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TruOps Telecom Routing Administration (TRA)

Thousands Blocks and Central Office Code Assignment Guidelines (TBCOCAG) Part 2 and Part 2A Forms

Job Aid

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This Job Aid has been prepared to support the Industry Numbering Committee (INC) document **ATIS-0300119**, **Thousands-Block (NPA-NXX-X) & Central Office Code (NPA-NXX) Administration Guidelines (TBCOCAG)**. Specifically, it addresses the data requests identified in Part 2 and Part 2A of the TBCOCAG. This Job Aid, although reviewed and used by industry participants, has not been subjected to industry consensus approval processes.

This issue of the Job Aid replaces all previous versions and reflects changes in the TBCOCAG Part 2/Part 2AForms through the date of issue. The TBCOCAG, Part 2/2A Forms and related industry documentation are available at www.atis.org. This Job Aid is available at www.trainfo.com and at the TRA GUI Job Aids menu for BIRRDS Users.

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General Overview – TBCOCAG

The TBCOCAG is maintained by the Alliance for Telecommunications Industry Solutions (ATIS) Industry Numbering Committee (INC). Specifics on ATIS and its committees are available at www.atis.org. A Canadian CO Code Assignment Guideline is available at www.cnac.ca.

The TBCOCAG is a set of guidelines focusing on assignment of NXXs (CO Codes) and Thousands Blocks to all companies that meet prescribed requirements.

The TBCOCAG Part 2 and Part 2A Forms supported by this Job Aid, identify the *basic* data that needs to be provided by the CO Code Holder and Block Assignee respectively, to various other industry participants and interfacing customers. The data supports proper call routing, recording, and billing across the networks and systems.

Obtaining a CO Code (NXX) and/or Thousands Block and providing the data addressed by the TBCOCAG Part 2/2A Forms and this Job Aid, is only *one* step in a more involved process. Appropriate interconnection agreements must be established, as applicable, to address the establishment of trunking and necessary supporting service arrangements among carriers. In addition, the Part 2 data must be processed through established collection and distribution channels to be effective, and must be *maintained* by the CO Code or Block Assignee, as network changes may require.

The following topics pertain to the assignment of Central Office (CO) Codes and are noted for information purposes:

Administrative Operating Company Number (AOCN)

AOCN refers to the company performing data entry into BIRRDS. It is the responsibility of Code Holders and Block Assignees to ensure that the data addressed by the TBCOCAG Part 2/2A Forms is entered into BIRRDS. A company may perform its own data entry or may enter into an agreement with another company (which need not be a service provider) to perform this function. For further information on directly performing data entry or for a list of companies providing this service, visit the TRA website www.trainfo.com or contact the TRA Customer Care Center on 732-699-6700 or 866-NPA-NXXS (866-672-6997) or at tra@iconectiv.com.

Centralized Central Office (CO) Code Assignment

United States: The North American Numbering Plan Administration (NANPA) manages CO Code assignments in the US and US Territories (American Samoa, Guam, Puerto Rico, US Virgin Islands, and the Commonwealth of the Northern Mariana Islands (CNMI)).

Canada: The Canadian Numbering Administration (CNA) (see www.cnac.ca) manages CO Code assignments in Canada. This is in conjunction with the Canadian Radio-television and Telecommunications Commission (CRTC).

Atlantic/Caribbean: Several independent island countries in the Atlantic and Caribbean participate in the North American Numbering Plan (NANP). CO Code Administration in these areas is managed by various regulatory authorities and/or their agents.

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Thousands Block Pooling (TBP)

Within the US, CO Code Assignments have transitioned towards assignment of 1,000 lines (thousands blocks) at a time. Although there are permissible reasons why an NXX may not be pooled, the general assignment of NXXs, currently in the US is based on TBP.

Interconnection Agreements

For calls to originate and terminate within the Public Switched Telephone Network (PSTN), numerous companies must interface with each other. Within the network environment, they must physically "interconnect" with each other.

Interconnection is not automatic. Agreements must be established between ALL interconnecting companies. Companies entering the industry or a new service area need to establish appropriate interconnection agreements.

A CO Code or Thousands Block assignment does not preclude the need to establish interconnection agreements. The expectation of the processes described herein is that such agreements have been already established.

In addition to interconnection agreements supporting the routing and completion of calls, it is expected that the Code Holder has addressed any arrangements necessary to obtain and process message details required in billing of calls.

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Job Aid Overview

This Job Aid supports the TRA database; Business Integrated Routing and Rating System (BIRRDS) and associated output products (e.g. LERG™ Routing Guide) that emanated from requirements of the 1984 AT&T divestiture, whereby exchange of certain PSTN routing and rating data among industry participants is mandated. These databases and outputs will continue to evolve to reflect industry data exchange needs as technology, and the industry, undergo constant transition.

This Job Aid has not been *formally* subjected to industry consensus approval processes. The extent of detail and the data requirements definitions and changes do not always readily coincide with INC review schedules. Data definitions and requirements are the result of processes primarily managed by the ATIS committees and the Common Interest Group on Routing and Rating (CIGRR). These groups provide direction to TRA in correlating data requirements with data collection and distribution processes.

❖ **Note**: The TBCOCAG Part 2 and Part 2A Forms can be considered 'optional' in the sense that they serve as a resource for the data needed for BIRRDS. Regardless of use of these specific formats, the data requirements noted herein remain applicable.

Historically, a need arose to provide Local Exchange Carrier (LEC) interconnection information equitably to all Interexchange Carriers (ICs). The BIRRDS database and output were developed by the industry to meet this need, and have since evolved to reflect changes in the industry's data requirements, technology, etc. The audience for this data has also evolved to include local service providers (ILECs, CLECS, wireless, VoIP, etc.) and other industry segments.

Processes surrounding data collection and data input can vary by company. This job aid provides basic details of the data on the TBCOCAG Part 2/2A Forms. Additional resource contact information is provided in Appendix A.

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1.0 Business Integrated Routing and Rating Database System (BIRRDS)

Section 1 of this Job Aid supports TBCOCAG Part 2 and Part 2A Forms (currently Part 2 Forms 1, 2, 6, 7, 8, 9 and Part 2A, Form 1). Data corresponds to specific data needed to be exchanged among service providers via the Business Integrated Routing and Rating Database System (BIRRDS) and its output.

For further information, you may contact:

United States and its territories:

- North American Numbering Plan Administration (NANPA) at 925-363-8700 or at www.nationalnanpa.com for CO Code Assignments.
- Pooling Administrator (PA) at www.nationalpooling.com for Thousands Block Pooling Assignments.
- ATIS-INC guidelines are available at the www.atis.org.

Canada:

- Canadian Numbering Administrator (CNA) at 613-563-7242 or at www.cnac.ca, for a copy of the Canadian CO Code Assignment Guidelines, procedures, and contact information.

NANP (Non US/Canada):

- For information regarding CO Code Assignments in Atlantic and Caribbean island countries participating in the NANP, please contact the appropriate telecommunications regulatory authority for each country.

1.1 Overview

This section provides an overview of the data requirements relative to CO Code and Thousands Block assignments and support the appropriate Part 2/2A Request Forms.

1.1.1 Introduction

BIRRDS is a centralized database used to collect data that supports the routing of local exchange calls within the NANP area. Output products include but are not limited to the LERG™ Routing Guide (LERG) that serves as a standard for reporting routing information to interexchange carriers and the telecommunications industry in general, the One-Day LERG™ Changes process which provides an expedited means of identifying pertinent network changes, and the TPM™ Data Source product that serves as an accepted standard for common and consistent reporting of rating information.   Additional TRA product information is available at www.trainfo.com.

Data in BIRRDS not only reflects the "current" status of a CO Code, but also provides "planning" information through the identification of future activity in the network. New CO Code and

Thousands Block data is provided immediately in the next output product, regardless of how far in the future it is effective.

The database is maintained by TRA as a proprietary database system in support of the industry data exchange processes that it supports. TRA's responsibilities include BIRRDS' system maintenance, general logon administration, user support, data integrity, and data processing and output. Data elements and data values are added, removed, and modified through TRA working with industry groups that base decisions via consensus. However, ultimate responsibility for timely and accurate reporting of data rests with service providers.

1.1.2 Input Responsibilities

Data pertaining to a new CO Code or Thousands Block assignment, and ongoing maintenance of that data, can be directly input by (1) the company assigned the CO Code or Thousands Block or, (2) via a third party that that provides consulting and/or support services to an SP(s). The company performing data entry is referred to as an AOCN (Administrative Operating Company Number). Questions regarding input responsibilities for a given company's data should be directed to the TRA Customer Care Center.

1.1.3 BIRRDS Data Requirements

Figure 1 identifies the record categories in BIRRDS that are related to CO Code and/or Thousands Block assignment data. Following it is a table that can be used to determine the BIRRDS data records that may need to be created to reflect such assignments. **Upon assignment of a CO Code and/or Thousands Block, a BIRRDS NXD record must be created by the AOCN.** In addition, a Switching Entity (SRD) (and possibly other records) may need to be created or updated to support an assignment. Location Routing Numbers (LRNs) are associated with Local Number Portability (LNP) and are interrelated to both SRD and NXD records. Multiple Switch Homing Arrangements (SHAs) may apply if different NXXs are being reported using the same switch identifier, but where each NXX (or combinations of NXXs) home to different tandems. **Once NXX data is entered into the database, it must also be *maintained* by the Code Holder and Block Assignee to support future network routing changes (e.g. switching entity/POI replacements).**

Figure 1 provides an *overview* of the relationship of BIRRDS record categories relative to a CO Code and/or Thousands Block assignment.
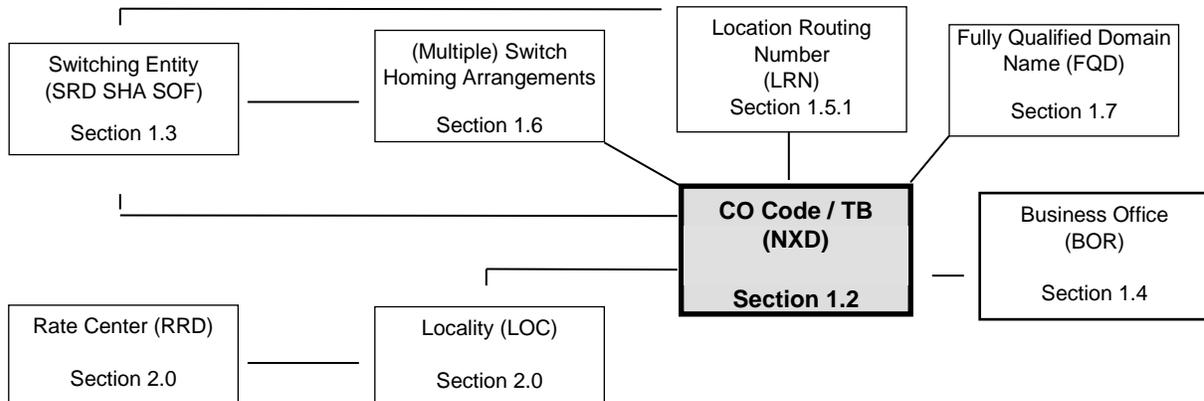

Figure 1 BIRRDS Record Categories

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Summary of BIRRDS Update Situations

Record Type	Form	Related BIRRDS Record	Create When ...
CO Code (Part 2) or Thousands Block (Part 2A)	1	NXD	Data for this record must be provided when a new CO Code or Thousands Block is assigned. Data for the switching entity/POI must also be provided unless already in BIRRDS.
Switching Entity	2	SRD SOF SHA (00)	Data must be provided if the CO Code or Thousands Block uses a switching entity/POI that does not already exist in BIRRDS.
Business Office	6	BOR	Data for this record must be supplied if a new Business Office code is needed.
Location Routing Number	7	LRN	Data must be provided for any switch that is "routed to" based on Local Number Portability concepts.
(Multiple) Switch Homing Arrangements	8	SHA (01 – 99)	Data must be provided if the switching entity/POI to be identified with a CO Code or Thousands Block uses the same CLLI™ Code as another NXX/Block, but where (1) the homing arrangement to the new NXX/Block is different and (2) that homing arrangement does not yet exist in BIRRDS.
Fully Qualified Domain Name (FQDN)	9	FQD	A Fully Qualified Domain Name does not already exist in BIRRDS and is needed for association with an NXD and/or LRN to provide IP routing information.
Other: Locality Rate Center	-	-	Locality, Rate Center, and rating information is maintained by TRA (see Section 2.0).

1.2 Central Office (CO) Code Data (NXD)

This section of the Job Aid supports TBCOCAG Part 2, Form 1 and Part 2A, Form 1.

Data for the NXD record must be provided when a CO Code or Thousands Block has been assigned.

❖ **Note:** The CO Code and Thousands Block data requirements include elements that merit special attention. These are the SWITCH (e.g. CLLI Code), the FQDN OCN and FQDN LABEL and LOCALITY. TRA must be contacted if there is a question regarding the LOCALITY. If the SWITCH value (Section 1.3) supporting the NXD record has not been supplied previously, then a Part 2, Form 2 must also be supplied for the switch

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information. If the FQDN OCN and LABEL values (Section X.X) supporting the NXD record have not been supplied previously, then a Part 2, Form 9 must also be supplied for the Fully Qualified Domain Name (FQDN) information.

The following describes the data elements required for the NXD record. **Numbers next to the data elements refer to line items on Part 2 (and Part 2A), Form 1**.

❖ **Note:** Certain CO Codes may not have a specific switching entity/POI, OCN, LOCALITY, etc., associated with them. These are considered "oddball" codes. See the "oddball" code subsection at the end of this section for further information.

1/2. NPA / NXX

Enter the NPA and CO Code values. The Central Office Code (COC) is the CO Code that has been assigned within the appropriate Numbering Plan Area (NPA) by the CO Code Administrator or, as a component of a Thousands Block Pooling Assignment, by the Pooling Administrator.

The NPA value must be an NPA assigned by the NANPA. The NXX value is the assigned CO Code.

3. BLOCK ID

♦ **If the entry pertains to the NPA NXX** itself (not Thousands Block) as assigned to the OCN (Code Holder) by the CO Code Administrator, then the letter "A" should be entered. TBCOCAG Part 2, Form 1 has this field pre-populated with an "A".

♦ **If the entry pertains to a Thousands Block** assignment as assigned to the OCN (Block Assignee) by the Pooling Administrator, then a single integer (0-9) representing the given block should be entered on TBCOCAG Part 2A, Form 1.

4. STATUS

The STATUS code clarifies the action that is to occur on the EFF DATE. One of the following three values must be used, as may be appropriate:

VALUE	PURPOSE (STATUS)
E	Enter an "E" if the EFF DATE is the date a new CO Code or Thousands Block will become active in the network. ❖ **Note:** An EFF DATE cannot be created for a new CO Code or Thousands Block if the EFF DATE is in conflict with that entered by the Administrator on the record it maintains in BIRRDS. See EFF DATE.
M	Enter an "M" if the EFF DATE is other than the activation or disconnect date. "M" is used to indicate the date that a change to data on an active CO Code or Thousands Block is to occur.

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VALUE	PURPOSE (STATUS)
D	Enter a "D" to indicate that a previously active CO Code or Thousands Block is "disconnecting" on the indicated EFF DATE. ❖ **Note:** In CO Code cases, a "D" will not be accepted unless the Code Administrator has also entered a "D" on the related record it maintains in BIRRDS.

5. EFF DATE

Enter the effective date that the CO Code or Thousands Block (or supporting data changes) is to become effective within the network. This would include: (1) the date the CO Code or Thousands Block is to become active or, (2) subsequent dates when pertinent supporting data will be modified or, (3) the date a CO Code or Thousands Block will be disconnected.

Effective dates are **always** used in conjunction with STATUS. The date should represent the date when *network activity becomes **effective***. This is **not** the date that a CO Code or Thousands Block is requested or assigned, nor the date the data is entered into the database. Effective dates for code activation or changes in supporting data should be consistent with any network factors that may apply (e.g. changes to switch activations, the rescheduling of a switch replacement, etc.).

❖ **Note:** The effective date of newly establishing CO Codes provided on this Part 2 Form must be the same as that provided on Part 1 as originally submitted, or as subsequently revised, per the TBCOCAG.

❖ **Note:** The TBCOCAG requires that data for newly assigned CO Codes be entered into BIRRDS with a lead-time of <u>at least</u> **45** days prior to the effective date (or any expedited date as outlined in the TBCOCAG). The database will automatically generate a rescheduled date if entry is made in a shorter-than-required timeframe.

❖ **Note:** The TBCOCAG requires that data for newly assigned Thousands Blocks be entered into BIRRDS with a lead time of at least **19** days prior to the effective date or any expedited date as outlined in the TBCOCPAG). The database will automatically generate a rescheduled date if entry is made is a shorter-than-required timeframe.

6. OCN

Enter the OCN. The four character OCN value is a means of identifying the company having ultimate responsibility for the CO Code (i.e. the CO Code Holder) or Thousands Block. The entered OCN should agree with the OCN provided on the NPA NXX assignment request (TBCOCAG Forms, Part 1) or Thousands Block assignment request (TBCOCAG Forms, Part 1A). OCN should not be confused with the AOCN (Administrative OCN) that is used to identify the company having the database authority to update a record in BIRRDS.

For purposes of the CO Code and Thousands Block assignments addressed in this document, OCNs correlate to Company Codes assigned by the National Exchange Carriers Association

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(NECA). Companies with no prior Company Code assignments may contact NECA at www.neca.org.

7. LOCALITY

Enter the LOCALITY (up to ten characters) identifying the geographical "locality" served by the CO Code or Thousands Block. This may equate to the "Exchange Area" name that the CO Code or Thousands Block is identified with in a local tariff, the RATE CENTER name identified in BIRRDS, the "called place" appearing on customer bills, etc. The RATE CENTER associated with the LOCALITY must be identified on the form. The RATE CENTER must be identical on records for a given CO Code and any of its subtending Thousands Blocks.

A LOCALITY and its associated RATE CENTER apply to the entire CO Code or Thousands Block. All line numbers must be rated to the identified RATE CENTER.

8. LOC INDX (INDEX)

INDEX (two characters) is part of the LOCALITY data record. It is sometimes used to clarify the LOCALITY. For example, the same LOCALITY name may exist in multiple RATE CENTERs in a state/province. An entry such as a county code, zone number, or other identifier may exist as an INDEX value to address such variations. INDEX is usually blank, however is required to be populated if the LOCALITY record in BIRRDS contains an INDEX value.

9. LOC STATE/PROV

A valid standard two character state, territory, province, or country code is required as may be applicable. It identifies the state/territory/province/country of the LOCALITY and must be the same as the state/ territory/province/country of the RATE CENTER. This will generally be the state/territory/province/country associated with the NPA of the assigned CO Code or Thousands Block. The STATE (or territory, province, country) codes used in BIRRDS correspond to those used by the iconectiv CLONES database. See Appendix C for specific codes.

10. PLACE NAME (PLNAME)

Enter a PLACE NAME (up to ten characters). This can be the same as the LOCALITY value. This field is often used by billing systems and other internal systems to identify a "place", therefore some variation from the LOCALITY may be desired.

The RATE CENTER associated with the PLACE NAME in BIRRDS must be the same as that of the LOCALITY.

A PLACE NAME and its associated RATE CENTER apply to the entire CO Code or Thousands Block.

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11. COCTYPE

Enter one of the values in the table below. COCTYPE is used in conjunction with the SSC value to identify the "function" that the CO Code or Thousands Block is performing. COCTYPEs do not necessarily reflect the "function" a given line number is performing for a ported line number. **Only one COCTYPE value is permitted on a given EFF DATE view of a NXD.** The following are permissible COCTYPE values (different COCTYPEs are used for "oddball" codes and are addressed at the end of this section):

VALUE	PURPOSE (COCTYPE)
ATC	Access Tandem Code (0/1XX). Used in routing of operator calls; not applicable to this document.
EOC	End Office Code. This is used to identify a CO Code or Thousands Block for which all line numbers, are used to provide Plain Old Telephone Service (POTS). This is often referred to as "wireline" or "landline" and generally is considered the historical standard "telephone" voice service provided to residential and business customers.
PLN	Planned Code (non-routable). Infrequently used by companies to address situations that do not conform to other values. PLN codes cannot be ported or pooled.
PMC	Public Mobile Carrier (Type 2 Interconnected). PMC identifies a CO Code or Thousands Block that has been assigned as fully dedicated Type 2 wireless interconnection. (Also see SP2).
RCC	Radio Common Carrier (Type 1 Interconnected). RCC identifies a CO Code or Thousands Block that has been assigned as fully dedicated Type 1 wireless interconnection. (Also see SP1).
SIC	Special 800 service code. This is used to indicate a non-dialable, but routable code. For example, a customer dials a certain number that is translated locally to a second number. The second number would then be routed to, and would appear with a COCTYPE of SIC. SIC codes cannot be ported or pooled.
SP1	Service Provider - Miscellaneous Service (Type 1 interconnected). SP1 identifies a CO Code or Thousands Block that has been assigned as fully dedicated Type 1 wireless interconnection for Personal Communications Services (PCS). (Also see RCC)

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VALUE	PURPOSE (COCTYPE)
SP2	Service Provider - Miscellaneous Service (Type 2 interconnected). SP2 identifies a CO Code or Thousands Block that has been assigned as fully dedicated Type 2 wireless interconnection for Personal Communications Services (PCS). (Also see PMC)
TST	Test code. TST identifies a CO Code that is needed for plant or other "testing" purposes. This only pertains to non-pooled NXXs. Test codes, specifically NXXs 958 and 959 are generic test codes that can be used by multiple carriers. They may also appear with a Rate Center value of XXXXXXXXXX and a SWITCH value of XXXXXXXXXXX and could be considered Oddball Codes. TST codes cannot be ported or pooled.
VOI	Voice over Internet Protocol (VoIP). VOI identifies a CO Code or Thousand Block that has been assigned for use as VoIP to a service provider identified with a NECA Company Code Category of IPES.

12. SSC

Special Service Code (SSC). SSC is used in conjunction with COCTYPE to identify the "function" that the CO Code or Thousands Block is performing. SSCs do not necessarily reflect the "function" a given line number is performing for a ported line number. **At least one of the following codes must be entered. Multiple codes (up to four different) may simultaneously be entered.**

VALUE	PURPOSE (SSC)
A	*INTRALATA* (for INTRALATA use only). Calls can only originate and terminate within the LATA to which the NXX or thousands block is assigned. An NXX-A record and all associated thousands blocks must show (or not show) an SSC of A.
B	*Paging Services*
C	*Cellular Services*
I	*Pseudo 800 Service Code* (Used for INWATS service). These numbers are the ring to number for an 800 number that is PIC'd to a long distance carrier and terminates within the LATA.

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VALUE	PURPOSE (SSC)
J	*Designates that this NXX and/or thousands block has an extended/expanded local Calling area.* Specifically, "J" designates that: • A non-pooled NXX has all 10,000 TNs dedicated to a unique extended/expanded 2-way local calling area. • A pooled NXX is dedicated to a unique extended/expanded 2-way local calling area and must have all of its subtending thousands blocks designated with "J" as well. A thousands block designated with "J" must subtend an NXD-A record which is also designated with "J". • Is applicable in specific states only (e.g. AR, MO, KS, NC, TX). • Is a state tariffed service. • The extended/expanded local calling area of an NXX showing a "J" is unique from the local calling area of an NXX in the same Exchange Area / Rate Center that does not show a "J".
M	*Local Mass Calling.* This is different than choke or high volume calling codes that are Oddball codes identified with a COCTYPE of HVL. Note that when an NXX is *dedicated* to a specific switch and Rate Center and is involved with "Mass Calling", it would be considered non-Oddball and represented as COCTYPE EOC / SSC M (when *some* lines serve for "Mass Calling") or COCTYPE EOC / SSC MO (when *all* assigned lines serve for "Mass Calling"). Cases where "MO" is used can only apply to NXX-A records that are not portable.
N	*Not Applicable* - No SSC is needed, nor is one applicable. Examples of types of services where an SSC of "N" is used may include Plain Old Telephone Service (POTS), 9YY Service, Test Code, and Non-Geographic 5XX-NXX.
O	*Other.* When "O" is used, there may be restrictions and/or special services that are otherwise not definable by an existing SSC value. These restrictions and/or special services may apply to some or to all lines within the NXX-A record and/or thousands block. Any need for further clarification should be addressed to the AOCN associated with the NXX-A record and/or thousands block to which the "O" has been associated. Where "O" is used, there must be an explanation of the service type entered into the NOTES field in BIRRDS for that NXX-A record or thousands block. NOTES only appear in the LERG when the "record" is an "Oddball code" (LERG6ODD).
R	*Two-way Conventional Mobile Radio.* This is a pre-cellular technology used when there needed to be two-way communications and an ability to patch to a

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VALUE	PURPOSE (SSC)
	phone. This is similar to the push-to-talk systems in a fleet arrangement. This was also referred to as Improved Mobile Telephone Service (IMTS).
S	*Miscellaneous Services.* For example, Personal Communications Services (PCS), Voice Mail, etc.
T	*Time.* This is used if an *entire* thousands block or *entire* NXX is dedicated to providing a "time of day" announcement or service. "T" can only be entered with a COCTYPE of INP.
V	*Internet Protocol Voice Enabled Services*
W	*Weather.* This is used if an *entire* thousands block or *entire* NXX is dedicated to providing a "weather" announcement or service. "W" can only be entered with a COCTYPE of INP.
X	*Service Provider requests Local Exchange Company IntraLATA Special Billing Option* X indicates that there may be line numbers or thousands blocks assigned to a Service Provider who has requested a LEC IntraLATA special billing option on a LATA-wide basis. IntraLATA toll calls originating from LEC wireline subscribers are billed to the Service Provider as specified by state tariffs. An entry of B, C, or R, or combinations of B, and/or C, and/or R, and/or S entries should always accompany an "X" entry in the SSC field.
Z	*Service Provider requests SELECTIVE Local Exchange Company IntraLATA Special Billing Option* Z indicates that there may be line numbers or thousands blocks assigned to a Service Provider who has requested a LEC IntraLATA special billing option on a SELECTIVE Exchange basis. IntraLATA toll calls originating from LEC wireline subscribers, in SELECTED Exchanges, are billed to the Service Provider as specified by state tariffs. An entry of B, C, or R, or combinations of B, and/or C, and/or R, and/or S entries should always accompany a "Z" entry in the SSC field.
8	*Puerto Rico and U.S. Virgin Islands* The SSC value of "8" applies to NXXs in Puerto Rico and the U.S. Virgin Islands. The original SSC "8" definition was used when the NANP areas in the Caribbean and Atlantic were all handled by NPA 809.

VALUE	PURPOSE (SSC)
	The digit "8" in the SSC field identifies those codes that are within Puerto Rico and the U.S. Virgin Islands and belong to either WATS Band 4 (for Florida and Rhode Island) or WATS Band 5 (for the remainder of the continental U.S.) and must be screened at the WATS originating screening office to pass calls from WATS Band 4 or 5. These codes must be reviewed each month in order to provide up-to-date originating WATS screening. Although the Atlantic/Caribbean are now associated with area specific NPAs, use of "8" has been retained in deference to billing and other systems that may still utilize the value in their processing of data.

13/14. TR DIG EO/AT

The following pertains to CO Code assignments:

Enter a value for the End Office (EO) and Access Tandem (AT) Terminating digits (TR DIG). TR DIG values indicate the number of terminating digits to be outpulsed to a Local Service Provider (LSP) switching entity/POI by an interconnecting company. EO indicates the number of terminating digits required if the interconnecting company routes terminating traffic over access trunk groups directly to the switching entity/POI in which the NPA NXX resides. AT indicates the number of terminating digits required if the terminating traffic is routed over access trunk groups to the identified access tandem for that switching entity/POI.

Both EO and AT entries are required. An "NA" for either means that the LSP does not provide for direct trunking to the switching entity/POI by another service provider.

EO

In most cases, the required number of digits will be 7 (NXX + line number). However, when non-conforming end offices (Feature Group B or C access) or cross-boundary offices are involved, the number of terminating digits required could range from 4 (line number only) to 10 (NPA + NXX + line number). Additionally, CO Codes having a TYPE of PMC may have an "NA", and those with a TYPE of CDA may have a 0 (zero). Switching entities/POIs that support CO Codes in areas that have NPA "overlays" may also require an EO value of 10.

AT

AT should contain either a 7 or a 10. Only seven digits (NXX + line number) are required when the access tandem serves CO Codes in only one NPA (i.e. the NPA of the CO Code). If the access tandem serves CO Codes in more than one NPA, then ten digits (NPA + NXX + line number) are required to resolve the ambiguity.

Special Cases

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If the CO Code has a TYPE of TST, then the EO and AT values are case specific and could range from 3 to 10.

If the CO Code has a TYPE of ATC (Access Tandem Code), the EO value will always be "NA", and the AT value can vary. Since ATCs are outside the preview of this document, further details are not provided herein.

15. NXXTYPE

Enter one of the following two-digit values. NXXTYPE is used to identify the "function" that the CO Code or Thousands Block is performing. NXXTYPEs do not necessarily reflect the "function" a given line number is performing for a ported line number. **Only one value is permitted on a given EFF DATE view of a CO Code.**

❖ **Note**: Although COCTYPE and SSC serve a similar purpose, there is not always a direct correlation between COCTYPE/SSC values and NXXTYPE values. In addition, these data elements originated from separate databases and are not used in the same output products. As a result, consideration of any changes must address the downstream impacts on the internal processes and support systems of many companies.

The following table provides the permissible values (if the value pertains to a CO Code that is "reserved" or otherwise not intended to be a direct part of the assignment guidelines, not applicable has been indicated):

VALUE	PURPOSE (NXXTYPE)	REFERENCE
00	Regular (Plain Old Telephone Service (POTS))	Note 1
01	Mobile	Note 2
02	Dedicated to Paging	Note 2
04	Dedicated to Cellular	Note 2
05	Testing	
09	9YY Service	Not applicable
11	Information Provider	
13	Directory Assistance	Not applicable
14	Special Calling Card	Not applicable
15	Official Exchange	

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VALUE	PURPOSE (NXXTYPE)	REFERENCE
16	Originating Only	
17	Billing Only	
18	Voice over Internet Protocol (VoIP)	
30	Broadband	
50	Shared among 3 or more services	Note 3
51	Shared between POTS and Mobile	Note 3
52	Shared between POTS and Paging	Note 3
53	Shared between POTS and VoIP	Note 3
54	Shared between POTS and Cellular	Note 3
55	Special Billing Option - Cellular	Note 4
56	Special Billing Option - Paging	Note 4
57	Special Billing Option - Mobile	Note 4
58	Special Billing Option - Shared	Note 4
60	Selective Special Billing Option - Cellular	Note 5
61	Selective Special Billing Option - Paging	Note 5
62	Selective Special Billing Option - Mobile	Note 5
63	Selective Special Billing Option - Shared	Note 5
64	Personal Communications Service (Non-geographic)	
65	Personal Communications Services (Geographic)	

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VALUE	PURPOSE (NXXTYPE)	REFERENCE
66	Shared between POTS and Personal Communications Services (Geographic)	Note 6
67	Special Billing Option - PCS and Personal Communications Services (Geographic)	Note 6
68	Service provider requests SELECTIVE Local Exchange Company IntraLATA Special Billing Option – PCS and Personal Communications Services (Geographic)	Note 6
77	Oddball Codes. 77 is used for NXX codes such as 411, 700, etc. which are either processed and/or used differently by service providers or are not specific to a given Rate Center, etc. Some NXXs may be considered Oddball codes, however they may have unique NXXTYPEs already assigned (e.g. NXXTYPE 11, 30, etc.). Oddball codes are essentially special use codes.	

Note 1   Enter an NXXTYPE of 00 when 100% of assignable lines are devoted to Plain Old Telephone Service (POTS).

Note 2   Enter an NXXTYPE of 01, 02, or 04, as appropriate, if the CO Code is 100% dedicated to one of the indicated services. The appropriate code applies to either Type 1 or Type 2 wireless connections.

Note 3   Enter an NXXTYPE of 50, 51, 52, 53, or 54, as appropriate, if the CO Code is shared between POTS and at least one of the indicated services.

Note 4   Enter an NXXTYPE of 55, 56, 57, or 58, as appropriate, if the CO Code represents a case where the service provider requests the local exchange company IntraLATA charges option (e.g. some companies call this a Land-to-Mobile option).

Note 5   Enter an NXXTYPE of 55, 56, 57, or 58, as appropriate, if the CO Code represents a case where the service provider requests the selective local exchange company IntraLATA charges option (e.g. some companies call this a selective Land-to-Mobile option).

Note 6   Enter an NXXTYPE of 66, 67, or 68 as appropriate, if the CO Code is shared between Personal Communications Services (Geographic) PCS and Miscellaneous PCS, based on the calling options.

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16. BILL RAO

Enter the Revenue Accounting Office (RAO) code that correlates to a specific location (office) which will ultimately receive calling message information. This is not necessarily the same as the term "send to RAO" which is used to identify where billing information is to be intermediately sent (although "send to" and "bill to" may often be the same).

RAO codes are assigned by the RAO Administrator in iconectiv based on the principles explained in the RAO Assignment Guidelines. RAO Assignment Guidelines are available from the RAO Administrator and can be downloaded from www.trainfo.com. For more information regarding RAO assignments, please contact the Administrator at RAOAdmin@iconectiv.com.

17. BO Code

Entry of a Business Office code is **optional**, however, providing or not providing such an entry should be done in a consistent manner by each given company. This is a three-digit code that is used to "tie" the record to additional Business Office information. The assignment of a BO code is managed by the Code Holder or Block Assignee company. The code is NPA and company specific. For example, code 010 may be associated with one company's business office data in one NPA, but used by an entirely different company in another NPA. The NPA and BO combination tie back to an existing Business Office record in BIRRDS.

Enter 000 if a Business Office (BO) code entry is not needed, otherwise, enter a valid BO code.

The Business Office record (see Section 1.4) can be created to provide address and telephone information for company-to-company billing resolution and message investigation.

18. CO TYPE

Enter one of the following values to identify the type of company to which the CO Code or Thousands Block has been assigned.

VALUE	PURPOSE (CO TYPE)
0	Bell Operating Company (BOC)
1	Independent Exchange Carrier (incumbent LEC)
2	Interexchange Carrier
3	Radio Common Carrier
4	Cincinnati Bell and Southern New England Telephone
5	Cellular Carrier
6	Internet Service Provider (ISP)

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VALUE	PURPOSE (CO TYPE)
7	Service Exchange Company (e.g. CLEC)
8	Personal Communications Services (PCS) Service Provider
9	Service Provider (Miscellaneous Services)

19. TIME ZONE

Enter one of the following codes to identify the time zone that covers the serving area of the CO Code or Thousands Block. A CO Code or Thousands Block should always cover one time zone, however, different CO Codes or Thousands Blocks under a given NPA may each have different time zones depending on the geographical boundaries of the NPA. The following are permissible TIME ZONE values:

VALUE	PURPOSE (TIME ZONE)	GMT offset
0	Not Applicable	Not Applicable
1	Guam and the Northern Marianas	+10
2	Hawaii and American Samoa	Hawaii (-10); American Samoa (-11)
3	Alaska/Yukon	-9
4	Pacific	-8
5	Mountain	-7
6	Central	-6
7	Eastern	-5
8	Atlantic	-4
9	Newfoundland	-3.5

❖ **Note**: Standard time, as hour offsets from Greenwich Mean Time (GMT), is parenthetically noted. If an area observes Daylight Savings Time (DST) the offset

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should be adjusted accordingly during DST observance (e.g. Pacific under DST is GMT –7).

20. IDDD

Enter a "Y" (yes) or "N" (no) to indicate whether International Direct Distance Dialed (IDDD) calls can be originated Form the assigned CO Code or Thousands Block.

21. DIND

Enter a "Y" (yes) or an "N" (no) for the Dialable Indicator (DIND). A "Y" (yes) indicates that a customer or operator can directly dial the CO Code. An "N" (no) indicates that a customer or operator cannot directly dial the CO Code.

Any NXX that has Thousands Blocks assigned by the Pool Administrator should have DIND = Y as should all subtending Thousands Blocks.

22. DAYLIGHT SAVINGS

Enter a "Y" (yes) or "N" (no) to indicate if the area served by the CO Code observes (yes) or does not observe (no), daylight savings time. All Thousands Blocks assigned under a given NXX should have the same DAYLIGHT SAVINGS indicator as the CO Code.

23. PORTABLE

Enter a "Y" (yes) or an "N" (no) for PORTABLE. A "Y" indicates at least one line number in the NPA NXX may be ported either due to Thousands Block Pooling and/or Service Provider Local Number Portability. An "N" indicates no lines may be portable. Porting involves mapping a given line number to a Location Routing Number (LRN) via the Number Portability Administration Center (NPAC) for routing the call.

24. TEST LINE INFORMATION

TEST LINE

If a specific test line exists for service providers to confirm connection to the CO Code or Thousands Block SWITCH, enter the 4 digits of such a number. The NPA NXX and the four digit test line would thus comprise the test line telephone number to be used.

❖ **Note:** Newly assigned CO Codes require a TEST LINE to be effective for at least 175 days after the establish date of the NPA NXX (Part 2, Form 1). This does not apply to Thousands Block Pooling assignments (Part 2A, Form 1).

RESPONSE

When a TEST LINE is provided, either an A (announcement) or M (Milliwatt tone) must be provided. This value indicates the response expected when a call is completed to the TEST LINE.

25. SWITCH

Enter the eleven-character descriptor used to identify the switching entity/POI to which an entire CO Code of Thousands Block has been assigned. The eleven characters should be a valid CLLI™ Code representing the switching entity/POI. To be accepted by the system, the entered

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value must be established as a switching entity/POI on the SRD record (see Section 1.3 for further information on switching entities/POIs and CLLIs).

❖ **Note:** When preparing Part 2, Form 1 to support the **initial** establishment of a CO Code or Thousands Block, the switching entity/POI(s) entered should coincide with that provided on the Part 3 (Administrator's Response / Confirmation form).

A CLLI code is comprised of descriptors that are used to identify the town, state, building (network site), and equipment/functionality (entity). Generally, the company providing the switching entity/POI engineering functions in support of the assigned CO Code or Thousands Block (if a licensee of Common Language®), should supply the necessary CLLI Code. Companies that are licensees of Common Language can also refer questions to their company's Common Language Coordinator. For additional Common Language/CLLI Code information, please contact the iconectiv Common Language Customer Service Center at clcsc@iconectiv.com or on 732-699-5577 or 800-521-2673.

Under no circumstances should an eleven-character code be arbitrarily created. The Common Language organization in iconectiv maintains the CLONES database that is a repository for all properly assigned CLLI Codes. The CLLI that is used on this Form must be a valid CLLI (i.e. exist as active in CLONES).

26. SHA IND

To address multiple homing arrangements for the same switch, the SWITCH and Switch Homing Arrangement (SHA) IND values must be considered together. Multiple homing arrangements permit different tandem(s) to be used in one homing arrangement vs. another while the CLLI Code for the switch remains the same. Homing arrangements are then applied on an NPA NXX BLOCK basis, one homing arrangement per NPA NXX BLOCK record.

An initial homing arrangement for the SWITCH is provided for in TBCOCAG Part 2, Form 2. If that is the desired homing arrangement for the particular CO Code or Thousands Block being addressed, a SHA IND value of 00 should be used.

Alternative homing arrangements should be addressed by using TBCOCAG Part 2, Form 8. Should another homing arrangement apply to the particular CO Code or Thousands Block being addressed, a SHA IND value of 01 to 99 should be used. The combination of the SWITCH value and the SHA IND value define a unique homing arrangement for the CO Code or Thousands Block.

More than one CO Code or Thousands Block may be associated with a given SWITCH / SHA IND combination. This implies that the CO Codes are "homed" identically.

27. IP CAPABLE (Y/N)

Enter **Y** (Yes) if the Code Holder has chosen to identify that any non-ported lines (default routed) within the NPA NXX can be routed via IP. An "N" indicates it has not. This does not preclude the call from being terminated via a TDM (Time Division Multiplex) interconnection.

28. FQDN OCN

Enter an OCN that represents the service provider to which the FQDN belongs.

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29. FQDN LABEL

Enter (up to 20 characters) to identify a specific 255 character FQDN in conjunction with the FQDN OCN.

Oddball Codes

To date, the following have been identified as "types" of NXX use that would designate an NXX as an "oddball" code. The appropriate three-character code from the list below is to be populated in the COCTYPE field when applicable.

"Oddball" codes may not have a specific switch, locality, or other data element that is required to be identified for "standard" codes. However, EFF DATE, STATUS, and an SSC value apply. An appropriate valid value should be provided for other fields. Switch and locality information should be identified using a string of X's, when these elements do not apply.

COCTYPE	BASIC MEANING/USE – ODDBALL CODES
AIN	**Advanced Intelligent Network** - Usually a routing code (NXX) assigned to a service provider offering a wide range of circuit switched services and utilizing elements of Advanced Intelligent Network (AIN) platforms to determine proper termination of a call. AIN codes may terminate to different locations dependent upon where the call originates, and requires a database application and/or query for processing. AIN codes cannot be ported or pooled.
BLG	**Billing Only** - A non-ratable NXX used for billing purposes only. These codes are used to generate bills, often for isolated and obscure call situations, but are not dialable or switched through the PSTN. BLG codes cannot be ported or pooled
BRD	**Broadband** - An NXX assigned for multiple Broadband service offerings. Currently, these codes are not ratable in the PSTN; however, this is subject to change. Subscriber bills for usage are generated for Broadband telephone numbers. BRD codes cannot be ported or pooled.
CDA	**Centralized Directory Assistance**. This COCTYPE value is used as secondary means of flagging NXX "555" (i.e., DA line numbers only, line number 1212). NXX 555 line numbers, beyond x1212 for directory assistance are assigned by NANPA and are not applicable to this document. NXX 555 line number assignment procedures (other than line number 1212) are addressed in INC document INC94-0429-002. CDA codes cannot be ported or pooled.
CTV	**Cable Television** - An NXX assigned for subscriber access to a cable television company. The telephone numbers are usually assigned on a 7-digit basis, are ratable on a limited basis, and may be used to determine subscriber charges for selective viewing or special events. CTV codes cannot be ported or pooled.

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COCTYPE	BASIC MEANING/USE – ODDBALL CODES
ENP	**Emergency Preparedness** - A non-N11 NXX used for emergencies and disaster recovery (e.g. earthquakes, floods, etc.) ENP codes cannot be ported or pooled.
FGB	**Feature Group B Access** - NXX 950. Used for truck side termination arrangements that provide state FGB originating and terminating exchange access. FGB codes cannot be ported or pooled.
HVL	**High Volume** - indicates an NXX or block from which the assigned company provides line numbers to address cases involving a high volume of calls over a short period of time (e.g. media promotional call-in requests, certain emergency and relief situations, etc.). The NXX or block involved is not associated with a given Rate Center or switch. Assigned HVL numbers may also often be referred to as "Mass Calling" numbers. Note that when an NXX is *dedicated* to a specific switch and Rate Center and is involved with "Mass Calling", it would be considered non-Oddball and represented as COCTYPE EOC / SSC M (when *some* lines serve for "Mass Calling") or as COCTYPE EOC / SSC MO (when *all* assigned lines serve for "Mass Calling"). HVL codes cannot be ported or pooled.
INP	**Information Provider** - An NXX or block used uniquely for providing various "information services." These include NXX 976 and "976 Like" codes. "976" is reported assigned in an NPA when there is a state tariff (or other regulatory body decision) defining its use. INP records with an SSC of T or W indicate that the entire NXX or block is dedicated to providers provisioning Time or Weather respectively and inclusively.
N11	**N11 Code** - NXXs 211 through 911. N11 usage in the United States is defined by the FCC, which has formally addressed 211, 311, 511, 711, 811, and 911. Similarly, in Canada N11 code use is defined by the CRTC. 211 – Community Support and Referral Services 311 – Non-Emergency Government Services 411 – Local Directory Assistance 511 – Government Provided Traffic/Travel/Road Condition Report 611 – Repair Service 711 – Telecom Relay Operator for Hearing/Speech Impaired 811 – U.S. = One Call Services for Pipeline/Utility Excavations Canada = Non-urgent Health Care Telephone Triage Service 911 – Emergencies (Police, Fire, Ambulance, etc.)

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COCTYPE	BASIC MEANING/USE – ODDBALL CODES
ONA	**Open Network Architecture** (ONA) - An NXX assigned exclusively for ONA services. The NXX may be dialable on a company-wide, region-wide, or other limited calling area. ONA codes cannot be ported or pooled.
RTG	**Routing Only** - An NXX used by a service provider for administrative or official calling purposes. Assigned telephone numbers consist of the pseudo NXX and a four-digit line number. Routing codes are dialable on a 7-digit basis only and are not associated, dialed, translated, nor terminated with a Home or Foreign NPA. Such codes may terminate to multiple locations dependent upon where the call originates, and usually require 7-digit routing and code conversion in the translations process. Routing codes are not rated. RTG codes cannot be ported or pooled.
UFA	**Unavailable for Assignment -** Certain NXXs may be deemed unavailable for assignment for various reasons. For example, NXXs may be protected in a specific NPA (withheld from assignment) due to certain characteristics and interrelationships between the NPA and NXXs involved, dialing plans, etc. - which, if assigned would create routing and rating conflicts. NXXs may also be considered unavailable for assignment for various other reasons.
700	**700 IntraLATA Presubscription -** dialing (home NPA)-700-xxxx is used for subscribers' access into their presubscribed IntraLATA provider's network in the US. x4141 is reserved to provide an indication to subscribers as to what network they are presubscribed. NXX 700 can only be assigned as a standard Central Office (CO) Code if the assigned company agrees to reserve x4141 for the indicated purpose. This noted use of NXX 700 applies only the U.S. and its territories. 700 IntraLATA Presubscription codes cannot be ported or pooled.

1.3 Switching Entity (SRD SHA SOF)

❖ **Note:** The following Form is associated with the TBCOCAG. However, if required to support a Thousands Block assignment, it would apply in the same manner to a Thousands Block as it does to a CO Code.

This section of the Job Aid supports TBCOCAG Part 2, Form 2.

Switching entities and POIs (points of interconnection) are referred to in BIRRDS as SWITCH records. Data is sectionalized into three components: SRD, SHA, and SOF. These records provide details about a switching entity/POI, or other node that comprises various aspects of call set-up and routing. **Data for this record must be provided if the switching entity/POI is to be populated for the CO Code record (Part 2, Form 1)) and is not already in BIRRDS.** In some cases, data for more than one switching entity/POI record may be needed (e.g. if the CO Code is associated with an entirely new "homing" arrangement - see Section 1.3.2).

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❖ **Note:** *Switching entity/POI information provided via three separate components. Sections 1.3.1 through 1.3.3 describe these: SRD, SHA, SOF respectively. For* **Location Routing Numbers (LRNs)** *see Section 1.5.* ***If more than one homing arrangement is needed for this CLLI Code,*** *see Section 1.6.*

1.3.1 SRD

To *initially* create a switching entity/POI record, data for the SRD/SOF and SHA (considered SHA 00), must **all** be provided. Subsequent data updates can apply to as few as one of these components.

The following describes the data elements required for the BIRRDS SRD (switching entity/POI) record. **Numbers next to the data elements refer to line items on Part 2, Form 2.** When applicable, descriptions include permissible values and provide sources that may be useful for obtaining further information.

1. SWITCH

The SRD record "key" is an eleven-character value (CLLI Code). These eleven characters may be referenced in this document, in BIRRDS, and in output as a SW IDENT, switch identifier, or as SWITCH. This document and the industry may also refer to these eleven characters as a "Point Of Interface (POI)".

The value to be entered into this field should be a valid CLLI Code.

Under no circumstances should an eleven-character code be arbitrarily created. The Common Language organization in iconectiv maintains the CLONES database that is a repository for all properly assigned CLLI Codes. The CLLI that is used on this Form must be a valid CLLI (i.e. exist as active in CLONES).

This Form is needed when a "new" SWITCH has been established to replace existing and previously defined network elements (e.g. an end office switch replacement/upgrade, a new tandem office, etc.).

❖ **Note:** In certain situations (e.g. where a company is establishing presence for the first time), multiple copies of Part 2, Form 2 may be needed. Specifically, if supporting switches to be entered on the SHA (Section 1.3.2) and/or SH2 (Section 1.6) has not been previously defined by their own Part 2, Form 2, a separate Part 2, Form 2 must be created for each case. For example, if this Form is being established for a POI, it may be necessary to also submit a separate Part 2, Form 2 for the ACTUAL SWITCH appearing on the SHA of the POI's set of forms.

<u>Smart Remotes</u>

For purposes of this only, a smart remote is defined as a remote switch that is assigned a unique Point Code for routing purposes and has installed software that enables the functionality to provide a switched path or direct trunking to the smart remote.

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In cases where the smart remote has some dependency on the host for administrative functions only, AND routing to it is NOT permitted via the host, a DS(x) CLLI entity code is required for the smart remote.

If routing via the host is permitted, the Host/Remote relationship would be retained on the Switch Homing Arrangement record.

2. STATUS

The STATUS code clarifies the action that is to occur on the EFF DATE. One of the following three values must be used, as may be appropriate:

VALUE	PURPOSE (STATUS)
E	Enter an "E" if the EFF DATE is the date a new switching entity/POI will become active in the network.
M	Enter an "M" if the EFF DATE is other than the activation or disconnect date. This is used to indicate the date that a change to data supporting a then active switching entity/POI is to occur (i.e. on a date past the switching entity/POI's activation). For example, a future change to tandem homing, office functionalities, etc.
D	Enter a "D" to indicate that a then previously active switching entity/POI is "disconnecting" on the indicated EFF DATE. This would primarily occur in conjunction with office replacements.

3. EFF DATE

Enter the effective date that the switching entity/POI (or supporting data changes) is/are to become effective within the network. This would include: (1) the date a switching entity/POI is to become active (i.e. can first be used in routing), (2) subsequent dates when pertinent supporting data will be modified (e.g. a tandem "rehome"), or, (3) the date a switching entity/POI will be disconnected (most often due to office replacement).

Effective dates are **always** used in conjunction with STATUS codes. A date should represent the date when *network activity becomes* **effective** *in the network*. This is **not** the date that a SWITCH (e.g. CLLI) code is requested or assigned, or the date the data is entered into BIRRDS. Effective dates for switching entity/POI activation or changes in supporting data also should be consistent with any network factors that may apply (e.g. a tandem "rehome").

Specific date timeframes, depending on the activity involved, are addressed in an ATIS document entitled the Recommended Notification Procedures to Industry for Changes in Access Network Architecture (ATIS-0300046). Also, see Section 6.2.2 of the Central Office Code (NXX) Assignment Guidelines for more information on effective date timeframes.

4. EQPT TYPE

Enter the equipment code for the switching entity/POI equipment. This is a code used to identify the specific switching entity/POI equipment type that is being used, usually based on manufacturer and model.

5. OCN

The four character OCN value is a means of identifying the company having ultimate responsibility (e.g. ownership) of the switching entity/POI. OCN should not be confused with the BIRRDS AOCN (Administrative OCN) that is used to identify the company having the database authority to update a record.

6. LATA

Enter the three-digit code representing the geographical Local Access and Transport Area (LATA) *in which the switching entity/POI is located.* Note that this is not necessarily the LATA in which the associated Rate Center of the CO Code is geographically located.

The state of Florida requires use of an *additional* two-digit "sub-zone" code appended to the end of the three digit LATA code.

In some cases, a physical switching entity/POI may serve CO Codes in more than one LATA. Some CO Codes may cover areas in another LATA (i.e. a LATA different from the LATA in which the switching entity/POI physically resides). In these cases, unique SWITCH (e.g. CLLI) codes (one for each LATA) may be established for the single *physical* switching entity. Such cases may employ the use of POIs. Several POIs may often refer to the same switching entity existing in the background.

In some rare and embedded cases, if a switch is physically in one LATA but only serves NXXs in another LATA and no Point of Interface (POI) had been established, the LATA associated with the switch may not be that of the physical LATA location, but rather that of the NXX serving area.

7/8. VC/HC

Enter the Vertical and Horizontal coordinates (VC, HC respectively) that signify the access point as described below. VC and HC are also called V&H coordinates. V&H coordinates are the result of a translation of longitude and latitude into a flat rectangular grid. **The use and values of switching entity/POI V&H coordinates should not be confused with those used for Rate Centers (see Section 2.0).** Switching entity/POI V&H coordinates are specifically tied to access and transport charges. Rate Center V&H coordinates *do not have to be identical* to those of a switch - switch V&H coordinates *do not have to be identical* to those of a Rate Center.

In the case of switching entity/POI records, VC and HC values should correspond to the translated longitude and latitude position of the location of the physical switching entity/POI, however, some exceptions may apply.

9. IDDD

Enter a "Y" (yes) or "N" (no) to indicate if the switching entity/POI is capable of providing International Direct Distance Dialing (IDDD). Signaling is dependent upon the end office

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capability. Non-equal access offices will utilize two-stage outpulsing. Equal access offices will utilize Feature Group D signaling.

10. STREET, CITY, ST, ZIP

Enter the street address, city, state (or province, territory, country) code and zip code used to identify the actual location of the switching entity/POI.

This location data *should* coincide with the location data, as exists in the CLONES database.

11. INTERLATA USE

Enter a "Y" (yes) or "N" (no) to indicate if the switching entity/POI is permitted to be "homed to" by another switching entity/POI that is located in another LATA *or* permitted to be used on an NXX if the NXX's Rate Center is in a different LATA than the switching entity/POI.

12. POINT CODE

Reporting SS7 (Signaling System 7) point code information through this Form is optional, however may be beneficial for future reference. Enter the nine-digit SS7 "point code" designated for the switching entity/POI used within the SS7 environment if company policy permits. Although optional, reporting (or not reporting) the data should be done *consistently* by a given company.

13. CLASS 4/5 OFFICE

If the switching entity/POI is providing both toll (Class 4) and local (Class 5) functions, separate SWITCH (e.g. CLLI) codes are usually established for each function. This field should be populated with the related SWITCH code to the one for which the SRD information is being built. Entry is optional, however, the data should be provided when known. Since two SWITCH records are involved, two versions of this Form are needed, one for each function - assuming either or both have not been previously provided.

14. INTERCOMPANY EOC USE

This is a Y/N indicator that is used to identify if the given SWITCH can be used by other companies for purposes of establishing an NXX that functions as an EOC (see COCTYPEs, Section 1.2). A "Y" indicates it can be used; an "N", that it cannot be used.

1.3.2 SHA

The following describes the data elements required for the BIRRDS (Switch Homing Arrangement) SHA component of the switching entity record. If more than a single homing arrangement for this switching entity/POI is required, please see the *Note* below. To *initially* create a switching entity/POI record, data for the SRD, SHA (considered SHA 00), and SOF must **all** be provided. Subsequent data updates can apply to as few as one of these components.

The SHA is used to identify various "homing" arrangements associated with the switching entity/POI. Essentially, these are used to indicate the "linking" of various offices with each other as may exist in the routing, signaling, and/or processing of a call through the local network. Each

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field is eleven characters to support the identification of these other offices by their established SWITCH (e.g. CLLI) codes. Not all fields need contain data. The decision of what should be populated is dependent on factors such as the types of access service available and the type of office involved. Similarly, some decisions, such as identifying Signaling Transfer Point (STP) data prior to Interexchange Company (IC) access availability, can vary by company. SHA data generally should be available from the company or organization providing the switching entity/POI engineering functions in support of the assigned CO Code. **Interconnection with switches that are part of another company's network should not be indicated without the other company's prior awareness and consent, established via interconnection agreements.**

❖ **Note:** This Form should be used to identify the homing arrangements associated with a given switching entity/POI. <u>However</u>, if a given switch homes to different tandems <u>AND</u> the desire is to utilize the <u>SAME</u> eleven-character switch identifier, then you <u>must</u> use a SHA Indicator on **Part 2, Form 1**. <u>Also,</u> the Switch Identifier (with associated SHA Indicator) must be established on (or be pre-established) via use of **Part 2, Form 8**.

15. Homing Arrangements

Switching entity/POI entities that are provided in this homing section are validated against the types of functionalities they provide. For example, a switching entity/POI cannot be used as a Feature Group D tandem entity, unless it was previously defined as such in the database.

Specific homing arrangements are needed to ensure that a means exists for access to the switching entity/POI and associated CO Codes. Generally, data in this portion of a switching entity/POI record should be available from the organization or company responsible for the switching entity/POI from which the CO Code operates.

ORIG / TERM (FG D TDM, FG C TDM, FG B TDM, OS TDM, INT):

Separate fields are permitted for describing the "homing" of offices when traffic "originates" (e.g. calling) and when it "terminates" (e.g. called). In most cases, originating and terminating traffic will follow the same homing arrangement and the same office will be used for both the originating and terminating fields. However, should there be a need to signify a difference, the originating and terminating values for a given type of functionality can be different. The following definitions are in the order the elements are requested on the Part 2 form:

ORIG/TERM TYPES	DEFINITION
FG B TDM	The tandem switch that serves as the concentrated distribution point for FG B traffic between ICs and end office switches.
FG C TDM	A tandem office on which end office switches are homed for originating and/or terminating FG C exchange access service. FG C provides traditional signaling and is not equipped to provide FG D equal access.

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ORIG/TERM TYPES	DEFINITION
FG D TDM	A tandem switch that serves as the concentrated distribution point within the LATA or Sector within the LATA as determined by the LEC for FG D traffic between switching entities and the Interexchange Carriers. Allows a caller to access a presubscribed IC by dialing 1+10-digit telephone number, and any other IC by dialing the corresponding 101XXXX access code plus the telephone number. Provides trunk side equal access with "1+" / "101XXXX" dialing.
OS TDM	An Operator Services (OS) tandem switch serves as the concentrated distribution point for providing a host of services that may include toll and intercept. The OS Tandem is an integral part of the network as it performs Alternate Billing Services, Automated Coin Telephone Service, Automatic Message Accounting (AMA) teleprocessing, and Automatic Call Distribution for operator handling of calls.
FG B, C, D INT	Identifies an office that performs an "intermediate" office/tandem function (based on FG B, C, or D) in certain network architecture arrangements. Identifies a switching entity that performs an "intermediate" office/tandem function in certain network architecture arrangements. An "intermediate office" is a switching entity, other than the originating or terminating end office or access tandem, used to assist in call completion.
LOCAL TDM	A Local Exchange Carrier (LEC) switching system, specifically identified as a Local tandem in the LERG, that provides a traffic concentration and distribution function for local traffic originating and/or terminating within a local calling area as defined in the state tariff(s) on file with the appropriate regulatory body. A Local tandem provides trunk-to-trunk connections to more than one end office within a local calling area. Although interconnection at more than one Local tandem may be required to provide access to all end offices within a local calling area, only the "homing" or "subtending" interconnection is reflected in the LERG. Also, there may be end offices that do not subtend nor interconnect with a Local tandem. If the Local tandem field is not specified, then no tandem exists that serves the Local tandem function for that switch. A host/remote scenario does not constitute a Local tandem homing arrangement. Nor should an office be considered a Local tandem if local traffic is

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ORIG/TERM TYPES	DEFINITION
	routed to that office solely for emergency or special routing arrangements, e.g., Type 2A Interconnected wireless.
INTRA TDM	An IntraLATA tandem switch connects one trunk to another and serves as a trunk concentration and distribution function to minimize direct end office interconnection. IntraLATA tandem traffic can be either intrastate IntraLATA or interstate IntraLATA as defined in the tariffs on file with the appropriate regulatory body. An IntraLATA tandem completes billable toll messages that originate and terminate within the same LATA. A switch that completes IntraLATA toll traffic between subtending end offices. If the IntraLATA tandem field is not specified, then no tandem exists that serves the IntraLATA tandem function for that switch.
CS DATA TDM	Circuit Switch Data Tandem. This defines a tandem office which has the functionality (e.g., BCR5, BCR6, and PRI64) to process switched data calls.

The following fields do NOT require originating/terminating consideration:

NON ORIG/TERM TYPES	DEFINITION
HOST	Offices that are classified as "remote" end offices (as indicated by having an "X" indicated next to REMOTE on the SOF portion of the record) must home to a host office. A host office provides certain common processor functions for a remote entity and for the traffic that originates and/or terminates in the remote. ❖ **Note:** When providing information for REMOTE switch, Feature Group tandems, and any other interconnections that may apply to the HOST should also be reported, as may apply, with the REMOTE switch information.
STP 1, STP 2	Based on the following, enter the SWITCH (e.g. CLLI) codes of the paired Signaling Transfer Points (STPs) that are used to handle call set-up via Signaling System 7 (SS7). STPs occur in pairs; if one of the STPs is supplied, the other must be also. By convention, STP 1 and STP 2 should be provided in alphabetical order.

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NON ORIG/TERM TYPES	DEFINITION
	Required These fields must show the "pair" of STPs that link to the given SWITCH whenever the switching entity/POI entity is shown to be equipped for SS7 interexchange company interconnection (also see CCS AC OFC in Section 1.3.3).
	Optional If the office is capable of handling SS7 signaling but has not been shown to be equipped for TR 394, population of these fields is optional (e.g. IntraLATA services may apply).
	Blank The fields should be left blank if the office is not capable of handling SS7 signaling.
800 SSP	Originating calls using an 800 (or other toll-free) NPA NXX must be "translated" to a valid POTS number for routing. If the switching entity/POI can perform a database lookup directly, an entry for this field should not be made (also see 800 SSP, Section 1.3.3). If the switching entity/POI is not capable of directly performing this lookup, the traffic must be sent to another office. The office to which such traffic is sent in this case must be entered into this field. This does not apply to terminating traffic since the dialed number will no longer be an 800 (or other toll-free) number after translation.
ISDN FS OFC	In cases where subscribers serviced by this switching entity/POI can obtain ISDN services, but the service is actually provided from another switch, then provide the eleven-character identifier of that other switch. The other switch is then viewed as the ISDN Foreign Serving (FS).
ACTUAL SW ID	Enter the ACTUAL SW (switch) ID (Identifier) (eleven characters) when the switching entity being addressed by the Part 2 form, is not an actual physical switch (i.e. a POI). - The ACTUAL SWITCH ID is always required if the SWITCH Identifier is a Message Trunk Interface POI. - The ACTUAL SWITCH ID is always blank if the SWITCH Identifier is not a Message Trunk Interface POI. - The ACTUAL SWITCH ID serves as the Point Code signaling location for cases where the SWITCH Identifier is a POI. However,

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NON ORIG/TERM TYPES	DEFINITION
	o In cases where the <u>ACTUAL SWITCH ID is a Trunk Gateway</u> or Packet End Office, the Point Code signaling location is at the Call Agent that is noted in the Call Agent field. • The ACTUAL SWITCH ID serves as the Point Code signaling location for cases where the SWITCH Identifier does not perform this function. However, o If the <u>SWITCH Identifier is a Trunk Gateway</u>, the ACTUAL SWITCH ID is not applicable and the Point Code signaling location is at the Call Agent that is noted in the Call Agent field. • Use of an ACTUAL SWITCH ID is not applicable in host/remote situations. The Point Code signaling location is at the Host that is noted in the Host field. • The ACTUAL SWITCH ID may or may not be in the same LATA (or state/province) as some, or all, of its related SWITCH Identifiers. • If a POI (identified by its entity code or EQPT TYPE) is used for numbering assignments (i.e. on an NXD), then its ACTUAL SWITCH field must be populated with a switch that is permitted to have numbering assignments.
CALL AGENT	Enter the CALL AGENT (eleven characters) when the switching entity being addressed by the Part 2 form, is a Call Agent (i.e. enter the same switch as on TBCOCAG Part 2, Form 2, Field 1), a Trunk Gateway, or an Access Gateway. A call agent switch provides program and call control to manage distributed high performance network gateway equipment.
TRUNK GATEWAY	Enter the TRUNK GATEWAY (eleven characters) when the switching entity being addressed by the Part 2 form, is an Access Gateway. An access gateway provides the line side interface between the Public Switched Telephone Network (PSTN) and the Voice over Packet (VoP) core network. The Trunk Gateway provides an interface between the PSTN digital trunk facility and the VoP core network.

1.3.3 SOF

The following describes the data elements required for the BIRRDS (Switch Office Functionalities) SOF component of the switching entity record. To *initially* create a switching entity/POI record,

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data for the SRD, SHA (considered SHA 00), and SOF must **all** be provided. Subsequent data updates can apply to as few as one of these components.

Switching Office Functionality (SOF) data generally should be available from the company or organization providing the switching entity/POI engineering functions in support of the assigned CO Code should be able to supply the necessary information. This is essentially a checklist that should indicate the functions that the particular switching entity/POI (as defined by the SWITCH code) performs. A switching entity/POI's "functionality" serves to identify the functions it has been engineered and/or programmed to perform. This should not be confused with a "capability", defined as the *potential* uses of a switching entity/POI. The functionalities listed on the SOF are subject to change as industry needs may warrant.

Note that the identified functionalities for a SWITCH need not just be those in place when the record is established. A switching entity/POI's functionalities may change while it is an active record. In such cases, the SOF should be updated to show an "M" (modify) STATUS code on the effective date of such a change.

16. SWITCHING OFFICE FUNCTIONALITIES:

"Functionality" serves to identify the functions that the switching entity/POI has been engineered and/or programmed to perform. This should not be confused with a switch's "capability", which is defined as the potential uses of a switching entity/POI. **If a functionality applies to a given SWITCH, an "X" should be entered. At least one functionality must apply; more than one is permitted.** Functionalities that do not apply should be left blank.

The following provides a brief description of currently identified functionalities (listed alphabetically):

VALUE	PURPOSE (SWITCHING OFFICE FUNCTIONALITIES)
ACSS GATEWAY	This value will be automatically generated if the SWITCH record corresponds to the accepted standards of identifying an ACCESS GATEWAY.
BCR5	Enter an "X" if the office provides Integrated Service Digital Network (ISDN) Basic Rate Interface (BRI) access capability that allows a customer premise device to communicate directly with the network and/or another ISDN equipped location utilizing an out-of-band signaling protocol and has a data rate of 56Kbps. BRI is two bearer channels that can be used for voice and data and one data channel that can be used for signaling (2B+D).
BCR6	Enter an "X" if the office provides Integrated Service Digital Network (ISDN) Basic Rate Interface (BRI) access capability that allows a customer premise device to communicate directly with the network and/or another ISDN equipped location utilizing an out-of-band signaling protocol and has a data rate of 56Kbps or 64Kbps clear. BRI is two bearer channels that can be used

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VALUE	PURPOSE (SWITCHING OFFICE FUNCTIONALITIES)
	for voice and data and one data channel that can be used for signaling (2B+D). If BCR6 is provided, then BCR5 is also provided.
CALL AGENT	This value will be automatically generated if the SWITCH record corresponds to the accepted standards of identifying a CALL AGENT.
CCS AC OFC	Enter an "X" if the office is a Common Channel Signaling (CCS) Access Office (i.e. a switching entity/POI whose functionality is that of a node in the CCS network with interexchange company access capability as outlined in TR-394). An access purchaser can use Common Channel Signaling to a CCS AC OFC. A switching entity/POI having this functionality must have its associated STPs listed on the SRD portion of the record. If company policy permits, the point code (PC) should also be identified on the SRD portion of this record.
CIP	Enter an "X" if the office provides CIP. Carrier Identification Parameter (CIP) is a special option that the switch is to transmit the three (3) or four (4) digit CIC (Carrier Identification Code) of the prescribed line back to the customer. Identifying an office as CIP requires it also be identified as CCS AC OFC.
CS DATA TDM	Enter an "X" if the office serves as a Circuit Switch Data Tandem. This defines a tandem office which has the functionality (e.g., BCR5, BCR6, PRI64) to process switched data calls.
CSP	Enter an "X" if the office provides CSP. Carrier Selection Parameter (CSP) is a special option that provides for the automatic transmission of a signaling indicator that signifies to the customer whether or not a given call originated from a presubscribed line. If CSP is indicated, then CIP must also be indicated.
CLASS 4/5	This indicator will be automatically generated if a CLASS4/5 entry is made on the SRD component of this record.
DA OFC	Enter an "X" if the switching entity/POI is a Directory Assistance (DA) Office. This office provides the means for customers of operators to obtain subscriber telephone numbers and would pertain to NXX 411 and NXX 555 DA type calls. These CO Codes are currently "reserved" codes.

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VALUE	PURPOSE (SWITCHING OFFICE FUNCTIONALITIES)
DA TDM	Enter an "X" if the switching entity/POI is a tandem office that provides customers or operators access to the Directory Assistance (DA) office(s) from which listed subscribe telephone numbers can be obtained
END OFC	Enter an "X" if the switching entity/POI performs end office functions (i.e. the point where a customer POTS line is connected to receive dial tone). Any office to which subscriber lines are directly connected should be identified as either END OFFICE or as CELLULAR OFC in addition to any other valid functionalities.
FG B TDM	Enter an "X" if the switching entity/POI is a Feature Group B Tandem. This is a tandem office, transmission conditioned, designed for toll operation. It serves as the concentrated distribution point from Feature Group B traffic between ICs and end offices. Offices flagged as a FG B TDM should appear in the SHA FG B TDM fields of the switching entities/POIs that home to them.
FG C TDM	Enter an "X" if the switching entity/POI is a Feature Group C Tandem. This is a tandem office on which non equal access end offices are homed for originating and/or terminating Feature Group C service. Offices flagged as a FG C TDM should appear in the SHA FG B TDM fields of the switching entities/POIs that home to them.
FG D TDM	Enter an "X" if the switching entity/POI is a Feature Group D Tandem. This is a tandem office, transmission conditioned, designed for toll operation. It serves as the access tandem for concentration and distribution of Interexchange Carrier InterLATA traffic originating and/or terminating within the LATA. Offices flagged as a FG D TDM should appear in the SHA FG D TDM fields of the switching entities/POIs that home to them.
FGD 56	Enter an "X" if the switching entity/POI provides a trunk side FG D connection from the Local Service Provider (LSP) to an interexchange carrier and supports a rate adapted 56Kbps data speed utilizing in-band signaling.
FGD 64	Enter an "X" if the switching entity/POI provides a trunk side FG D connection from the Local Service Provider (LSP) to an interexchange carrier and supports a rate adapted 56Kbps or 64Kbps clear channel capability utilizing out-of-band signaling.
HOST	Enter an "X" if the switching entity/POI provides certain common processor functions for a remote entity and for the traffic that originates or terminates in the remote. If a switching entity/POI is identified as a host, it should be used

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VALUE	PURPOSE (SWITCHING OFFICE FUNCTIONALITIES)
	in the SHA HOST fields of its subtending remote switching entity/POI records. If, in addition to serving as a host, the switch has direct subscribers, then END OFC also applies.
INTERMED OFC	Enter an "X" if the switching entity/POI serves as an intermediate office. This is an office that concentrates originating and/or terminating traffic for several end offices but is not an access tandem. An intermediate office should itself home to an access tandem. Offices flagged as an INTERM OFC should appear in the SHA INTERM OFC fields of the switching entities/POIs that home to them.
INTRA PRSUB	Enter an "X" if the switching entity/POI permits IntraLATA Presubscription.
INTRA TDM	Enter an "X" if the switch serves as a tandem that completes IntraLATA toll traffic between subtending end offices.
ISDN FS OFC	Enter an "X" if the switch serves as a tandem that provides ISDN functionality for another office that cannot. The other office(s) would send ISDN traffic to this office.
ISDN MULTIRT	Enter an "X" if the switching entity/POI permits customers to set up n x 64Kbps (n by 64) calls from an ISDN Primary Rate Interface (PRI) circuit in real time and in the same manner as any circuit switched ISDN call. ISDN multirate is an extension of the 64Kbps service offering in that it can set up a call from 64Kbps to 1536Kbps (1 DS0 to 24 DS0s) in bandwidth capacity
LOCAL TANDEM	Enter an "X" if the switch serves as a tandem that completes Local traffic between subtending end offices.
LNP CAPABLE	Enter an "X" if the switching entity/POI is able to process SS7 LNP messages.
OS TDM	Enter an "X" if the switching entity/POI serves as an Operator Services Tandem (i.e. provides network access to operators).
PRI 64	Enter an "X if the office provides Integrated Service Digital Network (ISDN) Primary Rate Interface (PRI) access capability that allows a customer premise device to communicate directly with the network and/or another ISDN-equipped location, utilizing an out-of-band signaling protocol, and has data rates 56Kbps, 64Kbps clear, or multiple combinations thereof. PRI is 23

VALUE	PURPOSE (SWITCHING OFFICE FUNCTIONALITIES)
	64Kbps bearer channels, that can be used for and combination of voice and data, and one 64Kbps data channel that can be used for signaling (23B+D). If PRI 64 is provided, then BCR5 and BCR6 also apply.
REMOTE	This indicator will be automatically generated if a HOST value is entered onto the SHA component of this record.
STP	Enter an "X" if the SWITCH signifies a Signaling Transfer Point (STP). This is a packet switching entity in the Common Channel Signaling (CCS) network used for Signaling System 7 (SS7) interconnection.
SW56	Enter an "X" if the switching entity/POI is capable of processing circuit switched data at 56Kbps.
TRNK GATEWAY	This value will be automatically generated if the SWITCH record corresponds to the accepted standards of identifying a TRUNK GATEWAY. If the SWITCH serves as a TRUNK GATEWAY but does not correspond to current accepted standards, then enter an "X" directly.
WIRELESS OFC	Enter an "X" if the office provides dial tone and originating and terminating service for wireless subscribers. This would apply to Type 2 wireless connections and would be consistent with CO Code assignments using a TYPE of PMC and an SSC that included a C, B, and/or R value (see Section 1.2).
800 SSP	Enter an "X" if the switching entity/POI has the ability to directly launch an 800/888 database query. If it does not have the capability, then the office to which such calls would be routed should be identified as the 800 SSP switching entity/POI on the SHA component of this record.
911 TANDEM	Enter an "X" if the switching entity/POI serves as a 911 Tandem.

1.4 Business Office Data (BOR)

❖ **Note**: The following Form is associated with the TBCOCAG. If this Form is required to support a Thousands Block assignment, it applies in the same manner.

This section of the Job Aid supports TBCOCAG Part 2, Form 6.

Data is entered via the BOR screen. This record provides address and telephone information that can be used in the investigation and review of customer bills and message processing.

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Data for this record must be provided if the Business Office code to be populated on the BIRRDS NXD record is not already in BIRRDS.

1.4.1 BOR

The following describes the data elements required for the BIRRDS BO (Business Office) record. **Numbers next to the data elements refer to line items on Part 2, Form 6.** Descriptions include permissible values and provide sources that may be useful for obtaining further information.

1. NPA

Enter the NPA in which a CO Code has been assigned or is active.

2. BO

Enter a three digit Business Office (BO) code. If this is a new record, the code must not already be in use by another company (within the same NPA). The BO code that is chosen should then be the BO code used when CO Codes are assigned within this NPA for the given company.

3. ST

Enter a valid two character state code to identify the location of the business office.

4. STATUS

The STATUS code clarifies the action that is to occur on the EFF DATE. One of the following three values must be used, as may be appropriate:

VALUE	PURPOSE (STATUS)
E	Enter an "E" if the EFF DATE is the date a new Business Office code will become active.
M	Enter an "M" if the EFF DATE is other than the activation or disconnect date. This is used to indicate the date that a change to data supporting a CO Code is to occur (i.e. on a date past the code's activation). For example, a future change to a telephone number.
D	Enter a "D" to indicate that the Business Office code is "disconnecting" on the indicated EFF DATE.

5. EFF DATE

Effective dates are **always** used in conjunction with STATUS codes. A date should represent the date when *network activity becomes* **effective** *in the network*. This is **not** the date that a Business Office code is requested or assigned, or the date the data is entered into BIRRDS.

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6. OCN

Enter the OCN. The OCN value used for the BOR record and on related output is a means of identifying the company having responsibility for the Business Office code.

7. ADDRESS/PHONE Information

Enter address information and a telephone number to which billing and/or ordering queries can be forwarded.

1.5 Local Number Portability

Section 1.5.1 of this Job Aid supports TBCOCAG Part 2, Form 7.

Location Routing Number Best Practices are available from ATIS ([www.atis.org) INC.](www.atis.org)

Introduction - LNP

The primary concept of Local Number Portability is to provide a means by which a telephone subscriber can retain his or her telephone number within the local exchange network when choosing a different company as their primary Local Service Provider (LSP). LNP has also been defined as a means by which a given call can be alternatively routed (from the basic NPA NXX's routing schema) based on an LRN.

An LRN is a 10-digit number and provides a means of "pointing" to a given switching entity/POI. The first six digits of the LRN are defined as an NPA NXX that is "native" to the switching entity/POI it points to.

1.5.1 Location Routing Number (LRN)

❖ **Note**: If an LRN is to be established, it can only be established by the CO Code Holder.

This section of the Job Aid supports TBCOCAG Part 2, Form 7.

Data for this record must always be provided if the switching entity/POI supporting the CO Code assignment can have other CO Code line numbers ported to it, and such LRN information has not been previously provided (e.g. the CO Code is associated with a "new" switching entity/POI).

❖ **Note**: As LNP is introduced in an area, LRNs must be established for any existing switching entities/POIs that may have line numbers ported to it.

The following describes the data elements required for the BIRRDS LRN record. **Numbers next to the data elements refer to line items on Part 2, Form 7.** Descriptions may include permissible values and may provide sources useful for obtaining further information.

1. LRN

An LRN is a ten digit "Location Routing Number". The first six digits of an LRN should correspond to an NPA NXX that is native to a given switching entity/POI (i.e. originally assigned to that switch).

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Each NPA NXX in that switch need not serve as the basis for unique LRNs. LRNs are assigned by the owner of the switching entity POIs.

The NPA value must be an NPA assigned by the NANPA. The COC value is the assigned CO Code.

2. STATUS

The STATUS code clarifies the action that is to occur on the EFF DATE. One of the following three values must be used, as may be appropriate:

VALUE	PURPOSE
E	Enter an "E" if the EFF DATE is the date a new LRN will become active in the network. Note that system edits exist so that an EFF DATE cannot be created for a new LRN if the EFF DATE of a CO Code matching the first six digits of the LRN, or the associated SWITCH has a later EFF DATE.
M	Enter an "M" if the EFF DATE is other than the activation or disconnect date. This is used to indicate the date that a change to data supporting a then active LRN is to occur. For example, a future change to LRN TYPE, OCN, etc.
D	Enter a "D" to indicate that the active LRN is "disconnecting" on the EFF DATE.

3. EFF DATE

Enter the effective date that the LRN (or supporting data changes) is/are to become effective within the network. This would include: (1) the date the LRN is to become active (i.e. can first be routed to), (2) subsequent dates when pertinent supporting data will be modified or, (3) the date an LRN will be disconnected (most often CO Codes associated with the "old" NPA side of an NPA "split").

Effective dates are **always** used in conjunction with STATUS codes. A date should represent the date when *network activity becomes **effective** in the network*. This is **not** the date that a CO Code is requested or assigned, nor the date the data is entered into BIRRDS. Effective dates for code activation or changes in supporting data also should be consistent with any network factors that may apply (e.g. changes to switch activations, the rescheduling of a switch replacement, etc.).

4. LATA SERVED

Enter the three-digit code representing the geographical Local Access and Transport Area (LATA) to which the LRN is associated. It has been generally agreed that this should be the LATA of the Rate Center associated with the underlying NPA NXX assignment.

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The state of Florida requires use of an *additional* two-digit "sub-zone" code appended to the end of the three digit LATA code. LATA codes were assigned by the Justice Department in 1984 as part of the AT&T divestiture process. LATA boundaries are intended as the geographical boundary that defines the local exchange serving area (local toll included), and across which defines interexchange traffic. LATA codes were assigned to define the areas in which Bell Operating Companies (BOCs) could provide local exchange service, and in some areas, where service was uniquely provided by another (non-BOC) local exchange company. LATA boundaries may *occasionally* be modified, with regulatory concurrence, to address such issues as communities of interest.

5. RATE CENTER

Rate Center information (RATE CENTER, RC TYPE, RC STATE) is currently **optional**. This is expected to be used to identify LRNs that may be assigned based on the Rate Center area.

Enter a valid Rate Center name (see Section 2.0) that corresponds to the Rate Center to which the locality is to be associated. The Rate Center name (and RC TYPE, if applicable) must already be established as a Rate Center (RRD) record (see Section 2.0).

6. RC TYPE

Enter an RC TYPE if applicable, (see Section 2.0)

7. RC STATE

Enter the STATE of the RATE CENTER. A valid standard state, territory, province, or country code is required as may be applicable. It identifies the state/territory/province/country of the LOCALITY. This will generally be the state/territory/province/country associated with the NPA of the assigned CO Code or Thousands Block, however, rare occasional cross-boundary situations may arise. The STATE (or territory, province, country) codes used in BIRRDS correspond to those used by the CLONES database (see SWITCH). See Appendix C for specific codes.

- For the United States, this agrees with standard two-character USPS supported codes.
- For United States territories, these may sometimes agree with USPS supported codes and sometimes reflect code that are unique to CLONES.
- For Canada, there may be a few differences from the postal codes supported by Canada Post.
- For Atlantic and Caribbean island countries, these codes are unique to CLONES.

8. IP CAPABLE OCN

This denotes that the Code Holder (OCN appearing on the LRN record) has chosen to identify, via population of this field, the OCN of a company to which IP traffic can be routed. This does not preclude the call from being terminated via a TDM (Time Division Multiplex) interconnection. IP CAPABLE OCN can be the same OCN as the Code Holder.

9. FQDN OCN
Enter an OCN that represents the service provider to which the FQDN belongs.

10. FQDN Label

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Enter (up to 20 characters) to identify a specific 255 character FQDN in conjunction with the FQDN OCN.

1.6 (Multiple) Switch Homing Arrangements

❖ **Note**: The following Form is associated with the TBCOCAG. If this Form were required to support a Thousands Block assignment, it would apply in the same manner.

Section 1.6.1 of this Job Aid supports TBCOCAG Part 2, Form 8. Data corresponds to elements needed to identify additional switch homing arrangements beyond the single arrangement identified on Part 2, Form 2. Although referred to as SH2 records for purposes of this Job Aid, BIRRDS views them as a standard SHA record, however these would be identified as having a SHA Indicator of 01-99, versus a single/initial SHA identified as 00.

Overview

This Job Aid provides a more detailed of description of the data needs surrounding Part 2, Form 8. This Form reflects Multiple Switch Homing Arrangements in the BIRRDS database.

Introduction - (Multiple) Switch Homing Arrangements

Representing "multiple" homing of a switch to different tandems <u>for the same "service"</u> can be managed though use of unique switch identifiers (e.g. CLLIs), each of which "home" to a different tandem. CO Codes would be associated with the switch identifier that would have it "home" to the tandem. Although such switch identifiers are each unique eleven character codes, and thus are unique "records" that each require a unique Part 2, Form 2, they technically refer to the same switching entity. Should you follow this option, then this section does not apply.

In lieu of establishing unique eleven character switch identifiers, one can map CO Codes to the SAME switch identifier on each respective Part 2, Form 1, and make use of the Switch Homing Arrangement (SHA) Indicator to "point" to alternative homing situations. Each unique combination of eleven-character switch identifier and two digit SHA Indicator used on Part 2, Form 1s would then correlate to a switch "homing" arrangement as defined by Part 2, Form 8.

1.6.1 Multiple Switch Homing Arrangements (SHA)

Data for this record must always be provided if the switching entity/POI's "homing" arrangement is different from the initial "homing" currently or previously provided on Part 2, Form 2.

❖ **Note**: Use of this Form is dependent on various factors and can be optional based on how a company chooses to represent a switch that homes to different tandems for the same function.

The following describes the data elements required for the BIRRDS SHA record. **Numbers next to the data elements refer to line items on Part 2, Form 8.** Descriptions may include permissible values and may provide sources that may be useful for obtaining further information.

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1/2. SWITCH / SHA IND

To address multiple homing arrangements as described above, the SWITCH and SHA IND values must be considered together.

SWITCH is an eleven-character descriptor used to identify the switching entity/POI to which an entire CO Code (or subset of line numbers) have been assigned. For more information regarding SWITCH, see Section 1.3 of this Job Aid.

SHA IND can be any value identified by two digits from 01 to 99. The combination of the SWITCH value and the SHA IND value define a unique homing arrangement.

The SWITCH / SHA IND value created and maintained via this form, should correlate to the values provided via Part 2, Form 1. This essentially would map the given CO Code to this homing arrangement.

More than one CO Code may be associated with a given SWITCH / SHA IND combination. This implies that the CO Codes are "homed" identically.

3. STATUS

The STATUS code clarifies the action that is to occur on the EFF DATE. One of the following three values must be used, as may be appropriate:

VALUE	PURPOSE (STATUS)
E	Enter an "E" if the EFF DATE is the date a new SWITCH / SHA IND will become active in the network.
M	Enter an "M" if the EFF DATE is other than the activation or disconnect date. This is used to indicate the date that a change to data supporting a SWITCH / SHA IND homing arrangement is to occur (i.e. on a date past the switching entity/POI's activation); for example, a future change to tandem homing, office functionalities, etc.
D	Enter a "D" to indicate that a SWITCH / SHA IND homing arrangement is "disconnecting" on the indicated EFF DATE. This would primarily occur in conjunction with office replacements.

4. EFF DATE

Enter the effective date that the SWITCH / SHA IND homing arrangement (or supporting data changes) is/are to become effective within the network. This would include: (1) the date a SWITCH / SHA IND homing arrangement is to become active (i.e. can first be used in routing), (2) subsequent dates when pertinent supporting data will be modified (e.g. a tandem "rehome"), or, (3) the date a SWITCH / SHA IND homing arrangement will be disconnected (most often due to office replacement).

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Effective dates are **always** used in conjunction with STATUS codes. A date should represent the date when *network activity becomes* **effective** *in the network*.

Specific date timeframes, depending on the activity involved, are addressed in an ATIS document entitled the Recommended Notification Procedures to Industry for Changes in Access Network Architecture (ATIS-0300046). Also, see Section 6.2.2 of the Central Office Code (NXX) Assignment Guidelines for more information on effective date timeframes.

5. Homing Arrangements

Switching entity/POI entities that are provided in this homing section are validated against the types of functionalities they provide. For example, a switching entity/POI cannot be used as a Feature Group D tandem entity, unless it was previously defined as such in the database.

Specific homing arrangements are needed to ensure that a means exists for access to the switching entity/POI and associated CO Codes. Generally, data in this portion of a switching entity/POI record should be available from the organization or company responsible for the switching entity/POI from which the CO Code operates.

The homing arrangements provided on this Form must be different (e.g. different FG D tandems) than have been provided for other SWITCH / SHA combinations and different from that provided with the initial SHA data provided now or previously. Any information that is NOT different should nonetheless be reentered for each SWITCH / SHA combination.

Please refer to Section1.3.2 for definitions of Feature Group D, etc.

Note that under the heading of "ADDITIONAL" only ISDN FS OFC is provided. All other SHA values in this column (e.g. STP) are consider to be common to all switch homing arrangements that utilize the same eleven-character values.

1.7 Fully Qualified Domain Name (FQD)

❖ **Note**: The following Form is associated with the TBCOCAG.

This Job Aid supports TBCOCAG Part 2, Form 9.

Overview

This Job Aid provides a more detailed of description of the data needs surrounding Part 2, Form 9. This Form reflects FQDN data arrangements.

Introduction - FQDN

The Fully Qualified Domain Name Record (FQD) allows Service Providers (SP) to share Fully Qualified Domain Names (FQDNs) with other Service Providers to facilitate the routing of calls via Voice over Internet Protocol (VoIP).

Data Elements

The following describes the data elements required for the BIRRDS FQD record. **Numbers next to the data elements refer to line items on Part 2, Form 9.** Descriptions may include permissible values and may provide sources that may be useful for obtaining further information.

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1. FQDN

Enter the hostname component of a Uniform Resource Identifier (URI). The total length of the hostname cannot exceed 255 characters. Each element between the periods can have a maximum length of 63 characters with the exception of the last period which can only have maximum length of 62 characters

2. STATUS

The STATUS code clarifies the action that is to occur on the EFF DATE. One of the following three values must be used, as may be appropriate:

VALUE	PURPOSE (STATUS)
E	Enter an "E" if it reflects the date a new FQDN will become active in the network.
M	Enter an "M" if it reflects the date a change to data supporting an FQDN becomes effective.
D	Enter a "D" to indicate the date a FQDN is being disconnected.

3. EFF DATE

Enter the effective date that the FQDN is to become effective within the network.

Effective dates are **always** used in conjunction with STATUS codes. A date should represent the date when *network activity becomes* **effective** *in the network*.

4. FQDN OCN

Enter an OCN that represents the service provider to which the FQDN belongs.

5. FQDN Label

Enter (up to 20 characters) to identify a specific 255 character FQDN in conjunction with the FQDN OCN.

6. PERMISSIBLE OCNS

As comma-separated values, enter the OCNs that have permission to reflect the FQDN on BIRRDS records (NXDs and LRNs) associated with the OCN.

7. PERMISSIBLE AOCNS

As comma-separated values, enter the AOCNs that have permission to reflect the FQDN on BIRRDS records (NXDs and LRNs) associated with the AOCN, regardless of the OCN associated with the record.

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2.0 Locality and Rate Centers

Various TBCOCAG/ Part 2/2A Forms request identification of a LOCALITY and/or RATE CENTER. Since these data elements are part of the BIRRDS (i.e. LOC and RRD records respectively), any data identified on the Form must reflect a LOCALITY and/or RATE CENTER that already exists in the database.

The Rate Center should correspond to that provided on the TBCOCAG Part 1 CO Code Request Form (or corresponding Thousands Block form) that is reflected on the TBCOCAG/ Part 3 Form. LOCALITY is the identification of an actual locality within the Rate Center (this may or may not be the same "name" as the Rate Center "name").

RATE CENTER and LOCALITY records are maintained in BIRRDS by TRA to avoid direct user updates creating conflicting and/or erroneous situations. The data itself should represent data regarding RATE CENTERs as are identified in local exchange tariffs filed in each state's utility commission or otherwise appropriate regulatory body. Note that the term RATE CENTER is also known as Rate Exchange Area (or some variation thereof) in the body of local tariffs.

If the LOCALITY or RATE CENTER information provided on Part 2 Forms does not exist in the BIRRDS database, but otherwise is felt to be a valid RATE CENTER (per a tariff) or a valid LOCALITY, please contact the BIRRDS Administrator.

Rate Center Consolidations

CO Codes and Thousands Blocks are assigned, forecasted, and tracked on a Rate Center by Rate Center basis. As a means to reduce the rate of CO Codes assigned for given areas, regulatory bodies consider the "consolidation" of Rate Centers. By reducing the number of Rate Centers that cover a given area, the number of CO Codes and/or Thousands Blocks needed to be assigned to a Service Provider wanting to serve the entire area is less than prior to Rate Center consolidation. Although regulatory criteria and considerations in consolidating Rate Centers may vary, general considerations include some degree of commonality in the local calling area aspects of the existing Rate Centers, communities of interest, etc. Rate Center consolidations can take the track of consolidating Rate Centers into a pre-existing Rate Center, or by creating a new Rate Center.

Rate Center Documentation

Any requests to TRA to change, add or remove Rate Center (RRD) records in BIRRDS must include appropriate supporting documentation (e.g. a tariff copy, consolidation order, etc.) that depicts the change.

Rate Centers (CO Codes vs. Thousands Blocks)

The current requirement for assigning, reporting, and tracking CO Codes and Thousands Blocks is by Rate Center. For various network, rating, billing, and related reasons, all lines within an NXX must be rated against the same Rate Center. Consequently, any Thousands Blocks assigned under a given CO Code must all be rated to the same Rate Center and that Rate center must be the same as that for the CO Code.

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Rate Center V&H

For purposes of distance sensitive rating algorithms that are employed by some companies, Rate Centers have associated sets of V&H coordinates. V&H are a component of the Rate Center record. However, since a CO Code and Thousands Block are associated with both a Rate Center and switching entity/POI, and since a switching entity/POI also has a set of V&H coordinates, please be aware of which set is being provided to you for populating TBCOCAG Part 2, Form 2 (Switch information, Section 1.3.1), or when providing Rate Center information to TRA. **Switching entity/POI V&Hs and Rate Center V&Hs are not <u>necessarily</u> the same.**

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3.0 Thousands Block Pooling

CO Code assignments (10,000 potential line numbers) have transitioned in many areas in the United States and its territories, to numbering assignments at the "thousands block" level (1,000 lines) within each NXX.

In areas where that NXX is not deemed a "thousands block pooled" NXX, the information provided through the TBCOCAG Part 2 Forms refers to the routing and rating for all non-ported numbers associated with that NXX.

Under Thousands Block Pooling (TBP), the data on the TBCOCAG Part 2 Forms represents information associated with the company defined as the Code Holder. The Code Holder is, at a minimum, responsible for default routing of Thousands Block Pooled numbers. It is also assumed that the Code Holder will have at least one "thousands block" assigned to it.

Under TBP, as under portability in general, the physical "routing aspects" of a CO Code can be determined by considering the first six digits that the ported telephone number's LRN maps to, then treating those six digits as if they were an NPA NXX. Information provided through the TBCOCAG Part 2/2A Forms would then identify the associated tandem homing arrangements.

♦ TBP applies to the US within the NANP
♦ Paging companies do not participate in portability or TBP

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Appendix A   Contact Summary

The following is provided as a quick reference to the contact information.

Topic	Source / Additional Notes	Internet, telephone, etc.
456 NXX assignments	North American Numbering Plan Administration (NANPA)	www.nationalnanpa.com
5XX-NXX assignments	North American Numbering Plan Administration (NANPA)	www.nationalnanpa.com
555 line number assignments	North American Numbering Plan Administration (NANPA)	www.nationalnanpa.com
9YY NXX assignments	North American Numbering Plan Administration (NANPA)	www.nationalnanpa.com
Alliance for Telecommunications Industry Solutions (ATIS)	Includes information on all subtending committees (e.g. PTSC, NGIIF, INC, OBF)	www.atis.org
American National Standards Institute (ANSI)	Various T1 documents	www.ansi.org
ANI II Digits	North American Numbering Plan Administration (NANPA)	www.nationalnanpa.com
BIRRDS	Telecom Routing Administration (TRA) – BIRRDS Administrator	www.trainfo.com BIRRDSAdmin@iconectiv.com 732-699-6700
Business Office Codes	Telecom Routing Administration (TRA) – BIRRDS Administrator	BIRRDSAdmin@iconectiv.com
Carrier Identification Code (CIC) assignments	North American Numbering Plan Administration (NANPA)	www.nationalnanpa.com
Central Office Code Assignments	US areas: North American Numbering Plan Administration (NANPA) Non-US areas: Canada: Centralized Numbering Administration (CNA) Other areas - contact the country's telco regulatory agency	www.nationalnanpa.com www.cnac.ca 613-563-7242

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Topic	Source / Additional Notes	Internet, telephone, etc.
Thousands Blocks and Central Office Code Assignment Guidelines (TBCOCAG)	Industry Numbering Committee (INC)	www.atis.org
CLLI™ Codes, CLONES	Non-licensee Information → CLLI Customer Service Center (licensees) →	www.commonlanguage.com 800-521-2673 732-699-5577
TBCOCAG Job Aid	Telecom Routing Administration (TRA) – BIRRDS Administrator	www.trainfo.com or TRA GUI Job Aids menu for BIRRDS Users
Company Code (OCN) New Assignments and Company Name Changes	National Exchange Carrier Association (NECA)	www.neca.org
LERG™ Routing Guide, TPM™ Data Source, various other related data products	Telecom Routing Administration (TRA)	www.trainfo.com 732-699-6700 tra@iconectiv.com
NECA Tariff No. 4	National Exchange Carrier Association (NECA)	www.neca.org
NPA Relief (e.g. Split/Overlay) Information	High level (e.g. dates, schedules, test numbers, etc.)	www.nationalnanpa.com
Revenue Accounting Office (RAO) Assignments and Guidelines	RAO Administrator	www.trainfo.com RAO Administrator: RAOAdmin@iconeciv.com
SS7 Point Code Assignments	SS7 Point Code Administrator	https://iconectiv.com/ss7 SS7 Point Code Administrator: SS7PCAdmin@iconectiv.com
Thousands Block Pooling Assignments	US areas: Pooling Administration	www.nationalpooling.com
Vertical Service Codes	North American Numbering Plan Administration (NANPA)	www.nationalnanpa.com

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Appendix B   TBCOCAG Forms Part 2/2A Job Aid

Attached are the Central Office Code Assignment Guidelines, Part 2 forms, and Thousand Block Pooling Administration Guidelines. Since these Forms are maintained by the ATIS Industry Numbering Committee (INC), and the Job Aid is maintained by the Telecom Routing Administration (TRA), some "timing" differences may occur relative to updates. The Job Aid cannot be fully updated until changes to the Part 2/2A Forms have undergone final closure through the INC. The Job Aid will tend to trail the actual revision to Part 2/2A Forms by a short amount of time.

To ensure you have the latest version of the Part 2/2A forms, you may obtain downloadable copies from www.atis.org (under INC documents), or from the CO Code / Pooling Administrators.

Questions regarding any data on the Forms that cannot be answered via this Job Aid may be directed to the TRA BIRRDS Administrator via email BIRRDSAdmin@iconectiv.com.

Attached Forms

TBCOCAG - Part 2 (original Forms 3, 4, and 5 no longer apply):
- Cover Sheet
- Form 1
- Form 2
- Form 6
- Form 7
- Form 8
- Form 9

TBCOCAG - Part 2A:
- Form 1

Thousands Block and Central Office Code Assignment Guidelines (TBCOCAG)

Central Office Code (NXX) Assignment Request - Part 2
Revised: January 10, 2020

Routing and Rating Information

Although Part 2 Forms are revised from time to time, they do not necessarily represent the most current description of data needed for input to the iconectiv BIRRDS database[1]. Data requirements may change to meet industry needs. During data requirement transition periods, additional and/or different information than may appear on these Forms may be requested.

These forms are supported by the latest issue of the "TBCOCAG Forms Part 2 Job Aid" issued and maintained by the iconectiv Telecom Routing Administration (TRA). The latest issue of this Job Aid may be obtained by calling TRA Customer Care Center on 732-699-6700 and/or by downloading a copy from www.trainfo.com.

This page is a cover sheet that can be used in conjunction with Part 2 forms. The TBCOCAG Forms Part 2 Job Aid provides expanded detail on the purpose, definition, permissible values, etc. of the data being requested.

Form(s) being provided:

Form 1 – Co Code (NXX) ☐   **Form 6 – Business Office** ☐
Form 2 – Switching Entity/POI ☐   **Form 7 – LRN** ☐
Form 3 – No Longer Required   **Form 8 – Multiple Homing**   Choose an item
Form 4 – No Longer Required   **Form 9 – FQDN** ☐
Form 5 – No Longer Required   .

Data Provider Information   **Date:** Click here to enter a date.

Name (first, middle, last): Click here to enter text.
Company: Click here to enter text.
Address: Click here to enter text.
City: Click here to enter text. **State:** Click here to enter text. **Zip:** Click here to enter text.
Phone: Click here to enter text. **Fax:** Click here to enter text.
Other/e-mail: Click here to enter text.

NOTE: For an additional code(s) where the rating and routing are identical to an existing code, complete the following:

Use Same Route and Rate Center as: NPA Click here to enter text. **NXX** Click here to enter text.
Comments: Click here to enter text.

For Processor's Use
Date Received: Click here to enter a date.

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[1] iconectiv®, and Common Language® are registered trademarks and CLCI™, CLLI™, LERG™ Routing Guide and TPM™ Data Source are trademarks and the Intellectual Property of iconectiv, LLC.

Thousands Block and Central Office Code Assignment Guidelines (TBCOCAG)

Central Office Code (NXX) Assignment Request - Part 2, Form 1
Revised: January 10, 2020

Following are Central Office (CO) Code (NXX) data requirements for the iconectiv, LLC. BIRRDS database. Section 1.2 of the TBCOCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form. This form must always be completed for newly assigned CO Codes.

> **New CO Code** All items are required unless otherwise noted.
> **Data change** Items 1-5 are required, as are the appropriate element(s) to be changed.
> **Disconnect** Only items 1-5 should be provided.

1. **NPA** Click here to enter text.
   Number Plan Area Code (Area Code) in which the CO Code (NXX) has been assigned.

2. **NXX** Click here to enter text.
   CO Code (the assigned NXX).

3. **BLOCK ID** A
   No entry required for CO Codes (always "A").

4. **STATUS** Click here to enter text.
   E = new code, M = change to supporting data, D = disconnect.

5. **EFF DATE** Click here to enter text.
   Date that a new CO code can first be routed to, date that supporting data change will be effective, or date of disconnect.

6. **OCN** Click here to enter text.
   Operating Company Number (OCN).

7. **LOCALITY** Click here to enter text.   Locality in **RATE CENTER** Click here to enter text.
   (Maximum 10 characters each).

8. **LOC INDX** Click here to enter text.
   An index to distinguish cases of multiple same-name LOCALITY in the **STATE/PROVINCE**, if applicable.

9. **LOC STATE/PROV** Click here to enter text.
   Two-character code for the state, territory, or province of the LOCALITY.

10. **PLNAME (10)** Click here to enter text.
PLACENAME in same RATE CENTER as LOCALITY (max 10 characters[2]).

11. **COCTYPE** Click here to enter text.
Identifies use of the CO Codes [Chose one – EOC, PLN, PMC, RCC, SIC, TST, SP1, SP2, VOI, (for ODDBALL CODES see Job Aid)].

12. **SSC** Click here to enter text.
Special Service Code – [Choose one (or valid combinations up to 4) – A,B,C,I,J,M,N,O,R,S,T,V,W,X,Z,8].

13. **TR DIG EO** Click here to enter text.
Number of digits to be out-pulsed to a switching entity/POI end office by another carrier (e.g., NPA + NXX + line would be 10).

14. **TR DIG AT** Click here to enter text.
Number of digits to be out-pulsed to a switching entity/POI tandem office by another carrier (e.g., NPA + NXX + line would be 10).

15. **NXXTYPE** Click here to enter text.
Identifies use of CO Code (NXX). (Choose one of listed values provided in the TBCOCAG Part 2 Job Aid).

16. **BILL RAO** Click here to enter text.
Enter a valid Revenue Accounting Office code.

17. **BO CODE** Click here to enter text.
Enter an appropriate Business Office code.

18. **CO TYPE** Click here to enter text.
Company Type – (Choose appropriate value 0-9 provided in the TBCOCAG Part 2 Job Aid).

19. **TIME ZONE** Click here to enter text.
0-none, 1-Guam/CNMI, 2-Hawaii/American Samoa, 3-Alaska, 4-Pacific, 5-Mountain, 6-Central, 7-Eastern, 8-Atlantic, 9-Newfoundland.

20. **IDDD** Click here to enter text.
International Direct Distance Dialing. [Y- if the CO Code (NXX) can place IDDD calls, N – if not].

21. **DIND** Click here to enter text.
Dialable Indicator. (Y if directly dialable, N if not).

22. **DAYLIGHT** Click here to enter text.
[Y – If the CO Code (NXX) serves an area that observes daylight saving, N – if not].

23. **PORTABLE** Click here to enter text.
(Y/N) Y if line number can be ported from this CO Code.

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[2] If greater than 10 characters, an abbreviated (10 character) PLACENAME will be created and reported to meet requirements of some billing systems.

24. **TEST LINE Information:**

TEST LINE Click here to enter text.
Four-digit test line number (i.e., NPA-NXX-xxxx).

RESPONSE Click here to enter text.
Response from TEST LINE (A=Announcement, M=Milliwatt).

25. **SWITCH** Click here to enter text.
Eleven character Common Language® Location Code (CLLI^{TM} Code) that identifies the switching entity/Point Of Interface (POI) (see Part 2, Form 2 if switch has not yet been established in BIRRDS).

26. **SHA IND** Click here to enter text.
Switch Homing Arrangement (two digits) (multiple homing arrangements – see Part 2, Form 8 if SHA IND has not yet been established in BIRRDS for the given switch) (if not applicable, enter 00).

27. **IP CAPABLE (Y/N)** Click here to enter text.
"Y" if the CO Code Holder has chosen to identify that any non-ported lines within the NPA-NXX can be routed via IP.

28. **FQDN OCN** Click here to enter text.
Optional. An OCN that represents the service provider to which the FQDN belongs.

29. **FQDN Label** Click here to enter text.
Optional. The FQDN Label is a 20-character alphanumeric field that identifies a specific 255 character FQDN in conjunction with the FQDN OCN.

Thousands Block and Central Office Code Assignment Guidelines (TBCOCAG)

Central Office Code (NXX) Assignment Request - Part 2, Form 2

Revised: October 30, 2019

Switching Entity/POI (Point of Interconnection) data requirements for the iconectiv® BIRRDS database. Section 1.3 of the TBCOCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form.

New Switching Entity/POI	All items are required unless otherwise noted.
Data change	Items 1-3 are required, as are the appropriate element(s) to be changed.
Disconnect	Only items 1-3 should be provided.

1. **SWITCH** Click here to enter text.
   A switch code - 11 characters (e.g. Common Language® Location Code [CLLI™ Code]). For Central Office Code assignments, this is the switching entity/POI that will originate and terminate calls from/to the assigned CO Code.

2. **STATUS** Click here to enter text.
   E = new entity/POI, M = change to supporting data, D = disconnect.

3. **EFF Date** Click here to enter a date.
   Date a new switching entity/POI can be routed to, date supporting data change will be effective or, date of disconnect (mm/dd/yy).

4. **EQPT TYPE** Click here to enter text.
   A valid code designating the specific equipment being used.

5. **OCN** Click here to enter text.
   Operating Company Number.

6. **LATA** Click here to enter text.
   Local Access Transport Area Code (3 digits, 5 may apply in Florida).

7. **VC** Click here to enter text.
   The appropriate Vertical Coordinate for the switching entity/POI.

8. **HC** Click here to enter text.
   The appropriate Horizontal Coordinate for the switching entity/POI.

9. **IDDD** Click here to enter text.
   International Direct Distance Dialing (Y - if the switching entity/POI permits IDDD, N - if not).

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10. **Address Data** (should identify the actual location of the switching entity/POI)
    Street Click here to enter text.
    City Click here to enter text.   **State/Prov** Click here to enter text.
    Postal Code Click here to enter text.

11. **Inter LATA use** (default N) (Y/N) Click here to enter text.

12. **Point Code** (Optional) Click here to enter text.

13. **Class 4/5 Office** Click here to enter text.
    (CLLI™ Code of the "other" side of such offices, if applicable).

14. **Intercompany EOC Use** (default N) (Y/N) Click here to enter text.

15. **Homing Arrangements**
    As may be applicable, enter the appropriate eleven character SWITCH (e.g., CLLI Code) to which the switching entity/POI may home to for various feature group capabilities, signaling, etc.

ORIGINATING	TERMINATING	ADDITIONAL
FG B TDM Click here to enter text.	**FG B TDM** Click here to enter text.	**HOST** Click here to enter text.
FG C TDM Click here to enter text.	**FG C TDM** Click here to enter text.	**STP 1** Click here to enter text.
FG D TDM Click here to enter text.	**FG D TDM** Click here to enter text.	**STP 2** Click here to enter text.
OS TDM Click here to enter text.	**OS TDM** Click here to enter text.	
FGB INT Click here to enter text.	**FGB INT** Click here to enter text.	**800 SSP** Click here to enter text.
FG C INT Click here to enter text.	**FG C INT** Click here to enter text.	**ISDN FS OFC** Click here to enter text.
FG D INT Click here to enter text.	**FG D INT** Click here to enter text.	**ACTUAL SW ID** Click here to enter text.
LOCAL TDM Click here to enter text.	**LOCAL TDM** Click here to enter text.	**CALL AGENT** Click here to enter text.
INTA TDM Click here to enter text.	**INTRA TDM** Click here to enter text.	**TRUNK GATEWAY** Click here to enter text.
CS DATA TDM Click here to enter text.	**CS DATA TDM** Click here to enter text.	

16. Switching Entity/POI

Enter an "X" next to all functionalities that apply. (At least one functionality must be flagged.

END OFC ☐	FG B TDM ☐	BCR5 ☐	STP ☐	SW56 ☐
HOST ☐	FG C TDM ☐	BCR6 ☐	CCS AC OFC ☐	FGD 56 ☐
REMOTE ☐	FG D TDM☐	PRI 64 ☐		FGD 64 ☐
DA OFC ☐	OS TDM ☐	ISDN MULTIRT ☐	800 SSP ☐	INTRA PRSUB ☐
CLASS 4/5 ☐	INTERMED OFC☐	ISDN FS OFC ☐	LNP CAPABLE ☐	CALL AGENT ☐
WIRELESS OFC ☐	DA TDM ☐			TRNK GATEWAY ☐
	911 TANDEM ☐			ACSS GATEWAY ☐
	LOCAL TDM ☐		CIP ☐	
	INTRA TDM ☐		CSP ☐	
	CS DATA TDM ☐			

17. RAO Click here to enter text.

An appropriate Revenue Accounting Office Code if the switch is a FG B, FG C, FG D, or OS TDM (tandem).

Thousands Block and Central Office Code Assignment Guidelines (TBCOCAG)

Central Office Code (NXX) Assignment Request - Part 2, Form 6
Revised: September 4, 2015

Following are Business Office data requirements for the iconectiv®, BIRRDS database. Section 1.4 of the TBCOCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form.

New Bus. Office:	All items are required unless otherwise noted.
Data change	Items 1-4 are required, as are the appropriate element(s) to be changed.
Disconnect	Only items 1-4 should be provided.

1. **NPA** Click here to enter text.
   Numbering Plan Area code (Area Code) in which the CO Code has been assigned.

2. **BO** Click here to enter text.
   A numeric code (max 3 digits) used to tie this data to NXX data (Form 1).

3. **STATE/PROV** Click here to enter text.
   Two character code for the state, territory, or province of the NPA.

4. **STATUS** Click here to enter text.
   E = new office, M = change to supporting data, D = delete.

5. **EFF DATE** Click here to enter a date.
   Date data for a new office can be used, date supporting data change will be effective or, date of deletion (mm/dd/yy).

6. **OCN** Click here to enter text.
   Operating Company Number

7. **Indicate address and/or telephone number for a Business Office**
   Business Office Contact Click here to enter text.
   Address Click here to enter text.
   City Click here to enter text. **State Click** here to enter text. **Zip/Postal Click** here to enter text.
   Phone Click here to enter text.

Thousands Block and Central Office Code Assignment Guidelines (TBCOCAG)

Central Office Code (NXX) Assignment Request - Part 2, Form 7

Revised: January 10, 2020

Following are Location Routing Number (LRN) data requirements for the iconectiv BIRRDS database[3]. Section 1.5.1 of the TBCOCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form.

New LRN	All items are required unless otherwise noted.
Data change	Items 1-3 are required, as are the appropriate element(s) to be changed.
Disconnect	Only items 1-3 should be provided.

1. **LRN** Click here to enter text.
   Ten digit Location Routing Number (LRN) associated with a given switching entity/POI.

2. **STATUS** Click here to enter text.
   E = newly established LRN, M = change to supporting data D = disconnect of an LRN.

3. **EFF DATE** Click here to enter a date.
   Date the LRN can first be routed to, date supporting data change will be effective or, date of disconnect (mm/dd/yy).

4. **LATA Served** Click here to enter text.
   Local Access Transport Area code (3 digits, 5 may apply in Florida) to which the LRN is associated.

5. **RATE CENTER** Click here to enter text.
   Optional. Identifies the exchange Rate Center served by the CO Code (maximum of 10 characters).

6. **RC TYPE** Click here to enter text.
   Optional. If applicable, enter an indicator for the type of Rate Center (choose one S=Suburban, Z=Zoned).

7. **RC STATE/PROV** Click here to enter text.
   Optional. Two character code for the state, territory, or province of the Rate Center.

8. **IP CAPABLE OCN Click** here to enter text.
   Optional. The Code Holder has chosen to identify the OCN of a company to which IP traffic can be routed.

9. **FQDN OCN** Click here to enter text.
   Optional. An OCN that represents the service provider to which the FQDN belongs.

10. **FQDN Label** Click here to enter text.
    Optional. The FQDN Label is a 20-character alphanumeric field that identifies a specific 255 character FQDN in conjunction with the FQDN OCN.

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Thousands Block and Central Office Code Assignment Guidelines (TBCOCAG)

Central Office Code (NXX) Assignment Request - Part 2, Form 8
Revised: January 10, 2020

Following are Switch Homing Arrangement (SHA) data requirements for the iconectiv® BIRRDS database. Section 1.6.1 of the TBCOCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form.

New SHA (with same Common Language® Location Code [CLLI™ Code] as another SHA)
All items are required unless otherwise noted.

Data change	Items 1-4 are required, as are the appropriate element(s) to be changed.
Disconnect	Only items 1-4 should be provided.

1. **SWITCH** Click here to enter text.
   Eleven character CLLI™ Code that identifies the switching entity/POI. For CO Code assignments, this is the switching entity/POI that will originate/terminate calls from/to the assigned CO Code.

2. **SHA IND** Click here to enter text.
   Switch Homing Arrangement Indicator (01-99).

3. **STATUS** Click here to enter text.
   E = new entity/POI, M = change to supporting data, D = disconnect.

4. **EFF DATE** Click here to enter a date.
   Date a new switching entity/POI can be routed to, date supporting data change will be effective or, date of disconnect (mm/dd/yy).

5. **Homing Arrangements**
   As may be applicable, enter the appropriate eleven character SWITCH (e.g. CLLI™ Code) to which the switching entity/POI may home to for various feature group capabilities, signaling, etc.

ORIGINATING:		TERMINATING:		ADDITIONAL:	
FG B TDM:	Click here to enter text.	FG B TDM:	Click here to enter text.		
FG C TDM:	Click here to enter text.	FG C TDM:	Click here to enter text.		
FG D TDM:	Click here to enter text.	FG D TDM:	Click here to enter text.		
OS TDM:	Click here to enter text.	OS TDM:	Click here to enter text.		
FG B INT:	Click here to enter text.	FG B INT:	Click here to enter text.		
FG C INT:	Click here to enter text.	FG C INT:	Click here to enter text.	ISDN FS OFC:	Click here to enter text.
FG D INT:	Click here to enter text.	FG D INT:	Click here to enter text.		
LOCAL TDM:	Click here to enter text.	LOCAL TDM:	Click here to enter text.		
INTRA TDM:	Click here to enter text.	INTRA TDM:	Click here to enter text.		
CS DATA TDM:	Click here to enter text.	CS DATA TDM:	Click here to enter text.		

Thousands Block and Central Office Code Assignment Guidelines (TBCOCAG)

Central Office Code (NXX) Assignment Request - Part 2, Form 9
January 10, 2020

The following are Fully Qualified Domain Name (FQDN) data requirements for the iconectiv® TruOps Telecom Routing Administration (TRA) BIRRDS database. Section 1.7 of the TBCOCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form.

New Fully Qualified Domain Name (FQDN) All items are required unless otherwise noted.

Data change   Items 1-3 are required, as are the appropriate element(s) to be changed.

Disconnect   Only items 1-3 should be provided.

1. **FQDN** Click here to enter text.
   The hostname component of a Uniform Resource Identifier (URI). The total length of the hostname cannot exceed 255 characters. Each element between the periods can have a maximum length of 63 characters with the exception of the last period which can only have maximum length of 62 characters.

2. **STATUS** Click here to enter text.
   E = new FQDN, M = change to supporting data, D = disconnect.

3. **EFF Date** Click here to enter a date.
   Date a new FQDN can be routed to, date supporting data change will be effective or, date of disconnect (mm/dd/yy).

4. **FQDN OCN** Click here to enter text.
   Represents the service provider to which the FQDN belongs.

5. **FQDN LABEL** Click here to enter text.
   A 20-character alphanumeric field that identifies a specific 255 character FQDN in conjunction with the FQDN OCN.

6. **PERMISSIBLE OCNS** Click here to enter text.
   Optional. Identifies OCNs that have permission to reflect the FQDN on BIRRDS records (NXDs and LRNs) associated with the OCN. (Enter as comma-separated values.)

7. **PERMISSIBLE AOCNS** Click here to enter text.
   Optional. Identifies AOCNs that have permission to reflect the FQDN on BIRRDS records (NXDs and LRNs) associated with the AOCN, regardless of the OCN associated with the record.
   (Enter as comma-separated values.)

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Thousands Block and Central Office Code Assignment Guidelines (TBCOCAG)

Thousands-Block Routing and Rating Information - Part 2A
Revised: January 10, 2020

Following are Thousands Block Pooling assignment data requirements for the iconectiv®, LLC. BIRRDS database. [4] Section 1.2 of the TBCOCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form. This form must always be completed for newly assigned Thousands Block assignments.

New Block	All items are required unless otherwise noted.
Data change	Items 1-5 are required, as are the appropriate element(s) to be changed.
Disconnect	Only items 1-5 should be provided.

1. **NPA** Click here to enter text.
   Numbering Plan Area code (Area Code) in which the Central Office (CO) Code (NXX) has been assigned.

2. **NXX** Click here to enter text.
   CO Code (the assigned NXX).

3. **BLOCK ID** Click here to enter text.
   Thousands Block ID (first digit range, e.g., 3=3000-3999).

4. **STATUS** Click here to enter text.
   E = new code, M = change to supporting data, D = disconnect.

5. **EFF DATE** Click here to enter a date.
   Date that a new block can first be routed to, date that supporting data change will be effective or, date of disconnect.

6. **OCN** Click here to enter text.
   Operating Company Number (OCN).

7. **LOCALITY Click** here to enter text. **Locality in RATE Center:** Click here to enter text.
   (Maximum 10 characters each).

8. **LOC INDX** Click here to enter text.
   An index to distinguish cases of multiple same-name LOCALITY in the STATE, if applicable.

9. **LOC STATE/PROV** Click here to enter text.
   Two character code for the state, territory, or province of the LOCALITY. (Thousands Block Pooling applies only to the United States)

10. **PLNAME (10)** Click here to enter text.
    PLACENAME in same RATE CENTER as LOCALITY (max 10 char)[5]

11. **COCTYPE Click** here to enter text.

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[5] If greater than ten characters, an abbreviated (ten character) PLACENAME will be created and reported to meet requirements of some billing systems.

Identifies use of the block [Choose one - EOC, PLN, PMC, RCC, SIC, TST, SP1, SP2, VOI (for ODDBALL codes see Job Aid)].

12. **SSC Click** here to enter text.
Special Service Code – [Choose one (or valid combinations up to four) - A, B, C, I, J, M, N, O, R, S, T, V, W, X, Z, 8].

13. **TR DIG EO** NA
Must always be NA for Thousands Block Pooling Assignments.

14. **TR DIG AT** NA
Must always be NA for Thousands Block Pooling Assignments.

15. **NXXTYPE Click** here to enter text.
Identifies use of block (NXX) (Choose one of listed values provided in the TBCOCAG Part 2 Job Aid).

16. **BILL RAO Click** here to enter text.
Enter a valid Revenue Accounting Office code.

17. **BO Code Click** here to enter text.
Enter an appropriate Business Office code.

18. **CO Type Click** here to enter text.
Company Type – (Choose appropriate value 0-9 provided in the TBCOCAG Part 2 Job Aid).

19. **TIME ZONE** Click here to enter text.
0-none, 1-Guam/CNMI, 2-Hawaii/American Samoa, 3-Alaska, 4-Pacific, 5-Mountain, 6-Central, 7-Eastern, 8-Atlantic, 9-Newfoundland. (TBP assignments should be same as CO Code).

20. **IDDD** Click here to enter text.
International Direct Distance Dialing. [Y- if the CO Code (NXX) can place IDDD calls, N – if not].

21. **DIND** Click here to enter text.
Dialable Indicator. (Y - if directly dialable, N - if not).

22. **DAYLIGHT Click** here to enter text.
[Y – If the CO Code (NXX) serves an area that observes daylight saving, N – if not]. (TBP assignments should be same as CO Code).

23. **PORTABLE** Y
Must always be Y for Thousands Block Pooling Assignments.

24. **TEST LINE Information (optional for thousands blocks):**
TEST LINE Click here to enter text.
Four-digit test line number (i.e., NPA-NXX-xxxx).

RESPONSE Click here to enter text.
> Response from TEST LINE (A=Announcement, M=Milliwatt).

25. **SWITCH** Click here to enter text.
    Eleven character Common Language® Location Code (CLLI^{TM} Code) ⁶ that identifies the Switching
    Entity/Point of Interface (POI) (see Part 2, Form 2 if switch has not yet been established in BIRRDS).

26. **SHA IND** Click here to enter text.
    Switch Homing Arrangement (two digits) (multiple homing arrangements – see Part 2, Form 8 if SHA IND
    has not yet been established in BIRRDS for the given switch) (if not applicable, enter 00).

27. **IP CAPABLE (Y/N)** Click here to enter text.
    "Y" if the CO Code Holder has chosen to identify that any non-ported lines within the NPA-NXX can be routed via IP.

28. **FQDN OCN** Click here to enter text.
    Optional. An OCN that represents the service provider to which the FQDN belongs.

29. **FQDN Label** Click here to enter text.
    Optional. The FQDN Label is a 20-character alphanumeric field that identifies a specific 255
    character FQDN in conjunction with the FQDN OCN.

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LLC.

Appendix C   State/Territory/Province/Country Codes

State, Province, Island Code Table*		

Canada			United States		United States (cont'd)	
Alberta	AB		Alabama	AL	Montana	MT
British Columbia	BC		Alaska	AK	Nebraska	NE
Manitoba	MB		Arizona	AZ	Nevada	NV
New Brunswick	NB		Arkansas	AR	New Hampshire	NH
Newfoundland**	NF		California	CA	New Jersey	NJ
Northwest Territory	NT		Colorado	CO	New Mexico	NM
Nova Scotia	NS		Connecticut	CT	New York	NY
Nunavut Territory**	VU		Delaware	DE	North Carolina	NC
Ontario	ON		District of Columbia	DC	North Dakota	ND
Prince Edward Island	PE		Florida	FL	Ohio	OH
Quebec**	PQ		Georgia	GA	Oklahoma	OK
Saskatchewan	SK		Hawaii	HI	Oregon	OR
Yukon Territory	YT		Idaho	ID	Pennsylvania	PA
			Illinois	IL	Rhode Island	RI
Mexico	MX		Indiana	IN	South Carolina	SC
			Iowa	IA	South Dakota	SD
Islands	*TRA**	*ISO2*	Kansas	KS	Tennessee	TN
American Samoa****	AS	AS	Kentucky	KY	Texas	TX
Anguilla	AI	AI	Louisiana	LA	Utah	UT
Antigua	AN	AG	Maine	ME	Vermont	VT
Bahamas	BA	BS	Maryland	MD	Virginia	VA
Barbados	BD	BB	Massachusetts	MA	Washington	WA
Bermuda	BM	BM	Michigan	MI	West Virginia	WV
British Virgin Islands	BV	VG	Minnesota	MN	Wisconsin	WI
Cayman Islands	CQ	KY	Mississippi	MS	Wyoming	WY
CNMI (N. Marianas)***	NN	MP	Missouri	MO		
Dominica	DM	DM				
Dominican Republic	DR	DO				
Grenada	GN	GD				
Guam	GU	GU				
Jamaica	JM	JM				
Montserrat	RT	MS				
Puerto Rico	PR	PR				
St. Kitts & Nevis	KA	KN				
St. Lucia	SA	LC				
St. Maarten	SF	SX				
St. Vincent	ZF	VC				
Trinidad & Tobago	TR	TT				
Turks & Caicos	TC	TC				
US Virgin Islands	VI	VI				

*   Applies to the list of codes used in TRA products but may be qualified further in field definitions and/or the following notes
**   Canada Post codes are: Newfoundland/Labrador, NL; Nunavut Territory, NU; Quebec, QC (Canada Post abbreviations are used for some contact addresses). Canada Post codes also currently correlate to ISO 3166-2 codes.
***   USPS code is MP
****   AS is the USPS code; AM is the Common Language code (used for CLLIs only)
Note: For "Islands", their ISO2 value is noted above for reference
Note: Codes are based on Common Language assignments and may not correlate to other sources (e.g. postal, ISO2, etc.)
Note: Mexico pertains only to data in the TPM Data Source