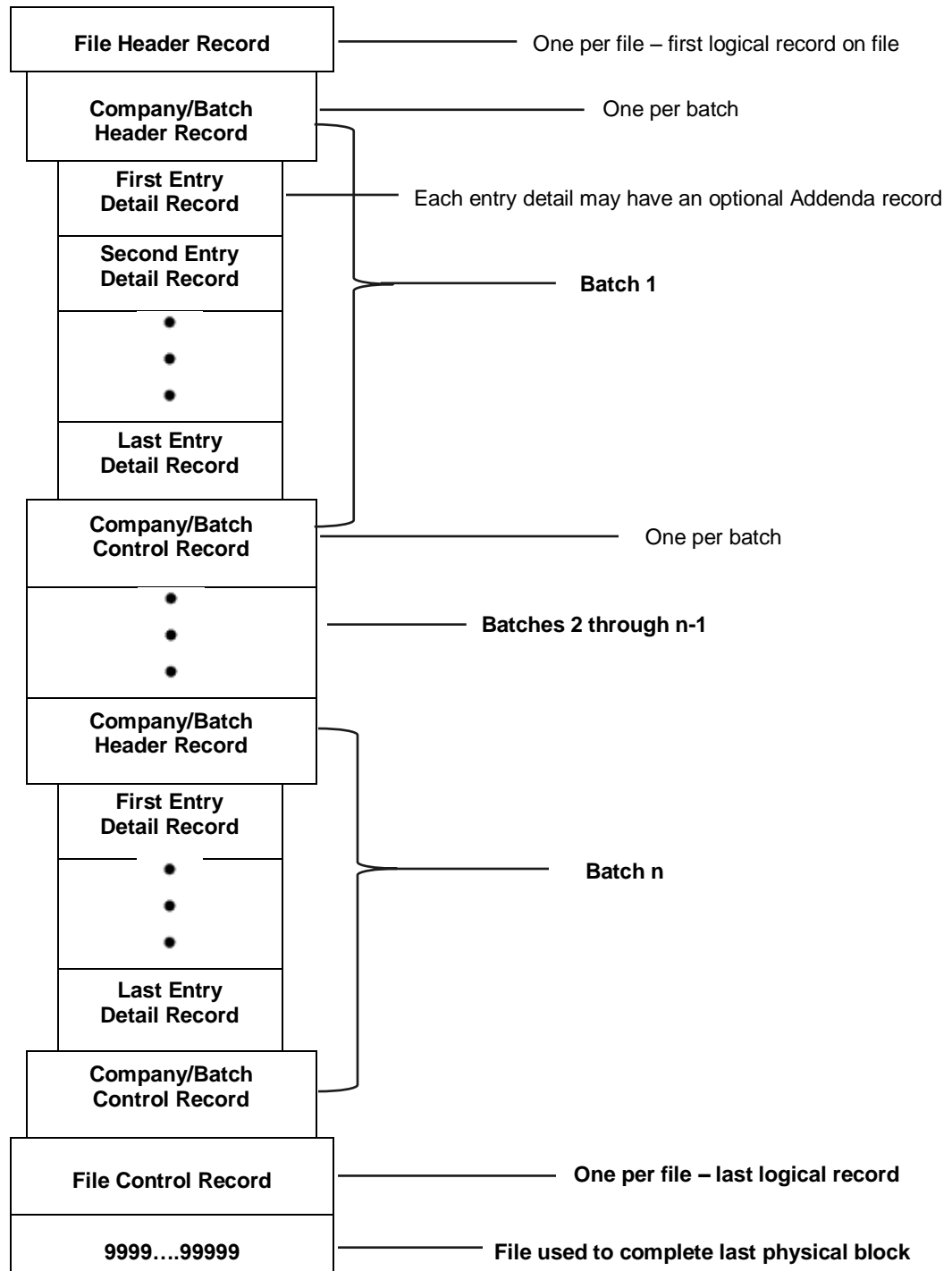**svb ›**

Silicon Valley Bank

Automated Clearing House – NACHA File Record Layouts

Overview

The **National Automated Clearing House Association (NACHA)** administers Operating Rules which govern the formats, specifications, and exchange of Automated Clearing House (ACH) entries.

‣ Below is an illustration of the standard **NACHA File Structure**.
   Note: Files used to import recipient data into SVB Online Banking ACH templates and payment batches will contain a single batch.

‣ The remainder of this guide outlines the **NACHA Record Formats**. The **File Header** and **File Control** records act as the outermost envelope of an ACH transaction. The **Batch Header** and **Batch Control** records act as an inner envelope combining similar entries.

File Header Record	One per file – first logical record on file
Company/Batch Header Record	One per batch
First Entry Detail Record	Each entry detail may have an optional Addenda record
Second Entry Detail Record	**Batch 1**
• • •	
Last Entry Detail Record	
Company/Batch Control Record	One per batch
• • •	**Batches 2 through n-1**
Company/Batch Header Record	
First Entry Detail Record	
• • •	**Batch n**
Last Entry Detail Record	
Company/Batch Control Record	
File Control Record	**One per file – last logical record**
9999….99999	**File used to complete last physical block**

Automated Clearing House – NACHA File Record Layouts

All Entries File Header Record

FIELD	1	2	3	4	5	6	7	8	9	10	11	12	13
DATA ELEMENT NAME	RECORD TYPE CODE	PRIORITY CODE	IMMEDIATE DESTINATION	IMMEDIATE ORIGIN	FILE CREATION DATE	FILE CREATION TIME	FILE ID MODIFIER	RECORD SIZE	BLOCKING FACTOR	FORMAT CODE	IMMEDIATE DESTINATION NAME	IMMEDIATE ORIGIN NAME	REFERENCE CODE
Field Inclusion Requirement	M	R	M	M	M	O	M	M	M	M	O	O	O
Contents	'1'	Numeric	b121140399	CompanyID	YYMMDD	HHMM	UPPER CASE A-Z NUMERIC 0-9	'094'	'10'	'1'	Alphanumeric	Alphanumeric	Alphanumeric
Length	1	2	10	10	6	4	1	3	2	1	23	23	8
Position	01-01	02-03	04-13	14-23	24-29	30-33	34-34	35-37	38-39	40-40	41-63	64-86	87-94

All Entries File Control Record

FIELD	1	2	3	4	5	6	7	8
DATA ELEMENT NAME	RECORD TYPE CODE	BATCH COUNT	BLOCK COUNT	ENTRY/ ADDENDA COUNT	ENTRY HASH	TOTAL DEBIT ENTRY DOLLAR AMOUNT IN FILE	TOTAL CREDIT ENTRY DOLLAR AMOUNT IN FILE	RESERVED
Field Inclusion Requirement	M	M	M	M	M	M	M	N/A
Contents	'9'	Numeric	Numeric	Numeric	Numeric	$$$$$$$$$$$¢¢	$$$$$$$$$$$¢¢	Blank
Length	1	6	6	8	10	12	12	39
Position	01-01	02-07	08-13	14-21	22-31	32-43	44-55	56-94

All Entries Company/Batch Header Record (Except IAT)

FIELD	1	2	3	4	5	6	7	8	9	10	11	12	13
DATA ELEMENT NAME	RECORD TYPE CODE	SERVICE CLASS CODE	COMPANY NAME	COMPANY DISCRETIONARY DATA	COMPANY IDENTIFICATION	STANDARD ENTRY CLASS CODE	COMPANY ENTRY DESCRIPTION	COMPANY DESCRIPTIVE DATE	EFFECTIVE ENTRY DATE	SETTLEMENT DATE (JULIAN)	ORIGINATOR STATUS CODE	ORIGINATING DFI IDENTIFICATION	BATCH NUMBER
Field Inclusion Requirement	M	M	M	O/R	M	M	M	O	R	Inserted by ACH Operator	M	M	M
Contents	'5'	Numeric	Alphanumeric	Alphanumeric	Alphanumeric	Alphanumeric	Alphanumeric	Alphanumeric	YYMMDD	Numeric	Alphanumeric	TTTTAAAA	Numeric
Length	1	3	16	20	10	3	10	6	6	3	1	8	7
Position	01-01	02-04	05-20	21-40	41-50	51-53	54-63	64-69	70-75	76-78	79-79	80-87	88-94

All Entries Company/Batch Control Record

FIELD	1	2	3	4	5	6	7	8	9	10	11
DATA ELEMENT NAME	RECORD TYPE CODE	SERVICE CLASS CODE	ENTRY/ ADDENDA COUNT	ENTRY HASH	TOTAL DEBIT ENTRY DOLLAR AMOUNT	TOTAL CREDIT ENTRY DOLLAR AMOUNT	COMPANY IDENTIFICATION	MESSAGE AUTHENTICATION CODE	RESERVED	ORIGINATING DFI IDENTIFICATION	BATCH NUMBER
Field Inclusion Requirement	M	M	M	M	M	M	R	O	N/A	M	M
Contents	'8'	Numeric	Numeric	Numeric	$$$$$$$$$$¢¢	$$$$$$$$$$¢¢	Alphanumeric	Alphanumeric	Blank	TTTTAAAA	Numeric
Length	1	3	6	10	12	12	10	19	6	8	7
Position	01-01	02-04	05-10	11-20	21-32	33-44	45-54	55-73	74-79	80-87	88-94

CCD Entry Detail Record

FIELD	1	2	3	4	5	6	7	8	9	10	11
DATA ELEMENT NAME	RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	AMOUNT	IDENTIFICATION NUMBER	RECEIVING COMPANY NAME	DISCRETIONARY DATA	ADDENDA RECORD INDICATOR	TRACE NUMBER
Field Inclusion Requirement	M	M	M	M	R	M	O	R	O	M	M
Contents	'6'	Numeric	TTTTAAAA	Numeric	Alphanumeric	$$$$$$$$¢¢	Alphanumeric	Alphanumeric	Alphanumeric	Numeric	Numeric
Length	1	2	8	1	17	10	15	22	2	1	15
Position	01-01	02-03	04-11	12-12	13-29	30-39	40-54	55-76	77-78	79-79	80-94

CCD Addenda Record

FIELD		1	2	3	4	5
DATA ELEMENT NAME		RECORD TYPE CODE	ADDENDA TYPE CODE	PAYMENT RELATED INFORMATION	ADDENDA SEQUENCE NUMBER	ENTRY DETAIL SEQUENCE NUMBER
Field Inclusion Requirement		M	M	O	M	M
Contents		'7'	'05'	Alphanumeric	Numeric	Numeric
Length		1	2	80	4	7
Position		01-01	02-03	04-83	84-87	88-94

CTX Entry Detail Record[1]

FIELD	1	2	3	4	5	6	7	8	9	10	11	12	13
DATA ELEMENT NAME	RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	AMOUNT	IDENTIFICATION NUMBER	Number of Addenda Records	Receiving Company Name/ID Number	Reserved	DISCRETIONARY DATA	ADDENDA RECORD INDICATOR	TRACE NUMBER
Field Inclusion Requirement	M	M	M	M	R	M	O	M	R	N/A	O	M	M
Contents	'6'	Numeric	TTTTAAAA	Numeric	Alphanumeric	\$\$\$\$\$\$\$\$¢¢	Alphanumeric	Numeric	Alphanumeric	Blank	Alphanumeric	Numeric	Numeric
Length	1	2	8	1	17	10	15	4	16	2	2	1	15
Position	01-01	02-03	04-11	12-12	13-29	30-39	40-54	55-58	59-74	75-76	77-78	79-79	80-94

CTX Addenda Record

FIELD		1	2	3	4	5
DATA ELEMENT NAME		RECORD TYPE CODE	ADDENDA TYPE CODE	PAYMENT RELATED INFORMATION	ADDENDA SEQUENCE NUMBER	ENTRY DETAIL SEQUENCE NUMBER
Field Inclusion Requirement		M	M	O	M	M
Contents		'7'	'05'	Alphanumeric	Numeric	Numeric
Length		1	2	80	4	7
Position		01-01	02-03	04-83	84-87	88-94

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[1] Only available through transActGateway. Not available through SVB Online Banking.

PPD Entry Detail Record

FIELD		1	2	3	4	5	6	7	8	9	10	11
DATA ELEMENT NAME		RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	AMOUNT	INDIVIDUAL IDENTIFICATION NUMBER	INDIVIDUAL NAME	DISCRETIONARY DATA	ADDENDA RECORD INDICATOR	TRACE NUMBER
Field Inclusion Requirement		M	M	M	M	R	M	O/R	R	O	M	M
Contents		'6'	Numeric	TTTTAAAA	Numeric	Alphanumeric	$$$$$$$$¢¢	Alphanumeric	Alphanumeric	Alphanumeric	Numeric	Numeric
Length		1	2	8	1	17	10	15	22	2	1	15
Position		01-01	02-03	04-11	12-12	13-29	30-39	40-54	55-76	77-78	79-79	80-94

PPD Addenda Record

FIELD		1	2	3	4	5
DATA ELEMENT NAME		RECORD TYPE CODE	ADDENDA TYPE CODE	PAYMENT RELATED INFORMATION	ADDENDA SEQUENCE NUMBER	ENTRY DETAIL SEQUENCE NUMBER
Field Inclusion Requirement		M	M	O	M	M
Contents		'7'	'05'	Alphanumeric	Numeric	Numeric
Length		1	2	80	4	7
Position		01-01	02-03	04-83	84-87	88-94

Tel Entry Detail Record[2]

FIELD		1	2	3	4	5	6	7	8	9	10	11
DATA ELEMENT NAME		RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	AMOUNT	INDIVIDUAL IDENTIFICATION NUMBER	INDIVIDUAL NAME	PAYMENT TYPE Code	ADDENDA RECORD INDICATOR	TRACE NUMBER
Field Inclusion Requirement		M	M	M	M	R	M	O/R	R	O	M	M
Contents		'6'	Numeric	TTTTAAAA	Numeric	Alphanumeric	$$$$$$$$¢¢	Alphanumeric	Alphanumeric	Alphanumeric	Numeric	Numeric
Length		1	2	8	1	17	10	15	22	2	1	15
Position		01-01	02-03	04-11	12-12	13-29	30-39	40-54	55-76	77-78	79-79	80-94

[2] Only available through transActGateway. Not available through SVB Online Banking.

Web Entry Detail Record[3]

FIELD		1	2	3	4	5	6	7	8	9	10	11
DATA ELEMENT NAME		RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	AMOUNT	INDIVIDUAL IDENTIFICATION NUMBER	INDIVIDUAL NAME	PAYMENT TYPE CODE	ADDENDA RECORD INDICATOR	TRACE NUMBER
Field Inclusion Requirement		M	M	M	M	R	M	O	R	R	M	M
Contents		'6'	Numeric	TTTTAAAA	Numeric	Alphanumeric	$$$$$$$$¢¢	Alphanumeric	Alphanumeric	Alphanumeric	Numeric	Numeric
Length		1	2	8	1	17	10	15	22	2	1	15
Position		01-01	02-03	04-11	12-12	13-29	30-39	40-54	55-76	77-78	79-79	80-94

Web Addenda Record

FIELD		1	2	3	4	5
DATA ELEMENT NAME		RECORD TYPE CODE	ADDENDA TYPE CODE	PAYMENT RELATED INFORMATION	ADDENDA SEQUENCE NUMBER	ENTRY DETAIL SEQUENCE NUMBER
Field Inclusion Requirement		M	M	O	M	M
Contents		'7'	'05'	Alphanumeric	Numeric	Numeric
Length		1	2	80	4	7
Position		01-01	02-03	04-83	84-87	88-94

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[3] Only available through transActGateway. Not available through SVB Online Banking.

ACH File Transmittal[4]

File Header Record

FIELD		1	2	3
DATA ELEMENT NAME		Header ID	Originating DFI Identification	System Number
Field Inclusion Requirement		M	M	M
Contents		'TRANSMTL '	'121140399 '	'0047723757'
Length		10	10	10
Position		01-10	11-20	21-30

Transmittal Record

FIELD		1	2	3	4	5
DATA ELEMENT NAME		File ID #	File Delivery Date	Entry Count	Total Debit Amount	Total Credit Amount
Field Inclusion Requirement		M	M	M	M	M
Contents		Numeric provided by SVB	0000YYMMDD	Numeric	Numeric	Numeric
Length		10	10	8	12	12
Position		01-10	11-20	21-28	29-40	41-52

The following is a sample of file transmittal file set up (X = carriage return)

```
TRANSMTL  121140399 0047723757X
00416141760000121010000000040000000000000000154345
```

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[4] Only available through transActGateway. Not available through SVB Online Banking.

File Information

Data Specifications for ACH Records

Type of Field	Alphabetic/Alphameric	Numeric
Valid Characters	A-Z, 0-9, space, EBCDIC values greater than hexadecimal "3F", ASCII values greater than hexadecimal "1F"	0-9
Justification	Left	Right
Empty Field Handling	Space filled	Zero filled
Special Notes	Certain Fields require the use of UPPER CASE characters – see below	Must be unsigned (Neither positive (+) or negative (-) signage.)

UPPER CASE characters must be used for all of the following:

‣ All alphabetic characters within the **Standard Entry Class Code** field;

‣ All alphabetic characters within the **File ID Modifier** field;

‣ **Company Entry Description** fields contained the words "REVERSAL," "RECLAIM," "NONSETTLED,"

ASCII-EBCDIC Table

Character	Hex. ASCII	Hex. EBCDIC
!	21	4F
"	22	7F
#	23	7B
$	24	5B
%	25	6C
&	26	50
'	27	7D
(	28	4D
)	29	5D
*	2A	5C
+	2B	4E
,	2C	6B
-	2D	60
.	2E	4B
/	2F	61
:	3A	7A
;	3B	5E
<	3C	4C
=	3D	7E
>	3E	6E

File Header:

Priority Code: 01
Immediate destination: "121140399" Immediate origin:
Company ID 7xxxxxxxxx
File ID Modifier: 0-9 or A-Z, recycles to A each day usually. Used to ID multiple batches per day-his choice of convention
Immediate Destination Name: Silicon Valley Bank
Immediate Origin Name: Company name
Reference code: client discretion, usually some sort of meaningful (to the client) sequence number.

Batch Header:

Service Class Code: Identifies the general classification of dollar entries to be exchanged.
- 200 ACH Entries Mixed Debits and Credits
- 220 ACH Credits
- 225 ACH Debits.

SVB Online Banking clients should NOT use 200.
Company Discretionary Data: entirely client's own information
Company Identification: Company ID again 7xxxxxxxxx
Standard entry class code: The three-character code within an ACH company/batch header, which identifies the type of transaction within the batch. Most common are CCD and PPD
Company entry description: Meaningful to company, can be "invoice" "expenses" "salary" etc
Originator Status Code: "1" Originating DFI
ID: "12114039"

Batch Number: The easiest thing to do is increment with each batch starting with "0000007"-should be
unique daily for research, to avoid duplicates, etc.

Batch Trailer:

Service Class code: must match one chosen above
Message Authentication Code: Not required at SVB

Entry Hash (all Standard Entry Class Codes):

    10 Positions – Company/Batch Control Record and File Control Record – Mandatory.

    The Receiving DFI Identification in each Entry Detail Record is hashed to provide a check against inadvertent alteration of data contents due to hardware failure or program error.

    Company/Batch Control Record:
    The Entry Hash is the sum of the Receiving DFI Identification fields in Entry Detail Records in the batch. This field contains the 8-digit routing number of the receiving depository institution. The hash is the arithmetic sum of the 8-digit routing numbers, with the overflow out of the high order (leftmost) position ignored.

    It would normally be different with each batch (unless nothing ever changes) and if someone altered an ABA number to change the funds debit or credit bank, the HASH would be out.

    If paying 10 employees for example, the HASH number would be the total of the 10 ABA numbers added as if they were just numbers.

    File Control Records:
    The Entry Hash is the sum of corresponding fields in the Company/Batch Control Records in the file.