

**CENTRAL MICHIGAN UNIVERSITY SURVEY CONTROL**

By Rowe Incorporated, August 2008

Horizontal Datum: NAD83/CORS96 MCS South Zone, OPUS GEOID03

Vertical Datum: NAVD88 referenced to NGS benchmarks T84 and S84

PROJECT COMBINED SCALE FACTOR: 0.9999493628

GRID DISTANCE/COMBINED SCALE FACTOR = GROUND DISTANCE

<b><u>Elevation</u></b>	<b><u>Northing/ Easting</u></b>	<b><u>Description</u></b>	<b><u>Location</u></b>	<b><u>Witnesses</u></b>
777.28	N= 763273.498 E= 13013633.655	<b>CP#1</b> 1/2" re-rod in concrete monument with aluminum cap	South end curb island in Northwest apartments SE Parking lot	S30E 9.00' NW leg "North West Apartment Parking Lot" sign N75E 61.28' SW corner light pole base NORTH 15.93' Center deciduous tree S45W 18.60' SW corner of Walk
784.47	N= 762532.533 E= 13016678.214	<b>CP#2</b> 1/2" re-rod in concrete monument with aluminum cap	NE corner parking lot 20, 15'± West on back of curb East Campus Drive	WEST 69.73' SE corner, light pole base NORTH 83.70' SSW bolt light pole base S15W 44.32' NNE bolt light pole base N60E 16.76' back of curb
785.80	N= 761170.319 E= 13016679.485	<b>CP#3</b> 1/2" re-rod in concrete monument with aluminum cap	50'± West of centerline East Campus Dr., 60'± South of Jack Saunders Marching band tower	EAST 39.50' West edge pavement S30W 73.56' NW corner metal CMU sign S10E 98.31' North face pine N10E 60'± SE corner band tower
781.86	N= 760590.852 E= 13013953.845	<b>CP#4</b> 1/2" re-rod in concrete monument with aluminum cap	NW corner of NW parking lot for residence towers, East of West Campus Drive	NORTH 39.24' SE bolt light pole base S60W 51.08' center of light pole EAST 47.45' center of manhole N30W 34.80' center of manhole
805.88	N= 758506.547 E= 13016187.446	<b>CP#5</b> 1/2" re-rod in concrete monument with aluminum cap	Between two ponds 900'± North of stadium, 900'± East of SAC, midway up hill.	S80W 40.14' center of manhole N45W 53.99' SE face pine tree N70E 43.35' West face pine tree South 76.45' highest point on large rock
797.79	N= 757411.027 E= 3015269.833	<b>CP#6</b> 1/2" re-rod in concrete monument with aluminum cap	South end of fenced in area surrounding soccer field & track, 20'± East & 10' North of intersection of bit path & rubberized path	N30E 85.83' SE corner shotput pit SOUTH 6.28' centerline Westerly fence post S80E 19.75' NW corner light pole base N25E 63.33' SW corner shotput pit

## CENTRAL MICHIGAN UNIVERSITY BENCHMARK LIST

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<u>Elevation</u>	<u>Northing/Easting</u>	<u>Description</u>	<u>Location</u>
786.26	N = 761822 E =13016719	<b>BM#1002</b> Top NE corner metal light pole base	SW quad East Campus & Preston, 55'± South of C/L Preston & 30'± West of C/L E. campus
786.66	N = 761276 E =13016700	<b>BM#1003</b> Top NE corner concrete of pad	Jack Saunders Marching band field tower
793.17	N = 760334 E =13016683	<b>BM#1005</b> Top SSE flange bolt hydrant	West side East Campus Drive by Central Energy Facility
802.59	N = 759583 E =13016572	<b>BM#1007</b> Top East corner concrete base	CMU Welcome Center/Public Broadcasting sign
804.87	N = 759073 E =13016304	<b>BM#1009</b> Top East side concrete light pole base	SW quad Broomfield & E. Campus Drive
803.71	N = 758450 E =13015699	<b>BM#1012</b> Top SW corner concrete wall	Wall around SE columns for covered front entrance to SAC
798.23	N = 757966 E =13015446	<b>BM#1014</b> Top West side concrete light pole base	NE corner of soccer stadium at North end of long jump pit

<u>Elevation</u>	<u>Northing/Easting</u>	<u>Description</u>	<u>Location</u>
793.70	N = 757126 E = 13014047	<b>BM#1017</b> Top middle of 1 <sup>st</sup> step	E'ly main concrete Stairway to Theunissen Stadium
791.44	N = 757578 E = 13014247	<b>BM#1018</b> Top West side concrete light pole base	West side of West Campus Drive 2 <sup>nd</sup> light pole North of entrance to Theunissen Stadium parking lot
793.13	N = 758539 E = 13013767	<b>BM#1020</b> Top East side concrete light pole base	West side of West Campus Drive 2 <sup>nd</sup> light pole South of entrance to Kewadin Village apartments
790.09	N = 759299 E = 13014092	<b>BM#1022</b> Top SW flange bolt on hydrant	East side of 7-11 parking lot
783.63	N = 760054 E = 13014572	<b>BM#89</b> Top of NE flange bolt on hydrant	NE quad Washington & Ojibway
776.37	N = 761651 E = 13013888	<b>BM#1027</b> Top SW corner concrete sign base for University Events/General counsel	East side West Campus Drive 150'± South of Preston Street
785.43	N = 762403 E = 13014086	<b>BM#1029</b> Top West side concrete light pole base	42'± East of SE corner West Hall
784.59	N = 763148 E = 13014117	<b>BM#1034</b> NW corner concrete base for Trout Hall sign	10'± South of S. edge Bellows Street
787.63	N = 763154 E = 13014544	<b>BM#1035</b> NW corner concrete base for CMU direction sign	SE quad Washington & Bellows
784.27	N = 763180 E = 13015377	<b>BM#1037</b> Top North side concrete light pole base	SW quad Bellows & Franklin

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784.37	N = 762753 E =13016399	<b>BM#1039</b> Top of hydrant	North side of East entrance to Lot 8, 150'± SW of Rowe Hall & 95'± West of East Campus Drive
787.14	N = 761347 E =13016280	<b>BM#1041</b> Top South side concrete light pole base "H63"	Middle of row "C" in parking lot East of Music building
793.25	N = 761647 E =13015554	<b>BM#79</b> Top SE corner metal light pole base	East side of Library
793.64	N = 761485 E =13015452	<b>BM#80</b> Top SE flange bolt hydrant	80'± SE of Library
795.51	N=761110 E =13015420	<b>BM#1045</b> Yellow paint square on top West side raised concrete Collar for manhole	East of sidewalk along East side of Brooks Hall
792.93	N = 760862 E =13015405	<b>BM#5307</b> Top SSW flange bolt hydrant	NE corner Dow Science Building
790.72	N = 760555 E =13015397	<b>BM#86</b> Chiseled square on top South side concrete light pole base	North side of Ottawa, NE of Education & Human Services building
785.22	N = 760551 E =13014167	<b>BM#1050</b> Top South side concrete light pole base	NE corner parking lot North of Residence Towers, 60'± West of Rail Road tracks