





2024 AGENDA

Saturday July 20, 2024

6:30 a.m 8:00 a.m.	Breakfast on Your Own	Suturday July 20, 2024
8:30 a.m 10:30 a.m.	Membership Meeting	Matterhorn CD merous past and future
11:30 a.m 1:30 p.m.	Cookout	Stein Eriksen's Patio
1:30 p.m 3:00 p.m.	SkyBridge Walk	SkyBridge for photo opportunity
4:00 p.m 6:00 p.m.	Paintball Competition	Adventure Center
6:00 p.m.	Dinner On Your Own	
11:00 a.m.	Depart - THANK YOU AND DRIVE SAFE	Sunday July 21, 2024



MAA Committee Updates





MAA Safety Committee

Chair - Nicole Platt – Edw. C. Levy



▶ Vice Chair – Tom Wolf – Team Elmer's







2024 MAA Summer Conference

Safety Committee



SAFETY ROUNDTABLE

Annual Winter Meeting - 2024

Round Table Discussion – "How can we improve our new hire training and retention"



- Need to identify best practices for training new hires.
- All too often conversations like this divulge into discussions of 'oh, the millennials' or 'the new hires just don't have the work ethic that we have'. Today's discussion will focus on steps we can take to better train new hires regardless of their age, background, or anything else.
- We are going to stay away from stereotyping and instead identify steps we can take to create the workforce of the future we desperately need.







Safety Reviews

We offer on site safety reviews!

Template for MSHA Safety Program for Mobile Equipment Rule – Compliance Required by July 17, 2024

INSERT COMPANY NAME

SAFETY PROGRAM FOR SURFACE MOBILE EQUIPMENT



COVERED LOCATIONS

- Insert Various Mine ID: 19-xxxxx
 Insert Various Mine ID: 19-xxxxx
 Insert Various Mine ID: 19-xxxxx
- Insert various ivine ib. 15 AAAAA

SUBCHAPTER K: Subpart T—Safety Program for Surface Mobile Equipment

§ 56.23000 AND 57.23000 PURPOSE AND SCOPE.

This subpart requires operators to develop, implement, and update a written safety program for surface mobile equipment to reduce the number and rates of accidents, injuries, and fatalities. This subpart applies to surface mobile equipment at surface metal and nonmetal mines. The purpose of this safety program is to promote and support a positive safety culture and improve miners' safety at the mine.

DEFINITION

- Responsible Person A person with authority and responsibility to evaluate and update a written safety program for surface mobile equipment.
- Surface Mobile Equipment Wheeled, skid-mounted, track-mounted, or rail-mounted equipment capable of moving or being moved, and any powered equipment that transports people, equipment, or materials, excluding belt conveyors, at surface metal and nonmetal mines.

§ 56/57.23003 WRITTEN SAFETY PROGRAM.

- (a) The operator shall develop and implement a written safety program that includes actions the operator will take to:
- (1) Identify and analyze hazards and reduce the resulting risks related to the movement and the operation of surface mobile equipment.
- Responsible person at each location will discuss, document (digital or paper), and implement if needed, ways to reduce risk related to movement and the operation of surface mobile equipment.
 Possible changes are:
 - o Increase use of signage
 - o Procedural changes to tasks that remediate identified risks
 - o Identify blind spots on equipment and install additional devices
 - Change traffic patterns
- Limit or prohibit small vehicles and foot traffic in high-risk or high-volume areas
- · Discussions and Documentation is not limited to:
 - o Review of Site Specific (by location)
 - Annual review of INSERT COMPANY NAME vehicle/pedestrian segregation
 - o Toolbox talks, Safety Alerts, MSHA Fatalgrams, Stand Downs
 - Safety Committee input
 - Direct observations and Near Misses



Water Rescue Training

Scheduled for July 24th at Lake Lansing



Website - Safety Innovations





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Safety Innovation



MAA would like to recognize those who go above and beyond normal safety practices by establishing or

developing new ways to be safe. Safety
Innovations can be items/practices invented

for a specialized use

or items/practices that are adapted from other industries and implemented into our own. If you have a Safety

Innovation that your company has developed and are following, please submit your idea to the MAA with our <u>MAA Safety Innovation Form.</u>

VSI Crusher

Horizontal Shaft Crusher

Portable Truss Section

Troughing Idler Replacement

Flasher Light System

Safety Vests For New Employees

Rigging -Spreaders/Single Hooks

Impactor - Changing Blow Bars (Shoe Striker)

Impactor - Changing Blow Bars (Blow Bar Wrench)

Fabrication -Welding/Grinding/Cutting (Head Lamp)

Maintenance - Portable Conveyor - Extension of

Conveyor

Maintenance - Portable Conveyor - Fall Protection





For additional information regarding any Safety Innovations, or to submit your own Safety Innovation, please contact Douglas E. Needham, P.E., Michigan Aggregates Association at dneedham@miagg.org







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MAA Safety Committee is developing a series of monthly safety bulletins that address various safety topics. These bulletins are designed so that they can be printed and posted to your bulletin boards.

Bulletins

January - Winter Maintenance

February - Firefighting Equipment Inspection Requirements

March - Spring Startup

April - Distracted Driving Awareness

May - Tornado Preparedness and Awareness

June - Jobsite Safety - Equipment Operation

July - Working Safely in Hot Weather

August - Electrical Safety - Good Practices

MSHA's Top 5 Electrical Violations

September - No Trespassing on Mines

October - Seasonal Changes are Among Us

November - Avoid Cold Weather Hazards

December - Shutting Down a Mine



Provide compliance assistance with the new Silica standard requirements – Compliance Required by June 17th, 2026



- **/**
- New Permissible Exposure Limit (PEL) for respirable crystalline silica of 50 micrograms per cubit meter (µg/m3)
- Action level for respirable crystalline silica of 25 µg/m3. When miner exposures are at or above the action level but at or below the PEL, periodic sampling will be required until miner exposures are below the action level.
- Medical surveillance for MNM mines: will need to provide periodic health examinations at no cost to miners.
- Updates the respiratory protection standard: MSHA is replacing its existing respiratory standard with the ASTM International 2019 standard entitled "Standard Practice for Respiratory Protection".



Thank you!

Women of MAA

Chair - Nicole Platt – Edw. C. Levy







MAA Public Relations Committee

▶ Chair - Jeff McConnell – Mid Michigan Materials



Vice Chair - Chauncey Halliday – Halliday Sand & Gravel

SAND & GRAVEL, INC.
"Michigan's Aggregate Producer"





PUBLIC RELATIONS

CHAIR: JEFF MCCONNELL

VICE CHAIR: CHAUNCEY HALLIDAY



EMERGING LEADER

BENEFIT

- SEE NEW APPLICATIONS IN USE
- EXPERIENCE NEW SITES PROCESSING DIFFERENT MATERIALS
- NETWORK WITH OTHER KEY PLAYERS IN THE INDUSTRY



MINING FOR THE FUTURE

- 14 TOTAL SITES
 - RANGING FROM GOLF COURSES, TO SUBDIVISIONS, TO NATURE PRESERVES



- SCHOOL VISITS TO DEMONSTRATE FOR KIDS
- HELPS INTRODUCE THEM INTO THE AGGREGATE WORLD
- MAY TAKE SOME THINGS HOME TO THEIR PARENTS THAT RAISES AWARENESS FOR THE INDUSTRY



- PROCEEDS FROM THIS YEARS CORNHOLE TOURNAMENT
 - BOYNE CITY GOOD NEIGHBORS FOOD PANTRY

MAA Specifications Committee

► Chair - Nathan Gates – Verplank

Verplank

▶ Vice Chair – Cyndy Brock - Stoneco





MAA Specifications Committee Update

Committee Chairs

► Chair – Nathan Gates – Verplank



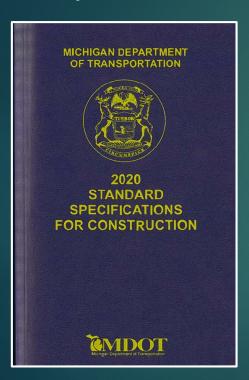
► Vice Chair – Cyndy Brock - Stoneco



Recent Successes



2020 MDOT Supplemental Specification



- ➤ 20SS-001A-16 ERRATA TO THE 2020 STANDARD SPECIFICATIONS.
 - ► For use in all projects beginning with August 2024 letting.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION
FOR
ERRATA TO THE 2020 STANDARD SPECIFICATIONS

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Page Subsection

Page Subsection

MICHIGAN
MICHIGAN
DEPARTMENTAL SPECIFICATION
FOR
ERRATA TO THE 2020 STANDARD SPECIFICATIONS

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Errata

MDOT 46R

► MDOT recently issued an errata and new special provision creating 46R gradation to Table 902-2 of the 2020 MDOT Standard Specifications for Construction. This material has the same gradation requirements as 46G without a crushed requirement. Its mimics 6A but does not require specific material characteristics.



MDOT 46R

ľ	/		ノロ	40	Z						8-200	820.04	Change the eleventh pay item from the bottom of the list on this page to read as follows: Mast Arm, RemEach
MDOT Standar	d Specifi	cations for Co	onstruction							Section 902	8-201	820.04	Delete the following pay item from the list: Power Co. (Est Cost to Contractor)
	Phys	ical Require	ments for C	oarse Aggre)2-2 (cont.): se-Graded Ag	gregates, and	d Open-Graded	Aggregates ^(a)		8-202	820.04	Add the following pay item to the list: Bracket, Truss, SalvEach
Gravel, Stone, and Crushed Concrete Slag ^(b)								Sla	All Aggregates		Blanch Committee		
	Series/	Crushed Material, % min.	Loss, % max, LA Abrasion	% max.	Chert, % max.	Sum of Soft Particles and Chert, % max.	Freeze- Thaw Dilation, % per 100 cycle max.	Sum of Coke and Coal Particles, % max.	Dilation, % per 100 cycles max.	Particles, ratio % max. (ASTM D4791)	8-204 8-204 9-5	820.04.C 820.04.D 902.02	Delete the last paragraph of this subsection in its entirety. Delete the first paragraph of this subsection in its entirety. Delete the first line under the Material list and relace with the
Material Type	Class	(MTM 117)		(MTM 110)	(MTM 110)	(MTM 110)	(MTM 115) ^(c)	(MTM 110)	(MTM 115) ^(c)	(MTM 130)			following:
Open-graded aggregates	4G	95	45 ^(m)			_		_					"Wire Cloth and Sieves ASTM E11"
aggrogatos	34R	≤20	45 ^(m)			_		_		_	9-9	902.03.C.1.b	Delete the first sentence in this subsection and replace with the
	34G	100	45 ^(m)			_		_					following:
	46G	95	45 ^(m)					_		_	9-14	Table 902-1	"The physical requirements for the coarse aggregate are as specified in Table 902-2 and as follows:" In the row that includes the information on the 34G material, under
9-16	Tab	le 902-2				row aften	er the thi	rd row in	the Ope	n-gı		74515 552 7	the column titled Item of Work by Section Number (Sequential) delete the reference to the section 404.
			_	6R	45	reading.					9-15	Table 902-2	Add the superscript (n) in the first row in the Dense-graded aggregates section of the table under the column titled Crushed Material, % min. (MTM 117).
						*					9-16	Table 902-2	Add the superscript (n) in the first row in the Open-graded aggregates section of the table under the column titled Crushed Material, % min. (MTM 117).
											9-16	Table 902-2	Delete the superscript footnote in the first through fourth rows under the header row that reads "(m)" in the column Loss, % max, LA Abrasion (MTM 102).
											9-16	Table 902-2	Add the following row after the third row in the Open-graded aggregates section reading: 46R - 45

20SS-001A-16

04-30-24

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Recycled Concrete Crush Requirement

► MDOT issued an errata to Table 902-2 by adding footnote (n) that states, "For recycled crushed concrete, if the source concrete uses primarily rounded river gravel aggregates, the minimum crushed particle content can be reduced to 90%."

Recycled Concrete

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20SS-001A-16 04-30-24

9-17 Table 902-2

Table 902-2: Physical Requirements for Coarse Aggregates, Dense-Graded Aggregates, and Open-Graded Aggregates^(a)

			Grav	Slag ^(b)					
Material Type	Series/ Class	Crushed Material, % min. (MTM 117)	Loss, % max, LA Abrasion (MTM 102)	Soft Particles, % max. (MTM 110)	Chert, % max. (MTM 110)	Sum of Soft Particles and Chert, % max. (MTM 110)	Freeze- Thaw Dilation, % per 100 cycle max. (MTM 115) ^(c)	Sum of Coke and Coal Particles, % max. (MTM 110)	Freeze-Thaw Dilation, % per 100 cycles max. (MTM 115) ^(c)
Coarse	6AAA	_	40	2.0 ^(e)	2.5	4.0	0.040 ^(f)	1.0	0.040 ^(f)
aggregates ^(d)	6AA ^(h)	_	40	2.0 ^(e)	_	4.0	0.067(1)	1.0	0.067
	6A ^(h)	_	40	3.0 ^(e)	7.0	9.0	0.067	1.0	0.067
	17A ^(h)	_	40	3.5 ^(e)	8.0	10.0	0.067(1)	1.0	0.067
	25A	95	45	8.00	_	8.0	_	1.0	_
	26A ^(h)	_	40	2.0 ^(e)	_	4.0	0.067	1.0	0.067
	29A	95	45	8.00	_	8.0	_	1.0	_
Dense-graded	21AA	95	50			_			
aggregates ^(l)	21A	25	50			_			
	22A	25	50				_		
	23A	25	50			_		_	-
	23AA	95	50			_			

IDOT Standard Specifications for Construction

Table 902-2 (cont.): Physical Requirements for Coarse Aggregates, Dense-Graded Aggregates, and Open-Graded Aggregates^(a)

Material Type	Series/		Grav	Slag ^(b)					
		Crushed Material, % min. (MTM 117)	Loss, % max, LA Abrasion (MTM 102)	Soft Particles, % max. (MTM 110)	Chert, % max. (MTM 110)	Sum of Soft Particles and Chert, % max. (MTM 110)	Freeze- Thaw Dilation, % per 100 cycle max. (MTM 115) ^(c)	Sum of Coke and Coal Particles, % max. (MTM 110)	Freeze-Thaw Dilation, % per 100 cycles max. (MTM 115) ^(c)
Open-graded	4G	95	45 ^(m)			_	_	_	
aggregates	34R	≤20	45 ^(m)			_	_		
	34G	100	45 ^(m)			_	_		
	46G	95	45 ^(m)			_	_		

Add the following footnote below the existing footnotes in this table. "(n) For recycled crushed concrete, if the source concrete uses primarily rounded river gravel aggregates, the minimum crushed particle content can be reduced to 90%."

MDOT Standard Specifications for Construction

Section 902

Table 902-2 (cont.):

Physical Requirements for Coarse Aggregates, Dense-Graded Aggregates, and Open-Graded Aggregates(a)

- (a) See subsections 902.03.B, 902.05, and 902.06 for additional physical requirements for coarse aggregate, dense-graded aggregates, and open-graded aggregates, respectively.
- (b) Iron blast furnace and reverberatory furnace slag must contain no free (unhydrated) lime.
- (c) If the relative density (OD) is >0.04 less than the relative density (OD) of the most recently tested freeze-thaw sample, the aggregate will be considered to have changed characteristics and be required to have a new freeze-thaw test per MTM 113 conducted prior to use on Department projects.
- (d) Grade 3500 concrete requires an optimized aggregate gradation as specified in section 604. Use aggregates only from geologically natural sources.
- (e) Clay-ironstone particles must not exceed 1.0% for 6AAA, 6AA, and 26A, and 2.0% for 6A and 17A. Clay-ironstone particles are also included in the percentage of soft particles for these aggregates.
- (f) Maximum freeze-thaw dilation is 0.067 when the directional commercial ADT is less than 5,000 vehicles per day. Maximum dilation is 0.040 for all high-performance concrete.
- (g) ASTM D4791 Section 8.4 will be followed. The test will be performed on the material retained down to and including the 3/8-inch sieve.
- (h) Except for pre-stressed beams, the sum of soft and chert particles may be up to 3.0% higher than the values determined from the sample tested for freeze-thaw durability. However, under no circumstances will the deleterious particle percentages exceed the specification limits in Table 902-2. In addition, a source may be restricted to a minimum percent crushed not to exceed 15% less than the percent crushed in the freeze-thaw sample. When the freeze-thaw dilation is between 0.040 and 0.067% per 100 cycles, more restrictive limits will be applied.
- (i) Maximum dilation of 0.010 for pre-stressed concrete beams.
- (j) Friable sandstone is included in the soft particle determination for chip seal aggregates.
- (k) ASTM D4791 Section 8.4 will be followed. The test will be performed on the material retained down to and including the No. 4 sieve.
- (I) Quarried carbonate (limestone or dolomite) aggregate may not contain over 10% insoluble residue finer than No. 200 sieve when tested in accordance with MTM 103.
- (m) If a blend of different aggregate sources, the abrasion value applies to each source.

Cement Treated Base

- ▶ Job Specified SP (not FUSP)
- ▶ Cement Treated Base

When using recycled concrete MDOT will allow more fines as well as reducing the strength requirement. These changes will reduce the amount of excess material that has to be removed from the job site.



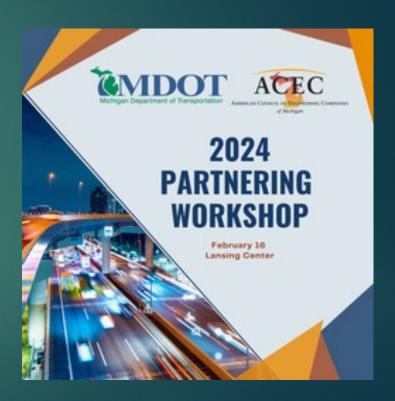


Permeability vs. Crushed Count – Pea Stone (34R)

Table 3. Data Analysis Result										
State	Samples	V (ml)	L (cm)	ΔH (cm)	D (cm)	A (cm ²)	t (s)	K(cm/s)	Average K(cm/s)	
midway stone	1	188	19.8	86.0	9.80	75.4	10.7	0.0540		
(over 20% crushed	2	171	19.8	86.0	9.80	75.4	9.50	0.0550	0.0540	
aggregates)	3	200	19.8	86.0	9.80	75.4	11.3	0.0540		
gun river stone	1	179	19.8	86.0	9.80	75.4	9.60	0.0570		
(under 20% crushed	2	191	19.8	86.0	9.80	75.4	10.3	0.0570	0.0570	
aggregates)	3	160	19.8	86.0	9.80	75.4	8.70	0.0560		
	1	151	19.8	86.0	9.80	75.4	8.40	0.0550		
30% crushed	2	172	19.8	86.0	9.80	75.4	9.60	0.0550	0.0560	
aggregates	3	192	19.8	86.0	9.80	75.4	10.3	0.0570		
	1	168	19.8	86.0	9.80	75.4	9.50	0.0540		
40% crushed	2	139	19.8	86.0	9.80	75.4	7.80	0.0540	0.0550	
aggregates	3	175	19.8	86.0	9.80	75.4	9.70	0.0550		

MDOT/ACEC Partnering Conference

Suggested a breakout session for the 2025 Conference that would provide a deeper dive in various aggregate options that are available and would be an equal alternative vs. just going off the design tables.



Aggregate Certification Modification

- ▶ Beginning with classes starting in the fall of 2024.
 - ▶ Level 1 will remove Unit Weight and Organic Impurities material from the class and backfill the time with an increased focus on proper sampling techniques. However, there will be a mention organic impurities and deleterious material in level 1 but not to test.

Level 1 will focus on:

- Sampling
- Gradation
- Crushed pick
- Loss by wash
- Rubble pick

Level 2 will focus on:

- Specific Gravity
- Deleterious
- Unit Weight
- Organic Impurities
- Plus all items covered in Level 1



Aggregate Certification Modification

- ▶ 4EMH Sample
 - ▶ Will remove full asphalt gradation analysis in an aggregate course and replace with adding a crushed sample "station".
 - ▶ This will satisfy the learning outcomes needed for an understanding of the 1 and 2-faced crush requirements, without requiring the students to perform a 3rd LBW and gradation analysis, on a separate sample.
- ▶ Training Video
 - ▶ FSU is working with Halliday Sand & Gravel to create a proper sampling technique video from a mini stockpile.

Future Items

- Freeze/ThawCompanion Testing
- Integration of AASHTOWare and data input
 - Aggregate industry will be the first material to utilize





MAA Environmental Committee

Chair - Alicia Ramsdell – Edw. C. Levy



► Keith Childress – Great Lakes Aggregates





Environmental Committee Update

MICHIGAN AGGREGATE ASSOCIATION SUMMER CONFERENCE JULY 20, 2024

Regulatory Update

- Lower PM2.5 primary annual standard became effective May 6, 2024
 - \rightarrow Went from 12.0 µg/m3 to 9.0 µg/m3
 - Currently may impact large mining operations where the general non-metallic mineral crushing general permit cannot be used.
- City of Detroit has passed a new fugitive dust ordinance
 - > Effects even temporary construction operations
 - > Will this be a model for other local governments?

Working with EGLE

- MAA / EGLE Mine Tours Great Lakes Aggregates and Carmeuse
- MAA Environmental Committee met with EGLE four times
 - Focus on NPDES process water discharge permitting, WRD Part 301 permitting, and hydro-geo evaluations
- NPDES Discharge Permits
 - EGLE is not open to reconsidering their proposed permit limits for Total Sulfides and Chlorides
 - Permittees unable to meet permit limits will have to seek a permit variance – Requires USEPA approval

Working with EGLE

- Part 301 and Hydro-Geo Evaluations
 - > EGLE WRD identifies staffing issues as permitting bottleneck
 - No immediate EGLE plans to address concerns about acceptance of administratively complete permit applications
 - EGLE will continue to require applicants to follow application draft guidelines - Latest Draft Hydro-Geo Evaluation guidelines are dated December 2023
 - EGLE is in the process of hiring new staff to review hydro-geo applicability and evaluations

Do you have...

- Questions?
- Concerns?
- Ideas for how the Environmental Committee can support our members?

Contact:

Committee Chair Alicia Ramsdell (313) 402-5823 aramsdell@edwclevy.net Committee Co-Chair Keith Childress (810) 217-4044 kchildress@greatlakesagg.com MAA Operations Manager Workgroup

Chair – Todd Crane – Gerken Materials



Vice Chair – Karel Domres – Team Elmer's







MAA Technology/ Integrated Mine Workgroup

Chair - Mike Pelletier – Edw. C. Levy



Vice Chair – Jordan Stol – Great Lakes Aggregates







Information Technology Committee

2023 - 2024 Projects and Discussions



by Michael Pelletier



Two publications for the MAA Membership have been completed and will be released shortly after our summer meeting.

- Loadout Scale Installation
- E-Ticketing



Cyber Security

- Presentation from Rehmann on A.I. in Cyber Security
- Discussions on different threats facing businesses today



Picture of what we think is our biggest cyber security threat





Actual picture of biggest cyber security threats. Not necessarily these actual people, but maybe...



Artificial Intelligence

- It is here and you should be trying to utilize different offerings to increase efficiencies.
- Check for accuracy. Just because the internet told you something does not mean it is true.



Uses of A.I. (Research)

Tell me the brief history of steel.



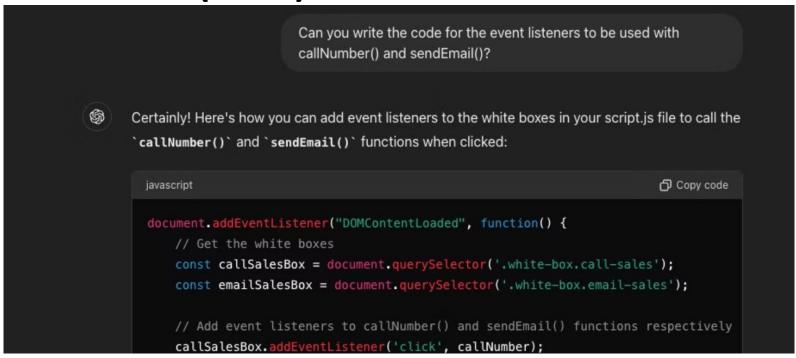
Steel has been used for thousands of years, but it was not produced on a large scale until the 19th century. The ancient Hittites in Anatolia, Turkey were the first people known to produce steel by heating iron with carbon. The ancient Chinese also developed steel-making techniques, as did the ancient Indians.

The modern steel industry began to take shape in the late 1700s and early 1800s with the development of the Bessemer process, which was used to mass-produce steel. The Bessemer process used air to burn off impurities in molten iron, and was the first method to produce large quantities of steel quickly and cheaply.

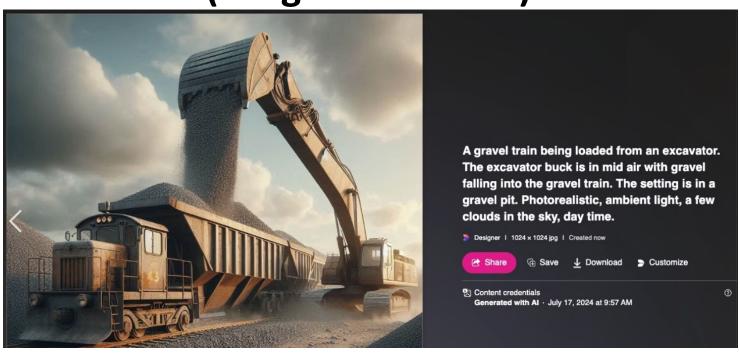
In the late 19th century, new processes such as the open hearth furnace and the basic oxygen



Uses of A.I. (Code)



Uses of A.I. (Image Generation)



Hmmm... Not what I was going for.





MAA Governmental Affairs/PAC

► Chair – Sky Cheney – Cheney Limestone



Dave Ladd – Kelley Cawthorne



John Sellek – Harbor Strategic

















































RIETH-RILEY Verplank

















STONECO































