

Proposal for Taking the Current Cadastre to a 3D, LADM Based Cadastre in Trinidad and Tobago

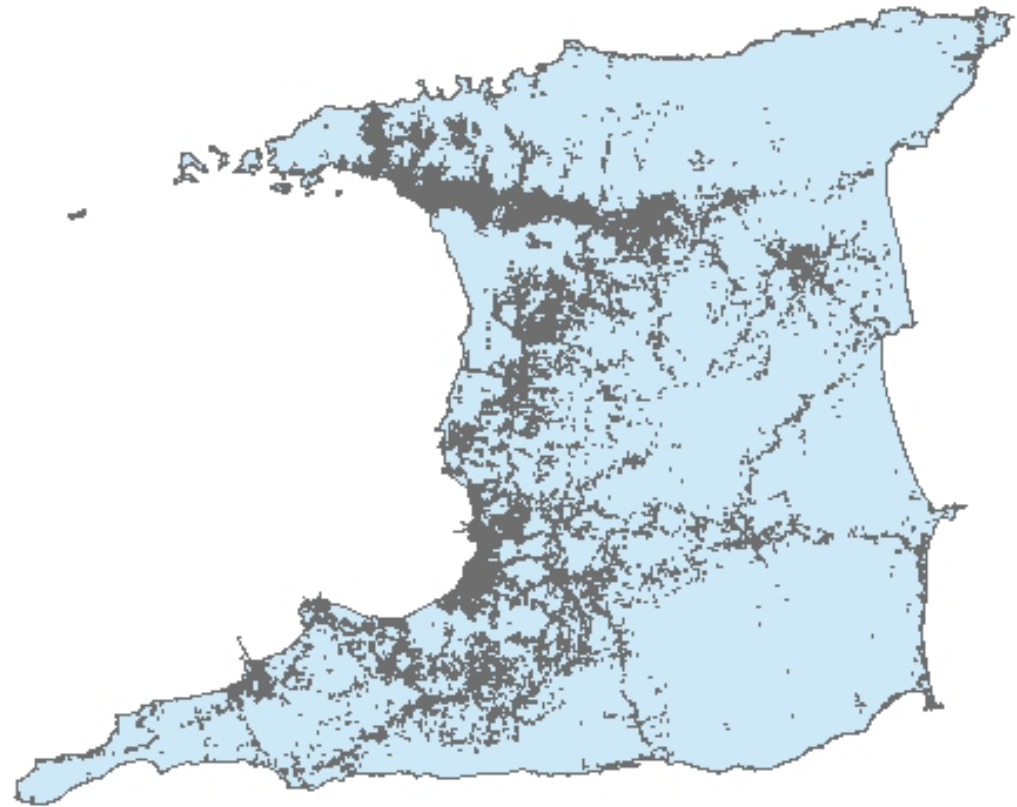
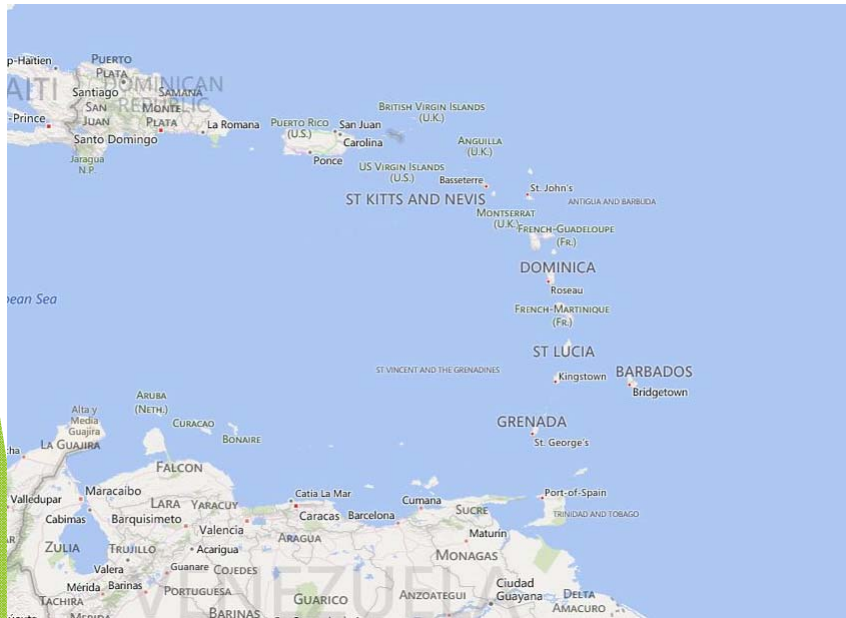
Charisse Griffith-Charles and Earl Edwards
Department of Geomatics Engineering and Land Management,
The University of the West Indies, St. Augustine,
Trinidad and Tobago

Outline

- ▶ Justification for project
- ▶ Legislation on visualisation of cadastre
- ▶ Current visualisation
- ▶ Proposed visualisation
- ▶ Recommendations

Justification for 3d cadastre

- Building density concentration



Justification for 3d cadastre

- ▶ Property price increases

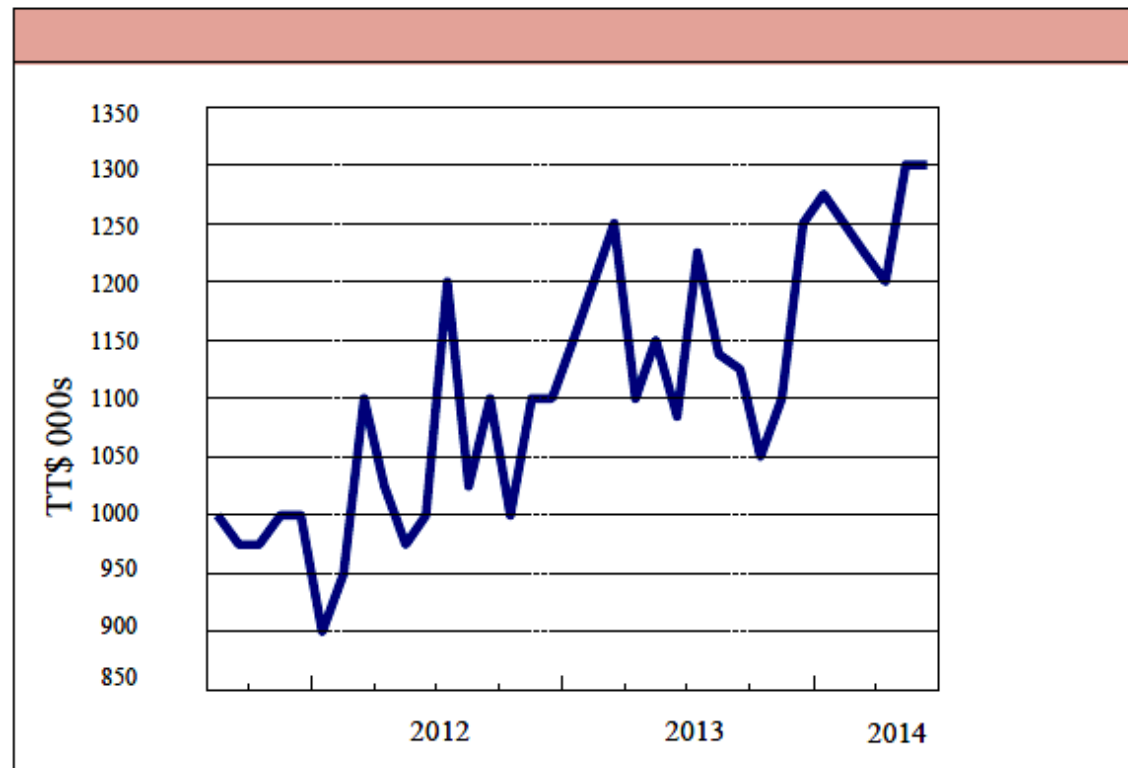
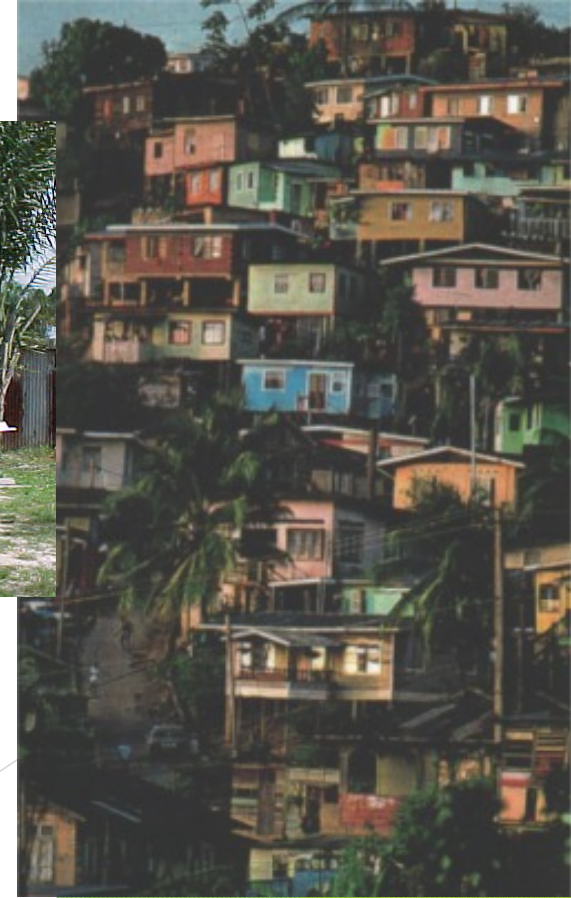


Figure 2. Median property price increases 2012 to 2014 in Trinidad and Tobago (Central Bank of Trinidad and Tobago 2014)

Justification for 3d cadastre

World Bank - Ease of Doing Business Registration of Property Ranking

Country	Rank (1 to 189 best to worst)
Georgia	1
UAE	4
Trinidad and Tobago	159



QUICK LINKS

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RECENT ADDITIONS

The Summit, Moka
Beds/Baths: 3/3.5
TT\$6,500,000
View Details

The Summit, Moka



The Summit, Moka - CNP9057

SHARE [Facebook] [Twitter] [Email]



Area

» Moka

Price

» TT\$6,500,000

Beds/Baths

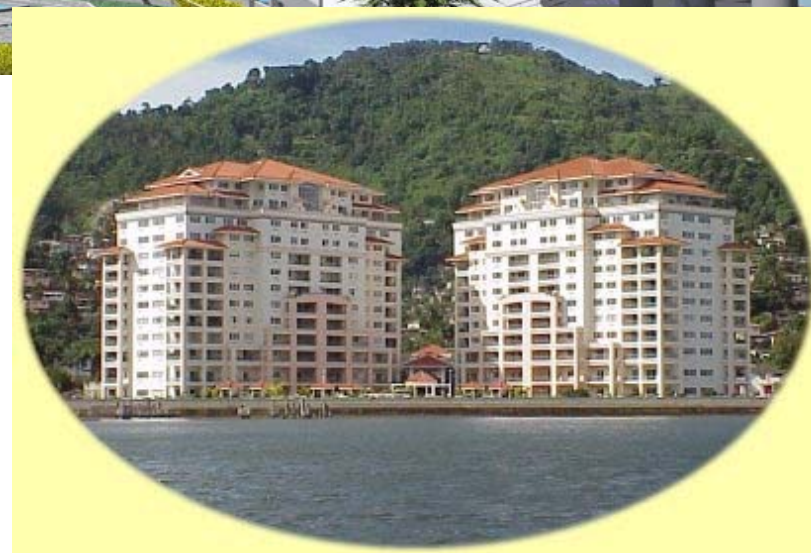
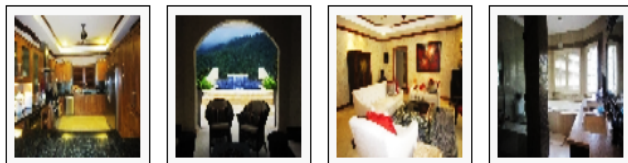
» 3 / 3.5

Type

Status

» For Sale

Bookmark or share this property information with someone: SHARE [Facebook] [Twitter] [Email]

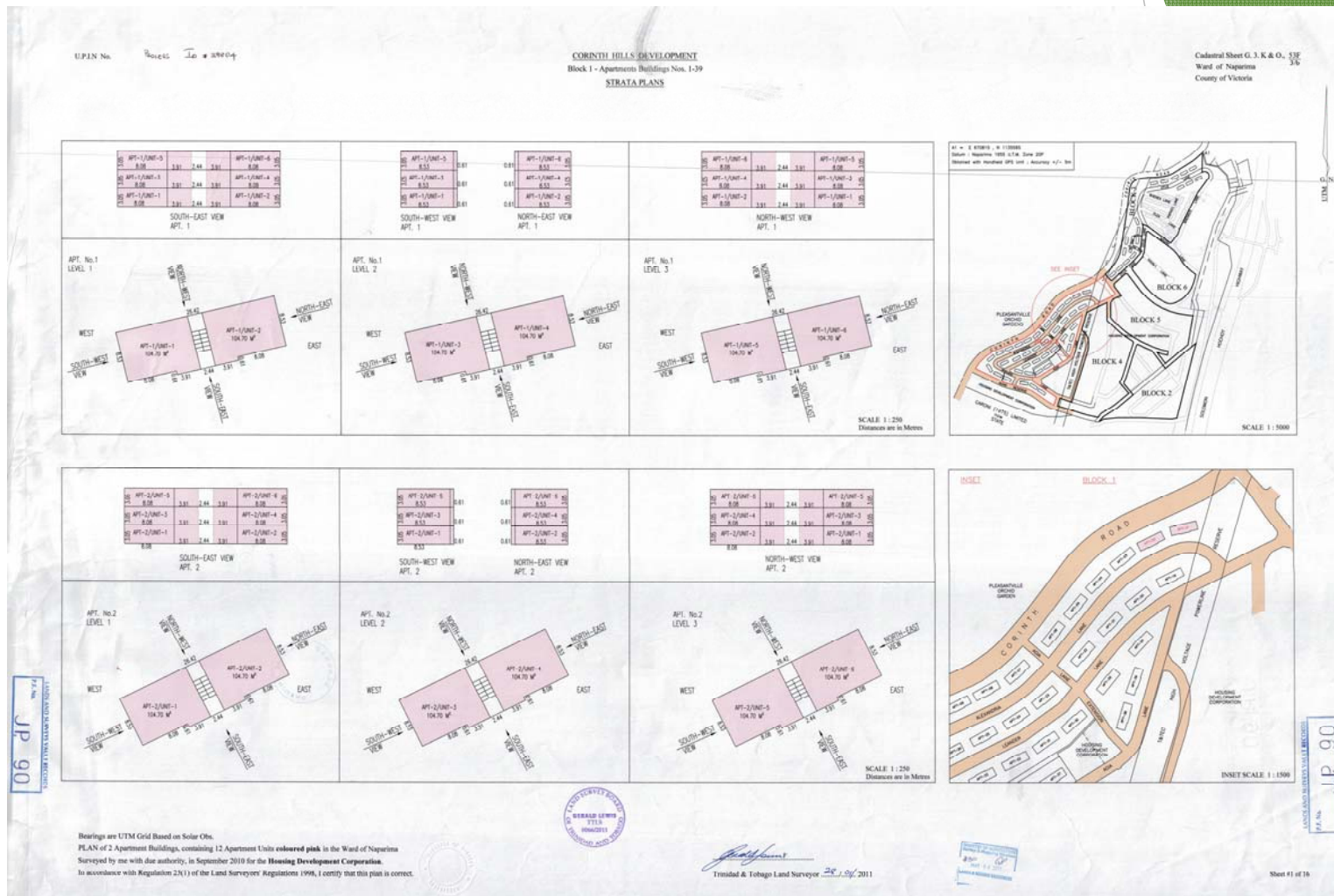




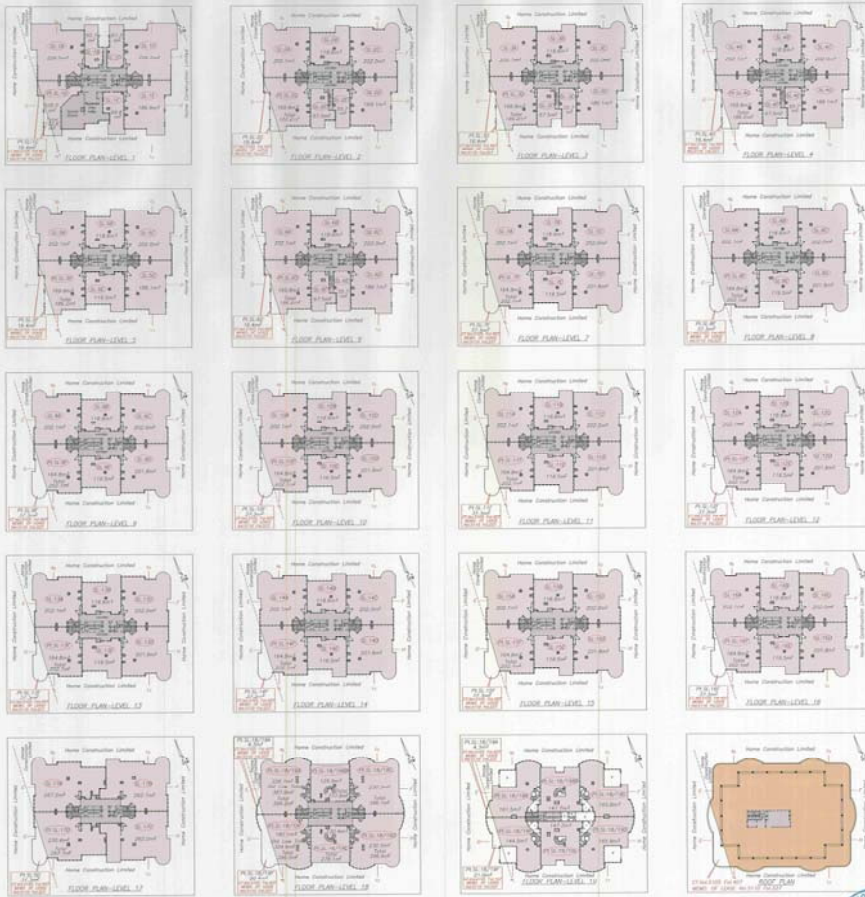
legislation

- ▶ Real Property Act Chapter 56:02 states:
- ▶ Every map, plan or diagram required for the purposes of this Act shall be prepared and furnished in the manner specially provided for the purpose by the Land Surveyors Act and by Rules made thereunder.
- ▶ The Rules require:
- ▶ for condominiums and townhouses a location plan, strata plans for each floor, and elevation plans for each façade.

Current Visualisation



JD 14152



ALL DIMENSIONS IN METERS
 UNLESS OTHERWISE SPECIFIED
 DIMENSIONS TO FACE UNLESS NOTED OTHERWISE
 DIMENSIONS TO CENTERLINE UNLESS NOTED OTHERWISE

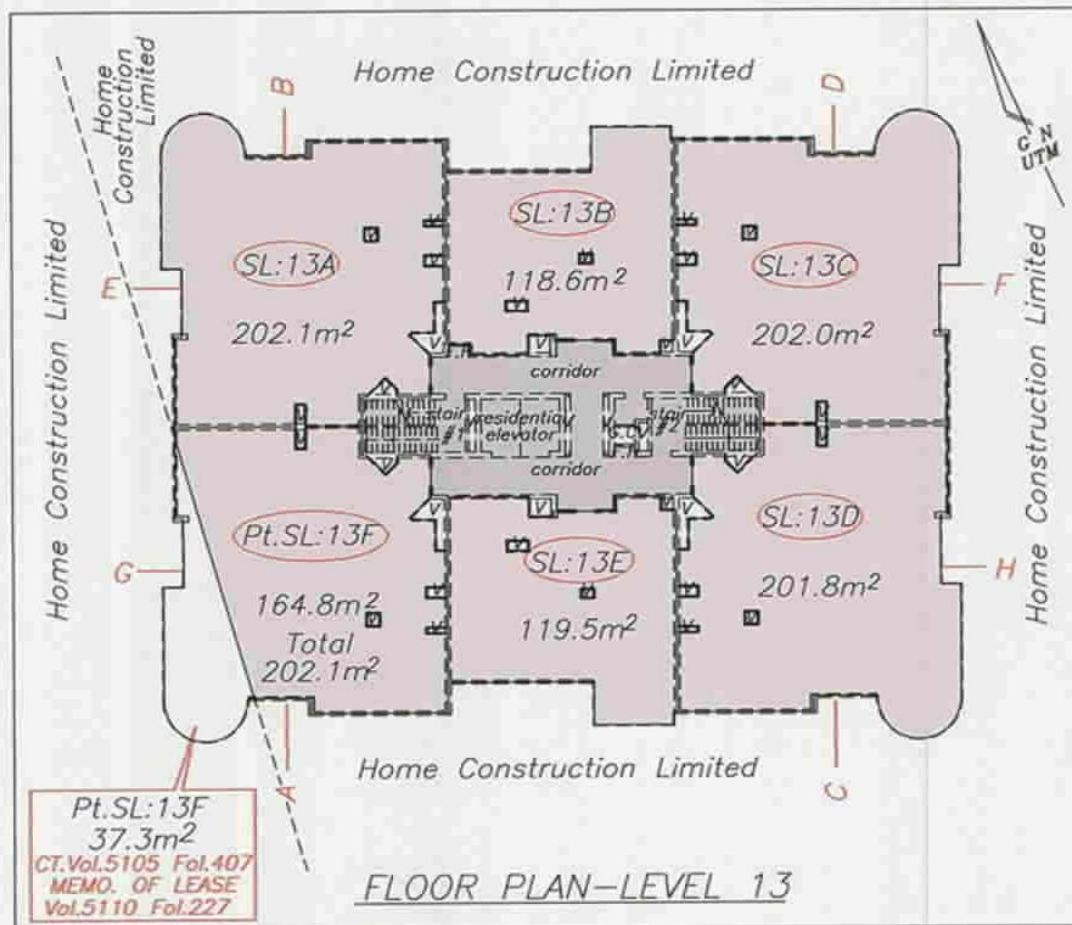
PLAN showing 19 floor store within Tower No.2 and 111 white hole indicated zone in the City of Port of Spain.
 (including Regulation 1000 zone and 1000 zone and 1000 zone)

Designed by me with due authority on January 2020 for Home Contribution Limited
 In accordance with Regulation 21 (1) of the Land Surveyors' Regulations 1998.
 I certify that this plan is correct.

Checked by: *[Signature]*
 Entered: *[Signature]*

Prepared at Village Land Surveyors, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.



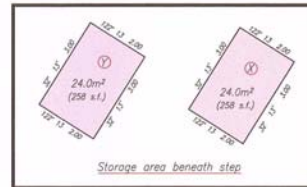


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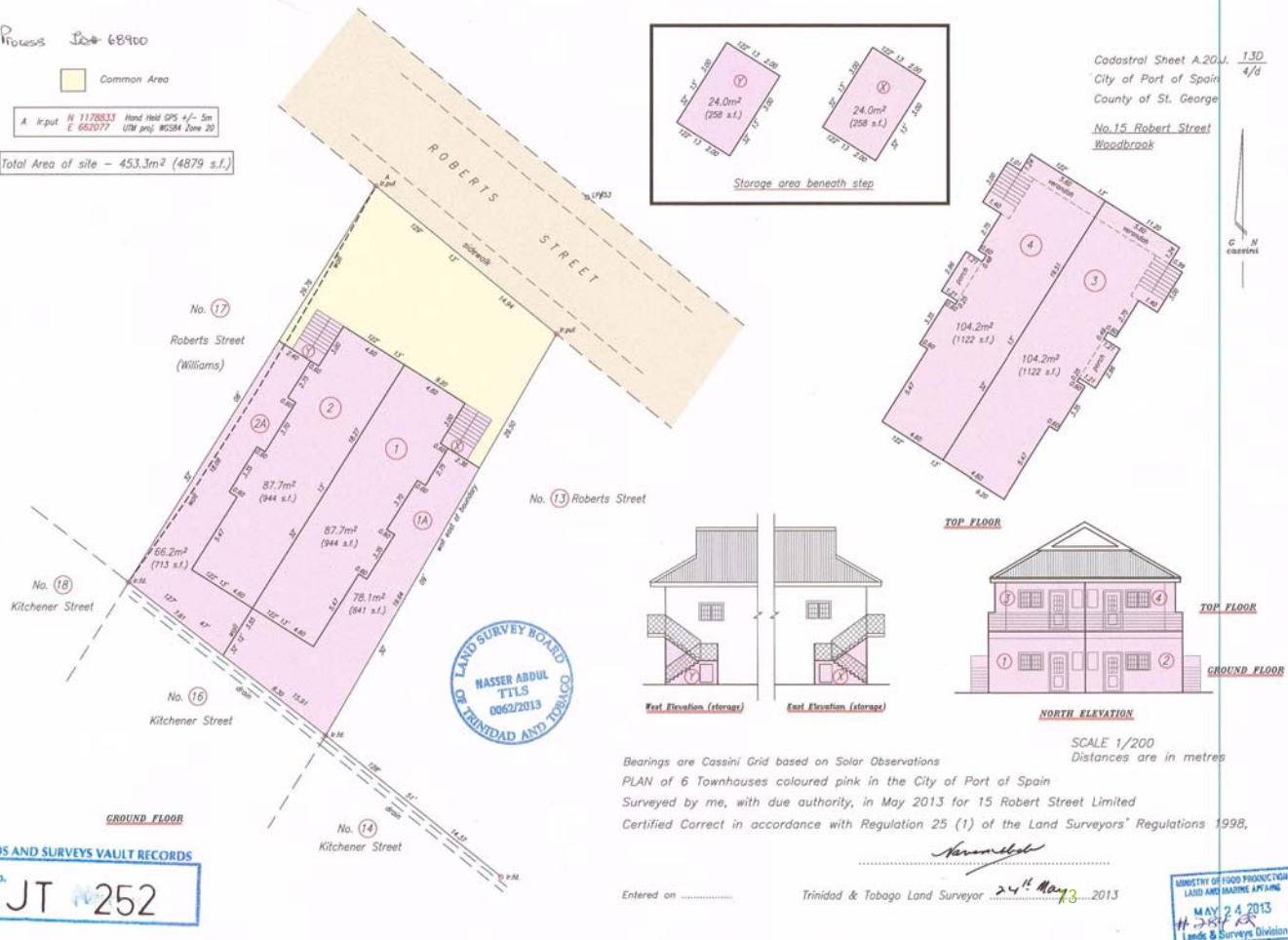
Common Area

A Input N 1178833 Hand Held GPS +/- 5m
E 662077 UTM proj. WGS84 Zone 20

Total Area of site - 453.3m² (4879 s.f.)



Cadastral Sheet A.20.J. 130
City of Port of Spain 4/d
County of St. George
No.15 Robert Street
Woodbrook



LAND SURVEY BOARD
OF TRINIDAD AND TOBAGO
HASSEER ABDUL
TTLS
0062/2013



SCALE 1/200
Distances are in metres

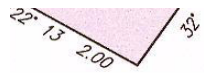
Bearings are Cassini Grid based on Solar Observations
PLAN of 6 Townhouses coloured pink in the City of Port of Spain
Surveyed by me, with due authority, in May 2013 for 15 Robert Street Limited
Certified Correct in accordance with Regulation 25 (1) of the Land Surveyors' Regulations 1998.

Handwritten signature

Entered on Trinidad & Tobago Land Surveyor 24th May 2013

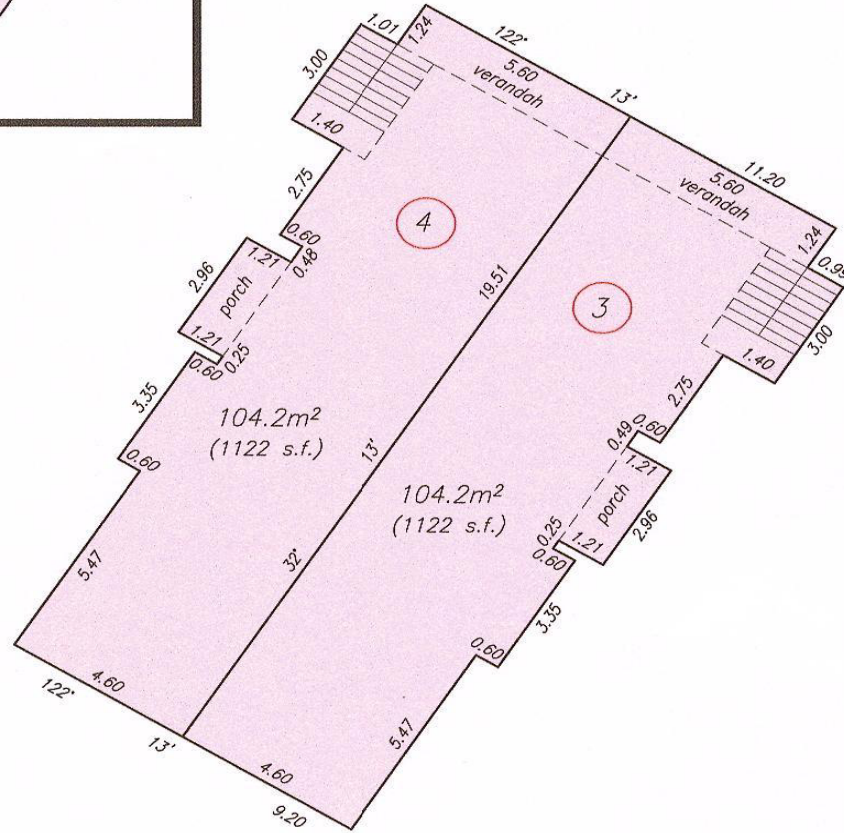
LANDS AND SURVEYS VAULT RECORDS
P.F. No. JT 252

MINISTRY OF FOOD PRODUCTION
LAND AND MARINE AFFAIRS
MAY 24 2013
Land & Survey Division



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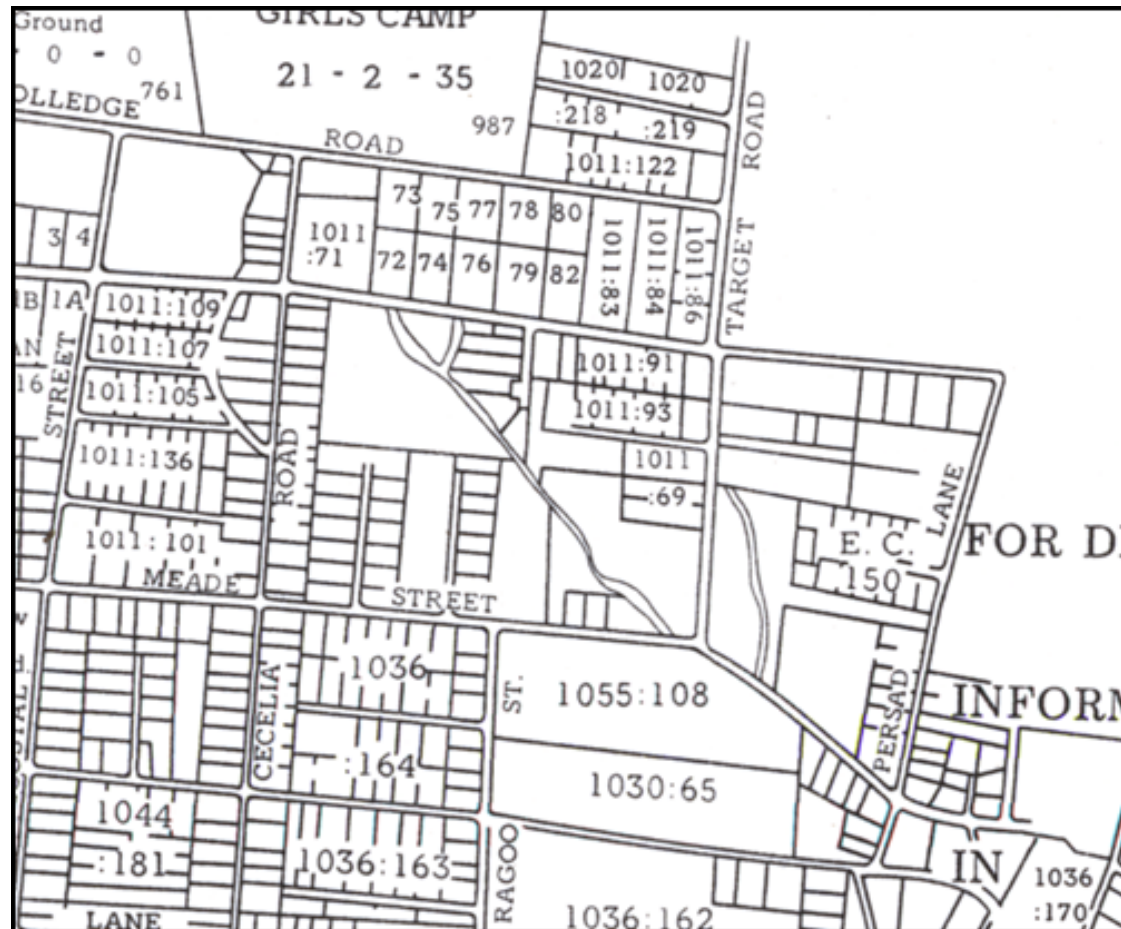
Woodbrook

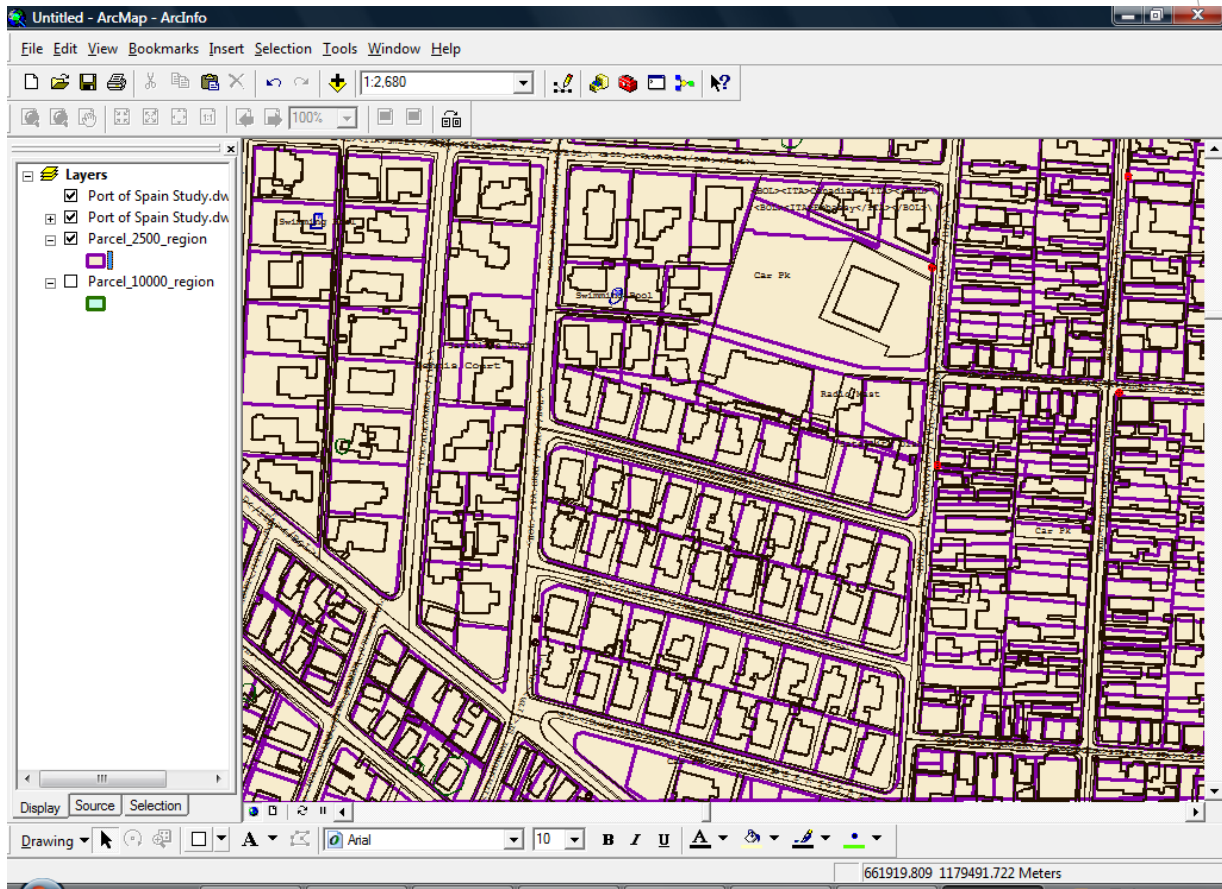


TOP FLOOR



Current Visualisation





Untitled - ArcMap - ArcInfo

File Edit View Bookmarks Insert Selection Tools Window Help

1:2,680

46%

Layers

- Port of Spai
- Port of Spa
- Parcel_2500
- Parcel_1000

Attributes of Parcel_2500_region

FID	Shape *	PARCELNO	PARCELOWNE	AREA_ACRE	AREA_SF	AREA_SM	AREA_HA	LANDUSENO	LANDUSETYP
0	Polygon		Waterloo Estate					1	Parcel
1	Polygon		Felicity Cemetery	0-3-2				1	Parcel
2	Polygon							1	Parcel
3	Polygon							3	Roads
4	Polygon							1	Parcel
5	Polygon		Felicity Estate	1762-2-35				1	Parcel
6	Polygon		Wesleyan Methodist Church Lands					1	Parcel
7	Polygon							1	Parcel
8	Polygon							3	Roads
9	Polygon		Roy Dyett					1	Parcel
10	Polygon	1			760.6			1	Parcel
11	Polygon	2			854.9			1	Parcel
12	Polygon		Hrs. of D. Maraj					1	Parcel
13	Polygon							3	Roads
14	Polygon	3			539.9			1	Parcel
15	Polygon	4			540.4			1	Parcel
16	Polygon	1						7	US Parcel
17	Polygon							1	Parcel
18	Polygon		Jolly Gerro					1	Parcel
19	Polygon							3	Roads

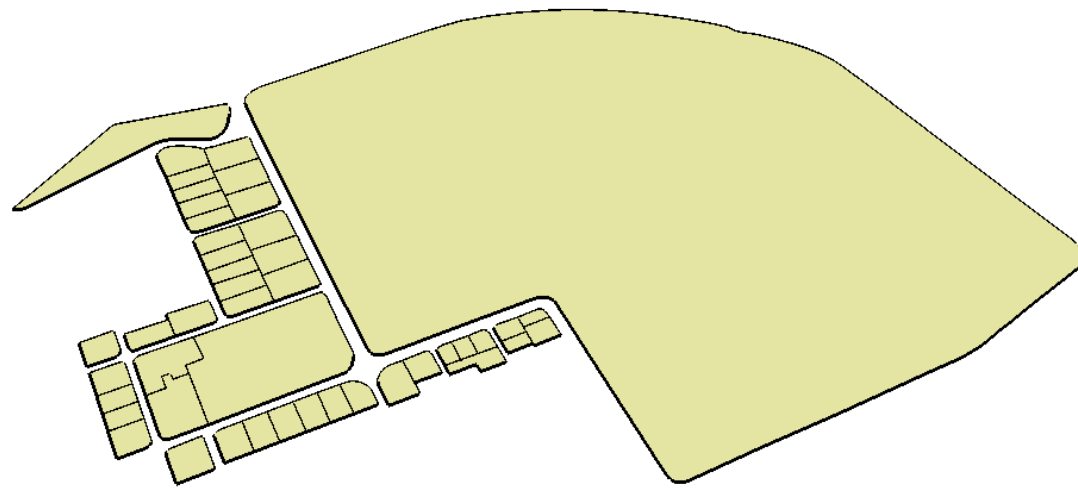
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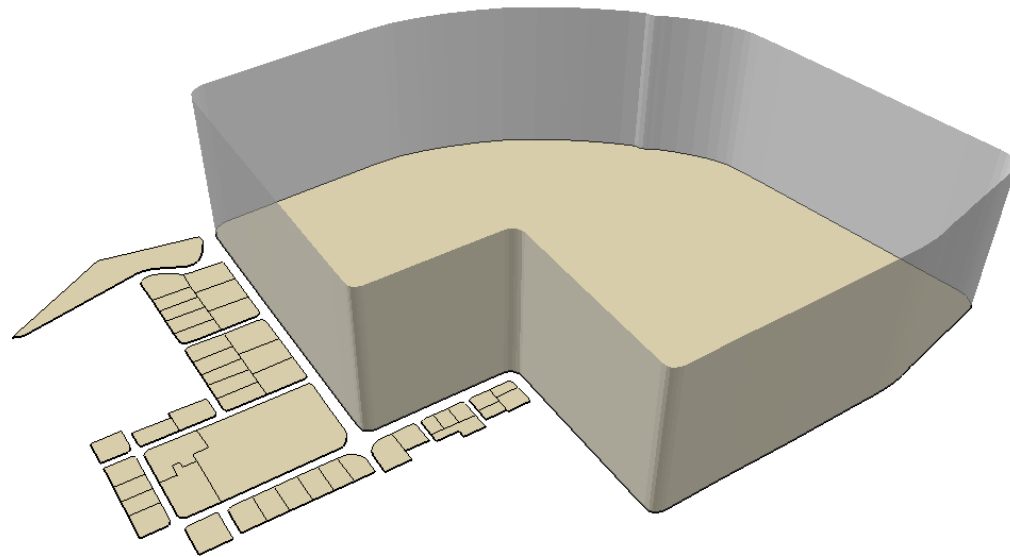
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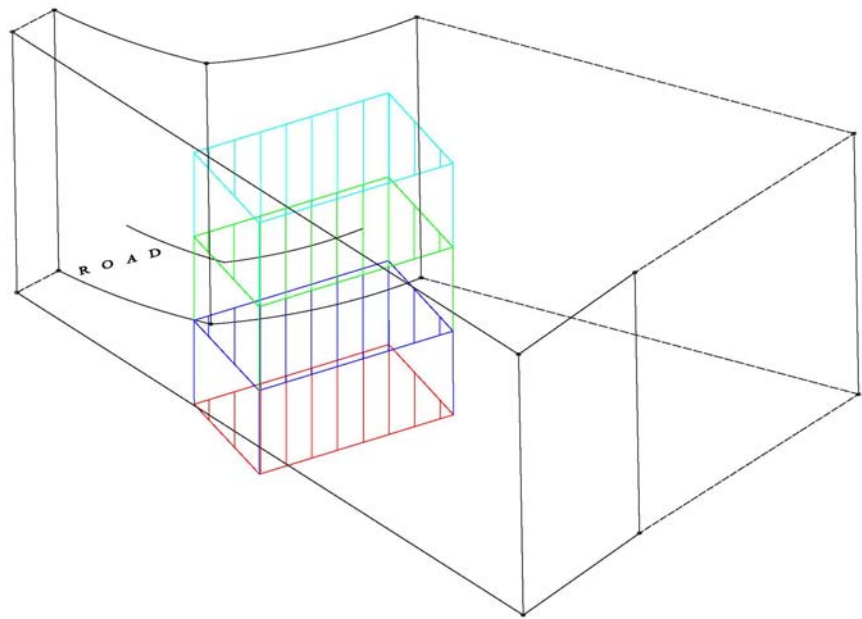
Drawing Arial 10 B I U A

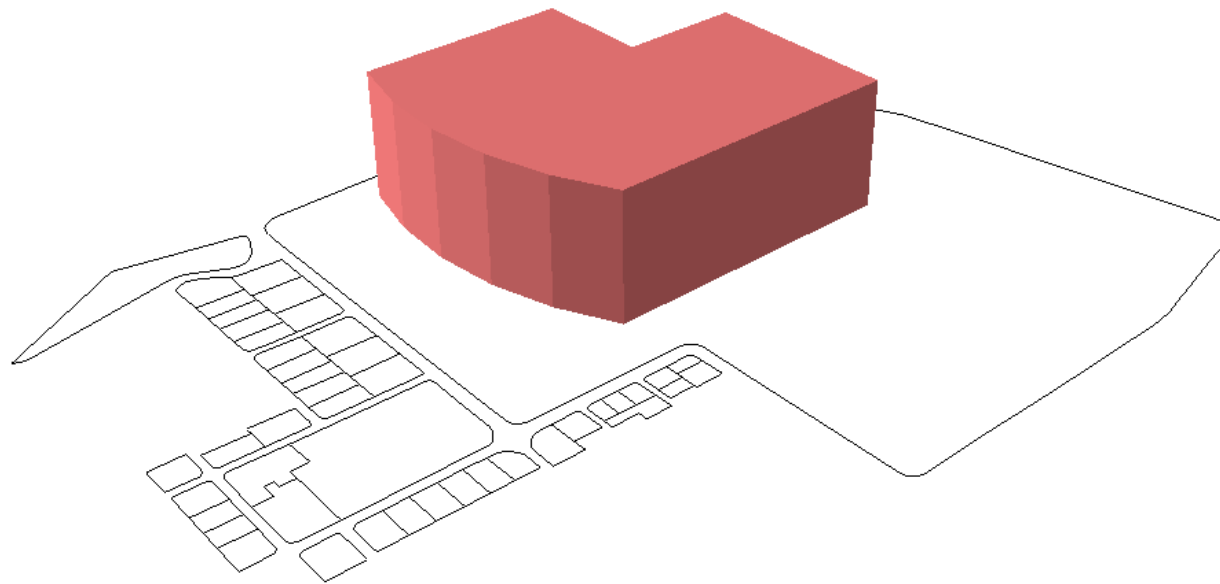
Open attribute table for this layer 661878.687 1179227.972 Meters

Proposed Visualisation

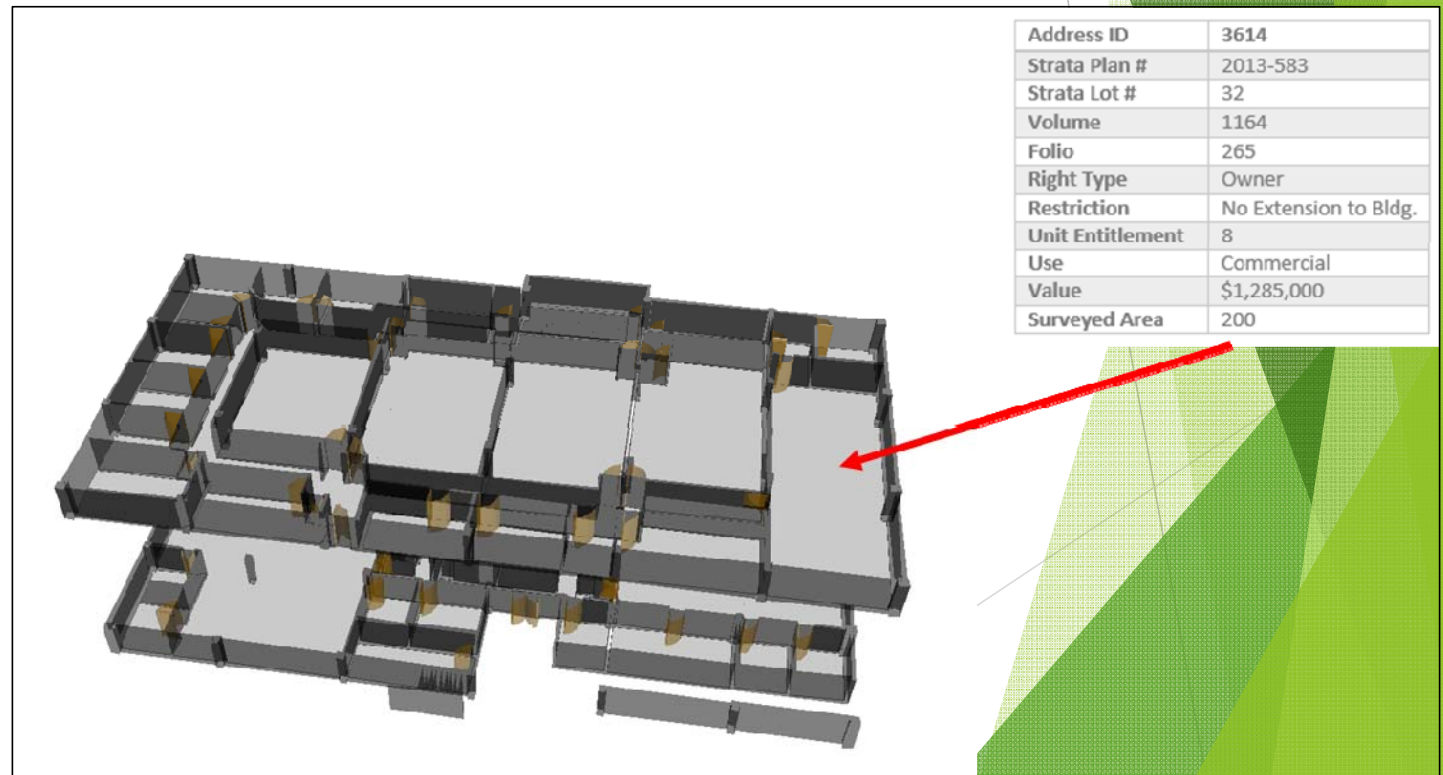
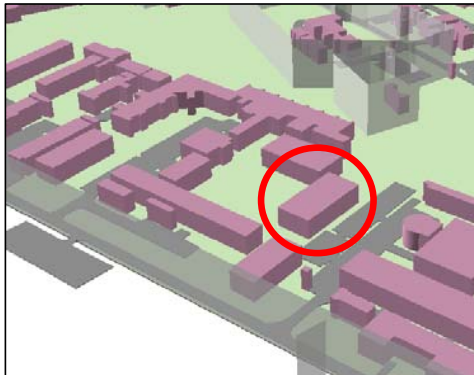








Recommendation - LADM Prototype

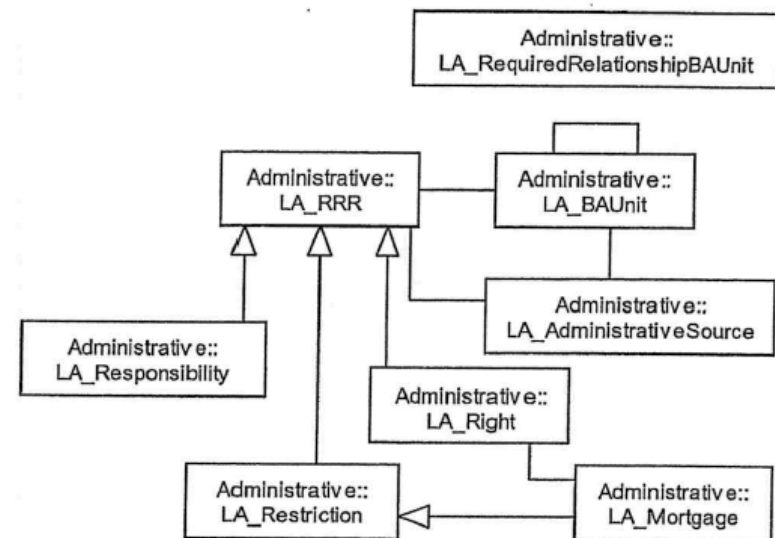
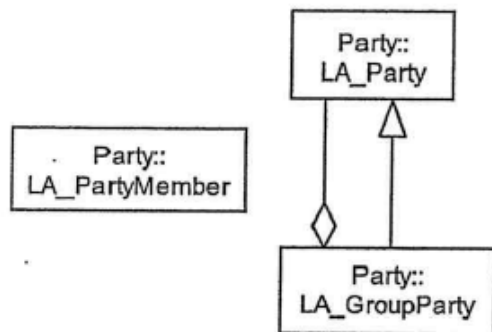


Address ID	3614
Strata Plan #	2013-583
Strata Lot #	32
Volume	1164
Folio	265
Right Type	Owner
Restriction	No Extension to Bldg.
Unit Entitlement	8
Use	Commercial
Value	\$1,285,000
Surveyed Area	200

Attribute Name	Field Type	Width	Example	Remarks
Address ID	Integer	50	5631	Link to external address table
Strata Plan #	Text	100	2014-48	Number assigned by recording agency
Strata Lot #	Text	15	F116	Unique ID for Lot
Volume	Short Integer	5	1164	Book recording title information
Folio	Short Integer	5	465	Entry number in that book
Right Type	Text	100	Owner	Type of possession
Restriction	Text	255	No extension of apartment allowed	Restrictive covenants
Unit Entitlement	Short Integer	25	4	Undivided shares in common area
Use	Text	100	Residential	Permitted use of strata lot
Value	Double		100000.00	Valuation at time of transaction in TT\$
Surveyed Area	float		85.3	Floor Area recorded on survey plan in sq. m

LADM Structure - Party Package

LADM	TTLADM	Definition
LA_Party	TTLA_Party	Unit owner
LA_GroupParty	TTLA_GroupParty	Condominium company
LA_PartyMember	TTLA_PartyMember	Unit owner/company member



Proposal for Taking the Current Cadastre to a 3D, LADM Based Cadastre in Trinidad and Tobago

Dr Charisse Griffith-charles and Dr Earl Edwards
Department of geomatics engineering and land management,
The university of the west indies, st. Augustine,
Trinidad and Tobago