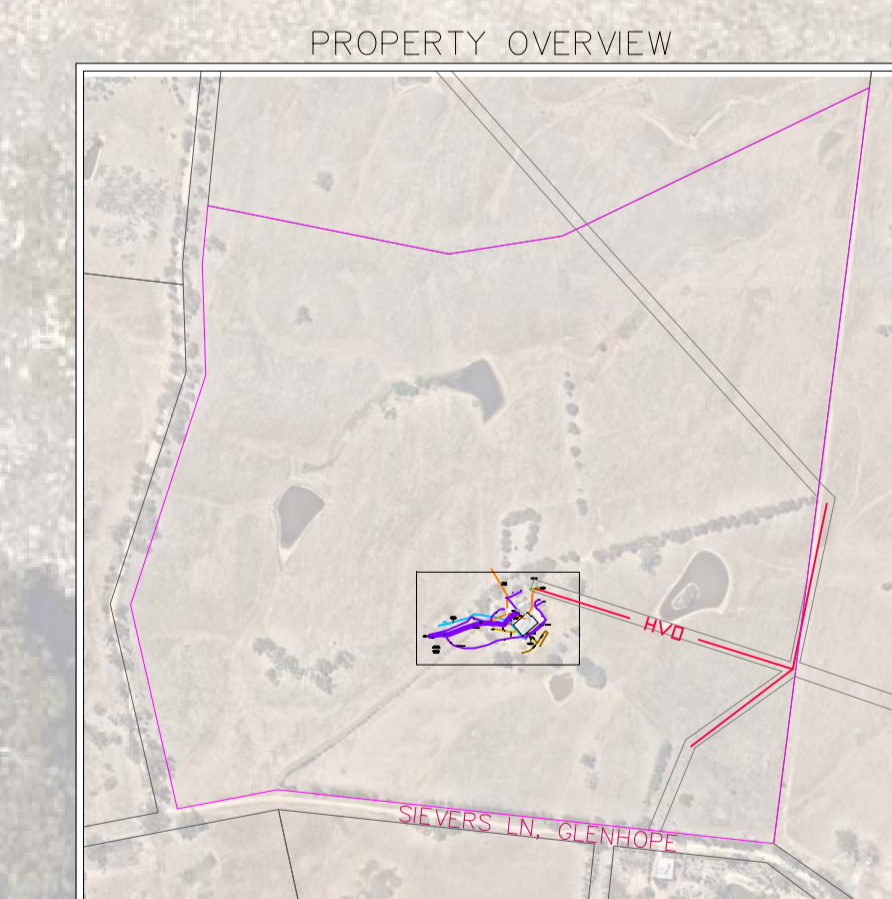
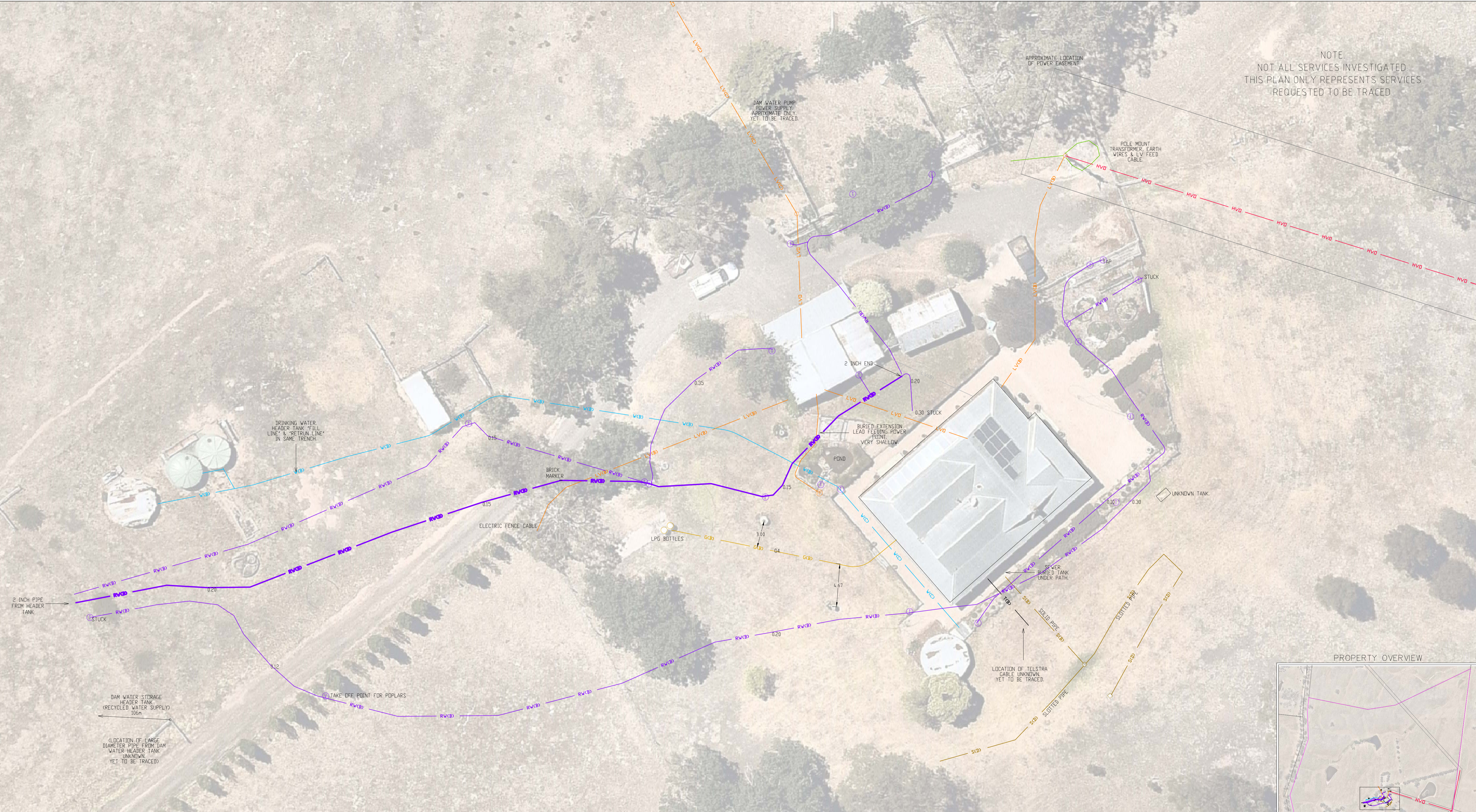


NOTE  
NOT ALL SERVICES INVESTIGATED  
THIS PLAN ONLY REPRESENTS SERVICES  
REQUESTED TO BE TRACED



LEGEND	
C(B) GENERAL COMMUNICATIONS	G(B) GAS
FD(B) GENERAL FIBRE OPTIC	GT(B) GAS TRANSMISSION
N(B) NBN	PC(B) PRODUCT LINES AND PIPELINES
OPT(B) OPTUS	W(B) POTABLE WATER
T(B) TESLTRA	RW(B) RECYCLED WATER
VRC(B) VICROADS COMMS	IR(B) IRRIGATION WATER
VTC(B) VICTRACK COMMS	FS(B) FIRE SERVICE
EW(B) EARTH WIRE	SL(B) STEAM LINE
HV(B) HIGH VOLTAGE ELECTRICITY	SB(B) SEWER
HVO(B) HV ELEC OVERHEAD	SR(B) SEWER RISING MAIN
LV(B) LOW VOLTAGE ELECTRICITY	TR(B) TRADE WASTE
LVO(B) LOW VOLTAGE ELEC OVERHEAD	SW(B) STORM WATER
VRC(B) VICROADS ELECTRICITY	CP(B) CATHODIC PROTECTION
VTE(B) VICTRACK ELECTRICITY	EL(B) ELECTROLYSIS
SIG(B) RAIL SIGNALS	UN(B) UNKNOWN
	GR(B) GROUND PENETRATING RADAR
	CA(B) COMPRESSED AIR
	FE(B) FENCE

**NOTES**

- TRACEABILITY OF SERVICE MATERIAL TYPES.** THE ABILITY TO LOCATE UNDERGROUND SERVICES USING ELECTRONIC (RADIO) DETECTION IS HEAVILY DEPENDENT ON THE TYPE OF MATERIAL A GIVEN UNDERGROUND SERVICE IS MADE FROM. TO SUMMARISE, METALLIC PIPES AND ELECTRICAL CABLES CAN OFTEN BE IDENTIFIED AS THESE ARE CONDUCTIVE MATERIALS SUITABLE FOR LOCATING USING ELECTRONIC DETECTION. CONDUITS (ENCASING NON-CONDUCTIVE CABLES E.G. FIBRE OPTIC), SEWER PIPES AND STORM WATER PIPES DO NOT THEMSELVES CONDUIT ELECTRICITY. TO LOCATE THESE TYPES OF MATERIALS A CONDUCTIVE TRACING ROD IS FED INTO THE UNDERGROUND SERVICE AND THE SIGNAL EMITTED FROM THE ROD OR TRACING HEAD (SONDE) IS THEN LOCATED. A LIMITATION OF ELECTRONIC DETECTION IS WHEN AN UNDERGROUND SERVICE IS MADE FROM NON CONDUCTIVE MATERIAL SUCH AS POLY VINYL CHLORIDE (PVC) OR POLYETHYLENE (PE) ETC AND WHERE THE SERVICE IS ALSO UNDER PRESSURE I.E. CANNOT BE OPENED OR ACCESSED LIKE A CONDUIT OR DRAINAGE PIPE. EXAMPLES OF THESE ARE PVC WATER PIPES, POLY IRRIGATION PIPES, POLY GAS PIPES, SEALED AND FLOODED GRAVITY FED STORM WATER HARVESTING SYSTEMS AND PRESSURISED RISING SEWER MAINS. WITHOUT THE PRESENCE OF AN ACCESSIBLE TRACE WIRE, ACCURATE PLANS OR CAPABILITY TO ISOLATE AND ACCESS THE SERVICE, ABILITY TO LOCATE THESE SERVICES IS LIMITED.
- INFORMATION REGARDING UNDERGROUND SERVICE DEPTHS.** DEPTHS OF SERVICES PROVIDED ON THIS DRAWING ARE OBTAINED USING ELECTRONIC DETECTION (QL-B) UNLESS OTHERWISE STATED. ACCURACY OF THESE READINGS IS HIGHLY DEPENDENT ON THE ENVIRONMENT. DEPTHS SHOULD BE TAKEN AS A GUIDE ONLY AND SERVICE DEPTHS SHOULD BE PROVEN MANUALLY ON SITE WHEN EXCAVATING WITHIN THE VICINITY OF THE SERVICE.
- INFORMATION REGARDING DEPTHS OF STORM WATER AND SEWER PIPES.** DEPTHS OF STORM WATER AND SEWER PIPES ARE PROVIDED IN VARIOUS MANDORS ON THIS PLAN UNLESS OTHERWISE STATED. DEPTHS OF PIPES MEASURED FROM PIT ACCESS POINTS (MAN HOLES) ARE NOTED FROM TOP OF PIT TO PIPE INVERT LEVEL (IL) IN MM. IN SOME CASES AUSTRALIA HEIGHT DATUM (AHD) LEVELS ARE PROVIDED. THIS CAN BE USED TO DERIVE THE IL/AHD OF THE PIPE. IN SOME CASES THIS MAY ALREADY BE CALCULATED AND NOTED AS X.XX/AHD.
- METHODS OF OBTAINING DEPTHS FOR STORM WATER & SEWER.**
  - DEPTH MEASURED USING ELECTRONIC DETECTION:** THE METHOD OF DETERMINING THE IL AT SPECIFIC POINTS ALONG ANY GIVEN PIPE IS OBTAINED USING ELECTRONIC DETECTION. AN IN-DEPTH EXPLANATION OF HOW THIS IS ACHIEVED IS AS FOLLOWS. A TRACING ROD IS FED INTO THE PIPE FROM AN ACCESS POINT. FOR EXAMPLE A JUNCTION PIT OR MANHOLE. THE TRACING ROD HAS A LOCATING SONDE ATTACHED TO THE HEAD. THE ROD IS FED INTO THE PIPE SO THE HEAD IS DIRECTLY BELOW THE SPECIFIC POINT WITH THE TRANSMITTING SONDE SITTING ON THE BOTTOM OF THE INSIDE OF THE PIPE. ELECTRONIC DEPTH IS OBTAINED AND NOTED AT APPROXIMATELY 400MM BELOW THE SURFACE LEVEL. ADDITIONALLY IF REQUIRED AND IF NOT ALREADY PROVIDED, SURFACE LEVELS ARE THEN MEASURED USING A TOP CON ROVING SURVEYOR'S GPS. ELECTRONIC DEPTHS IS THEN SUBTRACTED FROM THE MEASURED GPS SURFACE LEVEL AHD TO ASCERTAIN AN APPROXIMATE INVERT LEVEL AHD.
  - DEPTH MEASURED USING INFERRED DEPTH:** THIS METHOD ASSUMES CONSISTENT AND LINEAR FALL ON A PIPE. FIRST, DEPTH IS OBTAINED USING DEPTHS MEASURED AT ACCESS POINTS FOR THE PIPE. FOR EXAMPLE AT 2 SEPARATE JUNCTION PITS OR MANHOLES. APPROXIMATE DEPTH CAN THEN BE DERIVED FOR A PARTICULAR POINT ALONG THE PIPE BY CONSIDERING CALCULATED GRADE, INVERT LEVELS AND SURFACE LEVEL AHD AT THE GIVEN POINT.
- WE ARE NOT LICENSED SURVEYORS THEREFORE CERTIFIED LEVELS CAN ONLY BE ATTAINED BY EXPOSING THE UTILITY BY EXCAVATION AND HAVING IT SURVEYED BY A LICENSED SURVEYOR.
- DEPENDING ON THE NATURE OF THE WORKS, REASON FOR SURVEY AND FIELD CONDITIONS DETERMINES IF AND WHAT METHOD WILL BE USED AND HOW MUCH INFORMATION IS PROVIDED. EVERY ATTEMPT WILL BE MADE TO PROVIDE ALL RELEVANT INFORMATION HOWEVER, SHOULD ADDITIONAL INFORMATION BE REQUIRED SUBSEQUENT SITE VISITS AND/OR TECHNIQUES MAY BE NEEDED.

UNDERGROUND SERVICES PLAN FOR  
**(ADDRESS HERE)**

SCALE  
1:200

LOCATING: JS / DRAWING: JS  
DATE OF SURVEY: 01/2022  
DATE OF DRAWING: 01/2022  
ORIGINAL SHEET SIZE: A1  
SHEET NUMBER 1 OF 1

POSTAL: PO BOX 401 RIMSEY VIC 3434  
EMAIL: JAKE@MRLS.COM.AU  
PHONE: 0403 222 537

THIS PLAN DOES NOT REPLACE DIAL BEFORE YOU DIG PLANS

DIAL BEFORE YOU DIG  
www.1100.com.au

CERTIFIED LOCATOR  
www.dbylocator.com

**WARNING**  
ACCURACY OF UNDERGROUND SERVICES INFORMATION  
UNDERGROUND SERVICES SHOWN ON THIS PLAN HAVE BEEN LOCATED TO THE QUALITY LEVEL INDICATED IN THE LINE TYPE DESCRIPTOR. THE LOCATION AND DEPTHS STATED SHOULD BE TREATED AS APPROXIMATE AND CAN ONLY BE VERIFIED VIA PROVEN METHODS (MANUAL EXPOSURE/NON-DESTRUCTIVE DIGGING, GPR) OF WHICH UNLESS OTHERWISE AGREED UPON IS THE RESPONSIBILITY OF THE CONTRACTOR.  
THERE IS NO GUARANTEE ALL SERVICES THAT EXIST IN THE AREA COVERED ON THIS PLAN ARE SHOWN

NOTES REGARDING QUALITY LEVELS - TAKEN FROM AS/NZS 5488:2013  
QUALITY LEVEL IS DEFINED AS "A CLASSIFICATION REFLECTING THE PRECISION AND ACCURACY OF UTILITY LOCATION AND ATTRIBUTE INFORMATION"  
QUALITY LEVELS WILL BE REPRESENTED ON THE LINE TYPE AS A SINGLE LETTER (A, B, C OR D) IN BRACKETS PRECEEDING THE UTILITY DESCRIPTOR. SEE BELOW.  
—LVA(B)— QUALITY LEVEL A - POT HOLLING TO PROVE A UTILITY LOCATION  
—LVB(B)— QUALITY LEVEL B - USE OF LOCATING EQUIPMENT/ELECTRONIC DETECTION TO LOCATE A UTILITY  
—LVC(B)— QUALITY LEVEL C - USING FEATURES ABOVE THE SURFACE TO MAKE ALIGNMENTS. FOR EXAMPLE, FIRE HYDRANTS, UTILITY PITS.  
—LVD(B)— QUALITY LEVEL D - FROM PLANS, ANECDOTAL EVIDENCE  
WHERE THE WHOLE LINE SEGMENT CANNOT BE VERIFIED BY LINE OF SIGHT, QUALITY LEVEL A SHALL NOT BE ATTRIBUTED TO THE LINE SEGMENT BETWEEN VALIDATED POINTS.  
QUALITY LEVELS MAY VARY ON SEPARATE SECTIONS OF A SINGLE SUBSURFACE UTILITY, DEPENDING ON THE SOURCE INFORMATION AVAILABLE FOR EACH SECTION.