

Guidance Document

G1376 Core Ellipse Data Requirements – Equipment and Work Orders

Issue: A1

Issue date: April 2015

MAYOR OF LONDON



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1 Purpose

- 1.1 The purpose of this Guidance is to outline which core data fields in Ellipse should be populated within Equipment Register and Work Orders and some guidance to the rules behind population. The document will focus on Equipment Register (MSQ600) and its key related modules and Work Order Manager (MSQ620) and supporting modules.

2 Scope

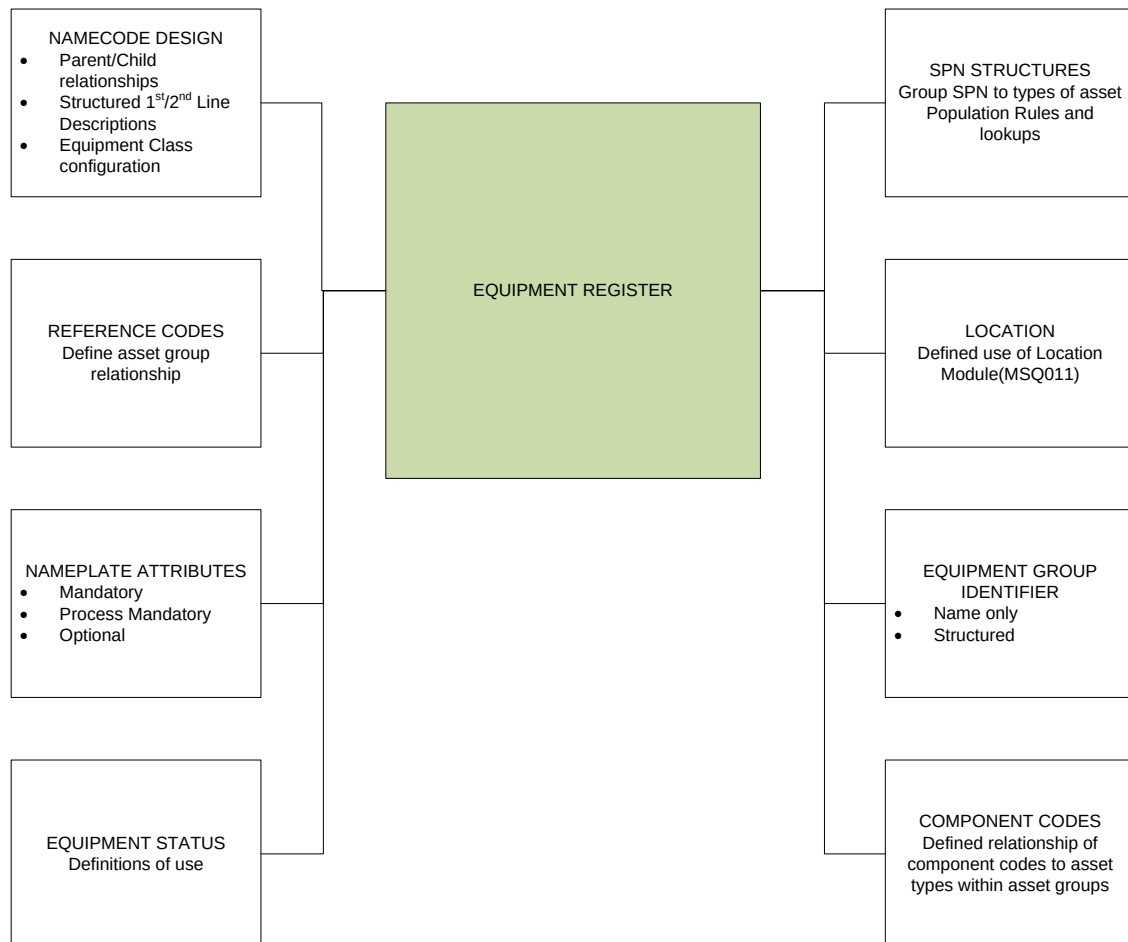
- 2.1 This Guidance applies to all asset groups, it will define the generic fields that support all asset groups and the asset group specific fields where each area may have an individual requirement. To ensure consistency across asset groups a set of business rules should support each section, to enable validation of data changes through BAU and the baseline for future system or data design developments.

The document will define data in 3 categories, System Mandatory, Process Mandatory and Optional, these will support current or future business process. The data will be associated to a process or standard where possible.

3 Guidance

3.1 Equipment Register Data Requirements(MSQ600)

EQUIPMENT REGISTER DEFINITION



3.1.1 NAMECODE DESIGN (MSO605 to edit, MSO607 to review)

Every record in the Ellipse Equipment Register is produced using the Ellipse Entity “Item Name Code”. The Namecode is a template for a record, it contains all the base information that an equipment record of a specific type will require.

By business process Namecodes are related to Ellipse Equipment Classes, forming lower level divisions of the Equipment Class. Each Namecode will have a specific Plant Number Structure, Structured 1st/2nd Line Descriptions and set of Equipment Classifications.

The Namecodes are defined in a controlled spreadsheet to define the parent child relationships of each asset group. Each level of the hierarchy is defined by a specific colour, example below:



Namecode	Equipment Class	Asset Classification	Asset Classification Description	1st Line Prefix	1st Line Description	2nd Line Description	E0 Asset Record Type	E0 Asset Record Type Description	E2 Asset Group	E2 Asset Group Description
MK001	MK	SG1	Signalling		SIGNALLING GROUP	<LOCATION ROAD DESCRIPTION>	14	Group	15	Signalling
MK002	MK	PTOP	Point Operating		POINT OPERATING SUBGROUP	<LOCATION ROAD DESCRIPTION>	16	SubGroup	15	Signalling
MK003	MK	SW04	4PT EN Points		4PT EN POINTS SYSTEM	<LOCATION ROAD DESCRIPTION>	17	System	15	Signalling
PM004	PF	SW04	4PT EN Points	SPN	POINTS - <SPN> <LOCAL ID>	<PT EN> <PT EN ID> <POINTS> <WM>	21	Subsystem Func Loc	15	Signalling
FSM07	FS	SW05	Hydraulic Fluid Alarm Unit	DPL	ALARM UNIT: HYDRAULIC FLUID	HYDRAULIC FLUID ALARM UNIT SYSTEM	20	Func Location	15	Signalling
BP001	BP	SW05	Hydraulic Fluid Alarm Unit	FEQ	HYDRAULIC FLUID ALARM UNIT	<TYPE> <MODEL>	21	Equipment	15	Signalling

The defined parent child relationships are used by the ADMF Validation Tool to ensure data supplied to the ADMF matches the designed hierarchy

The Namecode Spreadsheet is managed by the ADMF and any change to the spreadsheet requires a change request to the ADMF with approval from the “Equipment” approver. There is a standard 6 week change cycle for Namecodes, 4 weeks for the business to deliver changes and 2 weeks for the ADMF to configure Ellipse.

Fields required for Namecode Creation:

Namecode
Equipment Class
Asset Classification
Asset Classification Description
1st Line Prefix
SPN Format - Characters
SPN Format - Structure
1st Line Description
2nd Line Description
E0 Asset Record Type
E0 Asset Record Type Description
E2 Asset Group
E2 Asset Group Description

3.1.2 REFERENCE CODES (MSF070)

- Define asset group relationship

Equipment Reference Codes are information fields that can be viewed for all equipment records. Equipment Reference Codes contain data that is mainly non-asset group specific, they are fields that are available for any area to use. They have the added capability that they can be searchable by all users in Ellipse from the main search screen in MSQ600.

They are currently lightly used but as the requirement for reliability and performance data grows in the business they are a good place to store mandatory/common asset data that supports multiple asset groups.

ENTITY_TYPE	REF_NO	SHORT_NAMES	SCREEN_LITERAL	LENGTH	FIELD_TYPE	SPECIAL_EDIT	TABLE_TYPE
EQP	010	COLOUR	Colour at Takeover	10	AN		+COL
EQP	012	DOB	ACA Date of Birth	30	D		
EQP	020	OMEAV	Current MEAV	10	N		
EQP	025	TMEAV	MEAV at Takeover	10	N		
EQP	027	ACANO	Original ACA Number	30	AN		
EQP	032	NAMEC	Original Namecode	08	AN		
EQP	130	BOUND	Boundary Demarcation	30	AN		
EQP	205	CIRCUITREF	Circuit Reference	08	AN		+PDB
EQP	207	PROJECTID	HV Power Project ID Code	09	ANZ		+PRJ
EQP	210	RESERVED	Asset Reserved by	08	AN		+ARB
EQP	215	EX_LOC	Location Strapped from	04	AN		+EXL
EQP	220	AGE_GROUP	Age Group (5yr)	11	AN		+AGE
EQP	225	MAINTSTRAT	Maintenance Strategy	02	AN		+MAS
EQP	230	PROTECTGRP	Protection Grouping	02	AN		+PRG
EQP	235	DELPOINT	Delivery Point (Y/N)	01	AN	YN	
EQP	240	SUB_CLASS	Equipment Sub Class	02	AN		+SUB
EQP	270	DLOAD	Duty Loading	40	AN		
EQP	290	CONSTR	Type of Construction	30	AN		
EQP	320	CAPAC	Asset Capacity	30	AN		
EQP	340	ACACAT	ACA Category	10	AN		
EQP	350	CURRGREY	Current Grey Status	10	AN		+COL
EQP	370	TANCAT	Tanc Category	01	AN		+TAN
EQP	455	ORIGFORM	ORIG TEST OF CONFORMITY	01	AN	YN	
EQP	460	ORIGCERT	CONFORMITY CERTIFICATE	40	AN		
EQP	470	ABASSET	A/ BASSET	01	A		+ABS
EQP	480	DRAWNUM	DRAWINGNUMBER	40	AN		
EQP	490	PATTEST	PAT TESTED?	01	AN	YN	
EQP	495	FOLDLOC	FOLDERLOCATION	40	AN		
EQP	520	PROJID	PROJECTID	40	AN		

List of current Reference codes - [Ellipse Lookups](#)

3.1.3 NAMEPLATE ATTRIBUTES (MSO6A0)

Nameplate Attributes in Ellipse hold asset type specific data. They are fields to hold technical and physical attributes concerning a specific type of asset. They are structured in Ellipse as a set of fields that are related to a specific Equipment Class. Some are defined by Information standard - Provision of Engineering Asset Information, http://onespace.tfl.gov.uk/lu/_cms/CMSLibrary/S1/S1041.pdf

c) Model Type

d) Installation Date

e) Commissioning Date

Other are required by Asset Group specific Standard or to support other reporting requirements. Nameplate Attributes fall into 3 categories defined below:

- Mandatory – Required by Standard
Typically -

DATEOFCOM	Date of Commissioning
DATEOFIN	Date of Installation
DATEOFM	Date of Manufacture
ECOLIFE	Economic Life
EXLIFEDAT	Expected Life Expiry Date
- Process Mandatory – Required to support a business process
Typically -

NUMSPAN	NUMBER OF SPANS
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HEIGHT
LNGTHMT Height
Length (m)

- Optional – Helpful technical or physical information defining the asset
Typically

TRAN_EB_RAIL Min Transverse E.Bound-Rail
TRAN_EB_ROAD Min Transverse E.Bound-Roadway
TRAN_NB_RAIL Min Transverse N.Bound-Rail
TRAN_NB_ROAD Min Transverse N.Bound-Roadway
TRAN_SB_RAIL Min Transverse S.Bound-Rail

3.1.4 EQUIPMENT STATUS

Definitions of Equipment Status use :

Table Type	Table Code	Table Description	Definition	Active Flag Status
ES	AL	Allocated	The asset or part of asset is allocated for a specific reason, this is primarily used for cable allocating services to cores in cables.	Y
ES	AR	Archived	The asset record no longer required	
ES	AV	Available	The asset is available for service but not physically in service	Y
ES	DE	Defective	The asset is in a defective condition(temporary State)	Y
ES	DI	Disposed Of	The asset has been removed from the operational railway	N
ES	DU	Disused	The asset is physically in place on the railway but not in use	N
ES	EU	Emergency Use	Assets in a de-graded state that can be used for service under certain controlled circumstances	Y
ES	IN	In service	The asset is in operational use	Y
ES	MO	Mothballed	The asset is onsite but has been taken out of use. Could be returned to service but would require some work to prepare it.	Y
ES	NO	Non-Operational	The Asset has been taken out of operational use	Y
ES	OP	Operational	The asset is in available for operation but is not in use	Y
ES	OU	Out of Service	The asset has been taken out of service, typically for maintenance or refurbishment	Y
ES	PR	Proposed Asset	Assets that have been registered but not yet entered service. Mainly new project assets that are installed but not commissioned	N
ES	RO	Repair Off Site	The asset has been removed for repair outside LU	Y
ES	SS	Strategic Spare	Assets that are at one of the designated stores that are available to be delivered to site or on site that and can be put into service	Y
ES	WD	Walk down	The escalator is defective but available for passengers to walk down	Y



3.1.5 SPN STRUCTURES

SPN Format - Characters	SPN Format - Structure	Description of SPN Structure	SPN Format - Structure	Record Type	Asset Group
5	LCS CODE	LCS Code - Depot		LCS Level	N/A
10	LCS CODE	LCS Code - Trackside		LCS Level	N/A
10/4	LCS CODE/ASSET CLASS	Trackside LCS Code/Asset Class derived from Namecode Spreadsheet(Group Record)		Group, Subgroup, System, Subsystem, System Functional Location	Track, Earth Structures, Power, Drainage, Signalling, Premises, Bridges &
10/4/10	LCS CODE/ASSET CLASS/ID	Trackside LCS Code/Asset Class derived from Namecode Spreadsheet/10 character ID free text		Functional Equipment, Equipment	Track, Power, Signalling, Electrical, Premises,
10/4/2	LCS CODE/ASSET CLASS/ID	Trackside LCS Code/Asset Class derived from Namecode Spreadsheet/2 character ID free text		System, Subsystem, System	Power
10/4/4/5/6/1	LCS CODE/ASSET CLASS/BUILDING NO./RM/AREA ID/ROOM DESC/ID	Trackside LCS Code/Asset Class derived from Namecode Spreadsheet/BUILDING Number LCS Level 2 Code, SID Code for location/Coded description of room from dropdown n/ Single character ID/Subsystem		Subsystem/Functional Location, Functional Equipment	Premises
10/4/5/5/4/2	LCS CODE/ASSET CLASS/START (M)/FINISH (M)/OFFSET/ID	Trackside LCS Code/Asset Class derived from Namecode Spreadsheet/Start Meterage of Asset/Finish Meterage of asset/Offset Meterage from nearest running rail/2 character ID(System Record)		System, System Functional Location, Subsystem, System Functional Location, Functional Equipment, Functional Location, Equipment	Track, Earth Structures, Power, Drainage, Signalling, Premises, Bridges & Structures, Deep Tube
10/4/5/5/6	LCS CODE/ASSET CLASS/START (M)/FINISH (M)/ID	Trackside LCS Code/Asset Class derived from Namecode Spreadsheet/Start Meterage of Asset/Finish Meterage of asset/6 character		Equipment	Track, Signalling, Fencing & Environment
3	LINE	3 Character line identifier code		Line	N/A
3	TOP	Top of the FUH Hierarchy		Top of Hierarchy	N/A
3/1/10	LINE/CAR/UNIQUE ID	3 Character line identifier code/Rolling Stock Car Number/10 character ID free text(Car Record)		System	Rolling Stock
3/1/6	LINE/UNIT/UNIQUE ID	3 Character line identifier code/Rolling Stock Unit Number/10 character ID free text(Unit Record)		Unit level	Rolling Stock
3/1/6/4	LINE/CAR/UNIQUE ID/LOCATION	4 Character line identifier code/Rolling Stock Car Number/10 character ID free text/Low er level car		Car Level	Rolling Stock
4	LCS CODE	LCS Code - Station		LCS Level	N/A
4/10/10	ASSET CLASS/SERIAL NUMBER/ID	Asset Class derived from Namecode Spreadsheet/Asset Serial Number/10 character ID		Serialised Spares	Rolling Stock, L&E, Power, Signalling
4/10/5/2	ASSET CLASS/SERIAL NUMBER/SERIAL NUMBER/ID	Asset Class derived from Namecode Spreadsheet/Asset Serial Number first 10 char/Asset Serial Number overflow 5 char/2 character ID free text(Maintainable Unit Record)		Serialised Spares	L&E
5/10	MU TYPE/LOCAL REF	Maintainable Unit Code/Local Reference Code 10 character ID free text(Maintainable Unit Record)		Maintainable Unit	Track, Rolling Stock
5/10/5/5/5	MU TYPE/LCS START/START (M)/LCS END/END (M)	Maintainable Unit Code/Start Trackside LCS Code/Start Trackside LCS Code Meterage/End Trackside LCS Code/End Trackside LCS Code Meterage(Maintainable Unit Record)		Maintainable Unit	Earth Structure, Mechanical Services, Fire Systems, Drainage, Depot Plant
5/3/4/4	MU TYPE/LINE/ASSET GROUP/SYSTEM	Maintainable Unit Code/Line Identifier Code/Asset Group Code/System Code(Maintainable Unit Record)		Maintainable Unit	Pumps, Bridges & Structures
5/4	ASSET CLASS/LINE	Asset Class derived from Namecode Spreadsheet/Code defining Line asset is supporting		Maintainable Unit	N/A
5/4	LCS CODE/ASSET CLASS	Level 1 LCS Code/Asset Class derived from Namecode Spreadsheet/Infrastructure Record)		Infrastructure, Group, Subgroup, System, Subsystem, Maintainable Unit	Drainage, L&E, Power, Fire systems, Electrical, Depot Plant, Communications, C&I, Automatic Fare Collection, Pumps, Signalling,
5/4/10	LCS CODE/ASSET CLASS/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/10 character ID free text (Equipment Record)		Subgroup, System, Subsystem, Functional Equipment, Equipment, Subsystem Functional Location	Lift & Escalators, Electrical, Mechanical Services, Power, Fire Systems, Communications, C&I,
5/4/10/10	LCS CODE/ASSET CLASS/ASSET NUM/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/Asset Identifier/10 character ID free text(Functional Location Record)		Functional Equipment	Depot Plant
5/4/10/6/5	LCS CODE/ASSET CLASS/SUBSTATION/ROOM DESC/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/Substation code from dropdown n/Room descriptionCode from dropdown n/5 character ID(Subsystem Record)		Functional Location, Subsystem Functional Location	Communications
5/4/2	LCS CODE/ASSET CLASS/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/2 character ID free text (System Record)		Subgroup, System, Subsystem, Subsystem Functional Location, System Functional Location	Signalling, Fire systems, Mechanical services, L&E, Power, Electrical, Bridges & Structures, Deep Tube
5/4/3	LCS CODE/ASSET CLASS/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/3 character ID free text (System Record)		System, Subsystem, Subsystem Functional Location, System Functional Location	Communications, C&I
5/4/4/5/6/6	LCS CODE/ASSET CLASS/BUILDING NO./RM/AREA ID/ROOM DESC/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/BUILDING Number LCS Level 2 Code, SID Code for location/Coded description of room from dropdown n/6 character ID(Functional Location Record)		Subsystem, Functional Location/Equipment, Subsystem Functional Location, System Functional Location	Signalling, Premises, Mechanical Services, L&E, Power, Fire Systems, Electrical, Communications, C&I, Pumps, Electrical,
5/4/4/5/6/6	LCS CODE/ASSET CLASS/BUILDING NO./START ROOM/FINISH RM/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/BUILDING Number LCS Level 2 Code, SID Code for location/Coded description of room from dropdown n/6 character ID(Functional Location Record)		Functional Location/Equipment	Not Used
5/4/5/10/4/1	START LCS CODE/ASSET CLASS/START RM NO/END LCS CODE/METERAGE/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/SID Code for location/End LCS Code/Meterage along LCS where asset ends/1 character ID free text(Functional Location Record)		Functional Equipment	Power
5/4/5/5/5/6	START LCS CODE/ASSET CLASS/START RM NO/END LCS CODE/END RM NO/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/SID Code for location/End LCS Code/End Room Number/6 character ID free text(Functional Equipment Record)		Functional Equipment	Power, Communications
5/4/6/10/5	LCS CODE/ASSET CLASS/SITE MNEMONIC/ID1/ID2	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/HV Power Site Mnemonic/10 character ID free text(1)/5 character ID free text		Subgroup	HV Power
5/4/6/5/10	LCS CODE/ASSET CLASS/SITE MNEMONIC/EQUIP ID/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/HV Power Site Mnemonic/HV Power Equip ID/10 character ID free text(Functional Equipment Record)		Functional Equipment, Subsystem Functional Location, System Functional Location	HV Power
5/4/6/5/5/5	LCS CODE/ASSET CLASS/SITE MNEMONIC/EQUIP ID/ID1/ID2	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/HV Power Site Mnemonic/HV Power Equip ID/5 character ID free text(1)/5 character ID free text(2)(Functional Equipment Record)		Functional Equipment, Subsystem Functional Location, System Functional Location	HV Power
5/4/6/5/6	LCS CODE/ASSET CLASS/START RM NO/END RM NO/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/1st SID Code for location/2nd SID Code for location/6 character ID(Functional Location Record)		Functional Equipment	Power
5/4/6/5/6/4	LCS CODE/ASSET CLASS/SITE MNEMONIC/EQUIP ID/ID1/ID2	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/HV Power Site Mnemonic/HV Power Equip ID/6 character ID free text(1)/4 character ID free text(2)(System Record)		Functional Equipment, System Functional Location	HV Power
5/4/6/5/8/2	LCS CODE/ASSET CLASS/SITE MNEMONIC/EQUIP ID/ID1/ID2	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/HV Power Site Mnemonic/HV Power Equip ID/8 character ID free text(1)/2 character ID free text(2)(System Record)		System, System Functional Location	HV Power
5/4/6/7/8	LCS CODE/ASSET CLASS/RM/AREA ID1/RM/AREA ID2/ID	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/1st SID Code for location/2nd SID Code for location/8 character ID(Equipment Record)		Functional Equipment	Electrical
5/4/6/8	START LCS CODE/ASSET CLASS/END LCS CODE/CABLE EQUIP NO	Room based LCS Code/Asset Class derived from Namecode Spreadsheet/End LCS Code/Cable Identifier Code(Functional Location Code)		Functional Equipment	HV Power
5/5/10/10	MU TYPE/EQUIP ID/ID1/ID2	Maintainable Unit Code/HV Power Equip ID/10 character ID free text(1)/10 character ID free text		Maintainable Unit	HV Power
6	TYPE	Type of Rolling Stock Code(Group Record)		Rolling Stock Type	Rolling Stock



The Structured Plant Number provides a unique number for an asset, in the case of Room Based or Trackside Assets it provides a coded version of the asset location and asset type.

There are some non-location based SPN's that define Rolling Stock Structures and also some for Maintainable Units that represent multiple assets or locations.

It is mandatory for all equipment records to have a SPN

The code can be a maximum of 30 characters, with each segment being no more than 10 characters long. The first 2 segments mainly define the primary LCS Code Location and a 4 character code defined by the Namecode Spreadsheet which represents the "Asset Type".

Typical Asset Classifications:

ST02	Jointless Track Circuit
ST14	Jtc Transmitter
ST14	Jtc Transmitter
ST16	Jtc Receiver
ST16	Jtc Receiver
ST18	Jtc Mounting Plate
ST18	Jtc Mounting Plate
ST19	Jtc Terminating Plate
ST19	Jtc Terminating Plate
SP22	Jtc Transformer Unit
SP12	Transformer
ST67	Jtc TX Baseplate
ST67	Jtc TX Baseplate
ST68	Jtc RX Baseplate
ST68	Jtc RX Baseplate

The segments can be set up in various ways, free text or drop down list and mandatory of non-mandatory. - Example

Plant Names	Plant Codes	Descriptions	Size	Mand	Valid
LCS CODE	C125/CEBFA	PLT2 BOND STREET - EBFA	10	Y	Y
ASSET CLAS	SG27	ATP Block Marker Board	04	Y	Y
START (M)	0105/		05	Y	N
FINISH (M)	0105/		05	Y	N
OFFSET	L001		04	Y	N
ID	01		02	Y	N

Where the "Valid" box is "Y" then a validation table of codes are required. The lookup tables that support SPN structures can be found in the ADMF Various Lookup spreadsheets - [Ellipse Lookups](#)