Attachment H
Interface Control Document

Pay-by-Mail, Violations Processing, Collections, and Customer Services

Central Texas Regional Mobility Authority

Video Processing Center

Interface Control Document

ICD

Version: 1.1

Document Control

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Change Notice

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Reference to the status- and version administration:

Status:

Draft	the document is being processed
Released	the document has been checked and released, it can only be modified if the version number is updated.
Final	the document has been checked and released, it can only be modified if the version number is updated.

Versions:

1.0	draft version
1.x	released version with the status "**Released**"
2.0	final or As-Built version with the status "**Final**"
2.x	minor revisions to the final version with the status "**Final**"

Reference to the data classification

Public	No restriction
Internal	Restricted to internal and external Kapsch employees (default)
Confidential	**Restricted to selected active directory and/or sharepoint groups,**
Secret	Restricted to selected employees, server encryption needed

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1 Acronyms and Definitions

Acronym	Definition
ACK	Acknowledgement
CSC	Customer Service Center
CTRMA	Central Texas Regional Mobility Authority
DSP	Disposition
ETC	Electronic Toll Collection
ICD	Interface Control Document
ICD	Interface Control Document
I-Toll	An image-based transaction associated with a toll tag customer's license plate, due to their transponder, which is in good standing, being misread in a toll lane. These transactions are posted to the customer's account at the ETC toll rate without any Video fees.
NACK	Not Acknowledged
OCR	Optical Character Recognition
RMA	Regional Mobility Authority
SFTP	A network protocol that provides file transfer and manipulation functionality over any reliable data stream. It is typically used with the SSH-2 protocol (TCP port 22) to provide secure file transfer, but is intended to be usable with other protocols as well.
TVL	Tag Validation List
TxDOT	Texas Department of Transportation
TXN	Transaction
Video Bill (Also Video Toll)	This is the initial phase of a transaction that is not paid in the lane, either via cash or a toll tag. Invoices will be sent to customers based on their license plates, and a surcharge is typically added to the toll amount to cover the cost associated with sending the invoices and accepting payments. If a video bill is not paid within the prescribed amount of time, it is then considered a 'Video' and pursued in that manner.
VIOS	Videos
VPC	Video Processing Center

Table 1 Acronyms and Definitions

2 Introduction

This document is the Interface Control Document (ICD) that defines the interface between the Central Texas Regional Mobility Authority (CTRMA) Host system and the Video Processing Center's (VPCs) system.

2.1 Purpose

This ICD documents the subsystem interface requirements for interacting with the CTRMA Toll Collection System in order to process tolls.

The ICD describes the requirements for transactions, commands and data elements used to implement the interfaces of the data transfers between the CTRMA system and Video Processing System.

3 CTRMA Host to/from VPC Interface

The CTRMA Host – to/from – VPC Interface consists of the following file transfers:

Note: All files exchanged between the VPC and the CTRMA Host shall be accomplished using SSH File Transfer Protocol (SFTP). All SFTP servers must be password protected, and usernames and passwords will be shared at a mutually agreed time between the VPC vendor and CTRMA.

- Transaction File (Pushed from CTRMA to VPC)
- Image Files (Pulled from CTRMA by the VPC)
- Placement Disposition File (Pushed from VPC to CTRMA)
- Acknowledgement Files

3.1 CTRMA/VPC Host File Transfer Locations

CTRMA and the VPC system shall use the following locations on their respective SFTP Servers to push, pull and archive files required by the CTRMA / VPC Interface.

Note: The VPC should constantly monitor its SFTP site for file transfers provided by CTRMA. Likewise, CTRMA should constantly monitor its SFTP site for file transfers from the VPC.

3.1.1 Image File Transfers – SFTP Server File Location

CTRMA creates the image file and places it for pick-up by the VPC for processing. The structure of the file system on the CTRMA Server for delivery will be as follows:

```
SFTP://(CTRMA Server)/(SFTP IMAGE dir)/input/yyyymmddhhmn
```

Note: Subdirectories are set up by year (YYYY), month (MM), day (DD), hour (HH) and minute (MN).

CTRMA shall place all image files into the main `/input/yyyymmddhhmn` directory for pickup by the VPC. The VPC will pull the image file(s) from the `/input/yyyymmddhhmn` directory and then delete the files from the `/input/yyyymmddhhmn` directory on the CTRMA Server.

Note: All times used in the file name format, file directory name format, and in the file contents are designated in GMT (Universal Time Zone – Grand Meridian).

3.1.2 Transaction File Transfers – SFTP Server File Location

CTRMA Host creates Transaction Files and transmits them to the VPC for processing. The structure of the file system on the VPC's SFTP Server for pickup of Transaction Files shall be as follows:

For Transaction Files:

```
SFTP://(VPC SFTP Server)/(Project dir)/(SFTP TXN dir)/input SFTP://(VPC SFTP
Server)/(Project dir)/(SFTP TXN dir)/input/sending SFTP://(VPC SFTP
Server)/(Project dir)/(SFTP TXN dir)/input/arch
```

The CTRMA system shall push all Transaction Files (via SFTP) into the proper `/input/sending` directory on the VPC SFTP Server. The CTRMA System then moves the file from the `/input/sending` subdirectory up into the main `/input` directory. This is done to prevent the VPC from picking up a file that has not completed transmission. The VPC shall pick up the Transaction File from the `/input` directory and move the file to the `/input/arch` directory for archive purposes.

3.1.3 Acknowledgement File Transfers – SFTP Server File Location

The structure of the file system on the CTRMA and the VPC SFTP Server for pickup of Acknowledgement Files shall be as follows:

Acknowledgement Files:

```
CTRMA SFTP Server:
  SFTP://(CTRMA SFTP Server)/(SFTP ACK dir)/input
  SFTP://(CTRMA SFTP Server)/(SFTP ACK
  dir)/input/sending SFTP://(CTRMA SFTP Server)/(SFTP
  ACK dir)/input/arch

VPC SFTP Server:
  SFTP://(VPC SFTP Server)/(SFTP ACK dir)/input
  SFTP://(VPC SFTP Server)/(SFTP ACK
  dir)/input/sending SFTP://(VPC SFTP Server)/(SFTP
  ACK dir)/input/arch
```

The sending agency shall transfer Acknowledgment Files (via SFTP) into the `/input/sending` directory. The sending agency then moves the file from the `/input/sending` subdirectory to the main `/input` directory. This is

done to prevent the receiving agency from picking up a file that has not completed transmission. The receiving agency shall pick up the Acknowledgement File from the `/input` directory and move the file to the /input/arch directory for archive purposes.

4 VPC/CTRMA Interface File Types

This section of the ICD defines the requirements for each file type required for the CTRMA System to interface to the VPC. In this section, you shall find information about the following file types:

- Transaction File – Section 4.1
- Image Files – Section 4.2
- Placement Disposition File – Section 4.3
- Acknowledgement Files – Section 4.4

Note (for all fields in all files): Blank fields will be comma-delimited.

4.1 SFTP Transaction Files

Transaction Files are pushed from the CTRMA SFTP Server to the VPC by SFTP. Lane transactions that are paid in full either by cash in the lane or with a valid electronic toll tag will not be included in a Transaction File. This file will only contain transactions that were not paid in full in the lane at the time of the transaction, and require some sort of VPC processing to reconcile or collect payment. All transactions meeting these criteria are sent from the CTRMA server to the VPC in Transaction Files. Once a Transaction File has been received and processed, the VPC will return reconciliation information to the CTRMA system in a Disposition File.

Note: All times used in the file name format and in the file contents are designated in GMT (Universal Time Zone – Grand Meridian).

4.1.1 File Transfer Timetable

Transaction Files shall be pushed from the CTRMA SFTP Server to the VPC daily. A file will be transferred at least once a day every day between midnight and 6AM.

4.1.2 File Name Format

The file name shall have the date and creation time as the filename and the “tr” suffix extension.

`“yyyymmddhhmnssaaa.tr”`

where:

yyyy = year
mm = month
dd = day
hh = hour

mn = minute
ss = second
aaa = Authority where the transaction(s) originated

Example: `20040815143045104.tr`

4.1.3 File Format

The file format follows the standard guidelines referenced in Appendix B File Structure - Standard Guidelines.

4.1.3.1 File Header Format – Transactions File

When a Transaction File is packaged for transmission, the CTRMA system must construct the File Header so that it contains all of the required fields listed below. Once the File Header is constructed, the file contents are appended; and the entire file is transmitted to the appropriate directory location on the VPC SFTP Server for processing.

The File Header is a fixed length ASCII record with comma-delimited fields, terminated by a carriage return-line feed. Some of the fields within the File Header are right-justified and must be zero padded. Although all fields in the File Header are fixed in length, they are still separated by commas. This is to allow processing by either of two means: (1) specifying absolute file offset position and field length; or (2) parsing the record, breaking on the comma-delimiter. This format was developed to afford developers maximum flexibility in processing this record type.

The CRC 32 standard algorithm is used to compute the checksum value. The checksum is a 32- bit value and is displayed as an ASCII hex number. The file size is a base-10 ASCII number.

Field Name	Data Type (Fixed Length)	Required Field	Format/Range	Description
Rec_type	Char (1)	Y		Record Type. Value = 'H'
File_date_time	Char (14)	Y	yyyymmddhhmmss	Date and time of this file creation.
TR_File_control_number	Char (8)	Y	00000000-99999999	A unique, sequential number created by the CTRMA System that is used to identify the file. **Note:** This field is right-justified and must be zero padded.
Authority	Char (3)	Y	For a list of authorities, refer to Appendix A.	Code indicating the Authority that owns/operates the facility on which the transaction occurred.

Field Name	Data Type (Fixed Length)	Required Field	Format/Range	Description
Rec_count	Char (10)	Y	0000000000-9999999999	The number of records in the Data Record (exclusive of the Header and Trailer). **Note:** This field is right-justified and must be zero padded.
File_Size	Numeric (12)	Y	000000000000-999999999999	The size of the file in bytes. **Note:** This field is right-justified and must be zero padded.
Checksum	Char (8)	Y		A 32-bit checksum computed for the contents of the file, beginning at the character immediately following the header record and associated CR/LF. This value is displayed as an 8-digit ASCII hex number.
Total_revenue_amount	Char (9)	Y	0.00 - 999999.99	The total amount due based on the transactions sent within that transaction file. **Note:** This field is right-justified and must be zero padded.
Separator	Char (1)	Y		"\n" Newline Character

Table 2 File Header Format – Transactions File

4.1.3.2 File Trailer Format – Transactions File

The File Trailer is a fixed length ASCII record with comma-delimited fields, terminated by a carriage return-line feed. Some of the fields within the File Trailer are right-justified and must be zero-padded.

Field Name	Data Type (Fixed Length)	Required Field	Format/Range	Description
Rec_type	Char (1)	Y		T = Trailer

Field Name	Data Type (Fixed Length)	Required Field	Format/Range	Description
Rec_count	Char (10)	Y	0000000000 – 9999999999	The number of records in the Data Record (exclusive of the Header and Trailer). Note: This field is right-justified and must be zero padded.
Separator	Char(1)	Y		"\n" Newline Character

Table 3 File Trailer Format – Transactions File

4.1.3.3 Data Record Format – Transactions File

Field	Type	Max Length	Required/ Optional	Description
File Sequence Number	Num	12	Required	File Record Sequence ID
Record Type	Char	4	Required	Record Type. Values: TB01 – Tag Toll - Barrier Type. TC01 – Tag Toll - Closed Type (either from a single entry/exit pair or from a constructed trip comprised of multiple toll zones). TC02 – Tag Toll - Closed Unmatched Type (either from a single entry/exit pair or from a constructed trip comprised of multiple toll zones). Used when either the entry or exit toll zone has been inferred. VB01 – Video Toll - Barrier Type. VC01 – Video Toll - Closed Type (either from a single entry/exit pair or from a constructed trip comprised of multiple toll zones). VC02 – Video Toll - Closed Unmatched Type (either from a single entry/exit pair or from a constructed trip comprised of multiple toll zones). Used when either the entry or exit toll zone has been inferred.

Field	Type	Max Length	Required/ Optional	Description
Sequence_no_plaza	Char	20	0000000000 0000000000 9999999999 9999999999	A sequence number generated by the entity creating the Transaction Data unique to that entity across all Transaction Data and Correction Data submissions. Used to correlate the Transaction Data and Reconciliation Data.
Exit Date/Time	Date/ Time	20	Required	The date/time the vehicle exited the facility. For Barrier type transactions, this is the date/time the vehicle used the facility. For Unmatched type transactions, this may be inferred information.
Facility ID	Char	10	Required	Unique identifier of the facility on which the transaction took place.
Facility Description	Char	30	Required	The facility description that corresponds to the Facility ID.
Exit Plaza	Char	15	Required	Unique (for the Facility ID) identifier of the plaza on the facility at which the vehicle exited the facility.
Exit Lane	Char	4	Required	Lane identifier at which the vehicle exited the facility. For Barrier type transactions, this is the lane used. For Unmatched type transactions, this may be inferred information.
Entry Date/Time	Date/ Time	20	Optional	The date/time the vehicle entered the facility. For Barrier type transactions, this is unused. For Unmatched type transactions, this may be inferred information.
Entry Plaza	Char	15	Optional	Unique (for the Facility ID) identifier of the plaza on the facility at which the vehicle entered the facility. For Barrier type transactions, this is unused. For Unmatched type transactions, this may be the inferred information.
Entry Lane	Char	4	Optional	Lane identifier at which the vehicle entered the facility. For Barrier type transactions, this is unused. For Unmatched type transactions, this may be inferred information.
Tag Agency ID	Char	4	Optional	Tag Agency ID interpreted from the transponder. If the TVL is used to look-up license plate information for a video transaction, the Tag Agency ID, Tag Serial Number, and Tag Status shall be populated by the Away Agency.
Tag Serial Number	Char	8	Optional	Serial Number as read from the transponder. Leading zeroes included.

Field	Type	Max Length	Required/ Optional	Description
Tag Status	Char	1	Optional	Tag Status associated with the Exit Date/Time as determined by the Away Agency from the then active TVL. Values: V – Valid I – Invalid Z – Zero/Negative Balance
HUB Rejection Code	Char	1	Optional	The rejection code submitted to a HUB. For a list of codes, please see Rejection Codes in the appendices.
Occupancy Indicator	Char	1	Optional	HOV switch position or other means used to indicate vehicle occupancy. For facilities with multiple gantries/toll points that could comprise a trip, this would be the switch position/indicator used to calculate the toll. Values: 1 – SOV 2 – HOV2 3 – HOV3+
Vehicle Classification	Num	4	Required	Classification of the vehicle based on the Away Agency's classification structure/rules and used to calculate the Toll Amount. This field does not require validation by the Home agency. **Note:** This is not the same classification as encoded on the tag.
AVI Toll Amount	Num	9	Required	Toll amount in Cents.
PBM Toll Amount	Num	9	Required	Toll amount in Cents.
Discount Plan	Char	12	Optional	Discount Plans are currently not supported.
BaseFileName	Char	30	Required	The base file name format of the image file. Format: SSAAAPPPPLLYYYY MMDDHHMISSQQQ QQ

Field	Type	Max Length	Required/ Optional	Description
License Plate Country	Char	2	Required	Issuing country of the license plate as determined by the Away Agency and matched to the Home Agency data from the TVL. Values: US – United States CA – Canada MX – Mexico If a License Plate Number is provided, the License Plate Country must be provided. License plates with any country other than the 3 listed above cannot be included in the TVL.
License Plate State	Char	2	Required	Issuing jurisdiction of the license plate. If a License Plate Number is provided, the License Plate State must be provided.
License Plate Number	Char	15	Required	License Plate Number as determined.
License Plate Type	Char	20	Optional	License Plate Type as determined by Image Review.
Vehicle Classification Adjustment Flag	Char	1	Optional	Used to indicate if the Vehicle Classification presented in the transaction was adjusted. Values: A – Axles adjusted
Spare 1	Char	20	Optional	Spare field for future growth.
Spare 2	Char	20	Optional	Spare field for future growth.
Spare 3	Char	20	Optional	Spare field for future growth.
Spare 4	Char	20	Optional	Spare field for future growth.
Spare 5	Char	20	Optional	Spare field for future growth.
Separator	Char	1	Required	“\n” Newline Character

Table 4 Data Record Format – Transactions File

4.1.4 File Example – Transactions File

H,20050417220000,00000001,104,0000000005,000000000050,12345678,000005.00
*1,VB01,2030419458,20170216101453067800,7,CRYFLN,7,2,,,,104,TEX.98765432,V,R,,2,.53,.77,,
20170216101453067800,US,TX,FHJ834N,,,,,,,
*1,VB01,2030448271,20170216101753036700,7,CRYFLN,7,2,,,,104,TEX.98763748,V,R,,2,.53,.77,,
20170216101453067800,US,TX,M4XLJ97,,,,,,,
*1,VB01,2030458729,20170216101134598300,7,CRYFLN,7,2,,,,104,TEX.12345678,V,R,,2,.53,.77,,
20170216101453067800,US,TX,D45JBC9,,,,,,,
*1,VB01,2030478928,20170216101253067800,7,CRYFLN,7,2,,,,104,TEX.32829184,V,R,,2,.53,.77,,
20170216101453067800,US,TX,H7ML4XM,,,,,,,
*1,VB01,2030489273,20170216101958067800,7,CRYFLN,7,2,,,,104,TEX.89382734,V,R,,2,.53,.77,,
20170216101453067800,US,TX,F8R7JLM,,,,,,,

4.2 Image File

The CTRMA – to – VPC (Image Processing) Interface consists of the following file transfer:

Image Files (CTRMA – to – VPC (Image Processing)

4.2.1 File Name Format – Image File

The file name for the image files shall have the following format:

```
<State_Abbrev><Authority><Plaza><Lane><Year><Month><Day><Hour><Mi
n><Sec><Sequence><ImageNumber>.jpg
```

Note: Lane Sequence Number has been removed from the file name.

where:

<State_Abbrev> = SS = “TX” (2 Char)
<Authority> = AAA = “101” (3 Char)
<Plaza> = PPPP = "0007" (4 Char)
<Lane> = LL = “01” (2 Char)
<Year> = YYYY (4 Char)
<Month> = MM (2 Char)
<Day> = DD (2 Char)
<Hour> = HH (2 Char)
<Min> = MI (2 Char)
<Sec> = SS (2 Char)
<Sequence> = QQQQQ = “12345” (5 Char)
<ImageNumber> = _1 or _A or _ROI (2 char – 1 underscore and a number for front camera images, or 2 char – 1 underscore and a letter for rear images) - for Videos or LP for License Plate captures.

Note: The date and time information captured in the image file name shall match the date and time information of the associated transaction.

4.2.2 File Format

All files will be saved in a JPEG format with dimensions of 1920 x 512 and an average image size of 60 KB.

4.3 Format Placement Disposition File

When a Placement Disposition File is packaged for transmission, the sender must construct the File Header so that it contains all of the required fields listed below. Once the File Header is constructed, the file contents are appended; and the entire file is transmitted to the appropriate directory location on the VPC to the CTRMA SFTP Server for processing.

The File Header is a fixed length ASCII record with comma-delimited fields, terminated by a carriage return-line feed. Some of the fields within the File Header are right-justified and must be zero padded. Although all fields in the File Header are fixed in length, they are still separated by commas. This is to allow processing by either of two means: (1) specifying

absolute file offset position and field length; or (2) parsing the record, breaking on the comma-delimiter. This format was developed to afford developers maximum flexibility in processing this record type.

The CRC 32 standard algorithm is used to compute the checksum value. The checksum is a 32-bit value and is displayed as an ASCII hex number. The file size is a base-10 ASCII number.

Field Name	Data Type (Fixed Length)	Required Field	Format/Range	Description
Rec_type	Char (1)	Y		Record Type. Value = 'H'
File_date_time	Char (14)	Y	yyyymmddhhmmss	Date and time of this file creation.
TR_File_control_number	Char (8)	Y	00000000-99999999	A unique, sequential number created by the VPC that is used to identify the file. **Note:** This field is right-justified and must be zero padded.
Authority	Char (3)	Y		Code indicating the Authority that owns/operates the facility on which the transaction occurred.
Rec_count	Char (10)	Y	0000000000-9999999999	The number of records in the Data Record (exclusive of the Header and Trailer). **Note:** This field is right-justified and must be zero padded.
File_Size	Numeric (12)	Y	000000000000-999999999999	The size of the file in bytes. **Note:** This field is right-justified and must be zero padded.
Checksum	Char (8)	Y		A 32-bit checksum computed for the contents of the file, beginning at the character immediately following the header record and associated CR/LF. This value is displayed as an 8-digit ASCII hex number.
Separator	Char (1)	Y		"\n" Newline Character

Table 5 File Header Format – Placement Disposition File

4.3.1 File Trailer Format – Placement Disposition File

The File Trailer is a fixed length ASCII record with comma-delimited fields, terminated by a carriage return-line feed. Some of the fields within the File Trailer are right-justified and must be zero padded.

Field Name	Data Type (Fixed Length)	Required Field	Format/Range	Description
Rec_type	Char (1)	Y		T = Trailer
Rec_count	Char (10)	Y	0000000000 – 9999999999	The number of records in the Data Record (exclusive of the Header and Trailer). **Note:** This field is right-justified and must be zero padded.
Separator	Char (1)	Y		"\n" Newline Character

Table 6 File Trailer Format – Placement Disposition File

Field Name	Data Type (Max Length)	Required Field	Format/Range	Description
Rec_type	Char (1)	Y		Record Type. Value = 'R'
Unique_id	Char (20)	Y	0000000000 – 9999999999	Unique ID for each transaction record assigned by CTRMA.
Authority	Char (3)	Y	For a list of Authorities, refer to Appendix A.	This is the Facility ID from the original transaction file.
Plaza	Char (4)	Y	Plaza ID	Plaza ID (from original transaction)
Lane	Char (2)	Y	Lane ID	Lane ID (from original transaction)
Transdate	Char (8)	Y	YYYYMMDD	Transaction date (from original transaction)
Transtime	Char (6)	Y	HHMMSS	Transaction time in 24-hour format (from original transaction)
Plate	Char (10)	Y	Alpha Numeric	Plate Number. This will be blank if unreadable.

Field Name	Data Type (Max Length)	Required Field	Format/Range	Description
Jurisdiction	Char (2)	Y	Alpha	State from which the license plate is from. This will be blank if unreadable.
Code	Char (2)	Y	Alpha	This will be a two-letter code indicating the reason the transaction has been taken for processing further. Codes are: 'GB' = Good for Billing 'NB' = Not Good for Billing 'DU' = Duplicate 'NI' = No Image 'ST' = Wrong State 'PL' = Wrong Plate
Separator	Char (1)	Y		"\n" Newline Character

Table 7 Data Record Format – Placement Disposition File

4.3.2 File Example – Placement Disposition File

```
20160803130837105.dsp

H,20160803130837,00000001,104,0000005071,000000275904,5BAEBAB7
R,0705379665,104,3203,01,20160719,131655,GJJ0857,TX,GB
R,0706059419,104,3202,01,20160720,204011,A588YX,UT,GB
R,0706401353,104,3202,02,20160721,150910,,TX,NB
R,0707317618,104,3204,03,20160723,114040,,TX,NB
T,0000005071
```

4.4 Acknowledgement File

Acknowledgement Files shall be sent from the receiving agency after every file transfer, except in regards to Image Files. Because Image Files are pulled by the VPC from the CTRMA SFTP Server, acknowledgement is not necessary. Acknowledgement Files shall indicate a successful or unsuccessful file transfer based on verification of the transferred file's checksum, file size and record count.

4.4.1 File Transfers:

After a file is transferred (via SFTP) from the `/input/sending` subdirectory into the main `/input` directory, the receiving agency shall pick up the file and check the integrity of the data within the file using the file checksum. Once the file is checked, the receiving agency shall send an **_ack** or **_nack** file back to the sending Authority before archiving the file. Acknowledging the file is done before archiving the file to prevent the receiving agency from archiving a bad file. Should a file prove to be invalid based on the file checksum, the receiving agency shall delete the invalid file and the sending agency shall be notified by the **_nack** file. Once the agency that sent the original file receives the **_nack** file,

they shall repackage the file and send it again. Should the second attempt also result in the generation of a _**nack** file, the sending agency shall send an e-mail to the target agency to notify them of the problem, investigate the problem and transfer the file manually to the target agency once the problem has been resolved.

Note: All Acknowledgement Files shall be sent within five (5) minutes of the receiving agency's receipt of a file.

4.4.2 File Naming Conventions:

Acknowledgement Files shall use the following naming conventions based on the success or failure of the file transfer.

Successful Transmission:

If a file's checksum, file size and record count, identified in the file's header, are verified as correct by the receiving agency, the receiving agency shall send an Acknowledgement File to the sending agency. The Acknowledgement File shall use the following naming scheme:

(original file name.ext)_**(Authority)**_**ack**

Unsuccessful Transmission:

If a file's checksum, file size and record count cannot be verified as correct, based on the information in the file header, the receiving agency shall create an Acknowledgement File that specifies that the transmission of the file was not successful. The receiving agency shall specify that the file transfer failed by utilizing the following file naming scheme:

(original file name.ext)_**(Authority)**_**nack**

4.4.3 File Transfer Timetable

The VPC and CTRMA shall receive acknowledgement files for the following file types:

- Transaction Files

The party that sends a file shall receive an acknowledgement file within 5 minutes of the file being received by the target authority.

Note: All times used in the file name format and in the file contents are designated in GMT (Universal Time Zone – Grand Meridian).

4.4.4 File Name Format

As mentioned above, Acknowledgement Files shall be named based on the success or failure of the file transmission. Refer to the lists below for an example of the Acknowledgement File naming conventions used for each file type based on both success and failure.

Successful Transmission:

Successful file transmissions shall use the following naming convention: (original file name.ext)_**(Authority)**_**ack**

- Transaction Files – `20040815143045104.tr_`**`104`**`_`**`ack`**

Unsuccessful Transmission:

Unsuccessful file transmissions shall use the following naming convention: (original file name.ext)_**(Authority)**_**nack**

> Transaction Files – `20040815143045104.tr_`**`104`**`_nack`

4.4.5 File Format

The file format follows the standard guidelines referenced in Appendix B File Structure - Standard Guidelines.

4.4.5.1 File Header Format – Acknowledgement File

The File Header is a fixed length ASCII record with comma-delimited fields, terminated by a carriage return-line feed. Although the fields are fixed in length, they are still separated by commas. This is to allow processing by either of two means: (1) specifying absolute file offset position and field length; or (2) parsing the record, breaking on the comma-delimiter. This format was developed to afford developers maximum flexibility in processing this record type.

Field Name	Data Type (Fixed Length)	Required Field	Format/Range	Description
Rec_type	Char (1)	Y		Record Type. Value = 'H'
File_date_time_created	Char (14)	Y	yyyymmddhhmmss	Date and time of this file creation
Original_file_date_time_received	Char (14)	Y	yyyymmddhhmmss	Date and time the original file was received
Processing_Status	Char (1)	Y		Processing status of file received: "V" – Checksum, file size and record count validated "C" –Checksum invalid "F" – File size invalid "D" – Record count invalid
Separator	Char (1)	Y		"\n" Newline Character

Table 8 File Header Format – Acknowledgement File

4.4.5.2 File Trailer Format – Acknowledgement File

Field Name	Data Type (Fixed Length)	Required Field	Format/Range	Description
Rec_type	Char (1)	Y		Record Type. Value = 'T'
Separator	Char (1)	Y		"\n" Newline Character

Table 9 File Trailer Format – Acknowledgement File

4.4.6 File Example – Acknowledgement File

```
H,20050417220000,20050416220000,V T
```

Appendix A Authority/Plaza/Lane Descriptions

The following shall be used to uniquely identify plazas and lanes:

ID	Number of Characters
Authority	3
Plaza	4
Lane	2

Authority ID Number – (AUTHORITY):

- 101 – TxDOT
- 102 – NTTA
- 103 – HCTRA
- 104 – CTRMA
- 105 – CCRMA
- 106 – NETRMA
- 107 - CRRMA

Appendix B File Structure - Standard Guidelines

The files involved in the file transfer that are described in this document are ASCII text files. All fields shall be comma-delimited. The various components of a file that are involved in the file transfer are as follows:

- **File Header Line:** The first line of the file shall be the file header record. The format of the header record may be different for different types of transfers. All file headers fields are right-justified and fixed length (zero padded if necessary).
- **Data Record Line(s):** All files created from the database for file transfer shall have comma-delimited records. Field sizes are maximum lengths. Field data can be less than the maximum length.
- **File Trailer Line:** The last line of the file shall be the file trailer record. The format of the trailer record may be different for different types of transfers. All file trailers fields are right-justified and fixed length (zero padded if necessary).

Note: The default value for required fields that are not being used shall be zero (0).

Appendix C Transaction Record Types

Record Type ID	Record Type	Description
10	Toll Transaction	Used for ALL toll transactions (including videos).
13	Unusual Occurrence	Used for maintenance messages, if implemented in the system.
15	Account Transaction	Used for transactions that affect accounts, i.e., adding money or giving discounts.

Appendix D Axle-Based Vehicle Classes

Vehicle Class ID	Vehicle Class	No. of Axles
01	NOT USED	N/A
02	CLASS 2 VEHICLE	<=2 axles
03	CLASS 3 VEHICLE	3 axles
04	CLASS 4 VEHICLE	4 axles
05	CLASS 5 VEHICLE	5 axles
06	CLASS 6 PLUS VEHICLE	>=6 axles

Appendix E Lane Modes

Lane Mode ID	Meaning
1	Closed
2	Manned
3	Manned Preclass
4	Manned Exact Change
5	Manned Exact Change – Preclass
6	ACM
7	Dedicated ETC
8	ACM – ETC
9	Maintenance
10	Event Mode
11	Standby Mode
12	Open Road ETC
13	Manned ETC Lane

Appendix F Plaza ID List

Turnpike	Host Name	Description (27 characters max.)	Interop Location Name (13 characters max.)	Plaza Number	Lane Number
183-A	Park Street Mainline	Park Street Plaza L01 NB	183-PARKS-01	2	1
183-A	Park Street Mainline	Park Street Plaza L02 NB	183-PARKS-02	2	2
183-A	Park Street Mainline	Park Street Plaza L03 NB	183-PARKS-03	2	3
183-A	Park Street Mainline	Park Street Plaza L04 NB	183-PARKS-04	2	4
183-A	Park Street Mainline	Park Street Plaza L05 NB	183-PARKS-05	2	5
183-A	Park Street Mainline	Park Street Plaza L06 NB	183-PARKS-06	2	6
183-A	Park Street Mainline	Park Street Plaza L07 NB	183-PARKS-07	2	7
183-A	Park Street Mainline	Park Street Plaza L08 NB	183-PARKS-08	2	8
183-A	Park Street Mainline	Park Street Plaza L09 NB	183-PARKS-09	2	9
183-A	Park Street Mainline	Park Street Plaza L10 SB	183-PARKS-10	2	10
183-A	Park Street Mainline	Park Street Plaza L11 SB	183-PARKS-11	2	11
183-A	Park Street Mainline	Park Street Plaza L12 SB	183-PARKS-12	2	12
183-A	Park Street Mainline	Park Street Plaza L13 SB	183-PARKS-13	2	13
183-A	Park Street Mainline	Park Street Plaza L14 SB	183-PARKS-14	2	14
183-A	Park Street Mainline	Park Street Plaza L15 SB	183-PARKS-15	2	15
183-A	Park Street Mainline	Park Street Plaza L16 SB	183-PARKS-16	2	16
183-A	Park Street Mainline	Park Street Plaza L17 SB	183-PARKS-17	2	17
183-A	Park Street Mainline	Park Street Plaza L18 SB	183-PARKS-18	2	18
183-A	Lakeline Plaza NB	Lakeline Plaza Northbnd L01	183-LKLNN-01	3	1
183-A	Lakeline Plaza NB	Lakeline Plaza Northbnd L02	183-LKLNN-02	3	2

Turnpike	Host Name	Description (27 characters max.)	Interop Location Name (13 characters max.)	Plaza Number	Lane Number
183-A	Lakeline Plaza NB	Lakeline Plaza Northbnd L03	183-LKLNN-03	3	3
183-A	Lakeline Plaza NB	Lakeline Plaza Northbnd L04	183-LKLNN-04	3	4
183-A	Lakeline Plaza NB	Lakeline Plaza Northbnd L05	183-LKLNN-05	3	5
183-A	Lakeline Plaza SB	Lakeline Plaza Southbnd L01	183-LKLNS-01	4	1
183-A	Lakeline Plaza SB	Lakeline Plaza Southbnd L02	183-LKLNS-02	4	2
183-A	Lakeline Plaza SB	Lakeline Plaza Southbnd L03	183-LKLNS-03	4	3
183-A	Lakeline Plaza SB	Lakeline Plaza Southbnd L04	183-LKLNS-04	4	4
183-A	Lakeline Plaza SB	Lakeline Plaza Southbnd L05	183-LKLNS-05	4	5
183-A	Brushy Creek NB	Brushy Creek Ex L01 NB	183-BRSHCX-01	5	1
183-A	Brushy Creek NB	Brushy Creek Ex L02 NB	183-BRSHCX-02	5	2
183-A	Brushy Creek SB	Brushy Creek Ent L01 SB	183-BRSHCE-01	6	1
183-A	Brushy Creek SB	Brushy Creek Ent L02 SB	183-BRSHCE-02	6	2
183-A	Crystal Mainline	Crystal Falls Plaza L01 NB	183-CRYFLN-01	7	1
183-A	Crystal Mainline	Crystal Falls Plaza L02 NB	183-CRYFLN-02	7	2
183-A	Crystal Mainline	Crystal Falls Plaza L03 NB	183-CRYFLN-03	7	3
183-A	Crystal Mainline	Crystal Falls Plaza L04 NB	183-CRYFLN-04	7	4
183-A	Crystal Mainline	Crystal Falls Plaza L05 NB	183-CRYFLN-05	7	5
183-A	Crystal Mainline	Crystal Falls Plaza L06 SB	183-CRYFLS-06	7	6
183-A	Crystal Mainline	Crystal Falls Plaza L07 SB	183-CRYFLS-07	7	7
183-A	Crystal Mainline	Crystal Falls Plaza L08 SB	183-CRYFLS-08	7	8
183-A	Crystal Mainline	Crystal Falls Plaza L09 SB	183-CRYFLS-09	7	9

Turnpike	Host Name	Description (27 characters max.)	Interop Location Name (13 characters max.)	Plaza Number	Lane Number
183-A	Crystal Mainline	Crystal Falls Plaza L10 SB	183-CRYFLS-10	7	10
183-A	Scottsdale Drive NB	Scottsdale Ex L01 NB	183-SCOTTX-01	8	1
183-A	Scottsdale Drive NB	Scottsdale Ex L02 NB	183-SCOTTX-02	8	2
183-A	Crystal Parkway NB	Crystal Falls Ent L01 NB	183-CRYFLE-01	9	1
183-A	Crystal Parkway NB	Crystal Falls Ent L02 NB	183-CRYFLE-02	9	2
183-A	Crystal Parkway SB	Crystal Falls Ex L01 SB	183-CRYFLX-01	10	1
183-A	Crystal Parkway SB	Crystal Falls Ex L02 SB	183-CRYFLX-02	10	2
SH550	SH550-Main-North	SH550 - FM1847 N. Shoulder	SH550-FM1847-01	21	1
SH550	SH550-Main-North	SH550 - FM1847 North Lane 2	SH550-FM1847-02	21	2
SH550	SH550-Main-North	SH550 - FM1847 North Lane 3	SH550-FM1847-03	21	3
SH550	SH550-Main-South	SH550 - FM1847 South Lane 4	SH550-FM1847-04	22	1
SH550	SH550-Main-South	SH550 - FM1847 South Lane 5	SH550-FM1847-05	22	2
SH550	SH550-Main-South	SH550 - FM1847 S. Shoulder	SH550-FM1847-06	22	3
SH550	Port Spur NB	SH550 Port Spur L01 SB	SH550-PS-S01	23	1
SH550	Port Spur NB	SH550 Port Spur L02 SB	SH550-PS-S02	23	2
SH550	Port Spur SB	SH550 Port Spur L01 NB	SH550-PS-N01	24	1
SH550	Port Spur SB	SH550 Port Spur L02 NB	SH550-PS-N02	24	2
SH550	SH550 - DC North	SH550 - DC North L01	SH550-DC-N01	25	1
SH550	SH550 - DC North	SH550 - DC North L02	SH550-DC-N02	25	2
SH550	SH550 - DC North	SH550 - DC North L03	SH550-DC-N03	25	3
SH550	SH550 - DC South	SH550 - DC South L04	SH550-DC-S04	26	4

Turnpike	Host Name	Description (27 characters max.)	Interop Location Name (13 characters max.)	Plaza Number	Lane Number
SH550	SH550 - DC South	SH550 - DC South L05	SH550-DC-S05	26	5
SH550	SH550 - DC South	SH550 - DC South L06	SH550-DC-S06	26	6
SH550	SH550-OARE	SH550 Old Alice Rd E NB L01	SH550-OARE-01	27	1
SH550	SH550-OARE	SH550 Old Alice Rd E NB L02	SH550-OARE-02	27	2
SH550	SH550-OARX	SH550 Old Alice Rd X SB L01	SH550-OARX-01	28	1
SH550	SH550-OARX	SH550 Old Alice Rd X SB L02	SH550-OARX-02	28	2
US290 E	183 Entry EB	US 183 ENT L01 EB	290-US183E-01	30	1
US290 E	183 Entry EB	US 183 ENT L02 EB	290-US183E-02	30	2
US290 E	183 Entry EB	US 183 ENT L03 EB	290-US183E-03	30	3
US290 E	183 Entry EB	US 183 ENT L04 EB	290-US183E-04	30	4
US290 E	183 Entry EB	US 183 ENT L05 EB	290-US183E-05	30	5
US290 E	183 Exit WB	US 183 EX L01 WB	290-US183X-01	31	1
US290 E	183 Exit WB	US 183 EX L02 WB	290-US183X-02	31	2
US290 E	183 Exit WB	US 183 EX L03 WB	290-US183X-03	31	3
US290 E	183 Exit WB	US 183 EX L04 WB	290-US183X-04	31	4
US290 E	183 Exit WB	US 183 EX L05 WB	290-US183X-05	31	5
US290 E	Springdale Road EB	Springdale EX L01 EB	290-SPRINX-01	32	1
US290 E	Springdale Road EB	Springdale EX L02 EB	290-SPRINX-02	32	2
US290 E	Springdale Road EB	Springdale EX L03 EB	290-SPRINX-03	32	3
US290 E	Springdale Road WB	Springdale EN L01 WB	290-SPRINE-01	33	1
US290 E	Springdale Road WB	Springdale EN L02 WB	290-SPRINE-02	33	2

Turnpike	Host Name	Description (27 characters max.)	Interop Location Name (13 characters max.)	Plaza Number	Lane Number
US290 E	Giles Lane EB	Giles Lane EX L01 EB	290-GILESX-01	34	1
US290 E	Giles Lane EB	Giles Lane EX L02 EB	290-GILESX-02	34	2
US290 E	Giles Lane WB	Giles Lane EN L01 WB	290-GILESE-01	35	1
US290 E	Giles Lane WB	Giles Lane EN L02 WB	290-GILESE-02	35	2
US290 E	Giles Mainline	Giles Lane Plaza L01 EB	290-GLMLEB-01	36	1
US290 E	Giles Mainline	Giles Lane Plaza L02 EB	290-GLMLEB-02	36	2
US290 E	Giles Mainline	Giles Lane Plaza L03 EB	290-GLMLEB-03	36	3
US290 E	Giles Mainline	Giles Lane Plaza L04 EB	290-GLMLEB-04	36	4
US290 E	Giles Mainline	Giles Lane Plaza L05 EB	290-GLMLEB-05	36	5
US290 E	Giles Mainline	Giles Lane Plaza L06 EB	290-GLMLEB-06	36	6
US290 E	Giles Mainline	Giles Lane Plaza L07 WB	290-GLMLWB-07	36	7
US290 E	Giles Mainline	Giles Lane Plaza L08 WB	290-GLMLWB-08	36	8
US290 E	Giles Mainline	Giles Lane Plaza L09 WB	290-GLMLWB-09	36	9
US290 E	Giles Mainline	Giles Lane Plaza L10 WB	290-GLMLWB-10	36	10
US290 E	Giles Mainline	Giles Lane Plaza L11 WB	290-GLMLWB-11	36	11
US290 E	Giles Mainline	Giles Lane Plaza L12 WB	290-GLMLWB-12	36	12
US290 E	Harris Branch WB	Harris Branch EX L01 WB	290-HARISX-01	37	1
US290 E	Harris Branch WB	Harris Branch EX L02 WB	290-HARISX-02	37	2
US290 E	Harris Branch EB	Harris Branch EN L01 EB	290-HARISE-01	38	1
US290 E	Harris Branch EB	Harris Branch EN L02 EB	290-HARISE-02	38	2
US290 E	Parmer Mainline	Parmer Lane Plaza L01 EB	290-PMMLEB-01	39	1

Turnpike	Host Name	Description (27 characters max.)	Interop Location Name (13 characters max.)	Plaza Number	Lane Number
US290 E	Parmer Mainline	Parmer Lane Plaza L02 EB	290-PMMLEB-02	39	2
US290 E	Parmer Mainline	Parmer Lane Plaza L03 EB	290-PMMLEB-03	39	3
US290 E	Parmer Mainline	Parmer Lane Plaza L04 EB	290-PMMLEB-04	39	4
US290 E	Parmer Mainline	Parmer Lane Plaza L05 WB	290-PMMLWB-05	39	5
US290 E	Parmer Mainline	Parmer Lane Plaza L06 WB	290-PMMLWB-06	39	6
US290 E	Parmer Mainline	Parmer Lane Plaza L07 WB	290-PMMLWB-07	39	7
US290 E	Parmer Mainline	Parmer Lane Plaza L08 WB	290-PMMLWB-08	39	8
NETRMA	SH64NB Ramp	LP49 SH64 NB L01	NE49-SH64N-01	50	1
NETRMA	SH64NB Ramp	LP49 SH64 NB L02	NE49-SH64N-02	50	2
NETRMA	SH64SB Ramp	LP49 SH64 SB L01	NE49-SH64S-01	51	1
NETRMA	SH64SB Ramp	LP49 SH64 SB L02	NE49-SH64S-02	51	2
NETRMA	Prarie Creek Mainline	LP49 PCM NB L01	LP49-PCM-N01	52	1
NETRMA	Prarie Creek Mainline	LP49 PCM NB L02	LP49-PCM-N02	52	2
NETRMA	Prarie Creek Mainline	LP49 PCM SB L03	LP49-PCM-S03	52	3
NETRMA	Prarie Creek Mainline	LP49 PCM SB L04	LP49-PCM-S04	52	4
NETRMA	Saline Creek Plaza EB	LP49 SCP EB L01	NE49-SCPEB-01	53	1
NETRMA	Saline Creek Plaza EB	LP49 SCP EB L02	NE49-SCPEB-02	53	2
NETRMA	Saline Creek Plaza EB	LP49 SCP EB L98	NE49-SCPEB-98	53	98
NETRMA	Saline Creek Plaza EB	LP49 SCP EB L99	NE49-SCPEB-99	53	99
NETRMA	Saline Creek Plaza WB	LP49 SCP WB L01	NE49-SCPWB-01	54	1
NETRMA	Saline Creek Plaza WB	LP49 SCP WB L02	NE49-SCPWB-02	54	2

Turnpike	Host Name	Description (27 characters max.)	Interop Location Name (13 characters max.)	Plaza Number	Lane Number
NETRMA	Saline Creek Plaza WB	LP49 SCP WB L98	NE49-SCPWB-98	54	98
NETRMA	Saline Creek Plaza WB	LP49 SCP WB L99	NE49-SCPWB-99	54	99
NETRMA	FM 2493 Entrance	LP49 2493E L01	NE49-2493E-01	55	1
NETRMA	FM 2493 Entrance	LP49 2493E L02	NE49-2493E-02	55	2
NETRMA	FM 2493 Entrance	LP49 2493E L98	NE49-2493E-98	55	98
NETRMA	FM 2493 Entrance	LP49 2493E L99	NE49-2493E-99	55	99
NETRMA	FM 2493 Exit	LP49 2493X L01	NE49-2493X-01	56	1
NETRMA	FM 2493 Exit	LP49 2493X L02	NE49-2493X-02	56	2
NETRMA	FM 2493 Exit	LP49 2493X L98	NE49-2493X-98	56	98
NETRMA	FM 2493 Exit	LP49 2493X L99	NE49-2493X-99	56	99
NETRMA	FM 756/Paluxy Dr Exit	LP49 PLXYX L01	NE49-PLXYX-01	57	1
NETRMA	FM 756/Paluxy Dr Exit	LP49 PLXYX L02	NE49-PLXYX-02	57	2
NETRMA	FM 756/Paluxy Dr Exit	LP49 PLXYX L98	NE49-PLXYX-98	57	98
NETRMA	FM 756/Paluxy Dr Exit	LP49 PLXYX L99	NE49-PLXYX-99	57	99
NETRMA	FM 756/Paluxy Dr Entrance	LP49 PLXYE L01	NE49-PLXYE-01	58	1
NETRMA	FM 756/Paluxy Dr Entrance	LP49 PLXYE L02	NE49-PLXYE-02	58	2
NETRMA	FM 756/Paluxy Dr Entrance	LP49 PLXYE L98	NE49-PLXYE-98	58	98
NETRMA	FM 756/Paluxy Dr Entrance	LP49 PLXYE L99	NE49-PLXYE-99	58	99
NETRMA	SH110 Plaza EB	LP49 H11L0E L01	NE49-H110E-01	59	1
NETRMA	SH110 Plaza EB	LP49 H11L0E L02	NE49-H110E-02	59	2
NETRMA	SH110 Plaza EB	LP49 H110E L98	NE49-H110E-98	59	98
NETRMA	SH110 Plaza EB	LP49 H110E L99	NE49-H110E-99	59	99
NETRMA	SH110 Plaza WB	LP49 H11L0W L01	NE49-H110W-01	60	1
NETRMA	SH110 Plaza WB	LP49 H11L0W L02	NE49-H110W-02	60	2

Turnpike	Host Name	Description (27 characters max.)	Interop Location Name (13 characters max.)	Plaza Number	Lane Number
NETRMA	SH110 Plaza WB	LP49 H110W L98	NE49-H110W-98	60	98
NETRMA	SH110 Plaza WB	LP49 H110W L99	NE49-H110W-99	60	99
NETRMA	SH31 Plaza EB	LP49 SH31E L01	NE49-SH31E-01	61	1
NETRMA	SH31 Plaza EB	LP49 SH31E L02	NE49-SH31E-02	61	2
NETRMA	SH31 Plaza EB	LP49 SH31E L98	NE49-SH31E-98	61	98
NETRMA	SH31 Plaza EB	LP49 SH31E L99	NE49-SH31E-99	61	99
NETRMA	SH31 Plaza WB	LP49 SH31W L01	NE49-SH31W-01	62	1
NETRMA	SH31 Plaza WB	LP49 SH31W L02	NE49-SH31W-02	62	2
NETRMA	SH31 Plaza WB	LP49 SH31W L98	NE49-SH31W-98	62	98
NETRMA	SH31 Plaza WB	LP49 SH31W L99	NE49-SH31W-99	62	99
CRRMA	623E Plaza	Loop 375 EB Plant 1	375EB-PLANT-1	70	1
CRRMA	623E Plaza	Loop 375 EB Plant 2	375EB-PLANT-2	70	2
CRRMA	623W Plaza	Loop 375 WB Plant 1	375WB-PLANT-1	71	1
CRRMA	623W Plaza	Loop 375 WB Plant 2	375WB-PLANT-2	71	2
CRRMA	511E Plaza	Loop 375 EB Midway 1	375EB-MIDWY-1	72	1
CRRMA	511E Plaza	Loop 375 EB Midway 2	375EB-MIDWY-2	72	2
CRRMA	511W Plaza	Loop 375 WB Midway 1	375WB-MIDWY-1	73	1
CRRMA	511W Plaza	Loop 375 WB Midway 2	375WB-MIDWY-2	73	2
MOPAC	MOPNBTR01	LP1X NB: CVZ to 183	1XNB-CVZ-183	91	1
MOPAC	MOPNBTR01	LP1X NB: CVZ to 183	1XNB-CVZ-183	91	2
MOPAC	MOPNBTR02	LP1X NB: CVZ to Parmer	1XNB-CVZ-PAR	92	1
MOPAC	MOPNBTR02	LP1X NB: CVZ to Parmer	1XNB-CVZ-PAR	92	2
MOPAC	MOPNBTR03	LP1X NB: 2222 to Parmer	1XNB-2222-PAR	93	1
MOPAC	MOPNBTR03	LP1X NB: 2222 to Parmer	1XNB-2222-PAR	93	2
MOPAC	MOPSBTR01	LP1X SB: Parmer to 2222	1XSB-PAR-2222	94	1

Turnpike	Host Name	Description (27 characters max.)	Interop Location Name (13 characters max.)	Plaza Number	Lane Number
MOPAC	MOPSBTR01	LP1X SB: Parmer to 2222	1XSB-PAR-2222	94	2
MOPAC	MOPSBTR02	LP1X SB: Parmer to 5th/CVZ	1XSB-PAR-CVZ	95	1
MOPAC	MOPSBTR02	LP1X SB: Parmer to 5th/CVZ	1XSB-PAR-CVZ	95	2
MOPAC	MOPSBTR03	LP1X SB: 2222 to 5th/CVZ	1XSB-2222-CVZ	96	1
MOPAC	MOPSBTR03	LP1X SB: 2222 to 5th/CVZ	1XSB-2222-CVZ	96	2
SH71	973 EB	973 East	SH71-FM973-01	100	1
SH71	973 EB	973 East	SH71-FM973-02	100	2
SH71	973 EB	973 East	SH71-FM973-03	100	3
SH71	973 EB	973 East	SH71-FM973-04	100	4
SH71	973 WB	973 West	SH71-FM973-05	101	1
SH71	973 WB	973 West	SH71-FM973-06	101	2
SH71	973 WB	973 West	SH71-FM973-07	101	3
SH71	973 WB	973 West	SH71-FM973-08	101	4

Appendix G File Record Types

RECNNAME	RECNDESC
ACCEPTED	Accepted and Paid
InterOP "R"	Posted with reservation, the tag is now invalid, but the status was not yet communicated to the peer Authority.
InterOP "D"	Duplicate transaction, posting failed
InterOP "I"	Invalid Tag, posting failed
InterOP "V"	Tag validation status out of date, posting failed
InterOP "M"	Manual Review Rejected - posting failed
InterOP "T"	Transaction Type not found in IOP
InterOP "C"	Tag Not Found in IOP
InterOP "B"	Bad Transaction Amount
InterOP "O"	Transaction too old
InterOP "E"	Credit Card Failure - posting failed

Appendix H Record Type Value

Record Type Value	Definition
H	File header
T	File trailer
A	Transaction File ETC data record
V	Transaction File Video data record