

**SPECIFICATIONS OF DIRECTORATE OF FORENSIC SCIENCE , MHA, GOI**  
**FOR MOBILE FORENSIC VAN WITH IT ENABLED FORENSIC EVIDENCE**  
**MANAGEMENT SYSTEM:-**

**1. Introduction:-**

The goal of crime scene investigation is to identify, document and collect physical and biological evidences at the scene of crime and must be done with great care and a thoughtful approach, since the case under investigation has to be put in the court. Solving the crime will depend on reaching the crime scene in time as well as piecing together the evidences to form a picture of what happened at the crime scene. Crime scene investigation includes securing of crime scene, photography, proper search of crime scene, systematic documentation of the crime scene along with the suitable collection, packaging, preservation and transport of all the evidences encountered at a specific crime scene. In the majority of cases, investigating officer who protects and searches a crime scene plays a critical role in determining whether physical evidence will be used in solving or prosecuting crimes. For such it was felt to develop a proper Scene of Crime (SOC) Vehicle for effective and efficient crime scene management.

- Mobile Forensic Van (MFV) vehicle should have a prefabricated driver cabin and a chassis to accommodate the different cabins for storage of kits, chemicals, exhibits, etc.
- MVF should be designed to have in the see-through labeled drawers, ease out to pick the right tool, kits and consumables for use.
- A wash basin to clean hands and face to be fitted inside the MFV.
- A DC operated refrigerator (suitable for moving vehicles) has to be installed in dedicated space, so that e.g. DNA samples can reach safely in the forensic lab for testing without deterioration.
- An inverter has to be provided in the MFV that will supply the electric current continuously at the time of investigation. It can be charged both on moving vehicles with the engine as well as from external charging points provided in the vehicle.
- MFV proposed should have more internal height with sufficient working space as well as space for Equipment, with rigid ladder type chassis, which offers sturdiness on road and longer life of vehicle in view of Indian vivid terrains.
- Proposed Vehicle should be fit for precise customized fabrication to ensure Quality Control, Warranty and Serviceability.

<b>Technical Specifications of PORPOSED MF VEHICLE</b>	
	<b>Diesel/CNG</b>
Engine Capacity (cc)	3450 or better
Category of Vehicle for which Chassis to be used	Light Capacity Commercial Vehicles
Type of Chassis with certification	Chassis with face cowl
Body Style & Length	Tilt Cabin Chassis with 12ft or better
Chassis with Built up Cabin	Yes
Type of Fuel	Diesel/CNG
Vehicle Emission Compliance	BS VI
Chassis Transmission System	Manual
Max Engine Power BHP	100 or better
Max Engine Torque (N-m)	315 or better
Engine Aspiration	Turbocharged Intercooled
No. of Cylinder in Engine (Nos)	4
Ground Clearance (mm)	225 millimeter or better
Wheel Base (mm)	3300 millimeter or better
Type of Steering	Manual/Power
No of Axle (Nos)	2
Axle Configuration ( No of Outside Tyre x No of Driving Tyre)	4X2
Type of Front & Rear Axle and Suspension System	MULTI-LEAF SPRING
No. of Speed/ Forward Gears (Nos)	5
Front & Rear Vehicle Brake	DRUM
Type of Clutch	Dry Sgl. plate
<b>CONSTRUCTION</b>	
Design of Chassis	Full Frame chassis
Body Options	Customize-able
Fuel Tank Capacity (Ltrs)	90 or better
Length of Chassis (mm)	6000 or better
Width of Chassis (mm)	2200 or better
Height of Chassis (mm)	2700 or better
Type of Vehicle Tyre	Tube/tubeless
Size of Wheel	400mm or better
Vehicle Mileage (Km/Ltr)	8 or better
Speed, Max (Km/Hr)	80 or better
Turning Radius (mm)	7000 or better
Warranty Period inclusive of warranty of Battery (Month)	36 months or better

### 3. Details of basic Forensic Evidence Collection Kits :

With reference to crime scenario vis-à-vis Cr PC requirements on evidence management to be housed in MFVs are given below:

- 1) MVF Common Items and PPE Kits  
MFVs are to be equipped with dashboard and cabin CCTVs with chip or DVR recording facilities with at least 2 months backup.
- 2) Physical Evidence Collection and Packaging Kits.
- 3) Biological Evidence Collection Kits/Sexual Assault Evidence Collection Kit (SAECKIT)
- 4) Shoe Print And Tyre Marks Collection Kits.
- 5) Digital Evidence Collection Kits.
- 6) Fingerprint Lifting Kits.
- 7) Questioned Documents Collection Kits.
- 8) Chemicals, Explosive and Narcotics Collection Kits.
- 9) Ballistics Evidence Collection Kits.
- 10) Digital evidence collection Kits.

S. No.	ILLUSTRATION OF ITEMS	QUANTITY	REMARKS
<b>1) MVF' COMMON ITEMS AND PPE KITS</b>			
1	DISPOSABLE GLOVES ( SMALL, MEDIUM AND LARGE)	1 BOX Each Size.	DISPOSABLE
2	DISPOSABLE FACE MASKS, EAR LOOP, 3 PLY.	1 BOX	DISPOSABLE
3	DISPOSABLE CAPS, FREE SIZE	1 BOX	DISPOSABLE
4	DISPOSABLE GOWNS, FREE SIZE	1 Pkgg/ Box	DISPOSABLE
5	DISPOSABLE SHOE COVERS , FREE SIZE	1 BOX	DISPOSABLE
6	DISPOSABLE NAPKINS, STANDARD SIZE	6 PACKETS	DISPOSABLE
7	CRIME SCENE COATS AND PLASTIC APRONS	6 PIECES EACH	REUSABLE
8	SAFETY GOGGLES, FREE SIZE	6 PIECES	REUSABLE
9	HEAVY DUTY RUBBER PROTECTIVE GLOVES	6 PAIRS	REUSABLE
10	PROTECTIVE RUBBER SHOES UPTO KNEE	6 PAIRS	REUSABLE
11	HAND SANITIZRES, ALCOHOL BASED	500ML pack /6 BOTTLES	CONSUMABLE
12	DISPOSABLE BIODEGRADBLE WASTE BAGS ,MEDIUM SIZE	1 PACK	DISPOSABLE

13	MAGNIFYING LEN 4" DIA	4 NOs	REUSEABLE
14	FORCEPS ( TOOTHED AND POINTED) OF VARIOUSLENGTHS 6"-8"	4 PIECES	REUSEABLE
15.	SCISSORS ( SMALL 6" 2 PCS)(BIG 8", 2PCS),( CLOTH CUTTING SCISSORS-1)	05 PIECES	REUSEABLE
16	STAINLESS STEEL SPATULAS 4"-6"	4 PIECES	REUSEABLE
17	SURGICAL BLADE WITH HANDLES ( 4"-6")	3 HANDLES + 1 BOX BLADES	DISPOSABLE
18	GLASS SLIDES FOR MICROSCOPE, STANDARD SIZE	1 BOX	DISPOSABLE
19	Dissection NEEDLES ( 3"-4")	5 PIECES	REUSEABLE
20	NAIL CUTTER, STANDARD SIZE	1 PIECE	REUSEABLE
21	COMBS ( SMALL AND BIG)	2 PIECES EACH	REUSEABLE
22	DIFFERENT SIZES OF RUBBER BANDS	250 GMS	REUSEABLE
23	MEASURING TAPES ( 50 FT, 100FT)	ONE PIECES EACH.	REUSEABLE
24	DIGITAL DISTANCE MEASURING DEVICE	2 PIECE	REUSEABLE
25	RIGID PHOTO SCALE (WHITE AND GREY), STANDARD SIZE	6 PIECES	REUSEABLE
26	SUITABLE EVIDENCE NUMBER MARKING FLAGS OR PEGS	1-60 & A TO Z	REUSEABLE
27	PHOTO NUMBER BOOKLETS ADHESIVE (LARGE AND SMALL)	2 ( ONE EACH)	DISPOSABLE
28	SET OF DIRECTION INDICATORS (SIZE) 3"-4"	15 PIECES	REUSEABLE
29	CRIME-SCENE TAPE 200 MTR WITH PLASTIC STANDS NO. 6	6 SETS	REUSEABLE
30	FOLDING LADDER 6 ' HEIGHT	2 PIECE	REUSEABLE
31	DIRECTION COMPASS, STANDARD	2PIECE	REUSEABLE
32	HAND HELD RECHARGEABLE TORCH	4 PIECES	REUSEABLE
33	RECHARGEABLE BRIGHT WHITE LED LIGHT WITH TRIPOD STAND	4 PIECE	REUSEABLE
34	SMALL BATTERY OPERATED UV LIGHT	1 PIECE	REUSEABLE
35	CAMERA CANON/ NIKON/SONY/FUJI, 20 MEGAPIXELS 12X OPTICAL ZOOM, CMOS SENSOR, SUPPORT FOR WI-FI / NFC, FULL HD MOVIE RECORDING (OR BETTER SECES)	1 PIECE WITH 2 SETS OF RECHARGEABLE BATTERIES	REUSEABLE
36	WET & DRY VACUUM CLEANER TO COLLECT SMALL EXHIBITS & WATER/LIQUID SAMPLES WITH	1 PIECE WITH 20 PIECES OF	REUSEABLE/ BAGS ARE CONSUM-

	ADDITIONAL COLLECTION BAGS	COLLECTION BAGS	ABLES
37.	DC-REFRIGERATOR ( 165 L)	1	REUSEABLE
38	LAPTOP AND PRINTER WITH PHOTOSTATE FACILITY	1 EACH	REUSEABLE
39	QR CODE PRINTER	1 PIECE	REUSEABLE
40	SUITABLE INVERTER	1 PIECE	REUSEABLE
41	METAL MIRROR, STANDARD SIZE	2 PIECE	REUSEABLE
42	HAND TOWEL (CLOTH) AND LIQUID DETTOL SOAP DISPENSER.	1 EACH	CONSUMABLE
43	CLOTH LINING FOR EXHIBITS WITH NEEDLE AND THREAD.	1 ROLL OF 20 METERS	CONSUMABLE
44	STATIONARY ITEMS; PAPER RIM,CARBON PAPERS, VARIOUS MARKERS,NOTE PADS, PAPER WRING SUPPORT, STAPLER, PENCILS, SHARPENER, PAPER CUTTER, FEVISTICK, CARDBOARD PINS, PAPER PUNCH, PAPER THREADS ,CELLO TAPE OF DIFFERENT SIZES	2 PACKS EACH	CONSUMABLE
45	SPECIAL PACKING PAPER ENVELOPES OF( A5,A4,A3 SIZES)	20 EACH	CONSUMABLE
46	PLASTIC ZIPPER ENVELOPES (250,500,1000G CAPACITY)	20 EACH	CONSUMABLE
47	PLASTIC CONTAINERS WITH AIRTIGHT LID ( 100, 250,500 AND 1000 ML CAPACITY)	10 EACH	DISPOSABLE
48	CARDBOARD BOXES OF( 1'X2'; 2'X2')	10 PCS	DISPOSABLE
49	TAMPER PROOF TAPE	4 ROLLS	CONSUMABLE
50	ALUMINUM FOILS	5 PCS	CONSUMABLE
51	BUTTER WRAPS	5 ROLLS	CONSUMABLE
52	BUBBLE WRAP	20 METER	DISPOSABLE
53	BROWN PAPER	1 ROLL	CONSUMABLE
54	FILTER PAPERS 6"	2 PACKETS	CONSUMABLE
55	CANDLES, MATCH BOX PACKET CONTAINING 5 MATCH BOXES. AND ONE PACK OF TOOTHPICKS	1 EACH	CONSUMABLE
<b>2) PHYSICAL EVIDENCE COLLECTION KITS</b>			
56	HAMMER AND CLAW HAMMER, SMALL, BIG & STANDARD SIZE	1 EACH	REUSEABLE
57	SHOVEL, STANDARD SIZE	1 PIECE	REUSEABLE

58	SCRAPPER 8"	1 PIECE	REUSEABLE
59	DIGITAL VERNIER GAUZE 15-20 CMS	1 PIECE	REUSEABLE
60	GLASS CUTTER, STANDARD SIZE	2 PIECE	REUSEABLE
61	PLIER ( NOZZLE AND ORDINARY), STANDARD SIZE	2 EACH	REUSABLE
62	WIRE CUTTER, STANDARD SIZE	1 PIECE	REUSEABLE
63	RATCHETSCREWDRIVER WITH ASSORTED HEADS, STANDARD SIZE	1 SET	REUSEABLE
64	ELECTRICAL TESTER, STANDARD SIZE	2 PIECE	REUSEABLE
65	HACK SAW BOTH FOR WOOD AND IRON CUTTING, STANDARD SIZE.	1 EACH	REUSEABLE
67	TROLLEY WITH FOUR WHEELS (2'Wx3'L)	1 PIECE	REUSEABLE
68	CONVERTER ADAPTER FOR COMPUTER	2 PIECES	REUSEABLE
69	ELECTRICAL EXTENSION BOARDS ( 6MTR CORD LENGTH)	1-1 EACH	REUSEABLE
70	CPU POWER CORDS	3	REUSEABLE
<b>3) BIOLOGICAL &amp; DNA EVIDENCE COLLECTION &amp; SEAC KITS</b>			
71	STERILIZED COTTON SWABS, INDIVIDUALLY PACKED	50 PIECES	DISPOSABLE
72	SWAB DRYER RACKS, 25-30 CMS L, 10- 15 CMS W	3 PIECES	REUSEABLE
73	STERILIZED COTTON GAUZE, SIZE 2"X2" OR 4"X 4"	25 PIECES	DISPOSABLE
74	STERILIZED PLASTIC CONTAINERS-30ML	15 PIECES	DISPOSABLE
75	ALCOHOL SWABS, INDIVIDUALLY PACKED	100 PIECES	DISPOSABLE
76	EDTA VIALS- 3ML	50 PIECES	DISPOSABLE
77	DISPOSABLE PLASTIC PIPETTES, 3-5 ML	50 PIECES	DISPOSABLE
78	DISPOSABLE NEEDLE SYRINGE- 3-5 ML	50 PIECES	DISPOSABLE
79	DISTILLED WATER	250 ML	CONSUMABLE
80	SALINE WATER	250 ML	CONSUMABLE
<b>4) SHOE PRINT AND TYRE MARKS COLLECTION KITS</b>			
81	FOOT PRINT FRAME ALUMINUM (14"X8"X2")	1 PIECES	REUSEABLE
82	MIXING BOWL (2 LTR)	1 [PIECES	REUSEABLE
83	MIXING SPOON, STANDARD SIZE	1 PIECES	REUSEABLE
84	TALCUM POWDER -250-400 G	1 PIECES	CONSUMABLE

85	POP	2 KG	CONSUMABLE
86	POLY VINYL CHLORIDE (PVC)	1 KG	CONSUMABLE
<b>5) DIGITAL EVIDENCE COLLECTION TOOL/ KITS</b>			
87	PEN DRIVES 64 GB OR HIGHER CONFIGURATION	5	REUSEABLE
88	HARD DRIVE 1TB	3	REUSEABLE
89	SCREW DRIVIER SET WITH BITS 3-8MM ALLEN KEY 1.27,1.5,2.2.5 MM EXTENSION ANDSLIDING T BAR	1 SET EACH	REUSEABLE
<b>6) FINGERPRINT LIFTING KITS</b>			
90	BLACK, WHITE, SILVER-BLACK,SILVER-GREY, SILVER RED LATENT POWDERS	1 STANDARD PACKET EACH	CONSUMABLE
91	BLACK AND WHITE FEATHER DUSTER, REGULAR POWDER BRUSHES, FINGERPRINT LIFTING TAPE	1 PIECE EACH	CONSUMABLE
<b>7) QUESTIONED DOCUMENTS LIFTING KITS</b>			
92	POLYVINYL ACETATE IN ACETONE	500ML	CONSUMABLE
93	SUITABLE SPRAY PUMP	1 PIECE	REUSEABLE
94.	HAND MAGNIFIER WITH LIGHT	2 PIECE	RESUEABLE
95.	GLASS SHEETS TO COLLECT CHARRED DOCs	2 PIECE	REUSEABLE
<b>8 ) CHEMICAL, EXPLOSIVE AND NARCOTICS COLLECTION KIT</b>			
94	MAGNET WITH HEIGHT ADJUSTABLE HANDLE BETWEEN 1 TO 4 FEETS) AND A SMALL MAGNET OF 6" L	1 EACH	REUSEABLE
95	ACETONE	500ML	CONSUMABLE
96	HELMETS	3	REUSEABLE
97	BRUSHES ½, 1, 2 And 4 inches	2 each	REUSEABLE
98.	GENERAL NDPS SCREENING KIT (UNITED NATIONS) (Optional)	2 KITS	CONSUMABLE
99.	EXPLOSIVES DETECTION KIT (EXPRAY OR ANY OTHER) (Optional)	1 KIT	CONSUMABLE
100	SPANNER SETS (OPEN AND CLOSED ENDED) AND ADJUSTABLE	1 each	REUSEABLE
101	DRILLING MACHINE WITH DIFFERENT BITS SETS	1	REUSEABLE
102	DIGITAL MULTIMETER	1	REUSEABLE
<b>9) BALLISTICS EVIDENCE COLLECTION KITS</b>			
103	5% NITRIC ACID	500ML	CONSUMABLE
104	PLASTIC FORCEPS TO LIFT BULLETS AND CARTRIDGES	10 PIECES	REUSEABLE

105	GSR collection stubs	4Pkt	CONSUMABLE
106	FIRE EXTINGUISHER	1	REUSEABLE
107	FIRST AID KIT	1	CONSUMABLE
<b>10) KITS FOR DIGITAL EVIDENCE INVESTIGATION</b>			
108	WRITE BLOCKER	1	REUSEABLE
109	FORENSIC IMAGER	1	REUSEABLE

Each of the MFV should have the Digital Evidence Collection Tools, Camera with a drone, Longer battery backup-Laptop, Blue-tooth/WI-FI based Ink tank printer, with Flatbed photo and document scanner cum copier, Compatible Memory Cards, Forensic Evidence Management System (FEMS) type Software Application with PKI enabled technology to generate Secure Barcodes to store the information and secured login Integration with Google API (for longitude and latitude), SMS Gateway for real time updates to Key stakeholders as defined in ICJS tracking system. The proposed vehicle should have the facility of Intuitive Dashboard showing detailed level of Chain of custody, Real time GPS generation of QR code at the SOC; Print & Scan QR Code securely using authorized Mobile devices to fix on seized exhibits; Extraction of information by scanning the QR codes in authorized mobile devices having PKI key; Role based access; Supported Mobile Systems: iOS & Android; QR Code Printer/ Flexible connectivity/ Bluetooth wireless technology, Ethernet, Print labels wirelessly.

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