

ADVANCED AUTOMOTIVE ELECTRONIC ENGINEERING

Compliance Design of Automotive Systems

Modelling of Traffic on a CAN Network

Presented by: Enrico Marini

Emiliano Tomaro

Massimo Toscanelli

Supervisors: Prof. Carlo Concari

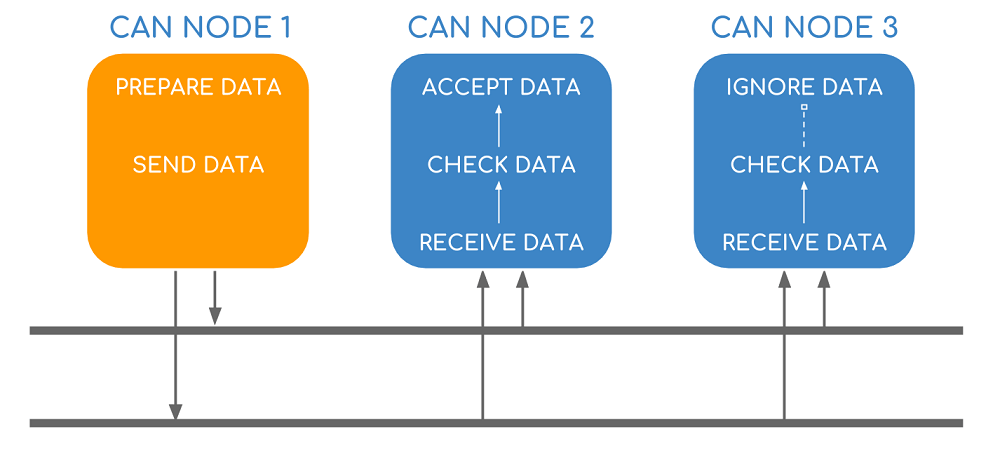
Prof. Alessandro Soldati

Academic Year 2018/2019

CONTROLLER AREA NETWORK (CAN)

The CAN is a protocol largely used in automotive that allows a robust communication between several ECUs and sensors on board a vehicle. Each ECU (e.g. engine control unit, airbags, automatic transmission, ESP, audio system) represents a node connected to the CAN bus. Nowadays, cars have around 70 ECUs. CAN system is not a point-to-point communication system, it is instead a broadcast transmission typology, making it a smarter, cheaper and lighter solution than point-to-point.

The main purpose of the CAN is to allow any ECU to communicate with the entire system without causing an overload to the controller computer. The ECUs communicate through a single CAN interface and the system allows for central error diagnosis and configuration among all ECUs.



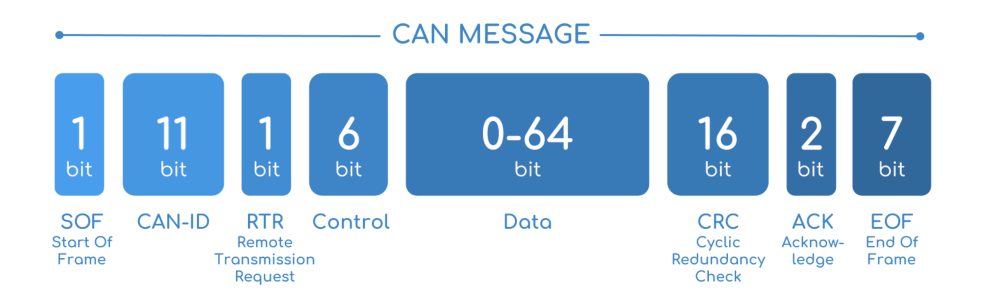
Every node receives all transmitted messages, decides relevance and chooses whether it needs the data on the bus or not. CAN messages are prioritized according to each node’s ID (lower ID means higher priority), making it a very efficient system. Furthermore, it is a flexible protocol since it is possible to include additional nodes over time.

Each ECU reads the bus through a buffer and each ECU writes on the bus through a transistor. The bus is also called a “wired AND” because the 0 level (0 V ground, logical bit value 0) is the dominant level: if one ECU writes a 0 on the bus, the logical value on the bus will be a 0 regardless of what other ECUs are writing.

If two different nodes are waiting for another to end transmission, they will probably start transmitting together once the bus is free. To avoid collisions on the bus, bitwise arbitration is used: all the ECUs with a transmission request start simultaneously to send the identifier of their respective CAN message to be transmitted, bitwise from the most significant to the least significant bit. Knowing that a 0 bit is dominant on the bus, each ECU compares the value in the bus with the value it sent (bit monitoring) and if it reads a 0 when it pushed a 1 it means that there is another ECU with higher priority that is willing to transmit - this is why lower IDs have higher priority. Lower priority ECU will then stop transmitting and start listening to the higher priority ECU transmitting.

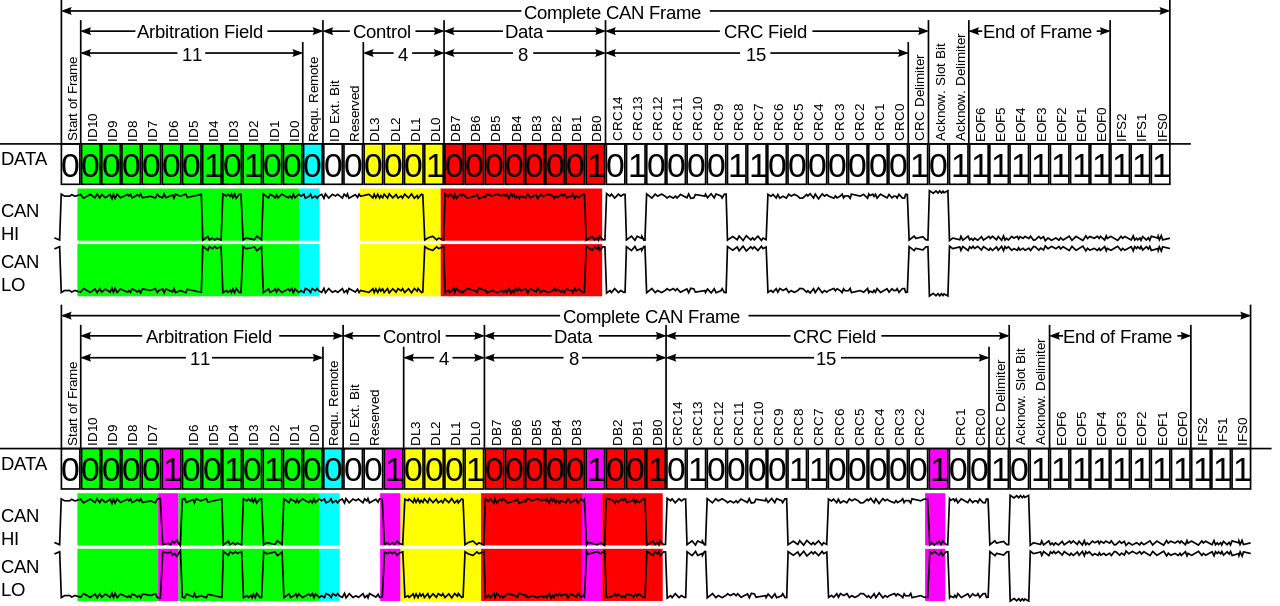
The whole message sent by a node could be subdivided into 8 different blocks:

* Start Of Frame (SOF): a dominant 0 to tell the other ECUs that a message is coming;
* Identifier (ID): gives each message a priority;
* Remote Transmission Request (RTR): a forced transmission from other ECUs;
* Control: informs the length of the data expressed in Bytes (0 to 8 B);
* Data: the actual information;
* Cyclic Redundancy Check (CRC): check used to ensure data integrity (i.e. detects errors);
* Acknowledgment (ACK): a bit that indicates if the CRC process is correct;
* End Of Frame (EOF): marks the end of a CAN message.



At the end of a message, 3 bits of interframe are used as well.

Not to lose synchronization among ECUs in long consecutive bit sequences, bit stuffing is performed by the transmitting node from the beginning of a message up to the CRC (not the CRC delimiter). Stuffing adds an opposite bit after five consecutive equal bits (purple bits in the following figure).



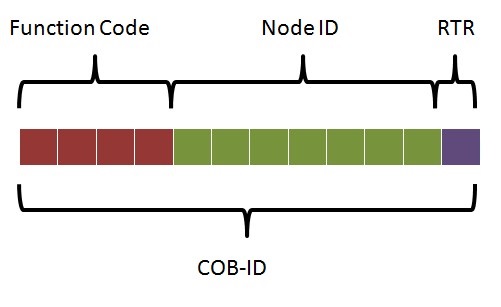
CAN bus’s speed is 1 Mb/s for a 40 m long bus. The speed decreases with longer buses to 40 Kb/s in a 1 Km long bus.

The push for increased vehicle functionality may require changes to the core CAN technology. Increased functionality could for example mean an increase in the data load or a way not to leave precious data unharvested.

The former is allowed by CAN-FD (i.e. Flexible Data-rate) which increases the payload by a factor 8 and allows for a higher data bit rate (i.e. up to 8 Mb/s with a with a payload of 64 B).

The latter is allowed by CANopen, used to optimize standard CAN applications. CANopen is extensively used in industrial robotics, production machinery, medical equipment and speciality vehicles because they all need a kind of memory built-in. The collection of data is very important - even if you don’t really know how to use those data - and CANopen, built on CAN protocol, can, in addition, record data. Configurations and processed data are stored in a table called Object Dictionary.

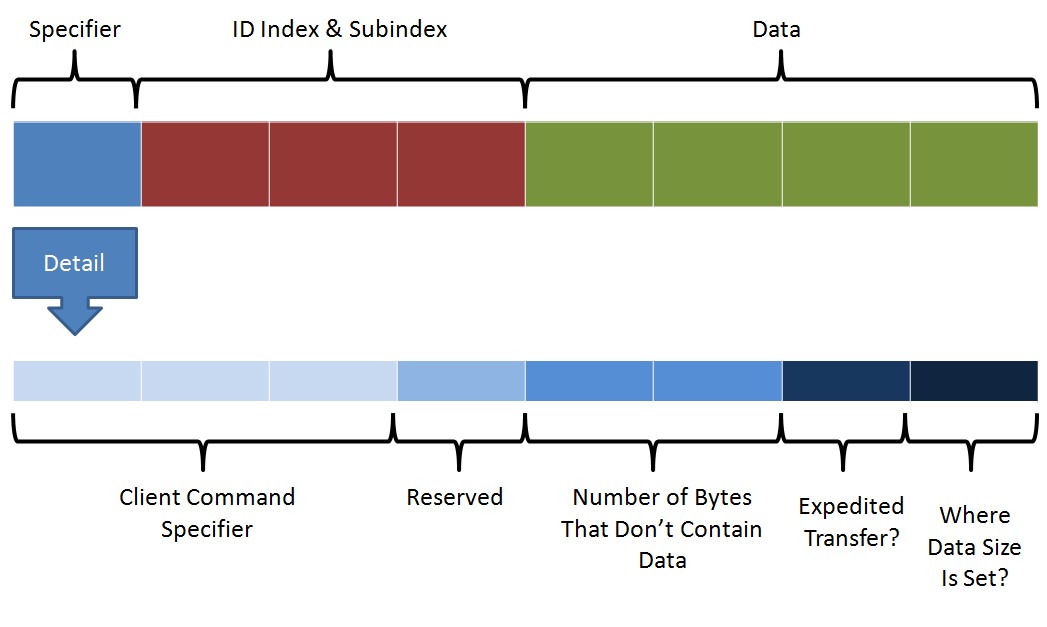
In CANopen the 11-bit CAN ID is split into two parts: a 4-bit function code and a 7-bit CANopen node ID (this limitation restricts the amount of devices on the network to 127). These two blocks followed by a 1-bit RTR form the COB-ID:



All COB-IDs must be unique to prevent conflicts on the bus. Functions of the COB-ID include:

* Service Data Objects (SDO): it handles read/write requests allowing a master (the SDO client) to grab data from a particular node;
* Process Data Objects (PDO): it represents data that could be changing in time such as inputs from sensors;
* SYNC: periodical messages used to send PDOs synchronously;
* Network Management (NMT): used to change the configuration of a slave node between initializing, pre-operational, operational and stopped;
* EMCY: it communicates node’s status and information about errors that may have occurred.

Also, the CAN data section is different in CANopen since the frame is split into three parts: 1 B for the specifier (it indicates what type of message is being transferred, what’s its length and the type of transfer), 3 B for the node index and subindex and 4 B for the actual data transfer.



SDO is the mechanism for which a node will send a request to the network and the node of interest will respond with the data requested. When the SDO client wants to request some information it sends a request using a COB-ID of 600h + the slave node ID. The server will respond using a COB-ID of 580h + its node ID. SDO communication only allows access to one Object Dictionary at a time. If the data that need to be transferred do not fit a single message, a segmented transfer (i.e. opposite of expedited) is selected and data is transferred using multiple messages.

PDO is the mechanism for which data is sent as soon as it is ready. There are two types of PDOs which are transfer PDOs (TPDO, produced by the node) and receive PDOs (RPDO, coming to the node). There are different methods through which a TPDO could start such as time driven events and polling: TPDO is initiated at a fixed time interval (using a pre-configured number of SYNC signals) or when the process data in the node changes. TPDOs and PRDOs’ COB-IDs are multiple in order not to have a lot of overhead for accessing continually changing data. They are:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TPDO** | 180h + node ID | 280h + node ID | 380h + node ID | 480h + node ID |
| **RPDO** | 200h + node ID | 300h + node ID | 400h + node ID | 500h + node ID |

The SYNC protocol provides the basic network synchronization mechanism, since it triggers the synchronization periodically, compensating the indeterminism of time in CAN. The transmission period of SYNC is configurable. The COB-ID used by SYNC is 080h.

HOW WE IMPLEMENTED THE CAN

~ figure CAN\_Model\_v8 ~

A single node is made of three main subblocks: Transmission, Node Logic and Receiver. The reason is that the node has to be able to monitor what is on the bus during the arbitration phase. If the arbitration is won the node will transmit its message, otherwise it will receive another node’s message.

Other parameters (i.e. ReadyToSend, SOF, ArbCmplt, Win, EOF) are used as flags raised to understand when it is time to move from a particular state to another.

~ figure Chart (logic block) ~

All nodes monitor for a StartOfFrame on the bus, which is a 0-logic-value. SOF is followed by the node’s ID and both of them are stuffed by the CANstuffer block. Arbitration between different nodes starts as soon as IDs are pushed on the bus and at the end, when only one node won this phase (ArbComplt and Win flags are raised), a node will either switch to transmission (i.e. when Win equals 1) or to reception (i.e. when Win equals 0).

Transmission will continue with the RTR, ControlBits, Data and CRC, all of which have to be stuffed, followed by CRC delimiter, ACK, ACK delimiter, a 7-bit EOF and a 3-bit IFS. These are the Frame Formatter’s inputs, while it gives two outputs: Frame and FrameLength.

~ figure Frame Formatter ~

Frame and Frame Length, as well as enable (i.e. a flag equal to 1 when either Arbitration or Tx is happening, allowing the Transmitter to transmit), are the inputs of the Transmitter block.

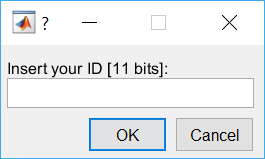
~ figure CanNode ~

On the Receiver side, a node is always receiving (i.e. during Arbitration, Tx and Rx). The Receiver has two main jobs: generate a DeStuffedFrame and send an ACK at a very precise position inside the frame.

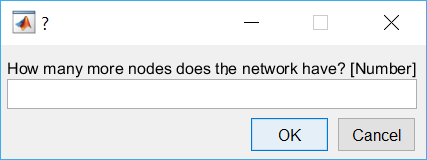
~ figure Receiver ~

In CAN protocol, the ID of each node is buried inside each ECU. Instead, we decided to give the ID as input, through a user interface, in order to simulate as many cases as possible only using two nodes: one simulates the node we want to study and test, the other simulates the traffic of the network by changing its ID every time a transmission is completed – it simulates all the other nodes of the network. This allows us to consider both higher and lower priorities and a customizable number of nodes forming the network.

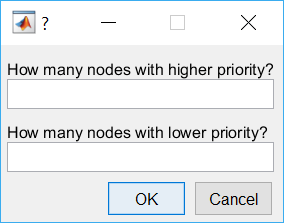
First, the user will enter the ID of the node that as to be tested in terms of transmission delay due to priority and traffic congestion of the network. ID has to be entered with a blank space in between each bit (e.g. ‘0 0 0 1 0 0 1 0 1 1 1’).



The number of additional nodes is asked (e.g. ‘35’). Since CANopen is implemented in our analysis, the number of total nodes is restricted to 127 due to the smaller number of available bits for identification.



More dialog boxes will guide the user through, who is able to insert the other nodes’ IDs manually to study a particular condition or to let the interface generate them randomly. The user is also able to choose how many higher and lower priorities nodes he wants the network to have (e.g. ‘4’ and ‘20’). If the numbers are not consistent with what declared in the beginning, error dialogs will appear.



In the end, the user will be able to choose the bus load through a dialog box as well.

# CAN NETWORK

The creation of the network starts with the design of one single node, which is then replicated numerous times in order to simulate the functioning of hundreds of nodes all connected and communicating with the network.

Each node has the clock (CLK), the data that is on the bus (Bus) and a unique ID as input. The output of each node is connected to a AND port (“wired AND”), which output is what is found on the bus.

The model is structured to analyze:

* Typical Response time
* Delay between the logical and the physical transmission
* Jitter of periodic signals

![Immagine che contiene screenshot

Descrizione generata con affidabilità molto elevata](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEAYABgAAD/4RD6RXhpZgAATU0AKgAAAAgABAE7AAIAAAAQAAAISodpAAQAAAABAAAIWpydAAEAAAAgAAAQ0uocAAcAAAgMAAAAPgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEVtaWxpYW5vIFRvbWFybwAABZADAAIAAAAUAAAQqJAEAAIAAAAUAAAQvJKRAAIAAAADNjQAAJKSAAIAAAADNjQAAOocAAcAAAgMAAAInAAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADIwMTk6MDM6MjUgMTY6MzE6NTcAMjAxOTowMzoyNSAxNjozMTo1NwAAAEUAbQBpAGwAaQBhAG4AbwAgAFQAbwBtAGEAcgBvAAAA/+ELImh0dHA6Ly9ucy5hZG9iZS5jb20veGFwLzEuMC8APD94cGFja2V0IGJlZ2luPSfvu78nIGlkPSdXNU0wTXBDZWhpSHpyZVN6TlRjemtjOWQnPz4NCjx4OnhtcG1ldGEgeG1sbnM6eD0iYWRvYmU6bnM6bWV0YS8iPjxyZGY6UkRGIHhtbG5zOnJkZj0iaHR0cDovL3d3dy53My5vcmcvMTk5OS8wMi8yMi1yZGYtc3ludGF4LW5zIyI+PHJkZjpEZXNjcmlwdGlvbiByZGY6YWJvdXQ9InV1aWQ6ZmFmNWJkZDUtYmEzZC0xMWRhLWFkMzEtZDMzZDc1MTgyZjFiIiB4bWxuczpkYz0iaHR0cDovL3B1cmwub3JnL2RjL2VsZW1lbnRzLzEuMS8iLz48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOnhtcD0iaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLyI+PHhtcDpDcmVhdGVEYXRlPjIwMTktMDMtMjVUMTY6MzE6NTcuNjM3PC94bXA6Q3JlYXRlRGF0ZT48L3JkZjpEZXNjcmlwdGlvbj48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOmRjPSJodHRwOi8vcHVybC5vcmcvZGMvZWxlbWVudHMvMS4xLyI+PGRjOmNyZWF0b3I+PHJkZjpTZXEgeG1sbnM6cmRmPSJodHRwOi8vd3d3LnczLm9yZy8xOTk5LzAyLzIyLXJkZi1zeW50YXgtbnMjIj48cmRmOmxpPkVtaWxpYW5vIFRvbWFybzwvcmRmOmxpPjwvcmRmOlNlcT4NCgkJCTwvZGM6Y3JlYXRvcj48L3JkZjpEZXNjcmlwdGlvbj48L3JkZjpSREY+PC94OnhtcG1ldGE+DQogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgIDw/eHBhY2tldCBlbmQ9J3cnPz7/2wBDAAcFBQYFBAcGBQYIBwcIChELCgkJChUPEAwRGBUaGRgVGBcbHichGx0lHRcYIi4iJSgpKywrGiAvMy8qMicqKyr/2wBDAQcICAoJChQLCxQqHBgcKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKir/wAARCAH/A0gDASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRVS0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJBUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn6Onq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwD6RoorjGsxqniLXDdXmogW94kUSQahPCqL9mhbAVHA+87HOM81UYuTsgOzorkv+Eftf+fzV/8AwcXf/wAco/4R+1/5/NX/APBxd/8AxytPYyFc62iuS/4R+1/5/NX/APBxd/8Axyj/AIR+1/5/NX/8HF3/APHKPYyC51tFcl/wj9r/AM/mr/8Ag4u//jlH/CP2v/P5q/8A4OLv/wCOUexkFzraK5L/AIR+1/5/NX/8HF3/APHKP+Eftf8An81f/wAHF3/8co9jILnW0VyX/CP2v/P5q/8A4OLv/wCOUf8ACP2v/P5q/wD4OLv/AOOUexkFzraK5L/hH7X/AJ/NX/8ABxd//HKP+Eftf+fzV/8AwcXf/wAco9jILnW0VyX/AAj9r/z+av8A+Di7/wDjlH/CP2v/AD+av/4OLv8A+OUexkFzraK5L/hH7X/n81f/AMHF3/8AHKP+Eftf+fzV/wDwcXf/AMco9jILnW0VyX/CP2v/AD+av/4OLv8A+OUf8I/a/wDP5q//AIOLv/45R7GQXOtorkv+Eftf+fzV/wDwcXf/AMco/wCEftf+fzV//Bxd/wDxyj2MgudbRXJf8I/a/wDP5q//AIOLv/45R/wj9r/z+av/AODi7/8AjlHsZBc62iuS/wCEftf+fzV//Bxd/wDxyj/hH7X/AJ/NX/8ABxd//HKPYyC51tFcl/wj9r/z+av/AODi7/8AjlH/AAj9r/z+av8A+Di7/wDjlHsZBc62iuS/4R+1/wCfzV//AAcXf/xyj/hH7X/n81f/AMHF3/8AHKPYyC51tFcl/wAI/a/8/mr/APg4u/8A45R/wj9r/wA/mr/+Di7/APjlHsZBc62iuS/4R+1/5/NX/wDBxd//AByj/hH7X/n81f8A8HF3/wDHKPYyC51tFcl/wj9r/wA/mr/+Di7/APjlH/CP2v8Az+av/wCDi7/+OUexkFzraK5L/hH7X/n81f8A8HF3/wDHKP8AhH7X/n81f/wcXf8A8co9jILnW0VyX/CP2v8Az+av/wCDi7/+OUf8I/a/8/mr/wDg4u//AI5R7GQXOtorkv8AhH7X/n81f/wcXf8A8co/4R+1/wCfzV//AAcXf/xyj2MgudbRXJf8I/a/8/mr/wDg4u//AI5R/wAI/a/8/mr/APg4u/8A45R7GQXOtorkv+Eftf8An81f/wAHF3/8co/4R+1/5/NX/wDBxd//AByj2MgudbRXJf8ACP2v/P5q/wD4OLv/AOOUf8I/a/8AP5q//g4u/wD45R7GQXOtorkv+Eftf+fzV/8AwcXf/wAco/4R+1/5/NX/APBxd/8Axyj2MgudbRXJf8I/a/8AP5q//g4u/wD45R/wj9r/AM/mr/8Ag4u//jlHsZBc62iuS/4R+1/5/NX/APBxd/8Axyj/AIR+1/5/NX/8HF3/APHKPYyC51tFcl/wj9r/AM/mr/8Ag4u//jlH/CP2v/P5q/8A4OLv/wCOUexkFzraK5L/AIR+1/5/NX/8HF3/APHKP+Eftf8An81f/wAHF3/8co9jILnW0VyX/CP2v/P5q/8A4OLv/wCOUf8ACP2v/P5q/wD4OLv/AOOUexkFzraK5L/hH7X/AJ/NX/8ABxd//HKP+Eftf+fzV/8AwcXf/wAco9jILnW0VyX/AAj9r/z+av8A+Di7/wDjlH/CP2v/AD+av/4OLv8A+OUexkFzraK5L/hH7X/n81f/AMHF3/8AHKP+Eftf+fzV/wDwcXf/AMco9jILnW0VyX/CP2v/AD+av/4OLv8A+OUf8I/a/wDP5q//AIOLv/45R7GQXOtorkv+Eftf+fzV/wDwcXf/AMco/wCEftf+fzV//Bxd/wDxyj2MgudbRXJf8I/a/wDP5q//AIOLv/45R/wj9r/z+av/AODi7/8AjlHsZBc62iuS/wCEftf+fzV//Bxd/wDxyj/hH7X/AJ/NX/8ABxd//HKPYyC51tFcl/wj9r/z+av/AODi7/8AjlH/AAj9r/z+av8A+Di7/wDjlHsZBc62iuS/4R+1/wCfzV//AAcXf/xyj/hH7X/n81f/AMHF3/8AHKPYyC51tFcl/wAI/a/8/mr/APg4u/8A45R/wj9r/wA/mr/+Di7/APjlHsZBc62iuS/4R+1/5/NX/wDBxd//AByj/hH7X/n81f8A8HF3/wDHKPYyC51tFcl/wj9r/wA/mr/+Di7/APjlH/CP2v8Az+av/wCDi7/+OUexkFzraK5L/hH7X/n81f8A8HF3/wDHKP8AhH7X/n81f/wcXf8A8co9jILnW0VyX/CP2v8Az+av/wCDi7/+OUf8I/a/8/mr/wDg4u//AI5R7GQXOtorkv8AhH7X/n81f/wcXf8A8co/4R+1/wCfzV//AAcXf/xyj2MgudbRXJf8I/a/8/mr/wDg4u//AI5R/wAI/a/8/mr/APg4u/8A45R7GQXOtorkv+Eftf8An81f/wAHF3/8co/4R+1/5/NX/wDBxd//AByj2MgudbRXJf8ACP2v/P5q/wD4OLv/AOOUf8I/a/8AP5q//g4u/wD45R7GQXOtorkv+Eftf+fzV/8AwcXf/wAco/4R+1/5/NX/APBxd/8Axyj2MgudbRXJf8I/a/8AP5q//g4u/wD45R/wj9r/AM/mr/8Ag4u//jlHsZBc62iuS/4R+1/5/NX/APBxd/8Axyj/AIR+1/5/NX/8HF3/APHKPYyC51tFcl/wj9r/AM/mr/8Ag4u//jlGl2507xna28F1fSQz6fcySR3N7NOCySQBSBIzYIDt09aUqbSuFzraKKKyGFcrY/8AIweI/wDsIJ/6SW9dVXK2P/IweI/+wgn/AKSW9a0viEzRooorqEFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABVGH/AJHzTv8AsGXn/o22q9VGH/kfNO/7Bl5/6NtqzqfCwOnooorkKCuVsf8AkYPEf/YQT/0kt66quVsf+Rg8R/8AYQT/ANJLetaXxCZo0UUV1CCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAqjD/AMj5p3/YMvP/AEbbVeqjD/yPmnf9gy8/9G21Z1PhYHT0UUVyFBXK2P8AyMHiP/sIJ/6SW9dVXK2P/IweI/8AsIJ/6SW9a0viEzRooorqEFFFFABRRRQAVcgtElhV2LZPofeqdcj8Sdb1SG38OeF/D949hfeJL42zXsf37eBPmlZPRsEYP16HBrKo2loCO++wRf3n/MUfYIv7z/mK86v/AIFeG102SXw/LqGneIEQtb6x/aEzTeb2Z8tggnqAPXGK6HW/EF/4L+FNxrHiSW3uNUsLH968APlzXGNq4BA4ZyvbvWHPLuUdJ9gi/vP+Yo+wRf3n/MV498MNOvfhx43tfDusSyOvinTE1ANIc41CMf6Qg9ypDE/7Iql8VINe/wCF66bqXhNt2p6R4fN+lvg/6UizsHi/4EjN+IHfmjnl3A9u+wRf3n/MUfYIv7z/AJivKPib4lsPF/wS03XNJfdbXeo2TBT96NvOAZG9wcg/SvYKOeXcCt9gi/vP+Yo+wRf3n/MV89+Hdb1HwP8AEvxZ4omkMnhi68Sz6bqqAf8AHq2QYrj6ZcqfY9yRj0PXmV/2h/B7IwZW0m9IIOQRxRzy7geg/YIv7z/mKPsEX95/zFcK/wATNW1O81A+DPBtzr+m6bM1vPfC9jtxJIn31hRgTJj14yelc38S/G1zr/gHwrrHhG2a4sNQ1i28wvdeQ6yLJgW7rg5ywYE5wNoODkUc8u4Hr32CL+8/5ij7BF/ef8xXOaB4zudQ8X6j4c1vSU0q9s7G3vV23fnLKkgIfB2rgI4255z146VjeFvjBYeJPA3iLxK9g1lHobSkwNNuaaNYw8bg7RjeDgDB+po55dwO8+wRf3n/ADFH2CL+8/5iuHm+Jt9I2kabo3hebUvEN/p6ajPpyXaxx2UTAY8yZlxnJxjbk/lmfTfiX9p07xEmqaLPpeu+H7R7q50uaZWEiBCyskqjDKcY3Y4Pajnl3A7H7BF/ef8AMUfYIv7z/mK8X8VeP9W8b/B3X7r/AIRK403RrjSPOi1Ga7VhJJuQNGI8BsZLYY43Bc4Ga7bTPHBl1jSPC/h7Tv7VuIbSGTVLjz/Li0+MoMbm2tukPZBg9yQOaOeXcDrp7RIoWdS2R6n3qnWnd/8AHq/4fzrMrem21qSwooorUAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAqjD/yPmnf9gy8/9G21Xqow/wDI+ad/2DLz/wBG21Z1PhYHT0UUVyFBXK2P/IweI/8AsIJ/6SW9dVXK2P8AyMHiP/sIJ/6SW9a0viEzRooorqEFFFFABRRRQAVyHxL0bU5LPw74p0Cze/vvDd8blrOP788DfLKqerYAwPr1PFdfWnaf8eqfj/Osa3wjR5pf/Hjw1NpckXhpNQ1PxBIhW30lbCUSiUjgPldoAPXBPtmsXxPb654zvPBXw+8SXrQ6lNE2r67NYbUaFI8iMLwR984zgjKg17XRXMM8T+Inw7vfDXh6PxhpnijxFrOo+G5kv4YNUu0lj2Kw8zgICPkznnoDWvZapba3+0JomqWD77a98HmeJvVWuAR+PNeq0UAfOPxd0G/8Eag8GlRb/DHiXVLe5aIcLZXqyAtgdlkUE49R2xz9HUUUAeV/DjS7PW/+FlaZqcCz2l34lu4po26MpVQf/wBfauQ8IWut6D8fdB8J68WuI9EsLuPTr1utzaOMx591wVP0x2yfoOigD5q8OWmg+C7G90Hxz4m8XaDqlndTeVb2N7cRw3sZYskkKoCp3Z57561tazpqaF8C9Cvl0nUtMtYfEFvqdzb3spuJ4YvNJZ3IUEZGGxjI3c8173RQB4f8X9ZNrBonjnwqWuotY0650USxqVLi4QtAcHBGHUnmsfxX4Ym0LxvpngTToidP8WWWnW1y68cWbYlP4xKufrzX0RRQB5TqOp2/w8+M+qa54jSW30PXNPgii1BYWeK3liyPKfaDtyDkHp+uMm4uP+Ev13xz4z0yCdNDi8KTaXbXM0TRi8fDyM6BgCVH3c4r2yigDx7VgB+yDHgY/wCKdtz/AOOJVTw/ZJ8G9f0aaOWZ/CviiGGK6lncubW/2fLIzHosnIPYEZ4AAr2yigCG7/49X/D+dZlad3/x6v8Ah/Osyumj8ImFFFFbCCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACqMP/I+ad/2DLz/ANG21Xqow/8AI+ad/wBgy8/9G21Z1PhYHT0UUVyFBXK2P/IweI/+wgn/AKSW9dVXK2P/ACMHiP8A7CCf+klvWtL4hM0aKKK6hBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVRh/5HzTv+wZef+jbar1UYf8AkfNO/wCwZef+jbas6nwsDp6KKK5CgrlbH/kYPEf/AGEE/wDSS3rqq5Wx/wCRg8R/9hBP/SS3rWl8QmaNFFFdQgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKow/8j5p3/YMvP/RttV6qMP8AyPmnf9gy8/8ARttWdT4WB09FFFchQVytj/yMHiP/ALCCf+klvXVVytj/AMjB4j/7CCf+klvWtL4hM0aKKK6hBRRRQAUUUUAFc9b+Jr6/E0ml+EtavbeK5mthcRy2arI0UrROQHuFbG5G6gV0NUfh7/yKs3/YX1T/ANL56yqScVoCKX9s65/0I2u/+BFh/wDJNH9s65/0I2u/+BFh/wDJNdpRWXtZDscTJrmtxxs7eBdfIUEnbNYsfwAucn6Cr+laxZazYQ3mnzebDMgdDjBx6Edj2I7GunrzbxFZP4J8TDWLQbdE1ScC7QfdtbljgP7JIeD6Pg/xnFRqO+oWOwoqK3nW4hWRDkEVLXQIKKKKACiiigAooooAKKKKAOZ8U+KX8OyplA8bCMALC8rs7vsVVVMkksVAABOTWV/wnep/9ADV/wDwn77/AON0eO/+Q7ov/YT0z/0ujr1Stq1ZUVFKKd1fX5+ZwU6cqsptzas7aW7LyPK/+E71P/oAav8A+E/ff/G6P+E71P8A6AGr/wDhP33/AMbr1SisPrj/AJI/j/ma/Vn/AM/Jfh/keV/8J3qf/QA1f/wn77/43R/wnep/9ADV/wDwn77/AON16pRR9cf8kfx/zD6s/wDn5L8P8jyv/hO9T/6AGr/+E/ff/G6P+E71P/oAav8A+E/ff/G69Uoo+uP+SP4/5h9Wf/PyX4f5Hlf/AAnep/8AQA1f/wAJ++/+N0f8J3qf/QA1f/wn77/43XqlFH1x/wAkfx/zD6s/+fkvw/yPK/8AhO9T/wCgBq//AIT99/8AG6P+E71P/oAav/4T99/8br1Sij64/wCSP4/5h9Wf/PyX4f5HA+FvFJ8RmOWPyWtprcTxOiMpYHGDgnjg+ldLXk3wZlZtN0xT0GmRj/x1K9ZrpxCiprlVtETg5SlTfM76sKKKK5zsCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAOb8VabY6vrfhKx1Wzt760l1d/Mt7mJZI3xY3RGVYEHBAP1FbP/CuPBH/AEJvh/8A8FcH/wATWfrP/I1eDv8AsLy/+kF3XaVy1fiGjm/+FceCP+hN8P8A/grg/wDiaP8AhXHgj/oTfD//AIK4P/ia6SishnN/8K48Ef8AQm+H/wDwVwf/ABNMl+G3g9l/0Tw/ZabL/DPpsYtJVPqHi2munooA8++16j4U1iHStduGvbO6JFhqLqA0hAyYpQAAJAASCMBgDwCDXTI4kQMpyDVjxFocHiPQbnTLljGJVzHMv3oZAcpIvurAH8K4/wAGaxPd2j2mpKI761kaC4jB4WRCVbHqMjIPcEGumnO+jEzqqKKK2EFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVRh/wCR807/ALBl5/6NtqvVRh/5HzTv+wZef+jbas6nwsDp6KKK5CgrlbH/AJGDxH/2EE/9JLeuqrlbH/kYPEf/AGEE/wDSS3rWl8QmaNFFFdQgooooAKKKKACvPLW51SDSf+JLJcfao08TXFvDE7YkmS/whKA4kI3tgMCMmvQ6xfAml2lzpMWoyo/2qz1XWEhdZWUBXv5twIBAYHYvDA8gEVhW2Q0Y2qaxo1lpMs/h7xPfXIT7K91I2ovPFEv2uEFndifKYqXBQFQV3ZXjibxN4h1G/wBetz4Jv47+0OmzvctZXIkKqs0O8xKMq0wViF3evvg+jUVzjOT8J3NvPrupf2Zf3F7pzWVlNbNNdSTjDCQbgXJIJCrn1I55rV8VXWk2fhXUJfEKLLpxhKTxFcmUN8oQDuzEgADnJFXLbS7S01G7voUcXN5sEztKzZCA7QASQoGTwMda8f8AF2vSeO/FCWOnsW0iwkIjKni4l5DS+4HKr/wJuQVIaV3YCfwXqXihNKt7azsrC/VY+ZL3UXhdeThTthcMQu0FuMnJwK6r7b4z/wCgDoX/AIO5v/kSrWgaSmm2KKFw2K167EnYk577b4z/AOgDoX/g7m/+RKPtvjP/AKAOhf8Ag7m/+RK6GinYDnvtvjP/AKAOhf8Ag7m/+RKPtvjP/oA6F/4O5v8A5EroaKLAc99t8Z/9AHQv/B3N/wDIlH23xn/0AdC/8Hc3/wAiV0NFFgOe+2+M/wDoA6F/4O5v/kSsTxrd+L28A+IFl0TR4ozplyGeDWJnkUeU2Sq/ZhlvQZGT3HWu8oosB80+D/8AhYv2jQf+Et8z+zf7U03yv7Rz9p2/bYtu3+LGf7/bpXu3iCztm8SajLreiXmreZbQjSzb27v5bDduVJFGIH3YO8leCvPy8Ynjv/kO6L/2E9M/9Lo69UqMTHl5Fe+n6s58PK7np9r9EebSG9uvCUujafbX1vqkeveeHm0yfy0T+1N4kDFQrgKwfhumT0BI6nwXbyWegm1vLWSG/hndLyV1P+lzcZnDH7wcYI/u/d424HQUVyHUFFFFABRRRQAUUUUAcH4g1LxVFqWpx6P9tMy+aLWBbJWg8oWhZJRKUwZPPwu0t042Y+apdOvdU1P4gR3kg1SHS1NzDbJLZNEjKYbRhvDIGA3ifDNjlcA9j29FAHzt8KLjXorPTxpOm6dcp/Z0e03OoSQEjYmeFhfv716f9t8Z/wDQB0L/AMHc3/yJXB/Bf/kH6b/2DY//AEFa9dr18SnzrXojz8F/DfqznvtvjP8A6AOhf+Dub/5Eo+2+M/8AoA6F/wCDub/5EroaK5rHcc99t8Z/9AHQv/B3N/8AIlH23xn/ANAHQv8Awdzf/IldDRRYDnvtvjP/AKAOhf8Ag7m/+RKPtvjP/oA6F/4O5v8A5EroaKLAc99t8Z/9AHQv/B3N/wDIlH23xn/0AdC/8Hc3/wAiV0NFFgOe+2+M/wDoA6F/4O5v/kSj7b4z/wCgDoX/AIO5v/kSuhoosBz323xn/wBAHQv/AAdzf/IlH23xn/0AdC/8Hc3/AMiV0NFFgOe+2+M/+gDoX/g7m/8AkSj7b4z/AOgDoX/g7m/+RK6GiiwHPfbfGf8A0AdC/wDB3N/8iUfbfGf/AEAdC/8AB3N/8iV0NFFgOe+2+M/+gDoX/g7m/wDkSj7b4z/6AOhf+Dub/wCRK6GiiwHPfbfGf/QB0L/wdzf/ACJR9t8Z/wDQB0L/AMHc3/yJXQ0UWA577b4z/wCgDoX/AIO5v/kSj7b4z/6AOhf+Dub/AORK6GiiwHPfbfGf/QB0L/wdzf8AyJR9t8Z/9AHQv/B3N/8AIldDRRYDnvtvjP8A6AOhf+Dub/5Eo+2+M/8AoA6F/wCDub/5EroaKLAc99t8Z/8AQB0L/wAHc3/yJR9t8Z/9AHQv/B3N/wDIldDRRYDnvtvjP/oA6F/4O5v/AJEo+2+M/wDoA6F/4O5v/kSuhoosBz323xn/ANAHQv8Awdzf/IlH23xn/wBAHQv/AAdzf/IldDRRYDnvtvjP/oA6F/4O5v8A5Eo+2+M/+gDoX/g7m/8AkSuhoosBz323xn/0AdC/8Hc3/wAiUfbfGf8A0AdC/wDB3N/8iV0NFFgOe+2+M/8AoA6F/wCDub/5ErjfizdeM5PhjqajSLC3Yvb7JdO1WaadW+0R7difZ0yc4H3h689K9TopNXVgPG/h3/wsf+2PCH/CwPK+yf2nJ9m8/wD4/N32C6xvxxtxn73zZxXvtcXrP/I1eDv+wvL/AOkF3XaVzVFZ2GgooorMYUUUUAFeZ+JIv7A+J8d1GNsGs24kOP8AntFtRz+KNF/3ya9Mrhviva/8U3Zaoud+m38TkjqUkPkkfTMgJ/3aqLswN6NxJGrDoRmnVm6Fc/adLjbOSBitKu0kKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAqjD/yPmnf9gy8/wDRttV6qMP/ACPmnf8AYMvP/RttWdT4WB09FFFchQVytj/yMHiP/sIJ/wCklvXVVytj/wAjB4j/AOwgn/pJb1rS+ITNGiiiuoQUUUUAFFFFABXE6r4IPmTvo9/rNkJppJ2jtdYuo4w8jl3IRZAq5ZicAAZNdtXFeHPD3guTR/tfiHw7pV5e6jr+pW6TTaWtxLNJ9suCATsJwEQ8ngBeorKo0lqgRkf8IRrn/QweIv8Awd3f/wAco/4QjXP+hg8Rf+Du7/8AjldNoujfC/xC8K6X4U0djcW/2qDz/D4g86L5fnQyRLvHzryM43D1Fbf/AArjwR/0Jvh//wAFcH/xNY80ewzzx/AmsyxtHLrviF0cFWVtauyGB6gjzK6Xw54Th0gL+7VcDgAYArRsfBXw81ZLkWnhHQ2+zzNbzBtHjiZHABI+ZAejAgjjng1k3iX/AMP5wbqWa+8NMcR3UjF5NP8ARJT1aP0kPI6N/eNxnG+wHXDiiooLiO5iWSJgysMgg1LXQIKKKKACiiigAooooAKKKgvr2303Trm+vpRDbWsTTTSEEhEUEseOeADQBxXjz/kO6L/2E9M/9Lo69T3V5F4t1Ky1a90K90u7hvLaTUdMKTQSB1b/AE6PuK9AuvFWlWWrf2dczTJcAxhiLWVo0MhwgaULsXJ4GSKWM3h/h/VnLht6n+J/kjbfLDAbHNRsHDR4ncfNyABzweOR/nFG6sfVfE+naTqVrZXgvfPnbEQh0+eZXO1jgMiEZwCcZyAM1wnYbDybGwXf8AKXzP8Abk/74/8ArVR1TUrXTLcXF7O8aFhGqxozu7HoqooJYn0APSm2Wq2+pWi3NjPJLGXKENGUZGBwVZWUFWB7EA0AXmfIA3ycsP4cd/XFTbF9W/76NVdxyuS/3h1A9aZpmsWOs2oudMuFniKo24AjAdFkXIPIyrqcH1oAtBmV3CjIz/Ex9KXfJ/dX/vr/AOtWLJ4l08a2+mJM32kyeUCYZBH5mzfs8zbs3bedu7PtWqjHb82c5PXH9KAJVkk3fMAB7f5/pT91Upb+CC8t7WWTbNcbvKXaTu2jJ56Dj1qfdQB4j8F/+Qfpv/YNj/8AQVr12vIvgv8A8g/Tf+wbH/6Cteu17GJ+NeiPPwP8N+rCiiiuY7gooooAKKztE1/SfEenrfaFqEF9bN/HC+dp9COqn2ODVC41e+1rUJdJ8JCN5YW2XmpyLugsz3UD/lpL/sDgfxEcAy5JK4FnV9eFjdR6dp1s2o6xcLuhsomwQvTzJG6Rxg9WP0AJ4pYPCGuTwiXUvGWpQXL/ADPFp9vaLBGf7qebC7kD1ZiT146Vo2Ol6R4I0K9vZJJCqI1zqF/ODJNPtXJdyBk4A4UDAHCgdKWPxjpMusR6Wq6kLyQBljfSrpRtJA3FjHgLkgEk4HeuaVRt6DsUf+EM1D/oePEH/fmw/wDkWj/hDNQ/6HjxB/35sP8A5Frf1PVrPSII5b+RlEsgjiSOJpHkfBO1UQFmOATgA8AnoKXTdUs9XtPtNhKZIw7RsGRkZGU4KsrAMpHoQDU80u4zn/8AhDNQ/wCh48Qf9+bD/wCRaP8AhDNQ/wCh48Qf9+bD/wCRa6uqMOs6fPqMthFcqbqKRo3iIIO5URzjI5wsqHI4+ajml3Awv+EM1D/oePEH/fmw/wDkWj/hDNQ/6HjxB/35sP8A5FrX1zxFp/h2CObVTdLFIdoeCymnAOQAGMaNtyWAGcZ7Vbiv4ZtN+3IlwIdhfa9tIsmB/wBMyu/PHTGT2o5pdwOB0XVbyz8T67od/qc+pfYb5I4J7lIlk2NbQyYPloin5pG5x0rrq8u0++ttU+Kev6hYyeba3c9rPDJtK70axtmU4OCMgjg816jXTTbcSWFFFFaAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAGJrP/I1eDv+wvL/AOkF3XaVxes/8jV4O/7C8v8A6QXddpXLV+IaCiiishhRRRQAVheN7JtR8B65ax/617GUxcdHCEqfwYCt2kdVdGRxlWGCD3FAHnngO8F1o6EHIZAwrq685+FJaDR7a1kYs8MQiYnuVGD/ACr0au2OqJCiiiqAKKKKACiiigAooooAKKydZ1ieyurLTtKtI7/Vb5j5NvJMYkVF5eR3CsVVcgZ2nJZR3pu3xv8A9ALw/wD+Dyf/AORKhzinZgbFFY+3xv8A9ALw/wD+Dyf/AORKNvjf/oBeH/8AweT/APyJS9pHuFjYornDr2sad4js9K8R6Xp9qL22nnhlstRe45iaJSrBoY8Z84EEE9DXQowdAw6GrTT2AdRRRTAKow/8j5p3/YMvP/RttV6qMP8AyPmnf9gy8/8ARttWdT4WB09FFFchQVytj/yMHiP/ALCCf+klvXVVytj/AMjB4j/7CCf+klvWtL4hM0aKKK6hBRRRQAUUUUAFcjoayf2RoEyQTSxw+LdUaUwwtJ5ama/QM20HC7mUZPAzzXXVw97oviLSBcR+HPFGp2lvLczXK24gtJFRpZWlcAtCWxudupNZVItrQEM0v4ba5baHbWcz2kE1rop08v8A2ncXazv+6IIWRB5CZjyQmeoGDtFXNX8C67q9xd30i6XHd3F3JcRr55kSDMFvGp+eEhzmAk4CNgja65NYv/Fw/wDob9Q/8ArP/wCMUf8AFw/+hv1D/wAArP8A+MVh7ORR6H4WWTz9elkhmiWbVHaMzQtHvURRruAYAkZU4PQ4rC8e+P4tHEmi6OkV5q0q7ZA674rVWHVx/ExB4Tv1OARnmGX4hspU+L9RwRg4s7MH8/Iq14d8DLbTedchmYksS5LEknJJJ5JJ5JPJJyapU3fUVyPwl4bvo9Ktrez1/VdLghj2rFAtu4PJOf3sTkdcYGFAAAAFdH/wjWq/9Dtrv/fmx/8Akat2GBIIwkYwBUldCVkI57/hGtV/6HbXf+/Nj/8AI1H/AAjWq/8AQ7a7/wB+bH/5GroaKdgOe/4RrVf+h213/vzY/wDyNR/wjWq/9Dtrv/fmx/8AkauhoosBz3/CNar/ANDtrv8A35sf/kaj/hGtV/6HbXf+/Nj/API1dDRRYDnv+Ea1X/odtd/782P/AMjVl+JvB+t6h4S1eztvFms3c1xYzRR280dkqTM0ZARiLcEAk4JBB56jrXa0UWA+cND+E974B1LR7nVNYeW5k1PTne1tWIg5vIhhs/fI69Bg+teya74T1PUfFE99amFYZmtGSVtQmQxNC+4k24Uxy9sbj19KzPiB/wAhjSP+wjpv/pdHXom6oxUIw5Eu36s58PJyc7/zfojzy48G6zeWXlTw2RihiEcIM/LgTNIGcNGyA4YfKVkGR9COsi8PXoi8M+fcRNJpRzclBtDH7O8fyDH95h1xx+VakZzCoPI2ijZH/cX8q5DqOKtPBmraVqBvoPsM1xHfC/t4jK6ogZZ4zb7tpIjCzFlIH32b5QMCnaj4V1LxHJHfazBY+eY0CxD5hAPtCSFQxHJ2KRuwMkkYANdou1fugD6Co0jZIlQzO+1cbnxk+/GOf0oA4G08I31v4pdFsrWOCFreaK9ZmH2eMX9zN5cXy4J8tkRhlQoI+8MA7PhSxi8D2skGoiKR7mK2/fWEEsxZoraOJg22PgbkJUk87zwMHPV7qN1AHG3fh/VtT12e/wBLuYdPhumLm9hnmjlZDFtCyWxGwuOPnJDAAcDFZlj8Ob1Ikh1A2EkQSX9wcOgcwiNXAWJACT1ypPAOSa9F3Uwt+9X/AHT/AEoA8+ufh/rFyzlprEXDRyh9QEjefPvVMRsDGRtG0pklvl/h6itjwx4Nk0nVor7UFtpGhikWBVKv9nZ3ydmI0UAjPRV+8Rjues3UbqAPBvhdpt9caZZzWWtapaldMRlgsktSWIRflUzRsMn3PU9QK7XS5bzULeWe78WeJNJiSWWJWvxpS+Y0TOsoXZE33fLYknHAzyKwPgv/AMg/Tf8AsGx/+grXaaj4L/tHQRpb34SMX89/v+zhjveWSVBycYVpBn+8FIOAxFetil76t2RwYJ3pv1ZOvhzU3UMnjfXGVhkEQ2BBH/gNS/8ACNar/wBDtrv/AH5sf/kat9AwjUSEM+BuKjAJ9hzinVz2O057/hGtV/6HbXf+/Nj/API1H/CNar/0O2u/9+bH/wCRq6GiiwHg3w5+AOp6NN/aPiHXrqwmdCrWek3BjYqR915R/JfwNem+H9fXwKtv4d15Y4tJixFY6okYRFHZJwMBW/6aDCt32nr1lVb/AE+31C2eG5jV0cFWDDII9DWbpq1kFybxvDLd/D/X4LSKSeaXTZ1jjiQuzsY2wFA5JPoKJdNmu/EI1iJIpLeTS2t1guAyMzM4YBlK/KMDByMj0rj7O61X4eSCJI5tT8OA/wDHuuXnsR6xd3Qf88+oH3f7teh6bqdlrGnQ3+l3Md1azrujlibIYf49iOoNc8ouLsyjh9F8C6xoKWlxBJYXd7Z3PnIZZZEEqND5bQlirFRHwEPzfKMEZJYz6/4M1bxNBNNqn9mG7OmX9tbKpYrazTGLyWVyuSV8skyYDAngV3dFSB5pqfgq7TxY8dhpGm3Njcx3skEcwZILUPFZRj7qEK5eOVgB1BY5BzjQs/CVzoniGHW74w3628sm6by3kuNr21vFvCqjEtuhbIH8L5z1Fd3RQBz+sJ/wlWg3FlpwmikEsDk3ltLAMLKrnG9BnhD0zzjOM1QvvDl0njweJiLc2cCAPaqJHaTEbD7RtUHMy7tigA5QnnJUL19FAHgPgi3mtPEs9vdRSQTwwadHJFIpVkYadagqQeQQeMV7LXm3/NZfFH/X7b/+kdvXpNddP4SWFFFFaAFFFFABRRWFrWtanaa5YaVo2m2l5Pd21xcs13etbqixNEuAVikJJMw7DoaQG7RXPfbfGf8A0AdC/wDB3N/8iUfbfGf/AEAdC/8AB3N/8iUXA6Giue+2+M/+gDoX/g7m/wDkSj7b4z/6AOhf+Dub/wCRKLgdDRXPfbfGf/QB0L/wdzf/ACJR9t8Z/wDQB0L/AMHc3/yJRcDoaK577b4z/wCgDoX/AIO5v/kSj7b4z/6AOhf+Dub/AORKLgdDRXPfbfGf/QB0L/wdzf8AyJR9t8Z/9AHQv/B3N/8AIlFwOhornvtvjP8A6AOhf+Dub/5Eo+2+M/8AoA6F/wCDub/5EouB0NFc99t8Z/8AQB0L/wAHc3/yJR9t8Z/9AHQv/B3N/wDIlFwOhornvtvjP/oA6F/4O5v/AJErjfizdeM5PhjqajSLC3Yvb7JdO1WaadW+0R7difZ0yc4H3h689KTlZXA7jWf+Rq8Hf9heX/0gu67SvAvh3/wsf+2PCH/CwPK+yf2nJ9m8/wD4/N32C6xvxxtxn73zZxXvtc1R3dxoKKKKzGFFFFABRRRQB494Cby9Y1CEdItRuoh/wGd1/pXpFeR+GZ9ai8VawNHsLC6Q6xfHN1fPAQftcvGFifjGOf0ru/tvjP8A6AOhf+Dub/5Errg/dJOhornvtvjP/oA6F/4O5v8A5Eo+2+M/+gDoX/g7m/8AkSruB0NFc99t8Z/9AHQv/B3N/wDIlUbjxRrtpqMen3dp4WgvZQpjtpfEbrI+4kDCm1yckED6UXQHX0Vyw1vxOwjK6X4bIklaFCPEEvzSLu3IP9F5YbGyOo2n0NMsPEXiLVUd9LsPDF6sbbXa38QySBT6HbanBougOsqtqOoW2labcX9/KIra3jMkjnsB/M+3evIvjRceOpfDGkrY6ZDaXf8Aa0Zt30bUZricv5UvG3yEwMZyc9unORd0J/G1vY6FefFj7G2lW14rTLFgSq2MQyz7fkKI+CQOhIY/dNQ526AeleDtIuVFx4g1qIx6rqYX9y3Js7ccxwfUZLN6sx7AV1FFeT+JtLS88SXk/wDZ8N0I/E0RuXk0l9QVYxpBC74o/mZQ7gDnAZga5W7u5R6xRXldjf8AiPw/4Qmt7OyvwTY6gbAW+mOR9o85mhIiKloV2t8sb8BQBzin+IbnWbyx8T2msxXFzYJb3EsDTWuyKEpKPKAzEMnachlkkztJOw8UgD4oyNH478KFGIJtL8HH+/a11+nknT4Seu2uO+Kn/I9eE/8Ar1v/AP0O1rsdO/5B0P8Au100thMs0UUVsIKow/8AI+ad/wBgy8/9G21Xqow/8j5p3/YMvP8A0bbVnU+FgdPRRRXIUFcrY/8AIweI/wDsIJ/6SW9dVXK2P/IweI/+wgn/AKSW9a0viEzRooorqEFFFFABRRRQAVhXHjnwnaXUttd+KNFgnhcxyxSahErIwOCpBbIIPGDW7VH4e/8AIqzf9hfVP/S+es5y5QOG+IXjfwheeDZIYvEuhXP+m2TvH9ojuQUW7iZiYlbLqFBJUdQDXN6F8R9B0Jrr7N4g0tdNmuZ2QWcawoXMEXl7LdiXiXcr5J+UsSSecV7V4j8Q/wDCPrZH7N9o+1Syx/6zbt2W8s2ehznydv8AwLPbBqaP4mv7u90631jS4LL+07Vrm1e2vDOp2hSUfMaFWw4IxkHB5HGcXUd7jseZ6N8U7F/EljFqPizTntpoY/NU3EMaRN9nDMWO3B/eAjiQEE7dmBur1cMD0IP0qr8R/wDklniv/sC3n/oh6yPCWovqFlvfP3c81pTm5bgzoqKKK2EFFFFABRRRQAUUUUAFFFZ+vaqNC8N6lqzxGZbC0luTEG2lwiFsZ7ZxigDkfiF/yFtI/wCwjpv/AKXR1326vEr34l+HfHd1pD6RctFc/wBoacGtLkbJARexk47Nx3BNei6p4ourTXU0mw0+G4uJHhRGmuTEnzpO5yQjEYEB7HO7tioxclLkt/L+rObDJp1L/wA36I6RVKqAJGwBjt/hS/N/z0b9P8KzNG1VtUtJHmg+z3EEzwTxB94V1OOGwMgjBBwOCMgHitDdXGdY/wCb/no36f4UfN/z0b9P8KZuo3UAP+b/AJ6N+n+FHzf89G/T/CmbqN1AD/m/56N+n+FABDhi7HAxg4pm6sLxN4nHh42IYWKi7laMy3979mijwhbltrcnGMYoA6PdRurjo/FmrXK6S9no9m0epSPErS6g6YZBIxYYhO5CI8q3GQw4FWdH8Vvquu3Gnta28PkmTKC7Bnj2PtBkhKgqG6ggsPfpQBxXwX/5B+m/9g2P/wBBWvXa8i+C/wDyD9N/7Bsf/oK167XsYn416I8/A/w36sKKKK5juCiiigAoorP17VRoXhvUtWeIzLYWktyYg20uEQtjPbOMUAXZYkmQq4BBrzvxd4B8Kww3Gr6np1guWy7taq0krk4CgYyzE4AAySas6D8afBevaTJeJqX2SaFN0llcrtmz0ARRnzCSQAFyeRXUaBoF5qWoxeIfFEPl3EeTp+mkhlsVIxvbHDTEdT0UHavctlOUbAcn4F+C+iQytrXifw/p5nmXbb6ZJbRvHbIe8gxh5D36heg7k9v/AMK48Ef9Cb4f/wDBXB/8TW9dz/ZbKe427/KjZ9ucZwM4rgJ/ilLbxyGaw0qKaOyhuxaSawVnuPMQuI4U8nMjY4HTJOPeuUo6H/hXHgj/AKE3w/8A+CuD/wCJo/4Vx4I/6E3w/wD+CuD/AOJqP/hI9bHiabTTodoYIbYXfmJfuZWiLMoAj8nG/wCX7u7GTjd3pfCfi9vE0sqNb2cXlxLIwtr4TPCT/wAs5YyiPG/tgjrz6gD/APhXHgj/AKE3w/8A+CuD/wCJo/4Vx4I/6E3w/wD+CuD/AOJqXxLreq6LJZf2fplnexXVxHbbp75oGV3bA4ET5HvnPtVfU/GtrYadqCxLFcaxp9rJcT6eHkUL5aK7/vDHwuGG1yoDZGO+ADz3TtPsNI+KXiWw0qyt7G1ivofLt7aJY40zaW5OFUADJJP1NeoV5nE/m/F/xK+Mbru3OPTNlb16ZXXT+ElhRRRWgBRRRQAVz17/AMlM0X/sEah/6Os66Guevf8Akpmi/wDYI1D/ANHWdJgdDRRRTAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAMTWf+Rq8Hf9heX/0gu67SuL1n/kavB3/YXl/9ILuu0rlq/ENBRRRWQwooooAKKKZNKkEDzSnakalmPoAMmgDx7wF+81m9mHSa/uJf++pnb+tel15l8Kkkk021lnXEjQqzj0Yrk/rXptdkPhJCiiirAK4PxToutXviS8k063vXt7m1tETy3thbu8UsrkTbz5oUbl/1fJBPU13lFJq4HDHRdWlMOnNpW6G11K+vftEs6CGdJluNiDaxcHNwoOVAG1sE8Z0PCNhqVpeXTXttdQW32eGKH7e0DzgqX+QPFndGAwxv+bJb1rqaKLAFQX1nDqFlLa3UaywyoUdGGQwIwQRU9FMDE8D6nNYXEvhLVpWe4sY/MsJ5Dk3NrnAye7xkhW9Rsb+I11sVjaQXk93Bawx3Nzt8+ZIwHl2jC7mHLYHAz0rkvEWhf2qttc2t1NY39nJ5ttd223zIjgg43KykEEggggg/SuWuI/iBHMVi8YaiV7E2Vn/8YrmlTd9B3PXagvLG01G2NvqFrDdQMQTFPGHUkHIODxwa8k/4uH/0N+of+AVn/wDGKP8Ai4f/AEN+of8AgFZ//GKj2chl/wCKn/I9eE/+vW//APQ7Wux07/kHQ/7tedxeHvEGq65aX/iTWLvU3s45I4BLDDGEEhQt/q41yT5a9c9K9HtY/KtY0/ujFb000tSWTUUUVqAVRh/5HzTv+wZef+jbar1UYf8AkfNO/wCwZef+jbas6nwsDp6KKK5CgrlbH/kYPEf/AGEE/wDSS3rqq5Wx/wCRg8R/9hBP/SS3rWl8QmaNFFFdQgooooAKKKKACuV8G+NfCukaJdWOq+JdHsbuLV9T8y3ub+KORM305GVZgRkEH6GuqrI1XQIdU3eZjn1rOceZAV9a8U/D7XVtRd+NtFT7LJJInlatbjJeGSE5yT/DKx+oH0NXSNc8B6XdW1xP8RdN1KSztzbWv2vVLQCFDtzgRhASdi8nJ44xk5xdc0LSdAjje8SRw6TOPKQHiONpG6kdlOPemabodjf30dncafdadcTQG4hS6EZ86MFQxUxuw4LrkEg/MKx9kx3Nvx94+8H3nw28S2tn4s0Oe4m0m6jiii1KFnkYwsAqgNkkk4AFYfg/wZ4av7V5tR8N6VczP8zST2MbsxJ5JJXk1tL4DtFYHKcHPSuh0/T00+LZHjp2rSFPleoXMr/hX3gz/oUdC/8ABbD/APE0f8K+8Gf9CjoX/gth/wDia6GitbIRz3/CvvBn/Qo6F/4LYf8A4mj/AIV94M/6FHQv/BbD/wDE10NFFkBz3/CvvBn/AEKOhf8Agth/+Jo/4V94M/6FHQv/AAWw/wDxNdDRRZAc9/wr7wZ/0KOhf+C2H/4mj/hX3gz/AKFHQv8AwWw//E10NFFkBz3/AAr7wZ/0KOhf+C2H/wCJqnq3wy8I6lot7Y2/hzRrKW5t5IUuodNiDwsykB1wByCcjkdK62iiyA8Sv/hp4d8B3GkJpFs0tz/aGnFru5O+Qk3sYOOy8dgBXo+peGodQ1NdRS+u7O6Vo2SSDyztKLKo4dGHInfOR6YxWN8Robma5tjZJFJPBJa3KpLIUV/KuBIVLAMRkIRnB61lyfEPxBG2D4ZsD9NXf/5HrWvhqk1B046W/Vnn08TTpynGpKzv+iO70vT4tKszBFJJMWkaWSaYgvI7HLMcADqegAAGAAAKubq82/4WPr//AELFj/4Nn/8Akej/AIWPr/8A0LFj/wCDZ/8A5Hrn+p4j+Rm/13D/AM6PSd1G6vNv+Fj6/wD9CxY/+DZ//kej/hY+v/8AQsWP/g2f/wCR6PqeI/kYfXcP/Oj0ndRurzb/AIWPr/8A0LFj/wCDZ/8A5Ho/4WPr/wD0LFj/AODZ/wD5Ho+p4j+Rh9dw/wDOj0ndVS70+C9vLS4n3FrRnZFGNrbkKkMCORgmuB/4WPr/AP0LFj/4Nn/+R6P+Fj6//wBCxY/+DZ//AJHo+p4j+Rh9dw/86OztPD9rZxadFHNcMmmyvJbK7A7QyuoTp91VfA74AyTTLTw7Fa6pHePfXlyIPM+zQzsjLBvPzbSFDn0+ZmwK4/8A4WPr/wD0LFj/AODZ/wD5Ho/4WPr/AP0LFj/4Nn/+R6PqeI/kYfXcP/OjE+FHhnQdXs9Pk1bRNOvnbToyzXNpHISQiAcsD24r0/8A4V94M/6FHQv/AAWw/wDxNcd8J9Om01bW1uCpkt7FY3K9CQFBx7V6lXbiopTSt0RlgZc1JvzZz3/CvvBn/Qo6F/4LYf8A4mj/AIV94M/6FHQv/BbD/wDE10NFctkdxz3/AAr7wZ/0KOhf+C2H/wCJo/4V94M/6FHQv/BbD/8AE10NFFkBz3/CvvBn/Qo6F/4LYf8A4mqerfDLwjqWi3tjb+HNGspbm3khS6h02IPCzKQHXAHIJyOR0rraKLIDhfDPwe8HeF9Okgt9Ljvp5YzHLc3wEruCMEDIwo/3QK09C8QXPhXUYtB8STPLp0ziPTtSmbJQnhYJmPfsrn73Q/Ngt09UtV0q11jT5bS+hSaGVSro4yGB7GolBNWQG/fQNc6fcQRkBpYmRS3QEgiub07wTA3hySz1jIubq1t4ZzbzZETwptSSJiqkMCAwJHBArE0vxPc+CGOleKPtt5paj/QtRit5LmVAP+WUqorMcD7smORw3PLaB+L/AIMBwb3UAf8AsDXv/wAarlcWnYo6M6Dbvfy3k81xLLNYrYyEuF3ICx3fKAQxLHkY9gKoW3hufSrxdRt7y41i/jgNrEdSnSMRQlgzANHFliSq8sGPHXk5yv8AhcHgz/n+1D/wTXv/AMao/wCFweDP+f7UP/BNe/8AxqizA6GbTptYgtxrMUds9rdx3MS2lwZAxQ5GSyLxnqAPxrI17wUbuHWrzTLiVtW1O0ltWNzPtidHTaqNhDhU5ZcDOS2T8zZq/wDC4PBn/P8Aah/4Jr3/AONUf8Lg8Gf8/wBqH/gmvf8A41RZgcjAhj+L3iVG6rdWwOP+vK3r0yvLdHvodd+JOv6vpqztY3V3E0Mk1vJCXC2sKE7XAbG5WHTtXqVdVP4SWFFFFaAFFFFABXPXv/JTNF/7BGof+jrOuhrnr3/kpmi/9gjUP/R1nSYHQ0UUUwCiiigAooooAKKKKACiiigAooooAKKKKACiiigDE1n/AJGrwd/2F5f/AEgu67SuL1n/AJGrwd/2F5f/AEgu67SuWr8Q0FFFFZDCiiigArn/AB7dtZfD/W5Y22ytZyRRE9pHGxP/AB5hXQV5/wDF69x4fsNLXlr69RnUHkJF8+78JBEPxoApfD+28uy3AYAXgeldpWF4Ttvs+kqcYyK3a7lsSFFFFMAooooAKKKKACiiigAooooAKKKKACiiigAooooAKow/8j5p3/YMvP8A0bbVeqjD/wAj5p3/AGDLz/0bbVnU+FgdPRRRXIUFcrY/8jB4j/7CCf8ApJb11VcrY/8AIweI/wDsIJ/6SW9a0viEzRooorqEFFFFABRRRQAUUUUAYfiXw5/wkUMSfavs/lx3EefL3582Fos9R03Z98Y460mm6Few6pb3+r6hBdy2lq1tbpb2pgVVcoWYgu5LHy1HUAc8c1u0UrAFFFFMAooooAKKKKACiiigAooooAKKKKAIZrO2uW3XFvFK2MZdATj8a5rX9PtzrGk6ZbRw2KXzS77pII2f5E3CNd6ldzcnkHhG+o6uq97YWepWxt9RtILuAkExTxh1JHQ4PFPmlayZDpwbu0cFqWr6Z4c06Tda2eutapPJcTJGUdUjfGCI42XcOQSdillPTnEetaxFHoOsS2+iWlm0dtqYs7lWEjCW13qGKFMAErnqemCK7ebw5odzbwwXGjafLDAhjijktUZY1PVVBHA9hU8mk6dLC0UthavG3mBkaFSD5mfM4x/Fk7vXJzS5qncXs4fyo88GsJZ69DpV9pdpJqEMPkT2+xY45ZmmiSKYNtJWNlcnjODlcErTta12P+wtXXTNCsYNQsLK6kmkeUFYWjLIDHlCJeRnBC9geTivQbnS9PvZHe8sba4eSLyXaWFWLR53bDkcrnnHTNQy+HtFuLWG2n0ewlt4Awiie1QrGD1CgjAz3xRzVP5g9nD+VHNaVqul6p4gawXw6scHn3EEdwYX5aFyjZzGEwSrY2ux6ZAzxJ4p0wR3VhbaRbIrSiV5YbRbcXMiqF5j88FCAWG4HB5XB610Uui2RuJrq0hjsr6YYe9t4I/OIyMgsynOcDrmo5NAtL23MGuY1qPcHRdQt4XCH1ACAd6fPPuHs4dkcVZ+JNMP2OBdEGoYhtzdXQtHjOZJGjyEVGUEFSTl1H93NTRa/aPDZmTwxZpJqCI1oouMqS0yxfvG8v5OXU8Bs9OvXtW0XS3ltpX02zaS0AW3c26kwgdAhx8uPalfR9MltxBJp1o8IjMQjaBSoQkErjHTIBx0yBRzVO4ezh/Kjzy28S29rHPFfeHo7y4gluZLgwRs4jiW6liVUKREMQIzy+zoMnJOOs0OCz1dLyWXRLO3ghu5raFlfe0nlSvGzEbRt5TIGT1/PT/4R7RfLgj/ALHsNlsxaBfsqYiJO4lRj5STzx3q7DBFboUt4kiVnZyqKFBZiWY8dySST3JNClPuHs4dkR2+n2loxa1toomIwSiAHFWKKKG29y0klZBRRRSGFFFFABRRRQAUUUUAQXNpFdx7ZVBFZLeEtPZicdfat2ilYDA/4RDT/T9KP+EQ0/0/St+iiyAwP+EQ0/0/Sj/hENP9P0rfoosgMyy0K1sTmEfpWnRRTAKKKKACiiigArnr3/kpmi/9gjUP/R1nXQ1z17/yUzRf+wRqH/o6zpMDoaKKKYBRRRQAUUUUAFZXiPV5tE0b7XaWsd3O1zb20UMkxiUtNMkQJcKxABkzwp6Vq1z3jf8A5F+2/wCwvpn/AKXQUnsAfbfGf/QB0L/wdzf/ACJR9t8Z/wDQB0L/AMHc3/yJXQ0UWA577b4z/wCgDoX/AIO5v/kSj7b4z/6AOhf+Dub/AORK6GiiwHPfbfGf/QB0L/wdzf8AyJR9t8Z/9AHQv/B3N/8AIldDRRYDnvtvjP8A6AOhf+Dub/5ErjfizdeM5PhjqajSLC3Yvb7JdO1WaadW+0R7difZ0yc4H3h689K9TopNXVgPG/h3/wALH/tjwh/wsDyvsn9pyfZvP/4/N32C6xvxxtxn73zZxXvtcXrP/I1eDv8AsLy/+kF3XaVzVFZ2GgooorMYUUUUAFePeL7z/hIPiZ9niO+DS4xbLx/y0bDSEHuP9Wv1jNei+L/EkXhfw7NfNte5b91awsf9bKQdo9cDBYkdFVj2rzrwFo8jObu5ZpJJGMjyOPmdicsx9ySSfcmtKauxHoFhCLeyjjHYVYo6UV1iCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKow/8j5p3/YMvP/RttV6qMP8AyPmnf9gy8/8ARttWdT4WB09FFFchQVytj/yMHiP/ALCCf+klvXVVytj/AMjB4j/7CCf+klvWtL4hM0aKKK6hBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABXPXv/JTNF/7BGof+jrOuhrnr3/kpmi/9gjUP/R1nSYHQ0UUUwCiiigAooooAK57xv8A8i/bf9hfTP8A0ugroa57xv8A8i/bf9hfTP8A0ugpPYDoaKKKYBRRRQAUUUUAFFFFAHO+KbxNM1TwzqVxFdSWtnqjyXDW1rJcNGps7lAxSNWbG51GcdxUz/F3wdG22S71FW9G0W9B/wDRNbMsSzRlH6GsebwrYzSF3HJ9qylT5ncLjP8AhcHgz/n+1D/wTXv/AMao/wCFweDP+f7UP/BNe/8Axqk/4RDT/T9KP+EQ0/0/So9kO4v/AAuDwZ/z/ah/4Jr3/wCNVHcfGDw0IGOmpqWoTAcRLYSwZ/4FMqL+tP8A+EQ0/wBP0py+EtPVs7f0o9kFzhpP7Y8c+IFv9XURxRjbBbRklIVyCQCQCxOASxAzgcADFek6ZYJYWixoMcVJa6fb2i4hQCrNaxiooQUUUVYBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFUYf8AkfNO/wCwZef+jbar1UYf+R807/sGXn/o22rOp8LA6eiiiuQoK5Wx/wCRg8R/9hBP/SS3rqq5Wx/5GDxH/wBhBP8A0kt61pfEJmjRRRXUIKKKKACiiigDO1XxBo2heV/bmr2Om+dnyvtlykPmYxnbuIzjIzj1FZ//AAsHwZ/0N2hf+DKH/wCKqyv/ACVPRv8AsC6j/wCj7KuxrGVRxdh2OF/4WD4M/wChu0L/AMGUP/xVH/CwfBn/AEN2hf8Agyh/+KruqKn2z7BY5jTNb0rW4Gm0bU7PUIkbY0lpcJKqtjOCVJ5wRx71erA8daTc2E48WaJGz3FtGE1G2jGTdW453Ad3jySO5BZeTjGhpGpwarp0VzbSLIkiBlZTkMCOCK0hPmQi/RRRWgBRRRQAUUUUAFFFFABRRRQBT1XVbTRdPa91BpFhV44/3ULyuzO4RFVEBZiWZQAAetZv/CY6f/z4eIP/AAnb/wD+M0eMf+QPZf8AYa0v/wBL4K7esZzcXZDOI/4THT/+fDxB/wCE7f8A/wAZo/4THT/+fDxB/wCE7f8A/wAZrt6Kj20gscR/wmOn/wDPh4g/8J2//wDjNH/CY6f/AM+HiD/wnb//AOM129FHtpBY4j/hMdP/AOfDxB/4Tt//APGaP+Ex0/8A58PEH/hO3/8A8Zrt6KPbSCxxH/CY6f8A8+HiD/wnb/8A+M0f8Jjp/wDz4eIP/Cdv/wD4zXb0Ue2kFjiP+Ex0/wD58PEH/hO3/wD8Zo/4THT/APnw8Qf+E7f/APxmu3oo9tILHN6bqdnq+nW1/p0wmtrqJZoX2ldyMAQcEAjgjg81brzj4QXsk/hDSIn+6lhCo/CMV6PXQndXEFFFFMAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigArnr3/AJKZov8A2CNQ/wDR1nXQ1z17/wAlM0X/ALBGof8Ao6zpMDoaKKKYBRRRQAUUUUAFc943/wCRftv+wvpn/pdBXQ1z3jf/AJF+2/7C+mf+l0FJ7AdDRRRTAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACqMP8AyPmnf9gy8/8ARttV6qMP/I+ad/2DLz/0bbVnU+FgdPRRRXIUFcrY/wDIweI/+wgn/pJb11VcrY/8jB4j/wCwgn/pJb1rS+ITNGiiiuoQUUUUAFFFFAHI+Kb2403xA19ZSeVc2vhbWJoX2g7XV7QqcHg8gda0Fv8AUpm1qW48StpkeiSxxDzYIWSVfJjkMsw2gncXYYjKdOOai1TTodY8dWemXLOkN74e1S3kaMgMFeWzUkZBGcH0rqj4f0uaa1uL+xtr+9tVVY7y5t42mG3odwUYOeeMDNclT4mNHN3niHU4fh34k1VJybyxub5Ld1jUlVjmdUGMYOAAOeveq0XiHWbvN1cXcunXUes21nNo/lxHyImkAG5sEsXRg25WAHAHKsT1R8K+Hmu5ro6FphuJ93nTGzj3ybvvbmxk5zznrRqnh6z1W8t7qXdDPDNFK0kKIGmETb0R2Kk7AxJwCOp9TWYzVryS5u7XwJ45vtNszJNpckS3nkW0LzNZO74MQRAWKsfnAAO0Zzhdtd54z8VQ+EtAe8ZVlu5T5Vnbk482UgkA+igAsx7AHqcCvNfBei3d7ey6lqErTXFxIZZpXGDI56k+noB2AAHAFaU076CZ1y+ONKZQfsmu8/8AUv33/wAZpf8AhN9K/wCfTXf/AAn7/wD+M10CLtQL6Clrq1Ec9/wm+lf8+mu/+E/f/wDxmj/hN9K/59Nd/wDCfv8A/wCM10NFGoHPf8JvpX/Pprv/AIT9/wD/ABmj/hN9K/59Nd/8J+//APjNdDRRqBz3/Cb6V/z6a7/4T9//APGaP+E30r/n013/AMJ+/wD/AIzXQ0Uagc9/wm+lf8+mu/8AhP3/AP8AGay/E3xAtbLwlq91psGsxXkFjNJbyTaDeKiyCMlSxeEKACBkscevFdrUF9ZW+padc2N9EJra6iaGaMkgOjAhhxzyCaNQPDfC/wAZL3x5ZWOl6poUyXKavphe/s0Jtxi+gPz5+4TjA5OT6V7LqmoXsutawg1waLb6TbRTgmGN0k3ByXl3DJT5duEKn5W56Yy/EGm2Wk+GdOs9LtIbO2j1nSwkMEYRV/0+DsK7W80fTNQuoLm/060up7c5hlngV2iOc5UkZHIB4rlqJp6jRy114j1WDwN/aUG+6vRrZtVjRUDSx/2iYRGM4UZT5cn65zzW14Rv7jVPD0d7fXPm3MzuZofLCC0cHDQYHPyEFSTkkgnoQBYh8M6Fb3kl3BomnRXMz+ZJMlogd23h9xYDJO8Bs+oB61ehtbe3eZ7eCOJp38yVkQKZHwBubHU4AGT2ArMZLRRRQAUUUUAFFFFABRWNfeLdF025uIL27aJrVWaZvIkKKVi80rvC7S/ljfsB3Y5xS/8ACS2TeKU0KISyXJWUyMsTbImjWF9pbGOVnQ5zjt14oA8v+DX/ACK2l/8AXlF/6AK9PrzD4Nf8itpf/XlF/wCgCvT67Y7EhRRRVAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFc9e/8lM0X/sEah/6Os66Guevf+SmaL/2CNQ/9HWdJgdDRRRTAKKKKACiiigArnvG//Iv23/YX0z/0ugroa57xv/yL9t/2F9M/9LoKT2A6GiiimAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFUYf+R807/sGXn/o22q9VGH/kfNO/7Bl5/wCjbas6nwsDp6KKK5CgrlbH/kYPEf8A2EE/9JLeuqrlbH/kYPEf/YQT/wBJLetaXxCZo0UUV1CCiiigAooooA57xBZ6xHrNjrXh+8s4Lm1tbi1aO8tHnR1laFsjbIhBBhHc9TXPyeLviOkjKG8PsAev9mT8/wDkxXQ6rFfan400rR7XWLzS7eXT7y6la0jgZnaOS2VQTLG4AxK/QDt6Vc/4Qa8/6HTXf+/Gn/8AyLXPNw5tRnIf8Jj8R/8AqX//AAWT/wDyRR/wmPxH/wCpf/8ABZP/APJFdd/wg15/0Oeu/wDfjT//AJFo/wCEGvP+hz13/vxp/wD8i1F4BqcE+m+IPFeuR3/ieaCSSJfLijtYWiijTIJwrMxySASc84X0r0bTLFLC0SNABgVianBrXgz/AE2a7uNf0bGbmSWCIXNn/t4iRA8frhdy9fmGdu9Y39vqNpHcWkqSxSKGV0bIYHoQa2p8ttBFmiiitQCiiigAooooAKKKKACiiigDB8Y/8gay/wCwzpf/AKXwV226uI8Zf8gWz/7DOl/+l8FdjurmrfENDlnVuzfln+VAuUMhTD7gAT+7bGDnvjHam7qaG/et/uj+tYjJfOX0b/vk0ecvo3/fJqqpYNwZT+PT86dub/pp+YoAsGYcAKxJOB8uP50u9v8Anm36f41WDN5iZ3/e749Ks5oAQToepCnJBBIo86P++v51CrsM4XI3Hv70vmncAy4ycdaAMLUfB2m6xc3bXNzdm3u2eSS1RlEZkaAwGQHbuz5ZxjdtzzjPNTad4Ug0/WBqh1K+ubxpJHlknMf73fHEhUhUAAAgjI24OR1wSK2BgHIAB9cUu6gDwj4VeFvD+r+HdNn1XQtNvpWsot0lzZxyMcRgDJYHsK9E/wCFfeDP+hR0L/wWw/8AxNcj8Gv+RW0v/ryi/wDQBXp9dkUrEnPf8K+8Gf8AQo6F/wCC2H/4mj/hX3gz/oUdC/8ABbD/APE10NFVZAc9/wAK+8Gf9CjoX/gth/8AiaP+FfeDP+hR0L/wWw//ABNdDRRZAc9/wr7wZ/0KOhf+C2H/AOJo/wCFfeDP+hR0L/wWw/8AxNdDRRZAc9/wr7wZ/wBCjoX/AILYf/iaP+FfeDP+hR0L/wAFsP8A8TXQ0UWQHPf8K+8Gf9CjoX/gth/+Jo/4V94M/wChR0L/AMFsP/xNdDRRZAc9/wAK+8Gf9CjoX/gth/8AiaP+FfeDP+hR0L/wWw//ABNdDRRZAc9/wr7wZ/0KOhf+C2H/AOJo/wCFfeDP+hR0L/wWw/8AxNdDRRZAc9/wr7wZ/wBCjoX/AILYf/iaP+FfeDP+hR0L/wAFsP8A8TXQ0UWQHPf8K+8Gf9CjoX/gth/+Jo/4V94M/wChR0L/AMFsP/xNdDRRZAc9/wAK+8Gf9CjoX/gth/8AiaP+FfeDP+hR0L/wWw//ABNdDRRZAc9/wr7wZ/0KOhf+C2H/AOJq5pfhfw/ol01zo2h6bp87IY2ltLOOJipIO0lQDjIBx7CtWiiyAKKKKYBRRRQAUUUUAFc943/5F+2/7C+mf+l0FdDXPeN/+Rftv+wvpn/pdBSewHQ0UUUwCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAqjD/yPmnf9gy8/9G21Xqow/wDI+ad/2DLz/wBG21Z1PhYHT0UUVyFBXK2P/IweI/8AsIJ/6SW9dVXK2P8AyMHiP/sIJ/6SW9a0viEzRooorqEFFFFABRRRQBjr/wAlT0b/ALAuo/8Ao+yrzU6C02g2rWmloWm8JWC2sqaFNdOZ83LOIp4/lgky6ku2cFlYjjnv9eOr6d4k07XdGsbO/FtZXVrLBc3bW5/evA4ZSsb5x5JGCB1FYdt8Q9c0m3Flp/gLS7W3iztit9WZEXPJwBbADmuWpF8w0bV/rnicTy2dtb38NyLy4O9dPMsaQfYpGjw+0K+JtnAbJI2nriodKmv77XPD1xrcE32uHULmGK4uIdjyRG0LfLmKJtu7I5Qcr3wGND/hanib/oTLL/wcv/8AI1QSfEbW5r2G8l8BaZJdQBhDO2qsXjDcEK32bIz3xUcrGerzTRW0Ek1xIkUUal3kdgqqoGSST0FeL6frH/FV6hL4Et4xpMgBis7mRoopZi3zyoQrGJCM/LtO484UHLJrmq+JfHbR2uoWcemWCMCbK3nMyysOdzuVXdjsu3Axk7jjb13hzwxDpkCsy/P1JrSnB3uJj1vvGZUH+wdC/wDB3N/8iUv23xn/ANAHQv8Awdzf/IldCBgcUV0WEc99t8Z/9AHQv/B3N/8AIlH23xn/ANAHQv8Awdzf/IldDRRYDnvtvjP/AKAOhf8Ag7m/+RKPtvjP/oA6F/4O5v8A5EroaKLAc99t8Z/9AHQv/B3N/wDIlH23xn/0AdC/8Hc3/wAiV0NFFgOe+2+M/wDoA6F/4O5v/kSsTxrd+L28A+IFl0TR4ozplyGeDWJnkUeU2Sq/ZhlvQZGT3HWu8oosB89+Cf8AhaH9gaf/AMJX/wAgL+1tM2f2ln7X/wAfsG3Z/FjOM7+3SvQ/E+nXEnj64uoNP82YPYPBINJlkkfZJllS7X5IRjhs54J6ZrofGv8AyAbX/sMaZ/6XwV0+6uWorOw0efz6/wCKpoBHAmowyRIFmkOnkBn85gdrCJ8jYF+ZUcYOcdSO40aS/udJs576HyppbWJpElbDq5GWDADAOT29+BTIgsdwJI12s3zMVjzuO1RkkDOccdf5Vb+1t/lDWYyUMcsGwCDjg02UllAHc88A1AXRnZnXJY5+4fSjdF/c/wDHP/rUASxBg0WRjB/vk9quZrO3R5BCEEdCFIpfNHrJ/wCPUAShsuwEmDuPAx60z5iwzIx+c9h6H2pgYFl27uCScg/1oDfMP98/yoAnXKtksT9afuqHdRuoA8p+DX/IraX/ANeUX/oAr0+vMPg1/wAitpf/AF5Rf+gCvT67Y7EhRRRVAFFFFABRRRQAUUVmavr1tpDQQGOa8vro7baxtVDTTkdcAkAAd2YhR3IpbAadFYn9s65/0I2u/wDgRYf/ACTR/bOuf9CNrv8A4EWH/wAk1PPHuBt0Vif2zrn/AEI2u/8AgRYf/JNH9s65/wBCNrv/AIEWH/yTRzx7gbdFYn9s65/0I2u/+BFh/wDJNH9s65/0I2u/+BFh/wDJNHPHuBt0VzepeKtS0jSrvUtQ8F67DaWcLzzyedYtsRFLMcC5JOADwBmt+C4juF3RHIpqSewEtFFFUAUUUUAFFFFABRRRQAUUUUAFFFFABXPeN/8AkX7b/sL6Z/6XQV0Nc943/wCRftv+wvpn/pdBSewHQ0UUUwCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAqjD/AMj5p3/YMvP/AEbbVeqjD/yPmnf9gy8/9G21Z1PhYHT0UUVyFBXK2P8AyMHiP/sIJ/6SW9dVXK2P/IweI/8AsIJ/6SW9a0viEzRooorqEFFFFABRRRQA1kVxhxkVyXh/wvdeI9PudRn8T6rak6lfQLBbQWflxpFdSxIBvt2b7qDkknNdfXO+E/EWl6H4XnGp3DRN/aGr3IVYXkJjTUpFYgKDn5pUGOp3cDg1jVbS0Gif/hXcv/Q4a7/35sP/AJGo/wCFdy/9Dhrv/fmw/wDkauj0vXrDWJZorN5hNAFMsNxbSQSKGztbZIqtg7WwcYOD6GotR8TabpeoGxuTdvciETmO2sZ7jahJAY+WjAcqevpWHNLuM43xT4Vv/DvgzW9YsPF+tG40/T57qJZILEqzJGzAMBbA4yOcEVvaRqY1KDeuOmeKPHd3Bf8Awe8SXllKs1vcaDdSxSocq6NbsQw9iDmsLwD/AMg4/wC6K1pNt6iZ11FFFdAgooooAKKKKACiiigAooqC+vbfTdOub6+lENtaxNNNIQSERQSx454ANAGL42/5AFt/2GNM/wDS+Cuj3VyXifUrLVvCNne6Xdw3ltJq2mFJoJA6t/p0HcVp6h4l0zTLr7NdSzGfciiKG2lmclw5XARSTxE546bee1ctX4ho00gVFALFjgZYquWwMZOB7U7y19f/AB0f4Vyfie5tdZ8LR39heXkYW6hjV7a5mtmGZ0R1YKVORyCGGQc9DWbrPiLU7C81HRNLdfJtrRmhuh5ks24KpaIMxO6VVJk5ySCo2nDGshnfeWvr/wCOj/Cjy19f/HR/hXDx6zDbXMNv4R1Y36XVwsUkt3NJewxEQTyHY5fJY+UuV34AIOBnmmPHupolr9sudJs/tEC3HnTRPsUNB5gj/wBYMtuyM55HbNAHonlr6/8Ajo/wo8tfX/x0f4Vw3hnWtRvPFIS8uDDDPFcSCzmyXVw8fygk/wAIbGMcc+tV/GkupnW9UNiLl4rXSYZT5OpT25ty0k4MqxRjEpAUEqcEhABnOKAPQfLX1/8AHR/hS7PmQiRgFOdoAweCOePfNeeP4+1JL68gghtp4oFbbISuVQBcXDBZNxjIbd9xRgjDGpj451BdcsrGE2N7DM0Q+0wKEW53zvG3l75c/IqgnaJMk9VGDQB6Duo3V5rbeONXh0KAJZRSzJpkN+T87DyHijAJZnyWErSElm5WI5OTka3hvxPquuapFFILNLZYpJJHRNxnw+1ShWVlUevL/dPTPABhfBr/AJFbS/8Aryi/9AFen1418KtXvbLw7psdt4d1LUFFlFiS2ktlVv3Y6eZMp9uleif8JLqv/Qk67/3+sf8A5Jrsi9CToaK57/hJdV/6EnXf+/1j/wDJNH/CS6r/ANCTrv8A3+sf/kmquB0NFc9/wkuq/wDQk67/AN/rH/5Jo/4SXVf+hJ13/v8AWP8A8k0XA6GivHfjH488TaJ4W0680fSdW0K5GpxqJ7hrWRJQY5P3ZWOVyc8HBXHy9c4q1pHjDxzrHhi1uPFGhTeHrF5MX2p2o3TrDj76QHLJzwW+YgHIU9RPOr2A7u/1u5udSfRfDEMd5qagefLJn7PYg9GlI6tjkRj5j/sj5q2/D3he20Hzbh5ZL7U7kD7VqE4HmS46KMcIg7IOB7nJNnw9Y6Tp+h28Xh5YfsDr5kckL7xLu53l8neT1LEknrmuM8VJLNp/j26+36jDLp1l5tobfUJ4RCy2pYEKjgfeOenPeuaU3Io9ForibzW5/DfiLS9DsHSSyufLa5uLyae4ezLOQu92Y580/IgJGGBPzDisjTddt7bRbfUJtavJvFKW00t9pxuXkRJVidnSSDOIo1YABgEJwo3HdzAHptFefP4w8QWjyNdf2bKkUtujLHbSKW82EuMEyHG1gOxyPSsyTxpq2sR6X9iv7SR2VJjcaejiMSvY3jGB13ncUaONsEg8rkA4JAPVKKzPDV2994W0y6luY7uSa1jd54vuuSoyRye/vXl3h3VNX0zSPDmo6nfHT1utDNyt7fapc30N9L5AbbJG+BG4/wBZhSSQGCk4NAHoHxH/AOSWeK/+wLef+iHrB8EXMlxYEynJ21geK9ev9c8EaheXwexnk0jWIbjTUlkH2fZb5VJVJwzjO7dtHDDGRydrwD/yDj/uitqW4mddRRRXSIKKKKACiiigAooooAKKKKACiiigArnvG/8AyL9t/wBhfTP/AEugroa57xv/AMi/bf8AYX0z/wBLoKT2A6GiiimAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFUYf+R807/sGXn/AKNtqvVRh/5HzTv+wZef+jbas6nwsDp6KKK5CgrlbH/kYPEf/YQT/wBJLeuqrlbH/kYPEf8A2EE/9JLetaXxCZo0UUV1CCiiigAooooAK4PT/C+oa94fefTntgY59btgs8jLl31USLyFOFxAwJ68jg847yqPw9/5FWb/ALC+qf8ApfPWFbZDQW8d7Za9ca94ghSF5baOzhttNWa82hWdyzMIweSwH3cDHU7uKWp+Fx4s1e81KK+1DT45dOSzhkikuLSVJVd2LNGdodfnXhsg8iu0ornGeReNfB2pQeEtZ1eeDSreK18PTW72Fq8nlZW0kXz1yoAdc+WoI+5nLZwFZ4N0PULm1eSDxTq1mrciOCK0KqM9BvgY4HuSa7z4j/8AJLPFf/YFvP8A0Q9c54B/5Bx/3RW1LcTLv/CNar/0O2u/9+bH/wCRqP8AhGtV/wCh213/AL82P/yNXQ0V0WEc9/wjWq/9Dtrv/fmx/wDkaj/hGtV/6HbXf+/Nj/8AI1dDRRYDnv8AhGtV/wCh213/AL82P/yNR/wjWq/9Dtrv/fmx/wDkauhoosBz3/CNar/0O2u/9+bH/wCRqP8AhGtV/wCh213/AL82P/yNXQ0UWA57/hGtV/6HbXf+/Nj/API1ZfibwfreoeEtXs7bxZrN3NcWM0UdvNHZKkzNGQEYi3BAJOCQQeeo612tFFgPAvD/AMG73wHpFtqmqa7M9y+qaaHsLNyLc5vYR8+fvkZyOBg+tel6toeqSeJ4tY05bSXypIHEM87RbgkdyjfMEbH+vUjg9D0q/wCOv+Rbg/7C2m/+l0Fam6uWoknZDRS0Kxn0+znN60Zubq5kuJVhJKIWPCgkAnAAGcDJycDOK091Q7qN1ZjJt1QS2sE11Bcypult93lNk/LuGDx349aXdRuoAS6t47yHypmmVc5zDM8Tf99KQaLW3js4fKhaZlznM0zyt/30xJpd1G6gCbdRuqHdRuoAm3Ubqh3UbqAPL/hxG83wyEUKNJI+jlVRRksTDwAO5rRtNK1vw4Z20yxhiv5LK3FmNO00w287BxuS4GW2sM4LZGEZivIIpPg1/wAitpf/AF5Rf+gCvT664q6JKOiyzTaHZyXbTtO0KmU3EQik3Y53IOAc54HH161eoorQAooooAjlt4Z2iaeGOQwv5kZdQdjYI3DPQ4JGfc0s0SzRlG6Gn0UAcZ9i1XwReyXvhpPtWnSuXutJZsKxPJeEnhH74+63fB+aut8M3uh6411rmhu5muisd2ju4aN0GNrxE4RwMdhkY5IwalZQ6kMMiuV1Xw1c2upjWvDN1/Z+pqArPs3xzoP4JUyN6+nII7EVhOnfVDueiUV5PP4r+I8MhXd4fbHf+zJ//kmo/wDhMfiP/wBS/wD+Cyf/AOSKy5JDPWZokngkhlXdHIpVhnGQRg021torOzhtbZNkMEaxxrknaoGAMnnoK8o/4TH4j/8AUv8A/gsn/wDkij/hMfiP/wBS/wD+Cyf/AOSKXJID0x9FtXvPtJlvhJv34F/OEz/uB9uPbGK0K8j/AOEx+I//AFL/AP4LJ/8A5Io/4TH4j/8AUv8A/gsn/wDkijkkB1nxM0u0n8A+ItRlR2ubbQ75Im81gqhoG3fJnaScdSM1keAf+Qcf90Vzus618QNf0G/0e8fQ47fULaS1leLTZg6pIpUlc3BGcHjINdd4S059Pstj5+7jmtacWnqJnRUUUV0CCiiigAooooAKKKKACiiigAooooAK57xv/wAi/bf9hfTP/S6CuhrnvG//ACL9t/2F9M/9LoKT2A6GiiimAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFUYf8AkfNO/wCwZef+jbar1UYf+R807/sGXn/o22rOp8LA6eiiiuQoK5Wx/wCRg8R/9hBP/SS3rqq5Wx/5GDxH/wBhBP8A0kt61pfEJmjRRRXUIKKKKACiiigAri9d+Gnh7V7qa5Oh6Z587tJJKbSPc7E5LE4ySTzmu0opNJgeYf8ACmtE/wCgRp//AIDp/hR/wprRP+gRp/8A4Dp/hXp9FLlQHmC/BrQwwJ0jTzz/AM+6f4V32kaYNNh2ADpjitGihRS2AKKKKoAooooAKKKKACiiigAooooAqanptpq+my2OpWsN3bSgb4Z4w6NggjKng4IB+ory298D+CptX+yxabYRt532femnYh83/nn5oTZuzxtznPHXivXa5vTtL1zSydPtDYf2eb6S5+1O7mbZJK0rJ5e3bnLFd2/pzjNS1cDlP+FNaJ/0CNP/APAdP8Kon4ZeFF11dGax00ag1v8AaVgNsoLR7tu4HGDz2zmtTT/h5qq3iPqX9mtAxtmuY42yszRyFmYqIlzkEgbyx9WOavweBLyKaeaO4t7eeEM2mSR5P2Zhc3EkakYHyeXMsZUdtwHGDU8vkBhWHwn8Oanp1tf2OmafLbXUSzQv9mUbkYAqcEZGQR1oX4T+HH1GSxXTNPNzFEkzp9mXhGLBTnGOSjflWpYeAdUtbPT7d5LHz7eKyX+0kdvPtRDFGjxRApyjlG5LL/rWyDUA+Hep+ViNNMtAsNpHJHbyZW9MPnbml3xEAsZVblX5TknghW8gIv8AhTWif9AjT/8AwHT/AArFtvA3gy6uo4ItOtwZZ3t45JNLdInkUsCokZAhOVYdeccZr0fRpE8N6NbaXffbJp4VJZobSaZFDMWCh0jCkKCFGAMADgdKybTwNdWjWN1DdlriK9uJpYZbqV4AkskhDxo2VSVA4IwoH3geoYPlXQDI/wCFNaJ/0CNP/wDAdP8ACk/4U1og/wCYRp//AIDp/hVnTPh7qllbItw9ndCNoPNtZZR5N9sDgtJthXBJcNlhISVGSetWIvAuprr1vema1ijR4HVYHx9lVAAYY90RcocHo6A72+XsSy7AZcPwf0Ke3jmTR7ILIoYB7RUYAjPKsAQfYgEVJ/wprRP+gRp//gOn+FXofh9qSabHYrqEVvCulqm6EsWjvxbfZ/OXgfKE6dDkA8GpdH8BT2+oWk2ox2b28FyZ/soKuinytgZQsMa7t2D93+EHJNHKuwHRaBoEWh26QwRpHHGoRUQABQBgAAdBW1RRVgFFFFMAooooAKKKKACiiigBpijPVFP4Unkx/wDPNP8AvkU+igBnkx/880/75FHkx/8APNP++RT6KAGeTH/zzT/vkUeTH/zzT/vkU+igBnkx/wDPNP8AvkU4ADoAPpS0UAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFc943/AORftv8AsL6Z/wCl0FdDXPeN/wDkX7b/ALC+mf8ApdBSewHQ0UUUwCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAqjD/yPmnf9gy8/wDRttV6qMP/ACPmnf8AYMvP/RttWdT4WB09FFFchQVytj/yMHiP/sIJ/wCklvXVVytj/wAjB4j/AOwgn/pJb1rS+ITNGiiiuoQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFc943/5F+2/7C+mf+l0FdDXPeN/+Rftv+wvpn/pdBSewHQ0UUUwCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAqjD/wAj5p3/AGDLz/0bbVeqjD/yPmnf9gy8/wDRttWdT4WB09FFFchQVytj/wAjB4j/AOwgn/pJb11VcrY/8jB4j/7CCf8ApJb1rS+ITNGiiiuoQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFc943/AORftv8AsL6Z/wCl0FdDXPeN/wDkX7b/ALC+mf8ApdBSewHQ0UUUwCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAqjD/yPmnf9gy8/wDRttV6qMP/ACPmnf8AYMvP/RttWdT4WB09FFFchQVytj/yMHiP/sIJ/wCklvXVVytj/wAjB4j/AOwgn/pJb1rS+ITNGiiiuoQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFc943/5F+2/7C+mf+l0FdDXPeN/+Rftv+wvpn/pdBSewHQ0UUUwCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAqjD/wAj5p3/AGDLz/0bbVeqjD/yPmnf9gy8/wDRttWdT4WB09FFFchQVytj/wAjB4j/AOwgn/pJb11VcrY/8jB4j/7CCf8ApJb1rS+ITNGiiiuoQUUUUAFFFFAHP6pHf6j400rSLTWbzSreXT7y6lazjgZ3aOS2VQTLG4AxK/QDt6Ve/wCEM1D/AKHjxB/35sP/AJFrO1TUYdH8dWep3Ku8Nl4e1S4kWMAsVSWzYgZIGcD1rbbxfH5sqQ6PqlwLXYt40Ecb/ZXZVfYwD7nYK6kiMPwRXLUk1LcZV/4QzUP+h48Qf9+bD/5Fo/4QzUP+h48Qf9+bD/5FrRk8U2UXh/UdYaK4Nvp0s8UqhV3sYnKNtGcYJU4yR+FQt4xszOBb2l3c2pvI7L7bEqeSZXbbgEsCwVsAlQRk4GSGxHNLuM56+uNU8G6xbwatqVxqulagwjgvbmOJZIJ/+eT+UiLtYDKnGcggnla6WKVZow6HIIq/rOkWevaPc6ZqcfmW1ymxwDgjuGB7MCAQexANcH4a1C80nVLjw1rz7r6zwUmxgXUJ+5MB74II7MCOmM7U530YmdhRQDmitxBRRRQAUUUUAFFFFABRRXNf8LC8NL4wu/C9zqUdpqtsyDyrj5BLvRXGxjwThhx1z2pXsAnh7R9V8Rafc6jN4u1i0J1K+gSC2hs/LjSK6liQDfbs33UHJJOa1P8AhDNQ/wCh48Qf9+bD/wCRaq+E9Vh0fwRNcTpJKX1vUYooYQC8sjajOFVckDJJ6kgAZJIAJrdsPEcd7qkenS6ffWN28cshjuo1G0RmMH5lYhs+chBUkfeBIIIrkcpX3KMz/hDNQ/6HjxB/35sP/kWj/hDNQ/6HjxB/35sP/kWtDTfFVjq2oCzsYriSVXmWfCri3Ecjx5c543MjbQMkjnAAONulzS7gcp/whmof9Dx4g/782H/yLR/whmof9Dx4g/782H/yLXV0Uc0u4HKf8IZqH/Q8eIP+/Nh/8i0f8IZqH/Q8eIP+/Nh/8i11dFHNLuByn/CGah/0PHiD/vzYf/ItH/CGah/0PHiD/vzYf/ItdXRRzS7gcp/whmof9Dx4g/782H/yLR/whmof9Dx4g/782H/yLXV0Uc0u4HnngHxFceIPCek3N9KJruayhknk2hdzlAWOAABk54FdVXmHwa/5FbS/+vKL/wBAFen11x1RIUUUVQBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVz3jf/kX7b/sL6Z/6XQV0Nc943/5F+2/7C+mf+l0FJ7AdDRRRTAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACqMP/I+ad/2DLz/0bbVeqjD/AMj5p3/YMvP/AEbbVnU+FgdPRRRXIUFcrY/8jB4j/wCwgn/pJb11VcrY/wDIweI/+wgn/pJb1rS+ITNGiiiuoQUUUUAFFFFAHI+KbK41LxA1jZR+bc3XhbWIYU3AbnZ7QKMngckda308PaoWu5tM1M6TDqjJNdwSWyyTwyeWiN5cgk2qSqL1DgHJHWsnWNWt9A8eaPqmoxXn2JdMvoGltrKa5CO0toyhhEjEZEb8nj5TVhvi94NViGvdQBHUHRb3/wCM1yVPiY0S3HgvUrnRtZ0Z9YtP7N1SS5kK/wBnt5sfnOz43+dg4Lf3RkelMvPCk+mywW+gRE6ZLqdrdfYY1REsikgaV1JYfIwAOxVPzZI+8cM/4XB4M/5/tQ/8E17/APGqP+FweDP+f7UP/BNe/wDxqosxnYXt7badYz3t9MkFtbxtJLK5wqKBkk/hXiq3Nx4+8Vz6neR3EEDL5FqkcrwyQQhg2N6EMrMQGbBHZeQuTb8ZeL/+E6uLfS/D32n+yY3WSeWW3kgNxIDlV2uA21eGzjlsY+6c9b4X0OPTLFPlAbFa043d2JjI/BGl+WubrXc4/wChgvv/AI9Tv+EI0r/n713/AMKC/wD/AI9XQ0V0WQjnv+EI0r/n713/AMKC/wD/AI9R/wAIRpX/AD967/4UF/8A/Hq6GiiyA57/AIQjSv8An713/wAKC/8A/j1H/CEaV/z967/4UF//APHq6GiiyA57/hCNK/5+9d/8KC//APj1H/CEaV/z967/AOFBf/8Ax6uhoosgOe/4QjSv+fvXf/Cgv/8A49XAX37P2l614+vtb1rUruXTpWj8mz+0SSyttjVT5k0hZzyDwD0xgjoPYKKTimBzHg3w/DP8OotP06T7EdP1q+ezcqZBEY7+faCCQWGBtPIJBPIPNacnh3xF/bVvqsXiCza7SOaKQTaczRBJDEdqIJQVA8kHlmyWbpwKTwC2PDM//YX1T/0vnrpWl2IW64GcCuN7lHO6R4NXw/qLahpt3HFLNLcyXwFvgXYkleVN3zfejL4Dc/LuGORt6cGTAy6/98n/ABqGNBLGS+7knI3n1+tEqBIXZSwKqSCXPH60gJ/n/vr/AN8//XphlweZEHbJQ4/PNQef/wBNovy/+vSjOdwMeT3Cf/XoAm84f89ovy/+vSBy8oUTKRtJOwD2+tQC4z/y2jH1XH9adFJvuB86N8p+79R70AWdp/56N+Q/wpqyMGdSGfDYB49BS5qs8xSSTC/xgbjjAyBQBYMx3AeWw+v/ANapMiudvvF+kabcXMN3qCo9qjNKRbyFAVjMpXeAVL7Bu2g7sc4qT/hJ7NvE6aHEJZLgrKZGWJtsTIsT7ScY5WdDnOO3XigDzb4Nf8itpf8A15Rf+gCvT68w+DX/ACK2l/8AXlF/6AK9PrtjsSFFFFUAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFc943/5F+2/7C+mf+l0FdDXPeN/+Rftv+wvpn/pdBSewHQ0UUUwCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAqjD/yPmnf9gy8/9G21Xqow/wDI+ad/2DLz/wBG21Z1PhYHT0UUVyFBXK2P/IweI/8AsIJ/6SW9dVXK2P8AyMHiP/sIJ/6SW9a0viEzRooorqEFFFFABRRRQBh67qpg1C00q30e+1W6u4Zp1js2gXYkbRqxYyyIOsqYAJPX0rDfTLx3LHwLruT/ANNtP/8AkqugX/kqejf9gXUf/R9lXNyfEbxDFpq3bfYmZdBtdVMUWk3MiyPM0+YzKshWBQIlG98jlm6DA55zalYY7+ybz/oRdd/7/af/APJVH9k3n/Qi67/3+0//AOSq7K68aadawtKYbqZVupbUCGMOXeO3eclQDkgrGQMckkDHeqtl4wOr6ho76YIhY3lxNbTLIUkcMkRkBV45GTtgjk/Qio9owsc/pUmnW2rDT9R0y90a/dfMhgvhF+/QdWRo3dWx3G7I4yACCexTG0benap9f8P2HiTTDZanGxUMHiljbbJBIOjo3VWHr9QcgkVwdt4mbwrrFzoXi6/ts2kKzDUi6xxPEzbVMmTiKQnjaeG6r3A1hUvowsdtRXOj4g+DCP8AkbdC/wDBlD/8VS/8LB8Gf9DdoX/gyh/+KrW6EdDRXPf8LB8Gf9DdoX/gyh/+Ko/4WD4M/wChu0L/AMGUP/xVF0B0NFc9/wALB8Gf9DdoX/gyh/8AiqP+Fg+DP+hu0L/wZQ//ABVF0B0NFc9/wsHwZ/0N2hf+DKH/AOKo/wCFg+DP+hu0L/wZQ/8AxVF0B0NFc9/wsHwZ/wBDdoX/AIMof/iq4C+/aE0PSPH19o19HHdaRG0f2fVdOlEyndGrNuAPOGLDKntjGaTkkB6L4EfHhy4H/UX1P/0vnroZZP3L/wC6a820jxI9r8O49T0aRGS9128Ecr2kk/7uS/m+YRIVcnB6da1NP8cLLok8uoQySXMCyl1gh8reBMYl/dyNujY8Hax4zya43uUdsCB0LDnPDGgkEEFmIPX5zXP6J4otteku0tIJ0a0fZIsrR7gckcqGJU/KeGAPTitbzm/55t+Y/wAaQFzzKZFJ+5Tn+EVW85v+ebfmP8abuH/PD9B/jQBa3BMBche+zH9adbu5nXeVJ2Hp9RVPcP8Anh+g/wAaA21srEynGMqQP60Aa+aqPNtnlGGPzDoPYVV85/SX/vv/AOvQJSM/I5J6kkH+tAGPqHhLT9Wuro3c955F2XkktQyiMyND5BkB27s7DjG7bnnGeam0/wAMQ6fq39pnUb65u2eR5ZJjH+93xxIQQqAAAQRkbcHI9CRWh5zm5QeU4XY2XyuAcjjrnnnt2PtmXfQB418KvC3h/V/Dumz6roWm30rWUW6S5s45GOIwBksD2Feif8K+8Gf9CjoX/gth/wDia5H4Nf8AIraX/wBeUX/oAr0+uyKViTnv+FfeDP8AoUdC/wDBbD/8TR/wr7wZ/wBCjoX/AILYf/ia6GiqsgOe/wCFfeDP+hR0L/wWw/8AxNH/AAr7wZ/0KOhf+C2H/wCJroaKLIDnv+FfeDP+hR0L/wAFsP8A8TR/wr7wZ/0KOhf+C2H/AOJroaKLIDnv+FfeDP8AoUdC/wDBbD/8TR/wr7wZ/wBCjoX/AILYf/ia6GiiyA57/hX3gz/oUdC/8FsP/wATR/wr7wZ/0KOhf+C2H/4muhoosgOe/wCFfeDP+hR0L/wWw/8AxNH/AAr7wZ/0KOhf+C2H/wCJroaKLIDnv+FfeDP+hR0L/wAFsP8A8TR/wr7wZ/0KOhf+C2H/AOJroaKLIDnv+FfeDP8AoUdC/wDBbD/8TR/wr7wZ/wBCjoX/AILYf/ia6GiiyA57/hX3gz/oUdC/8FsP/wATR/wr7wZ/0KOhf+C2H/4muhoosgOe/wCFfeDP+hR0L/wWw/8AxNH/AAr7wZ/0KOhf+C2H/wCJroaKLIDnv+FfeDP+hR0L/wAFsP8A8TR/wr7wZ/0KOhf+C2H/AOJroaKLIDnv+FfeDP8AoUdC/wDBbD/8TR/wr7wZ/wBCjoX/AILYf/ia6GiiyA57/hX3gz/oUdC/8FsP/wATR/wr7wZ/0KOhf+C2H/4muhoosgOe/wCFfeDP+hR0L/wWw/8AxNH/AAr7wZ/0KOhf+C2H/wCJroaKLIDnv+FfeDP+hR0L/wAFsP8A8TUlv4G8J2l1Fc2nhfRYJ4XEkUsenxKyMDkMCFyCDzkVu0UWQBRRRTAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACqMP/I+ad/2DLz/0bbVeqjD/AMj5p3/YMvP/AEbbVnU+FgdPRRRXIUFcrY/8jB4j/wCwgn/pJb11VcrY/wDIweI/+wgn/pJb1rS+ITNGiiiuoQUUUUAFFFFAHM6nrelaD8SdEutc1Oz023fSdQjWW8uFhRmM1mQoLEDOATj2NZmnSfDWLSLS11Xxtot3PDYRadLLb64bVLiCPdsV40n2t99s5znce3FdjeWi3kPlv0rjde8NWGk6fLqM8LzgSRoIoAu92d1RQNxA6sOpFYTp3dx3NKbVPhVPetdSeJdB8xmZiq64qxhmiMTMIxJtBMZK5Az+PNRx614AtdYsLuw8caBFFbTyXMyzaqk8txI0PlAmV5SeFwMEHoOlY+l6FpepTT20sTWF5BN5L2t0U3ltgk42Myt8rA8E474qeLw94dnmWGDVLCWV4hMsccyszRldwYAHJBBBz6VPsmFy/wCK/inZi2+xeCbu21S8lGGvbd1mgtvxGQ7+i9B1bsGx/Bvhu6jma8u5JJJpnMkkkjbmkY9WY9z/AIAdABWj4Y0bStTtTfWUcqxrNJFieIxtlGKk7TyBkd8H2FdlFCkMYSMYAq4U7aiHKNqgelLRRWwBRRRQAUUUUAFFFFABXNf8K98NN4wu/FFzpsd3qtyyHzbj5xFsRUGxTwDhRz1z3rpaKVrgcX4f0211bwzc218shjXW9RkUxTPEyst/OQQyEEc+9X28I6G6Rq1rKdhYljdS7pCWDned2ZPmAPzZxjiueN34n8KpeW0Oi6dfQNf3dzHL/ackbMs1xJKAV8ggEB8fePSq/wDwnfif/oVLL/wbP/8AI9cji7lHb6fpNjpc801lE6yTAK7PM8mFBYhRuJ2qCzYAwOaveZXnX/Cd+J/+hUsv/Bs//wAj0f8ACd+J/wDoVLL/AMGz/wDyPS5WB6L5lHmV51/wnfif/oVLL/wbP/8AI9H/AAnfif8A6FSy/wDBs/8A8j0crA9F8yjzK86/4TvxP/0Kll/4Nn/+R6P+E78T/wDQqWX/AINn/wDkejlYHovmUeZXnX/Cd+J/+hUsv/Bs/wD8j0f8J34n/wChUsv/AAbP/wDI9HKwPRfMo8yvOv8AhO/E/wD0Kll/4Nn/APkej/hO/E//AEKll/4Nn/8AkejlYCfBr/kVtL/68ov/AEAV6fXAfDHRbnRdDsrW72mSC2SNyucZCgHHtXf11x2JCiiiqAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACqMP/ACPmnf8AYMvP/RttV6qMP/I+ad/2DLz/ANG21Z1PhYHT0UUVyFBXK2P/ACMHiP8A7CCf+klvXVVytj/yMHiP/sIJ/wCklvWtL4hM0aKKK6hBRRRQAUUUUAFZXiXRf+Eh8Pz6b5sUXmvG26aHzUOyRXwyZG4HbgjI61q0UAcbZeBbjTrhbuw1CytLhbgzLFbacY7ZQYjG22IScMeCW3ckDipNE8DyaLf6dNHqm6KzhijeNIWQzlLcQ5YbynYHOzcMBd2OK66ip5UBQ0nTP7LhuI/N83z7qa4zt27fMctt6npnGav0UVQBRRRQAUUUUAFFFFABRRRQAUUUUAYfi25bT/D011AsYl82GLzZFysIklVGkI9EDFv+A1k3Msfh2Wa3lvl1m4cwiK2njCzIX38kwxksCEJAEZPysc4+72EkaTRPHMiyRupVkYZDA9QR3FZ6eG9Djsms49G09LVnEjQLaoELDoxXGM+9S0Bydl4uhvY0mj0KJbdVtTO7XJDIZrh4MKpT5trR55Kkg9AeKiH2vR9Q1iSW9utWSyu7S1gtLgQRK5n8tcs6QhuGkzx6V20OjaXbxGKDTbSKM7cokCgfK5deAOzMWHoST1NSvYWcjSM9rAxldJJCYwd7IQUY+pUquD2wMdKLMDz/AF7xe1laajDbaTbLcxWt2YZ1lkdFmgiLMMmIKwBVhwxOQAQuTiCDWb3R9T1BdbQ3a28jQxRJNHtJSGBssRCh5abJbIA5+XjnvpPD2iy3EtxLpFg80wYSyNbIWcMpVsnGTkEg56gkVO+l2EjyPJY2ztLu8xmhUl9yhWzxzlVUH1AA7UrMDjNWm1Ke+itrWFIJYUlN1a6Vc280+RsKOPPUAoAx3DCtkrjIIzWtPFayQM9pYRanmIzCWST7OhRbSCYlVCMV3eb91ixBz82MAdnL4a0KezitJ9F06S2hYtHC9ohRCepCkYBNWP7K0/ezfYLbc4IY+SuWBUIQeO6qq/RQO1OzA5mw1+C51K0srnR4oJLmdIwVuN4VWtnnVvujn92VI/HJ6Vk2Pi5biB7tNPhm+1eRJb2pdz5SNbLK3McbMwBPXbgZ6jiu5uNE0q6iMd1plnNGSpKSW6sCVGF4I7DgelMk8PaLLCsMukWDxIQVRrVCq4XaMDHZeB7cUWYHH6T4nl1S5UW+j2rrfPB9hSW4Me1XtFnbewQ8jPGAc+wGa1fDOsQ+JZ5mh0iKC0iijYytPucu6htoULjAyfm3c8YHPG0/h3RJITFJo9g0ZREKNaoVKoMIMY6KCQB2zxVy3tLa13fZbeKHcFDeWgXIUYHT0AAHsKEmA+OGOL/VoF+lPooqgCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKow/8j5p3/YMvP8A0bbVeqjD/wAj5p3/AGDLz/0bbVnU+FgdPRRRXIUFcrY/8jB4j/7CCf8ApJb11VcrY/8AIweI/wDsIJ/6SW9a0viEzRooorqEFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABVGH/kfNO/7Bl5/6NtqvVRh/wCR807/ALBl5/6NtqzqfCwOnooorkKCuNa8Gl+ItcF1Z6iRcXiSxPBp88yuv2aFc7kQj7yMMZzxXZUVUZOLugOS/wCEgtf+fPV//BPd/wDxuj/hILX/AJ89X/8ABPd//G662itPbSFY5L/hILX/AJ89X/8ABPd//G6P+Egtf+fPV/8AwT3f/wAbrraKPbSCxyX/AAkFr/z56v8A+Ce7/wDjdH/CQWv/AD56v/4J7v8A+N11tFHtpBY5L/hILX/nz1f/AME93/8AG6P+Egtf+fPV/wDwT3f/AMbrraKPbSCxyX/CQWv/AD56v/4J7v8A+N0f8JBa/wDPnq//AIJ7v/43XW0Ue2kFjkv+Egtf+fPV/wDwT3f/AMbo/wCEgtf+fPV//BPd/wDxuutoo9tILHJf8JBa/wDPnq//AIJ7v/43R/wkFr/z56v/AOCe7/8AjddbRR7aQWOS/wCEgtf+fPV//BPd/wDxuj/hILX/AJ89X/8ABPd//G662ij20gscl/wkFr/z56v/AOCe7/8AjdH/AAkFr/z56v8A+Ce7/wDjddbRR7aQWOS/4SC1/wCfPV//AAT3f/xuj/hILX/nz1f/AME93/8AG662ij20gscl/wAJBa/8+er/APgnu/8A43R/wkFr/wA+er/+Ce7/APjddbRR7aQWOS/4SC1/589X/wDBPd//ABuj/hILX/nz1f8A8E93/wDG662ij20gscl/wkFr/wA+er/+Ce7/APjdH/CQWv8Az56v/wCCe7/+N11tFHtpBY5L/hILX/nz1f8A8E93/wDG6P8AhILX/nz1f/wT3f8A8brraKPbSCxyX/CQWv8Az56v/wCCe7/+N0f8JBa/8+er/wDgnu//AI3XW0Ue2kFjkv8AhILX/nz1f/wT3f8A8bo/4SC1/wCfPV//AAT3f/xuutoo9tILHJf8JBa/8+er/wDgnu//AI3R/wAJBa/8+er/APgnu/8A43XW0Ue2kFjkv+Egtf8Anz1f/wAE93/8bo/4SC1/589X/wDBPd//ABuutoo9tILHJf8ACQWv/Pnq/wD4J7v/AON0f8JBa/8APnq//gnu/wD43XW0Ue2kFjkv+Egtf+fPV/8AwT3f/wAbo/4SC1/589X/APBPd/8Axuutoo9tILHJf8JBa/8APnq//gnu/wD43R/wkFr/AM+er/8Agnu//jddbRR7aQWOS/4SC1/589X/APBPd/8Axuj/AISC1/589X/8E93/APG662ij20gscl/wkFr/AM+er/8Agnu//jdH/CQWv/Pnq/8A4J7v/wCN11tFHtpBY5L/AISC1/589X/8E93/APG6P+Egtf8Anz1f/wAE93/8brraKPbSCxyX/CQWv/Pnq/8A4J7v/wCN0f8ACQWv/Pnq/wD4J7v/AON11tFHtpBY5L/hILX/AJ89X/8ABPd//G6P+Egtf+fPV/8AwT3f/wAbrraKPbSCxyX/AAkFr/z56v8A+Ce7/wDjdH/CQWv/AD56v/4J7v8A+N11tFHtpBY5L/hILX/nz1f/AME93/8AG6P+Egtf+fPV/wDwT3f/AMbrraKPbSCxyX/CQWv/AD56v/4J7v8A+N0f8JBa/wDPnq//AIJ7v/43XW0Ue2kFjkv+Egtf+fPV/wDwT3f/AMbo/wCEgtf+fPV//BPd/wDxuutoo9tILHJf8JBa/wDPnq//AIJ7v/43R/wkFr/z56v/AOCe7/8AjddbRR7aQWOS/wCEgtf+fPV//BPd/wDxuj/hILX/AJ89X/8ABPd//G662ij20gscl/wkFr/z56v/AOCe7/8AjdH/AAkFr/z56v8A+Ce7/wDjddbRR7aQWOS/4SC1/wCfPV//AAT3f/xuj/hILX/nz1f/AME93/8AG662ij20gscl/wAJBa/8+er/APgnu/8A43R/wkFr/wA+er/+Ce7/APjddbRR7aQWOS/4SC1/589X/wDBPd//ABuj/hILX/nz1f8A8E93/wDG662ij20gscl/wkFr/wA+er/+Ce7/APjdH/CQWv8Az56v/wCCe7/+N11tFHtpBY5L/hILX/nz1f8A8E93/wDG6P8AhILX/nz1f/wT3f8A8brraKPbSCxyX/CQWv8Az56v/wCCe7/+N0f8JBa/8+er/wDgnu//AI3XW0Ue2kFjkv8AhILX/nz1f/wT3f8A8bo/4SC1/wCfPV//AAT3f/xuutoo9tILHJf8JBa/8+er/wDgnu//AI3R/wAJBa/8+er/APgnu/8A43XW0Ue2kFjkv+Egtf8Anz1f/wAE93/8bo/4SC1/589X/wDBPd//ABuutoo9tILHJf8ACQWv/Pnq/wD4J7v/AON0f8JBa/8APnq//gnu/wD43XW0Ue2kFjkv+Egtf+fPV/8AwT3f/wAbo/4SC1/589X/APBPd/8Axuutoo9tILHJf8JBa/8APnq//gnu/wD43R/wkFr/AM+er/8Agnu//jddbRR7aQWOS/4SC1/589X/APBPd/8Axuj/AISC1/589X/8E93/APG662ij20gscl/wkFr/AM+er/8Agnu//jdH/CQWv/Pnq/8A4J7v/wCN11tFHtpBY5L/AISC1/589X/8E93/APG6P+Egtf8Anz1f/wAE93/8brraKPbSCxyX/CQWv/Pnq/8A4J7v/wCN0f8ACQWv/Pnq/wD4J7v/AON11tFHtpBY5L/hILX/AJ89X/8ABPd//G6P+Egtf+fPV/8AwT3f/wAbrraKPbSCxyX/AAkFr/z56v8A+Ce7/wDjdGl3H9o+M7W4gtb6OGDT7lJJLmymgAZ5ICoBkVckhG6eldbRSlUbVgsFFFFZDP/Z)

The nodes use for this purpose are three: one Sender, one Receiver and one Traffic Simulator.   
These are all structured with the same low-level structure (physical and control layers), with the addition of different logical parts in order to manage them.

* CAN Node Sender:

Takes care of transmitting periodic packets according certain parameters modifiable in Matlab.  
It consist in a counter which increments the ReadyToSend flag of the Can Node, this value is then decremented at the end of the transmission. In case of congested network, where the node’s ID does not allow the transmission, this value keeps increasing.

* CAN Node Receiver:

Is always in receiving mode, waiting for a request by means of the Transmitting Node. When this packet arrives, it tries to reply transmitting a certain payload on the bus.

This node has been used to estimate the typical response time.

* CAN Traffic Simulator:

This node tries to simulate a generic Can traffic on a certain Network, given as input the BusLoad (0% to 100%) and a list of Can IDs.   
This nodes logic rises a ReadyToSend flag depending on the BusLoad value, it is a proportional equation related on the number of packets on the bus in a certain simulation time.  
Every time it succeeds in transmitting a packet, the ID changes randomly among the ones in the list.

# TIMING ANALYSIS

In order to analyze the Typical Response Time and the transmission delay, different functions were implemented: using a counter triggered by the network’s clock and strategical flags in the low-level Can node, we were able to fill in a vector the time instants under analysis.  
This vectors are brought into the workspace at the end of every simulation and elaborated via Matlab.

![Immagine che contiene screenshot

Descrizione generata con affidabilità molto elevata](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEAYABgAAD/4RD6RXhpZgAATU0AKgAAAAgABAE7AAIAAAAQAAAISodpAAQAAAABAAAIWpydAAEAAAAgAAAQ0uocAAcAAAgMAAAAPgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEVtaWxpYW5vIFRvbWFybwAABZADAAIAAAAUAAAQqJAEAAIAAAAUAAAQvJKRAAIAAAADMTQAAJKSAAIAAAADMTQAAOocAAcAAAgMAAAInAAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADIwMTk6MDM6MjUgMTc6MDk6MzAAMjAxOTowMzoyNSAxNzowOTozMAAAAEUAbQBpAGwAaQBhAG4AbwAgAFQAbwBtAGEAcgBvAAAA/+ELImh0dHA6Ly9ucy5hZG9iZS5jb20veGFwLzEuMC8APD94cGFja2V0IGJlZ2luPSfvu78nIGlkPSdXNU0wTXBDZWhpSHpyZVN6TlRjemtjOWQnPz4NCjx4OnhtcG1ldGEgeG1sbnM6eD0iYWRvYmU6bnM6bWV0YS8iPjxyZGY6UkRGIHhtbG5zOnJkZj0iaHR0cDovL3d3dy53My5vcmcvMTk5OS8wMi8yMi1yZGYtc3ludGF4LW5zIyI+PHJkZjpEZXNjcmlwdGlvbiByZGY6YWJvdXQ9InV1aWQ6ZmFmNWJkZDUtYmEzZC0xMWRhLWFkMzEtZDMzZDc1MTgyZjFiIiB4bWxuczpkYz0iaHR0cDovL3B1cmwub3JnL2RjL2VsZW1lbnRzLzEuMS8iLz48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOnhtcD0iaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLyI+PHhtcDpDcmVhdGVEYXRlPjIwMTktMDMtMjVUMTc6MDk6MzAuMTM5PC94bXA6Q3JlYXRlRGF0ZT48L3JkZjpEZXNjcmlwdGlvbj48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOmRjPSJodHRwOi8vcHVybC5vcmcvZGMvZWxlbWVudHMvMS4xLyI+PGRjOmNyZWF0b3I+PHJkZjpTZXEgeG1sbnM6cmRmPSJodHRwOi8vd3d3LnczLm9yZy8xOTk5LzAyLzIyLXJkZi1zeW50YXgtbnMjIj48cmRmOmxpPkVtaWxpYW5vIFRvbWFybzwvcmRmOmxpPjwvcmRmOlNlcT4NCgkJCTwvZGM6Y3JlYXRvcj48L3JkZjpEZXNjcmlwdGlvbj48L3JkZjpSREY+PC94OnhtcG1ldGE+DQogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgIDw/eHBhY2tldCBlbmQ9J3cnPz7/2wBDAAcFBQYFBAcGBQYIBwcIChELCgkJChUPEAwRGBUaGRgVGBcbHichGx0lHRcYIi4iJSgpKywrGiAvMy8qMicqKyr/2wBDAQcICAoJChQLCxQqHBgcKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKir/wAARCAHgAqEDASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRVS0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJBUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn6Onq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwD2S91TWJNeu7LTHsYYrVIyTcQvIzFgT2dcDimfafE//P3pP/gHL/8AHaSP/kbtY/3Lf/0E1frojCLjcRR+0+J/+fvSf/AOX/47R9p8T/8AP3pP/gHL/wDHavUVXs4iKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaPtPif8A5+9J/wDAOX/47V6ij2cQKP2nxP8A8/ek/wDgHL/8do+0+J/+fvSf/AOX/wCO1eoo9nECj9p8T/8AP3pP/gHL/wDHaW21XWoNasLXUnsJobx3j/0eB42QiNnzkuwP3cYx3q7Wfdf8jLoH/XzL/wCk8lKUIpXA6iiiiuYo5iP/AJG7WP8Act//AEE1fqhH/wAjdrH+5b/+gmr9dcPhRLCiiirAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKz7r/kZdA/6+Zf8A0nkrQrPuv+Rl0D/r5l/9J5KifwsDqKKKK5CjmI/+Ru1j/ct//QTV+qEf/I3ax/uW/wD6Cav11w+FEsKKKKsAooooAKKKckbyEhBnFIBtFS/ZZv7n6ij7LN/c/UUuZdwIqKl+yzf3P1FH2Wb+5+oo5l3AioqX7LN/c/UUfZZv7n6ijmXcCKipfss39z9RR9lm/ufqKOZdwIqKl+yzf3P1FH2Wb+5+oo5l3AioqX7LN/c/UUfZZv7n6ijmXcCKipfss39z9RR9lm/ufqKOZdwIqKl+yzf3P1FH2Wb+5+oo5l3AioqX7LN/c/UUfZZv7n6ijmXcCKipfss39z9RR9lm/ufqKOZdwIqKl+yzf3P1FH2Wb+5+oo5l3AioqX7LN/c/UUjW8qKWZMAe9HMu4EdFFFUAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVn3X/Iy6B/18y/8ApPJWhWfdf8jLoH/XzL/6TyVE/hYHUUUUVyFHMR/8jdrH+5b/APoJq/VCP/kbtY/3Lf8A9BNX664fCiWFFFFWAUUUUAFQ3+o3Ok6Ne31jp02p3EEe5LOA4eY5AwKmq1Yf6xvpUT+FgeV6t8ctZ0GKCXWfhvq9klxMIImmnCh5DnCj5epwa3NK+JPiS/v/ACL34b6zYQ+VLIZ5HBAKRs4XAXqxUKPdhWT+0J/yAPC3/YxW3/oMleleIrmaz8L6rdWzmOaGzmkjcD7rBCQfzFchQzwxrE/iDw3Z6pd6ZcaVNcKWazugRJFhiMMCAe2enetWvCtW8f8Aiax/Zw8PeJoNQd9XuLxFmmKLmZfMkBUjGOQoHAqbxwPiH4B8OR+Nbnxkb+eCeI3ulfZUS12uwBRO+ASBnqeuQaAPb6wtf8Q3Wi6rotpbaLd6impXXkSz26kraLx874BwOe+OleXeMIviL4e8FP48fxkRdwCK4l0dLRRaqjso8odzjd948nB6da6Hxl4v1SHVvhxJpdy1pb65fRi7hUA+ZGyodpJH+0emKAPTaK8e1bVvGmt/HDWPB/h/XhpenpYQ3DzmBZGt1wu7ywf4mLAZJ4GSKm0PUPFPgz4xaf4Q1zxDL4h0zWbOSe3muYlSWCRAzEZHUYX9R0xyAet0V5Hb3/ij4n+Mteg0XxFN4d8PaHcmyV7OJWmu51+8Sx6KD6diOO9M8J6x40sPjlJ4R8UayNRsrfR2nglWBY/tI8wbZHA6OMlTg4+X8aAPX64P4k/FOz+HLafHNp02pXF4JH8mBwpjiQAs54PHP6H0rvK8Z8P2Vp8S/il4z1rUismk2ds3h+yyRggg+cy+/JwfR6APX7K8g1Cwt7yzkEtvcRLLE46MrDIP5Gp68t+BWsXH/CNah4R1V92peGLt7N+fvRbj5bD24YD2ArH0m98c+N/H3jDQrPxQ+kaVpOobftEdujzbTkJEhOAo+UktyegoA9qory34f6z4k0v4m634E8TasdbS0s0vrO+kiCSbCVBVsdeXHr0PrgFzpHjzxFqmqXmv+KJPBulQXDRafa2nks0kY6SvJk9f7ufXgdwD1KuB0f4nvrvwtn8Y6Z4evLqSKUxppsDeZLIRIEOML756dAayfhP4r1e98U+JvC2s65B4ij0dontdUhCjzUcHIJXgkcDuQdwya4nwfrWoeHf2SdR1XRblrW9t7pjFMoBK5uEU8EEdCRQB9CWc7XVjBO8TQtLGrmJ/vISM7T7jpU1eP+P/ABrq1i/gvSBry+HLTW7cyX2tvErFCsanYM8KSTye2R0ANa/hfT/GGmeKLGSx8Vx+LvCt1G4uZrhozJbOB8pR1+/k446Yz7GgD0mivOfBXiLV4fij4r8IeI717poWW/0t5FUE2z9V4AztJUfXdVS08X63qfj3xtfadJJcaJ4YsWt4LJFGLq8VS7c4zkFSuM91oA9RqK5/49n+leFeFLzxJ468NjWtL+KoTxHIjSpo8ccKxRMCcRGM844A3Ed889/YtGk1eXwnaP4lghg1XyQLpIG3IHBwSD6HrjtnFVHdAFFFFdhIUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVn3X/Iy6B/18y/8ApPJWhWfdf8jLoH/XzL/6TyVE/hYHUUUUVyFHMR/8jdrH+5b/APoJq/VCP/kbtY/3Lf8A9BNX664fCiWFFFFWAUUUUAFWrD/WN9Kq1asP9Y30qJ/CwPMf2hP+QB4W/wCxitv/AEGSvRfFn/Il63/2D5//AEW1a9FchR82ax/yad4R/wCwjF/6Nlr0b9oX/kier/8AXW3/APRyV6bRQB518Yf+SCaz/wBecP8A6MjrmfF3+v8Ag1/192//AKLir2uigDyrQv8Ak6PxR/2BIP5x0eK/+TmPAn/Xjef+ipK9VooA8T0DxBbfBzxh4m0rxhFc2ukarqD6jp2pJbvLE+/70Z2gkMMAdOx6AjMfhTxM3iz9pqTUo7K5tLMeH2jszcxGN5ohKD5m08gFi2M9gD3rqL2D4leG/FWp3OhxWvifR7+TzYLa7vPIlsj3VSRgpz09h07zeCPCGvp411Pxt41e0TVb22Wzt7KzYtHawAg4LHqxKjp7+uAAa3xP8VDwb8OdW1dH23Kw+Va+vnP8qkfQnd9FNcP4M+AHg5/BelSeKNGe61aa3WW6ka7mQ72+bbhXA+XO3p2r2SigDwi40LTfgx8avD91ocDWfh3xBC2n3EbSvII5tw2sWYkjkp1PQPXRfCf/AJKP8TP+wun/ALUr1WigDyrS/wDk6zWv+xcT/wBGxV534YuPA13qGs3Pxummk8VQ30itb3/nlI4+NqxInBGc4HPGMDHX6ZqNreF5lleKNpE+65UEr9DQB4f8HZrUfGbxeLLR20O2ubOCaysXg8lhAuFD7O27IY+7Vzek/wDJmOsf9fJ/9Ko6+mKKAPJvF/iOx0XRfC1r4w8PQaj4SvLONbu+khM32SURjaSoBwDkcjnrjpXF6VaeFl+Lnhx/glPeFWn360sBlNqltxkMZO5G7AyRnGMHFfRjKGUqwBBGCCOtMhgit02QRJEuc7UUAfpQB5N8Z5J/B+ueH/iNp0Jlk05nsbxB/wAtIZFbZn2DE/iwrZ+G+h6l4T+DiS29sLvXbuGTUpYpW2+fcSDcFY9jjav1FVPFvhvxl468UQ6Jq1rYWng22vUupZklLTXqJyIiueOevA6Z7YPp/TpQB836jqvwc8T6BJeeKdNPh/xOqsLm0s4JYZ0uB/dUDaxJ5BYd+cV6n8Jo9fi+EemL4rM5vtrFRc580RbzsDZ5ztx15xiu4a2gaYTNDGZV6OUG4fjRc/8AHs/0qo7oDMooorsJCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACs+6/wCRl0D/AK+Zf/SeStCs+6/5GXQP+vmX/wBJ5KifwsDqKKKK5CjmI/8AkbtY/wBy3/8AQTV+qEf/ACN2sf7lv/6Cav11w+FEsKKKKsAooooAKfHK0RJTvTKKW4E/2yb1H5UfbJvUflUFFLlj2An+2Teo/Kj7ZN6j8qgoo5Y9gJ/tk3qPyo+2Teo/KoKKOWPYCf7ZN6j8qPtk3qPyqCijlj2An+2Teo/Kj7ZN6j8qgoo5Y9gJ/tk3qPyo+2Teo/KoKKOWPYCf7ZN6j8qPtk3qPyqCijlj2An+2Teo/Kj7ZN6j8qgoo5Y9gJ/tk3qPyo+2Teo/KoKKOWPYCf7ZN6j8qPtk3qPyqCijlj2An+2Teo/Kj7ZN6j8qgoo5Y9gJ/tk3qPypHupHQqxGD7VDRRyx7AFFFFUAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVn3X/Iy6B/18y/8ApPJWhWfdf8jLoH/XzL/6TyVE/hYHUUUUVyFHMR/8jdrH+5b/APoJq/VCP/kbtY/3Lf8A9BNX664fCiWFFFFWAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAUtauZLPQdQuYG2yw20kiNjOGCkg/mKxdF8L69qfh/Tr648camJbm1imcJaWoAZkBOP3fTmtTxJ/wAirq3/AF5Tf+gGrXhbVNPXQNF01r62F9/ZcE32UzL5vl7AN+zOdue+MVhVbVrDRnf8IVrX/Q86t/4C2v8A8ao/4QrWv+h51b/wFtf/AI1W9Y+J9B1NrgabrenXZtVLTiC7R/KA6lsHge5q5Jf2kViL2W6gS0KhxO0gEe09Du6YOR+dZc0u4zlf+EK1r/oedW/8BbX/AONVT1Xw14p0mwbUNK8S3urz2x8xtPuLeBRcoPvIGRFIbHKnOMgA8Guv1DXdJ0gn+1tUsrHCeYftNwkeE3Bd3zEcbmUZ9SB3q6jpLGskbK6MAyspyCD0INHNLuByPh3X7bX9Miu7WTeki7hng/QjsfatiuK8SWD+CPFH9t2a7dF1WYC8QfdtbljgSeyyHg+j4P8AEcdfbXC3MCyIcgiumEuZEk1FFFWAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVn3X/Iy6B/18y/8ApPJWhWfdf8jLoH/XzL/6TyVE/hYHUUUUVyFHMR/8jdrH+5b/APoJq/VCP/kbtY/3Lf8A9BNX664fCiWFFFFWAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAZniT/kVdW/68pv/QDXES29zd6BrkNnHLMzeF9FMkUQJeSIPcGVABySYw4wOucV2/iT/kVdW/68pv8A0A0/wjoltHY6Xrcck63M+j2ttKgf926ohKkr6gu3PvXPV6DRi6x4g8I6xaGLQjb6leQ6Xd+VLYFWWxi8o5EmCNgJCqFIzntwSMrVfE+i6t8E30/Rda0291GDS7YtbxXSSNHtaJSWVTkAMQD9a9WCgZwAMnJwOtLWIzy7bLolr4u0rxI6XGuX2nXF3DqewqL6ARkeWoJOzyicbAehDclmNehaF/yLunf9esX/AKAKdq+mRa1o9zptzLNFDcoY5Ggfa209QD7jg+xNWLa3S0tYreHIjhQIuTngDAoAra3Hpsug3ya6Iv7NNu/2rzjhBHg7s+gxXk3gTVfEr6YqaZYWl7Zhn+zS6jfvbzNDuPll1WFxu2bSeepPFXPH2tyeMfEX/CJ6W27TLGUNqci9J5gcrB9F4ZvfA7Guw0XTI9OskVVwcVtTi9xMpfbPGP8A0AtD/wDB1N/8i0fbPGP/AEAtD/8AB1N/8i10FFb2EYejazqV3rl/pes6da2c9rbwXKta3jXCusrSrglokIIMJ7HqK3K5+z/5KVrP/YI0/wD9HXldBQgCiiimAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFZ91/yMugf9fMv/pPJWhWfdf8AIy6B/wBfMv8A6TyVE/hYHUUUUVyFHMR/8jdrH+5b/wDoJq/VCP8A5G7WP9y3/wDQTV+uuHwolhRRRVgFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAFDXYJLnw7qMEC75ZbWVEUdyUIArnNK+I40XQNOsL3wn4iE1taxQvsityCyoAcfvunFdlUD2dvIcvErH3qJQUgOd/4W7a/wDQqeJP+/Fv/wDHqP8Ahbtr/wBCp4k/78W//wAeroP7PtP+eCflR/Z9p/zwT8qj2SHc5/8A4W7a/wDQqeJP+/Fv/wDHqo6x8T7/AFPS5bHw14e1ey1G4Hlx3d9FCIrcHrJ8sjEkDJAxycZ4rrv7PtP+eCflSrYWqnKwKD9KPZILnLeCfCsWi6ei4LMOSznLMx5LE9yTyTXY0iqFGFGBS1qlYQUUUUwOfs/+Slaz/wBgjT//AEdeV0Fc/Z/8lK1n/sEaf/6OvK6CkgCiiimAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFZ91/yMugf9fMv/AKTyVoVn3X/Iy6B/18y/+k8lRP4WB1FFFFchRzEf/I3ax/uW/wD6Cav1Qj/5G7WP9y3/APQTV+uuHwolhRRRVgFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUVn66+px6DeyaCsD6kkLNbJcKWR3AyFIBB56de9AGfZ/8AJStZ/wCwRp//AKOvK6Cvmrwh8XPG/iT4kx21pYaUl5qSw2k+63l2wxQtK5bHmZyBK+cnsB9fpWojJNaAFFFFWAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFZ91/yMugf9fMv/pPJWhWfdf8jLoH/XzL/wCk8lRP4WB1FFFFchRzEf8AyN2sf7lv/wCgmr9UI/8AkbtY/wBy3/8AQTV+uuHwolhRRRVgFFFFABXM6zFfap450nRbXWb3Sreawu7mVrJYt7sjwKoJkRxjEjdAK6asA/8AJXdF/wCwNf8A/o21qJ6RAn/4QO8/6HjxJ/5J/wDyPR/wgV5/0PHiT/yT/wDkeuworm5pdyjj/wDhArz/AKHjxJ/5J/8AyPR/wgV5/wBDx4k/8k//AJHrsKKOaXcDj/8AhArz/oePEn/kn/8AI9H/AAgV5/0PHiT/AMk//keuwoo5pdwOP/4QK8/6HjxJ/wCSf/yPR/wgV5/0PHiT/wAk/wD5HrsKKOaXcDj/APhArz/oePEn/kn/API9VL/wv4l0aEX2g+Ib7W5IuZNO1PyFE6+iPHGmx/TdlT0OOo7uijml3A47w/4ks9ftGeAvHNExjnt5l2SQOOqOp5Uj/PFbNZvinwb/AGpdDWNCnXTteiUKs5XMdyo6RzKPvL6N95e3cHO0DxP9tupdL1a3bTtXtQPPs5TkgdnQ9HQ9mH44ORXRCakSdHRR1orQAooooAKKKKACub8feKn8FeCr3Xo7RbxrUxgQtJsDbpFTrg/3s9K6SvPPjv8A8ka1n/et/wD0elTLRMBqeKvilJGrp8MEKsAQf7ah5FL/AMJP8VP+iYJ/4OoK9Vsv+PC3/wCuS/yqeub2ku47Hkf/AAk/xU/6Jgn/AIOoKP8AhJ/ip/0TBP8AwdQV65RR7SXcLHkf/CT/ABU/6Jgn/g6go/4Sf4qf9EwT/wAHUFeuUUe0l3Cx5H/wk/xU/wCiYJ/4OoKP+En+Kn/RME/8HUFeuUUe0l3Cx5H/AMJP8VP+iYJ/4OoKP+En+Kn/AETBP/B1BXrlFHtJdwseR/8ACT/FT/omCf8Ag6go/wCEn+Kn/RME/wDB1BXrlITgE0e0l3Cx87aBoHj3w9461jxPZ/DBTcamBiI6xAFgycybef4mAPtXXf8ACT/FT/omCf8Ag6grQ8IXus678RdZudetdStYIplNlEl7KsdsBDEwjmiDbNzLKr8g/NvGeBXplCnJDPI/+En+Kn/RME/8HUFH/CT/ABU/6Jgn/g6gr1yij2ku4rHkf/CT/FT/AKJgn/g6go/4Sf4qf9EwT/wdQV65RR7SXcLHkf8Awk/xU/6Jgn/g6go/4Sf4qf8ARME/8HUFeuUUe0l3Cx5H/wAJP8VP+iYJ/wCDqCj/AISf4qf9EwT/AMHUFeuUUe0l3Cx5H/wk/wAVP+iYJ/4OoKP+En+Kn/RME/8AB1BXrlFHtJdwseJa/wDEf4g+F9Fm1fXfhzHaWMBUSTHV4n27mCjhQT1IHSvTbG7W9tY5kGAyg4z0yK5X9oL/AJIjrf8AvW//AKUR1peDHZ9AiLHJ2L/Ktacm9wZ0FFFFbCCiiigAooooAKKKKACiiigDH1rxLa6Hd2drNbX11cXokMMVlavOxCY3EhRwBuHWqn/CZL/0LviT/wAFEv8AhUl3/wAlP8M/9el9/KGu3rCdRp2HY4P/AITJf+hc8Sf+CiX/AAo/4TJf+hc8Sf8Agol/wrvKKn2sgscH/wAJkv8A0LniT/wUS/4Uf8Jkv/QueJP/AAUS/wCFd5RR7WQWOD/4TJf+hc8Sf+CiX/Cj/hMl/wChc8Sf+CiX/Cu8oo9rILHB/wDCZL/0LniT/wAFEv8AhUdx46t7S1lubrQfEUUEKGSSR9JlARQMkk46AV6BWH42/wCRA8Qf9gy5/wDRTUe1kFiOzvYb63Sa3YlHUMMjsasVyXgGd5tGi8w5xEuPyFdbXQtUIKKKKYBRRRQAUUUUAFZ91/yMugf9fMv/AKTyVoVn3X/Iy6B/18y/+k8lRP4WB1FFFFchRzEf/I3ax/uW/wD6Cav1Qj/5G7WP9y3/APQTV+uuHwolhRRRVgFFFFABXD+MNXudB8XW2p2KxNcW2g37xiZSyZ861HIBBI59RXcV5/4+s7nUPEMdrYwPcXEnh+/EcUYyznzrTgVnU+FgjodW1DxnY+ItI02DUtCZdTMiCR9LmzGY4t5OBcc5IOB2z1NaqeMtNi1D+ybuZzqkTmOaFISpAWMO023JxFgjDZPJC5J4qzc6V/a+raFrPmSW/wBg8yX7PJF8zeZFtweflIz7+lZ3/CGynxc3iN9UZ72RzDIhh/dNZY4t9u7qG+ff13E8YO2uUog0fVvFur6dpuvQw6YdOvzHKNN8t1uI7eTBD+cX2lwpDFNgHUA55M0nxE0hLw2yWupSsbuWxjaOzYrLcRlg0SnucIxz93APIwcRWPg/WbGzs9Hi8SbNDspIzDFFbFLsxIQUhacSY2jAUkICVGM8kmzbeDvs82nyfbt32LWrvVceTjf56zjy/vcbfP8Avc529BngAj/4WLo7RxNb2+o3DPbNdPHDaMzRRo7RuXHYqyEEdeOAaoz/ABBkj1z7Pa2gvrOa/tba3mtwSTHNb+bvPPPt04+lUoPBuvaf4jlh0jU4re3lsJlku5rLzFLTXcsu1QJBh1EnBJIPcel8fD4adHG2lah5QtLi0nt0ltjLtW3g8nYQHUsWXPIxg44NAHZXAna1lFo8cc5QiJ5ULqrY4JUEEjPUAjPqK4zSNb8VNrGupq1zpdxZ6HMI5o7HTJRNcA26TfJmdgD+8Axhs49+Ogt/EUdxcRwjTNVjMjBd8lk6que5PYVFF4furS48R3On6isN1rMyzRSPb7xastvHCONw3/6vd2647cgGTqfjmO50kah4Uube6ggvbKGeWSBnjlW4kjXajhlw6rKrHhgOARk8dnXnWoeDpvDvhv8AsjRGu7+zudSsJo7cx72t3S4jknkaTP3WCFyMcMWx94Aei0AFYXifwnZeJ7aIyu9pf2xLWd/BgS27e3qp7qeCPwI3ap6rqtjoelz6jq11HaWduu6SaQ4Cj+pPQAck8CgDiNM1++0rVU0DxdGlvfsD9muY8+RfKP4oyejDuh5HuOa6oEMMjkV5nfalqPxN1e2aa0ks/D1nOtxbWsgxLcSKcrLIf4QOyD/gWeg6mD4f+ERCok8KaGWxznTof/ia6oOTWpJ0lFc//wAID4O/6FPQ/wDwWw//ABNH/CA+Dv8AoU9D/wDBbD/8TV6gdBRXP/8ACA+Dv+hT0P8A8FsP/wATR/wgPg7/AKFPQ/8AwWw//E0agV/Hnjmz8AaNaapqVrNcW094ts/kkbkDI7bgD1+50yOtcT8UvGGg+L/gbrNz4f1KG7ANuXjBxJH+/j+8h5H5Vc+Jvwjs/EXh6zsfB+i6Ppl39uR5rmO2SHbCEcHJVckZK8fT0rh/GnwZ0XwJ8JNV1Izzahq6+SouHOxEzMgIVAfQ9yfwrOTlr2A9+1fxM/hzT7F20TUL+GbyIBLavAAskrrGikSSKclmXnGBnk9a1LbWbaWANdlbC4DJHJa3E8Zkid/uI2xmGW4wATnNUNZ0mfWfDun29q8aPFeWN0xkJAKQ3EUrDgHkqhA98dOtZ2qeE7+/8e23iJDZBLMJClu5b99GQ4kdzt4kXzD5eM4G8EjzDt5ii7YeMY9RltZLfSNS/s28k8u21LYhil67W2hi6o2OGKgdOgIJuHxZ4cG7Ov6WNrKrf6bHwW+6Dz1OOPWsjQtK8T6RY6XoavpyabpoSH7csrPNPBGMInlFAqMQFDNvPQkDnjKX4eXi+H47EGwEy+HLrSi2TjzpSp3Z2525BJPXnoaAOyk1/SUupbRdRtZLyJGdrVJ0MuFGT8mc8VPpl/Fquk2moW6usV3Ak6K4AYKyhgDjvg1wGn+G9Y1C4vbd7a0trWLW5bv7WzuJpCItgAXZjBzjfu+7kYrpNH1Wx0HQ9P0e+nc3NjaxW0pitpWQsiBTg7ORkdaAG2XjOS51m50+48O6nYmzRJbq4uZrURwIwYhmKzE4+RugOO9dDDeW1zI0dvcwyuqK7KjhiFbO1sDscHB74rIi0m9tfEWuapD9nl+3WsEdvE7lcvGJMhztOFJccjPfiqPgXwrdeEbK6sZ5ba4hmdJ1ljBVw5QK8e3H+rXaAnOQuFx8uSAdXSNnb8uM+9LRQBE8rRRhpFzyF+UE8k4HAHv+FRXUKX1s9rcK3lTKUcKxUkEHIzwR+FWH+6PqP51XSAC8mkjIUsVLDaOTjGc9ScYHJ/hFAFfSNBsNCglh0uJoVmk8yQly7O2AuSzZJ4UDr0FWXuWEZWPyXn8sukbS7d2MexIGSMnBxmpVYt92RD9B/wDXqJVZPMDSF+DjIA28LwMfnznrQBz6eMblvEj6RL4b1KBoY0nmnkmtvLjhZ2USkibO35GOMbsDpV/V/E0Gm6c93Z20mrCKEXEkdjNCXSEqxEuHdcqdpwRnPak/sq7j8YXusxGB45dMitYo2cqTIkkr88HCnzF5GT149cHw/wCCdQ0Tw9rmmNLZSf2pCzrIgZfKmdCrRAY/1K/Ls7gEjHHIBtab4shvIIpr+xn0eKaHz0e/ntxlMoAcJKxGTIB9Rg4yM27fxNod46R2OsafdSyRtJFHBdxs0irnJUA8gYPPQYrm9Y8E32pW+mxCS0K22nRWkqyM2GK3FvI2Pl5BWFhz3I98STeDLtr6WeJrRPM1yTUSckExtZtBj7v3tx+mO/agDoLfxJpM7WkTahaQ3V0itHavcxmUllDYAVjk4IPy5GOQSOaeviHRmuLiBdXsDNahjPGLlN0QX7xYZyuO+elcjp/gK+tNGNtJJZm4N1pE3mKzfdtPs/mDO3OT5Um3/eGcZOOfsdFv9WuLPRI9Pt5IdM0y9tTPOlxCZC8ke0StsUozbScoz8guD0yAekQ+J9MutSsbSzuEukvo5WgureRZIWaPbuTcD97DZA9Fb0ptt4r0ict515DaA3clpB9qlSP7S8bbG8sE5YBsr65B46VzsfhTxAvh+YrdWo1iDUVvtOaeYyiPCLGyyyiNWfcvmLuKkgMBlsVS1b4b3hVINKmjntpNIj0yVZ7uSD7rOWkYIp8zf5hLLlTlRzzkAHY6p4p0TRo7w3+p2qS2Vu1zNb+cvmqgGc7M5+nrkVND4h0eea0hj1SzM95GJbeH7Qm+VCMgqucke4rlLvwdq8thqukxR6VJa3sl3Ml/cM7zo00LoAF2/KQXxv3H5BjHPA/hPXJ2uYZY9OSLUbyyvZ5xcO0lq0CwgxxjyxvH7nKsSuC7HHHIBj/HXVLDUvgl4gGnX1tdmGS2WUQTK/lkzxkBsHg49a2vBX/Ivxf7i/yrlvitor+H/wBmzUtPmEPmxvEztD91i12rZ5AP8VXfCPgnwrc6HFJc+GdHmcquWksImJ49StbUtxM76iuf/wCEB8Hf9Cnof/gth/8AiaP+EB8Hf9Cnof8A4LYf/ia31EdBRXP/APCA+Dv+hT0P/wAFsP8A8TR/wgPg7/oU9D/8FsP/AMTRqB0FFc//AMID4O/6FPQ//BbD/wDE0f8ACA+Dv+hT0P8A8FsP/wATRqB0FFc//wAID4O/6FPQ/wDwWw//ABNH/CA+Dv8AoU9D/wDBbD/8TRqB0FcL4k+LOheEfGqeH/ECzWyy26Tpequ+MbiwwwHI+71Gevatr/hAfB3/AEKeh/8Agth/+JrzPxn8CP8AhKPH0dxpS2Gg6GlrGsgtYFVnk3MW2xqAM4I+Y/rUycraAeix6hZ6r8QvCt5pt1Dd20lpfFJoHDq3EPcVBrSeLrTxzo2k2/jGRLfVhdSf8g2AmERBWVRxz97GT6Vk+FvAWieA/Hvh200KKXM1remeaaQs8pAiwT2HXsBXe6roVzfeNvD+sQvCLfTI7pZlYnexlVAu0YwfunOSPxrnnfm1KKd3420/w20uma5PdTajaW0LqfIUPqJc7AYVU4Zi+FK8YJHbmsfxa3iuw1zRRYeKZLW31nUvsv2drCBzbKYZJOGwdxBjA5PerPinwZrPiHxGutRX1tbXGjqraEmWK+acGVp/l6MAI8LnC5bqcDY8QaHe61e+GrlDbxNpmoi8uULsQV8iRCEO3k7pB1xwD9KgDKXxUvhX+2R4j1e71X+y1sxMyWCIVM8jIpUIfmySuRjjbxkmib4oWNub9J9B15LjTYxPeQfZULQQkZEpIfaVIB4BLfK3y8Gma/4I1LVb/wAQT281qqanLpbwiR2BUWs/mSbsKcZHTGcnrirmoeFL661LxhcRy24XXNKhsrYMzZR0SZSX44GZV6ZPB49QCO78eadpV9qtxdXV1dWkAsAkMFqDs+0FghUg7n3HGRjjHGc1MvxE0tLXUpNQstR0+400wiWyuYAZpDMdsOwIzBt7AqMHqDnFYr/D3VWlkb7RZ4eTRmHzv0s33S/w9x93174pPHPh6SC81jxLcXsFpCq6ZJaysjyCKa2nkfMqqOIz5igsCcDcTjFAGv8A8LJ0qH+011Ow1PTZ9Lto7m4guoFDbXYqgXazBiSMcHHPJGDhut6+NZ8C+KoZNM1DTbi20yYvFfRKpIaJ9rKyMysOD0bI7gVy2ltqvjbxN4nuoJdBvFfSLWzjeAtd2JcSyu0LOVHmZB+YgfLvHBI5tx+FNQ8O+EfGE80Nvpenz6PKkGk2l9LdRROscm6QNIq7NwKjaoAwuetAE/w8/wCQNH/1yX+Qrsa474ef8gaP/rkv8hXY12R2JCiiiqAKKKKACiiigArPuv8AkZdA/wCvmX/0nkrQrPuv+Rl0D/r5l/8ASeSon8LA6iiiiuQo5iP/AJG7WP8Act//AEE1fqhH/wAjdrH+5b/+gmr9dcPhRLCiiirAKKKKACsA/wDJXdF/7A1//wCjbWt+uQ1vX9J8O/FDQ7zXdQt9Ptm0q+jEtxIEUsZbYgZPfAP5VnU+Fgj0eiuR/wCFreA/+ht0n/wJWj/ha3gP/obdJ/8AAla5SjrqK5H/AIWt4D/6G3Sf/AlaP+FreA/+ht0n/wACVoA66iuR/wCFreA/+ht0n/wJWj/ha3gP/obdJ/8AAlaAOuorkf8Aha3gP/obdJ/8CVo/4Wt4D/6G3Sf/AAJWgDrqK5H/AIWt4D/6G3Sf/Alax/Evxv8AB2i6YZNM1az1a9kOyC2gnAUt6u/RFHcnn0BoA63xP4q0vwlpRvtXlYbjsggiG6W4fsiL3P6DqSBzXmEdlrXxB1iLVPE6+Tawvvs9MRsx2/ozH+OTH8XQdgO+T4e1HSPE3iVdU8R+KNN1DWbg7IokuFCwqf8AllEmeB+p6kk16/aW8MEIWEDA7it4Q6sRFYadDYQqkagYHpVyiitxBRRRQAUUUUAFeefHf/kjWs/71v8A+j0r0OvPPjv/AMka1n/et/8A0elTL4WB6hZN/oFv/wBcl/lU+6qVm3+gwf8AXNf5VPurjKJt1G6od1G6gCbdRuqHdRuoAm3Ubqh3UbqAJt1G6od1G6gCR2+UfUfzqMSI0kgKtlWwTsPPAPB79aZKz7B5QVm3LwzYGMjPY9s//W60u9/Rf++v/rUAORl43B/ujGR2/CkeVQ2xQwyjHO047d+n+famIzAcKvQZ4K80krSmF/LRC+07QzkAntk4OPyoAt7qN1Q7qN1AE26jdUO6jdQBNuo3VDuo3UATbqN1Q7qN1AE26jdUO6jdQB55+0A2fglrf+9b/wDo+OtPwV/yL8X+4v8AKsj4+tn4K61/vW//AKPjrX8Ff8i/F/uL/KtqW4mdFRRRXQIKKKKACiiigAooooAKKKKAMC7/AOSn+Gf+vS+/lDXb1wfiXT9ZOtaVrPh+4s47iwjnjaO8geRXEgTptdSCNn61kP4p+IyOVEfh847/AGOf/wCPVzzi3K40ep0V5X/wlfxH/wCeXh//AMA5/wD49R/wlfxH/wCeXh//AMA5/wD49WfJIZ6pRXlf/CV/Ef8A55eH/wDwDn/+PUf8JX8R/wDnl4f/APAOf/49RySA9Uoryv8A4Sv4j/8APLw//wCAc/8A8eo/4Sv4j/8APLw//wCAc/8A8eo5JAepqoRQFAUDoAKxPG3/ACIHiD/sGXP/AKKauH/4Sv4j/wDPLw//AOAc/wD8eqpqmtfELWNHvNNuF0JIryB7d2Szm3KrqVJGZeuDRySA1vh5/wAgaP8A65L/ACFdjXPeEtLfS9OSGTkqgUn1xXQ11rYkKKKKYBRRRQAUUUUAFZ91/wAjLoH/AF8y/wDpPJWhWfdf8jLoH/XzL/6TyVE/hYHUUUUVyFHMR/8AI3ax/uW//oJq/VCP/kbtY/3Lf/0E1frrh8KJYUUUVYBRRRQAVgH/AJK7ov8A2Br/AP8ARtrW/WAf+Su6L/2Br/8A9G2tZ1PhYI7bA9KMD0rN1DxLoWkTtBqutafYypGJWjubpI2VC20MQxHBPGemeKbpfijQNbuWt9F1zTdRmRN7RWl3HKyrkDJCknGSBn3rlKNTA9KMD0qC+v7PTLOS71K6gtLaMZea4kEaL9WPApmnapp+sWYu9Jvra+tmJAmtpVkQkdRlSRmgC1gelGB6UtRXFzBZ27z3c0cEKDLySuFVfqTwKAJMD0owPSkWRHLBHVih2sAc7T1wfzFUNV8Q6NoXlf25q9hpvnZ8r7ZcpD5mMZ27iM4yM49RQBoYHpRgelQWOoWWqWaXemXcF5bP92a3lWRG+jAkGmrqdg+qPpqXts1/HH5r2olUyqmQNxTOQMkc4xzQAmpaXY6xp0thqlpFd2sy7ZIpVDK3/wBf37VwlzpmueBWMtj9p13w+vJjOZLyyX27zIP++x/tV6NRTUmnoBzGk6zY63YR3mm3MdxBIMq8bZB/z6VfrF13wM/2+XWvCFxHpmqyHdPCwP2a9P8A00Ufdb/povPqG6VW0XxUt3evpWsW0ml6xCuZLOcjJH99GHEif7S/jg8V0xmpE2OjopAcjIpa0AKKKKACvPPjv/yRrWf963/9HpXoWcYz36V578d/+SNaz/vW/wD6PSpl8LA9Fs2/0GD/AK5r/Kpt1VLNv9Bg/wCua/yqbdXGUS7qN1RbqN1AEu6jdUW6jdQBLuo3VFuo3UAS7qC+Bnr9Ki3UbqAH+Ycfdb9KVXLMFUcn1NQs2SufX+hpkMjrdHcgMajIIbnOWBGMdOBznueOOQC5sk/2fz/+tUXmkKCVPOOlSfaV/ut+lUY3k3SLIoUKyhcOTkccnjg5yMc9B9AAXBJk42kfhS7qi3UbqAJd1G6ot1G6gCXdRuqLdRuoAl3Ubqi3UbqAJd1G6ot1G6gDz/49nPwX1n/et/8A0fHW34K/5F+L/cX+VYHx4bPwZ1n/AHrf/wBHpW/4K/5F+L/cX+VbUtxM6KiiiugQUUUUAFFFFABRRRQAUUUmaAOY8Q2k2q+NfD+ljUr+xtp4buSUWU/lGQoI9uTjoNxrQ/4Vza/9DD4i/wDBif8ACoLv/kp/hn/r0vv5Q09PiXaTW1xd23h/X7iyt5ZY3uobNXTMblHIw+4gFT27VzVG+YaJP+Fc2v8A0MHiL/wYn/Cj/hXNr/0MHiL/AMGJ/wAK6fT7+11XTbbUNPmWe1uolmhkXo6MMg/ka57xH49t/DN55N7oetTxtLFClzbWytFJJIQFVSXBJJYDp1rPmYyH/hXNr/0MHiL/AMGJ/wAKP+Fc2v8A0MHiL/wYn/CtjSPEB1aZY20bVbAtGz5vbcIBggYJDHk5yB6A1sUczA4//hXNr/0MHiL/AMGJ/wAKP+Fc2v8A0MHiL/wYn/Cun+2f8TQ2X2a44h87z/L/AHX3sbd397vj0qzRzMDj/wDhXNr/ANDB4i/8GJ/wrM8TeB49M8J6vf2niLxCs9rYzTRE6gSAyoSOMeor0OsPxt/yIHiD/sGXP/opqOZgY3hbVG1PSYXd97+UpZj1JwK3a474ef8AIGj/AOuS/wAhXY12LYkKKKKYBRRRQAUUUUAFZ91/yMugf9fMv/pPJWhWfdf8jLoH/XzL/wCk8lRP4WB1FFFFchRzEf8AyN2sf7lv/wCgmr9UI/8AkbtY/wBy3/8AQTV+uuHwolhRRRVgFFFFABWAf+Su6L/2Br//ANG2tb9YB/5K7ov/AGBr/wD9G2tZ1PhYIv6cof4o+IgwDD+y9O4I/wCml3XO6ZcjTvg/eXVvdSWV2uoXwtZIEDO832+Xy4wv8e5sLt7g9R1HcJoltH4km1uOSdbme3S2lQP+7dULFSV9QXbn3rSrlKPKLfVXkuPD+r+MLjCWeo3a6rHOAIdMuygEKnqFjVchXPB8xWyN1aGo6xpup3yt4QuJrZb7Wba2vtUsivl3eYn3Kj8hiAqgsBxkckjj0c89aQAKAAMAdAKAPKEv9Y06G3u/7d1C4P8AbWoaX5c7qV8iOG5aPPHLhoUO88nkHism51yTUPCBSy1+bXI7nQPtOqeZIri2uPMh2dB+7LbpRs/2M44JPtNzAl1ay282THKhRsHHBGDTLCxh03TreytVIht4liTJydqqFGT34AoA5bwGkMOqeK4Fu3luF1h2kgkl3NErIpU7eoDc4PfHtUHiuLVJviT4aXQ7qztrn+zdRO+9tmnQjfa8bVkQg5xzn8DXU6jpjag0ZXULyz2A5+yuq7vrkGpNPsWsIGja8ubss27fcuGYcdBgDjigDyi31PU9K0O9OlzE+NpdbZrnSI4wsM8piUMoTPEJhUSCQnORknJK10nh+6ivfF3hq4gv5tQWTw9eFrmcbZHfz7XduX+Ehsgr/DjHau+rO/sS2/4SUa40k7XS2zWqIz/u0RmVmwvqSi8+1AGjRRRQAVz/AIy0rw/qGhST+J5I7W3s/wB6l8ZfKktG/vpJ1U/z6EHpUHi/x5pfhFEglD32qTrm2023IMsnbceyJnqzcdcZPFcBHouueOdTj1LxfKrxxtvttOiz9ntvQgH77/7bfgAOKqMW9gLHhPxF4pvo5o7CztNUsY5StrfajcPYy3MfZzEsUmO/J2567RnFdN9s8Y/9ALQ//B1N/wDItaWn6XDp8IWNcECr1dSTtuSc/wDbPGP/AEAtD/8AB1N/8i0fbPGP/QC0P/wdTf8AyLXQUU7AeI/HnUvE9t4H0+e8tLLTPK1SNorjT9UlllV/KlxgGGPAxnkN+HPHE6h4r+IWvfBjVU8SacbjR8QbNUuB5Up/fJtwP+WgPTOPUknpX0zqGlWGrJAmp2cN2lvKJolnQOEcAgNg8ZAY/nXDfHb/AJIzrP8AvW//AKPSs5ReruBf8YWSS6Fpl0tzfQTfbNPtiba/mgBjkuYkcFUcA5VmGcZ5606fX7nRfFtl4Ys1hkgnRHjnuJpJHjXDlo3ZmJLvsOwk9A/B2YboI4YbnTrdLmKOZFEcgWRQwDKQytz3BAIPYgGlfT7GR5Hksrd3kkSV2aJSXdMbGPHJXAweowMVzFHK+HPs82h6Dr1/rd8mpXzR+cDdO0cszg77fySSihTkcKCuzOepqmPGviY6SL7bpIDaPLqqp5EhwIiMx58zktuB3fw9MN1rsItD0iDVH1KDS7OO/cktdJboJCT1+bGee9Sf2Zp3kiL7Ba+WIWtwnkrt8o9Y8Y+6cDI6UAcxJ4t1VzPK32MWbahJpyRRq3nr+7LCTduxkd129Oc9q6TwxcST+EdHmnkaSWSxgZ3diWYmMEkk9TVWw8MaTYX9zfJZwSXdxK8hneFS6hhgoGxnbjt7086ZeRkJZ6q9rboAsUEdtFtjUcBR8vQCgDgtLudSMmjzO1/bNd6s6f2nPq80kLqs75hMGSoLopRcgAHoc4B6/wAPeKbzVvE2paVcLaqum7leWPd/pJLkKY8ngKAVfr8/HGOdptPsWsvsbWVubXdv8gxLs3bt2duMZ3fNn15oh0+xtmha3sreJoFZYikSr5YYgsFwOASATjrigC/uo3VDuo3UASM3zJ9f6GmID5jP5jAHjbxgYJ56Z7/oKjeTayZ3HLY4BPY/lSDyh0jAySThO5oAsZJxyyfKOM9ffkVBLmNLhvMZiwDDOPl7YGB7Z/GnPwy+auTsBHfiozsOdqDLYB+XqAf/ANdAHmfhK41Rj4QMj3tlLe2SzveXmqzXUd//AKPkp5TMVDksJP4SApxnBxrQa7P4x8J61cXbG0bTYmEf2C7mhZ5VjJMwZGXMTZBQHOQMnPQdhJpenTWMNlLYWr2tuFEMDQqUj2jC7VxgYHAx0FOXT7FQwWyt1Dwi3bES/NEM4Q8fdGTx05NAHEnVLjw1Z6cdN825nudNSctf3txODI81vGfvOcDEhPA47dSDdTxRrsV6YdQOnywrqMumuYIZI2ci3aZZAS529ApXnudw6V1Emn2Evl+bZW7+WgRN0SnaoIYKOOACqnHqoPalawsmYs1nbkmUzEmJf9YV2l+n3tvy5644oA4/S/F+sPYW1wqWYsoZdNtpI3EjyyfaVhBIcvwVM2ckMWA5IPJP+E31s29pdJHpjrqNjc3VvbEmOSFo2QKjsz7WPz4P3PmGPeuuTTdPjh8qOxtlj3RtsWFQN0e3yzjHVdq49Nox0FYtj4J0611ee/uCt280csTJLbxAOshBbzCqgyH5QMtnjPck0AZ8XiW6E9pq+o3PlRWV22n6lD5MlusayojRu8bMwDB/LAIZhtkJB5IFBfF+u6dFKY7VppZLQ6zMtwpYLHK7+XACXURBUjALfMATnHWu1j0XSYdMk06LTLNbGUkyWwgXy3z1yuMHoOtOvtJ0zU5IpNR0+1u3gOYmnhVynQ8EjjkD8hQBy2teJ9Zl8P61e2V1p9hDD9rtoY5Q32gPFE7blbdhmJUkJgYX5snGDYPirVrcTyO1lJBp11aWVxGYnEtw0yxEyId5CgecMKQ2SpGRXQPo+lSX8l7Jpto11KhSSdoFLupGCC2MkY4+lMTQdGjuLeePSbFJrVAkEi26BolHQKccAZOMdMmgDzj4lanqWs/ALV9Q1P7Konlh8mO3RhsUXKr8xLHJOM8AYzjnrXR+EbvxWuhxC20XR5E2rgyavKh6egtj/Os/41ww23wX1aG2iSGJWg2pGoVR+/Q8AV1ngr/kX4v9xf5VtS3Ex32zxj/0AtD/APB1N/8AItH2zxj/ANALQ/8AwdTf/ItdBRW9hHP/AGzxj/0AtD/8HU3/AMi0fbPGP/QC0P8A8HU3/wAi10FFFgOf+2eMf+gFof8A4Opv/kWj7Z4x/wCgFof/AIOpv/kWugoosBz/ANs8Y/8AQC0P/wAHU3/yLR9s8Y/9ALQ//B1N/wDItdBRRYDn/tnjH/oBaH/4Opv/AJFrwX4seJfGGifFy2uNPb+zdSexiVYNNuXuUlG98Aho03HOflKmvpqqY0nTxqzap9jgN+0YiNyUBk2DOFDdQOTxUyi2twPP/A+reLtX8YeGZvG+jw6Zci0vfKKPhpRiLJaPnYenfnPQVBpeieKbj4bahfeHvEN+I11G/Z9IhigXzoxdSh0jlMZdXYZIOTyccdu0u/8Akp/hn/r0vv5Q129c89JFHiXiC6sb7TNDb4ZG82Jo4GoR2TfOmljgpznE+VYJ/FkSV1njCTTZvAfhmTQmjbTW1jSjamI/L5f2iPbj8K9BoqAPJ/ipLJHqeueXIy48G3jDBxg+dHz9alXwN4ff4mf2VLY+ZYT6F9ont3lcpPOJtomcZ+aTDN8x55z1r1OigD57mvry68BrNNdTGZ/Atuxl3ndu+0Y3Z9feuo8R6NL4b1zWrLwNBJaXF14Wnm8q3di0sySqokGTzLtZgG6kkV65Ve/s49R064s5mkSO4iaNmikKOoIxlWHIPoR0oA8YdvCJ8UWcfga7nghk8P6j9qk04O7o2yIK+3vOMkkffztz2qHRLixg0rxJYaaNHvVfw1cSPqGhTOIjtXAFxCSQkzbic7i2A2a9U0nwkun6wmqX+sajrF5DbtbW8l8Yv3EbFSwURooJJVcsck7RzUnjRVXwB4h2gDOmXJOB1PlNQByfw8/5A0f/AFyX+Qrsa474ef8AIGj/AOuS/wAhXY12R2JCiiiqAKKKKACiiigArPuv+Rl0D/r5l/8ASeStCs+6/wCRl0D/AK+Zf/SeSon8LA6iiiiuQo5iP/kbtY/3Lf8A9BNX6oR/8jdrH+5b/wDoJq/XXD4USwoooqwCiiigArAP/JXdF/7A1/8A+jbWt+ue8R+GTrN9a31vfX1jeWsUkUctnOYmKuVLA46jKL+VRNXjYDuaK8mPg/xFk48V6/j/AK/2o/4Q/wAR/wDQ16//AOB7Vh7OQ7nrNFeTf8If4j/6GvX/APwPaj/hD/Ef/Q16/wD+B7UezkFz1mivJv8AhD/Ef/Q16/8A+B7Uf8If4j/6GvX/APwPaj2cgues0V5N/wAIf4j/AOhr1/8A8D2o/wCEP8R/9DXr/wD4HtR7OQXPWaK8m/4Q/wAR/wDQ16//AOB7Uf8ACH+I/wDoa9f/APA9qPZyC56wzBVLMQABkk9q8x8QfEy61a4fSvh6EmYEpNrLruhiPQiIdJW/2vuD/a6VRm8A6pqMRttW1/Wb20c/vLa4vmMcg9GA6j2PFdZo3hy00qBEiiVQowABgCqjTfULnO+GPAsVlJJeXryXN5O2+e5uG3yzN6sx6/ToO1dvFCkKBY1AAp4GBgUtbpJbCCiiimAUUUUAFeefHf8A5I1rP+9b/wDo9K9DrO17QtP8SaLPpWsW4ubSfbviLFc7WDDkEHqAaTV1YDOtNc0r7FB/xM7P/Vr/AMvCen1qb+3dK/6Cdn/4EJ/jXEXHwI8KPJmDSkRfTz5P/iqi/wCFDeGf+gan/f6T/wCKrn9lIdzvP7d0r/oJ2f8A4EJ/jR/bulf9BOz/APAhP8a4P/hQ3hn/AKBqf9/pP/iqP+FDeGf+gan/AH+k/wDiqPZyC53n9u6V/wBBOz/8CE/xo/t3Sv8AoJ2f/gQn+Neaan8I/AOieV/bL6fp/nZ8r7XfmLfjGcbnGcZHT1FT2XwV8G6lardadBa3du/3ZoLtnRvoQ2KXs2Fz0T+3dK/6Cdn/AOBCf40f27pX/QTs/wDwIT/GuD/4UN4Z/wCgan/f6T/4qj/hQ3hn/oGp/wB/pP8A4qn7OQXO8/t3Sv8AoJ2f/gQn+NH9u6V/0E7P/wACE/xrg/8AhQ3hn/oGp/3+k/8AiqP+FDeGf+gan/f6T/4qj2cgud5/bulf9BOz/wDAhP8AGj+3dK/6Cdn/AOBCf41wf/ChvDP/AEDU/wC/0n/xVZ2p/Cf4f6LJGmszabp7yAlFutQMRYDuAzjNL2bC56YNb0kdNSsx/wBt0/xpf7d0r/oJ2f8A4EJ/jXmmm/CLwHrG7+yG0+/2AFvst8ZcAkgE7XPcH8jV/wD4UN4Z/wCgan/f6T/4qj2cgud5/bulf9BOz/8AAhP8aP7d0r/oJ2f/AIEJ/jXB/wDChvDP/QNT/v8ASf8AxVZ1v8JvAF3qkmm2sunTX0ed9rHflpVx1yofIxR7OQXPTf7d0r/oJ2f/AIEJ/jR/bulf9BOz/wDAhP8AGuD/AOFDeGf+gan/AH+k/wDiqP8AhQ3hn/oGp/3+k/8Aiqfs5Bc7z+3dK/6Cdn/4EJ/jR/bulf8AQTs//AhP8a4F/gT4WTG+wiXcdozO4yfT71O/4UN4Z/6Bqf8Af6T/AOKo9nILnef27pX/AEE7P/wIT/Gj+3dK/wCgnZ/+BCf41wf/AAobwz/0DU/7/Sf/ABVH/ChvDP8A0DU/7/Sf/FUezkFzvP7d0r/oJ2f/AIEJ/jR/bulf9BOz/wDAhP8AGuD/AOFDeGf+gan/AH+k/wDiqP8AhQ3hn/oGp/3+k/8AiqPZyC4fGrVdPufhLq0VvfW0sjNBhEmVif3yHoDXbeCv+Rfi/wBxf5VxSfAbwuHBbTUI7jz5P/iq9M02xXT7UQoMKoAArSnBx3BluiiitRBRRRQAUUUUAFFFFABRRRQByfiHWtM0L4h+GbvWr+2sLb7NfL51zKI1yRDgZPFbn/Cy/A//AEN+if8AgfH/AI1ZurVLuLZJ0rCk8G2UkhY7eT6VjKnzO47mp/wsvwP/ANDfon/gfH/jR/wsvwP/ANDfon/gfH/jWT/whVl/s/lR/wAIVZf7P5VPsmFzW/4WX4H/AOhv0T/wPj/xo/4WX4H/AOhv0T/wPj/xrJ/4Qqy/2fyo/wCEKsv9n8qPZMLmt/wsvwP/ANDfon/gfH/jR/wsvwP/ANDfon/gfH/jWT/whVl/s/lR/wAIVZf7P5UeyYXNb/hZfgf/AKG/RP8AwPj/AMax/F/xF8GXXgjXILbxVo800unXCRxx3sbM7GNgAADySe1O/wCEKsv9n8qUeC7IMD8vB9KPZMLlX4eqy6LHuGMxL/IV19VbKxjsY9sfTFWq3WiEFFFFMAooooAKKKKACs+6/wCRl0D/AK+Zf/SeStCs+6/5GXQP+vmX/wBJ5KifwsDqKKKK5CjmI/8AkbtY/wBy3/8AQTV+qEf/ACN2sf7lv/6Cav11w+FEsKKKKsAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAOM8URalL8Q/Dq6Nc2ltc/2fqB33ds0yEb7bjaroQc45z+Fcmmp6hplg8T3MNlfXWtyf28Wn+xxQP5P7sJIEcxxuEQhyMseCQSa9fpCAQQRkHqDUuIHkd94j1SPQ9PuLnxDb7PLuynlXzW5uFWQBHSZ4QkzKvG3AD/e5FWbrxLO+pavJDrt3FqcNzZf2bpMhVDKJIYGZTFjLbizbv7nJGOteplQcZAODkZHSqlrpltZ319dwqfNvpVlmJOfmEaxjHp8qClZgefx6/ef2hERrMz62+rTW9xpG5SsVsHcA+XjKgRhHEnckckHFV7XUdYtNA0m5bxDd+bq3hia9nnuU81YZlFuVkVVXIAEzA4B4wSCRXqeBuzjnpmlp8oHkZ8U6l/ZYgtb8G3GpxxXd62rLJbRxtCzBUuxGWUF1UEsuRvAyNwI0r+7udR+DerTX9zBfFXdILiF2lDRiUAfvCib8cjcBg4zk8mvSQqhdoUBfTFL06UcoHAeLtQv7PWtSt9Ou3s/9F0sI8SrlDLfPG5GQeq8c8VV83U9P1O9ZNb1CaPT/ABFZ2EMU0gZWhmWAuH4yx/ftgnpgY759JoosB5Fomt+JtXXyF1S2GqXlndi5shfNJLBKEbYPKEIEBR9q5L4IPVjg1v6NrXhOXR/Del2sUdzfW7xLDp8IH2iylVcO8iZDIF+bcT1z3yAe9wASQOT1NGAGJAGT1PrRYDym08QanNp9k1jrNxea3dWV02qaeCrGykWF2GEAzGVlCIP7wbueafqfjCbUkhTQddLA2Fj5k1syv5csl5CjZ4I37WIIPTPI5r1PABJA5PU0AAdBj6UuVgeX6rvt9YW01DV7s2em+IbXy57icAxrJbZwz8ZG84Gf72PSq2k+Jdenvw1zqlsl4/2wXlj9taSSIIkhUeQIQIdpCYYvhh3YsK9a60mBnOOT3p8oGH4NiuF8JafPe39zf3F3BHcyy3DAkMyKSFAAAXPQe9btFFMAooopgFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFZ91/yMugf9fMv/AKTyVoVn3X/Iy6B/18y/+k8lRP4WB1FFFFchRzEf/I3ax/uW/wD6Cav1Qj/5G7WP9y3/APQTV+uuHwolhRRRVgFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFZ91/yMugf9fMv/pPJWhWfdf8AIy6B/wBfMv8A6TyVE/hYHUUUUVyFHMR/8jdrH+5b/wDoJq/VCP8A5G7WP9y3/wDQTV+uuHwolhRRRVgFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAFbUrv+z9Ku7wJv8As8Dy7M43bVJxn8KwrC68d6lptrfW+jeHliuoUmQPq0+4KwBGcW/XmtPxJ/yKurf9eU3/AKAa1fCn/ImaL/2D4P8A0WtY1JNbDRz/AJfxA/6BHhv/AMG0/wD8jUeX8QP+gR4b/wDBtP8A/I1drnPSlrL2ku4WOJ8v4gf9Ajw3/wCDaf8A+Rqqalqvi/w/ZNqWuaLpJ02Ag3T2F/LNLDH3k2NCoKr1POQMnnFeg0jKroVdQysMEEZBFHtJBY5+yvor+3WaB1ZWGQVOQRVmuFhgf4f+Kl0ds/2Jfsz6W56Qnq1sT7dV9VyP4TXcI4kQMpyDXTGXMriHUUUVQBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABWfdf8AIy6B/wBfMv8A6TyVoVn3X/Iy6B/18y/+k8lRP4WB1FFFFchRzEf/ACN2sf7lv/6Cav1Qj/5G7WP9y3/9BNX664fCiWFFFFWAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAZniT/kVdW/68pv/AEA1wc+630vV9Qth5d1b+FdHQXca/vbeB3nE7I3VfkBOR/dB7V3niT/kVdW/68pv/QDTfCGhGKGw1pbolLzRLO1mtWjBU+WrFW3df+WrAj6Vz1eg0Zes6L4Q0G1ZtFjg0++u9LuxDHYjAvIxEWLS7R84HBDsep65bBb4klI+AitCBJIumWpCBsbj+74z2rrrDwt4f0o3B0zQ9OszdKUn8i1RPNU9VbA5HseKhtPBXhawaU2PhrR7YzJ5chhsIk3rkNtOF5GVU49QPSsRnCT2y6jp/jGHxvawTeI49OlkSJ/3sCWm0tGbcMBwHUbjjdvUE8bAPR9C/wCRd07/AK9Yv/QBVfxDoEGvabPD+6gu5IHt47wwLJJCkmBIFJ6bgMfl6VoWVsLKwt7VWLLBEsYY9SAMZ/SgCh4l8P2vifQZ9MvS0YfDRTp9+CReUkU+oPP6Hg15z4R8Z6lcaf5H9h3urPA7wvdWEluIZWRyhdPNlQlW27gcYwRzWn8T/E8zung/QpWW9vU3X08Z5trc8YB7O/IHcDJ9Kv8AhLQo9I0yKONAiqgVVAwAB2rammJjv+Ej1T/oS9c/7/WP/wAk0f8ACR6p/wBCXrn/AH+sf/kmugorewjH0jxAdU1K70+40m+0y6tIYp2juzC29JDIqkGKRx1ifIOD0rYrn7P/AJKVrP8A2CNP/wDR15XQUIAooopgFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABWfdf8AIy6B/wBfMv8A6TyVoVn3X/Iy6B/18y/+k8lRP4WB1FFFFchRzEf/ACN2sf7lv/6Cav1Qj/5G7WP9y3/9BNX664fCiWFFFFWAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAZniT/kVdW/68pv/AEA1n+GfiN4Lt/CekQz+K9HjljsYVdHvowysEAIIJ4NdERkEHvWVd+HbO7fdKOfpWc4cwE3/AAsvwP8A9Dfon/gfH/jR/wALL8D/APQ36J/4Hx/41R/4RHT/AE/8do/4RHT/AE/8drP2THcvf8LL8D/9Dfon/gfH/jWfrnxY8L2OkTSaJrGn6zqTDZa2NpdLI80h6A7ScKOpPYA07/hEdP8AT/x2nR+FLCNwwXke1HsmFzl/BHhu4M02p6xIbjULyQz3M7D77n09ABgAdgAK9DVQqgDoKjggS3j2RjAqWt0rKwgoorP1231C70G9g0W8+xag8LfZrjarbJMfLkMCCM8HjpTAz7P/AJKVrP8A2CNP/wDR15XQV8u+BvF3xH8SfFJNMfWZYLqUrBqMhtIcxwwM5II2YBBkcD3YZ7V9RVEZXQBRRRVgFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABWfdf8AIy6B/wBfMv8A6TyVoVn3X/Iy6B/18y/+k8lRP4WB1FFFFchRzEf/ACN2sf7lv/6Cav1Qj/5G7WP9y3/9BNX664fCiWFFFFWAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBy/jP4gaP4F+wDWY7uRr9mSBbWISElduRjI/vCue/4Xj4f/6A/iL/AMFx/wDiqk8e/wDJWfht/wBf1z/6Aleu1hObTsh2PHv+F4+H/wDoDeIv/Bcf/iqP+F4+H/8AoDeIv/Bcf/iq9hoqfayCx49/wvHw/wD9AbxF/wCC4/8AxVH/AAvHw/8A9AbxF/4Lj/8AFV7DRR7WQWPHv+F4+H/+gN4i/wDBcf8A4qj/AIXj4f8A+gN4i/8ABcf/AIqvYaKPayCx49/wvHw//wBAbxF/4Lj/APFUf8Lx8P8A/QG8Rf8AguP/AMVXsNFHtZBY8e/4Xj4f/wCgN4i/8Fx/+Ko/4Xj4f/6A3iL/AMFx/wDiq9hprusaM7kKqjJJ7Cj2sgseA6V4/wDBWj+LdX8Q2eheIlvNWCCb/iW8LtHO35v4jgn1Irf/AOF4+H/+gN4i/wDBcf8A4qtvwZ4r1LxV411T7Vc6hYWUEu6ws2giEVzB5UZyzFPMV/3qOV3DAkUY4avRWYKMnp7DNL2kgseP/wDC8fD/AP0BvEX/AILj/wDFUf8AC8fD/wD0BvEX/guP/wAVXsAIIBHQ0tP2sgsePf8AC8fD/wD0BvEX/guP/wAVR/wvHw//ANAbxF/4Lj/8VXsNFHtZBY8e/wCF4+H/APoDeIv/AAXH/wCKo/4Xj4f/AOgN4i/8Fx/+Kr2Gij2sgsePf8Lx8P8A/QG8Rf8AguP/AMVR/wALx8P/APQG8Rf+C4//ABVew0Ue1kFjx7/hePh//oDeIv8AwXH/AOKo/wCF4+H/APoDeIv/AAXH/wCKr2Gij2sgseNT/HnwzawmW50zXoYx1eSw2gfiWr0i3uEuYFliOVYAjPvXJftBf8kR1v8A3rf/ANKI61vCUrS6DCznJ2L/ACrSnNy3Bm5RRRWogooooAKKKKACiiigAopk0qwW8k0mdsalmx6AZrmrTxsb+xgvLPwx4imt7iNZYpFslw6sMgj5+4NJtLcDqKK5z/hLLj/oU/Ef/gEv/wAXR/wllx/0KfiP/wAAl/8Ai6XPHuB0dFc5/wAJZcf9Cn4j/wDAJf8A4uj/AISy4/6FPxH/AOAS/wDxdHPHuB0dFc5/wllx/wBCn4j/APAJf/i6P+EsuP8AoU/Ef/gEv/xdHPHuB0dFc5/wllx/0KfiP/wCX/4uj/hLLj/oU/Ef/gEv/wAXRzx7gdHRXOf8JZcf9Cn4j/8AAJf/AIuorvxsbGynu7vwv4iigt42llkayXCqoyT9/sBRzx7gdRRUFneRX1rHPbklJEDrkc4IzU9UAUUUUAFFFFABRRRQAVn3X/Iy6B/18y/+k8laFZ91/wAjLoH/AF8y/wDpPJUT+FgdRRRRXIUcxH/yN2sf7lv/AOgmr9UI/wDkbtY/3Lf/ANBNX664fCiWFFFFWAUUUUAFFFcprOlWmvfEjRNN1MTSWn9mXs5ijuJIgXWS2AJ2MCcBm6+tTJ2VwOrorK/4Vj4U/wCfG5/8GNz/APHKP+FY+FP+fG5/8GNz/wDHKz9quw7GrRWV/wAKx8Kf8+Nz/wCDG5/+OUf8Kx8Kf8+Nz/4Mbn/45R7VdgsatFZX/CsfCn/Pjc/+DG5/+OUf8Kx8Kf8APjc/+DG5/wDjlHtV2Cxq0Vlf8Kx8Kf8APjc/+DG5/wDjlZGo6FqfgeRr/wAOC61LQ87rnTXkaae29ZISxLOvcxkk91/u0KqmwsdZRVHSdYstb0+K9064SeCVdyOhyCKvVsIKKKKACiiigAooooAKKKKACiiigDzrx7/yVn4bf9f1z/6Aleu15D49/wCSsfDb/r+uf/QEr13IrlqfENC0UmRRkVmMWikyKMigBaa5YD5Bk0uRRkUAJl/7q/8AfX/1qMv/AHV/76/+tS5FGRQAwyEHB25/3v8A61Q3aG7s5YFne3Mi7fNhfDp7gkHmpGw0gySPn7Ej+GmRuxjQyJtcqCyrIzAH645oAoaHosOipcRwXNxcSXUxuJ57iQO8j7UTJOAPuoo4HatUpkYLEj3A/wAKYhzMOCPlPUk+nrU1ADdp/vt+Q/wqNJsopJjyR/f/APrVNUEZbyl+/wBB/doAVrhVKhniBY4UGTqcZwPwBrn/ABL4qn0O50qC2gsZH1CV4995emCOPahflgjdcYHFb+7Lg7iQQCAcccGsvVfD9vrWo6RdXZjePT3kkMEsIcS74ymOemN2eh6UAc9P4+1T/hGNS1ix0fTrldKnkhutuqMY5NqowaGQQnePnIOQuGUjmrWqeMdV0m+s9OvbHRra+uYnlBudWaKB8MAI45DDl3OckbRgetTt4Lx4T1fw7b6h5en3hb7Ghhz9iRsExj5vmUNkqONoO3oBVvX9E1LUrnzNP1G0SCSHyZ7LUbE3UD4JIcKHTDckHkgjHHGaANixuJLvT7e4ntntZZYld4JCC0RIyVJGQSOnHFYb+OdF+1tHFeR+VbzTQ3U0qSxrGYkkZwrFNrlfKbPzDAGc9ATS5P8AhF9ItNEg07VL6OxhSFbhI0xIAo5HzDH0xx0qqfBfmadbwi/2GO81C7y9qrZ+1Gc7SrEg7PP75DbegzwAX28X6aRbPHKUjkuWglF1DNBImIJJshGTJO2PPO0YyQSQFJF438Pz2stxHevsiWJsNbSq0iykiMxqVzIGIIBQHJHFYVt8OpY7aOKTVY0SO5eeO3t7d1giDWk1vhEeVimfO3nBx8oAAyTT9b8JT28VtqFhLLcXVjb2cEKRQKxBhdiZCrOu4ESHKZBx0OcUAYHxs1mx1v4D6/caZMZY454IX3RtGyOtxHuUqwBBHcEVL4U8b+FLbQ4Y7jxPo0ThVyr6hEpHHoWrE+JVlqNn+z34nl1ldt1e6ityVKBCFa5jC5UMwXgZxuJAIyc5rt/B3/Ivw/7i/wAq2pbiYn/CfeDv+hs0P/wZQ/8AxVH/AAn3g7/obND/APBlD/8AFV0FFb6iOf8A+E+8Hf8AQ2aH/wCDKH/4qj/hPvB3/Q2aH/4Mof8A4qugoo1A5/8A4T7wd/0Nmh/+DKH/AOKo/wCE+8Hf9DZof/gyh/8Aiq6CijUDn/8AhPvB3/Q2aH/4Mof/AIqsbxb8UvD+i+Fb3UNF1zRdRvoFVorRL6NzL8wBACtnoT0ruawPHHh6XxX4L1HQ7edLeS8RUErgkJh1JOB14FJ3sBxmgfG7wv4t0e4tp5f7I1J4HAtrthtdtp4STofocE+lel+BP+Sc+G/+wVa/+iVrzjQPgt4W8H6Pc3Lwf2rqKW7kXV2oIRtp5ROi/Xkj1r0fwJ/yTnw3/wBgq1/9ErWFS+lxnlNp4j099FvJdW8TeLotak1C7t7aOzFy0bOJ5FiRDsMROAoxnHXPeug8WadrkPgHTdb1LW9XsNcc6fBeQ2d6Y4VeSWKOXCLwD8zdOM11ln4Esk8D3nhjVJft1reTXMruE2FfNmeUY5OCpYYPqoPHSi98JXuqeBbPQdU1n7Td28ttJJqH2bBm8mZJBlN3VggBOepJx2rIZj+KdJ1bQ9J0630288R6hpZvGk1N7S5M1+IzHhBGx+bZvAyF+b071b+H2oW13NqkWneIbzVLSJo9tnqaSLeWLEHcrmQByrYBGR2bk9tjxHoF7qtxYX2jas2l6hYM/lu0XnQyK4AZJI8jcOAQQQQRwazbPTpfDWpXXiTxTfz6rqN5HHZg6ZpUpSGNC7hRFH5j9WYl2J7DjuAbPirX08LeFb/W5bdrlLKLzGiRsFxkDAP41yt542u9I1Ke81/SLuzmtdEnvTZQXqzRlElQAkBQN/P3s4UZ69a0tau7Dxzod54dtjqtlJfR7RPc6JdxomCG5aREXt0LCrmseFZtT1+TVbTVpbCc6XJYRtFEGaNmkVxJknBxsxtxznqKAMG98bz3vg3Ur+5sxDBB9naK70bVknSUPKq4WUKCrDjcCvQ8HniXVviNe6dJr80Hh17nTvD04jvrr7YqMV8tJC0abTuIV8kEr0GCScCs3wtluk1aW91Gwt7rUoYIWOmaZ9nhxHMJN7p5jF5DjG7cMDtWxfeBvtuh+LtO/tHZ/wAJJK8nmeRn7Nugjixjd8/+rz2647ZoAq618QbuwXXbrSfD7anp2ggi9uBdrExcRiRljQqdwVWUsSR3wDitTxZcfa/hfrdyF2ibR55Auc4zCxxXA+NLHVIP+Er0bQG1aA61HxappDTx3crwLGXjuQdkKnADiTkbSRjINd54pga1+Fms27kFotFnQkdyIGFAGH4Cmebw7bbznEKfyFdTXJ/D3/kXLf8A64p/IV1ldq2JCiiimAUUUUAFFFFABWfdf8jLoH/XzL/6TyVoVn3X/Iy6B/18y/8ApPJUT+FgdRRRRXIUcxH/AMjdrH+5b/8AoJq/VCP/AJG7WP8Act//AEE1frrh8KJYUUUVYBRRRQAVgH/krui/9ga//wDRtrW/WAf+Su6L/wBga/8A/RtrWdT4WCLI+IMMs0ENloGr3clzcXUECxfZx5v2Z9kjjdMMLuyBnBOOlSN46T+z72eLQNXln0+Ux31mogEtt+7EgZt0oVlKsCCrNXKaH4ePiNtHffcC0sNR1xbqSzvnt5Ime8fYCY3V+cHjp69q39A8Oaho/h3xFokls07SNKbbUXmDyagHjwplJbd5i4CEtgEBSO4HKUWofHqTaZZXf/CPawkmpOqWFq4t/Mu8xmTK4lKqAikkuy/nW1omtJrVvM/2O6sZ7aYwT212gEkTgBsZUlWBDAgqSDnrXMajol6fBHh2wu/D8esR2cMK3tokypcRMsW0PDJvVQytkH5hkE4Prc8HLeaTZ3i61Jc2VpLcbtPtdVvVnuIYtighpNzZ+bcQNzEAjnsAC74o8V/8ItALifRNTvrUBd89n5JVCzhFUh5FOSSOgI561oafqwvLUyXlpNpcqqXe2vHi8xEBxvOx2G3jrmsvxjaS+IPB91aaN5d3M00BCpIuPlmRm5JxwoJrH+IXhrU/Ed9ZHTLCN1sYmmmkklCC+TcpNicMDtfbliw2jC9ctgA6fTNfh1TVtR09La4hlsDGWeUoUlVwSroVY8EKeuD7Vq1yfhydJ/HviVkGwiCxDx7lJjbZJlTtJGR04NdZQBw2veEbzS9Rm1/wUii4lbzL3Si22K9Pd0PRJffo38X94WfD/iOz8QWZltWZJI2Mc0Eq7JIJB1R1PKsPSutmmitoJJ7iRIoo1LvI7BVVRySSegrxu71WPxn4+TVPCgl020iiaGbVIlAk1HjCkIwKlUPKuyknoML11pyadhM9PornU8OaqYwT401zp/zxsf8A5Gp3/COap/0Omuf9+bH/AORq6LiOgorn/wDhHNU/6HTXP+/Nj/8AI1H/AAjmqf8AQ6a5/wB+bH/5GouB0FFc/wD8I5qn/Q6a5/35sf8A5Go/4RzVP+h01z/vzY//ACNRcDoKK5//AIRzVP8AodNc/wC/Nj/8jUf8I5qn/Q6a5/35sf8A5GouB0FZN54n0XTteg0a/wBRgtr+5j82GKZtvmDJHyk8E5HTOaq/8I5qn/Q6a5/35sf/AJGrxf4wfD7xP4h8daXZ6TJqOuv9iy9zdJCiQDzG4LRoigd+cn0qZSaWiA9B8fnHxW+G/wD1/XP/AKAldzeeOdEsLm9huZLwfYH2XU0enzyRQHYr/NIqFRhXUk5wAea8Ps/CGveDvG3w6tPEXiB9Vdr2fy4eWS1ARcqrt8zA5HoBjgV6Lq3g3VL/AP4Sm4hmula7v1mgsRd7IL+EW0KNG+05XeUdM5B4BOR155/EUdW3jjSE1gaXt1Jrs5KqmlXLKyhgpcMI9pTJHzA7eRzUlv4y0e61NLGGeffJK8EUzWsqwyyJnciSldjEbW4B52nHQ1Uisrp/Gljqf2QwWq6TJAyllzFI0kbBMAnsp5GRx1rn9P0zWrXxBbfYtMvtNAvWkvT9sSXTpYyWLNHGzs6M2QQFVMMTnjrAHo2+jfUG+jfQBPvo31Bvo30AT76N9Qb6N9AD9/7z/gf/ALLTVf7gz1UdPoaj3/P/AMD/APZaar/Mn0H8jQBNBI+2N5lCMU+YK5cA8cZwPzxU/nr7/wDfJqqCwAAYYHtTXcj7zL0OOSv40AXPPX3/AO+TVVmkSOMBVx0YmQ5UbTyBjnkD0/oV3P8A3h/3z/8AXprlih3MOAeg9qAJA/K/QfyNSI/7tfoKqhuV+g/kakR/3a/SgCxvo31Bvo30AT76N9Qb6N9AE++jfUG+jfQB598f2z8E9a/3rf8A9Hx1seDv+Rfh/wBxf5VhfHts/BbWv963/wDR8dbvg7/kX4f9xf5VtS3EzfoooroEFFFFABRRRQAUUUUAR3EK3FtLC/3ZEKHHoRiuDbwZq9hbQ2mkeIdchtrdFiijF62ERRgAfQAV6BRUuKe4Hnf/AAi/ij/oZtc/8DGo/wCEX8Uf9DNrn/gY1eiUUuSIXPO/+EX8Uf8AQza5/wCBjUf8Iv4o/wChm1z/AMDGr0SijkiFzzv/AIRfxR/0M2uf+BjUf8Iv4o/6GbXP/Axq9Eoo5Ihc87/4RfxR/wBDNrn/AIGNR/wi/ij/AKGbXP8AwMavRKKOSIXPO/8AhF/FH/Qza5/4GNUdx4N8QX1rLaXviLW5badGjlja8bDowwQfqDXpFFHJELmVoGlDSbBLdBhUUKM+grVooqwCiiigAooooAKKKKACs+6/5GXQP+vmX/0nkrQrPuv+Rl0D/r5l/wDSeSon8LA6iiiiuQo5iP8A5G7WP9y3/wDQTV+qEf8AyN2sf7lv/wCgmr9dcPhRLCiiirAKKKKACsA/8ld0X/sDX/8A6Nta365bxHDrdn4p03XdBhsrhrWzuLaWK7kdMiRomBBVT08r9aiavHQDvILW3tjIbaCOEyMXfy0C72PUnHU+9S15gfHfjYEj+wNI/wDAqX/4ik/4Tzxt/wBADSf/AAKl/wDiK5uWRR6hVa706xvypvrO3uSmdvnRK+3PpkV5x/wnnjb/AKAGk/8AgVL/APEUf8J542/6AGk/+BUv/wARRyyA9JtbK1sYzHZW0NsjHcVhjCAn1wKnry//AITzxt/0ANJ/8Cpf/iKP+E88bf8AQA0n/wACpf8A4ijlkB6XDa29vJK8EEcTzNukZEALn1JHU1Bq2rWGhaXPqWr3UdpaW67pJZDgD29yegA5J4Fed/8ACeeNv+gBpP8A4FS//EVlyaPr3jXWob/xY8XlW7ZtbC3z5EB/v88u/wDtHp0AHOWoNgRanqGrfFC9WOWGWw8OI4aOxbh7rB4eb27iPp3OTjHd6PodvpluqogBA9Ks6fpsNhCqRqAQKu10RiookKKKKsAooooAKKKKACiiigAooooA82+Ihx8Uvhx/1+3P/oCV6bvrzD4jHHxQ+HP/AF+3P/oCV6TvrlqfENE2+jfUO+jfWYybfRvqHfRvoAm30b6h30b6AJt9G+od9G+gB+/95/wP/wBlpiSqW2MGOEU/cJHfv0/z71Hv/ef8D/8AZaEMixqGdSQACQuM/rQBPuj/ALn/AI5RuGTsBHynOFxx+NRbn/vL/wB8/wD16azD/loVPBx2waAJ90f9z/xymyLBLG0csSujgqytHkMD1BGKZuf+8v8A3z/9ejc/95f++f8A69ADw/K/QfyNSI/7tfoKqksJAWYEHgADGOD715f4iur9NR8U3CR6hJFaywxx3UWsTW8diDbRHeYkPKqWLthTxnI60Aet76N9cDe6PHL4y0OKfUdSkF3Z3EtyYNTuIo5XTyQrBVkAUfMxwuBzVG3uJ7TXINSurq6ura41ZoI7+01J2T5pWRYJbV8KoUkJlASCu7jmgD0zfRvrmvHNxdweBdXl065+zXC2zFZQDlfXGCCDjODng81iJ4ov9N1qz0yIwXNil4mmyOsEuQ/l5J8535bd/CA/HV85oA9A30b68h0HxLqNvpukTz3E13I9vaMTPPIfm/sqaUkgN82WQZ3ZBJz94AjdXxjrkTQW1yun/aL6GzlglWJxHb+e7qQ4L5fG3ggruJAwOtADPjy2fgxrP+9b/wDo9K6Hwd/yL8P+4v8AKvP/AIoavd6r8EfEw1A2zTWl+lqXtgQjhJ4+cEnB55GTjpz1rpPCmv6lFocKp4R1mYbV+ZJrMA8e9wDW1LcTO7orn/8AhI9U/wChL1z/AL/WP/yTR/wkeqf9CXrn/f6x/wDkmt7iOgorn/8AhI9U/wChL1z/AL/WP/yTR/wkeqf9CXrn/f6x/wDkmi4HQUVz/wDwkeqf9CXrn/f6x/8Akmj/AISPVP8AoS9c/wC/1j/8k0XA6Ciuf/4SPVP+hL1z/v8AWP8A8k1yvxM8T6zF8N9Xkg8Pa3pUiRoy3rXFqBCfMXnMc7N7cA0m7ID0O9ma3sLiZMbo4mcZ6ZAzXKWX/CWT+C7bxLf+K9HsbWTT0v5gdDkcQoYw55Fxk4HtzjpXk/w9+L/jHWra40jUNHm1+EQMr3tuoSSAbT8znhCPrtPua9evP+TZ5f8AsUv/AG0rGc72sOxk2niO8vby3tofiDpCS3TiODz/AA1cQrIx6KGecAk9hnmobnxbcWl6bS4+IGmJcBmXy/8AhFboklfvY/fc49qdrS+IjZeGrHxnf6aPDF5PbCS406yeOSOVWV4UkZ5GCozKAXUdeOM5rrPEX/JV/Bf/AFw1H/0XFWfPLuM5y/1nUtNS0N3480oNdwC4hij8M3EkhiPRyizllX3YDvWxpun+KdY02G/0vxrol1aTruimi0RyrDp/z8+vHsaZqsLS/EPUJfDHiKLSNdjsoFu7XULUSwXcQLmNl+ZWGCzgspx6itX4d6kupeG7hxY2dpJDf3EMxsCTbzyCQ75Yyf4WYk/XIo55dwMbW4/Enh2xW71jxrpEELyrCmPD0sjO7dFVVuCzHg8AdjV+Pw/40kjV08WaTtYAjOgyA4+huai+JOmx6hqXg7zJ7qL/AInix/6PcPFwYJjn5SOflGD1AJHc1x+sa/qIkHiDTLzVvIOvx2sd1c6kIoZF+1CJ4UtFJDKAGGWCtwWz2o55dwOiifX5rqK2i8c6M0013LZIv9gS/NPGpZ0/4+OoCsfTirmnaZ4s1XToL/T/ABjpE1tcIJIpP7AkXcp6HBuARXO6V/yN2kf9jpqv/pNPUfg5tT8Wy6Ba6pr+rRwSeF4rub7NeNE8sxmZd5cfNnHvzxnOKOeXcDr/APhHPG3/AENmkf8Agif/AOSaoa5p/jbRvD+o6p/wk+kTfYrWW48r+xHXfsQttz9oOM4xnFYvh/Vb/wAS/wDCM6f4g1y9tLaTRprkz29ybaS8njmEfzOuCdqYYqDyWycgVf0a/n1P4Ba7c3WpSao3kaqiXkrBjMiyTKjZHGNoGMcY6U+eXcDodA1Q6tpcFy+3e8as23pkjNalcn8Pf+Rct/8Arin8hXWV1LYkKKKKYBRRRQAUUUUAFZ91/wAjLoH/AF8y/wDpPJWhWfdf8jLoH/XzL/6TyVE/hYHUUUUVyFHMR/8AI3ax/uW//oJq/VCP/kbtY/3Lf/0E1frrh8KJYUUUVYBRRRQAUhAPUA/WlooAZ5Uf/PNf++RR5Mf/ADzX/vkU+igBnkx/881/75FHkx/881/75FPooAZ5Mf8AzzX/AL5FHkx/881/75FPooAZ5Mf/ADzX/vkU4Kq/dUD6ClooAKKKKACiiigAooooAKKKKACiiigAooooA8z+JJx8Tfh1/wBftz/6Aleh768u+Mer2mg+M/AeqalIY7W2url5XVSxUbYxnA5PWrH/AAvTwH/0Fpf/AADl/wDia5anxDR6Tvo315t/wvTwH/0Fpf8AwDl/+Jo/4Xp4D/6C0v8A4By//E1mM9J30b682/4Xp4D/AOgtL/4By/8AxNH/AAvTwH/0Fpf/AADl/wDiaAPSd9G+vNv+F6eA/wDoLS/+Acv/AMTR/wAL08B/9BaX/wAA5f8A4mgD0nfRvrzb/hengP8A6C0v/gHL/wDE0f8AC9PAf/QWl/8AAOX/AOJoA9E8xWdgd3yt6Edh+fWl3r/t/rXnX/C9PAf/AEFpf/AOX/4mj/hengP/AKC0v/gHL/8AE0Aei71/2/1p8ZJLeWT9w53Z6V5v/wAL08B/9BaX/wAA5f8A4mg/HPwEeuqyn62cv/xNAHou9f8Ab/Wjev8At/rXnX/C9PAf/QWl/wDAOX/4mj/hengP/oLS/wDgHL/8TQB6KWXg/PkdOtMS2t1WYi3iBuMGc7B+9O0L83rwAOewxXnv/C9PAf8A0Fpf/AOX/wCJo/4Xp4D/AOgtL/4By/8AxNAHoMVnZwfZ/JtYI/ssZig2RgeUhxlV/uj5V4HoPSqh0DSBqT6nFpllFqTA/wCmrbJ5oJGM7sZzXE/8L08B/wDQWl/8A5f/AImj/hengP8A6C0v/gHL/wDE0Adqmm3MhKajqRv7Z1KyW81tHskBHQ4FSNomkPqBv20uya8LBzcG3UybhjB3Yzngc+wrhv8AhengP/oLS/8AgHL/APE0f8L08B/9BaX/AMA5f/iaAO7XSNLRERNNs1WMAIogUBQEMYA44wjMv+6SOhqDVdCs9T097YJHbl0SPekEbZRGyIyrKQU6/KR3OMHmuL/4Xp4D/wCgtL/4By//ABNH/C9PAf8A0Fpf/AOX/wCJoAqfFPRLbw/8CtYsrQ7laaKV22KmWa4QnCqAFA4AAHAArvvB3/Ivw/7i/wAq8e+KPxW8J+Jvh1qOk6PqEk15O0RRGtpEB2yqx5Ix0Br2PwijR6BCHGDsX+VbUtxM3aKKK6BBRRRQAUUUUAFUdZ0ex1/SJ9M1aHz7O4AEse4ruAIOMjnqBV6igDKk0yx0jwvc2WlWcNnbR28gWKCMIo+U9h/OsXwp478DN8ONF03VvEehkf2TBBc2tzdxH/lkqsjox+oINdcRkEHvWVd+HbO7fdKOfpWc4cwDLrx18Ob7T2sL3xF4cubN1CtbzXULxsB0BUnGBgflTn8ffDyS6guZPEvh557YMsErXcJaIMAGCnORkAZx1xUH/CI6f6f+O0f8Ijp/p/47WfsmO5FrHif4V+IBGNd1fwtqXlf6v7XPBLs+m4nFQ3Xjrw7bpBb+GPHXg7TLKGPYLeaNZQP93ZcRhRjtg/Wrf/CI6f6f+O0f8Ijp/p/47R7Jhcr2PjrwxIwbxL428IakYZFltTbqsJgcBgW+eeTnDYBG0jnrmmvrvwjkvp72S/8ACL3Vwd00zPbl5DkHJPUnIBz7CrX/AAiOn+n/AI7R/wAIjp/p/wCO0eyYXHp41+GscySpr/hpZEne4RxcwArK4IaQHPDEEgt1IJotPGvw109o2sNf8NWxihFvGYbmBNkQOQgweFzzjpTP+ER0/wBP/HaP+ER0/wBP/HaPZMLmF4i1jwPqcNlDpXi7wbBaWqsBp+oQQXVtkkEOqB0KOOeQcHccjvUVx4k8EaF8I9V0Kw8YaTeznT7w5W7iDTzSiR2winjLucKOnArov+ER0/0/8dpV8J2CsCB09qPZMLlHwAjJ4dt9wx+5T+Qrq6gtrVLWPZH0qet0IKKKKYBRRRQAUUUUAFZ91/yMugf9fMv/AKTyVoVn3X/Iy6B/18y/+k8lRP4WB1FFFFchRzEf/I3ax/uW/wD6Cav1Qj/5G7WP9y3/APQTV+uuHwolhRRRVgFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUARXFtHcptlUMPcVmN4Y05mLGIZP+yK2KKQGL/wi2m/88h/3yKP+EW03/nkP++RW1RRZAYv/AAi2m/8APIf98ij/AIRbTf8AnkP++RW1RRZAcNdnT4dau9MsvDupalLZpG88lqLcKu8EqP3kqknAPQVRuNX0WOysL218Pare2moNHHBPAkABkc4EZDyqwYEEHIx71f1LwTPrXiPxDdSXeoad9qgt0s7mzv5IgWVWDFo0cBgCRww6E4qU6RqVz4T8OWv9kRWFxYX9s89rDInlxpG/zMhzypA3AfeweRnNTqBWnlsIrmO0h8Napc332cXM9pEtvvt4yzKpYmUKSSjYCsx4ra0/RNH1TTbe+tYj5NxGJE3x7WAIzyDyD7Vm+K9Lmu9cWebw7c6lCtuq215pN2La7gfJ3KzGVMoflIwTg7sitnQJ57Dw/ZW3iK/hbUo4gJy8yls9gTxk4wCccnmn1A5+5ewj1q902x8N6pqUlkUE0lsLcIC6hgP3kqk8H0q5qkGgaNpgu9Qi8qTy1k+yZTzsEgEbd2DgnnBI461k3+izP4x1nUJfD+s6nbXhga2uNL1ZLdCFiVTlftEZJyDyQfrUOveHdSvl1hF8NSXkuqNaTWs8s0JazEaRhonYvncrI7DbuBLnnqaQHVHRNCW6Ns0tuLgAExF13jPTjrzTW0jw+iXLNNb4tFLXGGU+SAMkt6cA9a4i6jjGtWunpZ28963ih5hqaSxM+C7vt258zciYUgqF2oDnoKdo/gDU5tNXS9Qiv7d10m5sJ7uSS0ELtKgUlfKTzZAT8/7wgjAzk5ov5AbtjPpN5c2ayaHqVpa3522l5cQxiOY7Sw4DF0yASN6rn68Vsrougu06pNbsbf8A1wDqfK/3vT8ar2moeJ7qOysDoR011G29vJpo3iChSP3IR9xJOMblXA6jPFcsvg7VrvQLXSodEXTLmz0W6sbm8aSPbeySQ7BgqxZlZ/3hLgEYHfNAHaP4f0aMkSGFCACQxUcE4H5niqNxD4Xt2sA1zbuNQuDbW7RsrKzhWYjI9lP4kDvWHqmh614kmuZLjQJbaCS10+3MNzNCxk8q8EkvCuRtCZ784PHSrV34Xu7fxUL600dJLOPW4btY4TEvyfY2hdwCQBhypPQnbkA4FHyA3l0TQmlmiWS3MkAzKgZcxj/aHb8afB4f0a6RmtjFMqsVYxkMAR1HHeuD0zwTrdvZLaz21/JdW1jeRPcPLZpDcPJGyjaUTzX3sQx8wrggEkkc+keH9Mh0fQLKygtYrXy4UDxxqANwUA5x1PHWmtegFf8A4RbTf+eQ/wC+RR/wi2m/88h/3yK2qKdkBi/8Itpv/PIf98ij/hFtN/55D/vkVtUUWQGOnhjTkYMIhkf7IrUhhWCPYgwKkooAKKKKYBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVn3X/ACMugf8AXzL/AOk8laFZ91/yMugf9fMv/pPJUT+FgdRRRRXIUcxH/wAjdrH+5b/+gmr9UI/+Ru1j/ct//QTV+uuHwolhRRRVgFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABVOfSNNupmmudPtZpW+88kKsx7dSKuUUAMiijgiWKCNY40GFRFwAPYCn0UUAQCxtFvWvFtYRcsu1pxGN5Hpu64qeiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACs+6/wCRl0D/AK+Zf/SeStCs+6/5GXQP+vmX/wBJ5KifwsDqKKKK5CjmI/8AkbtY/wBy3/8AQTV+qEf/ACN2sf7lv/6Cav11w+FEsKKKKsAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigArPuv+Rl0D/r5l/wDSeStCs+6/5GXQP+vmX/0nkqJ/CwOoooorkKOYj/5G7WP9y3/9BNX6yLy8TTfFepPdw3WyeOExvFaSyq2FIPKKR1p//CRWP9y+/wDBdcf/ABFdUGuVEs1KKy/+Eisf7l9/4Lrj/wCIo/4SKx/uX3/guuP/AIiq5kBqUVl/8JFY/wBy+/8ABdcf/EUf8JFY/wBy+/8ABdcf/EUcyA1KKy/+Eisf7l9/4Lrj/wCIo/4SKx/uX3/guuP/AIijmQGpRWX/AMJFY/3L7/wXXH/xFH/CRWP9y+/8F1x/8RRzIDUorL/4SKx/uX3/AILrj/4ij/hIrH+5ff8AguuP/iKOZAalFZf/AAkVj/cvv/Bdcf8AxFH/AAkVj/cvv/Bdcf8AxFHMgNSisv8A4SKx/uX3/guuP/iKP+Eisf7l9/4Lrj/4ijmQGpRWX/wkVj/cvv8AwXXH/wARR/wkVj/cvv8AwXXH/wARRzIDUorL/wCEisf7l9/4Lrj/AOIo/wCEisf7l9/4Lrj/AOIo5kBqUVl/8JFY/wBy+/8ABdcf/EUf8JFY/wBy+/8ABdcf/EUcyA1KKy/+Eisf7l9/4Lrj/wCIo/4SKx/uX3/guuP/AIijmQGpRWX/AMJFY/3L7/wXXH/xFH/CRWP9y+/8F1x/8RRzIDUorL/4SKx/uX3/AILrj/4ij/hIrH+5ff8AguuP/iKOZAalFZf/AAkVj/cvv/Bdcf8AxFH/AAkVj/cvv/Bdcf8AxFHMgNSisv8A4SKx/uX3/guuP/iKP+Eisf7l9/4Lrj/4ijmQGpRWX/wkVj/cvv8AwXXH/wARR/wkVj/cvv8AwXXH/wARRzIDUorL/wCEisf7l9/4Lrj/AOIo/wCEisf7l9/4Lrj/AOIo5kBqUVl/8JFY/wBy+/8ABdcf/EUf8JFY/wBy+/8ABdcf/EUcyA1KKy/+Eisf7l9/4Lrj/wCIo/4SKx/uX3/guuP/AIijmQGpRWX/AMJFY/3L7/wXXH/xFH/CRWP9y+/8F1x/8RRzIDUorL/4SKx/uX3/AILrj/4ij/hIrH+5ff8AguuP/iKOZAalFZf/AAkVj/cvv/Bdcf8AxFH/AAkVj/cvv/Bdcf8AxFHMgNSisv8A4SKx/uX3/guuP/iKP+Eisf7l9/4Lrj/4ijmQGpRWX/wkVj/cvv8AwXXH/wARR/wkVj/cvv8AwXXH/wARRzIDUorL/wCEisf7l9/4Lrj/AOIo/wCEisf7l9/4Lrj/AOIo5kBqUVl/8JFY/wBy+/8ABdcf/EUf8JFY/wBy+/8ABdcf/EUcyA1KKy/+Eisf7l9/4Lrj/wCIo/4SKx/uX3/guuP/AIijmQGpRWX/AMJFY/3L7/wXXH/xFH/CRWP9y+/8F1x/8RRzIDUorL/4SKx/uX3/AILrj/4ij/hIrH+5ff8AguuP/iKOZAalFZf/AAkVj/cvv/Bdcf8AxFH/AAkVj/cvv/Bdcf8AxFHMgNSisv8A4SKx/uX3/guuP/iKP+Eisf7l9/4Lrj/4ijmQGpRWX/wkVj/cvv8AwXXH/wARR/wkVj/cvv8AwXXH/wARRzIDUorL/wCEisf7l9/4Lrj/AOIo/wCEisf7l9/4Lrj/AOIo5kBqUVl/8JFY/wBy+/8ABdcf/EUf8JFY/wBy+/8ABdcf/EUcyA1KKy/+Eisf7l9/4Lrj/wCIo/4SKx/uX3/guuP/AIijmQGpRWX/AMJFY/3L7/wXXH/xFH/CRWP9y+/8F1x/8RRzIDUorL/4SKx/uX3/AILrj/4ij/hIrH+5ff8AguuP/iKOZAalFZf/AAkVj/cvv/Bdcf8AxFH/AAkVj/cvv/Bdcf8AxFHMgNSisv8A4SKx/uX3/guuP/iKP+Eisf7l9/4Lrj/4ijmQGpRWX/wkVj/cvv8AwXXH/wARR/wkVj/cvv8AwXXH/wARRzIDUrPuv+Rl0D/r5l/9J5Kj/wCEisf7l9/4Lrj/AOIqKK9j1PxNo/2OG7IgmkklaS0ljVVMLrkllA6kD8amTXKwOxooorlKP//Z)

The analysis we are going to show are obtained with these settings:

* CLK freq. = 500KHz
* TPDO period = 10 mS
* SimTime = 0.2 s
* ID\_Tx = [1,1,1,1,1,0,0,1,1,1,1];
* ID\_Rx = [1,1,1,1,0,0,1,1,1,1,1];

The Can Traffic Simulator is fed by 20 pseudo-random IDs, chosen with priorities around ID\_Tx and ID\_Rx.

Typical response time distribution

Typical response time distribution is the average response waiting time of a node that sends a request frame to another node, conditioned by the traffic on the network. The nodes directly in this analysis are the transmitter and the receiver, we used their *TxCmplt* flag to evaluate the response delay.

![Immagine che contiene shoji

Descrizione generata con affidabilità elevata](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEAYABgAAD/4RD6RXhpZgAATU0AKgAAAAgABAE7AAIAAAAQAAAISodpAAQAAAABAAAIWpydAAEAAAAgAAAQ0uocAAcAAAgMAAAAPgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEVtaWxpYW5vIFRvbWFybwAABZADAAIAAAAUAAAQqJAEAAIAAAAUAAAQvJKRAAIAAAADOTkAAJKSAAIAAAADOTkAAOocAAcAAAgMAAAInAAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADIwMTk6MDM6MjUgMTc6NTg6MDYAMjAxOTowMzoyNSAxNzo1ODowNgAAAEUAbQBpAGwAaQBhAG4AbwAgAFQAbwBtAGEAcgBvAAAA/+ELImh0dHA6Ly9ucy5hZG9iZS5jb20veGFwLzEuMC8APD94cGFja2V0IGJlZ2luPSfvu78nIGlkPSdXNU0wTXBDZWhpSHpyZVN6TlRjemtjOWQnPz4NCjx4OnhtcG1ldGEgeG1sbnM6eD0iYWRvYmU6bnM6bWV0YS8iPjxyZGY6UkRGIHhtbG5zOnJkZj0iaHR0cDovL3d3dy53My5vcmcvMTk5OS8wMi8yMi1yZGYtc3ludGF4LW5zIyI+PHJkZjpEZXNjcmlwdGlvbiByZGY6YWJvdXQ9InV1aWQ6ZmFmNWJkZDUtYmEzZC0xMWRhLWFkMzEtZDMzZDc1MTgyZjFiIiB4bWxuczpkYz0iaHR0cDovL3B1cmwub3JnL2RjL2VsZW1lbnRzLzEuMS8iLz48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOnhtcD0iaHR0cDovL25zLmFkb2JlLmNvbS94YXAvMS4wLyI+PHhtcDpDcmVhdGVEYXRlPjIwMTktMDMtMjVUMTc6NTg6MDYuOTg4PC94bXA6Q3JlYXRlRGF0ZT48L3JkZjpEZXNjcmlwdGlvbj48cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0idXVpZDpmYWY1YmRkNS1iYTNkLTExZGEtYWQzMS1kMzNkNzUxODJmMWIiIHhtbG5zOmRjPSJodHRwOi8vcHVybC5vcmcvZGMvZWxlbWVudHMvMS4xLyI+PGRjOmNyZWF0b3I+PHJkZjpTZXEgeG1sbnM6cmRmPSJodHRwOi8vd3d3LnczLm9yZy8xOTk5LzAyLzIyLXJkZi1zeW50YXgtbnMjIj48cmRmOmxpPkVtaWxpYW5vIFRvbWFybzwvcmRmOmxpPjwvcmRmOlNlcT4NCgkJCTwvZGM6Y3JlYXRvcj48L3JkZjpEZXNjcmlwdGlvbj48L3JkZjpSREY+PC94OnhtcG1ldGE+DQogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgIDw/eHBhY2tldCBlbmQ9J3cnPz7/2wBDAAcFBQYFBAcGBQYIBwcIChELCgkJChUPEAwRGBUaGRgVGBcbHichGx0lHRcYIi4iJSgpKywrGiAvMy8qMicqKyr/2wBDAQcICAoJChQLCxQqHBgcKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKir/wAARCAISAusDASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRVS0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJBUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn6Onq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwD6RooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKxdYF/bf6Rb6g0atKiCPykO0EgdSM1tVna3G8tiixIzt58Zwo5wHGTQA6B2sWVL++ad5WwhaIKB7ZUY/OrUFzFcoXgcOoJXcBxkfzqhqyPeRx2McT4nb55QvESjnOfXjH40llO+n6Ri6gIaB/KIiXhssAGHtzz+NAFjVp3ttLuJojteOMspxnFZN1cXtpYi6TWEmZVBEJjQBz6cc1qaxG9xot1HGm92iKhRzmqF1pP2a1jvNMt4xdQgHyynDjHIPv7jmgDR/tS0jytxJ5MioJGVwRgH09eT2q3HIssaumdrDIyCOPoa5+/W41WdZYbUxi2QSDz4yDIx52fh/PFblrK09vHI0bRFlBKMOVPcUATUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBzus69q1pr2n6RoumWd5cXdtcXLNd3r26osTQqQCsUhJJmHUDp3pv27xv/wBC9oH/AIPZ/wD5DpL3/kqeh/8AYG1L/wBH2NdLQBzf27xv/wBC9oH/AIPZ/wD5Do+3eN/+he0D/wAHs/8A8h10lFAHN/bvG/8A0L2gf+D2f/5Do+3eN/8AoXtA/wDB7P8A/IddJRQBzf27xv8A9C9oH/g9n/8AkOj7d43/AOhe0D/wez//ACHXSUUAcbqniTxfpFnHc3fh3QyklzBbDZrkxO+aZIl/5dOm5xn2q99u8b/9C9oH/g9n/wDkOruv6X/a2nQ2xlMey+tLncFznyrmObb+OzGe2a16AOb+3eN/+he0D/wez/8AyHR9u8b/APQvaB/4PZ//AJDrpKKAOb+3eN/+he0D/wAHs/8A8h0fbvG//QvaB/4PZ/8A5DrpKKAOb+3eN/8AoXtA/wDB7P8A/IdH27xv/wBC9oH/AIPZ/wD5DrpKKAOb+3eN/wDoXtA/8Hs//wAh1R0rxJ4v1izkubTw7oYRLme2Ik1uYHdDK8Tn/j0PG6M49q7Ksjw9pg0jTZLYSmXzL67uNxXHMtxJLj8N+PwoApfbvG//AEL2gf8Ag9n/APkOj7d43/6F7QP/AAez/wDyHXSUUAc39u8b/wDQvaB/4PZ//kOj7d43/wChe0D/AMHs/wD8h10lFAHN/bvG/wD0L2gf+D2f/wCQ6Pt3jf8A6F7QP/B7P/8AIddJRQBzf27xv/0L2gf+D2f/AOQ6ozeJPF8Ou22kv4d0M3FzbTXSEa5MV2xNGrAn7J1zMuPoa7Ksm50wS+LrHVfNINtZXNt5e3IbzZIGzn28n9T6UAUft3jf/oXtA/8AB7P/APIdH27xv/0L2gf+D2f/AOQ66SigDm/t3jf/AKF7QP8Awez/APyHR9u8b/8AQvaB/wCD2f8A+Q66SigDm/t3jf8A6F7QP/B7P/8AIdH27xv/ANC9oH/g9n/+Q66SigDm/t3jf/oXtA/8Hs//AMh1R1nxJ4w0LQ77Vbzw5obW9jbSXMoi1yYsURCxwDaDnA4rsqyPFWmjWfCer6W0jRC9sZ7cyKu4oHjZc474zQBRF/43I/5F7QP/AAez/wDyJS/bvG//AEL2gf8Ag9n/APkOukFFAHN/bvG//QvaB/4PZ/8A5Do+3eN/+he0D/wez/8AyHXSUUAc39u8b/8AQvaB/wCD2f8A+Q6T7b43/wChf0D/AMHs/wD8h10tFAHM/bPGx6+HtA/8Hs//AMh0j3njVhhvDvh8gnODrs3/AMh109NcZx7c/XigDj9P8ReL9Qu9Strfw9oe/TrlbaYtrk2C5hjl4/0TkbZV59c1d+3eN/8AoXtA/wDB7P8A/IdaGj6WLDUdbuRKX/tG+W4KlceXi3hi2+/+qzn3rVoA5r7Z42HTw94f/wDB7N/8h0C98bD/AJl7QP8Awez/APyHXS0UAc39u8b/APQvaB/4PZ//AJDo+3eN/wDoXtA/8Hs//wAh10lFAHN/bvG//QvaB/4PZ/8A5Do+3eN/+he0D/wez/8AyHXSUUAcbN4j8Xw67a6S/h3Q/tF1bTXMZGuTbdkTRK2T9k65mXH41dF/43P/ADL3h/8A8Hs//wAiVfu9M83xZp+q+YQbaxurYRbeG814GzntjyenfNaqjAPOeTQBzn27xv8A9C9oH/g9n/8AkOj7d43/AOhe0D/wez//ACHXSUUAc39u8b/9C9oH/g9n/wDkOj7d43/6F7QP/B7P/wDIddJRQBzf27xv/wBC9oH/AIPZ/wD5Do+3eN/+he0D/wAHs/8A8h10lFAHG6z4k8X6Hod/q174d0M29hbyXMoj1yYsVRSxwPsg5wKvfbvG/wD0L2gf+D2f/wCQ6u+J9L/trwnrGlmUxC/sprbzAu4x74ymcd+ua16AOb+3eN/+he0D/wAHs/8A8h0fbvG//QvaB/4PZ/8A5DrpKKAOb+3eN/8AoXtA/wDB7P8A/IdH27xv/wBC9oH/AIPZ/wD5DrpKKAOb+3eN/wDoXtA/8Hs//wAh0fbvG/8A0L2gf+D2f/5DrpKKAOb+3eN/+he0D/wez/8AyHVeDWvGdxPcxR+HtB3W0oifOuTDJKK3H+idMOK6yqVpa/Z7u+l3bvtFwJMYxt/domP/AB3NAGR9u8b/APQvaB/4PZ//AJDo+3eN/wDoXtA/8Hs//wAh10lFAHN/bvG//QvaB/4PZ/8A5Do+3eN/+he0D/wez/8AyHXSUUAc39u8b/8AQvaB/wCD2f8A+Q6Pt3jf/oXtA/8AB7P/APIddJRQBzf27xv/ANC9oH/g9n/+Q6gfWfGcd9FaN4e0ESSxPKp/t2bACFQc/wCif7Y/WurqlNa79Ygut+PLhki24znc0ZP/AKB+tAGOL/xvj/kXtA/8Hs//AMiUv27xv/0L2gf+D2f/AOQ66SigDm/t3jf/AKF7QP8Awez/APyHR9u8b/8AQvaB/wCD2f8A+Q66SigDm/t3jf8A6F7QP/B7P/8AIdH27xv/ANC9oH/g9n/+Q66SigDm/t3jf/oXtA/8Hs//AMh1HJrHi61kga+0HRUt3uIopHh1maR1DyKmQptVBxuzjcOldRWZrwH9nxcf8vtr/wClEdAGkDkUtFFABRRRQAUUUUAFFFFABRRRQBzV9/yVPQ/+wNqX/o+xrpa5q+/5Knof/YG1L/0fY10tABRRRQAUUUUAFFFFAEU/+rX/AH1/9CFS1FP/AKtf99f/AEIVLQAUUUUAFFFFABRRRQAVFB90/wDXRv5mpaig+6f+ujfzNAEtFFFABRRRQAUUUUAFRP8A8fKf7jfzWpaif/j5T/cb+a0AS0UUUAFFFFABRRRQAVFc/wDHrL/uN/Kpaiuf+PWX/cb+VAEtFFFABRRRQAUUUUAFBooNAEUX+sm/3/8A2UVLUUX+sm/3/wD2UVLQAUUUUAFFFFABRRRQBE3/AB9R/wC4381qWom/4+o/9xv5rUtABRRRQAUUUUAFFFFAEVz/AMes3+438qwPiN/yS3xV7aNdn/yC9b9z/wAes3+438qwPiP/AMks8V/9gW8/9EPQA3/hXPgnv4O0H6nTIT/7LR/wrrwR/wBCfoH/AILIP/ia19Xsry/s1i07UpNOlEgYyxxo5YYPy4YEdwfwrG/4RzxD/wBDhd/+AcH/AMRVKKa1ZnKTT0Vx3/CuvBH/AEJ+gf8Agsg/+Jo/4V14I/6E/QP/AAWQf/E03/hHPEP/AEOF3/4Bwf8AxFH/AAjniH/ocLv/AMA4P/iKrkj/ADE88v5R3/CuvBH/AEJ+gf8Agsg/+Jo/4V14I/6E/QP/AAWQf/E03/hHPEP/AEOF3/4Bwf8AxFH/AAjniH/ocLv/AMA4P/iKXJH+YOeX8o7/AIV14I/6E/QP/BXB/wDE1ja1pXwl8OTxw69pPhPTpZV3ItzZW6Fh0yMrWwnh3X1kBfxbcuAQSDaQjPt92s/4sWsJ+FHiKaSKN5YtOlCSMoJX5ex+tJxS2dy4yb3VhNF8PfC7xHDJNoGh+FtRjiO12trG3cKfQ4XitEfDvwQwBTwfoDDqCNMg/P7tYfxF1C98O2en3Phe5jh1RrhlTS0h3jUExh/lUE5jGH3f7OD1xXX+HGjfw9ZPBqTarE8KMl8zAm4BA+fjjnrx06VJZlfDq2gs/CUttaQxwQQ6tqccUUShVjVb+cBQBwAAAMCuprm/Af8AyLt1/wBhrVf/AE4XFdJQAUUUUAFMP+tX6H+lPph/1q/Q/wBKAHjpRQOlFABRRRQAUUUUAFZuvf8AIOi/6/bX/wBKI60qzde/5B0X/X7a/wDpRHQBpUUUUAFFFFABRRRQAUUUUAFFFc1rfii603xPpekW2l3Esd5Mqz3rLthhRg+AG/iclPujoOTjIyAF9/yVPQ/+wNqX/o+xrpa4vxFrem6H8SNButa1C106BtJ1GMS3c6xJuMtkQuScZwK6DSvEmi63HJJo+safqEcZCu1pcpKEPXB2k4PtQBqUVF9ph/56p/31R9ph/wCeqf8AfVAEtFV2u4lGTPEBnAy4GTSpdwsxHnRkgZPzDj/ODRsHWxPRUX2mH/nqn/fVH2mH/nqn/fVABP8A6tf99f8A0IVLVS4uYRED50f31/i/2hSi8jO0rOhDDIII5HrQK+ti1RUK3MXeVP8Avql+0w/89U/76oGS0VD9pi/56p/30KQXMWR++Qj69aAJ6Ki+0w/89U/76o+0w/8APVP++qAJaig+6f8Aro38zR9ph/56p/31VaO9hCP+/h+V2LfOOOev6j86QF6ioFuY88ypx1+anfaYf+eqf99UwJaKi+0w/wDPVP8AvqmG7hzj7RHnGcbh06UCLFFQ/aoscTJ/30KBcxd5U/76pXH1sTVE/wDx8p/uN/NaPtMP/PVP++qrzXUa3CESxgYYZ3D2piehdoqsl3ERkzx9cfeHrj+dSfaYf+eqf99UD2JaKi+0w/8APVP++qY11EvWaIA8DLj/AD3oAsUVALqI5/eoMdQWHFO+0xf89U/76oAlqK5/49Zf9xv5UfaYf+eqf99VDdXERtpQs0f+rbqwwODQBboqAXcLKGWeMhhlTuHI9ad9ph/56p/31QBLRUX2mH/nqn/fVIbqEf8ALaPH+9QBNRVY3kWeJ4upHDjqP6+1O+0oDzKn5igCeg1F9ph/56p/31SG5i7Sp/31QAsX+sm/3/8A2UVLVFbyFZJ83EQw2T844+Uc1ZFzFtGZUz/vVKld2DpcloqL7TD/AM9U/wC+qPtMP/PVP++qoCWiovtMP/PVP++qPtMP/PVP++qAJaKi+0w/89U/76o+0w/89U/76oAG/wCPqP8A3G/mtS1Va5h+1R/vY/uN/F7rUouYcf62P/vqgCWiovtMP/PVP++qPtMP/PWP/vqgCWiovtMP/PVP++qPtMP/AD1T/vqgCWiovtMP/PVP++qPtMP/AD1T/vqgAuf+PWb/AHG/lWB8R/8Aklniv/sC3n/oh62rm5h+zTfvo/uH+L2rB+Is8bfC3xUFkUk6NecA/wDTB6AOooqnqMt9Fbq2mQQzyl8FZpTGAuDzkKec47Vm/bPE3/QL0/8A8DX/APjVQ5WexpGm5K6a+9G9RWD9s8Tf9AvT/wDwNf8A+NUfbPE3/QL0/wD8DX/+NUvaeTK9jLuvvRvUVg/bPE3/AEC9P/8AA1//AI1SfbPE/wD0C9P/APA1v/jVHP5MPYy7r70b9Vru0t761mtb63jubeZSkkEqBkkXupU8Eex61kre+JTIofTbFVzyReE/+064z4ryyHxF4PtZxrMttczXQubbRpZEllCwblxsZScNg/TNVGVyJQcd/wAz0drC0lv47yS3he5jRo0nKAuqt95QcZAOBx0pbDTLLSrRbbTLSG0t1JKwwRhEBJJOAOOpNeZ+DNbnTRfEur+HbfVpdOs3VY7LXLxpJ1li3mdRlnZAU8sKrkZI6DOT2vg/xHP4r0uXVhaLbadPKf7PYsfMnhHAlYfwhiCQOuME9aogZ4D/AORduv8AsNar/wCnC4rpK5fwNNGnh66Duqn+2dV4J/6iFxXR/aYf+eqf99UAS0VF9ph/56p/31R9ph/56p/31QBLTD/rV+h/pTftMP8Az1T/AL6phuYfNX97H0P8XuKALA6UVF9ph/56p/31R9ph/wCeqf8AfVAEtFRfaYf+eqf99UfaYf8Anqn/AH1QBLRUX2mH/nqn/fVH2mH/AJ6p/wB9UAS1m69/yDov+v21/wDSiOrjXMIU/vkHHJ3Dj3rlNR8c+FdSjtrPT/E+jXV1LfWqx28GoRPI589OAobJPtQB2NFIDkUtABRRRQAUUUUAFFFFABWVrGmzahNprQFFFrercPvOMqFYccHn5q1aKAOavgP+Fp6Hx/zBtS/9HWNdLiuavv8Akqeh/wDYG1L/ANH2NdLQAUUUUAc540P/ABT8WP8An/tP/SiOrGnn/isNVH/Tvb/zkqt4y/5F6P8A7CFp/wClEdWNO/5HDVv+ve3/APalKp8EfUik/wB5NeX6m5RRRTLMrxL/AMixqH/XB/5VgeHuR4Pz0/sV/wD0CCug8S/8ixqH/XB/5VgeH/u+Dv8AsCP/AOgwVVVfuE/7yJo/7y1/df6nYp3+tOpBS1JQ0muT8OH5NG/3bv8A9DFdW33q5Pw393Rfpd/+h1Mvg+aCH8VLyf5HX0UUVQBXnd+f+JR419ft6f8AoqKvRK871D/kFeNv+v8AX/0VFSn/AAp+n6oUf41P1PQY8Y/AU+o4v6CpKYxDXIav/wAj6f8AsA3H/oxK65utcjq3/I/f9wG4/wDRiVUdn6MiXxRXmjf0U/8AElsf+uCf+gir68/lVDRv+QPYf9e8f/oIrQWsqesEzaqrVJeotc54m/5C/h7/ALCP/tKSujrnvEv/ACF/Dv8A2Ef/AGlJW1P4jnrfB935i+EedFYgf8vlz/6PeugrB8H/APIBb/r8uf8A0e9b1c9J3ppnVXVqsvUQ1z3jU/8AFPx/9f1r/wCj0roW6H6VznjP/kXo/wDr+tP/AEelb0/4iRzVXaDZf0w/8TDU8j/l6X/0THWoKy9N/wCQjqn/AF9L/wCiY61BWUPhNp7oWs7X/wDkX7/j/l2k/wDQTWjVDXf+Rf1D/r1k/wDQTWkd0ZzV4tHN+HzmLwh/2CD/AOi4q7OuL8Pfc8H/APYIP/ouKu0qF8Ul5mn2IvyENIehpxpp6VRB5/pjH+0Iv+xmuv8A0XJXfjtXAaZ/x/w/9jNdf+i5a9AHaol/GkvQcP4MPn+Y6mv92nU1/u1YHEeJSfsnirv/AKLB/wCzV3C/dH0rh/En/Hr4r/69YP5NXcjoKmX8Z+kf1Lh/u0f8Uv0CiiiqICiiigAooooAib/j6j/3G/mtSiom/wCPqP8A3G/mtS0AFFFFABRRRQAUUUUARXP/AB6zf7h/lWB8R/8Aklniv/sDXn/oh637n/j1m/3G/lRdW0N7ZzWt3DHcQTIY5YZVDJIpGCrA8EEcEHqKAHt049abzXOr8OfBf8Xg/QMf9guH/wCJp3/CuPBP/Qn6B/4K4P8A4mk1cDoOaOa5/wD4Vx4J/wChP0D/AMFcH/xNH/CuPBP/AEJ+gf8Agrg/+JpcqA6DmlANc9/wrjwT/wBCfoH/AIK4P/iaP+FceCf+hP0D/wAFcH/xNNKwHQ4+lZGo+HrbU/EGj6tcPMLjSHmeAIVCkyIY23cZ+63GKq/8K48E/wDQn6B/4K4P/iaYvw68E7nz4P0E84/5BkHoP9mmAan4Ms9Uv7y5a6vLQX6xR3sNqypHdLG5ID5UnlfkYgjK8Vc0Hw3aeH7nUJNPlnWC+lExtGYeTC/8TRqANu88sM4zyAMmq3/CuPBP/Qn6B/4K4P8A4mkPw58FD7vg/QPf/iVw/wDxNAC+A/8AkXbr/sNar/6cLiukqrpum2WkafHY6XZ29laxZ2QW0axxpkknCqABkkk4HUk1aoAKKKKACmH/AFq/Q/zFPph/1q/Q/wBKAHjpRQOlFABRRRQAUUUUAFZuvDGmxY/5/bX/ANKI60qzde/5B0X/AF+2v/pRHQBpUUUUAFFFFABRRRQAUUUUAFFFFAHNX3/JU9D/AOwNqX/o+xrpa5q+/wCSp6H/ANgbUv8A0fY10tABRRRQBzfjL/kXo/8AsIWn/pRHVjTv+Rw1b/r3t/8A2pVfxl/yL0f/AGELT/0ojqxp3/I4at/172//ALUpVfgj6mdL+JP0/U3KKKKZoZfiX/kWNQ/64P8AyrA8P/d8Hf8AYEf/ANBgrf8AEv8AyLGof9cH/lWB4f8Au+Dv+wI//oMFXV/3f/t5foRR/wB5f+F/qdkKWkFLUFjG+9XJ+G/u6L9Lv/0Ousb71cn4b+7ov0u//Q6Uvg+aCH8VekvyOvooopgFed6h/wAgrxt/1/r/AOioq9ErzvUP+QV42/6/1/8ARUVKf8Gfp+qFH+NT9f0Z6BF/QVJUcX9BUlMY1utcjq3/ACP3/cBuP/RiV1zda5HVv+R+/wC4Dcf+jEqo7S9GRL4o+qN/Rv8AkD2H/XvH/wCgitBaz9G/5A9h/wBe8f8A6CK0FrGl/DRvV/iS9X+Ytc94l/5C/h3/ALCP/tKSuhrnvEv/ACF/Dv8A2Ef/AGlJXRT+NHNW+D7vzH+D/wDkAt/1+XP/AKPet6sHwf8A8gFv+vy5/wDR71vVy0f4cfRfkdmI/iy9WI3Q/Suc8Z/8i9H/ANf1p/6PSujbofpXOeM/+Rej/wCv60/9HpXRT/iI4638Nl/Tf+Qjqn/X0v8A6JjrUFZem/8AIR1T/r6X/wBEx1qCsofCdE90LVDXf+Rf1D/r1k/9BNX6oa7/AMi/qH/XrJ/6Ca0W5nLY5rw99zwf/wBgg/8AouKu0ri/D33PB/8A2CD/AOi4q7SoXxz9Sv8Al3D0A009KcaaelMR5/pn/H/D/wBjNdf+i5a9AHavP9M/4/4f+xmuv/RctegDtUy/jS+X5BD+DD5/mOpr/dp1Nf7tWBxHiT/j18V/9esH8mruR0FcN4k/49fFf/XrB/Jq7kdBUS/jP0j+pcP92j/il+gUUUVZAUUUUAFFFFAETf8AH1H/ALjfzWpaib/j6j/3G/mtS0AFFFFABRRRQAUUUUARXP8Ax6zf7jfyqWorn/j1m/3G/lUtABRRRQAUUUUAFFFFABTF+8/+9/QU+mL95/8Ae/oKAH0UUUAFFFFABRRRQAUw/wCtX6H+lPph/wBav0P9KAHjpRQOlFABRRRQAUUUUAFZuvf8g6L/AK/bX/0ojrSrN17/AJB0X/X7a/8ApRHQBpUUUUAFFFFABRRRQAUUUUAFFFFAHNX3/JU9D/7A2pf+j7Gulrmr7/kqeh/9gbUv/R9jXS0AFFFFAHN+Mv8AkXo/+whaf+lEdWNO/wCRw1b/AK97f/2pVfxl/wAi9H/2ELT/ANKI6sad/wAjhq3/AF72/wD7UpVfgj6mdL+JP0/U3KKKKZoZfiX/AJFjUP8Arg/8qwPD/wB3wd/2BH/9Bgrf8S/8ixqH/XB/5VgeH/u+Dv8AsCP/AOgwVdX/AHf/ALeX6EUf95f+F/qdkKWkFLUFjG+9XJ+G/u6L9Lv/ANDrrG+9XJ+G/u6L9Lv/ANDpS+D5oIfxV6S/I6+iiimAV53qH/IK8bf9f6/+ioq9ErzvUP8AkFeNv+v9f/RUVKf8Gfp+qFH+NT9f0Z6BF/QVJUcX9BUlMY1utcjq3/I/f9wG4/8ARiV1zda5HVv+R+/7gNx/6MSqjtL0ZEvij6o39G/5A9h/17x/+gitBaz9G/5A9h/17x/+gitBaxpfw0b1f4kvV/mLXPeJf+Qv4d/7CP8A7Skroa57xL/yF/Dv/YR/9pSV0U/jRzVvg+78x/g//kAt/wBflz/6Pet6sHwf/wAgFv8Ar8uf/R71vVy0f4cfRfkdmI/iy9WI3Q/Suc8Z/wDIvR/9f1p/6PSujbofpXOeM/8AkXo/+v60/wDR6V0U/wCIjjrfw2X9N/5COqf9fS/+iY61BWXpv/IR1T/r6X/0THWoKyh8J0T3QtUNd/5F/UP+vWT/ANBNX6oa7/yL+of9esn/AKCa0W5nLY5rw99zwf8A9gg/+i4q7SuL8Pfc8H/9gg/+i4q7SoXxz9Sv+XcPQDTT0pxpp6UxHn+mf8f8P/YzXX/ouWvQB2rz/TP+P+H/ALGa6/8ARctegDtUy/jS+X5BD+DD5/mOpr/dp1Nf7tWBxHiT/j18V/8AXrB/Jq7kdBXDeJP+PXxX/wBesH8mruR0FRL+M/SP6lw/3aP+KX6BRRRVkBRRRQAUUUUARN/x9R/7jfzWpaib/j6j/wBxv5rUtABRRRQAUUUUAFFFFAEVz/x6zf7jfyqWorn/AI9Zv9xv5VLQAUUUUAFFFFABRRRQAUxfvP8A739BT6Yv3n/3v6CgB9FFFABRRRQAUUUUAFMP+tX6H+lPph/1q/Q/0oAeOlFA6UUAFFFFABRRRQAVm69/yDov+v21/wDSiOtKs3Xv+QdF/wBftr/6UR0AaVFFFABRRRQAUUUUAFFFNZ9px60AOoqNZlcsEZWKnBweh9KXzBuAJALdBnk0Ac7ff8lT0P8A7A2pf+j7Gulrmb05+Keh/wDYG1H/ANHWVdNQAUUUUAc34y/5F6P/ALCFp/6UR1Y07/kcNW/697f/ANqVX8Zf8i9H/wBhC0/9KI6sad/yOGrf9e9v/wC1KVX4I+pnS/iT9P1NyiiimaGX4l/5FjUP+uD/AMqwPD/3fB3/AGBH/wDQYK3/ABL/AMixqH/XB/5VgeH/ALvg7/sCP/6DBV1f93/7eX6EUf8AeX/hf6nZClpBS1BYxvvVyfhv7ui/S7/9DrrG+9XJ+G/u6L9Lv/0OlL4Pmgh/FXpL8jr6KKKYBXneof8AIK8bf9f6/wDoqKvRK871D/kFeNv+v9f/AEVFSn/Bn6fqhR/jU/X9GegRf0FSVHF/QVJTGNbrXI6t/wAj9/3Abj/0Yldc3WuR1b/kfv8AuA3H/oxKqO0vRkS+KPqjf0b/AJA9h/17x/8AoIrQWs/Rv+QPYf8AXvH/AOgitBaxpfw0b1f4kvV/mLXPeJf+Qv4d/wCwj/7Skroa57xL/wAhfw7/ANhH/wBpSV0U/jRzVvg+78x/g/8A5ALf9flz/wCj3rerB8H/APIBb/r8uf8A0e9b1ctH+HH0X5HZiP4svViN0P0rnPGf/IvR/wDX9af+j0ro26H6VznjP/kXo/8Ar+tP/R6V0U/4iOOt/DZf03/kI6p/19L/AOiY61BWXpv/ACEdU/6+l/8ARMdagrKHwnRPdC1Q13/kX9Q/69ZP/QTV+qGu/wDIv6h/16yf+gmtFuZy2Oa8Pfc8H/8AYIP/AKLirtK4vw99zwf/ANgg/wDouKu0qF8c/Ur/AJdw9ANNPSnGmnpTEef6Z/x/w/8AYzXX/ouWvQB2rz/TP+P+H/sZrr/0XLXoA7VMv40vl+QQ/gw+f5jqa/3adTX+7VgcR4k/49fFf/XrB/Jq7kdBXDeJP+PXxX/16wfyau5HQVEv4z9I/qXD/do/4pfoFFFFWQFFFFABRRRQBE3/AB9R/wC4381qWom/4+o/9xv5rUtABRRRQAUUUUAFFFFAEVz/AMes3+438qlqK5/49Zv9xv5VLQAUUUUAFFFFABRRRQAUxfvP/vf0FPpi/ef/AHv6CgB9FFFABRRRQAUUUUAFMP8ArV+h/pT6Yf8AWr9D/SgB46UUDpRQAUUUUAFFFFABWbr3/IOi/wCv21/9KI60qzde/wCQdF/1+2v/AKUR0AaVFFFABRRRQAUUUUAFc58QNRutI+Huv3+nnFzbadNJEwH3CEPz/h1/CujqK4hjuInhnjWSOVCjo4yGU8EEdxigDjNB8P6X4b8VafBodnHaQ3ukyPcrCNqyPC8AVyBwXIlfLdWrg/iFY3Gr+IvFl9aWP26LSILcSXsj4m0tkAmdrRN2HYKQ5yY+RjcQcV6fb+CdEtLe7t4YLordxCGRpb+4kcRjkIjs5aNR6KQPbpRf+BPD2qXj3F5ZSM8qqk4S5ljW5VRgCVVYCXjj593Ax0oAyNUvtQm8c+Gbvw5Ba6g02i3zL9tuXtg0ZksjuyInOeBwQOp5HQ9Rpdzrk0TnWtOsLSTI2La3zzgj3LQoQfbB+tZdxGsXxO0FI0VEXRdRVVUYAHnWXb04xXUUARb5/wDnnH/32f8A4mjfP/zzj/77P/xNS0UAcv4yaX/hHo8og/0+0Od5/wCfiP2qzYNKPF2qkIuTb2+QW/3/AGqLxl/yL0f/AGELT/0ojqxp3/I4at/172//ALUoq/BH1IpfxZ+n6mvvn/55x/8AfZ/+Jo3z/wDPOP8A77P/AMTUtFBZi+JGnPhnUMxoB5D87z6f7tYmg+YE8H4VTjRX6t/sQe1dD4l/5FjUP+uD/wAqwPD/AN3wd/2BH/8AQYKur/u//by/Qij/ALy/8L/U60PP/wA84/8Avs//ABNLvn/55x/99n/4mpBS1BZXZps/6tP++z/8TXK+HTII9Gwqk7bvgt/t/Suvb71cn4b+7ov0u/8A0OlL4Pmgh/FXpL8jqt8//POP/vs//E0b5/8AnnH/AN9n/wCJqWimBFvn/wCecf8A32f/AImvPdQ83+yfGnypzfJ/Ef8AnlF7V6PXneo/8grxt/1/r/6KipT/AIM/T9UKP8an6/ozu42mHSNDwP4z/hUm+f8A55x/99n/AOJpYv6CpKYyAvNn/Vp/32f/AImuT1QzHx5nYn/ICuB98/8APRP9muxbrXI6t/yP3/cBuP8A0YlVHaXoyJfFH1Rt6O0w0ex+RD/o8f8AGf7o9qvK83/PNP8Avs//ABNVdG/5A9h/17x/+gitBaxp/wAOJvV/iS9X+ZHvn/55x/8AfZ/+Jrn/ABGZjqvh4+WnGo/3z/zyk/2a6Wue8S/8hfw7/wBhH/2lJXRT+NHNW+D7vzE8IGYaG2EQ/wCl3P8AGf8Anu/+zW7vn/55x/8AfZ/+JrG8Hf8AIBb/AK/Ln/0e9b1ctH+HH0X5HZiP4svVkLPNg/u06f3z/wDE1zvjIzHw9H8iD/TrT+M/890/2a6duh+lc54z/wCRej/6/rT/ANHpXRT/AIiOOt/DZc04zDUNTwiH/Sh/Gf8AnjH7Vpb5/wDnnH/32f8A4mqGmf8AIR1T/r6X/wBEx1qCsYfCdE90R75/+ecf/fZ/+JqhrjTHw/qH7tP+PWT+M/3T7VqVQ13/AJF7UP8Ar1k/9BNarczlscv4fMwj8IfInGkH+M/884v9muy3z/8APOP/AL7P/wATXIeHvueD/wDsEH/0XFXaVC+OfqX/AMu4ehDvn/55x/8AfZ/+JpC02P8AVp/32f8A4mpzTT0qiTzvSzN9uj+RTjxNdfxH/nnJ7V34abj92n/fZ/8Aia4TTP8Aj/h/7Ga6/wDRctegDtUS/jT+X5BD+DD5/mM3z/8APOP/AL7P/wATTXaYr/q0/wC+z/8AE1PTX+7VgcL4jMn2XxVlVGbWDo3s3tXbb5v+eaf99n/CuM8Sf8eviv8A69YP5NXcjoKiX8Z+kf1Lh/u0f8Uv/bSLfP8A884/++z/APE0b5/+ecf/AH2f/ialoqyCLfP/AM84/wDvs/8AxNG+f/nnH/32f/ialooAi3z/APPOP/vs/wDxNG+f/nnH/wB9n/4mpaKAKrNP9qj/AHcf3G/jPqv+zUgefH+rj/77P/xNK3/H1H/uN/NalFAEW+f/AJ5x/wDfZ/8AiaN8/wDzzT/vs/8AxNS0UARb5/8AnnH/AN9n/wCJo3z/APPOP/vs/wDxNS0UARb5/wDnnH/32f8A4mjfP/zzj/77P/xNS0UAVLhp/s037tPuH+M+n+7U2+f/AJ5x/wDfZ/8AiaLn/j1m/wBw/wAqloAi3z/884/++z/8TRvn/wCecf8A32f/AImpaKAIt8//ADzj/wC+z/8AE0b5/wDnnH/32f8A4mpaKAIt8/8Azzj/AO+z/wDE0b5/+ecf/fZ/+JqWigCLfP8A884/++z/APE0xWn3P+7Tr/fPoP8AZqxTF+8/+9/QUAN3z/8APOP/AL7P/wATRvn/AOecf/fZ/wDialooAi3z/wDPOP8A77P/AMTRvn/55x/99n/4mpaKAIt8/wDzzj/77P8A8TRvn/55x/8AfZ/+JqWigCLfP/zzj/77P/xNMLz+av7uPof4z6j/AGasUw/61fof6UAN3z/884/++z/8TRvn/wCecf8A32f/AImpRRQBFvn/AOecf/fZ/wDiaN8//POP/vs//E1LRQBFvn/55x/99n/4mjfP/wA84/8Avs//ABNS0UAQtJOB/q0/77P+FcpqN74skitl1DRdHgtjfWvmSQ6vLJIo89OiG2UE+xYfWuxrN17/AJB0X/X7a/8ApRHQBojOOaWiigAooooAKKKKACiiigAooooA5q+/5Knof/YG1L/0fY10tc1ff8lT0P8A7A2pf+j7GuloAKKKKAOb8Zf8i9H/ANhC0/8ASiOrGnf8jhq3/Xvb/wDtSq/jL/kXo/8AsIWn/pRHVjTv+Rw1b/r3t/8A2pSq/BH1M6X8Sfp+puUUUUzQy/Ev/Isah/1wf+VYHh/7vg7/ALAj/wDoMFb/AIl/5FjUP+uD/wAqwPD/AN3wd/2BH/8AQYKur/u//by/Qij/ALy/8L/U7IUtIKWoLGN96uT8N/d0X6Xf/oddY33q5Pw393Rfpd/+h0pfB80EP4q9JfkdfRRRTAK871D/AJBXjb/r/X/0VFXoled6h/yCvG3/AF/r/wCioqU/4M/T9UKP8an6/oz0CL+gqSo4v6CpKYxrda5HVv8Akfv+4Dcf+jErrm61yOrf8j9/3Abj/wBGJVR2l6MiXxR9Ub+jf8gew/694/8A0EVoLWfo3/IHsP8Ar3j/APQRWgtY0v4aN6v8SXq/zFrnvEv/ACF/Dv8A2Ef/AGlJXQ1z3iX/AJC/h3/sI/8AtKSuin8aOat8H3fmP8H/APIBb/r8uf8A0e9b1YPg/wD5ALf9flz/AOj3rerlo/w4+i/I7MR/Fl6sRuh+lc54z/5F6P8A6/rT/wBHpXRt0P0rnPGf/IvR/wDX9af+j0rop/xEcdb+Gy/pv/IR1T/r6X/0THWoKy9N/wCQjqn/AF9L/wCiY61BWUPhOie6Fqhrv/Iv6h/16yf+gmr9UNd/5F/UP+vWT/0E1otzOWxzXh77ng//ALBB/wDRcVdpXF+HvueD/wDsEH/0XFXaVC+OfqV/y7h6AaaelONNPSmI8/0z/j/h/wCxmuv/AEXLXoA7V5/pn/H/AA/9jNdf+i5a9AHapl/Gl8vyCH8GHz/MdTX+7Tqa/wB2rA4jxJ/x6+K/+vWD+TV3I6CuG8Sf8eviv/r1g/k1dyOgqJfxn6R/UuH+7R/xS/QKKKKsgKKKKACiiigCJv8Aj6j/ANxv5rUtRN/x9R/7jfzWpaACiiigAooooAKKKKAIrn/j1m/3G/lUtRXP/HrN/uN/KpaACiiigAooooAKKKKACmL95/8Ae/oKfTF+8/8Avf0FAD6KKKACiiigAooooAKYf9av0P8ASn0w/wCtX6H+lADx0ooHSigAooooAKKKKACs3Xv+QdF/1+2v/pRHWlWbr3/IOi/6/bX/ANKI6ANKiiigAooooAKKKKACiiigAooooA5q+/5Knof/AGBtS/8AR9jXS1zV9/yVPQ/+wNqX/o+xrpaACiiigDm/GX/IvR/9hC0/9KI6sad/yOGrf9e9v/7Uqv4y/wCRej/7CFp/6UR1Y07/AJHDVv8Ar3t//alKr8EfUzpfxJ+n6m5RRRTNDL8S/wDIsah/1wf+VYHh/wC74O/7Aj/+gwVv+Jf+RY1D/rg/8qwPD/3fB3/YEf8A9Bgq6v8Au/8A28v0Io/7y/8AC/1OyFLSClqCxjferk/Df3dF+l3/AOh11jferk/Df3dF+l3/AOh0pfB80EP4q9JfkdfRRRTAK871D/kFeNv+v9f/AEVFXoled6h/yCvG3/X+v/oqKlP+DP0/VCj/ABqfr+jPQIv6CpKji/oKkpjGt1rkdW/5H7/uA3H/AKMSuubrXI6t/wAj9/3Abj/0YlVHaXoyJfFH1Rv6N/yB7D/r3j/9BFaC1n6N/wAgew/694//AEEVoLWNL+Gjer/El6v8xa57xL/yF/Dv/YR/9pSV0Nc94l/5C/h3/sI/+0pK6Kfxo5q3wfd+Y/wf/wAgFv8Ar8uf/R71vVg+D/8AkAt/1+XP/o963q5aP8OPovyOzEfxZerEbofpXOeM/wDkXo/+v60/9HpXRt0P0rnPGf8AyL0f/X9af+j0rop/xEcdb+Gy/pv/ACEdU/6+l/8ARMdagrL03/kI6p/19L/6JjrUFZQ+E6J7oWqGu/8AIv6h/wBesn/oJq/VDXf+Rf1D/r1k/wDQTWi3M5bHNeHvueD/APsEH/0XFXaVxfh77ng//sEH/wBFxV2lQvjn6lf8u4egGmnpTjTT0piPP9M/4/4f+xmuv/RctegDtXn+mf8AH/D/ANjNdf8AouWvQB2qZfxpfL8gh/Bh8/zHU1/u06mv92rA4jxJ/wAeviv/AK9YP5NXcjoK4bxJ/wAeviv/AK9YP5NXcjoKiX8Z+kf1Lh/u0f8AFL9AoooqyAooooAKKKKAIm/4+o/9xv5rUtRN/wAfUf8AuN/NaloAKKKKACiiigAooooAiuf+PWb/AHG/lUtRXP8Ax6zf7jfyqWgAooooAKKKKACiiigApi/ef/e/oKfTF+8/+9/QUAPooooAKKKKACiiigAph/1q/Q/0p9MP+tX6H+lADx0ooHSigAooooAKKKKACs3Xv+QdF/1+2v8A6UR1pVm69/yDov8Ar9tf/SiOgDSooooAKKKKACiiigAooooAKKKKAOavv+Sp6H/2BtS/9H2NdLXNX3/JU9D/AOwNqX/o+xrpaACiiigDm/GX/IvR/wDYQtP/AEojqxp3/I4at/172/8A7Uqv4y/5F6P/ALCFp/6UR1Y07/kcNW/697f/ANqUqvwR9TOl/En6fqblFFFM0MvxL/yLGof9cH/lWB4f+74O/wCwI/8A6DBW/wCJf+RY1D/rg/8AKsDw/wDd8Hf9gR//AEGCrq/7v/28v0Io/wC8v/C/1OyFLSClqCxjferk/Df3dF+l3/6HXWN96uT8N/d0X6Xf/odKXwfNBD+KvSX5HX0UUUwCvO9Q/wCQV42/6/1/9FRV6JXneof8grxt/wBf6/8AoqKlP+DP0/VCj/Gp+v6M9Ai/oKkqOL+gqSmMa3WuR1b/AJH7/uA3H/oxK65utcjq3/I/f9wG4/8ARiVUdpejIl8UfVG/o3/IHsP+veP/ANBFaC1n6N/yB7D/AK94/wD0EVoLWNL+Gjer/El6v8xa57xL/wAhfw7/ANhH/wBpSV0Nc94l/wCQv4d/7CP/ALSkrop/GjmrfB935j/B/wDyAW/6/Ln/ANHvW9WD4P8A+QC3/X5c/wDo963q5aP8OPovyOzEfxZerEbofpXOeM/+Rej/AOv60/8AR6V0bdD9K5zxn/yL0f8A1/Wn/o9K6Kf8RHHW/hsv6b/yEdU/6+l/9Ex1qCsvTf8AkI6p/wBfS/8AomOtQVlD4Tonuhaoa7/yL+of9esn/oJq/VDXf+Rf1D/r1k/9BNaLczlsc14e+54P/wCwQf8A0XFXaVxfh77ng/8A7BB/9FxV2lQvjn6lf8u4egGmnpTjTT0piPP9M/4/4f8AsZrr/wBFy16AO1ef6Z/x/wAP/YzXX/ouWvQB2qZfxpfL8gh/Bh8/zHU1/u06mv8AdqwOI8Sf8eviv/r1g/k1dyOgrhvEn/Hr4r/69YP5NXcjoKiX8Z+kf1Lh/u0f8Uv0CiiirICiiigAooooAib/AI+o/wDcb+a1LUTf8fUf+4381qWgAooooAKKKKACiiigCK5/49Zv9xv5VLUVz/x6zf7jfyqWgAooooAKKKKACiiigApi/ef/AHv6Cn0xfvP/AL39BQA+iiigAooooAKKKKACmH/Wr9D/AEp9MP8ArV+h/pQA8dKKB0ooAKKKKACiiigArN17/kHRf9ftr/6UR1pVm69/yDov+v21/wDSiOgDSooooAKKKKACiiigAqKeVYI2lkYLGilmYngAck1LXOeP7G91P4f6/Y6UCby406aOJVOC5KH5R7np+NAEuh+L9J8RTTRaZPMXiRJNk1tJCzI33ZAJFXKnBwwyDxzUWt+OvD/h3UFs9X1HyJtgkkCwySLChbaHkZVIjUkgZYgc1z9n4w8O3OsQ6tZajDJp2kaLINQniBZYC7wmNGwD8wEcmU6r3AzXG+KJ/sGt+OHudXls7vUkhn0a1Fukkeqf6OiKm1kbzQWyhT+EMzY70Aen3bB/ijoTKcg6NqJBBzx51jXTVw81rJf+OPC638T2s39g3zSRW8zxCN/MscqCjA4BJ4zjp+HW2mnx2aFY5Lht2CfNuJJPy3MSKALdFM8v3b/vo/40eX7t/wB9H/GgDnvGX/IvR/8AYQtP/SiOrGnf8jhq3/Xvb/8AtSqvjJB/wjqct/x/2n8R/wCfiOrGnoD4u1Xk/wDHvb/xH/boq/BH1IpfxZ+n6m9RTPL92/76P+NHl+7f99H/ABoLM7xL/wAixqH/AFwf+VYHh/7vg7/sCP8A+gwVueJI8eGdQ5P+of8AiPp9awtAQFfB/J50V/4j/cgq6v8Au/8A28v0Io/7y/8AC/1OzFLUYj92/wC+j/jS+X7t/wB9H/GoLBvvVyfhv7ui/S7/APQ66poxu6t/30f8a5Pw4mU0bk/du/4j/fpS+D5oIfxV6S/I7GimeX7t/wB9H/Gjy/dv++j/AI0wH153qH/IK8bf9f6/+ioq9B8v3b/vo/4155qCD+yvGnX/AI/06sf+eUVKf8Gfp+qFH+NT9f0Z6FF/QVJUEUYPdug/iP8AjUnl+7f99H/GmMVutcjq3/I/f9wG4/8ARiV1bR89W/76P+NcnqqgePcc/wDICuDncf8AnonvVR2l6MiXxR9UdBo3/IHsP+veP/0EVoLWbo6A6PYcn/j3j/iP90e9X1jHq3/fR/xrGn/DRvV/iS9X+ZJXPeJf+Qv4d/7CP/tKSt7y/dv++j/jXP8AiRMat4eHPOo/3j/zykrop/GjmrfB935kvg//AJALf9flz/6Pet6uf8IIDoTHkf6Xc9GP/Pd/et3y/dv++j/jXLR/hx9F+R2Yj+LL1Y5uh+lc54z/AORej/6/rT/0eldA0fynlun94/41zvjJB/wj0fU/6dafxH/nunvXRT/iI4638Nmjpv8AyEdU/wCvpf8A0THWoKydNQf2hqfX/j6Hc/8APGP3rT8v3b/vo/41jD4TonuiSqGu/wDIv6h/16yf+gmrnl+7f99H/GqGuxgeH9Q5J/0WT+I/3T71qtzOWxzvh77ng/8A7BB/9FxV2lcV4fQeX4Q686Qe5/55xe9dl5fu3/fR/wAahfHP1K/5dw9B5pp6Unl+7f8AfR/xppjGOrf99H/GmI4LTP8Aj/h/7Ga6/wDRctegDtXnulp/p0fXnxNdfxH/AJ5yV34j6ct/30f8amX8afy/IIfwYfP8yWmv92k8v3b/AL6P+NNeMberf99H/GrA4vxJ/wAeviv/AK9YP5NXcjoK4TxIv+i+KsZ4tYP4j6NXcCPjq3/fR/xqJfxn6R/UuH+7R/xS/wDbR9FM8v3b/vo/40eX7t/30f8AGrIH0Uzy/dv++j/jR5fu3/fR/wAaAH0Uzy/dv++j/jR5fu3/AH0f8aAGt/x9R/7jfzWpartH/pUfLfcb+I+q+9SiP3b/AL6P+NAD6KZ5fu3/AH0f8aPK/wBpv++j/jQA+imeX7t/30f8aPL92/76P+NAD6KZ5fu3/fR/xo8v3b/vo/40ANuf+PWb/cb+VS1XuI/9Gm5b7h/iPp9al8v3b/vo/wCNAD6KZ5fu3/fR/wAaPL92/wC+j/jQA+imeX7t/wB9H/Gjy/dv++j/AI0APopnl+7f99H/ABo8v3b/AL6P+NAD6Yv3n/3v6Cjy/dv++j/jTFj+Z+W+9/ePoPegCaimeX7t/wB9H/Gjy/dv++j/AI0APopnl+7f99H/ABo8v3b/AL6P+NAD6KZ5fu3/AH0f8aPL92/76P8AjQA+mH/Wr9D/AEo8v3b/AL6P+NMaP96vLdD/ABH1HvQBMOlFM8v3b/vo/wCNHl+7f99H/GgB9FM8v3b/AL6P+NHl+7f99H/GgB9FM8v3b/vo/wCNHl+7f99H/GgB9Zuvf8g6L/r9tf8A0ojq80WR1b/vo1gaxo1vDawSpJeblvrUgPezOP8Aj4TsXIP4g0AdHRSDgUtABRRRQAUUUUAFIQSevFLRQBGYyTkH/GlCYOePyp9FAHM3g2/FLQx/1BtR/wDR1lXTVzV9/wAlT0P/ALA2pf8Ao+xrpaACiiigDm/GX/IvR/8AYQtP/SiOrGnf8jhq3/Xvb/8AtSq/jL/kXo/+whaf+lEdWNO/5HDVv+ve3/8AalKr8EfUzpfxJ+n6m5RRRTNDL8S/8ixqH/XB/wCVYHh/7vg7/sCP/wCgwVv+Jf8AkWNQ/wCuD/yrA8P/AHfB3/YEf/0GCrq/7v8A9vL9CKP+8v8Awv8AU7IUtIKWoLGN96uT8N/d0X6Xf/oddY33q5Pw393Rfpd/+h0pfB80EP4q9JfkdfRRRTAK871D/kFeNv8Ar/X/ANFRV6JXneof8grxt/1/r/6KipT/AIM/T9UKP8an6/oz0CL+gqSo4v6CpKYxrda5HVv+R+/7gNx/6MSuubrXI6t/yP3/AHAbj/0YlVHaXoyJfFH1Rv6N/wAgew/694//AEEVoLWfo3/IHsP+veP/ANBFaC1jS/ho3q/xJer/ADFrnvEv/IX8O/8AYR/9pSV0Nc94l/5C/h3/ALCP/tKSuin8aOat8H3fmP8AB/8AyAW/6/Ln/wBHvW9WD4P/AOQC3/X5c/8Ao963q5aP8OPovyOzEfxZerEbofpXOeM/+Rej/wCv60/9HpXRt0P0rnPGf/IvR/8AX9af+j0rop/xEcdb+Gy/pv8AyEdU/wCvpf8A0THWoKy9N/5COqf9fS/+iY61BWUPhOie6Fqhrv8AyL+of9esn/oJq/VDXf8AkX9Q/wCvWT/0E1otzOWxzXh77ng//sEH/wBFxV2lcX4e+54P/wCwQf8A0XFXaVC+OfqV/wAu4egGmnpTjTT0piPP9M/4/wCH/sZrr/0XLXoA7V5/pn/H/D/2M11/6Llr0AdqmX8aXy/IIfwYfP8AMdTX+7Tqa/3asDiPEn/Hr4r/AOvWD+TV3I6CuG8Sf8eviv8A69YP5NXcjoKiX8Z+kf1Lh/u0f8Uv0CiiirICiiigAooooAib/j6j/wBxv5rUtRN/x9R/7jfzWpaACiiigAooooAKKKKAIrn/AI9Zv9xv5VLUVz/x6zf7jfyqWgAooooAKKKKACiiigApi/ef/e/oKfTF+8/+9/QUAPooooAKKKKACiiigAph/wBav0P9KfTD/rV+h/pQA8dKKB0ooAKKKKACiiigArN17/kHRf8AX7a/+lEdaVZuvf8AIOi/6/bX/wBKI6ANKiiigAooooAKKKKACiiigAooooA5q+/5Knof/YG1L/0fY10tc1ff8lT0P/sDal/6Psa6WgAooooA5vxl/wAi9H/2ELT/ANKI6sad/wAjhq3/AF72/wD7Uqv4y/5F6P8A7CFp/wClEdWNO/5HDVv+ve3/APalKr8EfUzpfxJ+n6m5RRRTNDL8S/8AIsah/wBcH/lWB4f+74O/7Aj/APoMFb/iX/kWNQ/64P8AyrA8P/d8Hf8AYEf/ANBgq6v+7/8Aby/Qij/vL/wv9TshS0gpagsY33q5Pw393Rfpd/8AoddY33q5Pw393Rfpd/8AodKXwfNBD+KvSX5HX0UUUwCvO9Q/5BXjb/r/AF/9FRV6JXneof8AIK8bf9f6/wDoqKlP+DP0/VCj/Gp+v6M9Ai/oKkqOL+gqSmMa3WuR1b/kfv8AuA3H/oxK65utcjq3/I/f9wG4/wDRiVUdpejIl8UfVG/o3/IHsP8Ar3j/APQRWgtZ+jf8gew/694//QRWgtY0v4aN6v8AEl6v8xa57xL/AMhfw7/2Ef8A2lJXQ1z3iX/kL+Hf+wj/AO0pK6Kfxo5q3wfd+Y/wf/yAW/6/Ln/0e9b1YPg//kAt/wBflz/6Pet6uWj/AA4+i/I7MR/Fl6sRuh+lc54z/wCRej/6/rT/ANHpXRt0P0rnPGf/ACL0f/X9af8Ao9K6Kf8AERx1v4bL+m/8hHVP+vpf/RMdagrL03/kI6p/19L/AOiY61BWUPhOie6Fqhrv/Iv6h/16yf8AoJq/VDXf+Rf1D/r1k/8AQTWi3M5bHNeHvueD/wDsEH/0XFXaVxfh77ng/wD7BB/9FxV2lQvjn6lf8u4egGmnpTjTT0piPP8ATP8Aj/h/7Ga6/wDRctegDtXn+mf8f8P/AGM11/6Llr0AdqmX8aXy/IIfwYfP8x1Nf7tOpr/dqwOI8Sf8eviv/r1g/k1dyOgrhvEn/Hr4r/69YP5NXcjoKiX8Z+kf1Lh/u0f8Uv0CiiirICiiigAooooAib/j6j/3G/mtS1E3/H1H/uN/NaloAKKKKACiiigAooooAiuf+PWb/cb+VS1Fc/8AHrN/uN/KpaACiiigAooooAKKKKACmL95/wDe/oKfTF+8/wDvf0FAD6KKKACiiigAooooAKYf9av0P9KfTD/rV+h/pQA8dKKB0ooAKKKKACiiigArN17/AJB0X/X7a/8ApRHWlWbr3/IOi/6/bX/0ojoA0qKKKACiiigAooooAKKKKACiiigDmr7/AJKnof8A2BtS/wDR9jXS1zV9/wAlT0P/ALA2pf8Ao+xrpaACiiigDm/GX/IvR/8AYQtP/SiOrGnf8jhq3/Xvb/8AtSq/jL/kXo/+whaf+lEdWNO/5HDVv+ve3/8AalKr8EfUzpfxJ+n6m5RRRTNDL8S/8ixqH/XB/wCVYHh/7vg7/sCP/wCgwVv+Jf8AkWNQ/wCuD/yrA8P/AHfB3/YEf/0GCrq/7v8A9vL9CKP+8v8Awv8AU7IUtIKWoLGN96uT8N/d0X6Xf/oddY33q5Pw393Rfpd/+h0pfB80EP4q9JfkdfRRRTAK871D/kFeNv8Ar/X/ANFRV6JXneof8grxt/1/r/6KipT/AIM/T9UKP8an6/oz0CL+gqSo4v6CpKYxrda5HVv+R+/7gNx/6MSuubrXI6t/yP3/AHAbj/0YlVHaXoyJfFH1Rv6N/wAgew/694//AEEVoLWfo3/IHsP+veP/ANBFaC1jS/ho3q/xJer/ADFrnvEv/IX8O/8AYR/9pSV0Nc94l/5C/h3/ALCP/tKSuin8aOat8H3fmP8AB/8AyAW/6/Ln/wBHvW9WD4P/AOQC3/X5c/8Ao963q5aP8OPovyOzEfxZerEbofpXOeM/+Rej/wCv60/9HpXRt0P0rnPGf/IvR/8AX9af+j0rop/xEcdb+Gy/pv8AyEdU/wCvpf8A0THWoKy9N/5COqf9fS/+iY61BWUPhOie6Fqhrv8AyL+of9esn/oJq/VDXf8AkX9Q/wCvWT/0E1otzOWxzXh77ng//sEH/wBFxV2lcX4e+54P/wCwQf8A0XFXaVC+OfqV/wAu4egGmnpTjTT0piPP9M/4/wCH/sZrr/0XLXoA7V5/pn/H/D/2M11/6Llr0AdqmX8aXy/IIfwYfP8AMdTX+7Tqa/3asDiPEn/Hr4r/AOvWD+TV3I6CuG8Sf8eviv8A69YP5NXcjoKiX8Z+kf1Lh/u0f8Uv0CiiirICiiigAooooAib/j6j/wBxv5rUtRN/x9R/7jfzWpaACiiigAooooAKKKKAIrn/AI9Zv9xv5VLUVz/x6zf7jfyqWgAooooAKKKKACiiigApi/ef/e/oKfTF+8/+9/QUAPooooAKKKKACiiigAph/wBav0P9KfTD/rV+h/pQA8dKKB0ooAKKKKACiiigArN17/kHRf8AX7a/+lEdaVZuvf8AIOi/6/bX/wBKI6ANKiiigAooooAKKKKACiisnxNrcXhzw3qOsXCPJHYWslw0acF9ik7c44Jxj8aANaiuV0XUtfj1ePT/ABFNY3DXdm93byWUDxeXsZAyMGdt2DKuGyM4PFVfF/jV9F1jTNK0tBPd3F7aLd55W3t5bhIck/3mLnaP9lj/AA0AX77/AJKnof8A2BtS/wDR9jXS1xXiLW9L0P4j6Dda1qVrp1u2k6ggmu5liUsZbIhctgZwDx7V0OleJdE1uOR9H1iw1BIiFd7W5SUKSM4JUnBoA1KKi+1Qf89U/wC+qPtUH/PVP++qAMDxl/yL0f8A2ELT/wBKI6sad/yOGrf9e9v/AO1Kp+Mpoz4dTbImft1ofvf9PEdWdPniHi7VGMiYNvb4Of8Afoq/BH1IpfxZ+n6m/RUX2qD/AJ6p/wB9UfaoP+eqf99UFlDxL/yLGof9cH/lWB4f+74O/wCwI/8A6DBW14kuIT4Z1ACVCfIfA3e1YegTRBPCH7xeNFcdRx8kFXV/3f8A7eX6EUf95f8Ahf6naClqEXMH/PVP++qX7VB/z1T/AL6qCxzferk/Df3dF+l3/wCh11BuYSf9an/fVcp4cmjVNG3SLgLddT/t0pfB80EP4q9JfkdlRUX2qD/nqn/fVH2qD/nqn/fVMCWvO9Q/5BXjb/r/AF/9FRV3/wBqg/56p/31XnuoSxnSvGmJF5vkI5/6ZRUp/wAGfp+qFH+NT9f0Z6HF/QVJVeO4hHWVBwP4qf8AaoP+eqf99Uxj261yOrf8j9/3Abj/ANGJXUm5hz/rU/76rk9UniPjzIkTH9hXH8X/AE0SqjtL0ZEvij6o6LRv+QPYf9e8f/oIrQWsvR54ho9jmVBi3jz83+yKvrcwj/lqn/fVY0v4cTer/El6v8yaue8S/wDIX8O/9hH/ANpSVufaoP8Anqn/AH1XP+JJ4jqvh4iVMDUf73/TKSuin8aOat8H3fmT+D/+QC3/AF+XP/o963q53wjcQrobBpUH+l3P8X/Td63ftUH/AD1T/vquWj/Dj6L8jsxH8WXqyRuh+lc54z/5F6P/AK/rT/0elbzXMJB/ep/31XO+Mp4j4fjAlTP260/i/wCnhK6Kf8RHHW/hs09N/wCQjqn/AF9L/wCiY61BWRp08S6hqeZEH+lD+L/pjHWl9pg/56p/31WMPhOie6Jqoa7/AMi/qH/XrJ/6CatfaoP+eqf99VQ1y4hPh/UMSp/x6yfxf7JrVbmUtjn/AA99zwf/ANgg/wDouKu0riPD88Qj8IEyJgaQc/N/0zirsvtUH/PVP++qhfHP1L/5dw9CU009KZ9pg/56p/31TTcw4/1qf99UxHCaZ/x/w/8AYzXX/ouWvQB2rzzTJI/t0f71f+Rmuj97/pnJXfi5hGP3qf8AfVTL+NP5fkEP4MPn+ZNTX+7TPtUH/PVP++qa9xCV4lT/AL6qwON8Sf8AHr4r/wCvWD+TV3I6CuD8RzRm18VBZFJNrBwG9mrtxcw4/wBan/fVRL+M/SP6lw/3aP8Ail/7aS0VF9qg/wCeqf8AfVH2qD/nqn/fVWQS0VF9qg/56p/31R9qg/56p/31QBLRUX2qD/nqn/fVH2qD/nqn/fVAA3/H1H/uN/Nalqq1zAbqP98n3W/i9xUguYMf65P++qAJqKi+1Qf89U/76o+1Qf8APVP++qAJaKi+1Qf89U/76o+1Qf8APVP++qAJaKi+1Qf89U/76o+1Qf8APVP++qAC5/49Zv8Acb+VS1VubiH7NN++T7h/i9ql+1Qf89U/76oAloqL7VB/z1T/AL6o+1Qf89U/76oAloqL7VB/z1T/AL6o+1Qf89U/76oAloqL7VB/z1T/AL6o+1Qf89U/76oAlpi/ef8A3v6Cm/aoP+eqf99UxbiHc/75Ov8Ae+lAFiiovtUH/PVP++qPtUH/AD1T/vqgCWiovtUH/PVP++qPtUH/AD1T/vqgCWiovtUH/PVP++qPtUH/AD1T/vqgCWmH/Wr9D/Sm/aoP+eqf99Uw3EJlX98nQ/xe4oAsDpRUX2mD/nqn/fVH2qD/AJ6p/wB9UAS0VF9qg/56p/31R9qg/wCeqf8AfVAEtFRfaoP+eqf99UfaoP8Anqn/AH1QBLWbr3/IOi/6/bX/ANKI6uNdQ44lT/voVyeo+OvCmpRWtpp3ifRrq5mvrRY4IdQid3PnpwFDZJ9qAOyopFOVHb29KWgAooooAKKKKACs3xBo8XiDw/qGkXWRBf20ltIw6qGUjI+ma0qKAOVt9H8Qi7W9updPa4tdO+yWqhWKs7Mpkkc8HB8uPCjOMHk5rN8R/C3TdclN3G9zbX1xfW13dyR6hcIknlsm7CK4AbamFYDKnkYrvKKAOVmgW3+Jvh+KMsVTRNRUb3Lniay6sSSfqSa6quavv+Sp6H/2BtS/9H2NdLQAUUUUAc34y/5F6P8A7CFp/wClEdWNO/5HDVv+ve3/APalV/GX/IvR/wDYQtP/AEojqxp3/I4at/172/8A7UpVfgj6mdL+JP0/U3KKKKZoZfiX/kWNQ/64P/KsDw/93wd/2BH/APQYK3/Ev/Isah/1wf8AlWB4f+74O/7Aj/8AoMFXV/3f/t5foRR/3l/4X+p2QpaQUtQWMb71cn4b+7ov0u//AEOusb71cn4b+7ov0u//AEOlL4Pmgh/FXpL8jr6KKKYBXneof8grxt/1/r/6Kir0SvO9Q/5BXjb/AK/1/wDRUVKf8Gfp+qFH+NT9f0Z6BF/QVJUcX9BUlMY1utcjq3/I/f8AcBuP/RiV1zda5HVv+R+/7gNx/wCjEqo7S9GRL4o+qN/Rv+QPYf8AXvH/AOgitBaz9G/5A9h/17x/+gitBaxpfw0b1f4kvV/mLXPeJf8AkL+Hf+wj/wC0pK6Gue8S/wDIX8O/9hH/ANpSV0U/jRzVvg+78x/g/wD5ALf9flz/AOj3rerB8H/8gFv+vy5/9HvW9XLR/hx9F+R2Yj+LL1YjdD9K5zxn/wAi9H/1/Wn/AKPSujbofpXOeM/+Rej/AOv60/8AR6V0U/4iOOt/DZf03/kI6p/19L/6JjrUFZem/wDIR1T/AK+l/wDRMdagrKHwnRPdC1Q13/kX9Q/69ZP/AEE1fqhrv/Iv6h/16yf+gmtFuZy2Oa8Pfc8H/wDYIP8A6LirtK4vw99zwf8A9gg/+i4q7SoXxz9Sv+XcPQDTT0pxpp6UxHn+mf8AH/D/ANjNdf8AouWvQB2rz/TP+P8Ah/7Ga6/9Fy16AO1TL+NL5fkEP4MPn+Y6mv8Adp1Nf7tWBxHiT/j18V/9esH8mruR0FcN4k/49fFf/XrB/Jq7kdBUS/jP0j+pcP8Ado/4pfoFFFFWQFFFFABRRRQBE3/H1H/uN/NalqJv+PqP/cb+a1LQAUUUUAFFFFABRRRQBFc/8es3+438qlqK5/49Zv8Acb+VS0AFFFFABRRRQAUUUUAFMX7z/wC9/QU+mL95/wDe/oKAH0UUUAFFFFABRRRQAUw/61fof6U+mH/Wr9D/AEoAeOlFA6UUAFFFFABRRRQAVm69/wAg6L/r9tf/AEojrSrN17/kHRf9ftr/AOlEdAGlRRRQAUUUUAFFFFABRRRQAUUUUAc1ff8AJU9D/wCwNqX/AKPsa6Wuavv+Sp6H/wBgbUv/AEfY10tABRRRQBzfjL/kXo/+whaf+lEdWNO/5HDVv+ve3/8AalV/GX/IvR/9hC0/9KI6sad/yOGrf9e9v/7UpVfgj6mdL+JP0/U3KKKKZoZfiX/kWNQ/64P/ACrA8P8A3fB3/YEf/wBBgrf8S/8AIsah/wBcH/lWB4f+74O/7Aj/APoMFXV/3f8A7eX6EUf95f8Ahf6nZClpBS1BYxvvVyfhv7ui/S7/APQ66xvvVyfhv7ui/S7/APQ6Uvg+aCH8VekvyOvooopgFed6h/yCvG3/AF/r/wCioq9ErzvUP+QV42/6/wBf/RUVKf8ABn6fqhR/jU/X9GegRf0FSVHF/QVJTGNbrXI6t/yP3/cBuP8A0Yldc3WuR1b/AJH7/uA3H/oxKqO0vRkS+KPqjf0b/kD2H/XvH/6CK0FrP0b/AJA9h/17x/8AoIrQWsaX8NG9X+JL1f5i1z3iX/kL+Hf+wj/7Skroa57xL/yF/Dv/AGEf/aUldFP40c1b4Pu/Mf4P/wCQC3/X5c/+j3rerB8H/wDIBb/r8uf/AEe9b1ctH+HH0X5HZiP4svViN0P0rnPGf/IvR/8AX9af+j0ro26H6VznjP8A5F6P/r+tP/R6V0U/4iOOt/DZf03/AJCOqf8AX0v/AKJjrUFZem/8hHVP+vpf/RMdagrKHwnRPdC1Q13/AJF/UP8Ar1k/9BNX6oa7/wAi/qH/AF6yf+gmtFuZy2Oa8Pfc8H/9gg/+i4q7SuL8Pfc8H/8AYIP/AKLirtKhfHP1K/5dw9ANNPSnGmnpTEef6Z/x/wAP/YzXX/ouWvQB2rz/AEz/AI/4f+xmuv8A0XLXoA7VMv40vl+QQ/gw+f5jqa/3adTX+7VgcR4k/wCPXxX/ANesH8mruR0FcN4k/wCPXxX/ANesH8mruR0FRL+M/SP6lw/3aP8Ail+gUUUVZAUUUUAFFFFAETf8fUf+4381qWom/wCPqP8A3G/mtS0AFFFFABRRRQAUUUUARXP/AB6zf7jfyqWorn/j1m/3G/lUtABRRRQAUUUUAFFFFABTF+8/+9/QU+mL95/97+goAfRRRQAUUUUAFFFFABTD/rV+h/pT6Yf9av0P9KAHjpRQOlFABRRRQAUUUUAFZuvf8g6L/r9tf/SiOtKs3Xv+QdF/1+2v/pRHQBpUUUUAFFFFABRRRQAUUUUAFFFFAHNX3/JU9D/7A2pf+j7Gulrmr7/kqeh/9gbUv/R9jXS0AFFFFAHN+Mv+Rej/AOwhaf8ApRHVjTv+Rw1b/r3t/wD2pVfxl/yL0f8A2ELT/wBKI6sad/yOGrf9e9v/AO1KVX4I+pnS/iT9P1NyiiimaGX4l/5FjUP+uD/yrA8P/d8Hf9gR/wD0GCt/xL/yLGof9cH/AJVgeH/u+Dv+wI//AKDBV1f93/7eX6EUf95f+F/qdkKWkFLUFjG+9XJ+G/u6L9Lv/wBDrrG+9XJ+G/u6L9Lv/wBDpS+D5oIfxV6S/I6+iiimAV53qH/IK8bf9f6/+ioq9ErzvUP+QV42/wCv9f8A0VFSn/Bn6fqhR/jU/X9GegRf0FSVHF/QVJTGNbrXI6t/yP3/AHAbj/0Yldc3WuR1b/kfv+4Dcf8AoxKqO0vRkS+KPqjf0b/kD2H/AF7x/wDoIrQWs/Rv+QPYf9e8f/oIrQWsaX8NG9X+JL1f5i1z3iX/AJC/h3/sI/8AtKSuhrnvEv8AyF/Dv/YR/wDaUldFP40c1b4Pu/Mf4P8A+QC3/X5c/wDo963qwfB//IBb/r8uf/R71vVy0f4cfRfkdmI/iy9WI3Q/Suc8Z/8AIvR/9f1p/wCj0ro26H6VznjP/kXo/wDr+tP/AEeldFP+Ijjrfw2X9N/5COqf9fS/+iY61BWXpv8AyEdU/wCvpf8A0THWoKyh8J0T3QtUNd/5F/UP+vWT/wBBNX6oa7/yL+of9esn/oJrRbmctjmvD33PB/8A2CD/AOi4q7SuL8Pfc8H/APYIP/ouKu0qF8c/Ur/l3D0A009KcaaelMR5/pn/AB/w/wDYzXX/AKLlr0Adq8/0z/j/AIf+xmuv/RctegDtUy/jS+X5BD+DD5/mOpr/AHadTX+7VgcR4k/49fFf/XrB/Jq7kdBXDeJP+PXxX/16wfyau5HQVEv4z9I/qXD/AHaP+KX6BRRRVkBRRRQAUUUUARN/x9R/7jfzWpaib/j6j/3G/mtS0AFFFFABRRRQAUUUUARXP/HrN/uN/Kpaiuf+PWb/AHG/lUtABRRRQAUUUUAFFFFABTF+8/8Avf0FPpi/ef8A3v6CgB9FFFABRRRQAUUUUAFMP+tX6H+lPph/1q/Q/wBKAHjpRQOlFABRRRQAUUUUAFZuvf8AIOi/6/bX/wBKI60qzde/5B0X/X7a/wDpRHQBpUUUUAFFFFABRRRQAUUUhJ6A4NAC0VGkgkzsYEZxkEGhplRgrsoY9ASBmgDnr7/kqeh/9gbUv/R9jXS1zV7/AMlT0P8A7A2pf+jrGuloAKKKKAOb8Zf8i9H/ANhC0/8ASiOrGnf8jhq3/Xvb/wDtSq/jL/kXo/8AsIWn/pRHVjTv+Rw1b/r3t/8A2pSq/BH1M6X8Sfp+puUUUUzQy/Ev/Isah/1wf+VYHh/7vg7/ALAj/wDoMFb/AIl/5FjUP+uD/wAqwPD/AN3wd/2BH/8AQYKur/u//by/Qij/ALy/8L/U7IUtIKWoLGN96uT8N/d0X6Xf/oddY33q5Pw393Rfpd/+h0pfB80EP4q9JfkdfRRRTAK871D/AJBXjb/r/X/0VFXoled6h/yCvG3/AF/r/wCioqU/4M/T9UKP8an6/oz0CL+gqSo4v6CpKYxrda5HVv8Akfv+4Dcf+jErrm61yOrf8j9/3Abj/wBGJVR2l6MiXxR9Ub+jf8gew/694/8A0EVoLWfo3/IHsP8Ar3j/APQRWgtY0v4aN6v8SXq/zFrnvEv/ACF/Dv8A2Ef/AGlJXQ1z3iX/AJC/h3/sI/8AtKSuin8aOat8H3fmP8H/APIBb/r8uf8A0e9b1YPg/wD5ALf9flz/AOj3rerlo/w4+i/I7MR/Fl6sRuh+lc54z/5F6P8A6/rT/wBHpXRt0P0rnPGf/IvR/wDX9af+j0rop/xEcdb+Gy/pv/IR1T/r6X/0THWoKy9N/wCQjqn/AF9L/wCiY61BWUPhOie6Fqhrv/Iv6h/16yf+gmr9UNd/5F/UP+vWT/0E1otzOWxzXh77ng//ALBB/wDRcVdpXF+HvueD/wDsEH/0XFXaVC+OfqV/y7h6AaaelONNPSmI8/0z/j/h/wCxmuv/AEXLXoA7V5/pn/H/AA/9jNdf+i5a9AHapl/Gl8vyCH8GHz/MdTX+7Tqa/wB2rA4jxJ/x6+K/+vWD+TV3I6CuG8Sf8eviv/r1g/k1dyOgqJfxn6R/UuH+7R/xS/QKKKKsgKKKKACiiigCJv8Aj6j/ANxv5rUtRN/x9R/7jfzWpaACiiigAooooAKKKKAIrn/j1m/3G/lUtRXP/HrN/uN/KpaACiiigAooooAKKKKACmL95/8Ae/oKfTF+8/8Avf0FAD6KKKACiiigAooooAKYf9av0P8ASn0w/wCtX6H+lADx0ooHSigAooooAKKKKACs3Xv+QdF/1+2v/pRHWlWbr3/IOi/6/bX/ANKI6ANKiiigAooooAKKKKACub+Ic93a/DfxFPppZbqLTLh42Q4ZSI25HuOorpKimhEytHIqvG6lWRhkEHrkfSgDlNJsdP07xbpa6PbQW8dxo8rT+QAN+x4BGWA6/ekwe+T6VieMdL0rWNX1XQNItobrxLq9uDNcz5ddNiCbVm3f8syOqqpBZuemWrr4/CGiwwXMMenp5dzbrbSAuxJiXOIwSchRnhRgCo5/BGgXF9cXkmngXNwV82VJnQybV2rnB5wKAMTVbPVk8deG7XRtRtoLmHRb9GuL+0e4EiiSyH3RIh3EgHJY9+OQa6fS4NcijkGs6hp93ISNjWlg9uqj0IaZ8n3yPpWXcQrB8T9BjjyFXRNRAycniay711FAEW24/wCekf8A37P+NG24/wCekf8A37P+NS0UAcv4yWb/AIR6PLpj7fadEP8Az8R+9WbAS/8ACXartdM/Z7fOVz/f96i8Zf8AIvR/9hC0/wDSiOrGnf8AI4at/wBe9v8A+1KKvwR9SKX8Wfp+pr7bj/npH/37P+NG24/56R/9+z/jUtFBZjeJFn/4RnUMyR48h8/uz6fWsPQRJs8H7XXP9ivjK/7EHvXQ+Jf+RY1D/rg/8qwPD/3fB3/YEf8A9Bgq6v8Au/8A28v0Io/7y/8AC/1OtC3H/PSP/v2f8aXbcf8APSP/AL9n/GpBS1BZAyz5+/H/AN8H/GuV8OiTy9G2soO276rn+Ouub71cn4b+7ov0u/8A0OlL4Pmgh/FXpL8jqttx/wA9I/8Av2f8aNtx/wA9I/8Av2f8alopgRbbj/npH/37P+Nee6gsn9k+NMyJ/wAfyZ+Q/wDPKL3r0evO9Q/5BXjb/r/X/wBFRUp/wZ+n6oUf41P1/RndxrP2ePoOqH/GpNtx/wA9I/8Av2f8aWL+gqSmMgKz5/1kf/fB/wAa5PVRL/wnvMkef7CuP+WZ/wCeie9di3WuR1b/AJH7/uA3H/oxKqO0vRkS+KPqjb0dZv7HsMPH/wAe8ePkP90e9X1WftJH/wB+z/jVTRv+QPYf9e8f/oIrQWsqf8OJvV/iS9X+ZHtuP+ekf/fs/wCNc/4kWX+1vD2ZI8/2jx+7P/PKT3rpa57xL/yF/Dv/AGEf/aUlb0/jRzVvg+78xPCCzf2G22SPH2u5/wCWZ/57v71u7bj/AJ6R/wDfs/41jeD/APkAt/1+XP8A6Pet6uWj/Dj6L8jsxH8WXqyFlnwf3kfT+4f8a53xks3/AAj0eZI/+P60/wCWZ/5+E966duh+lc54z/5F6P8A6/rT/wBHpXRT/iI4638NlzThN/aGp4eP/j6H8B/54x+9aW2f/npH/wB+z/jVDTf+Qjqn/X0v/omOtQVjD4TonuiPbcf89I/+/Z/xqhrqzf8ACP6hmSP/AI9ZP4D/AHT71qVQ13/kX9Q/69ZP/QTWq3MpbHL+HxL5fhDEkef7IOP3Z/55xe9dltuP+ekf/fs/41yHh77ng/8A7BB/9FxV2lQvjn6l/wDLuHoRbbj/AJ6R/wDfs/400rPjmSP/AL4P+NTmmnpTEed6Wsv26P8AeJ/yM11/Af8AnnJ7134WfjEkf/fB/wAa4TTP+P8Ah/7Ga6/9Fy16AO1TL+NP5fkEP4MPn+Yzbcf89I/+/Z/xprrPt5kj/wC/Z/xqemv92rA4XxGsn2XxVl1P+iwdF9m967fbP2kj/wC+D/jXF+JP+PXxX/16wfyau5HQVEv4z9I/qXD/AHaP+KX/ALaRbbj/AJ6R/wDfs/40bbj/AJ6R/wDfs/41LRVkEW24/wCekf8A37P+NG24/wCekf8A37P+NS0UARbbj/npH/37P+NG24/56R/9+z/jUtFAFVluPtUf7yL7jf8ALM+o96kC3GP9ZH/37P8AjSt/x9R/7jfzWpaAIttx/wA9I/8Av2f8aNtx/wA9Iv8Av2f8alooAi23H/PSP/v2f8aNtx/z0j/79n/GpaKAIttx/wA9I/8Av2f8aNtx/wA9I/8Av2f8alooAq3Cz/Zpv3kf3D/yzPp9al23H/PSP/v2f8aLn/j1m/3G/lUtAEW24/56R/8Afs/40bbj/npH/wB+z/jUtFAEW24/56R/9+z/AI0bbj/npH/37P8AjUtFAEW24/56R/8Afs/40bbj/npH/wB+z/jUtFAEW24/56R/9+z/AI0xVn3P+8j6/wDPM+g96sUxfvP/AL39BQA3bcf89I/+/Z/xo23H/PSP/v2f8alooAi23H/PSP8A79n/ABo23H/PSP8A79n/ABqWigCLbcf89I/+/Z/xo23H/PSP/v2f8alooAi23H/PSP8A79n/ABpjLceav7yPof8AlmfUe9WKYf8AWr9D/SgBu24/56R/9+z/AI0bbj/npH/37P8AjUo6UUARbbj/AJ6R/wDfs/40bbj/AJ6R/wDfs/41LRQBFtuP+ekf/fs/40bbj/npH/37P+NS0UAQsLjafnjPHaM/41ymo2nixI7ZtQ1nR57UX1r5kUGkSxOw89OFc3LBT7lT9K7Gs3Xv+QdF/wBftr/6UR0AaIGBS0UUAFFFFABRRRQAUUUUAFFFFAHNX3/JU9D/AOwNqX/o+xrpa5q+/wCSp6H/ANgbUv8A0fY10tABRRRQBzfjL/kXo/8AsIWn/pRHVjTv+Rw1b/r3t/8A2pVfxl/yL0f/AGELT/0ojqxp3/I4at/172//ALUpVfgj6mdL+JP0/U3KKKKZoZfiX/kWNQ/64P8AyrA8P/d8Hf8AYEf/ANBgrf8AEv8AyLGof9cH/lWB4f8Au+Dv+wI//oMFXV/3f/t5foRR/wB5f+F/qdkKWkFLUFjG+9XJ+G/u6L9Lv/0Ousb71cn4b+7ov0u//Q6Uvg+aCH8VekvyOvooopgFed6h/wAgrxt/1/r/AOioq9ErzvUP+QV42/6/1/8ARUVKf8Gfp+qFH+NT9f0Z6BF/QVJUcX9BUlMY1utcjq3/ACP3/cBuP/RiV1zda5HVv+R+/wC4Dcf+jEqo7S9GRL4o+qN/Rv8AkD2H/XvH/wCgitBaz9G/5A9h/wBe8f8A6CK0FrGl/DRvV/iS9X+Ytc94l/5C/h3/ALCP/tKSuhrnvEv/ACF/Dv8A2Ef/AGlJXRT+NHNW+D7vzH+D/wDkAt/1+XP/AKPet6sHwf8A8gFv+vy5/wDR71vVy0f4cfRfkdmI/iy9WI3Q/Suc8Z/8i9H/ANf1p/6PSujbofpXOeM/+Rej/wCv60/9HpXRT/iI4638Nl/Tf+Qjqn/X0v8A6JjrUFZem/8AIR1T/r6X/wBEx1qCsofCdE90LVDXf+Rf1D/r1k/9BNX6oa7/AMi/qH/XrJ/6Ca0W5nLY5rw99zwf/wBgg/8AouKu0ri/D33PB/8A2CD/AOi4q7SoXxz9Sv8Al3D0A009KcaaelMR5/pn/H/D/wBjNdf+i5a9AHavP9M/4/4f+xmuv/RctegDtUy/jS+X5BD+DD5/mOpr/dp1Nf7tWBxHiT/j18V/9esH8mruR0FcN4k/49fFf/XrB/Jq7kdBUS/jP0j+pcP92j/il+gUUUVZAUUUUAFFFFAETf8AH1H/ALjfzWpaib/j6j/3G/mtS0AFFFFABRRRQAUUUUARXP8Ax6zf7jfyqWorn/j1m/3G/lUtABRRRQAUUUUAFFFFABTF+8/+9/QU+mL95/8Ae/oKAH0UUUAFFFFABRRRQAUw/wCtX6H+lPph/wBav0P9KAHjpRQOlFABRRRQAUUUUAFZuvf8g6L/AK/bX/0ojrSrN17/AJB0X/X7a/8ApRHQBpUUUUAFFFFABRRRQAUUUUAFFFFAHNX3/JU9D/7A2pf+j7Gulrmr7/kqeh/9gbUv/R9jXS0AFFFFAHN+Mv8AkXo/+whaf+lEdWNO/wCRw1b/AK97f/2pVfxl/wAi9H/2ELT/ANKI6sad/wAjhq3/AF72/wD7UpVfgj6mdL+JP0/U3KKKKZoZfiX/AJFjUP8Arg/8qwPD/wB3wd/2BH/9Bgrf8S/8ixqH/XB/5VgeH/u+Dv8AsCP/AOgwVdX/AHf/ALeX6EUf95f+F/qdkKWkFLUFjG+9XJ+G/u6L9Lv/ANDrrG+9XJ+G/u6L9Lv/ANDpS+D5oIfxV6S/I6+iiimAV53qH/IK8bf9f6/+ioq9ErzvUP8AkFeNv+v9f/RUVKf8Gfp+qFH+NT9f0Z6BF/QVJUcX9BUlMY1utcjq3/I/f9wG4/8ARiV1zda5HVv+R+/7gNx/6MSqjtL0ZEvij6o39G/5A9h/17x/+gitBaz9G/5A9h/17x/+gitBaxpfw0b1f4kvV/mLXPeJf+Qv4d/7CP8A7Skroa57xL/yF/Dv/YR/9pSV0U/jRzVvg+78x/g//kAt/wBflz/6Pet6sHwf/wAgFv8Ar8uf/R71vVy0f4cfRfkdmI/iy9WI3Q/Suc8Z/wDIvR/9f1p/6PSujbofpXOeM/8AkXo/+v60/wDR6V0U/wCIjjrfw2X9N/5COqf9fS/+iY61BWXpv/IR1T/r6X/0THWoKyh8J0T3QtUNd/5F/UP+vWT/ANBNX6oa7/yL+of9esn/AKCa0W5nLY5rw99zwf8A9gg/+i4q7SuL8Pfc8H/9gg/+i4q7SoXxz9Sv+XcPQDTT0pxpp6UxHn+mf8f8P/YzXX/ouWvQB2rz/TP+P+H/ALGa6/8ARctegDtUy/jS+X5BD+DD5/mOpr/dp1Nf7tWBxHiT/j18V/8AXrB/Jq7kdBXDeJP+PXxX/wBesH8mruR0FRL+M/SP6lw/3aP+KX6BRRRVkBRRRQAUUUUARN/x9R/7jfzWpaib/j6j/wBxv5rUtABRRRQAUUUUAFFFFAEVz/x6zf7jfyqWorn/AI9Zv9xv5VLQAUUUUAFFFFABRRRQAUxfvP8A739BT6Yv3n/3v6CgB9FFFABRRRQAUUUUAFMP+tX6H+lPph/1q/Q/0oAeOlFA6UUAFFFFABRRRQAVm69/yDov+v21/wDSiOtKs3Xv+QdF/wBftr/6UR0AaVFFFABRRRQAUUUUAFFFFABRRRQBzV9/yVPQ/wDsDal/6Psa6WuavuPinof/AGBtS/8AR9jXSbqAFopN1G6gDnPGX/IvR/8AYQtP/SiOrGnf8jhq3/Xvb/8AtSq/jL/kXov+whaf+lEdWNPOPGGrf9e9v/7Uoq/BH1IpJ+0n6fqblFJuo3UFmZ4l/wCRY1D/AK4P/KsDw/8Ad8Hf9gR//QYK3vEhz4Z1D/r3f+VYPh8/L4O/7Aj/APoMFVU/3f8A7eX6EUb/AFl/4X+p2Qpabml3VJY1vvVyfhv7ui/S7/8AQ66w8/WuU8O8Jov+7d/+h0pfB80EL+1Xo/yOuopN1G6mAted6h/yCvG3/X+v/oqKvQ91eeah/wAgnxt6/b1/9FRUp/wZ+n6oUb+2p+v6M9Ai/oKkqKM4H4CpN1MYjda5HVv+R+/7gNx/6MSutJzXJar/AMj9/wBwG4/9GJVR2l6MiXxR9Ub+jf8AIHsP+veP/wBBFaC1n6Pxo9hn/n3jx/3yKvg4rKn8CN6v8SXq/wAx1c94l/5C/h3/ALCP/tKSug3Vz3iTnVvDv/YR/wDaUlb0/jRzVvg+78yTwf8A8gFv+vy5/wDR71vVgeDz/wASFv8Ar8uf/R71vbq5aP8ADj6L8jsxH8WXqwbofpXOeM/+Rej/AOv60/8AR6V0ROVP0rnfGf8AyL0f/X9af+j0rop/xEcdb+Gy/pv/ACEdU/6+l/8ARMdagrL03H9oap/19L/6JjrTzisYfCdE9x1UNd/5F/UP+vWT/wBBNXt1UNcOfD+of9esn/oJrVbmctjm/D33PB//AGCD/wCi4q7SuL8P/wCr8H/9gg/+i4q7PdUL45+pX/LuHoKaaelLnNNPpTEcBpn/AB/w/wDYzXX/AKLlr0Adq8/0zi/hz/0M91/6LlrvwelTL+NP5fkEL+xh8/zH01/u0u6mucrVgcT4k/49fFf/AF6wfyau5HQVw/iQf6J4r/69bf8Ak1dsGqZfxn6R/UuCaw0f8Uv/AG0dRSbqN1UQLRSbqN1AC0Um6jdQBG3/AB9R/wC4381qWoWP+lR/7jfzWpN1ADqKTdRuoAWik3UbqAFopN1G6gCO5/49Zv8Acb+VS1DcH/Rpf9w/yqXdQAtFJuo3UALRSbqN1AC0Um6jdQAtMX7z/wC9/QU7dTFPzP8A739BQBJRSbqN1AC0Um6jdQAtFJuo3UALTD/rV+h/pTt1MLfvV+h/pQBIOlFN3Uu6gBaKTdRuoAWik3UbqAFrN17/AJB0X/X7a/8ApRHWjurN14/8S6L/AK/bX/0ojoA06KKKACiiigAooooAKKKKACuG1/4gXWlapqy6fo5v9O0FI5NWuTcbGhDDeRGmw+YVj+dgSvBFdzXmXiHw94jS88XadpGki+s/FUYCXhuI0Wzd4Vgk8xWIYgKu8bM5JxgdaAOhu7qB/iPoF0sq+RJouoFJCwCkGayIwffr+FdH9utf+fiL/vsf41yE+i2Y8ZeGdGvIVvbS20O8VVuYw4YxyWaqxB4zgn866FPC2hIMJo1gv0tUH9Kl83QpcvUvfbrX/n4i/wC+x/jR9utf+fiL/vsf41S/4RrRP+gTZf8AgMn+FH/CNaJ/0CbL/wABk/wqbzH+7MvxhcwP4fQJNGT9utCArAn/AI+E7ZqxY3Vuvi3VGM8eDBbgHeP9vvmrn/CNaJ/0CbL/AMBk/wAKP+Ea0T/oE2X/AIDJ/hRLnkkuzFFU4ylK71VvxuXft1r/AM/EX/fY/wAaPt1r/wA/EX/fY/xql/wjWif9Amy/8Bk/wo/4RrRP+gTZf+Ayf4UXmP8AdkPiG8tm8N34E8RJgfjeOePrWHoFzEsfhDfLGCujOrZYfKdsHv7Gt6Xw1oqxjGk2P31/5dk/vD2qT/hGtE/6BNl/4DJ/hTk5yhyedxQVONX2l3s195c+3Wv/AD8Rf99j/Gl+3Wv/AD8Rf99j/GqX/CNaJ/0CbL/wGT/Cj/hGtE/6BNl/4DJ/hSvMf7suG9tjwLiLP/XQf41y3h66gVNI3SoMLddWHH7we9bv/CNaJ/0CbL/wGT/Cj/hGtE/6BNl/4DJ/hQ+dxt5oI+zUubXZr7y79utf+fiL/vsf40fbrX/n4i/77H+NUv8AhGtE/wCgTZf+Ayf4Uf8ACNaJ/wBAmy/8Bk/wovMP3Zd+3Wv/AD8Rf99j/GvP76eE6V4zHmqS9+u0ZHI8uLpzzXZ/8I1on/QJsv8AwGT/AAqOHw1opQ50mx++3/LsnqfaiXO4Sj3BezU4zu9HcvJe2w63EXT++P8AGn/brX/n4i/77H+NUv8AhGtE/wCgTZf+Ayf4Uf8ACNaJ/wBAmy/8Bk/wovMP3ZbN7bH/AJeIuP8ApoP8a5XVLqBvHe4Srj+w7gZ3DH+sTjOetb//AAjWif8AQJsv/AZP8KP+Ea0T/oE2X/gMn+FNSmr6dCXGm2nd6O43SLy2XR7DM8X/AB7x/wAY4+Ue9Xhe23/PxF/32P8AGqf/AAjWif8AQJsv/AZP8KP+Ea0T/oE2X/gMn+FTHnSSNJOnKTZd+3Wv/PxF/wB9j/GsDxHdwNqnh9luIyF1HJww4/dSdTnitL/hGtE/6BNl/wCAyf4VG3hrRftKj+ybHlG/5dk9R7VcZTi72M5RpyVrlTwpeW6aGQZo1P2u4OC4HHnP71ufbrX/AJ+Iv++x/jVL/hGtE/6BNl/4DJ/hR/wjWif9Amy/8Bk/wrKEZwio9jWpKnObl3LhvrbH/HxF/wB9j/Guf8Y3UD+H41jmjZvt1qcBgf8Al4T3rU/4RrRP+gTZf+Ayf4Uf8I1on/QJsv8AwGT/AArSMpxkpGU405RcbvUi068t1v8AU8zRjN0MEuOf3MfvWl9utv8An4i/7+D/ABql/wAI1on/AECbL/wGT/Cj/hGtE/6BNl/4DJ/hURU0rFt02+pd+3Wv/PxF/wB9j/GqOtXlu2g34WeMk20nyhxk/IeOtL/wjWif9Amy/wDAZP8ACo7jw1oot5P+JTY/cP8Ay7J6H2q05ktU2rXMDQLmAR+ESZowF0g5yw4/dxcHniuw+3Wv/PxF/wB9j/GqX/CNaL/0CbL/AMBk/wAKP+Ea0T/oE2X/AIDJ/hUrnu33dyv3fKlrorFz7dbf8/EX/fwf40fbrXp9oiz/ANdB/jVP/hGtE/6BNl/4DJ/hR/wjWif9Amy/8Bk/wp++L92cdptxEt7GXkTH/CSXTZ3DgbJOevSu9F7bcf6RF/32P8ap/wDCNaJ/0CbL/wABk/wo/wCEa0T/AKBNl/4DJ/hSfO5ufca9moKGuhd+3Wv/AD8Rf99j/Gmte2xH/HxFj/fH+NVP+Ea0T/oE2X/gMn+FB8M6Jx/xKbL/AMBk/wAKfvi/d9zmPEtxF9j8U4mj+a1gxhgc/e6c12f261/5+Iv+/g/xqhH4b0UyS50my4f/AJ9k/uj2p/8AwjWif9Amy/8AAZP8KT53Ny8kvuKTpqmoa6Nv77f5F37da/8APxF/32P8aPt1r/z8Rf8AfY/xql/wjWif9Amy/wDAZP8ACj/hGtE/6BNl/wCAyf4U7zJ/dl37da/8/EX/AH2P8aPt1r/z8Rf99j/GqX/CNaJ/0CbL/wABk/wo/wCEa0T/AKBNl/4DJ/hReYfuy79utf8An4i/77H+NH261/5+Iv8Avsf41S/4RrRP+gTZf+Ayf4Uf8I1on/QJsv8AwGT/AAovMP3ZZa9tvtMf+kRfcb/loPUe9P8At1r/AM/EX/fwf41nt4b0UXCAaTY4Ktn/AEZPUe1SDwzomP8AkE2X/gMn+FF5h+77l37da/8APxF/32P8aPt1r/z8Rf8AfY/xql/wjWif9Amy/wDAZP8ACj/hGdF/6BNj/wCAyf4UXmH7su/brX/n4i/77H+NH261/wCfiL/vsf41S/4RrRP+gTZf+Ayf4Uf8I1on/QJsv/AZP8KLzD92Xft1r/z8Rf8AfY/xo+3Wv/PxF/32P8apf8I1on/QJsv/AAGT/Cj/AIRrRP8AoE2X/gMn+FF5h+7LFxe2xtpR9oi+4f8AloPT61L9utf+fiL/AL7H+NZ0/hvRVt5SNJsc7T/y7J6fSpP+Ea0T/oE2X/gMn+FF5h+77l37da/8/EX/AH2P8aPt1r/z8Rf99j/GqX/CNaJ/0CbL/wABk/wo/wCEa0T/AKBNl/4DJ/hReYfuy79utf8An4i/77H+NH261/5+Iv8Avsf41S/4RrRP+gTZf+Ayf4Uf8I1on/QJsv8AwGT/AAovMP3Zd+3Wv/PxF/32P8aPt1r/AM/EX/fY/wAapf8ACNaJ/wBAmy/8Bk/wo/4RrRP+gTZf+Ayf4UXmH7su/brX/n4i/wC+x/jTVvbXc/8ApEXX/noPQe9VP+Ea0T/oE2X/AIDJ/hTV8NaKWbOk2PX/AJ9k9B7UXmH7vuX/ALda/wDPxF/32P8AGj7da/8APxF/32P8apf8I1on/QJsv/AZP8KP+Ea0T/oE2X/gMn+FF5h+7Lv261/5+Iv++x/jR9utf+fiL/vsf41S/wCEa0T/AKBNl/4DJ/hR/wAI1on/AECbL/wGT/Ci8w/dl37da/8APxF/32P8aPt1r/z8Rf8AfY/xql/wjWif9Amy/wDAZP8ACj/hGtE/6BNl/wCAyf4UXmH7su/brX/n4i/77H+NNN7a+Yv+kRdD/wAtB6j3qp/wjWif9Amy/wDAZP8ACmnw1ookGNJsuh/5dk9R7UXmH7vuX/t1r/z8Rf8AfY/xo+3Wv/PxF/32P8apf8Izon/QJsv/AAGT/Cj/AIRrRP8AoE2X/gMn+FF5h+7Lv261/wCfiL/vsf40fbrX/n4i/wC+x/jVL/hGtE/6BNl/4DJ/hR/wjWif9Amy/wDAZP8ACi8w/dl37da/8/EX/fY/xo+3Wv8Az8Rf99j/ABql/wAI1on/AECbL/wGT/Cj/hGtE/6BNl/4DJ/hReYfuy79utf+fiL/AL7H+NZ2t3cD2EKpNGzG9tcAOCT/AKRH71IfDOif9Amx/wDAZP8ACs3VvDejWlvb3FrpNjDNHe2pSSO2RWU+enQgcU05dQ9zodOOnNLTcYFOqyAooooAKKKKACiiigAooooA5q+/5Knof/YG1L/0fY10uK5q+/5Knof/AGBtS/8AR9jXS0AGKMUUUrIAxRiiiiyAMUYooosgIZ/9Wv8Avr/6EKmxUU/+rX/fX/0IVLRZAGKMUUUWQBijFFFFkAYoxRRRZAGKhg+6f+ujfzNTVFB90/8AXRv5miyAlxRiiiiyAMUYooosgDFGKKKLIAxULj/SU/3G/mtTVE//AB8p/uN/NaLICXFGKKKLIAxRiiiiyAMUYooosgDFRXP/AB6y/wC438qlqK5/49Zf9xv5UWQEmKXFFFFkAYoxRRRZAGKMUUUWQBikIpaDRZARRf6yb/f/APZRUuKii/1k3+//AOyipaLIAxRiiiiyAMUYooosgDFGKKKLICJv+PqP/cb+a1Jio2/4+o/9xv5rUtFkAYoxRRRZAGKMUUUWQBijFFFFkBDc/wDHrL/uH+VTYqK5/wCPWb/cb+VS0WQBijFFFFkAYoxRRRZAGKMUUUWQBimL95/97+gp9MX7z/739BRZAPxRiiiiyAMUYooosgDFGKKKLIAxTCP3q/Q/0p9MP+tX6H+lFkA4DilxQOlFFkAYoxRRRZAGKMUUUWQBiszXv+QdF/1+2v8A6UR1p1m69/yDov8Ar9tf/SiOmBo4paKKACiiigAooooAKKKKACiiigDmr7/kqeh/9gbUv/R9jXS1zV9/yVPQ/wDsDal/6Psa6WgAooooAKKKKACiiigCKf8A1a/76/8AoQqWs3WtTi0qziuLhXeN7u2twEA4aWdIl/AM4zWlQAUUUUAFFFFABRRRQAVFB90/9dG/malrN0TUotWsZbi3DKqXdzbkOOd0UzxMfplCR7EUAaVFFFABRRRQAUUUUAFRP/x8p/uN/NalrNuNTii8S2emMG865tLi4Rv4QsbwqwPv+9XH40AaVFFFABRRRQAUUUUAFRXP/HrL/uN/KpazvEGpw6L4c1LVLpWa3srSW4lVPvMqIWIHvgUAaNFIv3RnriloAKKKKACiiigAoNFI1AEcX+sm/wB//wBlFS1naXqcV/e6tBErB7C7W3lLdGYwRS5HttlX8jWjQAUUUUAFFFFABRRRQBE3/H1H/uN/NalrNudTih8SWWmFXM9zaXFwjAfKFjeFWB98yrj6GtEdKAFooooAKKKKACiiigCK5/49Zv8Acb+VS1meIdTi0Xw5qWp3Ks8Flay3EqoPmKohYge+BWnQAUUUUAFFFFABRRRQAUxfvP8A739BT6rW1ytxcXcag5t5hG2e52I38mFAFmiiigAooooAKKKKACmH/Wr9D/Sn1VkulTVIbTnfLDJIp7AKUB/9CH60AWh0ooHSigAooooAKKKKACs3Xv8AkHRf9ftr/wClEdaVZuvf8g6L/r9tf/SiOgDSooooAKKKKACiiigAooooAKD04ooOdpx17UAYt9o01x4gstVsryOG4tLae2CSwGRWWVomJwGXBBhGDnoxqfyNb/6COn/+AD//AB6uM03WNVvo/wDhJk1aZbP+2W00aX5UZhaEXf2UNu27xIfv53Y7YxzXoi9/egDO8jXP+gjp/wD4AP8A/HqPI1z/AKCOn/8AgA//AMerTooAzPI1z/oI6f8A+AD/APx6jyNc/wCgjp//AIAP/wDHq06KAMzyNc/6COn/APgA/wD8epPJ1sH/AJCNh/4L3/8Aj1alclqkeqa34ovbDTdeu9HTT7WGRfs0ELiWSQyff8xGyoCj5QVPJ56YALeraJqms2cdvc6nZrHHc290pisWyWhmSZesp4LIM98ZwR1q8YtaHXUtPHOP+PB//j1cvq3ibUrvw54TOmyrYXfiOaCN7hEDm3VoGmcoGyC2E2jcCOSTmmaRda1qF14g8LRa1Ilxot1BCuqvDG9xJDLEknI2hN43Mu7bjHO0kUAdYIdbYcajp/8A4AP/APHqPI1z/oI6f/4AP/8AHqy/B1xdm61mwn1ObVrewuUihvZxHvcmNWdCY1VTtJx0zzg9Mnp6AMzyNc/6COn/APgA/wD8eo8jXP8AoI6f/wCAD/8Ax6tOigDM8jXP+gjp/wD4AP8A/HqDDrY66jYf+C9//j1adYXi27ntdJiS0uGtri7uoLWOdFBMXmSqrMAeMhSxGQRkDI4oAs+VrWAf7R0/n/pwf/49VDR9E1PRrN7W11OzZJLme6zJYsTummeVgMSjgFyB7Y69ah8O3tza6jrOj6he3GotphikjurhUEjpIhO07FVSQVbnAyCM8jJ5TSPFGvRWXhLxHqWpG5g8U3cVvLpphRYrRZY3eNo2A35XYAdzNu3HpxQB6CIdbPTUdP8A/AB//j1Hka5/0EdP/wDAB/8A49XO6R4nvtW8eTRRp5ejQQXMUPy5a6lja3DSZ6bQZGQAZ5D59B2gbJ6Y4zQBm+Rrn/QR0/8A8AH/APj1Hka5/wBBHT//AAAf/wCPVp0UAZnka5/0EdP/APAB/wD49QYdbHXUdP8A/AB//j1adQ3UghtpJXztjUucd8c0AUfK1r/oI6f/AOAD/wDx6qE2ianL4gttXfU7MT2ltNaoosW2FZWiZif3vUGBcc9CfbHP+FdS1i7t/DOv3+rTXEfiQEvpzwxCK1LwPOvlFVD4URbcMzZ3Z4NHijVdaU+JtT0/VpbSLw3aefFaJBGY7t1iMpErEFtpBC4QqR1znoAdd5es8f8AEy0/np/oD/8Ax6nCHWznGo6fx/04P/8AHq831vxxcXOoJImq6npsIjgKRaZbQTbDJGshmuDJyIhvA+XbwrHPPHqts4eNcFTkZBUYBHqPagCl5Guf9BHT/wDwAf8A+PUeRrn/AEEdP/8AAB//AI9WnRQBmeRrn/QR0/8A8AH/APj1Hka3/wBBHT//AAAf/wCPVp0jfd4oAzPK1rGRqOnkYzkWD/8Ax6qGuaJqevaDqGkXmp2a29/ayW0rRWLB1V1KkrmUjODxwfpVLUYNT1rxPeWWna/daQmn20MwFvFFIJZZPM++JFYlQEGFBXqTnpilq3iPUbrw34S+wTCxuvEs8MclwqBjbK8DTMUB43fIFGQQM55NAHUiLWiMjUbDHT/kHv8A/HqPK1r/AKCNh/4L3/8Aj1eeap4t1bSdO8R6ZJqEzy6JqVjanVDHGZzBcCNmbbtCF1DsNxXBxkjIzXT/AA/1a61Sz1NLq+e/hstQe2tbuZUEk0YRTl9gCE7i4yoHAXvmgDd8jXP+gjp//gA//wAeo8jXP+gjp/8A4AP/APHq06KAMzyNc/6COn/+AD//AB6jyNc/6COn/wDgA/8A8erTooAzDBrY66jp/wD4AP8A/Hqa0WtY/wCQjp//AIAP/wDHq03G5CM4yMZ9K8wfxFrMmky+MI9UlW2j1saf/ZBhjMDQC8+y7t23zBJ8xkzvxnjGBQB1+n6Jqmm3mpXMOqWZfUrpbmUPYthXEMcQC/vRgbYlPOTknnsL/ka5/wBBHT//AAAf/wCPVHrD6sbeOPQzaxzSS7HnugxWFdpO4Kv3jkAYJAyevGDL4cupb3wrpV1ctvmnsoZJG/vMyAk/maAE8jXP+gjp/wD4AP8A/HqPI1z/AKCOn/8AgA//AMerTooAzPI1z/oI6f8A+AD/APx6jyNc/wCgjp//AIAP/wDHq06KAMzyNb/6COn/APgA/wD8epBFrROBqWn57j7A/wD8erUOdpx17V59BqmpQ3Vhrjavcz2l/qsmn/2cY4hCkXmvGjKQu/f8isSWIOSMdMAG/NomqTa/aaq2qWYuLW2mtkUWLbSsrxMxI83OQYUxg45Oc9roi1rHOo6eD3H2B+//AG2rM8Z3utWFhFNo7WsMKyIbmaXcXAMqKFRcY+YM3JPHYHOQviWy1SeV7iPxJJoum21u0rm1hiMjOpJyzyqyhAuOMDPOTQBqeTrZ6ajp/wD4AP8A/HqPs+uf9BHT/wDwAf8A+PVV8G6lqWseC9J1DW7dba/urWOWaJVZdjEDPDcg+xrdoAzPI1z/AKCOn/8AgA//AMeo8jXP+gjp/wD4AP8A/Hq06KAMzyNc/wCgjp//AIAP/wDHqQw62Dg6jYf+C9//AI9WpXKa6NU1bxWmj6drFxpEUFj9qeW1hid5HZyqgmRWAUbDkAZOeooAs61oeqa9oN/pN1qdmlvqFrJbSPFYsGCyIVJBMpGcHuDV7ydazgajp+f+vB//AI9WT4S8TX3if4a2GvRWsAv7qzMog3sIjKARtzywUsPcj3NUvCXiW5Xwfq+qeJ7tJH0/Ub6B5VAjVlimdVCAnHbAycnjk0AdIIdbI41HT/8AwAf/AOPUeRrn/QR0/wD8AH/+PVz3w313VNettan1pGilTUsRW7IV+zRtbQSCPnBJHmEEkDnPFdpQBmeRrn/QR0//AMAH/wDj1Hka5/0EdP8A/AB//j1adFAGZ5Guf9BHT/8AwAf/AOPUGHWlGW1LTwO5Ng//AMerTrA8W3V7FaWFppt19jn1C9S2+0hA7RKQzMVB4J2oQM5AznBoAueTreCf7RsOP+nB/wD49Va207V7ee6kj1KxJuZhK/8AoD4BCKnH73phB+OazPB+rXkmt+IfD+oXUl82h3MKR3kyqskySxLIN4QBcgkjIAyB0qvp2s6wvxE1ux1eSBbK30qK7t7eAn5FM065ZiAdzLGCew4AzjJAOjEOtnpqOn/+AD//AB6l8jXP+gjp/wD4AP8A/Hq868DeNbzxBrOlXF3r00Z1G2+0Gxa0h+yMGUsIYpMiTzUH3slsjPA4I9XH50AZvka5/wBBHT//AAAf/wCPUeRrn/QR0/8A8AH/APj1adFAGZ5Guf8AQR0//wAAH/8Aj1Bh1sYzqOnjJwP9Af8A+PVp0yZgkLMegBJ/KgDO8rWh/wAxLT85x/x4P/8AHqrS6dq7ahHeNqVjviieNR9hfGGKsc/ve2wfrXDaP4o11bDwf4l1LUjcw+KLtLWTTPIjSK0EqO8ZjYAPlSgB3M24MeBxXRfEPVNZ0rQ4LvSLiG2iF5bR3Dsm6Vg9zFHtQdAMOxycnjAHOQAdB5Wt/wDQRsP/AAXv/wDHqPJ1stj+0dPz/wBeD/8Ax6uC+JPi2/0DXI4E1K50+zTS571HsoYnklnR1AjYSAjZhui4YkHkYFd54avLm/8ADGl3moCJbu5tIpZxFkL5jIC2M84yePagB3ka5/0EdP8A/AB//j1Hka5/0EdP/wDAB/8A49WnRQBmeRrn/QR0/wD8AH/+PUeRrn/QR0//AMAH/wDj1adFAGYYNbHXUbD/AMAH/wDj1QT6dqd+IVudRtGgWaKVhFZspbY6uBkynHKjnBqr491q70HwlLd6b5YvJLi3tYWkXcqNNMkW7Hfbv3Y74rO0HUNSsPHl74U1LUpdVjXTYtRgu540SVd0skbIdgCsMoCDgEZwc9aAOzVxgZPNOrhvGbappMdzrUfiWe12SIljpkUUBiuHO3CPvQuxZs/cYEAjAyOe5oAKKKKACiiigAooooAKDyD3oooA4aHwrrdtff2ZA2nroLau2qNM0rm4yZDP5Yj2bR++53b/ALvG2u5AoooAKKKKACiiigArlNc0/wATQ67dX3hZNKY3tklu7X0zxmGRGcpIAqN5gxIcqSv3V5rq6MD0oA4PVvCetTWel2ulS6fEugPazaZJKzgySRo8ciS4B2qY3wCNxB7cVR1HwX4muvD+uvYz6fa6zr97FJerFdSJElskax+SkojLZKJjdsH3jxxmvSsD0ooA53wZp2q6TpP2DU9M0fTYLdVS2h0qeSVNvOc70U5zz3zk5Pr0VFFABRRRQAVk+JdPu9S0V4tNMK3scsM8BnJEZeOVZAGIBIB24yAcZ6GtajAPUUAcnp+ma/B9t1GWDSU1HUb2Hz4RO8kUVsiqhVX2KWfAYjKgZbHbJxNF8Ba3aS+HtL1K4sJND8N3LXFo0TMZ5yFdIQ6lQE2LI2SGbccHjFej4HpRgelAHEWHw00bTPE2nX+mC8ihs7eVdjardOQ5MWzCtIRtARgV6fd4OBjtgMdST7mlooAKKKKACmyIHUqwyDwadRQBweheGfEOmf2Rps50w6XoEMgsWSZ3luHCGOEuCgEYWN2BwzZJB4qtqfhfxbqNvqVt5mjrB4g09LXU2WWQG2k2mOR4RsPmAxnADFCCo57V6LgelGB6UAcNf+GdesrjUYvDC6YbDU7OO3dbuaSKS2ZUMYddqMJBs2/KdpyPvDPHX6bZRabp1vY22fKtoliTJ5wowM+9WsD0oxQAUUUUAFI33eOKWigDldd0/wASx6zcXvhddMZr2zS3dr2d4zA6M5WVVVGEnEh+UlfujnnjN1bwjrsljpNppE2nwjQGtZtMeUvmR40eKRJMA7VaN8AjcQe3Fd5gelGB6UAefHwZrW2+1lDpya/darFqPkmR3tlEUawpCX2Bj8gY79mQzdOOdrwpoF/p+p63rGstbrfaxcRyPb2krSRQrHGsagOyqWY7clio7DHGT0+B6UUAFFFFABRRRQAhGRivPp/BmtO/9iRyaenh6TWv7UllMrtcOPO+0eSI9m0fvhnfv+7kba9CowPSgDM07+0jp8n9s/ZUujJIFFo7FAu4lM7gDu24J989ak0Gyk03w5ptjOyNLa2kULshJUsqAEgntxV/FFABRRRQAUUUUAB5B71xcPh3Wv7Ut7W7TTm0e01KbUYplmczyFjI6RtHsCqFeTO4OchRwM8dpRigDA1PTtQ1fwubS4NpHeSSI37t28rCyhxg4yflX06/nXO+MvDfirXfFFhcWCaReaJZoJRp19dyxK9yG3CRtkbb1GF2gnGckg9vQcD0owPSgClpp1A6bEdWito7wr+9S2kLxg+ikqCR25FXaMUUAFFFFABXLeIdM8Qp4ig1fwv/AGdI7Wj2lzFfyvGMbt0bqyo2SpLZUjkHqK6mjFAHO+F9Cm8LaPpmh2phk0+xsViMmWWV5gRk7em08nrnJrKsfANpceH7zTPEsazxy61c6lAbW5kiZS87SRnepVg67h36j8a7bA9B+VLgelAHH+C/A9v4V1XW7uF5nW+ut9sHvp59sPlxjDCRiN29GOeTggZxwOwoxiigAooooAKxPFWlX+qabAdGlgi1Czuo7qA3GfLYqeVYgEgMpYZwcZzg1t0UAcjoWh6tpt3qGqXC6eNT1nUI5ruNJWaOGFESMJGxUF2CJnJVeWPTFWR4fn/4T6/1qZoXs7vSoLHy9x8zckkrnjGMESDvng9O/S4HpSYHoKAPNdI+H+tW/wDwjuj39xYNoXhy8+1Ws0TyG4udqusKuhAVNoc5IY7sdBmvSlGB+FLiigAooooAKR1DKQeQetLRQB5vongPW7aTw/pOrXOny6F4dne4szEzmechWSFXBUBQiu2SGbcdvAxW94k0PU/EnhCKwd7SLUBc2k8hV28r91cJIwBxnopA46kZx1rqsA9RRigDjNX8P69beMp/EPhptPme8sEspYtQlePyyjOyOhVWz985QgZ9R0ra8KaH/wAI34W0zSDKJXs7ZIXkVdodgOSB2Gc4GTgVs4HpRigAooooAKKKKAMPxjoEnibwrdaZBOLa4do5YJmXIjljkWRCR3G5BkelYumaF4hj13UPEeqNpa6vcQQWUEEMjvDFBG5ZyXKqSzF2P3eMKMnrXbUYHpQB55e+G/Fv/CwbvxBbWGgXy4WGxkvr6ZZLWEAbgqLCVDM28k5zggZ4OfQ6MUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAf//Z)

In this picture we can see the activation of the *TxCmplt* flags of the two nodes, it was simulated with a Bus Load of 80%. Elaborating these timing result with Matlab, repeating the simulation with different Bus Loads, we obtained the following result:

Immagine che contiene mappa, testo

Descrizione generata con affidabilità molto elevata

This plot shows the variation of the average response time depending on the Bus Load of the network. Above the 90% Bus Load the receiver is no more able to access the bus.

# Delay (Logical & Physical Transmission)

Delay is the difference in time between the logical sending of the message at the application level and the completion of its sending on the bus, conditioned by the traffic of the network.  
As in the previous analysis, we chose flags of the Can Node to identify this specific event. The counter is enabled by the rising edge of the ReadyToSend flag and is disabled at its falling edge. This operation is repeated in time and then averaged, for different Bus Loads.

Immagine che contiene testo, mappa

Descrizione generata con affidabilità molto elevata

What we expected was a monotonous trend, which is not consistent with the result obtained. It may be due to pseudo-random choice for the ID and payloads, reflecting in frame stuffed differently.  
Nevertheless, the trend of the delay above 50% Bus Load is contained in 15 Clock cycles (300 uS).

# Jitter

Jitter is the delay deviation from true periodicity of a periodic signal, conditioned by the traffic of the network. The only node involved in this analysis is the transmitting one, a periodic TPDO with period 10 mS.  
The flag used to trigger this event is again the *TxCmplt* one, we considered just the first 20 frames.  
The inter-times have been saved in the following matrix (times are in second):

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bus Load | t1 | t2 | t3 | t4 | t5 | t6 | t7 | t8 | t9 |
| 0 % | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 10 % | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 20% | 0.0099 | 0.0099 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 30% | 0.0101 | 0.0099 | 0.01 | 0.01 | 0.01 | 0.0101 | 0.0099 | 0.01 | 0.01 |
| 40% | 0.0099 | 0.0099 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.0102 | 0.0099 |
| 50% | 0.0101 | 0.0099 | 0.01 | 0.0102 | 0.0098 | 0.0101 | 0.0102 | 0.0098 | 0.0101 |
| 55% | 0.01 | 0.01 | 0.01 | 0. 0.01 | 0.0101 | 0.0101 | 0.01 | 0.0098 | 0.01 |
| 60% | 0.0099 | 0.0099 | 0.01 | 0.01 | 0.0102 | 0.0099 | 0.0099 | 0.009 | 0.01 |
| 65% | 0.0099 | 0.0101 | 0.0099 | 0.0102 | 0.0099 | 0.0099 | 0.0101 | 0.0099 | 0.0102 |
| 70% | 0.0101 | 0.0099 | 0.0100 | 0.0101 | 0.0099 | 0.0101 | 0.0101 | 0.0098 | 0.0101 |
| 75% | 0.0101 | 0.0101 | 0.0101 | 0.0098 | 0.0100 | 0.0101 | 0.0101 | 0.0101 | 0.0101 |
| 80% | 0.0099 | 0.0101 | 0.0099 | 0.0101 | 0.0099 | 0.0101 | 0.0099 | 0.0101 | 0.0099 |
| 85% | 0.0099 | 0.0101 | 0.0099 | 0.0101 | 0.0099 | 0.0101 | 0.0099 | 0.0101 | 0.0099 |
| 90% | 0.0101 | 0.0099 | 0.0101 | 0.0101 | 0.0098 | 0.0101 | 0.0101 | 0.0098 | 0.0101 |

What we see is constant Jitter just until the 10% Bus Load, increasing this value we notice a slight chance in its trend. Jitter remains always in the range of a fraction of half millisecond, it seems not to be significantly dependent on the bus load.  
This could probably be a limit of the developed model. Nevertheless, we are confident that, in case of further studies, this problem could find an straight forward solution.