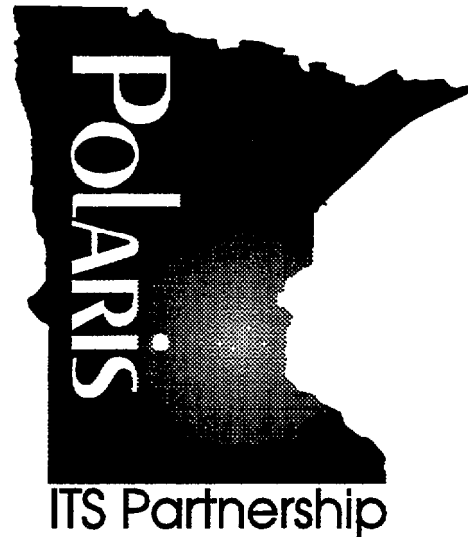


Minnesota Department of Transportation Agreement Number: 73807P

Minnesota Intelligent Transportation Systems

# ITS System Specification

## APPENDIX B: Requirements by Service/ Function/Subfunction



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January 1997

**Final**



## **System Specification - Appendix B: Requirements By Service/Function/Subfunction**

This appendix lists the requirements that have been allocated to each service, function, and subfunction. The following table defines the service, function, and subfunction acronyms used in the lists.

### **Acronyms Used in System Specification Appendix B**

<b><u>Service</u></b>	<b><u>Function</u></b>	<b><u>Sub-function</u></b>	<b><u>Acronym</u></b>	<b><u>Description</u></b>
AM				Account Management
	MUSA			Manage User Service Accounts
		AUA		Administer User Accounts
		MSU		Manage Service Usage Data
		SBP		Manage Service Billing/Payments
	PSPS			Plan Service Price Structure
		MPR		Manage Pricing Requirements
		MPS		Manage Pricing Strategies
		MSPS		Manage Service Pricing Structures
IM				Incident Management
	MIRP			Manage Incident Response
		CRI		Classify and Record Incidents
		DAI		Detect and Acknowledge Incidents
		IRPPR		Initiate Response Plans and Procedures
		MIL		Manage Incident Log
		MMR		Manage May&y Requests
		<b>TRP</b>		Track Response Progress
	MIRS			Manage Incident Resources
		MIRA		Manage Incident Resource Assignments
		TIRS		Track Incident Resource Status
	PIR			Plan Incident Response
		MRPP		Manage Response Plans and Procedures

<b><u>Service</u></b>	<b><u>Function</u></b>	<b><u>Sub-function</u></b>	<b><u>Acronym</u></b>	<b><u>Description</u></b>
		MRR		Manage Response Requirements
		MRRO		Manage Response Routes
MNT				Maintenance
	MMA			Manage Maintenance-Activities
		MMRD		Manage Maintenance Records
		PM		Perform Maintenance Activity
	PMA			Plan Maintenance Activities
		GMP		Generate Maintenance Plan
		MMPI		Manage Maintenance Planning Information
		PMT		Prioritize Maintenance Tasks
PTS				Public Travel Security/Enforcement
	PTSE			Plan Travel Security/Enforcement
		MTSER		Manage Travel Security/Enforcement Requirements
		MTSPR		Manage Travel Security Plans and Procedures
		MER		Manage Enforcement Regulations
	MTSE			Manage Travel Security/Enforcement
		ISPP		Implement Travel Security Plans and Procedures
		ER		Enforce Regulations
		MVL		Manage Violations Log
<b>RMR</b>				Ride Matching and Reservations
	DRO			Manage Demand Responsive Operations
		DRS		Provide Demand Responsive Service
		RSA		Manage Rideshare Schedule Adherence
		RSU		Manage Rideshare Service Usage Data
	RSO			Manage Rideshare Offers
		DTSPI		Distribute Transit Service Provider Information
		MRP		Match Rider with Provider
		PRO		Plan Rideshare Operating Procedures
		PRR		Plan Rideshare Routes

<u>Service</u>	<u>Function</u>	<u>Sub-function</u>	<u>Acronym</u>	<u>Description</u>
			RSO	Manage Rideshare Offers
		RSR		Manage Rideshare Requests
			DRI	Distribute Rideshare Information
			RRQ	Manage Rider Requests
TC				Traffic Control
		MSNEO		Manage Signal Network Operations
			CSM	Control Signal Modes
			ISTP	Implement/Adapt Signal Timing Plans
			MSR	Manage Signal Resources
		MSNO		Manage Signal Network Operations
			CSM	Control Sign Modes
			STP	Implement/Adapt Signing Plans
			MSIR	Manage Signing Resources
		MTC		Monitor Traffic Conditions
			CTD	Collect Traffic Surveillance Data
			DITC	Distribute Traffic Conditions
			DETC	Determine Traffic Conditions
			STSD	Sense Traffic Surveillance Data
		PTCS		Plan Traffic Control Strategies
			MTCP	Manage Traffic Control Strategies/Plans
			MTCR	Manage Traffic Control Requirements
TCI				Travel Conditions Information
		MTCDD		Manage Travel Conditions Data
			CTC	Collect Travel Conditions Source Data
			BTC	Determine Basic Travel Conditions and Travel Effects
			STD	Sense Travel Conditions Data
		MTCI		Manage Travel Conditions Information
			DTC	Distribute Travel Conditions Information

<b><u>Service</u></b>	<b><u>Function</u></b>	<b><u>Sub-function</u></b>	<b><u>Acronym</u></b>	<b><u>Description</u></b>
			TTC	Determine Tailored Travel Conditions
			TTE	Determine Tailored Travel Effects
TFM				Public Transit Fleet Management
	MAIN			(High Level Requirements)
		MAIN		(High Level Requirements)
	MFO			Manage Fleet Operations
		MPT		Manage Passenger Transfers
		MPU		Manage Passenger Usage Data
		MRC		Manage Route Changes
		MSA		Manage Schedule Adherence
		MTA		Manage Transit Assignments
		TRS		Track Resource Operational Status
	PFO			Plan Fleet Operations
		PFR		Plan Fixed/Flexible Routes, Trips, and Runs
		POP		Plan Fleet Operating Procedures
		STT		Schedule Trip Times
TNG				Training
	MTACT			Manage Training Activity
		MTCRD		Manage Training Credentials
		MTR		Manage Training Records
		PTC		Perform Training/Certification Activity
	PTA			Plan Training Activities
		ETS		Establish Training Schedule
		GTP		Generate Training Plan
		PPE		Plan Public Education
		PTR		Prioritize Training Tasks
TPD				Trip Planning and Directions
	MTPD			Manage Trip Planning and Directions Data
		CD		Compute Directions

<u>Service</u>	<u>Function</u>	<u>Sub-function</u>	<u>Acronym</u>	<u>Description</u>
		DR		Determine Route
	MTTP			Manage Tailored Trip Plans and Directions
		BTI		Build Trip Plan
		DTPD		Distribute Trip Plans and Directions
TSI				Traveler Services Information
	MTSD			Manage Traveler Services Data
		BTS		Manage Basic Traveler Services Information
		CTS		Manage Basic Traveler Services Source Data
	MTTS			Manage Tailored Traveler Services Information
		DTSI		Distribute Traveler Services Information
		DTTS		Determine Tailored Traveler Services Information
		MR		Make Reservations

## ITS System Specification - Appendix B: Requirements By Service/Function/Subfunction

Service	Function	Sub - Function	Sequence Number	Requirement	Source
AM	MUSA	AUA	1	A list of authorized users shall be created, stored, updated and deleted for Travel Conditions Information Service,	Derived
			2	A list of authorized users shall be created, stored, updated and deleted for Trip Planning and Directions Service.	Derived
			3	A list of authorized users shall be created, stored, updated and deleted for Traveler Services Information Service.	Derived
			4	A list of authorized users shall be created, stored, updated and deleted for Ride Matching and Reservations Service.	Derived
			4.a	A list of authorized providers shall be created, stored, updated and deleted for the Ride Matching and Reservations Service.	Derived
			5	A list of authorized users shall be created, stored, updated and deleted for Incident Management Service (Mayday Service).	Derived
			5.a	A list of authorized users shall be created, stored, updated and deleted for parking garage usage (pre-payment or billing).	Derived
			5.b	A list of authorized users shall be created, stored, updated and deleted for public transit usage (pre-payment or billing).	Derived
			5.c	A list of authorized users shall be created, stored, updated and deleted for roadway toll usage (pre-payment or billing).	Derived
			6	A user profile shall be created, stored, updated and deleted for each user of the Travel Conditions Information Service.	Derived
			7	A user profile shall be created, stored, updated and deleted for each user of the Trip Planning and Directions Service.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
<b>AM</b>	MUSA	AUA	8	A user profile shall be created, stored, updated and deleted for each user of the Traveler Services Information Service.	Derived
			9	A user profile shall be created, stored, updated and deleted for each user of the Ride Matching and Reservations Service.	Derived
			10	A user profile shall be created, stored, updated and deleted for each user of the Incident Management (Mayday Service).	Derived
			11	A user profile shall contain user account information.	Derived
			12	A user profile shall contain service profile(s) for each service.	Derived
			13	A user profile shall contain distribution profile(s) for each service.	Derived
			14	User profile data shall be accepted into the system manually.	Derived
			15	User profile data shall be accepted into the system electronically (standard format).	Derived
			16	User profile data shall be accepted into the system electronically (Non-standard format).	Derived
			16.a	All user profile data shall be checked for validity.	Derived
			17	Users shall be allowed to store up to (TBD) service profiles per user profile.	Derived
			17.a	Users shall be allowed to store up to (TBD) distribution profiles per user profile.	Derived
			18	A master user profile shall be created, stored, updated and deleted for each registered user.	Derived
			19	A user profile shall be able to be activated and deactivated via an activation/deactivation request.	Derived
			20	A user profile shall be able to be created, stored, updated, and deleted.	Derived
			21	User account information shall include account number (assigned by the system).	Derived



<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
<b>AM</b>	MUSA	AUA	21.a	User account information shall include a Personal Identification Number (PIN).	Derived
			22	User account information shall include user/company name.	Derived
			23	User account information shall include mailing address.	Derived
			24	User account information shall include phone number.	Derived
			24.a	User account information shall include a fax number.	Derived
			24.b	User account information shall include a computer address.	Derived
			25	User account information shall include user list (for multiple user accounts, like a company account).	Derived
			26	User account information shall include credit card name(s), number(s), expiration date(s),	Derived
			27	User account information shall include financial institution name(s), account number(s).	Derived
			27.a	User account information shall include financial institution mailing address.	Derived
			27.b	User account information shall include a financial institution computer address.	Derived
			27.c	User account information shall include user account balance.	Derived
			27.d	Users shall be allowed to query user account information.	Derived
			27.e	User account information shall be validated with a financial institution via an account validation request.	Derived
			27.f	An account validation shall be received from a financial institution via an account validation notice.	Derived
			28	Travel Conditions Information Service profile data shall include departure location.	USR 1.1.3.2.2
			29	Travel Conditions Information Service profile data shall include departure time.	USR 1.1.3.2.3

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
AM	MUSA	AUA	30	Travel Conditions Information Service profile data shall include arrival location.	USR 1.1.3.2.1
			31	Travel Conditions Information Service profile data shall include desired arrival time.	USR 1.1.3.2.4
			32	Travel Conditions Information Service profile data shall include up to TBD preferred route(s) per user.	USR 1.1.3.2.8
			33	Travel Conditions Information Service profile data shall include up to TBD alternate route(s) per user.	Derived
			34	Travel Conditions Information Service profile data shall include travel conditions notification criteria.	Derived
			35	Travel Conditions Information Service profile data shall include notification time frame (start and end times).	Derived
			36	Trip Planning and Directions Service profile data shall include preferred route type (eg. freeway, arterial, scenic, mix).	MnE 3.2.3, USR 1.3.4.2.2
			37	Trip Planning and Directions Service profile data shall include preferred travel mode(s) (eg. automobile, bus, etc.)	MnE 3.2.1, USR 1.1.3.2.9, GGO 29.10.1
			38	Trip Planning and Directions Service profile data shall include an option to minimize number of mode changes.	USR 1.1.3.2.6
			39	Trip Planning and Directions Service profile data shall include an option to minimize number of mass transit transfers.	USR 1.1.3.2.7, 1.3.4.2.2
			40	Trip Planning and Directions Service profile data shall include an option to minimize trip cost.	MnE 3.2.1
			41	Traveler Services Information Service profile data shall include restaurant preferences.	MnE 6.3
			42	Traveler Services Information Service profile data shall include lodging preferences.	MnE 6.3
			43	Traveler Services Information Service profile data shall include airline preferences.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
AM	MUSA	AUA	44	Traveler Services Information Service profile data shall include rental vehicle preferences.	Derived
			45	Traveler Services Information Service profile data shall include travel mode preferences.	Derived
			46	Ride Matching and Reservations Service profile data shall include origin/destination points.	Derived
			47	Ride Matching and Reservations Service profile data shall include arrival time(s).	Derived
			48	Ride Matching and Reservations Service profile data shall include departure time(s).	Derived
			49	Ride Matching and Reservations Service profile data shall include travel mode.	Derived
			50	Ride Matching and Reservations Service profile data shall include special needs.	Derived
			51	Incident Management (Mayday service) profile data shall include vehicle identification (eg. registration number).	USR 5.1.1.1
			52	Incident Management (Mayday service) profile data shall include vehicle information (eg. year, make, model, color).	USR 5.1.1.1
			53	Incident Management (Mayday service) profile data shall include owner information (eg. name, address, age, emergency contact name and phone number, special medical conditions).	Derived
			54	Incident Management (Mayday service) profile data shall include registered vehicle occupant(s) information (eg. name, address, age, emergency contact name and phone number, special medical conditions).	Derived
			55	A service profile shall be created, stored, updated, and deleted.	Derived
			56	A service profile shall be able to be activated and deactivated via an activation/deactivation request.	Derived
			57	Distribution profile data shall contain the user-specific parameters, needed to transmit information from a given service to the user, including notification device (eg.; phone, fax, computer).	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
AM	MUSA	AUA	58	Distribution profile data shall contain notification address (eg.; phone/fax number, computer id and address).	Derived
			59	Distribution profile data shall contain user type (to support prioritization of delivery where applicable).	Derived
			59.a	A distribution profile shall be able to be activated/deactivated via an activation/deactivation request.	Derived
			60	Distribution profile data shall be created, stored, updated, and deleted.	Derived
			60.a	A profile confirmation shall be sent to each user registered for a service to confirm their registration.	Derived
			60.b	A profile confirmation shall be sent to each user registered for a service to verify the correctness of the information contained in their user profile.	Derived
			61	A provider profile shall be created, stored, updated, and deleted for each rideshare service provider.	Derived
			62	Provider profile data shall be accepted into the system manually.	Derived
			63	Provider profile data shall be accepted into the system electronically (standard format).	Derived
			64	Provider profile data shall be accepted into the system electronically (non-standard format).	Derived
			65	Provider profile information shall include provider' 'identification number (assigned by the system).	Derived
			65.a	Provider profile information shall include provider name.	Derived
			65.b	Provider profile information shall include mailing address.	Derived
			65.c	Provider profile information shall include phone number.	Derived
			65.d	Provider profile information shall include fax number.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
<b>AM</b>	MUSA	AUA	65.e	Provider profile information shall include computer address.	Derived
			65.f	Provider profile information shall include vehicle type(s).	Derived
			65.g	Provider profile information shall include vehicle(s) seating' capacity.	Derived
			65.h	Provider profile information shall include vehicle(s). information (make, model, color).	Derived
			65.i	Provider profile information shall include vehicle(s) license number.	Derived
			65.j	Provider profile information shall include driver name(s).	Derived
			65.k	Provider profile information shall include safety certification information,	Derived
			66	A master provider profile shall be created, stored, updated and deleted for each rideshare service provider.	Derived
			66.a	Provider profile information shall be validated with external information sources (e.g., DMV for moving violations, etc.)	Derived
			67	A list of authorized providers shall be created, stored, updated and deleted for the Ride Matching and Reservations Service,	Derived
			67.a	A profile confirmation shall be sent to each Ride Matching and Reservations Service provider to confirm their registration.	Derived
			67.b	A profile confirmation shall be sent to each Ride Matching and Reservations Service provider to verify the correctness of the information contained in their provider profile,	Derived
			68	The Travel Conditions Information Service profile shall contain up to (TBD) transit route(s).	Derived
			69	The travel conditions profile shall allow a user to specify more than one active route at any given time.	Derived
	MS		70	Service usage data shall be collected for Travel Conditions Information Service.	Derived

Service	Fuunction	Sub - Function	Sequence Number	Requirement	Source
AM	MUSA	MSU	2	Service usage data shall be collected for Trip Planning and Directions Service.	Derived
			3	Service usage data shall be collected for Traveler Services Information Service.	Derived
			4	Service usage data shall be collected for Ride Matching and 'Reservations Service.	Derived
			5	Service usage data shall be collected for Incident Management (Mayday service).	Derived
			6	Service usage data shall be collected for Public Transit Usage.	USR 2.1.1.1
			7	Service usage data shall be collected for parking.	Derived
			8	Service usage data shall be collected for toll roads.	Derived
			9	Service usage data collected for the Travel Conditions Information Service shall include service name.	Derived
			9.a	Service usage data collected for the Trip Planning and Directions Service shall include service name.	Derived
			9.b	Service usage data collected for the Traveler Services Information Service shall include service name.	Derived
			10	Service usage data collected for the Travel Conditions Information Service shall include date and time of each service usage.	Derived
			10.a	Service usage data collected for the Trip Planning and Directions Service shall include date and time of each service usage.	Derived
			10.b	Service usage data collected for the Traveler Services Information service shall include date and time of each service usage.	Derived
			11	Service usage data collected for the Travel Conditions Information Service shall include service options used within a service,	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
<b>AM</b>	M-USA	MSU	11.a	Service usage data collected for the Trip Planning and Directions Service shall include service options used within a service.	Derived
			11.b	Service usage data collected for the Traveler Services Information Service shall include service options used within a service.	Derived
			12	Service usage data collected for Ride Matching and Reservation shall include ride completion data, including date and time of each service usage and service options used.	Derived
			13	Service usage data collected for Ride Matching and Reservation shall include a passenger list.	Derived
			14	Service usage data collected for the Incident Management (Mayday service) shall include date and time of each service usage.	Derived
			15	Service usage data collected for the Incident Management (Mayday service) shall include service options used (eg. towing, emergency medical services, etc.)	Derived
			16	Service usage data collected for the Public Transit Service shall include number of passengers getting on and off a vehicle at each stop.	USR 2.1.1.1, 2.3.3.1, 3.1.4.3
			17	Service usage data collected for the Public Transit Service shall include vehicle percent full.	USR 3.1.2.7
			18	Service usage data collected for the Public Transit Service shall include passenger trip origin, destination, and associated times.	Sbus 56-2
			19	Service usage data collected for the Public Transit Service shall include fares collected by fare category.	USR 2.1.1.1 ,Sbus 56-2
			20	Service usage data collected for the Public Transit Service shall include fares calculated based on distance traveled.	Sbus 59-2
			21	Service usage data collected for the Public Transit Service shall include miscellaneous fees collected (eg. bicycle locker rentals at transit stations).	GGO 29.5.2
			22	Service usage data collected for the Parking shall include date and time of each vehicle entrance and exit.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>	
<b>AM</b>	MUSA	MSU	23	Service usage data collected for the Parking shall include fees collected by service pricing structure.	Derived	
			24	Service usage data collected for the toll facilities shall include date and time of each vehicle entering the roadway.	Derived	
			25	Service usage data collected for the toll facilities shall include tolls collected by category (if applicable).	Derived	
			26	Service usage statistics shall be compiled based on analysis of service usage data over time.	Derived	
			27	Service usage statistics shall be compiled for usage by individual account.	Derived	
			28	Service usage statistics shall be compiled for usage levels for each service.	Derived	
			29	Service usage statistics shall be compiled for usage for each pricing structure within a service.	Derived	
			30	Service usage statistics shall be created, stored, updated and deleted.	Derived	
			SBP	1	Service invoices shall integrate charges for many transportation modes and services including Travel Conditions Information Service.	USR 3.1.4, 3.1.4.1, 3.1.4.4, Derived
				2	Service invoices shall integrate charges for many transportation modes and services including Trip Planning and Directions Service.	USR 3.1.4, 3.1.4.1, 3.1.4.4, Derived
3	Service invoices shall integrate charges for many transportation modes and services including Traveler Services Information Service.	USR 3.1.4, 3.1.4.1, 3.1.4.4, Derived				
4	Service invoices shall integrate charges for many transportation modes and services including Ride Matching and Reservations Service.	USR 3.1.4, 3.1.4.1, 3.1.4.4, USR 1.4.0, 1.4.2.1, 1.4.3.2				
5	Service invoices shall integrate charges for many transportation modes and services including Incident Management (Mayday Service).	USR 3.1.4, 3.1.4.1, 3.1.4.4, Derived				



Service	Function	Sub - Function	Sequence Number	Requirement	Source
AM	MUSA	SBP	6	Service invoices shall integrate charges for many transportation modes and services including Public Transit.	USR 3.1.4, 3.1.4.1, 3.1.4.4, USR 3.1.3.2, 3.1.4.2, GGO 13.5.1
			7	Service invoices shall integrate charges for many transportation modes and services including Parking.	USR3.1.4, 3.1.4.1, 3.1.4.4, USR 3.1.3.2, GGO 13.5.1
			8	Service invoices shall integrate charges for many transportation modes and services including Toll roads.	USR 3.1.4, 3.1.4.1, 3.1.4.4, USR 3.1.4.2
			9	A service invoice shall be compiled for each user account based on the service usage data and service pricing structures.	Derived
			10	Third party billing (for companies or other groups of users under a single account) shall be supported.	USR 2.3.3.3, 3.1.1.5, 3.1.2.4
			11	Periodic billing (eg. monthly, quarterly, etc) shall be supported.	Sbus 56-5
			12	Service payments shall include payment for Travel Conditions Information Service.	USR 3.1.4.4, GGO 13.5.2, 13.10.2, Derived
			13	Service payments shall include payment for Trip Planning and Directions Service.	USR 3.1.4.4, GGO 13.5.2, 13.10.2, Derived
			14	Service payments shall include payment for Traveler Services Information Service.	USR 3.1.4.4, GGO 13.5.2, 13.10.2, Derived
			15	Service payments shall include payment for Ride Matching and Reservations Service.	USR 3.1.4.4, GGO 13.5.2, 13.10.2, USR 1.4.2.1, 1.4.3.2
			15.a	Rideshare payments shall be made to Rideshare Service Providers.	Derived
			16	Service payments shall include payment for Incident Management (Mayday Service).	USR 3.1.4.4, GGO 13.5.2, 13.10.2, Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
AM	MUSA	SBP	17	Service payments shall include payment for Public Transit usage.	USR 3.1.4.4, GGO 13.5.2, 13.10.2, USR 3.1.2, 3.1.2.8, GGO 13.5.1, 13.10.1, 13.10.3
			18	Service payments shall include payment for Parking.	USR 3.1.4.4, GGO 13.5.2, 13.10.2, USR 3.1.3, 3.1.3.1, GGO 13.5.1, 13.10.1
			19	Service payments shall include payment for toll road usage.	USR 3.1.4.4, GGO 13.5.2, 13.10.2, USR3.1.1, 4.1.1
			20	Service payments shall be accepted via electronic pre-payment methods (eg. Debit cards).	USR 2.4.3.1, 3.1.0, 3.1.1, 3.1.2, 3.1.3, 3.1.3.1, 4.4.1, Sbus59-1
			21	Service payments shall be accepted via credit card transactions.	USR2.4.3.1, 3.1.0, 3.1.1, 3.1.2, 3.1.3, 3.1.3.1, 4.4.1, Derived
			22	Service payments shall be accepted via SMART card transactions.	USR2.4.3.1, 3.1.0, 3.1.1, 3.1.2, 3.1.3, 3.1.3.1, 4.4.1, GGO 13.5.1, 13.5.3, 29.5.2, Sbus 56-5
			23	Service payments shall be accepted via PROXIMITY card transactions.	USR 2.4.3.1, 3.1.0, 3.1.1, 3.1.2, 3.1.3, 3.1.3.1, 4.4.1, GGO 12.5.3
			23.a	Service payments shall be accepted via electronic funds transfers from financial institutions.	Derived
			24	Tolls shall be collected without requiring vehicle operators to stop.	USR 3.1.1.1, 3.1.1.6

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
<b>AM</b>	MUSA	SBP	25	A single payment media shall be supported for all transportation services.	USR 3.1.2.1
			26	A single payment media shall be supported for transportation services and other uses, such as retail purchases, utility bills, etc.	USR 3.1.2.6
			27	A payment confirmation shall be sent to each user.	USR3.1.1.3
			28	Voided or invalid payment media shall be detected.	USR 3.1.2.3
			29	Service payments that are insufficient or past due shall be detected.	Derived
			30	A delinquent account notice shall be sent to users with overdue or insufficient payments.	Derived
	PSPS	MPR	1	Pricing requirements shall be collected from public agencies.	Derived
			2	Pricing requirements shall be collected from travelers.	Derived
			3	Pricing requirements shall be collected from private companies.	Derived
			3.a	Pricing requirements shall be collected, stored, and updated to support pricing strategy and pricing structure planning activities.	Derived
4			Service usage statistics shall be assessed to determine additional requirements.	Derived	
	MPS	1	Pricing strategies shall support a self-sustaining business model for the services.	Derived	
2		As a goal, pricing strategies shall support public/private partnerships.	Derived		
3		As a goal, pricing strategies shall support cost sharing.	Derived		
4		Pricing strategies shall support incentive programs (eg. favor certain transportation modes, routes or user groups).	USR 3.1.4.3, 3.1.5.2, 3.1.5.3		
		5	Pricing strategies shall be created, stored, updated and deleted.	Derived	
	MSPS	1	Service pricing structure(s) shall be established for Travel Conditions Information pricing.	Derived	

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
AM	PSPS	MSPS	2	Service pricing structure(s) shall be established for Trip Planning and Directions pricing.	Derived
			3	Service pricing structure(s) shall be established for Traveler Services Information pricing.	Derived
			4	Service pricing structure(s) shall be established for Ride Matching and Reservation pricing.	Derived
			5	Service pricing structure(s) shall be established for Mayday Service pricing.	Derived
			6	Service pricing structure(s) shall be established for Public Transit fares.	Derived
			7	Service pricing structure(s) shall be established for parking fees.	Derived
			8	Service pricing structure(s) shall be established for roadway tolls.	USR 3.1.5, 3.1.5.3, 3.1.5.1.1
			8.a	Service pricing structure(s) that implement pricing requirements and pricing strategies shall include yearly price options.	Derived
			9	Service pricing structures, that implement pricing requirements and pricing strategies, shall include quarterly price options.	Derived
			10	Service pricing structures, that implement pricing requirements and pricing strategies, shall include monthly price options.	Derived
			11	Service pricing structures, that implement pricing requirements and pricing strategies, shall include per use price options.	Derived
			12	Service pricing structures, that implement pricing requirements and pricing strategies, shall include combination yearly, quarterly, monthly and per use price options.	Derived
			13	Service pricing structures, that implement pricing requirements and pricing strategies, shall include discounts.	Derived
			14	Service pricing structures, that implement pricing requirements and pricing strategies, shall include rebates.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
<b>AM</b>	PSPS	MSPS	15	Service pricing structures, that implement pricing requirements and pricing strategies, shall include free trial periods.	Derived
			16	Service pricing structures, that implement pricing requirements and pricing strategies, shall include fixed fares (for Public Transit).	USR 3.1.2.2
			17	Service pricing structures that implement pricing requirements and pricing strategies, shall include variable prices (for Public Transit and roadways).	USR 3.1.2.2, 3.1.5.1.1
			17.a	Service pricing structures, that implement pricing requirements and pricing strategies, shall include transit fares based on transit routes.	Derived
			18	Service pricing structures, that implement pricing requirements and pricing strategies, shall include fees based on vehicle classification (for parking) and roadway tolls.	USR 3.1.3.3
			19	Service pricing structures shall be created, stored, updated and deleted.	Derived

Service	Function	Sub - Function	Sequence Number	Requirement	Source	
IM	MIRP	CRI	1	Incidents shall be classified based on incident data.	GGO 20.10.1	
			2	Incidents shall be classified according to standard categories (Rational: Requirements specify a wide range of classifications which are covered by this standard e.g., HAZMAT chemical spills, breakdown/disable vehicle, accidents within injuries, major events).	USR 5.1.2.2.3, 5.1.1.1, 4.5.1	
			3	Incident reports for each incident shall be retained in an incident file.	Derived	
	DAI			1	Incidents shall be detected and incident data collected for planned (predicted) incidents.	USR 1.7.1, 1.7.1.1, 1.7.1.2
				2	Incidents shall be detected and incident data collected for unplanned incidents.	USR 1.7.1, 1.7.1.2, 4.5.1, 4.5.2.2, MCTO 4/24/96-24
				3	Incidents shall be detected using incident data collected from public safety sources (e.g. police, fire, medical personnel, etc.).	MnE 3.4.4, USR 1.7.1.1.1, 1.7.1.2.1
				4	Incidents shall be detected using incident data collected from media sources.	USR 1.7.1.1.1, 1.7.1.2.1
				5	Incidents shall be detected using incident data collected from weather information sources.	USR 1.7.1.1.1, 1.7.1.2.1
				6	Incidents shall be detected using incident data collected from public transit and other transportation providers.	USR 1.7.1.1.1, 1.7.1.2.1, 2.1.44 MCTO 4/24/96-24
				7	Incidents shall be detected using incident data collected from sponsors of special events.	USR 1.7.1.1.1
				8	Incidents shall be detected using incident data collected from hazardous condition prediction algorithms.	USR 1.7.1.1.1
				8.a	Incidents shall be detected using incident data collected from Mayday Service providers.	Derived
				9	Incidents shall be detected using incident data collected from travelers.	MnE 5.1.2, USR 1.7.1.2.1, GGO 12.10.1

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
<b>IM</b>	MIRP	DAI	10	Incidents data shall be detected using incident data collected from traffic control agencies.	USR 1.7.1.1.1, 1.7.1.2.1
			11	Incident data shall be detected using incident data collected via traffic flow sensors.	USR 1.7.1.1.1, 1.7.1.2.1
			12	Incident data shall be detected using incident data collected via environmental sensors.	USR 2.4.2.1, 5.1.1.1, 5.1.1.4, 5.1.2.1.1, 5.1.2.2, GGO 2.5.3, 2.10.2
			13	Incidents shall be detected using incident data collected via in-vehicle alert/mayday systems and sensors.	MnE 5.3.3
			14	Incidents shall be detected using incident data collected via telephone.	USR 2.4.4.1
			15	Incidents shall be detected using incident data collected via alarm systems (e.g. tire, security, panic).	USR 2.4.2.2, 2.4.4.2, MCTO 4/24/96-24
			16	Incidents shall be detected using incident data collected via video surveillance.	USR 2.4.2.2, 2.4.4.2
			17	Incidents shall be detected using incident data collected via audio surveillance.	USR 5.1.2.2, MCTO 4/24/96-24
			18	Incident data shall include type of incident classification.	USR 1.7.1.1.2, 1.7.1.2.2, 4.5.1.2, 5.1.1.1, 5.1.2.2
			19	Incident data shall include location.	USR 1.7.1.1.2, 1.7.1.2.2, 5.1.2.1.2, 5.1.2.2
			20	Incident data shall include severity.	USR 4.5.1.2
			21	Incident data shall include time of occurrence.	USR 4.5.1.2
			22	Incident data shall include material involved.	USR 5.1.1.3, GGO 20.10.1

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
IM	MIRP	DAI	23	Upon receipt of incident data, an incident acknowledgement message shall be sent to the reporting source of the incident.	USR 5.1.1.3
			24	An incident acknowledgement message shall contain verification that the incident data has been received.	MnE 5.2, 5.2.1, 5.2.2
			25	An incident acknowledgement message shall contain estimated time when help will arrive.	MnE 5.3.1, MCTO 4/24/96-3
			26	Incident detection shall be available 24 hours/day, 7 days/week.	Derived
		IRPPR	1	Response plans and response procedures shall be selected and implemented based on the most current incident data.	USR 1.7.3, 1.7.3.1, 4.5.2
			2	Response plans and response procedures shall provide for coordination of all responding agency activities at the incident scene pertaining to patient care.	MnA 3.2.1
			3	Response plans and response procedures shall provide for coordination of all responding agency activities at the incident scene pertaining to traffic flow control.	MnA 3.2.1
			4	Response plans and response procedures shall provide for coordination of all responding agency activities at the incident scene pertaining to incident clearing and removal.	MmA 3.2.1
			5	Resource requests shall be sent to the appropriate agencies based on the response plans and response procedures that have been selected to resolve the incident.	Derived
			6	A resource request shall contain, the most current incident data.	Derived
			9	A travel conditions request shall be generated to request travel conditions information along a primary or alternate response route.	Derived
			10	Response routes shall be selected based on the most current incident data and tailored travel conditions for that response route.	USR 5.2.2.2
			11	Emergency response vehicles and personnel shall be advised of travel conditions along the response route. (Rationale: reduce response time to an incident by helping emergency vehicles avoid delays due to travel conditions).	Derived



Service	Function	Sub - Function	Sequence Number	Requirement	Source	
IM	MIRP	IRPPR	12	A signal pre-emption request shall be generated for ambulance emergency response vehicles (Rationale: reduce response time to an incident).	MnA 53.1, USR 1.7.2.5	
			13	A signal pre-emption request shall be generated for fire emergency response vehicles (Rationale: reduce response time to an incident).	MnA 5.3.1, USR 1.7.2.5	
			14	A signal pre-emption request shall be generated for police emergency response vehicles (Rationale: reduce response time to an incident).	MnA 5.3.1, USR 1.7.2.5	
			15	A resource cancellation shall be issued for any incident response resource that is no longer needed to respond to an incident.	Derived	
	MIL			1	Incident log reports shall be generated based on data stored in the incident log.	Mn4 3.4.5
				2	Incident log reports shall be generated based on user defined criteria for one or more incidents to support key stakeholder agencies.	MnA 3.4.1, 3.2.2,3.3
				4	Incident information shall be accessible by mobile data terminals.	MnA 3.4.3, 3.4.4
				4.a	Incident information shall be accessible by agency computers.	Derived
				5	Incident history information shall be generated from incident reports and incident files contained in the incident log. (Rationale: This information will be used for analysis purposes to determine if changes are needed to existing response plans, procedures and routes, or if a new response pan, procedure or route needs to be developed.)	MnA 3.4.5, USR 1.7.2
				6	Incident conditions shall be generated based on indldent data and incident response status.	USR 1.7.3.3, Derived
				12	Incident conditions shall identify type of incident.	Derived
				13	Incident conditions shall identify location.	USR 4.5.1.2
				14	Incident conditions shall identify severity (e.g. number of lanes blocked or other factors that would require traffic rerouting).	Derived
				15	Incident conditions shall identify time of occurrence.	USR 4.5.1.2

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
IM	MIRP	MIL	16	Incident conditions shall identify estimated time until incident cleared.	Derived
			18	Incident information shall be retained for TBD years.	Derived
			19	Incident information and shall be provided on a need-to-know basis.	Derived
	MMR		1	A list of authorized users of the Mayday Service shall be stored and maintained.	Derived
			2	Bach mayday request shall be checked for proper service level authorization prior to allowing Mayday Service access.	Derived
			3	A mayday request shall be accepted for medical assistance.	MnE 5.1.1, USR5.1.1.1
			4	A mayday request shall be accepted for highway assistance.	MnE 5.1.1, USR 5.1.1.1
			5	A mayday request shall be accepted for fire.	MnE 5.1.1, USR5.1.1.1
			6	A mayday request shall be accepted for police.	MnE 5.1.1, USR 5.1.1.1
			7	A mayday request shall be able to be initiated manually.	USR 5.1.1.1
			8	A mayday request shall be able to be initiated automatically (i.e. without requiring user action).	USR5.1.1.4, 5.1.2.1
			9	A mayday cancellation shall be accepted for any mayday request that has been manually initiated by the user.	USR 5.1.1.2
			10	The user profile for the Mayday Service shall contain Mayday Service profile.	Derived
			11	The user profile for the Mayday Service shall contain distribution profile.	Derived
12	The Mayday Service profile shall contain vehicle identification (e.g. registration number).	USR 5.1.1.1			
13	The Mayday Service profile shall contain vehicle information (e.g. year, make, model, color).	USR 5.1.1.1			
14	The Mayday Service profile shall contain, owner information (e.g. name, address, age, emergency contact name and phone number, special medical conditions).	Derived			

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>		
IM	MIRP	MMR	15	The Mayday Service profile shall contain, frequent vehicle occupant(s) information (e.g. name, address, age, emergency contact name and phone number, special medical conditions).	Derived		
			16	Mayday Service profiles shall be stored and maintained.	Derived		
			17	Upon receipt of a mayday request or cancellation, an acknowledgement message shall be sent to the Mayday Service requestor.	USR 5.1.1.3, GGO 20.10.1		
			18	A mayday acknowledgement message shall contain, verification that the request or cancelation for help has been received.	USR 5.1.1.3		
			19	A mayday acknowledgement message shall contain, estimated time when help will arrive.	MnE 5.2, 5.2.1, 5.2.2		
			20	The distribution profile shall contain the user-specific parameters needed to format and transmit a mayday acknowledgement to the user, including mayday device (e.g.; phone, other device).	Derived		
			21	The distribution profile shall contain the user-specific parameters needed to format and transmit a mayday acknowledgement to the user, including mayday device address (e.g. phone number, device address).	Derived		
			22	A distribution profile shall be stored and maintained.	Derived		
			23	Service usage data shall be stored for each mayday request. (Rationale: This is required so that service features usage can be logged for billing, and so that usage levels can be monitored and analyzed.).	Derived		
			24	Service usage data shall be forwarded to the account management service as needed to support billing.	Derived		
				<b>TRP</b>	<b>1</b>	Incident response status shall include estimated time of arrival of responding resources.	MnE 5.2,5.2.2
					<b>2</b>	Incident response status shall include current step in the response procedure.	Derived
					<b>3</b>	Incident response status shall include estimated time to removal and clearing of incident.	USR 1.7.1.2.2

Service	Function	Sub - Function	Sequence Number	Requirement	Source
IM	MIRP	TRP	5	Resource location, response route and travel conditions shall be used to determine the estimated time of arrival (ETA) at the incident scene, for each responding resource.	Derived
			6	Estimated time of arrival shall be sent to mayday service users, people who have reported incidents, and agencies participating in the incident response until the responding resource arrives at the scene.	MnE 5.2.1
			7	Incident response status shall be monitored and updated continuously until an incident is closed.	USR 1.7.1.2.2
			9	Incident response status for each incident shall be stored and maintained in the incident log.	Derived
MIRS	MIRA	1	Resource assignments shall be used to manage assignment of emergency medical resources, from multiple agencies and multiple jurisdictions.	GGO 2 1.5.4, Derived	
		2	Resource assignments shall be used to manage assignment of emergency fire resources, from multiple agencies and multiple jurisdictions.	GGO 2 1.5.4, Derived	
		3	Resource assignments shall be used to manage assignment of emergency police resources, from multiple agencies and multiple jurisdictions.	GGO 2 1.5.4, Derived	
		4	Resource assignments shall be used to manage assignment of highway maintenance resources, from multiple agencies and multiple jurisdictions.	GGO 2 1.5.4, Derived	
		5	Resource assignments shall be used to manage assignment of highway service (e.g. Highway Helper) resources, from multiple agencies and multiple jurisdictions.	GGO 2 1.5.4, Derived	
		6	Resource assignments shall be used to manage assignment of public transit (e.g. when large numbers of people need to be transported) resources, from multiple agencies and multiple jurisdictions.	GGO 21.5.4, USR 2.4.4.3	
		7	Resource assignments shall include vehicle assignments.	USR 5.2.1	
		8	Resource assignments shall include personnel assignments.	Derived	
		9	Resource assignments shall include equipment assignments.	Derived	

<b>service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
IM	MIRS	MIRA	10	Vehicle assignments shall include jurisdictional assignment of vehicles to facilities and districts (e.g. fire station).	Derived
			11	Vehicle operational assignments shall include assignment of vehicles to incidents, patrols, maintenance, or training.	USR 1.7.2.2, 1.7.2.3
			12	Vehicle assignment status shall be maintained for each vehicle.	Derived
			13	Personnel assignments shall include capability of assignment of personnel to vehicles.	Derived
			14	Personnel assignments shall include jurisdictional assignment of personnel to facilities and districts (e.g. fire station).	Derived
			15	Personnel assignments shall include operational assignment of personnel to available, incidents, training, or other.	Derived
			16	Personnel assignment status shall be maintained for each individual.	Derived
			17	Equipment assignments shall include assignment of equipment to vehicles.	Derived
			18	Equipment assignments shall include jurisdictional assignment of equipment to facilities and districts (e.g. fire station).	Derived
			19	Equipment assignments shall include assignment of equipment to personnel.	Derived
			20	Equipment assignment status shall be maintained for each piece of equipment.	Derived
			21	Equipment assignments shall include operational assignment of equipment to available, incidents, maintenance, or training.	Derived
			22	Resource assignments for each incident shall be determined based on a resource request, resource status, resource assignment status, and resource location.	MnA 3.4, 3.4.2, 3.5.1, USR 5.2.1.2, 5.2.1.3, GGO 21.5.3
			22.a	When required resources are unavailable to be assigned to incidents, incidents will be queued until appropriate resources become available.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
IM	MIRS	MIRA	23	A resource request shall be sent to Public Transit Fleet Management when transportation for large numbers of people is required during an incident.	USR 2.4.4.3
			29	Upon receipt of a resource cancellation or incident completion notice, resource assignments shall be updated to indicate that responding vehicle(s), personnel and equipment are available to be reassigned to other incidents.	MnA 3.4.2
			30	When incident response status indicates that an incident per response plans and procedures is closed, resource assignments shall be updated to indicate that responding vehicle(s), personnel and equipment are available to be reassigned to other incidents.	MnA 3.4.2
			31	Upon receipt of a maintenance request for preventative maintenance on a vehicle, vehicle assignments shall allocate the vehicle to a maintenance garage if the vehicle is not currently assigned to an incident or assigned as a backup to another vehicle that is assigned to an incident.	Derived
			32	Upon receipt of a maintenance completion notice, the vehicle shall be reassigned to its facility.	Derived
			33	Upon receipt of a maintenance request for preventative maintenance on a piece of equipment, equipment assignments shall allocate the equipment to maintenance if the equipment is not currently assigned to an incident or assigned as a backup to other equipment that is assigned to an incident.	Derived
			34	When vehicle status indicates that a vehicle is not operable, the failed vehicle will be assigned to a maintenance garage.	Derived
			35	When vehicle status indicates that a vehicle is not operable, the appropriate maintenance equipment and personnel shall be assigned to the failed vehicle's location.	Derived
			36	When vehicle status indicates that a vehicle is not operable, an available replacement vehicle shall be assigned to replace the disabled vehicle, if the disabled vehicle was assigned to an incident.	Derived
			37	When a maintenance completion notice is received for a vehicle the vehicle shall be made available for operational assignment.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
<b>IM</b>	MIRS	MIRA	37.a	When a maintenance completion notice is received, the vehicle status shall indicate the vehicle is operable.	Derived
			38	Vehicle condition shall include accumulated mileage.	Derived
			39	Vehicle condition shall include driver reported problems.	Derived
			40	When equipment status indicates that a piece of equipment is inoperable, the failed equipment will be assigned to maintenance.	Derived
			41	When equipment status indicates that a piece of equipment is inoperable, appropriate maintenance equipment and personnel shall be assigned to the failed equipment's location (if necessary).	Derived
			42	When equipment status indicates that a piece of equipment is inoperable, available replacement equipment shall be assigned to replace the disabled equipment if the original equipment had been assigned to an incident.	Derived
			43	When a maintenance completion notice is received on repaired equipment, the equipment status shall indicate operable.	Derived
			44	Equipment condition shall include accumulated hours of usage.	Derived
			45	Equipment condition shall include operator reported problems.	Derived
			46	When a maintenance completion notice is received, the equipment assignment shall be made available for operational assignment.	Derived
			47	When a training request is received, incident response personnel shall be scheduled for a training/certification course if they are not assigned to an incident or if they are not assigned as back-up to other personnel.	Derived
			48	When a training completion notice is received, personnel will be made available for operational assignment.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
IM	MIRS	MIRA	49	Resource assignments shall be stored and maintained.	USR 5.2.1.1, 5.2.2.1, 5.2.3.1
			1	Resource location shall be determined.	MnA 3.5, 3.5.1, USR 1.7.3.1
			3	Resource location shall be determined to an accuracy of +/- (TBD) meters.	Derived
			4	Resource location shall be continuously monitored and reported.	MnE 5.2, GGO 21.5.1
			4.a	Resource location reporting shall be tailorable to the needs of resource managers (e.g. resource owners, dispatch personnel, and on-scene coordinators).	MnE 5.2, GGO 21.5.1
			5	The resource managers (e.g. on scene incident coordinator, the dispatching agency, and the resource owner) shall be alerted when any vehicle condition or equipment condition information indicates a problem.	Derived
			6	Resource status shall include vehicle status.	Derived
			7	Resource status shall include equipment status.	Derived
			8	Resource location shall include vehicle location.	Derived
			9	Resource location shall include personnel location.	Derived
	10	Resource location shall include equipment location.,	Derived		
	PIR	MRPP	1	Response plans and response procedures shall be developed based on the analysis of response requirements and incident history information.	MnA 4.5.3, MCTO 4/24/96- 17
			2	Response plans and response procedures shall be developed to handle each incident in a manner that minimizes response time.	USR 1.7.2, MnA 3.4.2, MCTO 4/24/96- 17
3			Response plans and response procedures shall be developed to handle each incident in a manner that assigns the correct personnel, vehicles and equipment.	USR 1.7.2, 1.7.3, 1.7.2.2, 1.7.2.3	



<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
IM	PIR	MRPP	4	Response plans and response procedures shall be developed to handle each incident in a manner that establishes a command structure to coordinate responding agencies.	USR 1.7.2, MnA 3.2.1, USR 1.7.3.1
			5	Response plans and response procedures shall be developed to handle each incident in a manner that minimizes time required to clear an incident.	USR 1.7.2, MnA 3.1.3
			6	Response plans shall define the appropriate personnel, vehicles and equipment that are needed to respond to a specific incident based on the type of incident.	USR 1.7.2, 1.7.2.2, 1.7.2.3
			7	Response plans shall define the appropriate personnel, vehicles and equipment that are needed to respond to a specific incident based on the location of incident.	USR 1.7.2, 1.7.2.2, 1.7.2.3
			8	Response plans shall define the appropriate personnel, vehicles and equipment that are needed to respond to a specific incident based on the severity of incident.	USR 1.7.2, 1.7.2.2, 1.7.2.3
			9	Response procedures shall define the specific actions, including data that shall be recorded in the incident file, that need to be performed to resolve a specific type of incident.	USR 1.7.2
			10	Response plans and response procedures shall be developed for traffic accident incidents.	USR 1.7.2, 1.7.2.1
			11	Response plans and response procedures shall be developed for transit accident incidents.	USR 1.7.2, 1.7.2.1
			12	Response plans and response procedures shall be developed for HAZMAT incidents.	USR 1.7.2, I 7.2.1
			13	Response plans and response procedures shall be developed for breakdown incidents.	USR 1.7.2, 1.7.2.1
			14	Response plans and response procedures shall be developed for fire incidents.	USR 1.7.2, 1.7.2.1
			15	Response plans and response procedures shall be developed for medical emergency incidents.	USR 1.7.2, 1.7.2.1
			16	Response plans and response procedures shall be developed for planned event (construction, parades, sports or other special events) incidents.	USR 1.7.2, 1.7.2.1
			17	Response plans and response procedures shall be developed for hazardous situation incidents (eg. reported drunk driver, road hazard, etc.).	USR 1.7.2, 1.7.2.1, MnE 5.1.2

Service	Function	Sub - Function	Sequence Number	Requirement	Source
IM	PIR	MRPP	18	Response plans and response procedures shall be developed for terrorist incidents.	USR 1.7.2, 1.7.2.1, 2.4.4.2
			19	Response plans and response procedures shall facilitate a coordinated response to an incident across multiple agencies and jurisdictions involving state/local police.	MnA 3.1.1, 3.4.2, USR 2.4.4.4, 4.5.2.3
			20	Response plans and response procedures shall facilitate a coordinated response to an incident across multiple agencies and jurisdictions involving emergency medical services.	MnA 3.1.1, 3.4.2, USR 2.4.4.4, 4.5.2.3
			21	Response plans and response procedures shall facilitate a coordinated response to an incident across multiple agencies and jurisdictions involving fire departments.	MnA 3.1.1, 3.4.2, USR 2.4.4.4, 4.5.2.3
			22	Response plans and response procedures shall facilitate a coordinated response to an incident across multiple agencies and jurisdictions involving HAZMAT teams.	MnA 3.1.1, 3.4.2, USR 2.4.4.4, 4.5.2.3
			23	Response plans and response procedures shall facilitate a coordinated response to an incident across multiple agencies and jurisdictions involving towing services.	MnA 3.1.1, 3.4.2, USR 2.4.4.4, 4.5.2.3
			24	Response plans and response procedures shall facilitate a coordinated response to an incident across multiple agencies and jurisdictions involving TMC.	MnA 3.1.1, 3.4.2, USR 2.4.4.4, 4.5.2.3
			25	Response plans and response procedures shall facilitate a coordinated response to an incident across multiple agencies and jurisdictions involving highway maintenance.	MnA 3.1.1, 3.4.2, USR 2.4.4.4, 4.5.2.3
			26	Response plans and response procedures shall facilitate a coordinated response to an incident across multiple agencies and jurisdictions involving state and/or local transportation officials	MnA 3.1.1, 3.4.2, USR 2.4.4.4, 4.5.2.3
			27	Response plans and response procedures shall facilitate a coordinated response to an incident across multiple agencies and jurisdictions involving environmental protection agencies.	MnA 3.1.1, 3.4.2, USR 2.4.4.4, 4.5.2.3
			28	Response plans and response procedures shall be updated based on response requirements changes and improvements identified from incident history analyses.	USR 1.7.2, MCTO 4/24/96- 17
			29	Response plans and response procedures shall be stored and maintained.	Derived
			30	Measures of effectiveness data shall be collected to support improvements on incident management plans.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>	
IM	PIR	MRR	1	Response requirements shall be collected, stored and maintained to support incident and emergency response planning activities.	USR 4.4.5.2	
			2	Response requirements shall reflect the needs of key stakeholder agencies (e.g. Police(including Transit Police), Fire , Emergency Medical, MnDOT, TMC, road maintenance, Highway Helper, environmental (e.g. HAZMAT teams, etc.)).	Derived	
			3	Response requirements shall reflect the needs of counties, cities and state.	Derived	
			4	Response requirements shall reflect the needs of travelers/citizens.	Derived	
	MRRO			1	Response routes shall be developed based on the analysis of response requirements and incident history information.	MnA 4.5.3
				2	Response routes shall be developed in a manner that minimizes the travel time required to respond to an incident.	MnA 3.4.2
				3	Response routes shall be updated based on response requirements changes and improvements identified from incident history analyses.	USR 1.7.2
				4	Response routes shall be stored and maintained.	USR 5.2.3.1

Service	Function	Sub - Function	Sequence Number	Requirement	Source
MNT	MMA	MMR	1	Upon completion of a maintenance task, maintenance mechanic input shall be used to create and store a vehicle maintenance record.	USR 2.1.3.1.5
			2	A maintenance task completion shall be generated when the vehicle maintenance record is stored.	USR 2.1.3.1.4
		PMA	1	Mechanics shall be assigned to work on vehicles in accordance with the daily maintenance plan.	USR 2.1.3.1.4
			2	Upon receipt of a maintenance mechanic input requesting vehicle information, vehicle condition history and vehicle maintenance records shall be made available as maintenance mechanic output.	USR 2.1.3.1.3
	PMA	GMP	3	Upon receipt of a maintenance mechanic input requesting additional maintenance activity, an unscheduled maintenance request shall be generated.	USR 2.1.3.1.4
			4	Upon receipt of a maintenance mechanic input requesting additional parts, a required parts list shall be generated.	USR 2.1.3.1.4
			1	Personnel availability information shall be examined to determine which mechanics should be available for performing tomorrow's activities.	USR 2.1.3
			2	Upon receipt of training request for an unavailable mechanic, the personnel assignment for the mechanic shall indicate that the mechanic is assigned to other activity.	USR 2.1.3
		3	Upon receipt of a training request for an available mechanic, a maintenance planner output shall be generated to allow the maintenance planner to accept/reject the request.	USR 2.1.3	
		4	Upon receipt of maintenance planner input that indicates acceptance of the training request, the personnel assignment for the mechanic shall indicate a status of "training" for the duration of the training course.	USR 2.1.3	
5	Upon receipt of training completion for a mechanic, the mechanic shall be assigned to the status indicated in personnel availability information.	USR 2.1.3			

Service	Function	Sub - Function	Sequence Number	Requirement	Source
MNT	PMA	GMP	6	Tomorrow's maintenance plan shall be generated by matching available mechanics with the necessary skills to vehicles with the highest priority maintenance task. Each mechanic shall be assigned to a minimum of 8 hours of maintenance tasks for tomorrow's maintenance plan. A (tbd) maximum number of vehicles shall be assigned for tomorrow's maintenance plan. If no skilled mechanics are available to perform a maintenance task, the maintenance task shall remain on the vehicle maintenance priority list, and next highest priority task shall be reviewed to determine if it can be added to tomorrow.'s maintenance plan.	USR 2.1.3.1.4
			7	At the end of each day, a maintenance request shall be generated for all vehicles in tomorrow's maintenance plan.	USR 2.1.3.1.4
			8	Upon receipt of vehicle assignments at the beginning of each day, a daily maintenance plan shall be generated by assigning available mechanics with the necessary skills to vehicles with the highest priority maintenance task. Each mechanic shall be assigned to complete any tasks that weren't completed on the previous day plus additional tasks until a minimum of 8 hours of maintenance tasks is reached. If no skilled mechanics are available to perform a maintenance task, the maintenance task shall remain on the vehicle maintenance priority list, and next highest priority task shall be reviewed to determine if it can be added to the daily maintenance plan.	USR 2.1.3.1.4
		MMPI	1	A maintenance planner input shall allow the maintenance operator to enter and store preventative maintenance schedules, maintenance task skill requirements, and maintenance task durations for each model of vehicle.	USR 2.1.3.1.2
			2	Vehicle mileage (part of vehicle condition) shall be tracked to predict the vehicle maintenance date for each vehicle's next preventative maintenance activity.	USR 2.1.3.1.2
			3	Vehicle condition history shall be maintained to support activities.	USR 2.1.3.1.3
		PMT	1	Upon receipt of a vehicle assignment that was due to a vehicle failure condition, an additional diagnostic maintenance task shall be created with a vehicle maintenance date that indicates when it was assigned to maintenance.	USR 2.1.3.1.4

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
MNT	PMA	PMT	2	Upon receipt of an unscheduled maintenance request, an additional maintenance task shall be created with a vehicle maintenance date set to the time indicated in the request. (Rationale: this allows mechanics to schedule additional maintenance tasks that are discovered during preventative maintenance and diagnostic maintenance tasks)	USR 2.1.3.1.4
			3	A vehicle maintenance priority list shall be generated for the vehicle fleet in the order of vehicle maintenance date.	USR 2.1.3.1.4
			4	Upon receipt of a maintenance task completion, the maintenance task shall be removed from the vehicle maintenance priority list and a maintenance completion shall be returned to the fleet management service.	USR 2.1.3.1.4
			5	Upon receipt of a required parts list, a parts order shall be generated. The maintenance task shall be removed from the vehicle maintenance priority list until replacement parts have been received.	USR 2.1.3.1.4

Service	Function	Sub - Function	Sequence Number	Requirement	Source
RMR	DRO	DRS	1	Real-time demand responsive dispatch shall be provided to allow paratransit and other passengers to schedule requests for same-day trips.	GGO 11.5.1, MnA 6.1.2, 6.4.2, 6.4.5
			2	Upon receipt of a DEMAND RESPONSIVE REQUEST, the vehicle driver shall be contacted in real-time to determine if the driver will accept the request.	USR 1.4.1.4, 2.3.2.9, 2.3.2.10, GGO 4.5.3, 4.10.2
			3	If the vehicle driver does not respond to the DEMAND RESPONSIVE REQUEST within (TBD) minutes, the DEMAND RESPONSIVE RESPONSE shall indicate “denied”.	USR 1.4.1.4, 2.3.2.9, 2.3.2.10, GGO 4.5.3, 4.10.2
			4	If the vehicle driver responds to the DEMAND RESPONSIVE REQUEST within (TBD) minutes, the DEMAND RESPONSIVE RESPONSE shall indicate the driver’s response.	USR 1.4.1.4, 2.3.2.9, 2.3.2.10, GGO 4.5.3, 4.10.2
			5	If the demand responsive response is “confirmed”, the modified vehicle manifest shall be sent to the vehicle driver.	USR 1.4.1.4, 2.3.2.9, 2.3.2.10, GGO 4.5.3, 4.10.2
	RSA	1	Rideshare vehicle location shall be determined automatically.	USR 2.3.3.1.a	
		2	Rideshare vehicle location shall be determined to an accuracy of +/- (TBD) meters.	USR 2.3.3.2	
		3	VEHICLE PARAMETERS including rideshare vehicle location shall be reported to the rideshare fleet management facility.	USR 2.3.3.2	
		4	Schedule adherence information shall be maintained to support real time schedule adjustments, and to provide status information for customer service.	USR 2.1.2.2.5, 2.3.3.2	
		5	Schedule adherence information shall be reported as necessary to notify passengers that the rideshare vehicle arrival is imminent.	USR 2.3.1.4	
6	A scenario for returning a vehicle to schedule adherence shall be determined.	USR 2.1.1.2.2, 2.3.3.2			

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>			
RMR	DRO	RSA	7	A capability to dispatch taxicabs to pick-up rideshare participants shall be provided to enable a late ridesharing vehicle to regain schedule adherence.	GGO 11.5.2			
			8	Corrective instruction vehicle commands shall be automatically issued to the vehicle drivers.	USR 2.1.1.2.1.4, 2.3.3.2			
			9	Corrective instruction vehicle commands shall include a) changes in stops and b) route corrections including rerouting around incidents and congestion.	USR 2.1.1.2.1.4			
			10	Fleet vehicles shall arrive/depart within (TBD) minutes of the published schedule.	USR 2.3.3.2			
			11	A capability to delay connecting vehicle departures shall be provided when travelers with connecting rides are late.	Derived			
			12	Travelers shall be notified if they missed a travel connection.	Derived			
			13	A TRAVEL CONDITIONS REQUEST shall be established for each transit route to enable the collection of TRAVEL CONDITIONS along the route.	Derived			
			14	TRAVEL CONDITIONS shall be monitored to determine when traffic could cause a schedule deviation along a route.	Derived			
			RSU	1	RIDESHARE COMPLETIONS data including passenger trip origin and pick-up time shall be collected and stored as service usage data.	USR 1.4.3.5, 1.4.3.6, 2.3.3.1 .b, 2.3.3.2		
				2	RIDESHARE COMPLETIONS data including passenger trip destination and drop-off time shall be collected and stored as service usage data.	USR 1.4.3.5, 1.4.3.6, 2.3.3.1.b, 2.3.3.2		
			RSO	DTSPI	1	Rideshare provider information reports shall be generated as needed by rideshare transportation providers.	USR 1.4.2.3	
					2	Rideshare provider information vehicle manifests shall be generated daily for each rideshare vehicle.	Derived	
					MRP	1	Rideshare matching of riders to providers shall be provided.	GGO 4.5.2,4.5.4, 4.10.3, 11.10.3, MnA 6.1.1, SB 74-2, 74-3, USR 1.4.3.4



Service	Function	Sub - Function	Sequence Number	Requirement	Source
RMR	RSO	MRP	2	When a rideshare request for a future date is received, the available rideshare offers shall be filtered to determine rideshare information (i.e. a list of rideshare options and provider profile information) that meet the trip criteria.	USR 1.4.1.3, 1.4.3.1, SB 75-3
			3	When a rideshare request for the current date is received, the available rideshare offers shall be filtered and combined with vehicle location to determine rideshare information (i.e. a list of rideshare options and provider profile information) that meet the trip criteria.	USR 1.4.1.3, 1.4.3.1, SB 75-3
			4	If no available rideshare offers meet the rideshare request trip criteria, the request shall be waitlisted for the next rideshare route plan determination.	ASIS
			5	When a rideshare request for a selected option is received, a seat on the selected vehicle shall be reserved for the requester.	USR 2.3.2.5, GGO 4.10.1
			6	When a rideshare request for a selected option on a future date is received, rideshare information that indicates a reserved seat shall be sent to the requestor via the Manage Rideshare Requests subfunction.	USR 2.3.2.5, GGO 4.10.1
			7	When a rideshare request for a selected option on the current day is received, a demand responsive request shall be sent to determine if the provider can accept the added passenger.	USR 2.3.2.10
			8	When a “confirmed” demand responsive response is received, rideshare information that indicates a reserved seat shall be sent to the requestor via the Manage Rideshare Requests subfunction.	USR 2.3.2.5, GGO 4.10.1
			9	When a “confumed” demand responsive response is received, an updated vehicle manifest shall be sent to the provider.	USR 2.3.2.5, GGO 4.10.1
			10	When a “denied” demand responsive response is received, rideshare information that indicates “no seats available” shall be sent to the requestor via the Manage Rideshare Request subfunction.	USR 2.3.2.5, GGO 4.10.1
			11	Rideshare personnel assignments shall include driver to run.	USR 2.3.4.3
			12	Rideshare personnel assignments shall include driver to training course.	GGO 12.10.2

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>		
<b>RMR</b>	<b>RSO</b>	<b>MRP</b>	13	Rideshare vehicle assignments shall include vehicle to blocks.	USR 2.3.4.3		
			14	Rideshare vehicle assignments shall include vehicle to maintenance garage.	Derived		
			15	Rideshare vehicle assignments shall be determined using rideshare information for special passenger handling and service usage data.	USR 2.3.2.1		
			16	Rideshare vehicle assignments shall be determined for both publicly owned and privately owned/publicly licensed vehicles.	USR 2.3.2.6		
			17	Rideshare vehicle assignments shall support demand responsive mode.	SB 46- 1		
			18	When a maintenance request for preventative maintenance on a vehicle is received, the vehicle assignment for the vehicle shall be allocated to a maintenance garage if the minimum required number of vehicles would still be available for normal ridesharing operations.	USR 2.1.3.1.2		
			19	When a driver indicates that his vehicle has broken down, the vehicle assignment for the failed vehicle shall be allocated to a maintenance garage.	Derived		
			20	When a driver indicates that his vehicle has broken down, appropriate equipment and personnel shall be assigned to the failed vehicle's location.	USR 2.1.3.1.4		
			21	When a driver indicates that his vehicle has broken down, the vehicle assignment for a replacement vehicle shall be allocated to pick-up the stranded passengers and continue the run.	Derived		
			22	When a training request for a driver is received, the personnel assignment for the driver shall schedule the driver for the training course if the minimum required number of drivers would still be available for normal ridesharing operations.	GGO 12.10.2		
			23	When an incident RESOURCE REQUEST is received, available VEHICLE and PERSONNEL ASSIGNMENTS shall be allocated to the incident in support of law enforcement and/or emergency response agencies.	USR 2.4.4.3, 2.4.4.4, 2.4.4.5		
				<b>PRO</b>	1	Rideshare Fleet Operating Procedures shall be continuously evaluated, improved and maintained to meet customer demand.	MTCO 10/3/96

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
RMR	RSO	PRR	1	Individual daily rideshare route plans shall be determined for all vehicles participating in each daily run.	Derived
			2	Rideshare route plans shall be maintained for up to (TBD) days in advance of the run day.	Derived
			3	The rideshare route plan shall be determined periodically using rideshare offers, reserved rideshare requests and waitlisted rideshare requests..	USR 2.3.2.1, 2.3.2.4
			4	The rideshare route plan optimization shall support a strategy of minimizing passenger ride time.	USR 2.3.2.4, 2.3.4.2
			5	The rideshare route plan optimization shall support a strategy of maximizing vehicle occupancy.	Derived
			6	The rideshare route plan shall be compliant with Americans with Disabilities Act (ADA) regulations.	Derived
			7	If a waitlisted rideshare request is accommodated in a rideshare route plan, rideshare information (i.e. list of rideshare options) shall be sent to the requestor via the Manage Rideshare Requests subfunction.	Derived
			8	A final rideshare route plan shall be determined the night before the run begins.	Derived
			9	When the final rideshare route plan is completed, rideshare information (i.e. passenger manifest) and rideshare provider information (i.e. vehicle manifest) shall be generated.	GGO 4.5.1, 4.10.1
			10	Rideshare route plans shall support transfers between demand responsive and fixed route vehicles.	Derived
		RSO	1	Rideshare offers for paratransit commercial operators shall be maintained.	USR 1.4.3.3
			2	Rideshare offers for Vanpools, express bus, bus, rail and taxis shall be maintained.	USR 1.4.2.4, 1.4.3.3
			3	Rideshare offers for single trip Carpools shall be maintained to allow qualified drivers to use their vehicle to offer rides to others who are traveling in the same direction.	SB 73-3

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
RMR	RSO	RSO	4	Rideshare offers shall include the number of seats available in the rideshare vehicle.	SB 73-4
			5	Rideshare offers for single trip Carpools shall include origin and destination checkpoints.	SB 73-3
			6	Rideshare providers profile information shall be maintained' for each provider.	Derived
			7	Manage Rideshare Request functions shall only be made available to transit providers that are authenticated by the ridesharing Authorized Provider List.	Derived
			8	Upon receipt of an Authorized Provider List, the list shall be saved for user authentication.	Derived
	RSR	DRI	1	When Rideshare Information indicating a confirmed rideshare request is received, the transit user shall be contacted and provided with Trip Itinerary listing departure and arrival times, along with times associated with any intermediate stops.	USR 2.3.1.3
			2	When Rideshare Information indicating a confirmed rideshare request is received, the transit user shall be contacted and provided with Provider Information (e.g. driver name, vehicle license number).	USR 1.4.0
			3	Schedule Adherence Information shall be used to compute the additional time it will take for the rideshare vehicle to arrive at the transit user departure point. When this time matches the timeout period listed in the transit User Profile, an imminent arrival notification (Rideshare Information) shall be sent to the transit user.	USR 2.3.1.4
4			Mode Use Information data shall be maintained.		
5			Mode Use Information shall include rideshare program data about registration for and access to ride matching and reservation services.	USR 1.1.1.1.6, 2.2.3.2.2.c	
6			Mode Use Information shall include transit provider information.	MnA 6.2.3, USR 1.4.0, 2.2.2.3	
7			Mode Use Information shall include security information (e.g. driver and vehicle identification).	GGO 4.5.3	

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
RMR	RSR	DRI	8	When RIDESHARE INFORMATION indicates an available ride for a waitlisted request, the transit user shall be contacted and notified about the available ride.	Derived
			9	When RIDESHARE INFORMATION indicates an available ride for a waitlisted request, the RIDESHARE INFORMATION (i.e. rideshare options) shall be passed to the Manage Rider Requests subfunction to enable the user to select an available option.	Derived
			10	Mode Use Information shall be made available to any user.	
		RRQ	1	RIDESHARE REQUEST information shall be collected from the transit user to allow the user to request a specific rideshare trip itinerary.	
			2	RIDESHARE REQUEST information shall include Trip Date.	USR 1.4.1.2
			3	RIDESHARE REQUEST information shall include Trip Frequency (e.g. daily, weekly, monthly)	Sbus 74-l
			4	RIDESHARE REQUEST information shall include Time of pick-up.	USR 1.4.1.2, 2.3.1.1
			5	RIDESHARE REQUEST information shall include Time of drop-off.	USR 1.4.1.2, 2.3.1.1
			6	RIDESHARE REQUEST information shall include Trip Origin.	USR 1.4.1.2, 2.3.1.1
			7	RIDESHARE REQUEST information shall include Trip Destination,	USR 1.4.1.2, 2.3.1.1
			8	RIDESHARE REQUEST information shall include Rider Constraints (e.g. handicap access).	USR 1.4.1.2, 2.3.1.2
			9	The transit user shall be permitted to submit a RIDESHARE REQUEST to obtain information about available single trips.	USR 1.4.1.1
			10	The transit user shall be permitted to submit a standing RIDESHARE REQUEST to obtain information about available daily, weekly or monthly trips.	Sbus 74-l
			11	The transit user shall be permitted to suspend a standing RIDESHARE REQUEST when the user has a change in travel plans.	Sbus 74- l

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
RMR	RSR	RRQ	12	The transit user shall be permitted to submit RIDESHARE REQUESTs via telephone, mail, or personally owned computer equipment.	Sbus 43-4
			13	The transit user shall be permitted to submit a RIDESHARE REQUEST to reserve a seat for a single trip, daily trip, weekly trip or monthly trip.	Sbus 43-4
			14	Rideshare requests shall be passed to Manage Rideshare Offers subfunction to obtain rideshare information (i.e. rideshare options) that meet the rideshare request criteria.	Derived
			15	When rideshare information is received, it shall be forwarded to the transit user via the user's preferred delivery method (i.e. computer, mail).	Derived
			16	When a transit user submits a telephone or computer generated rideshare request for a single trip reservation, real-time rideshare information shall be provided while the transit user is connected to the ride matching and reservations service.	Derived
			17	The transit user shall be provided with the capability to either wait for real-time RIDESHARE INFORMATION, or to disconnect and have the service contact him with the information when it becomes available.	Derived
			18	If rideshare information contains no rideshare options, the transit user shall be notified that his rideshare request for a trip reservation will be wait-listed.	Derived
			19	If the transit user rejects all of the available rideshare options, the transit user shall be notified that his rideshare request for a trip reservation will be wait-listed.	Derived
			20	When updated rideshare information is received for a wait-listed reservation, the rideshare information shall be forwarded to the transit user via the user's preferred delivery method (i.e. telephone, computer, mail).	Derived
			21	When a transit user selects an available rideshare option, a RIDESHARE REQUEST for the selected option shall be generated to reserve a seat on the provider's vehicle.	Derived
			22	Manage Rideshare Request functions shall only be made available to transit users that are authenticated by the ridesharing Authorized Users List.	USR 3.1.2.5

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
RMR	RSR	RRQ	23	Upon receipt of an Authorized User List, the list shall be processed for user authentication and retained.	USR 3.1.2.5

Service	Function	Sub - Function	Sequence Number	Requirement	Source
TC	MSNEO	CSM	1	Signals shall be capable of operating in automatic signal timing mode.	Derived
			2	Signals shall be capable of operating in manual override mode.	GGO 6.5.2, USR 1.6.3.5
			3	Signals shall be capable of operating in pre-emption .or priority mode.	Derived
			4	Signals shall be capable of operating in manual override using using secured wire and wireless communications	MnA 976
			5	Signal pre-emption shall be available on-demand for emergency vehicles at traffic signal intersections to minimize delays in responding to emergencies and reduce safety hazards when passing through intersections by providing preference over others.	GGO 6.5.3, MnA 973, 994, USR 1.6.3.2.2, 5.2.3
			6	Signal priority shall be available on-demand for transit vehicles and other authorized vehicles at traffic signal intersections along transit routes to facilitate adherence to transit schedules by providing preference over others.	GGO 6.5.3, USR 1.6.1.2.2, 1.6.3.2.2
			7	Signal pre-emption and signal priority timing shall be determined automatically when signal pre-emption requests and/or signal priority requests are received from authorized emergency, transit, or railroad vehicles.	UST 5.2.3.2
			8	Signal pre-emption shall be available on-demand for railroad trains at traffic signal intersections to minimize safety hazards when passing through grade level crossings by providing highest priority to the railroad.	Derived
		ISTP	1	Real-time, adaptive control of signaling devices shall be provided throughout the traffic control system network to allow traffic flow optimization via rapid modification of signal controls on arterials.	GGO 6.10.1, USR 1.6.3.3.1
			2	Real-time, adaptive control of signaling devices shall be provided throughout the traffic control system network to allow traffic flow optimization via rapid modification of signal controls on highways.	GGO 6.10.1, USR 1.6.3.3.1



Service	Function	Sub - Function	Sequence Number	Requirement	Source
TC	MSNEO	ISTP	3	Real-time, adaptive control of signaling devices shall be provided throughout the traffic control system network to allow traffic flow optimization via rapid modification of signal controls integrated with freeways.	GGO 6.10.1, USR 1.6.3.3.1, USR 1.6.1.2.1
			4	Signal timing plans shall be integrated, coordinated and consistent across wide areas including multiple jurisdictions to avoid issuing conflicting controls and to minimize traffic delays.	USR 1.6.3.2, 1.6.3.2.1
			5	Signal timing plans shall be maintained and modifiable on-demand in real-time,	USR 5.2.3.1
			6	Signal control plans shall be maintained and modifiable on-demand in real-time.	MnA 993
			7	Signaling systems shall be programmable and fully adaptive.	GGO 6.5.1, MnA 968
			8	Signal timing plans and signal controls shall be selectable/modifiable by traffic control operators in real-time to respond to changing traffic requirements and modify system response.	USR 1.6.3.1, 1.6.3.3.1, 1.6.3.6
			9	Signal timing plans and signal controls shall be selectable/modifiable via a single agency across multiple jurisdictions.	MnA 972
			10	Signal timing plans and signal controls shall be selectable/modifiable in a coordinated manner across multiple jurisdictions to reduce traffic flow impact of an incident report.	USR 1.6.3.6, 1.7.2.5
			11	Signal timing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to traffic volume/occupancy data feedback.	USR 1.6.3.3.2, 1.6.1.6
			12	Signal timing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to current traffic conditions feedback.	USR 1.6.3.3.2, MnA 914
			13	Signal timing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to incident reports.	USR 1.6.3.3.2, MnA ?
			14	Signal timing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to current and predicted/forecast travel conditions.	USR 1.6.3.3.2, MnA ?
			15	Signal timing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to reversible lane change requirements.	USR 1.6.3.3.2, 1.6.3.3.4

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>			
TC	MSNEO	ISTP	16	Signal timing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to turn restriction change requirements.	USR 1.6.3.3.2, 1.6.3.3.4			
			17	Signal controls for currently selected signal timing plans shall be transmitted to the respective traffic signal devices throughout the signal network including traffic signals and intersection controllers.	USR 1.6.1.1.1, 1.6.3.4			
			18	Signal controls for currently selected signal timing plans shall be transmitted to the respective traffic signal devices throughout the signal network including freeway ramp meters.	USR 1.6.1.1.2, 1.6.3.3.3, 1.6.3.4			
			19	Signal controls for currently selected signal timing plans shall be transmitted to the respective traffic signal devices throughout the signal network including HOV lane signals.	USR I .6.3.4			
			20	Signal controls for currently selected signal timing plans shall be transmitted to the respective traffic signal devices throughout the signal network including human operator.	USR 1.6.3.4			
			21	Signal controls shall be updated via on-demand real-time communications along arterials.	MnA 915			
			22	Signal controls shall be updated via on-demand real-time communications along freeways.	MnA 985			
			23	Signal controls shall be updated via on-demand real-time communications between arterials and freeways.	MnA 947			
			MSR			1	Signal resources throughout the network shall be maintained by the respective owner agencies.	Derived
						2	Signal resources throughout the network shall be operated by the mutually agreed upon agencies.	Derived
3	Individual signal resource operation shall be capable of being passed to a different agency in accordance with documented operating agreements.	Derived						
MSNO	CSM		I	Signs shall be capable of operating in automatic messaging mode.	Derived			
			2	Signs shall be capable of operating in manual messaging mode.	Derived			

Service	Function	Sub - Function	Sequence Number	Requirement	Source	
TC	MSNO	CSM	3	Sign controls shall be determined by the selected signing plans when in the automatic messaging mode.	Derived	
			4	Sign controls shall be operator controlled when in the manual messaging mode.	Derived	
	ISCP			1	Real-time, adaptive control of signing devices shall be provided throughout the traffic control system network to allow flow optimization via rapid modification of sign controls on arterials.	GGO 6.10.1, USR 1.6.3.3.1
				2	Real-time, adaptive control of signing devices shall be provided throughout the traffic control system network to allow flow optimization via rapid modification of sign controls on highways.	GGO 6.10.1, USR 1.6.3.3.1
				3	Real-time, adaptive control of signing devices shall be provided throughout the traffic control system network to allow flow optimization via rapid modification of sign controls integrated with freeways.	GGO 6.10.1, USR 1.6.3.3.1, 1.6.1.2.1
				4	Signing plans shall be integrated, coordinated and consistent across wide areas including multiple jurisdictions to avoid issuing conflicting messages and to minimize traffic delays.	USR 1.6.3.2, 1.6.3.2.1
				5	Signing plans shall be maintained and modifiable on-demand in real-time.	USR 5.2.3.1
				6	Sign controls shall be maintained and modifiable on-demand in real-time.	MnA 993
				7	Signing systems shall be programmable.	GGO 6.5. I, MnA 968
				8	Signing plans and sign controls shall be selectable/modifiable by traffic control operators in real-time to respond to changing traffic requirements and to modify system response.	USR 1.6.3.1, 1.6.3.3.1, i1.6.3.6
				9	Signing plans and sign controls shall be selectable/modifiable via a single agency across multiple jurisdictions.	MnA 972
10	Signing plans and sign controls shall be selectable/modifiable in a coordinated manner across multiple jurisdictions to reduce traffic flow impact of an incident report.	USR 1.6.3.6, 1.7.2.5				
11	Signing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to traffic volume/occupancy data feedback.	USR 1.6.3.3.2, 1.6.1.6				

Service	Function	Sub - Function	Sequence Number	Requirement	Source			
TC	MSNO	ISCP	12	Signing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to current traffic conditions feedback.	USR 1.6.3.3.2, MnA 914			
			13	Signing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to incident reports.	USR 1.6.3.3.2, MnA ?			
			14	Signing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to current and predicted/forecast travel conditions.	USR 1.6.3.3.2, MnA ?			
			15	Signing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to reversible lane change requirements.	USR 1.6.3.3.2, 1.6.3.3.4			
			16	Signing plans shall be dynamically adaptable in real-time based on traffic situations including but not limited to turn restriction change requirements.	USR 1-6.3.3.2, 1.6.3.3.4			
			17	Sign controls for currently selected signing plans shall be transmitted to the respective signing devices throughout the signal network including changeable message signs (fixed).	Derived			
			18	Sign controls for currently selected signing plans shall be transmitted to the respective signing devices throughout the signal network including fixed-location variable message signs.	Derived			
			19	Sign controls for currently selected signing plans shall be transmitted to the respective signing devices throughout the signal network including portable variable message signs.	Derived			
			20	Sign control shall be updated via on-demand real-time communications along arterials.	MnA 915			
			21	Sign control shall be updated via on-demand real-time communications along freeways.	MnA 985			
			22	Sign control shall be updated via on-demand real-time communications between arterials and freeways.	MnA 947			
			MSR			1	Sign resources throughout the network shall be maintained by the respective owner agencies.	Derived
						2	Sign resources throughout the network shall be operated by the mutually agreed upon agencies.	Derived
						3	Individual sign resource operation shall be capable of being passed to a different agency in accordance with documents operating agreements.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>	
TC	MTC	CTD	1	Traffic surveillance data, needed for determining current traffic conditions and predicting future conditions, shall be collected and maintained.	USR 1.6.2.2	
			2	Traffic surveillance data shall be collected throughout large geographic areas.	USR 1.6.2.3	
			3	Traffic surveillance data shall be collected multiple jurisdictions.	USR 1.6.2.3	
			4	Traffic surveillance data shall be collected for a large number of roadway segments.	USR 1.6.2.3.2	
			5	Traffic surveillance data shall be collected at specific locations as needed.	USR 1.6.2.4	
			6	Traffic surveillance data shall be collected in real-time.	USR 1.6.2.1	
	DITC			1	Traffic conditions information shall be distributed to requesting agencies and other ITS services to support sharing within/between agencies across jurisdictions.	MnA 984
				2	Traffic conditions information shall be distributed to requesting agencies and other ITS services to support in-vehicle navigation.	USR 1.6.4
				3	Traffic conditions information shall be distributed to requesting agencies and other ITS services to support trip planning.	USR 1.6.4
				4	Traffic conditions information shall be distributed to requesting agencies and other ITS services to support routing and guidance.	USR 1.6.4
				5	Traffic conditions information shall be distributed to requesting agencies and other ITS services to support fleet management.	USR 1.6.4
				6	Traffic conditions information shall be distributed to requesting agencies and other ITS services to support Travel Conditions Information.	USR 1.6.4
				7	Traffic volume/occupancy data feedback shall be provided to facilitate traffic performance analysis and traffic control plan updates/improvements.	USR 1.6.2.2.1
				8	Traffic surveillance data feedback shall be provided to signal network operations and sign network operations agencies to facilitate real-time, adaptive signaling and signing control.	USR 1.6.2.2.1

Service	Function	Sub - Function	Sequence Number	Requirement	Source
TC	MTC	DITC	9	Traffic conditions information feedback shall be provided to the signal network operations and sign network operations agencies to facilitate real-time, adaptive signaling and signing control.	USR 1.6.2.2.1
		DTC	1	Traffic surveillance data shall be processed to determine link-specific traffic speeds.	MnA 920, 92 1
			2	Traffic surveillance data shall be processed to determine link-specific as traffic flow parameters.	USR 1.6.2.3.1
			3	Traffic surveillance data shall be processed to determine link-specific congestion levels.	MnA 962
			4	Traffic surveillance data shall be processed to determine link-specific vehicle presence.	USR 1.6.2.1
			5	Traffic surveillance data shall be processed to determine identify HOV vehicles.	USR 1.6.2.1.1
			6	Traffic surveillance data shall be processed to determine identify presence of pedestrians in crosswalks.	GGO 29.5.1
			7	Traffic speeds shall be accurate to (+/- TBD).	Derived
			8	Traffic flow shall be accurate to (+/- TBD).	Derived
			9	Link-specific traffic conditions information shall be determined for geographically referenced roadway segments.	Derived
			10	A common roadway segment geographical reference system shall be supported.	Derived
	PTCS	MTCP	1	Traffic control plans shall be developed based on traffic control requirements and strategies that consider traffic volume occupancy data analysis.	Derived
			2	Traffic control plans shall be developed based on traffic control requirements and strategies that consider traffic conditions data.	Derived
			3	Traffic control plans shall be developed based on traffic control requirements and strategies that consider safety statistics (accident statistics by location, etc.).	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TC	PTCS	MTCP	4	Traffic control plans shall be developed based on traffic control requirements and strategies that consider users requests/complaints.	Derived
			5	Traffic control plans shall be developed based on traffic control requirements and strategies that consider results of traffic flow optimization models.	Derived
			6	Traffic control plans shall facilitate traffic movement in a manner that minimizes traffic delay times.	USR 1.6.1.1.3
			7	Traffic control plans shall facilitate traffic movement in a manner that minimizes energy use.	USR 1.6.1.1.4
			8	Traffic control plans shall facilitate traffic movement in a manner that maximizes traffic-movement efficiency.	USR 1.6.1.1
			9	Traffic control plans shall facilitate traffic movement in a manner that minimizes air quality impacts.	USR 1.6.1.1.5
			10	Traffic control plans shall facilitate traffic movement in a manner that incorporates current traffic demand.	USR 1.6.1.4
			11	Traffic control plans shall facilitate traffic movement in a manner that incorporates expected traffic demand.	USR 1.6.1.4
			12	Traffic control plans shall facilitate traffic movement in a manner that predicts travel patterns.	USR 1.6.1.5
			13	Traffic control plans shall include provisions for dissipating traffic congestion.	USR 1.6.1.4.1
			14	Traffic control plans shall include provisions for moving traffic around incidents.	MnA 988
			15	Traffic control plans shall include provisions for handling predictable fluctuations in traffic patterns/volume (e.g.; workday such hours, weekends, holidays, etc.).	Derived
			15.a	Traffic control plans shall include provisions for moving traffic in inclement weather.	Derived
			16	Traffic control plans shall address requirements for optimizing traffic movement across multiple jurisdictions.	USR 1.6.1.2

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TC	PTCS	MTCP	17	Traffic control plans shall address requirements for optimizing traffic movement throughout large geographic areas.	USR 1.6.1.3
			18	Traffic control plans shall be based on integrated traffic control strategies and traffic volume/occupancy data that are coordinated across multiple agencies/jurisdictional boundaries.	MnA 919, 912
			19	Traffic control plans shall be based on integrated traffic control strategies and traffic volume/occupancy data that are coordinated along arterial/freeway corridors.	MnA 919, 964
			20	Traffic control plans shall be based on integrated traffic control strategies and traffic volume/occupancy data that are coordinated for streets and highways.	MnA 919, USR 1.6.0
			21	Traffic volume/occupancy data shall be collected, stored and maintained to support traffic management performance analysis.	MnA 913, 916
			22	Traffic volume/occupancy data shall be collected, stored and maintained to support growth planning analysis.	MnA 916
			23	Traffic volume/occupancy data shall be collected, stored and maintained to support problem intersection analysis.	MnA 918, 983
			24	Traffic volume/occupancy data collection and analysis shall be coordinated across multiple agencies and jurisdictions.	MnA 923
			25	Traffic control plans shall be updated based on traffic control requirements changes and improvements identified from traffic volume/occupancy data analyses.	MIIA 977
			26	Traffic control plans shall be selectable to suit the current or predicted traffic situations.	Derived
			27	The active traffic control plan shall include coordinated signal timing plans and signing plans that implement the traffic control strategy appropriate for the current or predicted traffic situation.	Derived
			28	Traffic control resources consisting of signals and signs, maintenance equipment, operations and maintenance staff, and funding shall be shared within between agencies, and across jurisdictions in a manner that enables traffic management to be efficiently and effectively provided across large geographic areas.	MnA 974, 975, 978



<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TC	PTCS	MTCP	29	Signal resources and signing resources shall be allocated in a manner that optimizes implementation of documented traffic control strategies and traffic control plans.	Derived
		MTCR	1	Traffic control requirements shall be collected, stored and maintained to support traffic control planning activities.	Derived
			2	Traffic control requirements shall reflect the needs of counties and cities.	MnA 969
			3	Traffic control requirements shall reflect the needs traveler expectations and human factors.	USR 1.6.1.7
			4	Traffic control requirements shall reflect the needs key stakeholder agencies (e.g. MnDOT, TMC, road maintenance, highway helper, emergency response, etc.).	MnA 956, 98 1, 988

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTCD	CTCD	1	Travel conditions source data shall include traffic conditions.	MnE 1.3
			2	Travel conditions source data shall include traffic surveillattce data.	Derived
			3	Travel conditions source data shall include weather conditions.	MnE 1.3
			4	Travel conditions source data shall include weather surveillance data.	MnE 1.3
			5	Travel conditions source data shall include road surface conditions.	MnE 1.3
			6	Travel conditions source data shall include road surface surveillance data.	MnE 1.3
			7	Travel conditions source data shall include incident conditions.	MnE 1.3
			8	Travel conditions source data shall include planned event information.	MnE 1.3
			9	Travel conditions source data shall include parking conditions.	MnE 1.3
			10	Travel conditions source data shall include transit conditions.	MnE 1.3
			12	Traffic conditions data shall be collected.	Derived
			13	Weather conditions shall be collected.	Derived
			16	Road surface conditions shall be collected from humans	Derived
			17	Road surface conditions shall be collected from other systems.	Derived
			18	Incident conditions shall be collected from humans.	Derived
			19	Planned event information shall be collected from humans	Derived
			20	Planned event information shall be collected from other systems.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTCD	CTCD	21	Parking conditions shall be collected.	Derived
			22	Transit conditions shall be collected.	Derived
			23	Travel conditions source data shall be accepted for input in to the system via voice.	Derived
			24	Travel conditions source data shall be accepted for input in to the system via fax	Derived
			25	Travel conditions source data shall be accepted for input into the system via paper copy	Derived
			26	Travel conditions source data shall be accepted for input into the system via magnetic medium	Derived
			28	Travel conditions source data shall be accepted in the system via manual entry.	Derived
			29	Travel conditions source data shall be accepted into the system via electronic entry. (ITS standard format).	Derived
			29.a	Travel conditions source data shall be accepted into the system when in NTCIP format.	Derived
			29.b	Travel conditions source data shall be accepted into the system when in ITIS BAP format.	Derived
			30	Travel conditions source data shall be accepted into the system via electronic entry. (ITS non-standard format)	Derived
			31	Travel conditions source data received in a non-standard format shall be converted to standard format.	Derived
			32	Travel conditions source data shall be stored and maintained as an operator selectable option.	Derived
			33	Travel conditions source data that is no longer active shall be identified.	Derived
			34	Travel conditions source data that is no longer active shall be manually deletable.	Derived
			35	Travel conditions source data shall be logged upon initial receipt, change, and deletion.	Derived
			36	Condition start time shall be assigned when travel conditions source data is generated.	Derived

Service	Function	Sub - Function	Sequence Number	Requirement	Source
TCI	MTC	CTCD	37	Condition stop time shall be assigned to travel conditions source data.	MnE 2.2,2.6.2 1.5.3, 1.7.2
			38	Expected duration shall be assigned when travel conditions source data is generated.	MnE 2.2,2.6.2 1.5.3, 1.7.2
			39	Weather surveillance data shall be collected.	USR 3.1.2.5
			40	Road surface surveillance data shall be collected.	
			41	Parking surveillance data shall be collected.	Derived
			42	Traffic surveillance data shall be collected.	Derived
			43	Travel conditions source data shall include parking surveillance data.	Derived
			44	Incident conditions shall be collected from other systems.	Derived
			45	Multiple sources of travel conditions source data shall be compared to improve the accuracy of the data.	Derived
			46	Multiple sources of travel conditions source data shall be compared to improve the consistency of the data.	Derived
		DBTCTE	4	Travel conditions shall be referenced to a physical location.	MnE 1.1.1, 1.2
			5	Travel effects shall be referenced to a physical location.	MnE 1.1.1
			7	Link reference model data shall be stored and maintained.	Derived
			8	Travel conditions shall include current traffic conditions	USR 5.2.2.1
			9	Travel conditions shall include current weather conditions.	USR 5.2.2.1, GGO 10.5.2
			10	Travel conditions shall include forecasted weather conditions.	MnE 1.1.2, 1.6.1, GGO 10.5.2

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTC	DBTCTE	11	Travel conditions shall include current road surface conditions.	USR 5.2.2.1
			12	Travel conditions shall include forecasted road surface conditions	Derived
			13	Travel conditions shall include current incident conditions.	USR 5.2.2.1
			14	Travel conditions shall include planned event information	MnE 1.6.1
			15	Travel conditions shall include current parking conditions	USR 1.1.2.1.6
			16	Travel conditions shall include current transit conditions	USR 1.1.2, 1.1.2.1
			17	Travel conditions shall include future transit conditions	MnE 2.5,2.6
			18	Travel conditions shall be stored and maintained.	Derived
			19	Traffic conditions shall include congestion	USR 5.2.2.1, MnE 1.4.1, MnA 1.5.1, USR 1.2.2.1.2
			20	Traffic conditions shall include freeway data.	USR 5.2.2.1, GGO 1.5.1
			21	Traffic conditions shall include traffic speeds	USR 5.2.2.1, USR 1.1.2.1.5
			22	Traffic conditions shall include traffic levels (volume and occupancy)	USR 5.2.2.1, MnE 1.4.1, MnA 1.5.1
			23	Traffic conditions shall include approaching trains at railroad crossings	USR 5.2.2.1, GGO 2.5.1
			24	Weather conditions shall include rain.	MnE 1.1, 1.4.1, MnA 1.5.2,USR 1.1.2.1.8, 5.2.2.1, Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTCD	DBTCTE	25	Weather conditions shall include snow.	MnE 1.1, 1.4.1, MnA 1.5.2, USR 1.1.2.1.8, 5.2.2.1, Derived
			26	Weather conditions shall include fog.	MnE 1.1, 1.4.1, MnA 1.5.2, USR 1.1.2.1.8, 5.2.2.1, Derived
			27	Weather conditions shall include clear weather.	MnE 1.1, 1.4.1, MnA 1.5.2, USR 1.1.2.1.8, 5.2.2.1, Derived
			28	Forecast weather conditions shall be maintained.	MnE 1.1.2, 1.6.1, 2.5, 2.5.1, 2.6
			29	Road surface conditions shall include dry pavement.	MnE 1.1, 1.4.1, MnA 1.5.2, GGO 1.5.1, USR 1.1.2.1.5, 1.2.3.2.4, GGO 2.5.1, Derived
			30	Road surface conditions shall include wet pavement.	MnE 1.1, 1.4.1, MnA 1.5.2, GGO 1.5.1, USR 1.1.2.1.5, 1.2.3.2.4, GGO 2.5.1, Derived
			31	Road surface conditions shall include flooded pavement	MnE 1.1, 1.4.1, MnA 1.5.2, GGO 1.5.1, USR 1.1.2.1.5, 1.2.3.2.4, GGO 2.5.1, Derived
			32	Road surface conditions shall include snow covered pavement	MnE 1.1, 1.4.1, MnA 1.5.2, GGO 1.5.1, USR 1.1.2.1.5, 1.2.3.2.4, GGO 2.5.1, Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTC	DBTCTE	33	Road surface conditions shall include icy pavement.	MnE 1.1, 1.4.1, MnA 1.5.2, GGO 1.5.1, USR 1.1.2.1.5, 1.2.3.2.4, GGO 2.5.1, Derived
			34	Road surface conditions shall include plowed pavement	MnE 1.1, 1.4.1, MnA 1.5.2, GGO 1.5.1, USR 1.1.2.1.5, 1.2.3.2.4, GGO 2.5.1, Derived
			35	Road surface conditions shall include salted pavement.	MnE 1.1, 1.4.1, MnA 1.5.2, GGO 1.5.1, USR 1.1.2.1.5, 1.2.3.2.4, GGO 2.5.1, Derived
			36	Road surface conditions shall include sanded pavement.	MnE 1.1, 1.4.1, MnA 1.5.2, GGO 1.5.1, USR 1.1.2.1.5, 1.2.3.2.4, GGO 2.5.1, Derived
			37	Forecasted road surface conditions shall be maintained.	Derived
			38	Planned event information shall include current construction and maintenance.	USR 5.2.2.1, 1.1.2.1.1, MnA 1.5.3, MnE 1.4.2, USR 1.1.2.1.3
			39	Incident conditions shall include dangerous situations and hazards	USR 5.2.2.1, 1.1.2.1.1, MnE 1.5.1, GGO 2.5.1
			40	Incident conditions shall include accidents	USR 5.2.2.1, 1.1.2.1.1, MnE 1.4.1, MnA 1.5.1, USR 1.1.2.1.2
			41	Planned event information shall include special events.	USR 5.2.2.1, 1.1.2.1.1, MnE 1.4.2, MnA 1.5.3

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTC	DBTC	42	Future planned event information such as future construction and maintenance shall be maintained.	MnE 1.6.1,2.5,2.5.1, 2.6, MnA
			43	Future planned event information such as upcoming special events/event schedules shall be maintained.	MnE 1.6.1,2.5,2.5.1,2.6, USR 1.1.2.1.7
			44	Parking conditions shall include parking availability..	USR 1.1.2.1.6, MnE 1.5.2
			45	Parking conditions shall include parking lot status	USR 1.1.2.1.6, MnE 1.4.2
			46	Transit conditions shall include estimated arrival times at each transit stop	GGO 1.5.2, MnE 2.3.1, 2.3.2,2.6.1, USR 1.1.1.1.3, 1.2.2.1.1, 2.2.2,2.2.3.1.1, GGO 10.10.1 Sbus 59-4.4
			46.a	Transit conditons shall include estimated departure times from each transit stop	Derived
			46.b	Transit conditions shall include transit vehicle schedule status relative to each stop along a route	Derived
			47	Transit conditions shall include schedule changes.	GGO 1.5.2, MnE 2.2, 2.6.1
			48	Transit conditons shall include route changes	GGO 1.5.2, MnE 2.2, 2.6.1
			49	Transit conditons shall include transfer changes.	GGO 1.5.2, MnE 2.2, 2.6.1
			50	Transit conditions for various public transit modes including public transit buses shall be determined	USR 1.1.2, 1.1.2.1
			51	Transit conditions for various public transit modes including rail shall be determined	Derived



<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTCB	DBTCTE	52	Transit conditions for various public transit modes including taxis shall be determined.	Derived
			53	Future transit conditions shall be maintained	Derived
			54	Travel conditions that are no longer active shall be identified	Derived
			55	Travel effects that are no longer active shall be identified.	Derived
			56	Travel conditions shall be manually deletable.	Derived
			57	Travel effects shall be manually deletable.	Derived
			59	Travel effects shall be stored and maintained.	Derived
			60	Travel conditions shall be logged upon initial receipt, change and deletion.	Derived
			61	Travel effects shall be logged upon initial receipt, change and deletion.	Derived
			62	Agencies shall be able to access travel conditions without having to manually replicate the information.	MnA 1.1.2
			68	Travel effects shall be determined based on travel conditions source data.	Derived
			68.a	Travel effects shall be determined based on using travel effects rules.	Derived
			69	Travel effects shall include delays.	GGO 2.10.3, MnE 1.5.1
			70	Travel effects shall include road/ramp closings.	GGO 2.10.3, MnE 1.5.2
			71	Travel effects shall include detours.	GGO 2.10.3, MnE 1.5.2
			72	Travel effects shall include reduced speeds.	GGO 2.10.3, MnE 1.5.1
			74	Future travel effects shall be determined and maintained, including expected delays.	MnE 1.7, MnE 1.7.1

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTCD	DBTCTE	75	Future travel effects shall be determined and maintained, including planned road/ramp closings.	MnE 1.7, MnE 1.7.1
			76	Future travel effects shall be determined and maintained, including planned detours.	MnE 1.7, MnE 1.7.1
			77	Travel effects that are no longer active shall be identified.	Derived
			79	A capability to enter travel effects rules shall be provided.	Derived
			80	Travel effects rules shall include current condition specific rules.	Derived
			81	Travel effects rules shall include future/forecast condition specific rules.	Derived
			82	Travel effects rules shall be created, stored and updated.	Derived
			83	Travel conditions shall be determined using traffic conditions.	Derived
			84	Travel conditions shall be determined using weather conditions	Derived
			85	Travel conditions shall be determined using road surface conditions.	Derived
			86	Travel conditions shall be determined using incident conditions	Derived
			87	Travel conditions shall be determined using planned event information.	Derived
			88	Travel conditions shall be determined using parking conditions.	Derived
			89	Travel conditions shall be determined using transit conditions.	Derived
			90	Traffic conditions shall be determined using traffic surveillance data.	Derived
			91	Traffic conditions shall include arterial data.	Derived
			92	Weather conditions shall be determined using weather surveillance data.	Derived
			93	Road surface conditions shall be determined using road surface surveillance data.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTCD	DBTCTE	94	Parking conditions shall be determined using parking surveillance data.	Derived
			95	Traffic conditions shall include road segment travel time.	Derived
			96	Traffic conditions shall include signal timing data.	Derived
		STD	2	Weather surveillance data shall be sensed.	Derived
			4	Road surface surveillance data shall be sensed	USR 1.2.3.2.3
			6	Traffic surveillance data shall be sensed.	MnE 1.3
	MTCI	DTCI	1	Travel conditions requests shall be accepted for travel conditions.	Derived
			3	Each travel conditions request shall be checked for proper service level authorization.	Derived
			4	Authorized travel conditions requests shall be provided the requested travel conditions information	Derived
			5	A list of authorized users shall be created, stored, updated and deleted.	Derived
			6	Authorized users shall be allowed to request travel conditions.	Derived
			8	Authorized users shall be allowed to request travel effects.	Derived
		9	Authorized users shall be allowed to request trip alternative recommendations.	Derived	
		10	A record of each service usage shall be stored for each travel conditions request.	Derived	
		11	Travel conditions shall be formatted to the user-specific delivery device.	Derived	
		12	As a goal, travel conditions will be made available to users 24 hours/day, 7 days/week, 365 days/year.	MnE 1.3.1,2.4.1, GGO 2.5.4	

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTCI	DTCI	12.a	Travel conditions shall be made available within the agreed to hours of operation.	Derived
			12.b	Travel conditions shall be made available to humans	Derived
			12.c	Travel conditions shall be made available to other systems	Derived
			16	Registered users shall be notified about travel conditions and travel effects according to predefined notification priority rules.	Derived
			17	Travel conditions shall be distributed via phone.	MnE 1.3.3,2.4.3, MnA 1.1.4
			19	Travel conditions shall be distributed via fax.	MnE 1.3.3,2.4.3, MnA 1.1.4
			21	Travel conditions shall be distributed via electronic transfer to publicly owned computer.	MnE 1.3.3, 2.4.3, MnA 1.1.4
			23	Travel conditions shall be distributed via variable message signs.	MnE 1.3.3,2.4.3, GGO 2..2
			25	Travel conditions shall be distributed via radio.	MnE 1.3.3
			26	Travel conditions shall be distributed via cable television.	MnE 1.3.3
			27	Travel conditions shall be distributed via communications radio.	MnA 1.1.4
			28	Travel conditions shall be distributed via pager.	USR 1.1.4.1.4
			30	Travel conditions shall be distributed via e-mail.	Derived
			32	Basic travel conditions shall be made available via on-line services.	Derived
			33	Travel conditions shall be distributed via electronic transfer to privately owned computer.	Derived
			35	Travel conditions shall be distributed via telephony.	USR 2.2.1.2.2.1 .1

Service	Function	Sub - Function	Sequence Number	Requirement	Source	
TCI	MTCI	DTCI	37	Travel conditions shall be distributed via monitor.	USR 2.2.1.2.2.1.1	
			39	Transit travelers shall be notified when a transit vehicle is about to arrive.	USR 2.2.1.2.2.1.1, 2.3.1.4, GGO 10.10.2, Sbus 59-4.6	
			40	The distribution profile shall contain the user-specific parameters, including notification device, needed to prioritize format and transmit travel conditions to the user.	Derived	
			41	The distribution profile shall contain the user-specific parameters, including notification address, needed to prioritize, format and transmit travel conditions to the user.	Derived	
			42	The distribution profile shall contain the user-specific parameters, including user type needed to prioritize, format and transmit travel conditions to the user.	Derived	
			43	A distribution profile for each registered user shall be stored and maintained.	Derived	
			44	Authorized users shall be notified of travel conditions, when travel effects exceed their notification criteria.	Derived	
			DTTC	1	Registered users affected by travel conditions shall be determined based on travel conditions, travel effects and user profile criteria.	Derived
				2	Registered users affected by travel conditions shall be determined automatically upon the occurrence of an event.	Derived
				3	Registered users affected by travel conditions shall be determined automatically upon any change in an event.	Derived
				4	Travel conditions shall be filtered based on user-specified parameters contained in the user profile	MnE 1.1.1, MnA 1.1.1, USR 1.1.3.1.3
				5	Travel conditions shall be received automatically upon occurrence of an event.	Derived
				6	Travel conditions shall be received automatically upon any change in an event.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTCI	DTTC	7	Travel conditions shall be received upon the issuing of a travel conditions request.	Derived
			23	A travel conditions profile for each registered user shall be created, stored, updated and deleted.	Derived
			24	Travel conditions shall contain active/or forecasted/future conditions.	Derived
			25	Forecasted travel conditions shall contain effects of active or forecasted/future conditions.	Derived
			26	Travel conditions information shall contain trip alternatives, if requested.	Derived
			27	Travel conditions shall contain conditions descriptions.	Derived
			28	Travel conditions information shall be compiled from travel conditions and travel effects for primary routes.	USR 1.1.2.1.5, MnE 2.1.1
			29	Travel conditions information shall be compiled from travel conditions and travel effects for alternate routes.	MnE 3.5.2
			30	Travel conditions information shall be compiled from travel conditions and travel effects for a local service area.	MnE 1.1.1,2.1.1
			31	Travel conditions information shall be compiled from travel conditions and travel effects for the metro area.	GGO 1.10.2
			32	Travel conditions information shall be compiled from travel conditions and travel effects for freeways.	GGO 1.10.2, MnA 1.1.3
			33	Travel conditions information shall be compiled from travel conditions and travel effects for arterials.	MnA 1.1.3, GGO 1.10.2
			34	Travel conditions information shall be compiled from travel conditions and travel effects for multiple counties.	MnE 1.8.1,2.7.1
			35	Travel conditions information shall be compiled from travel conditions and travel effects for multiple cities.	MnE 1.8.1,2.7-1

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTCI	DTTC	36	Travel conditions information shall be compiled from travel conditions and travel effects statewide.	MnE 1.8.2,2.7.2
			37	Travel conditions information shall be compiled from travel conditions and travel effects for multiple states.	MnE 1.8.1,2.7.1
			38	Travel conditions information shall be compiled from travel conditions and travel effects for a geographic region.	MnE 1.8,2.7
			39	Travel conditions shall be compiled for the current time frame.	MnE 1.1.2, MnA 1.4.1, USR 1.1.2.1, 1.1.2.1.1, 1.1.2.1.2, 1-1.2.1.3, 1.2.1.4, 1.1.2.1.5, 1.1.2.1.6, 1.1.2.1.7, 1.1.2.1.8
			40	Travel conditions shall be compiled for the future time frame.	MnE 1.1.2, 1.6.1, USR 1.1.3.1.3
			41	Travel conditions shall be compiled for the forecasted time frame.	MnE 1.1.2, 1.6.1, USR 1.1.3.1.3
			42	Travel conditions shall be compiled for the user's specific time.	USR 1.1.3.1.3
			43	Trip alternative recommendations shall be provided based on travel conditions and trip alternative rules.	Derived
			44	The ability to enter trip alternative rules shall be provided.	Derived
			45	Trip alternative rules shall be created, stored, updated, and deleted.	Derived
			46	Travel conditions information shall be compiled from travel conditions and travel effects for primary route segments.	USR 1.1.2.1.5, MnE 2.1.1
			47	Travel conditions information shall be compiled from travel conditions and travel effects for alternate route segments.	MnE 3.5.2

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TCI	MTCI	DTTE	1	The effects of travel conditions on a given user shall be determine using parameters in the user profile and travel conditions.	Derived
			2	Travel effects shall be received automatically upon the occurrence of an event.	Derived
			3	Travel effects shall be received automatically upon any change in an event.	Derived
			4	Travel effects shall be received upon the issuing of a request for travel effects	Derived



<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TFM	MAIN	MAIN	1	Integrated Transit Management and Information service shall be provided 24 hrs/day, 7 day/week.	MnA 523,527, USR 2.3.27,2.3.5.1, GGO 9.10.1, MnA 6.0, MnA 6.2
			2	Computer assisted control of transit vehicle/facilities' operations shall be implemented such that processing can be centralized and/or distributed.	USR 2.1.1,2.3.4.1
			3	Two-way data communication shall be provided to link the fleet vehicle with the fleet management facility and shall include communications with supervisors.	USR 2.1.4.2,2.3.5.2, 2.3.5.3,2.3.5.4
			4	Two-way data communication shall be provided to link maintenance garages with the fleet management facility.	USR 2.1.4.3
			5	Two-way data communication shall be provided to link transit stops with the fleet management facility.	USR 2.3.5.4, Sbus 43-4
			6	Two-way voice communication shall be provided to link vehicle drivers with the fleet management facility.	USR 2.1.4.1,2.3.5.2
			7	This communications service shall interface with all other services as defined in the Interface Data sections for each function.	Derived
			8	Transit vehicle components shall be compliant with the associated open communication standard TBD 1 component -- TBD 1 standard.	URS 2.1.4.5
			9	Transit vehicle components shall be compliant with the associated open communication standard TBD2 component -- TBD3 standard.	USR 2.1.4.5
			10	Transit vehicle components shall be compliant with the associated open communication standard TBD3 component -- TBD3 standard.	USR 2.1.4.5
			11	Smart bus technology shall be provided on selected statewide transit systems.	GGO 9.5.1

Service	Function	Sub - Function	Sequence Number	Requirement	Source	
TFM	MFO	MPT	1	A capability to delay connecting vehicle departures shall be provided when travelers with connecting rides are late.	SB 59-4.6	
			2	Travelers shall be notified if they missed a travel connection.	MCTO 4/24/96 - 20	
	MPU			1	Transit service usage data including passenger trip origin and time, passenger trip destination and time, shall be maintained and reported to the account management service. (Rationale: needed for fare payment computation and route planning). Collected service usage data shall also include vehicle percent full, number of passengers getting on/off vehicle, method of payment, time spent at stop, wheel chair lift use, and type of fare paid.	SB 56-2, MCTO 4/24/96-14
				3	Transit service usage data including the number of passengers getting on and off the vehicle shall be automatically counted at each transit stop, and saved for future analysis. (Rationale: needed to develop pricing strategies that favor certain modes or routes.)	USR 2.1.1.1, 2.3.3.1, 3.1.4.3
				4	Transit service usage data, including vehicle percent full, shall be collected for each route segment and saved for future analysis.	USR 2.1.1.1, 2.2.3.1.1.b, SB 59-4.8
				5	Passenger counts shall be accurate +/- (TBD) passengers.	USR 3.1.2.7
				6	Passenger count sensing shall detect passengers without interference to passenger movement.	SB 59-4.8
				7	Transit service usage data, including method of payment for each rider shall be maintained.	MCTO 4/24/96 -23
				7.a	Transit service usage data including type of fare paid at each transit stop shall be maintained for future analysis.	MCTO 4/24/96-23
				7.b	Transit service usage data including time spent at each transit stop shall be maintained for future analysis.	MCTO 4/24/96-23
				7.c	Transit service usage data including wheel chair lift use at each transit stop shall be maintained for future analysis.	MCTO 4/24/96-23
				MRC		6

Service	Function	Sub - Function	Sequence Number	Requirement	Source	
TFM	MFO	MRC	7	Upon receipt of a detour route, the modified route shall be passed along to the vehicle driver.	MnA 6.3.3	
			8	Upon receipt of a ride request from an optional transit stop along a flexible route, if diverting the bus to pick up the passenger at the optional stop does not affect the scheduled departure time at the next mandatory transit stop, the bus shall be commanded to pick up the passenger.	Sbus 43-4	
			8.d	Fixed route buses detoured for flexibly routed operations shall be controlled.	USR 2.3.2.3	
			9	Upon receipt of a ride request from an optional transit stop along a flexible route, if diverting the bus to pick up the passenger at the optional stop affects the scheduled departure time at the next mandatory transit stop, an additional transit resource (e.g. bus, taxi, etc.) shall be dispatched to pick up the passenger.	Sbus 45- 1	
			MSA	1	Vehicle schedule deviation shall be automatically determined and displayed to both the dispatcher and vehicle driver.	USR 2.1.1.2.1.1, 2.1.1.2.1.3
				1.a	Vehicle schedule deviation data shall be stored on the vehicle.	Derived
				2	Vehicle schedule adherence information shall be reported to fleet management on an exception basis when the vehicle is more than (TBD) minutes behind schedule.	USR 2.1.1.2.1.2, SB 59-4.1
				2.a	Vehicle schedule adherence information shall be reported to fleet management on demand.	George Serumgard comments on 4/1 2 ITS Spec
				3	Next available vehicle information shall be maintained based on actual operational conditions.	USR 2.2.3.1.1.c
	4	An optimum scenario for returning the fleet to schedule adherence shall be automatically determined.	USR2.1.1.2.2, 2.3.3.2			
	5	Corrective instruction vehicle commands shall be automatically issued to the vehicle drivers.	USR2.1.1.2.1.4, 2.3.3.2			
	6	Corrective instruction vehicle commands shall include a) changes in stops and b) route corrections including rerouting around incidents and congestion.	USR2.1.1.2.1.4			
	7	Vehicle commands shall be determined on the vehicle or at a remote site.	USR 2.1.1.2.4			

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TFM	MFO	MSA	8	A signal priority request shall be generated when a transit vehicle is running,late by more the (tbd) minutes.	USR 2.1.1.2.3, MnA 5.3.2, SB 59-4.2
			8.b	A signal priority request shall be generated when a transit vehicle is running late.	George Serumgard comments on 4/12 ITS Spec.
			9	A signal priority request shall enable a transit vehicle to pre-empt both intersection traffic signals and ramp meter signals.	MnA 5.3.2
			10	Fleet vehicles shall arrive/depart within (TBD) minutes of the published schedule.	USR 2.1.1.2.1
			11	Schedule adherence information (incl. vehicle running time between time points, dwell time, schedule deviation, scheduled and actual arrival and departure times) shall be maintained for each scheduled transit stop. (Rationale: needed for off-line schedule performance analysis)	USR2.1.1.1, SB 56-2, MnA 6.2.2, MCTO 4/24/96-7, 5/2/96-4, 4/24/96-9, 4/24/96- 10
			13	Traffic control requirements shall be determined based on traffic signal timing plans and reports of problems in maintaining schedule adherence.	MCTO 4/24/96 - 15
			14	Schedule adherence statistics shall be aggregated and reported on a quarterly basis.	MCTO 4/24/96 - 17
			15	Signal priority shall be coupled with dwell time to maintain schedule adherence.	MCTO 4/24/96 - 7, 5/2/96 - 4
			16.a	Transit conditions shall include estimated arrival times at each transit stop.	MCTO 4/24/96-20
			16.b	Transit conditions shall include estimated departure times at each transit stop.	MCTO 4/24/96-20
			16.e	Transit conditions shall include schedule changes at each transit stop.	MCTO 4/24/96-20
			16.d	Transit conditions shall include route changes.	MCTO 4/24/96-20
			16.e	Transit conditions shall include transfer changes.	MCTO 4/24/96-20
			16.f	Transit conditions shall include transit vehicle schedule status (e.g. on-time, late, departed).	MCTO 4/24/96-20

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TFM	MFO	MSA	18	On time performance, including 1) fleet-wide performance, 2) by driver, 3) by route, and 4) by corridor shall be maintained.	MCTO 4/24/96 - 17
			20	Driver route adherence shall be maintained.	MCTO 4/24/96 " 17
			22	Expense per revenue mile shall be maintained.	MCTO 4/24/96 - 17
			23	Revenue per revenue hour shall be maintained.	MCTO 4/24/96 - 17
			24	Trip time for transit vs. Single Occupancy Vehicle (SOV) shall be maintained.	MCTO 4/24/96 - 17
			30	A TRAVEL CONDITIONS REQUEST shall be established for each transit route to enable the collection of TRAVEL CONDITIONS along the route.	Derived
			31	TRAVEL CONDITIONS shall be monitored to determine when traffic could cause a schedule deviation along a route.	Derived
			32	The cause of a schedule deviation shall be determined to select which FLEET OPERATING PROCEDURES should be used to resolve the schedule deviation.	Derived
		MTA	1	Transit vehicle and personnel assignments shall be determined prior to start of assignment.	USR 2.1.3.2.1, 2.3.4.3, MCTO 4/24/96-4
			2	Transit driver personnel assignments shall include driver to runs.	USR2.1.3, 2.1.3.2.1
			3	Transit driver personnel assignments shall include. driver to incident.	USR 2.4.4.3, 2.4.4.5, MCTO 4/21/96-2
			4	Transit driver personnel assignments shall include driver to training course.	GGO 12.10.2
			4.a	Personnel availability information shall be used to adjust transit driver assignments daily at the vehicle garage to address driver vacation and sick leave impacts.	MCTO 4/24/96 - 4
			5	Transit vehicle assignments shall include vehicle to blocks.	USR 2.3.4.3M, MCTO 4/24/96-5

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TFM	MFO	MTA	6	Transit vehicle assignments shall include vehicle to incident.	USR 2.4.4.3,2.4.4.5, MCTO 4/24/96-2
			7	Transit vehicle assignments shall include vehicle to training course.	GGO 12.10.2
			7.a	Transit vehicle assignments shall include vehicle to maintenance garage.	USR2.1.3.1.4
			8	Driver personnel assignments shall be generated to minimize labor and overtime costs.	USR 2.1.3.2.2
			9	Transit driver personnel assignments shall be determined using factors relating to driver's schedule preference, seniority and union constraints, garage assignment, and vehicle qualification.	USR 2.1.3.2.3
			12	Transit vehicle assignments shall support fixed route mode. (Rationale: during AM/PM peak periods)	SB 46- 1
			13	Transit vehicle assignments shall support route deviation mode (Rationale: during midday hours).	SB 46- 1
			14	Transit vehicle assignments shall support demand responsive mode (Rationale: during evenings, weekends and holidays).	SB 46- 1
			14.a	Transit vehicle assignments shall assure vehicles with proper equipment are assigned to correct routes.	MCTO 4/24/96 - 5, USR 2.3.2.1
			14.b	Transit vehicle assignments shall assure vehicles are assigned to specific garage parking locations.	MCTO 4/24/96 - 2, USR 2.1.3.1.4
			14.c	Transit supervisor personnel assignments shall include supervisor to incident assignments.	MCTO 4/24/96-2
			14.d	Transit supervisor personnel assignments shall include supervisor to vehicle assignments.	MCTO 4/24/96-2
			15	When an incident RESOURCE REQUEST is received, available VEHICLE and PERSONNEL ASSIGNMENTS shall be allocated to the incident in support of law enforcement and/or emergency response agencies.	USR 2.4.4.3,2.4.4.4, 2.4.4.5, MCTO 4/24/96-2

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TFM	MFO	MTA	16	When a MAINTENANCE REQUEST for preventative maintenance on a vehicle is received, VEHICLE ASSIGNMENTS shall allocate the vehicle to a maintenance garage if the minimum required number of fleet vehicles would still be available for normal transit operations.	USR 2.1.3.1.2
			16.a	A transit vehicle shall be made available for operational assignment when a MAINTENANCE COMPLETION is received for the vehicle.	Derived
			17	When a driver indicates that his vehicle has broken down, vehicle assignments shall assign the failed vehicle to a maintenance garage.	USR 2.1.3.1.4
			18	When a driver indicates that his vehicle has broken down, vehicle assignments shall assign appropriate equipment and personnel to the failed vehicle's location.	USR2.1.3.1.4
			19	When a driver indicates that his vehicle has broken down, and if the next bus for the route is more than (tbd) minutes behind the failed bus, an available replacement vehicle and driver shall be assigned to pick-up stranded passengers and continue the run.	USR 2.1.3.1.4
			20	Upon receipt of a training request for a driver, personnel assignments shall schedule the driver for the training course if the minimum required number of drivers would still be available for normal transit operations.	GGO 12.10.2
			21.a	Personnel assignments shall be updated based on driver license expiration data obtained from an external information source.	MCTO 4/24/96- 11
			21.b	Personnel assignments shall be updated based on drug/alcohol test results obtained from an external information source.	MCTO 4/24/96- 11
			21.c	Personnel assignments shall be updated based on driver history obtained from an external information source.	MCTO 4/24/96- 11
			21.d	Personnel assignments shall be updated based on moving violations data obtained from an external information source.	MCTO 4/24/96 - 11
		TRS	1	Transit vehicle location shall be determined automatically.	USR 2.3.3.1, SB 59.4.1
			2	Transit vehicle location shall be determined to an accuracy of +/- (TBD) meters.	USR 2.1.1.1, SB 59.4.1

Service	Function	Sub - Function	Sequence Number	Requirement	Source
TFM	MFO	TRS	3	Transit vehicle location shall be reported to the transit fleet management facility.	USR 2.3.2.10, SB 59-4.1, MCTO 4/24/96-8, MCTO 5/2/96-5
			4	Transit vehicle condition including accumulated vehicle mileage shall be automatically tracked.	USR2.1.1.1,2.1.3.1.1
			5	Transit vehicle condition including engine temperature shall be automatically tracked .	SB 56-2,59-4.9
			6	Transit vehicle condition including tranmission temperature shall be automatically tracked.	SB 56-2,59-4.9
			7	Transit vehicle condition including oil pressure shall be automatically tracked.	SE3 59-4.9
			8	Transit vehicle condition including drive-line operating condition shall be automatically tracked.	USR2.1.1.1
			8.a	Transit vehicle conditions including brake pneumatic pressure shall be automatically tracked.	PWT 3/12/96
			8.b	Transit vehicle conditions including vehicle electrical draw shall be automatically tracked.	PWT 3/12/96
			9	The driver shall be alerted when any vehicle condition information indicates a potential problem.	SB 59-4.9
			10	The number of hours worked by each driver shall be tracked.	USR 2.1.3.2.4
			10.b	The transit center shall be capable of remotely testing transit vehicles.	MCTO 5/2/96 - 1
			10.c	Transit vehicle locations shall be overlaid with incident data from the freeway and arterials to obtain a traffic status overview.	MCTO 4/24/96-8,5/2/96-5
			11	Transit conditions including actual road data shall be maintained.	USR 2.1.1.1,2.2.2.1, 2.2.2.2,2.2.2.3,2.2.3, 2.2.3.2.1,2.2.3.2.2, MnA 6.2.1 ,USR 2.2.3.1.2.a



<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TFM	MFO	TRS	12	Transit conditions including traffic data shall be maintained.	USR2.1.1.1,2.2.2.1, 2.2.2.2,2.2.2.3,2.2.3, 2.2.3.2.1,2.2.3.2.2, MnA 6.2.1 ,USR 2.2.3.1.2.b
			15	Transit conditions including schedule adherence information shall be maintained.	USR2.1.1.1,2.2.2.1, 2.2.2.2,2.2.2.3,2.2.3, 2.2.3.2.1,2.2.3.2.2, MnA 6.2.1,USR 2.1.2.2.5
			15.a	Transit conditions including route deviation information shall be maintained.	MCTO 5/2/96-2
			15.b	Transit conditions including area, corridor, route, and hub performance sampling shall be maintained .	MCTO 5/2/96-2,4/24/96- 16
			15.c	Transit conditions including weather conditions shall be maintained.	MCTO 5/2/96-2
			18	Daily vehicle condition pm-trip defect inspection data shall be captured and reported to maintenance.	MCTO 4/24/96 - 4
			18.a	All transit vehicle condition information shall be monitored and captured for analysis.	MCTO 4/24/96 - 2 I
			19	Vehicle condition problems shall be conveyed to both the control center and garage in real time on an exception only basis.	MCTO 4/24/96 - 2 I, USR2.1.1.1,2.1.3.1.1
			20.d	Transit vehicle conditions including wheel chair lift conditions shall be maintained.	MCTO 5/21/96-2
				PFO	PFR
2	Transit Route shall be determined to support Route Deviation Structure. This includes routes with a set of optional stops between a set of compulsory stops.	USR 2.1.2, Sbus 43-3			
3	Transit Route shall be determined to support Fixed Routes Structure.	USR 2.1.2, Sbus 45-1			
4	Transit Route shall be determined to support Express Routes Structure.	USR2.1.2,MnA6.1.3			

Service	Function	Sub - Function	Sequence Number	Requirement	Source		
TFM	PFO	PFR	5	Transit Route optimization shall support a strategy of minimize fleet vehicle mileage	USR 2.1.2.1.2		
			6	Transit Route optimization shall support a strategy to minimize number of transfers.	USR 2.1.2.1.2		
			7	Transit Route optimization shall support a strategy to minimize transfer wait time.	USR 2.1.2.1.2, MnA 6.3.2		
			8	Transit Route optimization shall support a strategy of minimize passenger trip time.	USR 2.1.2.1.2		
			8.e	Transit Route planning shall divert vehicles to pick up a passenger at an optional stop if that passenger had previously submitted a ride request.	SB 43-4		
			9	Transit Route planning shall be determined in a manner that does not affect the operational performance of the transit system.	USR 2.1.2.1.1		
			10	Transit Route planning shall be determined using service usage data (e.g. travel patterns and ridership volume), schedule adherence information (e.g. route time), requested travel conditions (e.g. construction information and driver shift constraints), airport flight times and signal timing plans. All developed transit routes shall be distributed to required transit agencies.	MnA 6.3.1, USR 2.1.2.1.1, 2.1.2.2.1, MCTO 4/24/96- 19, MTCO 10/3/96		
			12	Fixed/Flexible Routes planning shall access airport flight times and airport access road traffic patterns to facilitate airport passenger service.	MCTO 4/24/96 - 19		
			13	TRANSIT ROUTEs shall be determined using a standard LINK REFERENCE MODEL.	Derived		
			14	TRANSIT ROUTEs shall be distributed to required agencies.	Derived		
			POP	1	1	Fleet Operating Procedures shall be continuously evaluated, improved, and maintained to meet customer demand.	GGO 9.5.4, 9.10.2, Sbus 56-2, GGO 9.5.5
				2		Transit mode use instructions shall be maintained and made available to meet customer demand.	MnE 3.7.5, 6.4.6
			STT		I	Historic schedule adherence information shall be collected and stored. (Rationale: needed for transit stop schedule adjustment.)	USR 2.1.2.2.1

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TFM	PFO	STT	1.a	Schedule adherence statistics shall be determined from historic schedule adherence information and shall be stored. (Rationale: Statistics saved for subsequent fleet scheduling analysis.)	USR 2.1.2.2.2
			2	Transit Route Schedules shall be developed using schedule adherence statistics. All developed transit schedules shall be distributed to required transit agencies.	USR 2.1.2.2.2, MCTO 10/3/96
			3	Transit Route Schedules shall be updated with most current information and provided to the Trip Planning & Directions service. Schedules should include, but not be limited to transit stop arrival time, departure time, fare information, and transfer information.	USR 2.1.2.2.5
			4	Fleet schedule shall be adjusted based on historical information on freeway and arterial conditions.	MCTO 4/24/96 - 7

Service	Function	Sub - Function	Sequence Number	Requirement	Source	
TNG	MTA	MTC	1	Upon receipt of a credential request, the authorization of the requestor shall be validated. If the requestor is authorized, the requested training credentials shall be sent to the requestor. If the requestor is not authorized, system security shall be notified of a possible security incident.	GGO 12.10.2	
			1	Upon completion of a course, training instructor input shall be used to create and store a training record and/or training credential for each student.	GGO 12.10.2	
		2	A course completion shall be generated for each student when the training record/credential is stored.	GGO 12.10.2		
			PTCA	1	Training instructor output shall be used to provide the instructor with a copy of the class roster.	GGO 12.10.2, 19.5.3
	PTA	ETS	1	A training planner input shall allow the training to enter and store training requirements for each person, number of training course seats, training course dates, and training course duration.	GGO 12.10.2	
			2	Upon receipt of a training course schedule, the training course dates and training course duration shall be automatically updated, and a training planner output shall be generated to notify the training planner of the change.	GGO 12.10.2	
		GTP	1	Training planner input shall allow the training planner to reserve seats in a class for the students with the highest priority need.	GGO 12.10.2	
			2	Upon completion of reserving seats, a training request shall be generated for each student reservation.	GGO 12.10.2	
				3	Upon receipt of personnel availability information that indicates the student will be available to attend the class, the student shall be added to the class roster. If the personnel availability information indicates that the student is not available, the seat shall be reserved for the next highest priority student that needs the class.	GGO 12.10.2
				4	Upon receipt of personnel availability information that indicates the student will be available to attend the class, the student shall be added to the class roster. If the personnel availability information indicates that the student is not available, a training request shall be generated for the new student.	GGO 12.10.2

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>	
TNG	PTA	GTP	5	If a personnel availability information is not received from a student by the planning cutoff date, and if there are other students that could take the class, the student shall be bumped from the class.	GGO 12.10.2	
			6	If a personnel availability information is not received from a student by the planning cutoff date, and if there are other students that could take the class, the seat shall be reserved for the next highest priority student that needs the class.	GGO 12.10.2	
			7	If a personnel availability information is not received from a student by the planning cutoff date, and if there are other students that could take the class, a training request shall be generated for the new student.	GGO 12.10.2	
			8	A final class roster shall be generated for the new student.	GGO 12.10.2	
			9	A list of student personnel assignments that were not assigned to training by the class cutoff date shall be generated for the training planner. (Rationale: this permits the planner to call the student and/or organization to resolve any issues, and re-assign the seat if the student really can't attend the class)	GGO 12.10.2	
			PPE	10	A training planner input shall allow the training planner to enter and store public training course dates, number of seats available, and to reserve seats at the public training classes.	GGO 12.10.2, 19.5.3
			PTT	1	Upon receipt of a training planner input to prioritize training tasks, the training expiration dates for each student shall be determined using the training requirements and the date of the student's latest training record for each required course.	GGO 12.10.2
			2	Upon receipt of a training planner input to prioritize training tasks, a training priority list shall be generated for all students in the order of training expiration date.	GGO 12.10.2	
			3	Upon receipt of a course completion, a training completion shall be generated.	GGO 12.10.2	

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTPD	CD	1	Directions shall be computed from any user-specified source to any user-specified destination.	MnE 4.1, USR 1.3.1.1, GGO 3.5.2
			2	Directions shall be computed for transit transfer and connections	MnE 4.3.5
			3	Directions shall be based on a calculated route.	USR 1.3.2.2.2, GGO 3.5.4
			3.a	If the travel conditions option is selected in the route requirements, then directions shall be determined using current or forecast travel conditions.	USR 1.3.2.2.2, GGO 3.5.4
			4	If the travel conditions option is selected in the route requirements, then directions shall be determined using traffic conditions.	MnE 4.6, USR 1.1.3.3.1, 1.1.3.3.2, 1.3.1.2, 1.3.4.2, USR 1.3.1.2.1
			5	If the travel conditions option is selected in the route requirements, then directions shall be determined using street closure information.	MnE 4.6, USR 1.1.3.3.1, 1.1.3.3.2, 1.3.1.2, 1.3.4.2, USR 1.3.1.2.1
			6	If the travel conditions option is selected in the route requirements, then directions shall be determined using transit schedules.	MnE 4.6, USR 1.1.3.3.1, 1.1.3.3.2, 1-3.1.2, 1.3.4.2, USR 1.3.1.2.1, 2.2.3.1.1
			7	If the travel conditions option is selected in the route requirements, then directions shall be determined using transit schedule changes.	MnE 4.6, USR 1.1.3.3.1, 1.1.3.3.2, 1.3.1.2, 1.3.4.2, MnE 4.6.2
			8	If the travel conditions option is selected in the route requirements, then directions shall be determined using transit system status.	MnE 4.6, USR 1.1.3.3.1, 1.1.3.3.2, 1.3.1.2, 1.3.4.2, USR 1.3.1.2.1
			9	If the travel conditions option is selected in the route requirements, then directions shall be determined using no pedestrian zone information.	MnE 4.6, USR 1.1.3.3.1, 1.1.3.3.2, 1.3.1.2, 1.3.4.2, USR 1.3.1.2.1

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTPD	CD	10	If the travel conditions option is selected in the route requirements, then directions shall be determined using pedestrian event information.	MnE 4.6, USR 1.1.3.3.1, 1.1.3.3.2, 1.3.1.2, 1.3.4.2, USR 1.3.1.2.1
			11	If the travel conditions option is selected in the route requirements, then directions shall be determined using business closure, opening, and move information.	MnE 4.6, USR 1.1.3.3.1, 1.1.3.3.2, 1.3.1.2, 1.3.4.2, MnE 4.6.3
			12	Directions information shall include mode of travel.	Derived
			13	Directions information shall include instructions text.	Derived
			14	Directions information shall include travel distance.	Derived
			15	Directions information shall include travel time.	Derived
			16	Directions information shall include travel cost.	Derived
			17	Instructions text shall include trip steps from origin to destination.	MnE 4.2,4.3, USR 1.3.1.3, 1.3.2.1, GGO 3.5.1
			18	Instructions text shall include route/street names.	MnE 3.7.1, GGO 1.10.2
			19	Instructions text shall include which way to turn onto streets, roads, walkways and transit facilities.	USR 1.3.1.3
			20	Instructions text shall include direction changes(turns, exits,lane changes,mode changes,transfers).	MnE 4.2.2
			21	Instructions text shall include walking instructions.	Derived
			22	Instructions text shall include waiting instructions (i.e., layover times between trip segments).	Derived
			23	Instructions text shall include parking locations.	MnE 3.7.3,4.3.1

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTPD	CD	24	Instructions text shall include transportation modes available.	MnE 4.3.4, GGO 10.5.3, USR 2.2.3.1.1
			25	Instructions text shall include transportation mode boarding, departure and transfer points	MnE 4.3.4, GGO 9.5.2, 10.10.3
			26	Instructions text shall include public transit vehicle/route identification.	MnE 4.3.5, USR 1.1.1.1.1,2.2.1.2.1.1
			27	Instructions text shall include connecting transit route information.	MnE 4.3.4, USR 1.1.1.1.4,2.2.3.1.1, GGO 10.5.1, 10.10.1, Sbus 59-4.3
			28	Instructions text shall include next transit stop information.	Sbus 59-4.3
			29	Instructions text shall include transit schedules.	USR 1.1.1.1.2, 1.3.2.1, 1.3.3.1,2.1.2.2.3, 2.1.2.2.4,2.2.3.1.1, Sbus 59-4.5
			30	Instructions text shall include instructions on how to use the mode (transit).	MnE 3.7.5,6.4.6
			31	Travel distance shall include travel distances for each segment.	MnE 4.3.2
			32	Travel distance shall include total travel distance.	MnE 4.3.3
			33	Travel time shall include travel times for each segment.	MnE 4.3.2
			34	Travel time shall include total travel time.	MnE 4.3.3
			35	Travel cost shall include transit fares.	MnE 3.7.2,4.3.3, USR 1.1.1.1.5
			36	Travel cost shall include parking fees.	MnE 3.7.2,4.3.3



<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTPD	C D	37	Travel cost shall include tolls.	MnE 3.7.2,4.3.3
			38	Travel cost shall include total trip costs.	MnE 3.7.2.4.3.3
			39	Directions shall be available for the metro-wide area.	MnE 4.7.1
			40	Directions shall be available for a multi-city area.	MnE 4.7.1
			41	Directions shall be available for a multi-county area.	MnE 4.7.1
			42	Directions shall be available for a multi-state area.	MnE 4.7.1
			43	Directions shall be made available for a statewide area.	MnE 4.7.2
			44	Directions shall be available for a user-specified geographic area.	MnE 4.7
			45	Directions changes shall be clearly noted with advance warning so that users can prepare for the change.	MnE 4.2.1,4.9.2
			46	A tracking capability shall be available to users to guide them through a set of directions.	MnE 4.9
			47	Directions shall be updated as the user progresses along a route.	MnE 4.9.3
			48	User's shall be notified of errors (missing or wrong turns) when following a set of directions.	MnE 4.9.4
			49	Directions shall be updated to get a user back on track to their destination after an error (missed or wrong turn) has occurred.	MnE 4.9.4
			50	A users location shall be determined automatically.	MnE 4.8.1,4.9.1
			51	Directions shall be computed from the user's automatically determined location to the user's specified destination.	MnE 4.8.2
		DR	1	A route shall be determined based on route requirements.	MnE 3.2, USR 1-1.3.1.2, 1.1.3.2, 1.3.4.2.1, I .3.4.2.2

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTPD	DR	2	A route shall be determined based on predicted demand on the transportation system by that user.	USR 1.3.4.3.1
			3	Route information shall include total route travel time.	MnE 3.5.3,3.7.1,4.3.3
			4	Route information shall include total route travel distance.	MnE 3.7.2.
			5	Route information shall include segment travel times.	MnE 3.7.1,4.3.2
			6	Route information shall include segment travel distances.	MnE 3.7.1,4.3.2
			7	Route information shall include segment names(streets, roads, highways).	MnE 3.7.1
			8	Route information shall include estimated arrival time.	MnE 3.7.1
			9	Route information shall include parking locations.	MnE 3.7.3,4.3.1
			10	Route information shall include parking availability.	MnE 3.7.3
			11	Route information shall include route travel cost (tolls, fares, parking).	MnE 3.7.2,4.3.3, USR 1.1.1.1.5
			12	Route information shall include routes highlighted on a map.	MnE 4,3
			12.a	If the travel conditions option is selected in the route requirements, then a route shall be determined using current or forecast travel conditions.	MnE 4.3
			13	If the travel conditions option is selected in the route requirements, then a route shall be determined using travel conditions, including traffic conditions.	USR 1.2.2.1.2.1, GGO 3.5.4, USR 1.3.1.2.1
			14	If the travel conditions option is selected in the route requirements, then a route shall be determined using street closures information.	USR 1.2.2.1.2.1, GGO 3.5.4,USR 1.3.1.2.1
			15	If the travel conditions option is selected in the route requirements, then a route shall be determined using public transit fleet schedules.	USR 1.2.2.1.2.1, GGO 3.5.4, USR 1.3.1.2.1,2.2.3.1.1

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTPD	DR	16	If the travel conditions option is selected in the route requirements, then a route shall be determined using transit schedule change information.	USR 1.2.2.1.2.1, GGO 3.5.4, MnE 4.6.2
			17	If the travel conditions option is selected in the route requirements, then a route shall be determined using transit system status	USR 1.2.2.1.2.1, GGO 3.5.4, USR 1.3.1.2.1
			18	If the travel conditions option is selected in the route requirements, then a route shall be determined using no pedestrian zones information.	USR 1.2.2.1.2.1, GGO 3.5.4, USR 1.3.1.2.1
			19	If the travel conditions option is selected in the route requirements, then a route shall be determined using pedestrian event information.	USR 1.2.2.1.2.1, GGO 3.5.4, USR 1.3.1.2.1
			20	If the travel conditions option is selected in the route requirements, then a route shall be determined using business closure, opening, and move information.	USR 1.2.2.1.2.1, GGO 3.5.4, MnE 4.6.3
			22	If a transit detour is specified in the route requirements, then a route shall be determined that minimizes the schedule impact for that transit route.	Derived
			23	Link reference model data shall be accepted from multiple sources including public agencies.	Derived
			24	Link reference model data shall be accepted from multiple sources including information service providers.	Derived
			25	Link reference model data shall be accepted into the system via manual entry.	Derived
			26	Link reference model data shall be accepted into the system via electronic entry (standard form)	Derived
			27	Link reference model data shall be accepted into the system via electronic entry (non-standard form).	Derived
			28	A link reference model shall be stored and maintained.	Derived
			29	Public transit fleet schedules shall be stored, updated and deleted.	USR2.2.3.1.1
			MTTP	BTI	1

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>	
TPD	MTTP	BTI	2	A tailored trip itinerary shall include route highlighted on a map.	MnE 3.7,4.3	
			3	A tailored trip itinerary shall include directions.	MnE 3.7,4.3	
			4	A tailored trip itinerary shall include any requested Traveler Services Information (eg.airline, hotel, rental car reservations, etc.) including information about destination points.	MnE 6.7	
			5	A tailored trip itinerary shall include any requested Traveler Services Information including information about points of interest along the route (e.g., service stations, restaurants, tourist sights, etc.)	MnE 6.7	
	DTPD			1	Tailored trip itineraries, tailored routes and tailored directions information shall be made available to users 24 hours/day, 7 days/week, 365 days/year.	MnE 3.6.1,4.4.1
				2	Tailored trip itineraries shall be made available via fax.	MnE 3.6.3
				3	Tailored trip itineraries shall be made available via computer.	MnE 3.6.3, USR 1.3.4.1
				4	Tailored trip itineraries shall be made available via in-vehicle devices.	MnE 3.6.3, USR 1.2.1.5, 1.2.3.1, 1.3.4.1, 2.2.1.2.2.1,2.2.1.2.2.4, GGO 3.10.1, 10.10.1, 21.10.2
				5	Tailored trip itineraries shall be made available via personal portable devices.	USR 1.1.4.1.4, 1.3.4.1, 2.2.1.2.2.3
				6	Tailored trip itineraries shall be made available via kiosks.	USR 1.3.4.1,2.1.2.2.4, 2.2.1.2.1.2
				7	Tailored trip itineraries shall be made available via printed media,	USR 2.1.2.2.3
				8	Tailored routes shall be made available via fax.	MnE 3.6.3
				9	Tailored routes shall be made available via computer.	MnE 3.6.3, USR 1.3.4.1

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTTP	DTPD	10	Tailored routes shall be made available via in-vehicle devices.	MnE 3.6.3, USR 1.2.1.5, 1.2.3.1, 1.3.4.1, 2.2.1.2.2.1,2.2.1.2.2.4, GGO 3.10.1, 10.10.1, 21.10.2
			11	Tailored routes shall be made available via personal portable devices.	USR 1.1.4.1.4, 1.3.4.1, 2.2.1.2.2.3
			12	Tailored routes shall be made available via kiosks.	USR 1-3.4.1,2.1.2.2.4, 2.2.1.2.1.2
			13	Tailored routes shall be made available via printed media.	USR 2.1.2.2.3
			14	Detour routes shall be made available via phone.	MnE 3.6.3
			15	Detour routes shall be made available via computer.	MnE 3.6.3, USR 1.3.4.1
			16	Tailored directions information shall be made available via phone	MnE 3.6.3, USR 1.3.4.1
			17	Tailored directions information shall be made available via fax.	MnE 3.6.3
			18	Tailored directions information shall be made available via computer.	MnE 3.6.3, USR 1.3.4.1
			19	Tailored directions information shall be made available via in-vehicle devices.	MnE 3.6.3, USR 1.2.1.5, 1.2.3.1, 1.3.4.1, 2.2.1.2.2.1,2.2.1.2.2.4, GGO 3.10.1, 10.10.1, 21.10.2
			20	Tailored directions information shall be made available via kiosks.	USR 1.3.4.1,2.1.2.2.4, 2.2.1.2.1.2
			21	Tailored directions information shall be made available via printed media.	USR 2.1.2.2.3

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTTP	DTPD	22	Tailored trip itineraries, tailored routes and tailored directions shall be made available via digital methods.	USR 1.1.4.2.1
			23	Tailored trip itineraries, tailored routes and tailored directions shall be made available via audio.	MnE 4.9.2, USR 2.2.1.2.1.1, 2.2.1.2.2.4, GGO 10.10.3, Sbus 59-4.3
			24	Tailored trip itineraries, tailored routes and tailored directions shall be made available via video.	MnE 4.9.2, USR 1.3.4.1, 2.2.1.2.1.2
			25	Travelers shall be notified when to leave for any trip.	MnE 3.7.4
			26	Tailored directions shall be provided en route to individuals with impaired vision.	USR <b>1.2.3.1.1</b>
			27	Tailored directions shall be provided en route to individuals in areas of poor visibility.	USR <b>1.2.3.1.3</b>
			28	Directions shall be provided in a manner that augments existing signs (e.g.; stop signs, slow signs).	USR <b>1.2.3.1.4</b> , 1.2.3.1.4.1, 1.2.3.1.4.2
			29	Two-way communications capability shall be provided between the traveler and the infrastructure (for Route Guidance).	USR 1.3.2.2
			30	Distribution profiles shall contain the user-specific parameters needed to transmit tailored trip itineraries, tailored routes and tailored directions to the user, including notification device (e.g: phone, fax, computer).	Derived
			31	Distribution profiles shall contain the user-specific parameters needed to transmit tailored trip itineraries, tailored routes and tailored directions to the user, including notification address (e.g.: phone/fax number, computer id and address).	Derived
			32	Distribution profiles for each registered user shall be created, stored, updated and deleted.	Derived
			33	Fixed/Flexible Routes planning shall support external customer query of the the fleet schedule. Query access may include telephone and internet access.	MCTO 4/24/96 - 20

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTTP	DTPD	34	A list of authorized users shall be stored, updated and deleted.	Derived
			35	Each trip request shall be checked against a list of authorized users, for proper service level authorization prior to allowing access to the Trip Planning and Directions Service.	Derived
			36	Authorized users shall be allowed to request a trip itinerary from this service.	MnE 3.1, USR 1.1.3.1
			37	Authorized users shall be allowed to request a route from this service.	MnE 3.1
			38	Authorized users shall be allowed to request directions from this service.	MnE 4.1
			39	A trip request shall contain origin/destination points.	MnE 3.2.1, USR 1.1.3.2.1, 1.3.1.1, 1.3.2.2.1, 1.3.2.2.2, GGO 3.10.2
			40	A trip request shall contain option to factor in current or forecasted travel conditions.	MnE 3.2.4, USR 1.1.3.2.4, 1.1.3.2.3, 1.1.3.2.10, 1.1.3.3.2, 1.1.3.3.2
			41	A trip request shall contain desired arrival time..	MnE 3.2.2, USR 1.1.3.2.4
			42	A trip request shall contain desired departure time.	MnE 3.2.2, USR 1.1.3.2.3
			43	A trip request shall contain maximum acceptable trip duration.	MnE 3.2.2, USR 1.1.3.2.5, GGO 3.10.2
			44	A trip request shall contain preferred route(s)/route segment(s).	MnE 3.2.3, USR 1.1.3.2.8

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTTP	DTPD	45	A trip request shall contain a request for a route.	MnE 3.2.1, USR 1.1.3.2.1, 1.3.1.1, 1-3.2.2.1, 1.3.2.2.2, GGO 3.10.2
			48	A trip request shall contain a request for directions.	MnE 3.2.1, USR 1.1.3.2.1, 1.3.1.1, 1.3.2.2.1, 1.3.2.2.2, GGO 3. 10.2
			49	A trip planning and directions profile for each registered user shall be created, stored, updated and deleted.	Derived
			50	Upon receipt of a trip request, a set of route requirements will be formulated based on the information in the specific request and the information in the user's trip planning and directions service profile.	Derived
			51	Upon receipt of a detour request, a set of route requirements will be formulated based on the information in the specific request about the transit route and transit stops that are involved,	Derived
			52	Users shall be allowed to perform "what if" trip planning based on changes to parameters in their trip request or changes to their trip planning and directions profile.	MnE 3.3,3.4,3.5.1
			53	Alternate route(s)/route segment(s) shall be determined based on travel conditions changes.	MnE 3.5.1, USR 1.1.2.1.4, GGO 3.5.3, 3.10.2
			54	A record of each service usage shall be stored for each trip planning and directions request,	Derived
			55	Query access of the the fleet schedule shall be available via telephone.	MCTO 4124196 - 20
			56	Query access of the the fleet schedule shall be available via Internet access.	MCTO 4124196 - 20
			57	Detour routes shall be made available via an in-vehicle device (e.g., communications radio, Mobile Data Terminal, etc.)	Derived



<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TPD	MTTP	DTPD	58	A detour request shall consist of origin/destination points	Derived
			59	A detour request shall contain an option to factor in current travel conditions in determining a detour route.	Derived
			60	A detour request shall contain desired arrival time.	Derived
			61	A detour request shall contain the maximum acceptable trip duration time.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	BTS	1	Traveler services information shall geographically reference traveler services source data to specific, multi-modal route segments.	Derived
			8	Eink reference model data shall be stored, updated and deleted.	Derived
			9	Traveler services information shall include restaurant information.	Derived
			10	Traveler services information shall include lodging/camping information.	Derived
			11	Traveler services information shall include fuel/vehicle services information.	Derived
			12	Traveler services information shall include emergency medical facilities information.	Derived
			13	Traveler services information shall include tourist sight information.	Derived
			14	Traveler services information shall include planned event information.	Derived
			15	Traveler services information shall include entertainment information.	Derived
			16	Traveler services information shall include shopping information.	Derived
			17	Traveler services information shall include airline information.	Derived
			18	Traveler services information shall include rental vehicle information.	Derived
			19	Traveler services information shall be created, stored, updated and deleted.	UST 1.5.1.1
			19.a	Restaurant information shall include name.	Derived
			20	Restaurant information shall include description.	Derived
			21	Restaurant information shall include location.	Derived
			22	Restaurant information shall include phone number.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	BTS	23	Restaurant information shall include type of food.	Derived
			24	Restaurant information shall include hours of operation.	Derived
			25	Restarurant information shall include prices.	Derived
			26	Restaurant information shall include directions.	Derived
			27	Restaurant information shall include available parking information.	Derived
			28	Restaurant information shall include quality rating.	Derived
			29	Restaurant information shall include alternate modes of transporation available.	Derived
			29a	Lodging/camping information shall include name.	Derived
			30	Lodging/camping information shall include type of facility.	Derived
			31	Lodging/camping information shall include description.	Derived
			32	Lodging/camping information shall includie location.	Derived
			33	Lodging/camping information shall include phone number.	Derived
			34	Lodging/camping information shall include rates.	Derived
			35	Lodging/camping information shall include availability.	Derived
			36	Lodging/camping information shall include services available.	Derived
			37	Lodging/camping information shall include directions.	Derived
			38	Lodging/camping information shall include available parking information.	Derived
			39	Lodging/camping information shall include quality rating.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	BTS	40	Lodging/camping information shall include alternate modes of transportation available.	Derived
			40.a	Fuel/vehicle services information shall include facility name.	Derived
			41	Fuel/vehicle services information shall include type of facility.	Derived
			42	Fuel/vehicle services information shall include description.	Derived
			43	Fuel/vehicle information shall include location.	Derived
			44	Fuel/vehicle services information shall include phone number.	Derived
			45	Fuel/vehicle service information shall include hours of operation	Derived
			46	Fuel/vehicle service information shall include directions.	Derived
			47	Fuel/vehicle service information shall include prices.	Derived
			47.a	Emergency medical facilities information shall include name.	Derived
			48	Emergency medical facilities information shall include type of facility.	Derived
			49	Emergency medical facilities information shall include description.	Derived
			50	Emergency medical facilities information shall include location.	Derived
			51	Emergency medical facilities information shall include phone number.	Derived
			52	Emergency medical facilities information shall include hours of operation.	Derived
			53	Emergency medical facilities information shall include directions.	Derived
			54	Emergency medical facilities information shall include alternate modes of transportation available.	Derived
			54.a	Tourist sight information shall include name.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	BTS	55	Tourist site information shall include type of facility.	Derived
			56	Tourist site information shall include description.	Derived
			57	Tourist site information shall include location.	Derived
			58	Tourist site information shall include phone number..	Derived
			59	Tourist site information shall include rates.	Derived
			60	Tourist site information shall include hours of operation,	Derived
			61	Tourist site information shall include directions.	Derived
			62	Tourist site information shall include available parking information.	Derived
			63	Tourist site information shall include alternate modes of transportation available.	Derived
			63.a	Planned event information shall include name of event.	Derived
			64	Planned event information shall include type of event,	Derived
			65	Planned event information shall include description,	Derived
			66	Planned event information shall include location.	Derived
			67	Planned event information shall include phone number.	Derived
			68	Planned event information shall include prices.	Derived
			69	Planned event information shall include availability.	Derived
			70	Planned event information shall include hours of operation.	Derived
			71	Planned event information shall include directions.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	BTS	7 2	Planned event information shall include available parking information.	Derived
			7 3	Planned event information shall include alternate modes of transportation available.	Derived
			7 4	Entertainment information shall include type of entertainment.	Derived
			7 5	Entertainment information shall include description,	Derived
			7 6	Entertainment information shall include location.	Derived
			7 7	Entertainment information shall include phone number.	Derived
			7 8	Entertainment information shall include prices.	Derived
			7 9	Entertainment information shall include availability.	Derived
			8 0	Entertainment information shall include hours of operation.	Derived
			8 1	Entertainment information shall include directions.	Derived
			8 2	Entertainment information shall include available parking information.	Derived
			8 3	Entertainment information shall include alternate modes of transportation available.	Derived
			83.a	Shopping information shall include name of shopping facility.	Derived
			8 4	Shopping information shall include type of facility.	Derived
			8 5	Shopping information shall include description.	Derived
			8 6	Shopping information shall include location.	Derived
			8 7	Shopping information shall include phone number.	Derived
			8 8	Shopping information shall include hours of operation.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	BTS	89	Shopping information shall include directions.	Derived
			90	Shopping information shall include available parking information.	Derived
			91	Shopping information shall include alternate modes of transportation available.	Derived
			91.a	Airline information shall include name of airline.	Derived
			92	Airline information shall include flight departure times and destinations.	Derived
			93	Airline information shall include flight arrival times.	Derived
			94	Airline information shall include availability.	Derived
			95	Airline information shall include rates.	Derived
			96	Airline information shall include phone number.	Derived
			97	Airline information shall include special services.	Derived
			97.a	Rental vehicle information shall include name of rental company.	Derived
			98	Rental vehicle information shall include location.	Derived
			99	Rentail vehicle information shall include phone number.	Derived
			100	Rental vehicle information shall include types of vehicles offered.	Derived
			101	Rental vehicle information shall include rates.	Derived
			102	Rental vehicle information shall include availability.	Derived
			103	Rental vehicle information shall include directions.	Derived
			104	Rental vehicle information shall include special services.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	BTS	105	Traveler services information shall include recreational areas information.	Derived
			106	Traveler services information shall include parking information.	Derived
			107	Traveler services information shall include mode use information	Derived
			107.a	Recreational areas information shall include name of recreational facility.	Derived
			108	Recreational areas information shall include type of area.	Derived
			109	Recreational areas information shall include location.	Derived
			110	Recreational areas information shall include hours of operation.	Derived
			111	Recreational areas information shall include services available.	Derived
			112	Recreational areas information shall include directions.	Derived
			112.a	Parking information shall include name of parking facility.	Derived
			113	Parking information shall include location.	Derived
			114	Parking information shall include phone number	Derived
			115	Parking information shall include hours of operation.	Derived
			116	Parking information shall include parking rates.	Derived
			117	Parking information shall include services available.	Derived
			118	Parking information shall include total number of spaces available.	Derived
			119	Parking information shall include directions.	Derived
			120	Mode use information shall include name of transit organization/company.	Derived



<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>			
TSI	MTSD	BTS	121	Mode use information shall include customer service phone number.	Derived			
			122	Mode use information shall include hours of operation.	Derived			
			123	Mode use information shall include area of service.	Derived			
			124	Mode use information shall include rules for use of the service.	Derived			
			125	Mode use information shall include payment methods accepted.	Derived			
			126	Mode use information shall include special services offered.	Derived			
			127	Mode use information shall include transit organization/company address.	Derived			
			CTS			1	Traveler services source data shall include restaurant data.	MnE 6.1.1, USR 1.5.2.2
						2	Traveler services source data shall include lodging/camping data.	MnE 6.1.2, USR 1.5.2.2
						3	Traveler services source data shall include fuel/vehicle services data.	MnE 6.1.3, USR 1.5.2.2
4	Traveler services source data shall include emergency medical facilities data.	MnE 6.1.4, USR 1.5.2.2						
5	Traveler services source data shall include tourist sight data.	MnE 6.1.5, USR 1.5.2.2						
6	Traveler services source data shall include planned event data.	MnE 6.1.6, USR 1.5.2.2						
7	Traveler services source data shall include entertainment data.	MnE 6.1.7, USR 1.5.2.2						
8	Traveler services source data shall include shopping data.	MnE 6.1.8, USR 1.5.2.2						
9	Traveler services source data shall include airline data.	MnE 6.1.9, GGO 10.5.2						
10	Traveler services source data shall include rental vehicle data.	MnE 6.1.1						

Service	Function	Sub - Function	Sequence Number	Requirement	Source
TSI	MTSD	CTS	11	Restaurant data shall be accepted from restaurant guides.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3, 1.5.1.2.4, 1.5.1.2.5
			12	Restaurant data shall be accepted from travel guides.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3, 1.5.1.2.4, 1.5.1.2.5
			13	Lodging/Camping data shall be accepted from hotel/motel guides.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3, 1.5.1.2.4, 1.5.1.2.5
			14	Lodging/Camping data shall be accepted from camping guides.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			15	Lodging/Camping data shall be accepted from travel guides.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			16	Fuel/vehicle services data shall be accepted from travel guides.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			17	Emergency medical facilities data shall be accepted from multiple sources.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	CTS	18	Tourist sight data shall be accepted from travel guides.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3, 1.5.1.2.4, 1.5.1.2.5
			19	Tourist sight data shall be accepted from tourist agencies.	USR 15.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			20	Tourist sight data shall be accepted from chambers of commerce.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			21	Planned event data shall be accepted from event planners.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			22	Planned event data shall be accepted from tourist agencies.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			23	Planned event data shall be accepted from travel guides.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			24	Entertainment data shall be accepted from travel guides.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	CTS	25	Entertainment data shall be accepted from tourist agencies.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3, 1.5.1.2.4, 1.5.1.2.5
			26	Shopping data shall be accepted from travel guides.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			27	Shopping data shall be accepted from chambers of commerce.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			28	Shopping data shall be accepted from tourist agencies.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			29	Airline data shall be accepted from airlines.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			30	Airline data shall be accepted from travel agencies.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			31	Rental vehicle data shall be accepted from rental car companies.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5, Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	CTS	32	Rental vehicle data shall be accepted from travel agencies.	USR 1.5.1, 1.5.1.2, 1.5.1.2.1, 1.5.1.2.2, 1.5.1.2.3., 1.5.1.2.4, 1.5.1.2.5
			33	Traveler services source data shall be accepted for input into the system via voice.	Derived
			34	Traveler services source data shall be accepted for input into the system via fax.	Derived
			35	Traveler services source data shall be accepted for input into the system via paper copy.	Derived
			36	Traveler services source data shall be accepted for input into the system via magnetic medium.	Derived
			37	Traveler services source data shall be accepted for input into the system via digital methods.	Derived
			38	Traveler services source data shall be input into the system via manual entry.	Derived
			39	Traveler services source data shall be input into the system via electronic entry (standard format).	Derived
			40	Traveler services source data shall be input into the system via electronic entry (non-standard format).	Derived
			41	Traveler services source data received in a non-standard format shall be converted to standard format.	Derived
			42	Traveler services source data shall be created, stored, updated and deleted.	Derived
			43	Traveler services source data shall include recreational areas data.	Derived
			44	Traveler services source data shall include parking data.	Derived
			45	Traveler services source data shall include transit mode use information,	Derived
			46	Recreational areas data shall be accepted from travel guides.	Derived

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTSD	CTS	47	Recreational areas data shall be accepted from tourist agencies.	Derived
			48	Parking data shall be accepted from parking facilities.	Derived
			49	Mode use information shall be accepted from transit agencies.	Derived
MTTS	DTSI	1	Tailored traveler information shall consist of user-specific traveler services that have been formatted to the user-specific delivery device.	Derived	
		2	Tailored traveler information shall be made available to users 24 hour/day, 7 days/week, 365 days/year.	MnE 6.5.1	
		3	Tailored traveler information shall be made available via phone.	MnE 6.5.3, USR 1.5.2.5	
		4	Tailored traveler information shall be made available via fax.	MnE 6.5.3	
		5	Tailored traveler information shall be made available via computer.	MnE 6.5.3, USR 1.5.2.5	
		6	Tailored traveler information shall be made available via signs.	MnE 6.5.3	
		7	Tailored traveler information shall be made available via radio.	MnE 6.5.3, USR 1.5.2.5, GGO 5.10.2	
		8	Tailored traveler information shall be made available via in-vehicle device.	USR 1.5.2.5, GGO 5.10.1	
		9	Tailored traveler information shall be made available via kiosk.	MnE 6.5.3, USR 1.5.2.5, 1.5.2.6, GGO 5.5.3	
		10	Tailored traveler information shall be made available via personal portable devices.	USR 1.5.2.5	
		11	Tailored traveler information shall be made available via HAR stations.	USR 1.5.2.5, GGO 10.5.2	
		12	Tailored traveler information shall be made available digitally (standard format).	Derived	
		13	Tailored traveler information shall be made available via audio.	Derived	

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>	
TSI	MTTS	DTSI	14	Tailored traveler information shall be made available via video.	Derived	
			15	Tailored traveler information shall be made available via hardcopy.	GGO 5.5.3	
			18	Distribution profiles for registered users shall be stored, updated and deleted.	Derived	
			19	A list of authorized users shall be created, stored, updated and deleted.	Derived	
			20	Each traveler services request shall be checked for proper service level authorization prior to allowing access to the Traveler Services Information Service.	Derived	
			21	Authorized traveler services requests shall be provided the requested traveler services information.	MnE 6.1, USR 1.1.1, 1.1.1.1, 1.5.1, 1.5.2	
			22	A record of each service usage shall be stored for each traveler services request.	Derived	
			DTTS	1	Traveler services information shall be made available to users based on user-specified parameters.	MnE 6.3
				10	A traveler services profile for each registered user shall be created, stored, updated and deleted.	Derived
				16	User account information for registerd users shall be stored, updated and deleted.	Derived
				17	Tailored traveler information shall contain type of facility/service offered.	MnE 67.4
				18	Tailored traveler information shall contain description of the service or facility.	MnE 6.7.1
				19	Tailored traveler information shall contain location(address).	MnE 6.7.1
				20	Tailored traveler information shall contain directions in text and/or map form (either general directions or from the users location).	MnE 6.7.1
21	Tailored traveler information shall contain hours/dates/season of operation.	MnE 6.7.2, USR 1.5.2.2				
22	Tailored traveler information shall contain prices/rates.	MnE 6.7.2				

<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTTS	DTTS	23	Tailored traveler information shall contain availability of the facility, service, or event.	MnE 6.7.2, USR 1.5.2.2
			24	Tailored traveler information shall contain parking availability/location for the facility or event.	MnE 6.7.3, USR 1.5.2.2
			25	Tailored traveler information shall contain alternate transportation modes available.	MnE 6.7.3
			26	Tailored traveler information shall contain reservation confirmation number(s).	Derived
			27	Tailored traveler information shall contain reservation date(s).	Derived
			28	Tailored traveler information shall be compiled for specific routes.	MnE 6.2,6.2.3
			29	Tailored traveler information shall be compiled for a departure point (eg. roadway exit, transit stop).	MnE 6.2,6.2.2
			30	Tailored traveler information shall be compiled for a destination.	MnE 6.2,6.2.4
			31	Tailored traveler information shall be compiled a specific area.	MnE 6.2, USR 1.5.2.2
			32	Tailored traveler information shall be compiled for the local area.	MnE 6.2, USR 1.5.2.1
			33	Tailored traveler information shall be compiled for an area nearest to the users current location.	MnE 6.2,6.2.1, USR 1.5.2.2
			34	Tailored traveler information shall be compiled to show miles to the next facility or service (e.g.; hotel, restaurant, service station).	<del>MnE</del> 6.2,6.2.1
			35	Tailored traveler information shall be compiled across multiple counties.	MnE 6.2,6.6.1
			36	Tailored traveler information shall be compiled for a metro-wide area.	MnE 6.2,6.6.1
			37	Tailored traveler information shall be compiled across multiple cities.	MnE 6.2,6.6.1
			38	Tailored traveler information shall be compiled for a statewide area.	MnE 6.2,6.6.2, GGO 5.5.1



<b>Service</b>	<b>Function</b>	<b>Sub - Function</b>	<b>Sequence Number</b>	<b>Requirement</b>	<b>Source</b>
TSI	MTTS	DTTS	39	Tailored traveler information shall be compiled across multiple states.	MnE 6.2,6.6.1
			40	Tailored traveler information shall be compiled across a wide geographic region.	MnE 6.2,6.6
		<b>MR</b>	1	Users shall be able to make reservations for dining.	MnE 6.4, USR 1.5.2.3
			2	Users shall be able to make reservations for lodging..	MnE 6.4, USR 1.5.2.3
			3	Users shall be able to make reservations for airline flights.	MnE 6.4
			4	Users shall be able to make reservations for rental vehicles.	MnE 6.4
			5	Users shall be able to make reservations for special events.	MnE 6.4
			6	Users shall be able to make reservations for entertainment.	MnE 6.4
			7	A reservation/ticket request shall be sent to the traveler service provider for processing.	Derived
			8	A reservation/ticket confirmation shall be received from the traveler service provider.	Derived
			9	Users shall be allowed to purchase tickets for events, entertainment, tourist sites.	USR 1.5.1.4
			10	Users shall be allowed to purchase airline tickets.	Derived
			11	Users shall be allowed to make deposits for lodging reservations.	USR 1.5.1.4
		12	User account information shall be sent to the traveler service provider, via the reservation/ticket request, when the user makes a purchase/deposit.	Derived	
		13	Users shall be able to make reservations for parking.	Derived	