CLOSER THAN 200 FEET TO PLACES OF RESIDENCES OR COMMERCIAL, PROFESSIONAL, QUASI-PUBLIC OR PUBLIC PLACES OF HUMAN OCCUPATION.

AIR POLLUTION AND NOISE CONTROL PRACTICES

1. CONSTRUCTION ACTIVITIES WILL BE LIMITED TO WEEKDAY DAYTIME HOURS, UNLESS APPROVED IN ADVANCE BY THE OWNER.

2. CONSTRUCTION EQUIPMENT WILL BE PROVIDED WITH INTAKE SILENCERS AND MUFFLERS, AS REQUIRED BY SAFETY STANDARDS.

3. PERIODICALLY CHECK EQUIPMENT AND MACHINERY FOR PROPER TUNING TO MINIMIZE EXHAUST EMISSIONS AND NOISE.

4. ALL CONSTRUCTION VEHICLES SHOULD BE EQUIPPED WITH PROPER EMISSIONS CONTROL EQUIPMENT.

5. UNPAVED AREAS WILL BE WET DOWN (AS NECESSARY) DURING CONSTRUCTION TO MINIMIZE DUST GENERATION.

ARCHAEOLOGICAL AND HISTORICAL RESOURCES

1. CONTRACTORS AND SUBCONTRACTORS ARE REQUIRED UNDER OHIO REVISED CODE (O.R.C.) SECTION 149.53, TO NOTIFY THE OHIO HISTORICAL SOCIETY AND THE OHIO HISTORIC SITE PRESERVATION BORAD OF ARCHAEOLOGICAL DISCOVERIES LOCATED IN THE PROJECT AREA AND TO COOPERATE WITH THOSE ENTITIES IN ARCHAEOLOGICAL AND HISTORIC SURVEYS AND SALVAGE EFFORTS IF SUCH DISCOVERIES ARE UNCOVERED WITHIN THE PROJECT AREA.

CONTACT: STATE HISTORIC PRESERVATION OFFICE
PHONE: 614.298.2000

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

GENERAL

GENERAL NOTES

PROJECT NO: 230467
DRAWING NAME: 00G-04
SHEET 4 OF 44

BAR SCALE

50 25 0 50

SCALE: 1"= 50'

SURVEYOR'S NOTES

1) HORIZONTAL DATUM IS NAD 1983 (2011 ADJ.), OHIO NORTH ZONE, ESTABLISHED BY UTILIZING THE OHIO DEPARTMENT OF TRANSPORTATION'S VIRTUAL REFERENCE SYSTEM.

2) VERTICAL DATUM= NORTH AMERICAN VERTICAL DATUM GEOID 18 AS ESTABLISHED BY UTILIZING THE OHIO DEPARTMENT OF TRANSPORTATION'S VIRTUAL REFERENCE SYSTEM.

3)THE UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES LOCATED HERE ON COMPRISE OF ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES LOCATED ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION MADE AVAILABLE.

OUPS TICKET NUMBERS:

A314401526-00A, A314401682-00A, A314401734-00A, B313901455-00B, B313901491-00B, B313901529-00B, A314401526-00A, A314401682-00A, A314401734-00A, B313901455-00B, B313901491-00B, B313901529-00B,

4) FIELD WORK WAS PERFORMED DURING THE MONTHS OF JUNE AND JULY, 2023

5) SUBJECT PROPERTY IS LOCATED WITHIN FEMA FLOOD ZONE "X" AS PUBLISHED IN FEMA PANEL NUMBER 39007C0127E AND 39007C0131E, AUGUST 28TH, 2019



LEGEND:

- BENCHMARK
- I.PIN TO BE SET
- I.PIN FOUND
- I.PIPE FOUND
- LIMITS OF PUBLIC R/W
- CENTERLINE PUBLIC R/W
- PARCEL LINES
- SUBDIVISION LINES
- 5' TEMPORARY EASEMENT

POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	804429.9170	2397019.7820	604.29	Iron Pin (Fnd)
4	803471.7850	2397021.6260	602.38	Iron Pin (Fnd)
5	803467.6330	2396710.6150	602.26	Iron Pin (Fnd)
20	804376.3380	2396994.1540	603.35	Iron Pin (Fnd)
21	804223.8750	2396895.0370	597.39	Iron Pin (Fnd)
22	804192.5400	2396895.2170	596.18	Iron Pin (Fnd)
23	804193.7030	2396995.2610	599.17	Iron Pin (Fnd)
26	803491.8420	2397054.8190	602.00	Iron Pin (Fnd)
27	803467.5150	2396789.9540	603.39	Iron Pin (Fnd)
30	804019.5190	2396997.0370	598.26	Iron Pin (Fnd)
31	803828.7460	2397037.6670	584.85	Iron Pipe (Fnd)

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 9/29/23
DESIGNED BY: ---
DRAWN BY: ---
CHECKED BY: ---

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

GENERAL

SURVEY CONTROL - 1

PROJECT NO: 230467
DRAWING NAME: 24PP-02
SHEET 5 OF 44

BAR SCALE

50 25 0 50

SCALE: 1"= 50'

SURVEYOR'S NOTES

1) HORIZONTAL DATUM IS NAD 1983 (2011 ADJ.), OHIO NORTH ZONE, ESTABLISHED BY UTILIZING THE OHIO DEPARTMENT OF TRANSPORTATION'S VIRTUAL REFERENCE SYSTEM.

2) VERTICAL DATUM= NORTH AMERICAN VERTICAL DATUM GEOID 18 AS ESTABLISHED BY UTILIZING THE OHIO DEPARTMENT OF TRANSPORTATION'S VIRTUAL REFERENCE SYSTEM.

3)THE UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES LOCATED HERE ON COMPRISE OF ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES LOCATED ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION MADE AVAILABLE.
OUPS TICKET NUMBERS:
A314401526-00A, A314401682-00A, A314401734-00A, B313901455-00B, B313901491-00B, B313901529-00B, A314401526-00A, A314401682-00A, A314401734-00A, B313901455-00B, B313901491-00B, B313901529-00B,

4) FIELD WORK WAS PERFORMED DURING THE MONTHS OF JUNE AND JULY, 2023

5) SUBJECT PROPERTY IS LOCATED WITHIN FEMA FLOOD ZONE "X" AS PUBLISHED IN FEMA PANEL NUMBER 39007C0127E AND 39007C0131E, AUGUST 28TH, 2019

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
6	803213.3590	2396405.7355	597.73	Iron Pin (Set)
10	802963.8057	2397053.8628	603.80	Iron Pin (Set)
11	802633.0190	2396999.6000	604.95	Iron Pin (Set)
25	803307.2970	2397006.7260	604.58	Iron Pipe (Fnd)
28	803393.0360	2396609.9840	597.31	Iron Pin (Fnd)
29	803052.2890	2396480.0800	599.95	Iron Pin (Fnd)
33	803265.3130	2396131.6440	599.47	Iron Pin (Fnd)
34	803204.5960	2396111.8680	601.12	Iron Pipe (Fnd)
35	803207.2210	2396311.7910	602.42	Iron Pipe (Fnd)
50	803232.0033	2397014.0301	605.09	Iron Pipe (Fnd)
51	803007.5748	2397057.9138	605.64	Iron Pin (Fnd)
52	802737.0470	2397044.3856	604.86	Iron Pin (Fnd)
70	802971.8550	2396510.0681	602.89	Iron Pin (Set)
71	802896.0606	2396540.4867	604.62	Benchmark (Set)
72	803192.3388	2396448.6213	597.13	Benchmark (Set)
1478	802433.6877	2396017.5049	602.85	Iron Pipe (Fnd)

LEGEND:

- BENCHMARK
- I.PIN TO BE SET
- I.PIN FOUND
- I.PIPE FOUND
- LIMITS OF PUBLIC R/W
- CENTERLINE PUBLIC R/W
- PARCEL LINES
- SUBDIVISION LINES
- 5' TEMPORARY EASEMENT

SHORT STREET

HAWLEY DRIVE

PALMER STREET

LAKEVIEW DRIVE

PALMER DRIVE

PALMETTO DRIVE

EX. R/W

33 599.47 Iron Pin (Fnd)

34 601.12 Iron Pipe (Fnd)

35 602.42 Iron Pipe (Fnd)

6 597.73 Iron Pin (Set)

72 597.13 Benchmark (Set)

28 597.31 Iron Pin (Fnd)

25 604.58 Iron Pipe (Fnd)

50 605.09 Iron Pipe (Fnd)

29 599.95 Iron Pin (Fnd)

51 605.64 Iron Pin (Fnd)

10 603.80 Iron Pin (Set)

70 602.89 Iron Pin (Set)

71 604.62 Benchmark (Set)

52 604.86 Iron Pin (Fnd)

11 604.95 Iron Pin (Set)

1478 602.85 Iron Pipe (Fnd)

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

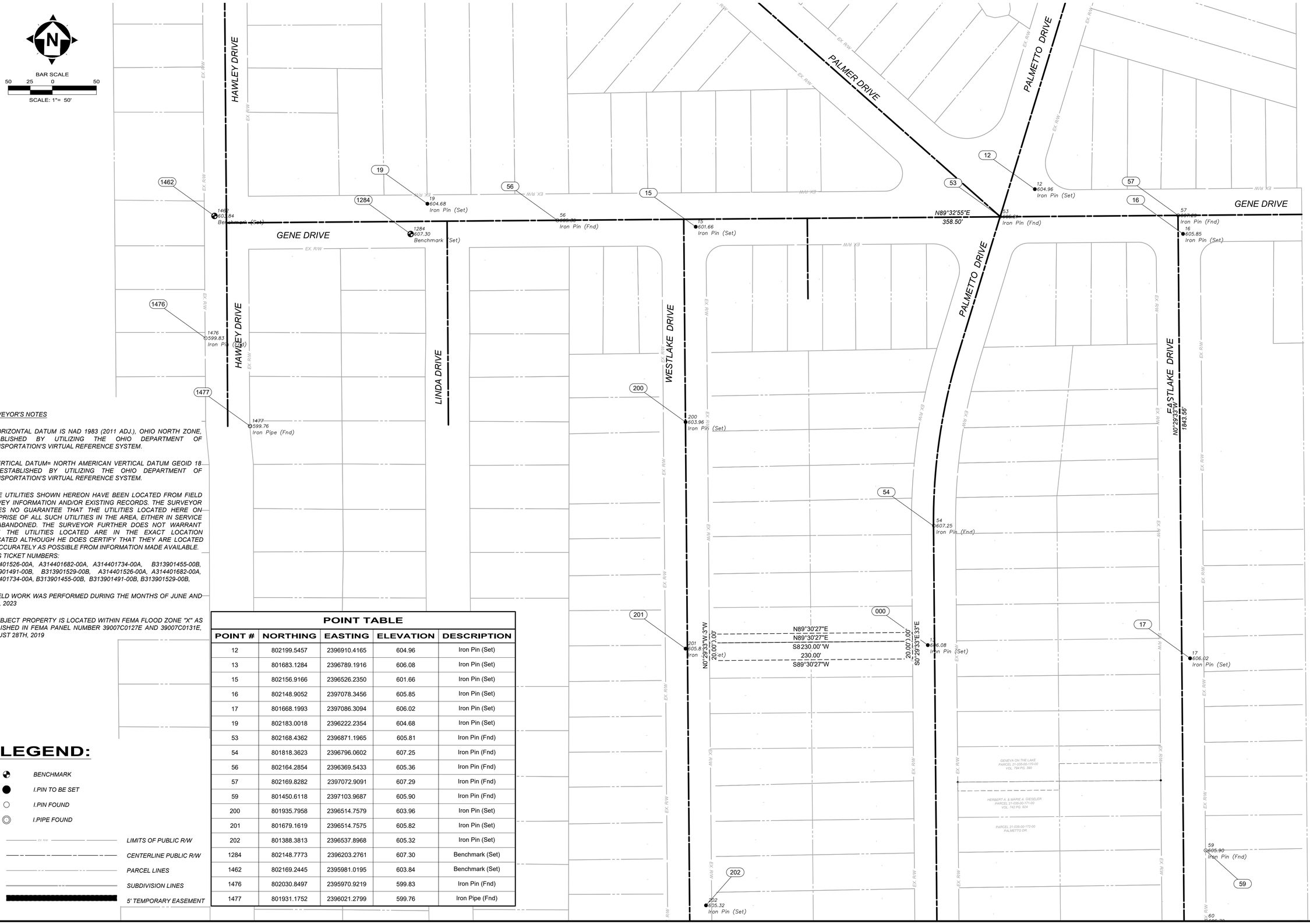
SCALE: 1" = 50'
DATE: 9/29/23
DESIGNED BY: ---
DRAWN BY: --
CHECKED BY: ---

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

GENERAL

SURVEY CONTROL - 2

PROJECT NO: 230467
DRAWING NAME: 24PP-02
SHEET 6 OF 44



SURVEYOR'S NOTES

1) HORIZONTAL DATUM IS NAD 1983 (2011 ADJ.), OHIO NORTH ZONE, ESTABLISHED BY UTILIZING THE OHIO DEPARTMENT OF TRANSPORTATION'S VIRTUAL REFERENCE SYSTEM.

2) VERTICAL DATUM= NORTH AMERICAN VERTICAL DATUM GEOID 18 AS ESTABLISHED BY UTILIZING THE OHIO DEPARTMENT OF TRANSPORTATION'S VIRTUAL REFERENCE SYSTEM.

3)THE UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES LOCATED HERE ON COMPRISE OF ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES LOCATED ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION MADE AVAILABLE.
OUPS TICKET NUMBERS:
A314401526-00A, A314401682-00A, A314401734-00A, B313901455-00B, B313901491-00B, B313901529-00B, A314401526-00A, A314401682-00A, A314401734-00A, B313901455-00B, B313901491-00B, B313901529-00B,

4) FIELD WORK WAS PERFORMED DURING THE MONTHS OF JUNE AND JULY, 2023

5) SUBJECT PROPERTY IS LOCATED WITHIN FEMA FLOOD ZONE "X" AS PUBLISHED IN FEMA PANEL NUMBER 39007C0127E AND 39007C0131E, AUGUST 28TH, 2019

POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
12	802199.5457	2396910.4165	604.96	Iron Pin (Set)
13	801683.1284	2396789.1916	606.08	Iron Pin (Set)
15	802156.9166	2396526.2350	601.66	Iron Pin (Set)
16	802148.9052	2397078.3456	605.85	Iron Pin (Set)
17	801668.1993	2397086.3094	606.02	Iron Pin (Set)
19	802183.0018	2396222.2354	604.68	Iron Pin (Set)
53	802168.4362	2396871.1965	605.81	Iron Pin (Fnd)
54	801818.3623	2396796.0602	607.25	Iron Pin (Fnd)
56	802164.2854	2396369.5433	605.36	Iron Pin (Fnd)
57	802169.8282	2397072.9091	607.29	Iron Pin (Fnd)
59	801450.6118	2397103.9687	605.90	Iron Pin (Fnd)
200	801935.7958	2396514.7579	603.96	Iron Pin (Set)
201	801679.1619	2396514.7575	605.82	Iron Pin (Set)
202	801388.3813	2396537.8968	605.32	Iron Pin (Set)
1284	802148.7773	2396203.2761	607.30	Benchmark (Set)
1462	802169.2445	2395981.0195	603.84	Benchmark (Set)
1476	802030.8497	2395970.9219	599.83	Iron Pin (Fnd)
1477	801931.1752	2396021.2799	599.76	Iron Pipe (Fnd)

LEGEND:

- BENCHMARK
- I.PIN TO BE SET
- I.PIN FOUND
- I.PIPE FOUND
- EX. R/W — LIMITS OF PUBLIC R/W
- CENTERLINE PUBLIC R/W
- PARCEL LINES
- SUBDIVISION LINES
- 5' TEMPORARY EASEMENT

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE:	1" = 50'
DATE:	9/29/23
DESIGNED BY:	---
DRAWN BY:	---
CHECKED BY:	---

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

GENERAL

SURVEY CONTROL - 3

PROJECT NO: **230467**
DRAWING NAME: **24PP-02**
SHEET **7** OF **44**

H:\2023\230467\DWG__SURVEY\V-230467-SURVEY-CONTROL.DWG -- XX SURVEY CONTROL - 3 - 8/26/2026 4:25:31 PM - CORY SCOTT

BAR SCALE

50 25 0 50

SCALE: 1"= 50'

SURVEYOR'S NOTES

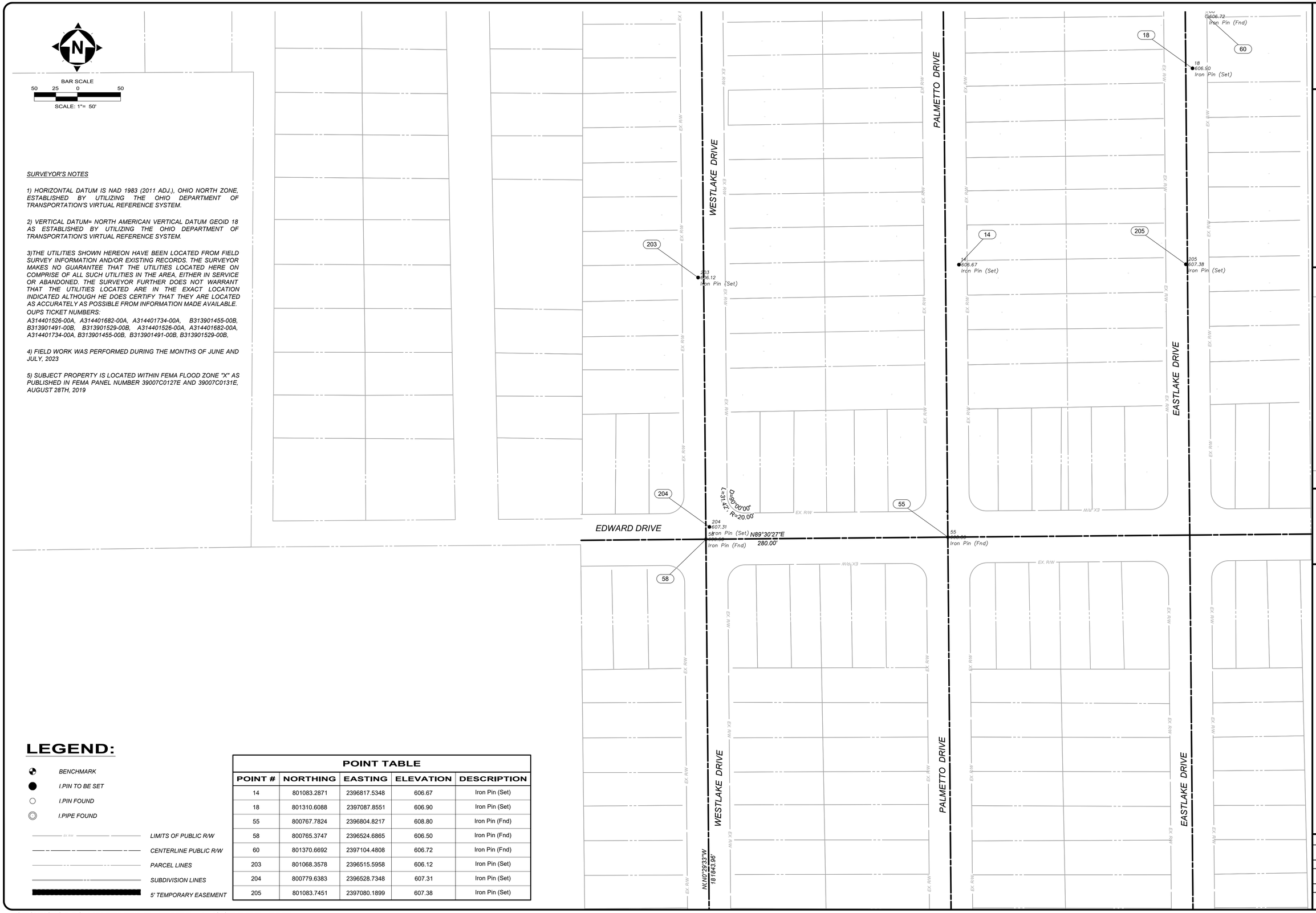
1) HORIZONTAL DATUM IS NAD 1983 (2011 ADJ.), OHIO NORTH ZONE, ESTABLISHED BY UTILIZING THE OHIO DEPARTMENT OF TRANSPORTATION'S VIRTUAL REFERENCE SYSTEM.

2) VERTICAL DATUM= NORTH AMERICAN VERTICAL DATUM GEOID 18 AS ESTABLISHED BY UTILIZING THE OHIO DEPARTMENT OF TRANSPORTATION'S VIRTUAL REFERENCE SYSTEM.

3)THE UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES LOCATED HERE ON COMPRISE OF ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES LOCATED ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION MADE AVAILABLE.
OUPS TICKET NUMBERS:
A314401526-00A, A314401682-00A, A314401734-00A, B313901455-00B, B313901491-00B, B313901529-00B, A314401526-00A, A314401682-00A, A314401734-00A, B313901455-00B, B313901491-00B, B313901529-00B,

4) FIELD WORK WAS PERFORMED DURING THE MONTHS OF JUNE AND JULY, 2023

5) SUBJECT PROPERTY IS LOCATED WITHIN FEMA FLOOD ZONE "X" AS PUBLISHED IN FEMA PANEL NUMBER 39007C0127E AND 39007C0131E, AUGUST 28TH, 2019



LEGEND:

- BENCHMARK
- I.PIN TO BE SET
- I.PIN FOUND
- I.PIPE FOUND
- LIMITS OF PUBLIC R/W
- CENTERLINE PUBLIC R/W
- PARCEL LINES
- SUBDIVISION LINES
- 5' TEMPORARY EASEMENT

POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
14	801083.2871	2396817.5348	606.67	Iron Pin (Set)
18	801310.6088	2397087.8551	606.90	Iron Pin (Set)
55	800767.7824	2396804.8217	608.80	Iron Pin (Fnd)
58	800765.3747	2396524.6865	606.50	Iron Pin (Fnd)
60	801370.6692	2397104.4808	606.72	Iron Pin (Fnd)
203	801068.3578	2396515.5958	606.12	Iron Pin (Set)
204	800779.6383	2396528.7348	607.31	Iron Pin (Set)
205	801083.7451	2397080.1899	607.38	Iron Pin (Set)

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: 1" = 50'
DATE: 9/29/23
DESIGNED BY: ---
DRAWN BY: ---
CHECKED BY: ---

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

GENERAL

SURVEY CONTROL - 4

PROJECT NO: **230467**
DRAWING NAME: **24PP-02**
SHEET **8** OF **44**

SANITARY STRUCTURE TABLE

No.	DESCRIPTION	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (ASBUILT)	EASTING (ASBUILT)
EX. MH - (5)	SAN. MANHOLE	802061.88	2392489.79		
EX. MH - (6)	SAN. MANHOLE - 48	803605.74	2397120.11		
EX. MH - (13)	SAN. MANHOLE - 48	801862.20	2396246.56		
EX. MH - (20)	SAN. MANHOLE - 48	803380.26	2396104.71		
EX. MH - (57)	SAN. MANHOLE - 48	802073.96	2392766.93		
EX. MH - (59)	SAN. MANHOLE - 48	800772.74	2397090.59		
EX. MH - (73)	SAN. MANHOLE - 48	803232.93	2395970.32		
EX. MH - (90)	SAN. MANHOLE - 48	803235.58	2396213.67		
EX. MH - (91)	SAN. MANHOLE - 48	803238.87	2396404.48		
EX. MH - (92)	SAN. MANHOLE - 48	803426.94	2396614.24		
EX. MH - (93)	SAN. MANHOLE - 48	803494.97	2397018.13		
EX. MH - (157)	SAN. MANHOLE - 48	802886.69	2393338.53		
EX. MH - (200)	SAN. MANHOLE - 48	802936.41	2395989.91		
EX. MH - (201)	SAN. MANHOLE - 48	802636.31	2395991.43		
EX. MH - (202)	SAN. MANHOLE - 48	802383.48	2395993.74		
EX. MH - (203)	SAN. MANHOLE - 48	802161.61	2395995.26		
EX. MH - (204)	SAN. MANHOLE - 48	801913.43	2395997.08		
EX. MH - (210)	SAN. MANHOLE - 48	802162.31	2396244.27		
EX. MH - (212)	SAN. MANHOLE - 48	801602.90	2396247.41		
EX. MH - (213)	SAN. MANHOLE - 48	801303.62	2396250.46		
EX. MH - (214)	SAN. MANHOLE - 48	801064.50	2396251.89		
EX. MH - (215)	SAN. MANHOLE - 48	800770.87	2396278.70		
LIFT STATION	SAN. MANHOLE - 72	801562.22	2396838.02		
SAN. Structure - (21)	SAN. MANHOLE - 48	802885.55	2393883.47		
SAN. Structure - (23)	SAN. MANHOLE - 48	802886.00	2393613.53		
SAN. Structure - (28)	SAN. MANHOLE - 48	800767.33	2396525.75		
SAN. Structure - (37)	SAN. DROP MANHOLE - 48	801540.90	2397086.48		
SAN. Structure - (38)	SAN. MANHOLE - 48	801844.67	2397082.05		
SAN. Structure - (39)	SAN. MANHOLE - 48	802177.60	2397075.51		
SAN. Structure - (40)	SAN. MANHOLE - 48	802181.38	2396876.40		
SAN. Structure - (41)	SAN. MANHOLE - 48	802168.00	2396520.53		
SAN. Structure - (44)	SAN. MANHOLE - 48	801904.42	2396799.00		

SANITARY STRUCTURE TABLE

No.	DESCRIPTION	NORTHING (PER PLAN)	EASTING (PER PLAN)	NORTHING (ASBUILT)	EASTING (ASBUILT)
SAN. Structure - (46)	SAN. MANHOLE - 48	802523.84	2396983.35		
SAN. Structure - (47)	SAN. MANHOLE - 48	802853.56	2397078.20		
SAN. Structure - (48)	SAN. MANHOLE - 48	803108.93	2397041.34		
SAN. Structure - (49)	SAN. MANHOLE - 48	801172.73	2397090.65		
SAN. Structure - (50)	SAN. MANHOLE - 48	800954.86	2396805.32		
SAN. Structure - (51)	SAN. MANHOLE - 48	801167.33	2396526.14		
SAN. Structure - (52)	SAN. MANHOLE - 48	801562.33	2396520.53		
SAN. Structure - (53)	SAN. MANHOLE - 48	802846.02	2396524.14		
SAN. Structure - (54)	SAN. MANHOLE - 48	802981.16	2396524.17		
SAN. Structure - (55)	SAN. MANHOLE - 48	801634.41	2392492.67		
SAN. Structure - (56)	SAN. MANHOLE - 48	803109.55	2396453.80		
SAN. Structure - (59)	SAN. MANHOLE - 48	802484.52	2392482.41		
SAN. Structure - (60)	SAN. MANHOLE - 48	801772.28	2396520.53		
SAN. Structure - (66)	SAN. MANHOLE - 48	801824.41	2392491.21		
SAN. Structure - (69)	SAN. MANHOLE - 48	803312.52	2397010.68		
SAN. Structure - (113)	SAN. MANHOLE - 48	803451.37	2397042.72		
SAN. Structure - (124)	SAN. MANHOLE - 48	801354.78	2396802.81		
SAN. Structure - (127)	SAN. MANHOLE - 48	801679.70	2396520.53		
SAN. Structure - (130)	DROP MANHOLE (N)	801683.38	2396799.00		
SAN. Structure - (131)	SAN. DROP MANHOLE	801533.10	2396800.35		
SAN. Structure - (135)	MANHOLE (WET WELL)	801533.10	2396838.34		
SAN. Structure - (135A)	MANHOLE - 48	801538.96	2396930.69		
SAN. Structure - (137)	SAN. MANHOLE - 48	800767.79	2396805.65		
SAN. Structure - (138)	SAN. MANHOLE - 48	800047.79	2396805.64		
SAN. Structure - (139)	MANHOLE - 48	800052.74	2397090.59		
SAN. Structure - (142)	SAN. MANHOLE - 48	802168.84	2396820.54		
SAN. Structure - (143)	SAN. MANHOLE - 48	802168.00	2396320.53		
SAN. Structure - (145)	SAN. MANHOLE - 48	802058.82	2396842.20		
SAN. Structure - (148)	MANHOLE - 48	800767.41	2396575.65		
SAN. Structure - (149)	MANHOLE - 48	800771.27	2397005.62		

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

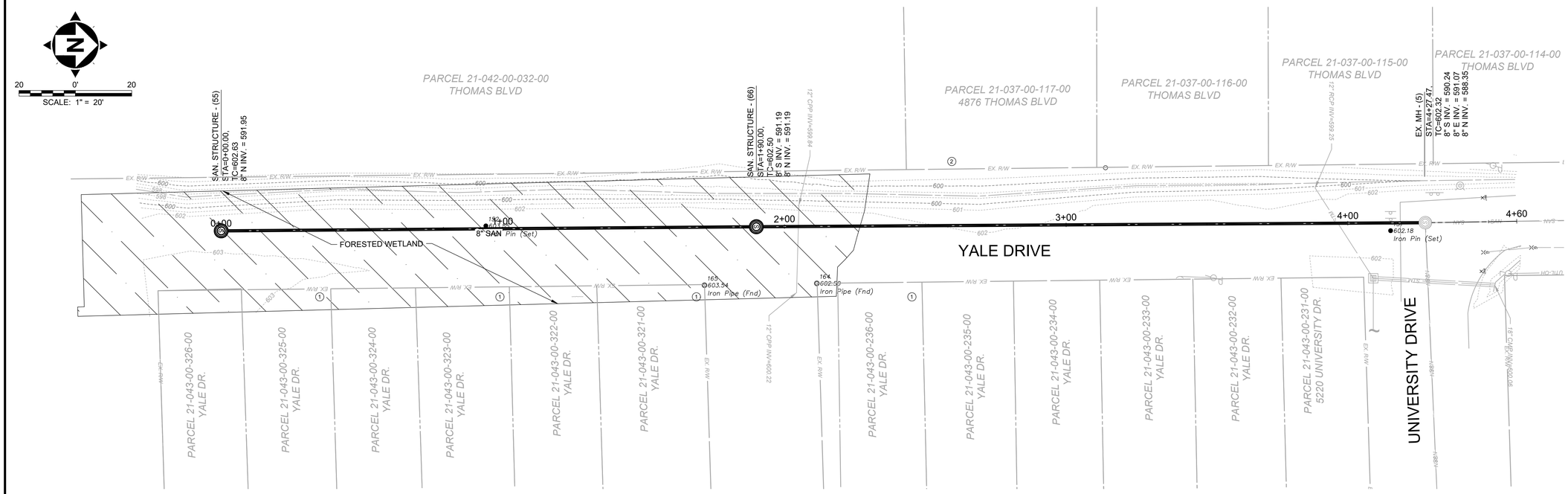
SCALE: AS NOTED
DATE: 9/29/23
DESIGNED BY: TJM
DRAWN BY: RLM
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES

MANHOLE STRUCTURE TABLE

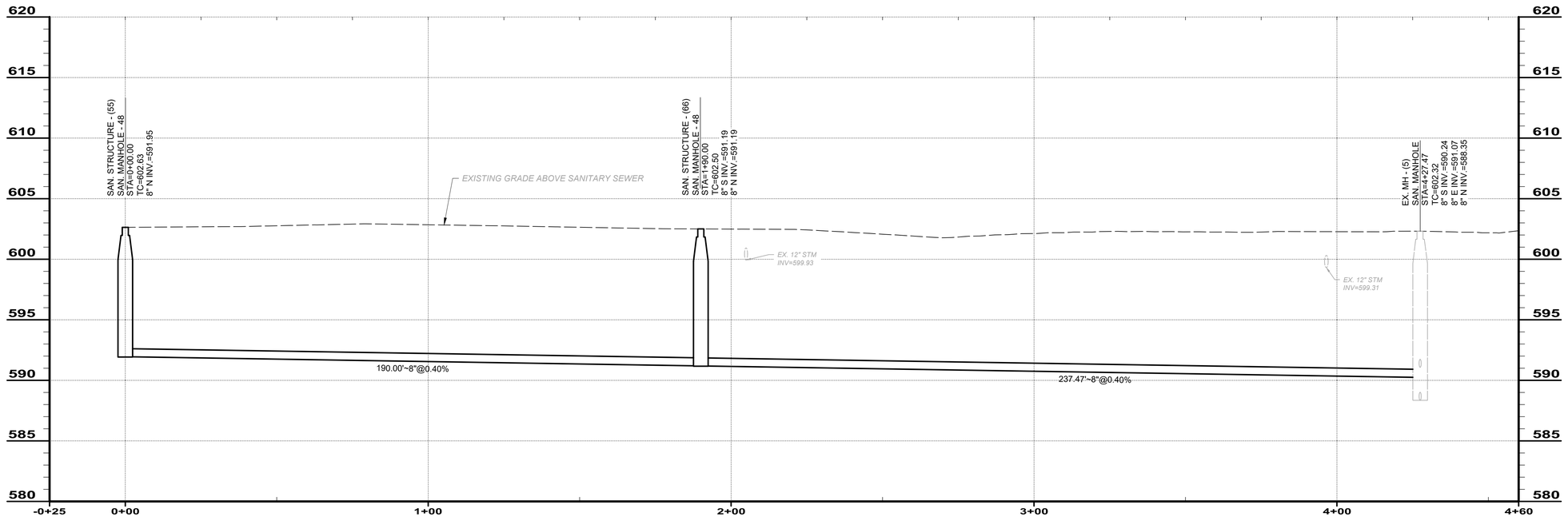
PROJECT NO: 230467
DRAWING NAME: 10C-01
SHEET 9 OF 44



PLAN
SCALE: 1" = 20'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'0CLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.
3. CONNECTION TO EX. SEWER SHALL BE MADE BY INSTALLING 5 LF OF NEW SEWER LINE AND A TRI-BAND MISSION COUPLING OR APPROVED SUBSTITUTE.



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

NO	REVISION	DATE

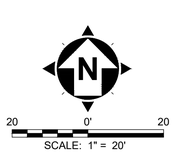
SCALE:	AS NOTED
DATE:	8/25/2025
DESIGNED BY:	RLM
DRAWN BY:	ELE
CHECKED BY:	RLM

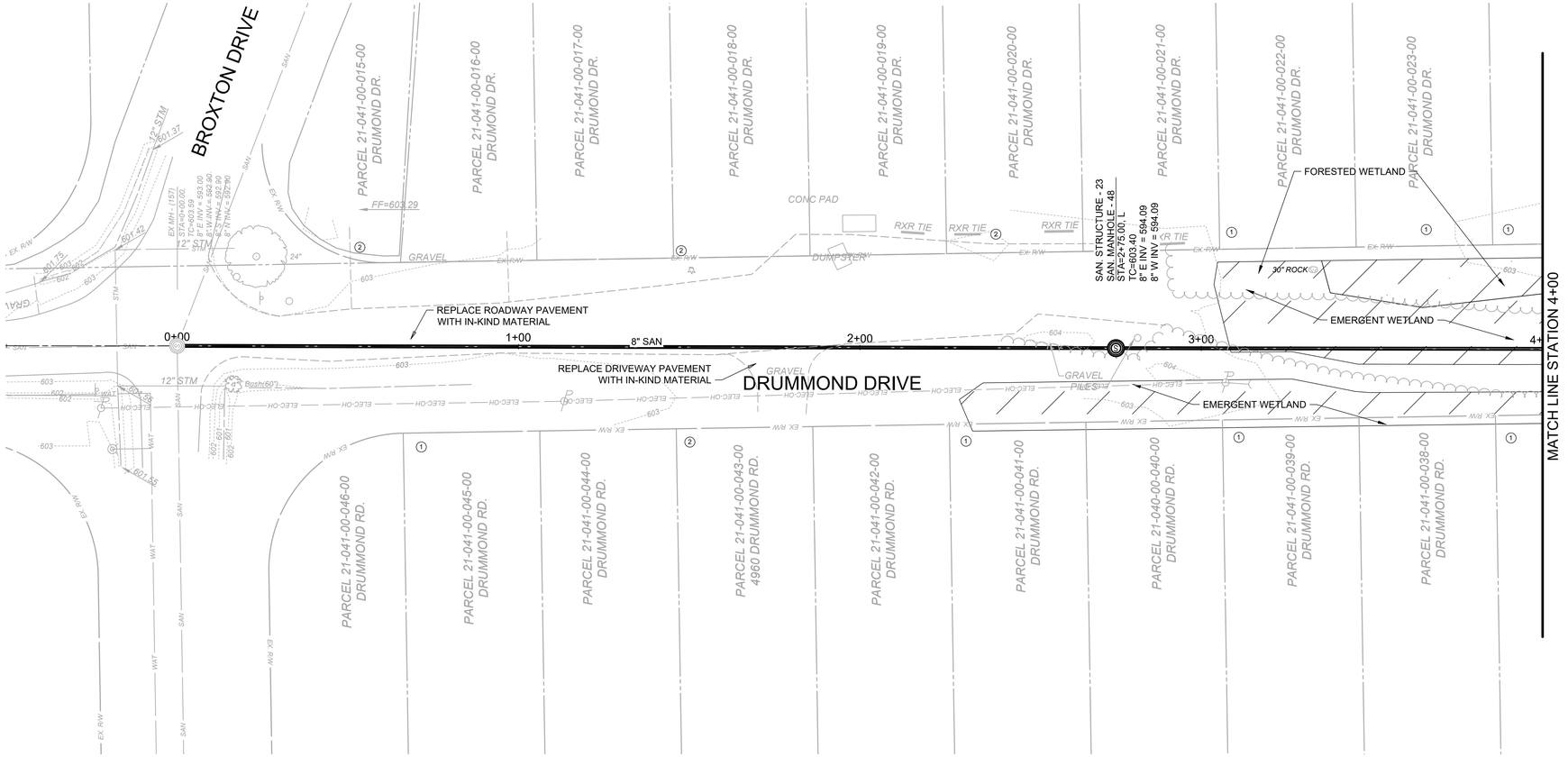
VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES

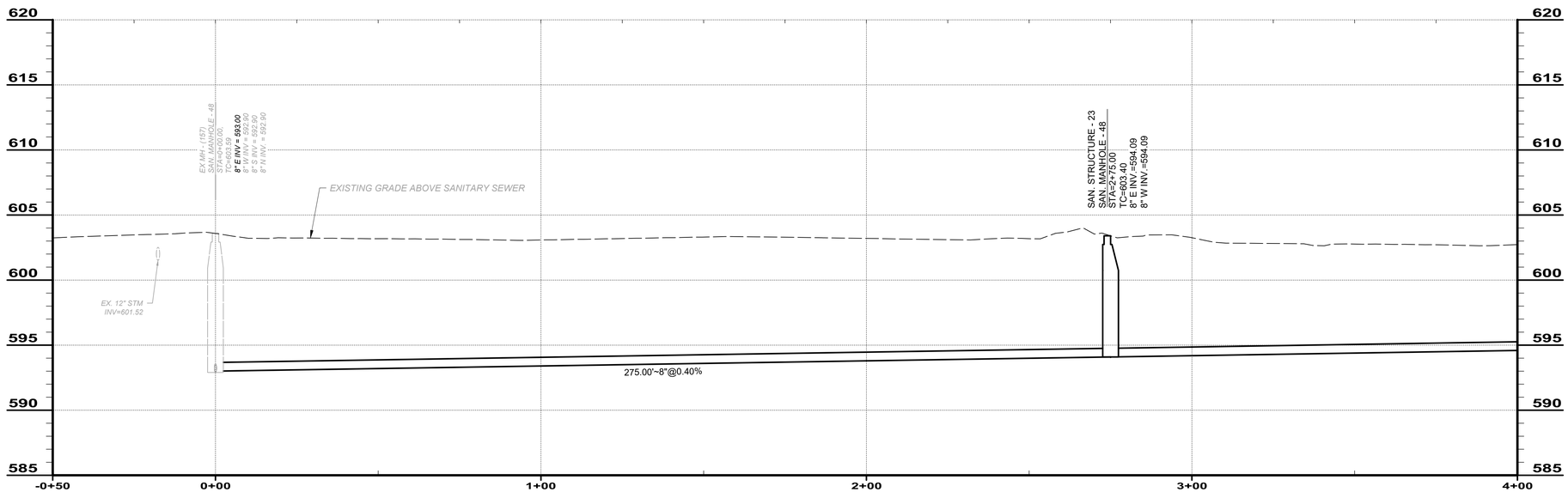
YALE - STA 0+00 TO 5+00

PROJECT NO: 230467
DRAWING NAME: 10C-02
SHEET: 10 OF: 44





PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'0CLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

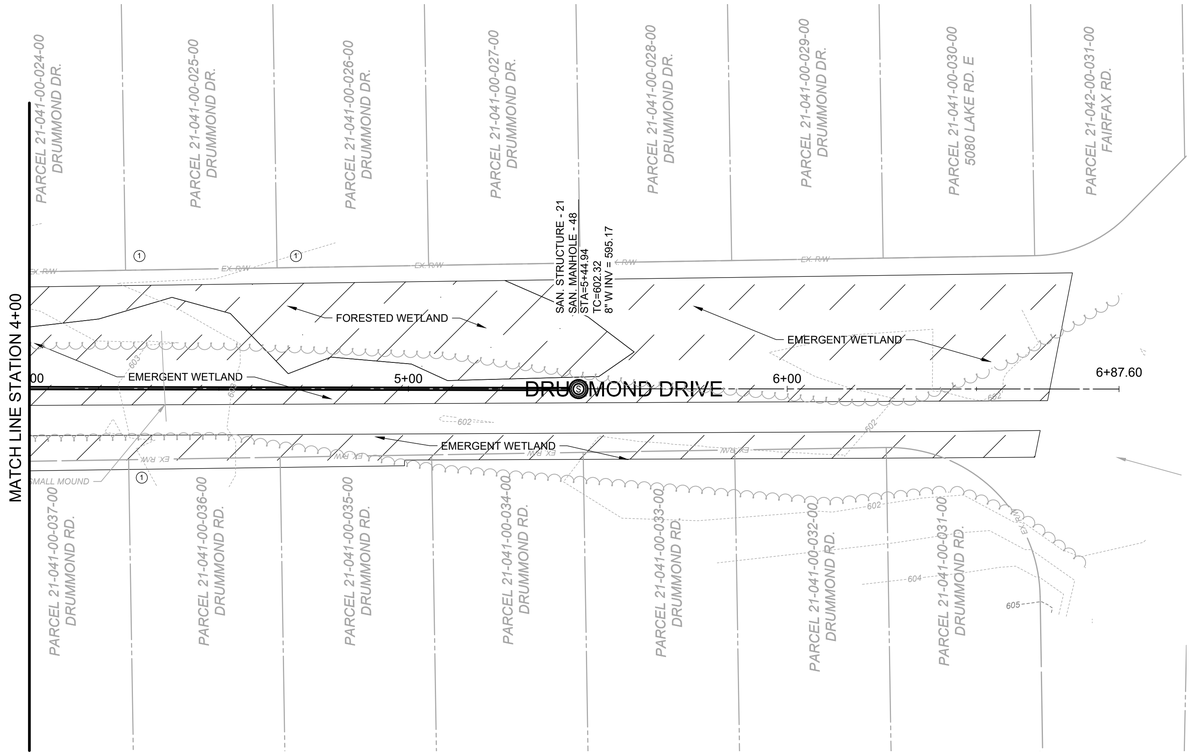
SCALE:	AS NOTED
DATE:	8/26/2025
DESIGNED BY:	RLM
DRAWN BY:	ELE
CHECKED BY:	RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

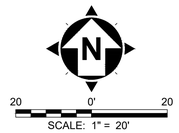
PLAN AND PROFILES - 10 SERIES

DRUMMOND - STA 0+00 TO 4+00

PROJECT NO:
230467
DRAWING NAME
10C-03
SHEET 11 OF 44



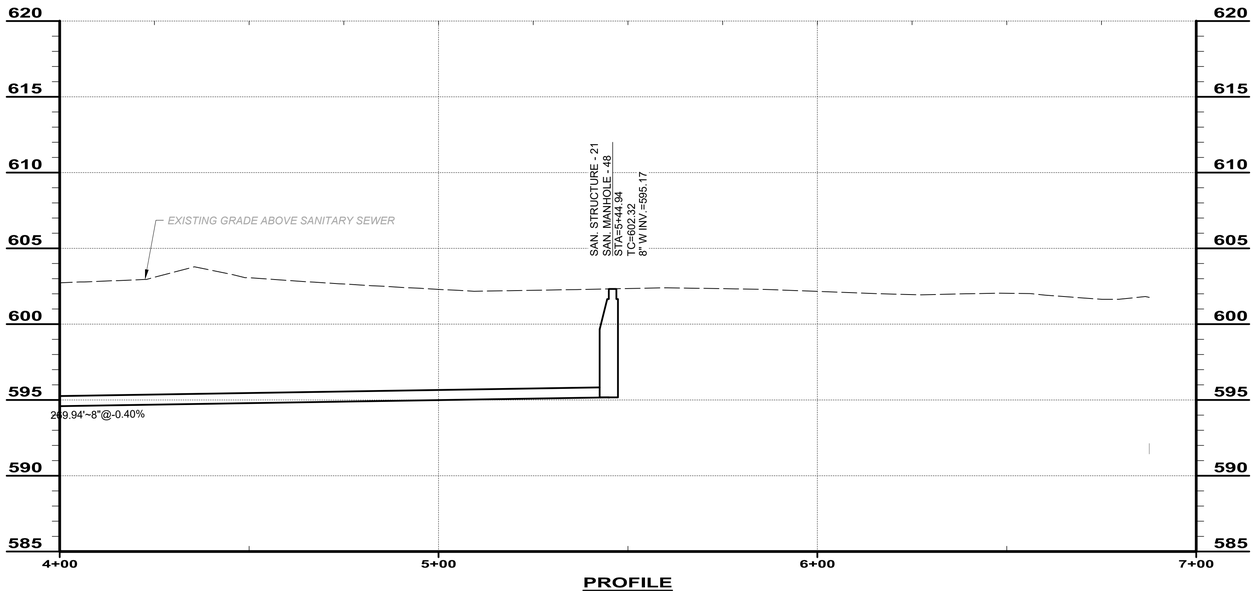
PLAN
SCALE: 1" = 20'



SCALE: 1" = 20'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'0CLOCK OR 2'0'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

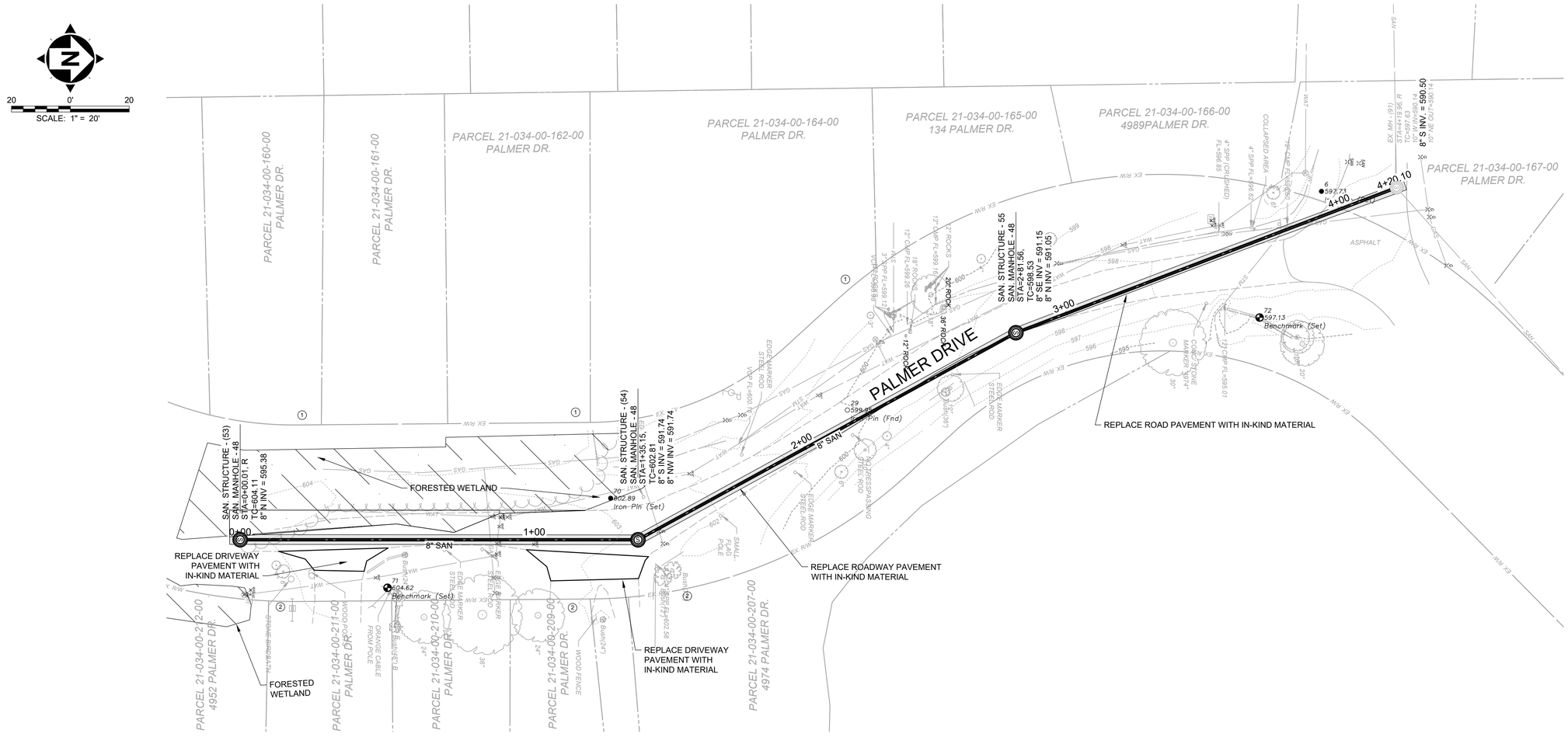
NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES
DRUMMOND - STA 4+00 TO 6+81

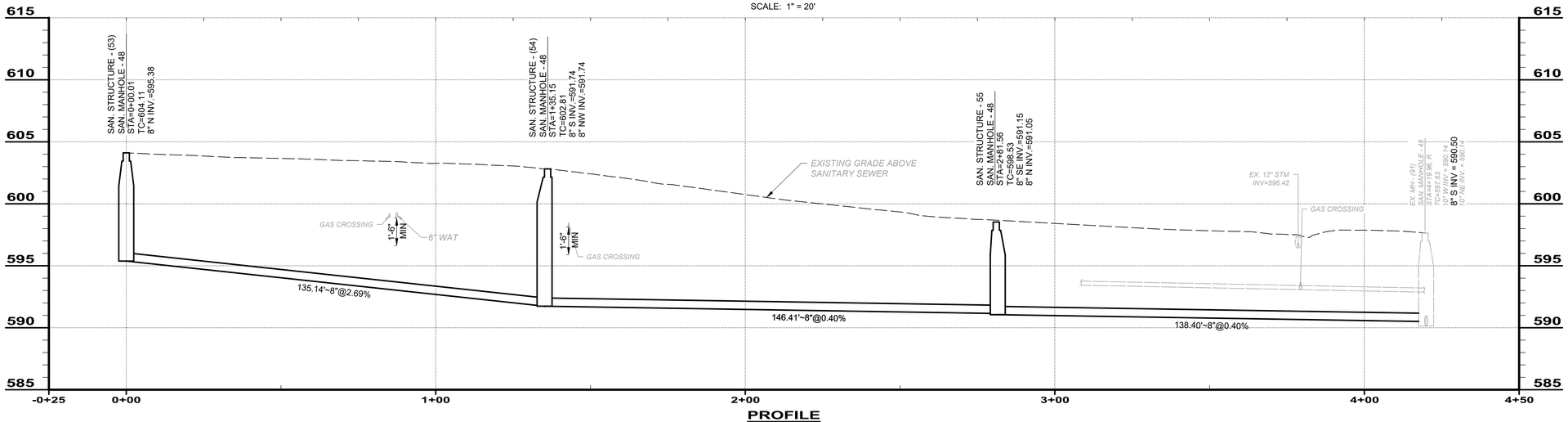
PROJECT NO: 230467
DRAWING NAME: 10C-04
SHEET: 12 OF: 44



CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'OCLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

NO	REVISION	DATE

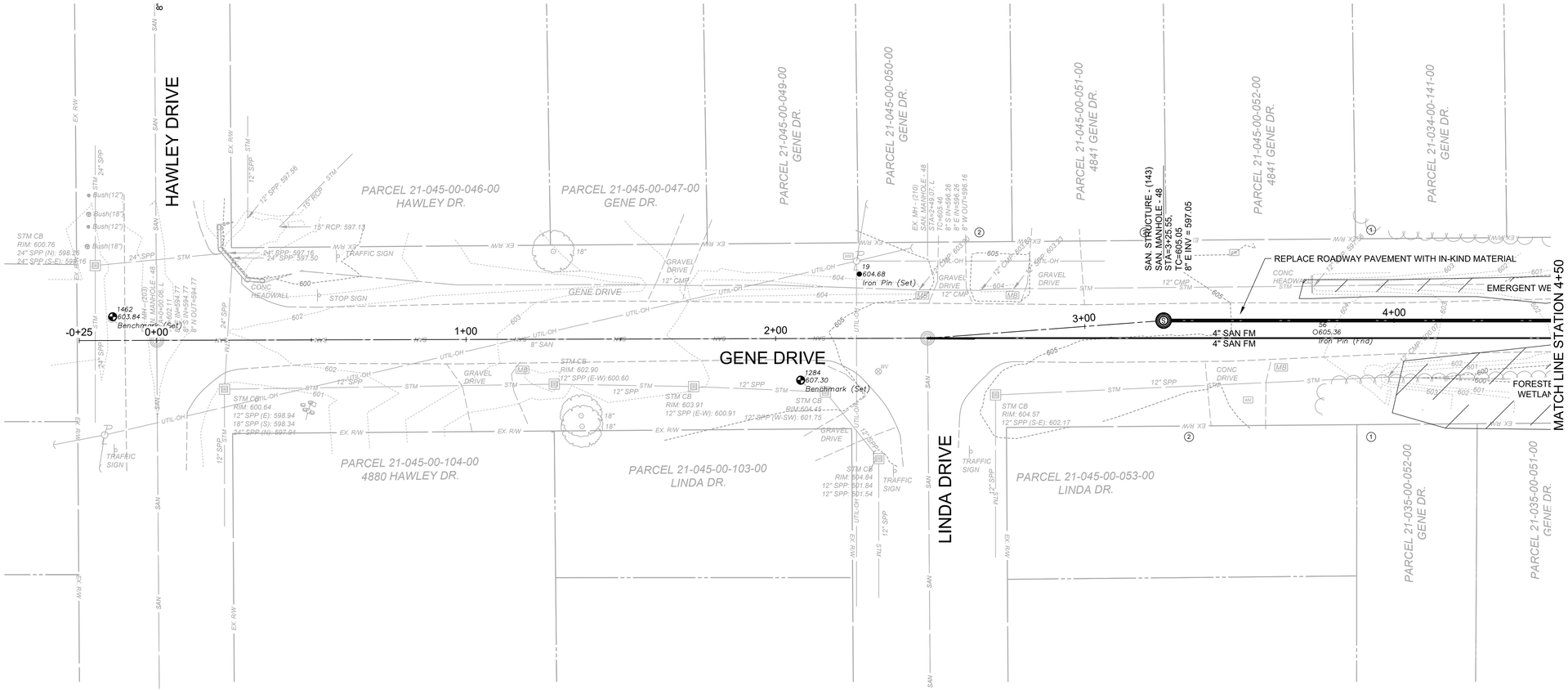
SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

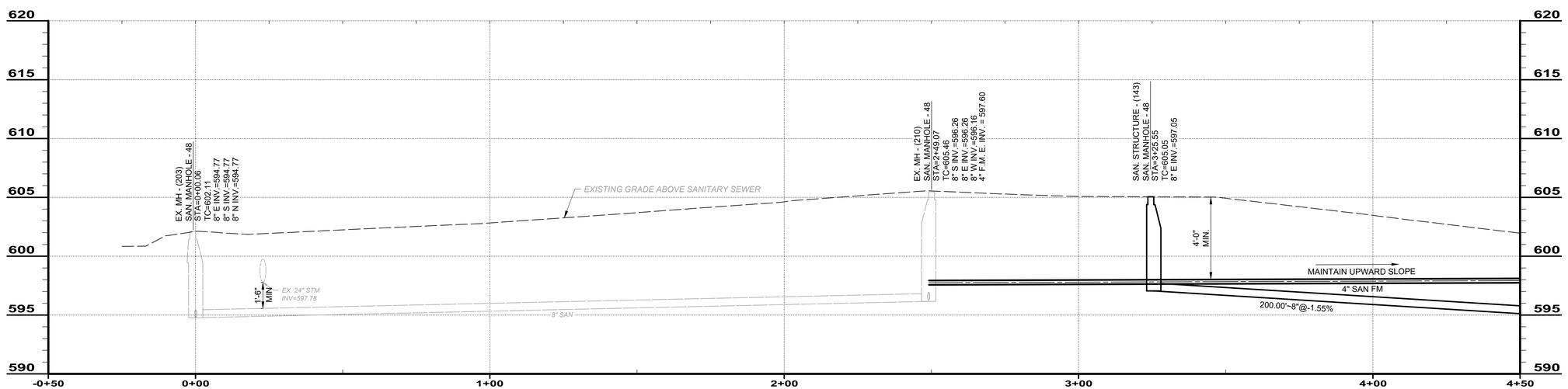
PLAN AND PROFILES - 10 SERIES

PALMER - STA 0+00 TO 4+50

PROJECT NO: 230467
DRAWING NAME: 10C-05
SHEET: 13
OF: 44



PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'0CLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

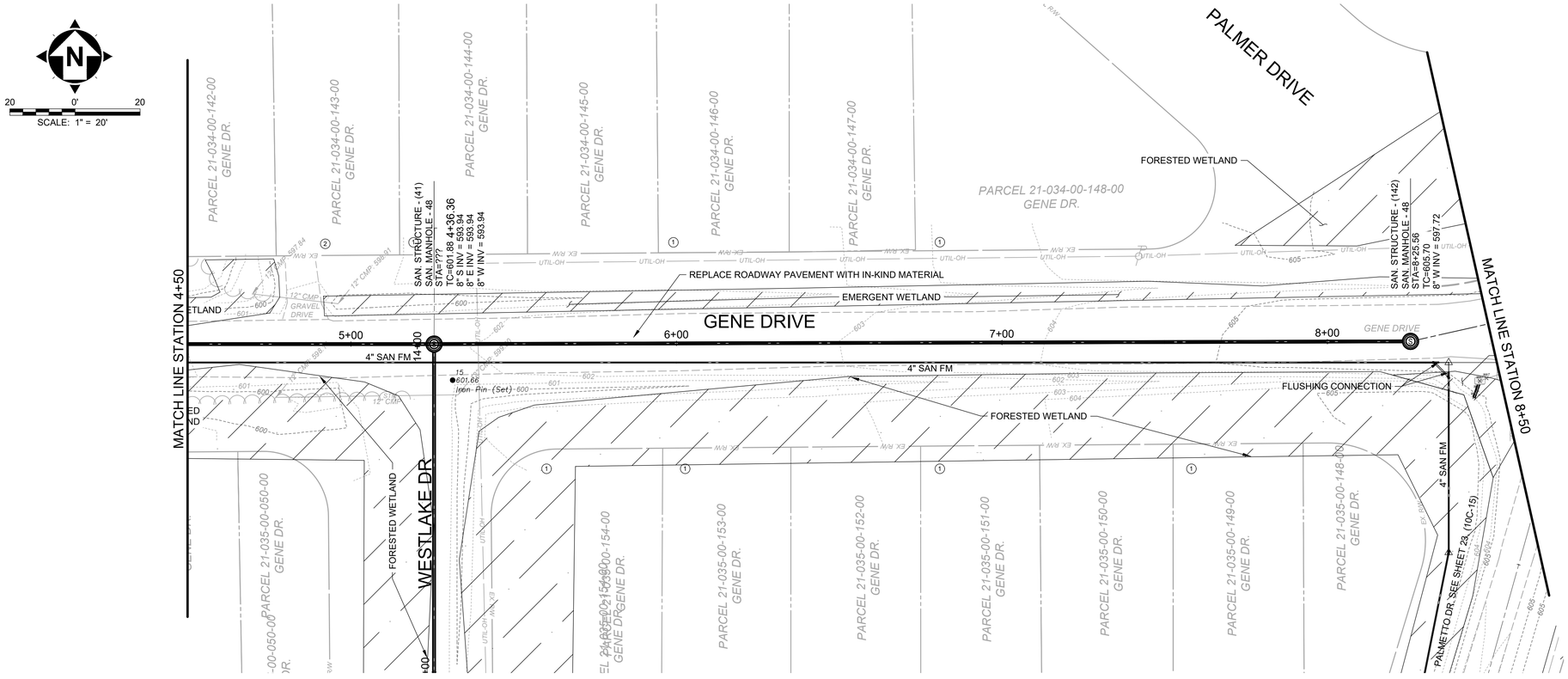
SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

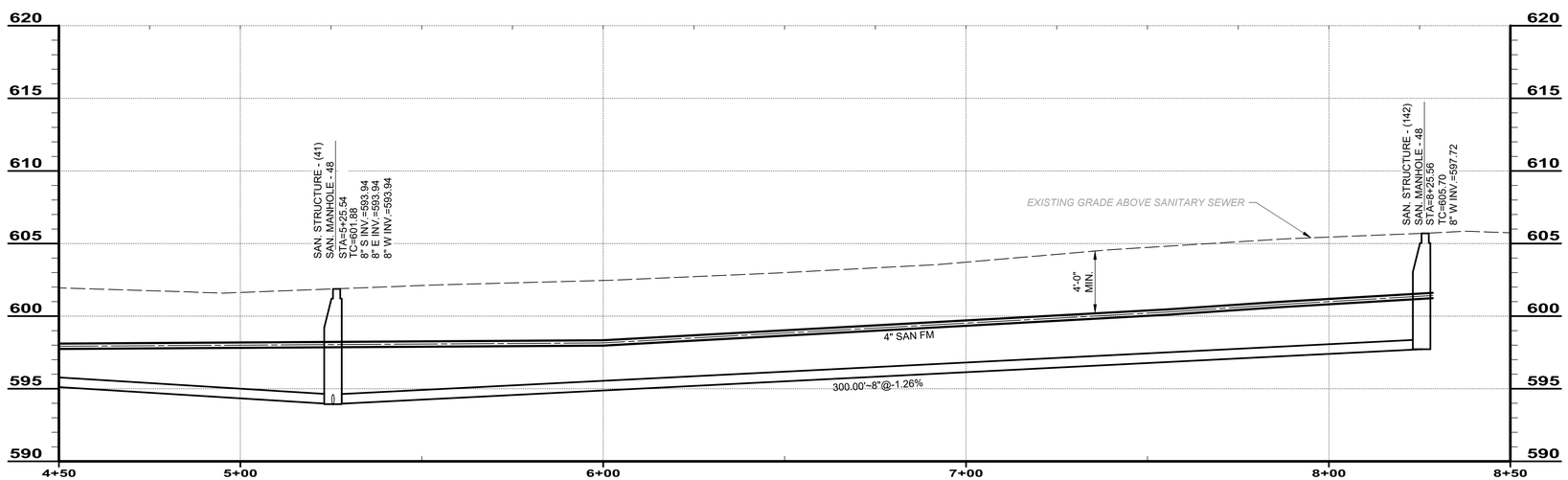
PLAN AND PROFILES - 10 SERIES

GENE - STA 0+00 TO 4+50

PROJECT NO: 230467
DRAWING NAME: 10C-06
SHEET: 14 OF: 44



PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'0CLOCK OR 2'0'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

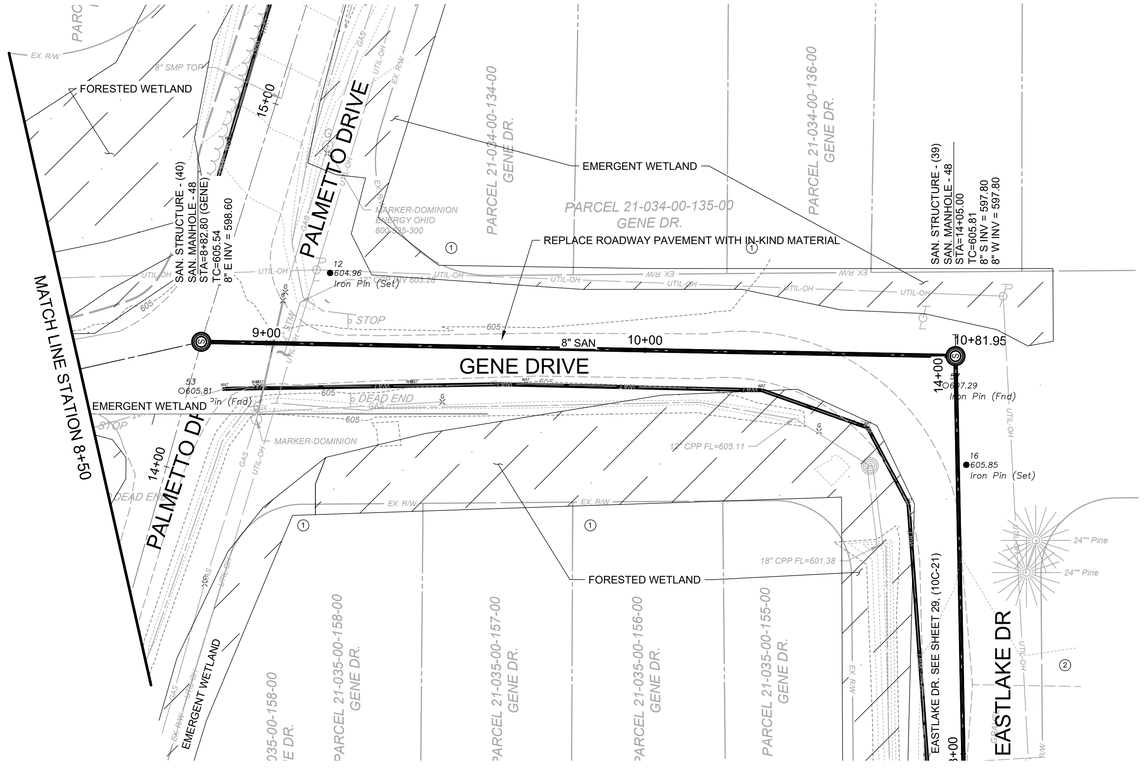
SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES

GENE - STA 4+50 TO 8+50

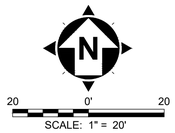
PROJECT NO: 230467
DRAWING NAME: 10C-07
SHEET 15 OF 44

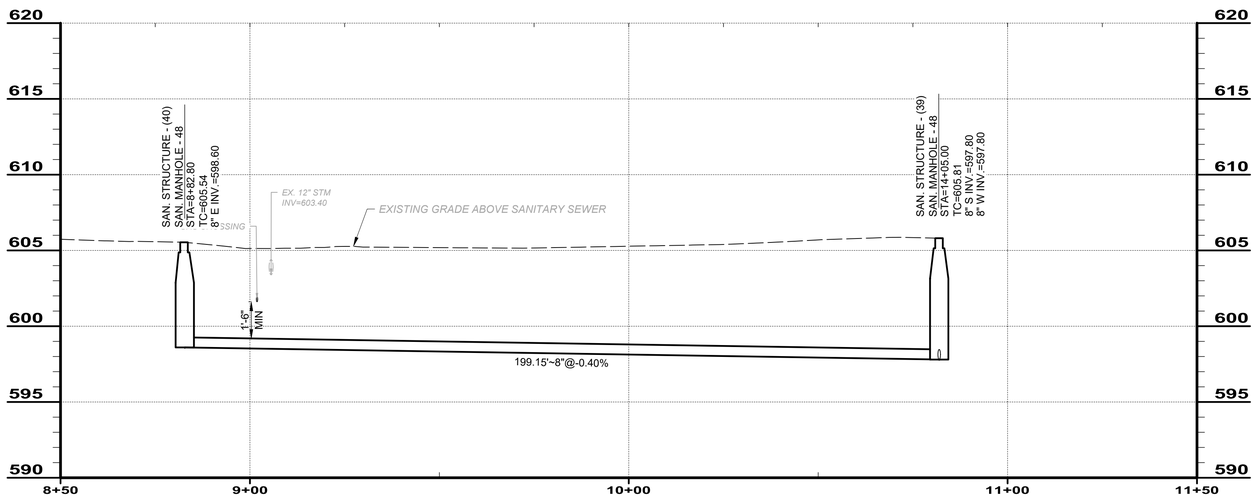


PLAN
SCALE: 1" = 20'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'0CLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.





PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

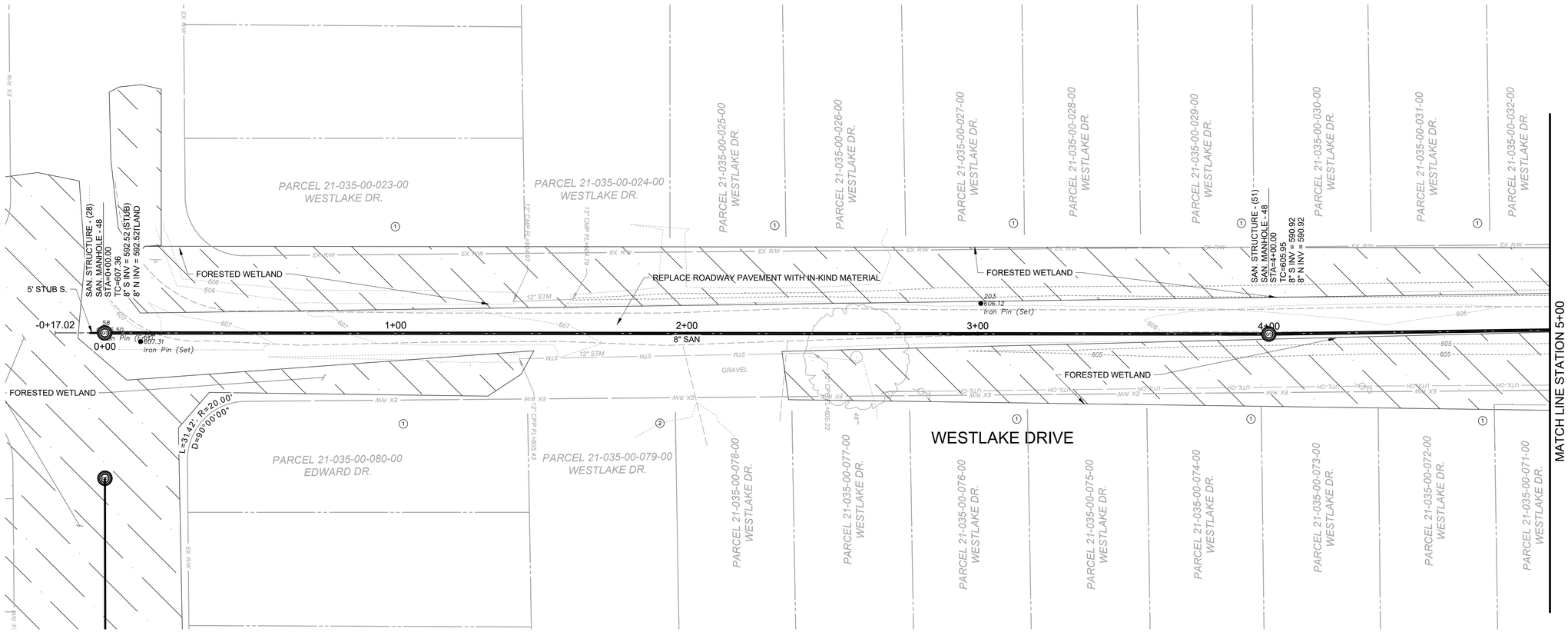
SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES

GENE - STA 8+50 TO 11+50

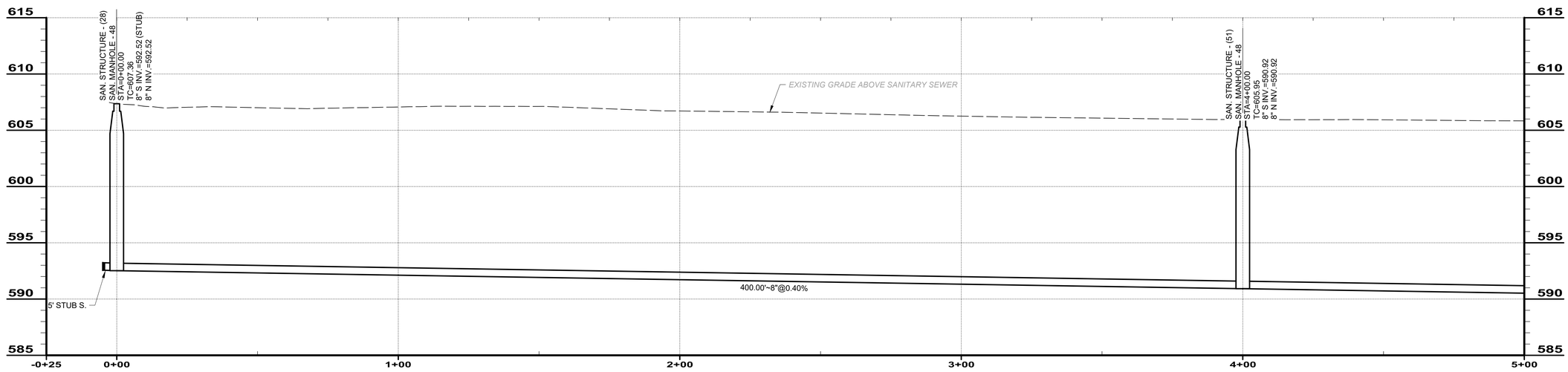
PROJECT NO: 230467
DRAWING NAME: 10C-08
SHEET: 16
OF: 44



CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'OCLOCK OR 2'OCLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

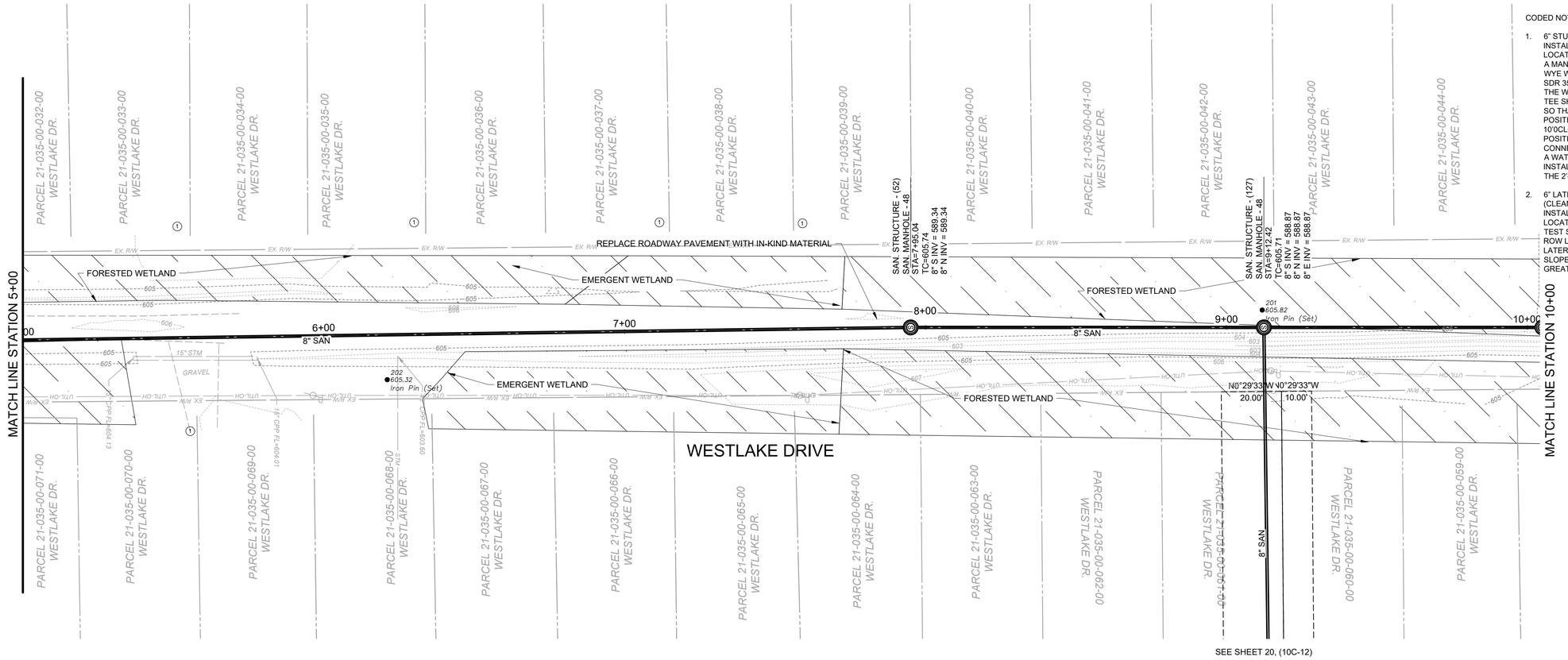
VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES

WESTLAKE - STA -0+25 TO 5+00

PROJECT NO: 230467
DRAWING NAME: 10C-09
SHEET: 17
OF: 44



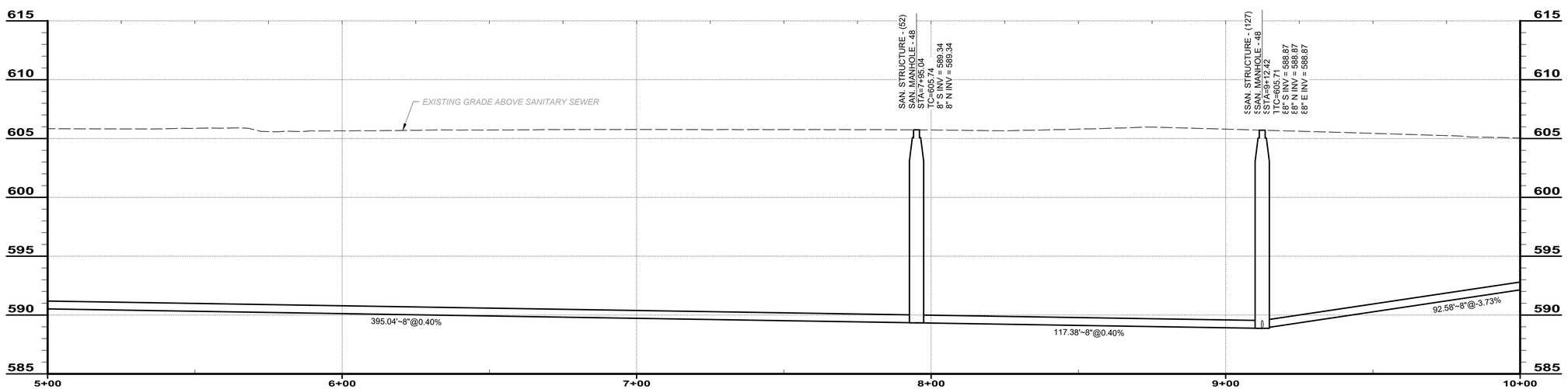


CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'OCLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

SEE SHEET 20, (10C-12)

PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

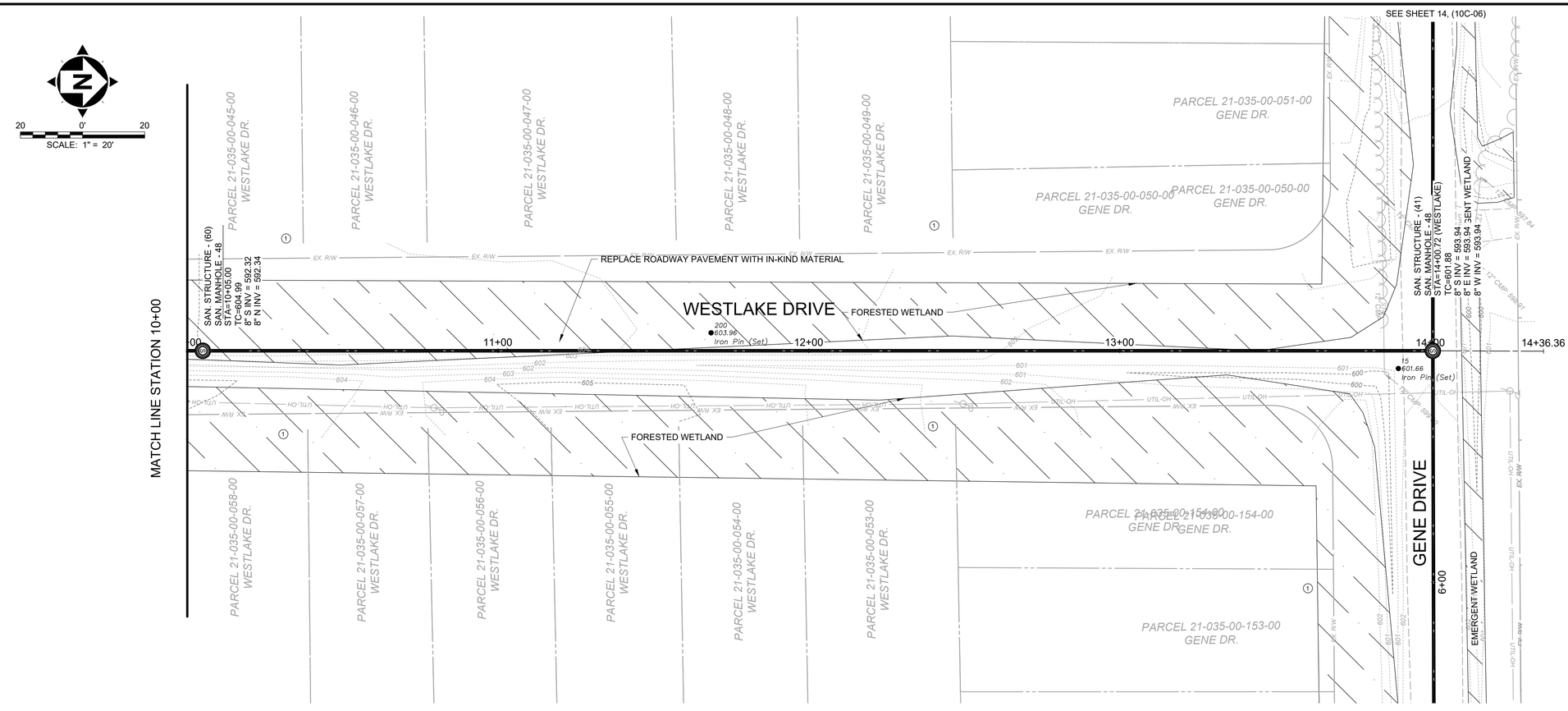
SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES

WESTLAKE - STA 5+00 TO 10+00

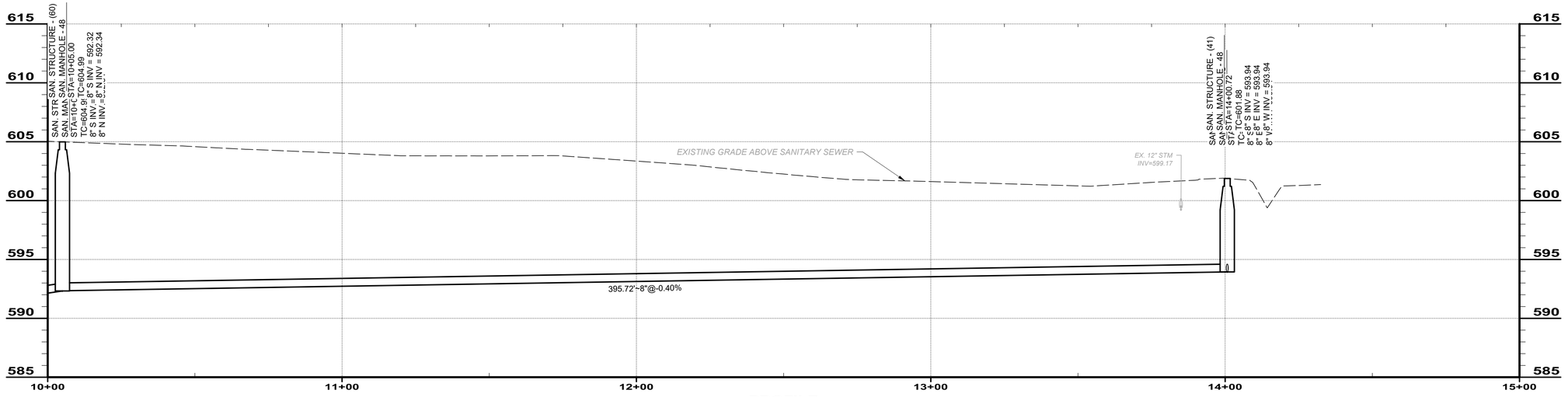
PROJECT NO: 230467
DRAWING NAME: 10C-10
SHEET: 18 OF: 44



PLAN
SCALE: 1" = 20'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'0CLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

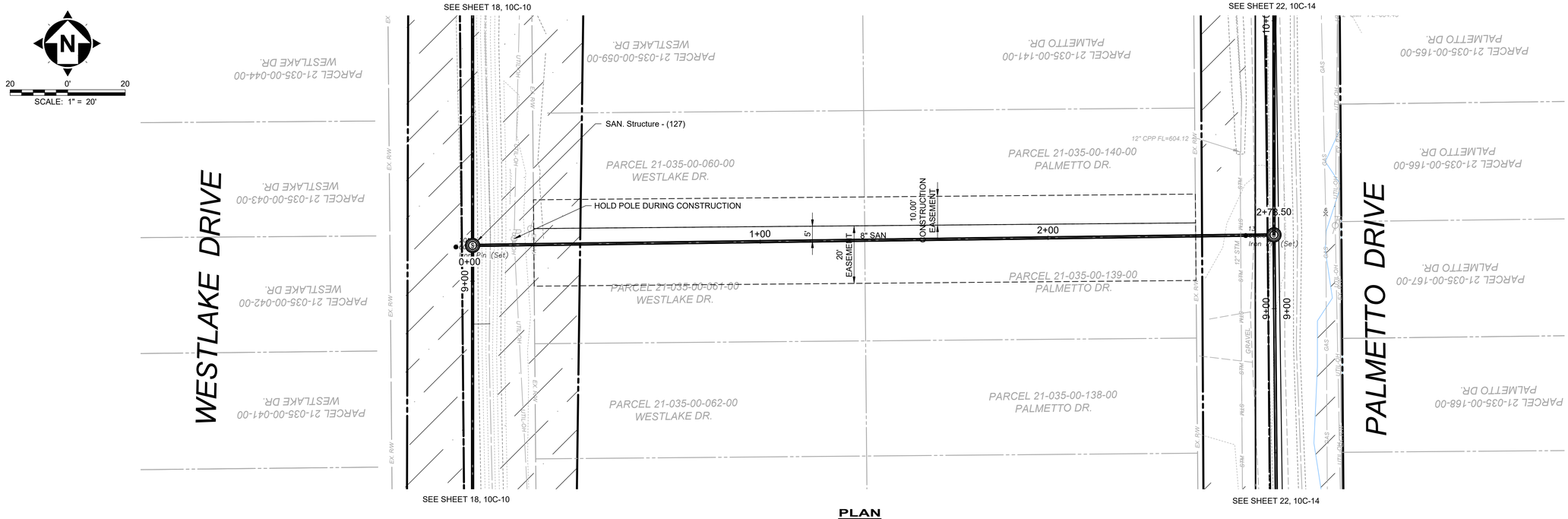
SCALE: AS NOTED
DATE: 9/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

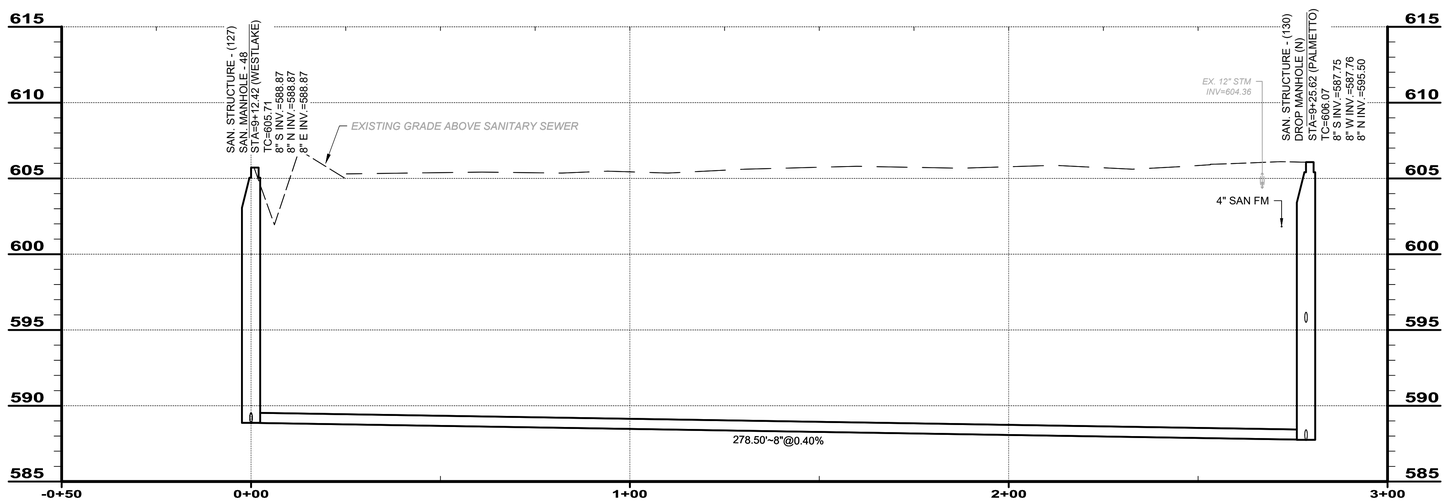
PLAN AND PROFILES - 10 SERIES
WESTLAKE - STA 10+00 TO 15+00

PROJECT NO: 230467
DRAWING NAME: 10C-11
SHEET: 19 OF: 44

H:\2023\230467\DWG\SHEETS\C_230467 - WESTLAKE PLAN & PROFILES.DWG - 19 WESTLAKE - STA 10+00 TO 15+00 - 4/20/2026 9:57:25 AM - REID SCOTT



PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

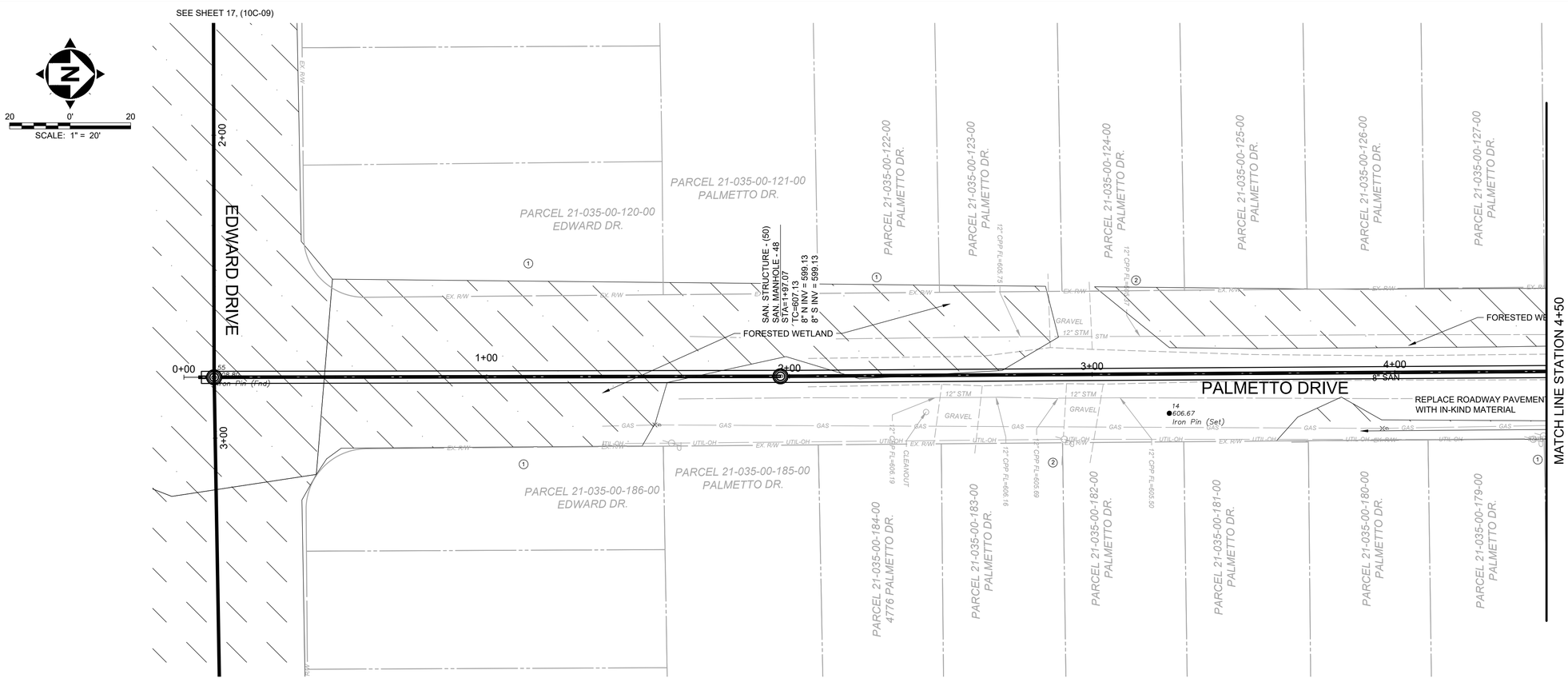
VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES

WESTLAKE - PALMETTO - STA 0+00 TO 3+00

PROJECT NO: 230467
DRAWING NAME: 10C-12
SHEET: 20
OF: 42

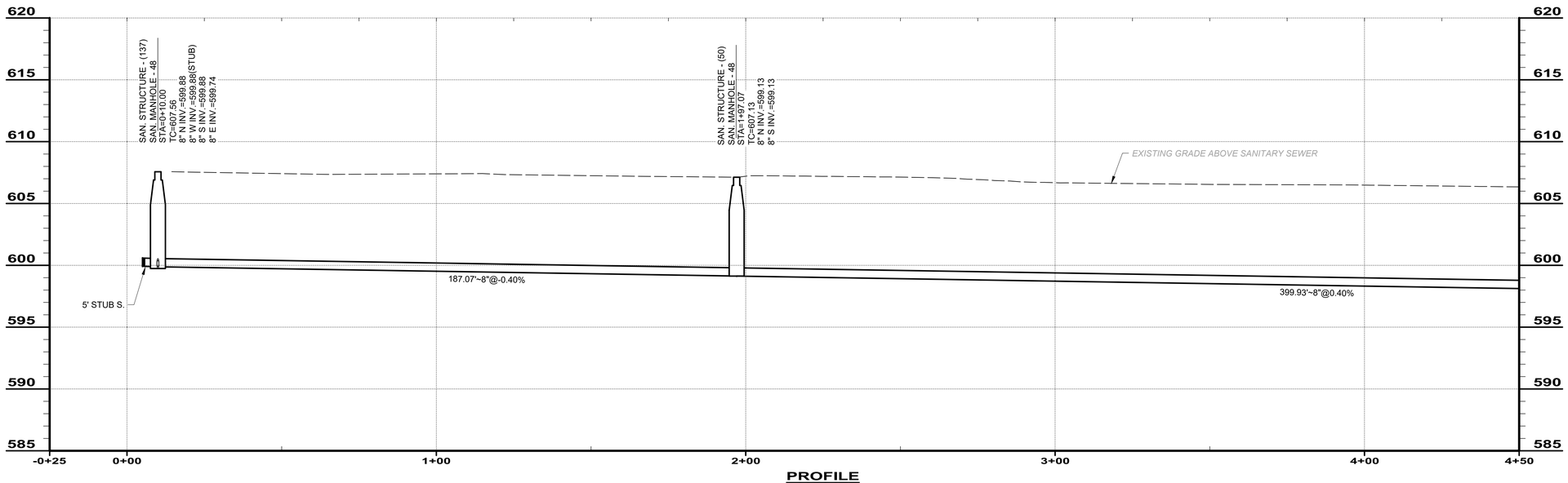
H:\2023\230467\DWG\SHEETS\C_230467 - WESTLAKE - PALMETTO P&P.DWG - WESTLAKE - PALMETTO - STA 0+00 TO 3+00 - 3/30/2026 8:58:23 AM - REID SCOTT



CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'OCLOCK OR 2'OCLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

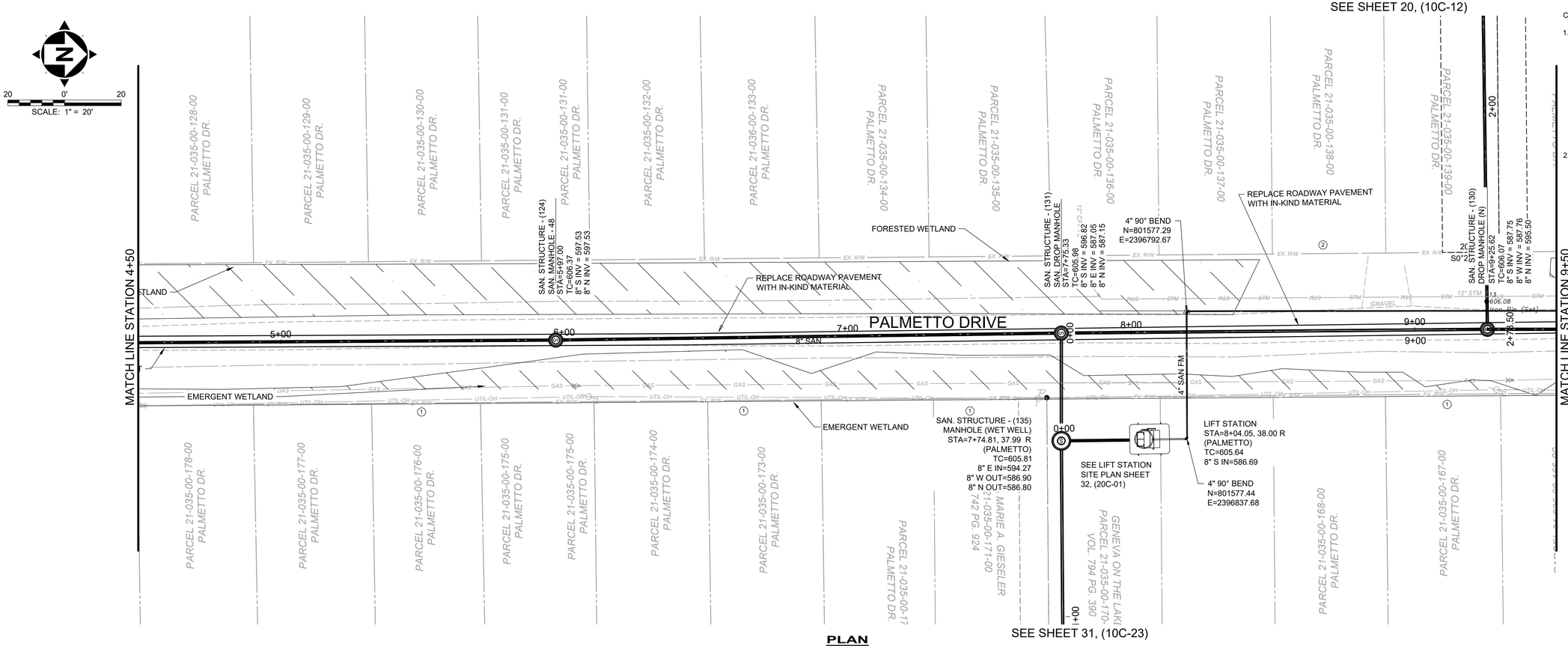
SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

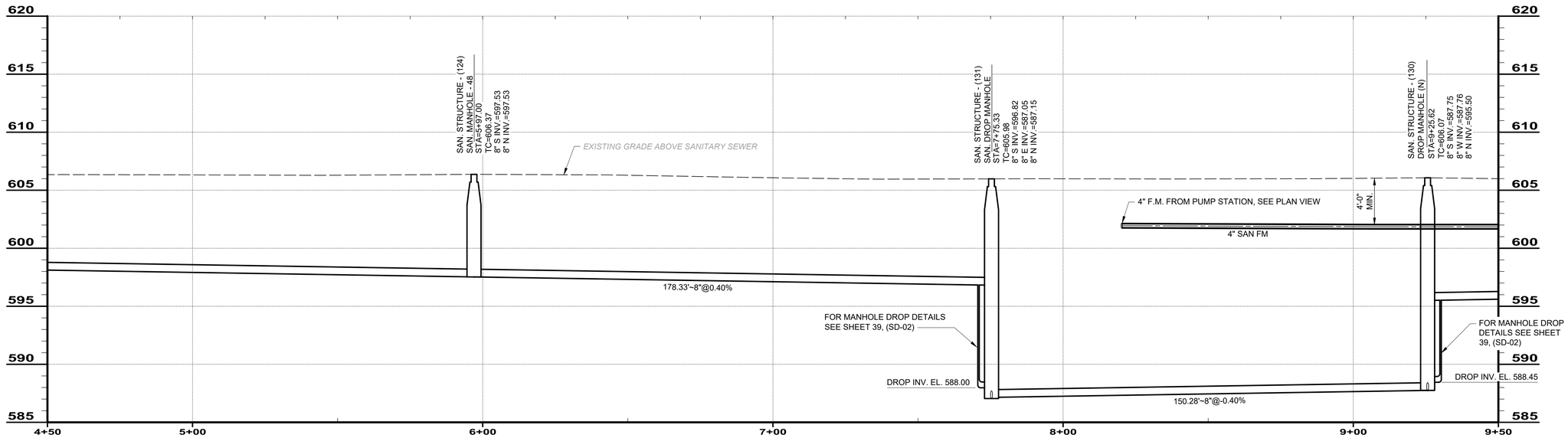
PLAN AND PROFILES - 10 SERIES

PALMETTO - STA 0+00 TO 4+50

PROJECT NO: 230467
DRAWING NAME: 10C-13
SHEET 21 OF 44



PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'OCLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

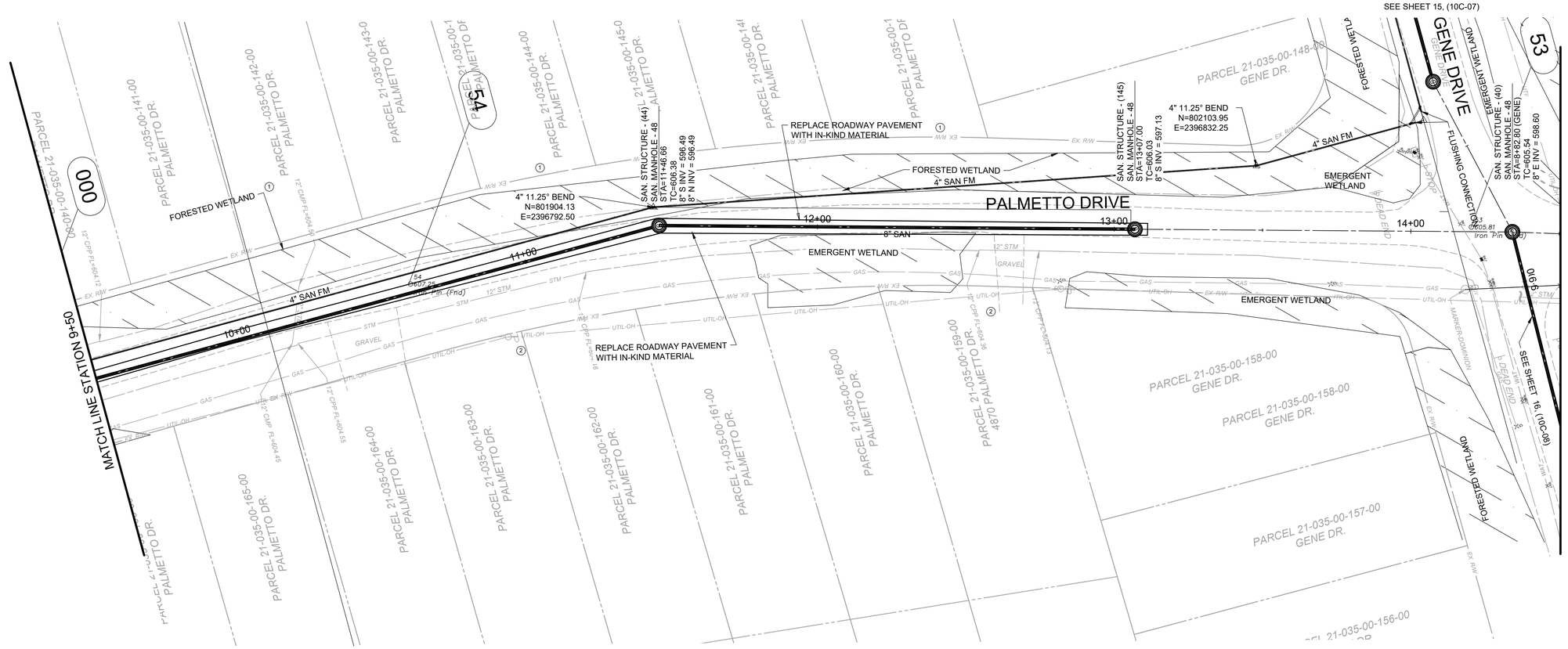
NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

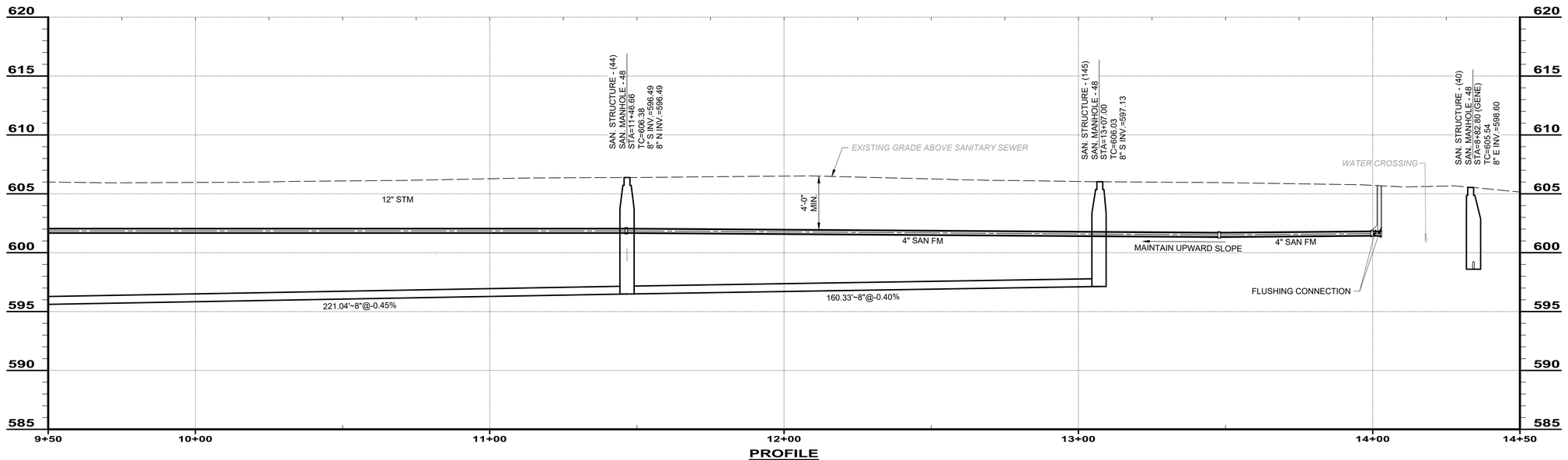
VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES
PALMETTO - STA 4+50 TO 9+50

PROJECT NO: 230467
DRAWING NAME: 10C-14
SHEET 22 OF 44



PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'OCLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

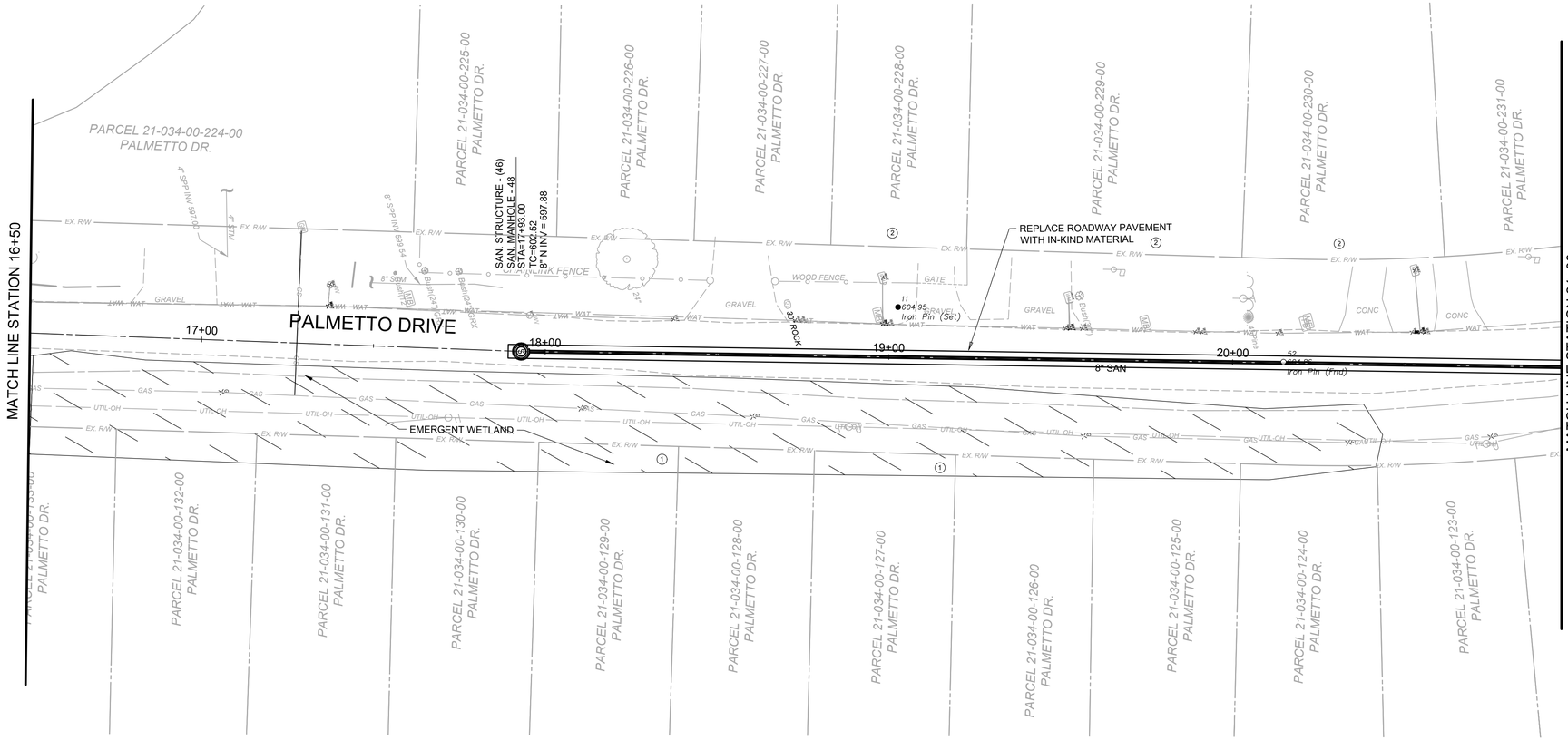
SCALE: AS NOTED	DATE: 8/25/2025	DESIGNED BY: RLM	DRAWN BY: ELE	CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES

PALMETTO - STA 9+50 TO 14+50

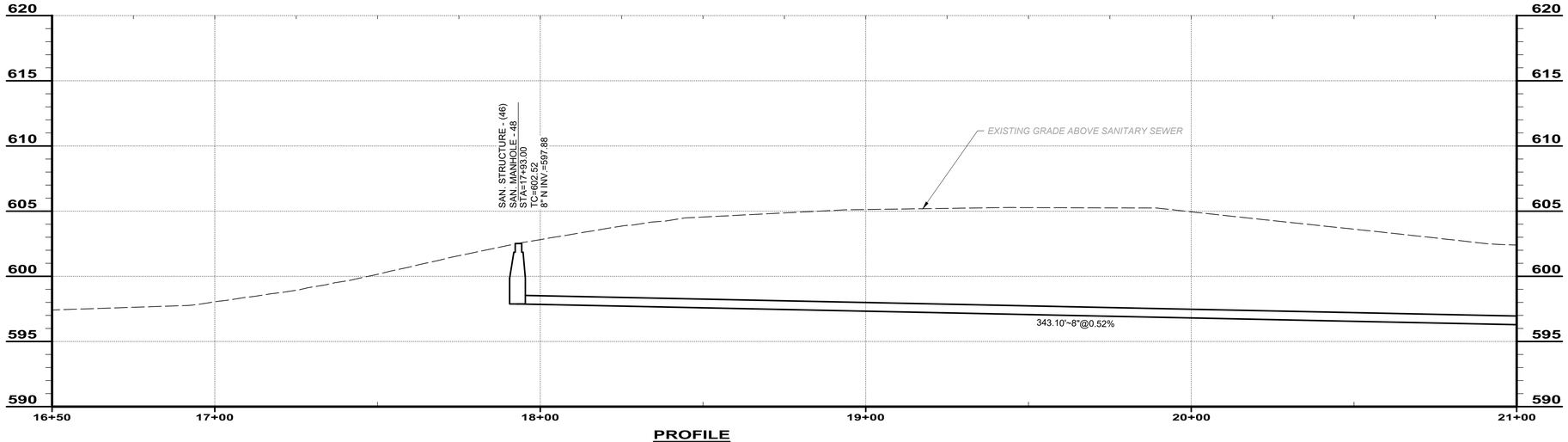
PROJECT NO: 230467
DRAWING NAME: 10C-15
SHEET 23 OF 44



PLAN
SCALE: 1" = 20'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'0CLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

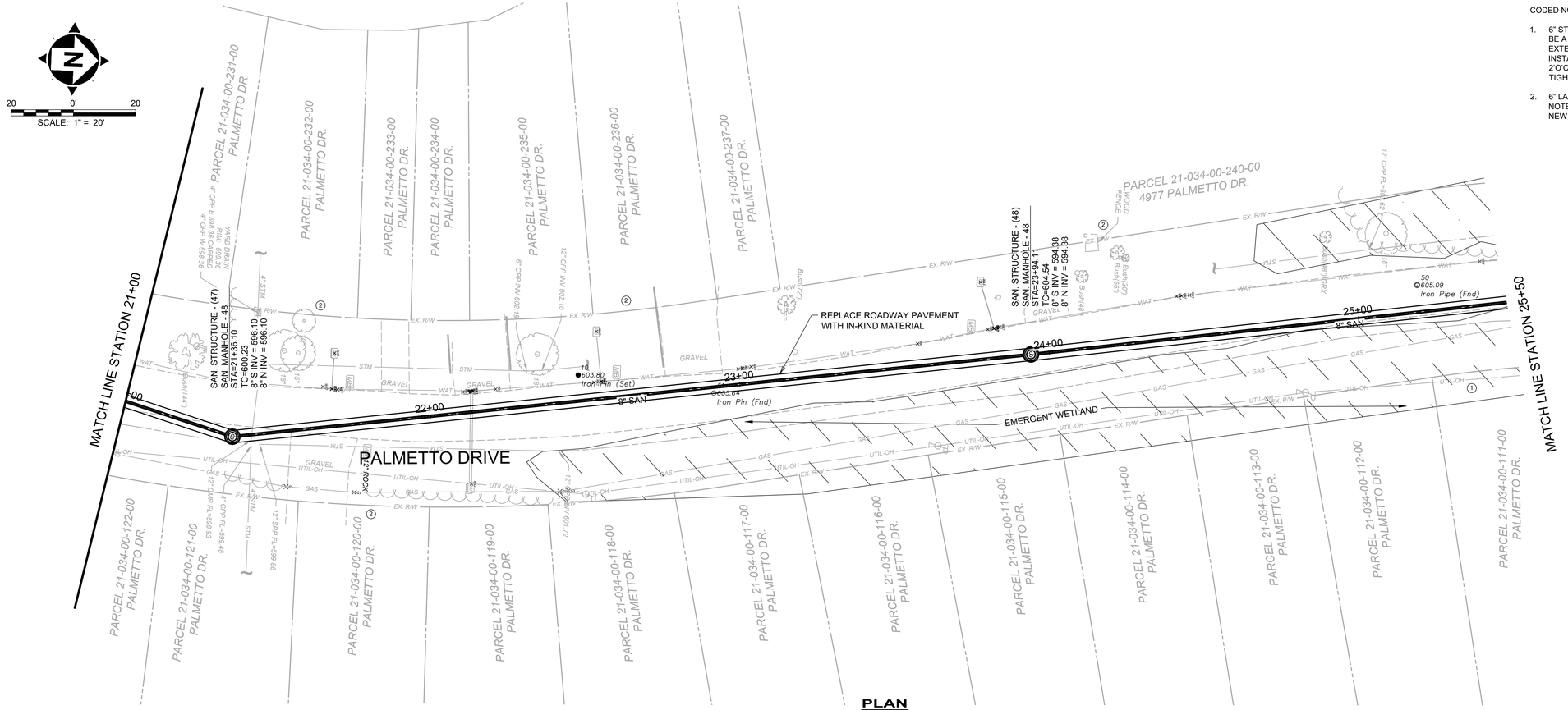
PLAN AND PROFILES - 10 SERIES

PALMETTO - STA 16+50 TO 21+00

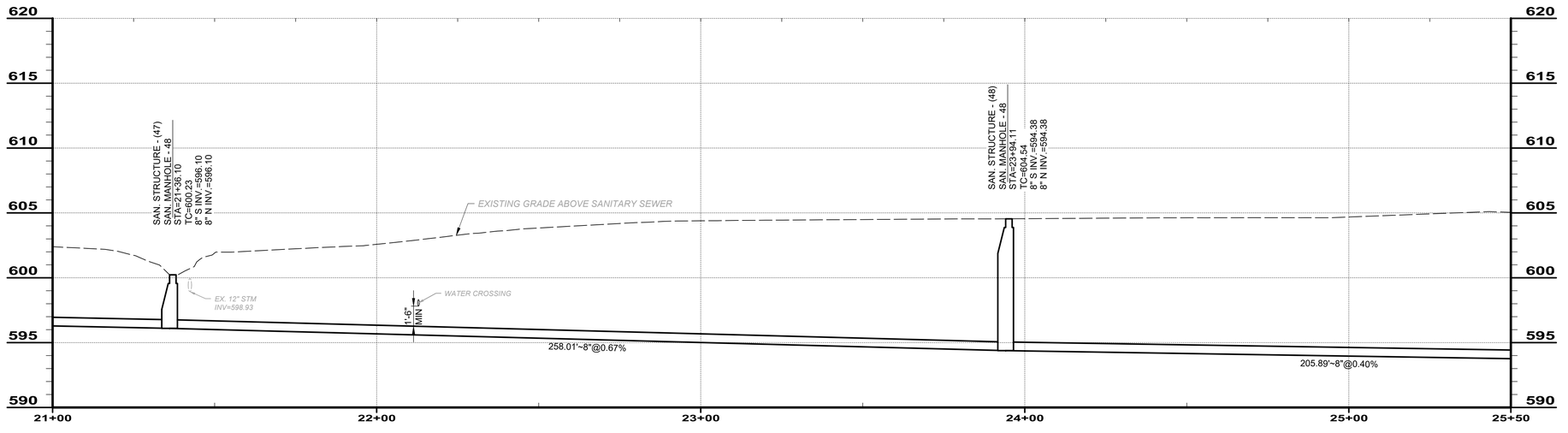
PROJECT NO: 230467
DRAWING NAME: 10C-16
SHEET 24 OF 44

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'0CLOCK OR 2'0'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.



PLAN
SCALE: 1" = 20'



PALMETTO SAN (5)

PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

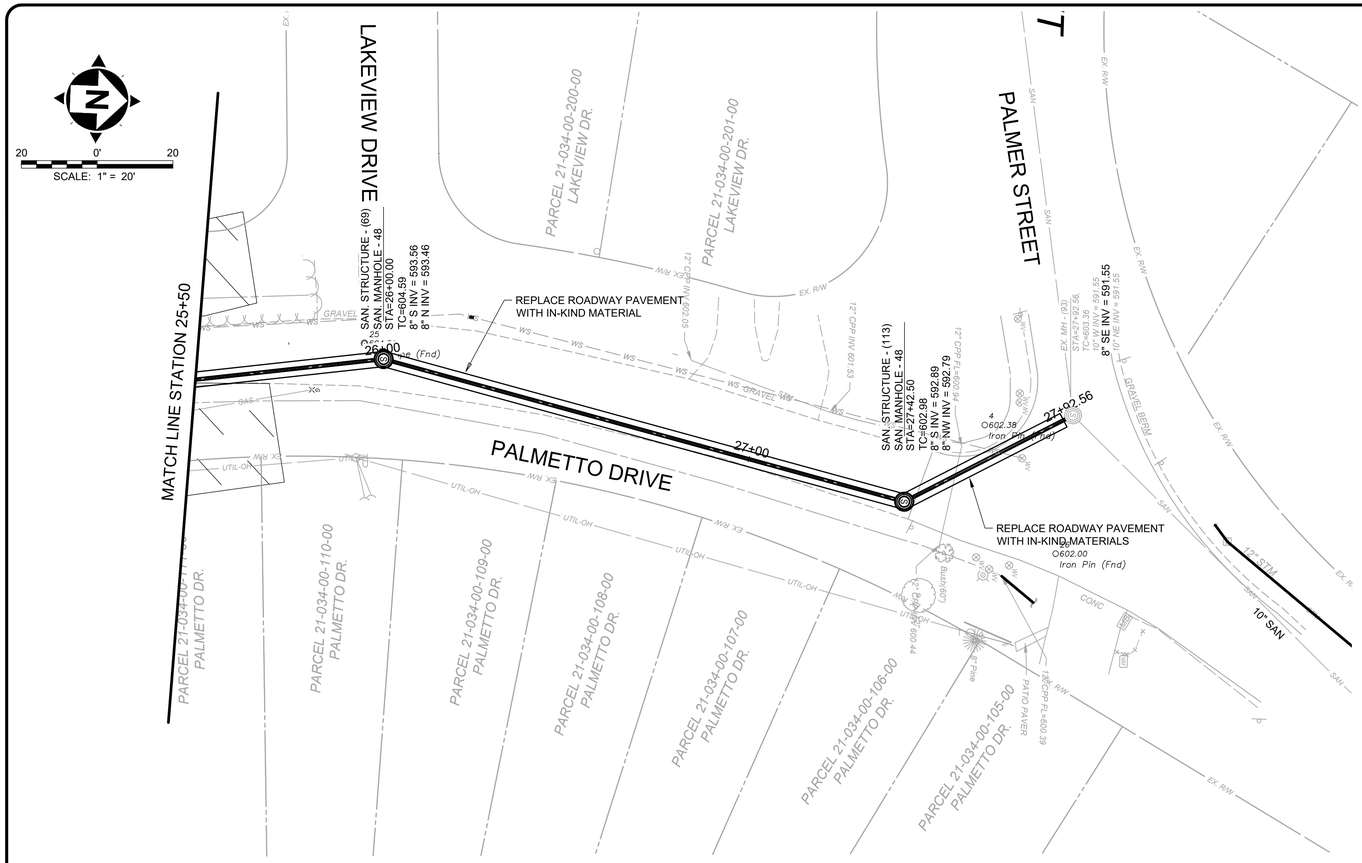
NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

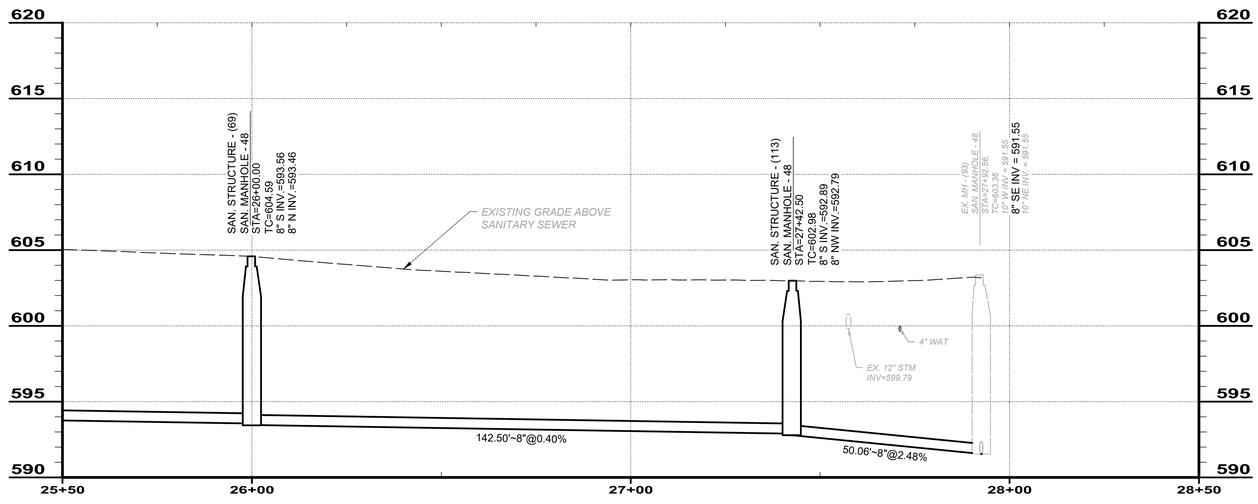
VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES
PALMETTO - STA 21+00 TO 25+50

PROJECT NO: 230467
DRAWING NAME: 10C-17
SHEET 25 OF 44



PLAN
SCALE: 1" = 20'



PALMETTO SAN (6)

PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'0CLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

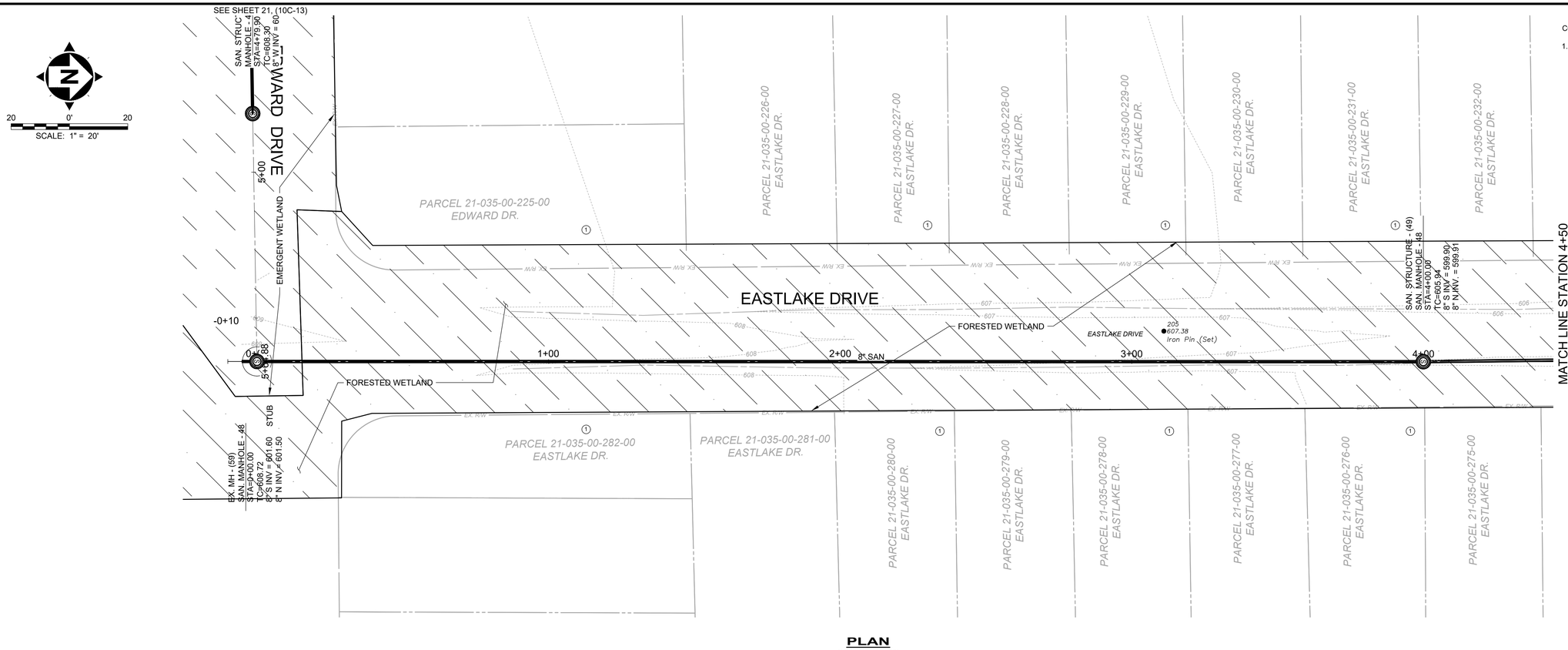
SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES

PALMETTO - STA 25+50 TO 28+00

PROJECT NO: 230467
DRAWING NAME: 10C-18
SHEET 26 OF 44

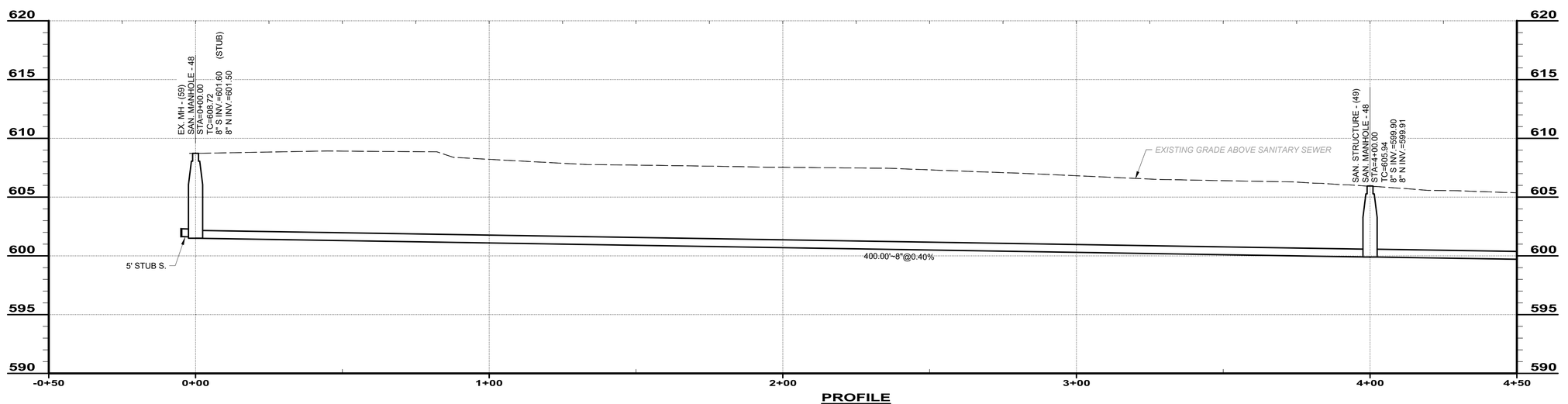


20 0' 20
SCALE: 1" = 20'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'OCLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.

PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

NO	REVISION	DATE

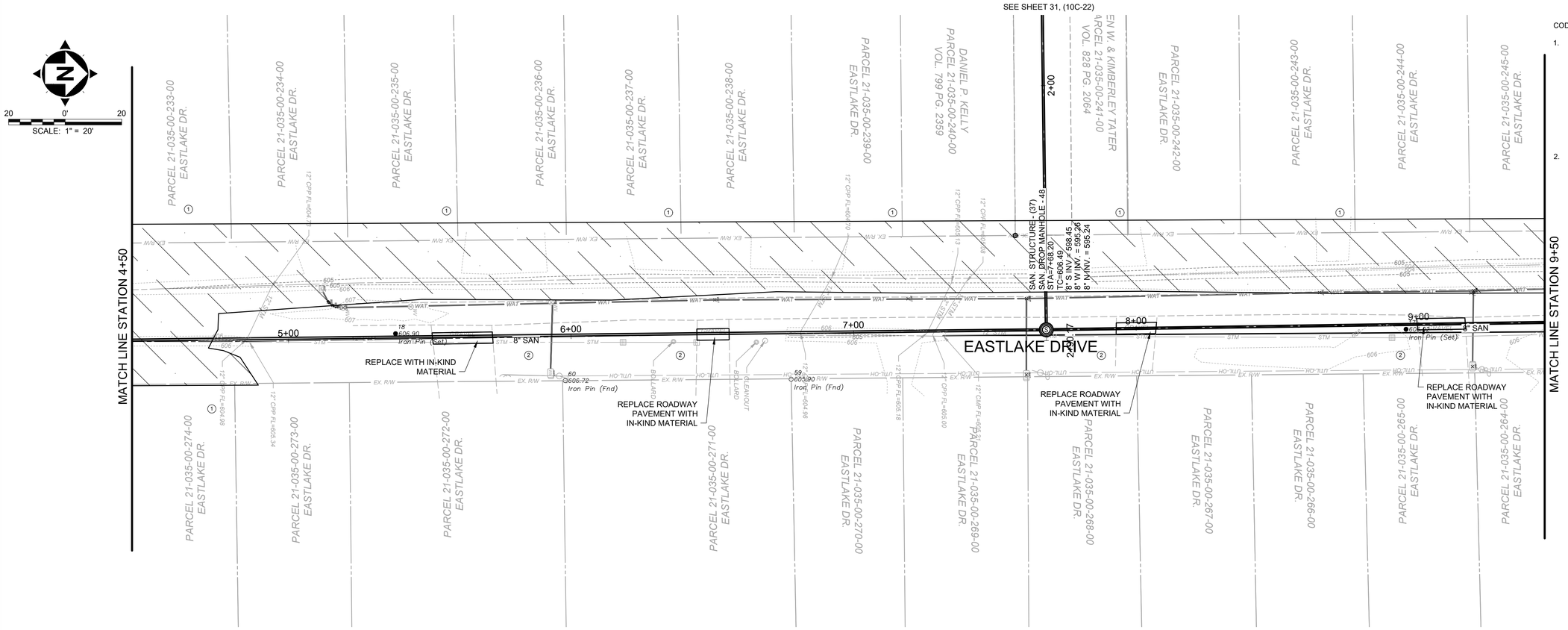
SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

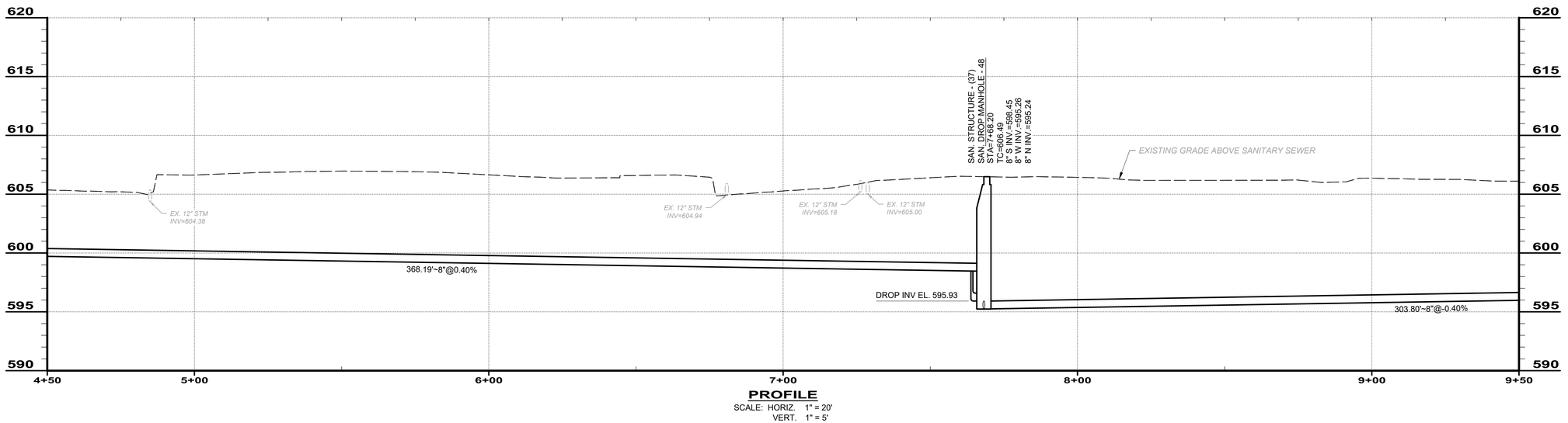
PLAN AND PROFILES - 10 SERIES

EASTLAKE - STA 0+00 TO 4+50

PROJECT NO:
230467
DRAWING NAME
10C-19
SHEET 27 OF 44



PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'OCLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.
2. 6" LATERAL WITH TEST TEE (CLEAN-OUT) SHALL BE INSTALLED AT THE NOTED LOCATION. LOCATION OF TEST SHALL BE AT THE ROW LINE. NEW 6" LATERALS SHALL BE SLOPED AT 1.0% OR GREATER.

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

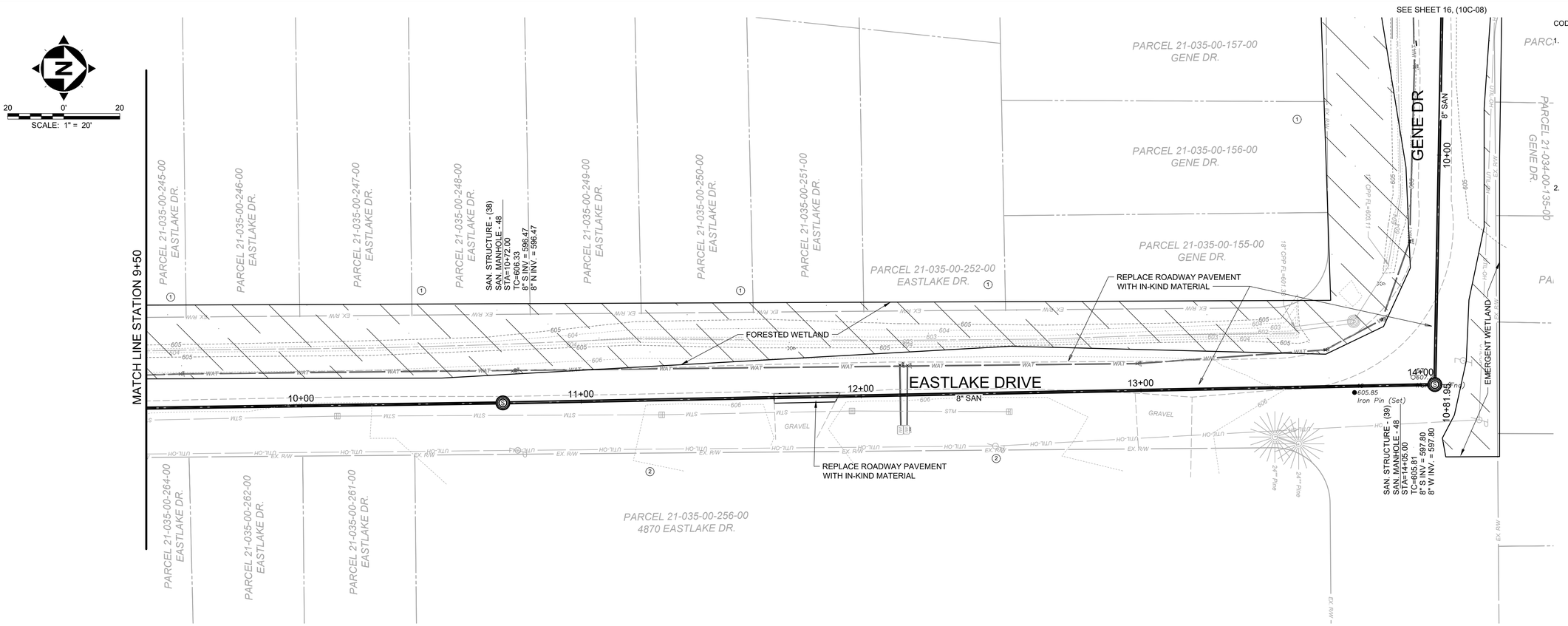
SCALE: AS NOTED	DATE: 8/25/2025	DESIGNED BY: RLM	DRAWN BY: ELE	CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

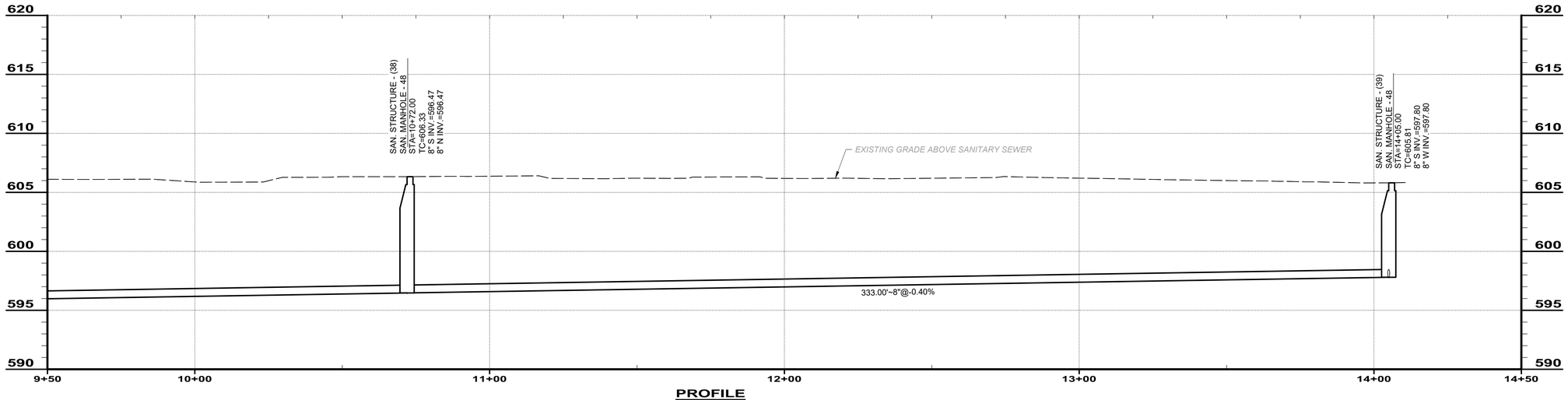
PLAN AND PROFILES - 10 SERIES

EASTLAKE - STA 4+50 TO 9+50

PROJECT NO: 230467
DRAWING NAME: 10C-20
SHEET 28 OF 44



PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

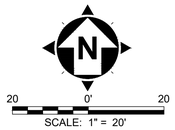
PLAN AND PROFILES - 10 SERIES

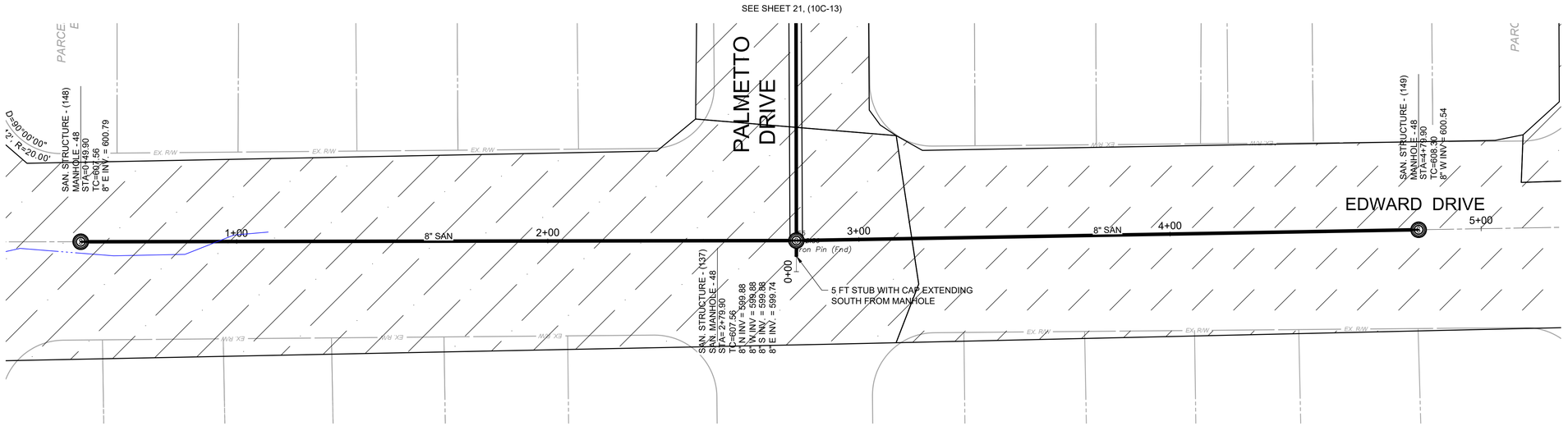
EASTLAKE - STA 9+50 TO 14+50

PROJECT NO: 230467
DRAWING NAME: 10C-21
SHEET 29 OF 44

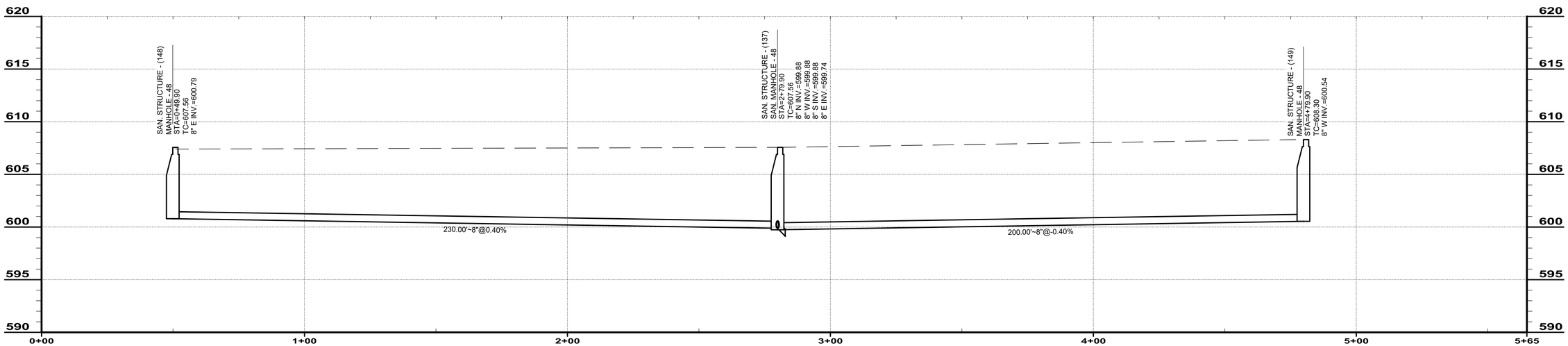
CODED NOTES:

1. 6" STUB SHALL BE INSTALLED AT THE NOTED LOCATION. STUB SHALL BE A MANUFACTURED 8"X 6" WYE WITH 2'-0" OF 6" PVC SDR 35 EXTENDING FROM THE WYE OR TEE. WYE OR TEE SHALL BE INSTALLED SO THAT THE PIPE IS POSITIONED IN THE 10'OCLOCK OR 2'O'CLOCK POSITION. EACH CONNECTION SHALL HAVE A WATER TIGHT CAP INSTALLED AT THE END OF THE 2'-0" EXTENSION.





PLAN
SCALE: 1" = 20'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

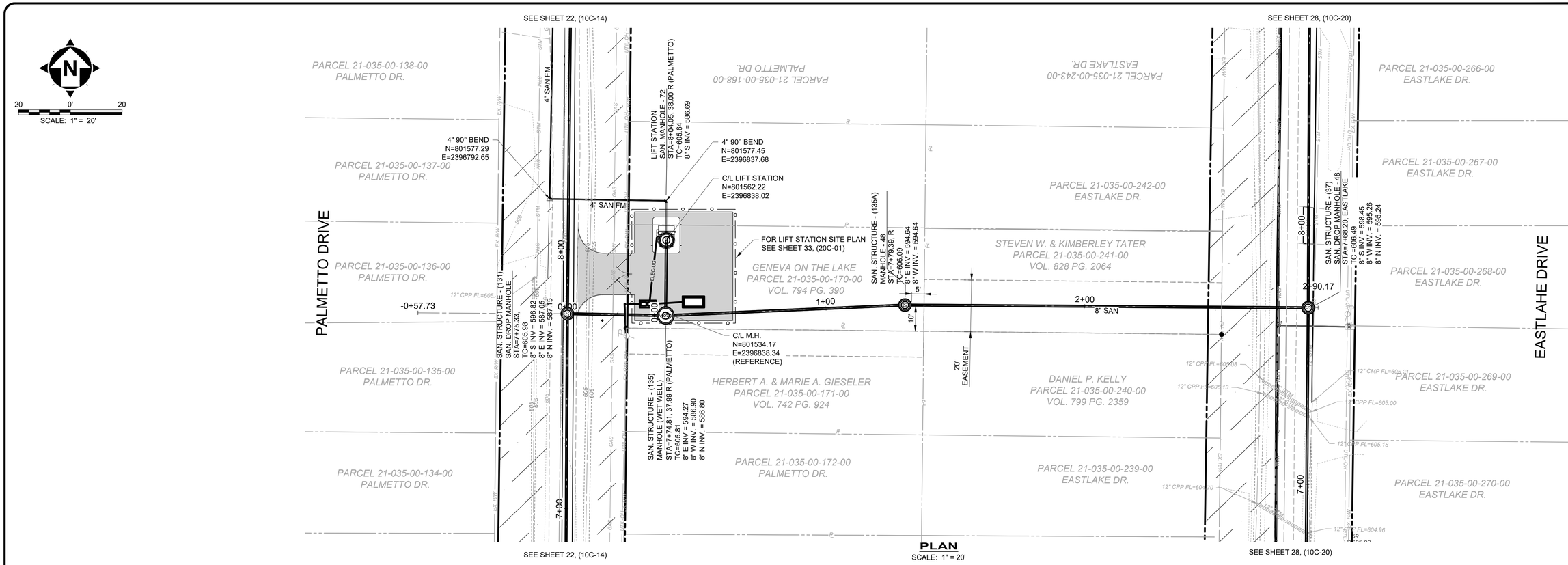
NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: TJM
DRAWN BY: RLM
CHECKED BY: RLM

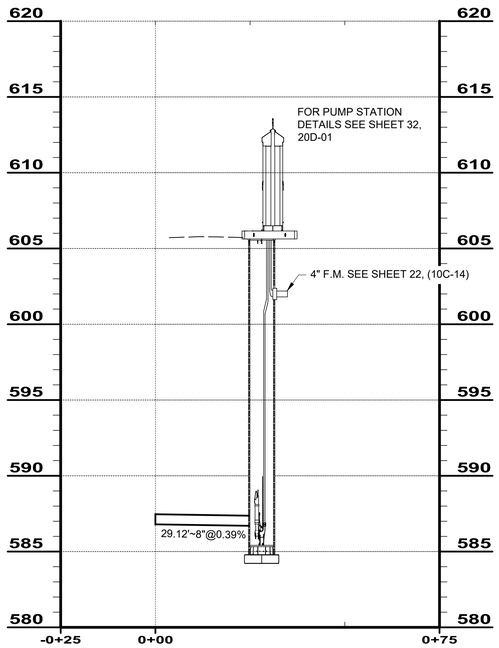
VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PLAN AND PROFILES - 10 SERIES
EDWARD - STA 0+00 TO 5+00

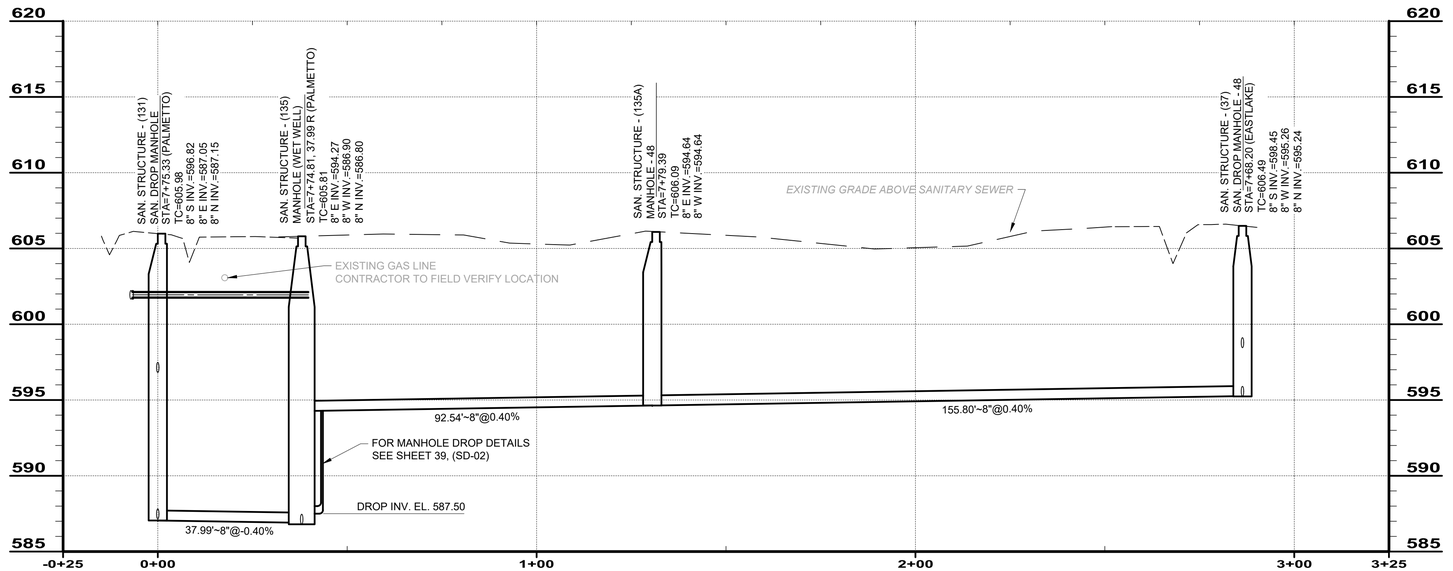
PROJECT NO: 230467
DRAWING NAME: 10C-22
SHEET: 30
OF: 44



PLAN
SCALE: 1" = 20'



WET WELL TO PUMP STATION



PALMETTO - EASTLAKE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 5'

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	8/25/2025
DESIGNED BY:	TJM
DRAWN BY:	RLM
CHECKED BY:	RLM

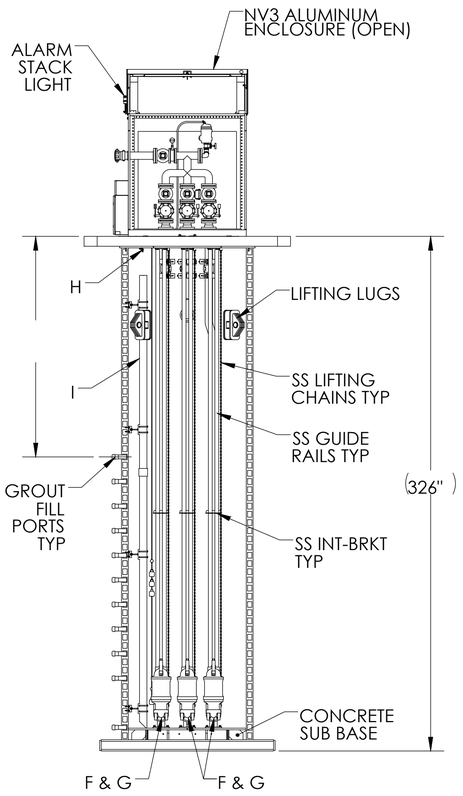
VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

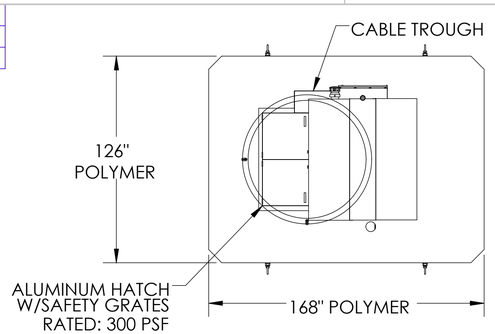
PLAN AND PROFILES - 10 SERIES

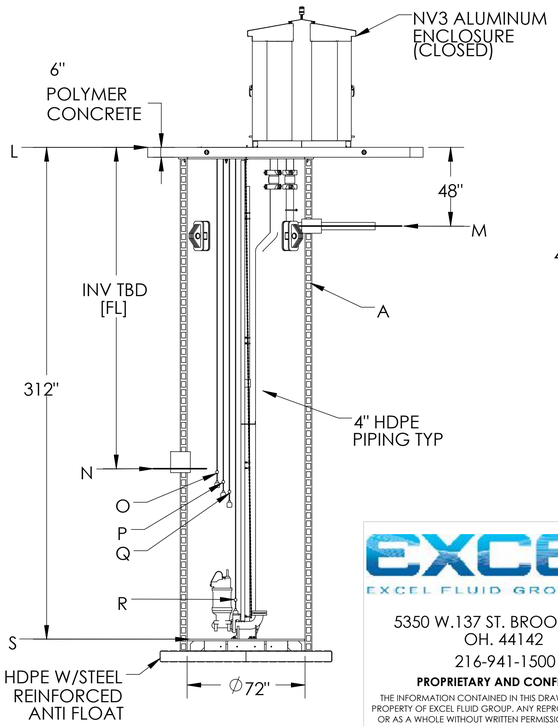
PALMETTO - EASTLAKE - STA 0+00 TO 3+00

PROJECT NO:
230467
DRAWING NAME
10C-23
SHEET 31 OF 44

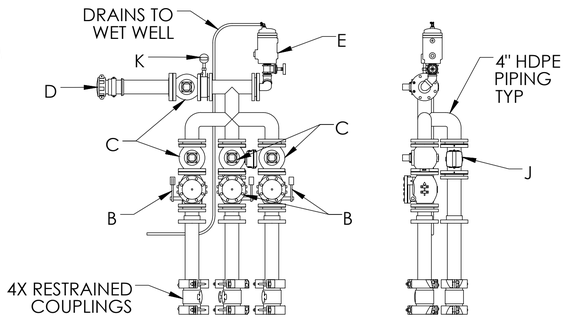
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	CREATED DRAWING	4/17/25	DW







EXCEL FLUID GROUP PUMP STATION		
ITEM:	DESCRIPTION:	QTY:
A	HDPE BASIN, Ø6' X 25'	1
B	4" CHECK VALVE	3
C	4" PLUG VALVE	4
D	4" BYPASS W/CAM LOCK	1
E	AIR RELEASE VALVE W/SHUT OFF	1
F	3XSCMP50N2 BARNES SITHE SEWAGE CHOPPER PUMP	3
G	3 X 4 BASE ELBOW	3
H	6-FLOAT BRACKET ASM	1
I	TRANSDUCER W/STILLING TUBE	1
J	4" FLOW METER	1
K	PRESSURE GAUGE	1



GOTL EXCEL FLUID GROUP STATION ELEVATION TABLE		
ITEM:	DESCRIPTION:	ELEVATION
L	TOP OF STATION	606.00
M	DISCHARGE (4" HDPE)	602.00
N	INVERT (8" PVC)	586.69
O	HIGH WATER ALARM FLOAT	586.00
P	LAG PUMP ON FLOAT	586.00
Q	LEAD PUMP ON FLOAT	585.50
R	PUMPS OFF FLOAT	582.00
S	FLOOR OF BASIN	580.00

EXCEL FLUID GROUP, LLC
5350 W.137 ST. BROOK PARK, OH. 44142
216-941-1500

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF EXCEL FLUID GROUP. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT WRITTEN PERMISSION IS PROHIBITED.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± 1/16"
ANGULAR: 0.25°
DECIMAL: ±.06

DRAWN BY: BP
DATE: 4/17/25
SCALE: 1/4" = 1'-0"

TITLE: VERDANTAS GENEVA ON THE LAKE PUMP STATION
DWG. NO. Q22584
SIZE: B | REV: 0 | SHEET: 1 of 1

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

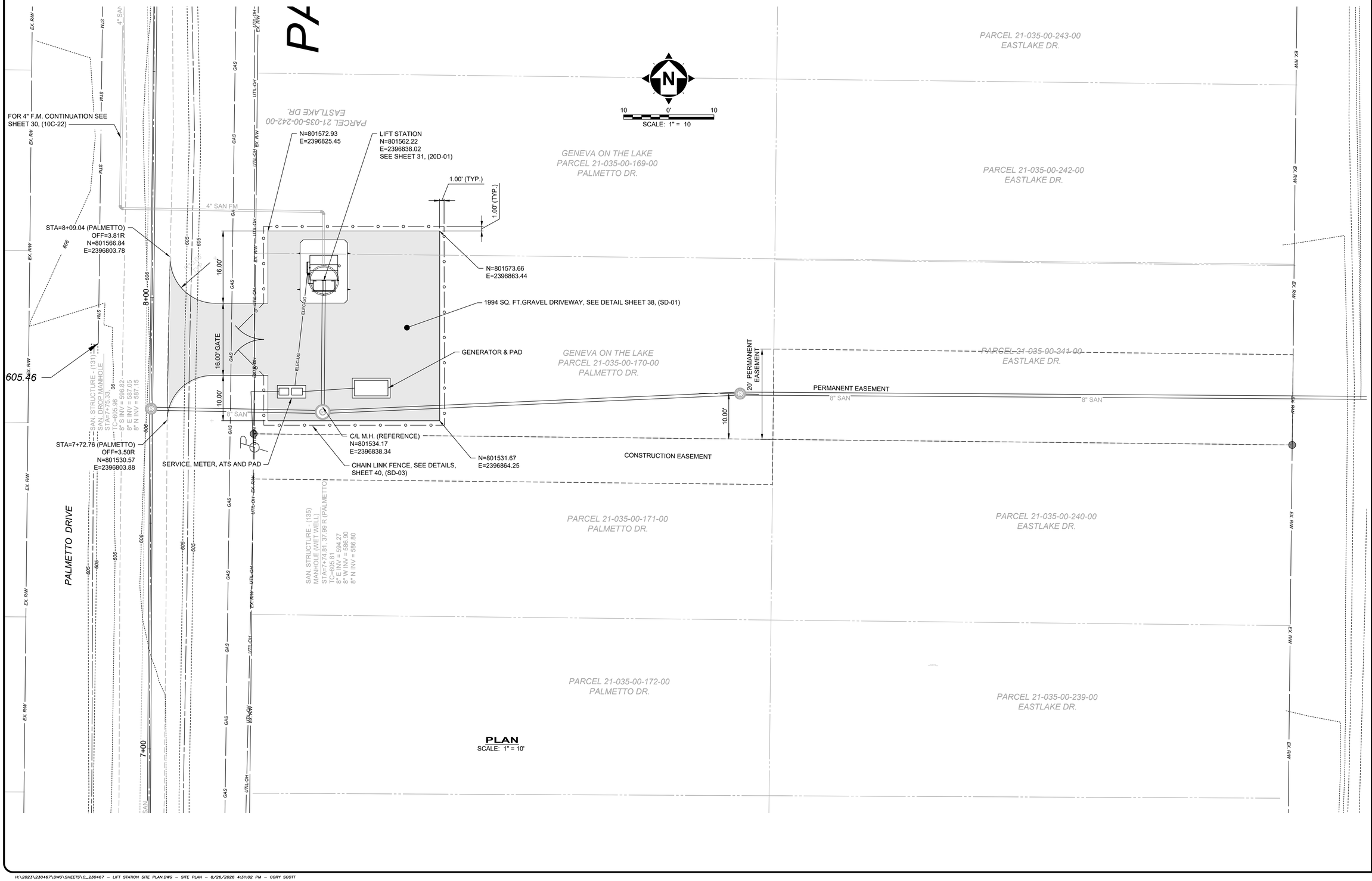
NO	REVISION	DATE

SCALE: 1/4" = 1'-0"
DATE: 9/29/23
DESIGNED BY: TJM
DRAWN BY: RLM
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

LIFT STATION - 20 SERIES
LIFT STATION DETAIL

PROJECT NO: 230467
DRAWING NAME: 20D-01
SHEET: 32 OF: 44



PLAN
SCALE: 1" = 10'

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: TJM
DRAWN BY: RLM
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

LIFT STATION - 20 SERIES
SITE PLAN

PROJECT NO: 230467
DRAWING NAME: 20C-01
SHEET 33 OF 44

H:\2023\230467\DWG\SHEETS\C_230467 – LIFT STATION SITE PLAN.DWG – SITE PLAN – 8/26/2026 4:31:02 PM – CORY SCOTT

1. SCOPE OF WORK

1.1 THE WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THESE GENERAL NOTES, CONSTRUCTION DRAWINGS AND CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT, TOOLS, LABOR, SUPERVISION AND ANY OTHER MISCELLANEOUS ITEMS REQUIRED TO INSTALL THE EQUIPMENT AND/OR DEVICES AS SPECIFIED HEREIN AND SHOWN ON THE DRAWINGS, UNLESS SPECIFICALLY EXCLUDED. THE EQUIPMENT OR DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC, THE MFR'S INSTRUCTIONS AND ACCORDING TO PLANS AND DRAWINGS PROVIDED. WRITTEN APPROVAL FROM THE AUTHORIZED COMPANY REPRESENTATIVE SHALL BE OBTAINED PRIOR TO MAKING ANY DEVIATION FROM THE DRAWINGS OR ANY SUBSTITUTION OF MATERIALS. IF SUCH PRIOR APPROVAL HAS NOT BEEN OBTAINED, IT WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO CHANGE, WITHOUT ADDITIONAL COMPENSATION, ANY ITEMS SUBSEQUENTLY DISCOVERED TO BE UNACCEPTABLE.

1.2 THE CONTRACTOR SHALL PROVIDE THE INSTALLATION, INTERCONNECTION AND TESTING OF COMPLETE AND OPERABLE SYSTEMS.

1.3 INCLUDED IN THIS WORK IS THE FURNISHING, BY THE CONTRACTOR, OF OFFICE MATERIAL, EQUIPMENT STORAGE AND SHOP FACILITIES FOR THE CONSTRUCTION WORK DURING THE ENTIRE CONSTRUCTION PERIOD. CAPACITY, ARRANGEMENTS AND LOCATION OF THESE FACILITIES ARE SUBJECT TO APPROVAL BY THE CONSTRUCTION MANAGER AND SHALL COMPLY WITH APPLICABLE CODES AND REGULATIONS.

1.4 TO ENABLE ORDERLY REVIEW DURING PROGRESS OF THE WORK, AND TO PROVIDE FOR SYSTEMATIC DISCUSSION OF PROBLEMS, THE CONSTRUCTION MANAGER WILL CONDUCT PROJECT MEETINGS THROUGHOUT THE CONSTRUCTION PERIOD. THE CONTRACTOR WILL BE EXPECTED TO ATTEND THESE MEETINGS.

1.5 THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ON THE PROJECT REQUIRED TO BE PERFORMED BY ELECTRICIANS, INCLUDING THAT DUE TO JURISDICTION AND/OR LOCAL PRACTICES.

1.6 THE CONTRACTOR SHALL EMPLOY QUALIFIED ELECTRICAL WORKERS, AND LABORERS TO PERFORM THE WORK TO BE DONE.

1.7 THE CONTRACTOR SHALL PROVIDE ALL TOOLS, CONSTRUCTION EQUIPMENT, TEST EQUIPMENT, AND TESTING FACILITIES AND SHALL MAKE TESTS AND KEEP RECORDS AS SPECIFIED HEREIN.

1.8 THE CONTRACTOR SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES, PERMANENT FACILITY PERSONNEL, AND THE CONSTRUCTION MANAGER. COORDINATION SHALL ALLOW WORK TO BE INSTALLED IN THE MOST DIRECT MANNER AND SO INTERFERENCE BETWEEN CONDUITS, PIPING, DUCTS, EQUIPMENT, AND STRUCTURAL FEATURES WILL BE AVOIDED.

1.9 CABLE TRAY AND RACEWAY ROUTING.

1.9.a EQUIPMENT, INSTRUMENTS, DEVICES, PANELS AND JUNCTION BOXES LOCATIONS ARE SHOWN ON THE ELECTRICAL LAYOUT DRAWINGS.

1.9.b ONLY THE GENERAL CABLE OR RACEWAY TRAY ROUTING PLANS ARE SHOWN ON THE ELECTRICAL LAYOUT DRAWINGS. THE ROUTING FROM INDIVIDUAL ITEMS IS NOT DEPICTED ON THE DRAWINGS.

1.9.c THE DIFFERENT WIRING CLASSES AND WIRE ASSIGNED TO THEM (MEDIUM VOLTAGE POWER, LOW VOLTAGE POWER, CONTROL, INSTRUMENTATION) ARE ALL INDICATED ON THE DRAWING OR IN THE CABLE, CONDUIT AND WIRE SCHEDULE.

1.9.d IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE BEST CABLE TRAY OR RACEWAY ROUTING FOR ALL WIRES NOT SPECIFICALLY ROUTED, WHILE MAINTAINING THE WIRE CLASS SEGREGATION REQUIREMENTS OF THE NEC.

1.9.e THE CONTRACTOR SHALL PRESENT THE ROUTING PLAN TO THE CONSTRUCTION MANAGER FOR APPROVAL BEFORE PROCEEDING.

1.10 RUNS FROM OUTLETS REFERRED TO AS "HOME RUNS" MAY BE USED ON CONTRACTOR'S CONSTRUCTION DRAWINGS. THEY ARE INDICATED BY POINTING IN THE GENERAL DIRECTION OF PANELS. CONTRACTOR SHALL BE RESPONSIBLE TO CONTINUE SUCH CIRCUITS TO THE PANELS AS THOUGH THE ROUTES WERE COMPLETELY INDICATED. HOME RUNS SHALL BE INSTALLED FROM OUTLETS AS SHOWN ON CONTRACTOR'S DRAWINGS.

1.11 THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL DETAILS OF THE WORK AND VERIFY ALL DIMENSIONS IN THE FIELD SO THAT THE OUTLETS AND EQUIPMENT WILL BE PROPERLY LOCATED AND READILY ACCESSIBLE. LIGHTING FIXTURES, OUTLETS, AND OTHER EQUIPMENT AND MATERIALS SHALL BE LOCATED TO AVOID INTERFERENCE WITH CABINETS, MECHANICAL OR STRUCTURAL FEATURES. DEVIATIONS FROM DRAWINGS REQUIRED TO MAKE WORK OF THIS CONTRACT CONFORM TO BUILDING AS CONSTRUCTED, OR AS TO WORK OF OTHER CONTRACTORS, SHALL BE MADE BY THE CONTRACTOR AT HIS EXPENSE. THE ENGINEER RESERVES THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF EQUIPMENT AND OUTLETS PRIOR TO INSTALLATION WITHOUT ADDITIONAL CHARGES.

2. CONTRACT DOCUMENTS

2.1 THE CONTRACT DOCUMENTS SHALL CONSIST OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS ISSUED BY THE ENGINEER. EACH DOCUMENT IS COMPLEMENTARY, AND THE REQUIREMENTS SHOWN, WRITTEN OR REASONABLY INFERABLE THERE FROM ONE DOCUMENT IS CONSIDERED AS WRITTEN, SHOWN OR IMPLIED IN ALL.

2.2 THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ALL OF THE PLANS INCLUDING ARCHITECTURAL, LAYOUT, PIPING AND MECHANICAL PLANS. HE SHALL PERFORM ALL WORK AND PROVIDE ALL MATERIAL REQUIRED BY THE ELECTRICAL CONTRACTOR SHOWN UNDER THESE AND ALL OTHER SECTIONS OF THE PLANS AND SPECIFICATIONS.

2.3 THE CONTRACTOR SHALL MAINTAIN AN UP TO DATE SET OF AS-BUILT DRAWINGS NEATLY MARKED WITH ALL CHANGES (RED LINED) FROM THE ORIGINAL DESIGN. THESE DRAWINGS SHALL BE DELIVERED TO THE CONSTRUCTION MANAGER AT THE COMPLETION OF THE PROJECT PRIOR TO RECEIVING FINAL PAYMENT.

3. CODES AND STANDARDS

3.1 THE ELECTRICAL EQUIPMENT, MATERIALS AND INSTALLATION PROVIDED FOR THIS PROJECT SHALL CONFORM IN DESIGN, FABRICATION, TESTING AND PERFORMANCE, TO THE LATEST EDITION OF STANDARDS AND GUIDELINES PUBLISHED BY THE FOLLOWING ORGANIZATIONS WHERE APPLICABLE. THE LATEST EDITION OF THE STANDARDS, DOCUMENTS, AND PUBLICATIONS, REFERENCED HEREIN BY BASIC DESIGNATION SHALL BECOME PART OF THESE SPECIFICATIONS TO THE EXTENT REFERENCED.

ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
FM FACTORY MUTUAL FM STANDARDS
IEEE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS
NFPA 70	NATIONAL ELECTRIC CODE
NFPA 70E	STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE
NFPA 72	NATIONAL FIRE ALARM CODE
NEMA	NATIONAL ELECTRICAL MFR'S ASSOCIATION
UL	UNDERWRITERS' LABORATORIES, INC.
ICEA	INSULATED CABLE ENGINEERS ASSOCIATION
IPCEA	INSULATED POWER CABLE ENGINEERS ASSOCIATION STANDARDS
ISA	INSTRUMENT SOCIETY OF AMERICA STANDARDS

3.2 ALL LOCAL, STATE AND FEDERAL CODES, STANDARDS AND REGULATIONS IN EFFECT HAVING JURISDICTION IN THE AREA WHERE THE EQUIPMENT WILL BE INSTALLED. ANY CONFLICT BETWEEN THE ABOVE MENTIONED DOCUMENTS AND THIS SPECIFICATION SHALL BE REFERRED TO THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE FABRICATION OF THE AFFECTED PARTS.

4. CODES AND PERMITS

4.1 THE INSTALLATION AND MATERIALS SHALL COMPLY WITH ALL LAWS APPLYING TO ELECTRICAL INSTALLATION IN EFFECT, WITH THE REGULATIONS OF THE NEC WHERE SUCH REGULATIONS DO NOT CONFLICT WITH LAWS IN EFFECT, AND WITH THE REGULATIONS OF THE PUBLIC UTILITY COMPANY FURNISHING THE SERVICE.

5. GUARANTEE

5.1 THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS, WORKMANSHIP AND THE SUCCESSFUL OPERATION OF ALL EQUIPMENT AND APPARATUS UNDER THIS CONTRACT FOR A PERIOD OF (18) EIGHTEEN MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE WHOLE WORK. CONTRACTOR SHALL GUARANTEE TO REPAIR OR REPLACE AT HIS OWN EXPENSE ANY PART OF THE APPARATUS WHICH MAY SHOW DEFECT DURING THAT TIME PROVIDED SUCH DEFECT IS DUE TO IMPROPER MATERIALS OR WORKMANSHIP AND NOT TO CARELESSNESS OR IMPROPER USE BY THE OWNER. BY DEFAULT, OWNER MAY HAVE SUCH WORK DONE AND CHARGED TO THE CONTRACTOR.

6. CONSTRUCTION, SHOP DRAWINGS AND MATERIALS

6.1 CONTRACTOR SHALL SUBMIT AN ELECTRONIC SET OF SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING ELECTRICAL CONSTRUCTION AND/OR PURCHASE OF EQUIPMENT INCLUDED THEREIN.

6.1.a THE FOLLOWING IS THE MINIMUM EXPECTATION OF SHOP DRAWINGS THAT WILL BE REQUIRED FOR THE PROJECT:

A. TRANSFORMERS
B. SWITCHGEAR, SWITCHBOARDS, PANELBOARDS, MOTOR CONTROLLERS
C. DISCONNECT SWITCHES AND ASSOCIATED FUSES
D. RACEWAYS: CONDUIT, CABLE TRAY AND WIREWAY
E. WIRE, CABLE INCLUDING GROUND SYSTEM
F. LIGHTING FIXTURES
G. CONTROL PANELS
H. ALL PREFABRICATED CONCRETE: MANHOLES, VAULTS, POLE BASES

6.2 RECEIPT OR APPROVAL OF SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLYING WITH CONTRACT DOCUMENTS.

6.3 ALL MATERIAL SHALL BE UL LISTED UNLESS OTHERWISE REQUIRED.

6.4 CONTRACTOR SHALL MAKE PROVISIONS FOR TIMELY AND SAFE DELIVERY AND SAFE STORAGE OF MATERIALS.

6.5 MFRS' NAMES ARE LISTED TO ESTABLISH FUNCTION AND QUALITY OF MATERIAL OR EQUIPMENT. MATERIALS SO LISTED SHALL BE BID AS SPECIFIED UNLESS WRITTEN APPROVAL IS OBTAINED TO SUBSTITUTE MATERIALS OF EQUAL QUALITY BY OTHER MFRS. LETTERS REQUESTING APPROVAL AND INCLUDING COMPLETE ENGINEERING INFORMATION DESCRIBING PERFORMANCE AND SHOWING DIMENSIONS SHALL BE SUBMITTED TO THE ENGINEER AT LEAST 5 WORKING DAYS PRIOR TO BID OPENING.

7. FIELD DEVICES & WIRING:

7.1 ALL MOTORS AND INSTRUMENTS SHALL BE HAVE AN EQUIPMENT IDENTIFYING TAG AS INDICTED HEREIN, ON PLANS OR IN SPECIFICATIONS SECTION 26.

7.2 TERMINAL BLOCKS SHALL BE LABELED AS INDICTED HEREIN, ON PLANS OR IN SPECIFICATIONS SECTION 26.

7.3 POWER CABLES ARE TO BE COLOR CODED BY PHASE AS INDICATED HEREIN.

8. EXCAVATION AND BACKFILLING:

8.1 THE CONTRACTOR SHALL PERFORM ALL EXCAVATION, TRENCHING AND BACKFILLING WORK, AND REMOVE ALL DEBRIS IN CONNECTION WITH HIS WORK. BACKFILLING SHALL BE DONE WITH MATERIALS ACCEPTABLE TO THE CONSTRUCTION MANAGER AND THOROUGHLY COMPACTED. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND PROPERLY INSTALLED TO ELIMINATE ANY SETTLEMENT.

9. WORKMANSHIP

9.1 THE CONTRACTOR SHALL BE HELD SOLELY RESPONSIBLE FOR THE PROPER INSTALLATION OF HIS WORK. HE SHALL ARRANGE WITH THE PROPER CONTRACTORS FOR THE BUILDING IN OF ANCHORS, ETC., AND FOR THE LEAVING OF REQUIRED CHASES, OPENINGS, ETC., AND SHALL DO ALL CUTTING AND PATCHING MADE NECESSARY BY HIS FAILURE OR NEGLECT TO MAKE SUCH ARRANGEMENTS WITH OTHERS. ANY CUTTING OR PATCHING DONE BY THIS CONTRACTOR SHALL BE SUBJECT TO THE DIRECTIONS OF THE CONSTRUCTION MANAGER AND SHALL NOT BE STARTED UNTIL APPROVAL HAS BEEN OBTAINED.

9.2 ALL CUTTING, WELDING OR DRILLING OF CONCRETE OR STRUCTURAL MEMBERS SHALL BE PROPERLY REINFORCED AND PATCHED TO MATCH AS NEARLY AS POSSIBLE THE SURROUNDING WORK. BEFORE CUTTING, WELDING OR DRILLING ANY CONCRETE OR STRUCTURAL MEMBER, THE CONTRACTOR SHALL SECURE THE APPROVAL OF THE CONSTRUCTION MANAGER.

9.3 THE CONTRACTOR SHALL ASSIGN PERSONS IN DIRECT CHARGE OF WORK WHO ARE THOROUGHLY EXPERIENCED IN THE CLASS OF CONSTRUCTION WORK SPECIFIED HEREIN. ALL LABOR SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED WORKMEN UNDER THE SUPERVISION OF COMPETENT SUPERVISORS.

9.4 THE CONTRACTOR SHALL PERIODICALLY REMOVE ALL DEBRIS AND WASTE IN ORDER TO MAINTAIN SAFE WORKING AND OPERATING CONDITIONS, AND SHALL DISPOSE OF THE SAME IN AN APPROVED MANNER. AT THE COMPLETION OF WORK, HE SHALL REMOVE ALL HIS RUBBISH, TOOLS, SCAFFOLDS AND SURPLUS MATERIALS FROM AND ABOUT THE SITE, LEAVING HIS WORK CLEAN AND THE AREAS READY FOR OCCUPANCY.

10. PERFORMANCE AND QUALITY ASSURANCE TESTING

10.1 UPON COMPLETION, THE COMPANY SHALL REVIEW AND APPROVE THE INSTALLATION TO ENSURE THAT THE WORK WAS DONE IN ACCORDANCE WITH THE DESIGN DRAWINGS AND CODE REQUIREMENTS, WITH ANY REQUIRED CORRECTIVE ACTIONS AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CERTIFICATES, PERMITS OR INSPECTIONS BY THE AUTHORITIES HAVING JURISDICTION.

10.2 THE INSTALLATION SHALL BE TESTED FREE FROM ALL GROUNDS AND SHORT CIRCUITS. ALL EQUIPMENT FURNISHED SHALL BE DEMONSTRATED TO OPERATE IN ACCORDANCE WITH THE REQUIREMENTS OF THESE SPECIFICATIONS AND PLANS. CONSULT WITH THE OWNER'S REPRESENTATIVE PRIOR TO TESTING AND ADJUSTING TO DETERMINE INTENDED FUNCTION. PERFORM SUCH TESTS AND MAKE NECESSARY ADJUSTMENTS TO ENSURE THAT DESIGN FUNCTION IS OBTAINED. THESE TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE CONSTRUCTION MANAGER OR HIS AUTHORIZED REPRESENTATIVE. THE CONTRACTOR SHALL NOTIFY ALL THOSE WHO ARE REQUIRED TO BE PRESENT DURING THE TESTS (SUCH AS THE FIRE MARSHAL FOR THE TESTING OF THE FIRE ALARM SYSTEM AND EMERGENCY EXIT LIGHTING SYSTEM). NOTIFICATION OF A TEST SHALL BE MADE TO PERSONS THAT ARE TO ATTEND AS REQUIRED BY THEIR DEPARTMENT AT LEAST 7 DAYS IN ADVANCE.

10.3 NORMAL FEEDERS, CIRCUITS, AND SERVICE ENTRANCE CONDUCTORS WITH WIRE SIZE #2 AND LARGER SHALL BE TESTED FOR LEAKAGE PHASE-TO-GROUND AND PHASE-TO-PHASE PRIOR TO ENERGIZATION OF THE ELECTRICAL SYSTEM. THE CONTRACTOR SHALL SUBMIT A WRITTEN REPORT TO THE CONSTRUCTION MANAGER SHOWING METHODS AND READINGS TAKEN.

11. MATERIALS AND INSTALLATION

11.1 CONDUIT

11.1.a MATERIALS: EXTERIOR - ALL CONDUITS SHALL BE PVC (BELOW GRADE) AND RIGID ALUMINUM ABOVE GRADE (UON ON PLANS). TRANSITION FROM PVC TO ALUMINUM CONDUIT BELOW GRADE WITH PVC COATED RIGID SWEEPS. INTERIOR - ALL CONDUITS SHALL BE ALUMINUM PER PLANS. ANY INTERIOR AREAS SUBJECT TO POTENTIAL IMPACT WITH CONDUIT (IE STORAGE AREAS, FORKLIFT PATHWAYS) SHALL BE PROTECTED.

11.1.b CONDUITS MUST USE EXPANSION JOINTS AS PER NEC.

11.1.c BEFORE INSTALLATION, THE INTERIOR AND EXTERIOR OF ALL CONDUIT AND FITTINGS SHALL BE INSPECTED AND CLEANED OF ALL DIRT, CUTTINGS AND OTHER FOREIGN MATERIALS.

11.1.d WHEN CONDUIT IS INSTALLED WHERE NO LOCATION DIMENSIONS ARE GIVEN ON THE DRAWINGS, APPROVAL OF THE LOCATIONS OF THESE CONDUITS SHALL BE OBTAINED FROM THE COMPANY REPRESENTATIVE PRIOR TO INSTALLATION.

11.1.e CONDUITS SHALL NOT BE FASTENED TO REMOVABLE MEMBERS SUCH AS PIPING. CONDUIT HANGERS SHALL BE SUPPORTED FROM BUILDINGS AND STRUCTURES, NOT FROM EQUIPMENT.

11.1.f CONNECTIONS TO INTERIOR BOXES, PANELS, EQUIPMENT AND RELATED ITEMS SHALL BE MADE WITH DOUBLE LOCKNUTS, ONE INSIDE AND ONE OUTSIDE, WITH AN INSULATING BUSHING ON EACH END OF THE CONDUIT IN ADDITION TO LOCKNUTS. OUTDOOR CONNECTIONS SHALL BE MADE WITH "MYERS" HUBS OR APPROVED EQUAL.

11.1.g ALL CONDUITS SHALL HAVE THEIR ENDS PLUGGED BY CAPS, COUPLINGS W/ PLUGS OR OTHER APPROVED MEANS DURING CONSTRUCTION WORK.

11.1.h ALL CONDUIT SUPPORTS SHALL BE ALUMINUM. THE USE OF PERFORATED STRAP OR PLUMBERS STRAP IS NOT PERMITTED.

11.1.i IN CROSSING OF PIPING, THE CONDUIT SHOULD CLEAR THE PIPE BY A MINIMUM OF 6 INCHES.

11.1.j EXPOSED CONDUITS IN BUILDINGS, UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS, SHALL BE SUBJECT TO THE FOLLOWING REQUIREMENTS:

A. ALL CONDUITS SHOULD RUN PARALLEL OR PERPENDICULAR TO WALLS, CEILINGS, BEAMS AND COLUMNS.
B. ALL CONDUIT RUNS SHALL CLEAR ALL CRANE SYSTEMS, DOORS, WINDOWS, ACCESS WALLS AND OPENINGS.
C. PARALLEL RUNS SHOULD BE GROUPED IN NEATLY ALIGNED BANKS WHERE POSSIBLE WITH MINIMUM 1" CLEARANCE BETWEEN CONDUITS.
D. CONDUITS TERMINATING AT CABLE TRAYS SHALL ATTACH TO TRAY AND SHALL BE ELECTRICALLY BONDED TO EDGE OF TRAY OR TO THE GND WIRE IN CABLE TRAY.

11.1.k CONDUITS SHALL BE INSTALLED, WHEREVER POSSIBLE, IN SUCH MANNER AS TO AVOID THE COLLECTION OF CONDENSED MOISTURE IN THE CONDUIT. DRAINS SHALL BE INSTALLED AT LOW POINTS IN EXPOSED CONDUIT RUNS.

11.1.l PULL POINTS SHALL BE PROVIDED IN EACH CONDUIT RUN TO CONFORM WITH THE REQUIREMENTS OF THE NEC OR CABLE MFR'S RECOMMENDATION.

11.1.m CONDUIT RUNS SHALL BE IDENTIFIED AT TERMINATIONS AND PULL POINTS WITH STAMPED ALUMINUM BANDS.

11.1.n EACH CONDUIT SHALL BE CLEANED OF ALL OBSTRUCTION BY PULLING A MANDREL THROUGH THE ENTIRE LENGTH OF RUN PRIOR TO PULLING WIRE OR CABLE IN CONDUIT.

11.1.o CONDUIT SEALING AND DRAINING SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC. SEALING METHODS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SEAL MFR.

11.1.p CONDUIT UNIONS SHALL BE INSTALLED IN ALL CONDUITS CONNECTED TO TAPPED EQUIPMENT SO THAT THE EQUIPMENT CAN BE REMOVED WITHOUT DISTURBING THE CONDUIT (OR SEAL).

11.1.q ALL BOLTS, NUTS & WASHERS SHALL BE CADMIUM PLATED.

11.1.r ALL CONDUITS ROUTED TO EXTERIOR CABLE TRAYS SHALL ENTER THROUGH THE BOTTOM OF THE CABLE TRAY UON.

11.2 CONDUIT BENDS

11.2.a ALL BENDS SHALL HAVE RADIUS NOT LESS THAN SHOWN IN THE NEC OR SHALL BE MADE UP OF SCREW-JOINTED CONDUIT FITTINGS. NOT MORE THAN THE EQUIVALENT OF FOUR (4) 90° BENDS SHALL BE USED IN ANY RUN BETWEEN TERMINALS AND CABINETS, OR BETWEEN OUTLETS AND JUNCTION OR PULL BOXES.

11.2.b A GROUP OF EXPOSED CONDUITS THAT CHANGE DIRECTION UTILIZING BENDS SHALL HAVE THE MINIMUM BENDING RADIUS OF THE LARGEST CONDUIT IN THE GROUP FOR VERTICAL CHANGES AND SHALL HAVE THE SAME BEND RADIUS POINT FOR A HORIZONTAL CHANGE.

11.2.c BENDS SHALL BE FREE FROM CRACKS, CRIMPS OR OTHER DAMAGE TO THE CONDUIT OR ITS COATING. THE CONDUIT AFTER BENDING SHALL BE TRUE AND ROUND WITH FULL INSIDE AREAS FOR THE LENGTH OF THE BEND. CONDUIT BENDS SHALL COMPLY WITH NEC.

11.3 CONDUIT JOINTS

11.3.a ALL JOINTS IN ALUMINUM SHALL BE THREADED OR ALUMINUM PUSH FITTINGS. ALL CUT THREADS AND ANY WRENCH MARKS SHALL BE COATED WITH COLD SEALING COMPOUND. ALL THREADED JOINTS SHALL BE MADE UP TIGHT WITH A MINIMUM OF FIVE (5) FULL THREADS.

11.4 CABLE TRAY

11.4.a MATERIALS: TRAYS SHALL BE THE BRAND/MODEL INDICATED ON PLANS OR AS DESCRIBED IF NO SPECIFIC BRAND/MODEL IS GIVEN. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER.

11.4.b CABLE TRAY AND TRAY SUPPORT MATERIALS, WHEN ASSEMBLED AND MOUNTED SHALL SUPPORT THE FULL CABLE LOAD WITH A MAXIMUM OF 2" DEFLECTION WITHOUT PERMANENT DEFORMATION.

11.4.c TRAY FITTINGS, SUCH AS BRANCHES, REDUCERS, FLAT ELBOWS, TEES AND CROSSES, SHALL BE USED FOR CHANGES IN DIRECTION. THE DIMENSIONS OF TRAY FITTINGS SHALL PROVIDE AMPLE BENDING RADIUS FOR THE CABLES CONTAINED IN THE TRAY. THE TERMINATION SHALL BE PROVIDED WITH A PROTECTOR GUARD TO PREVENT DAMAGE TO THE CABLES. AS REQUIRED, PROVIDE ADDITIONAL SUPPORTS FOR INDIVIDUAL CABLES WHERE THE CABLE LEAVES THE CABLE TRAY FOR FINAL TERMINATION.

11.4.d TRAYS SHALL BE CAREFULLY ALIGNED, LEVELED AND PLUMBED. TRAY SECTIONS AND FITTINGS SHALL BE ASSEMBLED ON THEIR SUPPORTS AND JOINTED TOGETHER, USING MFR'S STANDARD CONNECTOR UNITS.

11.4.e POWDER COATED STEEL ANGLES, TRAPEZE HANGERS, CHANNELS, BOLTING, AND MISCELLANEOUS MATERIALS REQUIRED FOR THE SUPPORT OF TRAYS FROM THE BUILDING STRUCTURE, SHALL BE ALUMINUM AND SUPPLIED AND INSTALLED BY THE CONTRACTOR.

11.4.f ALL EXTERIOR CABLE TRAYS TO BE SUPPLIED WITH COVERS, INSTALLED BY THE CONTRACTOR AFTER ALL CABLES ARE INSTALLED.

11.5 JUNCTION AND PULL BOXES

11.5.a MATERIALS: BOXES SHALL BE THE BRAND/MODEL INDICATED ON PLANS OR AS DESCRIBED IF NO SPECIFIC BRAND/MODEL IS GIVEN. ALL BOXES SHALL BE UL/FM RATED FOR LOCATION. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER.

11.5.b BOXES FOR INDOOR INSTALLATION SHALL CONFORM TO THE FOLLOWING:

A. BE HEAVY DUTY POWDER COATED METAL OR ALUMINUM, WITH ALUMINUM COVERS AND BRONZE OR CADMIUM PLATED SCREWS OR BOLTS UNLESS OTHERWISE PERMITTED OR SPECIFIED.
B. BE NEMA 12 IN NON-HAZARDOUS AREAS OR AS SHOWN ON DRAWINGS AND HAVE GASKETED COVERS ON BOXES CONTAINING TERMINAL BLOCKS.
C. HAVE PIANO HINGED COVER AND INTERIOR MOUNTING PANEL WHERE USED FOR ENCLOSING TERMINAL BLOCKS AND CONTROL RELAYS.

11.5.c BOXES FOR OUTDOOR INSTALLATION SHALL CONFORM TO THE FOLLOWING:

A. BE HEAVY DUTY STAINLESS STEEL WITH STAINLESS STEEL COVERS. SCREWS OR BOLTS UNLESS OTHERWISE NOTED.
B. HAVE THREADED CONDUIT ENTRANCES SUCH AS "MYERS" HUBS, OR APPROVED EQUAL ANDHAVE RUBBER OR NEOPRENE COVER GASKETS.
C. BE NEMA 4 WATERTIGHT IN OUTDOOR NON-HAZARDOUS AREAS AND HAVE A DRIP LIP ANDOTHER FEATURES REQUIRED FOR RAIN TIGHT CONSTRUCTION; UNLESS OTHERWISE NOTED.
D. HAVE PIANO HINGED COVER AND INTERIOR MOUNTING PANELS WHEN USED FOR ENCLOSING TERMINAL BLOCKS, CONTROL RELAYS, ETC AND HAVE A DRAIN FITTING INSTALLED IN THE BOTTOM OF THE BOX.

11.5.d IDENTIFICATION: NAMEPLATES, WITH TITLE AND TAG NO., FABRICATED FROM PLASTIC WITH BLACK LETTERS ON WHITE BACKGROUND SHALL BE PERMANENTLY AFFIXED TO ALL JUNCTION BOXES.

STATE OF OHIO
JOSEPH C. GRABOWSKI
PE.70758
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: JCZ
DRAWN BY: PMS
CHECKED BY: JCZ

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

LIFT STATION - 20 SERIES

ELECTRICAL SPECIFICATIONS

PROJECT NO: 230467
DRAWING NAME: 20E-01
SHEET 34 OF 44

11.6 WIRE AND CABLE

11.6.a MATERIALS: ALL WIRE / CABLE SHALL BE COPPER (UON) AND ACCORDING TO THE CABLE SCHEDULES AND/OR CONSTRUCTION DRAWINGS. ANY DEVIATION MUST BE APPROVED BY ENGINEER & OWNER'S REPRESENTATIVE.

11.6.b ALL WIRE AND CABLE WILL BE EITHER INSTALLED IN RACEWAY OR CABLE TRAY PROVIDED.

11.6.c CABLE ON REELS AND WIRE IN COILS SHALL BE PROTECTED DURING SHIPMENT, STORAGE AND HANDLING. THE ENDS OF CABLES SHALL BE TAPED WHILE ON REELS AND AFTER INSTALLATION. TAPE WILL BE REMOVED ONLY WHEN READY TO TERMINATE WIRE.

11.6.d CONDUCTORS SHALL BE CONTINUOUS FROM TERMINATION TO TERMINATION. CABLES SHALL NOT BE SPLICED TO MAKE USE OF SHORT LENGTHS AND SHALL NOT BE CUT FOR CONVENIENCE OF PULLING. MFR'S INSTRUCTIONS OR RECOMMENDATIONS FOR INSTALLATION, WIRING ACCESSORIES OR OTHER WIRING MATERIALS SHALL BE FOLLOWED.

11.6.e WHERE MULTI-CONDUCTOR CABLES ENTER CONTROL PANELS AND CABINETS, THE OUTER JACKET SHALL NOT BE STRIPPED BEYOND THE POINT WHERE THE FIRST CONDUCTOR LEAVES THE CABLE TO CONNECT TO THE TERMINAL STRIP. IF JACKET IS STRIPPED IN EXCESS OF THE ABOVE FROM ANY CABLE, THE CABLE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

11.6.f THE PULLING OF WIRING INTO CONDUIT OR OTHER RACEWAYS SHALL BE DONE WITH ALL POSSIBLE CARE. THE CABLE REELS OR COILS SHALL BE SET UP IN SUCH A WAY THAT THE CONDUCTOR MAY BE TRAINED INTO THE RACEWAY AS DIRECTLY AS POSSIBLE WITH A MINIMUM NUMBER OF CHANGES OF DIRECTION AND BENDING. WHERE SEVERAL CABLES ARE CONTAINED IN ONE CONDUIT, ALL SUCH CABLES SHALL BE PULLED IN TOGETHER. PULLING COMPOUND OR POWDERED SOAPSTONE SHALL BE COMPATIBLE WITH THE CABLE INSULATION AND APPROVED FOR USE BY THE CABLE MFR. CABLE PULLING TENSIONS SHALL NOT EXCEED VALUES SPECIFIED BY THE CABLE MFR.

11.6.g ALL CONDUCTORS SHALL BE TERMINATED IN STRICT ACCORDANCE WITH THE MFRS' RECOMMENDED METHODS. PARTICULAR CARE AND COMPLIANCE WITH MFRS' INSTRUCTIONS SHALL BE UTILIZED IN CONNECTION WITH TERMINATING HIGH VOLTAGE CABLES. ALL CONDUCTORS SHALL BE CLEAN WHEN CONNECTIONS ARE MADE. WIRES, BUS BARS, AND POINTS OF CONTACT SHALL BE CLEANED WITH STEEL WOOL OR SAND PAPER TO REMOVE OXIDES AND DIRT.

11.6.h ALL CONNECTIONS SHALL BE MADE WITH PRESSURE TYPE CONNECTORS INSTALLED WITH THE TOOL RECOMMENDED BY THE MFR. ALL CONNECTORS SHALL BE RING TYPE. THE RING SHALL NOT BE CUT TO FACILITATE INSTALLATION. TAPED CONNECTIONS SHALL HAVE LAYERS OF INSULATING TAPE BUILT UP TO A THICKNESS NOT LESS THAN THE THICKNESS OF THE INSULATION ON THE CABLES BEING CONNECTED.

11.6.i LUGS SHALL BE USED FOR THE CONNECTION OF CABLES TO EQUIPMENT AND BUSES. PRESSED LUGS SHALL BE USED ON WIRES SIZED #8 AWG AND SMALLER, CAST LUGS SHALL BE USED ON WIRES LARGER THAN #8 AWG.

11.6.j POWER CABLE FOR ALL CIRCUITS 400 VOLTS AND ABOVE SHALL BE IDENTIFIED AT TERMINATIONS AND BOXES WITH HEAVY GAUGE STAMPED ALUMINUM BANDS. HEAT SHRINK WIRE MARKERS SHALL BE INSTALLED ON MOTOR, CONTROL AND INSTRUMENT LEADS AND THERMOCOUPLES AT ALL TERMINAL POINTS. IDENTIFICATION SHALL BE IN ACCORDANCE WITH THE DRAWINGS. COLORED WIRE MARKERS SHALL BE INSTALLED ON ALL FEEDERS AND INSULATED GROUNDLEADS AT ALL TERMINAL POINTS WHERE COLOR CODED WIRE IS NOT USED. COLOR CODE AS FOLLOWS:

	208/120VAC	480/277VAC	415/240VAC
PHASE A	BLACK	BROWN	BROWN
PHASE B	RED	ORANGE	ORANGE
PHASE C	BLUE	YELLOW	YELLOW
NEUTRAL	WHITE	GREY	GREY

11.6.k CONTROL WIRING COLOR CODES SHALL BE IN ACCORDANCE WITH SPECIFIC WIRING DRAWINGS.

11.6.l CONTROL WIRING IDENTIFICATION SHALL BE IN ACCORDANCE WITH SPECIFIC WIRING DIAGRAMS AND SCHEMATICS.

11.6.m AFTER INSTALLATION OF WIRING AND ASSOCIATED DEVICES HAS BEEN COMPLETED, ELECTRICAL CONDUCTORS SHALL BE TESTED TO ENSURE CONTINUITY, PROPER SPLICING AND FREEDOM FROM GROUND (EXCEPT "MADE GROUND" AND THOSE REQUIRED FOR PROTECTION). ALL 480VAC CIRCUITS AND ABOVE SHALL HAVE INSULATION RESISTANCE TEST COMPLETED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND UL REQUIREMENTS UTILIZING A MEGGER. DO NOT HI-POT THE CABLES AS THIS SHALL BE CONSIDERED DESTRUCTIVE.

11.7 ELECTRICAL EQUIPMENT AND DEVICES

11.7.a MATERIALS: EQUIPMENT/DEVICES SHALL BE THE BRAND/MODEL INDICATED ON PLANS OR AS DESCRIBED IF NO SPECIFIC BRAND/MODEL IS GIVEN. ALL EQUIPMENT/DEVICES SHALL BE UL/FM RATED FOR LOCATION. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER.

11.7.b ALL EQUIPMENT SHALL BE COMPLETELY ASSEMBLED, INSTALLED AND CONNECTED AS SHOWN ON THE COMPANY OR MFR'S DRAWINGS AND SHALL BE FULLY PREPARED AND MADE READY FOR OPERATION AS NECESSARY BY THE CONTRACTOR. THE CONTRACTOR MAY HAVE THE USE OF ANY SPECIAL TOOLS FURNISHED WITH THE EQUIPMENT SPECIFICALLY FOR INSTALLATION PURPOSES. THE CONTRACTOR SHALL BECOME KNOWLEDGEABLE WITH AND FOLLOW SPECIAL INSTRUCTIONS OF THE MFR FOR THE HANDLING AND INSTALLATION OF THE EQUIPMENT.

11.7.c WHERE EQUIPMENT IS MOUNTED ON WALLS AND/OR COLUMNS CONTRACTOR SHALL PROVIDE STRUCTURAL STEEL SUPPORTS AND SUITABLE ANCHORS.

11.7.d AFTER INSTALLATION, ALL EQUIPMENT SHALL BE LEFT IN A CLEAN CONDITION. ALL INSULATORS, BUSHINGS, INSULATING MATERIALS AND OTHER PARTS WHICH ARE DEPENDED UPON FOR THEIR INSULATING QUALITIES SHALL BE THOROUGHLY CLEANED. NO OVERALL PAINTING OF EQUIPMENT WILL BE REQUIRED, BUT HOUSING SURFACES WHICH HAVE BEEN SOILED OR MARRED SHALL BE TOUCHED UP OR REFINISHED WITH PRIMER AND TOP COAT PAINT TO MATCH THE EQUIPMENT. DURING INSTALLATION, THE CONTRACTOR SHALL TAKE ALL POSSIBLE CARE TO KEEP THE DOORS OF SWITCHGEAR ASSEMBLIES, MOTOR CONTROL CENTERS AND PANELBOARDS CLOSED IN ORDER TO PREVENT THE ENTRANCE OF DUST AND OTHER FOREIGN MATTER.

11.7.e CONTRACTOR SHALL PROPERLY GROUND ALL EQUIPMENT, RACEWAYS, AND ANY SERVICE CONDUCTOR THAT IS TO BE GROUNDED IN ACCORDANCE WITH THE NEC AND ELECTRIC UTILITY COMPANY REQUIREMENTS.

11.7.f ANY POWERHOUSE, MOTOR CONTROL CENTER OR SWITCHGEAR SHALL BE SET AND SECURED ON ITS SUPPORTS. THE NECESSARY CONNECTIONS BETWEEN SECTIONS TO FORM A COMPLETELY ASSEMBLED AND INTERCONNECTED GROUP SHALL BE MADE INCLUDING INSTALLATION OF REMOVABLE CIRCUIT BREAKERS, POTENTIAL TRANSFORMERS, AND COMPLETING ALL EXTERNAL CONNECTIONS, THE RAILS ADJUSTED TO ENSURE SMOOTH BREAKER TRAVEL AND CONTACTS ON THE HOUSING SHALL BE INSPECTED AND TIGHTENED IF FOUND LOOSE.

11.7.g ARC FLASH HAZARD WARNINGS SHALL BE ATTACHED TO ALL APPLICABLE EQUIPMENT PER NEC 2014, SECTION 110.16.

11.7.h ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE LABELED AND LISTED BY CERTIFIED TESTING LABORATORY OR AGENCY.

11.8.i ALL INTERIOR DISTRIBUTION EQUIPMENT WITH TERMINATIONS (IE PANELBOARDS, SWITCHBOARDS, DISCONNECT/STARTERS, CONTROL PANELS, TRANSFORMERS, VFDs, MCCs) SHALL BE NEMA TYPE 12 WITH RATING OF BEING DUST TIGHT.

11.8 CONDUIT CONCRETE DUCT BANKS

11.8.a MATERIALS: ALL CONDUITS SHALL BE SCHEDULE 80 PVC UNLESS OTHERWISE NOTED. ALL CONCRETE SHALL BE 3000PSI MINIMUM AND DIED RED THROUGHOUT.

11.8.b ALL UNDERGROUND UTILITY CONDUITS SHALL HAVE 3000PSI CONCRETE ENCASEMENT DIED RED THROUGHOUT. 6" MINIMUM CONCRETE COVER AND 24" BELOW FINISHED GRADE WITH EXCEPTIONS AS ALLOWED BY THE NEC. CONDUIT SHALL BE FIRMLY FIXED IN PLACE BY BEING WIRED TO REINFORCING STEEL OR BY OTHER APPROVED MEANS TO AVOID BEING DISTURBED DURING BACKFILLING OR POURING OF CONCRETE. SEE DETAILS ON PLANS.

11.8.c INSTALL #2/0 HMWPE GROUND CABLE IN CONCRETE.

11.8.d CONTRACTOR TO USE SPACERS EVERY 60" MAXIMUM. (CARLON SNAP-N-STAC OR EQUAL)

11.9 GROUNDING

11.9.a MATERIALS:

A. GROUND RODS: COPPER-CLAD STEEL

B. GROUND BUS: RECTANGULAR BARS OF ANNEALED COPPER, 1/4 X 2 INCHES IN CROSS SECTION WITH INSULATORS

C. GROUNDING ELECTRODE CONDUCTORS: BARE COPPER

D. BONDING JUMPERS: BARE COPPER

E. EQUIPMENT GROUNDING CONDUCTORS: COPPER WITH GREEN-COLORED INSULATION

F. UNDERGROUND GROUNDING CONDUCTORS: SOFT DRAWN BARE COPPER

G. GROUNDING CONNECTORS: BRONZE SUITABLE FOR GROUNDING AND BONDING APPLICATIONS, IN CONFIGURATIONS REQUIRED FOR PARTICULAR INSTALLATION.

11.9.b GROUNDING SHALL BE IN ACCORDANCE WITH NFPA 70 AND DETAILS/NOTES HEREIN PLAN SET.

11.9.c. NON-CURRENT CARRYING PARTS OF ALL ELECTRICAL EQUIPMENT SHALL BE BONDED TO THE EQUIPMENT GROUND SERVING THIS EQUIPMENT.

11.9.d INSTALL SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN CONDUITS WITH ALL BRANCH CIRCUITS AND FEEDERS. SIZE EQUIPMENT GROUNDING CONDUCTORS IN ACCORDANCE WITH NFPA 70. TERMINATE EACH END ON SUITABLE LUG, BUS, OR BUSHING.

11.9.e INSTALL SOLID CONDUCTORS FOR NO. 10 AWG AND SMALLER, AND STRANDED FOR NO. 8 AND LARGER.

11.9.e BURY UNDERGROUND GROUNDING CONDUCTORS AT LEAST 30 INCHES BELOW GRADE.

11.9.f ISOLATED GROUNDING CONDUCTORS: GREEN-COLORED WITH CONTINUOUS YELLOW STRIPE. ON FEEDERS WITH ISOLATED GROUND, IDENTIFY GROUNDING CONDUCTOR WHERE VISIBLE TO NORMAL INSPECTION, WITH ALTERNATING BANDS OF GREEN AND YELLOW TAPE, WITH AT LEAST THREE BANDS OF GREEN AND TWO BANDS OF YELLOW.

11.9.g ISOLATED GROUNDING RECEPTACLE CIRCUITS: INSTALL AN ISOLATED EQUIPMENT GROUNDING CONDUCTOR CONNECTED TO THE RECEPTACLE GROUNDING TERMINAL. ISOLATE CONDUCTOR FROM RACEWAY AND FROM PANELBOARD GROUNDING TERMINALS. TERMINATE AT EQUIPMENT GROUNDING TERMINAL OF THE APPLICABLE DERIVED SYSTEM OR SERVICE, UNLESS OTHERWISE INDICATED.

11.9.h PERFORM TESTS AND INSPECTIONS.

A. INSPECT PHYSICAL AND MECHANICAL CONDITION. VERIFY TIGHTNESS OF ALL BOLTED CONNECTIONS WITH CALIBRATED TORQUE WRENCH ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

B. TEST GROUND RESISTANCE AT SERVICE DISCONNECT ENCLOSURE GROUNDING TERMINAL, AT GROUND TEST WELLS, AND AT INDIVIDUAL GROUND RODS. MAXIMUM MEASURED GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS.

C. MEASURE GROUND RESISTANCE NO FEWER THAN TWO FULL DAYS AFTER LAST TRACE OF PRECIPITATION AND WITHOUT SOIL BEING MOISTENED BY ANY MEANS.

PREPARE AND SUBMIT TEST AND INSPECTION REPORTS. TURNOVER REPORTS TO COMMISSIONING AGENT.

11.10 LIGHTNING PROTECTION

11.10.a DESIGN & MATERIALS: THE DESIGN AND ALL MATERIALS SHALL CONFORM TO THE CODE REQUIREMENTS OF THE NFPA 780, LIGHTNING PROTECTION INSTITUTE 175 AND UL 96 AND 96A.

A. AIR TERMINALS SHALL BE UTILIZED.

B. COPPER MATERIALS SHALL BE USED FOR CONTACT WITH COPPER SURFACES, THE EARTH, ALKALINE-BASE PAINT, CONCRETE OR MASONRY, OR EXCESSIVE MOISTURE SUCH AS FLAT ROOFS; IN ACCORDANCE WITH NFPA 780 4.2, UL 96A 7, AND LPI 175 18–23.

C. ALUMINUM MATERIALS SHALL BE USED ON ALUMINUM, GALVANIZED STEEL, OR PAINTED METAL SURFACES; IN ACCORDANCE WITH NFPA 780 4.2, UL 96A 7, AND LPI 175 18–23.

D. ALL CONDUCTORS SHALL BE COPPER.

11.10.b. ONLY APPROVED ADHESIVE SHALL BE USED ON MEMBRANE ROOF AREAS TO SECURE THE CABLES AND BASES IN POSITION. NO MECHANICAL FASTENERS SHALL BE DRIVEN INTO THE MEMBRANE ROOFING.

11.10.c. CABLE FASTENERS SHALL BE SPACED NO MORE THAN 36" ON CENTER USING SOLD COPPER OR ALUMINUM CLIPS WITH STAINLESS STEEL PINS ON MASONRY SURFACES AND STAINLESS STEEL NAILS ON NAILING SURFACES.

11.10.d. AIR TERMINALS SHALL BE APPLIED TO ALL BUILDINGS WITH SHEET METAL ROOFS OR BUILDINGS NOT OF STEEL MEMBER CONSTRUCTION. EXCEPTIONS TO THIS REQUIREMENT SHALL BE GIVEN TO BUILDINGS ADEQUATELY PROTECTED BY HIGHER LOCATED SYSTEMS, PER NFPA 780.

11.10.e. METAL BODIES WITHIN 72" OF LPS CONDUCTORS SHALL BE BONDED AS REQUIRED BY NFPA 780 4.19, UL 96A 11, AND LPI 175 110.

12. IDENTIFICATION NAMEPLATES AND LABELS

12.1 IDENTIFICATION NAMEPLATES:

12.1.a MATERIALS:

A. INDOOR CLEAN, DRY LOCATIONS: USE PLASTIC NAMEPLATES.

B. OUTDOOR LOCATIONS: USE PLASTIC SUITABLE FOR EXTERIOR USE.

C. MOTORS AND INSTRUMENT CONNECTION - STAINLESS STEEL IDENTIFICATION TAG.

12.1.b PLASTIC NAMEPLATES: TWO-LAYER OR THREE-LAYER LAMINATED ACRYLIC OR

ELECTRICALLY NON-CONDUCTIVE PHENOLIC WITH BEVELED EDGES; MINIMUM THICKNESS OF 1/16 INCH (1.6 MM); ENGRAVED TEXT.

12.1.c MOUNTING HOLES FOR MECHANICAL FASTENERS: TWO, CENTERED ON SIDES FOR SIZES UP TO 1 INCH (25 MM) HIGH; FOUR, LOCATED AT CORNERS FOR LARGER SIZES.

12.2. IDENTIFICATION LABELS:

12.2.a MATERIALS: USE SELF-ADHESIVE LAMINATED PLASTIC LABELS; UV, CHEMICAL, WATER, HEAT, AND ABRASION RESISTANT.

A. USE ONLY FOR INDOOR LOCATIONS ON ALL NON-EQUIPMENT UNLESS OTHERWISE NOTED. 12.2.b TEXT: USE FACTORY PRE-PRINTED OR MACHINE-PRINTED TEXT. DO NOT USE HANDWRITTEN TEXT UNLESS OTHERWISE INDICATED.

12.3 FORMAT FOR EQUIPMENT IDENTIFICATION:

12.3.a MINIMUM SIZE: 1 INCH (25 MM) BY 2.5 INCHES (64 MM).

12.3.b. LEGEND:

A. EQUIPMENT DESIGNATION OR OTHER APPROVED DESCRIPTION.

B. OTHER INFORMATION AS INDICATED.

12.3.c TEXT: ALL CAPITALIZED UNLESS OTHERWISE INDICATED.

12.3.d MINIMUM TEXT HEIGHT:

A. SYSTEM DESIGNATION: 1 INCH (25 MM).

B. EQUIPMENT DESIGNATION: 1/2 INCH (13 MM).

C. OTHER INFORMATION: 1/4 INCH (6 MM).

D. EXCEPTION: PROVIDE MINIMUM TEXT HEIGHT OF 1 INCH (25 MM) FOR EQUIPMENT

LOCATED MORE THAN 10 FEET (3.0 M) ABOVE FLOOR OR WORKING PLATFORM.

12.3.e COLOR:

A. NORMAL POWER SYSTEM: WHITE TEXT ON BLACK BACKGROUND.

12.4 FINAL CONNECTIONS TO ALL MOTORS AND INSTRUMENTS WILL BE SUPPLIED WITH A STAINLESS STEEL TAG IDENTIFYING THE EQUIPMENT (UON ON PLANS OR IN SPECIFICATIONS SECTION 26). THE IDENTIFICATION TAG WILL BE SUPPLIED ON THE CONNECTION POINT, NOT THE EQUIPMENT, TO FACILITATE FUTURE REPLACEMENT.

12.5 TERMINAL BLOCKS WILL BE CLEARLY LABELED AT EACH TERMINATION POINT. THE LABELING SYSTEM WILL BE TYPED, NOT WRITTEN AND WILL PROTECT THE LETTERING.

13. WIRE AND CABLE MARKERS

13.1 MARKERS FOR CONDUCTORS AND CABLES: USE WRAP-AROUND SELF-ADHESIVE VINYL

CLOTH, WRAP-AROUND SELF-ADHESIVE VINYL SELF-LAMINATING, HEAT-SHRINK SLEEVE, OR PLASTIC SLEEVE.

13.2 MARKERS FOR CONDUCTOR AND CABLE BUNDLES: USE PLASTIC MARKER TAGS SECURED

BY NYLON CABLE TIES.

13.3 LEGEND: POWER SOURCE AND CIRCUIT NUMBER OR OTHER DESIGNATION INDICATED.

13.4. TEXT: USE FACTORY PRE-PRINTED OR MACHINE-PRINTED TEXT, ALL CAPITALIZED UNLESS

OTHERWISE INDICATED.

13.4.a DO NOT USE HANDWRITTEN TEXT.

13.5 MINIMUM TEXT HEIGHT: 1/8 INCH (3 MM)

13.6 COLOR: BLACK TEXT ON WHITE BACKGROUND UNLESS OTHERWISE INDICATED.

14. GENERAL MOUNTING HEIGHTS

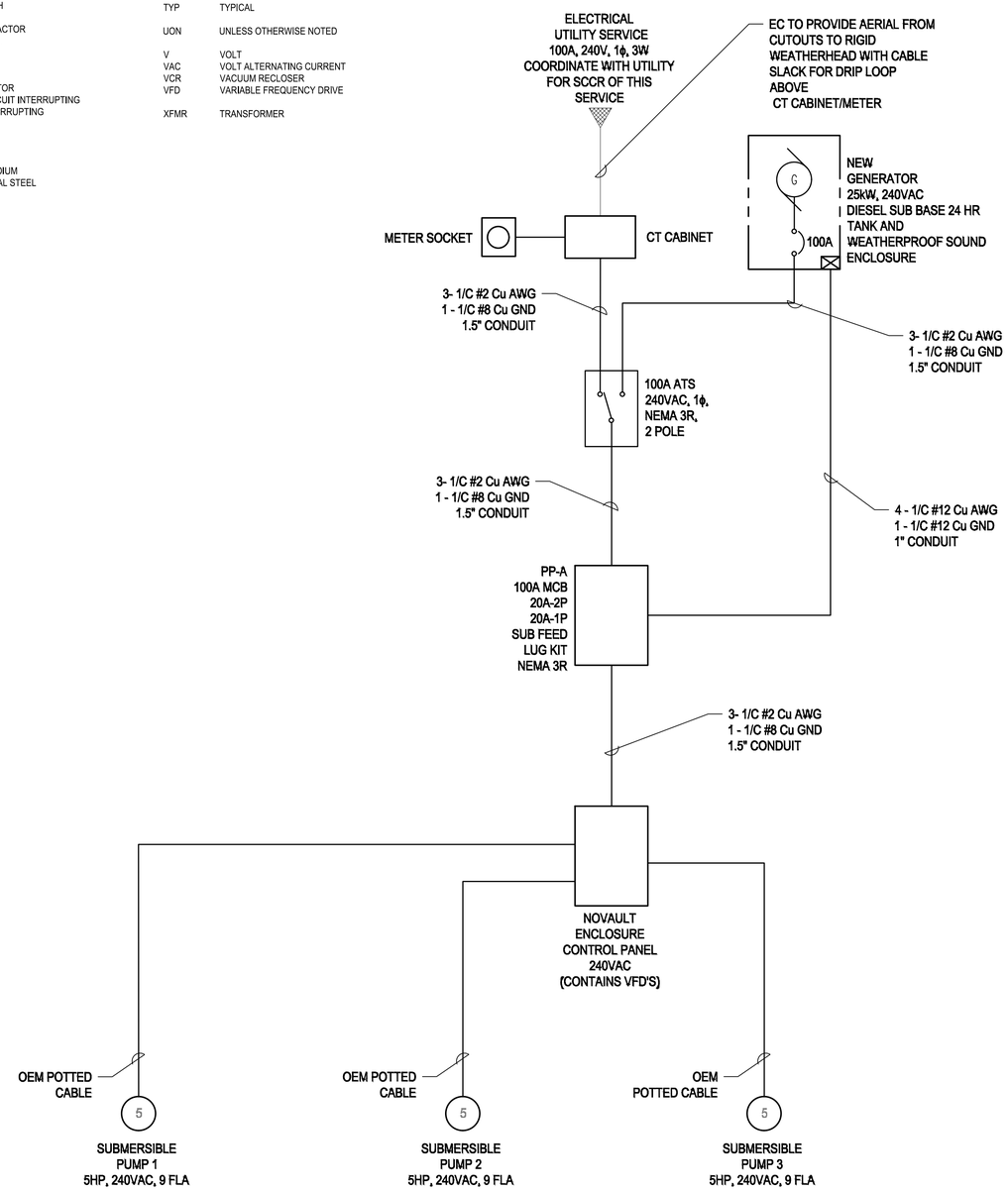
14.1 MOUNT DEVICES AT HEIGHTS INDICATED BELOW UNLESS OTHERWISE NOTED ON PLANS. HEIGHTS ARE TO CENTER OF DEVICE (UON). WHERE A DEVICE NOT LISTED BELOW IS BEING INSTALLED, MOUNTING HEIGHT SHALL FOLLOW ANY REGULATION REQUIREMENTS, TYPICAL INDUSTRY STANDARDS AND/OR MANUFACTURERS REQUIREMENTS.

LIGHT SWITCHES	48"
RECEPTACLE, GENERAL	18"
RECEPTACLE, COUNTER	6" ABOVE COUNTERTOP
SPECIAL PURPOSE OUTLET	AS NOTED OR APPROPRIATE FOR USE
TELEPHONE/DATA	18", 60" FOR STANDING LOCATIONS
THERMOSTAT	60"
PUSHBUTTONS	48"
INTERCOMS	54" INTERIOR, 48" EXTERIOR
CARD READERS	48"
FIRE ALARM HORN/STROBE	80"-96" WALL MOUNTED, 30' MAXIMUM CEILING MOUNTED
FIRE ALARM PULL STATION	48"
LIGHTING FIXTURES	AS INDICATED ON SCHEDULE
PANELBOARDS	TOP AT 78"
SAFETY SWITCHES	60" OR ADJACENT DEVICE SERVED AS ALLOWED PER CODE
HMI SCREENED DEVICE	60" AT SCREEN (WALL MOUNTED)

14.2 HEIGHTS ARE FOR REFERENCE AND ALL NATIONAL OR LOCAL CODES SHALL TAKE PRECEDENCE. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO CONFIRM HEIGHTS PRIOR TO ROUGH-IN.

GENERAL ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AWG	AMERICAN WIRE GAUGE
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BOD	BASIS OF DESIGN
CB	CIRCUIT BREAKER
CDP	CONTROLS DISTRIBUTION PANEL
C	CONDUIT
CLG	CEILING
CP	CAPPED / PLUGGED CONDUIT (SPARE)
CU Cu	COPPER
DS	DISCONNECT SWITCH
EC	ELECTRICAL CONTRACTOR
ETR	EXISTING TO REMAIN
FD	FIELD DETERMINE
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTING
GFI	GROUND FAULT INTERRUPTING
GND	GROUND
HC	HVAC CONTRACTOR
HP	HORSE POWER
HPS	HIGH PRESSURE SODIUM
HSS	HOLLOW STRUCTURAL STEEL
I/O	INPUT / OUTPUT
JB	JUNCTION BOX
KW kW	KILOWATT
KVA	KILO-VOLT AMPS
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MFR'S	MANUFACTURER'S
MLO	MAIN LUGS ONLY
PB	PULL BOX
QTY	QUANTITY
RGS	RIGID GALVANIZED STEEL
RPR	RESIDENT PROJECT REPRESENTATIVE
SCH	SCHEDULE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT
VAC	VOLT ALTERNATING CURRENT
VCR	VACUUM RECLOSER
VFD	VARIABLE FREQUENCY DRIVE
XFMR	TRANSFORMER



verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

STATE OF OHIO
JOSEPH C. COMER
PE.70758
REGISTERED
PROFESSIONAL ENGINEER

NO	REVISION	DATE

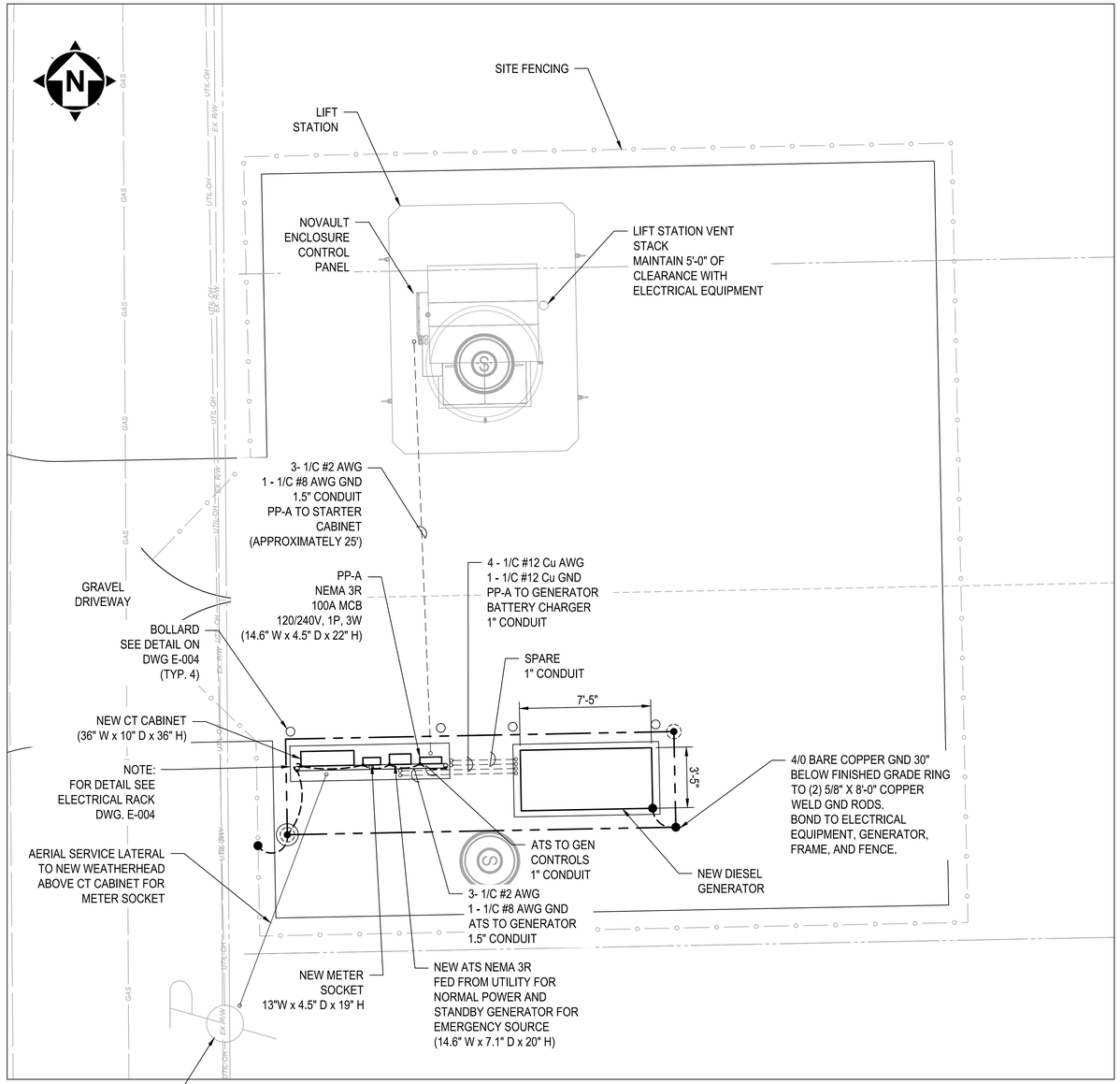
SCALE:	AS NOTED
DATE:	8/25/2025
DESIGNED BY:	JCZ
DRAWN BY:	PMS
CHECKED BY:	JCZ

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

PROJECT NO: 230467

DRAWING NAME

SHEET 35 OF 44



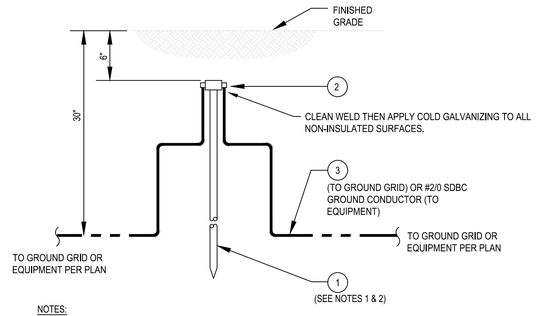
ELECTRICAL SITE PLAN

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

0 1' 2' 4' 8' 12'

SYMBOL LEGEND

- ● BONDING POINT - EXOTHERMIC WELD UNLESS OTHERWISE NOTED
- ◉ 5/8" x 8' STEEL GROUND ROD WITH HOT-DIP ZINC GALVANIZATION
- ◉ GROUND ROD WITH ACCESS - INSPECTION WELL AND MECHANICAL CABLE ROD CONNECTOR. SEE ACCESS WELL DETAIL ON SHEET E-104.
- —— — —— MAIN GROUNDING LOOP - 2/0 Cu INSULATED GROUND WIRE RATED FOR DIRECT BURY
- ---------- BRANCH GROUNDING - #2 Cu INSULATED GROUND WIRE RATED FOR DIRECT BURY (UNLESS NOTED OTHERWISE)
- A.F.F. ABOVE FINISHED FLOOR
- A.F.G. ABOVE FINISHED GRADE
- B.F.G. BELOW FINISHED GRADE

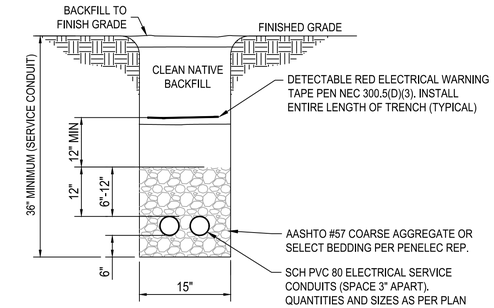


NOTES:

1. CADWELD GROUND ROD SPLICE CONNECTIONS ARE TO BE USED IN THE EVENT WHERE ADDITIONAL GROUND RODS ARE REQUIRED TO EXTEND ROD LENGTH BEYOND 10'. ELECTRICAL CONTRACTOR SHALL USE CADWELD CAT. NO. HDGBD-18 MOLD WITH CAT. NO. 2-200 WELD METAL (OR EQUAL).
2. REMOVE ROD GALVANIZING TO BARE STEEL BEFORE MAKING CONNECTIONS. THEN APPLY COATING OF COLD GALVANIZING TO ALL BARE METAL NON-GALVANIZED SURFACES.

BILL OF MATERIAL		
ITEM	QTY.	DESCRIPTION
1	1	GROUND ROD, 3/4" DIA. X 8' LONG HOT DIPPED GALV. STEEL, GALVAN GR7510 OR EQUAL
2	1	CONNECTOR, CABLE TO GND. ROD, CADWELL OR EQUAL
3	A/R	GROUND WIRE, MAIN GRID AS INDICATED ON PLANS

GROUND ROD INSTALLATION



NOTES:

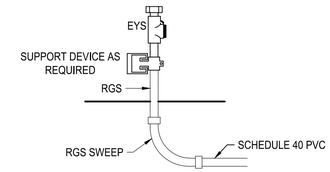
1. COMPACTION OF MATERIALS SHALL BE TO UTILITY REQUIREMENTS.

UNDERGROUND CONDUIT DETAIL

SCALE: NONE"

NOTES:

1. CONTRACTOR TO UTILIZE 25% OR 40% FILL SEAL-OFF FITTINGS WHERE SEAL-OFFS ARE NEEDED IN CLASSIFIED AREAS.



TYPICAL CONDUIT TRANSITION DETAIL

SCALE: NONE"

STATE OF OHIO
Jason A. Reinbrecht
PE.70758
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

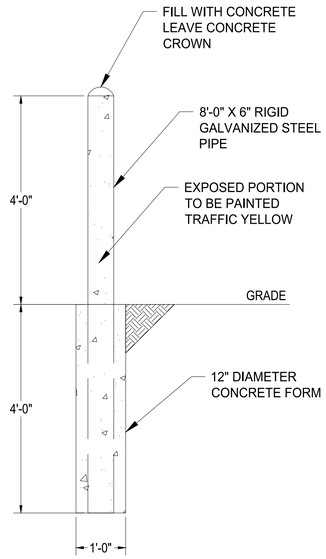
SCALE: AS NOTED
DATE: 9/29/23
DESIGNED BY: CJZ
DRAWN BY: PSM
CHECKED BY: CJZ

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

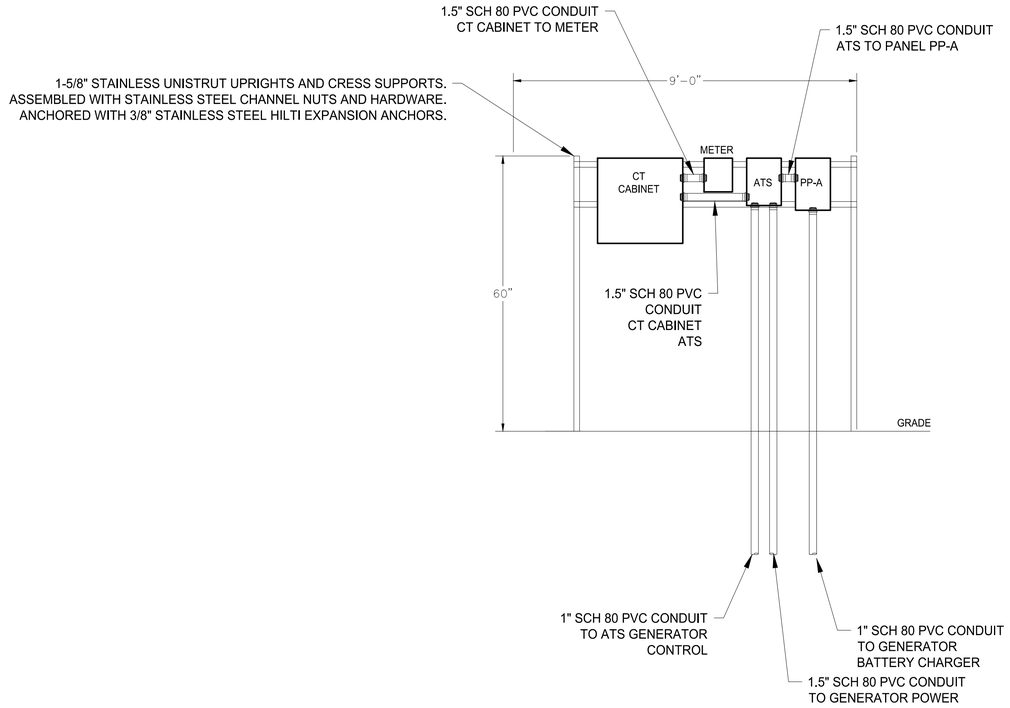
LIFT STATION - 20 SERIES

SITE PLAN - ELECTRICAL

PROJECT NO: **230467**
DRAWING NAME: **20E-03**
SHEET **36** OF **44**



BOLLARD DETAIL
SCALE: NO SCALE



PUMP STATION ELECTRICAL RACK DETAIL
SCALE: NO SCALE

STATE OF OHIO
PE.70758
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	8/25/2025
DESIGNED BY:	CJZ
DRAWN BY:	PSM
CHECKED BY:	CJZ

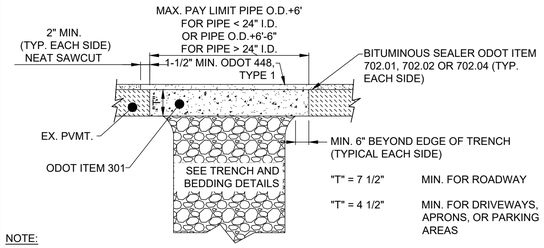
VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY
OHIO

LIFT STATION - 20 SERIES

ELECTRICAL RACK DETAIL

PROJECT NO:
230467
DRAWING NAME
20E-04

SHEET	OF
37	**44**

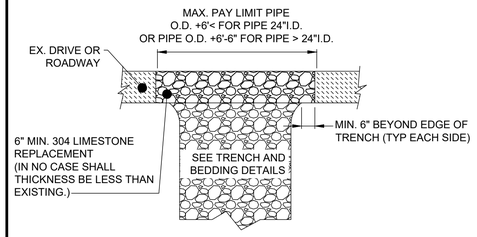


NOTE:

1. EXISTING UNSUITABLE SUBBASE MATERIAL (IF ANY) SHALL BE REPLACED, AS DIRECTED BY THE ENGINEER.

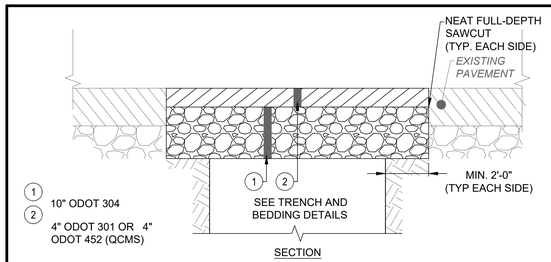
TYPE 'C' PAVEMENT (ASPHALT) REPLACEMENT

NOT TO SCALE



TYPE 'F' PAVEMENT (GRAVEL) REPLACEMENT

NOT TO SCALE

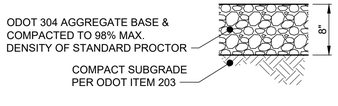


NOTES:

1. THIS DETAIL IS TO ONLY BE UTILIZED FOR TEMPORARY REPLACEMENT OF ROADWAY FOR AREAS WITH EXISTING ASPHALT CONCRETE OR PORTLAND CEMENT CONCRETE PAVEMENT.
2. EXISTING UNSUITABLE SUBBASE MATERIAL (IF ANY) SHALL BE REPLACED, AS DIRECTED BY ENGINEER.
3. CONTRACTOR TO MAINTAIN EX. ROAD CROSS-SLOPE.

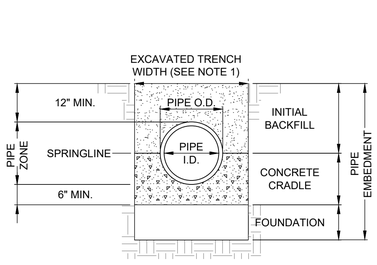
TEMPORARY ROAD DETAIL

NOT TO SCALE

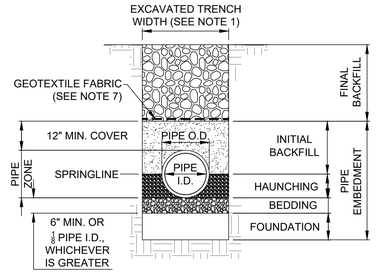


GRAVEL DRIVEWAY DETAIL

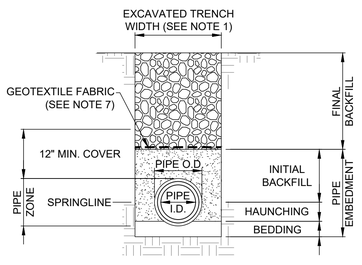
SCALE: NONE



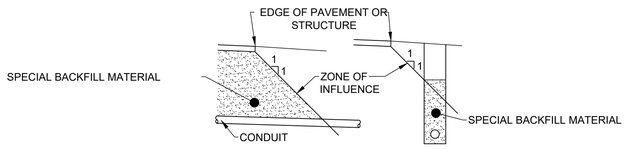
CLASS 'A' PIPE EMBEDMENT



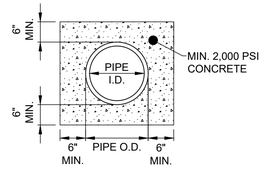
CLASS 'B' PIPE EMBEDMENT



CLASS 'C' PIPE EMBEDMENT



TRANSVERSE ZONE OF INFLUENCE | PARALLEL ZONE OF INFLUENCE



TYPICAL PIPE ENCASEMENT

NOTES:

1. MAXIMUM EXCAVATED TRENCH WIDTH: THE MAXIMUM EXCAVATED TRENCH WIDTH FROM THE BOTTOM OF THE TRENCH TO 12" OVER THE TOP OF THE PIPE (WITHIN PIPE EMBEDMENT) SHALL BE O.D. + 24" FOR ALL PIPES UP TO AND INCLUDING 24" I.D. + 30" FOR PIPE FROM 24" I.D. TO 54" I.D. AND O.D. + 48" FOR PIPES SIZES 60" I.D. AND OVER.
2. FOUNDATION: REQUIRED FOR THIS PROJECT. AS PER THE GEOTECHNICAL REPORT, THE CONTRACTOR SHALL EXCAVATE AND REMOVE AN ADDITIONAL 12" OF MATERIAL AND REPLACE WITH A LAYER OF 6" OF AASHTO NO. 1 AND NO. 2 CRUSHED LIMESTONE, FOLLOWED BY A LAYER OF 6" OF AASHTO NO. 57 GRANULAR LIMESTONE.
3. PIPE EMBEDMENT:

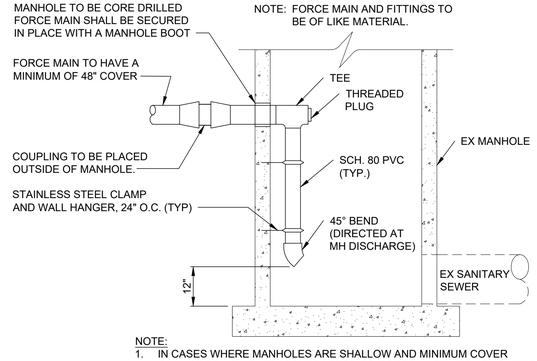
   CLASS A: CLASS A PIPE EMBEDMENT SHALL BE USED FOR ALL PIPING UNDER PAVEMENT OR STRUCTURES WITH LESS THAN 12 INCHES OF PIPE COVER TO THE SUBGRADE. THE CONCRETE CRADLE SHALL BE IN ACCORDANCE WITH ODOT ITEM 499, CLASS "C". THE INITIAL BACKFILL SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT.

   CLASS B: CLASS B PIPE EMBEDMENT SHALL BE USED FOR ALL PIPING UNLESS OTHERWISE NOTED ON THE PLANS OR AUTHORIZED BY THE ENGINEER. THE HAUNCHING SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT. IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE, THE INITIAL BACKFILL SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT. IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE, THE INITIAL BACKFILL SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER FOR ONLY REINFORCED CONCRETE PIPE AND DUCTILE IRON PIPE. THE INITIAL BACKFILL FOR ALL OTHER PIPES SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT.

   CLASS C: CLASS C PIPE EMBEDMENT SHALL ONLY BE USED FOR DUCTILE IRON WATER MAIN, DUCTILE IRON FORCE MAINS OR AS AUTHORIZED BY THE ENGINEER. THE PIPE EMBEDMENT SHALL BE AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE. THE PIPE EMBEDMENT SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE. WHERE ROCK OR SHALE IS ENCOUNTERED, A MINIMUM 6-INCHES OF AASHTO NO. 57 LIMESTONE GRANULAR PIPE BEDDING OR SAND BEDDING SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
4. FINAL BACKFILL: IN ALL AREAS UNDER PAVEMENT, STRUCTURES OR WITHIN THE ZONE OF INFLUENCE THE FINAL BACKFILL SHALL BE SPECIAL BACKFILL MATERIAL. IN ALL AREAS OUTSIDE OF PAVEMENT, STRUCTURES OR THE ZONE OF INFLUENCE, THE FINAL BACKFILL SHALL BE SUITABLE ON-SITE MATERIAL APPROVED BY THE ENGINEER.
5. SPECIFICATIONS: ALL TRENCHING, PIPE EMBEDMENT AND BACKFILL MATERIALS SHALL BE IN ACCORDANCE WITH SPECIFICATION 310000 - EARTHWORK.
6. CLAY TRENCH DAMS: CLAY TRENCH DAMS SHALL BE REQUIRED FOR EACH LATERAL, UPSTREAM OF EVERY MANHOLE, AS SHOWN ON THE DRAWINGS, AND AS DIRECTED BY THE ENGINEER.
7. GEOTEXTILE FABRIC: INSTALL A GEOTEXTILE FABRIC IN ACCORDANCE WITH ODOT 712.09, TYPE A, AFTER ALL INITIAL BACKFILL CONSISTING OF AASHTO NO. 57 LIMESTONE GRANULAR PIPE EMBEDMENT.
8. TYPICAL PIPE ENCASEMENT, AS PER PLAN OR AS DIRECTED BY THE ENGINEER.

TRENCHING, EMBEDMENT, AND BACKFILL DETAIL

NOT TO SCALE

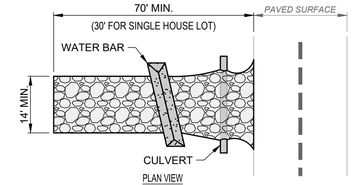


NOTE:

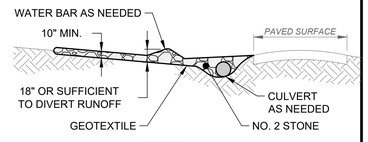
1. IN CASES WHERE MANHOLES ARE SHALLOW AND MINIMUM COVER CANNOT BE ACHIEVED. CONTRACTOR TO COORDINATE WITH ENGINEER.

TYPICAL MANHOLE FORCE MAIN CONNECTION

NOT TO SCALE



PLAN VIEW



PROFILE

NOTES:

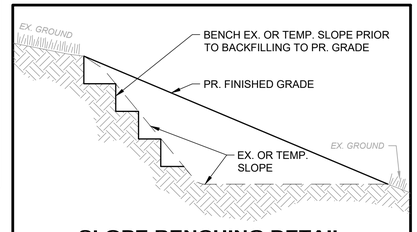
1. GEOTEXTILE SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS MEETING THE FOLLOWING:

TENSILE STRENGTH	200 LB
PUNCTURE STRENGTH	80 PSI
TEAR STRENGTH	50 LB
BURST STRENGTH	320 PSI
ELONGATION	20%
EQUIVALENT OPENING SIZE	< 0.6 MM
PERMITTIVITY	0.001 CM/SEC.

2. INSTALL WATER BAR, AS NEEDED, TO PREVENT SURFACE RUNOFF FROM FLOWING OUT ONTO PAVEMENT.
3. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND, REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6", AND REPLACE IF STONES BECOMES MUD-LADEN.
4. IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
5. CONSTRUCTION ENTRANCE SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
6. CONSTRUCTION ENTRANCE SHALL REMAIN UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY.

CONSTRUCTION ENTRANCE

SCALE: NONE



SLOPE BENCHING DETAIL

SCALE: NONE

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

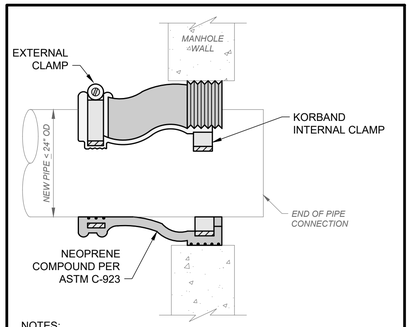
SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

STANDARD DETAILS - SD SERIES

CONSTRUCTION DETAILS

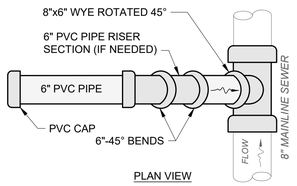
PROJECT NO: 230467
DRAWING NAME: SD-01
SHEET 38 OF 44



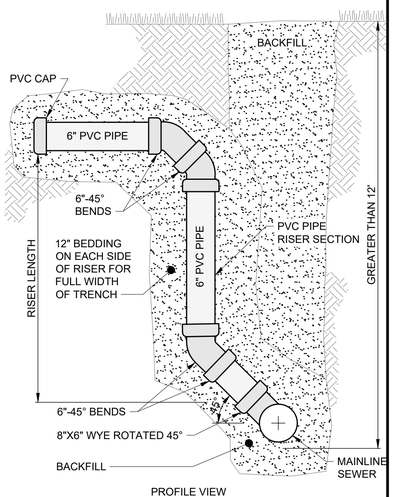
NOTES:
1. MAXIMUM LENGTH OF PIPE CONNECTION FOR PVC, RCP OR VCP SHALL BE 24". DIP MAY BE FULL LENGTH PIECE.

SANITARY SEWER FLEXIBLE GASKET DETAIL

SCALE: NONE



PLAN VIEW

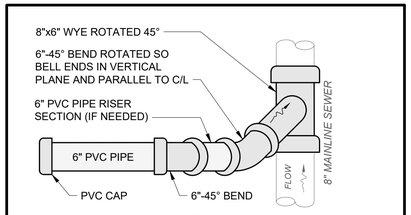


PROFILE VIEW

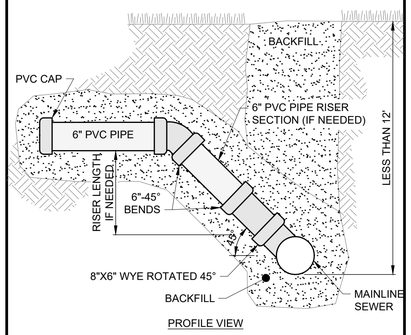
NOTES:
1. 8" AND 6" PIPES SHOWN IN DETAIL; SEE UTILITY PLAN FOR ACTUAL SIZES.
2. PLACE LATERAL MARKER AT END OF SERVICE LATERAL.

SANITARY LATERAL CONNECTION (>12') DETAIL

SCALE: NONE



PLAN VIEW

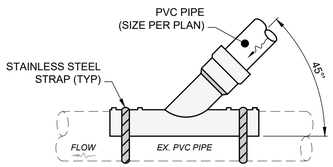


PROFILE VIEW

NOTES:
1. 8" AND 6" PIPES SHOWN IN DETAIL; SEE UTILITY PLAN FOR ACTUAL SIZES.
2. PLACE LATERAL MARKER AT END OF SERVICE LATERAL.

SANITARY LATERAL CONNECTION (<12') DETAIL

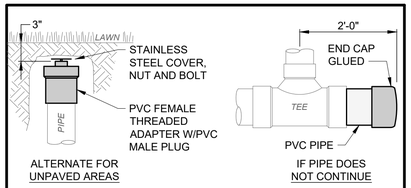
SCALE: NONE

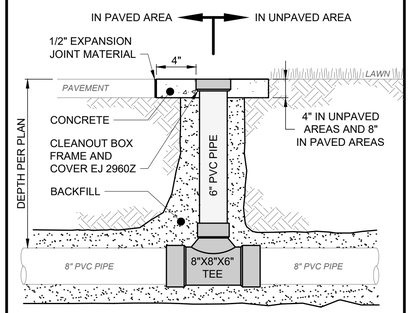


NOTES:
1. SANITARY MAIN SHALL BE CORED PRIOR TO SETTING THE SADDLE IN PLACE.
2. SADDLE WYE SHALL BE PLACED AT AN ANGLE OF 45° TO THE SEWER FLOW LINE.
3. SADDLE SHALL ONLY BE USED IF LATERAL CONNECTION IS TO BE ADDED AFTER MAINLINE IS INSTALLED.

SANITARY SADDLE DETAIL

SCALE: NONE



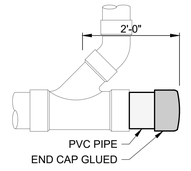


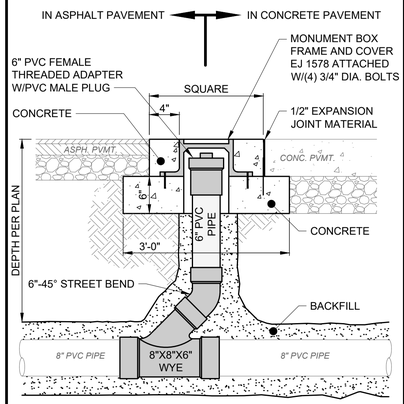
NOTES:
1. ALL CONCRETE SHALL BE ODOT ITEM 499, CLASS QC-1.
2. USE 4" CLEANOUT FOR 4" PIPE; AND 6" CLEANOUT FOR 6" AND ABOVE (6" CLEANOUT SHOWN WITH 8" PIPE).
3. CASTING SHALL MEET H-20 LOADING.

SANITARY CLEANOUT TYPE 1 DETAIL

SCALE: NONE

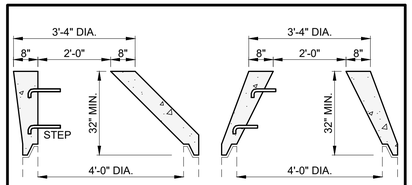
NOTES:
1. ALL CONCRETE SHALL BE ODOT ITEM 499, CLASS QC-1.
2. USE 4" CLEANOUT FOR 4" PIPE; AND 6" CLEANOUT FOR 6" AND ABOVE (6" CLEANOUT SHOWN WITH 8" PIPE).
3. CASTING SHALL MEET H-20 LOADING.

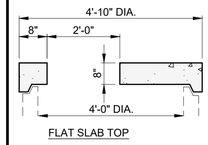


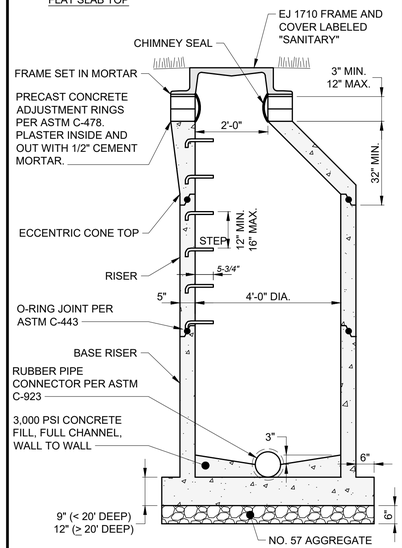


SANITARY CLEANOUT TYPE 2 DETAIL

SCALE: NONE





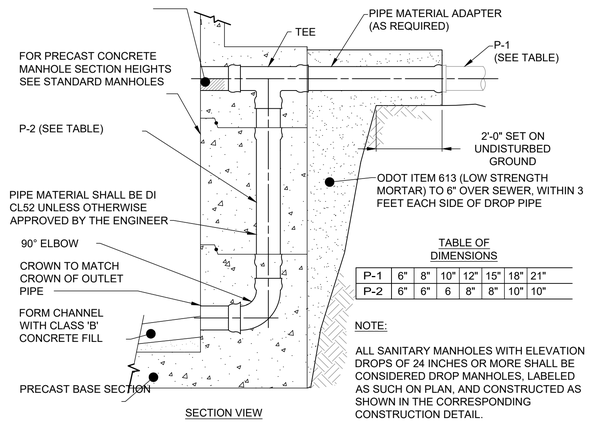


NOTES:
1. STRUCTURE TO MEET H-20 LOADING.
2. PRE-CAST CONCRETE SECTIONS SHALL BE MANUFACTURED AND FURNISHED AS SOLID SECTIONS WITHOUT LIFT HOLES.
5. PRE-CAST CONCRETE SHALL BE REINFORCED PER ASTM C-478.
6. TOP, TRANSITION AND REDUCER SECTIONS MAY BE ECCENTRIC CONE, CONCENTRIC CONE OR FLAT SLAB.
7. MANHOLE BASE MUST BE PRECAST WITH BASE RISER (I.E. MONOLITHIC).
8. USE REINFORCED PLASTIC MANHOLE STEPS.
9. FIRST STEP SHALL NOT BE MORE THAN 2'-0" BELOW TOP OF FRAME. MAKE PROJECTION 3-1/2" IF IN 24" DIA. SECTION.

PRE-CAST CONCRETE MANHOLE (SANITARY) DETAIL

SCALE: NONE

UPPER HORIZONTAL PIPE OF DROP CONNECTION EXTENDING THROUGH MH. WALL SHALL INCLUDE A MASONRY DAM 6" THICK IN BOTTOM HALF OF PIPE.



SECTION VIEW

TABLE OF DIMENSIONS

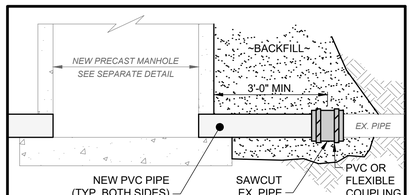
P-1	6"	8"	10"	12"	15"	18"	21"
P-2	6"	6"	6	8"	8"	10"	10"

NOTE:

ALL SANITARY MANHOLES WITH ELEVATION DROPS OF 24 INCHES OR MORE SHALL BE CONSIDERED DROP MANHOLES, LABELED AS SUCH ON PLAN, AND CONSTRUCTED AS SHOWN IN THE CORRESPONDING CONSTRUCTION DETAIL.

STANDARD PRECAST DROP CONNECTION DETAIL

NOT TO SCALE



NOTES:
1. FOR PVC PIPE INTO PVC PIPE: INSTALL PVC REPAIR COUPLING (BEVEL EX. PIPE GOING INTO COUPLING).
2. FOR PVC PIPE INTO CLAY PIPE: INSTALL NON-SHEAR, FLEXIBLE WATERTIGHT FERNCO TYPE COUPLING.

SANITARY CUT-IN MANHOLE DETAIL

SCALE: NONE

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

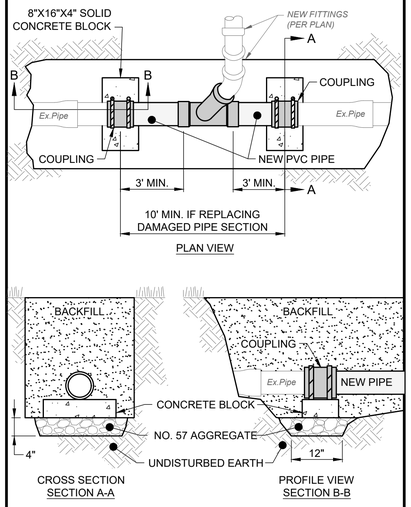
NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

STANDARD DETAILS - SD SERIES
CONSTRUCTION DETAILS

PROJECT NO: 230467
DRAWING NAME: SD-02
SHEET 39 OF 44

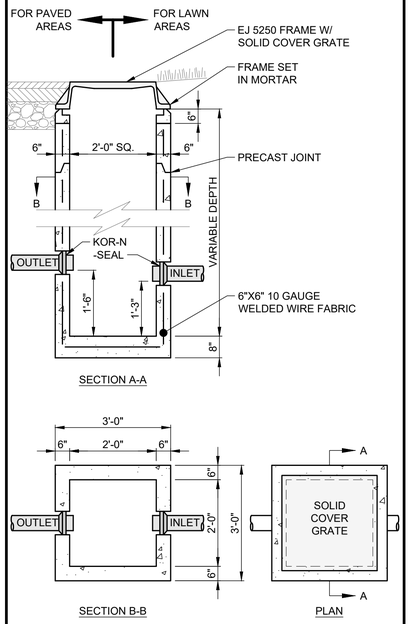


NOTES:

1. THIS DETAIL APPLIES TO REPLACING DAMAGED SECTION OF VCP OR PVC SANITARY PIPE, OR INSERTING NEW CLEANOUT, TEST TEE OR LATERAL INTO EX. PVC OR VCP SANITARY PIPE.
2. NEW PIPE SHALL BE CONNECTED TO EX. PIPE WITH APPROPRIATE NON-SHEAR, SOLID BANDED WATERTIGHT COUPLING (I.E. FERNCO).
3. EX. PIPE MUST BE SAW CUT FOR CLEAN EDGE.

FIELD TEE CONNECTION IN EX. SANITARY SEWER DETAIL

SCALE: NONE

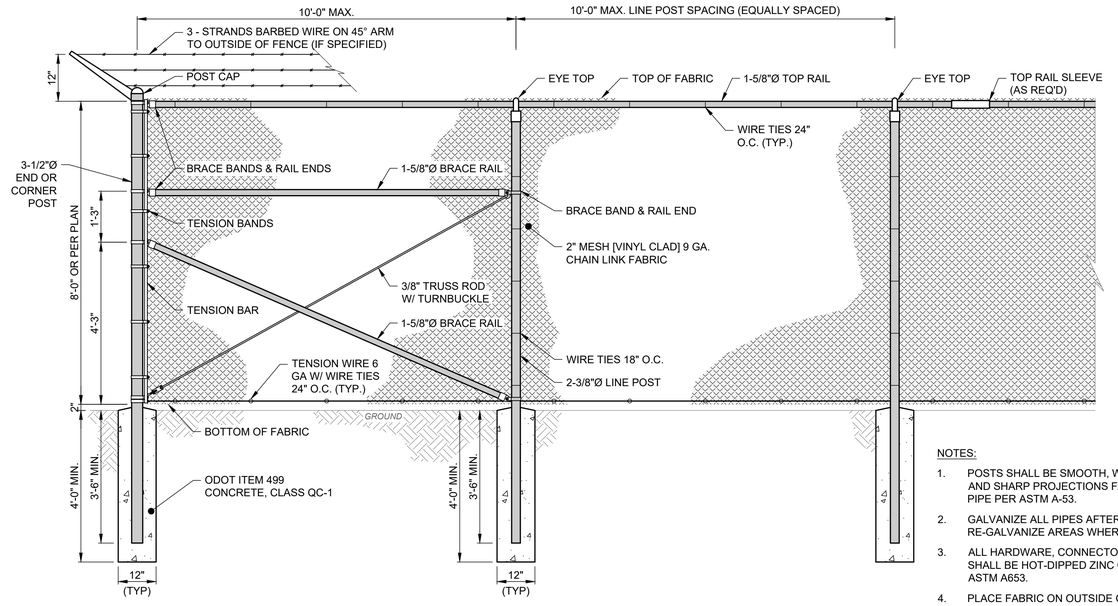


NOTES:

1. STRUCTURE TO MEET H-20 LOADING IF WITHIN PAVEMENT.
2. REINFORCING IN THE TOP TO BE NO. 4 BARS 6" O.C.
3. GRADE ADJUSTMENT BY PRE-CAST CONCRETE ADJUSTING COLLAR.
4. CONCRETE SHALL BE ODOT ITEM 499 CONCRETE, CLASS QC-1.
5. JOINT SEAL BETWEEN PRE-CAST SECTIONS SHALL BE RESILIENT AND FLEXIBLE GASKET JOINTS PER ASTM C-443.

2'X2' SANITARY SAMPLING BASIN DETAIL

SCALE: NONE



TYPICAL CORNER / END SECTION

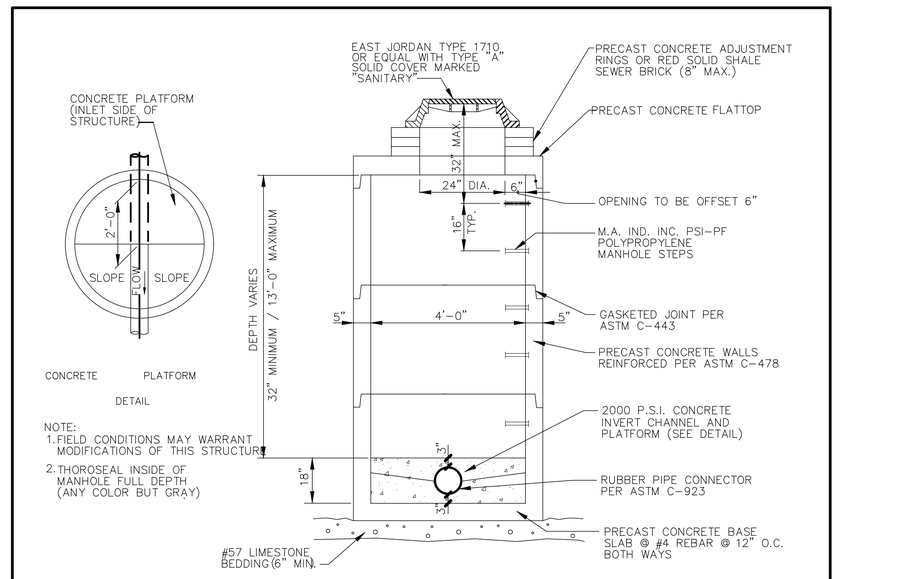
TYPICAL SECTION

8' CHAIN LINK FENCE DETAIL

SCALE: NONE

NOTES:

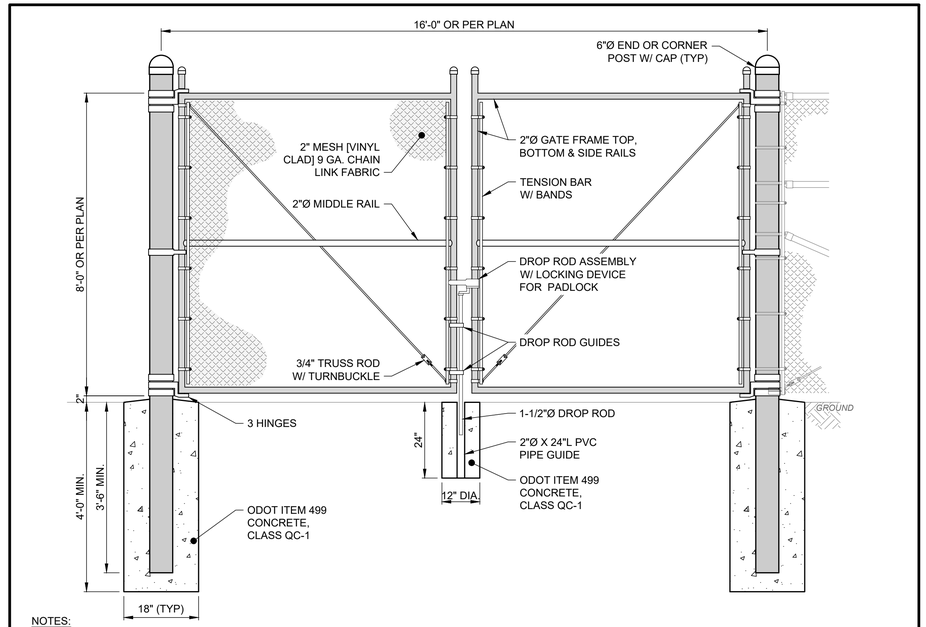
1. POSTS SHALL BE SMOOTH, WATER TIGHT, AND FREE OF BURRS AND SHARP PROJECTIONS FABRICATED FROM SCH. 40 STEEL PIPE PER ASTM A-53.
2. GALVANIZE ALL PIPES AFTER FABRICATION PER ASTM A-123. RE-GALVANIZE AREAS WHERE COATING IS DAMAGED.
3. ALL HARDWARE, CONNECTORS, BOLTS, NUTS, WASHERS, ETC. SHALL BE HOT-DIPPED ZINC COATED GALVANIZED STEEL PER ASTM A653.
4. PLACE FABRIC ON OUTSIDE OF SERVICE AREA [OR INSIDE OF PLAY AREA].
5. ALL POSTS, FABRIC, HARDWARE, CONNECTORS, ETC. SHALL BE PAINTED [BLACK] FOLLOWING THE AMERICAN GALVANIZERS ASSOCIATION (AGA) SPECIFICATIONS. [FINAL COLOR SHALL BE CHOSEN BY OWNER OR ARCHITECT.]



CITY OF WILLOUGHBY

PRECAST SAMPLING AND METERING MANHOLE DETAIL

09/02 SD-3-28



NOTES:

1. POSTS SHALL BE SMOOTH, WATER TIGHT, AND FREE OF BURRS AND SHARP PROJECTIONS FABRICATED FROM SCH. 40 STEEL PIPE PER ASTM A-53.
2. GALVANIZE ALL PIPES AFTER FABRICATION PER ASTM A-123. RE-GALVANIZE AREAS WHERE COATING IS DAMAGED.
3. ALL HARDWARE, CONNECTORS, BOLTS, NUTS, WASHERS, ETC. SHALL BE HOT-DIPPED ZINC COATED GALVANIZED STEEL PER ASTM A653.
4. PLACE FABRIC ON OUTSIDE OF SERVICE AREA [OR INSIDE OF PLAY AREA].
5. CONTRACTOR SHALL SUPPLY LOCK AND LOCK HASP (COORDINATE WITH OWNER THE TYPE).
6. THIS DETAIL IS FOR REFERENCE AND GENERAL DIMENSION CONTROL ONLY; SEE MANUFACTURER'S SPECIFICATIONS FOR ACTUAL DIMENSIONS, CONFIGURATION, PARTS LIST, ETC.

CHAIN LINK FENCE DOUBLE GATE DETAIL

SCALE: NONE

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

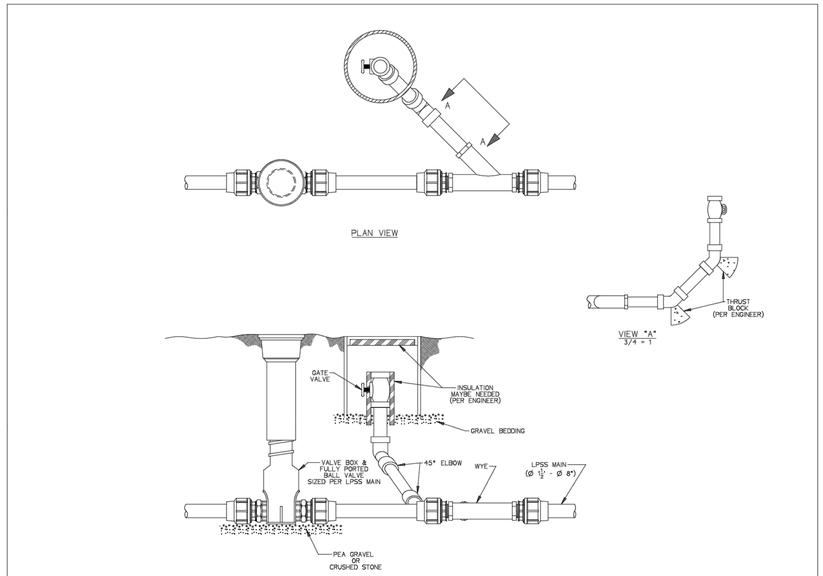
SCALE:	AS NOTED
DATE:	9/29/23
DESIGNED BY:	TJM
DRAWN BY:	RLM
CHECKED BY:	RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

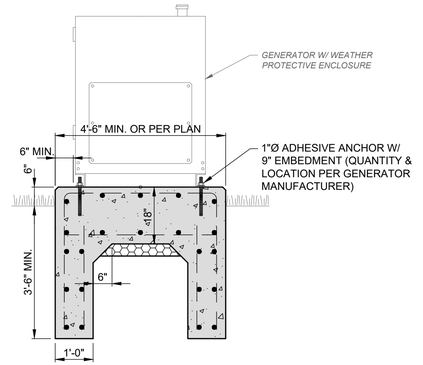
STANDARD DETAILS - SD SERIES

CONSTRUCTION DETAILS

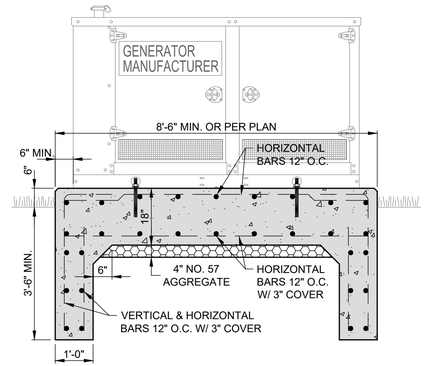
PROJECT NO:	
230467	
DRAWING NAME	
SD-03	
SHEET	OF
40	44



TYPICAL FLUSHING CONNECTION ON LPSS MAIN



SIDE VIEW



FRONT VIEW

NOTES:

1. THIS DETAIL SHOWS A DIMENSION OF 4'-6" X 8'-6" FOR REFERENCE ONLY. SEE SITE PLAN FOR ACTUAL WIDTH AND LENGTH. CONTRACTOR SHALL COORDINATE SIZE WITH GENERATOR MANUFACTURER.
2. REINFORCING STEEL SHALL BE NO. 5 BARS PER ASTM A-615, GRADE 60, 12" O.C. WITH 2" MINIMUM COVERAGE EXCEPT WHERE DIMENSIONED.
3. CONCRETE SHALL BE ODOT ITEM 499, CLASS QC-2.
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
5. ADHESIVE ANCHOR SYSTEM SHALL BE A HIGH STRENGTH, TWO PART EPOXY ADHESIVE (I.E. HILTI HIT RE 500 V3 ADHESIVE SYSTEM).
   A. 2-DAY BOND STRENGTH: 1,560 PSI
   B. COMPRESSIVE STRENGTH: 12,000 PSI
   C. COMPRESSIVE MODULUS: 380,000 PSI
   D. 7-DAY TENSILE STRENGTH: 7,150 PSI
6. ANCHOR ROD SHALL BE GALVANIZED THREADED ROD WITH MINIMUM 72.5 KSI TENSILE STRENGTH AND 58 KSI YIELD STRENGTH. RODS, NUTS AND WASHERS SHALL BE ZINC PLATED PER ASTM B-633 SC1.
7. CONTRACTOR SHALL COORDINATE QUANTITY, PROJECTION AND LOCATIONS OF ADHESIVE ANCHORS TO SECURE GENERATOR TO CONCRETE FOUNDATION PAD WITH GENERATOR MANUFACTURER.

GENERATOR FOUNDATION PAD DETAIL

SCALE: NONE

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE:	AS NOTED
DATE:	9/29/23
DESIGNED BY:	RLM
DRAWN BY:	RLM
CHECKED BY:	RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

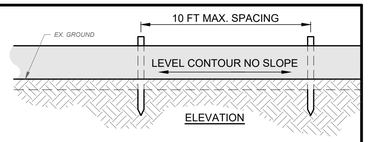
STANDARD DETAILS - SD SERIES

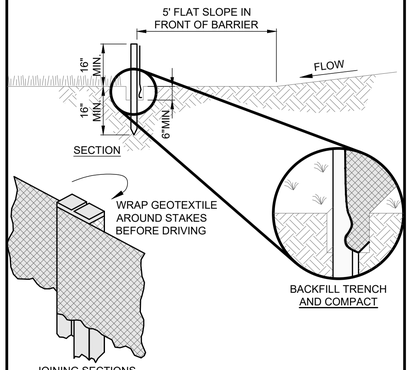
CONSTRUCTION DETAILS

PROJECT NO: 230467

DRAWING NAME: SD-04

SHEET 41 OF 44



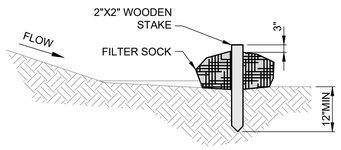


NOTES:

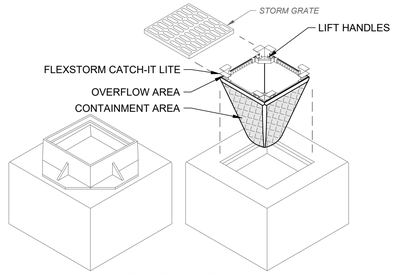
1. PRESERVE VEGETATION FOR 5 FEET, OR AS MUCH AS POSSIBLE, UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
2. SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. PERFORM ONE OF THE FOLLOWING IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW:
   - CHANGE THE LAYOUT OF THE SILT FENCE.
   - REMOVE ACCUMULATED SEDIMENT.
   - INSTALL OTHER PRACTICES.

FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MIN	ASTM D-1682
MULLEN BURST STRENGTH	190 PSI MIN	ASTM D-3786
SLURRY FLOW RATE	0.3 GAL./MIN./S.F. MAX.	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MIN	ASTM-G-26

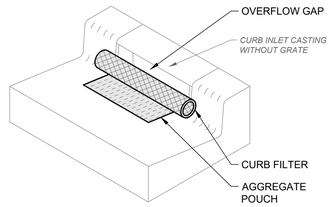
SILT FENCE
SCALE: NONE



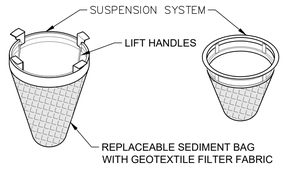
FILTER SOCK DETAIL
SCALE: NONE



INLET FILTER FOR SQUARE OR RECTANGULAR INLET BASIN WITH OR WITHOUT CASTING FRAME

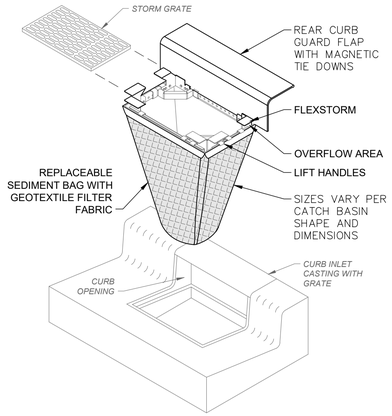


INLET FILTER FOR CURB INLET BASIN WITHOUT GRATE



INLET FILTER FOR ROUND INLET BASIN WITH OR WITHOUT CASTING FRAME

INLET FILTER FOR NYLOPLAST CASTING

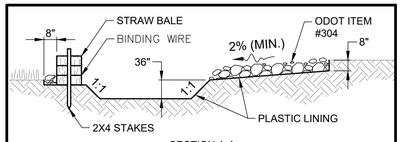


INLET FILTER FOR CURB INLET BASIN WITH GRATE

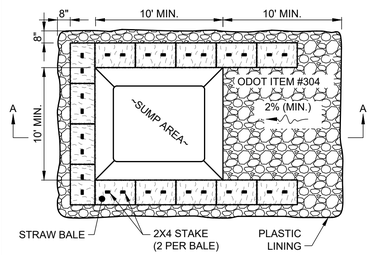
NOTES:

1. ALL FRAMING SHALL BE CONSTRUCTED OF CORROSION RESISTANT STEEL (ZINC PLATED OR GALVANIZED) FOR 7 YEAR MINIMUM SERVICE LIFE.
2. CONTRACTOR SHALL PROVIDE EXISTING OR PROPOSED STRUCTURE DETAILED DIMENSIONS, CASTING CALLOUT, MAKE AND MODEL TO CONFIGURE AND ASSEMBLE CUSTOMIZED FLEXSTORM INLET FILTERS.

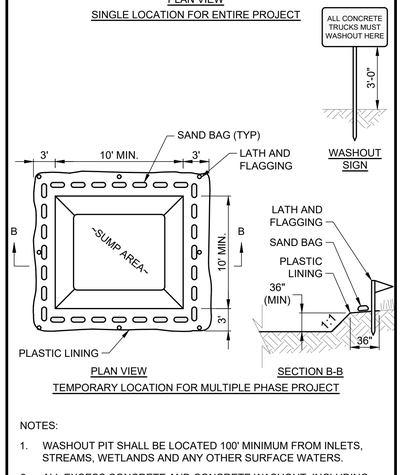
STORM DRAIN INLET PROTECTION DETAIL
SCALE: NONE



SECTION A-A



PLAN VIEW
SINGLE LOCATION FOR ENTIRE PROJECT

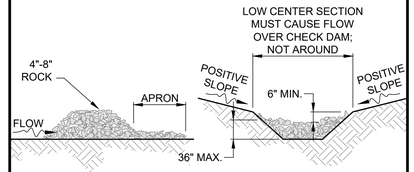


PLAN VIEW — SECTION B-B
TEMPORARY LOCATION FOR MULTIPLE PHASE PROJECT

NOTES:

1. WASHOUT PIT SHALL BE LOCATED 100' MINIMUM FROM INLETS, STREAMS, WETLANDS AND ANY OTHER SURFACE WATERS.
2. ALL EXCESS CONCRETE AND CONCRETE WASHOUT, INCLUDING FROM HAND MIXERS AND LIGHT EQUIPMENT, SHALL BE DISPOSED OF IN THE CONCRETE WASHOUT AREA. DISPOSAL OF EXCESS CONCRETE OR CONCRETE WASHOUT ON THE GROUND, OR IN STORM DRAINS, DITCHES OR WATER BODIES, IS PROHIBITED.
3. CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. FOR LARGER SITES, MULTIPLE CONCRETE WASHOUT AREAS MAY BE REQUIRED.
4. IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO THE CONSTRUCTION ENTRANCE.
5. PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-ML POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS, AND INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF ROCKS OR DEBRIS.
6. CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
7. CONCRETE WASHOUT AREAS SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOWS.
8. PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE, BUT MUST BE SPECIFICALLY DESIGNED FOR CONCRETE WASHOUT USE.
9. CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND TO DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR POLYETHYLENE SHEETING SHALL BE REPAIRED IMMEDIATELY. THE CONCRETE WASHOUT AREA SHALL BE CLEANED OR REPLACED WHEN IT IS 75% FULL. THE POLYETHYLENE SHEETING SHALL BE REPLACED AFTER EACH CLEANING.
10. SAW CUT CONCRETE, RESIDUE FROM SAW CUT, AND GRINDINGS SHALL BE DISPOSED OF IN THE WASHOUT PIT.

CONCRETE WASHOUT DETAIL
SCALE: NONE



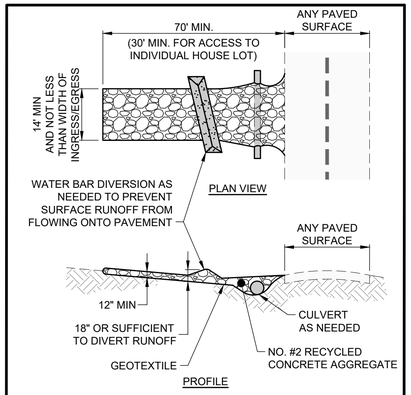
PROFILE — CROSS SECTION

NOTES:

1) THE CHECK DAM SHALL BE CONSTRUCTED OF 4" TO 8" DIAMETER STONE, PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL.
2) THE TOP OF THE CHECK DAM SHALL BE CONSTRUCTED SO THE CENTER IS APPROXIMATELY 6" LOWER THAN THE OUTER EDGES; SO WATER WILL FLOW ACROSS THE CENTER AND NOT AROUND THE ENDS.
3) THE MAXIMUM HEIGHT OF THE CHECK DAM AT THE CENTER OF THE WEIR SHALL NOT EXCEED 36".
4) SPACING BETWEEN DAMS SHALL BE AS SHOWN IN THE CONSTRUCTION PLANS OR BY THE FOLLOWING TABLE:

DAM HEIGHT	CHECK DAM SPACING — CHANNEL SLOPE			
	< 5%	5% - 10%	10% - 15%	15% - 20%
1 FT.	65 FT.	30 FT.	20 FT.	15 FT.
2 FT.	130 FT.	65 FT.	40 FT.	30 FT.
3 FT.	200 FT.	100 FT.	65 FT.	50 FT.

CHECK DAM DETAIL
SCALE: NONE



PROFILE

NOTES:

1. PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING STONE MEETING THE MIN. SPECIFICATIONS:
   - A. TENSILE STRENGTH = 200 LBS.
   - B. PUNCTURE STRENGTH = 80 PSI
   - C. TEAR STRENGTH = 50 LBS.
   - D. BURST STRENGTH = 320 PSI
   - E. ELONGATION = 20%
   - F. EQUIVALENT OPENING SIZE $\leq$ 0.6 MM
   - G. PERMITTIVITY = 0.001 CM/SEC
2. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND AND REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6". REMOVE AND REPLACE IF STONES BECOMES MUD-LADEN.
3. IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
4. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR TO PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CONSTRUCTION ENTRANCE
SCALE: NONE

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE:	AS NOTED	DESIGNED BY:	RLM
DATE:	8/25/2025	DRAWN BY:	ELE
		CHECKED BY:	RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

SWPPP - SW SERIES

SWPPP DETAILS & NOTES

PROJECT NO: 230467
DRAWING NAME: SWP-01
SHEET 42 OF 44

STORM WATER POLLUTION PREVENTION PLAN NOTES

1. THE EROSION CONTROL MEASURES INCLUDED IN THIS PLAN SHALL BE INSTALLED PRIOR TO INITIAL LAND DISTURBANCE ACTIVITIES OR AS SOON AS PRACTICAL. SEDIMENT SHALL BE PREVENTED FROM DISCHARGING FROM THE PROJECT SITE BY INSTALLING AND MAINTAINING SILT FENCE, SEDIMENT BASINS, ETC. AS SHOWN ON THIS PLAN. STRUCTURAL PRACTICES SHALL BE USED TO CONTROL EROSION FROM ALL SITES REMAINING DISTURBED FOR MORE THAN 14 DAYS.

2. THE CONTRACTOR SHALL CONTROL WASTES, GARBAGE, DEBRIS, WASTEWATER, AND OTHER SUBSTANCES ON THE SITE IN SUCH A WAY THAT THEY SHALL NOT BE TRANSPORTED FROM THE SITE BY THE ACTION OF WINDS, STORM WATER RUNOFF, OR OTHER FORCES. PROPER DISPOSAL OR MANAGEMENT OF ALL WASTES AND UNUSED BUILDING MATERIALS, APPROPRIATE TO THE NATURE OF THE WASTE OR MATERIAL, IS REQUIRED. COMPLIANCE IS REQUIRED WITH ALL STATE OR LOCAL REGULATIONS REGARDING WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEMS.

3. PUBLIC OR PRIVATE ROADWAYS SHALL BE KEPT CLEARED OF ACCUMULATED SEDIMENT. OFF-SITE VEHICLE TRACKING SEDIMENT SHALL BE MINIMIZED. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROAD NOTED ON PLAN. BULK CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING THE AREA WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE POINT OF LIKELY ORIGIN OR OTHER SUITABLE LOCATION.

4. EXCEPT AS PREVENTED BY INCLEMENT WEATHER CONDITIONS, ALL DISTURBED AREAS OVER 50 FEET AWAY FROM THE STREAM BED TO REMAIN INACTIVE FOR MORE THAN 14 DAYS SHALL BE STABILIZED BY SEEDING AND MULCHING, COVERING, OR BY OTHER EQUIVALENT EROSION CONTROL MEASURES WITHIN SEVEN (7) DAYS OF THE MOST RECENT DISTURBANCE AND PRIOR TO THE ONSET OF WINTER WEATHER. PERMANENT SOIL STABILIZATION SHALL BE PROVIDED WITHIN 7 DAYS AFTER FINAL GRADE IS ESTABLISHED.

5. EXCEPT AS PREVENTED BY INCLEMENT WEATHER CONDITIONS, ALL DISTURBED AREAS WITHIN 50 FEET OF THE STREAM BED TO REMAIN INACTIVE FOR MORE THAN 14 DAYS SHALL BE STABILIZED BY SEEDING AND MULCHING, COVERING, OR BY OTHER EQUIVALENT EROSION CONTROL MEASURES WITHIN TWO (2) DAYS OF THE MOST RECENT DISTURBANCE AND PRIOR TO THE ONSET OF WINTER WEATHER. PERMANENT SOIL STABILIZATION SHALL BE PROVIDED WITHIN 2 DAYS AFTER FINAL GRADE IS ESTABLISHED.

6. DISTURBED AREAS WHICH WILL REMAIN IDLE DURING THE WINTER MONTHS SHALL BE STABILIZED USING SEEDING AND MULCHING. SUCH STABILIZATION MEASURES MUST BE INSTALLED NO LATER THAN NOVEMBER 1.

7. THIS EROSION CONTROL PLAN SHALL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN THE CONSTRUCTION SITE. ALL MEASURES INVOLVING EROSION CONTROL PRACTICES SHALL BE INSTALLED UNDER THE GUIDANCE OF QUALIFIED PERSONNEL EXPERIENCED IN EROSION CONTROL, AND FOLLOWING THE PLANS AND SPECIFICATION INCLUDED HEREIN. OTHER EROSION AND SEDIMENT CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.

8. DURING THE PERIOD OF CONSTRUCTION ACTIVITY, ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE THE TRANSFER OF MAINTENANCE RESPONSIBILITIES, IF REQUIRED, WITH THE OWNER. MAINTENANCE SHALL BE IN ACCORDANCE WITH THE "OHIO RAINWATER AND LAND DEVELOPMENT HANDBOOK (2006)".

9. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE "OHIO RAINWATER AND LAND DEVELOPMENT HANDBOOK (2006)," AND THE THE OHIO DEPARTMENT OF TRANSPORTATION (O.D.O.T.) STANDARD CONSTRUCTION DRAWING MC-11.

10. POST CONSTRUCTION STORM WATER MANAGEMENT: ALL DISTURBED AREAS SHALL HAVE ADEQUATE VEGETATION TO FILTER POLLUTANTS AS MUCH AS PRACTICAL. LOCAL LAWS REGARDING THE DISCHARGING OF OIL AND OTHER POLLUTANTS INTO DRAINAGE-WAYS SHALL APPLY.

11. ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSPECTED IN ACCORDANCE WITH THE CONDITIONS OF APPLICABLE NPDES PERMITS.

12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE REMOVED AND DISPOSED OF WITHIN THIRTY DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY PRACTICES ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION.

13. THIS EROSION CONTROL PLAN MUST BE RETAINED ON-SITE AT ALL TIMES DURING THE PERIOD OF CONSTRUCTION.

14. FIELD ADJUSTMENTS FOR LOCATION AND DIMENSION OF SEDIMENT CONTROL DEVICES MAY BE MADE BY THE ENGINEER AS REQUIRED.

15. EROSION CONTROL DEVICES REMOVED DURING GRADING OPERATIONS SHALL BE PUT BACK IN PLACE AT THE END OF THE DAY OR DURING INCLEMENT WEATHER.

16. NO SOIL, ROCK, DEBRIS, OR OTHER MATERIAL SHALL BE DUMPED OR PLACED INTO A WATER RESOURCE OR INTO SUCH PROXIMITY THAT IT MAY READILY SLOUGH, SLIP, OR ERODE INTO A WATER RESOURCE UNLESS DUMPING OR PLACING IS AUTHORIZED BY THE ENGINEER AND, WHEN APPLICABLE, THE U.S. ARMY CORPS OF ENGINEERS, FOR SUCH PURPOSES AS, BUT NOT LIMITED TO, CONSTRUCTION BRIDGES, CULVERTS, AND EROSION CONTROL STRUCTURES.

17. THE CONTRACTOR IS RESPONSIBLE TO CONFORM TO ALL REGULATORY REQUIREMENTS FOR DISCHARGING WATER RELATED TO DE-WATERING ACTIVITIES. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE COST OF ITEM 503 - COFFERDAMS, CRIBS AND SHEETING.

18. SEDIMENT PONDS/TRAPS AND PERIMETER CONTROLS SHALL BE IMPLEMENTED AS A FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING AND SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS ARE STABILIZED.

19. EROSION CONTROL BLANKETS WITH MATTING WILL BE USED ON DITCHES GREATER THAN 1.5% AND ALL OTHER SLOPES GREATER THAN 6% GRADE.

20. REGULAR INSPECTION AND MAINTENANCE WILL BE PROVIDED FOR ALL EROSION AND SEDIMENT CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE KEPT THROUGHOUT THE CONSTRUCTION PERIOD. INSPECTIONS MUST BE MADE A MINIMUM OF ONCE EVERY 7 DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES OF RAIN IN A 24 HOUR PERIOD. PROVIDE NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION AND CORRECTIVE MEASURES TAKEN.

21. MARK LIMITS OF CLEARING AND GRUBBING FOR APPROVAL PRIOR TO CONSTRUCTION. AFTER CLEARING, BUT BEFORE GRUBBING, INSTALL ALL INITIAL EROSION CONTROL ITEMS. AFTER GRUBBING, BUT BEFORE TOPSOIL STRIPPING AND GRADING, INSTALL CONSTRUCTION FENCING AT THE CLEARING LIMIT LINE.

22. PROTECT UNDISTURBED AREAS THROUGHOUT CONSTRUCTION. DO NOT STORE EQUIPMENT, VEHICLES OR MATERIALS IN THE PROTECTED AREA BEYOND THE CONSTRUCTION FENCE.

23. OFF-SITE VEHICLES TRACKING SEDIMENT SHALL BE MINIMIZED. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROAD(S) NOTED ON THE PLAN.

24. OTHER EROSION AND SEDIMENT CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.

25. THE CONTRACTOR SHALL MAINTAIN AN SWPPP INSPECTION LOG IN THE FIELD.

26. ALL CONSTRUCTION AND DEMOLITION DEBRIS SHALL BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL, AS REQUIRED BY OHIO REVISED CODE (ORC) 3714.

27. NO TURBID STORM WATER MAY BE DISCHARGED OFF SITE.

28. THE CONTRACTOR SHALL CREATE A SIGN THAT WILL BE DISPLAYED ON SITE LABELING THE STEPS FOR SMALL AND LARGE OIL SPILL PROCEDURES. A SPILL RESPONSE KIT SHALL BE MAINTAINED ON THE SITE. THE SIGNAGE SHALL IDENTIFY WHERE THE KIT IS LOCATED.

29. (SMALL RELEASE) ANY DISCHARGE OF PETROLEUM OR PETROLEUM PRODUCTS OF LESS THAN 25 GALLONS ONTO A PERVIOUS SURFACE SHALL BE LEGALLY REMOVED AND PROPERLY TREATED OR PROPERLY DISPOSED OF, OR OTHERWISE REMEDIATED, SO THAT NO CONTAMINATIONS FROM THE DISCHARGE REMAINS ON-SITE. THE CONTRACTOR SHALL FOLLOW THE STEPS PROVIDED BELOW:

    A. SPILLS LESS THAN 25 GALLONS THAT REMAINS ON SITE DOES NOT NEED TO BE REPORTED.
    B. ALL SPILLS SHALL BE CONTAINED USING STRAW TO ABSORB THE LIQUID, A COMMERCIAL MATERIAL THAT IS CAPABLE OF ABSORBING OIL IN SOILS, MECHANICAL REMOVAL OR A VACUUM PUMP.
    C. ONCE THE SPILL HAS BEEN CONTAINED, THE AFFECTED SOIL, MATERIAL AND/OR LIQUID SHALL BE LEGALLY DISPOSED OF IN A MUNICIPAL SOLID WASTE LANDFILL PERMITTED BY THE OHIO EPA.

31. (LARGE RELEASE) IN THE EVENT OF A LARGE RELEASE (25 OR MORE GALLONS) OF PETROLEUM WASTE, THE CONTRACTOR MUST CONTACT THE OHIO EPA AT 1-800-282-9378, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) WITHIN 30 MINUTES OF A SPILL OF 25 OR MORE GALLONS. THE CONTRACTOR SHALL FOLLOW THE STEPS PROVIDED BELOW:

    A. ALL SPILLS GREATER THAN 25 GALLONS NEEDS TO BE REPORTED.
    B. ALL SPILLS SHALL BE CONTAINED USING STRAW TO ABSORB THE LIQUID, A COMMERCIAL MATERIAL THAT IS CAPABLE OF ABSORBING OIL IN SOILS, MECHANICAL REMOVAL OR A VACUUM PUMP. IF THE SPILL IS HEADING TOWARD SURFACE OR GROUND WATER, THE CONTRACTOR SHALL SET BOOMS AS CLOSE TO THE WATER ENTRY POINT OF THE SPILL AS POSSIBLE.
    C. ONCE THE SPILL HAS BEEN CONTAINED, THE AFFECTED SOIL, MATERIAL AND/OR LIQUID SHALL BE LEGALLY DISPOSED OF IN A MUNICPAL SOILD WASTE LANDFILL PERMITTED BY THE OHIO EPA.

32. ALL MATERIALS TO BE DISPOSED OF OFF-SITE MUST BE DISPOSED OF IN AN ENVIRONMENTALLY SOUND MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AT A SITE APPROVED BY THE ENGINEER. NO EXCESS MATERIALS ARE TO BE DISPOSED OF IN ANY WETLAND, FLOODPLAIN, SURFACE WATER, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS. EROSION CONTROL MEASURES AT THE DISPOSAL SITE MUST BE INSTALLED AND MAINTAINED UNTIL DISPOSAL IS COMPLETE AND THE DISPOSAL SITE IS PERMANENTLY STABILIZED. GIVING EXCAVATED SOIL AWAY DOES NOT RELIEVE THE CONTRACTOR OR ENGINEER OF THIS RESPONSIBILITY.

33. PROPERLY INSTALL EROSION CONTROLS (E.G., SILT FENCES, ETC.) ON SLOPES, ALONG STREAMS AND DRAINAGE WAYS, AROUND DRAINAGE STRUCTURES, AND ANYWHERE ELSE THAT EXPOSED SOIL COULD RUN OFF. ALL SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION.

34. THE PROJECT IS WITHIN THE RANGE OF THE STATE AND FEDERALLY ENDANGERED INDIANA BAT (MYOTIS SODALIST), THE STATE AND FEDERALLY ENDANGERED NORTHERN LONG-EARED BAT (MYOTIS SEPTENTRIONALIS), THE STATE ENDANGERED LITTLE BROWN BAT (MYOTIS LUCIFUGUS), AND THE STATE ENDANGERED AND FEDERALLY PROPOSED ENDANGERED TRI-COLORED BAT (PERIMYOTIS SUBFLAVUS) AND MAY IMPACT SUMMER ROOSTING HABITAT FOR THESE SPECIES. PER U.S. FISH AND WILDLIFE SERVICE RECOMMENDATIONS, THE REMOVAL OF TREES GREATER THAN OR EQUAL TO 3-INCHES IN DIAMETER SHOULD ONLY OCCUR BETWEEN OCTOBER 1 AND MARCH 31. IF THIS FRAME CANNOT BE FOLLOWED, THE U.S. FISH AND WILDLIFE SERVICE (614.416.8993) AND OHIO DEPARTMENT OF NATURAL RESOURCES (CONTACT: EILEEN WYZA, EILEEN.WYZA@DNR.OHIO.GOV) MUST BE CONTACTED PRIOR TO CUTTING FOR GUIDANCE ON NECESSARY STEPS TO DOCUMENT THE ABSENCE OR PRESENCE OF THESE SPECIES.

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED
PROFESSIONAL ENGINEER

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

NO	REVISION	DATE

SCALE: AS NOTED
DATE: 8/25/2025
DESIGNED BY: RLM
DRAWN BY: ELE
CHECKED BY: RLM

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

SWPPP - SW SERIES

SWPPP DETAILS & NOTES

PROJECT NO: 230467
DRAWING NAME: SWP-02
SHEET 43 OF 44

1. APPLY MULCH OR OTHER APPROPRIATE VEGETATIVE PRACTICES TO DISTURBED AREAS WITHIN 7 DAYS OF GRADING IF THE AREA IS TO REMAIN DORMANT FOR MORE THAN 45 DAYS OR ON AREAS OF THE SITE WHICH CAN BE BROUGHT TO FINAL GRADE.
2. MULCH SHALL CONSIST OF ONE OF THE FOLLOWING:
   - UNROTTED SMALL-GRAIN STRAW APPLIED AT A RATE OF 2 TONS/AC. OR 90 LB/1,000 S.F. (2 TO 3 BALES) AND SPREAD UNIFORMLY BY HAND OR MECHANICALLY.
   - WOOD-CELLULOSE FIBER APPLIED AT A RATE OF 2,000 LB/AC. OR 46 LB/1,000 S.F.
   - MULCH MATTING.
   - WOOD CHIPS APPLIED AT 6 TONS/AC.
3. ANCHOR MULCH IMMEDIATELY TO MINIMIZE LOSS BY WIND OR RUNOFF. ACCEPTABLE ANCHORING METHODS ARE:
   - PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL USING A DISK, CRIMPER OR SIMILAR TOOL. DO NOT FINELY CHOP STRAW TO BE MECHANICALLY ANCHORED, BUT LEAVE LONGER THAN 6 INCHES.
   - USE NETTING PER THE MANUFACTURER RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF OR ON CRITICAL SLOPES.
   - SYNTHETIC BINDERS MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.
   - WOOD-CELLULOSE FIBER BINDER AT A NET DRY WEIGHT OF 750 LB/AC. WOOD CELLULOSE FIBER IS TO BE MIXED WITH WATER AND THE MIXTURE IS TO CONTAIN 50 LB/100 GAL. MAX. OF WOOD CELLULOSE FIBER.

MULCHING DETAIL
SCALE: NONE

1. TEMPORARY SEED TO BE APPLIED BETWEEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 21 DAYS OR MORE. THESE IDLE AREAS SHOULD BE SEEDED AS SOON AS POSSIBLE AFTER GRADING OR BE SEEDED WITHIN 7 DAYS. SEVERAL APPLICATIONS OF TEMPORARY SEEDING ARE NECESSARY ON TYPICAL CONSTRUCTION PROJECTS.
2. THE SEED BED IS TO BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION.
3. SOIL AMENDMENTS MAY BE REQUIRED TO ESTABLISH ADEQUATE STANDS OF VEGETATION. PERFORM SOIL TESTS ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.
4. APPLY SEED UNIFORMLY WITH CYCLONE SEEDER, CULTIPACKER SEEDER OR HYDROSEEDER. COVER BROADCASTED SEED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPING INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, MIX THE SEED AND FERTILIZER ON SITE AND IMMEDIATELY USE.

MULCHING TEMPORARY SEEDING
1. APPLY MULCH MATERIAL IMMEDIATELY AFTER SEEDING. SEEDING MADE DURING OPTIMUM SEEDING DATES ON FLAT AREAS WITH FAVORABLE SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE STABILIZATION. DORMANT SEEDING IS TO BE MULCHED.
2. SEE MULCHING FOR MATERIALS AND ANCHORING METHODS.

TEMPORARY SEEDING SPECIES SELECTION			
SEEDING DATES	SPECIES	LB/1,000 S.F.	PER AC.
March 1 to August 15	Oats Tall Fescue Perennial Ryegrass	3 1 1	4 bushel 40 lb. 40 lb.
	Perennial Ryegrass Tall Fescue	2 1	40 lb. 40 lb.
August 16 to November 1	Rye Tall Fescue Perennial Ryegrass	3 1 1	2 bushel 40 lb. 40 lb.
	Wheat Tall Fescue Perennial Ryegrass	3 1 1	2 bushel 40 lb. 40 lb.
	Perennial Ryegrass Tall Fescue	2 1	40 lb. 40 lb.
November 1 to Spring Seeding	Use mulch only, sodding practices or dormant seeding.		

TEMPORARY SEEDING DETAIL
SCALE: NONE

SPECIFICATIONS FOR PERMANENT SEEDING SITE PREPARATION:
1. A SUBSOILER, PLOW OR OTHER IMPLEMENT TO BE USED TO REDUCE SOIL COMPACTION AND ALLOW MAXIMUM INFILTRATION. SUBSOILING TO BE DONE WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING IS NOT TO BE DONE ON SLIP-PRONE AREAS.
2. GRADE THE SITE AS NEEDED TO PERMIT USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
3. APPLY RESOIL WHERE NEEDED TO ESTABLISH VEGETATION.

SEEDBED PREPARATION:
1. APPLY AGRICULTURAL GROUND LIMESTONE TO ACIDIC SOIL AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY AT RATE OF 100 LB/1,000 S.F. OR 2 TONS/AC.
2. APPLY FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY AT A RATE OF 12 LB/1,000 S.F. OR 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS.
3. LIME AND FERTILIZER TO BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING-TOOTH HARROW, OR OTHER SUITABLE FIELD IMPLEMENT TO A DEPTH OF 3".

SEEDING DATES AND SOIL CONDITIONS:
1. SEED MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. THESE ARE IDEAL SEEDING DATES, BUT SEEDING MAY BE MADE ANY TIME THROUGHOUT THE GROWING SEASON WITH THE USE OF ADDITIONAL MULCH AND IRRIGATION. TILLAGE/SEED BED PREPARATION TO BE DONE WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. SEE THE FOLLOWING SECTION ON DORMANT SEEDING FOR WINTER SEEDING.

DORMANT SEEDINGS:
1. DO NOT PLANT SEEDINGS FROM OCTOBER 1 TO NOVEMBER 20. SEEDS ARE LIKELY TO GERMINATE DURING THIS PERIOD, BUT PROBABLY WILL NOT SURVIVE THE WINTER.
2. THE FOLLOWING METHODS MAY BE USED:
   - FROM OCTOBER 1 TO NOVEMBER 20, PREPARE THE SEED BED, ADD THE REQUIRED AMOUNTS OF LIME AND FERTILIZER, THEN MULCH AND ANCHOR. AFTER NOVEMBER 20 AND BEFORE MARCH 15, INCREASE THE SEEDING RATES BY 50% AND BROADCAST THE SEED MIXTURE.
   - FROM NOVEMBER 20 THROUGH MARCH 15, WHEN SOIL CONDITIONS PERMIT, PREPARE THE SEED BED, LIME AND FERTILIZER, APPLY THE SEED MIXTURE, MULCH AND ANCHOR. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
   - APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRO-SEEDED (SLURRY MAY INCLUDE SEED AND FERTILIZER) ON FIRM, MOIST SEED BED.
   - WHERE FEASIBLE, EXCEPT WHEN A CULTIPACKER TYPE SEEDER IS USED, THE SEED BED IS TO BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTIPACKER, ROLLER, OR LIGHT DRAG.

IRRIGATION:
1. PERMANENT SEEDING TO INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS AS NEEDED FOR ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH.
2. EXCESSIVE IRRIGATION RATES TO BE AVOIDED AND IRRIGATION MONITORED TO PREVENT EROSION AND DAMAGE FROM RUNOFF.

MULCHING:
1. APPLY MULCH MATERIAL IMMEDIATELY AFTER SEEDING. SEEDING MADE DURING OPTIMUM SEEDING DATES ON FLAT AREAS WITH FAVORABLE SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE STABILIZATION. DORMANT SEEDING IS TO BE MULCHED.

SPECIFICATIONS FOR MAINTENANCE OF PERMANENT SEEDING:
1. PERMANENT SEEDING TO NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF PLANTING. SEEDED AREAS TO BE INSPECTED FOR FAILURE AND VEGETATION REESTABLISHED AS NEEDED. DEPENDING ON SITE CONDITIONS, IT MAY BE NECESSARY TO IRRIGATE, FERTILIZE, OVERSEED, OR REESTABLISH PLANTINGS IN ORDER TO PROVIDE PERMANENT VEGETATION FOR ADEQUATE EROSION CONTROL.
2. ESTABLISH MAINTENANCE FERTILIZATION RATES BY SOIL TEST RECOMMENDATIONS OR USING THE FOLLOWING RATES:

SEED MIX	SEEDING RATE LB./AC.	SEEDING RATE LB./1,000 S.F.	NOTES:
GENERAL USE			
Creeping Red Fescue Domestic Ryegrass Kentucky Bluegrass	20-40 10-20 10-20	1/2 TO 1 1/4 TO 1/2 1/4 TO 1/2	
Tall Fescue	40	1	
Dwarf Fescue	40	1	
STEEP BANKS OR CUT SLOPES			
Tall Fescue	40	1	
Crown Vetch Tall Fescue	10 20	1/4 1/2	Do not seed later than August
Flat Pea Tall Fescue	20 20	1/2 1/2	Do not seed later than August
ROAD DITCHES AND SWALES			
Tall Fescue	40	1	
Dwarf Fescue Kentucky Bluegrass	90 5	2-1/4	Do not seed later than August
LAWN			
Kentucky Bluegrass Perennial Ryegrass	60 60	1-1/2 1-1/2	
Kentucky Bluegrass Creeping Red Fescue	60 60	1-1/2 1-1/2	For shaded areas

Note: Other approved seed species may be substituted.

MAINTENANCE FOR PERMANENT SEEDINGS
FERTILIZATION AND MOWING

MIXTURE	FORMULA	LB./ AC.		MOWING
Creeping Red Fescue Domestic Ryegrass Kentucky Bluegrass	10-10-10	500		≥3"
Tall Fescue	10-10-10	500	Fall, yearly or as needed	≥4"
Dwarf Fescue	10-10-10			≥2"
Crown Vetch Fescue	0-20-20		Spring, yearly following establishment, then every 4-7 years	Do not mow
Flat Pea Fescue	0-20-20	400		

Note: Following soil test recommendations is preferred to the fertilizer rates above.

PERMANENT SEEDING DETAIL
SCALE: NONE

verdantas
8150 STERLING COURT
MENTOR, OHIO 44060
(440) 951-9000

STATE OF OHIO
ROBERT L. McNUTT
E-58308
REGISTERED PROFESSIONAL ENGINEER

NO	REVISION	DATE

SCALE:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:

VILLAGE OF GENEVA-ON-THE-LAKE
EAST SIDE (PALMETTO) SANITARY EXTENSIONS
ASHTABULA COUNTY OHIO

SWPPP - SW SERIES

SWPPP DETAILS

PROJECT NO:
230467
DRAWING NAME

SHEET	OF
44	44