Ground Transportation Linear Features

DATA STANDARD REPORT

October 22, 2014

Version 2.0

United States Department of the Interior
Bureau of Land Management
National Operations Center
Division of Resource Services
Denver Federal Center
Denver, Colorado 80225

Purpose of the Data Standard Report

The Data Standard Report is the document to use when creating or revising a National Data Standard. The Department of the Interior (DOI) data standards process requires certain pieces of information to be documented for a data standard to be considered valid. The Data Standard Report is the tool Bureau of Land Management (BLM) uses to accomplish this documentation. The completed Data Standard Report is distributed for review and comment on the content of the data standard. Comments are gathered and resolutions are developed through working with the appropriate data stewards and other Subject Matter Experts. More iterations can occur depending on comments and complexity of the data standard. Once all comments are resolved, the Data Standard Report is then finalized.

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INTRODUCTION

Description of the Data Standard

The Ground Transportation Linear Feature (GTLF) data standard will provide a national geospatial data standard of the ground transportation linear features in BLM's Enterprise GIS (E-GIS). A national BLM GTLF data standard is essential for collecting the landscape-scale data necessary to identify management opportunities and challenges that may not be evident when managing smaller land areas. GTLF data not only serve the crucial function of improving BLM transportation planning, but is also invaluable to numerous other BLM programs affected by transportation (e.g. water and air quality, wildlife habitat fragmentation, engineering, realty, cultural resources). The purpose of the GTLF data standard is to help support the BLM mission in a wide spectrum of subject areas. The GTLF data standard will also provide BLM programs with a better understanding of the impact of transportation on their programs. The national GTLF standard allows for the capture of data from the Travel Management Plan (TMP) as well as from observed route usage.

Information about water trails is NOT addressed by this data standard. The water trails managed by the BLM are associated to national and historic trails and most logically belong in the National Landscape Conservation System (NLCS) database. Additionally water trail information may also be collected as part of a hydrology project.

Full and partial year snow trails are addressed by this data standard through the use of the surface type attribute and seasonal restriction attribute as detailed in this data standard report.

GTLF which are fully rehabilitated and are no longer considered GTLF, are to be removed from the dataset. If a state or local office chooses to keep these rehabilitated GTLF in their local dataset, each state office is responsible for ensuring these rehabilitated GTLF are NOT replicated into the national dataset created from this national GTLF data standard.

The BLM participated in the development of the Federal Trail Data Standards (FTDS) which was adopted in 2011 and applies to all trails managed by the US Forest Service (USFS), National Park Service (NPS), US Fish and Wildlife Service (FWS) and the Bureau of Land Management (BLM), including National Scenic Trails (NSTs) and National Historic Trails (NHTs). As an active participant in developing the FTDS, the BLM agreed to collect all data about its trails in accordance with the FTDS. Wherever the GTLF data standard overlapped with the FTDS standard, the corresponding FTDS attribute and definition is provided to facilitate cross-walking.

This is a national data standard and as such supersedes state level data standards. The GTLF national data standard organizes GTLF data to meet national reporting needs which typically are at a less detailed level than needed at the field or state office levels. As such, there are places where an indicator or smaller domain list is sufficient for national reporting needs. However, at the state or field office level, more information may be required to meet the local or state field office needs. Therefore, each state may extend its GTLF data standard to collect data to fulfill local data requirements. If the national data steward requires more detailed information about ground transportation linear features which is not available in the national GTLF data standard, the national data steward will contact the appropriate state or field offices for additional information.

This data standard was developed to address the business needs and questions detailed in Appendix D.

Affected Groups

Recreation Planners, Travel and Transportation Planners, Land Use Planners, Facility Asset Management System (FAMS) engineers, GIS leads, BLM Business Data Steward, GIS Specialists, BLM State, District and Field Office Personnel, Other BLM specialists, BLM managers.

Sponsor

WO-250, Recreation and Visitor Services

DATA STEWARD / CONTACT INFORMATION

Office	Role	Name	Contact Information
WO-250	Outdoor Recreation Planner National Business Data Steward	Robert Perrin	202-912-7243 rperrin@blm.gov
ES-020	Travel and Transportation Planning SME	Peter DeWitt	561-746-7680 pdewitt@blm.gov

DATA SET CHARACTERISTICS

Overall Security

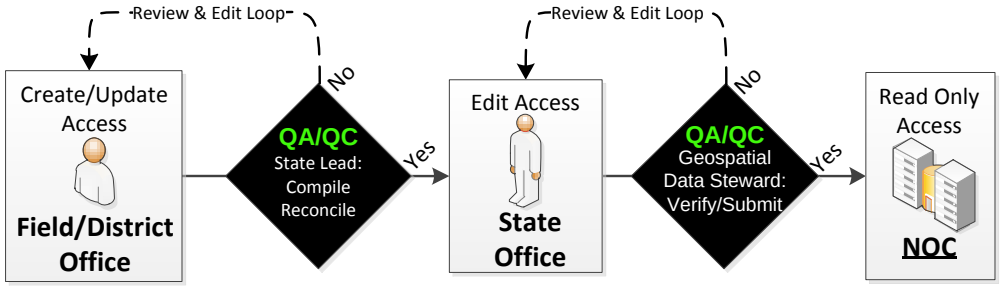
a.	**Identify Security Level**
	Public
b.	**Privacy Information**
	None

Data Privileges

Who has create, read, update, and/or delete (CRUD) privileges?

GIS Specialists at the field and state offices and Travel and Transportation Managers have full privileges on the state and field office data; all others have read-only access. Access to the national, replicated dataset will be exclusively read-only because the data belongs to and is maintained by the state and field offices.

National GIS dataset:
All creation, updates or deletion of GTLF data will occur in the field, district or state offices. Each state is solely responsible for the maintenance of their GTLF data. The national GTLF dataset is read-only.



Data Collection & Maintenance Protocols

a.	**Location Accuracy Requirements**
	The expected accuracy for a location will be within +/- 40 feet. This will be documented in the feature level metadata for each polyline. Spatial Accuracy: SEGMENT SPATIAL ACCURACY FEET MEASURE
b.	**Data Content Accuracy Requirements**
	The expected accuracy (quality) of the data values will be at least 95%.
c.	**Collection & Input Protocols**
	There is currently no single method for data collection and input for the GTLF data set. Data may be collected and entered from a variety of sources as long as those data sources are documented in the feature level metadata.
d.	**Update Procedures**
	The GTLF polylines should be reviewed for update whenever a travel management plan is updated. Any additional updates may occur as new observations of a GTLF occur. On an annual basis, the data steward will review state office compliance with the standard and policy, including any reports as appropriate, which will be published as needed.

Data Quality

a.	**Transaction Level Data Quality**
	Implementation will include using domain values during edits and data entry.

b.	Monitoring Level Data Quality
	GIS Specialists and Travel and Transportation Management Team (TTMT) State leads should both review the data for quality upon entry and completion during annual reviews. During replication to the NOC for compilation into the National GTLF dataset, various data quality checks will be performed to validate business rules identified later in this document.

Relationship to Other Standards

Facility Asset Management (FAMS), Federal Trails Data Standard (FTDS)

DATA CHARACTERISTICS

Each data standard is to be supported by a data model which includes entities and relationships between entities. The logical data model with its associated data dictionary is included in Appendix B.

Ground Transportation Linear Features Conceptual Data Model

GROUND TRANSPORTATION LINEAR FEATURE

* Federal Lands Transportation Program Status Name
* Distribute Externally Flag
*P - Planned Route Designation Authority Name
P - Planned Route Asset Classification Name
P - Planned OHV Route Designation Status
P - Planning Document NEPA ID
P - Planning Document Route ID
P - Planned Primary Route Management Objective Name
P - Planned Additional Mode of Transportation Restriction Flag
P - Planned Restriction on Who ID
P - Planned Restriction Period Name
O - Observed Mode of Transportation Name
O - Observed Route Surface Type
O - Observed Functional Class Name
O - Observed Route Suitability of Use
Route Primary Name
Route Secondary Special Designation Name
Route Special Designation Type Name
Route FAMS ID
Route Existing Authorization Flag

* = required atttribute

O = observed characteristic of linear feature

P = characteristic identified during planning activity

Ground Transportation Linear Feature Data Elements

The following is a list of the data elements and associated metadata relevant to the data standard. Design considerations for these data elements are included in the Implementation Guidelines. Naming conventions can be found in the BLM Manual H 1283-2, Data Administration and Management Handbook.

The physical attribute names are included in the table below to aid in translating from the data standard to a physical implementation. The physical data element name is NOT part of the data standard and may change in response to information technology changes. Changes to the physical data element name do not require an update of the data standard.

Logical Data Element Name	Conceptual Data Element Name	Physical Attribute Name*	Type	Size	Requi Red?	Key	Attribute Definition
GROUND TRANSPORTATION LINEAR FEATURE A feature for ground transportation including roads, primitive roads, primitive routes and trails. Includes ground transportation linear features on BLM lands as well as transportation linear features that provide access to BLM transportation routes.							
federal lands transportation program status name	Federal Lands Transportation Program Status	fltp_code	Character	9	Y		The identification of a route as part of the Federal Lands Transportation Program (FLTP) through a Yes/No/Unknown/Nominated attribute. Indicates whether the route is part of the Federal Lands Transportation Program and therefore eligible to receive additional funding from this program. **Please refer to Domain Document for domain values.**
distribute externally name	Distribute Externally Flag	dstrbte_extrnl_code	Character	7	Y		A flag indicating if the route should be included in a dataset provided to an external customer or shown on a map provided to an external customer. **Please refer to Domain Document for domain values.** *Business Rule:* If left NULL or Unknown, route will be distributed externally. The only time a route should not be provided to an external customer is if the flag is set to NO.

Logical Data Element Name	Conceptual Data Element Name	Physical Attribute Name*	Type	Size	Requi Red?	Key	Attribute Definition
route designation authority name	Planned Route Designation Authority Name	plan_route_dsgntn_auth	Character	10	Y	PK	Indicates if the ground transportation linear feature is something on which the BLM has the authority to make a route designation. Route designation authority refers to jurisdiction of the feature. Route designation authority does not refer to ownership of the land underneath or around the feature. Route designation authority may not be known until the planning process is completed by the BLM. **Please refer to Domain Document for domain values.** *Business Rule:* Route designation authority may not be known until the planning process is completed by the BLM.
ground transportation asset classification name	Planned Route Asset Classification Name	plan_asset_class	Character	50	N	PK	The basic characteristics of a route including if it is part of the BLM Transportation System as a Road, Primitive Road or Trail. The route may also be a temporary route, primitive route with wilderness characteristics or in a wilderness study area. Routes which are no longer part of the BLM transportation system can be assigned as a linear disturbance. **Please refer to Domain Document for domain values.** *Business Rule:* Planned Asset Classification Name is required if BLM has the authority to make a route designation on the route and a TMP has been completed. Planned Asset Classification Name should be left NULL if planned routed designation authority is either BLM or Unknown.

Logical Data Element Name	Conceptual Data Element Name	Physical Attribute Name*	Type	Size	Requi Red?	Key	Attribute Definition
ohv designation name	Planned OHV Route Designation Status	plan_ohv_route_dsgntn	Character	10	N		OHV designation represents the limitations, which are governed by constraints identified in the Resource Management Plan (RMP) and TMP recommendations that are placed on a feature with regard to use of Off-Highway Vehicles (OHV) only. Specifically meets the 43CFR8342.0-5 requirement. **Please refer to Domain Document for domain values.** *Business Rule:* Planned OHV route designation name should only be populated if planned route designation authority name is set to BLM. If a route has a planned asset classification name of Non-BLM or Unknown, planned OHV route designation name should be left NULL. In other words, if plan_asset_class_nm = 'BLM' then plan_ohv_route_dsgntn must be set to 'Open', 'Limited' or 'Closed'. *Business Rule:* Once a TMP has been completed that includes the route, Unknown is no longer an acceptable value. *Business Rule:* Information is assigned as part of TMP process but may not be available until the TMP process is complete.
nepa identifier	Planning Document NEPA Id	nepa_doc_num	Character	50	N		Unique identifier for the NEPA document associated with the most recent decision regarding the status and designation of a route. Use BLM standard NEPA document number format e.g., DOI-BLM-AZ-A000-2012-0001-DNA. NEPA number format: Department - Agency - State - Field Office - Year - Document Series Number - Type of NEPA (i.e., DNA, CX, EA or EIS) Example: DOI-BLM-AZ-A000-2012-0001-DNA

Logical Data Element Name	Conceptual Data Element Name	Physical Attribute Name*	Type	Size	Requi Red?	Key	Attribute Definition
planning document name	Planning Document Route ID	route_plan_id	Character	10	N		The unique identifier (numeric or alphanumeric) by which the route was referred to during the most recent planning/decision making process. The Planning Document Route ID is the unique identifier used to facilitate public comment and plan review. It provides the ability to track the exact route back to the planning document and public comments.
management objective name	Planned Primary Route Management Objective Name	plan_prmry_route_mngt_objtv	Character	25	N		The primary route management objective is the primary reason for managing the route. Primary route management objective summarizes multiple reasons into a single presentable statement. The route objective is presented in the TMP, rather than just documented in the Admin Record. Will be used by future implementation and planning actions. **Please refer to Domain Document for domain values.** *Business Rule:* Planned Primary Route Management Objective Name should only be populated if route designation authority is set to BLM. *Business Rule:* Planned Primary Route Management Objective Name applies only to Road, Primitive Road, Trail, Temporary Routes and Primitive Routes-WSA/LWC.

Logical Data Element Name	Conceptual Data Element Name	Physical Attribute Name*	Type	Size	Requi Red?	Key	Attribute Definition
mode of transportation name	Planned Mode of Transportation Name	plan_mode_trnsprt	Character	25	N		Mode of transport as identified during the planning process. Indicates the general category of transportation allowed on the route. Hierarchy is implied. Non-mechanized is the most restrictive mode of transport. Non-motorized is slightly less restrictive and allows for all foot and animal traffic as well as all modes of transport that do not use a motor to move vehicle. Motorized is the least restrictive mode of transport and allows all mode of transportation from foot traffic to vehicles that use motors of any kind to propel the vehicle. **Please refer to Domain Document for domain values.** NOTE: Planned Mode of Transport is assigned as part of the TMP and is not available until the TMP is complete. Therefore, it can NOT be a required field. *Business Rule*: Planned Mode of Transport should only be populated if Planned Route Designation Authority Name is set to BLM.
restriction name	Planned Additional Mode of Transportation Restriction Flag	plan_add_mode_trnsprt_rstrt_cd	Character	7	N		Indicates if there any types of restrictions on mode of transport beyond those associated with the planned mode of transport attribute. Example: A route has a planned mode of transport of Non-Mechanized which would normally allow pedestrians, horses and pack animal. However, the GTLF is limited to pedestrian use only. This flag should be set to Yes. If the route is open to all types of non-mechanized use, then the flag should be set to No. **Please refer to Domain Document for domain values.**

Logical Data Element Name	Conceptual Data Element Name	Physical Attribute Name*	Type	Size	Requi Red?	Key	Attribute Definition
restriction on who party identifier	Planned Restriction on Who ID	plan_access_rstrct	Character	50	N		The restrictions on person/organizations that can access/use the route. This is the "who", not the "what" or the "when". There is an implied hierarchy to the values, with Admin Only having the most restrictive access level. None is the least restrictive access level. The values are based on language contained in 43CFR8342. **Please refer to Domain Document for domain values.** *Business Rule:* Required if Planned Route Designation = 'BLM' *Business Rule*: If plan_route_dsgntn_auth = 'Non-BLM' or 'Unknown', plan_access_rstrct_flg should be NULL. *Business Rule:* If plan_route_dsgntn_auth = 'BLM' then plan_addl_mode_trnsprt_rstrct_flg should be 'Yes' or 'No'. Null is not an appropriate value once a TMP has been completed.
restriction period name	Planned Restriction Period Name	plan_season_rstrct_code	Character	7	N		Indicates if the route is unavailable for use at some point during the year (Consider restriction on access restriction, vehicle type, no restriction) **Please refer to Domain Document for domain values.**
mode of transportation name	Observed Mode of Transportation Name	obsrve_mode_trnsprt	Character	25	N		Indicates the general category of transportation observed on the route. Hierarchy is implied. Non-mechanized is the most restrictive mode of transport. Non-motorized is slightly less restrictive and allows for all foot and animal traffic as well as all modes of transport that do not use a motor to move vehicle. Motorized is the least restrictive mode of transport

Logical Data Element Name	Conceptual Data Element Name	Physical Attribute Name*	Type	Size	Requi Red?	Key	Attribute Definition
							and allows all mode of transportation from foot traffic to vehicles that use motors of any kind to propel the vehicle. The information for this attribute may be collected as part of an inventory, a casual observation, etc. **Please refer to Domain Document for domain values.**
surface type name	Observed Route Surface Type	obsrve_srfce_type	Character	25	N		The main surface material of the ground transportation linear feature at the time the observation was made. **Please refer to Domain Document for domain values.**
ground transportation functional class name	Observed Functional Class Name	obsrve_func_class	Character	15	N		This attribute groups routes according to the type of service and amount of traffic they have. **Please refer to Domain Document for domain values.** *Business Rule:* Applies to all routes regardless of planned route designation authority name.
route suitability of use name	Observed Route Suitability of Use	obsrve_route_use_class	Character	50	N		Describes the observed **physical** suitability of use of a road in order to aid in safe travel by the public across the BLM road network. This field is **independent of management decisions.** There is an implied hierarchy with 2wd Low being the most permissive suitability of use, while Impassable is the most restrictive. Values of Over Snow Vehicle and Unknown are not part of the implied hierarchy. **Please refer to Domain Document for domain values.** *Business Rule:* In instances where the vehicle type use varies by season or other condition, the most restrictive domain value should be used.
feature name	Route Primary Name	route_prmry_nm	Character	75	N	PK	The name, including any numeric portion, by which the feature is known according to the person or organization contained in route ownership code attribute.

Logical Data Element Name	Conceptual Data Element Name	Physical Attribute Name*	Type	Size	Requi Red?	Key	Attribute Definition
feature name	Route Secondary Special Designation Name	route_scndry_spcl_dsgntn_nm	Character	75	N		The name or phrase, including any numeric portion, which identifies the special designation. If there is no special designation indicated by the route special designation type attribute, the name held by this attribute is a secondary name for the route.
special designation type name	Route Special Designation Type Name	route_spcl_dsgntn_type	Character	25	N		The special designations applicable to each ground transportation linear feature. **Please refer to Domain Document for domain values.** *Business Rule*: If a route has a state specified special designation type that is not in the domain list, leave this attribute NULL.
facility identifier	Route FAMS ID	fams_id	Character	10	N		The primary key in the Facility Asset Management System that will uniquely identify a single occurrence of the entity. The GTLF FAMS ID attribute can be used to link to the FAMS database using the FAMS equipment number (a.k.a. Segment Asset ID number). FAMS ID does not link to the FAMS Asset ID number. *Business Rule:* Required for every route that is in FAMS.
authorization identifier	Route Existing Authorization Code	exstng_auth_code	Character	7	N		Indicates the existence of an easement, Right-of-Way (ROW), Reciprocal Right-of-Way (RROW) or similar authorizations. **Please refer to Domain Document for domain values.**

**Physical Attribute Names are NOT part of the data standard and may change in the future without requiring an update of data standard.*

BUSINESS RULES

The rules under which data are used and modified (See BLM Manual H 1283-2, Data Administration and Management Handbook, Chapter 8 – Documenting Business Rules.)

1. Federal Geographic Data Committee (FGDC) Standards

FGDC standards that apply to Ground Transportation Linear Features will be adhered to in the implementation of this standard.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Required	Not Applicable

2. Definitions for Accuracy, Precision and Error Probability

The following are definitions related to features.

Accuracy: (*technical*) the degree to which the result of a measurement, calculation, or specification conforms to the correct value or a standard: the accuracy of radiocarbon dating; accuracies of 50-70% (Oxford English Dictionary).

Precision: The degree of refinement with which an operation is performed or a measurement stated [Merriam-Webster]; the "closeness of agreement between indications or measured quantity values obtained by replicate measurements on the same or similar objects under specified conditions."

CEP: Circular Error Probable refers to the 50% probability that a specified location falls within the radius of a circle or ellipse. For example, if a CEP of 5 meters is quoted then 50% of horizontal (GPS) point positions should be within 5 meters of the true position [NovAtel, Trimble].

CEP_{95}: is an ellipse within which there is a 95% probability that the desired coordinate exists. This is sometimes referred to as a 95% confidence factor

Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Definitions	Manual Process

3. Administrative State code may be different than geopolitical state.

Administrative State code does not have to match geopolitical state boundaries. It may be possible that the administrative state will be different than the geopolitical state.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

4. FAMS ID must be entered if ground transportation linear feature can be found in FAMS database.

If a ground transportation linear feature is contained in the FAMS database, a FAMS ID must be entered.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

5. 'BLM' or 'Non-BLM' are only allowed values for Route Designation Authority after completion of Transportation Management Plan.

If a TMP has been completed, all GTLF associated to the TMP should have a planned route designation authority name of BLM or Non-BLM. A value of Unknown is not allowed once a TMP decision has been made.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

6. Functional class can be assigned to both BLM and Non-BLM ground transportation linear features.

Functional class is not restricted to ground transportation linear features where BLM has planned route designation authority name. It can be populated for both BLM and Non-BLM ground transportation linear features.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

7. Upon TMP completion, Planned Route Asset Classification is required if BLM has authority to make a route designation on the route.

Planned Asset Classification Name is required if BLM has the authority to make a route designation on the route and a TMP has been completed. If a TMP has not been completed, planned asset classification name should be left NULL.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

8. Planning attribute fields should be left NULL if the BLM does NOT have authority to make a designation.

If Planned Route Designation Authority Name is set to ‘Non-BLM’ or ‘Not Assessed’, 'Unknown’, then Planned Asset Classification Name, Planned OHV Route Designation Name, Planned Primary Route Management Objective Name, Planned Mode of Transportation Name, Planned Additional Mode of Transportation Restriction Name, Planned Restriction Period Name, Planned Restriction On Who Party Identifier should all be left NULL.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

9. BLM will only distribute information on routes where BLM has designation authority unless route is marked for external distribution.

If Planned Route Designation Authority Name is set to ‘Non-BLM’ or ‘Unknown’ then Distribute Externally Name should be set to No because BLM is not the authoritative source for non-BLM routes.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

10. Route closure status is determined through a combination of six attributes.

Route closure status is determined through the combination of the following six attributes: Planned Asset Classification Name, Planned OHV Route Designation, Planned Mode of Transportation, Planned Additional Mode of Transportation Restriction Name, Planned Restriction Period Name, and Planned Restriction On Who Party Identifier. Many decision documents exist, beyond a TMP, where a management decisions about a route are made including timber sale EAs. Place the unique identifier or number in the NEPA document identifier attribute and translate the information used to make the decision into the correct planning attributes in this data standard. Examples: Linear Disturbance = Decommissioned/Restored Route (Note: route should be removed for GTLF dataset once fully restored) Road+Open = Open Road Primitive Road+Limited+Season Closure Flag Yes = Seasonal Closure Road Primitive Road+Limited+Additional Mode of Transport Restriction Flag Yes = Restricted Year Long Road
Business Rule Source and Description
Guidance

Type of Business Rule	**Current Implementation**
Guideline	Manual Process

11. GTLF are available for external publication unless Display Externally Name is set to No.

Ground Transportation Linear Features will be assumed to be externally publishable unless the Display Externally Name is set to No.
Business Rule Source and Description
Guidance

Type of Business Rule	**Current Implementation**
Guideline	Manual Process

12. Aircraft are considered OHVs when on the ground at remote and developed airstrips.

If the airstrip is a project specific airstrip (ex: timber harvesting), the airstrip would be entered into the GTLF dataset with the following attributes:
Planned OHV Designation: Closed or Limited
Planned Mode of Transport: Motorized

If the airstrip is open to the public, the feature for the airstrip might be entered as:
Planned OHV Designation: Open
Planned Mode of Transport: Motorized

Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

13. Additional Mode of Transportation Restriction Flag Is Relevant ONLY to Mode of Transport, not OHV Designation.

There is no relationship between the additional mode of transportation restriction flag and OHV designation. Additional Mode of Transportation Restriction Flag is to be used solely to indicate if there is a restriction on the mode of transportation beyond what would normally be expected for the value chosen.

Example 1: Motorized vehicles allowed, Non-motorized allowed but no pedestrians, off-limits to OHV
Mode of Transportation (planned or observed) = Motorized
Additional Mode of Transportation Restriction Flag = Y
OHV designation = Closed

Example 2: Motorized vehicles allowed, Non-motorized allowed but no pedestrians, OHV allowed on route
Mode of Transportation (planned or observed) = Motorized
Additional Mode of Transportation Restriction Flag = Y
OHV designation = Open

Note: In both cases, the Additional Mode of Transportation Restriction Flag is set to Y indicating some Mode of Transport that would normally be allowed on a route with a mode of transport of Motorized is not allowed on the route, in this example, pedestrians.

Business Rule Source and Description

Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

14. Leave Special Designation Type Attribute Null Unless the Route is Assigned One of the Special Designation Types in the list.

If a route has a state specified special designation type that is not in the list of values, leave the Special Designation Type attribute NULL.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

15. Route level attribution takes priority over segment level attribution.

If a segment within a route has a different value for a common attribute, the value found at the route level takes priority over the value found at the segment level.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

16. If a segment within a route has sufficiently different attribution than the route, split that segment off into a new route.

When a segment within a route has sufficiently different attribution (example: seasonal restrictions, surface types, etc.) to warrant different management, split that segment off and make it its own route.	
Business Rule Source and Description	
Guidance	
Type of Business Rule	**Current Implementation**
Guideline	Manual Process

OTHER MATERIAL

Other supporting material that aids in the understanding or use of the data standard
Travel and Transportation Manual - 1626, published July 14, 2011 Travel and Transportation Handbook - H8342, published March 16, 2012 Bureau of Land Management. (n.d.) *Transportation System Development: Planning for Travel and Transportation Management* [Presentation slides]. National Training Center Course #8300-25, Unit Six GTLF Implementation Guide once completed.

DOMAINS SPECIFIC TO THIS DATA STANDARD

For domains specific to this standard, see gtlf_domain_v2_0.docx

APPENDIX A: BLM DATA FRAMEWORK

The BLM Taxonomy includes categories of information that support the mission of the Bureau. According to the United States Department of the Interior Data Standardization Procedures, April 2006, one or more categories must be identified for a data standard. Select One of the Four Major Taxonomy Categories Below. Select One of the 2nd Level Taxonomy Categories within the Major Taxonomy Selected.

Major Taxonomy	2nd Level Taxonomy	Yes/No	Examples
Asset (Resource)			

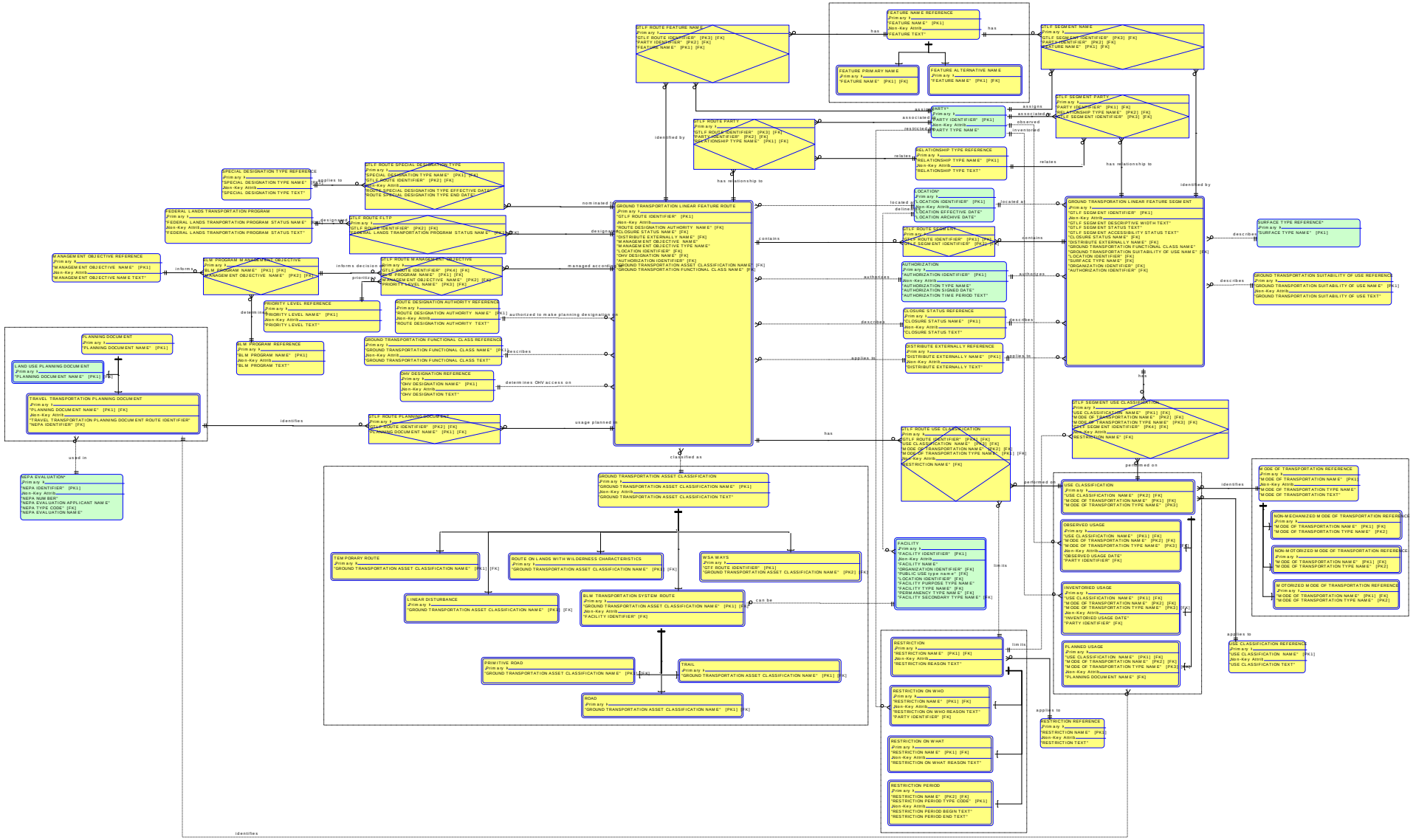
BLM KEYWORDS FOR THIS DATA STANDARD

The Thesaurus of BLM Keywords provides a common set of terms to tag BLM data and will be applied to all dataset metadata. These high-level keywords improve search and discovery of BLM data. The current version of the keyword list can also be found under "Reference Materials" on the BLM Data Management Site at https://blmspace.blm.doi.net/wo/wodm/Pages/HomePage.aspx.

Facility, Recreation, Wilderness, Authorization, Disturbance, Transportation

APPENDIX B: LOGICAL DATA MODEL

The entities in green are not part of this standard and do not need to be reviewed. They are provided to show context and provide relationships to other data only. To improve viewing, zoom to 200%; to print a larger version, use the 11"x17" model on the same webpage as this document.



Legend: See Appendix C

Logical Model Data Dictionary

This lists entities and attributes (in alphabetical order, not hierarchical or chronological order) in the logical data model shown above.

Entity Name	Entity Description	Logical Data Element Name	Type	Size	Req'd	Key	Definition
BLM PROGRAM MANAGEMENT OBJECTIVE The relationship between a BLM program and the management objectives used to determine how a ground transportation linear feature route is managed.							
		BLM PROGRAM NAME	character	25	Yes	PK, FK	The name which uniquely identifies the BLM program.
		MANAGEMENT OBJECTIVE NAME	character	25	Yes	PK, FK	The unique name of the management objective.
BLM PROGRAM REFERENCE A list of programs at the Bureau of Land Management.							
		BLM PROGRAM NAME	character	25	Yes	PK	The name which uniquely identifies the BLM program.
		BLM PROGRAM TEXT	character	100	Yes		The text which describes the BLM Program Name and provides clarity and improves ability to pick the appropriate value.
BLM TRANSPORTATION SYSTEM ROUTE Designated Routes that are the subject and result of Travel Management Plans (TMP). The Transportation System consists of designated roads, primitive roads and trails.							
		FACILITY IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
		GROUND TRANSPORTATION ASSET CLASSIFICATION NAME	character	25	Yes	PK, FK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
CLOSURE STATUS REFERENCE Closure status represents the limitations, which are governed by constraints identified in the Resource Management Plan (RMP) and TMO recommendations that are placed on a linear feature.							
		CLOSURE STATUS NAME	character	25	Yes	PK	The name which indicates under what circumstance the route can be traveled.
		CLOSURE STATUS TEXT	character	100	No		The text which is a description of the closure status which provides clarity and improves ability to pick the appropriate value.
DISTRIBUTE EXTERNALLY REFERENCE The reason that a feature will not being displayed on an externally published map or will not be included in an export provided to an external party.							
		DISTRIBUTE EXTERNALLY TEXT	character	100	No		The text which describes the reason the GTLF should not be provided to an external party which provides clarity and improves ability to pick the appropriate value.

	DISTRIBUTE EXTERNALLY NAME	character	25	Yes	PK	The name which identifies the reason the GTLF should not be shown on an external map or included in an export for an external party.
FEATURE ALTERNATIVE NAME A name which may also be used to identify an object or item, in addition to the Primary Feature Name.						
	FEATURE NAME	character	25	Yes	PK, FK	The name of the feature, also includes any numeric portion of the name.
FEATURE NAME REFERENCE The name of the feature, also includes any numeric portion of the name.						
	FEATURE TEXT	character	100	No		The text which is the description of the linear feature name value which provides clarity and improves ability to pick the appropriate value.
	FEATURE NAME	character	25	Yes	PK	The name of the feature, also includes any numeric portion of the name.
FEATURE PRIMARY NAME The primary name used to identify either an object or item. The primary name is usually assigned by the object or items owner.						
	FEATURE NAME	character	25	Yes	PK, FK	The name of the feature, also includes any numeric portion of the name.
FEDERAL LANDS TRANSPORTATION PROGRAM The possible statuses a route may have in relationship to the Federal Lands Transportation Program (FLTP).						
	FEDERAL LANDS TRANSPORTATION PROGRAM STATUS NAME	character	10	Yes	PK	The name which describes the FLTP status of a route.
	FEDERAL LANDS TRANSPORTATION PROGRAM STATUS TEXT	character	10	No		The text which describes the FLTP name and provides clarity to improve ability to pick the appropriate value.
GROUND TRANSPORATION FEATURE SEGMENT A portion of a ground transportation linear feature with a distinct start and stop point. Multiple segments can be part of the same route. Allows for a route to be made up of multiple segments which may have unique attributes including name, surface type or managing organization.						
	GTLF SEGMENT IDENTIFIER	number		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
	GTLF SEGMENT ACCESSIBILITY STATUS TEXT	character	50	No		The text which indicates accessibility guideline compliance status for the segment.
	GTLF SEGMENT STATUS TEXT	character	50	No		The text which indicates the current physical state of the segment.
	GTLF SEGMENT DESCRIPTIVE WIDTH TEXT	character	50	No		The designed primary key that will uniquely identify a single occurrence of the entity.

	CLOSURE STATUS NAME	character	25	Yes	FK	The name which indicates under what circumstance the route can be traveled.
	DISTRIBUTE EXTERNALLY NAME	character	25	Yes	FK	The name which identifies the reason the GTLF should not be shown on an external map or included in an export for an external party.
	GROUND TRANSPORTATION FUNCTIONAL CLASS NAME	character	25	Yes		The name which describes the character of the service which the ground transportation linear feature provides.
	GROUND TRANSPORTATION SUITABILITY OF USE NAME	character	25	Yes	FK	The name of the suitability of use which has been assigned to the ground transportation linear feature.
	LOCATION IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
	SURFACE TYPE NAME	character	25	Yes	FK	The name that designates the predominant surface type is encountered on the road or trail segment.
	ORGANIZATION IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
	AUTHORIZATION IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
GROUND TRANSPORTATION ASSET CLASSIFICATION The basic characteristics of a route including if it is part of the BLM Transportation System as a Road, Primitive Road or Trail. The route may also be a temporary route, primitive route with wilderness characteristics or in a wilderness study area. Routes which are no longer part of the BLM transportation system can be assigned as a linear disturbance.						
	GROUND TRANSPORTATION ASSET CLASSIFICATION NAME	character	25	Yes	PK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
	GROUND TRANSPORTATION ASSET CLASSIFICATION TEXT	character	100	Yes		The text which is a description of the asset classification value which provides clarity and improves ability to pick the appropriate value.
GROUND TRANSPORTATION LINEAR FEATURE ROUTE A route is comprised of one to many segments where the cumulative total of the segments forms the route. It is a grouper class for ground transportation linear feature segments.						
	GTLF ROUTE IDENTIFIER	number		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
	ROUTE DESIGNATION AUTHORITY NAME	character	25	Yes	FK	The name which indicates if the BLM or a Non-BLM organization has the authority to make a planning designation on the route.
	CLOSURE STATUS NAME	character	25	Yes	FK	The name which describes the closure status of either the route or segment.

DISTRIBUTE EXTERNALLY NAME	character	25	Yes	FK	The name which identifies the reason the GTLF should not be shown on an external map or included in an export for an external party.
MANAGEMENT OBJECTIVE NAME	character	25	Yes		The unique name of the management objective.
MANAGEMENT OBJECTIVE TYPE NAME	character	25	Yes		The name which identifies the type of management objective.
LOCATION IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
OHV DESIGNATION NAME	character	25	Yes	FK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
AUTHORIZATION IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
GROUND TRANSPORTATION ASSET CLASSIFICATION NAME	character	25	Yes	FK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
GROUND TRANSPORTATION FUNCTIONAL CLASS NAME	character	25	Yes	FK	The name which describes the character of the service which the linear feature provides.

GROUND TRANSPORTATION FUNCTIONAL CLASS REFERENCE

The grouping of routes by the character of service they provide and the amount of traffic which travels on the road.

GROUND TRANSPORTATION FUNCTIONAL CLASS NAME	character	25	Yes	PK	The name which describes the character of the service which the ground transportation linear feature provides.
GROUND TRANSPORTATION FUNCTIONAL CLASS TEXT	character	100	No		The text which describes the function and provides clarity to improve the ability to pick the appropriate value.

GROUND TRANSPORTATION SUITABILITY OF USE REFERENCE

Describes the observed physical suitability of use of a road in order to aid in safe travel by the public across the BLM road network. This field is independent of management decisions. There is an implied hierarchy with 2wd Low being the most permissive suitability of use, while Impassable is the most restrictive. Values of Over Snow Vehicle and Unknown are not part of the implied hierarchy.

GROUND TRANSPORTATION SUITABILITY OF USE TEXT	character	100	No		The text which describes the suitability of use and provides clarity which improves the ability to select the appropriate value.
GROUND TRANSPORTATION SUITABILITY OF USE NAME	character	25	Yes	PK	The name of the suitability of use which has been assigned to the ground transportation linear feature.

GTLF ROUTE FEATURE NAME

The relationship between a route and any feature name.

PARTY IDENTIFIER	character		Yes	PK, FK	The designed primary key that will uniquely identify a single

						occurrence of the entity.
	FEATURE NAME	character	25	Yes	PK, FK	The name of the feature, also includes any numeric portion of the name.
	GTLF ROUTE IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
GTLF ROUTE FLTP The association of a route to the route's status within the Federal Lands Transportation Program.						
	GTLF ROUTE IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
	FEDERAL LANDS TRANSPORTATION PROGRAM STATUS NAME	character	10	Yes	PK, FK	The name which describes the FLTP status of a route.
GTLF ROUTE MANAGEMENT OBJECTIVE The association of a ground transportation linear feature route to a BLM program management objective which provides guidance on how the route should be managed and the priority that should be applied to the BLM program management objective.						
	GTLF ROUTE IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
	BLM PROGRAM NAME	character	25	Yes	PK, FK	The name which uniquely identifies the BLM program.
	MANAGEMENT OBJECTIVE NAME	character	25	Yes	PK, FK	The unique name of the management objective.
	PRIORITY LEVEL NAME	character	25	Yes	PK, FK	The name which uniquely identifies the priority of the management activity for the route. Example values include Priority, Secondary, Tertiary
GTLF ROUTE PARTY The relationship between a ground transportation route and the party(ies) which have some type of interest in the route.						
	PARTY IDENTIFIER	character		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
	RELATIONSHIP TYPE NAME	character	25	Yes	PK, FK	The name of the type of relationship between the party and the route. Possible values include: Jurisdiction, Management, Administration, Ownership, Maintenance
	GTLF ROUTE IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
GTLF ROUTE PLANNING DOCUMENT The association of a route to a planning document which details the decisions made regarding the types of activities allowed on the route.						
	PLANNING DOCUMENT NAME	character	100	Yes	PK, FK	The name of the planning document which acts to uniquely identify the plan.

	GTLF ROUTE IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
GTLF ROUTE SEGMENT The relationship between a route and the segments which make up the route.						
	GTLF ROUTE IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
	GTLF SEGMENT IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
GTLF ROUTE SPECIAL DESIGNATION TYPE The association of a route to a special designation. A route can have zero to many special designations at any given time including the same special designation multiple times as long as the effective and end dates for each occurrence differ.						
	ROUTE SPECIAL DESIGNATION TYPE EFFECTIVE DATE	date		No		The date on which this special designation is begins for this route.
	ROUTE SPECIAL DESIGNATION TYPE END DATE	date		No		The date on which this special designation no longer applies for this route.
	SPECIAL DESIGNATION TYPE NAME	character	25	Yes	PK, FK	The name of the special designation which has been assigned.
	GTLF ROUTE IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
GTLF ROUTE USE CLASSIFICATION The association of a route to a usage type, including what type of usage was seen during an inventory, what type of usage was declared in a land use plan, if a particular usage is restricted and if a particular usage/activity is observed and recorded not as part of an inventory.						
	USE CLASSIFICATION NAME	character	25	Yes	PK, FK	The name of activity during which the usage was derived.
	MODE OF TRANSPORTATION NAME	character	25	Yes	PK, FK	The name that identifies the method of travel.
	MODE OF TRANSPORTATION TYPE NAME	character	25	Yes	PK, FK	The name which indicates the way in which the method of travel is powered.
	RESTRICTION NAME	character	25	Yes	FK	The name of the restriction that will uniquely identify a single occurrence of the entity.
	GTLF ROUTE IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
GTLF SEGMENT NAME The relationship between a segment and any ground transportation linear feature names.						
	PARTY IDENTIFIER	character		Yes	PK, FK	The designed primary key that will uniquely identify a single

						occurrence of the entity.
	FEATURE NAME	character	25	Yes	PK, FK	The name of the feature, also includes any numeric portion of the name.
	GTLF SEGMENT IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
GTLF SEGMENT PARTY The relationship between a ground transportation segment and the party(ies) which have some type of interest in the route.						
	PARTY IDENTIFIER	character		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
	RELATIONSHIP TYPE NAME	character	25	Yes	PK, FK	The name of the type of relationship between the party and the route. Possible values include: Jurisdiction, Management, Administration, Ownership, Maintenance
	GTLF SEGMENT IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
GTLF SEGMENT USE CLASSIFICATION The association of a segment to a usage type, including what type of usage was seen during an inventory, what type of usage was declared in a land use plan, if a particular usage is restricted and if a particular usage/activity is observed and recorded not as part of an inventory.						
	USE CLASSIFICATION NAME	character	25	Yes	PK, FK	The name of activity during which the usage was derived.
	MODE OF TRANSPORTATION NAME	character	25	Yes	PK, FK	The name that identifies the method of travel.
	MODE OF TRANSPORTATION TYPE NAME	character	25	Yes	PK, FK	The name which indicates the way in which the method of travel is powered.
	RESTRICTION NAME	character	25	Yes	FK	The name of the restriction that will uniquely identify a single occurrence of the entity.
	GTLF SEGMENT IDENTIFIER	number		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
INVENTORIED USAGE A type of usage that is planned and/or budgeted for that collects information about activities or types of activities.						
	INVENTORIED USAGE DATE	date		Yes		The date on which the inventory that collected the information about the usage activity was conducted.
	USE CLASSIFICATION NAME	character	25	Yes	PK, FK	The name of activity during which the usage was derived.
	MODE OF TRANSPORTATION NAME	character	25	Yes	PK, FK	The name that identifies the method of travel.
	MODE OF TRANSPORTATION TYPE NAME	character	25	Yes	PK, FK	The name which indicates the way in which the method of travel is powered.
	PARTY IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single

						occurrence of the entity.
LINEAR DISTURBANCE Human-made linear features, either planned or unplanned that were identified in the route inventory for a TMP and not designated as road, primitive road or trail (Roads and Trails Terminology Report). They are not part of the BLM Transportation system.						
	GROUND TRANSPORTATION ASSET CLASSIFICATION NAME	character	25	Yes	PK, FK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
MANAGEMENT OBJECTIVE REFERENCE A goal or purpose intended to contribute to the management of something. The goal or purpose is obtained or accomplished as the result of efforts or actions.						
	MANAGEMENT OBJECTIVE NAME	character	25	Yes	PK	The unique name of the management objective.
	MANAGEMENT OBJECTIVE NAME TEXT	character	100	Yes		The text which describes the gtlf management objective name and provides clarity and improves ability to pick the appropriate value.
MODE OF TRANSPORTATION REFERENCE The manner in which a person or machine is moved from one location to another.						
	MODE OF TRANSPORTATION NAME	character	25	Yes	PK	The name that identifies the method of travel.
	MODE OF TRANSPORTATION TYPE NAME	character	25	No		The name which indicates the way in which the method of travel is powered.
	MODE OF TRANSPORTATION TEXT	character	100	No		The text which provides additional information sufficient to allow users to differentiate between each mode of transportation type.
MOTORIZED MODE OF TRANSPORTATION REFERENCE The manner in which a person or machine is moved from one location to another. Motorized methods of transportation categorize the observed modes-of-transport for a specific route. The motorized category allows up to and including vehicles using combustion, electric or other forms of motor for propulsion. This category is inclusive of non-motorized and non-mechanized forms of travel unless restricted by another part of the designation. Furthermore, motorized use may be limited by type e.g., width of wheel base, weight of vehicle etc. and/or user e.g., right-of-way holders only etc. by another part of the route designation.						
	MODE OF TRANSPORTATION NAME	character	25	Yes	PK, FK	The name that identifies the method of travel.
	MODE OF TRANSPORTATION TYPE NAME	character	25	Yes	PK	The name which indicates the way in which the method of travel is powered.
NON-MECHANIZED MODE OF TRANSPORTATION REFERENCE The manner in which a person or machine is moved from one location to another. Non-mechanized categorizes the observed modes-of-transport for a specific route. The non-mechanized category allows up to and including propulsion by foot and/or stock animal e.g., pedestrian access, horseback riding						

etc. This category is exclusive of motorized and mechanized forms of travel. Furthermore, non-mechanized use may be limited by type and/or user by another part of the route designation.						
	MODE OF TRANSPORTATION NAME	character	25	Yes	PK, FK	The name that identifies the method of travel.
	MODE OF TRANSPORTATION TYPE NAME	character	25	Yes	PK	The name which indicates the way in which the method of travel is powered.
NON-MOTORIZED MODE OF TRANSPORTATION REFERENCE The manner in which a person or machine is moved from one location to another. Non-motorized methods of transportation categorize the observed modes-of-transport for a specific route. The motorized category allows up to and including vehicles using combustion, electric or other forms of motor for propulsion. This category is inclusive of non-motorized and non-mechanized forms of travel unless restricted by another part of the designation.						
	MODE OF TRANSPORTATION NAME	character	25	Yes	PK, FK	The name that identifies the method of travel.
	MODE OF TRANSPORTATION TYPE NAME	character	25	Yes	PK	The name which indicates the way in which the method of travel is powered.
OBSERVED USAGE A type of activity/usage that is observed or identified during a non-planned or budgeted for activity.						
	OBSERVED USAGE DATE	date		Opt		The date on which the observation that collected the information about the usage activity was conducted.
	USE CLASSIFICATION NAME	character	25	Yes	PK, FK	The name of activity during which the usage was derived.
	MODE OF TRANSPORTATION NAME	character	25	Yes	PK, FK	The name that identifies the method of travel.
	MODE OF TRANSPORTATION TYPE NAME	character	25	Yes	PK, FK	The name which indicates the way in which the method of travel is powered.
	PARTY IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
OHV DESIGNATION REFERENCE OHV designation represents the limitations, which are governed by constraints identified in the Resource Management Plan (RMP) and TMP recommendations that are placed on a linear feature. Specifically meets the 43CFR8342.0-5 requirement.						
	OHV DESIGNATION TEXT	character	10	No		The text which describes the OHV Designation Name and provides clarity and improves ability to pick the appropriate value.
	OHV DESIGNATION NAME	character	25	Yes	PK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
PLANNED USAGE A type of activity/usage that is identified during a planning activity.						
	USE CLASSIFICATION NAME	character	25	Yes	PK, FK	The name of activity during which the usage was derived.

	MODE OF TRANSPORTATION NAME	character	25	Yes	PK, FK	The name that identifies the method of travel.
	MODE OF TRANSPORTATION TYPE NAME	character	25	Yes	PK, FK	The name which indicates the way in which the method of travel is powered.
	PLANNING DOCUMENT NAME	character	100	Yes	FK	The name of the planning document which acts to uniquely identify the plan.
PLANNING DOCUMENT A document created during a planning activity detailing the findings of the planning activity.						
	PLANNING DOCUMENT NAME	character	100	Yes	PK	The name of the planning document which acts to uniquely identify the plan.
PRIMITIVE ROAD A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not normally meet any BLM road design standards. (Roads and Trails Terminology Report)						
	GROUND TRANSPORTATION ASSET CLASSIFICATION NAME	character	25	Yes	PK, FK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
PRIORITY LEVEL REFERENCE A list of values indicating the relative order or weight something should be given. Examples include: primary, secondary or tertiary.						
	PRIORITY LEVEL NAME	character	25	Yes	PK	The name which uniquely identifies the priority of the management activity for the route. Example values include Priority, Secondary, Tertiary
	PRIORITY LEVEL TEXT	character	100	Yes		The text which describes the gtlf management objective type and provides clarity and improves ability to pick the appropriate value.
RELATIONSHIP TYPE REFERENCE The various types of connections or similarities between two or more things.						
	RELATIONSHIP TYPE NAME	character	25	Yes	PK	The name of the type of relationship between the party and the route. Possible values include: Jurisdiction, Management, Administration, Ownership, Maintenance
	RELATIONSHIP TYPE TEXT	character	100	No		The text which describes the relationship type name value and provides clarity to improve the ability to pick the appropriate value.
RESTRICTION Something that limits or controls something else.						
	RESTRICTION REASON TEXT	character	250	No		The text which describes the reason a restriction is put into place.
	RESTRICTION NAME	character	25	Yes	PK, FK	The name of the restriction that will uniquely identify a single occurrence of the entity.

RESTRICTION ON WHAT Something that limits or controls an item, activity, role or group of people.						
	RESTRICTION ON WHAT REASON TEXT	character	250	No		The text which describes the reason a restriction is in place.
	RESTRICTION NAME	character	25	Yes	PK, FK	The name of the restriction that will uniquely identify a single occurrence of the entity.
RESTRICTION ON WHO Something that limits or controls a person, party or organization. Restrictions may also be identified for roles or groups of people.						
	RESTRICTION ON WHO REASON TEXT	character	250	No		The text which describes the reason the party is restricted.
	RESTRICTION NAME	character	25	Yes	PK, FK	The name of the restriction that will uniquely identify a single occurrence of the entity.
	PARTY IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
RESTRICTION PERIOD A span of time or season indicating when a restriction is in effect.						
	RESTRICTION PERIOD BEGIN TEXT	character	25	Yes		The date or season when the restriction starts.
	RESTRICTION PERIOD END TEXT	character	25	No		The date or season when the restriction ends.
	RESTRICTION NAME	character	25	Yes	PK, FK	The name of the restriction that will uniquely identify a single occurrence of the entity.
	RESTRICTION PERIOD TYPE CODE	character	25	Yes	PK	The code which indicates if the restriction is for a time span or a season.
RESTRICTION REFERENCE The possible restrictions on what can be limited or controlled.						
	RESTRICTION TEXT	character	100	No		The text which is a description of the restriction name value which provides clarity and improves ability to pick the appropriate value.
	RESTRICTION NAME	character	25	Yes	PK	The name of the restriction that will uniquely identify a single occurrence of the entity.
ROAD A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use. (Roads and Trails Terminology Report)						

	GROUND TRANSPORTATION ASSET CLASSIFICATION NAME	character	25	Yes	PK, FK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
ROUTE DESIGNATION AUTHORITY REFERENCE Indicates if the ground transportation linear feature is a route on which the BLM has the authority to make a route designation. Route designation authority is not ownership or jurisdiction of the linear feature or land underneath or around the linear feature.						
	ROUTE DESIGNATION AUTHORITY NAME	character	25	Yes	PK	The name which indicates if the BLM has the authority to make decisions about the route. It may not be known whether the BLM has designation authority until the planning process is completed.
	ROUTE DESIGNATION AUTHORITY TEXT	character	100	No		The text which describes the route designation authority value and provides clarity to improve the ability to pick the appropriate value.
ROUTE ON LANDS WITH WILDERNESS CHARACTERISTICS Route within Wilderness Inventory Units that have been found to possess Wilderness Character. They are not cherry-stemmed out of and not forming the boundary of a Wilderness Inventory Unit and are not part of the BLM transportation system.						
	GROUND TRANSPORTATION ASSET CLASSIFICATION NAME	character	25	Yes	PK, FK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
SPECIAL DESIGNATION TYPE REFERENCE Special designation routes are routes that have been identified through formal national, state, or agency designation processes to have a level of scenic, natural, cultural, recreational, or archeological importance beyond a traffic thoroughfare.						
	SPECIAL DESIGNATION TYPE TEXT	character	100	No		The text which describes the special designation and provides clarity which improves the ability to select the appropriate value.
	SPECIAL DESIGNATION TYPE NAME	character	25	Yes	PK	The name of the special designation which has been assigned to the ground transportation linear feature.
TEMPORARY ROUTE A linear route which is associated to a particular project that would eventually be remediated. The public may use if allowed by owner. The Project is responsible for remediation. The route is monitored in association with the project. Upon abandonment, the linear feature will be reviewed in order to decide if it should receive a designation and if responsibility should be removed from the contractor or remediated. Temporary routes are defined as short-term overland roads, primitive roads or trails; authorized or acquired for the development, construction or staging of a project or event that has a finite lifespan.						
	GROUND TRANSPORTATION ASSET CLASSIFICATION NAME	character	25	Yes	PK, FK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
TRAIL The established course in a linear route for travel for use by hikers, horseback riders, bicyclists, motorcyclists, or other sport users. A linear route managed for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally						

managed for use by four-wheel drive or high-clearance vehicles.						
	GROUND TRANSPORTATION ASSET CLASSIFICATION NAME	character	25	Yes	PK, FK	The name which identifies which part of the BLM route hierarchy that the route belongs in.
TRAVEL TRANSPORTATION PLANNING DOCUMENT A document created during a travel and transportation planning activity detailing the findings of the planning activity specific to ground transportation on routes within the land areas covered by the transportation management plan.						
	TRAVEL TRANSPORTATION PLANNING DOCUMENT ROUTE IDENTIFIER	character	100	Yes		The designed primary key that will uniquely identify a single occurrence of the entity.
	PLANNING DOCUMENT NAME	character	100	Yes	PK, FK	The name of the planning document which acts to uniquely identify the plan.
	NEPA IDENTIFIER	character	10	Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
USE CLASSIFICATION An activity or type of activity that occurs on the ground transportation linear feature.						
	MODE OF TRANSPORTATION NAME	character	25	Yes	PK, FK	The name that identifies the method of travel.
	USE CLASSIFICATION NAME	character	25	Yes	PK, FK	The name of activity during which the usage was derived.
	MODE OF TRANSPORTATION TYPE NAME	character	25	Yes	PK	The name which indicates the way in which the method of travel is powered.
USE CLASSIFICATION REFERENCE The manner in which a linear feature is used. A linear feature may have multiple usages, including Observed, Planned, Restricted or Inventoried.						
	USE CLASSIFICATION NAME	character	25	Yes	PK	The name of activity during which the usage was derived.
	USE CLASSIFICATION TEXT	character	100	No		The text which describes the activity which provides clarity and improves ability to pick the appropriate value.
WSA WAYS A trace maintained solely by the passage of vehicles which has not been improved and/or maintained by mechanical means to insure relatively regular and continuous use. Route was not cherry-stemmed out of and not forming the boundary of WSA that were officially recognized and mapped during the FLPMA Sec. 603 Wilderness Inventories (Sec. 603 WSAs) and any Sec. 202 inventories meeting the criteria of the Utah Settlement Agreement (Sec. 202 WSAs). They are not part of BLM's Transportation System.						
	GTLF ROUTE IDENTIFIER	number		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.

	GROUND TRANSPORTATION ASSET CLASSIFICATION NAME	character	25	Yes	PK, FK	The name which identifies which part of the BLM route hierarchy that the route belongs in.

The following entities shown on the logical data model are not part of this standard and are here for informational purposes.

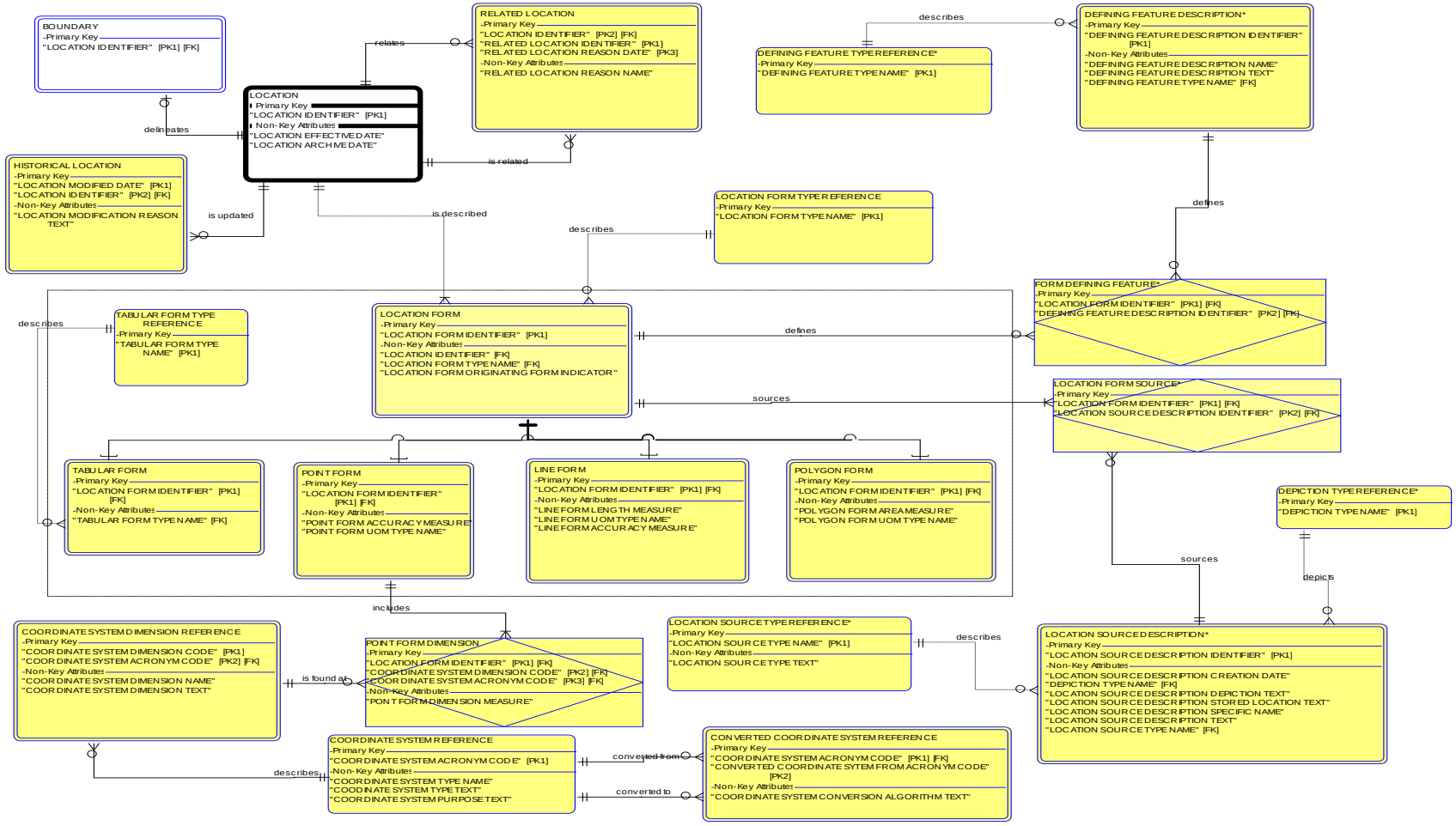
Entity Name	Entity Description	Logical Data Element Name	Type	Size	Req'd	Key	Definition
AUTHORIZATION	Documentation of a management decision allowing a request, application or proposal and/or granting the right to use, enjoy, remove, or occupy the land, resources, or real property.						
		AUTHORIZATION IDENTIFIER	character		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
		AUTHORIZATION TYPE NAME	character	10	Yes		The name that indicates the type of authorization being provided. (lease, permit, etc.)
		AUTHORIZATION SIGNED DATE	date		Yes		The date on which the authorization is signed and becomes official.
		AUTHORIZATION TIME PERIOD TEXT	character	20	Yes		The text that describes the length of time for the authorization. For example: 10 years in the case of oil and gas leases.
FACILITY	Human constructed assets designed and created to serve a particular function and to afford a particular convenience or service that is affixed to a specific location.						
		FACILITY IDENTIFIER	character		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
		FACILITY NAME	character	100	Yes		The name by which a facility is known.
		ORGANIZATION IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
		PUBLIC USE type name	character	15	Yes	FK	This name that designates whether the place or facility can be utilized by the public. Valid Values: Public, Private, Inaccessible.
		LOCATION IDENTIFIER	character		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
		FACILITY PURPOSE TYPE NAME	character	50	Yes		The name that indicates the purpose of the facility.
		FACILITY TYPE NAME	character	25	Yes	FK	The name that designates the type of facilities in which the BLM has an interest.
		PERMANENCY TYPE NAME	character	10	Yes	FK	The name that describes whether or not the structure is long--term

						or temporary.
	FACILITY SECONDARY TYPE NAME	character	25	Yes	FK	The name that indicates the subtype of a facility type.
LAND USE PLANNING DOCUMENT A collection of facts collated into a single document which describes the decisions made with regards to the land use planning process.						
	PLANNING DOCUMENT NAME	character	100	Yes	PK, FK	The name of the planning document which acts to uniquely identify the plan.
LOCATION* Possible values include: Jurisdiction, Management, Administration, Ownership, Maintenance						
	LOCATION ARCHIVE DATE	date		No		The date which is the calendar year, month, and day when the position of the Location is considered no longer valid but has historical value.
	LOCATION EFFECTIVE DATE	date		Yes		The date which is the calendar year, month, and day when the position of the Location was produced.
	LOCATION IDENTIFIER	character		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
NEPA EVALUATION* A required evaluation which follows the procedures in the National Environmental Policy Act regulations to analyze the environmental impacts as part of a federal action.						
	NEPA NUMBER	character	29	Yes		The alphanumeric number assigned to a NEPA project which contains the department, agency, state, office, year, document counter and NEPA type.
	NEPA IDENTIFIER	character	10	Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
	NEPA EVALUATION APPLICANT NAME	character	100	Yes		The name of the person from the public who submitted the application that resulted in the NEPA project being created.
	NEPA TYPE CODE	character	5	Yes	FK	The code associated with the NEPA TYPE NAME that designates the type of NEPA project. Domain values: EA, EIS, CX and DNA.
	NEPA EVALUATION NAME	character	100	Yes		The name given to a NEPA evaluation that helps represents the work and area being evaluated.
PARTY* General information (the name) about the individuals and organizations (agencies, companies, etc.) which interact with the BLM.						
	PARTY IDENTIFIER	character		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
	PARTY TYPE NAME	character	12	Yes		The name that categorizes whether this is a subtype of individual or organization.

SURFACE TYPE REFERENCE*						
The domain values for the mode(s) of travel for which the trail was designed and/or actively managed and appropriate, considering the design and management of the trail. The Designed Use is the intended use that controls the desired geometric design of the trail, and determines the subsequent maintenance parameters for the trail.						
	SURFACE TYPE NAME	character	25	Yes	PK	The name that designates the predominant surface type is encountered on the road or trail segment.

APPENDIX B: LOCATION LOGICAL DATA MODEL

Data Model that provides information on standard attributes for any type of location (either a description or a geospatial reference) and feature level metadata. It is **not part of this data standard** and does not need to be reviewed for the data standard, merely provides more information and relationships.



Legend: PK (Primary Key) – uniquely identifies one occurrence (row) of the entity; FK (Foreign Key): is all or part of the PK of another entity it is related to. PK1, PK2 – indicates the PK is made of more than 1 attribute to make it unique. The Word Identifier indicates that this will be a designed key, its format is not known, but the modeling tool required a format and size. The actual content and size of the identifier will be determined during design

Entity Name	Entity Description	Logical Data Element Name	Type	Size	Required?	Key *	Definition

Entity Name	Entity Description	Logical Data Element Name	Type	Size	Required?	Key *	Definition
BOUNDARY							DRAFT ENTITY
	The edge of a location that demarks the change from one location to another location.						
		LOCATION IDENTIFIER	integer		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
CONVERTED COORDINATE SYSTEM REFERENCE							DRAFT ENTITY
	The domain of values for the algorithm used to convert from one coordinate system to another.						
		COORDINATE SYSTEM CONVERSION ALGORITHM TEXT	character	60	Yes		The text that contains the algorithm used to convert from one coordinate system to another.
		COORDINATE SYSTEM ACRONYM CODE	character	10	Yes	PK, FK	The code that is considered the acronym for the coordinate system type.
		CONVERTED COORDINATE SYSTEM FROM ACRONYM CODE	character	10	Yes	PK	The code for the coordinate system that is being converted from (to another coordinate system).
COORDINATE SYSTEM DIMENSION REFERENCE							DRAFT ENTITY
	The dimensions that are part of given coordinate system type.						
		COORDINATE SYSTEM DIMENSION TEXT	character	100	Yes		The text that further describes the dimension for a given coordinate system type.
		COORDINATE SYSTEM DIMENSION CODE	character	10	Yes	PK	The code that is used to designate a dimension for a coordinate system type.
		COORDINATE SYSTEM DIMENSION NAME	character	10	Yes		The name associated with a code that is used to designate a dimension for a coordinate system type.
		COORDINATE SYSTEM ACRONYM CODE	character	10	Yes	PK, FK	The code that is considered the acronym for the coordinate system type.
COORDINATE SYSTEM REFERENCE							DRAFT ENTITY
	A system for assigning an n-tuple of numbers or scalars to each point in an n-dimensional space.						
		COODINATE SYSTEM TYPE TEXT	character	100	Yes		The text that describes the particular coordinate system type.
		COORDINATE SYSTEM TYPE NAME	character	40	Yes		The name given to a particular coordinate system type.
		COORDINATE SYSTEM ACRONYM CODE	character	10	Yes	PK	The code that is considered the acronym for the coordinate system type.

Entity Name	Entity Description	Logical Data Element Name	Type	Size	Required?	Key *	Definition
		COORDINATE SYSTEM PURPOSE TEXT	character	100	Yes		The text that describes the purpose or purposes of a given coordinate system type.
DEFINING FEATURE DESCRIPTION*							APPROVED ENTITY: BLM
The values associated with second level of detail that can be used to define / create the location, based on the Defining Feature Type Name. There is not a finite set of values for this.							
		DEFINING FEATURE DESCRIPTION NAME	character	40	Opt		The name that identifies a more specific description of the feature from which the arcs are derived to create polygon boundaries. This information further describes the physical or mapping feature that makes up the polygon boundary.
		DEFINING FEATURE DESCRIPTION TEXT	character	200	Yes		The text that provides further details on the Defining Feature Description.
		DEFINING FEATURE DESCRIPTION IDENTIFIER	integer		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
		DEFINING FEATURE TYPE NAME	character	30	Yes		The name that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived.
DEFINING FEATURE TYPE REFERENCE*							APPROVED ENTITY: BLM
A domain for the description of the characteristic (feature) constructed from a geographic feature that was used to create the location boundary.							
		DEFINING FEATURE TYPE NAME	character	30	Yes	PK	The name that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived.
DEPICTION TYPE REFERENCE*							APPROVED ENTITY: BLM
The domain of values for the way a location is depicted either in scale or resolution.							
		DEPICTION TYPE NAME	character	10	Yes	PK	The name that designates the detail with which the location is depicted, either in resolution or scale.
FORM DEFINING FEATURE*							APPROVED ENTITY: BLM
The defining features associated with a specific location form.							
		LOCATION FORM IDENTIFIER	integer		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
		DEFINING FEATURE DESCRIPTION IDENTIFIER	integer		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
HISTORICAL LOCATION							DRAFT ENTITY

Entity Name	Entity Description	Logical Data Element Name	Type	Size	Required?	Key *	Definition
	The date and reason why a location's information has changed. Business Rule: this is for administrative changes, not necessarily for corrections to data.						
		LOCATION MODIFICATION REASON TEXT	character	200	Yes		The text which is the explanation for why data about a location has changed for administrative reasons.
		LOCATION MODIFIED DATE	date		Yes	PK	The date which is the calendar year, month, and day when the position of the Location was last modified.
		LOCATION IDENTIFIER	integer		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
LINE FORM	A series of connected, co-ordinate points forming a simple linear feature. It is used to represent rivers, and roads, or to form the boundary of polygons. (GIS dictionary) Note: In our current physical environment this includes all types of straight and curved lines including ones that intersection.						DRAFT ENTITY
		LOCATION FORM IDENTIFIER	integer		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
		LINE FORM LENGTH MEASURE	decimal		Yes		The measure of the length of the line described in the Line Form UOM Type Name.
		LINE FORM UOM TYPE NAME	character	20	Yes		The domain value associated with the Unit of Measure used for the Line Form Length Measure.
		LINE FORM ACCURACY MEASURE	decimal		Yes		The measure that describes how close, in Line Form UOM Type Name the actual location is to the spatial depiction.
LOCATION	A defined place that requires a way to locate it by some means. Note: Entities linked to Location have the potential for a geospatial aspect.						DRAFT ENTITY
		LOCATION ARCHIVE DATE	date		Opt		The date which is the calendar year, month, and day when the position of the Location is considered no longer valid but has historical value.
		LOCATION EFFECTIVE DATE	date		Yes		The date which is the calendar year, month, and day when the position of the Location was produced.
		LOCATION IDENTIFIER	integer		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
LOCATION FORM	The form in which the location is described such as the description, shape, or appearance of the location.						DRAFT ENTITY
		LOCATION FORM IDENTIFIER	integer		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.

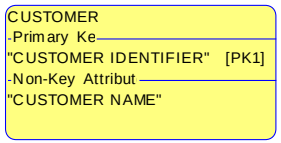
Entity Name	Entity Description	Logical Data Element Name	Type	Size	Required?	Key *	Definition
		LOCATION IDENTIFIER	integer		Yes	FK	The designed primary key that will uniquely identify a single occurrence of the entity.
		LOCATION FORM TYPE NAME	character	10	Yes	FK	The type of form in which the location is described or appears. point, line, polygon, tabular
		LOCATION FORM ORIGINATING FORM INDICATOR	character	3	Yes		The value that indicates if this is the way in which the location was first drawn/described. (yes, no)
LOCATION FORM SOURCE*							APPROVED ENTITY: BLM
The actual origin of the location sources that were used to create a specific location form.							
		LOCATION FORM IDENTIFIER	integer		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
		LOCATION SOURCE DESCRIPTION IDENTIFIER	integer		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
LOCATION FORM TYPE REFERENCE							DRAFT ENTITY
The domain for the type of form in which the location is described or appears whether in words, numbers of features (point line, polygon). This has been called feature in geospatial communities.							
		LOCATION FORM TYPE NAME	character	10	Yes	PK	The type of form in which the location is described or appears. point, line, polygon, tabular
LOCATION SOURCE DESCRIPTION*							APPROVED ENTITY: BLM
The values that provide a second level of detail about the location (coordinate) source origin. Note: there is not a finite set of these values.							
		LOCATION SOURCE DESCRIPTION CREATION DATE	date		Yes		The date on which the location source was originally created. This could just be a year (ccyy).
		LOCATION SOURCE DESCRIPTION STORED LOCATION TEXT	character	100	Yes		The text that provides the additional description of where the coordinate source can be found
		LOCATION SOURCE DESCRIPTION DEPICTION TEXT	character	20	Yes		The text that describes the actual resolution or scale in which the location is depicted. Examples for Resolution: 1 meter, 10 feet. Examples for Scale: 1 in 10,000, 1 in 100. This does not have a domain or list of valid values.
		DEPICTION TYPE NAME	character	10	Yes	FK	The name that designates the detail with which the location is depicted, either in resolution or scale.

Entity Name	Entity Description	Logical Data Element Name	Type	Size	Required?	Key *	Definition
		LOCATION SOURCE DESCRIPTION IDENTIFIER	integer		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
		LOCATION SOURCE DESCRIPTION TEXT	character	200	Yes		The text that provides further details on the Location (coordinate) Source Description.
		LOCATION SOURCE DESCRIPTION SPECIFIC NAME	character	40	Opt		The name that identifies a more specific description of the location (coordinate source).
		LOCATION SOURCE TYPE NAME	character	40	Yes	FK	The name that identifies the general category for the origin of the location coordinate, representing a compilation of the state adopted source codes. The domain contains those values that would most likely be used in the determination of source codes for the data set.
LOCATION SOURCE TYPE REFERENCE*							APPROVED ENTITY: BLM
The domain for the types of sources for the original location description / form.							
		LOCATION SOURCE TYPE NAME	character	40	Yes	PK	The name that identifies the general category for the origin of the location coordinate, representing a compilation of the state adopted source codes. The domain contains those values that would most likely be used in the determination of source codes for the data set.
		LOCATION SOURCE TYPE TEXT	character	100	Yes		The text that describes the Location Source Type.
POINT FORM							DRAFT ENTITY
A zero-dimensional abstraction of an object, with its location specified by a set of coordinates. (GIS dictionary)							
		LOCATION FORM IDENTIFIER	integer		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
		POINT FORM ACCURACY MEASURE	decimal		Yes		The measure that describes how close the spatial depiction of the point is to the actual location.
		POINT FORM UOM TYPE NAME	character	20	Yes		The name of the domain value associated with the Unit of Measure used for the Point Form Accuracy Measure.
POINT FORM DIMENSION							DRAFT ENTITY
The measure associated with each dimension of a Coordinate System.							
		PONT FORM DIMENSION MEASURE	decimal		Yes		The measure that is associated with a specific coordinate system dimension.

Entity Name	Entity Description	Logical Data Element Name	Type	Size	Required?	Key *	Definition
		LOCATION FORM IDENTIFIER	integer		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
		COORDINATE SYSTEM DIMENSION CODE	character	10	Yes	PK, FK	The code that is used to designate a dimension for a coordinate system type.
		COORDINATE SYSTEM ACRONYM CODE	character	10	Yes	PK, FK	The code that is considered the acronym for the coordinate system type.
POLYGON FORM							DRAFT ENTITY
	An area bounded by a closed line. It is used to describe spatial elements, such as administrative and political boundaries and areas of homogeneous land use and soil types. (GIS dictionary). Note: In our physical environment, this includes all types of polygons, including ones that overlap.						
		LOCATION FORM IDENTIFIER	integer		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity.
		POLYGON FORM UOM TYPE NAME	character	20	Yes		The name of the domain value associated with the Unit of Measure used for the Polygon Form Length Measure.
		POLYGON FORM AREA MEASURE	decimal		Yes		The area of the polygon described in the Polygon Form UOM Type Name.
RELATED LOCATION							DRAFT ENTITY
	A valid relationship between two LOCATIONs for a specific reason.						
		RELATED LOCATION IDENTIFIER	integer		Yes	PK	The designed primary key that will uniquely identify a single occurrence of the entity. The first location that has a relationship with another location.
		RELATED LOCATION REASON NAME	character	40	Yes		The name that indicates the reason why two locations are related. Possible values: multi-part polygon, polygon lines, overlapping polygons.
		RELATED LOCATION REASON DATE	date		Yes	PK	The date when two locations became related for the reason stated.
		LOCATION IDENTIFIER	integer		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.
TABULAR FORM							DRAFT ENTITY
	Descriptive information about a location, usually alphanumeric. This can be a single name or a combination of attributes that make up an address.						
		LOCATION FORM IDENTIFIER	integer		Yes	PK, FK	The designed primary key that will uniquely identify a single occurrence of the entity.

Entity Name	Entity Description	Logical Data Element Name	Type	Size	Required?	Key *	Definition
		TABULAR FORM TYPE NAME	character	20	Yes	FK	The name of the sub-category of the location form type which is true for tabular or alphanumeric descriptions of a location.
TABULAR FORM TYPE REFERENCE							DRAFT ENTITY
The domain for the type of tabular form that is being used to describe the location.							
		TABULAR FORM TYPE NAME	character	20	Yes	PK	The name of the sub-category of the location form type which is true for tabular or alphanumeric descriptions of a location.
						***Key**	**(PK: Primary Key) (FK: Foreign Key which is PK of related entity) (PK, FK: Foreign Key part of PK)**

APPENDIX C: READING A LOGICAL DATA MODEL

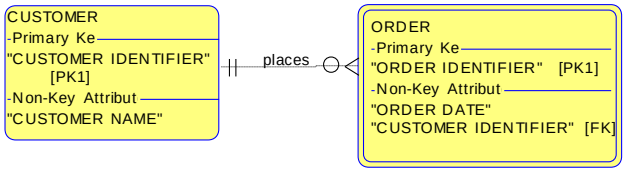


ENTITY

- *The noun or object on something of relevance to the business. If the name of the entity includes an *(asterisk) it indicates that the entity is a BLM approved entity as part of a prior standard.*
- *Shown as a box, with the name (singular in capital letters at the top, example below: ORDER).*

ATTRIBUTES

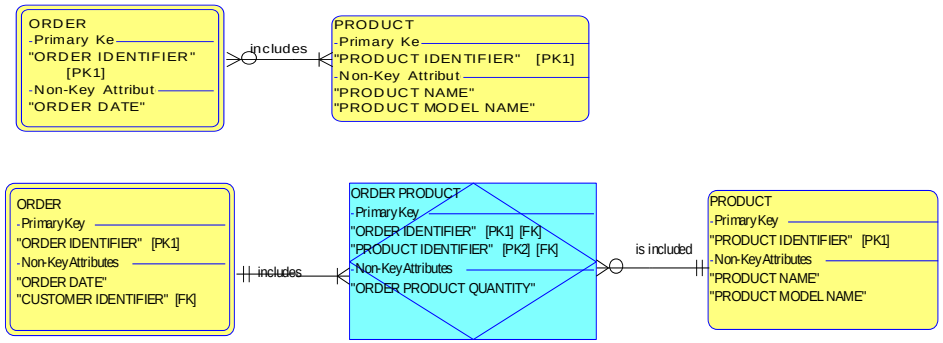
- *The adjective which is the data or information about an entity; describes an entity (ORDER NUMBER, ORDER DATE).*
- *Has **only one** valid value for an occurrence of an entity at any given time. The same value of an attribute may describe more than one entity occurrence.*
- *PK = Primary Key – uniquely identifies an occurrence of an entity (one customer may have same name as another customer, so CUSTOMER IDENTIFIER is unique for a customer).*
- *FK = Foreign Key – the primary key of the parent entity is a Foreign key in the child entity.*
- *The Word Identifier indicates that this will be a designed key, its format is not known, but the modeling tool required a format and size. The actual content and size of the identifier will be determined during design.*



The line includes optionality (minimum occurrences, inner symbol) and cardinality (maximum occurrences, symbol next to entity) | = one 0 = zero < or > = many

RELATIONSHIP

- *The verb which shows an association between entities and represents business rules.*
- *Represented by a line between two entities with active verb or verb phase (all small letters).*
- *Reading: Left to right (A CUSTOMER places zero to many ORDERs) and right to left (An ORDER is placed by one and only one CUSTOMER).*
- *Because a Customer can have many Orders, the Customer is considered the Parent Entity and the Order is considered the Child Entity). So the way you read it is normally from the Parent Entity to the Child Entity.*



Many to Many:

- *In a logical data model, many to many relationships are resolved. In the example to the left an ORDER includes one to many PRODUCTs and a PRODUCT can be in zero or many ORDERs.*

Associative Entity:

- *resolves the many to many*
- *with the diamond symbol*

APPENDIX D: BUSINESS QUESTIONS AND NEEDS

Note: Conceptual data element names are used in the solutions for each question. Please refer to Data Elements chart below to translate conceptual data element names to physical attribute names. Values identified in the solutions below are defined in the Domain Document and as such are not part of the data standard. The values may change in the future without requiring an update of this data standard.

#	QUESTION or MAP NEED	SOLUTION
1	Where are the special designation routes?	If a route has been given a special designation, a value must be present in the Route Special Designation Type attribute. Question can be answer in the physical database by querying for the routes where Route Special Designation Type IS NOT NULL.
2	Label special designation routes with their names	Select routes with a special designation type and label these routes with the special designation name which is stored in the Route Secondary Special Designation Name. At the physical level, query on records where the Route Special Designation Type attribute IS NOT NULL and label each route with the value stored in Route Alternative Name
3	Who owns the route?	Ownership and control are not the same. Ownership is not required to control a route and vice-versa. Ownership is not tracked in the GTLF data standard. At the national level, this question would be answered with a data call to a specific field office that would be most familiar with the jurisdiction and ownership for the specific route. Authority to make decision for the route is determined during the planning process and is assigned to the Planned Route Designation Authority Name attribute. Querying on the Planned Route Designation Authority Name attribute shows the name of the party that has the authority to make a decision on the route. The GTLF data standard contains information indicating if any type of authorization exists on the ground transportation linear feature but does NOT contain the exact type (lease, right-of-way, etc.). To select routes that have some type of existing authorization, query for "Yes" in the Route Existing Authorization Code attribute.

#	QUESTION or MAP NEED	SOLUTION
4	Where are the "Ways"?	It is not possible to say where just the "Ways" are located. It is possible to identify Primitive Routes with wilderness characteristics. The NLCS program is considered the authoritative source for information on "Ways" and what they mean. It is possible to determine where Primitive Routes that are ways or are on lands with wilderness characteristics. In the physical database this is accomplished by selecting on routes where Planned Route Designation Authority Name = 'BLM' AND Planned Route Asset Classification Name = 'Primitive Route – WSA/LWC'
5	Where are the routes in areas found to possess wilderness characteristics?	Routes that are located in areas that have been found to possess wilderness characteristics will have been determined to have the BLM as the route designation authority as well as having an asset classification of Primitive Route – WSA/LWC. Physically, this means querying for routes where Planned Route Designation Authority Name = 'BLM' and Planned Route Asset Classification Name = 'Primitive Route – WSA/LWC'
6	Of these, which routes have a protection decision?	The national GTLF data standard does NOT address protection decisions on a route.
7	Which routes are in FAMS?	If a route in the GTLF data standard has a FAMS ID assigned that indicates that route exists in the FAMS dataset. However, Route FAMS ID is an optional field. If a state or field office chooses to not fill in a Route FAMS ID, all that is known from the GTLF standard's point of view, is that the route is either not in FAMS or the state/field office did not fill it in. In the physical database, select routes where Route FAMS ID IS NOT NULL.
8	Join GTLF data to FAMS data.	The Route FAMS ID attribute contains the information needed to connect to the FAMS dataset. However, Route FAMS ID is an optional field. If a state or field office chooses to not fill in a Route FAMS ID, all that is known from the GTLF standard's point of view, is that the route is either not in FAMS or the state/field office did not fill it in. At the physical level, join to the FAMS dataset using the Route FAMS ID attribute in the GTLF dataset and the FAMS ID in the FAMS dataset.
9	Which routes are maintained by BLM?	The national GTLF data standard does NOT track maintenance of a route.
10	Which routes are maintained by a County road department?	The national GTLF data standard does NOT track maintenance of a route.

#	QUESTION or MAP NEED	SOLUTION
11	Within the BLM Transportation System, how are the routes classified?	All routes that have gone through a planning process and are determined to be part of the BLM Transportation System will have a Planned Route Designation Authority Name of 'BLM'. The routes will have an asset classification type assigned which will start with the phrase 'Transportation System'. In the physical database, query for routes where Planned Route Designation Authority Name = 'BLM' AND Planned Route Asset Classification Name LIKE 'Transportation System%'.
12	Within the Non-BLM transportation linear features, which are roads and which are trails?	The national GTLF data standard does NOT track if a non-BLM transportation linear feature is a road or trail directly. The information can be gathered indirectly by searching for Non-BLM routes and then pairing that with the suitability of use or observed surface type. Physically, this means querying for routes where Planned Route Designation Authority Name = 'Non-BLM' and looking at the values stored in Observed Route Suitability of Use and/or Observed Route Surface Type.
13	Where are the routes that are "BLM", but not yet designated?	This question is asking for the routes are known to be within the BLM's route designation authority but have not been assigned an asset classification yet. Physically this translates to selecting routes where Planned Route Designation Authority Name = 'BLM' AND Planned Route Asset Classification Name = 'Not Assessed'.
14	Where are the routes for which a "BLM" vs "Non-BLM" determination has not been made?	A Planned Route Designation Authority Name of Unknown indicates that the route designation authority for that route has not been determined. In the physical dataset, query for routes where Planned Route Designation Authority Name = 'Unknown'.

#	QUESTION or MAP NEED	SOLUTION
15	Are there any easements, ROWs or RROWs on a route?	The GTLF data standard only tracks the existence of any type of authorization. It does NOT track which type of authorization exists for the route. If a route has any type of existing authorization recorded in the GTLF data standard, the Route Existing Authorization Code will be set to 'Yes'. At the physical level, query for routes where Route Existing Authorization Code = 'Yes'. NOTE: The GTLF data standard is not the authoritative source for all authorization information. Route Existing Authorization Code is an optional attribute which means that the information about existing authorization does not have to be entered. A person must know that an authorization exists and then enter the information correctly into the dataset.
16	Which routes are non-motorized?	The GTLF data standard captures mode of transport in two ways, mode of transport identified during planning and mode of transport observed in the field. The mode of transport for a route as identified during the planning process can be found in the Planned Mode of Transportation Name attribute. The mode of transport identified during an observation in the field is held in the Observed Mode of Transportation Name attribute. There are three possible modes of transportation that can be assigned Non-Mechanized, Non-Motorized and Motorized. To determine which routes have been designated as non-motorized during the planning process, look for the Non-Motorized and Non-Mechanized values in the Planned Mode of Transportation Name attribute. To determine the routes which have been observed to have a mode of transportation of Non-Motorized, look for Non-Motorized and Non-Mechanized values in the Observed Mode of Transportation Name attribute. To determine which routes have a planned mode of transportation of non-motorized in the physical dataset, select routes where Planned Mode of Transportation Name IN ('Non-Motorized', 'Non-Mechanized'). To determine which routes have an observed mode of transportation of non-motorized in the physical dataset, select routes where Observed Mode of Transportation Name IN ('Non-Motorized', 'Non-Mechanized').

#	QUESTION or MAP NEED	SOLUTION
17	Which routes allow only foot traffic?	A definitive determination of which routes allow only foot traffic cannot be made from the national GTLF data standard. However, an inference, which is sufficient per Washington Office, can be made if a route has a planned mode of transport of Non-Mechanized and there is a restriction on the planned mode of transport. Then, most likely, the route is restricted to foot traffic only. In the physical dataset, query for routes where Planned Mode of Transportation Name = 'Non-Mechanized' AND Planned Additional Mode of Transportation Restriction Flag = 'Yes'.
18	Which routes allow all forms of travel?	Two areas of information are required to determine which routes allow all forms of travel. A value of 'Motorized' in the Planned Mode of Transportation indicates that the route can be traveled using any type of vehicle. Planned Additional Mode of Transportation Restriction Flag is the second area of information required to determine which routes are open to all forms of travel. If this flag is set to 'No', then the route is open to all forms of travel. If this value is set to 'Yes', a restriction has been designated on the route which limits some mode of transportation that would normally be allowed by a Motorized Mode of Transportation. When determining if all forms of travel are allowed based on observations, not planning, Observed Mode of Transportation Name should contain the value of 'Motorized'. There is no Observed Additional Mode of Transportation Restriction Flag attribute as there is with planning data.
19	Which routes allow only street legal vehicles?	Two areas of information are required to infer which routes allow only street legal vehicles. A value of 'Motorized' in the Planned Mode of Transportation indicates that the route can be traveled using any type of vehicle. Planned Additional Mode of Transportation Restriction Flag is the second area of information required to determine which routes are open to all forms of travel. Restricting a Motorized route to just street legal vehicles is an additional of restriction on mode of transportation. Therefore, the Planned Additional Mode of Transportation Restriction Flag must be set to 'Yes'. This will not tell you exactly which restriction is in effect but will indicate that some type of restriction is in effect and by inference, that is usually a limitation to street legal vehicles only. This question is not relevant to Observed Usage.

#	QUESTION or MAP NEED	SOLUTION
20	Where are the routes that have season limits?	Planned seasonal limits can be determined by inspecting the value stored in the Planned Restriction Period Name attribute. At the physical level, query for routes where Planned Restriction Period Name IS NOT NULL. If more specific information is needed as to which seasonal limit applies to a route, use the value stored in the Planned Restriction Period Name attribute to symbolize each seasonal limt and/or label them accordingly.
21	Make a map that does not show the closed routes.	The term closed routes can apply to different aspects of a route. The Planned OHV Route Designation Status attribute will indicate if the route is off limits to OHV use. In the physical dataset, query for routes where Planned OHV Route Designation Status <> 'Closed'. Route closure status not directly related to OHV use is not captured in a single attribute. Please refer to business rule below entitled "Route closure status is determined through a combination of six attributes." for guidance in determining route closure status.
22	Where are routes that are only open to permitted users?	The planned ability for a person or category of person to have access to a route is held in the Planned Restriction on Who ID attribute. A value of 'Permitted Users Only' would be found in the Planned Restriction on Who ID attribute. In the physical dataset, query on routes where Planned Restriction on Who ID = 'Permitted Users Only'.
23	Label routes with their official name and number	The official name and number of a route is stored in the Route Primary Name attribute. In the physical dataset, use the Route Primary Name to label each route.
24	Label routes with their official name and secondary name	The official name and number of a route is stored in the Route Primary Name attribute. A routes secondary name, if available, is stored in the Route Secondary Special Designation Name attribute. The Route Secondary Special Designation Name attribute field can also store the name of the special designation for a route. If a route has a special designation then the Route Special Designation Type will contain a value. In order to exclude Route Secondary Special Designation Name values that are actually route special designation names, a route must not have a Route Special Designation Type assigned. At the physical level, create a route's official name label from the Route Primary Name attribute. If the route has a secondary name, create the label from the Route Secondary Special Designation Name attribute where Route Special Designation Type IS NULL.

#	QUESTION or MAP NEED	SOLUTION
25	Symbolize state and federal highways with appropriate shield type and number.	BLM is not the authoritative source of non-BLM routes. Use layers provided by the appropriate state or federal sources to display state and federal highways on BLM land or land on which the BLM has an easement.
26	Symbolize USFS roads using their standard system.	BLM is not the authoritative source of non-BLM routes. Use layers provided by the USFS to display state and federal highways.
27	Symbolize routes according to their surface type.	A route's surface type is stored in the Observed Route Surface Type attribute. There is not corresponding planned route surface type because the planning process does not go to that level of detail. In the physical database, symbolize the route using the Observed Route Surface Type attribute.
28	Show only "major" or locally important routes.	High level information regarding whether a route is a "major" route or a locally important route is held in the Observed Functional Class Name. Please refer to the domain document for definitions of the possible Observed Functional Classes that can be assigned to a route.
29	What is the route length?	A route's length can be calculated in any units via the GIS software.

#	QUESTION or MAP NEED	SOLUTION
30	What agency-specific management direction exists for the trail and what are the actively managed uses for the trail?	<u>For routes for which BLM has the authority to make a designation/decision:</u> Information regarding the primary route management objective identified during the planning process can be queried from the Planned Primary Route Management Objective Name attribute. This attribute should only be filled in when the BLM has the authority to make a decision on the route. The mode of transportation identified during the planning process is held in Planned Mode of Transportation Name. Any restrictions on who can access the route are held in Planned Restriction On Who ID. The presence or absence of additional restrictions on the mode of transportation will be indicated by the Planned Additional Mode of Transportation Restriction Flag. Finally, if there is a seasonal restriction on use of the route can be found in the Planned Seasonal Restriction Name attribute. In the physical dataset, query on routes where Planned Route Designation Authority Name = 'BLM'. Please refer to the description above for the attributes that will answer the particular question(s). <u>For routes for which the BLM does NOT have authority to make a designation/decision:</u> The planned management uses and direction for routes where the BLM does not have designation authority are NOT collected in the national GTLF data standard. It will be necessary to contact state or field office to determine which agency or party has authority over the route. That agency or party can provide the information regarding agency specific management direction and managed uses for the trail if that is required. In the physical dataset, query on routes where Planned Route Designation Authority Name = 'Non-BLM'. Use this information to determine which state or field office to contact to determine the agency responsible for the route(s) of interest. <u>For routes for which it is UNKNOWN if the BLM has authority to make designations/decisions:</u> The planned management uses and direction for routes where the BLM does not have designation authority are NOT collected in the national GTLF data standard. It will be necessary to contact state or field office to determine which agency or party has authority over the route. That agency or party can provide the information regarding agency specific management direction and managed uses for the trail if that is required. In the physical dataset, query on routes where Planned Route Designation Authority Name = 'Unknown'. Use this information to determine which state or field office to contact to determine the agency responsible for the route(s) of interest.

#	QUESTION or MAP NEED	SOLUTION
31	What are the accessibility status and condition (state of repair) and surface of the trail?	No accessibility determinations can be made based on the GTLF information gathered according to this standard. This information is not available in any other known BLM database. Surface material for a route is found in the observed surface type name attribute. It is an optional attribute and even when populated, there is no indication of how intact or well maintained the surface is. Condition or state of repair for a route is NOT part of the national GTLF data standard.
32	How much does it cost to manage the trail?	The national GTLF data standard does NOT track maintenance or cost of management of a route. Some of this information may be available in FAMS. The Route FAMS ID attribute can be used to join to FAMS. At the physical level, join to the FAMS dataset using the Route FAMS ID attribute in the GTLF dataset and the FAMS ID in the FAMS dataset.
33	Does the trail pass through any special management areas?	Query the routes where BLM has designation authority and have been determined to have an asset classification of BLM Transportation System – Trail. Once this layer has been created, overlay it with another layer which contains the special management area boundaries. Physically, this means querying on Planned Route Designation Authority Name = 'BLM' and Planned BLM Asset Classification = 'Transportation System – Trail'. Then, create a layer from selected features. Add the special management area layer and perform a spatial intersect with the query layer. The resultant layer should include features and attributes of trails, if any, that pass through special management areas.
34	How many miles of roads, primitive roads and trails does BLM manage?	Query the GTLF dataset for routes where BLM has route designation authority and use the asset classification information to determine which routes are roads, primitive roads and trails. The GIS software will calculate the miles for each asset classification type. Physically, query for routes where Planned Route Designation Authority Name = 'BLM' AND Planned Route Asset Classification Name ='Transportation System - Road'. Then, calculate GIS_MILES. Repeat query and mileage calculation for Transportation System - Primitive Road, and Transportation System - Trail.

#	QUESTION or MAP NEED	SOLUTION
35	What quantities of GTLF's is a specific manager accountable for?	The GTLF data standard does NOT track management of a route down to a specific manager level. Intersect the solution for number of miles of roads, primitive roads and trails from above with the administrative boundary to determine the administrative unit in which the route resides.
36	Where are BLM's GTLF's?	Query on the routes where it has been determined that the BLM has route designation authority. Physically, query for routes where Planned Route Designation Authority Name = 'BLM'.
37	What is the status for BLM's effort to complete TMP's?	It is difficult to accurately determine the percentage complete with just the GTLF data standard. Only routes that have been inventoried and entered in to the GTLF data set will appear. Many offices may not inventory the GTLFs until just before the designation and ownership parties are determined. The number of routes with planned route designation authority name = 'UNKNOWN' indicates the number of routes that exist where the determination has not been made. At its simplest this attribute can be used to calculate the total number of routes where a TMP has not been completed and recorded in the dataset. However, accuracy is limited by the completeness of the inventory of routes.
38	Where are BLM's Federal Lands Transportation Program (FLTP) roads?	The status of a BLM route in the Federal Lands Transportation Program can be found in the Federal Lands Transportation Program Status Name. Query on routes where BLM has route designation authority and the Federal Lands Transportation Program Status Name attribute has a value of 'Yes' or 'Nominated'. In the physical dataset, query for routes where Federal Lands Transportation Program Status IN ('Yes', 'Nominated') AND Planned Route Designation Authority Name = 'BLM'.
39	Are there photos and/or other information about the GTLF?	This can't be done now with current attributes, but a photo link file path and/or a file path to an electronic folder for any and all electronic files may be a good idea at some point.

#	QUESTION or MAP NEED	SOLUTION
40	What is the name of the road?	The GTLF data standard allows for storing two names for each route. The official name and number of a route is stored in the Route Primary Name attribute. A secondary route name can be stored in the Route Special Designation Secondary Name attribute. Note of caution, the Route Secondary Special Designation Name can also store the special designation name for the route. If the Route Special Designation Type contains a value, the name stored in the Route Secondary Special Designation Name is the Special Designation Name. If the Route Special Designation Type does not contain a value, the name stored in the Route Secondary Special Designation Name is the secondary name for that route. In the physical dataset, label each route with the Route Primary Name. If a label with the secondary name is required, label the route with the Route Secondary Special Designation Name where the Route Special Designation Type IS NULL.
41	Where is “<insert route name here>”?	The GTLF data standard allows for storing two names for each route. The official name and number of a route is stored in the Route Primary Name attribute. A secondary route name can be stored in the Route Special Designation Secondary Name attribute. Note of caution, the Route Secondary Special Designation Name can also store the special designation name for the route. If the Route Special Designation Type contains a value, the name stored in the Route Secondary Special Designation Name is the Special Designation Name. If the Route Special Designation Type does not contain a value, the name stored in the Route Secondary Special Designation Name is the secondary name for that route. Query the routes using either the Route Primary Name or Route Secondary Special Designation attributes for the route name of interest. In the physical dataset, query the Route Primary Name for the route name of interest. If not found in the Route Primary Name attribute, query the Route Secondary Special Designation Name attribute for the route name of interest.
42	What % of roads are in poor condition?	Maintenance levels are NOT part of the national GTLF data standard.
43	How wide is the GTLF?	Route width is NOT part of the national GTLF data standard.

#	QUESTION or MAP NEED	SOLUTION
44	Map all the routes with National Historic Trail, National Scenic Trail, BLM Back Country Byway or National Recreation Trail designations.	Query the Route Special Designation Type attribute which contains the special designation type assigned to the route, if applicable. If the Route Special Designation Type attribute is empty, then no special designation type has been entered into the GTLF dataset for this route. Route Special Designation Type is an optional field which means the information does not have to be entered so the accuracy of this data is dependent on the completeness and accuracy of the information entered into the dataset. If the map should only contain the BLM's routes with those special designations, make sure that route designation authority is assigned to BLM. Physically, query for routes where Route Special Designation Type IS NOT NULL and Planned Route Designation Authority = 'BLM' (if query is restricted to just BLM routes). No other values beyond those contained in the question should be held in the Route Special Designation Type attribute so IS NOT NULL should work. If other values are contained and need to be removed from the result set, create a criteria to list only the special designation types contained in the question.
45	Export all routes eligible to be distributed outside the BLM	Information regarding whether a route should be distributed outside the BLM is contained in the Distribute Externally Flag attribute. If a route can be exported from the GTLF dataset and provided to an external customer, the Distribute Externally Flag must be set to Yes. Physically, query for routes where Distribute Externally Flag = 'Yes' and export that result set.
46	What GTLF were addressed in NEPA <xxx>?	The Planning Document NEPA ID attribute identifies the planning document in which the planning decisions for each route are stored. Query the GTLF dataset on the Planning Document NEPA ID attribute to find routes addressed by the NEPA ID. In the physical dataset, query for the routes where Planning Document NEPA ID = '<xxx>'.

#	QUESTION or MAP NEED	SOLUTION
47	What comments were received during public comments period for GTLF named <yyy>?	Query the dataset on the Route Primary Name. The Planning Document Route ID attribute is the ID by which that route was known during the public comment period. Use the Planning document NEPA ID and the Planning Document Route ID to go back into the Planning Document and find the comments for the specific route of interest. The specific comments are not stored in the GTLF data standard but the number by which the GTLF was known during the public comment period can be determined. This number can then be used to look up the comments about this exact GTLF. In the physical dataset, query on the routes where Route Primary Name = '<yyy>'. The Planning Document NEPA ID and Planning Document Route ID will provide the information to go back to the source planning document and retrieve the public comments.

REVISION HISTORY

VERSION NO.	VERSION TYPE	DATE	PURPOSE
2.0	Original		
2.0	Revision	June 30, 2014	Update revised LDM and data dictionary
2.0	Revision	July 7, 2014	Incorporate B. Benz's comments
2.0	Revision	Sept. 15, 2014	Incorporated formal review comments

VERSION 2.0 MODIFICATIONS

SECTION	PG	DESCRIPTION OF EDIT	CHANGE REQUESTED
Title Page	TP	Update title from Ground Transportation Linear Features to Ground Transportation Linear Features	The title of the data standard s/b Ground Transportation Route and Segments; linear feature implies physical implementation
Appendix A	all	Replace old LDM with new LDM and associated data dictionary	
Description of Data Standard	4	Added statement addressing purging of rehabilitated GTLF, Added s to end of word standard in first sentence of final paragraph	Inclusion of rehabbed GTLF in dataset?, Added s to end of word standard in first sentence of final paragraph
Data Collection & Maintenance Protocols	6	Updated arc to polyline for Location Accuracy Requirements	
Business Questions/Needs	8-13	Added column to table to number the questions, update Solution to question 12 , standardize capitalization of conceptual attribute names	Original solution violated business rule 8, updated to use observed route usage instead of planned asset classification. (AKSO comment #2, ORSO comment #33)
Business Questions/Needs	8-13	Updated "routes that are seasonally closed" to "routes that have seasonal limits".	
Business Questions/Needs	8	Added "or review the state level dataset" to question #3	Added "or review the state level dataset" to question #3
Business Questions/Needs	8	Updated last sentence of Solution for question #4 to read "NLCS program is considered the authoritative source for information on "ways" and what they mean."	Clarification on NLCS and ways
Business	9	Updated solution for question #12 to use observed	Update to use observed route usage

Questions/Needs		route usage instead of planned route usage	
Business Questions/Needs	9	Updated question 16 solution to read IN ('Non-Motorized', 'Non-Mechanized')	
Business Questions/Needs	11	Updated question 25 solution to include phrase "on BLM land or land on which the BLM has an easement."	
Business Questions/Needs	13	Added missing business questions for Distribute Externally Flag, Planning Document NEPA ID and Planning Document Route ID	Why have attributes for if they do not answer a business question?
Conceptual Model	14	Added missing Title	
Data Elements: OBSRVE_ROUTE_USE_CLASS, LDM Data Dictionary	29, 30, 50	Snowmobile updated to Over Snow Vehicle	Change Snowmobile to Over Snow Vehicle
Data Elements: OBSRVE_ROUTE_USE_CLASS	29	Changed default value to Unknown from 2wd Low	Suggest default value be 4wd High Clearance
Data Elements: FLTP_CODE	15	Updated order of possible values for FLTP code to reflect expected workflow, updated 1st of definition to read "The identification of a route as part of the Federal Lands Transportation Program (FLTP) through a Yes/No/Unknown/Nominated attribute."	Designated is a loaded term and may not be used correctly here
Data Elements: PLAN_ROUTE_DSGNTN_AUTH	18	Update route designation authority definition to remove reference to ownership	Ownership vs jurisdiction
Data Elements: PLAN_ASSET_CLASS	19	Planned Asset Classification Name: removed Interim Legislative value	
Data Elements: PLAN_OHV_ROUTE_DSGNTN	20	Added phrase "with regard to use of Off-Highway Vehicles (OHV) only." to definition	
Data Elements: PLAN_MODE_TRNSPRT	23	Update plan_mode_trnsprt definition to include foot and animal traffic for non-mechanized	Clarify definition for non-mechanized including foot and animal traffic

Data Elements: PLAN_ADD_MODE_TRNSPRT_RSTRT_CD	24	Update physical column name from PLAN_ADDL_MODE_TRNSPRT_RSTRCT_CODE to PLAN_ADD_MODE_TRNSPRT_RSTRT_CD	Shorten column name to fit with Oracle design rules.
Data Elements: PLAN_ACCESS_RSTRCT	25	Add "or the "when"" to definition for planned restriction on who party identifier, updated list of values, update "permissive" in definition to "least restrictive"	Need an all, split of users is inaccurate, Permissive is too "management " for an observation
Data Elements: OBSRV_MODE_TRNSPRT	26	Update obsrve_mode_trnsprt definition to include foot and animal traffic for non-mechanized	Clarify definition for non-mechanized including foot and animal traffic
Business Rules	27	Added business rule #14 to clarify lack of relationship between Additional MOT Restriction Flag and OHV designation	Question regarding relationship between add MOT flag and OHV designation.
Data Elements: OBSRVE_SRFCE_TYPE	28	Updated definition to clarify that the surface type recorded is the material present at the time of the observation.	How to handle surface types during different seasons.
Data Elements: OBSRVE_ROUTE_USE_CLASS	29	Increase length of field from 25 to 50 to handle new domain value.	
Data Elements: ROUTE_SPCL_DSGNTN_TYPE	31	Removed All American Road, National Scenic Byway, National Forest Scenic Byway, Auto Tour Route and 2nd instance of National Scenic Trail, updated BackCountry (1 word) to Back Country (2 words), added business rule "If a route has a state specified special designation type that is not in the domain list, leave this attribute NULL." to definition.	Data Steward only wants NHT, NST, BLM Back Country Byway and NRT in the list
Data Elements: EXSTNG_AUTH_CODE	32	Capitalize Reciprocal Right-of-Way	inconsistent capitalization of right-of-way
Business Rules	35	Business rule #9 – updated Not Assessed to Unknown, updated order of attributes to match order in Data Elements section	Improve readability of attributes, change Not Assessed to Unknown
Business Rules	35	Business rule #10 – updated description from Not Assessed to Unknown, added phrase "unless route is specifically marked as available for external	

		distribution" to title	
Business Rules	36	Add business rule #12 to address airstrips.	Are airstrips included in GTLF?
Data Elements	15, 16, 30	Updated key field for federal lands transportation program name, distribute externally name and route primary name , updated logical data element name to BLM administrative state code	Review primary key
Business Rules	34	Removed business rule #7 (OHV requires restriction) because it held incorrect business logic. Business rule #13 replaces it.	
	34	Business rule #9 – shortened from "BLM will only distribute information on routes where BLM has designation authority unless route is marked as available for external distribution" to "BLM will only distribute information on routes where BLM has designation authority unless route is marked for external distribution."	Reformat business rules so they look better in TOC
Business Rules	38	Added Business Rule #15 to address how to enter state specified special designation types not found in the list of values	How should states crosswalk special designation types that are state specific?
LDM Data Dictionary		Added Reference to the 4 Mode of Transportation entities, removed Mode of Transportation Type name from PK from the 4 entities, removed word linear from attribute names and definitions, removed L from GTLF in attribute names, reworked portions of LDM, updated data dictionary and LDM	Mode of Transportation should be a reference entity.
Table of Contents	2-3	Updated table of contents	
Entire Document		Replaced "GTF" with "GTLF". Inserted "linear" into statements dealing with transportation features.	