

REPORT TO THE LEGISLATURE
Pursuant to P.A. 166 of 2022,
Section 312
Michigan State Industries Annual Report

Sec. 312. From the funds appropriated in part 1, the department shall provide a report on the Michigan state industries program by December 1. The report shall include, but not be limited to, the locations of the programs, the total number of participants at each location, a description of job duties and typical inmate schedules, the products that are produced, and how the program provides marketable skills that lead to employable outcomes after release from a department facility.



MICHIGAN STATE INDUSTRIES
Building Bridges to Success

Michigan State Industries (MSI) serves as the prison industries program for the Michigan Department of Corrections and the State of Michigan. It is required by statute (Act 232 of 1953 as amended and PA 15 of 1968 as amended in Michigan) to operate as a receipt funded self-supporting system, without general fund/general purpose appropriations. The revenues it raises are deposited in the Correctional Industries Revolving fund within the Department of Treasury. Currently Michigan State Industries operates 12 factories at 9 locations across the state.

MSI's current operations are guided by four criteria:

1. Operate within the state and federal laws as they pertain to prison industries; selling to legal customer, limited ability to ship across state and federal lines, as well as requirements to provide prisoners for private industry employment while not directly competing with Michigan business owners (PICEP).
2. Provide meaningful work experience and training for prisoner employees to facilitate employability upon parole/release. Both specific work skills and soft skills such as interviewing, accepting constructive criticism, respectfulness, reporting to work on time and appropriately attired and working with others.
3. Provide for ALL operational costs of the program out of existing program revenues, including factories, equipment, civilian staff, etc.
4. Comply with all state of Michigan policies and procedures including procurement set asides and purchasing limits while at the same time complying with generally accepted accounting principles for business operations.

The Shoe Factory is located at the Bellamy Creek Correctional Facility (IBC) 1727 West Bluewater Hwy. in Ionia, Michigan 48846. IBC houses Level IV, II and I prisoners, with a net operating capacity of 1,835 beds and supervised by Warden Matt Macauley. This factory operates five days per week and inmates are scheduled to work from 6:45 am to 1:35 pm. The Shoe Factory employs Level II prisoners only and manufactures leather oxford shoes and boots for both prisoners and MDOC custody staff. It also produces orthopedic shoes as directed from a prescription from MDOC Health Care staff. Officer leather belts are also manufactured at this facility.

This factory employs a total of 2.5 civil service employees, including .5 Industries Supervisor 13 and 2 Industries Production Leaders 9-E10. It also employs a total of 45 prisoner workers. Prisoner workers are as follows (including SOC Codes) as of the end of September 2022:

1	Janitor and Cleaners – Porter	37-2011
1	Stock Clerk and Order Filler	43-5081
1	Office Clerk	43-9061
1	Machine Maintenance and Repair	49-9043
21	Shoe and Leather Worker	51-6041
12	Shoe Machine Operator	51-6042



Marketable Skills:

Inmates learn the soft skills needed to be successful in today’s job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as machine operators, machine repair and maintenance, shoe and leather production, office clerks, shipping and receiving duties, inventory control, machine operation, safety skills, quality control, production manufacturing, stock clerk/order fulfillment, time and attendance, teamwork.

The License Plate Factory is located at the Gus Harrison Correctional Facility (ARF) 2727 East Beecher Street in Adrian, Michigan 49221. ARF houses Level IV, II and I prisoners, with a net operating capacity of 1,057 beds and is supervised by Warden Sherman Campbell. The License Plate Factory operates four days a week and inmates are scheduled to work from 6:15 am to 3:25 pm. The License Plate Factory employs Level I prisoners only and provides both license plate manufacturing services for the Michigan Secretary of State and custom fund-raising plates for individual groups. It also produces acrylic awards, a large array of custom vinyl products, a variety of laser cut wood products such as cutting boards, mitten clocks, Lazy Susan and of course the famous license plate birdhouses.

This factory employs a total of 5 civil service employees, including 1 Industries Supervisor 12 and 4 Industries Production Leaders 8-E10. It also employs a total of 50 prisoner workers. Prisoner workers are as follows (including SOC Codes) as of the end of September 2022:

1	Janitor and Cleaners – Porter	37-2011
2	File Clerks	43-9061
10	Crew Leaders, Assistants	49-9042
2	Machine Maintenance and Repair	49-9043
15	Press Machine Setters, Operators	51-4031
20	Laborers, Freight, Stock	53-7062



Marketable Skills:

Inmates learn the soft skills needed to be successful in today’s job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as machine operators, machine repair and maintenance, office clerks, shipping and receiving duties, quality assurance managers, stock clerks, material cutters, order fulfillment, crew leaders, sewing machine operators, stock clerks, order fillers, quality control inspectors. Upon being awarded, parole civilian companies are notified of paroling inmates for possible job placement. Many companies have reached out to our factory in search of our highly skilled inmates for employment.

The Sign Shop is located at the Bellamy Creek Correctional Facility (IBC) 1727 West Bluewater Hwy. in Ionia, Michigan 48846. IBC houses Level IV, II and I prisoners, with a net operating capacity of 1,669 beds and supervised by Warden Matt Macauley. The factory operates 5 days per week and inmates are scheduled to work from 6:45 am to 1:35 pm. The Sign Shop Employs Level II prisoners only and provides road signs to customers across the state of Michigan, both within the MDOC and throughout state government, county road commissions and others. Additional products include Trail Signs, Labels, Decals, Banners, Recycle Signage, Wooden Signage and Apparel Screening.

This factory employs a total of 2.5 civil service employees, including .5 Industries Supervisor 13 and 2 Industries Production Leaders 9-E10. It also employs a total of 22 prisoner workers. Prisoner workers are as follows (including SOC Codes) as of the end of September 2022:

2	Graphic Designers	27-1024
1	Janitor and Cleaners – Porter	37-2011
1	Office Clerk	43-9061
3	Painting, Coating and Decorating Workers	51-9123
2	Photographic Process Workers & Processors	51-9194
13	Laborers and Freight	53-7062



Marketable Skills:

Inmates learn the soft skills needed to be successful in today’s job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as machine operators, machine repair and maintenance, CNC programmers, graphic designers, press machine setters/operators, painting, coating and decorating workers, photographic process workers/processors, office clerks, stock handlers, shipping and receiving duties.

Mattress Factory is located at the G. Robert Cotton Correctional Facility (JCF) 3500 N. Elm Road in Jackson, Michigan 49201. JCF houses Level I, II and IV prisoners, with a net operating capacity of 1,642 beds and supervised by Warden Noah Nagy. The factory operates five days a week and inmates are scheduled to work from 6:35 am to 2:15 pm. Only level I and II prisoners are employed in the Mattress Factory. This factory produces mattresses, pillows, laundry bags, jumpsuits, prisoner shirts, dog beds, shower curtains and non-custody outerwear for the MDOC. Its customer base also includes many of the State's County jail programs, DNR campgrounds, Veterans Hospitals, Psychiatric Hospitals, and has begun exploring the non-profit hospital markets.

This factory employs 2 civil service employees, including 1 Industries Supervisor 12, and 1 Industries Production Leader and a total of 40 prisoner workers. Prisoner workers are as follows (including Standard Occupational Classification (SOC) Codes) as of the end of September 2022:

0	Porter	37-2011
1	Shipping, Receiving Clerk	43-5071
1	Stock Clerk and Order Filler	43-5081
2	Maintenance and Repair	49-9043
36	Sewing Machine Operator	51-6031



Marketable Skills:

Inmates learn the soft skills needed to be successful in today's job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as machine operators, machine repair and maintenance, office clerks, shipping and receiving duties, quality assurance managers, stock clerks, order fulfillment, crew leaders, sewing machine operators, stock clerks, order fillers, quality control inspectors.

The Janitorial Factory is located at the Parnall Correctional Facility (SMT) 1780 East Parnall Rd. Jackson, Michigan 49201. The Parnall Correctional Facility opened in 1926 and is a Secure Level I (minimum security section of the former State Prison of Southern Michigan).

SMT has a net operating capacity of 1,501 and houses level one adult male prisoners ranging from 18 years of age and older. The facility serves as an in-reach site for the entire state of Michigan as we parole returning citizens to all 83 counties within Michigan. As an in-reach facility, we are charged with the task of readying prisoners for a successful transition to their community. The Janitorial Factory operates 5 days a week and inmates are scheduled to work from 6:30 am to 1:45 pm.

This factory employs a total of 3 civil service employees, including 1 Industries Supervisor 12 and 2 Industries Production Leaders. It also employs (depending on workload) a total of 20 prisoner workers. Prisoner workers are as follows (including SOC Codes) as of September 2022.

1	Porter/Cleaner	37-2011
2	Mixing and Blending Machine Setters, Hi-Lo Trainers	51-9023
3	Mixing and Blending Machine Setters, Operators	51-9023
8	Extruding, Forming, Pressing and Compacting	51-9041
2	Miscellaneous Production Worker	51-9199
4	Laborers, Freight, Stock	53-7062



Marketable Skills:

Inmates learn the soft skills needed to be successful in today's job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as machine operators, machine repair and maintenance, office clerks, shipping and receiving duties, basic training of forklift operations/trainers and concept of inventory and material control, setters, compactors, mixing and packaging of numerous cleaning supplies, Hi-Lo Certification.

Chippewa Garment Factory is Located at the Chippewa Correctional Facility (URF) W. M-80 in Kincheloe, Michigan 49784 which houses Levels IV, II and I prisoners. With a net operating capacity of 1,686 beds supervised by Warden James Corrigan. This Factory operates 5 days a week and inmates are scheduled to work 6:42 am to 1:45 pm Monday -Friday. The Chippewa Garment Factory employs Level II prisoners only Manufactures all Michigan Correctional Officer winter wear (coats, bib overalls, vests, hats, and caps) Officer shirts, Prisoner coats, Food Service chef shirts and coats, ANSI safety wear and various other items.

This factory employs a total of 4 civil service employees, including 1 Industries Supervisor 12 and 3 Industries Production Leaders 8-E10. It also employs a total of 88 prisoner workers. Prisoner workers are as follows (including SOC Codes) as of the end of September 2022:

1	Janitor and Cleaners – Porter	37-2011
3	Office clerks, general	43-9061
2	Maintenance and Repair Workers, General	49-9043
11	First Line Supervisors of production and operation	51-1011
3	Textile Knitting and Weaving	51-6063
61	Sewing machine operators	61-6031
1	Textile Cutting Machine Setters, Operators and Tenders	51-6062
1	Fabric and Apparel Patternmakers	51-6092
5	Trimmers	51-9031



Marketable Skills:

Inmates learn the soft skills needed to be successful in today’s job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as machine operators, machine repair and maintenance, office clerks, crew leaders, shipping and receiving duties. Specialty skills to the garment industry include pressers, sewing machine operator, patternmakers, cutters, trimmers, and embroidering skills.

Carson City Garment Factory is located at the Carson City Correctional Facility (DRF) 10274 Boyer Road in Carson City, Michigan 48811. DRF houses Level IV, II and I prisoners, with a net operating capacity of 2,224 beds and supervised by Warden Randy Rewerts. This factory operates 5 days per week and inmates are scheduled to work from 6:30 am to 1:42 pm. The Carson City Garment Factory employs Level I prisoners only and manufactures all Michigan correctional officer uniform pants, Emergency Response pants, new officer employee school PT wear, various custody belt device holders such as radio, personal protection device, handcuff cases, etc... It also manufactures prisoner purchased athletic shorts, prisoner uniform shirts and pants and prisoner pajamas.

This factory employs a total of 6.5 civil service employees, including 1 Industries Supervisor 14, .5 Industries Supervisor 13, 1 Industries Supervisor 12, 2 Active Industries Production Leaders 8-E10 and 2 Vacant Industries Production Leaders 8-E10. It also has on average a total of 104 prisoner workers. Prisoner workers are as follows (including SOC Codes) as of the end of September 2022:

2	Janitor and Cleaners – Porter	37-2011
7	Stock Clerk and Order Fillers	43-5081
3	Machine Maintenance and Repair	49-9043
11	First Line Supervisors of production and operation	51-1011
74	Sewing machine operators	51-6031
4	Textile Cutting Machine Setters, Operators and Tenders	51-6062
1	Fabric and Apparel Patternmakers	51-6092
2	Trimmers	51-9031



Marketable Skills:

Inmates learn the soft skills needed to be successful in today’s job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as sewing machine operators, machine repair and maintenance, patternmakers, cutters, physical and raw goods clerks, shipping and receiving duties, trimmers, order fulfillment, crew leaders.

Brooks Laundry is located at the E. C. Brooks Correctional Facility (LRF) 2500 S. Sheridan Drive in Muskegon Heights, Michigan 49444. LRF houses Level IV, II and I prisoners with a net operating capacity of 1,238 beds and supervised by A/Warden Fredeane Artis. This factory operates 5 days a week and inmates are scheduled to work from 7:30 am to 3:30 pm. The Brooks Laundry Factory employs Level II prisoners only. They also provide laundry services for the two Muskegon area correctional facilities as well as the Grand Rapids Veterans' Facility, Walter Reuther hospital, Hawthorn Center, Caro Center, Livingston County Animal Control, Livingston County EMS, Center for Forensic Psychology, Kalamazoo Psychiatric hospital and the Michigan State Police.

This factory employs a total of 3 civil service employees, including 1 Industries Supervisor 12 and 2 Industries Production Leaders E10. It also employs a total of 29 prisoner workers. Prisoner workers are as follows (including SOC Codes) as of the end of September 2022:

1	Janitor and Cleaners – Porter	37-2011
	Cutting, Punching, and Press Machine	51-4031
1	Setters, Operators, and Tenders, Vinyl	
1	Office Clerk	43-9061
1	File Clerk	43-4071
2	Machine Maintenance and Repair	49-9043
13	Laundry and Dry-Cleaning Workers	51-6011
6	Crew Leader & Assistant Crew Leaders	49-9042
3	Shipping, Receiving Clerk	43-5071
1	Sewing Machine Operator	51-6031



Marketable Skills:

Inmates learn the soft skills needed to be successful in today's job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as machine operators, machine repair and maintenance, office clerks, file clerks, shipping and receiving duties, crew leaders and assistant crew leaders, laundry workers, pressers, teamwork, accountability, quality control inspectors.

The Dental Laboratory is located at the Women’s Huron Valley Correctional Facility (WHV) 3201 Bemis Road in Ypsilanti, Michigan 48197. WHV houses Level IV, II and I prisoners, with a net operating capacity of 2,197 beds. The facility is supervised by Warden Jeremy Howard. Only Level I and II prisoners are employed in the dental laboratory, which has a very long training period and a very high employment rate upon release. The factory operates 4 days a week and inmates are scheduled to work from 5:30 am to 2:48 pm. This factory provides all dentures, bite splints, and dental repairs for MDOC prisoners. As the MDOC prisoner population is the only customer for this service, which are under the medical jurisdiction of the MDOC Health Care Division, all costs of the program are paid directly by MDOC Health Care based on historical cost estimates. Actual cost and a reconciliation to estimates are performed at year end.

This Laboratory employs a total of 1 civil service employee, including 1 Dental Laboratory Technician. It also employs (depending on the workload) a total of 11 prisoner workers. Prisoner workers are as follows (including SOC Codes) as of the end of September 2022:

11 Dental Lab Technician

51-9081



Marketable Skills:

Inmates learn the soft skills needed to be successful in today’s job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as machine operators, machine repair and maintenance, office clerks, shipping and receiving duties, dental lab technicians, removable partial and full denture product manufacturing, quality control and crewleader.

The Print Shop is located at the G. Robert Cotton Correctional Facility (JCF) 3500 N. Elm Road, Jackson, Michigan, 49201. JCF houses Level IV, II and I prisoners, with a net operating capacity of 1,642 beds and supervised by Warden Noah Nagy. The Print Shop operates 5 days per week, from 6:35 am to 2:15 pm. Level I and II prisoners are employed by the print shop which produces thousands of forms, booklets, brochures, posters, business cards and envelopes for MDOC, other state agencies, and non-profit customers throughout the state of Michigan.

This factory employs a total of 2 civil service employees, including 1 Industries Supervisor 13 and 1 Industries Production Leader 9-E10. It also employs a total of 6 prisoner workers. Prisoner workers are as follows (including SOC Codes) as of the end of September 2022:

1	Porter	37-2011
1	Shipping, Receiving Clerk	43-5071
1	Office Clerk	43-9061
1	Press Operator	51-0431
2	Printing Press Operator	51-5112



Marketable Skills:

Inmates learn the soft skills needed to be successful in today's job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as machine operators, machine repair and maintenance, office clerks, shipping and receiving duties, digital press-operation, finishing/bindery, printing press operator, teamwork.

The Optical Laboratory is a co-operative operation between MDOC Education and MSI. It is located at the Gus Harrison Correctional Facility (ARF) 2727 E. Beecher St., Adrian, Michigan 49221. The facility is supervised by Warden Sherman Campbell. ARF houses prisoners in Level IV, II and I and inmates are scheduled to work from 7:00 am to 3:25 pm. The Optical Lab is supervised by a Trades Instructor under agreement with MSI that MSI will provide all equipment and materials required for the manufacturing and distribution of optical wear to MDOC prisoners and staff. In addition, MSI has also agreed to pay one time for the prisoners to take the test necessary to earn their American Board of Opticianry Certification.

This laboratory employs 1 civil service employee funded through Education. However, it employs 15 board- certified prisoners. This group, as well as students in the program, also work to sort donated glasses for redistribution to the needy in Michigan and donated glasses are used to help the needy in third world countries such as Dominica, Liberia, and Mozambique. We also partner with the Kiwanis and Lions Clubs to provide children at 6 local elementary schools with eyeglasses. Workers are as follows (including SOC Codes) as of the end of September 2022:

1	Shipping, Receiving Clerk	43-5071
1	Office Clerk	43-9061
1	Edger	51-4033
1	Final Inspection	51-4033
2	Surface Fining and Polishing, PolyCoater	51-9083
7	Freight, Stock and Material Movers, Handlers Dispensing	53-7062
2	Classroom Tutors	53-7062



Marketable Skills:

Inmates learn the soft skills needed to be successful in today’s job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as machine operators, machine repair and maintenance, office clerks, shipping and receiving duties, health care support worker, stock clerk/order fulfillment, edger, quality control inspection, lens finisher, polisher and coater, ophthalmic lab technician, step 1 blocker, generator, stock handler.

Ionia Garment Factory is located at the Ionia Correctional Facility (ICF) 1576 W. Bluewater Hwy. in Ionia, Michigan 48846. ICF houses Level V and II prisoners only, with a net operating capacity of 675 beds and supervised by Warden John Davids. This factory operates 5 days per week and inmates are scheduled to work from 7:15 am to 2:15 pm. The Ionia Garment Factory employs Level II prisoners only and manufactures American flags and scrub uniforms for MDOC staff, as well as thermals, t-shirts and ride out clothing for prisoner issue. Ionia is also making prisoner sweats.

This factory employs a total of 2.5 Civil service employees, including .5 Industries Supervisor 13 and 2 Industries Production Leaders 8-E10. It also employs a total of 54 prisoner workers. Prisoner workers are as follows (including SOC Codes) as of the end of September 2022:

1	Janitor and Cleaners – Porter	43-5081
2	Machine Maintenance and Repair	49-9043
1	Shipping/receiving Clerk	43-5071
3	Office Clerk – General	49-9061
5	First Line Supervisors of Prod Operations	51-1011
41	Sewing machine operators	51-6031
1	Fabric and Apparel Patternmakers	51-6092



Marketable Skills:

Inmates learn the soft skills needed to be successful in today’s job market. Things like, coming to work every day on time, learning to work with others and being responsible for the quality and quantity of the product that they are working on, learning to work under supervision and the value of teamwork. Inmates also learn job specific skills that can transfer to the real-world job market. Job skills such as sewing machine operators, machine operators, machine repair and maintenance, office clerks, shipping and receiving duties, pattern-makers, inventory control, crew leaders, quality control inspectors.

MICHIGAN STATE INDUSTRIES														
PRISONER STANDARD OCCUPATIONAL CLASSIFICATION (SOC) CODE														
EMPLOYMENT BY FACTORY														
SEPTEMBER 2022														
SOC Code	Description	Mattress	Chippewa	Carson City	Ionia Garment	Brooks Laundry	Shoe	License Plate	Sign	Janitorial	Dental Lab	Print Shop	Optical Lab	Total
51-6063	Textile Knitting and Weaving		3											3
27-1024	Graphic Designers								2					2
31-9099	Fitting and dispensing Optician - Health Care Support Worker													
37-2011	Porter		1	2		1	1	1	1	1		1		9
43-4071	File Clerks					1								1
43-5071	Shipping, Receiving Clerk	1			1	3						1	1	7
43-5081	Stock Clerk and Order Filler	1	7	1		1								10
43-9061	Office clerks, General		3		3	1	1	2	1			1	1	13
49-9042	Crew Leader & Assistant Crew Leaders					6		10						16
49-9043	Maintenance and Repair workers	2	2	3	2	2	1	2						14
51-0431	Press Operator											1		1
51-1011	First line supervisors of production and operations		11	11	5									27
51-4031	Press Machine Setters, Operators					1		15						16
51-4033	Edger												2	2
51-5112	Printing Press Operator											2		2
51-6011	Laundry and Dry-Cleaning Workers					13								13
51-6021	Presser													
51-6031	Sewing Machine Operator	36	61	74	41	1								213
51-6041	Shoe and Leather Worker						21							21
51-6042	Shoe Machine Operator						12							12
51-6062	Textile Cutting Machine Setters, Operators and Tenders		1	4										5
51-6092	Fabric and Apparel Patternmakers		1	1	1									3
51-9023	Mixing and Blending Machine Setters, Hi-Lo Trainers									2				2
51-9023	Mixing and Blending Machine Setters, Operators									3				3
51-9031	Trimmers		5	2										7
51-9041	Extruding, forming, pressing, and compacting									8				8
51-9061	Assembly, Final Inspection												1	1
51-9081	Dental Lab Technician										11			11
51-9083	Lens finisher, Polisher and coater, Ophthalmic Laboratory													
51-9083	Step 1 Blocker, generator, Ophthalmic Lab Technician												2	2
51-9123	Painting, Coating and Decorating Workers								3					3
51-9194	Photographic Process Workers & Processors								2					2
51-9199	Miscellaneous Production Worker									2				2
53-7062	Laborers & Handlers, Freight and Stock						20	13	4				7	44
	Dispensing Opticians													
	Classroom Tutors												2	2
	TOTAL	40	88	104	54	29	45	50	22	20	11	6	15	484