

**WIDENING AND RECONSTRUCTION OF EXISTING TWO LANE
CARRIAGEWAY TO FOUR LANE WITH PAVED SHOULDER
INCLUDING CONSTRUCTION OF ROB IN MAKHU TOWN FROM KM.
170+000 TO KM. 171+900 OF NH-54 IN THE STATE OF PUNJAB
ON EPC MODE**

Payment Schedule-H

09th August 2022

SCHEDULE-H
(See Clause 19.3)

Contract Price Weightages

- 1.1 The Contract Price for this Agreement is Rs. xxxxxx Crores
- 1.2 Proportions of the Contract Price for different stages of Construction of the Project Highway shall be as specified below:

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage to Particular item (col. 2)
1	2	3	4
Road works Including Culverts, widening and repair of culverts	18.68%	A.1 - Widening and strengthening of existing road (Flexible Pavement)	
		(1) Earthwork up to top of the sub-grade	0.00%
		(2) Earthwork in shoulders	0.00%
		(3) Sub Base Course	0.00%
		(4) Non Bituminous Base Course	0.00%
		(5) Bituminous Base Course	0.00%
		(6) Wearing Coat	0.00%
		(7) Widening and repair of culverts	0.00%
		A.2 - Widening and repair of existing road (Rigid Pavement)	
		(1) Earthwork up to top of the sub-grade	0.00%
		(2) Earthwork in shoulders	0.00%
		(3) Sub Base Course	0.00%
		(4) Dry Lean Concrete (DLC) Course	0.00%
		(5) Pavement Quality Concrete (PQC) Course	0.00%
		B.1 - Reconstruction/ New 4-lane realignment/ bypass (Flexible pavement)	
		(1) Earthwork up to top of the sub-grade	17.61%
		(2) Earthwork in shoulders	0.44%
		(3) Sub Base Course	5.69%
		(4) Non Bituminous Base Course	7.44%
		(5) Bituminous Base Course	14.99%
		(6) Wearing Coat	5.58%
		B.2 - Reconstruction/ New 4-lane realignment / bypass (Rigid pavement)	
		(1) Earthwork up to top of the sub-grade	0.00%
(2) Earthwork in shoulders	0.00%		
(3) Sub Base Course	0.00%		
(4) Dry Lean Concrete (DLC) Course	0.00%		
(5) Pavement Quality Concrete (PQC) Course	0.00%		
C.1 - Reconstruction/ New service road / Slip road (Flexible pavement)			
(1) Earthwork up to top of the sub-grade	10.18%		
(2) Earthwork in shoulders	0.00%		
(3) Sub Base Course	8.10%		

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage to Particular item (col. 2)
1	2	3	4
		(4) Non Bituminous Base Course	9.85%
		(5) Bituminous Base Course	8.64%
		(6) Wearing Coat	7.66%
		C.2 - Reconstruction / New service road / slip road (Rigid pavement)	
		(1) Earthwork up to top of the sub-grade	0.00%
		(2) Earthwork in shoulders	0.00%
		(3) Sub Base Course	0.00%
		(4) Dry Lean Concrete (DLC) Course	0.00%
		(5) Pavement Quality Concrete (PQC) Course	0.00%
		D - Reconstruction and New culverts on existing road, realignments, bypasses	
Culverts (length < 6 m)	3.82%		
Minor Bridges / Underpasses / Overpasses	2.62%	A.1 - Widening and Repair of Minor bridges (length > 6 and < 60 m)	
		Minor Bridges	0.00%
		A.2 - New Minor Bridges (length > 6 and < 60 m)	
		(1) Foundation: On completion of the foundation work including foundations for wing and return walls, abutments, piers	10.94%
		(2) Sub-structure: On completion of abutments, piers upto the abutment/ pier cap including wing / return wall upto top	3.91%
		(3) Super-structure: On completion of super-structure in all respects including girder, deck slab and bearings	76.56%
		(4) Approaches: On completion of approaches including Retaining walls, stone pitching, protection works complete in all respect, tests on completion and fit for use	2.34%
		(5) Guide Bunds and River Training Works: On completion of Guide bunds and river training works complete in all respects	4.69%
		(6) Other Ancillary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion in all respects	1.56%
		B.1 - Widening and Repair of Underpasses / Overpasses	
		Underpasses / Overpasses	0.00%
		B.2 - New Underpasses / Overpasses	
		(1) Foundation:	0.00%

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage to Particular item (col. 2)
1	2	3	4
		On completion of the foundation work including foundations for wing and return walls, abutments, piers	
		(2) Sub-structure: On completion of abutments, piers upto the abutment / pier cap including wing / return wall upto top	0.00%
		(3) Super-structure: On completion of super-structure in all respects including girder, deck slab and bearings	0.00%
		(4) On completion of retaining / Reinforced earth walls complete in all respect and fit for use	0.00%
		(5) Approaches and Other Ancillary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, stone pitching, protection works, road sign and markings, test on completion in all respects Wearing coat (a) in case of Overpass - wearing coat including expansion joints complete in all respects as specified and (b) in case of Underpass - rigid pavement including drainage facility complete in all respects as specified	0.00%
Major Bridge (length > 60 m) works and ROB / RUB / elevated sections / flyovers including viaducts, if any	55.00%	A.1 - Widening and repairs of Major Bridges	
		(1) Foundation: On completion of the foundation work including foundations for return walls, abutments, piers	0.00%
		(2) Sub-structure: On completion of abutments, piers upto the abutment / pier cap upto top	0.00%
		(3) Super-structure: On completion of super-structure in all respects including girder, deck slab and bearings	0.00%
		(4) Wearing coat including expansion joints	0.00%
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00%
		(6) Wing walls / return walls upto top	0.00%
		(7) Guide bunds, river training works etc.	0.00%
		(8) Approaches (including retaining walls, stone pitching and protection works)	0.00%
		A.2 - New Major Bridges	
		(1) Foundation: On completion of the foundation work	0.00%

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage to Particular item (col. 2)
1	2	3	4
		including foundations for return walls, abutments, piers	
		(2) Sub-structure: On completion of abutments, piers upto the abutment / pier cap upto top	0.00%
		(3) Super-structure: On completion of super-structure in all respects including girder, deck slab and bearings	0.00%
		(4) Wearing Coat including expansion joints	0.00%
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	0.00%
		(6) Wing walls / return walls upto top	0.00%
		(7) Guide bunds, river training works etc.	0.00%
		(8) Approaches (including retaining walls, stone pitching and protection works)	0.00%
		B.1 - Widening and repair of	
		(a) ROB	
		(b) RUB	
		(1) Foundation	0.00%
		(2) Sub-structure	0.00%
		(3) Super-structure (including bearings)	0.00%
		(4) Waring Coat: (a) in case of ROB - wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB - rigid pavement under RUB including drainage facility complete in all respects as specified	0.00%
		(5) Miscellaneous items like hand rails, crash barriers, road markings etc.	0.00%
		(6) Wing walls / return walls	0.00%
		(7) Retaining / reinforced earth walls	0.00%
		(8) Approaches and other ancillary works (approaches, stone pitching and protection works etc.)	0.00%
		B.2 - New ROB / RUB	
		(1) Foundation	25.46%
		(2) Sub-structure	2.23%
		(3) Super-structure (including bearings)	53.99%
		(4) Wearing Coat: (a) in case of ROB - wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB - rigid pavement under RUB including drainage facility complete in all respects as specified	2.82%
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.	3.64%

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage to Particular item (col. 2)
1	2	3	4
		(6) Wing walls / return walls	0.00%
		(7) Retaining / reinforced earth walls	11.52%
		(8) Approaches and other ancillary works (approaches, stone pitching and protection works etc.)	0.34%
		C.1 - Widening and repair of Elevated Section / Flyovers / Grade Separators	
		(1) Foundation	0.00%
		(2) Sub-structure	0.00%
		(3) Super-structure (including bearings)	0.00%
		(4) Wearing coat including expansion joints	0.00%
		(5) Miscellaneous items like hand rails, crash barriers, road markings etc.	0.00%
		(6) Wing walls / return walls	0.00%
		(7) Retaining / reinforced earth walls	0.00%
		(8) Approaches and other ancillary works (approaches, stone pitching and protection works etc.)	0.00%
		C.2 - New Elevated Section / Flyovers / Grade Separators	
		(1) Foundation: On completion of the foundation work including foundation for return walls, abutments, piers	0.00%
		(2) Sub-structure: On completion of abutments, piers upto the abutment / pier cap upto top	0.00%
		(3) Super-structure: On completion of super-structure in all respects including girder, deck slab and bearings, test on completion in all respect	0.00%
		(4) Wearing coat including expansion joints	0.00%
		(5) Miscellaneous items like hand rails, crash barriers, road markings etc.	0.00%
		(6) Wing walls / return walls	0.00%
		(7) Retaining / reinforced earth walls	0.00%
		(8) Approaches and other ancillary works (approaches, stone pitching and protection works etc.)	0.00%
Other works	22.72%	(i) Toll Plaza	0.00%
		(ii) Roadside drains	
		(a) Lined Drain	30.56%
		(b) Unlined Drain	0.03%
		(iii) Road signs, safety devices, road furniture, road boundary walls etc.	4.86%
		(iv) Road markings and studs	1.44%
		(v) Interlocking paver blocks	2.34%
		(vi) Project facilities	

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage to Particular item (col. 2)
1	2	3	4
		(a) Bus Bays / Passenger Shelter	0.00%
		(b) Wayside amenities excluding slip roads and but including all internal roads	0.00%
		(c) others	0.00%
		(vii) Rainwater Harvesting	0.63%
		(viii) Turfing on slopes	0.04%
		(ix) Approaches to Structures	52.36%
		(x) Street lighting	3.06%
		(xi) Utility ducts	0.00%
		(xii) Roadside plantation and median plantation including horticulture	0.00%
		(xiii) Protection works other than approaches to bridges, elevated sections, flyover/ grade separators and ROB's / RUBs	0.00%
		(xiv) Junctions	4.68%
		(xv) Safety and traffic management during construction	0.00%
		(xvi) Other miscellaneous works including connecting road and junction under grade separator	0.00%
Electrical Utilities and Public Health Utilities, Water Pipelines and Sewage lines	0.98%	(i) EHT line	0.00%
		(ii) EHT crossings	0.00%
		(iii) HT / LT line	89.58%
		(iv) HT / LT crossing	10.42%
		(v) Water pipeline	0.00%
		(vi) Water pipeline crossings	0.00%
		(vii) Sewage line	0.00%
		(viii) Sewage line crossings	0.00%

The above list is illustrative and may require modification as per the scope of the work.

1.3 Procedure of estimating the value of work done

1.3.1 Road Works including approaches to minor bridges, Major bridges and structures (excluding service roads).

Procedure for estimating the value of the road work done shall be as follows:

Table 1.3.1

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
A.1 - Widening and strengthening of existing road		Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 10 (ten) percent of the total length.
(1) Earthwork up to top of the sub-grade	0.00%	

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
(2) Earthwork in shoulders	0.00%	If existing road length (excluding bypasses, re-alignment, structure) is say ' L ' km and the unencumbered length along the existing road as handed over on the appointed date is ' L1 ' km and the balance length i.e. ' L2 ' km (L-L1) is to be handed over on a later date as per the memorandum signed under provision of Clause 8.2.1 of the Contract Document, then the stage payment shall be worked out for the ' L1 ' km length handed over on the appointed date. The stage payment for the remaining ' L2 ' km length shall be worked out on prorata basis from the date of handing over of such length.
(3) Sub Base Course	0.00%	
(4) Non Bituminous Base Course	0.00%	
(5) Bituminous Base Course	0.00%	
(6) Wearing Coat	0.00%	
(7) Widening and repair of culverts	0.00%	
A.2 - Widening and repair of existing road (Rigid Pavement)		Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 10 (ten) percent of the total length.
(1) Earthwork up to top of the sub-grade	0.00%	
(2) Earthwork in shoulders	0.00%	If existing road length (excluding bypasses, re-alignment, structure) is say ' L ' km and the unencumbered length along the existing road as handed over on the appointed date is ' L1 ' km and the balance length i.e. ' L2 ' km (L-L1) is to be handed over on a later date as per the memorandum signed under provision of Clause 8.2.1 of the Contract Document, then the stage payment shall be worked out for the ' L1 ' km length handed over on the appointed date. The stage payment for the remaining ' L2 ' km length shall be worked out on prorata basis from the date of handing over of such length.
(3) Sub Base Course	0.00%	
(4) Dry Lean Concrete (DLC) Course	0.00%	
(5) Pavement Quality Concrete (PQC) Course	0.00%	
B.1 - Reconstruction / New 4-lane realignment / bypass (Flexible pavement)		
(1) Earthwork up to top of the sub-grade	17.61%	
(2) Earthwork in shoulders	0.44%	
(3) Sub Base Course	5.69%	
(4) Non Bituminous Base Course	7.44%	
(5) Bituminous Base Course	14.99%	
(6) Wearing Coat	5.58%	Unit of Measurement is linear length of each bypass / re-alignment (excluding structures) and payment of each stage shall be made on prorata
B.2 - Reconstruction / New 4-lane realignment / bypass (Rigid pavement)		

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
(1) Earthwork up to top of the sub-grade	0.00%	basis on completion of a stage in full length or 5 (five) km length of each bypass / re-alignment taken separately.
(2) Earthwork in shoulders	0.00%	
(3) Sub Base Course	0.00%	
(4) Dry Lean Concrete (DLC) Course	0.00%	
(5) Pavement Quality Concrete (PQC) Course	0.00%	
C.1 - Reconstruction / New service road / Slip road (Flexible pavement)		Unit Measurement is linear length. payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) km. length, whichever is less.
(1) Earthwork up to top of the sub-grade	10.18%	
(2) Earthwork in shoulders	0.00%	
(3) Sub Base Course	8.10%	
(4) Non Bituminous Base Course	9.85%	
(5) Bituminous Base Course	8.64%	
(6) Wearing Coat	7.66%	
C.2 - Reconstruction / New service road / slip road (Rigid pavement)		Unit of measurement is linear length. Payment of each stage shall be made on prorata basis on completion of a stage in full length or 5 (five) km. length, whichever is less.
(1) Earthwork up to top of the sub-grade	0.00%	
(2) Earthwork in shoulders	0.00%	
(3) Sub Base Course	0.00%	
(4) Dry Lean Concrete (DLC) Course	0.00%	
(5) Pavement Quality Concrete (PQC) Course	0.00%	
D - Reconstruction and New culverts on existing road, realignments, bypasses		Cost of each culvert shall be determined on pro rata basis with respect to the total number of culverts. Payment shall be made on the completion of atleast five culverts.
Culverts (length < 6 m)	3.82%	

@ For example, if the total length of bituminous work to be done is 100 km, the cost per km of bituminous work shall be determined as follows:

$$\text{Cost per km} = P \times \text{weightage for road work} \times \text{weightage for bituminous work} \times (1/L)$$

Where P = Contract Price

L = Total length in km

Similarly, the rates per km for other stages shall be worked out accordingly.

Note: The length affected due to law and order problems are litigation during execution due to which the Contractor is unable to execute the work, may

be deducted from the total project length for payment purposes. The total length calculated here is only for payment purposes and will not affect and referred in other clauses of the Contract Agreement.

1.3.2 Minor Bridge works / Underpass / Overpass

Procedure for estimating the value of Minor Bridge / Underpass / Overpass shall be as stated in table 1.3.2

Table 1.3.2

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
A.1 - Widening and Repair of Minor bridges (length > 6 and < 60 m)		Cost of each minor bridge shall be determined on pro rata basis with respect to the total linear length of the minor bridges. Payment shall be made on the completion of widening & repair works of a minor bridge.
Minor Bridges	0.00%	
A.2 - New Minor Bridges (length > 6 and < 60 m)		
(1) Foundation: On completion of the foundation work including foundations for wing and return walls, abutments, piers	10.94%	Foundation: Cost of each minor bridge shall be determined on pro rata basis with respect to the total linear length (m) of the minor bridges. Payment against foundation shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of each bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure: On completion of abutments, piers upto the abutment / pier cap including wing / return wall upto top	3.91%	Sub-structure: Cost of each minor bridge shall be determined on pro rata basis with respect to the total linear length (m) of the minor bridges. Payment against sub-structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of each bridge.
(3) Super-structure: On completion of super-structure in all respects including girder, deck slab and bearings	76.56%	Super-structures: Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure atleast one span in all respects as specified in the column of "Stage of Payment" in this sub-clause. In the case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Approaches: On completion of approaches including Retaining walls, stone pitching, protection works	2.34%	Approaches: Payments shall be made on pro rata basis on completion of a stage i.e. completion of approaches in all respects as specified in the column of "Stage of Payment" in this sub-clause.

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
complete in all respect, tests on completion and fit for use		
(5) Guide Bunds and River Training Works: On completion of Guide bunds and river training works complete in all respects	4.69%	Guide Bunds and River Training Works: Payment shall be made on pro rata basis on completion of a stage i.e. completion of Guide Bunds and River training Works in all respects as specified.
(6) Other Ancillary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion in all respects	1.56%	Other Ancillary Works: Payment shall be made on pro rata basis on completion of a stage in all respects as specified.
B.1 - Widening and Repair of Underpasses / Overpasses	0.00%	Cost of each underpass / overpass shall be determined on pro rata basis with respect to the total linear length of the underpasses / overpasses. Payment shall be made on the completion of widening & repair works of a underpass / overpass.
B.2 - New Underpasses / Overpasses		
(1) Foundation: On completion of the foundation work including foundations for wing and return walls, abutments, piers	0.00%	Foundation: Cost of each Underpass / Overpass shall be determined on pro rata basis with respect to the total linear length (m) of the Underpasses / Overpasses. Payment against foundation shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of each Underpass / Overpass. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure: On completion of abutments, piers upto the abutment / pier cap including wing / return wall upto top	0.00%	Sub-structure: Cost of each Underpass / Overpass shall be determined on pro rata basis with respect to the total linear length (m) of the Underpasses / Overpasses. Payment against sub-structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of each Underpass / Overpass.
(3) Super-structure: On completion of super-structure in all respects including girder, deck slab and bearings	0.00%	Super-structures: Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure atleast one span in all respects as specified in the column of "Stage of Payment" in this sub-clause. In the case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
		girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) On completion of retaining / Reinforced earth walls complete in all respect and fit for use	0.00%	Payment shall be made on pro rata basis on completion of 20% of the total area.
(5) Approaches and Other Ancillary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, stone pitching, protection works, road sign and markings, test on completion in all respects Wearing coat (a) in case of Overpass - wearing coat including expansion joints complete in all respects as specified and (b) in case of Underpass - rigid pavement including drainage facility complete in all respects as specified	0.00%	Approaches and other ancillary works: Payment shall be made on pro-rata basis on completion of a stage in all respect as specified.

1.3.3 Major Bridge / RUB / ROB / Structures

Procedure for estimating the value of Major Bridge / RUB / ROB structures shall be as stated in table 1.3.3.

Table 1.3.3

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
A.1 - Widening and repairs of Major Bridges		
(1) Foundation: On completion of the foundation work including foundations for return walls, abutments, piers	0.00%	Foundation: Cost of each major bridge shall be determined on pro rata basis with respect to the total linear length (m) of the major bridges. Payment against foundation shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the major bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure: On completion of	0.00%	Sub-structure: Cost of each major bridge shall be determined on pro rata basis with respect to

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
abutments, piers upto the abutment / pier cap upto top		the total linear length (m) of the major bridges. Payment against sub-structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the major bridge.
(3) Super-structure: On completion of super-structure in all respects including girder, deck slab and bearings	0.00%	Super-structures: Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearings atleast one span in all respects as specified. In the case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Wearing coat including expansion joints	0.00%	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls / return walls upto top	0.00%	Wing walls / return walls: Payments shall be made on completion on all wing walls / return walls complete in all respects as specified.
(7) Guide bunds, river training works etc.	0.00%	Guide Bunds, River Training works: Payments shall be made on completion of all guide bunds / river training works etc. complete in all respects as specified.
(8) Approaches (including retaining walls, stone pitching and protection works)		Approaches: Payments shall be made on pro rata basis on completion of 10% of the scope of each stage.
A.2 - New Major Bridges		
(1) Foundation: On completion of the foundation work including foundations for return walls, abutments, piers	0.00%	Foundation: Cost of each major bridge shall be determined on pro rata basis with respect to the total linear length (m) of the major bridges. Payment against foundation shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the major bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure: On completion of abutments, piers upto the abutment / pier cap upto top	0.00%	Sub-structure: Cost of each major bridge shall be determined on pro rata basis with respect to the total linear length (m) of the major bridges. Payment against sub-structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the major bridge.

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
(3) Super-structure: On completion of super-structure in all respects including girder, deck slab and bearings	0.00%	Super-structures: Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearings atleast one span in all respects as specified. In the case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Wearing Coat including expansion joints	0.00%	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls / return walls upto top	0.00%	Wing walls / return walls: Payments shall be made on completion on all wing walls / return walls complete in all respects as specified.
(7) Guide bunds, river training works etc.	0.00%	Guide Bunds, River Training works: Payments shall be made on completion of all guide bunds / river training works etc. complete in all respects as specified.
(8) Approaches (including retaining walls, stone pitching and protection works)	0.00%	Approaches: Payments shall be made on pro rata basis on completion of 10% of the scope of each stage.
B.1 - Widening and repairs of (a) ROB (b) RUB		
(1) Foundation	0.00%	Foundation: Cost of each ROB / RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROB / RUB. Payment against foundation shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the ROB / RUB. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure	0.00%	Sub-structure: Cost of each ROB / RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROB / RUB. Payment against sub-structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the ROB / RUB.
(3) Super-structure (including bearings)	0.00%	Super-structures: Payment shall be made on pro rata basis on completion of a stage i.e.

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
		completion of super-structure including bearings atleast one span in all respects as specified. In the case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Waring Coat: (a) in case of ROB - wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB - rigid pavement under RUB including drainage facility complete in all respects as specified	0.00%	Wearing Coat: Payment shall be made on completion of (a) in case of ROB - wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB - rigid pavement under RUB including drainage facility complete in all respects as specified.
(5) Miscellaneous items like hand rails, crash barriers, road markings etc.	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls / return walls	0.00%	Wing walls / return walls: Payments shall be made on completion of all wing walls / return walls complete in all respects as specified.
(7) Retaining / reinforced earth walls	0.00%	Retaining / reinforced earth walls: Payments shall be made on pro rata basis on completion of 20% of the total area.
(8) Approaches and other ancillary works (approaches, stone pitching and protection works etc.)	0.00%	Approaches and other ancillary works: Payments shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.
B.2 - New (a) ROB (b) RUB		
(1) Foundation	25.46%	Foundation: Cost of each ROB / RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROB / RUB. Payment against foundation shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the ROB / RUB. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure	2.23%	Sub-structure: Cost of each ROB / RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROB / RUB. Payment against sub-structure shall be made on pro rata basis on completion of a stage i.e.

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
		not less than 20% of the scope of sub-structure of the ROB / RUB.
(3) Super-structure (including bearings)	53.99%	<p>Super-structures:</p> <p>ROB Portion: Payment against each super-structure span shall be made on pro rata basis on completion of a stage i.e. not less than 15% of the scope of each super-structure span of the ROB / RUB.</p> <p>Viaduct Portion: Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearings atleast one span in all respects as specified. In the case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above.</p>
(4) Wearing Coat: (a) in case of ROB - wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB - rigid pavement under RUB including drainage facility complete in all respects as specified	2.82%	<p>Wearing Coat:</p> <p>Payment shall be made on completion of (a) in case of ROB - wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB - rigid pavement under RUB including drainage facility complete in all respects as specified.</p>
(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.	3.64%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls / return walls	0.00%	Wing walls / return walls: Payments shall be made on completion of all wing walls / return walls complete in all respects as specified.
(7) Retaining / reinforced earth walls	11.52%	Retaining / reinforced earth walls: Payments shall be made on pro rata basis on completion of 20% of the total area.
(8) Approaches and other ancillary works (approaches, stone pitching and protection works etc.)	0.34%	Approaches and other ancillary works: Payments shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.
C.1 - Widening and repair of Elevated section/ Flyovers/Grade Separators		
(1) Foundation	0.00%	Foundation: Cost of each structure shall be determined on pro rata basis with respect to the total linear length (m) of the structure. Payment against foundation shall be made on pro rata

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
		basis on completion of a stage i.e. not less than 25% of the scope of foundation of the structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure	0.00%	Sub-structure: Cost of each structure shall be determined on pro rata basis with respect to the total linear length (m) of the structure. Payment against sub-structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the structure.
(3) Super-structure (including bearings)	0.00%	Super-structures: Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearings atleast one span in all respects as specified. In the case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Wearing coat including expansion joints	0.00%	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous items like hand rails, crash barriers, road markings etc.	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls / return walls	0.00%	Wing walls/return walls: Payments shall be made on completion on all wing walls / return walls complete in all respects as specified.
(7) Retaining / reinforced earth walls	0.00%	Retaining/reinforced earth walls: Payments shall be made on completion of 20% of the total area.
(8) Approaches and other ancillary works (approaches, stone pitching and protection works etc.)	0.00%	Approaches: Payments shall be made on pro rata basis on completion of a stage in all respects as specified.
C.2 - New Elevated section/ Flyovers / Grade Separators		
(1) Foundation: On completion of the foundation work including foundation for return walls, abutments, piers	0.00%	Foundation: Cost of each structure shall be determined on pro rata basis with respect to the total linear length (m) of the structure. Payment against foundation shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
(2) Sub-structure: On completion of abutments, piers upto the abutment / pier cap upto top	0.00%	Sub-structure: Cost of each structure shall be determined on pro rata basis with respect to the total linear length (m) of the structure. Payment against sub-structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the structure.
(3) Super-structure: On completion of super-structure in all respects including girder, deck slab and bearings, test on completion in all respect	0.00%	Super-structures: Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearings atleast one span in all respects as specified. In the case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Wearing coat including expansion joints	0.00%	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous items like hand rails, crash barriers, road markings etc.	0.00%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls / return walls	0.00%	Wing walls / return walls: Payments shall be made on completion on all wing walls / return walls complete in all respects as specified.
(7) Retaining / reinforced earth walls	0.00%	Retaining / reinforced earth walls: Payments shall be made on completion of 20% of the total area.
(8) Approaches and other ancillary works (approaches, stone pitching and protection works etc.)	0.00%	Approaches: Payments shall be made on pro rata basis on completion of a stage in all respects as specified.

Note:

- 1) In case of innovate Major Bridge Projects like cable suspension / cable stayed / extra dozed and exceptionally long span bridges, the schedule may be modified as per site requirements before bidding with due approval of DG (RD) & SS, MoRT&H.
- 2) The schedule for exclusive tunnel projects may be prepared as per site requirements before bidding with due approval of DG (RD) & SS, MoRT&H.

1.3.4 Other Works

Procedure for estimating the value of Other Works shall be as stated in table 1.3.4

Table 1.3.4

Stage of Payment	Percentage - Weightage	Payment Procedure
1	2	3
(i) Toll Plaza	0.00%	Unit of measurement is each completed toll plaza. Payment of each toll plaza shall be made on pro rata basis with respect to the total of all toll plazas.
(ii) Roadside drains		Unit of measurement is linear length in km. Payment shall be made on pro rata basis on completion of stage in a length of not less than 10% (ten per cent) of the total length.
(a) Lined Drain	30.56%	
(b) Unlined Drain	0.03%	
(iii) Road signs, safety devices, road furniture, road boundary walls etc.	4.86%	
(iv) Road markings and studs	1.44%	
(v) Interlocking paver blocks	2.34%	
(vi) Project facilities		Payment shall be made on pro rata basis for completed facilities.
(a) Bus Bays / Passenger Shelter	0.00%	
(b) Wayside amenities excluding slip roads and but including all internal roads (service areas including Truck Lay-Byes)	0.00%	
(c) others	0.00%	
(vii) Rainwater Harvesting	0.63%	
(viii) Turfing on slopes	0.04%	Payment shall be made on pro rata basis on completion of 20% of the total area.
(ix) Approaches to Structures	52.36%	
(x) Street lighting	3.06%	Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of stage in a length of not less than 10% (ten per cent) of the total length.
(xi) Utility ducts	0.00%	
(xii) Roadside plantation and median plantation including horticulture	0.00%	
(xiii) Protection works other than approaches to bridges, elevated sections, flyover / grade separators and ROBs / RUBs	0.00%	
(xiv) Junctions	4.68%	Payment shall be made on pro rata basis for completed facilities.
(xv) Safety and traffic management during construction	0.00%	Payment shall be made on pro rata basis every six months.
(xvi) Other miscellaneous works including connecting road and junction under grade separator	0.00%	Payment shall be made on pro rata basis on completion of each stage.

1.3.5 Overhead Utilities

Procedure for estimating the value of Overhead Utilities shall be as stated in table 1.3.5

Table 1.3.5

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
(i) EHT line	0.00%	Unit of measurement is as per completed activities. Cost per activity shall be determined on pro-rata basis as per its weightage with reference to total cost of EI-IT line. Payment shall be made for completed activity. (The average weightage of major activities (only for payment purpose) in shifting work is (i) Erection of Poles-20%, (ii) Conductor stringing including laying of cable-30%, (iii) DTR erection (if involved)-15% and (iv) Charging of line including dismantling and site clearance-35% (with DTR) and 50% without DTR)
(ii) EHT crossings	0.00%	Cost of each crossing shall be determined on pro-rata basis with reference to total no. of crossings. Payment shall be made for not less than 25% of the crossings subject to a minimum of 4 crossings.
(iii) HT/LT line (including Transformers if any)	89.58%	Unit of measurement is as per completed activities. Cost per activity shall be determined on pro-rata basis as per its weightage with reference to total cost of LT/HT line. Payment shall be made for completed activity. (The average weightage of major activities (only for payment purpose) in shifting work is (i) Erection of Poles-20%, (ii) Conductor stringing including laying of cable-30%, (iii) DTR erection (if involved)-10% and (iv) Charging of line including dismantling and site clearance-40% (with DTR) and 50% without DTR)
(iv) HT/LT crossings	10.42%	Cost of each crossing shall be determined on pro-rata basis with reference to total no. of crossings. Payment shall be made for not less than 25% of the crossings subject to a minimum of 10 crossings.
(v) Water pipeline	0.00%	Unit of measurement is as per completed activities. Cost per activity shall be determined on pro-rata basis as per its weightage with reference to total cost of pipe line. Payment shall be made for completed activity. (The average weightage of major activities (only for payment purpose) in shifting work is laying of pipe-50%, Charging of line including all miscellaneous works and dismantling and site clearance-50%)
(vi) Water pipeline crossings	0.00%	Cost of each crossing shall be determined on pro-rata basis with reference to total no. of crossings. Payment shall be made for not less than 25% of the crossings subject to a minimum of 8 crossings.
(vii) Sewage lines	0.00%	Unit of measurement is as per completed activities. Cost per activity shall be determined on pro-rata basis as per its weightage with reference to total cost of pipe

Stage of Payment	Percentage-Weightage	Payment Procedure
1	2	3
		line. Payment shall be made for completed activity. (The average weightage of major activities (only for payment purpose) in shifting work is laying of pipe-50%, Charging of line including all miscellaneous works and dismantling and site clearance- 50%)
(viii) Sewage line crossings	0.00%	Cost of each crossing shall be determined on pro-rata basis with reference to total no. of crossings. Payment shall be made for completed activity. (The average weightage of major activities in shifting work is laying pipe-50%, Charging of line including all miscellaneous works and dismantling and site clearance-50%)

*This is illustrative and may require modification as per scope of work.

2 Procedure for payment for Maintenance

- 2.1 The cost for maintenance shall be as stated in Clause 14.1.1.
- 2.2 Payment for Maintenance shall be made in quarterly installments in accordance with the provisions of Clause 19.7.