Appendix A.   Data Submission Database

This Appendix describes the State Broadband Data Development Program Notice of Funding Availability data to be submitted by each Awardee. Section 1 of this Appendix lists the NOFA described data sets and valid value lists. Section 2 of this Appendix documents the transfer data model format the Awardees are submitting data to the Government.

For the purposes of this Contract, only Wireline, Wireless, Technology and Speed data are subject to the comparative analysis.

Address NOFA

RECORD FORMAT FOR ADDRESS DATA FOR EACH PROVIDER

Field	Description	Type	Example
Provider Identification Data:			
Provider Name	Provider Name	Text	ABC Co.
DBA Name	"Doing-business-as" name	Text	Superfone, Inc.
FRN	Provider FCC Registration Number	Integer	8402202.
ID	Sequential record number	Integer	1.
End User location/Service Data:			
End-User Address	Complete address	Text	1401 Constitution Ave., NW., Washington, DC 20230.
End-User Building Number	Building number	Text	1401.
End-User Prefix Direction	Prefix direction	Text.	
End-User Street	Street name	Text	Constitution.
End-User Street Type	Street type	Text	Ave.
End-User Suffix Direction	Suffix direction	Text	NW.
End-User City	City	Text	Washington.
End-User State Abbreviation.	Two-letter State postal abbreviation	Text	DC.
End-User ZIP Code	5-digit ZIP code (with leading zeros)	Text	20230.
End-User ZIP Plus 4	4-digit add-on code (with leading zeros)	Text	0005.
Category of End User	Category of End User Served at Address (see details below for codes).	Integer	3.
Technology of Transmission.	Category of technology available for the provision of service at the address (see details below for codes).	Integer	50.
Maximum Advertised Downstream Speed.	Speed tier code for the maximum advertised downstream speed available at the address (see details below for codes).	Integer	8.
Maximum Advertised Upstream Speed.	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see details below for codes).	Integer	8.
Typical Downstream Speed.	Speed tier code for the downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see details below for codes).	Integer	8
Typical Upstream Speed	Speed tier code for the upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see details below for codes).	Integer	8.

End User Codes

END USER CODES

End user category code	End user category	Description
1	Residential	Address denotes a residential living unit, individual living unit in institutional settings such as college dormitories and nursing homes and other locations designed primarily for residential use at which broadband service is available.
2	Governmental	Address denotes a State or local government location at which broadband service is available.
3	Small Business	Address denotes the location of a small business.
4	Medium or Large Enterprise	Address denotes the location of a medium or large enterprise.
5	Other	Address denotes a location not meeting any of the above descriptions.

Technology Transmission Codes

TECHNOLOGY OF TRANSMISSION CODES

Technology code	Description	Details
10	Asymmetric xDSL.	
20	Symmetric xDSL.	
30	Other Copper Wireline	All copper-wire based technologies other than xDSL (Ethernet over copper and T–1 are examples).
40	Cable Modem—DOCSIS 3.0.	
41	Cable Modem—Other.	
50	Optical Carrier/Fiber to the End User	Fiber to the home or business end user (does not include "fiber to the curb").
60	Satellite.	
70	Terrestrial Fixed Wireless—Unlicensed.	
71	Terrestrial Fixed Wireless—Licensed.	
80	Terrestrial Mobile Wireless.	
90	Electric Power Line.	
0	All Other	Any specific technology not listed above.

Speed Tier Codes

SPEED TIER CODES

Upload speed tier	Download speed tier	Description
1		Less than or equal to 200 kbps.
2		Greater than 200 kbps and less than 768 kbps.
3	3	Greater than or equal to 768 kbps and less than 1.5 mbps.
4	4	Greater than or equal to 1.5 mbps and less than 3 mbps.
5	5	Greater than or equal to 3 mbps and less than 6 mbps.
6	6	Greater than or equal to 6 mbps and less than 10 mbps.
7	7	Greater than or equal to 10 mbps and less than 25 mbps.
8	8	Greater than or equal to 25 mbps and less than 50 mbps.
9	9	Greater than or equal to 50 mbps and less than 100 mbps.
10	10	Greater than or equal to 100 mbps and less than 1 gbps.
11	11	Greater than or equal to 1 gbps.

Wireless

RECORD FORMAT FOR AVAILABILITY AREA DATA FOR EACH PROVIDER—USE ONLY IN CONNECTION WITH WIRELESS SERVICES NOT PROVIDED TO A SPECIFIC ADDRESS

Field	Description	Type	Example
Provider Name	Provider Name	Text	ABC Co.
DBA Name	"Doing-business-as" name	Text	Superfone, Inc.
FRN	Provider FCC Registration Number	Integer	8402202.
Technology of Transmission	Category of technology for the provision of service (see details following Part 1(a) for codes).	Integer	41.
Spectrum Used	If technology of transmission is wireless, is Cellular spectrum (824–849 MHz; 862–869) used to provide service (Y/N)?	Text	Y.
Spectrum Used	If technology of transmission is wireless, is 700 MHz spectrum (698–758 MHz; 775–788 MHz; 805–806 MHz) used to provide service (Y/N)?	Text	Y.
Spectrum Used	If technology of transmission is wireless, is Broadband Personal Communications Services spectrum (1850–1915 MHz; 1930–1995) used to provide service (Y/N)?	Text	Y.
Spectrum Used	If technology of transmission is wireless, is Advanced Wireless Services spectrum (1710–1755 MHz; 2100–2155) used to provide service (Y/N)?	Text	N.
Spectrum Used	If technology of transmission is wireless, is Broadband Radio Service/Educational Broadband Service spectrum (2496–2690 MHz) used to provide service (Y/N)?	Text	N.
Spectrum Used	If technology of transmission is wireless, is Unlicensed (including broadcast television "white spaces") spectrum used to provide service (Y/N)?	Text	N.
Spectrum Used	If technology of transmission is wireless, but the spectrum used to provide service is not listed above, please identify as one of the following: Specialized Mobile Radio Service (SMR) (817–824 MHz; 862–869 MHz; 896–901 MHz; 935–940 MHz), Wireless Communications Service (WCS) spectrum (2305–2320 MHz; 2345–2360 MHz), 3650–3700 MHz, Satellite (L-band, Big LEO, Little LEO, 2 GHz).	Text	SMR.
Maximum Advertised Downstream Speed	Speed tier code for the maximum advertised downstream speed available (see details following Part 1(a) for codes).	Integer	8.
Maximum Advertised Upstream Speed	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available (see details following Part 1(a) for codes).	Integer	8.
Typical Downstream Speed	Speed tier code for the downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see details following Part 1(a) for codes).	Integer	8.
Typical Upstream Speed	Speed tier code for the upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see details following Part 1(a) for codes).	Integer	8.

Last Mile

RECORD FORMAT FOR LAST-MILE CONNECTION POINTS DATA FOR EACH PROVIDER

Field	Description	Type	Example
Provider Name	Provider Name	Text	ABC Co.
DBA Name	"Doing-business-as" name	Text	Superfone, Inc.
FRN	FCC Registration Number	Integer	8402202.
Technology of Transmission	Category of technology for the provision of service (see details following Part 1(a) for codes).	Integer	10.
Serving Facility Backhaul Capacity	Upstream capacity of the serving facility (see details below).	Integer	1.
Serving Facility Backhaul Type	Type of upstream transport facility (1=Fiber; 2=Copper; 3=Hybrid Fiber Coax (HFC); 4=Wireless).	Integer	1.
End-users served	Count of end users served from this point of aggregation.	Integer	24.
Latitude	Latitude in decimal degrees of facility	Float	38.884560.
Longitude	Longitude in decimal degrees of facility	Float	−77.028123.
Elevation	Elevation relative to grade to the nearest foot (positive integers indicate above grade, negative below grade).	Integer	2.

Serving Facility Code

SERVING FACILITY CODES

Data rate code	Data rate
1	Less than 1.5 mbps.
2	Greater than or equal to 1.5 mbps and less than 3 mbps.
3	Greater than or equal to 3 mbps and less than 6 mbps.
4	Greater than or equal to 6 mbps and less than 10 mbps.
5	Greater than or equal to 10 mbps and less than 25 mbps.
6	Greater than or equal to 25 mbps and less than 50 mbps.
7	Greater than or equal to 50 mbps and less than 100 mbps.
8	Greater than or equal to 100 mbps and less than 1 gbps.
9	Greater than or equal to 1 gbps.

Middle Mile

RECORD FORMAT FOR MIDDLE-MILE AND INTERNET BACKHAUL CONNECTION POINTS DATA FOR EACH PROVIDER

Field	Description	Type	Example
Provider Name	Provider Name	Text	ABC Co.
DBA Name	Doing-business-as name	Text	Superfone, Inc.
FRN	FCC Registration Number	Integer	8402202.
Ownership	Is the facility owned (0) or leased (1)?	Integer	0.
Serving Facility Capacity.	Serving capacity of transport facility (see details below)	Integer	1.
Serving Facility Type	Type of transport facility (1=Fiber; 2=Copper; 3=Hybrid Fiber Coax (HFC); 4=Wireless).	Integer	1.
Latitude	Latitude in decimal degrees	Float	38.884560.
Longitude	Longitude in decimal degrees	Float	−77.028123.
Elevation	Elevation relative to grade to the nearest foot (positive integers indicate above grade, negative below grade).	Integer	−10.

Middle Mile Serving Facility Code

SERVING FACILITY CODES

Data rate code	Interconnection point data rate
1	Multiple T1s and less than 40 mbps.
2	Greater than 40 mbps and less than 150 mbps.
3	Greater than 150 mbps and less than 600 mbps.
4	Greater than or equal to 600 mbps and less than 2.4 gbps.
5	Greater than or equal to 2.4 gbps and less than 10 gbps.
6	Greater than or equal to 10 gbps.

Community Anchor Institutions

RECORD FORMAT FOR COMMUNITY ANCHOR INSTITUTIONS

Field	Description	Type	Example
Name	Institution Name	Text	John Smith Community Center.
Address	Complete address of institution	Text	1401 Constitution Ave., NW., Washington DC 20230
Latitude	Latitude in decimal degrees of institution	Float	38.884560.
Longitude	Longitude in decimal degrees of institution	Float	−77.028123.
Category	Category of institution (see details below for category codes)	Integer	2.
Broadband Service?	Does institution subscribe to broadband service at location?	Text	Y.
Technology of Transmission.	Category of technology used for the provision of broadband service to the institution (see details following Part 1(a) for codes).	Integer	10.
Advertised Downstream Service Speed.	Speed tier code for the downstream advertised data transfer throughput rate associated with the service that the institution receives (see details following Part 1(a) for codes).	Integer	8.
Advertised Upstream Service Speed.	Speed tier code for the upstream data transfer throughput rate associated with the service that the institution receives (see details following Part 1(a) for codes).	Integer	8.

Community Anchor Institution Category Codes

COMMUNITY ANCHOR INSTITUTION CATEGORY CODES

Category code	Category
1	School—K through 12.
2	Library.
3	Medical/healthcare.
4	Public safety.
5	University, college, other post-secondary.
6	Other community support—government.
7	Other community support—non-governmental.

Draft SBDD Data Transfer Model

Broadband Reporting ESRI File Geodatabase (Ver. 2.x, 2010 04 07)
Feature Class and Domain Detailed Information

NOTE: This is a draft data model, and subject to modifications. A blank copy of the file geodatabase will be made available to the Contractor.

Introduction
The proposed NSGIC Broadband Reporting Geodatabase (Ver. 2, 2010 04 07) has been issued in the form of an ArcGIS 9.3 File Geodatabase and an image file documenting the essential feature class and domain table information. This document expands on some feature-class-specific and field-specific information. In some cases, certain remaining issues or questions are presented.

Feature Class Names
All feature classes involved with reporting start with "**BB_**". While users are free to add any feature classes they wish in the process of collecting and analyzing data, please do not use "BB_" at the start of added feature class names.

Feature classes involved with reporting service-related data start with "**BB_Service_**". Those that are involved with reporting infrastructure-related data start with "**BB_ConnectionPoint_**". Appended to this is a short term descriptive of the data that is tied to the original NOFA, or its Clarification, submittal (deliverable).

Feature Class Listing by Submittal

The following list of names is given by NOFA Technical Appendix numbering and description.

1(a) Availability by Service Address – Service Associated with Specific Addresses: **BB_Service_Address**

1(a) Clarification Alternative: report by Census Blocks two square miles or less: **BB_Service_CensusBlock**

1(a) Clarification Alternative: report by Road Segment for Census Blocks larger than two square miles: **BB_Service_RoadSegment**

1(a) Clarification Alternative: report Maximum Advertised Downstream / Upstream Speed by MSA / RSA: **BB_Service_Overview**

1(b) Availability by Shapefile – Wireless Services not Provided to a Specific Address: **BB_Service_Wireless**

2(a) Average Revenue per End User and Weighted Average Speed : **BB_Service_Overview**

3(a) Last-Mile Connection Points: **BB_ConnectionPoint_LastMile**

3(b) Middle-Mile and Backbone Interconnection Points: **BB_ConnectionPoint_MiddleMile**

4. Community Anchor Institutions: **BB_Service_CAInstitutions**

For all feature classes, lightly shaded fields are default (and required) fields for ESRI geodatabases. Field type "String" is equivalent to "Text".

Domains, listed alphabetically

Domain information is listed separately at the end (in alphabetical order). Each domain is cross-referenced to the tables that use it.

Backhaul Technology Type
Community Anchor Institution
Download Speed Tier
End User
Geographic Unit Type
Last Mile Backhaul Capacity
Middle Mile Backhaul Capacity
Owned or Leased
Spectrum Used
Technology of Transmission
Upload Speed Tier
Yes or No

BB_Service_Address: Geometry: Point

Field Name	Type	Width	Definition	Example	Notes
ObjectID	OID	4	Internal feature number		
SHAPE	Geometry	0	Feature geometry		
ProvName	String	100	Provider name	ABC Co.	Parent (holding) company
DBAName	String	100	"Doing-business-as" name	Superfone, Inc.	Company that bills for provided service
FRN	String	12	Provider FCC Registration Number	0008-4022-02	Leading zeros required; hyphen's optional
ID	String	40	State-specific assigned feature ID (optional)	ABC001	To be used, if desired, as persistent feature ID
Address	String	150	Complete address	793 E Main St Tucson AZ 85705-0001	Concatenated, space-separated address elements
BldgNbr	String	10	Building number	793	
PreDir	String	2	Prefix direction	E	
StreetName	String	50	Street name	Main	
StreetType	String	10	Street type	St	
SufDir	String	2	Suffix direction		
City	String	50	City	Tucson	
StateAbbr	String	2	Two-letter state postal abbreviation	AZ	
Zip5	String	5	5-digit ZIP code (with leading zeros)	85705	
Zip4	String	4	4-digit add-on code (with leading zeros)	0001	
EndUserCat	String	2	Category of End User Served at address	3	
TransTech	String	2	Technology of transmission of received service	50	Domain: Technology of Transmission
MaxAdvDown	String	2	Maximum advertised downstream data transfer rate available at address	8	Domain: Download Speed Tier
MaxAdvUp	String	2	Maximum advertised upstream data transfer rate available at address	5	Domain: Upload Speed Tier
TypicDown	String	2	Typical consistent downstream data transfer rate during heavy network usage	7	Domain: Download Speed Tier
TypicUp	String	2	Typical consistent upstream data transfer rate during heavy network usage	4	Domain: Upload Speed Tier

Additional Notes: DBAName should be company that bills for service. ProvName may be the same as DBAName; if applicable, it is the company that owns the DBAName or is the actual legal company name.

BB_Service_CensusBlock: Geometry: Polygon

Field Name	Type	Width	Definition	Example	Notes
ObjectID	OID	4	Internal feature number		
SHAPE	Geometry	0	Feature geometry		
ProvName	String	100	Provider name	ABC Co.	Parent company
DBAName	String	100	"Doing-business-as" name	Superfone, Inc.	Company that bills for provided service
FRN	String	12	Provider FCC Registration Number	0008-4022-02	Leading zeros required; hyphen's optional
ID	String	40	State-specific assigned feature ID (optional)	ABC001	To be used, if desired, as persistent feature ID
StateFIPS	String	2	State ANSI (or FIPS) identifier (ss)	04	Leading zeros required
CountyFIPS	String	3	County ANSI (or FIPS) identifier (cc)	023	Leading zeros required
Tract	String	6	Census tract (tttt.tt)	102203	Period is implied, do not include
Block	String	4	Census block (gnnn)	1003	'g' is the block group number
BlockID	String	15	Full Census Block ID	040231022031003	Concatenated census block elements
CBYear	String	4	Census geography year	2009	Census 2009 Suffix ID dissolved, merged blocks
TransTech	String	2	Technology of transmission of received service	50	Domain: Technology of Transmission
MaxAdvDown	String	2	Maximum advertised downstream data transfer rate available in census block	8	Domain: Download Speed Tier
MaxAdvUp	String	2	Maximum advertised upstream data transfer rate available in census block	5	Domain: Upload Speed Tier
TypicDown	String	2	Typical consistent downstream data transfer rate during heavy network usage	7	Domain: Download Speed Tier
TypicUp	String	2	Typical consistent upstream data transfer rate during heavy network usage	4	Domain: Upload Speed Tier
Shape_Length	Double	8	Polygon perimeter length in internal units		
Shape_Area	Double	8	Polygon perimeter length in internal units		

Additional Notes: Census 2009 geography is being used, but blocks are merged to remove Suffix ID (by dissolve). At this time, the more detailed information is not required, but may be added in future submittals.

BB_Service_RoadSegment: Geometry: Polyline

Field Name	Type	Width	Definition	Example	Notes
ObjectID	OID	4	Internal feature number		
SHAPE	Geometry	0	Feature geometry		
ProvName	String	100	Provider name	ABC Co.	Parent (holding) company
DBAName	String	100	"Doing-business-as" name	Superfone, Inc.	Company that bills for provided service
FRN	String	12	Provider FCC Registration Number	0008-4022-02	Leading zeros required; hyphen's optional
ID	String	40	State-specific assigned feature ID (optional)	ABC001	To be used, if desired, as persistent feature ID
AddMin	String	10	Starting segment address number	700	
AddMax	String	10	Ending segment address number	799	
PreDir	String	2	Prefix direction	E	
StreetName	String	50	Street name	Main	
StreetType	String	10	Street type	St	
SufDir	String	2	Suffix direction		
City	String	50	City	Tucson	
StateAbbr	String	2	Two-letter state postal abbreviation	AZ	
Zip5	String	5	5-digit ZIP code (with leading zeros)	85705	
Zip4	String	4	4-digit add-on code (with leading zeros)	0001	
TransTech	String	2	Technology of transmission of received service	50	Domain: Technology of Transmission
MaxAdvDown	String	2	Maximum advertised downstream data transfer rate available on road segment	8	Domain: Download Speed Tier
MaxAdvUp	String	2	Maximum advertised upstream data transfer rate available on road segment	5	Domain: Upload Speed Tier
TypicDown	String	2	Typical consistent downstream data transfer rate during heavy network usage	7	Domain: Download Speed Tier
TypicUp	String	2	Typical consistent upstream data transfer rate during heavy network usage	4	Domain: Upload Speed Tier
Shape_Length	Double	8	Polyline length in internal units		

Additional Notes: If there are different City, StateAbbr, Zip5 and / or Zip4 values for different sides of the road segment, either value may be reported. If service is provided to only a portion of the road segment, for this submittal treat as service to entire road segment (do not split road segments to reflect service extent).

Enclosure (4) – Appendices for National Broadband Map Data Quality Assessment SOW

BB_Service_Wireless: Geometry: Polygon

Field Name	Type	Width	Definition	Example	Notes
ObjectID	OID	4	Internal feature number		
SHAPE	Geometry	0	Feature geometry		
ProvName	String	100	Provider name	ABC Co.	Parent company
DBAName	String	100	"Doing-business-as" name	Superfone, Inc.	Company that bills for provided service
FRN	String	12	Provider FCC Registration Number	0008-4022-02	Leading zeros required; hyphen's optional
ID	String	40	State-specific assigned feature ID (optional)	ABC001	To be used, if desired, as persistent feature ID
TransTech	String	2	Technology of transmission of received service	80	Domain: Technology of Transmission
Spectrum	String	1	Spectrum used to provide service	1	Domain: Spectrum Used
MaxAdvDown	String	2	Maximum advertised downstream data transfer rate available in denoted service area	4	Domain: Download Speed Tier
MaxAdvUp	String	2	Maximum advertised upstream data transfer rate available in denoted service area	3	Domain: Upload Speed Tier
TypicDown	String	2	Typical consistent downstream data transfer rate during heavy network usage	4	Domain: Download Speed Tier
TypicUp	String	2	Typical consistent upstream data transfer rate during heavy network usage	3	Domain: Upload Speed Tier
Shape_Length	Double	8	Polygon perimeter length in internal units		
Shape_Area	Double	8	Polygon perimeter length in internal units		

Additional Notes: Since only one spectrum can be reported per polygon, providers that offer more than one type of service must have a polygon for each service. In some areas this will lead to overlapping polygons. By "service" is meant any unique combinations of TransTech and Spectrum. There is a relationship between TransTech and Spectrum; for example, if TransTech is "60" (Satellite), then Spectrum cannot be "1" (Cellular). A list of permissible combinations will be forthcoming.

BB_Service_Overview: Geometry: Polygon

Field Name	Type	Width	Definition	Example	Notes
ObjectID	OID	4	Internal feature number		
SHAPE	Geometry	0	Feature geometry		
ProvName	String	100	Provider name	ABC Co.	Parent company
DBAName	String	100	"Doing-business-as" name	Superfone, Inc.	Company that bills for provided service
FRN	String	12	Provider FCC Registration Number	0008-4022-02	Leading zeros required; hyphen's optional
ID	String	40	State-specific assigned feature ID (optional)	ABC001	To be used, if desired, as persistent feature ID
GeogUnit	String	3	Geography being used to provide overview	MSA	Domain: Geographic Unit Type
GeogUnitID	String	5	Unique ID of this feature	46060	Leading zeros are required
TransTech	String	2	Technology of transmission of received service	80	Domain: Technology of Transmission
MaxAdvDown	String	2	Maximum advertised downstream data transfer rate available in geographic unit	4	Domain: Download Speed Tier
MaxAdvUp	String	2	Maximum advertised upstream data transfer rate available in geographic unit	3	Domain: Upload Speed Tier
ARPU	Double	8	Average monthly revenue per residential user for the geographic overview unit (in dollars)	35.72	Not required per Clarification; methodology for calculation is given in NOFA Technical Appendix
SWNomSpeed	Double	8	Subscriber weighted nominal speed for the geographic overview unit (in kbps)	2357.45	Methodology for calculation is given in NOFA Technical Appendix
Shape_Length	Double	8	Polygon perimeter length in internal units		
Shape_Area	Double	8	Polygon perimeter length in internal units		

Additional Notes: This feature class allows for reporting summary (overview) information by one of three different geographies: Metropolitan / Micropolitan Statistical Areas (MSAs) as defined by the OBM, Counties (StateFIPS + CountyFIPS, e.g., "04013") as defined by the Census Bureau, or Cellular Marketing Areas (CMAs) as defined by the FCC. Further guidance on which geography is preferred will be issued by the NTIA. CMAs are currently numbered from 1 to 734; if used for overview please report ID left padded with zeros (e.g., "00529").

BB_ConnectionPoint_LastMile: Geometry: Point

Field Name	Type	Width	Definition	Example	Notes
ObjectID	OID	4	Internal feature number		
SHAPE	Geometry	0	Feature geometry		
ProvName	String	100	Provider name	ABC Co.	Parent (holding) company
DBAName	String	100	"Doing-business-as" name	Superfone, Inc.	Company that bills for provided service
FRN	String	12	Provider FCC Registration Number	0008-4022-02	Leading zeros required; hyphen's optional
ID	String	40	State-specific assigned feature ID (optional)	ABC001	To be used, if desired, as persistent feature ID
TransTech	String	2	Technology of transmission of provided service	10	Domain: Technology of Transmission
BHCapLastM	String	1	Last mile service facility back haul capacity	1	Domain: Last Mile Backhaul Capacity
BHTechType	String	1	Last mile service facility back haul technology	5	Domain: Backhaul Technology Type
NbrServed	Long Integer	4	Number of end users served from this point of aggregation	24	Number of potential end users, not current subscribers
Latitude	Double	8	Latitude of service facility in decimal degrees	32.884560	
Longitude	Double	8	Longitude of service facility in decimal degrees	-112.028123	Include negative sign for west of Greenwich
ElevFeet	Long Integer	4	Elevation relative to grade to the nearest foot	0	

Additional Notes:

BB_ConnectionPoint_MiddleMile: Geometry: Point

Field Name	Type	Width	Definition	Example	Notes
ObjectID	OID	4	Internal feature number		
SHAPE	Geometry	0	Feature geometry		
ProvName	String	100	Provider name	ABC Co.	Parent (holding) company
DBAName	String	100	"Doing-business-as" name	Superfone, Inc.	Company that bills for provided service
FRN	String	12	Provider FCC Registration Number	0008-4022-02	Leading zeros required; hyphen's optional
ID	String	40	State-specific assigned feature ID (optional)	ABC001	To be used, if desired, as persistent feature ID
Ownership	String	1	Serving facility owned ('0') or leased ('1')	1	Domain: Owned or Leased
BHCapMidM	String	1	Middle mile service facility back haul capacity	1	Domain: Middle Mile Backhaul Capacity
BHTechType	String	1	Middle mile service facility back haul technology	5	Domain: Backhaul Technology Type
Latitude	Double	8	Latitude of service facility in decimal degrees	32.884560	
Longitude	Double	8	Longitude of service facility in decimal degrees	-112.028123	Include negative sign for west of Greenwich
ElevFeet	Long Integer	4	Elevation relative to grade to the nearest foot	0	

Additional Notes:

BB_Service_CAInstitutions: Geometry: Point

Field Name	Type	Width	Definition	Example	Notes
ObjectID	OID	4	Internal feature number		
SHAPE	Geometry	0	Feature geometry		
Name	String	100	Institution name	John Smith Community Center	
ID	String	40	State-specific assigned feature ID (optional)	LIB_0732	To be used, if desired, as persistent feature ID
Address	String	150	Complete address of institution	1401 Constitution Ave Washington DC 20230	Address, space-separated
Latitude	Double	8	Latitude of institution in decimal degrees	32.884560	
Longitude	Double	8	Longitude of institution in decimal degrees	-112.028123	Include negative sign for west of Greenwich
CAICat	String	1	Category of institution	2	Domain: Community Anchor Institution
BBService	String	1	Broadband subscribed to at location (Y/N)	Y	Domain: Yes or No
TransTech	String	2	Technology of transmission of received service	50	Domain: Technology of Transmission
MaxAdvDown	String	2	Maximum advertised downstream data transfer rate available at address	8	Domain: Download Speed Tier
MaxAdvUp	String	2	Maximum advertised upstream data transfer rate available at address	8	Domain: Upload Speed Tier

Additional Notes: None at this time.

Domains

The following domains are taken from the proposed NSGIC Data Model ver. 2. The Domain "Spectrum Used" is from the original NSGIC Data Model. Domains are listed alphabetically by **Domain Name** shown in bold.

Backhaul Technology Type: Coded value domain

Serving Facility Backhaul Type codes. Domain implemented as type coded, field type string (text), 1 character wide:

Code	Description
1	Fiber
2	Copper
3	Hybrid Fiber Coax (HFC)
4	Wireless

Used by: BB_ConnectionPoint_LastMile
                BB_ConnectionPoint_MiddleMile

Community Anchor Institution: Coded value domain

Community Anchor Institution Category codes. Domain implemented as type coded, field type string (text), 1 character wide:

Code	Description
1	School – K through 12
2	Library
3	Medical / healthcare
4	Public safety
5	University, college, other post-secondary
6	Other community support – governmental
7	Other community support – non-governmental

Used by: BB_Service_CAInstitutions

Download Speed Tier: Coded value domain

Download Speed Tier codes. Domain implemented as type coded, field type string (text), 2 characters wide (values "1" and "2" are omitted as they are outside the range of data to be reported):

Code	Description
3	Greater than or equal to 768 kbps and less than 1.5 mpbs
4	Greater than or equal to 1.5 mbps and less than 3 mpbs
5	Greater than or equal to 3 mbps and less than 6 mpbs
6	Greater than or equal to 6 mbps and less than 10 mpbs
7	Greater than or equal to 10 mbps and less than 25 mpbs
8	Greater than or equal to 25 mbps and less than 50 mpbs
9	Greater than or equal to 50 mbps and less than 100 mpbs
10	Greater than or equal to 100 mbps and less than 1 gpbs
11	Greater than or equal to 1 gbps

Used by: BB_Service_Address
                    BB_Service_CensusBlock
                    BB_Service_RoadSegment
                    BB_Service_Wireless
                    BB_Service_Overview
                    BB_Service_CAInstitutions

End User: Coded value domain
Category of End User Served at Address codes. Domain implemented as type coded, field type string (text), 1 character wide:

Code	Description
1	Residential
2	Governmental
3	Small Business
4	Medium or Large Enterprise
5	Other

Used by: BB_Service_Address

Geographic Unit Type: Coded value domain

Overview Geographic Unit Type codes. Domain implemented as type coded, field type string (text), 3 characters wide:

Code	Description
CMA	Cellular Market Area (FCC assigned)
CO	County (StateFIPS + CountyFIPS; Census assigned)
MSA	Metropolitan / Micropolitan Statistical Areas (OBM assigned)

Used by: BB_Service_Overview

Last Mile Backhaul Capacity: Coded value domain

Last Mile Serving Facility Backhaul Capacity codes. Domain implemented as type coded, field type string (text), 1 character wide:

Code	Description
1	Less than 1.5 mbps
2	Greater than or equal to 1.5 mbps and less than 3 mbps
3	Greater than or equal to 3 mbps and less than 6 mbps
4	Greater than or equal to 6 mbps and less than 10 mbps
5	Greater than or equal to 10 mbps and less than 25 mbps
6	Greater than or equal to 25 mbps and less than 50 mbps
7	Greater than or equal to 50 mbps and less than 100 mbps
8	Greater than or equal to 100 mbps and less than 1 gbps
9	Greater than or equal to 1 gbps

Used by: BB_ConnectionPoint_LastMile

Middle Mile Backhaul Capacity: Coded value domain

Middle Mile or Backbone Serving Facility Backhaul Capacity codes. Domain implemented as type coded, field type string (text), 1 character wide:

Code	Description
1	Multiple T1s and less than 40 mbps
2	Greater than or equal to 40 mbps and less than 150 mbps
3	Greater than or equal to 150 mbps and less than 600 mbps
4	Greater than or equal to 600 mbps and less than 2.4 gbps
5	Greater than or equal to 2.4 gbps and less than 10 gbps
6	Greater than or equal to 10 gbps

Used by: BB_ConnectionPoint_MiddleMile

Owned or Leased: Coded value domain

Facility Owned or Leased codes. Domain implemented as type coded, field type string (text), 1 character wide:

Code	Description
0	Owned
1	Leased

Used by: BB_ConnectionPoint_MiddleMile

Spectrum Used: Coded value domain

Spectrum Used codes (developed from NOFA Technical Appendix). Domain implemented as type coded, field type string (text), 1 character wide:

Code	Description
1	**Cellular spectrum** (824-849 MHz; 862-869 MHz)
2	**700 MHz spectrum** (698-758 MHz; 775-788 MHz; 805-806 MHz)
3	**Broadband Personal Communications Services spectrum** (1850-1915 MHz; 1930-1955 MHz)
4	**Advanced Wireless Services spectrum** (1710-1755 MHz; 2100-2155 MHz)
5	**Broadband Radio Service / Educational Broadband Service spectrum** (2496-2690 MHz)
6	**Unlicensed spectrum** (including broadcast television "white space")
7	**Specialized Mobile Radio Service (SMR)** (817-814 MHz; 862-869 MHz; 896-901 MHZ)
8	**Wireless Communications Services (WCS) spectrum** (2305-2320 MHz; 2345-2360 MHz; 3650-3700 MHz)
9	**Satellite** (L-band, Big LEO, Little LEO, 2 GHz)

Used by: BB_Service_Wireless

Technology of Transmission: Coded value domain

Technology of Transmission Category codes. Domain implemented as type coded, field type string (text), 2 characters wide:

Code	Description
10	Asymmetric xDSL
20	Symmetric xDSL
30	Other Copper Wireline
40	Cable Modem – DOCSIS 3.0
41	Cable Modem – Other
50	Optical Carrier / Fiber to the End User
60	Satellite
70	Terrestrial Fixed Wireless – Unlicensed
71	Terrestrial Fixed Wireless – Licensed
80	Terrestrial Mobile Wireless – Licensed
90	Electric Power Line
0	All Other

Used by: BB_Service_Address
             BB_Service_CensusBlock
             BB_Service_RoadSegment
             BB_Service_Wireless
             BB_Service_Overview
             BB_ConnectionPoint_LastMile
             BB_Service_CAInstitutions

Upload Speed Tier: Coded value domain

Upload Speed Tier codes. Domain implemented as type coded, field type string (text), 2 characters wide:

Code	Description
1	Less than or equal to 200 kbps
2	Greater than 200 kbps and less than 768 kpbs
3	Greater than or equal to 768 kbps and less than 1.5 mpbs
4	Greater than or equal to 1.5 mbps and less than 3 mpbs
5	Greater than or equal to 3 mbps and less than 6 mpbs
6	Greater than or equal to 6 mbps and less than 10 mpbs
7	Greater than or equal to 10 mbps and less than 25 mpbs
8	Greater than or equal to 25 mbps and less than 50 mpbs
9	Greater than or equal to 50 mbps and less than 100 mpbs
10	Greater than or equal to 100 mbps and less than 1 gpbs
11	Greater than or equal to 1 gbps

Used by: BB_Service_Address
BB_Service_CensusBlock
BB_Service_RoadSegment
BB_Service_Wireless
BB_Service_Overview
BB_Service_CAInstitutions

Yes or No: Coded value domain

Yes or No codes. Domain implemented as type coded, field type string (text), 1 character wide:

Code	Description
Y	Yes
N	No

Used by: BB_Service_CAInstitutions

Appendix B.   Sample Data Package

Worksheet #1 - DataPackage[2]

	A	B	C	D	E
	E36	▼	*fx*		
1	Contact				
2		**Name**	**Enter Values in this column**	**Description**	
3		Submittee Grantee		State/Territory	
4		Primary Contact Name		Enter the Primary Contact's Name	
5		Primary Contact email		Enter the Primary Contact's Phone number	
6		Primary Contact phone		Enter the Primary Contact's email	
7					
8		Technical Contact Name		Enter the Technical Contact's Name	
9		Technical Contact email		Enter the Technical Contact's Phone number	
10		Technical Contact phone		Enter the Technical Contact's emai	
11					
12		url for State Broadband information			
13		url for State Broabdband map			
14					
15		Date of submission		Enter the date of submission	
16					
17	Files:				**Comment**
18		FCC Approved File Geodatabase		Yes/No	e.g. BB_Map_FGB_XX.ZIP where the file based geodatabase is ZIP'd
19					
20		Block Availability Text File		Yes/No	e.g. "census_block_availability_XX.txt where XX is the two-letter postal abbreviation for the State or territory.
21		Address text file		Yes/No	e.g. "address_availability_XX.txt"
22		Community Anchor Institutions		Yes/No	e.g. "CAI_XX.txt"
23		Street Segment text file		Yes/No	eg "street_segment_availability_XX.txt"
24		Wireless Shapefile		Yes/No	e.g. "area_availability_XX.sss" - includes minimum of 3 file extensions
25		Speed Text file		Yes/No	e.g. "speed_YYY_XX.txt" where YYY is CMA, RSA, or MSA and XX is State Abbrev.
26		Last Mile text file		Yes/No	e.g. "lastmile_XX.txt"
27		Middle Mile text file		Yes/No	e.g. "middlemile_XX.txt"
28		Pricing text file		Yes/No	e.g. "pricing_XX.txt"
29					
30					

DataPackage / Data Dictionary / ProviderTable /

Unknown Zone

---

[2] A digital copy of this file will be made available for the Contractor

Worksheet #2 – Data Dictionary

	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
FCC Approved File Geodatabase	if in this format, confirm these fields are present (Enter a Yes or a No under the field heading to confirm this field exists for each field; leave null for a blank table)																	
	OBJECTID	SHAPE	ProvName	DBAName	FRN	ID	Address	BldgNbr	PreDir	StreetName	StreetType	SufDir	City	StateAbbr	ZIP5	ZIP4	EndUserCat	TransTech
BB_Service_Address																		
	OBJECTID	SHAPE	ProvName	DBAName	FRN	ID	AddMin	AddMax	PreDir	StreetName	StreetType	SufDir	City	StateAbbr	ZIP5	ZIP4	TransTech	MaxAdvDo...
BB_Service_Road_Segment																		
	OBJECTID	SHAPE	ProvName	DBAName	FRN	StateFIPS	CountyFIPS	Tract	Block	BlockID	CBYear	TransTech	MaxAdvDown	MaxAdvUp	TypicDown	TypicUp	Identifier	SHAPE_Ler
BB_Service_CensusBlock																		
	OBJECTID	SHAPE	Name	Address	Latitude	Longitude	CAICat	BBService	TransTech	MaxAdvDown	MaxAdvUp	Identifier						
BB_Service_CAInstitutions																		
	OBJECTID	SHAPE	ProvName	DBAName	FRN	TransTech	Spectrum	MaxAdvDown	MaxAdvUp	TypicDown	TypicUp	Identifier	SHAPE_Length	SHAPE_Area				
BB_Service_Wireless																		
	OBJECTID	SHAPE	ProvName	DBAName	FRN	GeogUnit	GeogUnitID	TransTech	MaxAdvDown	MaxAdvUp	ARPU	SWNomSpeed	Identifier	SHAPE_Length	SHAPE_Area			
BB_Service_Overview																		
	OBJECTID	SHAPE	ProvName	DBAName	FRN	TransTech	BHCapLastM	BHTechType	NbrServed	Latitude	Longtitude	ElevFeet	Identifier					
BB_ConnectionPoint_LastMile																		
	OBJECTID	SHAPE	ProvName	DBAName	FRN	Ownership	BHCapMidM	BHTechType	Latitude	Longtitude	ElevFeet	Identifier						
BB_ConnectionPoint_MiddleMile																		
	For each of the below, list field headings to the right as they occur in order in the text field (leave blank if no file submitted)																	
Block Availability Text File																		
Address text file																		
Street Segment text file																		
Community Anchor Institutions																		
Wireless Shapefile																		
Speed Text file																		
Last Mile text file																		
Middle Mile text file																		
Pricing text file																		

Tabs: DataPackage \ **Data Dictionary** / ProviderTable

Unknown Zone

Worksheet #3 – Provider Table

C53			fx										

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2						Please enter the Company DBA and associated information for each company that submitted data								
3									Number of records					
4		Number	Filing Company DBA	FRN	NDA (Y/N)	Enter Provided/Will/Did not/Non-Responsive - For this company provided data, will provide data, will not provide data, non-responsive)	Service Availability by Census Block	Service Availability by Street Segment	Maximum Advertised Upstream by CMA	Wireless Services by Shapefile	Infrastructure Points	Comments		
5		1												
6		2												
7		3												
8		4												
9		5												
10		6												
11		7												
12		8												
13		9												
14		10												
15		11												
16		12												
17		13												
18		14												
19		15												
20		16												
21		17												
22		18												
23		19												
24		20												
25		21												
26		22												
27		23												
28		24												
29		25												
30		26												
31		27												
32		28												
33		29												
34		30												
35		31												
36		32												
37		33												

DataPackage / Data Dictionary \ ProviderTable /

Unknown Zone

Appendix C. Example Data Sets the Government expects might be useful for comparative analysis

Data	Description	Source
Wireline Data		
Form 477	Subscribership data collected by FCC (service providers, connection type, speed, end user) (Census Tract)	FCC data, public notice required to release; level of permitted aggregation is a legal issue
Form 325	Annual Report of Cable Television Systems	FCC data maintained by franchise area; not currently in GIS data format
3rd Party Availability and Verification Data		
MaxMind	Geolocate IP Address locations	3rd party license needs to be retained by Contractor for this exercise
Quova	Geolocate IP Address locations	3rd party license needs to be retained by Contractor for this exercise
American Roamer	Wireless Availability Data	3rd party license needs to be retained by Contractor for this exercise
Root Wireless	Wireless Availability Data	3rd party license needs to be retained by Contractor for this exercise
ComScore	Marketing Research Data	3rd party license needs to be retained by Contractor for this exercise
Gadberry	Marketing Research Data	3rd party license needs to be retained by Contractor for this exercise
Telogical	Marketing Research Data	3rd party license needs to be retained by Contractor for this exercise
Crowd Sourced Data		
Speed & Broadband Connection Quality Data	Broadband data collected from public (connection type, speed) (Address or region)	FCC currently procuring application as part of Plan, license requires expansion for the Map Note: Data is subject to Privacy Act
Infrastructure Data		
Universal Licensing System (ULS)	Spectrum allocation collected by FCC (license holders, markets, frequency bands, service)	FCC data, currently public
Antenna Structure Reg. (ASR)	Antenna data (antenna locations, specifications) (Lat/Long?)	3rd party license needs to be retained by Contractor for this exercise
Ancillary Data		
Census Bureau	Demographics data from census (population, households, age, income, education, race, etc.) (Census Block, Group, Tract)	Publicly Available Data
Street and Line Segments	Such as TeleAtlas / Open-StreetMap / Tiger Lines	3rd party license needs to be retained by Contractor for this exercise