



PUNTOS DE CONTROL VERTICAL (BM)

PUNTOS	COORDENADAS TOPOGRAFICAS		COTA
	NORTE	ESTE	
PB-05/BM-040	8579378.772	513136.149	4372.672
BM-041	8579230.650	513124.008	4352.760
AZ-05/BM-041-A	8579205.475	513667.756	4327.032
BM-042	8579090.813	514137.765	4305.416
BM-043	8578874.101	514547.930	4285.532
BM-044	8578766.306	515056.376	4260.172
BM-045	8578842.299	515042.027	4235.759
BM-046	8578914.789	515083.388	4222.192
BM-047	8578662.565	515414.642	4205.680
BM-048	8578833.213	515755.937	4221.781
BM-049	8579008.697	516185.007	4248.673
PB-06/BM-050	8579083.828	516515.922	4272.523
BM-051	8578672.918	516619.257	4261.272
AZ-06/BM-052	8578365.086	516819.343	4274.605
BM-053	8577908.723	516951.809	4301.847
BM-054	8577476.680	517243.496	4317.103
BM-055	8577749.827	517575.908	4337.098
BM-056	8577457.887	517947.219	4351.249
BM-057	8577214.973	518316.816	4360.465
BM-058	8576860.649	518283.425	4344.567
BM-059	8576454.863	518002.505	4333.511
PB-07/BM-060	8576089.511	517842.443	4320.515
AZ-07/BM-061	8575990.167	517414.182	4312.215
BM-062	8575644.634	517373.891	4313.226
BM-063	8575264.418	517592.179	4307.832
BM-064	8574815.213	517738.894	4275.476
BM-065	8574452.798	517981.533	4266.985
BM-066	8574657.515	518257.139	4247.873
BM-067	8574332.442	518451.315	4221.855
BM-068	8574426.254	518459.828	4207.663
BM-069	8574087.394	518669.392	4179.874
PB-08/BM-070	8573634.476	518396.004	4152.184
BM-071	8573571.139	518533.179	4141.840
AZ-08/BM-072	8573880.611	518902.641	4128.787
BM-073	8573447.510	519089.332	4126.424
BM-074	8573646.164	519111.438	4141.181
BM-075	8573922.730	519225.855	4167.711
BM-076	8574242.085	519516.089	4190.086
BM-077	8573908.636	519791.457	4219.305
BM-078	8573715.497	520053.357	4234.371
BM-079	8573973.059	520403.161	4254.058
BM-080	8573806.088	520819.611	4268.548
AZ-09/BM-081	8573335.960	520842.694	4282.433
BM-082	8572930.949	520780.385	4282.459
BM-083	8572724.890	521115.845	4264.078
BM-084	8572652.712	521583.175	4245.662
BM-085	8572359.061	521873.758	4231.468
BM-086	8571976.502	521929.869	4215.860
BM-087	8571568.173	521749.964	4200.311
BM-088	8571402.929	521289.501	4184.465
BM-089	8571172.679	521197.031	4179.485

PUNTOS DE CONTROL HORIZONTAL

VERTICE	VERTICE	DISTANCIA	AZIMUT	NORTE	ESTE	COTA
AZ-05/BM-041-A	AZ-05-P-029	544.33	92° 39' 3.11"	8579205.475	513667.756	4327.032
P-029	P-029-P-030	106.18	95° 48' 8.64"	8579194.740	513773.392	4323.616
P-030	P-030-P-031	76.46	106° 13' 12.08"	8579069.458	514211.177	4300.636
P-031	P-031-P-032	129.56	93° 54' 25.77"	8578905.960	515212.649	4217.148
P-032	P-032-P-033	222.38	105° 48' 34.82"	8578845.373	515426.621	4203.599
P-033	P-033-P-034	129.05	62° 15' 1.37"	8578742.650	515528.845	4214.412
P-034	P-034-PB-06	329.06	46° 2' 46.88"	8579237.088	516421.896	4265.976
PB-06	PB-06-AZ-06	179.80	148° 28' 15.19"	8579083.828	516515.922	4272.523
AZ-06/BM-052	AZ-06-P-035	367.14	146° 58' 36.25"	8578365.086	516819.343	4274.605
P-035	P-035-P-036	349.84	139° 9' 53.92"	8577644.038	517180.562	4311.373
P-036	P-036-P-037	191.34	11° 34' 29.43"	8577664.326	517281.887	4323.041
P-037	P-037-P-038	111.81	109° 5' 53.89"	8577713.244	517681.562	4343.316
P-038	P-038-P-039	182.49	121° 4' 19.57"	8577619.060	517837.865	4351.101
P-039	P-039-P-040	282.97	119° 33' 58.51"	8577318.259	518193.346	4359.170
P-040	P-040-P-041	256.91	149° 5' 48.4"	8576994.533	518448.763	4353.544
P-041	P-041-P-042	177.99	198° 45' 51.52"	8576826.004	518391.509	4345.592
P-042	P-042-PB-07	151.95	188° 40' 49.79"	8576304.656	517979.573	4329.674
PB-07/BM-060	PB-07-AZ-07	255.13	212° 30' 45.95"	8576089.511	517842.443	4320.515
AZ-07/BM-061	AZ-07-P-043	439.63	256° 56' 24.29"	8575990.167	517414.182	4312.215
P-043	P-043-P-044	87.29	139° 56' 14.92"	8574748.409	517795.073	4275.459
P-044	P-044-P-045	191.06	40° 19' 20.28"	8574598.462	518105.163	4256.014
P-045	P-045-P-046	149.58	140° 3' 55.81"	8574311.559	518555.846	4196.223
P-046	P-046-PB-08	54.90	188° 12' 39.29"	8574033.053	518661.551	4178.528
PB-08/BM-070	PB-08-AZ-08	478.93	213° 40' 23.02"	8573634.476	518396.004	4152.184
AZ-08/BM-072	AZ-08-P-047	481.95	50° 2' 58.06"	8573880.611	518902.641	4128.787
P-047	P-047-P-048	60.02	162° 0' 50.69"	8573623.521	518921.175	4132.192
P-048	P-048-P-049	77.64	20° 24' 8.33"	8573718.934	519138.504	4146.088
P-049	P-049-P-050	67.41	11° 15' 2.5"	8573988.845	519239.007	4170.086
P-050	P-050-P-051	246.34	36° 42' 7.11"	8574186.347	519386.231	4185.406
P-051	P-051-P-052	108.24	98° 24' 46.56"	8574226.250	519623.161	4196.252
P-052	P-052-PB-09	188.75	145° 24' 13.13"	8574070.874	519730.333	4207.564
PB-09	PB-09-AZ-09	134.55	140° 46' 56.52"	8573701.843	520904.685	4276.215
AZ-09/BM-081	AZ-09-P-053	371.10	189° 36' 57.87"	8573335.960	520842.694	4282.433
P-053	P-053-P-054	207.79	138° 19' 23.45"	8573180.762	520980.858	4273.903
P-054	P-054-P-055	175.28	208° 30' 12.46"	8573026.731	520897.214	4274.686
P-055	P-055-P-056	169.54	82° 35' 9.42"	8572746.768	521283.967	4259.824
P-056	P-056-P-057	354.24	116° 22' 10.25"	8572484.391	521894.874	4235.218
P-057	P-057-P-058	36.53	169° 8' 22.62"	8572448.513	521901.757	4234.728
P-058	P-058-P-059	85.22	158° 4' 42.53"	8571897.446	521961.683	4213.881
P-059	P-059-P-060	201.00	191° 35' 11.81"	8571700.543	521921.313	4208.303
P-060	P-060-P-061	90.50	210° 41' 8.97"	8571622.716	521875.129	4205.506
P-061	P-061-P-062	271.59	239° 57' 25.49"	8571432.200	521514.858	4193.454
P-062	P-062-P-063	48.71	210° 36' 33.7"	8571361.005	521264.698	4183.828
P-063	P-063-P-064	179.62	230° 9' 26.74"	8571245.924	521126.782	4181.004
P-064	P-064-P-065	89.00	253° 41' 30.93"	8571220.933	521041.363	4181.053
P-065	P-065-PB-10	231.62	70° 24' 37.22"	8571250.337	521415.246	4177.347
PB-10	PB-10-AZ-10	168.91	74° 53' 31.11"	8571300.019	521912.674	4179.178
AZ-10	AZ-10-P-066	377.15	57° 29' 31.61"	8571430.099	522423.445	4191.050

LEYENDA

- POLIGONAL DE APOYO
- CARRERA EXISTENTE
- PUNTOS DE CONTROL HORIZONTAL (AZ)
- PUNTOS DE CONTROL HORIZONTAL (PB)
- PUNTOS DE POLIGONAL (P)
- PUNTOS DE CONTROL VERTICAL (BM)

PERÚ Ministerio de Transportes y Comunicaciones Provias Nacional

Compañía de Minas Buena Ventura

HOB CONSULTORES S.A. CALLE AGUADA BLANCA N° 102 - LIMA 33 - PERU

Jefe Estudio: ING. CESAR GUEVARA Especialista: ING. CARLOS URQUIAGA

REVISIONES

N°	FECHA	DESCRIPCION

ESTUDIO DEFINITIVO DE LA REHABILITACION Y MEJORAMIENTO CARRERA: HUANCAMELICA - LIRCAY TRAMO: 1+550(Av. Los Chancas)-LIRCAY CONTRATO N° 7341-2012

PLANO DE GEOREFERENCIACION COORDENADAS TOPOGRAFICAS 7341-12-PGT-02