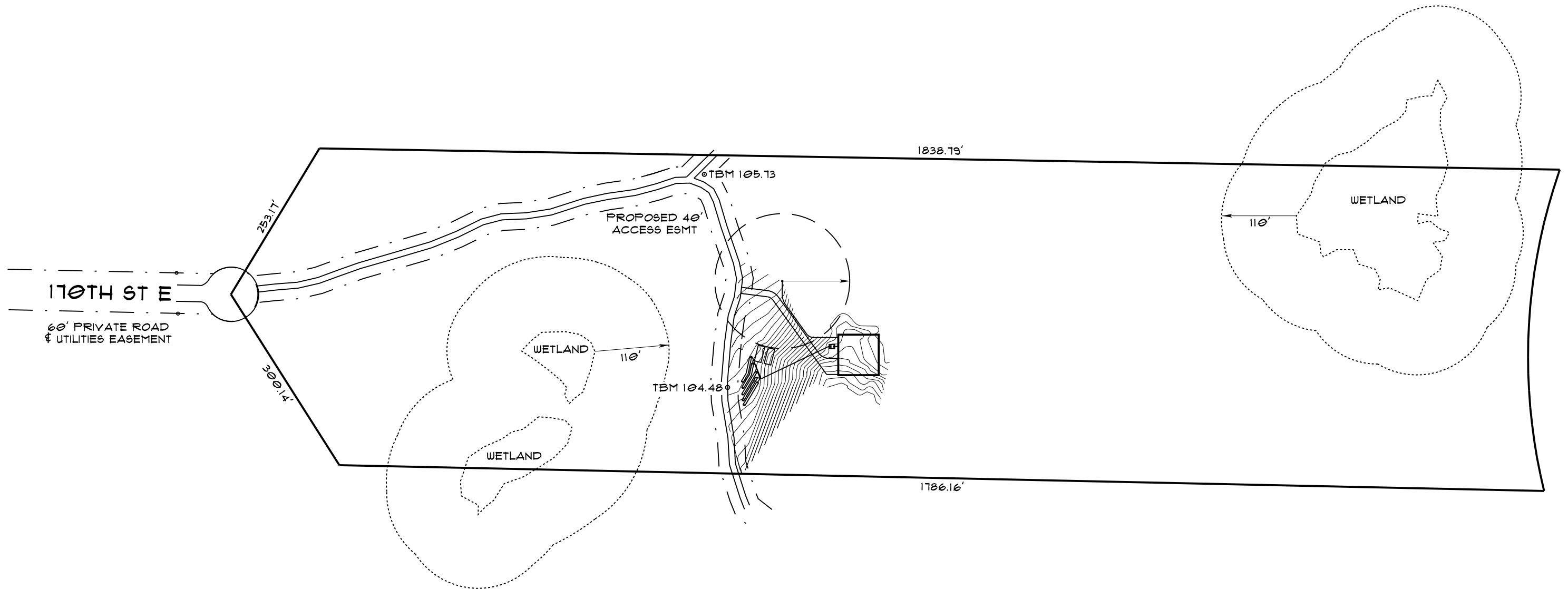
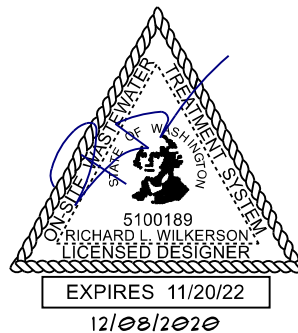
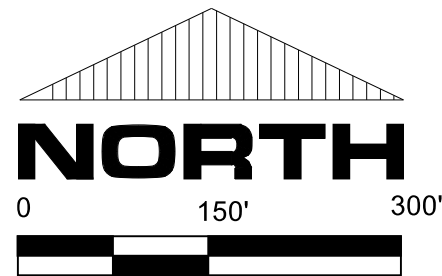




Received
02/04/2021



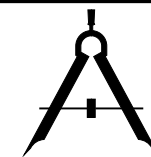
THIS IS NOT A SURVEY. SITE FEATURES, TOPOGRAPHY, ELEVATIONS & BENCHMARKS ARE BASED ON ASSUMED DATUM PROVIDED BY THE OWNER & PIERCE COUNTY (GIS) PLANNING RECORDS & ARE INTENDED ONLY FOR THE APPROVAL & CONSTRUCTION OF THE SEPTIC SYSTEM DESIGN. WILKERSON INC. RECOMMENDS THAT A LICENSED SURVEYOR ALWAYS BE USED TO SET CORNERS & ESTABLISH LOT LINES. FIELD TRAVERSE WAS PERFORMED USING A TOPCON 300 ROBOTIC TOTAL STATION & TOPCON FC2500 DATA COLLECTOR.

On-Site Sewage
Approved for Permit Release

Tyler Sorrell, RS
05/20/2021



SEPTIC SYSTEM DESIGN



WILKERSON & ASSOCIATES, INC.
SITE EVALUATIONS SOILS ANALYSIS SEPTIC DESIGNS

RICHARD L. WILKERSON
RICWILKERSON@COMCAST.NET

6712 GLEN ECHO LANE S.W.
LAKEWOOD, WA 98499

PHONE: 253.584.2404
CELL: 253.380.9109

SITE ADDRESS: 27009 170TH STREET E
PARCEL NUMBER: 06-19-29-4-016
LOT NUMBER: 6 OF ROS 2016-07-13-5002

CLIENT:

WATERSIDE LANE DEVELOPMENT, LLC
4193 NE NORTH SHORE ROAD
BELFAIR, WA 98528
C/O STEVE 206.396.8638

DATE: 12/08/2020

PAGE 1 OF 3 PAGES

ACCESS TO
170TH STREET E

SOIL LOG
TAKEN 11/30/2020 BY RIC WILKERSON

SL #1
00-18" ROOTED LOAMY MEDIUM SAND
18-51" LOAMY MEDIUM TO COARSE SANDS

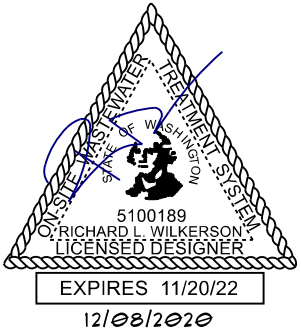
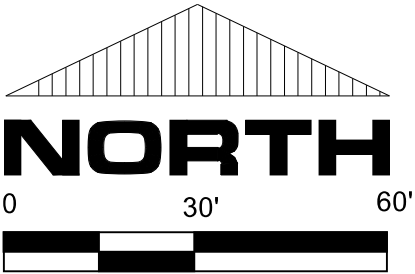
SL #2
00-40" ROOTED LOAMY MEDIUM SAND
40-51" EXTREMELY GRAVELLY COARSE SAND

SL #3
00-29" ROOTED LOAMY MEDIUM SAND
29-63" LOAMY MEDIUM TO COARSE SANDS

WETLAND

110' WETLAND BUFFER

Received
02/04/2021



THIS IS NOT A SURVEY. SITE FEATURES, TOPOGRAPHY, ELEVATIONS & BENCHMARKS ARE BASED ON ASSUMED DATUM PROVIDED BY THE OWNER & PIERCE COUNTY (GIS) PLANNING RECORDS & ARE INTENDED ONLY FOR THE APPROVAL & CONSTRUCTION OF THE SEPTIC SYSTEM DESIGN. WILKERSON INC. RECOMMENDS THAT A LICENSED SURVEYOR ALWAYS BE USED TO SET CORNERS & ESTABLISH LOT LINES. FIELD TRAVERSE WAS PERFORMED USING A TOPCON 300 ROBOTIC TOTAL STATION & TOPCON FC2500 DATA COLLECTOR.

PROPOSED
ACCESS EGMT

SL 1

RESERVE
BED

RESERVE
BED

40' PRIMARY LAT.
40' PRIMARY LAT.
40' PRIMARY LAT.
40' PRIMARY LAT.
40' PRIMARY LAT.

D-BOX

OB PORTS

TBM 104.48

100' PROTECTIVE WELL RADIUS
PROPOSED INDIVIDUAL WELL

Recommend sleeving
line under driveway to
prevent crushing.
TS 5/20/21

SEPTIC
TANK

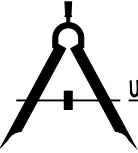
PROPOSED
4 BEDROOM
SINGLE FAMILY
RESIDENCE

DRIVEWAY

PRIMARY DRAINFIELD 200 LINEAL FEET
TO BE INSTALLED ON 5 FOOT CENTERS

RESERVE SAND LINED PRESSURE BEDS
240 SQ FT EACH, 480 SQUARE FEET TOTAL

SEPTIC SYSTEM DESIGN



WILKERSON & ASSOCIATES, INC.
SITE EVALUATIONS SOILS ANALYSIS SEPTIC DESIGNS

RICHARD L. WILKERSON
RICWILKERSON@COMCAST.NET

6712 GLEN ECHO LANE S.W.
LAKEWOOD, WA 98493
PHONE: 253.584.2404
CELL: 253.380.9109

SITE ADDRESS: 27009 170TH STREET E
PARCEL NUMBER: 06-19-29-4-016
LOT NUMBER: 6 OF ROS 2016-07-13-5002

CLIENT:
WATERSIDE LANE DEVELOPMENT, LLC
4193 NE NORTH SHORE ROAD
BELFAIR, WA 98528
C/O STEVE 206.396.8638

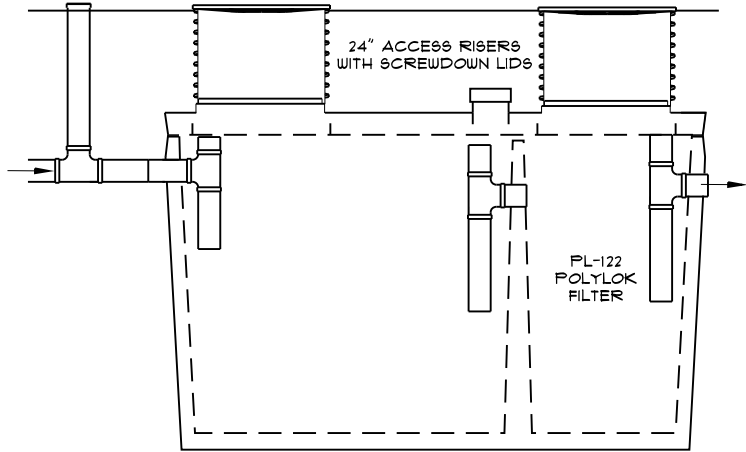
DATE: 12/08/2020 PAGE 2 OF 3 PAGES

On-Site Sewage
Approved for Permit Release

Tyler Sorrell, RS
05/20/2021

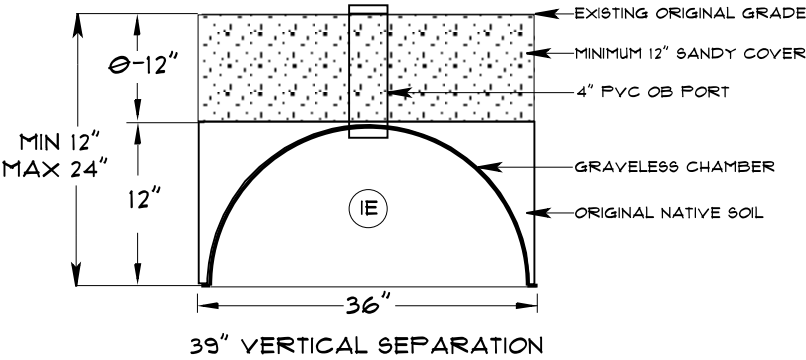


1250 SDC SEPTIC TANK DETAIL



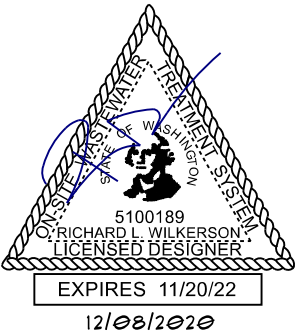
DRAINFIELD TRENCH DETAIL

INSTALL LATERALS 6" INTO NATIVE SOIL



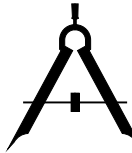
ELEVATIONS

TEMPORARY BENCHMARK	104.48
PLUMBING STUB-OUT	119.00
SEPTIC TANK INLET	118.50
SEPTIC TANK OUTLET	118.25
DISTRIBUTION BOX INLET	106.05
DRAINFIELD INVERT (HI)	105.80



SEPTIC SYSTEM SPECIFICATIONS AND DESIGN NOTES

1. CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST REGULATIONS AND REQUIREMENTS OF THE TACOMA-PIERCE COUNTY HEALTH DEPARTMENT AND WSDOH. THIS SYSTEM REQUIRES PERIODIC MAINTENANCE. THE APPROVAL OF THE DESIGN AND INSTALLATION DOES NOT INSURE CONTINUOUS TROUBLE-FREE SERVICE.
2. THIS IS NOT A SURVEY. PROPERTY LINES, CORNERS, TOPOGRAPHY, ELEVATIONS, AND BENCHMARKS ARE BASED ON ASSUMED DATUM AND ARE SOLELY INTENDED FOR USE BY THE SEPTIC SYSTEM DESIGNER, TPCHD REVIEW PERSONNEL AND THE SYSTEM INSTALLER. WILKERSON INC. RECOMMENDS THAT A PROFESSIONAL LICENSED SURVEYOR BE USED FOR ALL SURVEY PROJECTS (IAW WASHINGTON STATE LAW).
3. NO EXCAVATION OR ALTERATION AFFECTING THE DRAINFIELD SITE IS PERMITTED. ENCROACHMENTS INTO THE DRAINFIELD AREA MAY RENDER THE SITE UNUSABLE. RE-DESIGNS AND/OR ECONOMIC LOSSES DUE TO DAMAGE/ENCROACHMENTS SHALL BE AT THE OWNER'S EXPENSE.
4. ALL WATER LINES MUST BE 18 INCHES ABOVE CROSSED SEWER LINES AND SLEEVED IF WITHIN 10 FEET OF ANY SEPTIC SYSTEM COMPONENT. THERE ARE NO EXCEPTIONS TO THIS REQUIREMENT.
5. INSTALLER SHALL DIVERT ALL STORM DRAINAGE FLOW AWAY FROM SEPTIC SYSTEM COMPONENTS.
6. THIS SYSTEM IS NOT DESIGNED FOR THE USE OF A GARBAGE DISPOSAL. THE USE OF SUCH A DEVICE WILL CAUSE SEPTIC SYSTEM FAILURE FOR WHICH THE DEVICE INSTALLER/OWNER ACCEPTS RESPONSIBILITY.
7. NO CHANGES OR ALTERATIONS ARE TO BE MADE TO THIS PLAN OR INSTALLATION WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE DESIGNER. THE INSTALLER SHALL NOTIFY THE DESIGNER IN THE EVENT OF DISCOVERY OF POOR SOIL, HIGH WATER TABLES, OR SEVERE DISCREPANCIES DEVIATING FROM THE ORIGINAL PLAN. WORK PERFORMED UNDER ALTERED SITE CONDITIONS SHALL BE AT THE INSTALLER'S RISK AND THE DESIGNER SHALL BE HELD HARMLESS. THIS PLAN IS FULLY COPYRIGHTED.
8. INSTALLER MUST CONTACT THE DESIGNER IMMEDIATELY FOLLOWING THE INSTALLATION FOR FINAL AS-BUILT INSPECTION. INSTALLER IS RESPONSIBLE FOR PROVIDING BACKFILL AND COMPONENT DETAIL CERTIFICATION FOR RECORD DRAWING COMPLETION. ADDITIONAL INSPECTIONS DUE TO IMPROPER INSTALLATIONS WILL BE CHARGED TO THE INSTALLER. ALL CHARGES MUST BE PAID PRIOR TO REQUESTING ADDITIONAL INSPECTIONS.
9. INSTALLER SHALL POST PERMITS IN A CONSPICUOUS LOCATION DURING CONSTRUCTION FOR TPCHD AND DESIGNER USE. MISSING PERMITS WILL BE THE RESPONSIBILITY OF THE INSTALLER. A FEE WILL BE CHARGED TO THE INSTALLER TO REPRODUCE LOST OR MISSING PERMITS.
10. THIS SYSTEM IS DESIGNED FOR A SINGLE FAMILY RESIDENCE WITH 4 BEDROOMS. MAXIMUM DAILY WASTEWATER FLOW SHALL NOT EXCEED 480 GPD WITH A MAXIMUM WASTE STRENGTH OF 200 MG/L BOD5; 100 MG/L TSS; & 15 MG/L FOG. EXCEEDING THE MAXIMUM LEVELS WILL CAUSE SEPTIC SYSTEM FAILURE FOR WHICH THE OWNER ACCEPTS RESPONSIBILITY.
11. INSTALL A STATE CERTIFIED, WATERTIGHT EVERGREEN PRECAST 1250 SDC 1260 GALLON TWO-COMPARTMENT CONCRETE SEPTIC TANK. INSTALL 24 INCH RISERS WITH COMPATIBLE WATERPROOF SCREWDOWN LIDS OVER MANHOLES TO FINAL GRADE. BED TANK WITH 6 INCHES OF LEVELED PEA GRAVEL. INSTALL 4 INCH PVC CLEANOUT WITH THREADED CAP BETWEEN STUBOUT AND SEPTIC TANK.
12. INSTALL A POLYLOK PL-122 EFFLUENT FILTER IN THE SEPTIC TANK OUTLET PORT. FILTER HANDLE TO BE INSTALLED WITHIN 6 INCHES OF ACCESS LID.
13. ALL SEWER COLLECTION LINES TO BE ASTM D-3034 (SDR 35) GRAVITY SEWER PIPE. USE ASTM F-656 PIPE PRIMER AND ASTM D-2564 PIPE CEMENT.
14. INSTALL A TUF-TITE 6HD2 DISTRIBUTION BOX TO EVENLY DISTRIBUTE EFFLUENT TO LATERALS. BOX TO BE WATER LEVELED AND SET IN CONCRETE. USE TUF-TITE 9L-4 SPEED LEVELERS TO REGULATE FLOWS. DO NOT INTERCONNECT ENDS OF DRAINFIELD LATERALS WITH MANIFOLD/D-BOX TRENCHING, LEAVE 6 INCH EARTH BARRIER.
15. THE CALCULATED SOIL LOAD RATE IS 0.8 GALLONS PER SQUARE FOOT PER DAY. THE REQUIRED DRAINFIELD ABSORPTION AREA IS 600 SQUARE FEET, 200 LINEAL FEET. INSTALL 200 LINEAL FEET OF ADS ARC 36 STANDARD 12 INCH CHAMBERS ON 5 FOOT CENTERS LEVEL WITH CONTOURS. SEE TRENCH DETAIL FOR TRENCH DEPTH, MATERIALS AND DIMENSIONS.
16. 4 INCH SDR 35 OBSERVATION PORTS TO BE INSTALLED AT ALL LATERAL ENDS. PORTS WITH CAPS TO BE PLACED IN 6 INCH CARSON BOXES AT FINAL GRADE.
17. LOT SIZE IS APPROXIMATELY 20.21 ACRES WITH 880,348 SQUARE FEET.

On-Site Sewage Approved for Permit Release Tyler Sorrell, RS 05/20/2021  	SEPTIC DESIGN SPECIFICATIONS	SITE ADDRESS: 21009 170TH STREET E PARCEL NUMBER: 06-19-23-4-016 LOT NUMBER: 6 OF ROS 2016-07-13-5002
	 WILKERSON & ASSOCIATES, INC. SITE EVALUATIONS SOILS ANALYSIS SEPTIC DESIGNS RICHARD L. WILKERSON RICWILKERSON@COMCAST.NET 6712 GLEN ECHO LANE S.W. PHONE: 253.584.2404 LAKEWOOD, WA 98499 CELL: 253.380.9109	CLIENT: WATERSIDE LANE DEVELOPMENT 4193 NE NORTH SHORE ROAD BELFAIR, WA 98528 C/O STEVE 206.396.8638 DATE: 12/08/2020 PAGE 3 OF 3 PAGES