

CLIENT:-



NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED
(Ministry of Road Transport & Highways)

Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chuikhim-Nimbong-Kafer-Bakhim-Algarah-Rhenock in the State of West Bengal and From Rhenock-Rorathang-Pakyong along with Spur From Aritar-Relop-Menla in the State of Sikkim.

TENDER DRAWING

PACKAGE-V-B (I), PART OF KAFER TO RESHI BORDER

Near Algarah To Start of Pedong Bypass (West Bengal)

(Km 76+350 To Km 79+700)

DRAWING VOLUME:-HIGHWAY - (PLAN & PROFILE)



MARCH 2021

CONSULTANT :-

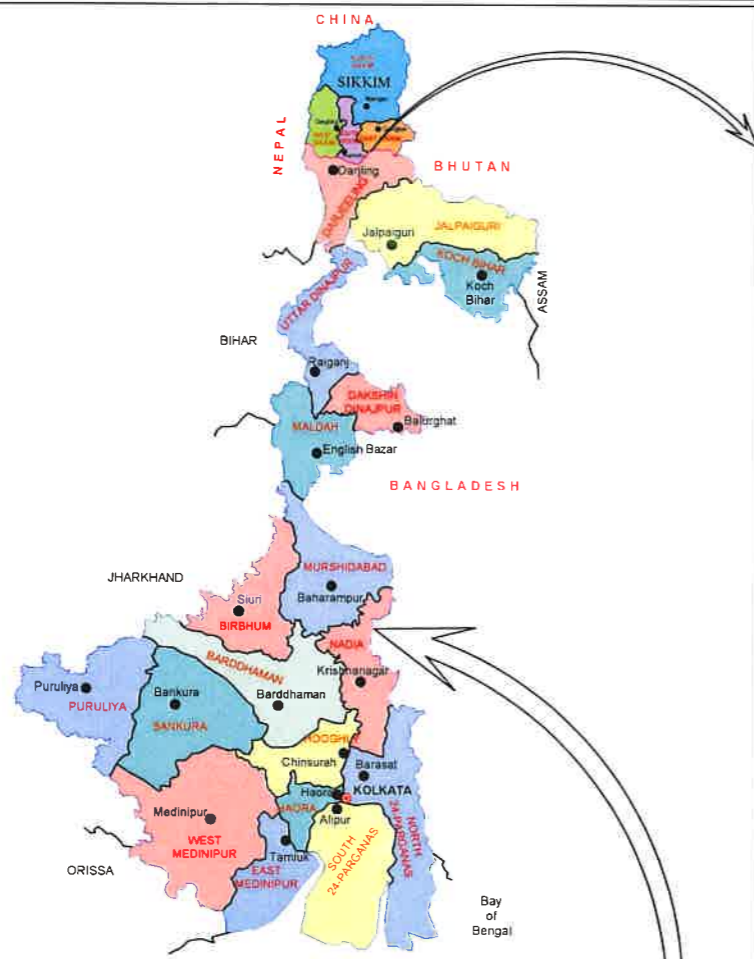


SA INFRASTRUCTURE CONSULTANTS PVT. LTD.

In Association with
Specialized Engineering Service Pvt. Ltd.
1101A, 11th Floor, Tower A-II, Corporate Park,
Plot No. 7A/1, Sector-142, Noida 201301, Uttar Pradesh.

GENERAL DRAWING





DATE: 04/03/2021 - 1:45pm
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REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
RO	Sep 2017	Final Feasibility Report	
RO	Nov 2016	Draft Feasibility Report	
RO	Dec 2014	Linear Plan	

Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED
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Near Algarah To Start of Pedong Bypass (West Bengal)

DATE : March 2021		Revision RO	
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
Vijay Gupta	Naresh	Vijay Gupta	Sanjay Shukla
SCALE:-NTS			

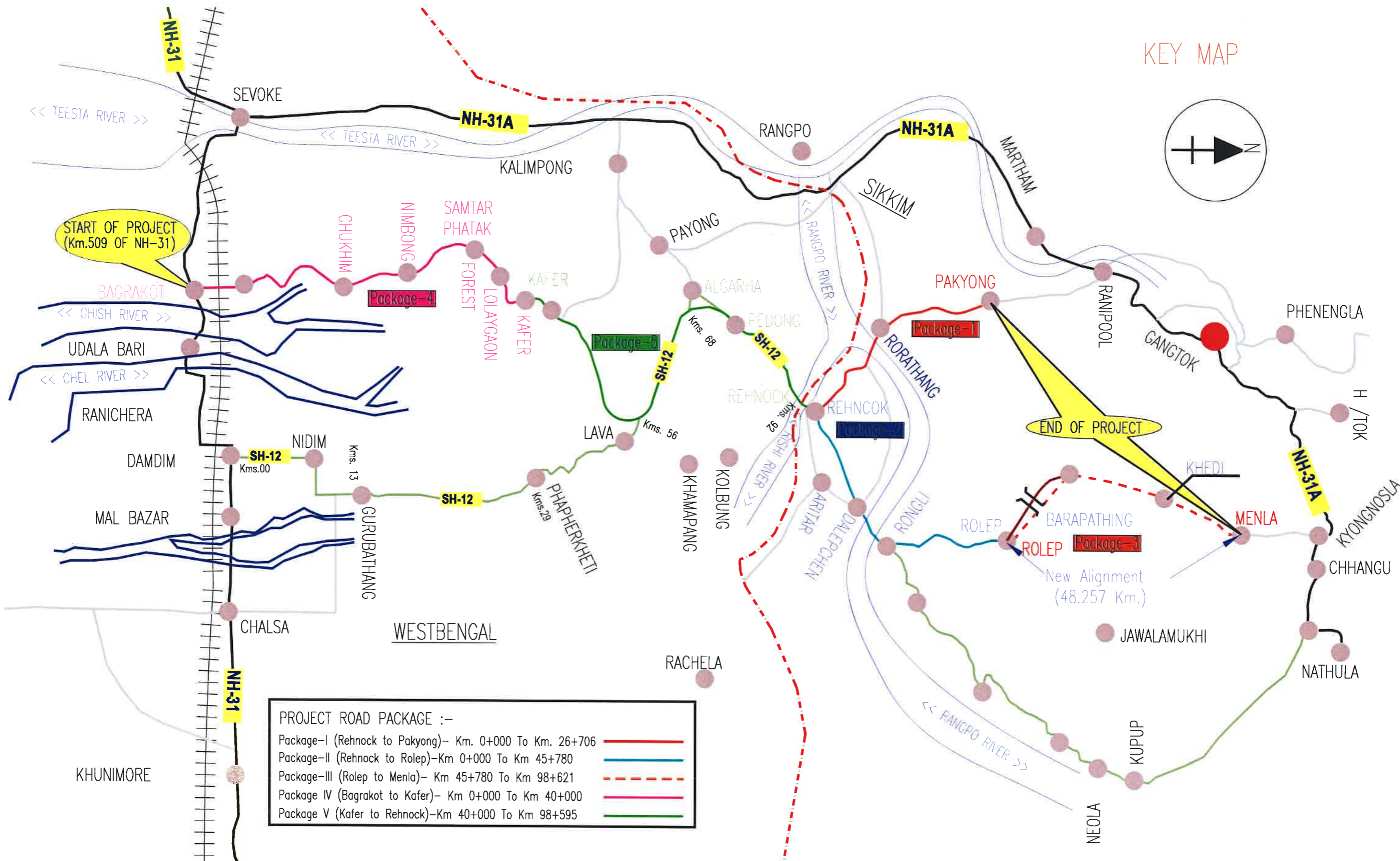
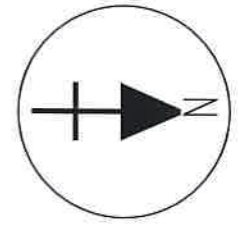
TENDER DRAWING

PACKAGE- 5
Near Algarah To Start of Pedong Bypass (West Bengal)

LOCATION MAP

Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/Gen/01

KEY MAP



PROJECT ROAD PACKAGE :-

Package-I (Rehnock to Pakyong)- Km. 0+000 To Km. 26+706	
Package-II (Rehnock to Rolep)-Km 0+000 To Km 45+780	
Package-III (Rolep to Menla)- Km 45+780 To Km 98+621	
Package IV (Bagrakot to Kafer)- Km 0+000 To Km 40+000	
Package V (Kafer to Rehnock)-Km 40+000 To Km 98+595	

DATE: 04/03/2021 - 1:42pm
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REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
R0	Sep 2017	Final Feasibility Report	
R0	Nov 2016	Draft Feasibility Report	
R0	Dec 2014	Linear Plan	

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Near Algarah To Start of Pedong Bypass (West Bengal)

DATE : March 2021	Revision R0
DESIGNED BY Vijay Gupta	DRAWN BY Naresh
CHECKED BY Vijay Gupta	APPROVED BY Sanjay Shukla
SCALE:- NTS	

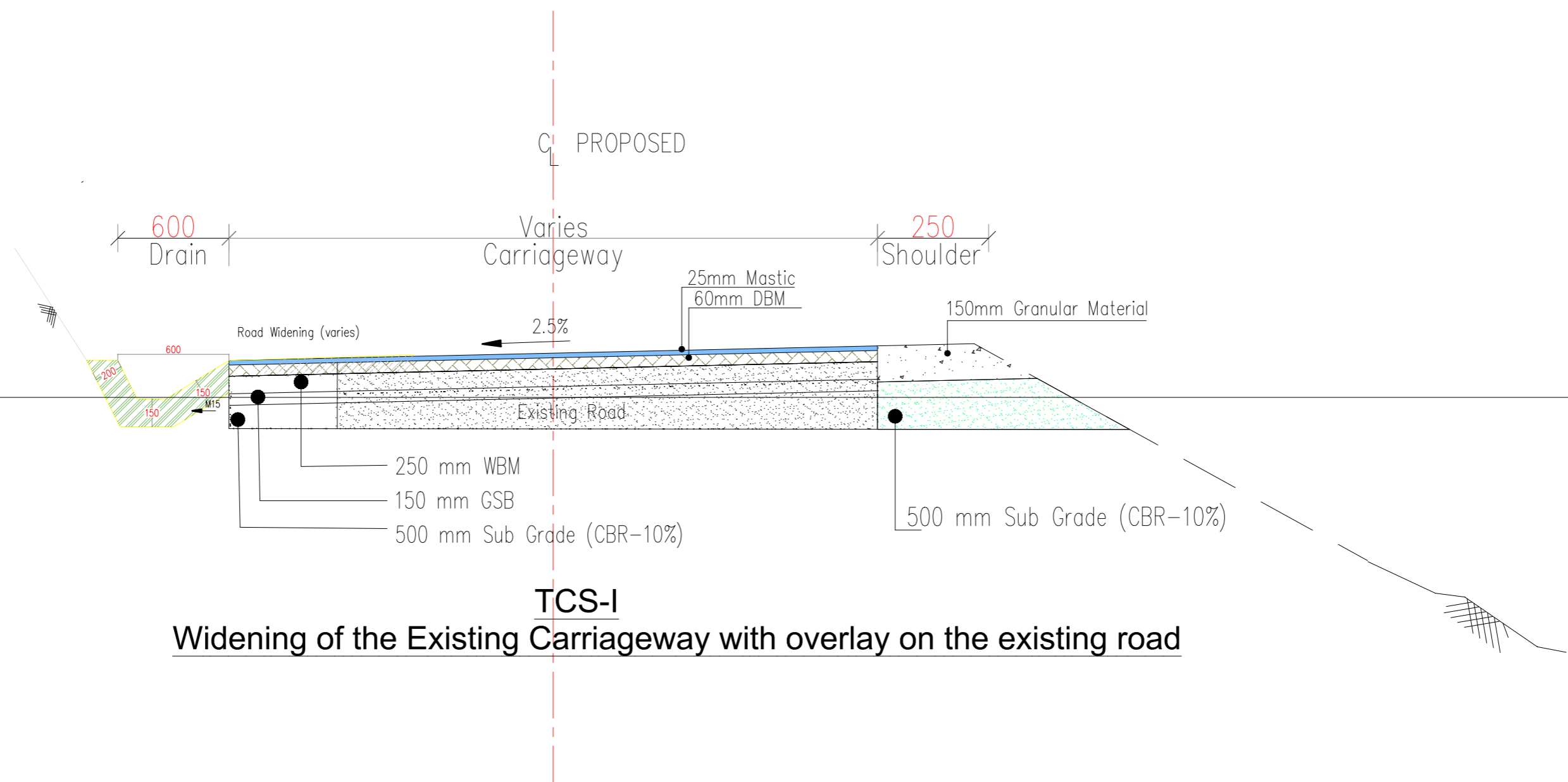
TENDER DRAWING

PACKAGE- 5
Near Algarah To Start of Pedong Bypass (West Bengal)

KEY PLAN

Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/Gen/01

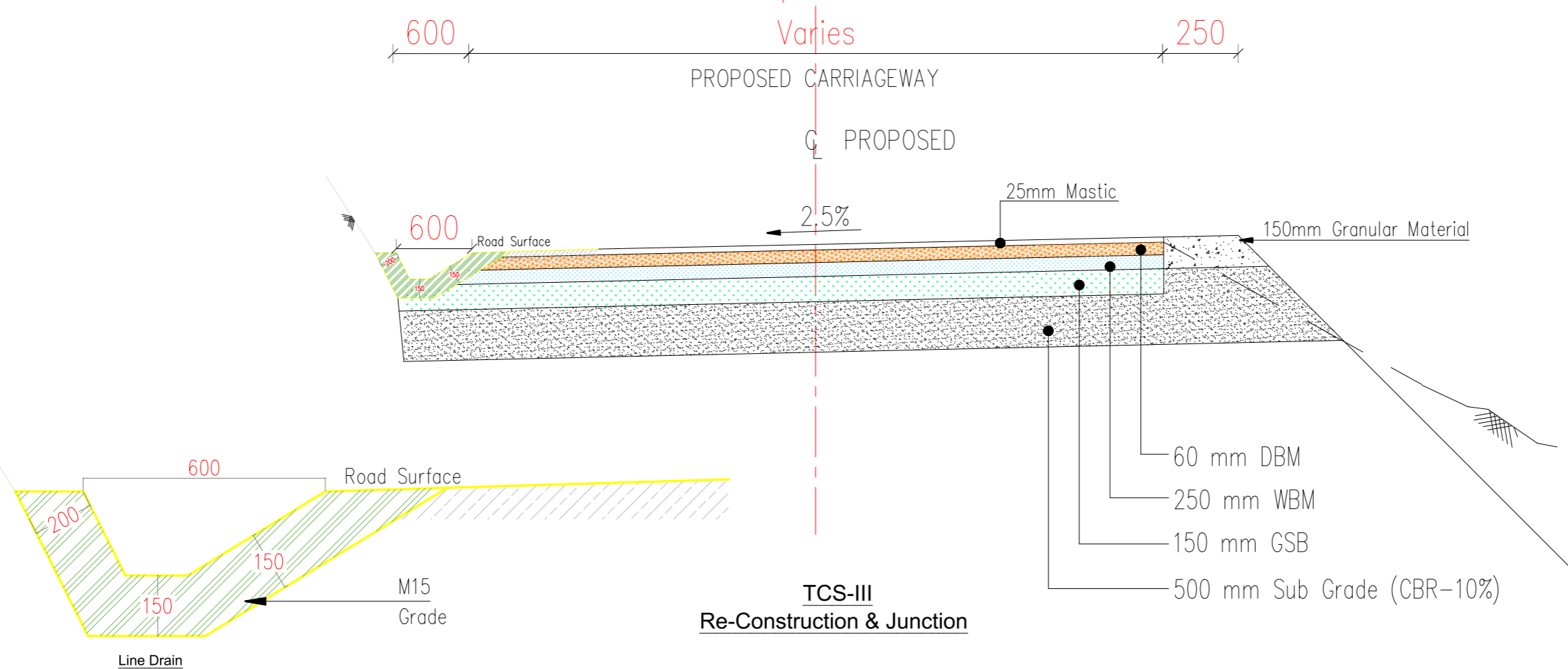
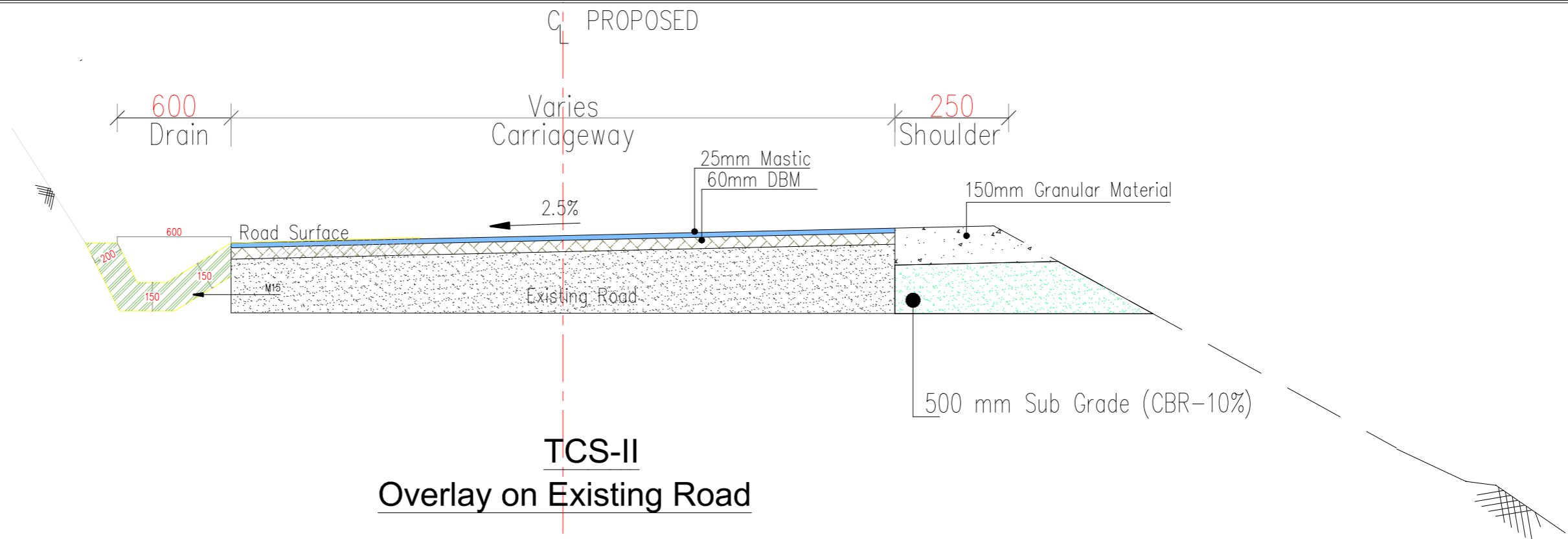
TYPICAL CROSS SECTION



TCS-I
Widening of the Existing Carriageway with overlay on the existing road

TENDER DRAWING

Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (Ministry of Road Transport & Highways)		Project : Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chuikhim-Nimbong-Kafer-Bakhim-Algarah-Rhenock in the State of West Bengal and From Rhenock-Rorathang-Pakyong along with pur From Aritar-Relop-Menla in the State of Sikkim.		DATE : Dec 2020	Revision : R0	PACKAGE-5 Near Algarah To Start of Pedong Bypass (West Bengal) TYPICAL CROSS SECTION	
Consultant : SA INFRASTRUCTURE CONSULTANTS PVT. LTD. <small>In Association with Specialized Engineering Service Pvt. Ltd. 1101A, 11th Floor, Tower A-II, Corporate Park, Plot No. 7A/1, Sector-142, Noida 201301, Uttar Pradesh.</small>		DESIGNED BY : Vijay Gupta	DRAWN BY : Naresh	CHECKED BY : Vijay Gupta	APPROVED BY : Sanjay Shukla	Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/TCS/ 1	
REV R0 R0 R0	DATE Sep 2017 Nov 2016 Dec 2014	DESCRIPTION OF REVISIONS Final Feasibility Report Draft Feasibility Report Linear Plan	INITIALS	SCALE: -NTS			



TENDER DRAWING

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DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
Vijay Gupta	Naresh	Vijay Gupta	Sanjay Shukla

DATE : Dec 2020
Revision: RO
SCALE: -NTS

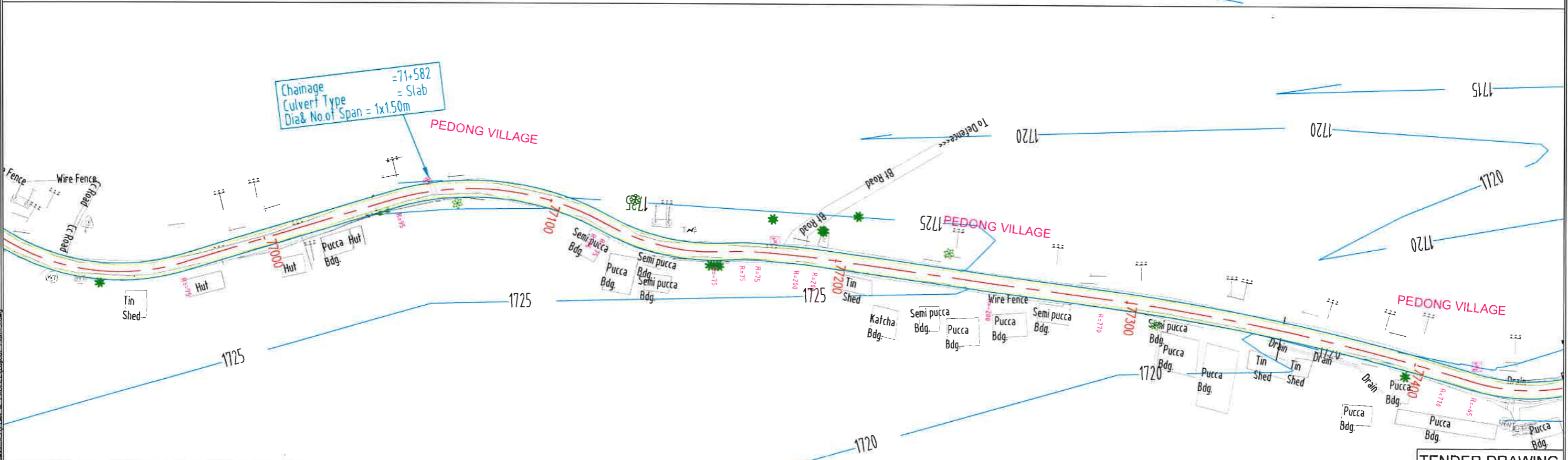
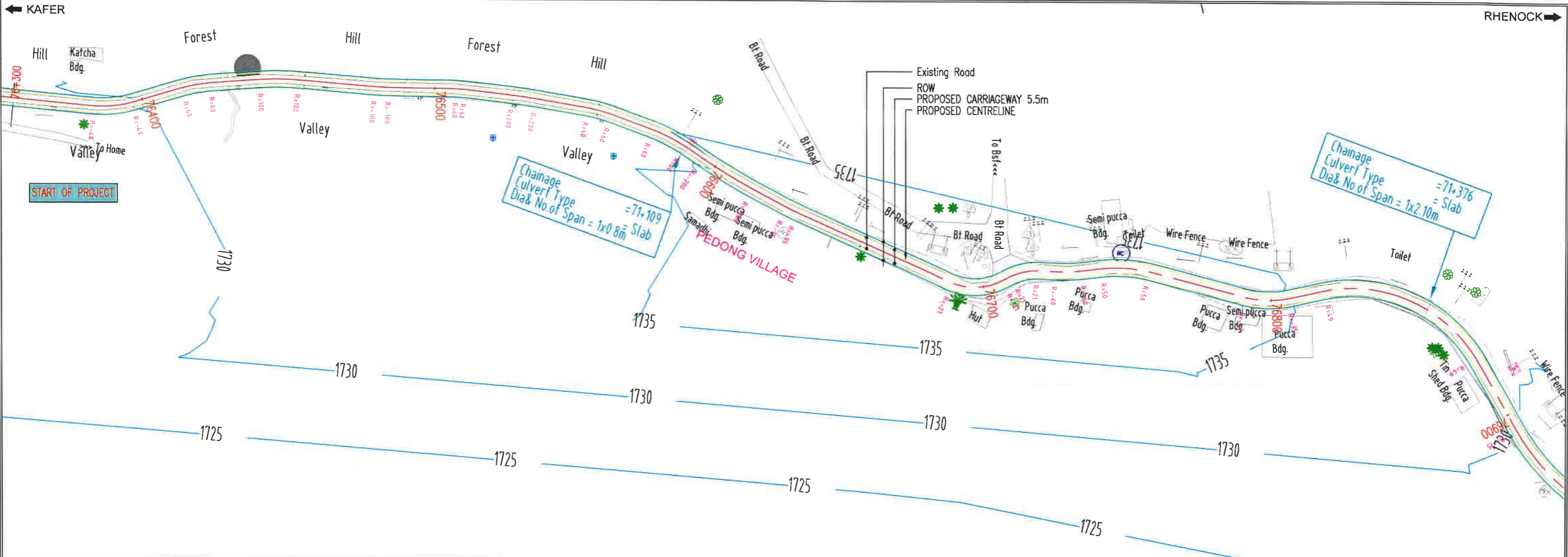
PACKAGE- 5

Near Algarah To Start of Pedong Bypass (West Bengal)

TYPICAL CROSS SECTION

Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/TCS/ 1

PLAN & PROFILE



DATE: 04/03/2021 1:50 PM
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Near Algarah To Start of Pedong Bypass (West Bengal)

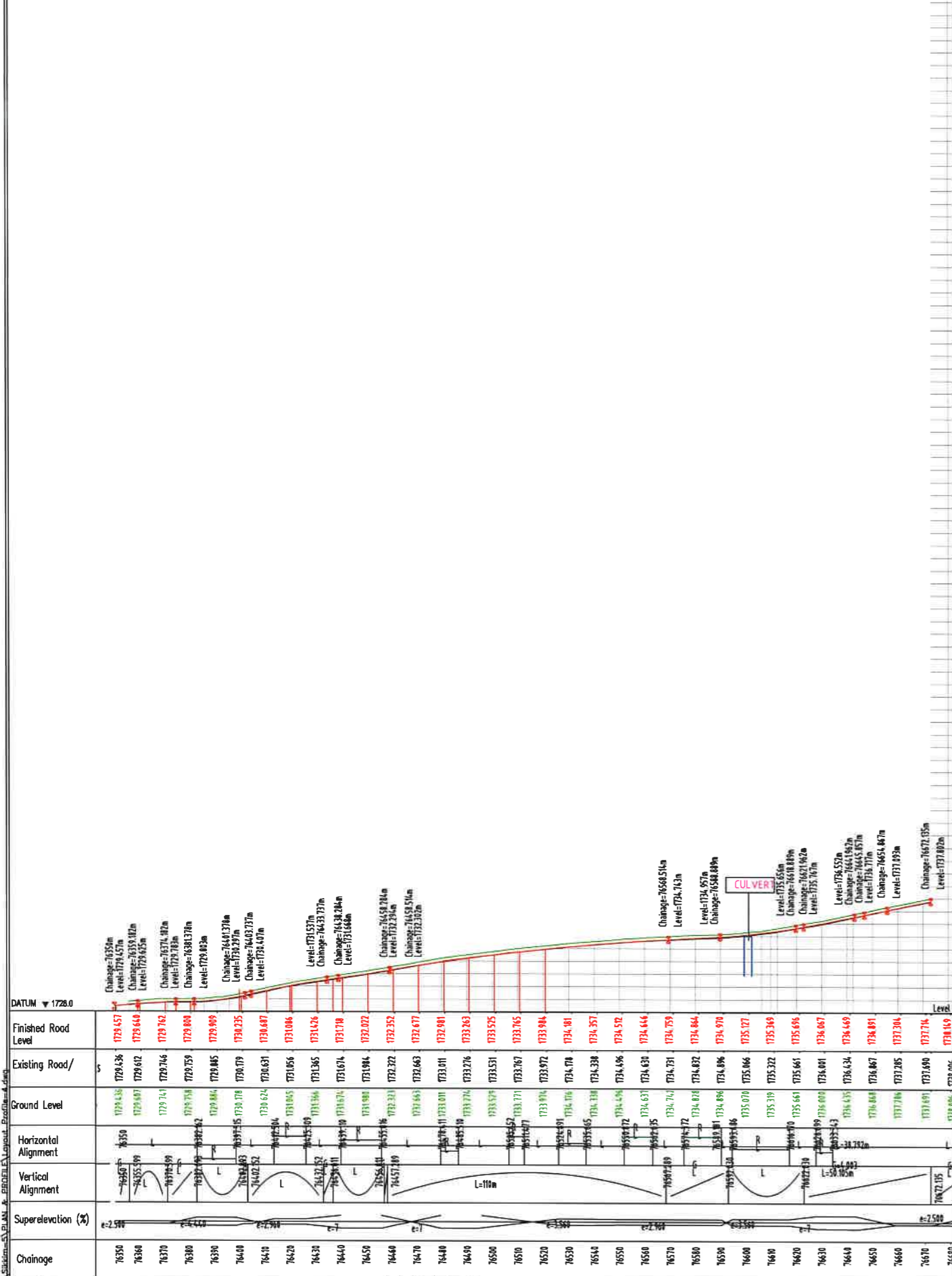
DATE : March 2021	Revision	RO
DESIGNED BY	DRAWN BY	CHECKED BY
Vijay Gupta	Naresh	Vijay Gupta
		Sanjay Shukla
SCALE:-	H-1:750, V-1:100, For A3 Paper Size	

TENDER DRAWING

PACKAGE- 5B (I)
 Near Algarah To Start of Pedong Bypass (West Bengal)
 PLAN & PROFILE
 (PLAN - Km 76+350 To Km 77+400)

Dwg. No. :- SAICPL-SESPL/NHDCL/WB-SKM/P&P/01

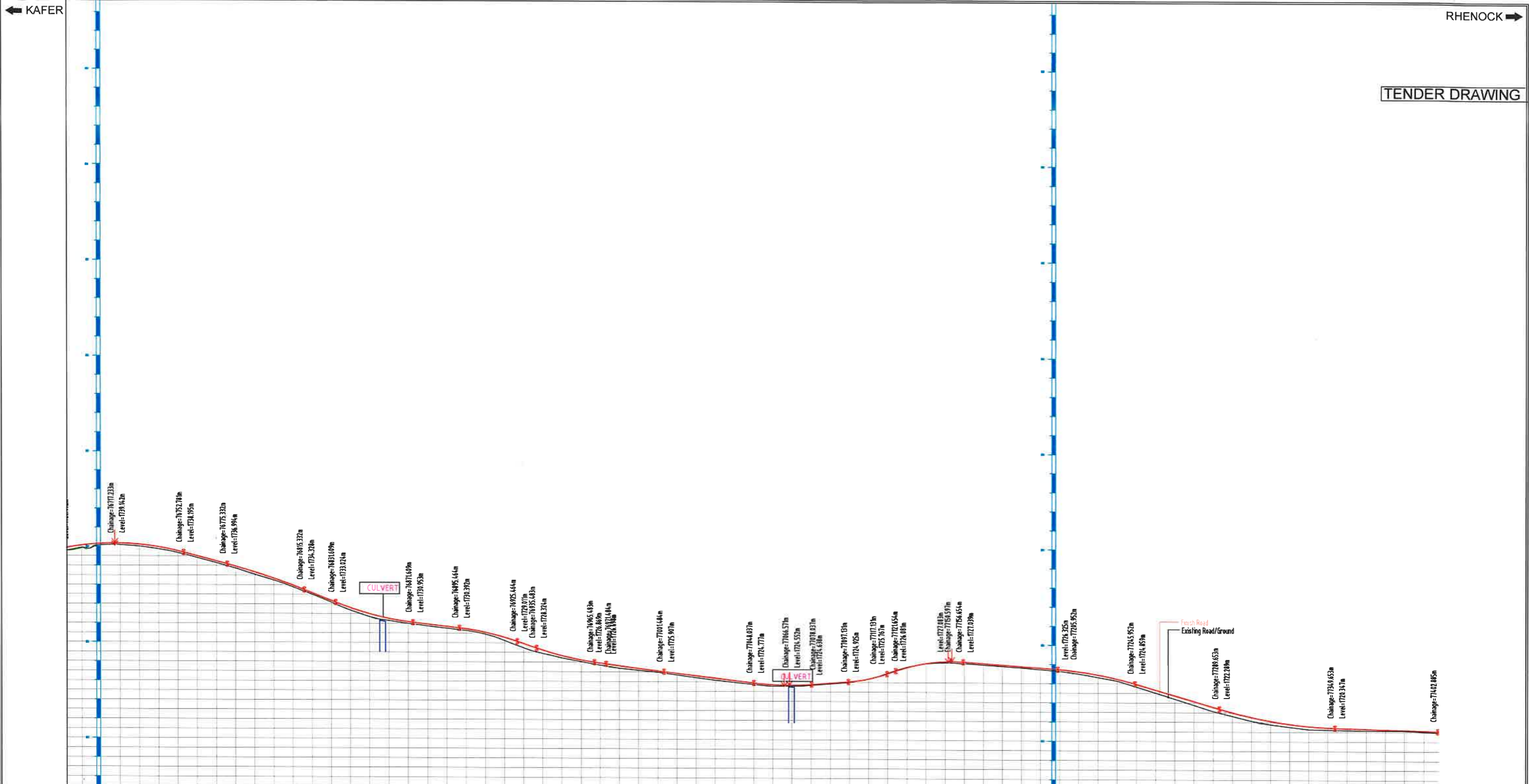
TENDER DRAWING



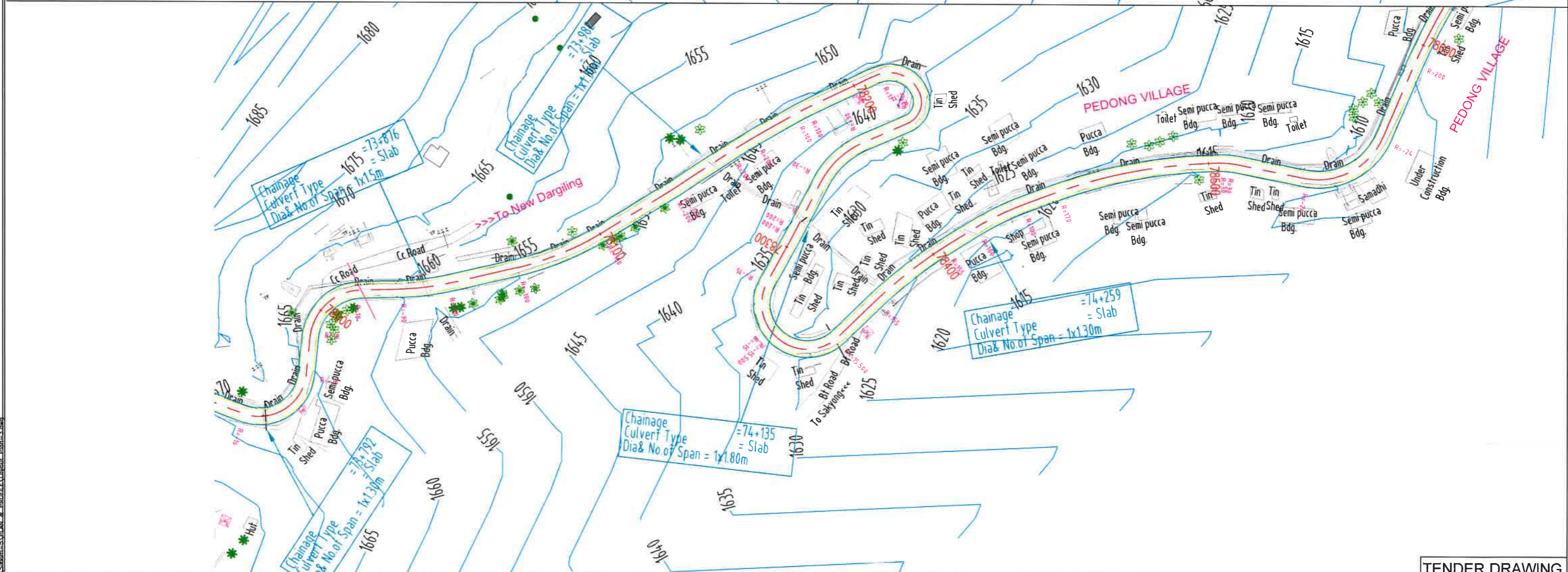
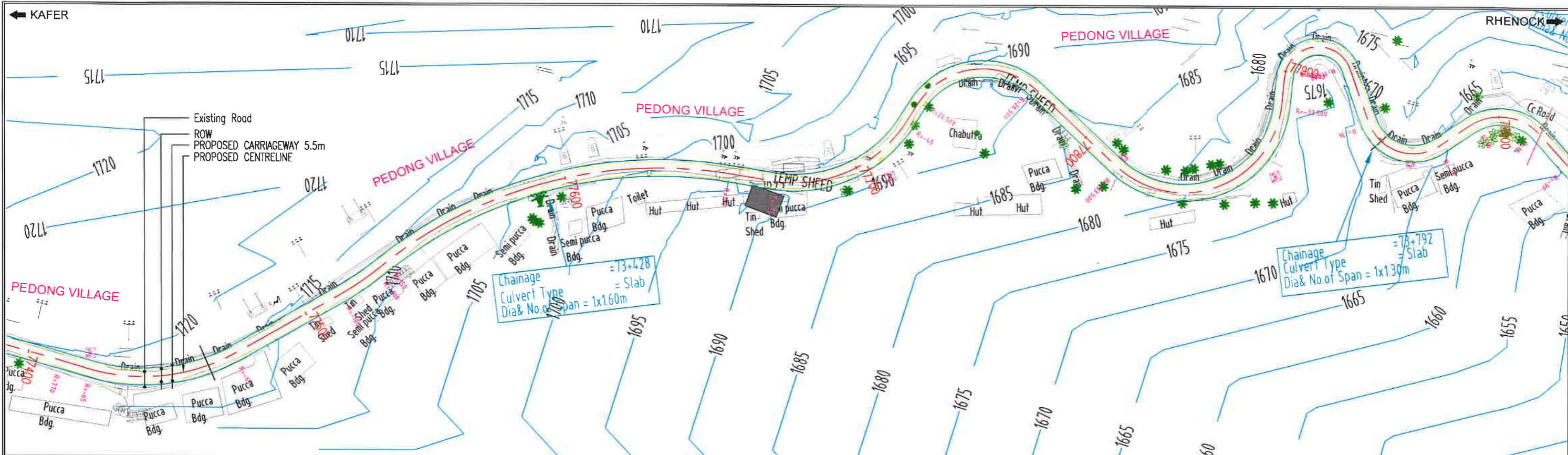
← KAIFER

RHENOCK →

TENDER DRAWING



ATUM	1714.0
Finished Road Level	7138.920, 7139.983, 7139.916, 7139.820, 7138.754, 7138.338, 7137.811, 7137.278, 7136.738, 7136.161, 7135.577, 7134.985, 7134.386, 7133.781, 7133.169, 7132.551, 7131.928, 7131.299, 7130.664, 7130.023, 7129.376, 7128.723, 7128.065, 7127.402, 7126.734, 7126.061, 7125.383, 7124.705, 7124.022, 7123.335, 7122.643, 7121.946, 7121.244, 7120.537, 7119.825, 7119.108, 7118.386, 7117.659, 7116.927, 7116.190, 7115.448, 7114.701, 7113.949, 7113.192, 7112.430, 7111.663, 7110.891, 7110.114, 7109.342, 7108.560, 7107.768, 7106.966, 7106.154, 7105.332, 7104.500, 7103.658, 7102.806, 7101.954, 7101.092, 7100.230, 7099.368, 7098.506, 7097.644, 7096.782, 7095.920, 7095.058, 7094.196, 7093.334, 7092.472, 7091.610, 7090.748, 7089.886, 7089.024, 7088.162, 7087.300, 7086.438, 7085.576, 7084.714, 7083.852, 7082.990, 7082.128, 7081.266, 7080.404, 7079.542, 7078.680, 7077.818, 7076.956, 7076.094, 7075.232, 7074.370, 7073.508, 7072.646, 7071.784, 7070.922, 7070.060, 7069.198, 7068.336, 7067.474, 7066.612, 7065.750, 7064.888, 7064.026, 7063.164, 7062.302, 7061.440, 7060.578, 7059.716, 7058.854, 7057.992, 7057.130, 7056.268, 7055.406, 7054.544, 7053.682, 7052.820, 7051.958, 7051.096, 7050.234, 7049.372, 7048.510, 7047.648, 7046.786, 7045.924, 7045.062, 7044.200, 7043.338, 7042.476, 7041.614, 7040.752, 7039.890, 7039.028, 7038.166, 7037.304, 7036.442, 7035.580, 7034.718, 7033.856, 7032.994, 7032.132, 7031.270, 7030.408, 7029.546, 7028.684, 7027.822, 7026.960, 7026.098, 7025.236, 7024.374, 7023.512, 7022.650, 7021.788, 7020.926, 7020.064, 7019.202, 7018.340, 7017.478, 7016.616, 7015.754, 7014.892, 7014.030, 7013.168, 7012.306, 7011.444, 7010.582, 7009.720, 7008.858, 7007.996, 7007.134, 7006.272, 7005.410, 7004.548, 7003.686, 7002.824, 7001.962, 7001.100, 7000.238, 6999.376, 6998.514, 6997.652, 6996.790, 6995.928, 6995.066, 6994.204, 6993.342, 6992.480, 6991.618, 6990.756, 6989.894, 6989.032, 6988.170, 6987.308, 6986.446, 6985.584, 6984.722, 6983.860, 6982.998, 6982.136, 6981.274, 6980.412, 6979.550, 6978.688, 6977.826, 6976.964, 6976.102, 6975.240, 6974.378, 6973.516, 6972.654, 6971.792, 6970.930, 6970.068, 6969.206, 6968.344, 6967.482, 6966.620, 6965.758, 6964.896, 6964.034, 6963.172, 6962.310, 6961.448, 6960.586, 6959.724, 6958.862, 6958.000, 6957.138, 6956.276, 6955.414, 6954.552, 6953.690, 6952.828, 6951.966, 6951.104, 6950.242, 6949.380, 6948.518, 6947.656, 6946.794, 6945.932, 6945.070, 6944.208, 6943.346, 6942.484, 6941.622, 6940.760, 6939.898, 6939.036, 6938.174, 6937.312, 6936.450, 6935.588, 6934.726, 6933.864, 6933.002, 6932.140, 6931.278, 6930.416, 6929.554, 6928.692, 6927.830, 6926.968, 6926.106, 6925.244, 6924.382, 6923.520, 6922.658, 6921.796, 6920.934, 6920.072, 6919.210, 6918.348, 6917.486, 6916.624, 6915.762, 6914.900, 6914.038, 6913.176, 6912.314, 6911.452, 6910.590, 6909.728, 6908.866, 6908.004, 6907.142, 6906.280, 6905.418, 6904.556, 6903.694, 6902.832, 6901.970, 6901.108, 6900.246, 6899.384, 6898.522, 6897.660, 6896.798, 6895.936, 6895.074, 6894.212, 6893.350, 6892.488, 6891.626, 6890.764, 6889.902, 6889.040, 6888.178, 6887.316, 6886.454, 6885.592, 6884.730, 6883.868, 6883.006, 6882.144, 6881.282, 6880.420, 6879.558, 6878.696, 6877.834, 6876.972, 6876.110, 6875.248, 6874.386, 6873.524, 6872.662, 6871.800, 6870.938, 6870.076, 6869.214, 6868.352, 6867.490, 6866.628, 6865.766, 6864.904, 6864.042, 6863.180, 6862.318, 6861.456, 6860.594, 6859.732, 6858.870, 6858.008, 6857.146, 6856.284, 6855.422, 6854.560, 6853.698, 6852.836, 6851.974, 6851.112, 6850.250, 6849.388, 6848.526, 6847.664, 6846.802, 6845.940, 6845.078, 6844.216, 6843.354, 6842.492, 6841.630, 6840.768, 6839.906, 6839.044, 6838.182, 6837.320, 6836.458, 6835.596, 6834.734, 6833.872, 6833.010, 6832.148, 6831.286, 6830.424, 6829.562, 6828.700, 6827.838, 6826.976, 6826.114, 6825.252, 6824.390, 6823.528, 6822.666, 6821.804, 6820.942, 6820.080, 6819.218, 6818.356, 6817.494, 6816.632, 6815.770, 6814.908, 6814.046, 6813.184, 6812.322, 6811.460, 6810.598, 6809.736, 6808.874, 6808.012, 6807.150, 6806.288, 6805.426, 6804.564, 6803.702, 6802.840, 6801.978, 6801.116, 6800.254, 6799.392, 6798.530, 6797.668, 6796.806, 6795.944, 6795.082, 6794.220, 6793.358, 6792.496, 6791.634, 6790.772, 6789.910, 6789.048, 6788.186, 6787.324, 6786.462, 6785.600, 6784.738, 6783.876, 6783.014, 6782.152, 6781.290, 6780.428, 6779.566, 6778.704, 6777.842, 6776.980, 6776.118, 6775.256, 6774.394, 6773.532, 6772.670, 6771.808, 6770.946, 6770.084, 6769.222, 6768.360, 6767.498, 6766.636, 6765.774, 6764.912, 6764.050, 6763.188, 6762.326, 6761.464, 6760.602, 6759.740, 6758.878, 6758.016, 6757.154, 6756.292, 6755.430, 6754.568, 6753.706, 6752.844, 6751.982, 6751.120, 6750.258, 6749.396, 6748.534, 6747.672, 6746.810, 6745.948, 6745.086, 6744.224, 6743.362, 6742.500, 6741.638, 6740.776, 6739.914, 6739.052, 6738.190, 6737.328, 6736.466, 6735.604, 6734.742, 6733.880, 6733.018, 6732.156, 6731.294, 6730.432, 6729.570, 6728.708, 6727.846, 6726.984, 6726.122, 6725.260, 6724.398, 6723.536, 6722.674, 6721.812, 6720.950, 6720.088, 6719.226, 6718.364, 6717.502, 6716.640, 6715.778, 6714.916, 6714.054, 6713.192, 6712.330, 6711.468, 6710.606, 6709.744, 6708.882, 6708.020, 6707.158, 6706.296, 6705.434, 6704.572, 6703.710, 6702.848, 6701.986, 6701.124, 6700.262, 6699.400, 6698.538, 6697.676, 6696.814, 6695.952, 6695.090, 6694.228, 6693.366, 6692.504, 6691.642, 6690.780, 6689.918, 6689.056, 6688.194, 6687.332, 6686.470, 6685.608, 6684.746, 6683.884, 6683.022, 6682.160, 6681.298, 6680.436, 6679.574, 6678.712, 6677.850, 6676.988, 6676.126, 6675.264, 6674.402, 6673.540, 6672.678, 6671.816, 6670.954, 6670.092, 6669.230, 6668.368, 6667.506, 6666.644, 6665.782, 6664.920, 6664.058, 6663.196, 6662.334, 6661.472, 6660.610, 6659.748, 6658.886, 6658.024, 6657.162, 6656.300, 6655.438, 6654.576, 6653.714, 6652.852, 6651.990, 6651.128, 6650.266, 6649.404, 6648.542, 6647.680, 6646.818, 6645.956, 6645.094, 6644.232, 6643.370, 6642.508, 6641.646, 6640.784, 6639.922, 6639.060, 6638.198, 6637.336, 6636.474, 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6376.999, 6376.137, 6375.275, 6374.413, 6373.551, 6372.689, 6371.827, 6370.965, 6370.103, 6369.241, 6368.379, 6367.517, 6366.655, 6365.793, 6364.931, 6364.069, 6363.207, 6362.345, 6361.483, 6360.621, 6359.759, 6358.897, 6358.035, 6357.173, 6356.311, 6355.449, 6354.587, 6353.725, 6352.863, 6351.999, 6351.137, 6350.275, 6349.413, 6348.551, 6347.689, 6346.827, 6345.965, 6345.103, 6344.241, 6343.379, 6342.517, 6341.655, 6340.793, 6339.931, 6339.069, 6338.207, 6337.345, 6336.483, 6335.621, 6334.759, 6333.897, 6333.035, 6332.173, 6331.311, 6330.449, 6329.587, 6328.725, 6327.863, 6326.999, 6326.137, 6325.275, 6324.413, 6323.551, 6322.689, 6321.827, 6320.965, 6320.103, 6319.241, 6318.379, 6317.517, 6316.655, 6315.793, 6314.931, 6314.069, 6313.207, 6312.345, 6311.483, 6310.621, 6309.759, 6308.897, 6308.035, 6307.173, 6306.311, 6305.449, 6304.587, 6303.725, 6302.863, 6301.999, 6301.137, 6300.275, 6299.413, 6298.551, 6297.689, 6296.827, 6295.965, 6295.103, 6294.241, 6293.379, 6292.517, 6291.655, 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6118.379, 6117.517, 6116.655, 6115.793, 6114.931, 6114.069, 6113.207, 6112.345, 6111.483, 6110



DATE: 04/03/2021 - 5:00pm
PATH: E:\G.D\Draws\2021\Shikim-5\PLAN & PROFILE\Layout\Plan-3.dwg

REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
RO	Sep 2017	Final Feasibility Report	
RO	Nov 2016	Draft Feasibility Report	
RO	Dec 2014	Linear Plan	

Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED
(Ministry of Road Transport & Highways)

Consultant : SA INFRASTRUCTURE CONSULTANTS PVT. LTD.
Specialized Engineering Service Pvt. Ltd.
1101A, 11th Floor, Tower A-II, Corporate Park,
Plot No. 7A/1, Sector-142,
Noida 201301, Uttar Pradesh.

Project : Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chuikhim-Nimlong-Kafer-Bakim-Algarah-Rhenock in the State of West Bengal and From Rhenock-Rorathang-Pakyong along with Spur From Antar-Relop-Menta in the State of Sikkim.

Near Algarah To Start of Pedong Bypass (West Bengal)

DATE : March 2021	Revision	RO
DESIGNED BY	DRAWN BY	CHECKED BY
Vijay Gupta	Naresh	Vijay Gupta
		Sanjay Shukla
SCALE:-	H-1:750, V-1:100,) For A3 Paper Size	

TENDER DRAWING

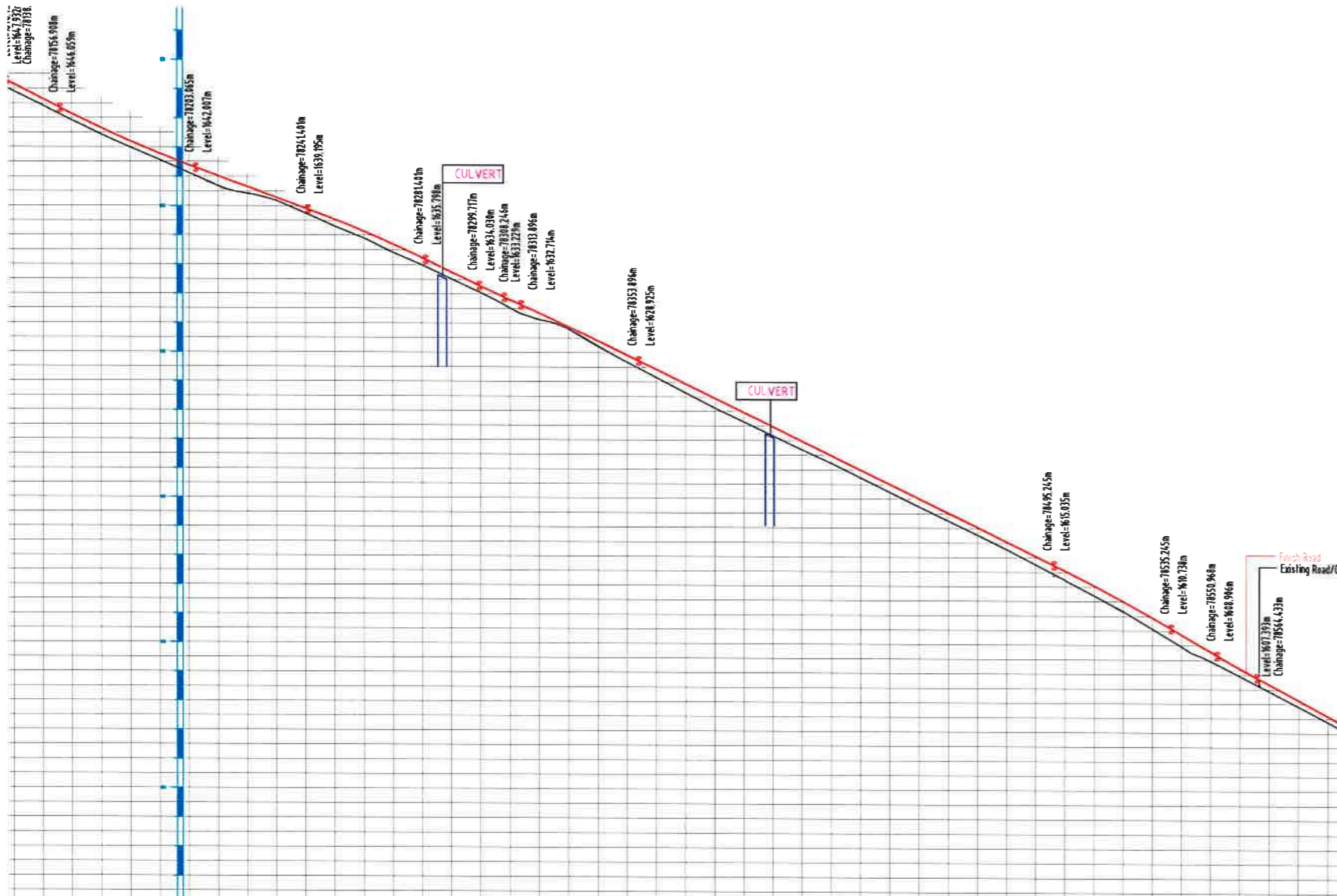
PACKAGE- 5B (I)
Near Algarah To Start of Pedong Bypass (West Bengal)
PLAN & PROFILE
(PLAN - Km 77+400 To Km 78+600)

Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/P&P/02

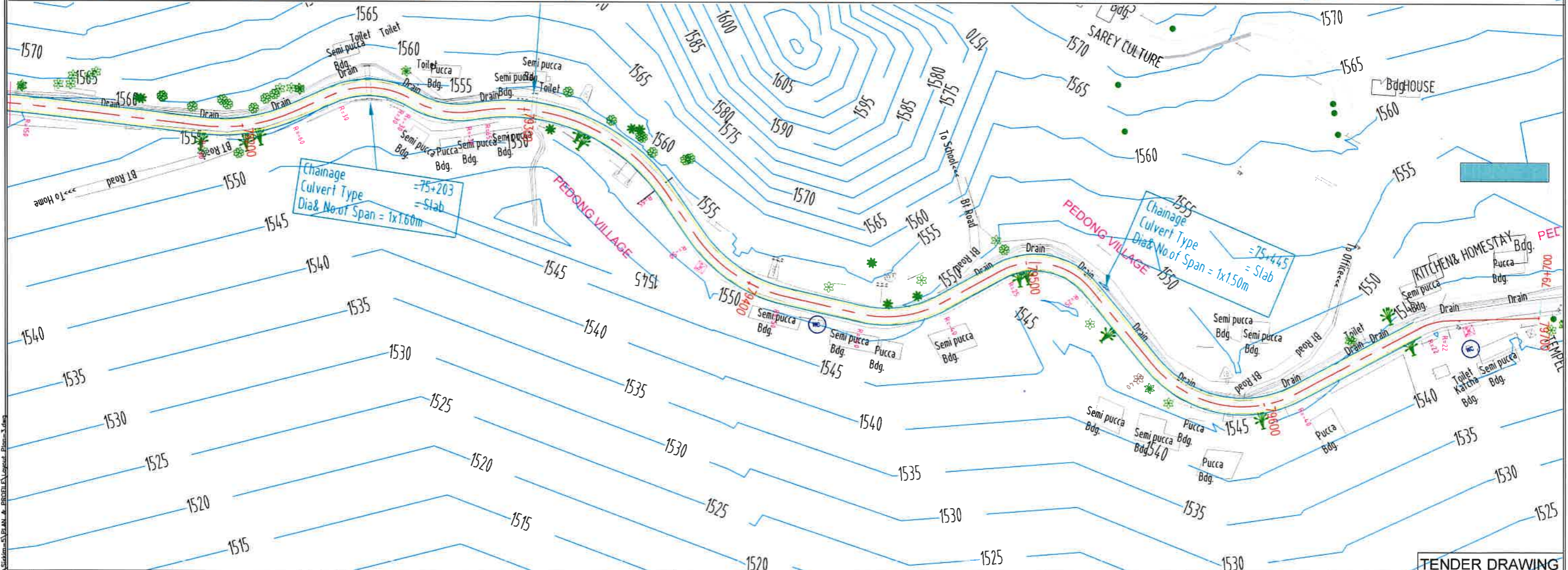
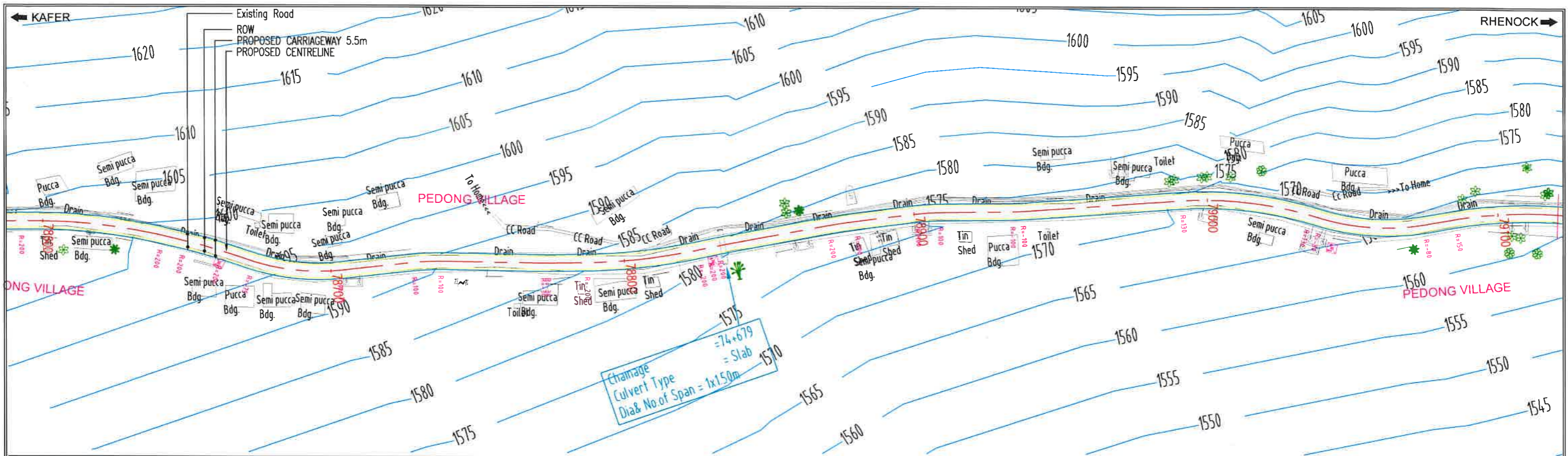
← KAFER

RHENOCK →

TENDER DRAWING



DATUM	1992.0
Finished Road Level	1646.765, 1645.744, 1644.774, 1643.865, 1642.235, 1641.648, 1640.785, 1640.031, 1639.294, 1638.563, 1637.731, 1636.860, 1635.932, 1634.968, 1633.974, 1632.952, 1628.306, 1628.325, 1627.342, 1626.360, 1625.377, 1624.394, 1623.412, 1622.429, 1621.446, 1620.464, 1619.481, 1618.498, 1617.516, 1616.533, 1615.550, 1614.562, 1613.575, 1612.582, 1611.583, 1610.584, 1609.585, 1608.586, 1607.587, 1606.588, 1605.589, 1604.590, 1603.591, 1602.592, 1601.593, 1600.594, 1599.595, 1598.596, 1597.597, 1596.598, 1595.599, 1594.600, 1593.601, 1592.602, 1591.603, 1590.604, 1589.605, 1588.606, 1587.607, 1586.608, 1585.609, 1584.610, 1583.611, 1582.612, 1581.613, 1580.614, 1579.615, 1578.616, 1577.617, 1576.618, 1575.619, 1574.620, 1573.621, 1572.622, 1571.623, 1570.624, 1569.625, 1568.626, 1567.627, 1566.628, 1565.629, 1564.630, 1563.631, 1562.632, 1561.633, 1560.634, 1559.635, 1558.636, 1557.637, 1556.638, 1555.639, 1554.640, 1553.641, 1552.642, 1551.643, 1550.644, 1549.645, 1548.646, 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1347.847, 1346.848, 1345.849, 1344.850, 1343.851, 1342.852, 1341.853, 1340.854, 1339.855, 1338.856, 1337.857, 1336.858, 1335.859, 1334.860, 1333.861, 1332.862, 1331.863, 1330.864, 1329.865, 1328.866, 1327.867, 1326.868, 1325.869, 1324.870, 1323.871, 1322.872, 1321.873, 1320.874, 1319.875, 1318.876, 1317.877, 1316.878, 1315.879, 1314.880, 1313.881, 1312.882, 1311.883, 1310.884, 1309.885, 1308.886, 1307.887, 1306.888, 1305.889, 1304.890, 1303.891, 1302.892, 1301.893, 1300.894, 1299.895, 1298.896, 1297.897, 1296.898, 1295.899, 1294.900, 1293.901, 1292.902, 1291.903, 1290.904, 1289.905, 1288.906, 1287.907, 1286.908, 1285.909, 1284.910, 1283.911, 1282.912, 1281.913, 1280.914, 1279.915, 1278.916, 1277.917, 1276.918, 1275.919, 1274.920, 1273.921, 1272.922, 1271.923, 1270.924, 1269.925, 1268.926, 1267.927, 1266.928, 1265.929, 1264.930, 1263.931, 1262.932, 1261.933, 1260.934, 1259.935, 1258.936, 1257.937, 1256.938, 1255.939, 1254.940, 1253.941, 1252.942, 1251.943, 1250.944, 1249.945, 1248.946, 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REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
RO	Sep 2017	Final Feasibility Report	
RO	Nov 2016	Draft Feasibility Report	
RO	Dec 2014	Linear Plan	

Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED
 (Ministry of Road Transport & Highways)

Consultant : SA INFRASTRUCTURE CONSULTANTS PVT. LTD.
 Specialized Engineering Service Pvt. Ltd.
 1101A, 11th Floor, Tower A-II, Corporate Park,
 Plot No. 7A/1, Sector-142,
 Noida 201301, Uttar Pradesh.

Project : Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chukhim-Nimbong-Kafer-Bakhim-Algarah-Rhenock in the State of West Bengal and From Rhenock-Rorahang-Pakyong along with Spur From Aritar-Retop-Menia in the State of Sikkim.
 Near Algarah To Start of Pedong Bypass (West Bengal)

DATE : March 2021	Revision	RO
DESIGNED BY	DRAWN BY	CHECKED BY
Vijay Gupta	Naresh	Vijay Gupta
SCALE:-		APPROVED BY
H-1:750, V-1:100,) For A3 Paper Size		Sanjay Shukla

TENDER DRAWING

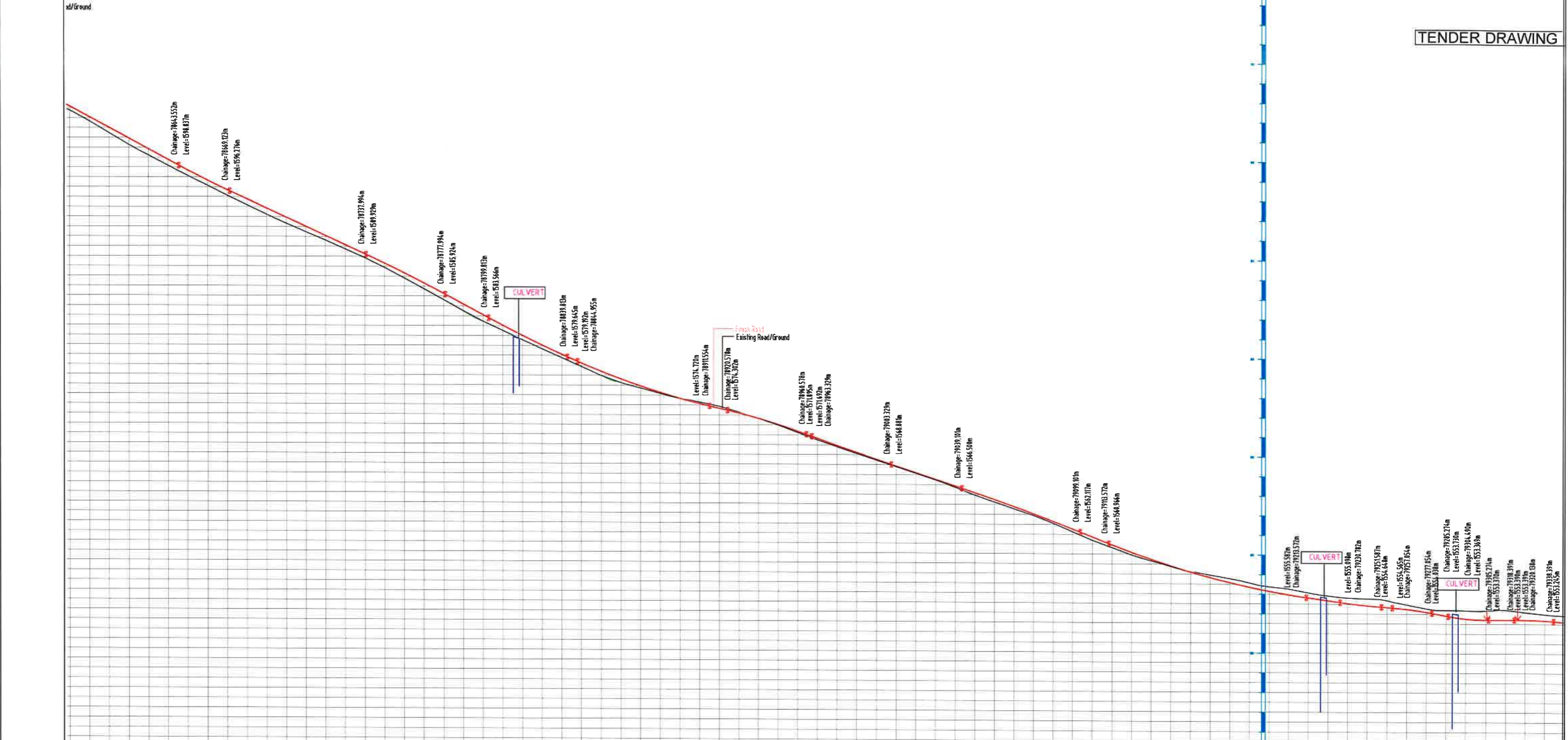
PACKAGE- 5B (I)
 Near Algarah To Start of Pedong Bypass (West Bengal)
 PLAN & PROFILE
 (PLAN - Km 78+600 To Km 79+700)

Dwg. No. :- SAICPL-S&SPL/NHDCL/WB-SKM/P&P/03

← KAIFER

RHENOCK →

TENDER DRAWING



DATUM	1538.0	
Finished Road Level	803.347	853.296
Existing Road/	803.704	853.704
Ground Level	802.592	852.600
Horizontal Alignment	1:1000	1:1000
Vertical Alignment	1:1000	1:1000
Superelevation (%)	5.500	5.500
Chainage	7800	7958

DATE: 04/03/2021 - 2:44 pm

REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
R0	Sep 2017	Final Feasibility Report	
R0	Nov 2016	Draft Feasibility Report	
R0	Dec 2014	Linear Plan	

Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (Ministry of Road Transport & Highways)

Consultant : SA INFRASTRUCTURE CONSULTANTS PVT. LTD. Specialized Engineering Service Pvt. Ltd. 1101A, 11th Floor, Tower A-II, Corporate Park, Plot No. 7A/1, Sector-142, Noida 201301, Uttar Pradesh.

Project : Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chuikhim-Nimbong-Kafer-Bakhim-Algarah-Rhenock in the State of West Bengal and From Rhenock-Rorahang-Pakyong along with Spur From Arilar-Relop-Menia in the State of Sikkim.

Near Algarah To Start of Pedong Bypass (West Bengal)

DATE :	March 2021	Revision	R0
DESIGNED BY	VIEW GUPTA	CHECKED BY	VIEW GUPTA
DRAWN BY	Naresh	APPROVED BY	Sanjay Shukla
SCALE:--	H-1:2000, V-1:100, For A3 Paper Size		

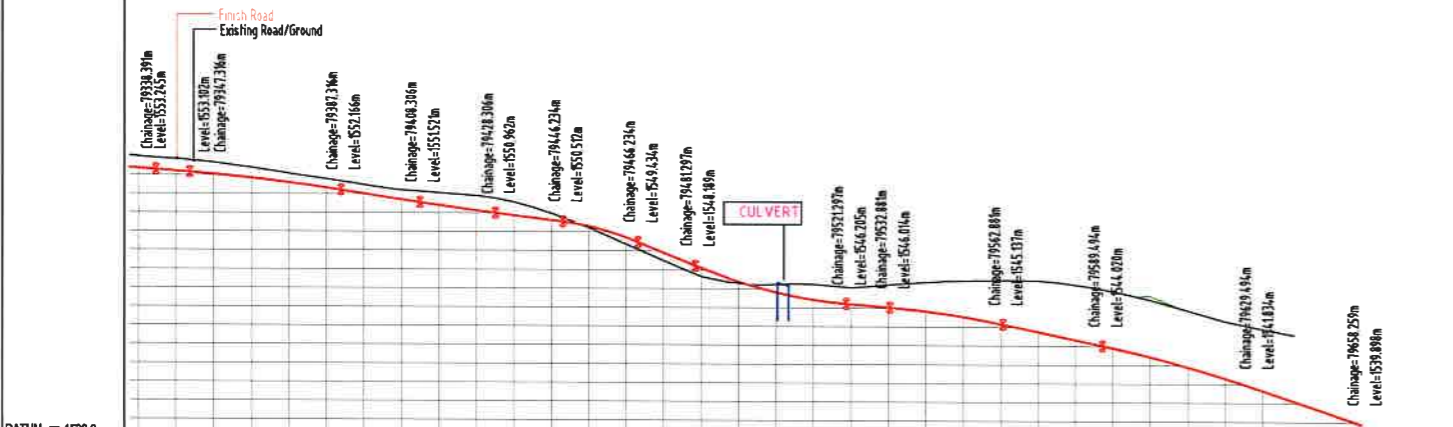
PACKAGE- 5B (I)
Near Algarah To Start of Pedong Bypass (West Bengal)
PLAN & PROFILE
Profile-(Km 78+600 To Km 79+350)

Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/P&P/03o

← KAFER

RHENOCK →

TENDER DRAWING



STANDARD DRAWINGS

CAUTIONARY/WARNING SIGNS



DATE: 04/03/2021 - 2:45 PM
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REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
RO	Sep 2017	Final Feasibility Report	
RO	Nov 2016	Draft Feasibility Report	
RO	Dec 2014	Linear Plan	

Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED
 (Ministry of Road Transport & Highways)

Consultant : SA INFRASTRUCTURE CONSULTANTS PVT. LTD.
 In Association with
 Specialized Engineering Service Pvt. Ltd.
 1101A, 11th Floor, Tower A-II, Corporate Park,
 Plot No. 7A/1, Sector-142,
 Noida - 201301, Uttar Pradesh.

Project : Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chuikhim-Nimbong-Kafer-Bakhim-Algarah-Rhenock in the State of West Bengal and From Rhenock-Rorathang-Pakyong along with pur From Aritar-Relop-Menia in the State of Sikkim.
Near Algarah To Start of Pedong Bypass (West Bengal)

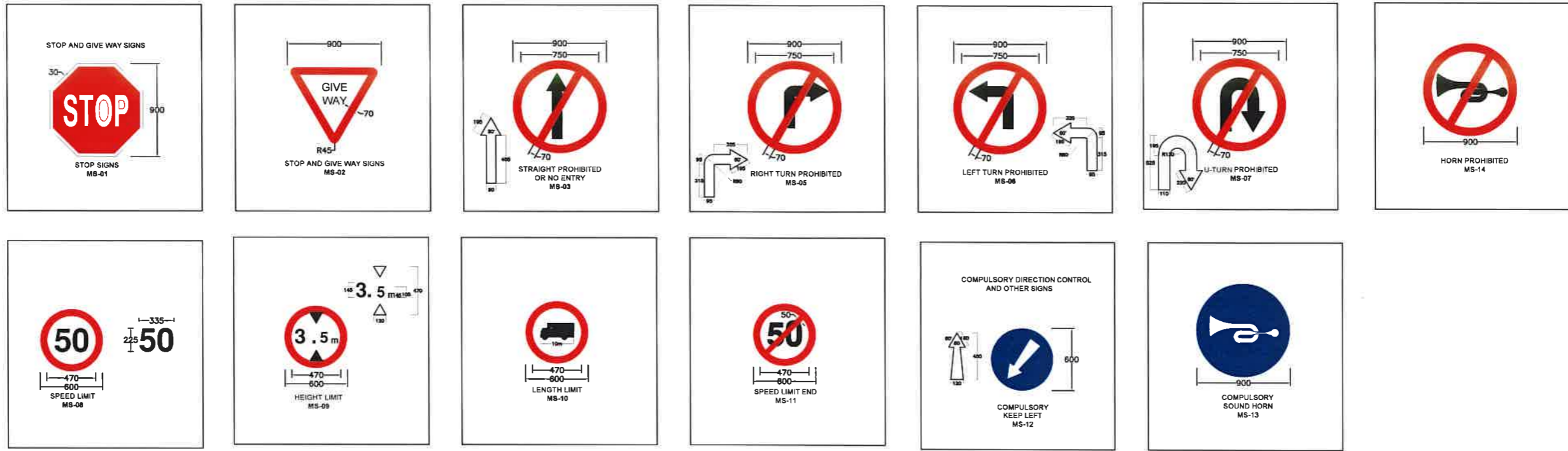
DATE :	March 2021	Revision	RO
DESIGNED BY	Vijay Gupta	DRAWN BY	Narash
CHECKED BY	Vijay Gupta	APPROVED BY	Sanjay Shukla
SCALE:--NTS			

TENDER DRAWING

PACKAGE- 5
 Near Algarah To Start of Pedong Bypass (West Bengal)
ROAD SIGN
 (Sheet 1 of 3)

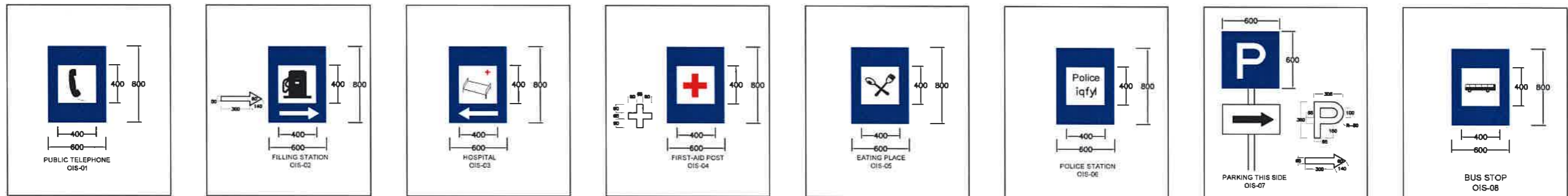
Dwg. No. :- SAICPL--SESPL/NHIDCL/WB--SKM/Misc/01

MANDATORY/REGULATORY SIGNS



INFORMATORY SIGN BOARD:-

(A) FACILITY INFORMATION SIGNS



(B) DIRECTION AND PLACE IDENTIFICATION SIGNS



DATE: 04/03/2021 - 15:00pm
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REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
RO	Sep 2017	Final Feasibility Report	
RO	Nov 2016	Draft Feasibility Report	
RO	Dec 2014	Linear Plan	

Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED
(Ministry of Road Transport & Highways)

Consultant : SA INFRASTRUCTURE CONSULTANTS PVT. LTD.
Specialized Engineering Service Pvt. Ltd.
1101A, 11th Floor, Tower A-II, Corporate Park,
Plot No. 7A/1, Sector-142,
Noida 201301, Uttar Pradesh.

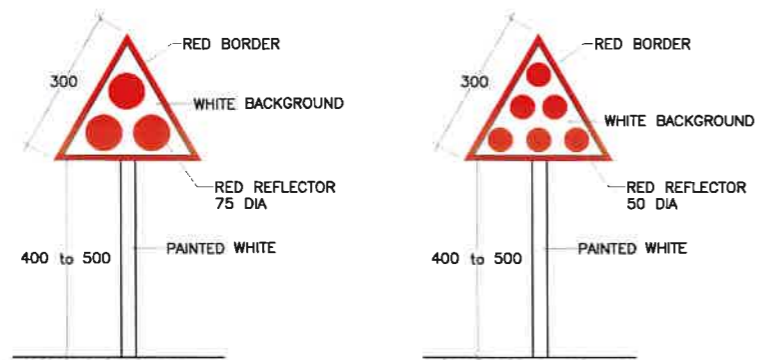
Project : Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chuikhim-Nimbong-Kafer-Bakhim-Algarah-Rhenoc in the State of West Bengal and From Rhenoc-Rorathang-Pakyong along with pur From Aritar-Relop-Menla in the State of Sikkim.
Near Algarah To Start of Pedong Bypass (West Bengal)

DATE : March 2021		Revision RO	
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
Vijay Gupta	Naresh	Vijay Gupta	Sanjay Shukla
SCALE:-NTS			

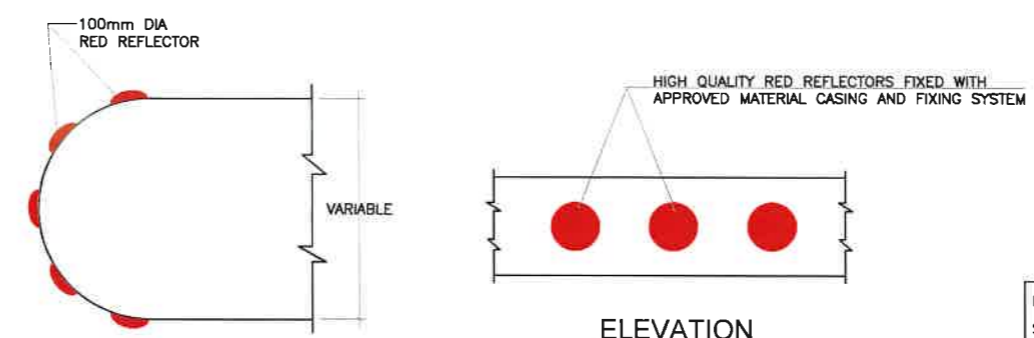
TENDER DRAWING

PACKAGE- 5
Near Algarah To Start of Pedong Bypass (West Bengal)
ROAD SIGN
(Sheet 2 of 3)

Dwg. No. :- SAICPL-SESPL/NHDCL/WB-SKM/Misc/

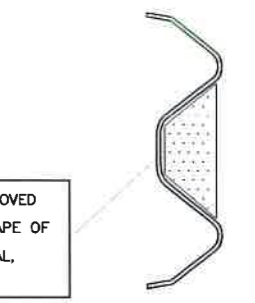


CLUSTER OF RED REFLECTORS TA-1

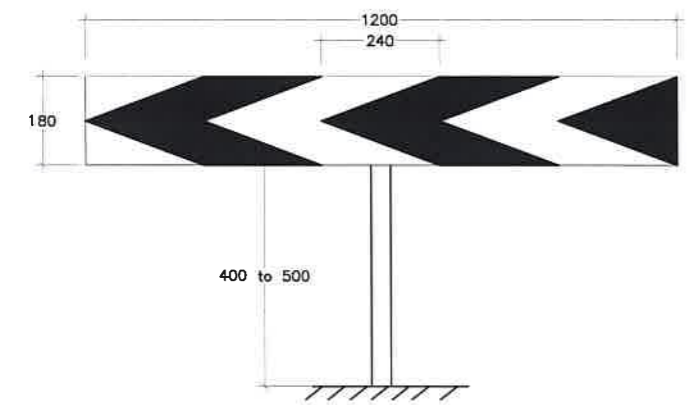


MEDIAN TIP REFLECTORS TA-2

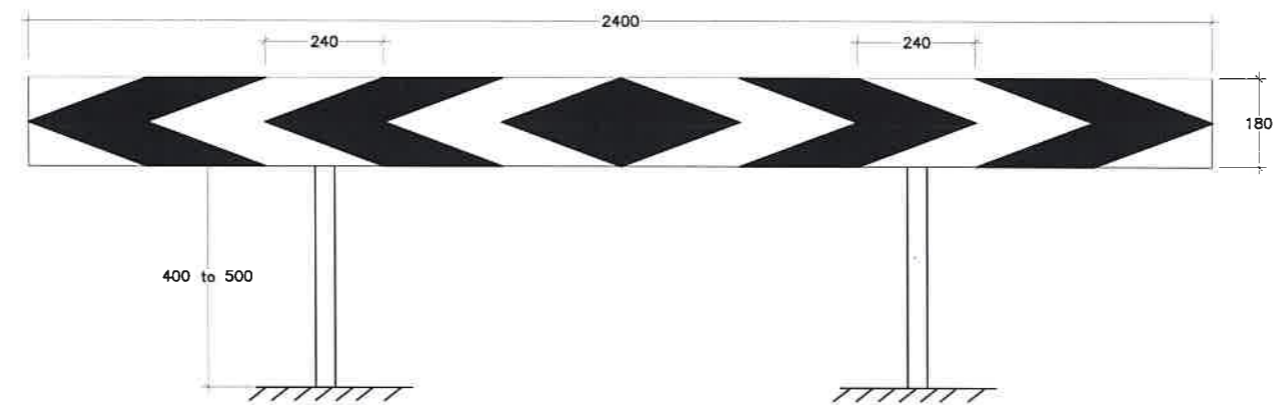
HIGH QUALITY RED REFLECTORS OF APPROVED SIZE AND SHAPE (TO FIXED IN THE SHAPE OF W-BEAM), FIXED WITH APPROVED MATERIAL, CASING ANF FIXUP SYSTEM



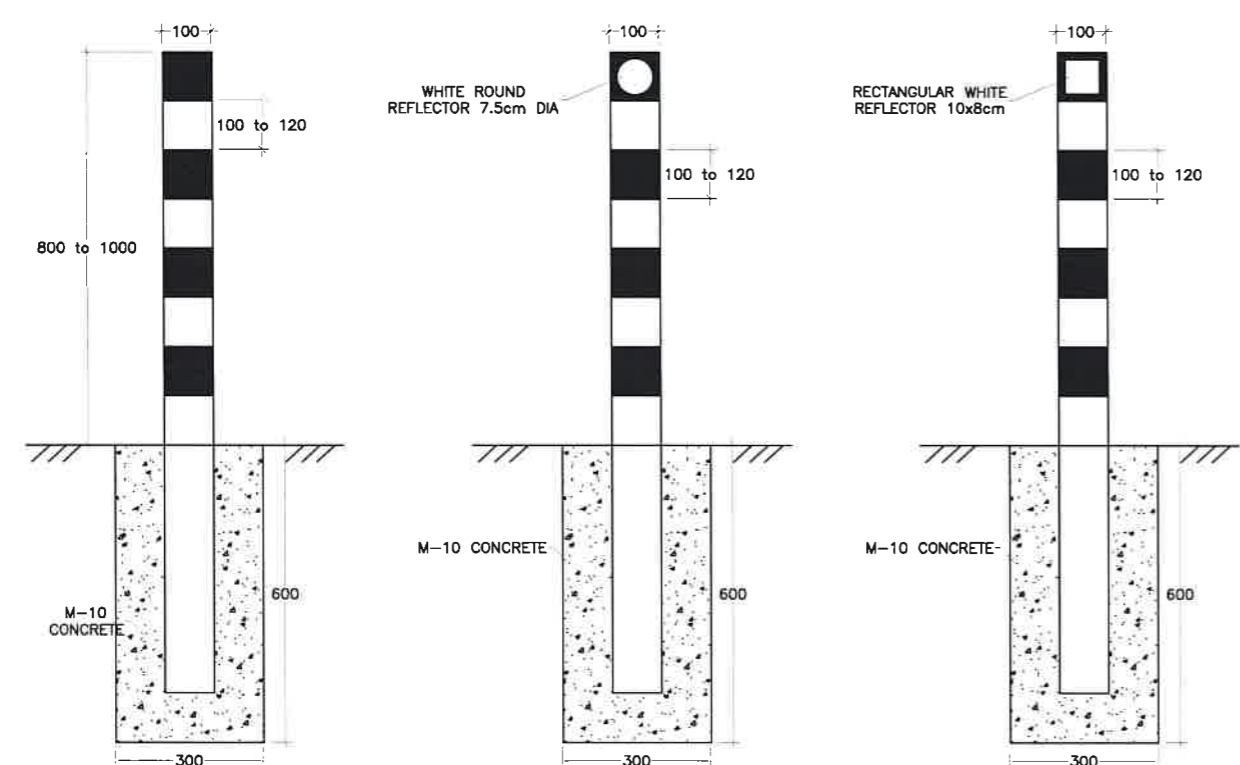
ON W-BEAM OF METAL BEAM CRASH BARRIER TA-3



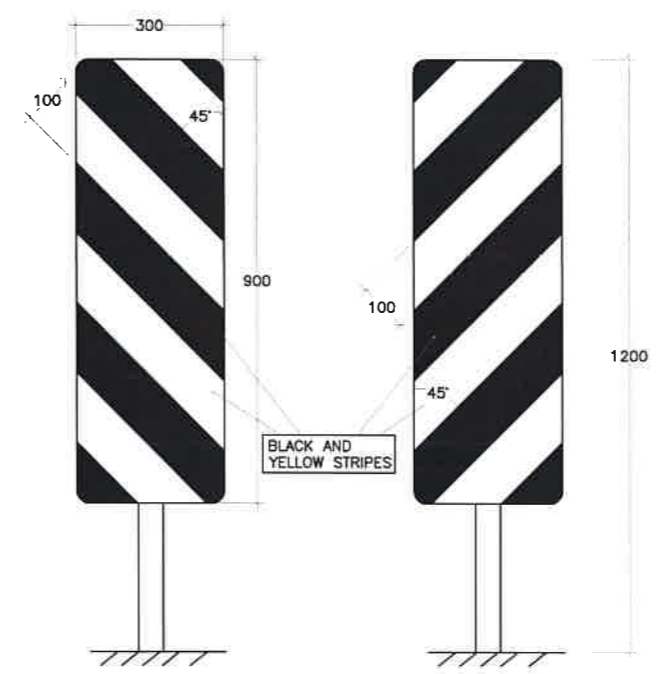
ONE-WAY HAZARD MARKER



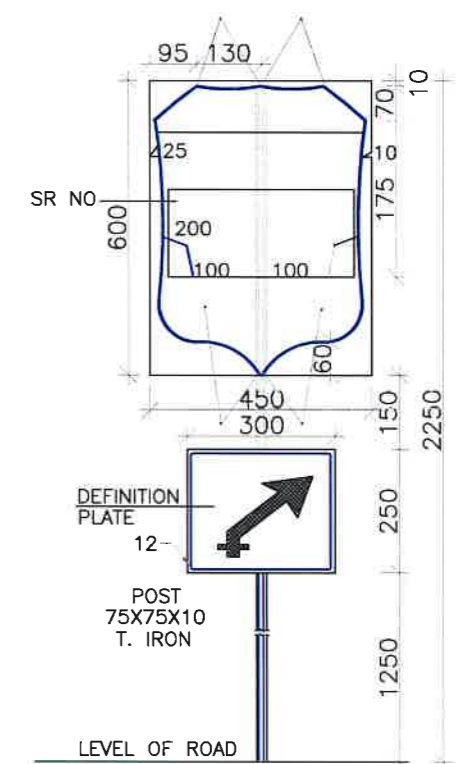
TWO-WAY HAZARD MARKER



ROADWAY DELINEATORS



OBJECT HAZARD MARKERS



ASSEMBLY OF ROUTE MARK SIGN ARRANGEMENT FOR ERECTION OF STATE ROUTE MARKER SIGN

DATE: 04/03/2021 - 3:01 PM
PATH: C:\Users\Manoj\OneDrive\Desktop\STANDARD DRAWING\MS-3-ROAD_SIGNS-III-(Sheet_3_of_3).dwg

REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
RO	Sep 2017	Final Feasibility Report	
RO	Nov 2016	Draft Feasibility Report	
RO	Dec 2014	Linear Plan	

Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (Ministry of Road Transport & Highways)

Consultant : SA INFRASTRUCTURE CONSULTANTS PVT. LTD. In Association with Specialized Engineering Service Pvt. Ltd. 1101A, 11th Floor, Tower A-II, Corporate Park, Plot No. 7A/1, Sector-142, Noida 201301, Uttar Pradesh.

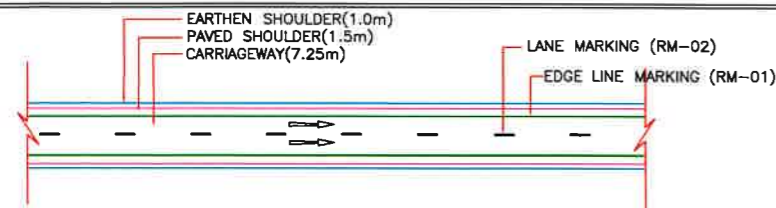
Project : Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chuikhim-Nimbong-Kafer-Bakhim-Algarah-Rhenock in the State of West Bengal and From Rhenock-Rorathang-Pakyong along with pur From Aritar-Relop-Mena in the State of Sikkim. **Near Algarah To Start of Pedong Bypass (West Bengal)**

DATE : March 2021	Revision	RO
DESIGNED BY	DRAWN BY	CHECKED BY
Vijay Gupta	Naresh	Vijay Gupta
		Sanjay Shukla
SCALE:-NTS		

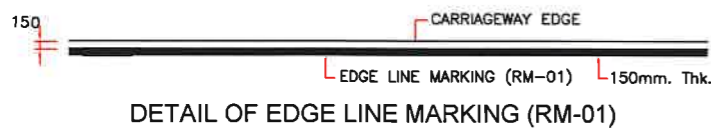
TENDER DRAWING

PACKAGE- 5
Near Algarah To Start of Pedong Bypass (West Bengal)
ROAD SIGN
(Sheet 03 of 03)

Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/Misc/



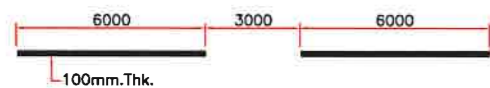
TYPICAL LAYOUT OF ROAD MARKINGS FOR 2-LANE



LANE MARKING AT STRAIGHT REACHES IN RURAL AREA (RM-02A)



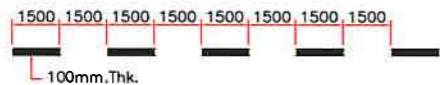
LANE MARKING AT APPROACHES TO INTERSECTION IN RURAL AREA (RM-02C)



LANE MARKING ON STRAIGHT REACHES IN URBAN AREA (RM-03A)



LANE MARKING AT CURVES AND APPROACHES TO INTERSECTION IN URBAN AREAS (RM-03B)



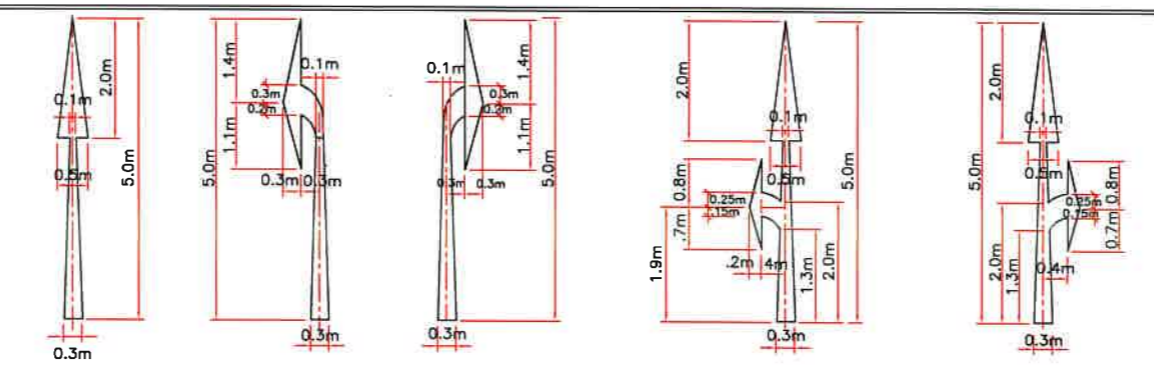
EXTENSION OF EDGE AT BUS BAY AREA (RM-04)



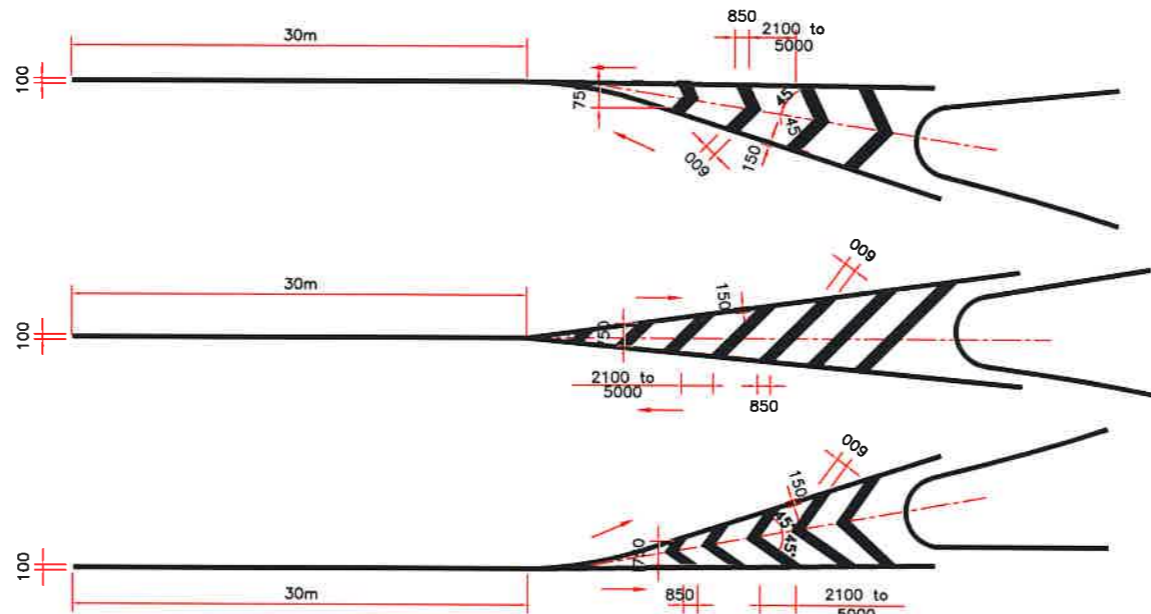
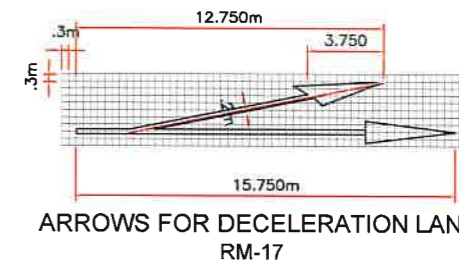
LANE MARKING FOR 2-LANE ROAD ON STRAIGHT REACHES IN URBAN AREA (RM-05A)



LANE MARKING FOR 2-LANE ROAD ON CURVES AND APPROACHES TO INTERSECTION IN URBAN AREA (RM-05B)



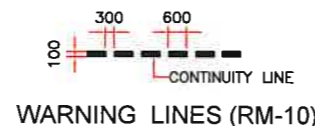
ROUTE DIRECTIONAL ARROWS FOR PROJECT ROAD (ALL THE ARROWS ARE IN WHITE COLOUR)



TOTAL LENGTH OF MARKING (m)	CLEAR SPACING BETWEEN DIAGONALS OR CHEVRONS(mm)	
	SPEED(<75km/h)	SPEED(>75km/h)
<6	2100	-
6 TO 22	3500	-
>22	5000	-
<10	-	4000
>10	-	6000

- ALL LENGTHS AND SPACINGS IN THE TABLE ARE MEASURED PARALLEL TO ROAD CENTRE LANE.
- FIRST DIAGONAL OR CHEVRON IS TO BE SO LOCATED THAT ITS LENGTH IS AT LEAST EQUAL TO ITS WIDTH.
- WIDTH OF ALL DIAGONALS/CHEVRONS MEASURED AT RIGHT ANGLES TO THE DIAGONALS OR CHEVRONS IS 600mm.

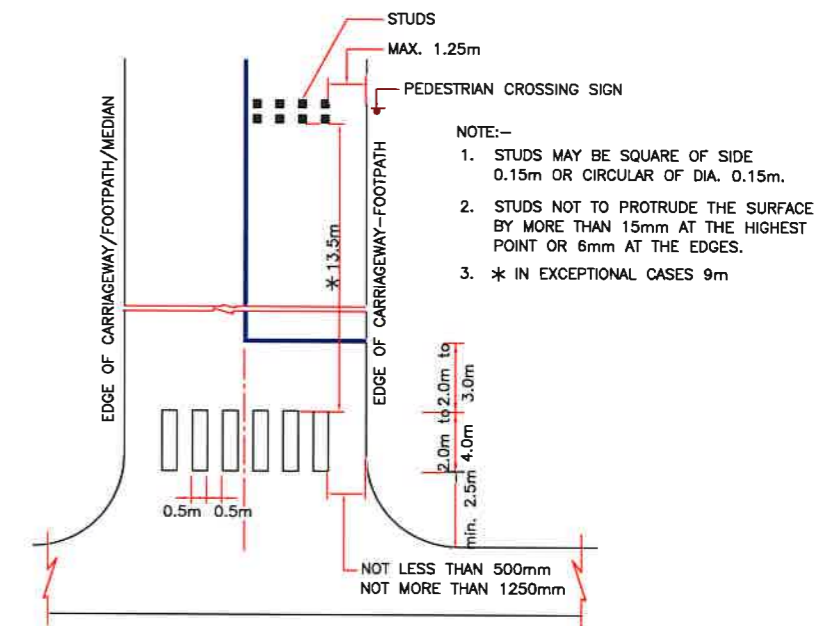
DETAILS OF DIAGONAL AND CHEVRON MARKINGS (RM-09)



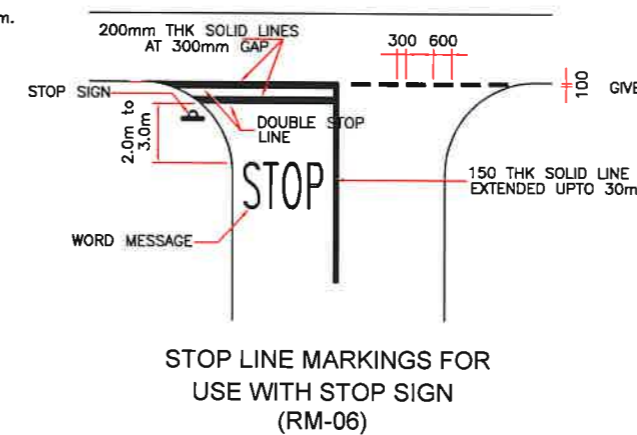
WARNING LINES (RM-10)



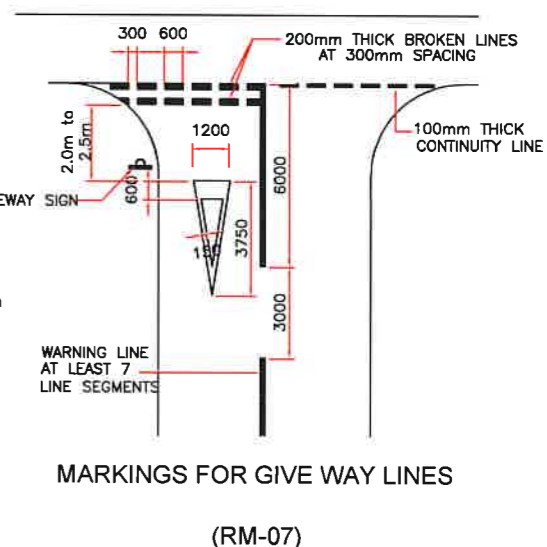
KERB MARKINGS (RM-11)



PEDISTRIAN CROSSING AT AN UNSIGNALLED INTERSECTION (RM-08)



STOP LINE MARKINGS FOR USE WITH STOP SIGN (RM-06)



MARKINGS FOR GIVE WAY LINES (RM-07)

REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
RO	Sep 2017	Final Feasibility Report	
RO	Nov 2016	Draft Feasibility Report	
RO	Dec 2014	Linear Plan	

Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (Ministry of Road Transport & Highways)

Consultant : SA INFRASTRUCTURE CONSULTANTS PVT. LTD. (Specialized Engineering Service Pvt. Ltd. 1101A, 11th Floor, Tower A-II, Corporate Park, Plot No. 7A/1, Sector-142, Noida 201301, Uttar Pradesh.)

Project : Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chuikhim-Nimbong-Kafer-Bakhim-Algarah-Rhenock in the State of West Bengal and From Rhencok-Rorathang-Pakyong along with pur From Aritar-Relop-Menia in the State of Sikkim. (Near Algrah To Start of Pedong Bypass (West Bengal))

DATE	Revision
March 2021	RO
DESIGNED BY	DRAWN BY
Vijay Gupta	Naresh
CHECKED BY	APPROVED BY
Vijay Gupta	Sanjay Shukla

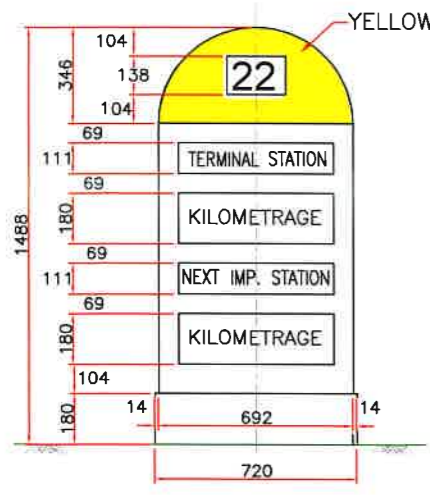
TENDER DRAWING

PACKAGE-5

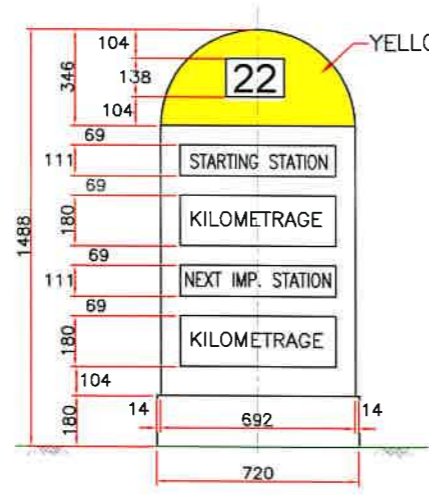
Near Algrah To Start of Pedong Bypass (West Bengal)

DETAIL OF ROAD MARKING

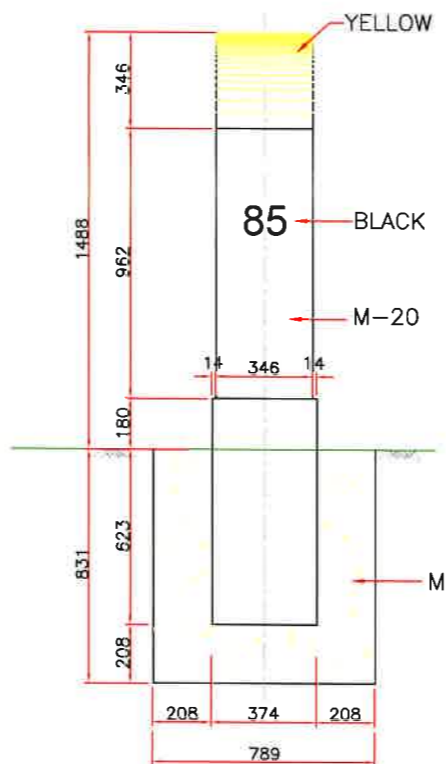
Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/Misc/



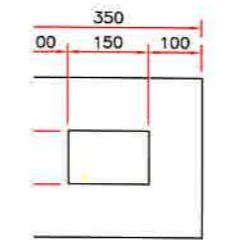
ELEVATION FACE-I



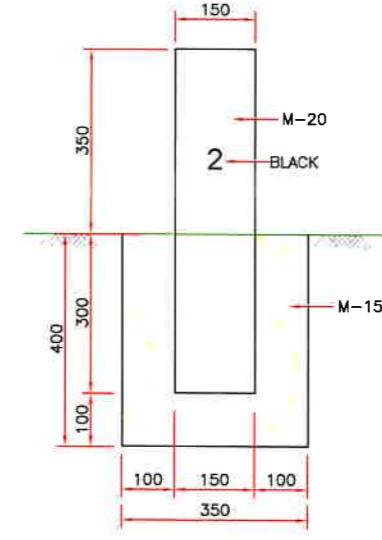
ELEVATION FACE-II



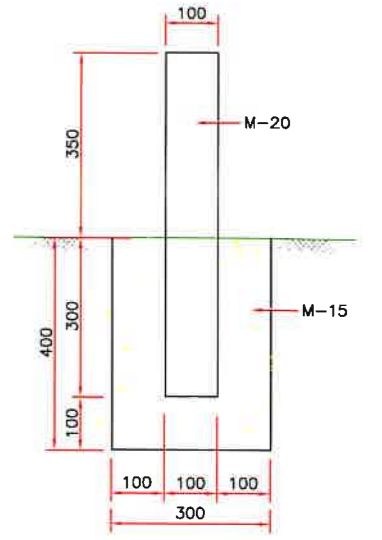
SIDE ELEVATION



SECTIONAL PLAN

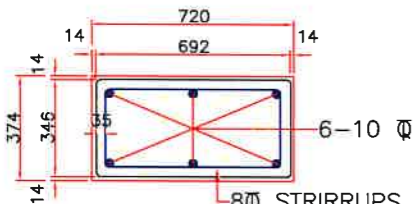


FRONT ELEVATION



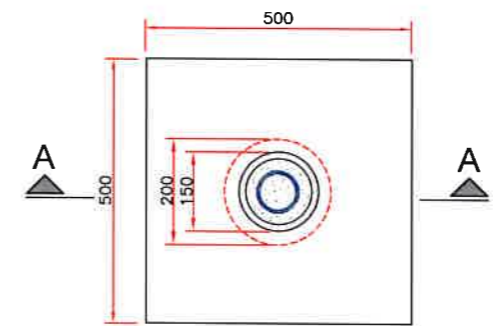
SIDE ELEVATION

DETAIL OF 200 METRE STONE (SCALE 1:10)



SECTIONAL PLAN

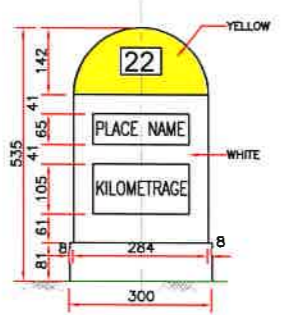
DETAIL OF FIFTH KILOMETRE STONE (SCALE 1:20)



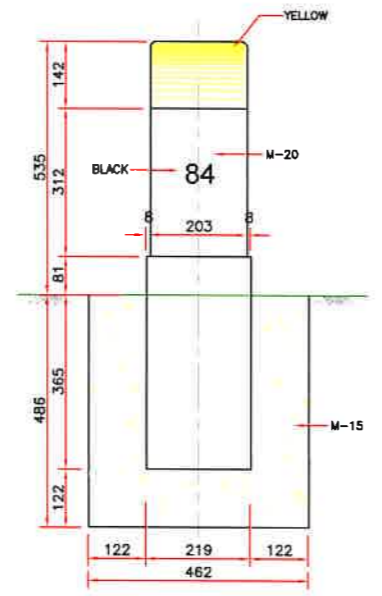
PLAN

BAR BENDING SCHEDULE FOR BOUNDARY STONE

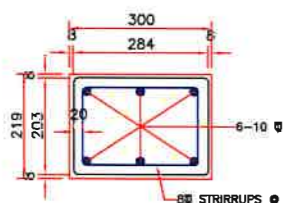
S NO.	TYPE OF M.S. BAR	NO OF BARS	SHAPE OF BARS	DIA IN mm	LENGTH OF ONE BAR INCLUDING HOOKS
1.	MAIN BARS	2	U	6 mm	1.48 m
2.	TOPMOST STIRRUP	1	□	6 mm	370 mm
3.	STIRRUP (FIRST FROM TOP)	1	□	6 mm	405 mm
4.	STIRRUP (SECOND FROM TOP)	1	□	6 mm	440mm
5.	STIRRUP (THIRD FROM TOP)	1	□	6 mm	475 mm
6.	BOTTOMMOST STIRRUP	1	□	6 mm	810 mm



ELEVATION

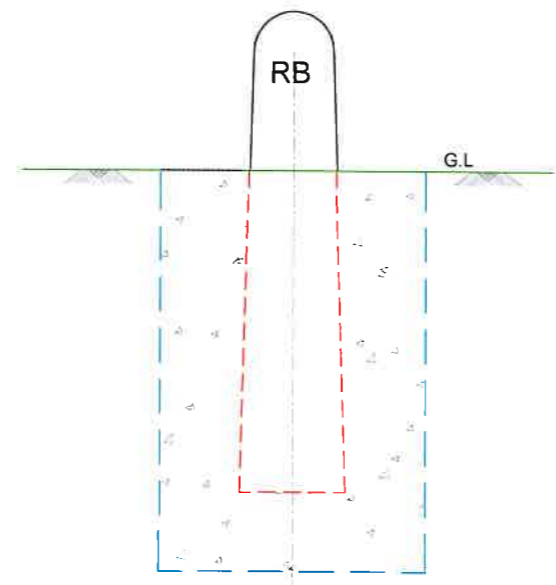


SIDE ELEVATION

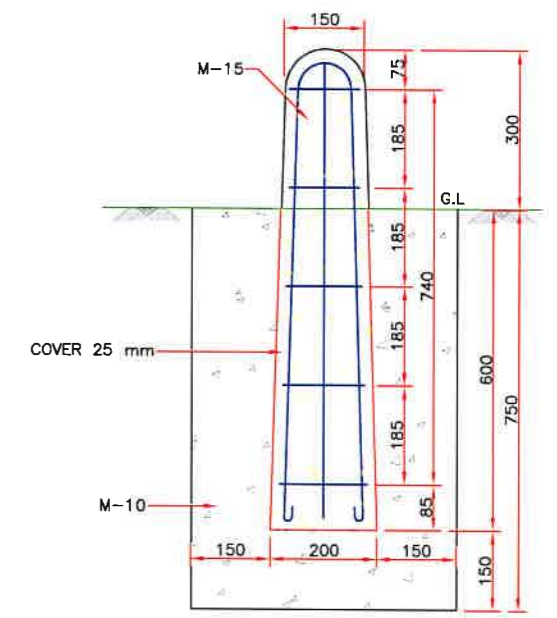


SECTIONAL PLAN

DETAIL OF KILOMETRE STONE (SCALE 1:10)



ELEVATION



SECTION A-A

DETAIL OF BOUNDARY STONE (SCALE 1:10)

DATE: 04/03/2021 - 2:45pm
PATH: D:\G...M...STANDARD DRAWING\MS-5-DETAIL OF DISTANCE & BOUNDARY STONE.dwg

REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
RO	Sep 2017	Final Feasibility Report	
RO	Nov 2016	Draft Feasibility Report	
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Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (Ministry of Road Transport & Highways)

Consultant : SA INFRASTRUCTURE CONSULTANTS PVT. LTD. Specialized Engineering Service Pvt. Ltd. 1101A, 11th Floor, Tower A-II, Corporate Park, Plot No. 7A/1, Sector-142, Noida 201301, Uttar Pradesh.

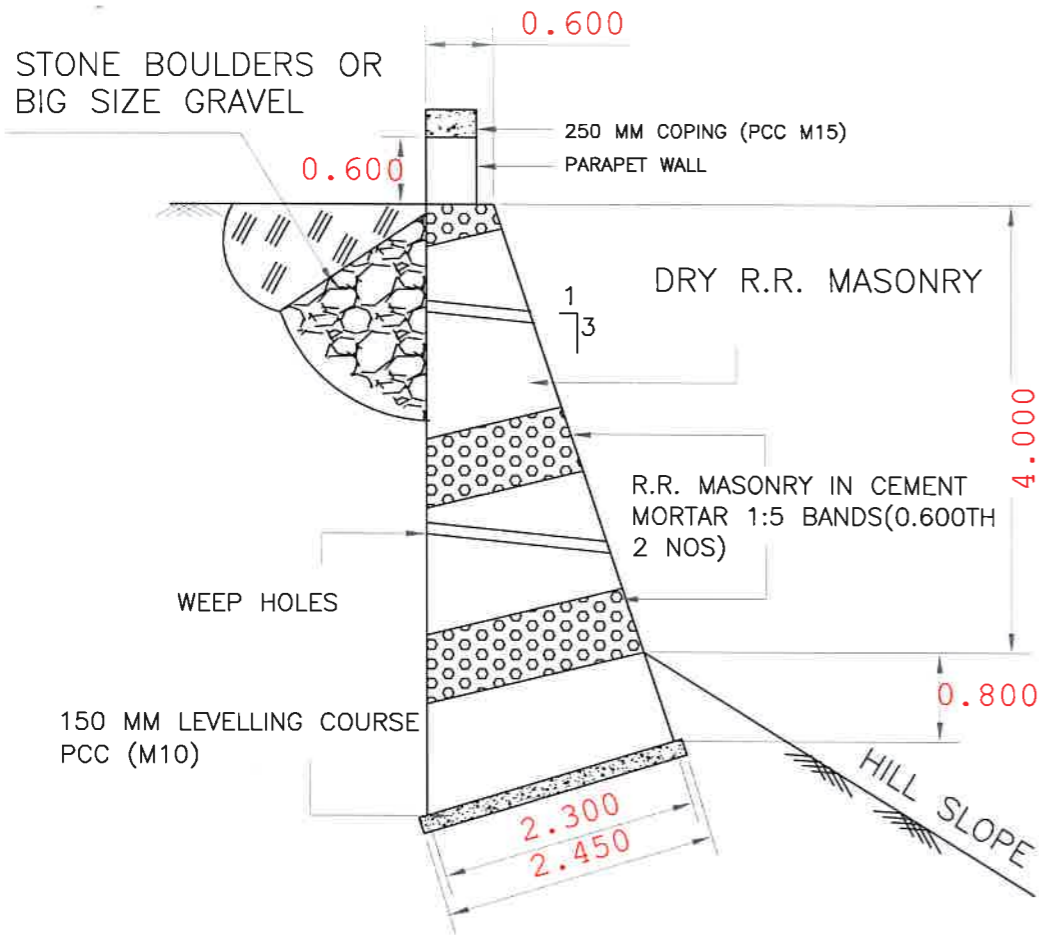
Project : Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chuikhim-Nimbong-Kafer-Bakhim-Algarah-Rhenock in the State of West Bengal and From Rhenock-Roralhang-Pakyong along with pur From Arilar-Relop-Menia in the State of Sikkim. Near Algarah To Start of Pedong Bypass (West Bengal)

DATE	Revision	RO
March 2021		
DESIGNED BY	DRAWN BY	CHECKED BY
Vijay Gupta	Naresh	Vijay Gupta
		APPROVED BY
		Sanjay Shukla
SCALE:-NTS		

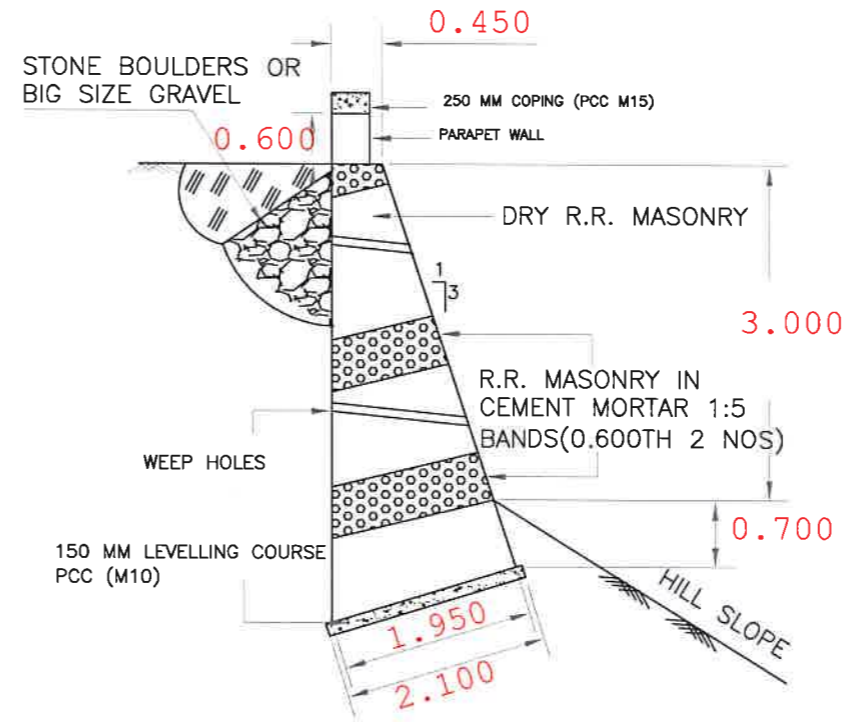
TENDER DRAWING

PACKAGE-5
Near Algarah To Start of Pedong Bypass (West Bengal)
DETAIL OF DISTANCE STONE & BOUNDARY STONE

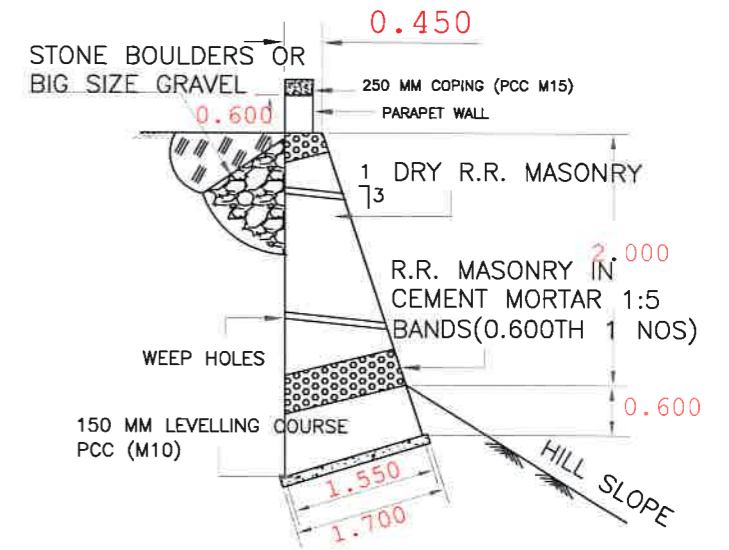
Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/Misc/



RETAINING WALL 4 M. HT.



RETAINING WALL 3 M. HT.



RETAINING WALL 2 M. HT.

NOTES:-

1. ALL DIMENSIONS IN METRES UNLESS OTHERWISE SPECIFIED
2. DESIGN AS PER GUIDELINES OF IRC:SP:48-1998 (HILL ROAD MANUAL)
3. BATTER TO BE KEPT AS 1:3 UP TO 4.0 M HT. ADJUSTING THE BASE DIMENSIONS SUITABLY

DATE: 04/03/2021 - 2:49PM
PATH: D:\G. Jaisa\Mar-2021\Sikkim-5\STANDARD DRAWING\MS-14-DETAIL OF RR Masonry Retaining wall.dwg

REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
RO	Sep 2017	Final Feasibility Report	
RO	Nov 2016	Draft Feasibility Report	
RO	Dec 2014	Linear Plan	

Client : NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED
(Ministry of Road Transport & Highways)

Consultant : SA INFRASTRUCTURE CONSULTANTS PVT. LTD.
Specialized Engineering Service Pvt. Ltd.
1101A, 11th Floor, Tower A-II, Corporate Park,
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Noida 201301, Uttar Pradesh.

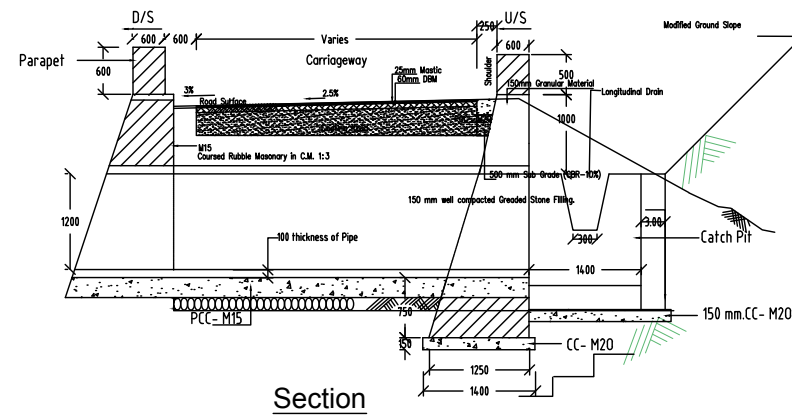
Project : Consultancy for Preparation of Feasibility Report cum Detail Design for Alternative Highway to Gangtok in Sikkim via Bagrakot-Chuikhim-Nimbong-Kafer-Bakhim-Algarah-Rhenock in the State of West Bengal and From Rhenock-Rorathang-Pakyong along with pur From Aritar-Relop-Menia in the State of Sikkim.
Near Algarah To Start of Pedong Bypass (West Bengal)

DATE : March 2021		Revision RO	
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
Vijay Gupta	Narash	Vijay Gupta	Sanjay Shukla
SCALE:-NTS			

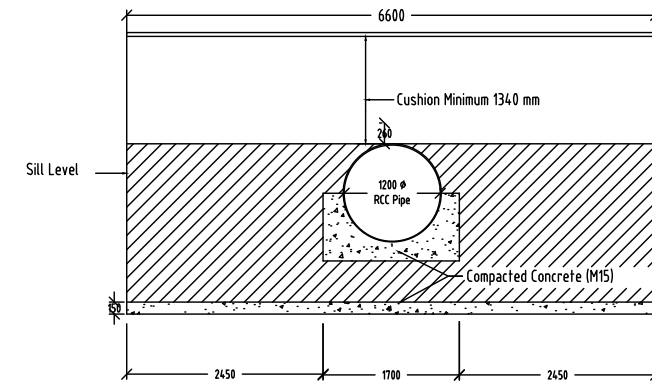
TENDER DRAWING

PACKAGE-5
Near Algarah To Start of Pedong Bypass (West Bengal)
DETAIL OF RETAINING WALL (MASONARY WALL)

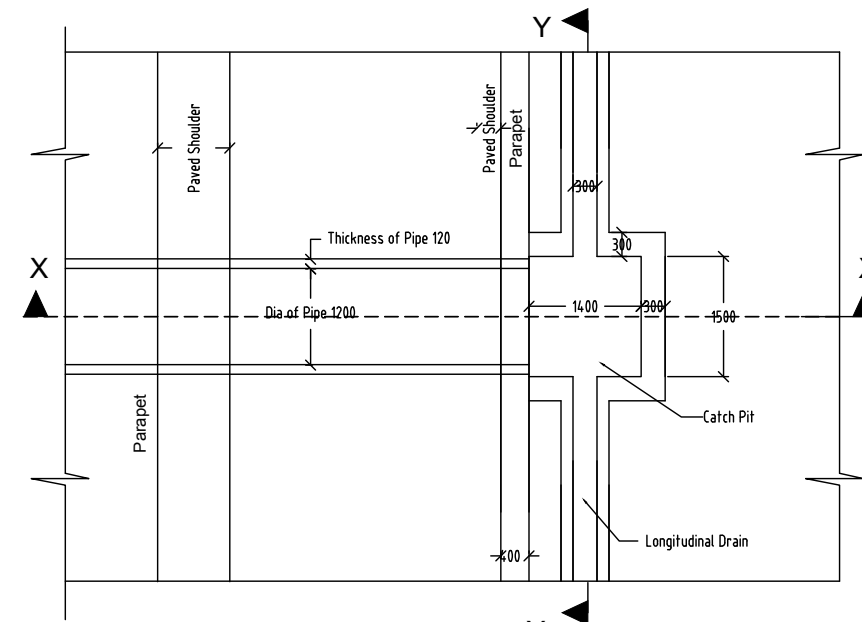
Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/Misc/



Section



Section at X-X



Plan

Notes:

1. All dimensions are in millimeters unless otherwise mentioned.
2. For any change in material, permission should be taken from engineer incharge who may modify the dimensions if required to suit the material.
3. Longitudinal slope of pipe should be minimum 1 in 1000 and not be steeper than 1 in 30.
4. For actual dimension refer setout details drawing.
5. Concrete cradle bedding be generally used for hilly area.
6. For other details refer IRC. SP-13.
7. In no case the minimum cushion should be less than 700 mm.
8. In case of steeper ground slope more than 45 degree at d/s toe wall would to be provided at bottom of revetment to retain the slope.
9. For chute arrangement on d/s refer drawing no:
10. If Nala bed encountered with boulder in the bed level to be refixed with consultaion to Engineer Incharge.

Table

RETAINING WALL TYPE HEAD WALL (H)	HEIGHT OF HEAD WALL					
	3.0 m.	4.0 m.	5.0 m.	6.0 m.	7.0 m.	8.0 m.
WIDTH OF FOUNDATION (B)	2.10 m.	2.40m.	3.00 m.	4.00 m.	4.80 m.	5.60 m.

TENDER DRAWING

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DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
Vijay Gupta	Naresh	Vijay Gupta	Sanjay Shukla

SCALE:-NTS

PACKAGE- 5

Near Algarah To Start of Pedong Bypass (West Bengal) TYPICAL DRAWING OF PIPE CULVERT

Dwg. No. :- SAICPL-SESPL/NHIDCL/WB-SKM/Misc/

DATE: 09/03/2021 11:17am PATH: C:\Users\vijay.gupta\Desktop\Pipe culvert-Sikkim.dwg

REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
RO	Sep 2017	Final Feasibility Report	
RO	Nov 2016	Draft Feasibility Report	
RO	Dec 2014	Linear Plan	