

**CITY OF BELLEVILLE REGULAR CITY COUNCIL MEETING
AGENDA
Monday, May 5, 2025 - 6:30 pm**

1. PLEDGE OF ALLEGIANCE & MOMENT OF SILENCE

2. ROLL CALL

3. PRESENTATIONS & CITIZENS COMMENTS ON AGENDA ITEMS

- a. Presentations
 - i. Service Recognition Proclamation – Todd Schrecengost
 - ii. Service Recognition Plaque – Alicia McGovern
 - iii. Service Recognition Plaque – Mike Hawkins
 - iv. Service Recognition Plaque – Mike Renaud
 - v. Firefighter recognition – Isabella Teachout
 - vi. Budget Presentation – Police and Fire
- b. Citizen Comments

4. APPROVAL OF AGENDA

5. CONSENT AGENDA

The Consent Agenda groups routine meeting discussion points into a single agenda item. In so doing, the grouped items can be approved in one action rather than through the filing of multiple motions.

- a. Approval of Minutes
 - i. April 7, 2025, Regular Meeting
 - ii. April 8, 2025, Special Meeting
- b. Communications
- c. Council Follow-Up List
- d. DDA Follow-Up List
- e. DPW Report
- f. Police and Fire Stats
- g. Special Events
 - i. Egan's Pub Summer Car Shows
 - ii. Lakefest

6. PUBLIC HEARINGS

- a. None.

7. INTRODUCTION OF ORDINANCES

8. GENERAL BUSINESS DISCUSSION

- a. GoGov – App subscription
- b. DPW – Purchase of Concrete Saw and Blades
- c. DPW – Purchase of Wood Fiber for Victory and Village Parks
- d. Parks – Giffels Webster Quote for Rec Plan Update
- e. Municode – Digital Ordinance and code book quote
- f. Discussion – Downtown Parking
- g. Discussion – Belleville High Championships Signage
- h. Resolution 25-007 – Adoption of the 2021 International Property Maintenance Code
- i. First Reading – Amendment to Code of Ordinances Chapter 54 – Parks and Recreation.

9. ACCOUNTS PAYABLE AND DEPARTMENTAL EXPENDITURES

- a. Accounts Payable
- b. Departmental Expenditures

10. CITY MANAGER COMMENTS

11. CITY COUNCIL MEMBER COMMENTS

12. MAYOR'S COMMENTS

13. CITIZENS COMMENTS ON NON-AGENDA ITEMS

14. ACTION ITEMS FOR NEXT REGULARLY SCHEDULED MEETING

15. ADJOURNMENT

Proclamation

BY THE BELLEVILLE CITY COUNCIL:

WHEREAS, the safety and well-being of our community depend upon the dedicated service of law enforcement professionals who put their lives on the line each day to protect and serve; and

WHEREAS, Sergeant Todd Schrecengost has faithfully served the City of Belleville Police Department for twenty-five (25) years with honor, integrity, and an unwavering commitment to public safety; and

WHEREAS, throughout his distinguished career, Sergeant Schrecengost has demonstrated exceptional leadership, professionalism, and dedication, rising through the ranks and serving as a mentor and role model to fellow officers; and

WHEREAS, the City of Belleville recognizes and celebrates the outstanding contributions and sacrifices made by Sergeant Schrecengost; and

WHEREAS it is fitting and proper to honor such distinguished service and to express our gratitude for the commitment and courage demonstrated throughout his exemplary career.

Now, Therefore, Be It Resolved, May 5, 2025, be recognized as

SERGEANT TODD SCHRECENGOST DAY

in the City of Belleville and urge all residents to join in recognizing the dedicated service and enduring impact of Sergeant Schrecengost.

Kenneth Voigt, Mayor

Kelly Bates, Mayor Pro-Tem

Jeremiah Beebe, Councilman

Julie Kissel, Councilwoman

Randy Priest, Councilman



BELLEVILLE POLICE DEPARTMENT

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Chief of Police
Kristin Faull

To: MAYOR AND CITY COUNCIL

From: Chief Kristin Faull

Subject: BELLEVILLE POLICE DEPARTMENT

DATE: April 23, 2025

Belleville City Council Study Session

Police Department





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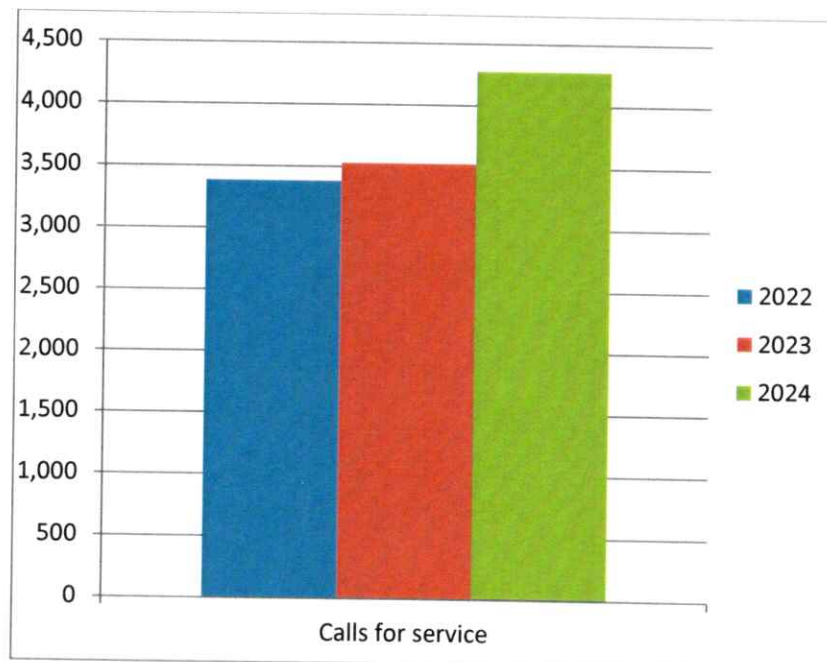
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Calls for Service (CFS's)



"CFS is a database of every incident a police department responds to in a given year, typically containing both 911 calls and police-initiated events. An individual. CFS entry usually includes the incident type, time and date of call, time and date of response, where the incident occurred, the incident's disposition and more."

Belleville Police Calls for Service 2022-2024



2022 – 3,385 2023 – 3,528 2024 – 4,276



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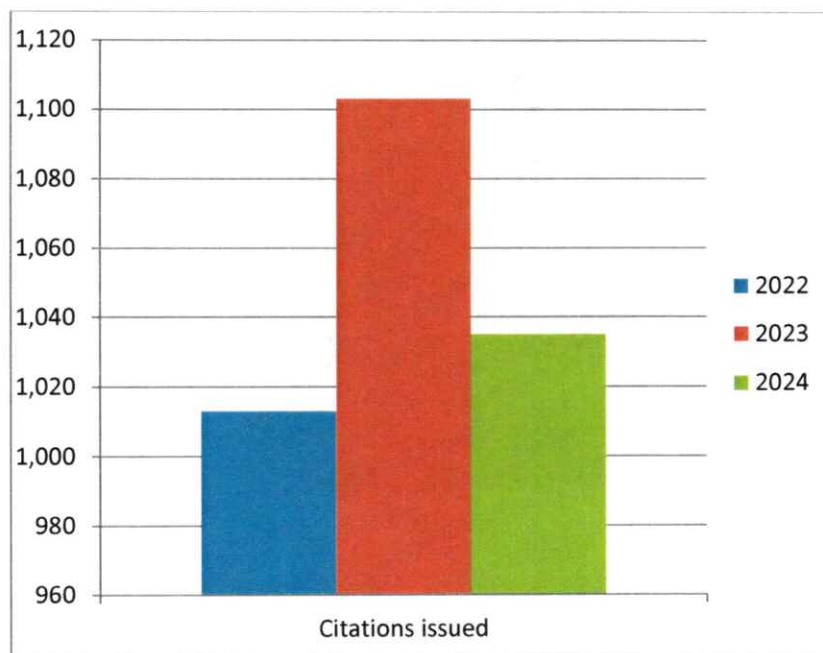
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Citations Issued



"A police citation, which is commonly called a 'ticket', is official documentation stating that an individual has been made aware of a violation by an officer of the law."

Belleville Police Citations Issued 2022-2024



2022 – 1,013 2023 – 1,103 2024 – 1,035



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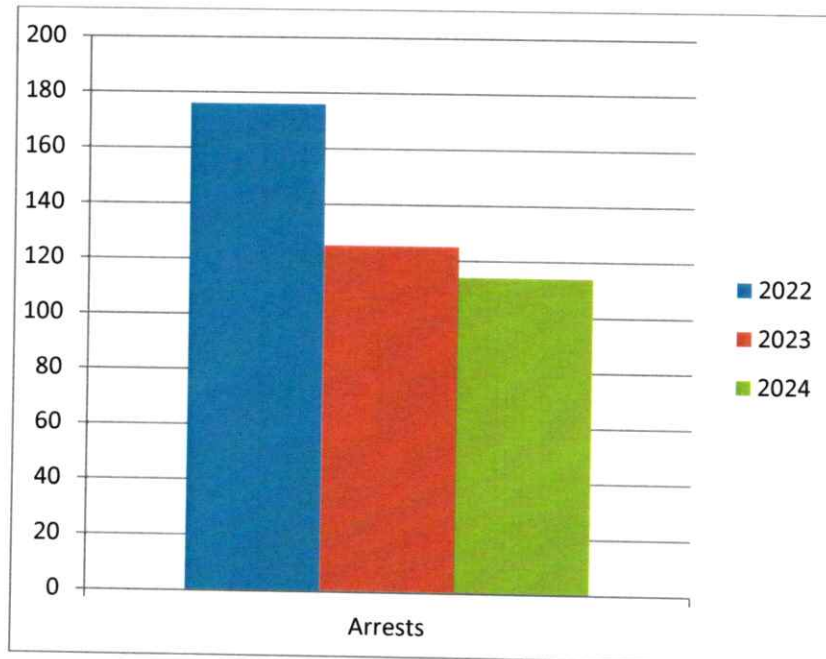
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Arrests



"An arrest is the act of apprehending, taking a person into custody or issuing a notice to appear summons, because the person has been suspected of or observed committing a crime. "

Belleville Police Arrests 2022-2024



2022* – 176 2023 – 125 2024* – 114

****Arrests Commentary:**

In April 2021, the Michigan Legislative bodies passed a law eliminating Bond in Misdemeanor cases, meaning those arrested for Misdemeanors must be issued Appearance citations and released. The exception to this law is Misdemeanor crimes involving violence and OWI. The result of this law is seeing an escalation in cited individuals failing to appear for court, issuances of warrants by the court, and is impacting time frames on adjudication of these cases.



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2024 BELLEVILLE CRIME COMPARISON BY CATEGORY

CRIME CATEGORY -CLASS A	2022	2023	2024
ACCIDENT/CRASH	114	146	114
ASSAULT -SIMPLE	36	32	18
ASSAULT-AGGREGATED	4	7	9
BURGLARY-ALL OTHER	2	1	4
BURGLARY-RESIDENTIAL	7	3	4
DAMAGE TO PROPERTY	20	19	25
DURG OFFENSES	25	25	11
FAMILY OFFENSE	71	43	45
FORGERY/COUNTERFEITING	0	4	4
FRAUD	31	31	20
INTIMIDATING/STALKING	12	20	22
KIDNAPPING/ABDUCTIONS	0	0	0
LARCENY -FROM AUTO	13	3	6
LARCENY -ALL OTHER	24	21	28
LARCENY -RETAIL FRAUD	1	0	2
MISSING PERSONS /RUNAWAY	2	5	4
MOTOR VEHICLE THEFT/FRAUD	15	14	3
OBSTRUCTION JUSTICE/ POLICE	15	21	27
OUI LIQUOR / DRUGS	39	23	27
PUBLIC PEACE / DISORDERLY CONDUCT	26	37	23
ROBBERY	0	0	0
SEX CRIMES	4	5	6
SEX OFFENSE	0	3	0
TRESPASSING /INVASION OF PRIVACY	7	12	8
WEAPON OFFENSE	14	4	0



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CRIME MEASUREMENTS:

1. **Part A Crimes:** *A- crimes are 52 crime classifications the Michigan Incident Crime Reporting System (MICR) collects from CLEMIS, which is the Records Management System used by the Belleville Police Department.*

MICR determines Crime Rates in the State of Michigan by calculating incidence of crime to population, so that it can be compared uniformly without regard to population size. In this report, rates are calculated by dividing the number of crimes by the population of the service jurisdiction. The calculated number is then multiplied by 100,000.

2. **Index Crimes** - *Are the eight offenses (murder, rape, robbery, aggravated assault, burglary, larceny, motor vehicle theft, and arson) retrieved from the Michigan Incident Crime Reporting System by the FBI used in calculating the Uniform Crime Report.*



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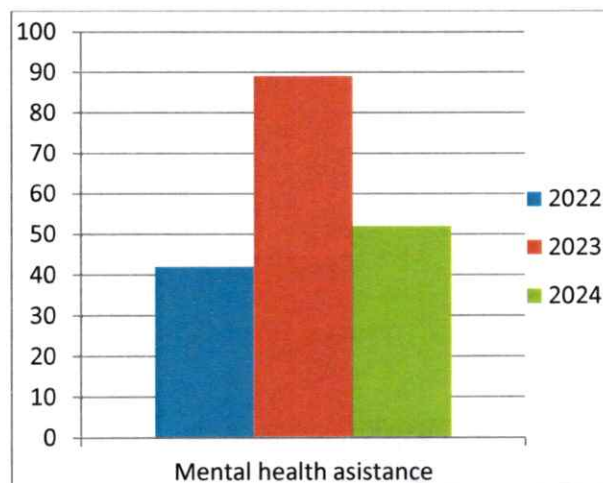
Significant monitored types of Police response 3-year comparison

Mental Health Response



"Mental health responses are calls for assistance or encounters where police assistance is necessary to assist those in cognitive, behavioral, or emotional crisis."

Mental Health Assistance 2022 - 2024



2022 – 42 2023 – 89 2024 – 52

Analysis: In 2024 Officer responded to just over 50 mental health calls for service, this is down from 89 calls in 2023. Continued training and proper policy and procedure when dealing with calls of this sensitive nature are imperative in today's Policing.



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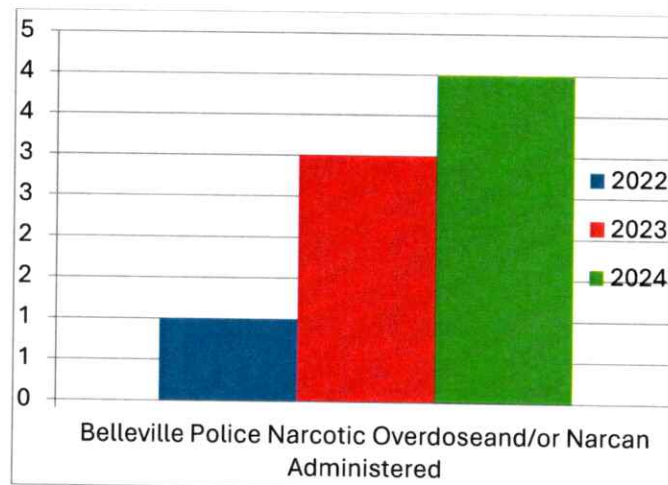
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Narcotic Overdose and/or Narcan Deployment



"Naloxone, sold under the brand name Narcan among others, is a medication used to block the effects of opioids. It is commonly used to counter decreased breathing in opioid overdose."

Narcotic Overdose I Narcan Deployment Comparison



2022 – 1 2023 – 3 2024 – 4

Analysis: During 2024 there were 4 overdoses documented with Narcan deployment, this has increased from the prior 2 years.



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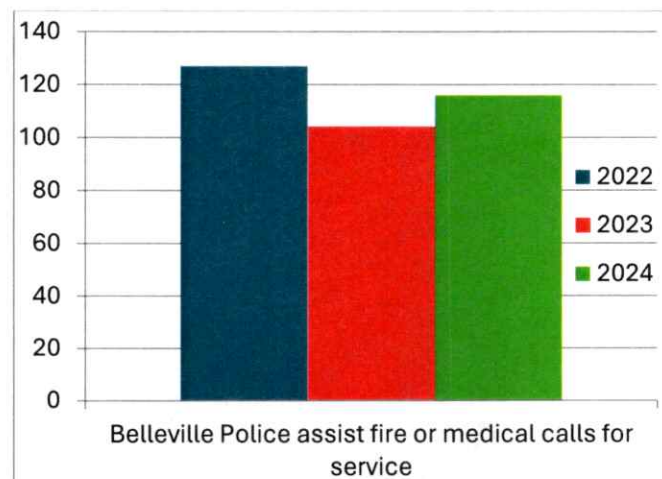


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Assist fire or medical – HVA (Huron Valley Ambulance)



"Assist fire or medical calls for service are verified when Officers arrive on the scene where the nature of the call is a medical assistance or fire. Officers will arrive before Belleville fire and HVA paramedics and assist in any way possible until specialized services (fire or paramedics) arrive to take over from Police Officers."



2022 – 127 2023 – 104 2024 – 116



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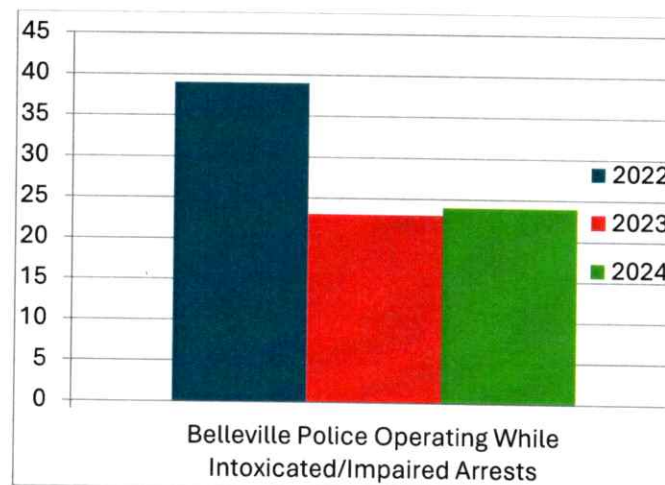
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Operating While Intoxicated/Impaired Arrests



"Operating while intoxicated (OWI) is a criminal offense referring to the act of operating a motor vehicle while under the influence of alcohol and/or a controlled substance. While conducting traffic enforcement, Officers may suspect that a driver is impaired and will conduct field sobriety tests (SFST's). Through the performance of SFST's, drivers with a blood alcohol content (BAC) at or above .08 and/or the presence of controlled substances in the body while operating a motor vehicle will be arrested. Below is the number of arrests made by Belleville Officers for the offense of OWI."

Operating While Intoxicated/Impaired Arrests Comparison



2022 – 39 2023 – 23 2024 – 24

NOTE: The number of arrests shown does not reflect the undocumented number of times Officers have conducted field sobriety tests and determined drivers were not impaired as to not be able to safely and legally operate a motor vehicle.



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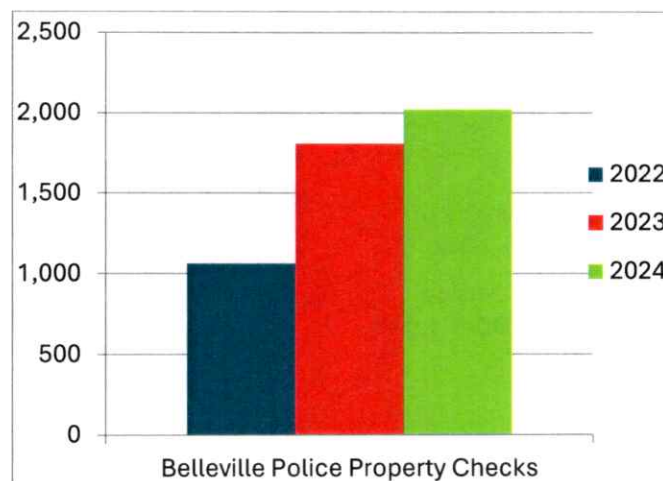
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Property Checks



"Property Checks are part of the Belleville Police Department's commitment to community-based Policing. Officers will proactively patrol residential and business areas (schools) at various times during their tour of duty, making sure crime is not afoot and Police presence is observed. "

Property Check comparison



2022 – 1,062 2023 – 1,805 2024 – 2,022

NOTE: *These above referenced numbers were NOT counted as part of the respective calls for service per year. These statistics are retrieved from Officers' daily activity log, which serves in part to document what Officers are involved in during their tour of duty. These numbers are in addition to actual calls for service where Police response is requested or required.*



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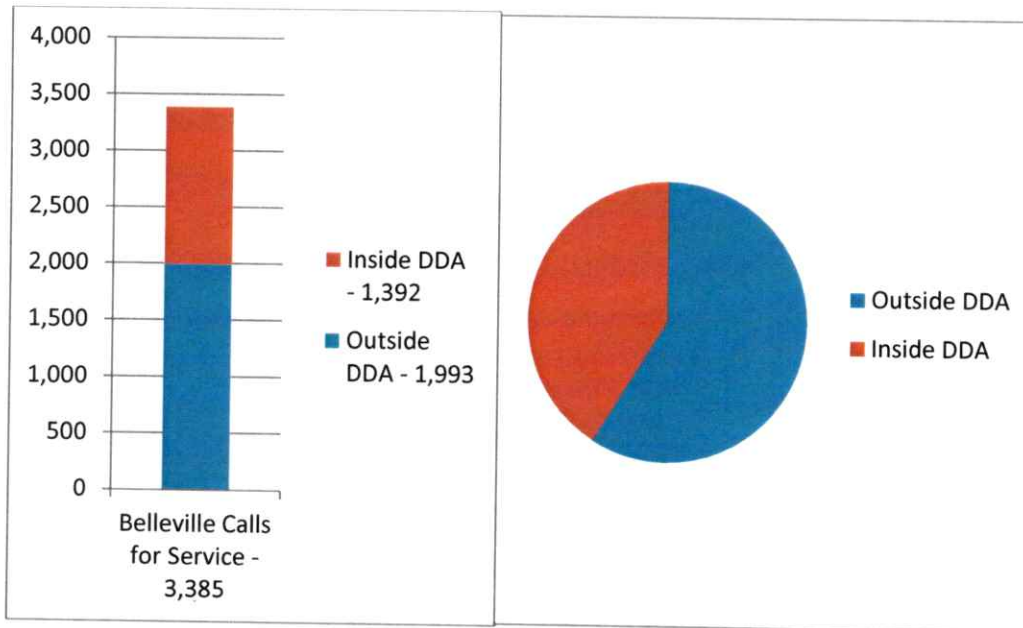
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Belleville Police Department Calls for Service within the DDA District

2022 - Belleville Police Calls for Service in the DDA





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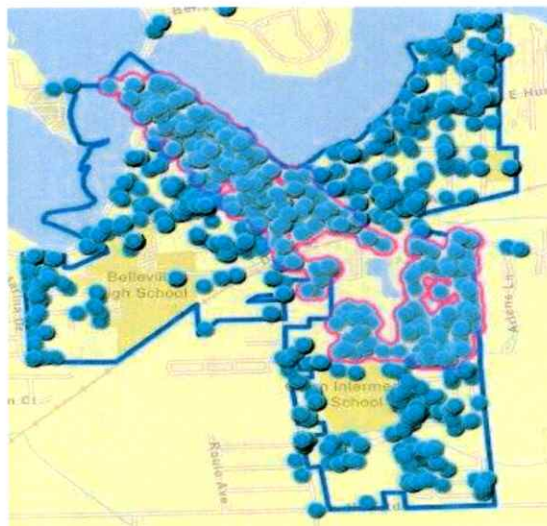
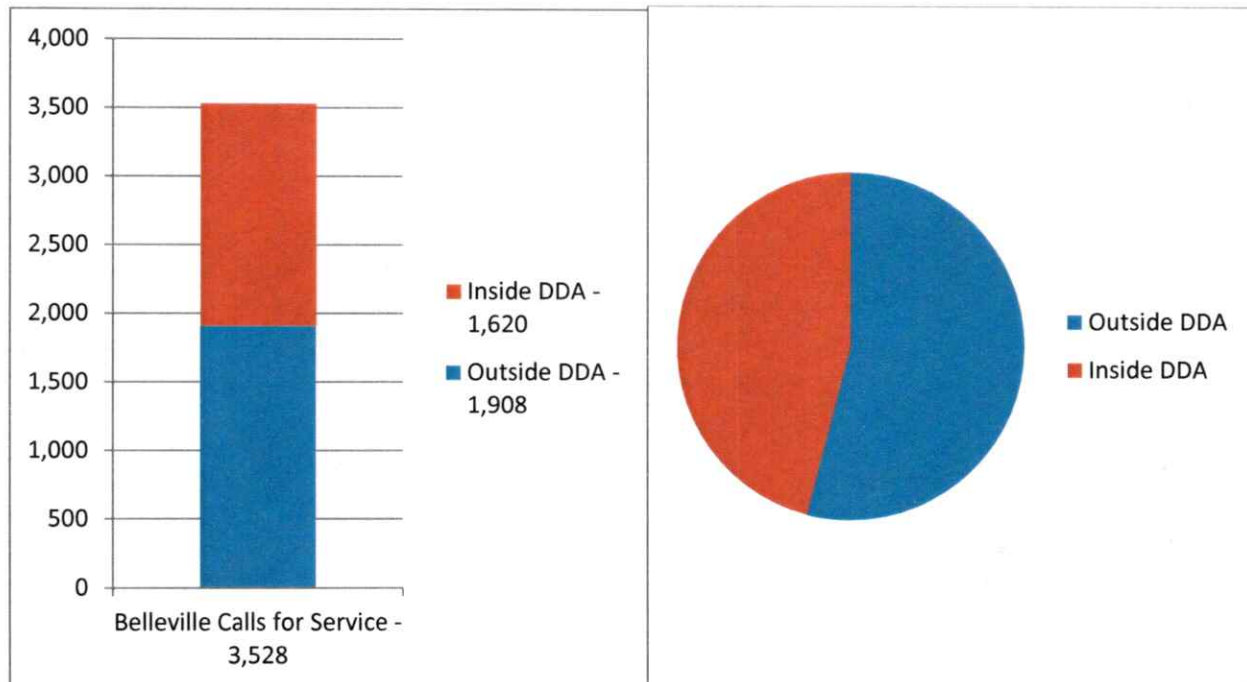
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2023 - Belleville Police Calls for Service in the DDA





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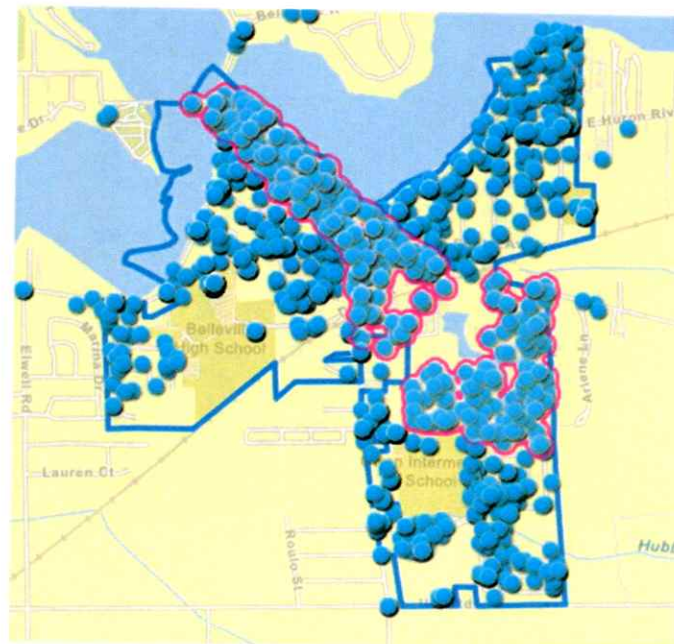
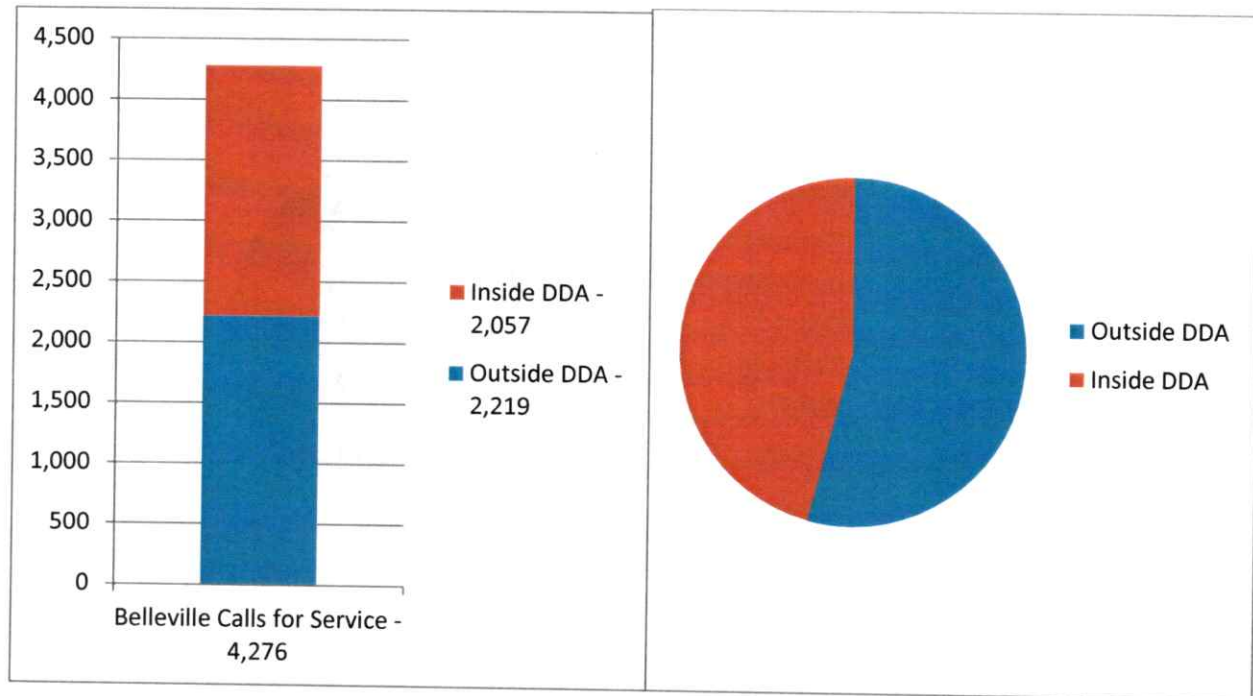
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2024 - Belleville Police Calls for Service in the DDA





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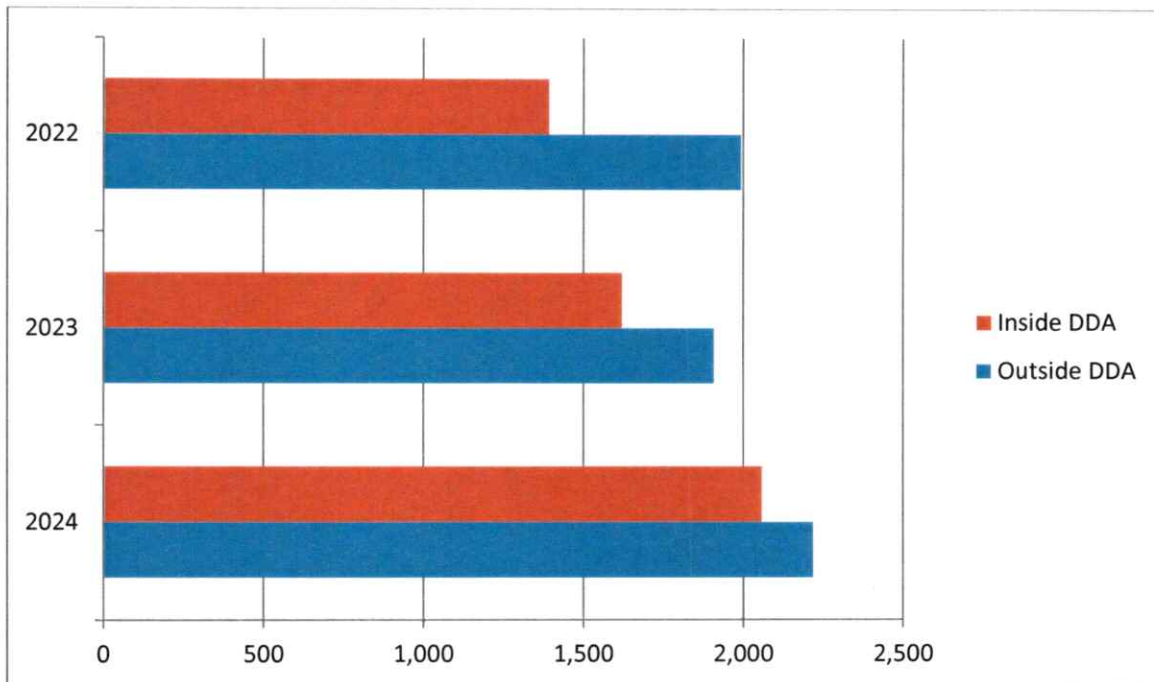
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3 Year Visual Comparison Belleville Police Calls for Service in the DDA vs Outside of DDA



**2022-2024 total calls for service - 11,189 of those 5,069 occurred inside the DDA.*





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ADMINISTRATIVE SERVICES

Below is the statistical breakdown of tasks performed in comparison to 2022 and 2024. What is not reflected in the statistical category is the number of service phone calls and walk-in assistance to citizens as there is no mechanism for tracking.

	2022	2023	2024
Record Checks	290	461	436
Pistol Sales Records Entered	185	155	75
Pistol Purchased applications with background checks completed	1	7	29
FOIA Requests Received, But Not Fulfilled (No Records/Not Our Jurisdiction)	22	6	26
FOIA Request Fulfilled	9	14	56
Discovery Orders	2	23	7
Reports Gathered for City Attorney	2	20	38
Impounded Vehicles Released	174	119	98
Vehicle Auctioned	1	2	2
Bond Money Processed and Sent to Court	26	24	8
Bills Processed and Paid	115	134	169
Reports Printed and Sold	44	116	164
Totals:	898	1093	1118
Total:	584	1212	1367



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UPDATES & EQUIPMENT STATUS

Patrol Vehicles:

Active:

1. Vehicle #218 — 2018 Ford Interceptor Explorer — Sold at Auction for \$2,007.80 — Vehicle was not in good condition.
2. Vehicle #218A — 2018 Ford Interceptor Explorer
Mileage: 58,029
Condition: Good -Vehicle was taken out of service and currently being used as a patrol vehicle for the reserves to utilize. The laptop and modem were taken out of this car.
3. Vehicle #221 — 2021 Ford Interceptor Explorer
Mileage- 50,000 (Est)
Condition: Decent—Just recently the vehicle had the front brakes replaced, which is normal wear and tear with the rear brakes to be replaced soon. The vehicle was taken to Atchinson on February 12 with a major oil leak in the engine compartment, where oil was discovered in 4 cylinders.
4. Vehicle # 223 — 2023 Ford Interceptor Explorer
Mileage — 16,997
Condition: Good — No major problems with the vehicle.
5. Vehicle # 224 — 2024 Chevrolet Tahoe
Mileage: 11,058
Condition: Good- Minor “warranty” problems. Had issues with a potential coolant leak. The dealership had the vehicle for over a week and could not locate a problem, have had no other issues since then.



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6. Vehicle # 225 -2024 Chevrolet Tahoe

Mileage: 4,907

Condition: Good – No major issues, had to replace 2 tires due to screws in the tire. Issues with Axon, working with the vehicle outfitter and Axon to get the problems resolved.

In-Car Computers:

Each police vehicle is equipped with a Mobile Data Terminal (MDT). This is a specially equipped mounted laptop computer that is connected to our record management system CLEMIS through a special car mounted wireless modem. Through CLEMIS, our MDTs are connected to dispatch, LEIN (Law Enforcement Information Network), Michigan State Police records, Secretary of State, and other law enforcement databases hosted through CLEMIS. The in-car computers are truly the most important equipment within our patrol vehicles.

Two New MDTs were purchased and installed in 2021. Two new MDT's were purchased in FY 2024 for the two newest patrol vehicles: #224 and #225.

Car 221	Purchased	2021
Car 223	Purchased	2023
Car 224	Purchased	2024
Car 225	Purchased	2025

**The computers have been used and transferred to new vehicles upon procurement of new police vehicles.*

Replacement Plan: Going forward I would like 1 new MDT to be budgeted and procure every year so that we keep up with the technological changes and connectivity to our Records Management service (CLEMIS)



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Station Computers/IT Infrastructure:

The police department has the following Desk-top computers:

- 1-Chief of Police
- 1- Sgt Schrecengost
- 1- Records Clerk
- 4 - Police report writing
- 1 - Police Evidence vault

In 2024 the police department was able to upgrade all the computers.

IT Infrastructure:

The police department server is failing. The city manager and I have been working with VC3 to come up with a plan to replace the old and failing server that the PD is currently using.

Prep Radios:

Last fall I was able to secure 10 brand new prep radios for all Full-time officers, to replace the current ones, and 4 brand new mobile radios for the patrol vehicles. At this time, the new radios were delivered in October and have gone into service. The State plans to have all departments switch over to encryption sometime in 2026. As far as the PD is concerned, I have already purchased the encryption keys for the radios, so when the state makes the switch, we will be complainant. However, we are now in need of 10 more prep radios for our reserve unit. Once the state makes this switch, the radios that the reserves are currently using will no longer work. have been with the State waiting to be prograded, however the State is backlogged at this time. I hope to have the new radios by Lake Festival. The State also notified all police departments in the last year that they are moving to a newer system. When the new system goes into effect all radio's both prep and mobile will have to have an encryption code. The new radios we secured were purchased with the encryption key, and when the new system takes effect, the supplier will turn on the encryption key.



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We are currently looking for grant money, but unfortunately there are no grants available currently through the government.

Training

The importance of law enforcement training cannot be understated. Officer safety and risk management are the driving catalysts for providing best practice law enforcement training for our officers. Training is one area in this police department that needs to be addressed. Lack of training and supervision are two of the important factors in civil litigation. The previous Chief secured On-Line training through Virtual Academy. Sending officers through more essential training would assist officers do their jobs.

On-Line Training:

Over the past 2 years, all officers have been assigned and completed essential training (legal updates, community policing, officer safety) through the on-line program. Through Virtual Academy officers can look for training on their own and look for other training classes they are interested in. They can request the training to be assigned to them through the Sergeant. Once training is completed, officers are required to print out their certificates and turn them into Sergeant. This past year, the state began requiring every officer to have a minimum of 12CPE (Continuing Professional Education). Our department was not aware of this mandate till late December, since January 1st, all our officers have completed their 12 CPE credits using Virtual Academy. This year, the state has now mandated 24 CPE credits for every officer. However, some of these training courses must be done in person and cost more money.



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In-Service Training:

In FY 2024, I will be coordinating and scheduling in-service training dates. This training will incorporate best practice internal policy review, legal update, Use of Force, officer safety, non-bias policing, and cultural diversity, along with other areas of importance. This coming may, our officers will be attending a mandated training of Implicit-bias and culture competent training, which will full fill 8 of the CPE credits for State mandated training classes. These training classes will also assist our officers earning 24 CPE credits. Per MCOLES, officers are required to have Firearm training and recertification at a minimum of once a year, however per policy for firearm training is a minimum of twice annually, which has been accomplished. We currently are looking to have 3 shoots a year, which would include a night shoot, winter shoot and our annual summer/fall shoot.

External Training

We have Coordinated with a neighboring department that offers MCOLES certified classes our officers will be training in. Since this past fall, our officers have been trained in Defensive Tactics. This past fall, the officers went through EVO training, (Emergency Vehicle Operations). These training courses have been coordinated with Van Buren Township police department. We are still looking for a defense tactics instructor, to assist our department with more in-service training, instead of going outside of our department. The one officer who wanted to attend a DT school, has since left our department for another employment opportunity. I have spoken with officers about becoming a defense tactics instructor.

This past year, we have been able to send 1 officer to REID schooling. I would like to send another 2 officers if possible based on our staffing. REID school assist officers in how to interview subjects. In my opinion, our officers are more well-rounded than any other department, because our officers are expected to be detectives and follow their cases from start to finish.



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Staffing

We currently have the Chief of Police, 1 Sergeant, 8 Full-time Officers. Over the past year, we have had some staffing issues, however, by changing the way we hire officers and offering experienced officers lateral pay, we have had more people apply for open positions. As of March 1, 2025, we are down an officer, for another employment opportunity I have already begun the process to hire an officer by summertime. During the weekdays, we are currently staffed with 2 road cars during the day, 1 being the SRO and 2 cars during the week on the night shift. Based on how our schedules work, only 1 shift will be affected till we can hire someone. At this time, the Sgt will switch over to the 12hr shift schedule and assist the road car during the week and the weekends.

I'm still actively working for the Lt's position that was created last year. Once we get our manpower back to full status, my intention is promoting a Lt. and to hold a Sgt exam and promote 1 if not 2 Sgts. within the organization. Creating this type of command staff, officers feel that there is upward mobility within the police department and hopefully retaining those officers.

Command Structure





BELLEVILLE POLICE DEPARTMENT

6 Main Street
Belleville, MI 48111

Phone: (734) 699-2710
FAX: (734) 699-3767



Chief of Police
Kristin Faull

POLICE SERGEANT POSITIONS

Since May of 2023, we have been down 1 Sergeant within the organization. I will be pushing to promote Sgt Schrecengost this summer to Lt and promote 1 more Sgt if possible. With the building of this command structure, officers will have more supervision on the weekends and shifts where there is no command available.

Reserves

The police Reserve Program has a long-standing history in the Belleville Police Department and is a necessary and vital part of our overall operation and mission to serve our community. Currently, we have 10 active reserves*

The Reserve Officers have been of great assistance by embracing this department's community policing philosophy and providing high visibility foot patrols in the downtown area for the Monday night car shows, the Bora Dora district, and all the other activities during the fall months. Based on their efforts, I have received numerous positive communications from our residents regarding their presence in the downtown area. The Reserves continue to assist the police department at all special events, including assisting the School Resource officer in athletic events.

I intend to continue to increase Reserve Officer recruitment.



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Chief of Police
Kristin Faull

COMMUNITY POLICING INITIATIVES

The Community Policing philosophy is the foundational principle that the Belleville Police Department does operate on. Moving forward, in FY 2024, the following Belleville Police Department initiatives will commence:

Neighborhood Associations: Outreach will be conducted with all neighborhood associations within the City of Belleville with the goal of establishing positive avenues of communication to open opportunities for crime prevention presentations and town hall type forums within each neighborhood group.

DDA/Chamber of Commerce/CBC: Outreach will be conducted with the goal of establishing positive avenues of communication and relationships to open opportunities for information sharing and joint ventures to advance the growth of the business community demonstrating Belleville as a safe and welcoming community.

School Resource Officer Program: This program is a core community policing initiative that will continue. Our dedication to the youth of our city and region is unwavering. In 2021, the police department had been discussing with Superintendent of the Van Buren Public Schools to look at expanding SRO coverage in the schools to include Van Buren Twp, police department and potentially Sumpter Twp. Since this conversation, Van Buren Police Department has dedicated 1 officer to assist the school district and to assist the SRO from the City of Belleville. As of this past March, the City of Belleville has placed a new SRO into the buildings. Ofc Stewart will be an excellent resource for the kids in our community.



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Chief of Police
Kristin Faull

Addition of two 2024 Chevrolet Tahoe patrol vehicles

In 2024, Chief Faull retired two 2018 Ford Explorers and purchased two 2024 Chevrolet Tahoe's in sterling gray metallic moving away from white patrol vehicles.

The Tahoe's are fully marked with visor mounted emergency lights giving a sleek appearance. The vehicles were outfitted with standard Police equipment also feature emergency LED lights in the running boards for increased visibility.

Officers have given Chief Faull positive feedback about the increased performance and comfort of the larger Tahoe patrol vehicles.





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Chief of Police
Kristin Faull

Mobile Radar Unit

The purchase of this radar unit was made in December of 2023. After a year of waiting, the radar unit is up and running, thanks to local business. This business built the trailer for us, and it was picked up on Friday, February 28th. At this point, the radar needs to be programmed and will be ready to be used.





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Chief of Police
Kristin Faull

Equipment needed for 2025

Radar Units: This year, I would like to replace 1 if not 2 mobile dash radar units and at least 1 handheld Lidar. Lidar's also assist in speed enforcement. A Lidar was purchased years ago, and it is now outdated and cannot be used for the road. I reached out to Stalker Radar and received quotes for both items. The dash mounted display cost around \$3,100 dollars per unit and the handheld Lidar cost about \$2,000 each. 2 of our dashboard radar units are old and have been sent out for repairs, a newer unit will have a 3-year warranty and be certified in the state for traffic enforcement.

The Lidar we have is at least 15 years old and has been out of service for years and is broken. I have tried to get parts to repair it but have been unsuccessful.

Prep Radios: I was notified in late February that the state is now pushing to the encrypted radio starting January of 2026. At this point, once the state moves towards the new encryption, the radios that our reserve officers carry will no longer work. I also learned that the encrypted radios would become part of the annual LEIN audit that occurs once every 3 years. The reason why the radios would become part of the LEIN audit is based on the radio transmission of criminal justice information. The reserves officers are an asset to our department, we depend on our reserve units to assist in covering overtime shifts that cannot be filled by a full-time officer, athletic events for Van Buren Public Schools, and Lake Festival and the many other activities that the city hosts through the year.



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Chief of Police
Kristin Faull

Patrol Vehicle: Would like to start looking at options to replace the 2021 Ford Explore. This vehicle is starting to have issues, based on milage and time on the road. The city manager would like to take the vehicle (2018A) that we currently use for the reserves and have that stripped down to make it a city vehicle for city officials. By the city taking that vehicle for city use, I would still need an extra vehicle for the reserve's officers. 221 is a vehicle that would last longer, since it would not be in the rotation of patrol vehicles. I would like to purchase another modem, to allow that vehicle to be used in a pinch for the full-time officers if one of the other cars goes down for maintenance. With the purchase of this new vehicle, I would like to request a new laptop as well as a modem. With the purchase of the new laptop, all our vehicles would have computer 2 years or younger.

Patrol Vehicle Modems: At this time, If the department is allowed to purchase another vehicle, I would like to keep the vehicle going out of service with a modem, and a computer in case we need it when another vehicle goes out for service. In the past year, we have had a few patrol vehicles taken out of service, due to miscellaneous issues. When this happens the vehicle is out of service for at least a week or more, causing more wear and tear on the 3 other patrol vehicles that we do have. Last year, we took vehicle 218A out of service and kept it as a training vehicle or reserve car. However, this car is not equipped with any computer or modem to allow officers to use it in a pinch when a vehicle does go down.



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Chief of Police
Kristin Faull

Axon Digital Evidence/ Body Worn Camera's and In-Car Cameras:

As of June, of this summer, the city needs to renew the contract with Axon. The department utilizes Axon for both BWC (Body Worn Cameras) and our in-car camera system. With the renewal of this contract, the contract will last 5 years and will now include unlimited data for storage. The ability for unlimited storage alone saves the department money, considering last year I had to purchase another terabyte of data to maintain our cases/evidence within the cloud space storage. With this renewal, our department will receive brand new body cameras with the new contract, and at the 2 1/2-year mark, they will upgrade our body cameras with the newest technology free of charge. Also with this new contract, our officers will all have pro-license, which will allow them to download their own videos to DVD or upload them to the prosecutor's office when needed. At this time, there are only 2 people in the department with the pro-license, which is Ofc Chad Adam and myself.



Bachman Commercial

Chuck Hill | 502-395-3996 | c.hill@bachmanautogroup.com

Vehicle: [Fleet] 2025 Chevrolet Tahoe (CK10706) 4WD 4dr Commercial (Complete)

Quote Worksheet - Police Dept.

	MSRP
Base Price	\$55,500.00
Dest Charge	\$1,995.00
Total Options	\$1,236.00
Subtotal	\$58,731.00
Subtotal Pre-Tax Adjustments	\$0.00
Less Customer Discount	(\$1,500.00)
Subtotal Discount	(\$1,500.00)
Trade-In	\$0.00
Subtotal Trade-In	\$0.00
Taxable Price	\$57,231.00
Sales Tax	\$0.00
Subtotal Taxes	\$0.00
Subtotal Post-Tax Adjustments	\$0.00
Total Sales Price	\$57,231.00

Comments:

Clark County

Dealer Signature / Date

Customer Signature / Date

Selected Model and Options

MODEL

CODE	MODEL	MSRP
CK10706	2025 Chevrolet Tahoe 4WD 4dr Commercial	\$55,500.00

COLORS

CODE	DESCRIPTION
GAZ	Summit White



This document contains information considered Confidential between GM and its Clients uniquely. The information provided is not intended for public disclosure. Prices, specifications, and availability are subject to change without notice, and do not include certain fees, taxes and charges that may be required by law or vary by manufacturer or region. Performance figures are guidelines only, and actual performance may vary. Photos may not represent actual vehicles or exact configurations. Content based on report preparer's input is subject to the accuracy of the input provided.
Data Version: 23799. Data Updated: Oct 27, 2024 6:42:00 PM PDT.



Bachman Commercial

Chuck Hill | 502-395-3996 | c.hill@bachmanautogroup.com

DD.

Vehicle: [Fleet] 2025 Chevrolet Tahoe (CK10706) 4WD 4dr Commercial (Complete)

Quote Worksheet

	MSRP
Base Price	\$55,500.00
Dest Charge	\$1,995.00
Total Options	\$1,236.00
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Subtotal Pre-Tax Adjustments	\$0.00
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Taxable Price	\$57,231.00
Sales Tax	\$0.00
Subtotal Taxes	\$0.00
Subtotal Post-Tax Adjustments	\$0.00
Total Sales Price	\$57,231.00

Comments:

Clark County

Dealer Signature / Date

Customer Signature / Date

Selected Model and Options

MODEL

CODE	MODEL	MSRP
CK10706	2025 Chevrolet Tahoe 4WD 4dr Commercial	\$55,500.00

COLORS

CODE	DESCRIPTION
GAZ	Summit White



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Data Version: 23799. Data Updated: Oct 27, 2024 6:42:00 PM PDT.



20400 E. 9 Mile Road, Saint Clair Shores, MI 48080 Phone: (586) 693-7525 Fax: (586) 693-7526
www.spectrum-wireless.us

Quote

Q000003268

Date March 3, 2025
Expires April 2, 2025
Customer BELLEVILLE PD

Bill To: Belleville PD
6 Main St.
Belleville MI 48111
United States of America

Ship To: Belleville PD
6 Main St.
Belleville MI 48111
United States of America

iever: Sgt.Todd Schreckengost Ph. (734) 216-9963 tschrec@belleville.mi.us

PO Number	FOB	Salesperson	Quote Date	Quote Number
	Your dock	Jeris Reynolds	March 3, 2025	Q000003268
Ship Via		Payment Terms	Reference	
Best way		Net 30 days	5118563	
Part Number	Description	Ordered	Unit Price	Extended Price
VP8000BKF2	VP8000 Portable Radio Model 2 Pkg. 700/800 MHz Radio comes with Antenna, Li-ion battery, KMC-70M speaker mic, P25 Phase1 trunking, P25 Phase 2 TDMA Trunking, Multi-Key AES/DES Encryption, ARC 4/ADP Encryption. Radio comes with 3 year Manufacture Warranty	10	4,107.84	41,078.40
KSC-5AK	Rapid Rate Single Unit Charger	10	73.84	738.40
2990600013	2 YR EXTENDED WARRANTY	10	164.00	1,640.00
KSC-526K	6 Unit Charger - Requires Individual Charger Pockets VP-T	1	622.24	622.24
KSC-52PBW	Charger Single Pocket B, KSC-52/526, KNB-L2/L3/LS7, VP-T	6	8.64	51.84
PROGRAMMING	Radio Set-Up / MPSCS Template Paperwork and Programming	10	25.00	250.00
***Pricing reflects Michigan State Contract Bid Price 210000000896 PRICING VALID FOR 30 DAYS A VALID PURCHASE ORDER IS REQUIRED TO PLACE THIS ORDER. OUR TERMS ARE NET 30 FROM DATE OF DELIVERY. TAX WILL BE ADDED TO ALL SALES UNLESS A TAX-EXEMPT CERTIFICATE HAS BEEN SIGNED. ALL SALES ARE SUBJECT TO CREDIT APPROVAL CUSTOMER PRICING NOTICE A 3.9% Convenience Fee will be assessed to each CREDIT / DEBIT Card Transaction. A 5% late fee will be added to all past due balances.		Net Amount		44,380.88
		Total		44,380.88

Non-Binding Budgetary Estimate



Axon Enterprise, Inc.
17800 N 85th St.
Scottsdale, Arizona 85255
United States
VAT: 86-0741227
Domestic: (800) 978-2737
International: +1.800.978.2737

Q-679195-45740.915AP

Issued: 03/24/2025

Quote Expiration: 05/20/2025

Estimated Contract Start Date: 08/01/2025

Account Number: 110320

Payment Terms: N30

Delivery Method:

SHIP TO	BILL TO
Belleville Police Dept.- MI 6 Main St Belleville, MI 48111-2736 USA	Belleville Police Dept.- MI 6 Main St Belleville MI 48111-2736 USA Email:

SALES REPRESENTATIVE	PRIMARY CONTACT
Asa Perez Phone: Email: asperez@axon.com Fax:	Kristin Faull Phone: (734) 699-2710 Email: kfaull@belleville.mi.us Fax: (248) 699-3767

Quote Summary

Program Length	60 Months
TOTAL COST	\$103,575.03
ESTIMATED TOTAL W/ TAX	\$103,575.03

Discount Summary

Average Savings Per Year	\$9,813.17
TOTAL SAVINGS	\$49,065.87

Payment Summary

Date	Subtotal	Tax	Total
Jun 2025	\$457.58	\$0.00	\$457.58
Jul 2025	\$20,623.49	\$0.00	\$20,623.49
Jul 2026	\$20,623.49	\$0.00	\$20,623.49
Jul 2027	\$20,623.49	\$0.00	\$20,623.49
Jul 2028	\$20,623.49	\$0.00	\$20,623.49
Jul 2029	\$20,623.49	\$0.00	\$20,623.49
Total	\$103,575.03	\$0.00	\$103,575.03

Non-Binding Budgetary Estimate

Quote Unbundled Price:	\$152,640.90
Quote List Price:	\$134,816.10
Quote Subtotal:	\$103,575.03

Pricing

All deliverables are detailed in Delivery Schedules section lower in proposal

Item	Description	Qty	Term	Unbundled	List Price	Net Price	Subtotal	Tax	Total
Program									
100553	TRANSFER CREDIT - SOFTWARE AND SERVICES	1			\$1.00	(\$5,606.17)	(\$5,606.17)	\$0.00	(\$5,606.17)
100552	TRANSFER CREDIT - GOODS	1			\$1.00	\$0.08	\$0.08	\$0.00	\$0.08
Fleet3B	Fleet 3 Basic	4	60	\$176.64	\$166.82	\$166.82	\$40,036.80	\$0.00	\$40,036.80
BWCUwTAP	BWC Unlimited with TAP	10	60	\$125.44	\$99.66	\$99.66	\$59,796.00	\$0.00	\$59,796.00
A la Carte Hardware									
H00001	AB4 Camera Bundle	10			\$1,798.00	\$89.90	\$899.00	\$0.00	\$899.00
H00002	AB4 Multi Bay Dock Bundle	1			\$1,638.90	\$0.00	\$0.00	\$0.00	\$0.00
A la Carte Software									
80401	AXON FLEET 3 - ALPR LICENSE - 1 CAMERA	4	60		\$64.01	\$35.21	\$8,449.32	\$0.00	\$8,449.32
Total							\$103,575.03	\$0.00	\$103,575.03

Delivery Schedule

Hardware

Bundle	Item	Description	QTY	Shipping Location	Estimated Delivery Date
AB4 Camera Bundle	100147	AXON BODY 4 - CAMERA - NA US FIRST RESPONDER BLK RAPIDLOCK	9	1	07/01/2025
AB4 Camera Bundle	100147	AXON BODY 4 - CAMERA - NA US FIRST RESPONDER BLK RAPIDLOCK	1	1	07/01/2025
AB4 Camera Bundle	100466	AXON BODY 4 - CABLE - USB-C TO USB-C	11	1	07/01/2025
AB4 Camera Bundle	100775	AXON BODY 4 - MAGNETIC DISCONNECT CABLE	11	1	07/01/2025
AB4 Camera Bundle	74020	AXON BODY - MOUNT - MAGNET FLEXIBLE RAPIDLOCK	11	1	07/01/2025
AB4 Multi Bay Dock Bundle	100206	AXON BODY 4 - 8 BAY DOCK	1	1	07/01/2025
AB4 Multi Bay Dock Bundle	70033	AXON - DOCK WALL MOUNT - BRACKET ASSY	1	1	07/01/2025
AB4 Multi Bay Dock Bundle	71019	AXON BODY - DOCK POWERCORD - NORTH AMERICA	1	1	07/01/2025
Fleet 3 Basic	100989	AXON FLEET - CRADLEPOINT R920-C7A+5YR NETCLOUD	4	1	07/01/2025
Fleet 3 Basic	70112	AXON SIGNAL - VEHICLE	4	1	07/01/2025
Fleet 3 Basic	71200	AXON FLEET - AIRGAIN ANT - 5-IN-1 2LTE 2WIFI 1GNSS BL	4	1	07/01/2025
Fleet 3 Basic	72036	AXON FLEET 3 - STANDARD 2 CAMERA KIT	4	1	07/01/2025
BWC Unlimited with TAP	73309	AXON BODY - TAP REFRESH 1 - CAMERA	10	1	12/31/2027
BWC Unlimited with TAP	73689	AXON BODY - TAP REFRESH 1 - DOCK MULTI BAY	1	1	12/31/2027
BWC Unlimited with TAP	73310	AXON BODY - TAP REFRESH 2 - CAMERA	10	1	07/01/2030
BWC Unlimited with TAP	73688	AXON BODY - TAP REFRESH 2 - DOCK MULTI BAY	1	1	07/01/2030

Software

Bundle	Item	Description	QTY	Estimated Start Date	Estimated End Date
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Non-Binding Budgetary Estimate

Software

Bundle	Item	Description	QTY	Estimated Start Date	Estimated End Date
BWC Unlimited with TAP	73686	AXON EVIDENCE - STORAGE - UNLIMITED (AXON DEVICE)	10	08/01/2025	07/31/2030
BWC Unlimited with TAP	73746	AXON EVIDENCE - ECOM LICENSE - PRO	10	08/01/2025	07/31/2030
Fleet 3 Basic	80400	AXON EVIDENCE - FLEET VEHICLE LICENSE	4	08/01/2025	07/31/2030
Fleet 3 Basic	80410	AXON EVIDENCE - STORAGE - FLEET 1 CAMERA UNLIMITED	8	08/01/2025	07/31/2030
A la Carte	80401	AXON FLEET 3 - ALPR LICENSE - 1 CAMERA	4	08/01/2025	07/31/2030

Services

Bundle	Item	Description	QTY
Fleet 3 Basic	100738	AXON FLEET 3 - SIM INSERTION - VZW 4FF	4
Fleet 3 Basic	73391	AXON FLEET 3 - DEPLOYMENT PER VEHICLE - NOT OVERSIZED	4

Warranties

Bundle	Item	Description	QTY	Estimated Start Date	Estimated End Date
BWC Unlimited with TAP	80464	AXON BODY - TAP WARRANTY - CAMERA	10	07/01/2026	07/31/2030
BWC Unlimited with TAP	80465	AXON BODY - TAP WARRANTY - MULTI BAY DOCK	1	07/01/2026	07/31/2030
Fleet 3 Basic	80379	AXON SIGNAL - EXT WARRANTY - SIGNAL UNIT	4	07/01/2026	07/31/2030
Fleet 3 Basic	80495	AXON FLEET 3 - EXT WARRANTY - 2 CAMERA KIT	4	07/01/2026	07/31/2030

Non-Binding Budgetary Estimate

Shipping Locations

Location Number	Street	City	State	Zip	Country
1	6 Main St	Belleville	MI	48111-2736	USA

Payment Details

Jun 2025

Invoice Plan	Item	Description	Qty	Subtotal	Tax	Total
Year 1a	100552	TRANSFER CREDIT - GOODS	1	\$0.00	\$0.00	\$0.00
Year 1a	100553	TRANSFER CREDIT - SOFTWARE AND SERVICES	1	(\$24.77)	\$0.00	(\$24.77)
Year 1a	80401	AXON FLEET 3 - ALPR LICENSE - 1 CAMERA	4	\$37.33	\$0.00	\$37.33
Year 1a	BWCUwTAP	BWC Unlimited with TAP	10	\$264.17	\$0.00	\$264.17
Year 1a	Fleet3B	Fleet 3 Basic	4	\$176.88	\$0.00	\$176.88
Year 1a	H00001	AB4 Camera Bundle	10	\$3.97	\$0.00	\$3.97
Year 1a	H00002	AB4 Multi Bay Dock Bundle	1	\$0.00	\$0.00	\$0.00
Total				\$457.58	\$0.00	\$457.58

Jul 2025

Invoice Plan	Item	Description	Qty	Subtotal	Tax	Total
Year 1b	100552	TRANSFER CREDIT - GOODS	1	\$0.02	\$0.00	\$0.02
Year 1b	100553	TRANSFER CREDIT - SOFTWARE AND SERVICES	1	(\$1,116.28)	\$0.00	(\$1,116.28)
Year 1b	80401	AXON FLEET 3 - ALPR LICENSE - 1 CAMERA	4	\$1,682.40	\$0.00	\$1,682.40
Year 1b	BWCUwTAP	BWC Unlimited with TAP	10	\$11,906.35	\$0.00	\$11,906.35
Year 1b	Fleet3B	Fleet 3 Basic	4	\$7,971.99	\$0.00	\$7,971.99
Year 1b	H00001	AB4 Camera Bundle	10	\$179.01	\$0.00	\$179.01
Year 1b	H00002	AB4 Multi Bay Dock Bundle	1	\$0.00	\$0.00	\$0.00
Total				\$20,623.49	\$0.00	\$20,623.49

Jul 2026

Invoice Plan	Item	Description	Qty	Subtotal	Tax	Total
Year 2	100552	TRANSFER CREDIT - GOODS	1	\$0.02	\$0.00	\$0.02
Year 2	100553	TRANSFER CREDIT - SOFTWARE AND SERVICES	1	(\$1,116.28)	\$0.00	(\$1,116.28)
Year 2	80401	AXON FLEET 3 - ALPR LICENSE - 1 CAMERA	4	\$1,682.40	\$0.00	\$1,682.40
Year 2	BWCUwTAP	BWC Unlimited with TAP	10	\$11,906.35	\$0.00	\$11,906.35
Year 2	Fleet3B	Fleet 3 Basic	4	\$7,971.99	\$0.00	\$7,971.99
Year 2	H00001	AB4 Camera Bundle	10	\$179.01	\$0.00	\$179.01
Year 2	H00002	AB4 Multi Bay Dock Bundle	1	\$0.00	\$0.00	\$0.00
Total				\$20,623.49	\$0.00	\$20,623.49

Jul 2027

Invoice Plan	Item	Description	Qty	Subtotal	Tax	Total
Year 3	100552	TRANSFER CREDIT - GOODS	1	\$0.02	\$0.00	\$0.02
Year 3	100553	TRANSFER CREDIT - SOFTWARE AND SERVICES	1	(\$1,116.28)	\$0.00	(\$1,116.28)
Year 3	80401	AXON FLEET 3 - ALPR LICENSE - 1 CAMERA	4	\$1,682.40	\$0.00	\$1,682.40
Year 3	BWCUwTAP	BWC Unlimited with TAP	10	\$11,906.35	\$0.00	\$11,906.35
Year 3	Fleet3B	Fleet 3 Basic	4	\$7,971.99	\$0.00	\$7,971.99

Non-Binding Budgetary Estimate

Jul 2027

Invoice Plan	Item	Description	Qty	Subtotal	Tax	Total
Year 3	H00001	AB4 Camera Bundle	10	\$179.01	\$0.00	\$179.01
Year 3	H00002	AB4 Multi Bay Dock Bundle	1	\$0.00	\$0.00	\$0.00
Total				\$20,623.49	\$0.00	\$20,623.49

Jul 2028

Invoice Plan	Item	Description	Qty	Subtotal	Tax	Total
Year 4	100552	TRANSFER CREDIT - GOODS	1	\$0.02	\$0.00	\$0.02
Year 4	100553	TRANSFER CREDIT - SOFTWARE AND SERVICES	1	(\$1,116.28)	\$0.00	(\$1,116.28)
Year 4	80401	AXON FLEET 3 - ALPR LICENSE - 1 CAMERA	4	\$1,682.40	\$0.00	\$1,682.40
Year 4	BWCUwTAP	BWC Unlimited with TAP	10	\$11,906.35	\$0.00	\$11,906.35
Year 4	Fleet3B	Fleet 3 Basic	4	\$7,971.99	\$0.00	\$7,971.99
Year 4	H00001	AB4 Camera Bundle	10	\$179.01	\$0.00	\$179.01
Year 4	H00002	AB4 Multi Bay Dock Bundle	1	\$0.00	\$0.00	\$0.00
Total				\$20,623.49	\$0.00	\$20,623.49

Jul 2029

Invoice Plan	Item	Description	Qty	Subtotal	Tax	Total
Year 5	100553	TRANSFER CREDIT - SOFTWARE AND SERVICES	1	(\$1,116.28)	\$0.00	(\$1,116.28)
Year 5	80401	AXON FLEET 3 - ALPR LICENSE - 1 CAMERA	4	\$1,682.40	\$0.00	\$1,682.40
Year 5	BWCUwTAP	BWC Unlimited with TAP	10	\$11,906.36	\$0.00	\$11,906.36
Year 5	Fleet3B	Fleet 3 Basic	4	\$7,972.00	\$0.00	\$7,972.00
Year 5	H00001	AB4 Camera Bundle	10	\$179.01	\$0.00	\$179.01
Year 5	H00002	AB4 Multi Bay Dock Bundle	1	\$0.00	\$0.00	\$0.00
Total				\$20,623.49	\$0.00	\$20,623.49

Non-Binding Budgetary Estimate

This Rough Order of Magnitude estimate is being provided for budgetary and planning purposes only. It is non-binding and is not considered a contractable offer for sale of Axon goods or services.

Tax is estimated based on rates applicable at date of quote and subject to change at time of invoicing. If a tax exemption certificate should be applied, please submit prior to invoicing.

Exceptions to Standard Terms and Conditions

Agency has existing contract(s) originated via Quote(s):

Q-308445, Q-506363, Q-574825

Agency is terminating those contracts effective 8/1/2025 Any changes in this date will result in modification of the program value which may result in additional fees or credits due to or from Axon.

The parties agree that Axon is applying a Net Transfer Credit of -\$5,606.09

100% discounted body-worn camera and docking station hardware contained in this quote reflects a TAP replacement for hardware purchased under existing quotes aforementioned above. All TAP obligations from this contract will be considered fulfilled upon execution of this quote.





Thank you for choosing CDW. We have received your quote.

Hardware

Software

Services

IT Solutions

Brands

Research Hub

QUOTE CONFIRMATION

KRISTIN FAULL,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PKHX429	4/17/2025	CLEMIS-CRADLEPOINT	12124636	\$1,484.47

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Cradlepoint R920 - wireless router - WWAN - Wi-Fi 6 - 3G, 4G - desktop Mfg. Part#: MA05-0920-C7A-NA Contract: Sourcewell 121923-CDWG Tech Catalog (121923)	1	7385653	\$1,109.98	\$1,109.98
Panorama Antennas Sharkee SH-IN2617 Antenna Mfg. Part#: SH-IN2617 Contract: Sourcewell 121923-CDWG Tech Catalog (121923)	1	6512784	\$290.46	\$290.46

SUBTOTAL \$1,400.44

SHIPPING \$0.00

SALES TAX \$84.03

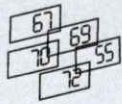
GRAND TOTAL **\$1,484.47**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CITY OF BELLEVILLE POLICE ACCOUNTS PAYABLE 6 MAIN ST BELLEVILLE, MI 48111-2736 Phone: (734) 669-2710 Payment Terms: Net 30-Expired	Shipping Address: CITY OF BELLEVILLE POLICE KRISTIN FAULL 6 MAIN ST BELLEVILLE, MI 48111-2736 Phone: (734) 669-2710 Shipping Method: DROP SHIP-GROUND
	Please remit payments to: CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515

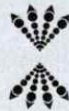
The Stalker DSR 2X At-A-Glance

Type	Direction Sensing Moving/Stationary Doppler Radar
Accuracy	±1 mph stationary, ±2 mph moving ±2 km/h stationary, ±3 km/h moving
Display	5-window, LCD or LED
Antennas	Ka-Band, waterproof
Warranty	3 years standard, additional 2 years optional

State-Of-The-Art Radar Features



5-WINDOW DISPLAY



DUAL-ANTENNA OPERATION



RFI IMMUNE COMMUNICATION



OFFICER SAFETY ALERT

All Stalker Radars have passed National Highway Traffic Safety Administration testing and are listed on the NHTSA Conforming Product List.



STALKER

Power to Enforce.

applied concepts, inc.

855 East Collins Blvd. ■ Richardson, Texas 75081
972.398.3780 ■ Fax 972.398.3781

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800-STALKER

006-0334-00 Rev P



Stalker DSR 2X | Dual Zone Select | Direction-Sensing Radar

The Industry-leading Stalker DSR 2X is actually two, full-functioning direction-sensing radars in one compact unit. The DSR 2X is unequalled in technology, performance, and safety.

DSR 2X



Up to 4 targets from 1 antenna - moving or stationary



LCD display - NEW

Now with a choice of LCD or LED display

- Direction-Sensing Technology
- Rear Traffic Alert Feature for Officer Safety
- Automatic Same-Direction Tracking
- Voice Verification of Antenna, Mode, and Direction



LED display



Fast-lock or Instant-on Infrared remote controls

STALKER

Power to Enforce.

The Stalker DSR 2X Dual Zone Select Radar is the most advanced speed enforcement radar on the market today.

Stalker's DSR 2X long-range radar is as effective on dense city streets as it is on the highway. Combine that with its wide range of operational modes – same direction and opposite direction, single or dual antenna, moving or stationary dual zone select mode – and it becomes clear why the 2X is the most versatile traffic enforcement radar available.

- Separate target locking is another STALKER first
- True doppler audio
- Vehicle Speed Sensing (VSS) operation is standard
- Track-Lock Function - With multi-colored displays
- Voice verification of the antenna, radar mode, and direction when locked
- RS-232 serial port is standard



Up to 4 Target Zones from a Single Antenna - Moving or Stationary



5-window display with choice of LCD or LED display technology*



LCD Display Technology - New

Tested and included on the NHTSA Conforming Product List.

- Backlight excels in nighttime conditions and covert operation
- Better readability in bright sunlight
- Enhanced graphics and interface
 - Color icons
 - Stationary vs moving
 - Lock speed and direction arrows



LED Display

Both displays can be separated from the counting unit and connected using an optional separation cable.

* Choose display type when placing order.



Rear Traffic Officer Safety Alert

Rear Traffic Alert is a proprietary feature of the DSR 2X. It is designed to warn the patrol officer of rapidly overtaking same-direction traffic when the patrol vehicle is most vulnerable to rear-end collisions – pulling into traffic from a standing start.

If the radar senses a rapidly approaching vehicle within adjustable speed parameters, it warns the officer with a distinctive alert tone. Rear Traffic Alert is a patented Stalker technology.



RFI immune communication

RFI is eliminated due to the DSR 2X antennas' advanced digital communication.



Waterproof antennas and components

The Stalker's 2X waterproof components are durable, accurate products for continuous duty in the worst conditions. A full selection of brackets, mounts and cables are available.



DSR 2X

Your choice of two full-function cordless remote controls

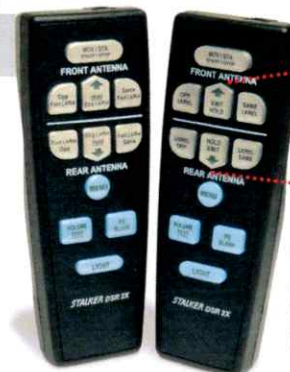
■ Fast-Lock Remote

This remote is designed for departments that require Fast Lock operation and normally operate in constant transmit mode.

■ Instant-On Remote

This remote is designed for departments that do not require Fast Lock operation but routinely use the "instant-on" feature. A dedicated XMIT/HOLD key provides instant transmitter ON/OFF operation.

Available in either ergonomic wireless infrared remote controls, or optional wired, metal body remote controls



Simple 1-Button Functions

Change antenna, turn on transmitter, and select direction are only a 1-button push on the DSR 2X.

Power to Enforce.



applied concepts, inc.

QUOTE
#2104434

855 E. Collins Blvd
Richardson, TX 75081
Phone: 972-398-3780
Fax: 972-398-3781

National Toll Free: 1-800- STALKER

Page 1 of 1

Date: 04/23/25

Inside Sales Partner: Vanna Moore
vanna.moore@a-concepts.com

Reg Sales Mgr: Dewey Gatts
972-398-3780
dewey@stalkerradar.com

Effective From : 04/23/2025

Valid Through: 07/22/2025

Lead Time: 45 working days

Bill To: Belleville Police Dept 6 Main St Belleville, MI 48111-2736	Customer ID: 011238 Accounts Payable	Ship To: Belleville Police Dept 6 Main St Belleville, MI 48111-2736	<i>FedEx Ground</i> Chief of Police Kristin Faull
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Grp	Qty	Package	Description	Wrnty/Mo	Price	Ext Price
1	1	807-0001-00	DSR 2X Radar with Fast Lock Remote	36	\$2,907.00	\$2,907.00

Ln	Qty	Part Number	Description	Price	Ext Price
1	1	200-0965-50	2X Counting Unit, 1.5 PCB, ARM Processor		\$0.00
2	1	200-1570-00	2X Modular OSC Display		\$0.00
3	1	200-1468-00	Dual DSR Ka Antenna		\$0.00
4	1	200-1468-01	2X Rear Antenna		\$0.00
5	1	200-0919-00	2X Fast Lock Remote w/Screw Latch		\$0.00
8	1	200-0648-00	Display Sun Shield		\$0.00
9	1	200-0243-00	Counting/Display Tall Mount		\$0.00
10	1	200-0244-00	Antenna Dash Mount		\$0.00
11	1	200-0245-00	Antenna Tall Deck Mount		\$0.00
12	1	155-2591-08	8 Foot Antenna Cable, IP67		\$0.00
13	1	155-2591-20	20 Foot Antenna Cable, IP67		\$0.00
14	1	200-0622-00	VSS Cable Kit		\$0.00
15	1	200-0619-00*	2X Documentation Kit		\$0.00
16	1	006-0094-00	Fan Noise Suppression Addendum - 2X		\$0.00
17	1	035-0361-00	Shipping Container, Dash Mounted Radar		\$0.00
18	1	060-1000-36	36 Month Warranty		\$0.00
19	1	006-0300-00	Michigan Certificate of Compliance, Radar	\$0.00	\$0.00
Group Total					\$2,907.00

Product	\$2,907.00	Sub-Total:	\$2,907.00
Discount	\$0.00	Sales Tax 0%	\$0.00
Payment Terms: Net 30 days		Shipping & Handling:	\$0.00
		Total: USD	\$2,907.00

2024 MI Contract
210000000351
Vehicle Information:
2025 (TBD) TBD

001

This Quote or Purchase Order is subject in all respects to the Terms and Conditions detailed at the back of this document. These Terms and Conditions contain limitations of liability, waivers of liability even for our own negligence, and indemnification provisions, all of which may affect your rights. Please review these Terms and Conditions carefully before proceeding.



Stalker RLR | Long Range LIDAR

Built for the real world

Easily performs in the harshest conditions.

UPGRADE



Fastest
acquisition time

UPGRADE



Industry-leading
range and
accuracy



Small and
lightweight



IP67 waterproof
and dustproof



Intuitive display



Anti-jamming
capability



Independently tested
and verified to pass
the MIL-STD 810H
drop test.



The RLR takes
rugged to the
next level -
New shock-
absorbing reticle
protector adds an
extra layer of drop
protection.

STALKER

Power to Enforce.

StalkerRadar.com

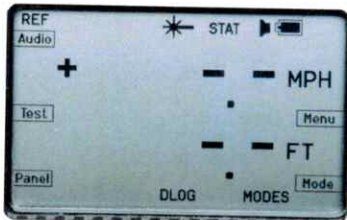
The R-Series LIDAR solidifies Stalker's place at the head of the LIDAR pack. Weighing in at a mere 2.3 lbs. (1.09 kg), with batteries, the R-Series is lighter than any comparable hand-held device on the market.

The RLR's Li-Ion battery pack snaps instantly into the pistol grip, provides power for at least two shifts, and withstands more than 500 charging cycles. Alternatively, the RLR AA uses six Alkaline or Ni-MH rechargeable AA batteries.

With an average target acquisition time of 1/3 of a second or less, and a range in excess 9,500 feet (on a tripod), there is not a more effective speed enforcement tool.

Full-Character LCD Display

The Stalker RLR LIDAR's new full-character LCD display and simple menu system make it the most user friendly lidar on the market.



Exclusive RLR Features:

■ C-Thru Technology™

Stalker LIDAR RLR's C-Thru Technology™ enables the LIDAR to track targets despite the presence of trees, leaves, bushes, utility poles, and other obstructions between it and the target.

■ Auto Obstruction Mode

Using C-Thru Technology™, the operator can take a position where previously – because of a fence, trees, signage, etc. – continuous tracking of a target was impossible.

■ School Zone / Construction Zone Mode

The RLR can track vehicles only within an operator-defined area. The operator sets a far boundary and near boundary and the RLR will ignore vehicles outside of that zone.

■ Inclement Weather / Obstruction Mode

The Inclement Weather/Obstruction Mode allows the unit to work in rain, snow, blowing dust, fog, as well as through fences, tree branches, etc.

■ Anti-Jamming Capability

■ Shoots Through Windshields

■ Calibration Expiration Notice

■ Wireless Connectivity

The RLR can connect with peripherals such as printers or speed display signs. It allows the RLR to connect to a PC for serial data transfers or use with the Data Logging feature.

■ Data Logging

Capturing and logging speed and time data is as easy as releasing the trigger. Storing up to 3,000 data sets in non-volatile memory, the data is either captured automatically or only when accepted by the operator.

■ Following-Too-Close

Easily set up. Taking readings of two vehicles in the same lane shows distance between the vehicles and separation time.

Specifications

Dimensions: 9.1" Height, 5.0" Length, 4.3" Width
(23.1 cm Height, 12.7 cm Length, 10.9 cm Width)

Weight: Including battery 2.3 lbs (1.09 kg)

Housing: High impact resistant polymer housing

Ingress Protection: IP67 dust and water proof

Environmental: -22° to +140° F, operating, (-30° to 60°C)
-40° to +185° F, non-operating (-40° to 85°C)

Battery Life: Typically 500+ charge cycles

Battery Charge: Li-Ion battery: Approx. 2 - 3 shifts
AA batteries: Approx. 2 shifts

Type: Hand-held LIDAR offering Tracking mode, and Single-Shot mode*

Acquisition Time: 0.33 second

Nominal Range on moving targets Minimum: Range mode < 5' (< 1.5 m)
Speed mode 49' (15.2 m)
Normal: 4,000' (1,219 m) approaching vehicles
Maximum: 9,999' (3,047 m)

Range Accuracy: ± 6" (± 15 cm **)

Speed Measure: 299 mph (481 km/h; 260 knots)

Speed Accuracy: ± 1 mph (± 1 km/h; ± 1 knot)

Eye Safety: FDA/CDRH CLASS 1 (U.S. /Canada eye safe)

* Not available in North America

** When the unit is in 0.1 (tenths) resolution

2 models to choose from:

AA battery version
#200-1058-08



Li-Ion battery pack
#200-1058-03



For complete information, go to www.stalkerradar.com

STALKER®

Power to Enforce.

applied concepts, inc.

855 East Collins Blvd. ■ Richardson, Texas 75081

972.398.3780 ■ Fax 972.398.3781

006-0598-00 Rev F

StalkerRadar.com

800-STALKER

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applied concepts, inc.

855 E. Collins Blvd
Richardson, TX 75081
Phone: 972-398-3780
Fax: 972-398-3781

National Toll Free: 1-800- STALKER

Inside Sales Partner: Vanna Moore
vanna.moore@a-concepts.com

QUOTE
2104436

Page 1 of 1

Date: 04/23/25

Reg Sales Mgr: Dewey Gatts
972-398-3780
dewey@stalkerradar.com

Effective From : 04/23/2025

Valid Through: 07/22/2025

Lead Time: 45 working days

Bill To: Belleville Police Dept 6 Main St Belleville, MI 48111-2736	Customer ID: 011238 Accounts Payable	Ship To: Belleville Police Dept 6 Main St Belleville, MI 48111-2736	<i>FedEx Ground</i> Chief of Police Kristin Faull
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Grp	Qty	Package	Description	Wrnty/Mo	Price	Ext Price
1	1	808-6125-00	Stalker Lidar RLR - w/BT, DL & FTC, 2 Batteries, D	24	\$2,699.00	\$2,699.00
Ln	Qty	Part Number	Description		Price	Ext Price
1	1	200-1602-53	Ruggedized RLR Lidar			\$0.00
2	2	200-1053-10*	Lidar RLR Battery Cell, ACI Build			\$0.00
3	1	200-1092-01	Lidar RLR Dual Bay Battery Charger			\$0.00
4	1	035-0211-00	Soft Storage Bag			\$0.00
5	1	011-0002-00	Lidar Certificate of Accuracy			\$0.00
6	1	011-0231-00	Lidar RLR Quick Start Guide			\$0.00
7	1	057-1010-00	Label for Documentation Kit			\$0.00
8	1	035-0389-00	Lidar Shipping Box w/Foam			\$0.00
9	1	060-1000-24	24-Month Warranty			\$0.00
10	1	062-0093-00	Lidar Delta Distance Mode		\$0.00	\$0.00
11	1	006-0301-00	Michigan Certificate of Compliance, Lidar		\$0.00	\$0.00
Group Total						\$2,699.00

Product	\$2,699.00	Sub-Total:	\$2,699.00
Discount	\$0.00	Sales Tax 0%	\$0.00
Payment Terms: Net 30 days		Shipping & Handling:	\$0.00
		Total: USD	\$2,699.00

2024 MI Contract
210000000351

001

This Quote or Purchase Order is subject in all respects to the Terms and Conditions detailed at the back of this document. These Terms and Conditions contain limitations of liability, waivers of liability even for our own negligence, and indemnification provisions, all of which may affect your rights. Please review these Terms and Conditions carefully before proceeding.



**City of Belleville
Fire Department**
Director of Public Safety Krisy Faull
Chief Chris Zweng
Lieutenant Rich Landskroener



Mission Statement

The mission of the Belleville Fire Department is to safely protect the lives and property of the citizens of the City of Belleville. All done with the proper training of our dedicated personnel for fire suppression, medical emergencies, public service, public education, and inspection.

Roles

All Rolls include the following duties:

During an assigned tour of duty, extinguishes fires; performs rescue operations; aids in emergency situations involving hazardous or toxic materials; administers emergency medical treatment; maintains all related equipment, buildings and grounds; does related work.

FIRE CHIEF

Under the direction of the Interim Director of Public Safety, has charge of the fire department. Manages all fire department operations and administration to ensure their timely, thorough, and cost-effective preparation and conduct; does related work.

ASST. CHIEF

Under the direction of the Fire Chief, assists in the management and discipline of the fire department designed to provide fire protection for persons and property; does other related duties as required.

FIRE CAPTAIN

Under the direction of the Chief and Assistant Chief, the Fire Captain has charge of a fire department platoon intended to assist in the extinguishing of fires; does other related duties.

FIRE LIEUTENANT

Under direction of a Fire Captain, has charge of a fire department platoon intended to assist in the extinguishing of fires; does other related duties.

FIRE FIGHTER

During an assigned tour of duty, extinguishes fires; performs rescue operations; aids in emergency situations involving hazardous or toxic materials; administers emergency medical treatment; maintains all related equipment, buildings and grounds; does related work. All firefighters are required to have both firefighter and medical first responder training for the City of Belleville Fire Department.

Policy and SOG

Fire Department employees follow Employment Policies put forth by the City of Belleville, its charter and the council. The fire department uses SOG's (Standard Operating Guidelines) to guide its day-to-day operations, SOG's remain guidelines which leave some room for modification. But the freedom to make a modification to SOG's does not relieve responsibility if the modification works against the SOG's intent.

Staff Qualifications:

You will find the training hours completed by members over the last 3 years. We have also included a list of every member and what training they have completed.

Last Name	First Name	Rank	Years of Service	2024 Runs	2024 Training Hours	2023 Training Hours	2022 Training Hours
Loranger	Brian	Chief	37	50	47	38	52
Zweng	Christopher	Asst. Chief	17	180	36	47	36
Landskroener	Richard	Lieutenant	7	223	47	50	47
Anderson	Jacob	Probationary	<1	10			
Gay	Robert	Firefighter	2	59	19	34	
Harper	Michael	Firefighter	2	8	50		
Kissel	Garrett	Firefighter	4	113	16	56	44
Landskroener	Andrew	Firefighter	1	215	20	6	
Martin	Raytheon	Probationary	1	73	4		
Reed	Allison	Firefighter	4	117	32	2	22
Reed	Justin	Firefighter	8	60	19	20	24
Teachout	Isabella	Probationary	<1	74	4		
Wisniewski	Michael	Firefighter	2	108	10	26	
Last Name	First Name	Rank	Fire 1	Fire 2	Hazmat Ops	Driver's Training	Medical
Loranger	Brian	Chief	X			X	EMR
Zweng	Christopher	Asst. Chief	X	X	X	X	EMR
Landskroener	Richard	Lieutenant	X	X	X	X	EMR
Anderson	Jacob	Probationary	X	X	X	X	EMT
Gay	Robert	Firefighter	X	X	X	X	MFR
Harper	Michael	Firefighter	X	X	X	X	Paramedic
Kissel	Garrett	Firefighter	X	X	X	X	Paramedic
Landskroener	Andrew	Firefighter	X	X	X	X	EMR
Martin	Raytheon	Probationary	In Academy	In Academy	In Academy	X	Waiting on class
Reed	Allison	Firefighter	X	X	X	X	EMT
Reed	Justin	Firefighter	X	X	X	X	MFR
Teachout	Isabella	Probationary	X	In Academy	In Academy	X	Waiting on class
Wisniewski	Michael	Firefighter	X	X	X	X	EMT
Last Name	First Name	Rank	Officer 1 & 2	Officer 3	Fire Instructor	Medical Instructor	
Loranger	Brian	Chief	X	X			
Zweng	Christopher	Asst. Chief	X	X	X		
Landskroener	Richard	Lieutenant	X				
Gay	Robert	Firefighter			X		
Harper	Michael	Firefighter	X	X	X	X	
Kissel	Garrett	Firefighter			X		
ALL TRAINING RECORDS ARE PULLED FROM LARA SMOKE RECORD SYSTEM, MDHHS AND IN-HOUSE TRAINING RECORDS REQUIRED BY STATE OF MICHIGAN							
ALL TRAINING HOURS ARE PULLED FROM IN-HOUSE TRAINING RECORDS							
CE REQUIREMENT CHART		MFR/EMR - 15 TOTAL		EMT - 30 TOTAL		PARAMEDIC - 45 TOTAL	
EVERY 3 YEARS							

Training:

The Belleville Fire Department members train monthly in both medical and firefighting skills. The calendar year for 2025 the department has schedules 25 hours of medical and 35 hours of Fire training.

Training Schedule:

Our training schedule is as follows:

2nd Monday of the month

Medically based training

2 hours 18:00 to 20:00

2nd Saturday of the month

Firefighting based training

3-4 hours 09:00 till 13:00 or 14:00

In 2024/25, we will have 2 members complete EMR (Emergency Medical responder), with one cadet completing EMT (Emergency Medical technician) and Fire I which will be joining the staff after graduating from BHS in the spring. We currently have 2 members who are nearing completion of Firefighter I & II and should be certified by the state by mid-May, contingent on passing the written and practical state exams.

The goal of the department training program is to assist firefighters in keeping up with basic firefighting skills that are not used daily. Our training program also introduces new fire fighters, who have no experience in dealing with the complexity of firefighting. The department currently struggles with getting members to show up for training, due to not having contractual requirements. This problem will hopefully be addressed in the next CBA, when the current one expires on December 31, 2025. The department is looking at providing better-quality fire and medical training with medical CEUs to encourage members to attend training.

The Fire Department trains 10 months in the year. During the months of June and December, there are no training courses, due to Lake Festival, Winterfest, and Holidays. On average each fire fighter receives 6 hours a month of training for a total of 60 hours for the year split between Fire and Medical training. Within these 60 hours of training, we also must meet and adhere to the MIOSHA Part 74 for Fire Fighting.

The state of Michigan's Firefighter Training Council has begun mandating a minimum of 36 hours of continuing education every three years beginning in October 2022 for all firefighters, including part-time and full-time employees.

Building Status:

The Fire Department is one of the oldest buildings the city owns. The Fire Department has had major renovations over the last calendar year.

2024 Completed Projects:

Kitchen:

Full renovation has been completed which included new flooring, walls, cabinet, appliances, and counter tops.

Report Writing Room:

Full renovation has been completed, which included new cabinets and counter tops.

There are still renovations that need to be completed. These renovations would include purchasing a whole building generator, replacing ceiling tiles, due to water damage, replacing the old wooden lockers with new modern and secure lockers with doors that can be locked, and a new slop sink to get rid of the commercial sink that is not conducive for the fire department. Also, the possibility of bay drains, which will allow the fire department to wash the trucks at the station, and re-epoxy the bay floor area.

Equipment Status:

Turn Out Gear

Our turn-out gear is a mix of Fire-Dex and Globe. The Fire-Dex gear was purchased through a grant in 2017. This gear is used by 25% of our department. The other 75% use Globe gear from 2014-2015. The current gear being used is in good working condition but will need to be replaced.

The replacement cost of Globe turnout gear is being asked for in this year's coming budget. One set of turnout gear is roughly \$4500. In December, the department filed for a FEMA grant for the replacement of turnout gear for everyone in the department. If this grant is approved through FEMA, it would be a 10% matching grant. The estimated cost for the 10% grant would be between \$10,000-\$15,000 dollars total.

If a grant was not received, the recommendation would be to budget four sets of gear yearly, until all gear is replaced.

Structural Firefighting Gloves

All members have good in-service gloves.

Prep Radios

Each member is assigned a radio. All current radios are in good working condition. Throughout the next year, the department will need to replace batteries. Battery cost per radio is roughly estimated at \$100/battery.

Voice Pagers

Each member is assigned an 800 MHz pager. All current pagers are in good working condition. Throughout 2025, a few new batteries will need to be purchased. Estimated cost for the pager batteries are \$100/battery.

SCBA Packs

We have 14 SCBA packs and 28 SCBA bottles. One SCBA bottle was damaged in a fire academy training and needs immediate replacement. We received these packs six years ago through a grant. The recommendation would be to start purchasing 2 pack frames and 4 bottles each year going forward to soften the financial impact of replacing all packs and bottles in 2029.

Fire Fighters Uniforms:

Under the currently CBA, the department is to provide each fire fighter with "Class B" uniforms, to be worn during stand-by duty and while working any event representing the city of Belleville Fire Department. It has come to my attention that the previous administration would not provide all items required by the CBA to new fire fighters and would piece meal uniforms, allowing them to only purchase a few items at a time, to cut back cost. I have asked the command staff to check with each member of the department to report what they are missing from their uniforms, that should have been provided when they hired on. Once this list is provided to me, fire fighters will be required to go purchase the gear they are missing to ensure they can perform their jobs safely and effectively.

IT Infrastructure

Currently the fire department has 4 in-house computers and two printers that are being utilized. Listed below are the following computers:

Radio Room/Workstations: 2 computers are in this area for doing reports. One of the computers in this room was purchased last year, however the second computer was donated by another member of the department. This should not be the case, the computers at the fire hall should belong to the City of Belleville. At this time, I request that another computer be purchased.

Server Rack: The server rack has 1 computer that handles the Brix system; response application display, and the access control system. However, there are two more computers in this server rack, which were donated by other staff members of the fire department. My suggestion would be to purchase a server for the fire department, to ensure that the server is maintained by VC3 and secured.

During this budget year, I would request that we purchase one laptop that can be used for training purposes for the common area room. Currently, fire fighters have to bring in their own equipment to host training classes and utilize the large screen and projector.

Vehicle Status

Engine 451 – 2023 Spartan

Mileage – 2941.1

Hours – 94.4

Condition – New apparatus. This vehicle was purchased as part of the federal grant program.

Rescue 453 – 2007 Spartan Hackney Heavy Rescue

Mileage – 12798 2024 current 13,372 March 2025

Hours – 2542.7 2024 current 2635 March 2025

Condition – Good – This apparatus is our first response vehicle to all MVAs; motor vehicle accidents, and second to respond to medical emergencies. All aspects of this apparatus are in working condition. Replacement in 2030 is recommended.

Squad 456 – 2004 Ford Expedition

Mileage – 39585.8 2024 current 41,215 March 2025

Condition – Good - This apparatus is our first to respond to all medical emergencies and gets the most wear. There are no current issues with this apparatus. I would recommend the replacement of this due to its age and size constraints in the 2025-2026 budget year. A larger longer SUV with a four-wheel drive would be more suited for our needs.

Brush 457 – 1985 AM General M998 Humvee (Recommend removing from service and selling)

Mileage – 28165.6

Condition – Good – This apparatus is in good working condition and is mainly used for brush/wildland fires. As this apparatus is not a daily responding unit, the cost of maintaining this apparatus is costly. Recently, batteries had to be purchased at the cost of \$1500. My suggestion would be to sell this apparatus at an auction.

Engine 461 – 1998 Pierce Saber Engine

Mileage – 15674.5 2024 current 16,034 March 2025

Hours – 2400.8 (Believe this number is wrong) 2024 current 10,718 March 2025

Condition – Good – This is our second apparatus to respond to all structure fires, first to respond on all mutual aids, and fourth to respond on medical emergencies. This apparatus is in good working condition, Due to this apparatus's age and being 26 years old, recommendation of the replacement process in the 2026 budget year.

Statistics

2022 Total Incidents

City of Belleville Fire Dept.

Belleville, MI

This report was generated on 3/29/2024 5:20:31 PM



Incident Count for All Calls (All Statuses) for Agency for Date Range

Start Date: 01/01/2022 | End Date: 12/31/2022

AGENCY	# INCIDENTS
City of Belleville Fire Dept.	694

2023 Total Incidents

City of Belleville Fire Dept.

Belleville, MI

This report was generated on 3/29/2024 5:22:14 PM



Incident Count for All Calls (All Statuses) for Agency for Date Range

Start Date: 01/01/2023 | End Date: 12/31/2023

AGENCY	# INCIDENTS
City of Belleville Fire Dept.	812

*The fire department switched over to CLEMIS in May of 2024. Therefore, the reports that are generated above are from the old system.

2024 Total Incidents

Belleville Fire Department had 711 calls for service as of the end of year.

Belleville Fire Department

2024 Run Response Category Breakdown*

*Breakdown is from May 1 to December 31, due to reporting software changes 2nd Quarter

Fire Incidents - 11

Passenger Vehicle Fire	3	Special Outside Fire, Other	2
Structure Fire, Other	1	Building Fire	3
Cooking Fire, Confined To Container	2		

Rescue & Emergency Medical Service Incidents - 353

Medical Assist, Assist EMS Crew	1	Emergency Medical Service, Other	5
EMS Call, Excl Vehicle Accident With Injury	335	Removal of Victim(s) - Stalled Elevator	1
Vehicle Accident With Injuries	10	Motor Vehicle/Pedestrian Accident	1

Hazardous Conditions (No Fire) Incidents - 10

Gas Leak (Natural Gas or LPG)	3	Hazardous Condition, Other	1
Power Line Down	3	Arcing/Shorted Electrical Equipment	2
Gasoline Or Other Flammable Liquid Spill	1		

Service Call Incidents - 14

Public Service Assistance, Other	1	Assist Police/Governmental Agency	6
Public Service	1	Service Call, Other	1
Smoke Or Odor Removal	2	Assist Invalid	2
Cover Assignment, Standby, Moveup	1		

Good Intent Call Incidents - 61

Dispatched & Cancelled Enroute	58	Good Intent Call, Other	1
Smoke Scare, Odor Of Smoke	1	No Incident Found On Arrival At Address	1

False Alarm & False Call Incidents - 23

False Alarm Or False Call, Other	7	Unintentional Transmission Of Alarm	2
System Malfunction, Other	1	Smoke Det Activation/Malfunction	3
Alarm System Sounded, No Fire, Unintentional	6	Carbon Monoxide Det Activation, No CO	3
Alarm System Sounded Due To Malfunction	1		

Fire Fighter Response

Over the last 3 years we have experienced fluctuating calls for service.

- 2022 total calls for service 694
- 2023 total calls for service 812
- 2024 total calls for service 711

Since implementing a platoon or duty crew shift for nighttime responses between 10 pm and 6 am, we have experienced a dramatic decrease in non-response calls. Currently, we are relying heavily on five firefighters for 90% of our calls during the business week. This is putting a huge strain on them and the department.

Recommendations of coverage:

The following are recommendations to the city to assist in enhancing the coverage to the residents and the business owners:

1. Implement platoon shifts during the overnight hours 10pm-6am. Currently, we have platoon shifts, but they are not being spread out evenly, most of these shifts are only being covered by a few out of the 12 fire fights we have on staff. If the city would consider providing a flat rate; \$30-\$35/FF on the platoon, with a two-person requirement, to the fire fighters to ensure coverage through the nighttime hours, my hope is that it would encourage the entire staff to sign up for shifts. Currently, this is a completely voluntary basis, which I am hoping to cover in the new CBA, once the current CBA expires in December of 2025.
2. Currently we do have duty crew shifts of two personnel from Monday -Friday from 9am-4pm. We would like to change the hours of operation from 7am-4pm, Monday through Friday during the school year, and 8am-5pm Monday through Friday during summer break months

Justification of new implementations:

1. Response times decreased to under 2 minutes.
2. Increased community outreach.
3. Increased community confidence.

Duty Crew: When there is a duty crew on shift during the daytime, there is a list of responsibilities for the duty crew to cover, when they are not on a run. These responsibilities range from:

1. Daily vehicle checks.
2. Daily station cleaning chores.
3. Station improvements as projects are progressed.
4. Weekly community outreach

Grants:

The City of Belleville Fire Department works very hard to acquire various grants for a lot of its equipment. Some grants are paid 100% from wherever the grant comes from (Jimmy John's, Walmart, etc.), some are 10% matching grants. Most of the 10% matching grants are from the government, whether it is State or Federal.

The Belleville Fire Department has received most of our grants through Washtenaw Area Mutual Aid Association (WAMAA). We also apply for federal and state grants utilizing J2W Fire Consultants, which is owned by a local fire fighter, Chris Wiggins. Chris prepares grants for Washtenaw County's Mutual Aid Association; he does charge a minimal fee for preparing these grants for many departments.

Grants received over the past few years:

Fire Engine

Turnout Gear

Fire Hose in various sizes

SCBA's (Self Contained Breathing Apparatus) our air packs

Nozzles for fire hose as well as other fittings

Propane fire trainer

Battery operated Jaws of Life equipment

Ballistic SWAT equipment for Active Shooter scenes to assist with patient extrication and Triage

Paratech stabilizing equipment

AED's Automatic Electronic Defibrillators for our vehicles

Portable scene lights

There are grants we are currently pursuing through the Washtenaw Area Mutual Aid Association. We have applied for FEMA grant for Turnout gear for all personnel, which Chris Wiggins did prepare for us. We also applied for a RIT (Rapid Intervention Team) equipment grant. This RIT equipment is necessary for a backup entry team, for emergency extraction of a downed fire fighter in a structural fire. Medical Equipment possibly add another Lucas device.

Recruitment:

Recruitment is very difficult for paid-per-call departments. We have used social media sources, Indeed, word of mouth, auxiliary and FD personnel being out at public events (car shows, Lake Festival, etc..) Our department is considered a steppingstone for a lot of full-time departments, or even Part full time/ Part part-time. It is a struggle to keep firefighters/MFRs (Medical First Responders) on the department when they can get more opportunities with bigger departments. These problems aren't only in the City of Belleville, they are nationwide. There are a lot of full-time departments struggling to get personnel as well.

For 2025 the department plans on continuing with the above-mentioned options but are looking for other ways to recruit. This year the department plans on attending local job fairs at high schools and colleges, and looking at the options of flyers to handout during car shows and other events. There has also been discussions in using the door-to-door to technique.

The department is now looking at adjusting the limits for staffing based on milage from the station. The current policy is a fire fighter must live within 4 miles of the station; by making this adjustment we are hoping to improve recruitment by creating two groups to break up the calls for service.

Group 1: This group would be per call group. Per call means, they are within a 5-mile radius, and they would primarily respond to non-duty crew calls and be eligible for the night coverage shift.

Group 2: This group would be the duty crew group. This group would be made up of personnel that live greater the 5 miles but less the 20 from the station. They would primarily cover all daytime duty shifts along with station ALL calls like structure fires, CPR and motor vehicle accidents.

2025 Capital Project Recommendation:

Listed below are capital projects/ wish list with roughly estimated cost.

1. Apparatus bay floor drains \$40,000.00
2. Apparatus bay floor epoxy \$20,000.00
3. Generator \$35,000.00
4. Gear Lockers \$13,000.00
5. Ceiling Tiles \$1,000.00
6. Slop sink \$250.00



Bachman Commercial

Chuck Hill | 502-395-3996 | c.hill@bachmanautogroup.com

Vehicle: [Fleet] 2025 Chevrolet Tahoe (CK10706) 4WD 4dr Commercial (Complete)

Quote: SSV Tahoe - Fire Dept.

Quote Worksheet

	MSRP
Base Price	\$55,600.00
Dest Charge	\$1,995.00
Total Options	\$1,611.00
Subtotal	\$59,206.00
Subtotal Pre-Tax Adjustments	\$0.00
Less Customer Discount	(\$1,500.00)
Subtotal Discount	(\$1,500.00)
Trade-In	\$0.00
Subtotal Trade-In	\$0.00
Taxable Price	\$57,706.00
Sales Tax	\$0.00
Subtotal Taxes	\$0.00
Subtotal Post-Tax Adjustments	\$0.00
Total Sales Price	\$57,706.00

Comments:

Clark County

Dealer Signature / Date

Customer Signature / Date

Selected Model and Options

MODEL		
CODE	MODEL	MSRP
CK10706	2025 Chevrolet Tahoe 4WD 4dr Commercial	\$55,600.00



At the user's request, prices for this vehicle have been formulated on the basis of Initial Pricing for the vehicle, however GM cannot guarantee that Initial Pricing is available.

This document contains information considered Confidential between GM and its Clients uniquely. The information provided is not intended for public disclosure. Prices, specifications, and availability are subject to change without notice, and do not include certain fees, taxes and charges that may be required by law or vary by manufacturer or region. Performance figures are guidelines only, and actual performance may vary. Photos may not represent actual vehicles or exact configurations. Content based on report preparer's input is subject to the accuracy of the input provided.

Data Version: 24463. Data Updated: Jan 14, 2025 6:47:00 PM PST.

SECTION 2 The City shall issue all employees a Class "B" duty uniform to be worn while working stand-by duty and while attending any events representing the City of Belleville Fire Department. The employees shall be issued the following items:

- (2) T-shirts with the City of Belleville Fire Department printed on it
- (2) Uniform Duty Pants (BDU)
- (1) Polo Shirt with City of Belleville Fire Department printed on it
- (1) Job Shirt with City of Belleville Fire Department printed on it
- (1) Class B Uniform Pant
- (1) Uniform Belt
- (1) Sweatshirt with the City of Belleville Fire Department printed on it
- (2) Class B shirts
- (1) Duty belt
- (1) Name tag
- (1) City of Belleville Fire Department badge

SECTION 3 Employees will be responsible for the maintenance and care of both the duty uniform as well as the dress uniform. Items will only be replaced if deemed necessary by the City Manager. Upon termination of employment with the City of Belleville, all employees shall be responsible for returning all Department issued equipment, uniforms, and badges.

SECTION 4 The City agrees to pay two hundred dollars (\$200.00) towards a pair of replacement duty boots from a vendor approved by the City. The Employee must first seek approval from the City Manager prior to any duty boots being purchased.



Bachman Commercial

Chuck Hill | 502-395-3996 | c.hill@bachmanautogroup.com

FD

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Quote: SSV Tahoe

Quote Worksheet

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Comments:

Clark County

Dealer Signature / Date

Customer Signature / Date

Selected Model and Options

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Belleville City Council Meeting Follow-up List

	Issue Name / Description	Date Opened	Opened by	Proposed Action	Assigned to	Status Date	Due Date	Date Closed	Updated by Team Member	Details
1	Recodification of Ordinances	7/18/16	Council		Jason	4/30/2025			Jason	Municode has provided a quote. On the 5/5 agenda for consideration
2	New City Hall	11/13/23	Jason/Council		Jason	4/30/2025			Jason	RFP posted to BidNet. Deadline 5/16
3	IT Infrastructure	11/13/23	Steve		Jason	4/1/2025			Jason	VC3 will install new servers and networking at new City Hall
4	Water Meters	4/1/24	Jason		Jason	4/17/2025			Jason	Project is 77.45% complete final notices to be mailed by SLC Meter
5	SEMOG Road Safety Grant	4/1/24	Jason		Jason	4/17/2025			Jason	Lexipol working on SS4A and TAP Grant Applications. Hennessey working on engineering drawings and estimates.
6	Victory Park Renovation	7/2/14	Steve		Steve	10/1/2024			Jason	Renovations and Construction underway
7	5-year Parks Plan Refresh	2/1/24	Jason		Jason	4/30/2025			Jason	Giffels Webster quote on 5/5 agenda
8	Master Plan Update	8/30/24	Jason		Jason	4/17/2025			Jason	Surveys Complete, Giffels to proceed to next steps.
9	Newsletter		Council		Jason	2/6/2025		4/17/2025	Jason	COMPLETE - Newsletters now sent with utility bills
10	Sidewalk Plan		Council		Melissa	10/1/2024			Jason	Blocks are being inspected and marked for repair.
11	Trees Plan		Council		Melissa	10/1/2024			Jason	Blocks are being inspected and marked for removal.
12	Banner Policy		Council		Jason	4/3/2025		4/1/2025	Jason	COMPLETE - Internal policy implemented
13	4th Street Clock		Council		Steve	11/25/2024			Jason	DDA selected new clock.
14	High Street Repair		Council		Jason	4/17/2025			Jason	Project to begin 5/1. Pre-Construction Meeting 4/25
15	Liberty Street Repair		Council		Jason	4/17/2025			Jason	Project to begin 5/1. Pre-Construction Meeting 4/25
16	Employee Handbook General Policy Manual Revisions		Jason and Michelle		Jason/Michelle	2/6/2025			Jason	Handbook and Policy updates and revisions have begun.
17	DPS Recycling Bin		Council		Melissa	4/3/2025			Jason	Awaiting gate quote. Clearing the site has begun.
18	Time Clock System		Council		Jason	4/17/2025			Jason	Onboarding process underway with Andrews Technology
19	Doanes Landing Power Box		DDA		Steve/Jason	4/3/2025			Jason	Awaiting delivery of the box.
20	Fire Department Consultant		Council		Chief Faull	4/30/2025			Jason	Interviews underway.
21	EV Charging Stations		Council		Steve	4/3/2025			Jason	Company is working with DTE to install power drops.

Belleville City Council Meeting Follow-up List

22	<i>Victoria Commons Roads</i>		Council		Jason	4/30/2025			Jason	SEMOG to conduct PASER Ratings. Roads to be reviewed for quality along with all city roads.
23	<i>Staffing</i>		Jason		Jason	4/30/2025			Jason	DPW Operator hired, continuing to accept applications for Police Officer and Firefighters

Belleville DDA Follow-up List							
<u>Item/Description</u>	<u>Date Opened</u>	<u>Opened by</u>	<u>Proposed Action</u>	<u>Committee/ Individual</u>	<u>Status</u>	<u>Date Closed</u>	<u>Comments</u>
Marketing/Economic Development:							
Marketing/Social Media Director	11/16/2022	DDA Board	Hire part time person and/or recruit college or high school intern		IP		Develop marketing strategy, obtain grants oversee social media strategy, update website
Economic Development Director	11/16/2022	DDA Board	Develop RFP for position		P		Develop plan to bring businesses to Belleville, work with developers-status TBD
Partnerships with other organizations	11/16/2022	DDA Board	DDA sponsors events or funding		IP		Discuss Sponsorship Apps March DDA Meeting -- Continue discussions re:partnerships
Partnerships with local restaurants		DDA Board	DDA sponsors restaurants for events		P		Develop partnership to sponsor local restaurants with booth at downtown events
Event Support		DDA Board	Sponsor local events		C		Grants awarded March 2025
Grant Writer		DDA Board	Develop RFP for position		P		
Reestablish Park & Rec Committee		D Robinson			P		DDA representation on committee
Pop-Up Shops	10/18/23	Board	Purchase/build pop-up shops.		P		Determine best placement, tenant criteria, fee structure
DDA Marketing Plan	10/18/23	Board	Develop DDA marketing plan		IP		Marketing Committee currently reviewing RFP's to hire firm that will assist in developing marketing strategy
Maintenance							
Main Street Walk-Through		S Jones	DDA Board review downtown	DDA Board	P		Need to schedule for 2025
Lawn Maintenance		DDA Board	Weed control		C/R		Park Maintenance list
Mowing		DDA Board	Contract		R		Pioneer Landscaping contract
Landscaping/Flowers		DDA Board	Contract		R		Pioneer Landscaping contract
Horizon Park							
Dock Maintenance/Improvements		DDA Board	Board Discussion		P		Park Maintenance list-Replacement in 2025/26?
Benches and picnic tables		DDA Board	Board Discussion		P		Park Maintenance list
Landscaping/trees/flowers		DDA Board	Board Discussion		P		Park Maintenance list/Pioneer
Parking lot maintenance		DDA Board	Board Discussion		P		Park Maintenance list
Mulch/Maintenance		DDA Board	Mulch parking areas, park areas, clear brush with goats		R		Park Maintenance list/Goat contract for June 2025
Events/Marketing		DDA Board	Board Discussion		P		Develop events or partnership and marketing event

Belleville DDA Follow-up List							
<u>Item/Description</u>	<u>Date Opened</u>	<u>Opened by</u>	<u>Proposed Action</u>	<u>Committee/ Individual</u>	<u>Status</u>	<u>Date Closed</u>	<u>Comments</u>
Village Park							
Pond Maintenance		Ongoing Project			R		Phragmite's removal begun-continuing remediation
Pond Bridge Repair/Replacement		S Richardson-Williams	Repair/Replace		P/DE		Assessing options with DPW Director Melissa Frierson
Community Garden		DDA Board	Board Discussion		P		
Cement repair/replacement		DDA Board	Board Discussion	Jones	IP		Park Maintenance list
Pickleball Courts		DDA Board	Long term project/Grant Application		P		Grant aprvrd 6/2024 fr Wayne Co- Construction underway
Benches and picnic tables		DDA Board	Purchase		P		Asses/Purchase more?-Spring 2025
Landscaping/trees/flowers		DDA Board	Ongoing maintenance		P		Park Maintenance list/Pioneer Spring installation
Playscape mulch		DDA Board	Ongoing maintenance		P		Park Maintenance list - Spring installation
Events/Marketing		DDA Board	Board Discussion		P		Develop events or partnership and marketing event, such as summer movie nights
Victory Park							
Building Renovations		DDA Board	Board Discussion	Jones	IP		Ongoing project-in process now, nearing completion
Cement repair/replacement		DDA Board	Board Discussion	Jones	IP		Park Maintenance list
Benches and picnic tables		DDA Board	Purchase		P		Possible purchase additional
Landscaping/trees/flowers		DDA Board	Ongoing maintenance		R		Park Maintenance list/Pioneer
Playscape mulch		DDA Board	Ongoing maintenance		R		Park Maintenance list
Events/Marketing		DDA Board	Board Discussion		P		Develop events or partnership and marketing event
Finance							
Event Funding Requests		DDA Board	Review applications for event support	Budget	IP		Award March 2025
Budget for 2025-2026		DDA Board	FY 2025-26 budget	Budget	IP		In process
Capital Improvement Plan		DDA Board	Board Discussion		P		Develop Capital Improvent Project List for planning and budgeting
Other							
Public Art - Sculptures		DDA Board	Committee selection	Art Committee	R		New sculptures to be installed May 2025
Community Calendar - Events		DDA Board	Board Discussion		IP		
Collaboration Meetings with other Organizations		DDA Board	Board Discussion		P		S. Jones discussed w/ M. Coburn-VBT DDA-date TBD
Community Volunteer Needs/Sign-up		DDA Board	Board Discussion		P		
DDA Business Registry		Director Robinson	Develop registry process	Robinson	IP		Investigating ordinance/legal requirements
Charging Stations for Electric Vehicles		DDA Board	Board Discussion		P		City project still in progress for EV stations
Parking		DDA Board	Lot at 25 5th St purchased for adtnl prkg		C		Liberty St prkg lot extention project complete
New Flower Pots for Main St		DDA Board	Deffered to Spring 2025				
Status:							
P = Planning							
DE = Development and/or Engineering							
B = Out for Bid							
IP = In Progress							
C - Completed							
R = Recurring							
NA = No Action Taken							

BELLEVILLE POLICE DEPARTMENT
YTD CRIME STATS & CALLS FOR SERVICE
MARCH 2025

YTD Calls for Service – Comparison

<u>2023</u>	<u>2024</u>	<u>2025</u>
891	920	1,289

YTD Crimes Stats by Category – Comparison

CRIME CATEGORY – Class A	2023	2024	2025
ACCIDENT/CRASH	32	28	33
ASSAULT- SIMPLE	4	5	6
ASSAULT-FELONY/AGGRAVATED	4	3	1
BURGLARY-ALL OTHER	0	1	1
BURGLARY-RESIDENTIAL	1	2	2
DAMAGE TO PROPERTY	4	7	3
DRUG OFFENSES	12	4	3
FAMILY OFFENSE	9	10	10
FORGERY/COUNTERFEITING	0	2	0
FRAUD	19	8	6
INTIMIDATION/STALKING	2	7	3
KIDNAPPING/ABDUCTIONS	0	0	0
LARCENY- FROM AUTO	0	0	0
LARCENY-OTHER	2	6	4
LARCENY-RETAIL FRAUD	0	1	0
MISSING PERSON/RUNAWAY	0	0	2
MOTOR VEHICLE THEFT/FRAUD	3	0	6
OBSTRUCTING JUSTICE/POLICE	5	4	2
ORDINANCE VIOLATIONS	4	6	1
OUI LIQUOR/DRUGS	14	2	6
PUBLIC PEACE/DISORDERLY CONDUCT	4	3	2
ROBBERY	0	0	0
SEX CRIME	1	2	2
SEX OFFENSES	2	0	2
TRESPASSING/INVASION OF PRIVACY	6	0	3
WEAPONS OFFENSE	1	0	0

BFD Monthly Incident Totals

For 03/01/2025 - 03/31/2025



Rescue & Emergency Medical Service Incidents		Incident Count	% Type / % Total
311 - MEDICAL ASSIST, ASSIST EMS CREW		1	2.94%
321 - EMS CALL, EXCLUDING VEHICLE ACCIDENT WITH INJURY		33	97.06%
Total		34	62.96%
Hazardous Conditions (No Fire) Incidents		Incident Count	% Type / % Total
444 - POWER LINE DOWN		1	100.00%
Total		1	1.85%
Service Call Incidents		Incident Count	% Type / % Total
571 - COVER ASSIGNMENT, STANDBY, MOVEUP		1	100.00%
Total		1	1.85%
Good Intent Call Incidents		Incident Count	% Type / % Total
611 - DISPATCHED & CANCELLED EN ROUTE		16	88.89%
622 - NO INCIDENT FOUND ON ARRIVAL AT DISPATCH ADDRESS		2	11.11%
Total		18	33.33%
		54	

City of Belleville
Special Event Application



PLEASE NOTE:

Applicant or their chosen representative must be present at the City Council Meeting when this application is presented

General Event Information	
Name of event:	EGANS PUB CAR SHOWS
Describe the purpose of the event	CAR SHOW
Name of organization sponsoring event:	EGANS PUB LLC
Complete address of sponsoring organization: (PO Boxes are not acceptable)	396 MAIN STREET BELLEVILLE MI, 48111
Website of organization:	
List of activities associated with the event (i.e. parades, vendors, concerts, etc.) *Attach additional documentation if necessary*	CAR SHOW
If there are any unusual activities planned or anticipated as a result of this event, list them here: (i.e. large groups of people, protests, gun salutes, fireworks, etc.)	RANDOM PERFORMERS IN 4 TH STREET SQUARE
Location & Schedule	
Location(s) of event	MAIN STREET FROM 3 RD – 5 TH STREETS INCLUDING ROYS FROM DRIVE THRU OF BANK TO MAIN STREET
**Note: Emergency lanes allowing for public safety access must be available at all times. **	

City of Belleville
Special Event Application



Location & Schedule (continued)	
Actual operational dates and hours of event	EVERY MONDAY FROM JUNE 2-OCTOBER 27TH
If additional dates are required for setup and tear-down, list them here:	
Beginning time of event (including setup time)	5PM
Ending time of event (including tear-down time)	9PM
Funding	
How will this event be funded?	EGANS PUB AND SPONSORS
Who will be compensated for goods or services that support this event?	EGANS PUB
Will the City of Belleville be reimbursed for any services rendered?	☐ Yes ☒ No
Have you applied for and been granted an insurance policy for this event?	☒ Yes ☐ No (If yes, please attach a copy of the policy)
Public Safety / Public Services	
Approximate number of participants expected:	EST 200-500
What is the plan for parking?	PUBLIC PARKING
How will this event be staffed/supervised?	VOLUNTEERS AND EGANS STAFF
Will event require assistance from Police, Fire, or EMS?	☐ Yes ☒ No
If this is a multi-day event, please describe how goods/supplies that may be left on site overnight will be stored and secured:	EVERYTHING WILL BE PUT AWAY AT EGANS
Will this event require the closure of any City streets?	☒ Yes ☐ No (If yes, please attach a map that clearly indicates which streets will be closed, and when)

City of Belleville
Special Event Application



Public Safety / Public Services (continued)	
Will event require utilization of barricades, traffic cones, or caution tape? (Attach additional documentation if necessary)	☒ Yes ☐ No (If yes, please identify how they will be setup, taken down, maintained, and returned to the City) CITY TO DROP OFF AND PICK UP
Describe any signage to be used for the event including how they will be setup and removed, size, and location(s). (Attach additional documentation if necessary)	NO PARKING SIGNS LEFT OUT FOR DURATION OF EVENT
** Note: Refer to City's Sign Ordinance for details regarding allowable types and permissible locations of signs **	
Describe the plan for rubbish collection and removal: (Attach additional documentation if necessary)	CITY TRASH CANS
Will food be available/sold at event?	☐ Yes ☒ No If yes, describe by whom:
Will alcoholic beverages be available/sold at the event?	☒ Yes ☐ No If yes, describe by whom: PURCHASE OF DORA REFRESHMENTS FROM PARTICIPATING RETAILERS
Please describe your plan for meeting State law and all requirements for sale and service of food and alcoholic beverages. (Attach additional documentation if necessary)	WE HAVE ALL APPLICABLE LICENSES
List of Document Attachments (if applicable)	
1.	4.
2.	5.
3.	6.

City of Belleville
Special Event Application



General Event Information	
Name of event:	Lake Fest
Describe the purpose of the event	To give local businesses more exposure and provide nonprofits, churches, and service organizations with a platform for fundraising. The festival aims to provide a fun and engaging experience for all ages, including live music, lakefront activities, a kid zone and other attractions.
Name of organization sponsoring event:	Belleville Area Chamber Foundation/Belleville Area Chamber of Commerce
Complete address of sponsoring organization: (PO Boxes are not acceptable)	248 Main St. Belleville, MI 48111
Website of organization:	www.baccevents.org
List of activities associated with the event (i.e. parades, vendors, concerts, etc.) *Attach additional documentation if necessary*	Detailed activities, maps, and street closure requests will be attached to the application.
If there are any unusual activities planned or anticipated as a result of this event, list them here: (i.e. large groups of people, protests, gun salutes, fireworks, etc.)	No unusual activities
Location & Schedule	
Location(s) of event	Horizon Park/High Street – Lakeside Boat Show/Food Trucks and Activities 4 th Street Square – Live Music Stage, Tent/Tables/Chairs 4 th Street Place – Food Trucks/Seating/Cocktail Tables/Garbage Cans Main St. between Roys & Third – Market on Main/Nonprofit Tents/Boats on display Main St. between 3 rd & 2 nd – Market on Main Overflow/Boats on display

City of Belleville

Special Event Application



Property at 3rd and Main (owner has granted permission) – Movie on Main (Fri., Kid/Teen Zone Sat/Sun
3rd between alley and Main – Food Trucks, Kids Entertainment/Cornhole Touch a Truck (Sun) and other activities on the south side lot at 3rd and Main.
Lakeview Plaza- Live music Fri/Sat starting at 6pm. Ticketed. Business owners will provide security, to be coordinated with Belleville PD.

****Note: Emergency lanes allowing for public safety access must be available at all times. ****

Location & Schedule (continued)

Actual operational dates and hours of event	Friday June 27: 6pm – 11pm Saturday, June 28: 9am – 11pm Sunday, June 29: 10am – 5pm
If additional dates are required for setup and tear-down, list them here:	Thurs, June 26 - Port-A-Potty and tent set up @Horizon Park grass area Friday, June 27 - Noon (Tents/Tables) Sunday, June 29 Tear down until 8pm
Beginning time of event (including setup time)	Noon Friday June 27 Street Closes at 4pm
Ending time of event (including tear-down time)	Sunday, June 29 Streets open by 8pm

Funding

How will this event be funded?	Sponsors and Belleville Area Chamber Foundation
Who will be compensated for goods or services that support this event?	No personal compensation
Will the City of Belleville be reimbursed for any services rendered?	☒ Yes ☐ No
Have you applied for and been granted an insurance policy for this event?	x Yes No (If yes, please attach a copy of the policy) In process: the City of Belleville will be named as also insured.

Public Safety / Public Services

Approximate number of participants expected:	Over the 3 days we expect 5 – 10,000
--	--------------------------------------

City of Belleville
Special Event Application



What is the plan for parking?	On-street, municipal and library parking lots.
How will this event be staffed/supervised?	All volunteers from the BACC, community groups and community members
Will event require assistance from Police, Fire, or EMS?	☒ Yes ☐ No
If this is a multi-day event, please describe how goods/supplies that may be left on site overnight will be stored and secured:	Private Overnight security will be hired Sat/Sun. Vendors will be asked to close or lower tents.
Will this event require the closure of any City streets?	☒ Yes ☐ No (If yes, please attach a map that clearly indicates which streets will be closed, and when)
Public Safety / Public Services (continued)	
Will event require utilization of barricades, traffic cones, or caution tape? (Attach additional documentation if necessary)	☒ Yes ☐ No (If yes, please identify how they will be setup, taken down, maintained, and returned to the City) Assistance from the City to barricade off Main Street from 5 Points to Roys and High St from Chase Bank Driveway to Roys/Church
Describe any signage to be used for the event including how they will be setup and removed, size, and location(s). (Attach additional documentation if necessary)	Typical vinyl banners attached to tents and stages, banner over Main St., Staked signage as we had at previous Lake Fests. No permanent signage.
** Note: Refer to City's Sign Ordinance for details regarding allowable types and permissible locations of signs **	
Describe the plan for rubbish collection and removal: (Attach additional documentation if necessary)	We will secure a dumpster and have hired workers to clear rubbish throughout the weekend.
Will food be available/sold at event?	☒ Yes ☐ No If yes, describe by whom: Multiple Food Trucks

City of Belleville
Special Event Application



Will alcoholic beverages be available/sold at the event?	No sales by BACC, however with this application Local Bars/Restaurants request Bora/Dora be extended to 12am Friday, Saturday and 8pm on Sunday.
Please describe your plan for meeting State law and all requirements for sale and service of food and alcoholic beverages. (Attach additional documentation if necessary)	All laws and local ordinances apply to food and alcoholic beverage sales by the local participating restaurants and food trucks.
List of Document Attachments (if applicable)	
1. Lake Fest Special Events Permit	4.
2. Lake Fest Map 2024	5.
3. Lake Fest Activities 2024	6.

Lake Fest Schedule	Time	Location/Info
Friday		
Pub Crawl	6pm-9pm	Start at 4th St Square, ticket sales ahead of time and at door
Movie On Main	Dusk to 11pm	Belleville Main Lot @3rd St, Movie TBD but probably Moana 2
Food Trucks	8pm to 11pm	Amaizeing Dawgs and Kona Ice
Live Music at Lakeview Plaza Stage (ticketed)	6pm-10:30pm	Lakeview Plaza
Live Band Karaoke	7pm-10pm	4th St Square Stage
Saturday		
Yoga	9am-10am	Horizon Park
Cadio Drumming	10am-11am	TBD
Market on Main	10am-7pm	Main St
Food Trucks	10am-7pm	Main St & Horizon Park
Pancakes with Princesses	10am-Noon	4th St Square
Live Music at 4th St Square	11am-11pm	4th St Square Stage
Kid Zone/Inflatables		Belleville Main Lot @3rd St

Mobile Planetarium	Noon-5pm	Inside Library??
Lakeside Boat Show	Noon- 7pm	Horizon Park
UofM Waterski Show	2:30PM- 3PM	Horizon Park
Twiggy the Waterskiing Squirrel Show	Noon, 4pm, 6pm	Belleville Main Lot @3rd St
Kids Stage Wildlife Safari Animal Shows	11am, 1pm, 3pm	3rd St Kid Stage
Kids Foam Party	2pm and 4:30pm	3rd St lot next to Milton's
Cornhole Tournament (incl Check In)	1-4pm, check in begins at Noon	3rd St and Main
Hoaloha Polynesian Dance Group	1:00 PM	4th St Square Stage
Donut Eating Contest	2PM - 3PM	4th St Square Stage
Funk Opus Band	4:00 PM	4th St Square Stage
Live Music at Lakeview Plaza Stage (ticketed)	6pm-10:30pm	Lakeview Center
The Louie Lee Show	6:00 PM	Lakeview Center
DTour Band at 4th St Square	8-11pm	4th St Square Stage
Sunday		
Bass Fishing Tournament (OFF SITE)	7am- 2pm (end time is tentative). Check in starts at 5:45am	Belleville East Boat Launch (next to BYC)
Yoga	9am-10am	Horizon Park

Pound Fitness	10am-11am	TBD
Market on Main	11am- 5pm	
Food Trucks	11am- 5pm	
Kid Zone/Inflatables	11am-5pm	Belleville Main Lot @3rd St
Mobile Planetarium	11am-4pm	Inside Library??
Lakeside Boat Show	Noon-5pm	Horizon Park
Twiggy the Waterskiing Squirrel Show	11am, 2pm, 4pm	Belleville Main Lot @3rd St
Kids Stage Juggling Shows	1pm, 3pm	3rd St Kid Stage
Live Music	11am- 5pm	4th St Square Stage
Touch a Truck	11am- 1pm	3rd St lot next to Milton's
Dan Rafferty Band at 4th St Square	3pm- 5pm	4th St Square Stage
GENERAL SPONSORS		
Steel & Stilettos		
Redemption Church		
Slip Free		
Advanced Body Medical		



To: Belleville City Council
From: Jason Smith, MPA – City Manager
Date: 5/1/2025
Re: GoGov App

RECOMMENDATION: *Motion to approve an annual unlimited subscription for \$3,900 with GoGov Citizen Notifications and Alerts App.*

GoGov provides citizen engagement, alerts, and serves as a multi-channel communication system in the form of a city-branded app.

The city has made strides in improving service delivery, transparency, and communication with residents. As part of our broader efforts to modernize municipal operations and enhance civic engagement, staff have reviewed options for mobile-based platforms that support efficient two-way communication with the public. GoGov is a proven solution designed specifically for local governments.

Key Benefits of the GoGov Platform

1. Resident Engagement & Communication

- Provides a centralized, mobile-friendly app where residents can report issues, request services, and receive city updates.
- Features include push notifications, event listings, news alerts, and interactive maps.

2. Efficient Service Request Management

- Streamlines the intake and routing of service requests (e.g., potholes, graffiti, code enforcement issues) to the appropriate departments.
- Enables real-time tracking for both staff and the submitting resident.

3. Transparency & Accountability

- Residents receive updates on the status of their requests, promoting trust in city processes.
- Public-facing dashboards provide insight into service trends and outcomes.

4. Data & Analytics

- Administrative tools offer robust reporting on request volume, response times, and departmental workloads.
- Helps inform resource allocation and identify recurring community concerns.

5. Custom Branding & Integration

- The app is tailored to reflect the City's logo, colors, and departmental structure.
- Can be integrated with existing work order or CRM systems.

6. Cost-Effective & Scalable

- Offers a cost-efficient alternative to developing a custom mobile app, with scalable features for future growth.

With GoGov, residents do not need to sign up, register an email or phone number, or do any sort of account creation. They simply download the app and turn on notifications. They will then be notified of key events like that of Nixle, but with the added feature of being linked to the community events page, bill payment, DPW service requests, and other features that currently are solely done by phone, e-mail, or our website.

We explored other apps like GoGov but elected to utilize GoGov because of its customization, unlimited users, and cost. SeeClickFix is a comparable solution, however, it was significantly more costly than GoGov (approx. \$10,000 annually). CitySourced was another app that was considered, but it is closer to CityWorks than a full-service resident app. It is geared more toward medium-to-large communities and is also more expensive (approx. \$8,000 annually).

Your consideration and concurrence are appreciated.

City of Belleville, MI

Citizen Notifications & Alerts

April 28, 2025

Prepared By:

Kevin Strauss

(631) 861-5812

Kevin@gogovapps.com

Prepared For:

Jason Smith

City Manager

jsmith@belleville.mi.us

Subscriptions & Services

Description	Amount
GONotify Citizen Notifications & Alerts (Notify) - Unlimited Subscription	\$3,900 /year
Services: \$0 Annually: \$3,900	

Order Details

Primary Contact			
Contact Name:		Phone:	
Title:		Email:	

Billing Information			
Contact Name:		Phone:	
PO #: (Optional)		Email:	

Contract Term Information	
Initial Subscription Period:	12 months starting:

Terms & Conditions

The following terms are the latest version of the GOGov Master Terms & Conditions that is maintained and updated. No part of these terms may be modified other than the “Special Terms & Exceptions” section.

1. **Ownership & License:** GOGov, Inc. (dba “GOGov”) owns all intellectual property in the software products listed in the Subscription and Services section (collectively “Software” or “Subscription Services”) in the Order Form. Customer shall not modify, adapt, translate, rent, lease or otherwise attempt to discover the Software source code. The following terms and conditions (this “Agreement”) will be effective as of the date of last signature of the Order Form (“Effective Date”) and will be governed by the laws in force in the State of New York.
2. **Software License.** The Software subscription and the accompanying files, software updates, lists and documentation are licensed, not sold, to you. You may use the Software if you maintain your annual subscription.
3. **Continued Services**
 - 3.1 **Hosting.** GOGov agrees to maintain Customer data in a secure datacenter and is committed to providing 99.5% uptime and availability. GOGov will perform nightly backups of your hosted data to an alternate physical location.
 - 3.2 **Ownership of Data.** All hosted data specific to Customer is owned by the Customer. Within thirty (30) calendar days following termination of this Agreement, the Customer can request and GOGov will provide a complete copy of Customer’s data without additional charge through a downloadable zip file provided the customer is current on payments.
4. **Payment Terms & Fees**
 - 4.1 **Subscription Term and Termination.** The initial Subscription Term of this Agreement begins on Effective Date (last signature) and will continue to the end of the Initial Subscription Period listed in the Order Form. At the end of the initial Subscription Term, Customer’s subscription and this Agreement will renew for an additional twelve (12) month term and for subsequent twelve (12) month periods thereafter. Quotes for budgeting purposes will be sent 6 months prior to subscription renewal. Invoices are sent approximately 60 days prior to subscription renewal. To cancel this agreement, Customer should submit written notice to GOGov at Billing@GOGovApps.com not less than sixty (60) calendar days prior to the end of the then-current Term. GOGov reserves the right to increase the annual fees by 7% on the anniversary date of each annual term.
 - 4.2 **Payment Terms.** Initial payment is due at the beginning of the subscription term. Each subsequent annual billing will be due on the anniversary date of the initial term. Payment Terms are **NET 30 Days** from the invoice date.
 - 4.3 **Taxes & Obligations.** Customer agrees to pay the amounts specified in the Order, which are non-cancelable and non-refundable, based on services purchased, not usage. Fees do not include any applicable taxes (e.g. sales, VAT, or withholding). For non-tax-exempt customers, Customer is responsible for paying all Taxes associated with its purchases hereunder and may be invoiced separately by GOGov.
 - 4.4 **Convenience Fees.** For GOGov products that manage credit card processing, GOGov will add a Convenience Fee of \$3.00 plus 3% per transaction to offset the costs of online processing.
 - 4.5 **Voice & SMS.** For customers using Voice and SMS services only. Customer must purchase a minimum of 10,000 credits per year to keep the Voice & SMS subscription active. Credits are non-refundable but will carry forward as long as the subscription remains active. Each SMS message uses 1-credit for each segment (160 characters) sent or received. Voice services use 1-credit per minute of outbound or inbound calls, except for calls to Alaska (907 area code) which cost 7-credits per minute (credit costs are subject to change). Upon cancellation of the Voice & SMS subscription any unused credits are forfeit and the leased Phone Number will be released and no longer available. Customer must abide by all federal and state laws and regulations for SMS & Voice calling usage including following a proper opt-in process (gogovapps.com/terms#sms).
5. **Limitation of Liability.** GOGov will, at all times during the Agreement, maintain appropriate insurance coverage. In no event will GOGov’s cumulative liability for any general, incidental, special, compensatory, or punitive damages whatsoever suffered by Customer or any other person or entity exceed 50% of the annual contract value at the point in time when the circumstances came about to such claim(s) of liability, even if GOGov or its agents have been advised of the possibility of such damages.

6. **Updating of Terms.** Upon each renewal of this Agreement, the latest Master Terms & Conditions that GOGov has published within the software ninety (90) days prior to the renewal date shall replace these terms. Any Special Terms & Exceptions listed in the original document shall carryover to the renewal terms. We reserve the right to change our Master Terms & Conditions at any time. If the changes are material, GOGov will advise the Customer by email or posting a notice on the site before changes go into effect. If the Customer does not agree to the new terms, Customer may contact Support@GOGovApps.com to have objections considered.
7. **Other Provisions**
- 7.1 *Other Public Agency Orders.* Other public agencies may utilize the terms and conditions established by this Agreement if agreeable to all parties. Customer does not accept any responsibility or involvement in the purchase orders or contracts issues by other public agencies.
- 7.2 *Alternate Terms Disclaimed.* The parties expressly disclaim any alternate terms and conditions accompanying drafts and/or purchase orders issued by Customer.
8. **Special Terms & Exceptions.** None.

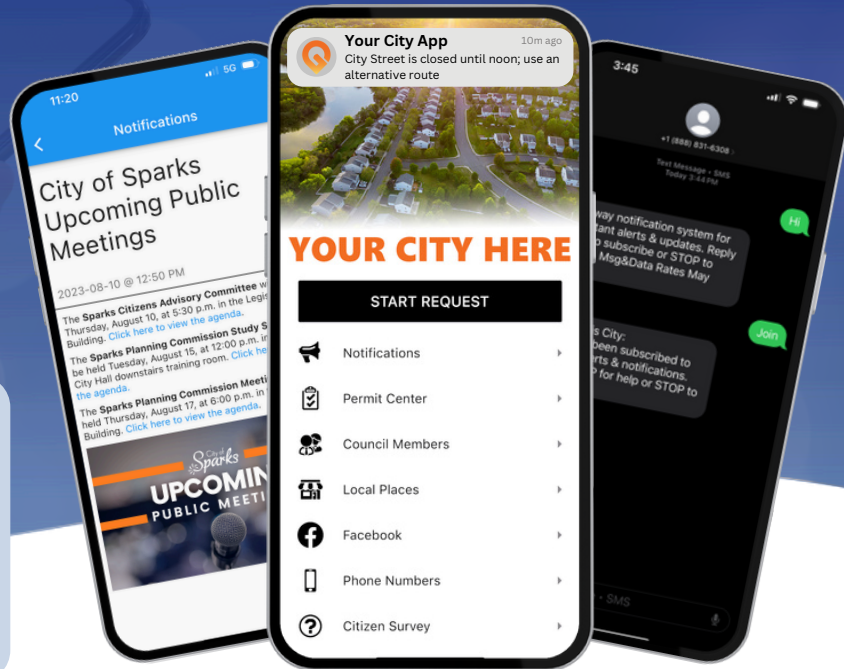
This Order Form is entered into between Customer and GOGov. Customer accepts and agrees to adhere to the Terms and Conditions with this order form, will be referenced as the "Agreement." This Agreement between Customer and GOGov, which Customer hereby acknowledges and accepts, constitutes the entire agreement between GOGov and Customer governing the Services referenced above. Customer represents that its signatory below has the authority to bind Customer to the terms of this Agreement.

GOGov, Inc.**City of Belleville, MI****Sign:****Name:** Daryl Blowes**Title:** CEO**Date:****Sign:****Name:****Title:****Date:***Additional Customer Signatures (Optional)***Sign:****Name:****Title:****Date:****Sign:****Name:****Title:****Date:**



Citizen Notifications

450+ customers
2m+ citizens engaged
7m+ issues resolved



Benefits for Citizen Notifications



Send Targeted Content

Setup subscription groups which allows citizens to subscribe to content.



Branded Mobile App

Provide your citizens with a mobile front door to government services.



Multi-Channel Communication

Mobile app, Email, SMS/texting, voice and social media.

All of Your Communication In One Spot

- ✓ Event Updates
- ✓ Election Information
- ✓ Weather Updates
- ✓ Road Closures
- ✓ Holiday Reminders
- ✓ Meeting Information
- ✓ Job Openings
- ✓ Facility Closures
- ✓ And More...



Get Started
Today!



www.GOGovApps.com | Sales@GOGovApps.com | (888) 464-6811

Citizen Benefits

Branded Mobile App

One place to access all notifications and important information directly from your local municipality.

Subscription Lists

Citizens can subscribe to the types of notifications that they want to receive.

Direct Notifications

Citizens rest assured that they won't miss important communications because they are delivered directly to their phones.

Manager Benefits

Efficient Communication

Quickly share important updates to residents for improved responsiveness across multiple communication channels.

Enhanced Citizen Engagement

Engage residents more effectively by providing timely and relevant information.

Streamlined Operations

Foster community involvement with timely notifications and updates.

Staff Benefits

Message Editor

Create detailed and stylish communications with our user-friendly editor by including pictures, formatting and links.

Multi-Channel

Push content to all important channels such as email, mobile push notifications, SMS/texting, voice and social media with just a few clicks.

Marketing Support Included

Benefit from GOGov's continuous marketing support to keep the community engaged with the app, ensuring ongoing awareness and utilization of the platform.

Support & Training

All-Inclusive Training & Support

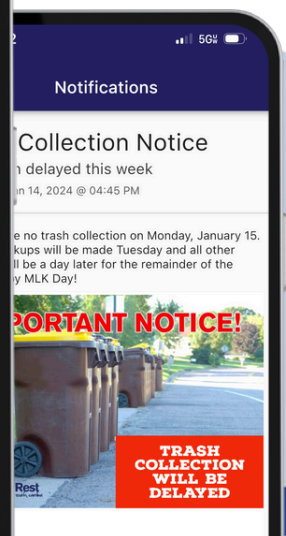
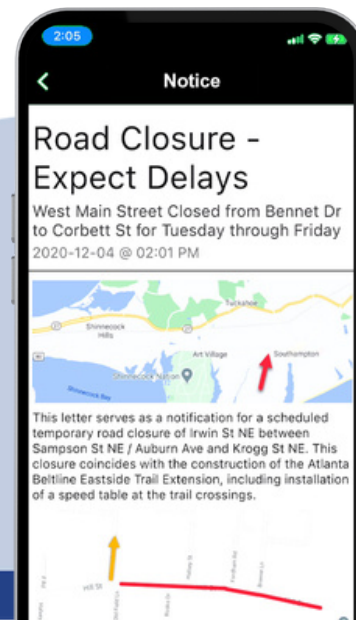
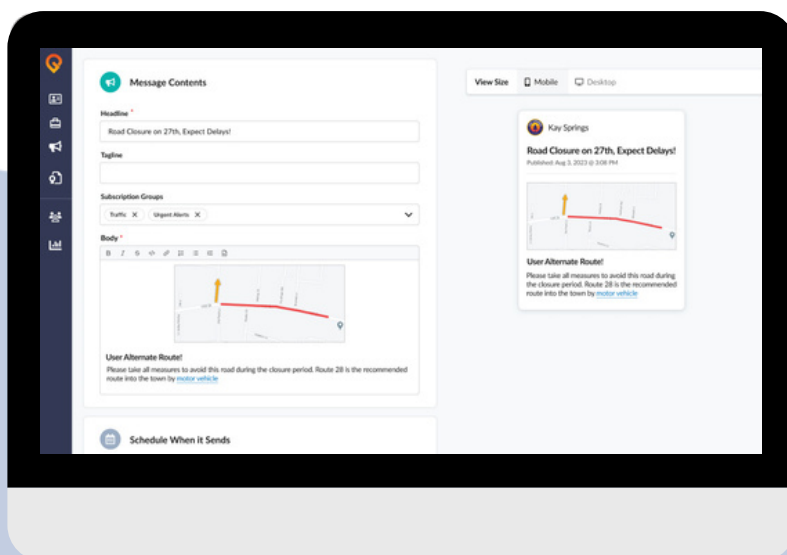
We provide unlimited access to a dedicated trainer as well as unlimited access to our support team via phone, web and email.

Ongoing Training & Support

Continuous assistance to adapt to changes, train new staff, and maintain performance.

Performance & Reliability

Dependable products with world-class infrastructure for uninterrupted service availability.



City of Belleville
6 Main Street ♦ Belleville, MI 48111-2788
734-252-4307 ♦ Fax 734-697-6837 ♦
www.bellevilleonthelake.com



To: Belleville City Council
From: Jason Smith, MPA – City Manager
Date: 5/1/2025
Re: Concrete Saw Purchase

RECOMMENDATION: *Motion to approve the purchase of a Core-Cut CC2500 Gas Self-Propelled Walk Behind Concrete saw for \$12,299; with two 46" saws at \$872.00, for a total cost of \$14,043.*

We have been researching the best concrete saw for DPW. After consulting with several experts on saws, it was recommended that we purchase the CC2500 Gas Self-Propelled walk behind saw. This saw will cut to a depth of 10 ¾". There is a 1-year bumper-to-bumper warranty on the saw. Some components, such as the engine, have longer warranties in certain situations, such as manufacturing defects. We were able to locate a supplier closer than Pennsylvania, Ace Cutting Equipment in Novi. There is also a warehouse in Grand Rapids and Elmyra, OH, for major service work. Minor services like oil changes can be done in-house without voiding the warranty.

Ace Cutting has one in stock and has placed it on hold for us on 4/23 for us to purchase until 5/6.

Your consideration and concurrence are appreciated.



ACE CUTTING EQUIPMENT
25125 Trans X Rd
Novi MI 48375-2439
United States

Sales Order

#SO95846

4/23/2025

Bill To

CITY OF BELLEVILLE
6 MAIN STREET
BELLEVILLE, MI 48111

Ship To

CITY OF BELLEVILLE
6 MAIN STREET
BELLEVILLE, MI 48111

Sales Rep	Customer Department	Shipping Method	PO #	Terms
Kellen Branoff	House	UPS Ground	JASON	PAG

Quantity	Item	Description	Rate	Amount
1	DP-5800408	CC2520H-26 20.8 HP HONDA GX630 GAS WALK BEHIND SAW W/26" GUARD	\$12,299.00	\$12,299.00
1	HUS-501433101	C 17 VC 26 X 165 FAST SMOOTH CUTTING FOR VERY HARD CONCRETE	\$872.00	\$872.00

Subtotal	\$13,171.00
Shipping Cost	\$0.00
Tax Total (%)	\$790.26
Total	\$13,961.26



SO95846

City of Belleville
6 Main Street ♦ Belleville, MI 48111-2788
734-252-4307 ♦ Fax 734-697-6837 ♦
www.bellevilleonthelake.com



To: Belleville City Council
From: Jason Smith, MPA – City Manager
Date: 5/1/2025
Re: Midstates Playground EWF Quote

RECOMMENDATION: *Motion to approve the purchase of Engineered Wood Fiber from Midstates Recreation in the amounts of \$9,675 for Victory Park and \$6,075 for Village Park.*

The city's playgrounds are surfaced with engineered wood fiber (EWF), a material designed to provide cushioning and impact attenuation beneath play structures. Engineered wood fiber (EWF) is a wood product that may look similar in appearance to landscaping mulch, but EWF products are designed specifically for use as a playground safety surface under and around playground equipment.

Over time, EWF compacts and decomposes due to weather, foot traffic, and natural settling. Regular replenishment is necessary to maintain the proper depth and protective qualities that reduce the risk of injury from falls.

Midstates Recreation uses only American Society for Testing and Materials (ASTM) compliant EWF.

A recent review by DPW staff has identified that the Village and Victory Park playgrounds have insufficient levels of wood fiber, posing a potential safety hazard. As we continue to invest in the maintenance of playground equipment with the intent to drive up usage in our park system, having sufficient EFW that meets ASTM standards is critical to ensuring the parks are ready and safe for use.

Three quotes were not obtained for this request, as Midstates is a MiDeal and Sourcewell vendor; meaning these are state pricing levels.

Your consideration and concurrence are appreciated.



1279 Hazelton-Etna Road SW
Pataskala, OH 43062
614-855-3790
www.midstatesrecreation.com

QUOTATION

Sold To	City of Belleville 6 Main Street Belleville, MI, 48111 United States	Ship To	Victory Park 86 S. Liberty Belleville, MI, 48111 United States
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Date	Quote #	Terms	Rep	Project	Ship Contact
2025-04-18	QTN-17860 Valid Until 05-18-2025	Net 10	Brion Kilpela	2025 04 Victory Park EWF Top Off - Mi Belleville City Of	

Item Code	Description	Qty	Rate	Amount
Wood Fiber	Supplied and installed(cy) Playground Engineered Wood Fiber Safety Surfacing - ASTM Compliant	215.0 Each	\$ 45.00	\$ 9,675.00
Sourcewell Member ID	Sourcewell Customer - Member ID # 174151: Contract #010521-LTS-8	1.0 Unit	\$ 0.00	\$ 0.00

Subtotal	\$ 9,675.00
Michigan Sales Tax	\$ 0.00
Total	\$ 9,675.00

Acceptance of Proposal

(Please be sure you have read, signed, and initialed and understand the terms and conditions) The items, prices, and conditions listed herein are satisfactory and are hereby accepted.

Signature (Approval) _____

Printed Name _____

Title _____

Date _____

TERMS AND CONDITIONS

QUOTE CONDITIONS AND ACCEPTANCE:

This quote is only valid for 30 days.

*** (Pls Initial) It is the Buyer's responsibility to verify quantities and description of items quoted. Once your order has been placed, any changes including additions, deletions, or color changes, could result in price increases, additional fees and could cause delays.

EXCLUSIONS : Unless specified, this quote excludes all of the following but not limited to:

Required Permits/Inspections, Background Checks, Davis Bacon, Prevailing Wage or Certified Payroll
Performance/Payment Bonds



1279 Hazelton-Etna Road SW
Pataskala, OH 43062
614-855-3790
www.midstatesrecreation.com

QUOTATION

Site Restoration

Site work, saw cutting/core drilling, and landscaping.

Removal of existing equipment

Unloading; Receiving of inventory or equipment; Storage of equipment.

Equipment assembly and/or installation

Safety surfacing; Borders or drainage requirements

Landscaping Repairs DUE to poor access or in climatic weather

FREIGHT AND DELIVERY: (if applicable)

Shipping is FOB Origin (means the buyer accepts the title of the goods at the shipment point and assumes all risk once the seller ships the product). All equipment will arrive unassembled.

*** (Pls Initial) Buyer is responsible to meet and provide adequate personnel/equipment to unload truck
A Check List, detailing all items shipped, will be included with the shipment. Unless taking delivery is specifically included in quote.

Buyer is responsible for ensuring the Sales Order Breakdown and Item Numbers on all boxes and pieces match the Check List.

*** (Pls Initial) Shortages or damages must be noted on the driver's delivery receipt. Shortages or damages not noted become the buyers financial responsibility.

Please notify Midstates Recreation immediately of any damages.

Shortages and Concealed Damage must be reported to Midstates Recreation within 10 days of delivery.

A reconsignment fee will be charged for any changes made to delivery address after order has been placed.

TAXES:

All orders are subject to applicable sales tax unless a tax exemption form is on file at the time the order is placed.

PAYMENT TERMS:

An approved Credit Application is required for new customers or customers that haven't been active in the last 18 months. Terms are check with order, or 50% down payment with approved credit (terms do vary based on references). Balance of product & freight will be invoiced upon shipment, due Net 10 days. 100 % prepayment required on Replacement Parts. A 3% charge will be added to all credit card orders over \$ 3,000.

For all non-taxpayer-funded entities: A 1.5% monthly service charge will be assessed on all balances over 30 days.

RESTOCKING: Items canceled, returned or refused will be subject to a minimum 25% restocking fee. All return freight charges are the responsibility of the Buyer.

MAINTENANCE/WARRANTY:

Manufacturer's standard product warranties apply and cover equipment replacement and freight costs only; labor is not included.

Midstates Recreation offers no additional warranties.

Maintenance of the equipment and safety surfacing is the responsibility of the customer.

Any unauthorized alterations or modifications to the equipment (including layout) will void your warranty.

INSTALLATION: (if applicable)

Spoils are to remain onsite.

Permits/inspections are the owner's responsibility and associated costs.



1279 Hazelton-Etna Road SW
Pataskala, OH 43062
614-855-3790
www.midstatesrecreation.com

QUOTATION

Customer must locate all underground private utilities before your scheduled installation a third-party private utility service can be provided at an additional cost if necessary. Additional charges may apply if obstruction(s) are encountered beneath the surface. Not responsible for damaged/broken parts on existing playground equipment. Not responsible for crossing sidewalks.

Acceptance of Terms & Conditions

Acceptance of this proposal, made by an authorized agent of your company, indicates agreement to the above terms and conditions.

Customer Signature	Printed Name and Title	Date
Updated:		



1279 Hazelton-Etna Road SW
Pataskala, OH 43062
614-855-3790
www.midstatesrecreation.com

QUOTATION

Sold To	City of Belleville 6 Main Street Belleville, MI, 48111 United States	Ship To	Village Park 660 Savage Road Belleville, MI, 48111 United States
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Date	Quote #	Terms	Rep	Project	Ship Contact
2025-04-18	QTN-17861 Valid Until 05-18-2025	Net 10	Brion Kilpela	2025 04 Village Park Ewf Top Off - Mi Belleville City Of	

Item Code	Description	Qty	Rate	Amount
Wood Fiber	Supplied & Installed (cy) Playground Engineered Wood Fiber Safety Surfacing - ASTM Compliant	135.0 Each	\$ 45.00	\$ 6,075.00
Sourcewell Member ID	Sourcewell Customer - Member ID # 174151: Contract #010521-LTS-8	1.0 Unit	\$ 0.00	\$ 0.00

Subtotal	\$ 6,075.00
Michigan Sales Tax	\$ 0.00
Total	\$ 6,075.00

Acceptance of Proposal

(Please be sure you have read, signed, and initialed and understand the terms and conditions) The items, prices, and conditions listed herein are satisfactory and are hereby accepted.

Signature (Approval) _____

Printed Name _____

Title _____

Date _____

TERMS AND CONDITIONS

QUOTE CONDITIONS AND ACCEPTANCE:

This quote is only valid for 30 days.

*** (Pls Initial) It is the Buyer's responsibility to verify quantities and description of items quoted. Once your order has been placed, any changes including additions, deletions, or color changes, could result in price increases, additional fees and could cause delays.

EXCLUSIONS : Unless specified, this quote excludes all of the following but not limited to:

Required Permits/Inspections, Background Checks, Davis Bacon, Prevailing Wage or Certified Payroll
Performance/Payment Bonds



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www.midstatesrecreation.com

QUOTATION

Site Restoration

Site work, saw cutting/core drilling, and landscaping.

Removal of existing equipment

Unloading; Receiving of inventory or equipment; Storage of equipment.

Equipment assembly and/or installation

Safety surfacing; Borders or drainage requirements

Landscaping Repairs DUE to poor access or in climatic weather

FREIGHT AND DELIVERY: (if applicable)

Shipping is FOB Origin (means the buyer accepts the title of the goods at the shipment point and assumes all risk once the seller ships the product). All equipment will arrive unassembled.

*** (Pls Initial) Buyer is responsible to meet and provide adequate personnel/equipment to unload truck
A Check List, detailing all items shipped, will be included with the shipment. Unless taking delivery is specifically included in quote.

Buyer is responsible for ensuring the Sales Order Breakdown and Item Numbers on all boxes and pieces match the Check List.

*** (Pls Initial) Shortages or damages must be noted on the driver's delivery receipt. Shortages or damages not noted become the buyers financial responsibility.

Please notify Midstates Recreation immediately of any damages.

Shortages and Concealed Damage must be reported to Midstates Recreation within 10 days of delivery.

A reconsignment fee will be charged for any changes made to delivery address after order has been placed.

TAXES:

All orders are subject to applicable sales tax unless a tax exemption form is on file at the time the order is placed.

PAYMENT TERMS:

An approved Credit Application is required for new customers or customers that haven't been active in the last 18 months. Terms are check with order, or 50% down payment with approved credit (terms do vary based on references). Balance of product & freight will be invoiced upon shipment, due Net 10 days. 100 % prepayment required on Replacement Parts. A 3% charge will be added to all credit card orders over \$ 3,000.

For all non-taxpayer-funded entities: A 1.5% monthly service charge will be assessed on all balances over 30 days.

RESTOCKING: Items canceled, returned or refused will be subject to a minimum 25% restocking fee. All return freight charges are the responsibility of the Buyer.

MAINTENANCE/WARRANTY:

Manufacturer's standard product warranties apply and cover equipment replacement and freight costs only; labor is not included.

Midstates Recreation offers no additional warranties.

Maintenance of the equipment and safety surfacing is the responsibility of the customer.

Any unauthorized alterations or modifications to the equipment (including layout) will void your warranty.

INSTALLATION: (if applicable)

Spoils are to remain onsite.

Permits/inspections are the owner's responsibility and associated costs.



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QUOTATION

Customer must locate all underground private utilities before your scheduled installation a third-party private utility service can be provided at an additional cost if necessary. Additional charges may apply if obstruction(s) are encountered beneath the surface. Not responsible for damaged/broken parts on existing playground equipment. Not responsible for crossing sidewalks.

Acceptance of Terms & Conditions

Acceptance of this proposal, made by an authorized agent of your company, indicates agreement to the above terms and conditions.

Customer Signature	Printed Name and Title	Date
Updated:		

Public Playground Safety Handbook



U.S. Consumer Product Safety Commission
Saving Lives and Keeping Families Safe





U.S. CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

December 29, 2015

The U.S. Consumer Product Safety Commission's ("CPSC" or "Commission") *Public Playground Safety Handbook* was first published in 1981 under the name *A Handbook for Public Playground Safety*. The recommendations in the *Handbook* are focused on playground-related *injuries* and mechanical mechanisms of injury; falls from playground equipment have remained the largest single hazard pattern associated with playground use. Since the first edition, the Commission has included recommendations that playgrounds not be installed over concrete, asphalt, or paved surfaces to address serious head injuries due to falls from the equipment. Additionally, the Commission has made suggestions for commonly used loose-fill and unitary surfacing materials (*e.g.*, wood mulch, pea gravel, sand, gym mats, and shredded/recycled rubber mulch) that provide head impact attenuation and can mitigate the hazard presented by falls from playground equipment. Maintaining the focus on falls, the *Handbook's* surfacing recommendations are based on the surfacing material's energy absorbing effectiveness.

During the past 35 years, innovations in technology have led to new playground equipment and surfacing practices. Voluntary standards for equipment and impact attenuation for protective surfacing have evolved. The 2010 edition of the *Handbook*, the most recent version, still discusses common materials, but also covers new surfacing systems that are specifically designed and tested to comply with ASTM F1292, the voluntary standard for measuring impact attenuation of surfacing. Maintaining that focus, Section 2.4 of the *Handbook* identifies shredded/recycled rubber mulch as an "Appropriate Surfacing" product, given that this product can meet the impact attenuation requirements of ASTM F1292, as long as minimum depths of the material are maintained, as specified in Table 2 of Section 2.5. This notation is solely focused on the impact attenuation to minimize serious head injuries, and not on other aspects that may pose other risks, such as chemical exposure or ingestion.

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1. INTRODUCTION

In recent years, it is estimated that there were more than 200,000 injuries annually on public playgrounds across the country that required emergency room treatment. By following the recommended guidelines in this handbook, you and your community can create a safer playground environment for all children and contribute to the reduction of playground-related deaths and injuries.

1.1 Scope

This handbook presents safety information for public playground equipment in the form of guidelines. Publication of this handbook is expected to promote greater safety awareness among those who purchase, install, and maintain public playground equipment. Because many factors may affect playground safety, the U.S. Consumer Product Safety Commission (CPSC) staff believes that guidelines, rather than a mandatory rule, are appropriate. These guidelines are not being issued as the sole method to minimize injuries associated with playground equipment. However, the Commission believes that the recommendations in this handbook along with the technical information in the ASTM standards for public playgrounds will contribute to greater playground safety.

Some states and local jurisdictions may require compliance with this handbook and/or ASTM voluntary standards. Additionally, risk managers, insurance companies, or others may require compliance at a particular site; check with state/local jurisdictions and insurance companies for specific requirements.

1.2 Intended Audience

This handbook is intended for use by childcare personnel, school officials, parks and recreation personnel, equipment purchasers and installers, playground designers, and any other members of the general public (e.g., parents and school groups) concerned with public playground safety and interested in evaluating their respective playgrounds. Due to the wide range of possible users, some information provided may be more appropriate for certain users than others. The voluntary standards listed in 1.4.1 contain more technical requirements than this handbook and are primarily intended for use by equipment manufacturers, architects, designers, and any others requiring more technical information.

1.3 What is a Public Playground?

“Public” playground equipment refers to equipment for use by children ages 6 months through 12 years in the playground areas of:

- Commercial (non-residential) child care facilities
- Institutions
- Multiple family dwellings, such as apartment and condominium buildings
- Parks, such as city, state, and community maintained parks
- Restaurants
- Resorts and recreational developments
- Schools
- Other areas of public use

These guidelines are not intended for amusement park equipment, sports or fitness equipment normally intended for users over the age of 12 years, soft contained play equipment, constant air inflatable play devices for home use, art and museum sculptures (not otherwise designed, intended and installed as playground equipment), equipment found in water play facilities, or home playground equipment. Equipment components intended solely for children with disabilities and modified to accommodate such users also are not covered by these guidelines. Child care facilities, especially indoor, should refer to ASTM F2373 — *Standard Consumer Safety Performance Specification for Public Use Play Equipment for Children 6 Months Through 23 Months*, for more guidance on areas unique to their facilities.

1.4 Public Playground Safety Voluntary Standards and CPSC Handbook History

- 1981 – First CPSC *Handbook for Public Playground Safety* was published, a two-volume set.
- 1991 – *Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment*, ASTM F1292, was first published.
- 1991 – Two-volume set was replaced by a single-volume handbook, which contained recommendations based on a COMSIS Corporation report to the CPSC (*Development of Human Factors Criteria for Playground Equipment Safety*).

- 1993 – First version of voluntary standard for public playground equipment, ASTM F1487 — *Standard Consumer Safety Performance Specification for Playground Equipment for Public Use*, was published (revisions occur every 3 to 4 years).
- 1994 – Minor revisions to the *Handbook*.
- 1997 – *Handbook* was updated based on (1) staff review of ASTM F1487, (2) playground safety roundtable meeting held October 1996, and (3) public comment received to a May 1997 CPSC staff request.
- 2005 – First version of voluntary standard for playground equipment intended for children under two years old, ASTM F2373 — *Standard Consumer Safety Performance Specification for Public Use Play Equipment for Children 6 Months Through 23 Months*, was published.
- 2008 – *Handbook* was updated based on comments received from members of the ASTM F15 Playground Committees in response to a CPSC staff request for suggested revisions. Significant revisions are listed below.

1.4.1 ASTM playground standards

Below is a list of ASTM technical performance standards that relate to playgrounds.

- **F1487** *Standard Consumer Safety Performance Specification for Playground Equipment for Public Use*.
- **F2373** *Standard Consumer Safety Performance Specification for Public Use Play Equipment for Children 6 Months through 23 Months*.
- **F1292** *Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment*.
- **F2075** *Standard Specification for Engineered Wood Fiber for Use as a Playground Safety Surface Under and Around Playground Equipment*.
- **F2223** *Standard Guide for ASTM Standards on Playground Surfacing*.
- **F2479** *Standard Guide for Specification, Purchase, Installation and Maintenance of Poured-In-Place Playground Surfacing*.
- **F1951** *Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment*.
- **F1816** *Standard Safety Specification for Drawstrings on Children's Upper Outerwear*.

- **F2049** *Standard Guide for Fences/Barriers for Public, Commercial, and Multi-Family Residential Use Outdoor Play Areas*.
- **F1148** *Standard Consumer Safety Performance Specification for Home Playground Equipment*.
- **F1918** *Standard Safety Performance Specification for Soft Contained Play Equipment*.

1.5 Significant Revisions for 2008

1.5.1 Equipment guidelines

- Age ranges expanded to include children as young as 6 months based on ASTM F2373
- Guidelines for track rides and log rolls added
- Exit zone requirements for slides harmonized with ASTM F1487

1.5.2 Surfacing guidelines

- Critical height table revised
- Suggestions for surfacing over asphalt added

1.5.3 General guidelines

- Suggestions on sun exposure added

1.5.4 Other revisions

- Editorial changes to make the *Handbook* easier to understand and use

1.6 Background

The safety of each individual piece of playground equipment as well as the layout of the entire play area should be considered when designing or evaluating a playground for safety. Since falls are a very common playground hazard pattern, the installation and maintenance of protective surfacing under and around all equipment is crucial to protect children from severe head injuries.

Because all playgrounds present some challenge and because children can be expected to use equipment in unintended and unanticipated ways, adult supervision is highly recommended. The handbook provides some guidance on supervisory practices that adults should follow. Appropriate equipment design, layout, and maintenance, as discussed in this

handbook, are also essential for increasing public playground safety.

A playground should allow children to develop gradually and test their skills by providing a series of graduated challenges. The challenges presented should be appropriate for age-related abilities and should be ones that children can perceive and choose to undertake. Toddlers, preschool- and school-age children differ dramatically, not only in physical size and ability, but also in their intellectual and social skills. Therefore, age-appropriate playground designs should accommodate these differences with regard to the type, scale, and the layout of equipment. Recommendations throughout this handbook address the different needs of toddlers, preschool-age, and school-age children; “toddlers” refers to children ages 6 months through 2 years of age, “preschool-age” refers to children 2 through 5 years, and “school-age” refers to children 5 through 12 years. The overlap between these groups is anticipated in terms of playground equipment use and provides for a margin of safety.

Playground designers, installers and operators should be aware that the Americans with Disabilities Act of 1990 (ADA) is a comprehensive civil rights law which prohibits discrimination on the basis of disability. Titles II and III of the ADA require, among other things, that newly constructed and altered State and local government facilities, places of public accommodation, and commercial facilities be readily accessible to and usable by individuals with disabilities. Recreation facilities, including play areas, are among the types of facilities covered by titles II and III of the ADA.

The Architectural and Transportation Barriers Compliance Boards – also referred to as the “Access Board” – has developed accessibility guidelines for newly constructed and altered play areas that were published October 2000. The play area guidelines are a supplement to the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Once these guidelines are adopted as enforceable standards by the Department of Justice, all newly constructed and altered play areas covered by the ADA will be required to comply. These guidelines also apply to play areas covered by the Architectural Barriers Act (ABA).

Copies of the play area accessibility guidelines and further technical assistance can be obtained from the U.S. Access Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111; 800-872-2253, 800-993-2822 (TTY), www.access-board.gov.

1.7 Playground Injuries

The U. S. Consumer Product Safety Commission has long recognized the potential hazards that exist with the use of playground equipment, with over 200,000 estimated emergency room-treated injuries annually. The most recent study of 2,691 playground equipment-related incidents reported to the CPSC from 2001-2008 indicated that falls are the most common hazard pattern (44% of injuries) followed by equipment-related hazards, such as breakage, tip over, design, and assembly (23%).¹ Other hazard patterns involved entrapment and colliding other children or stationary equipment. Playground-related deaths reported to the Commission involved entanglement of ropes, leashes, or clothing; falls; and impact from equipment tip over or structural failure.

The recommendations in this handbook have been developed to address the hazards that resulted in playground-related injuries and deaths. The recommendations include those that address:

- The potential for falls from and impact with equipment
- The need for impact attenuating protective surfacing under and around equipment
- Openings with the potential for head entrapment
- The scale of equipment and other design features related to user age and layout of equipment on a playground
- Installation and maintenance procedures
- General hazards presented by protrusions, sharp edges, and crush or shear points

1.8 Definitions

Barrier — An enclosing device around an elevated platform that is intended to prevent both inadvertent and deliberate attempts to pass through the device.

Composite Structure — Two or more play structures attached or functionally linked, to create one integral unit that provides more than one play activity.

Critical Height — The fall height below which a life-threatening head injury would not be expected to occur.

¹O'Brien, Craig W.; Injuries and Investigated Deaths Associated with Playground Equipment, 2001–2008. U.S. Consumer Product Safety Commission: Washington DC, October, 2009.

Designated Play Surface — Any elevated surface for standing, walking, crawling, sitting or climbing, or a flat surface greater than 2 inches wide by 2 inches long having an angle less than 30° from horizontal.

Embankment Slide — A slide that follows the contour of the ground and at no point is the bottom of the chute greater than 12 inches above the surrounding ground.

Entanglement — A condition in which the user's clothes or something around the user's neck becomes caught or entwined on a component of playground equipment.

Entrapment — Any condition that impedes withdrawal of a body or body part that has penetrated an opening.

Fall Height — The vertical distance between the highest designated play surface on a piece of equipment and the protective surfacing beneath it.

Footing — A means for anchoring playground equipment to the ground.

Full Bucket Seat Swing — A swing generally appropriate for children under 4 years of age that provides support on all sides and between the legs of the occupant and cannot be entered or exited without adult assistance.

Geotextile (filter) Cloth — A fabric that retains its relative structure during handling, placement, and long-term service to enhance water movement, retard soil movement, and to add reinforcement and separation between the soil and the surfacing and/or sub-base.

Guardrail — An enclosing device around an elevated platform that is intended to prevent inadvertent falls from the elevated surface.

Infill — Material(s) used in a protective barrier or between decks to prevent a user from passing through the barrier (e.g., vertical bars, lattice, solid panel, etc.).

Loose-Fill Surfacing Material — A material used for protective surfacing in the use zone that consists of loose particles such as sand, gravel, engineered wood fibers, or shredded rubber.

Preschool-Age Children — Children 2 years of age through 5 years of age.

Projection — Anything that extends outward from a surface of the playground equipment and must be tested to determine whether it is a protrusion or entanglement hazard, or both.

Protective Barrier — See Barrier.

Protective Surfacing — Shock absorbing (i.e., impact attenuating) surfacing material in the use zone that conforms to the recommendations in §2.4 of this handbook.

Protrusion — A projection which, when tested, is found to be a hazard having the potential to cause bodily injury to a user who impacts it.

Roller Slide — A slide that has a chute consisting of a series of individual rollers over which the user travels.

School-Age Children — Children 5 years of age through 12 years of age.

Slide Chute — The inclined sliding surface of a slide.

Stationary Play Equipment — Any play structure that has a fixed base and does not move.

Supervisor — Any person tasked with watching children on a playground. Supervisors may be paid professionals (e.g., childcare, elementary school or park and recreation personnel), paid seasonal workers (e.g., college or high school students), volunteers (e.g., PTA members), or unpaid caregivers (e.g., parents) of the children playing in the playground.

Toddlers — Children 6 months through 23 months of age.

Tube Slide — A slide in which the chute consists of a totally enclosed tube or tunnel.

Unitary Surfacing Material — A manufactured material used for protective surfacing in the use zone that may be rubber tiles, mats, or a combination of energy absorbing materials held in place by a binder that may be poured in place at the playground site and cures to form a unitary shock absorbing surface.

Upper Body Equipment — Equipment designed to support a child by the hands only (e.g., horizontal ladder, overhead swinging rings).

Use Zone — The surface under and around a piece of equipment onto which a child falling from or exiting from the equipment would be expected to land. These areas are also designated for unrestricted circulation around the equipment.

2. GENERAL PLAYGROUND CONSIDERATIONS

2.1 Selecting a Site

The following factors are important when selecting a site for a new playground:

Site Factor	Questions to Ask	If yes, then...Mitigation
Travel patterns of children to and from the playground	Are there hazards in the way?	Clear hazards.
Nearby accessible hazards such as roads with traffic, lakes, ponds, streams, drop-offs/cliffs, etc.	Could a child inadvertently run into a nearby hazard? Could younger children easily wander off toward the hazard?	Provide a method to contain children within the playground. For example, a dense hedge or a fence. The method should allow for observation by supervisors. If fences are used, they should conform to local building codes and/or ASTM F-2049.
Sun exposure	Is sun exposure sufficient to heat exposed bare metal slides, platforms, steps, & surfacing enough to burn children?	Bare metal slides, platforms, and steps should be shaded or located out of direct sun. Provide warnings that equipment and surfacing exposed to intense sun can burn.
	Will children be exposed to the sun during the most intense part of the day?	Consider shading the playground or providing shaded areas nearby.
Slope and drainage	Will loose fill materials wash away during periods of heavy rain?	Consider proper drainage re-grading to prevent wash outs.

2.1.1 Shading considerations

According to the American Academy of Dermatology, research indicates that one in five Americans will develop some form of skin cancer during their lifetime, and five or more sunburns double the risk of developing skin cancer. Utilizing existing shade (e.g., trees), designing play structures as a means for providing shading (e.g., elevated platforms with shaded space below), or creating more shade (e.g., man-made structures) are potential ways to design a playground to help protect children's skin from the sun. When trees are used for shade, additional maintenance issues arise, such as the need for cleaning up debris and trimming limbs.

2.2 Playground Layout

There are several key factors to keep in mind when laying out a playground:

- Accessibility
- Age separation
- Conflicting activities
- Sight lines
- Signage and/or labeling
- Supervision

2.2.1 Accessibility

Special consideration should be given to providing accessible surfaces in a play area that meets the ASTM *Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment*, ASTM F1951.

Equipment selection and location along with the type of protective surfacing are key components to ensuring the opportunity for children with disabilities to play on the playground.

2.2.2 Age separation

For playgrounds intended to serve children of all ages, the layout of pathways and the landscaping of the playground should show the distinct areas for the different age groups. The areas should be separated at least by a buffer zone, which could be an area with shrubs or benches. This separation and buffer zone will reduce the chance of injury from older, more active children running through areas filled with younger children with generally slower movement and reaction times.

2.2.3 Age group

In areas where access to the playground is unlimited or enforced only by signage, the playground designer should recognize that since child development is fluid, parents and caregivers may select a playground slightly above or slightly below their child's abilities, especially for children at or near a cut-off age (e.g., 2-years old and 5-years old). This could be for ease of supervising multiple children, misperceptions about the hazards a playground may pose to children of a different age, advanced development of a child, or other reasons. For this reason, there is an overlap at age 5.

Developmentally a similar overlap also exists around age 2; however, due to the differences in ASTM standards and entrapment testing tools, this overlap is not reflected in the handbook. Playgrounds used primarily by children under the supervision of paid, trained professionals (e.g., child-care centers and schools) may wish to consider separating playgrounds by the facility's age groupings. For example, a child-care facility may wish to limit a playground to toddlers under 2 exclusively and can draw information from this guide and ASTM F2373. A school, on the other hand, may have no children under 4 attending, and can likewise plan appropriately. Those who inspect playgrounds should use the intended age group of the playground.

2.2.4 Conflicting activities

The play area should be organized into different sections to prevent injuries caused by conflicting activities and children running between activities. Active, physical activities should be separate from more passive or quiet activities. Areas for playground equipment, open fields, and sand boxes should be located in different sections of the playground. In addition, popular, heavy-use pieces of equipment or activities should be dispersed to avoid crowding in any one area.

Different types of equipment have different use zones that must be maintained. The following are general recommendations for locating equipment within the playground site. Specific use zones for equipment are given in §5.3.

- Moving equipment, such as swings and merry-go-rounds, should be located toward a corner, side, or edge of the play area while ensuring that the appropriate use zones around the equipment are maintained.
- Slide exits should be located in an uncongested area of the playground.
- Composite play structures have become increasingly popular on public playgrounds. Adjacent components on composite structures should be complementary. For example, an access component should not be located in a slide exit zone.

2.2.5 Sight lines

Playgrounds that are designed, installed, and maintained in accordance with safety guidelines and standards can still present hazards to children. Playgrounds should be laid out to allow parents or caregivers to keep track of children as they move throughout the playground environment. Visual barriers should be minimized as much as possible. For example, in a park situation, playground equipment should be as visible as possible from park benches. In playgrounds with areas for different ages, the older children's area should be visible from the younger children's area to ensure that caregivers of multiple children can see older children while they are engaged in interactive play with younger ones.

2.2.6 Signage and/or labeling

Although the intended user group should be obvious from the design and scale of equipment, signs and/or labels posted in the playground area or on the equipment should give some guidance to supervisors as to the age appropriateness of the equipment.

2.2.7 Supervision

The quality of the supervision depends on the quality of the supervisor's knowledge of safe play behavior. Playground designers should be aware of the type of supervision most likely for their given playground. Depending on the location and nature of the playground, the supervisors may be paid professionals (e.g., childcare, elementary school or park and recreation personnel), paid seasonal workers (e.g., college or high school students), volunteers (e.g., PTA members), or unpaid caregivers (e.g., parents) of the children playing in the playground.

Parents and playground supervisors should be aware that not all playground equipment is appropriate for all children who may use the playground. Supervisors should look for posted



signs indicating the appropriate age of the users and direct children to equipment appropriate for their age. Supervisors may also use the information in Table 1 to determine the suitability of the equipment for the children they are supervising. Toddlers and preschool-age children require more attentive supervision than older children; however, one should not rely on supervision alone to prevent injuries.

Supervisors should understand the basics of playground safety such as:

- Checking for broken equipment and making sure children don't play on it.
- Checking for and removing unsafe modifications, especially ropes tied to equipment, before letting children play.
- Checking for properly maintained protective surfacing.
- Making sure children are wearing foot wear.

TABLE 1. EXAMPLES OF AGE APPROPRIATE EQUIPMENT

 Toddler — Ages 6-23 months • Climbing equipment under 32" high • Ramps • Single file step ladders • Slides* • Spiral slides less than 360° • Spring rockers • Stairways • Swings with full bucket seats	 Preschool — Ages 2-5 years • Certain climbers** • Horizontal ladders less than or equal to 60" high for ages 4 and 5 • Merry-go-rounds • Ramps • Rung ladders • Single file step ladders • Slides* • Spiral slides up to 360° • Spring rockers • Stairways • Swings – belt, full bucket seats (2-4 years) & rotating tire	 Grade School — Ages 5-12 years • Arch climbers • Chain or cable walks • Free standing climbing events with flexible parts • Fulcrum seesaws • Ladders – Horizontal, Rung, & Step • Overhead rings*** • Merry-go-rounds • Ramps • Ring treks • Slides* • Spiral slides more than one 360° turn • Stairways • Swings – belt & rotating tire • Track rides • Vertical sliding poles
* See §5.3.6	** See §5.3.2	*** See §5.3.2.5

- Watching and stopping dangerous horseplay, such as children throwing protective surfacing materials, jumping from heights, etc.
- Watching for and stopping children from wandering away from the play area.

2.3 Selecting Equipment

When selecting playground equipment, it is important to know the age range of the children who will be using the playground. Children at different ages and stages of development have different needs and abilities. Playgrounds should be designed to stimulate children and encourage them to develop new skills, but should be in scale with their sizes, abilities, and developmental levels. Consideration should also be given to providing play equipment that is accessible to children with disabilities and encourages integration within the playground.

Table 1 shows the appropriate age range for various pieces of playground equipment. This is not an all-comprehensive list and, therefore, should not limit inclusion of current or newly designed equipment that is not specifically mentioned. For equipment listed in more than one group, there may be some modifications or restrictions based on age, so consult the specific recommendations in §5.3.

2.3.1 Equipment not recommended

Some playground equipment is not recommended for use on public playgrounds, including:

- Trampolines
- Swinging gates
- Giant strides
- Climbing ropes that are not secured at both ends.
- Heavy metal swings (e.g., animal figures) – These are not recommended because their heavy rigid metal framework presents a risk of impact injury.
- Multiple occupancy swings – With the exception of tire swings, swings that are intended for more than one user are not recommended because their greater mass, as compared to single occupancy swings, presents a risk of impact injury.
- Rope swings – Free-swinging ropes that may fray or otherwise form a loop are not recommended because they present a potential strangulation hazard.
- Swinging dual exercise rings and trapeze bars – These are rings and trapeze bars on long chains that are generally considered to be items of athletic equipment and are not recommended for public playgrounds. *NOTE: The recommendation against the use of exercise rings does not apply to overhead hanging rings such as those used in a ring trek or ring ladder (see Figure 7).*



2.4 Surfacing

The surfacing under and around playground equipment is one of the most important factors in reducing the likelihood of life-threatening head injuries. A fall onto a shock absorbing surface is less likely to cause a

serious head injury than a fall onto a hard surface. However, some injuries from falls, including broken limbs, may occur no matter what playground surfacing material is used.

The most widely used test method for evaluating the shock absorbing properties of a playground surfacing material is to drop an instrumented metal headform onto a sample of the material and record the acceleration/time pulse during the impact. Field and laboratory test methods are described in ASTM F1292 *Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment*.

Testing using the methods described in ASTM F1292 will provide a “critical height” rating of the surface. This height can be considered as an approximation of the fall height below which a life-threatening head injury would not be expected to occur. Manufacturers and installers of playground protective surfacing should provide the critical height rating of their materials. This rating should be greater than or equal to the fall height of the highest piece of equipment on the playground. The fall height of a piece of equipment is the distance between the highest designated play surface on a piece of equipment and the protective surface beneath it. Details for determining the highest designated play surface and fall height on some types of equipment are included in §5 Parts of the Playground.

2.4.1 Equipment not covered by protective surfacing recommendations

The recommendations for protective surfacing do not apply to equipment that requires a child to be standing or sitting at ground level. Examples of such equipment are:



Appropriate Surfacing

- Any material tested to ASTM F1292, including unitary surfaces, engineered wood fiber, etc.
- Pea gravel
- Sand
- Shredded/recycled rubber mulch
- Wood mulch (not CCA-treated)
- Wood chips



Inappropriate Surfacing

- Asphalt
- Carpet not tested to ASTM F1292
- Concrete
- Dirt
- Grass
- CCA treated wood mulch

- Sand boxes
- Activity walls at ground level
- Play houses
- Any other equipment that children use when their feet remain in contact with the ground surface

2.4.2 Selecting a surfacing material

There are two options available for surfacing public playgrounds: unitary and loose-fill materials. A playground should never be installed without protective surfacing of some type. Concrete, asphalt, or other hard surfaces should never be directly under playground equipment. Grass and dirt are not considered protective surfacing because wear and environmental factors can reduce their shock absorbing effectiveness. Carpeting and mats are also not appropriate unless they are tested to and comply with ASTM F1292. Loose-fill should be avoided for playgrounds intended for toddlers.

2.4.2.1 Unitary surfacing materials

Unitary materials are generally rubber mats and tiles or a combination of energy-absorbing materials held in place by a

binder that may be poured in place at the playground site and then cured to form a unitary shock absorbing surface. Unitary materials are available from a number of different manufacturers, many of whom have a range of materials with differing shock absorbing properties. New surfacing materials, such as bonded wood fiber and combinations of loose-fill and unitary, are being developed that may also be tested to ASTM F1292 and fall into the unitary materials category. When deciding on the best surfacing materials keep in mind that some dark colored surfacing materials exposed to the intense sun have caused blistering on bare feet. Check with the manufacturer if light colored materials are available or provide shading to reduce direct sun exposure.

Persons wishing to install a unitary material as a playground surface should request ASTM F1292 test data from the manufacturer identifying the critical height rating of the desired surface. In addition, site requirements should be obtained from the manufacturer because some unitary materials require installation over a hard surface while others do not. Manufacturer's instructions should be followed closely, as some unitary systems require professional installation. Testing should be conducted in accordance with the ASTM F1292 standard.

2.4.2.2 Loose-fill surfacing materials

Engineered wood fiber (EWF) is a wood product that may look similar in appearance to landscaping mulch, but EWF products are designed specifically for use as a playground safety surface under and around playground equipment. EWF products should meet the specifications in ASTM F2075: *Standard Specification for Engineered Wood Fiber* and be tested to and comply with ASTM F1292.

There are also rubber mulch products that are designed specifically for use as playground surfacing. Make sure they have been tested to and comply with ASTM F1292.

When installing these products, tips 1-9 listed below should be followed. Each manufacturer of engineered wood fiber and rubber mulch should provide maintenance requirements for and test data on:

- Critical height based on ASTM F1292 impact attenuation testing.
- Minimum fill-depth data.
- Toxicity.
- ADA/ABA accessibility guidelines for firmness and stability based on ASTM F1951.

Other loose-fill materials are generally landscaping-type materials that can be layered to a certain depth and resist compacting. Some examples include wood mulch, wood chips, sand, pea gravel, and shredded/recycled rubber mulch.

Important tips when considering loose-fill materials:

1. Loose-fill materials will compress at least 25% over time due to use and weathering. This must be considered when planning the playground. For example, if the playground will require 9 inches of wood chips, then the initial fill level should be 12 inches. See Table 2 below.
2. Loose-fill surfacing requires frequent maintenance to ensure surfacing levels never drop below the minimum depth. Areas under swings and at slide exits are more susceptible to displacement; special attention must be paid to maintenance in these areas. Additionally, wear mats can be installed in these areas to reduce displacement.
3. The perimeter of the playground should provide a method of containing the loose-fill materials.
4. Consider marking equipment supports with a minimum fill level to aid in maintaining the original depth of material.

5. Good drainage is essential to maintaining loose-fill surfacing. Standing water with surfacing material reduces effectiveness and leads to material compaction and decomposition.
6. Critical height may be reduced during winter in areas where the ground freezes.
7. Never use less than 9 inches of loose-fill material except for shredded/recycled rubber (6 inches recommended). Shallower depths are too easily displaced and compacted.
8. Some loose-fill materials may not meet ADA/ABA accessibility guidelines. For more information, contact the Access Board (see §1.6) or refer to ASTM F1951.
9. Wood mulch containing chromated copper arsenate (CCA)-treated wood products should not be used; mulch where the CCA-content is unknown should be avoided (see §2.5.5.1).

Table 2 shows the minimum required depths of loose-fill material needed based on material type and fall height. The depths shown assume the materials have been compressed due to use and weathering and are properly maintained to the given level.

2.4.2.3 Installing loose-fill over hard surface

CPSC staff strongly recommends against installing playgrounds over hard surfaces, such as asphalt, concrete, or hard packed earth, unless the installation adds the following layers of protection. Immediately over the hard surface there should be a 3- to 6-inch base layer of loose-fill (e.g., gravel for drainage). The next layer should be a Geotextile cloth. On top of that should be a loose-fill layer meeting the specifications addressed in §2.4.2.2 and Table 2. Embedded in the loose-fill layer should be impact attenuating mats under high traffic areas, such as under swings, at slide exits, and other places where displacement is likely. Figure 1 provides a visual representation of this information. Older playgrounds that still exist on hard surfacing should be modified to provide appropriate surfacing.

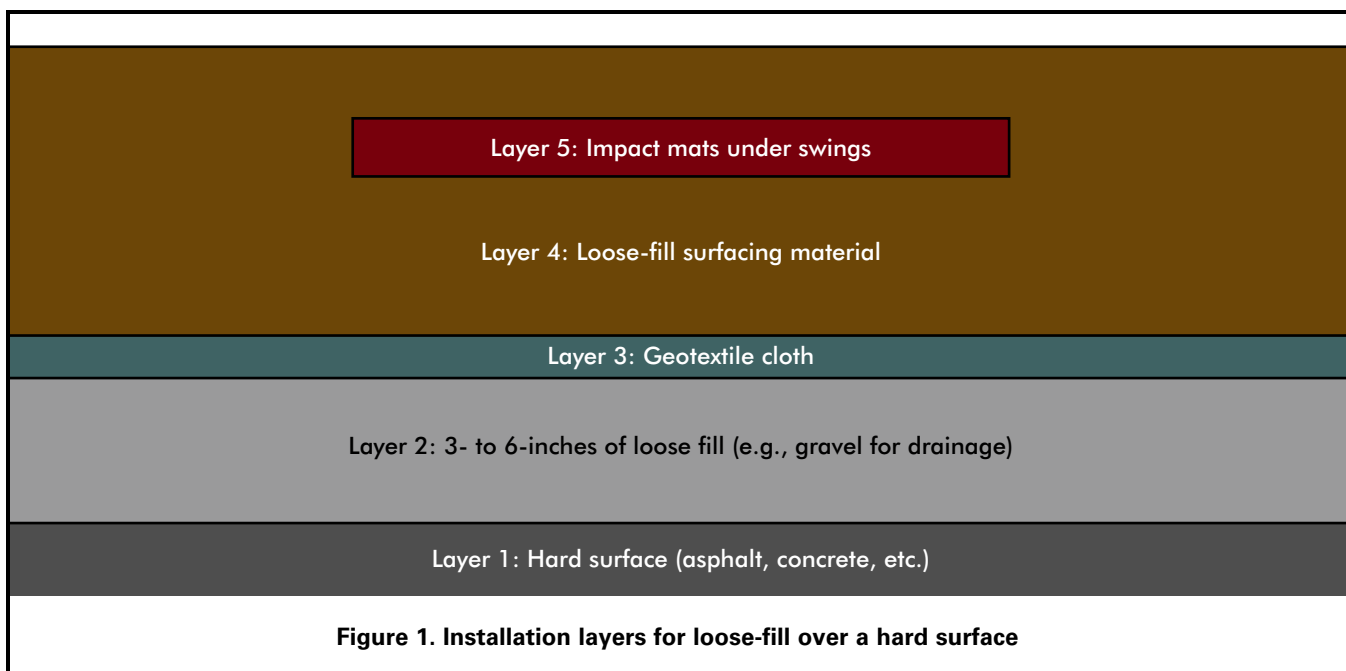
2.5 Equipment Materials

2.5.1 Durability and finish

- Use equipment that is manufactured and constructed only of materials that have a demonstrated record of durability in a playground or similar setting.

Table 2. Minimum compressed loose-fill surfacing depths

Inches	Of	(Loose-Fill Material)	Protects to	Fall Height (feet)
6*		Shredded/recycled rubber		10
9		Sand		4
9		Pea Gravel		5
9		Wood mulch (non-CCA)		7
9		Wood chips		10
* Shredded/recycled rubber loose-fill surfacing does not compress in the same manner as other loose-fill materials. However, care should be taken to maintain a constant depth as displacement may still occur.				

**Figure 1. Installation layers for loose-fill over a hard surface**

- Finishes, treatments, and preservatives should be selected carefully so that they do not present a health hazard to users.

2.5.2 Hardware

When installed and maintained in accordance with the manufacturer's instructions:

- All fasteners, connectors, and covering devices should not loosen or be removable without the use of tools.
- All fasteners, connectors, and covering devices that are exposed to the user should be smooth and should not be likely to cause laceration, penetration, or present a clothing entanglement hazard (see also §3.2 and Appendix B).
- Lock washers, self-locking nuts, or other locking means should be provided for all nuts and bolts to protect them from detachment.
- Hardware in moving joints should also be secured against unintentional or unauthorized loosening.

- All fasteners should be corrosion resistant and be selected to minimize corrosion of the materials they connect. This is particularly important when using wood treated with ACQ/CBA/CA-B² as the chemicals in the wood preservative corrode certain metals faster than others.
- Bearings or bushings used in moving joints should be easy to lubricate or be self-lubricating.
- All hooks, such as S-hooks and C-hooks, should be closed (see also §5.3.8.1). A hook is considered closed if there is no gap or space greater than 0.04 inches, about the thickness of a dime.

2.5.3 Metals

- Avoid using bare metal for platforms, slides, or steps. When exposed to direct sunlight they may reach temperatures high enough to cause serious contact burn injuries in a matter of seconds. Use other materials that may reduce the surface temperature, such as but not limited to wood, plastic, or coated metal (see also Slides in §5.3.6).
- If bare or painted metal surfaces are used on platforms, steps, and slide beds, they should be oriented so that the surface is not exposed to direct sun year round.

2.5.4 Paints and finishes

- Metals not inherently corrosion resistant should be painted, galvanized, or otherwise treated to prevent rust.
- The manufacturer should ensure that the users cannot ingest, inhale, or absorb potentially hazardous amounts of preservative chemicals or other treatments applied to the equipment as a result of contact with playground equipment.
- All paints and other similar finishes must meet the current CPSC regulation for lead in paint.
- Painted surfaces should be maintained to prevent corrosion and deterioration.
- Paint and other finishes should be maintained to prevent rusting of exposed metals and to minimize children playing with peeling paint and paint flakes.

- Older playgrounds with lead based paints should be identified and a strategy to control lead paint exposure should be developed. Playground managers should consult the October 1996 report, CPSC Staff Recommendations for Identifying and Controlling Lead Paint on Public Playground Equipment, while ensuring that all paints and other similar finishes meet the current CPSC regulation.³

2.5.5 Wood

- Wood should be either naturally rot- and insect-resistant (e.g., cedar or redwood) or should be treated to avoid such deterioration.
- Creosote-treated wood (e.g., railroad ties, telephone poles, etc) and coatings that contain pesticides should not be used.

2.5.5.1 Pressure-treated wood

A significant amount of older playground wood was pressure-treated with chemicals to prevent damage from insects and fungi. Chromated copper arsenate (CCA) was a chemical used for decades in structures (including playgrounds). Since December 31, 2003, CCA-treated wood is no longer processed for use in playground applications. Other rot- and insect-resistant pressure treatments are available that do not contain arsenic; however, when using any of the new treated wood products, be sure to use hardware that is compatible with the wood treatment chemicals. These chemicals are known to corrode certain materials faster than others.

Existing playgrounds with CCA-treated wood

Various groups have made suggestions concerning the application of surface coatings to CCA-treated wood (e.g., stains and sealants) to reduce a child's potential exposure to arsenic from the wood surface. Data from CPSC staff and EPA studies suggest that regular (at least once a year) use of an oil- or water-based, penetrating sealant or stain can reduce arsenic migration from CCA-treated wood. Installers, builders, and consumers who perform woodworking operations, such as sanding, sawing, or sawdust disposal, on pressure-treated wood should read the consumer information sheet available at the point of sale. This sheet contains important health precautions and disposal information.

² Ammoniacal copper quat (ACQ), copper boron azole (CBA), copper azole type B (CA-B), etc.

³ CPSC Staff Recommendations for Identifying and Controlling Lead Paint on Public Playground Equipment; U.S. Consumer Product Safety Commission: Washington, DC, October 1996.

When selecting wood products and finishes for public playgrounds, CPSC staff recommends:

- Avoid “film-forming” or non-penetrating stains (latex semi-transparent, latex opaque and oil-based opaque stains) on outdoor surfaces because peeling and flaking may occur later, which will ultimately have an impact on durability as well as exposure to the preservatives in the wood.
- Creosote, pentachlorophenol, and tributyl tin oxide are too toxic or irritating and should not be used as preservatives for playground equipment wood.
- Pesticide-containing finishes should not be used.
- CCA-treated wood should not be used as playground mulch.

2.6 Assembly and Installation

- Strictly follow *all* instructions from the manufacturer when assembling and installing equipment.
- After assembly and before its first use, equipment should be thoroughly inspected by a person qualified to inspect playgrounds for safety.
- The manufacturer’s assembly and installation instructions, and all other materials collected concerning the equipment, should be kept in a permanent file.
- Secure anchoring is a key factor to stable installation, and the anchoring process should be completed in *strict* accordance with the manufacturer’s specifications.

3. PLAYGROUND HAZARDS

This section provides a broad overview of general hazards that should be avoided on playgrounds. It is intended to raise awareness of the risks posed by each of these hazards. Many of these hazards have technical specifications and tests for compliance with ASTM F1487 and F2373. Some of these tests are also detailed in Appendix B.

3.1 Crush and Shearing Points

Anything that could crush or shear limbs should not be accessible to children on a playground. Crush and shear points can be caused by parts moving relative to each other or to a fixed part during a normal use cycle, such as a seesaw.

To determine if there is a possible crush or shear point, consider:

- The likelihood a child could get a body part inside the point, and
- The closing force around the point.

Potential crush/shear hazards specific to certain pieces of equipment are identified in §5.3 Major Types of Playground Equipment.

3.2 Entanglement and Impalement

Projections on playground equipment should not be able to entangle children's clothing nor should they be large enough to impale. To avoid this risk:

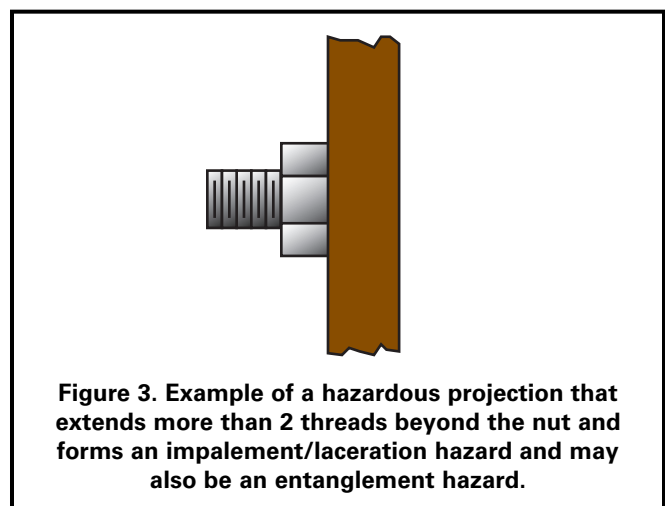
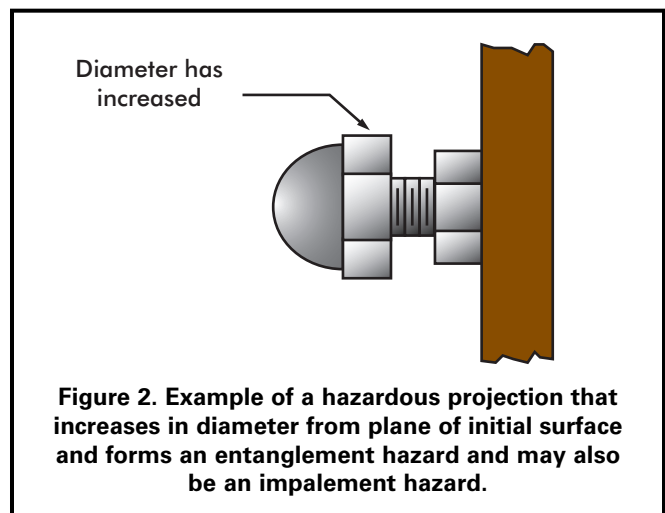
- The diameter of a projection should not increase in the direction away from the surrounding surface toward the exposed end (see Figure 2).
- Bolts should not expose more than two threads beyond the end of the nut (see Figure 3).
- All hooks, such as S-hooks and C-hooks, should be closed (see also §5.3.8.1). A hook is considered closed if there is no gap or space greater than 0.04 inches, about the thickness of a dime.
 - Any connecting device containing an in-fill that completely fills the interior space preventing entry of clothing items into the interior of the device is exempt from this requirement.

- Swings and slides have additional recommendations for projections detailed in §5.3.
- See Appendix B for testing recommendations.

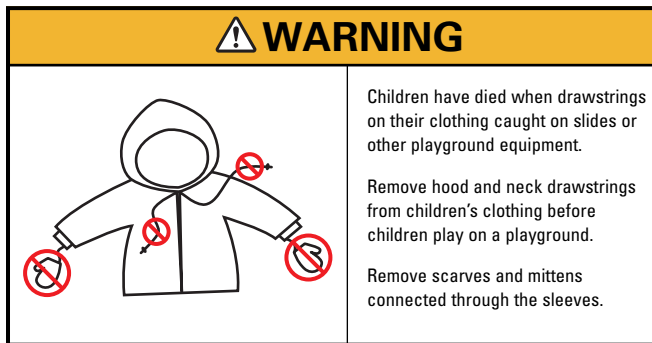
3.2.1 Strings and ropes

Drawstrings on the hoods of jackets, sweatshirts, and other upper body clothing can become entangled in playground equipment, and can cause death by strangulation. To avoid this risk:

- Children should not wear jewelry, jackets or sweatshirts with drawstring hoods, mittens connected by strings through the arms, or other upper body clothing with drawstrings.
- Remove any ropes, dog leashes, or similar objects that have been attached to playground equipment. Children can become entangled in them and strangle to death.



- Avoid equipment with ropes that are not secured at both ends.
- The following label, or a similar sign or label, can be placed on or near slides or other equipment where potential entanglements may occur.



3.3 Entrapment

3.3.1 Head entrapment

Head entrapment is a serious concern on playgrounds, since it could lead to strangulation and death. A child's head may become entrapped if the child enters an opening either feet first or head first. Head entrapment by head-first entry generally occurs when children place their heads through an

opening in one orientation, turn their heads to a different orientation, then are unable to get themselves out. Head entrapment by feet first entry involves children who generally sit or lie down and slide their feet into an opening that is large enough to permit their bodies to go through but is not large enough to permit their heads to go through. A part or a group of parts should not form openings that could trap a child's head. Also, children should not wear their bicycle helmets while on playground equipment. There have been recent head entrapment incidents in which children wearing their bicycle helmets became entrapped in spaces that would not normally be considered a head entrapment.

Certain openings could present an entrapment hazard if the distance between any interior opposing surfaces is greater than 3.5 inches and less than 9 inches. These spaces should be tested as recommended in Appendix B. When one dimension of an opening is within this range, all dimensions of the opening should be considered together to evaluate the possibility of entrapment. Even openings that are low enough for children's feet to touch the ground can present a risk of strangulation for an entrapped child. (See Figure 4). Younger children may not have the necessary intellectual ability or motor skills to reverse the process that caused their heads to become trapped, especially if they become scared or panicked.

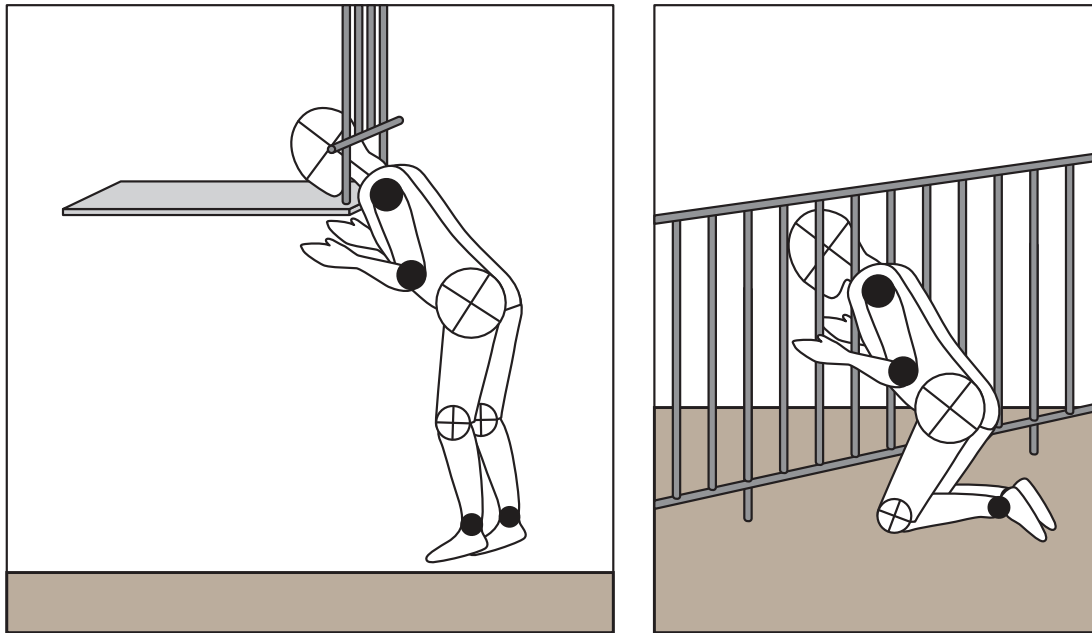


Figure 4. Examples of entrapment below a barrier and between the vertical bars of a barrier.

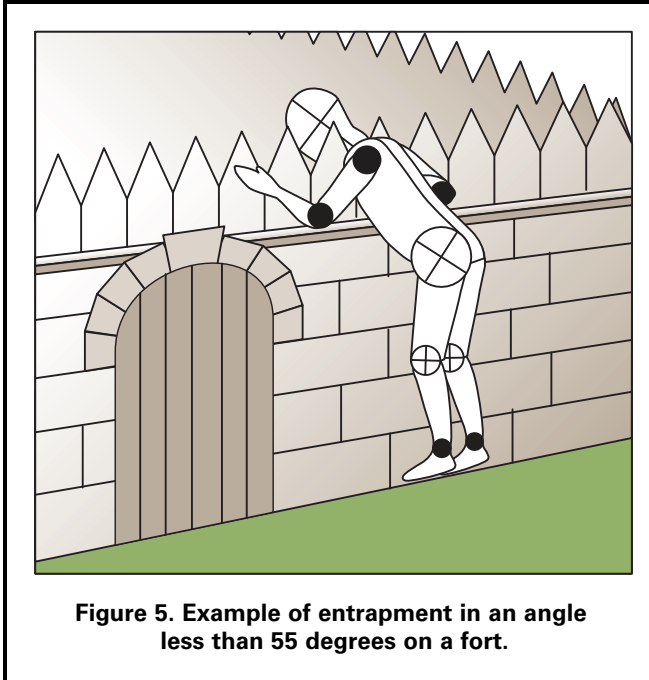


Figure 5. Example of entrapment in an angle less than 55 degrees on a fort.

3.3.2 Partially bound openings and angles

Children can become entrapped by partially bound openings, such as those formed by two or more playground parts.

- Angles formed by two accessible adjacent parts should be greater than 55 degrees unless the lowest leg is horizontal or below horizontal.
- Use the partially-bound opening test in Appendix B to identify hazardous angles and other partially-bound openings.

3.4 Sharp Points, Corners, and Edges

Sharp points, corners, or edges on any part of the playground or playground equipment may cut or puncture a child's skin. Sharp edges can cause serious lacerations if protective measures are not taken. To avoid the risk of injury from sharp points, corners and edges:

- Exposed open ends of all tubing not resting on the ground or otherwise covered should be covered by caps or plugs that cannot be removed without the use of tools.
- Wood parts should be smooth and free from splinters.
- All corners, metal and wood, should be rounded.
- All metal edges should be rolled or have rounded capping.

- There should be no sharp edges on slides. Pay special attention to metal edges of slides along the sides and at the exit (see also §5.3.6.4).
- If steel-belted radials are used as playground equipment, they should be closely examined regularly to ensure that there are no exposed steel belts/wires.
- Conduct frequent inspections to help prevent injuries caused by splintered wood, sharp points, corners, or edges that may develop as a result of wear and tear on the equipment.

3.5 Suspended Hazards

Children using a playground may be injured if they run into or trip over suspended components (such as cables, wires, ropes, or other flexible parts) connected from one piece of the playground equipment to another or hanging to the ground. These suspended components can become hazards when they are within 45 degrees of horizontal and are less than 7 feet above the protective surfacing. To avoid a suspended hazard, suspended components:

- Should be located away from high traffic areas.
- Should either be brightly colored or contrast with the surrounding equipment and surfacing.
- Should not be able to be looped back on themselves or other ropes, cables, or chains to create a circle with a 5 inch or greater perimeter.
- Should be fastened at both ends unless they are 7 inches or less long or attached to a swing seat.

These recommendations do not apply to swings, climbing nets, or if the suspended component is more than 7 feet above the protective surfacing and is a minimum of one inch at its widest cross-section dimension.

3.6 Tripping Hazards

Play areas should be free of tripping hazards (i.e., sudden change in elevations) to children who are using a playground. Two common causes of tripping are anchoring devices for playground equipment and containment walls for loose-fill surfacing materials.

- All anchoring devices for playground equipment, such as concrete footings or horizontal bars at the bottom of flexible climbers, should be installed below ground level

and beneath the base of the protective surfacing material. This will also prevent children from sustaining additional injuries from impact if they fall on exposed footings.

- Contrasting the color of the surfacing with the equipment color can contribute to better visibility.
- Surfacing containment walls should be highly visible.
- Any change of elevation should be obvious.
- Contrasting the color of the containment barrier with the surfacing color can contribute to better visibility.

3.7 Used Tires

Used automobile and truck tires are often recycled as playground equipment, such as tire swings or flexible climbers, or as a safety product such as cushioning under a seesaw or shredded as protective surfacing. When recycling tires for playground use:

- Steel-belted radials should be closely examined regularly to ensure that there are no exposed steel belts/wires.
- Care should be taken so that the tire does not collect water and debris; for example, providing drainage holes on the underside of the tire would reduce water collection.
- Recycled tire rubber mulch products should be inspected before installation to ensure that all metal has been removed.

In some situations, plastic materials can be used as an alternative to simulate actual automobile tires.

4. MAINTAINING A PLAYGROUND

Inadequate maintenance of equipment has resulted in injuries on playgrounds. Because the safety of playground equipment and its suitability for use depend on good inspection and maintenance, the manufacturer's maintenance instructions and recommended inspection schedules should be strictly followed. If manufacturer's recommendations are not available, a maintenance schedule should be developed based on actual or anticipated playground use. Frequently used playgrounds will require more frequent inspections and maintenance.

4.1 Maintenance Inspections

A comprehensive maintenance program should be developed for each playground. All playground areas and equipment should be inspected for excessive wear, deterioration, and any potential hazards, such as those shown in Table 3. One possible procedure is the use of checklists. Some manufacturers supply checklists for general or detailed inspections with their maintenance instructions. These can be used to ensure that inspections are in compliance with the manufacturer's specifications. If manufacturer-provided inspection guidelines are not available, a general checklist that may be used as a guide for frequent routine inspections of public playgrounds is included at Appendix A. This is intended to address only general maintenance concerns. Detailed inspections should give special attention to moving parts and other parts that can be expected to wear. Maintenance inspections should be carried out in a systematic manner by personnel familiar with the playground, such as maintenance workers, playground supervisors, etc.

4.2 Repairs

Inspections alone do not constitute a comprehensive maintenance program. Any problems found during the inspection should be noted and fixed as soon as possible.

- All repairs and replacements of equipment parts should be completed following the manufacturer's instructions.
- User modifications, such as loose-ended ropes tied to elevated parts, should be removed immediately.
- For each piece of equipment, the frequency of thorough

Table 3. Routine inspection and maintenance issues

- | | |
|--------------------------|--|
| ☐ | Broken equipment such as loose bolts, missing end caps, cracks, etc. |
| ☐ | Broken glass & other trash |
| ☐ | Cracks in plastics |
| ☐ | Loose anchoring |
| ☐ | Hazardous or dangerous debris |
| ☐ | Insect damage |
| ☐ | Problems with surfacing |
| ☐ | Displaced loose-fill surfacing (see Section 4.3) |
| ☐ | Holes, flakes, and/or buckling of unitary surfacing |
| ☐ | User modifications (such as ropes tied to parts or equipment rearranged) |
| ☐ | Vandalism |
| ☐ | Worn, loose, damaged, or missing parts |
| ☐ | Wood splitting |
| ☐ | Rusted or corroded metals |
| ☐ | Rot |

inspections will depend on the type and age of equipment, the amount of use, and the local climate.

- Consult the manufacturer for maintenance schedules for each piece of equipment. Based on these schedules, a maintenance schedule for the entire playground can be created. This routine maintenance schedule should not replace regular inspections.

4.3 Maintaining Loose-Fill Surfacing

Loose-fill surfacing materials require special maintenance. High-use public playgrounds, such as child care centers and schools, should be checked frequently to ensure surfacing has not displaced significantly, particularly in areas of the playground most subject to displacement (e.g., under swings and slide exits). This can be facilitated by marking ideal surfacing depths on equipment posts. Displaced loose-fill

surfacing should be raked back into proper place so that a constant depth is maintained throughout the playground. Impact attenuating mats placed in high traffic areas, such as under swings and at slide exits, can significantly reduce displacement. They should be installed below or level with surfacing so as not to be a tripping hazard.

The following are key points to look for during regular checks of surfacing:

- Areas under swings and at slide exits. Activity in these areas tends to displace surfacing quickly. Rake loose-fill back into place.
- Pooling water on mulch surfacing. For example, wet mulch compacts faster than dry, fluffy mulch. If puddles are noticed regularly, consider addressing larger drainage issues.
- Frozen surfacing. Most loose-fill surfacing that freezes

solid no longer functions as protective surfacing. Even if the first few inches may be loose, the base layer may be frozen and the impact attenuation of the surfacing may be significantly reduced. It is recommended that children not play on the equipment under these conditions.

4.4 Recordkeeping

Records of all maintenance inspections and repairs should be retained, including the manufacturer's maintenance instructions and any checklists used. When any inspection is performed, the person performing it should sign and date the form used. A record of any accident and injury reported to have occurred on the playground should also be retained. This will help identify potential hazards or dangerous design features that should be corrected.

5. PARTS OF THE PLAYGROUND

5.1 Platforms, Guardrails and Protective Barriers

5.1.1 Platforms

- Platforms should be generally flat (i.e., within $\pm 2^\circ$ of horizontal).
- Openings in platforms should be provided to allow for drainage.
- Platforms should minimize the collection of debris.
- Platforms intended for toddlers should be no more than 32 inches from the ground.

5.1.2 Stepped platforms

On some composite structures, platforms are layered or tiered so that a child may access the higher platform without steps or ladders. Unless there is an alternate means of access/egress, the maximum difference in height between stepped platforms should be:

- Toddlers: 7 inches.
- Preschool-age: 12 inches.
- School-age: 18 inches.

An access component (such as a rung) is needed if the difference in height is more than 12 inches for preschool-age and 18 inches for school-age children.

The space between the stepped platforms should follow the recommendations to minimize entrapment hazards in enclosed openings:

- Toddlers: if the space is less than 7 inches, infill should be used to reduce the space to less than 3.0 inches.
- Preschool-age: if the space exceeds 9 inches and the height of the lower platform above the protective surfacing exceeds 30 inches, infill should be used to reduce the space to less than 3.5 inches.
- School-age: if the space exceeds 9 inches and the height of the lower platform above the protective surfacing exceeds 48 inches, infill should be used to reduce the space to less than 3.5 inches.

5.1.2.1 Fall height

- The fall height of a platform is the distance between the top of the platform and the protective surfacing beneath it.

5.1.3 Guardrails and protective barriers

Guardrails and protective barriers are used to minimize the likelihood of accidental falls from elevated platforms. Protective barriers provide greater protection than guardrails and should be designed to discourage children from climbing over or through the barrier. Guardrails and barriers should:

- Completely surround any elevated platform.
- Except for entrance and exit openings, the maximum clearance opening without a top horizontal guardrail should be 15 inches.
- Prevent unintentional falls from the platform.
- Prevent the possibility of entrapment.
- Facilitate supervision.

For example:

- Guardrails may have a horizontal top rail with infill consisting of vertical bars having openings that are greater than 9 inches. These openings do not present an entrapment hazard but do not prevent a child from climbing through the openings.
- A barrier should minimize the likelihood of passage of a child during deliberate attempts to defeat the barrier. Any openings between uprights or between the platform surface and lower edge of a protective barrier should prevent passage of the small torso template (see test in B.2.5).

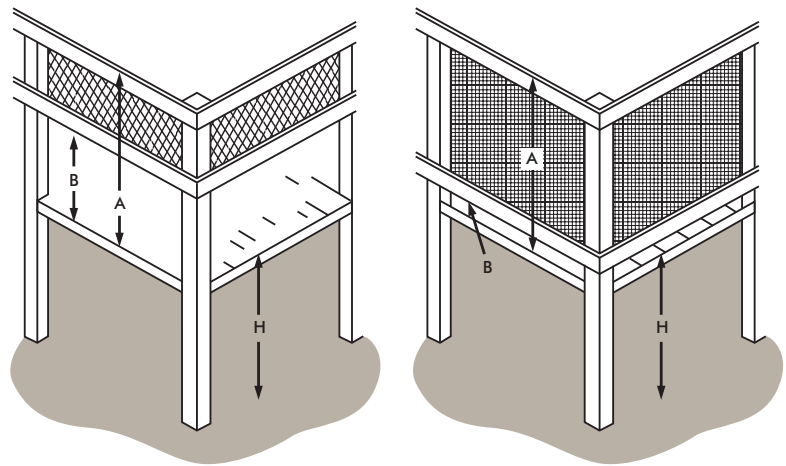
Guardrails or protective barriers should be provided on elevated platforms, walkways, landings, stairways, and transitional surfaces. In general, the younger the child, the less coordination and balance they have, therefore the more vulnerable they are to unintentional falls. Toddlers are the most vulnerable, and equipment intended for this age should use barriers on all elevated walking surfaces above 18 inches. Physical skills develop further in preschool-age children and then more with school-age children; therefore, minimum elevation recommendations for guardrails and barriers increase with each age group.

Guardrails and barriers should be high enough to prevent the tallest children from falling over the top. For guardrails, the lower edge should be low enough so that the smallest children cannot walk under it. Barriers should be low enough to prevent the smallest child from getting under the barrier in any way. This is generally done by designing the barrier so that the small torso probe (see test methods in Appendix B) cannot pass under or through the barrier. Vertical infill for protective barriers may be preferable for younger children because the vertical components can be grasped at whatever height a child chooses as a handhold.

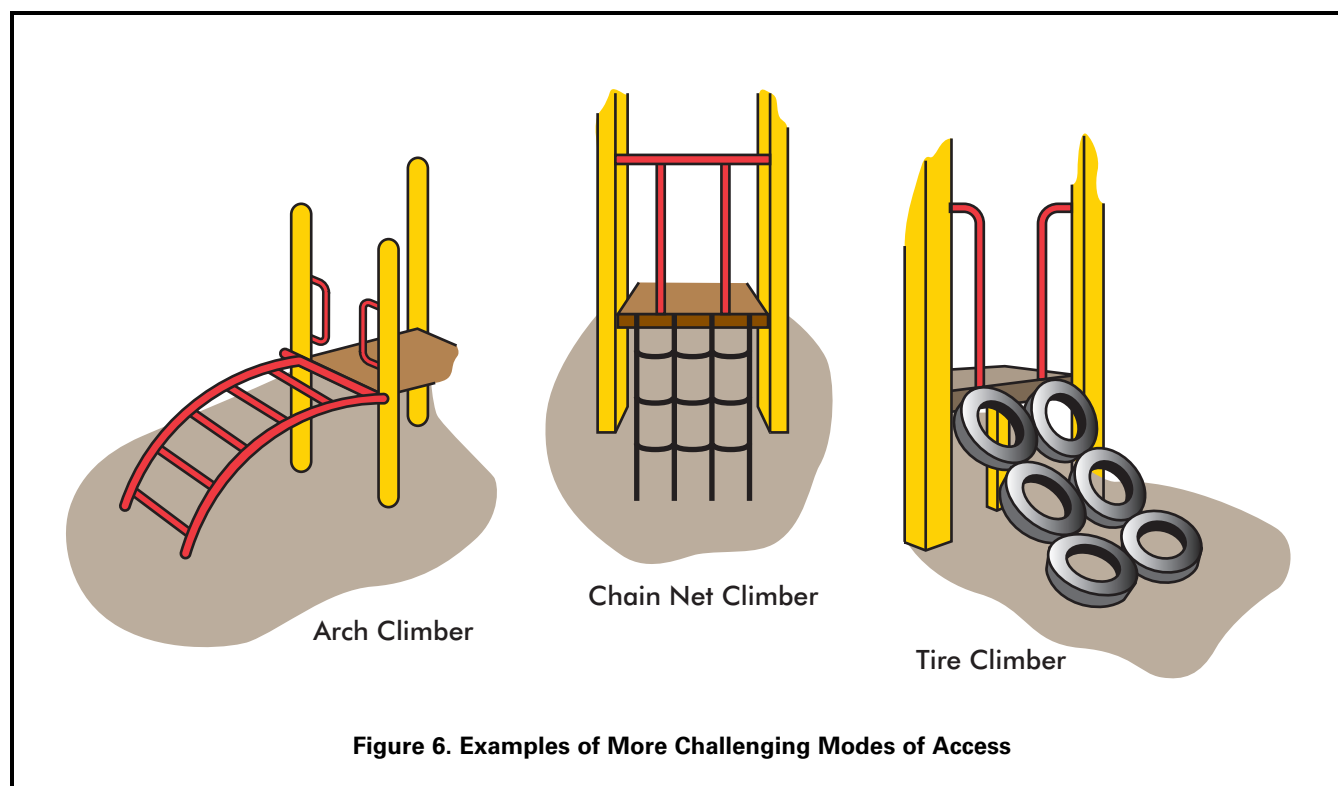
Guardrail and barrier recommendations are shown in Table 4. However, the recommendations do not apply if the guardrail or barrier would interfere with the intended use of the equipment, such as:

- Climbing equipment
- Platforms layered so that the fall height is:
 - Toddlers: 7 inches or less.
 - Preschool-age: 20 inches or less.
 - School-age: 30 inches or less.

Table 4. Guardrails and Barriers



	Guardrail	Barrier
Protects against accidental falls from platform	Yes	Yes
Discourages climbing over	No	Yes
Protects against climbing through	No	Yes
Toddlers		
A Top edge distance from platform	Not recommended	A = 24" or higher
B Bottom edge distance from platform	Not recommended	B < 3"
H Recommended when platform fall height is:	Not recommended	H = 18" or higher
Preschool-age		
A Top edge distance from platform	A = 29" or higher	A = 29" or higher
B Bottom edge distance from platform	9" < B ≤ 23"	B < 3.5"
H Recommended when platform fall height is:	20" < H ≤ 30"	H > 30"
School-age		
A Top edge distance from platform	A = 38" or higher	A = 38" or higher
B Bottom edge distance from platform	9" < B ≤ 28"	B < 3.5"
H Recommended when platform fall height is:	30" < H ≤ 48"	H > 48"



5.2 Access Methods to Play Equipment

Access to playground equipment can take many forms, such as conventional ramps, stairways with steps, and ladders with steps or rungs. Access may also be by means of climbing components, such as arch climbers, climbing nets, and tire climbers (see Figure 6).

As children develop, they gain better balance and coordination, so it is important to pick appropriate access methods based on the age group. Table 5 shows the most common methods of access and the youngest appropriate age group.

Access to platforms over 6 feet high (except for free-standing slides) should provide an intermediate standing surface so that the child can pause and make a decision to keep going up or find another way down. Children generally master access before egress, that is, they can go up before they can get back down a difficult component. Therefore, if there are more difficult access methods, it is important to have easier components for egress.

Table 5. Methods of access and egress

Method of Access	Challenge Level	Appropriate for
Ramps	Easiest	Toddlers +
Straight stairways	Easy	Toddlers +
Spiral stairways	Moderate	Toddlers* +
Step ladders	Moderate	15 months* +
Rung ladders	Moderate	Preschool* +
Arch climbers	Difficult	Preschool* +
Flexible climbers (nets, tires)	Difficult	Preschool* +
* only if an easy egress method is also provided		

5.2.1 Ramps, stairways, rung ladders, and step ladders

Ramps, stairways, rung ladders, and step ladders each have different recommendations for slope and tread dimension, but the steps or rungs always should be evenly spaced - even the spacing between the top step or rung and the surface of the platform. Table 6 contains recommended dimensions for: access slope; tread or rung width; tread depth; rung diameter; and vertical rise for rung ladders, step ladders, and stairways. Table 6 also contains slope and width recommendations for ramps. However, these recommendations are not intended to address ramps designed for access by wheelchairs.

- Openings between steps or rungs and between the top step or rung and underside of a platform should prevent entrapment.
- When risers are closed, treads on stairways and ladders should prevent the accumulation of sand, water, or other materials on or between steps.
- Climbing equipment should allow children to descend as easily as they ascend. One way of implementing this recommendation is to provide an easier, alternate means of descent, such as another mode of egress, a platform, or another piece of equipment. For example, a stairway can be added to provide a less challenging mode of descent than a vertical rung ladder or flexible climbing device (see Table 5).
- For toddlers and preschool-age children, offering an easy way out is particularly important since their ability to descend climbing components develops later than their ability to climb up the same components.

Table 6. Recommended dimensions for access ladders, stairs, and ramps*

AGE OF INTENDED USER			
Type of Access	Toddler	Preschool-age	School-age
<i>Ramps (not intended to meet ADA/ABA specifications)</i>			
Slope (vertical:horizontal)	< 1:8	≤ 1:8	≤ 1:8
Width (single)	≥ 19"	≥ 12"	≥ 16"
Width (double)	≥ 30"	≥ 30"	≥ 36"
<i>Stairways</i>			
Slope	≤ 35°	< 50°	< 50°
Tread width (single)	12-21"	≥ 12"	≥ 16"
Tread width (double)	≥ 30"	≥ 30"	≥ 36"
Tread depth (open riser)	Not appropriate	≥ 7"	≥ 8"
Tread depth (closed riser)	≥ 8"	≥ 7"	≥ 8"
Vertical rise	≤ 7"	≤ 9"	≤ 12"
<i>Step ladders</i>			
Slope	35≤65°	50-75°	50-75°
Tread width (single)	12-21"	12-21"	≥ 16"
Tread width (double)	Not appropriate	Not appropriate	≥ 36"
Tread depth (open riser)	Not appropriate	≥ 7"	≥ 3"
Tread depth (closed riser)	8"	≥ 7"	≥ 6"
Vertical rise	> 5" and ≤ 7"	≤ 9"	≤ 12"
<i>Rung ladders</i>			
Slope	Not appropriate	75-90°	75-90°
Rung width	Not appropriate	≥ 12"	≥ 16"
Vertical rise	Not appropriate	≤ 12"	≤ 12"
Rung diameter	Not appropriate	0.95-1.55"	0.95-1.55"
* entrapment recommendations apply to all openings in access components			

5.2.2 Rungs and other hand gripping components

Unlike steps of stairways and step ladders that are primarily for foot support, rungs can be used for both foot and hand support.

- Rungs with round shapes are easiest for children to grip.
- All hand grips should be secured in a manner that prevents them from turning.
- Toddlers:
 - Handrails or other means of hand support should have a diameter or maximum cross-section between 0.60 and 1.20 inches.
 - A diameter or maximum cross-section of 0.90 inches is preferred to achieve maximal grip strength and benefit the weakest children.
- Preschool- and school-age:
 - Rungs, handrails, climbing bars, or other means of hand support intended for holding should have a diameter or maximum cross-section between 0.95 and 1.55 inches.
 - A diameter or maximum cross-section of 1.25 inches is preferred to achieve maximal grip strength and benefit the weakest children.

5.2.3 Handrails

Handrails on stairways and step ladders are intended to provide hand support and to steady the user. Continuous handrails extending over the full length of the access should be provided on both sides of all stairways and step ladders, regardless of the height of the access. Rung ladders do not require handrails since rungs or side supports provide hand support on these more steeply inclined accesses.

5.2.3.1 Handrail height

Handrails should be available for use at the appropriate height, beginning with the first step. The vertical distance between the top front edge of a step or ramp surface and the top surface of the handrail above it should be as follows:

- Toddlers: between 15 and 20 inches.
- Preschool-age: between 22 and 26 inches.
- School-age: between 22 and 38 inches.

5.2.4 Transition from access to platform

Handrails or handholds are recommended at all transition points (the point where the child must move from the access component to the play structure platform).

- The handhold should provide support from the access component until the child has fully achieved the desired posture on the platform.
- Any opening between a handrail and an adjacent vertical structure (e.g., vertical support post for a platform or vertical slat of a protective barrier) should not pose an entrapment hazard.
- Access methods that do not have handrails, such as rung ladders, flexible climbers, arch climbers, and tire climbers, should provide hand supports for the transition between the top of the access and the platform.

5.3 Major Types of Playground Equipment

5.3.1 Balance beams

- Balance beams should be no higher than:
 - Toddlers: not recommended.
 - Preschool-age: 12 inches.
 - School-age: 16 inches.

5.3.1.1 Fall height

The fall height of a balance beam is the distance between the top of the walking surface and the protective surfacing beneath it.

5.3.2 Climbing and upper body equipment

Climbing equipment is generally designed to present a greater degree of physical challenge than other equipment on public playgrounds. This type of equipment requires the use of the hands to navigate up or across the equipment. “Climbers” refers to a wide variety of equipment, such as but not limited to:

- Arch climbers
- Dome climbers
- Flexible climbers (usually chain or net)
- Parallel bars
- Sliding poles



Simple Arch Climber



Geodesic Dome Climber



Overhead Horizontal Ladder



Overhead Loop Ladder

Figure 7. Examples of climbers

- Spiral climbers
- Upper body equipment (horizontal overhead ladders, overhead rings, track ride).

School-age children tend to use climbing and upper body equipment more frequently and more proficiently than preschool children. Young preschool children may have difficulty using some climbers because they have not yet developed some of the physical skills necessary for certain climbing activities (balance, coordination, and upper body strength). Older preschool children (i.e., 4- and 5-year-olds) are beginning to use flexible climbers, arch climbers, and upper body devices.

5.3.2.1 Design considerations

5.3.2.1.1 Layout of climbing components

When climbing components are part of a composite structure, their level of challenge and method of use should be compatible with the traffic flow from nearby components. Upper body devices should be placed so that the swinging movement generated by children on this equipment cannot interfere with the movement of children on adjacent structures, particularly children descending on slides. The design of adjacent play structures should not facilitate climbing to the top support bars of upper body equipment.

5.3.2.1.2 Fall Height

Climbers:

- Unless otherwise specified in this section, the fall height for climbers is the distance between the highest part of the climbing component and the protective surfacing beneath it.
- If the climber is part of a composite structure, the fall height is the distance between the highest part of the climber intended for foot support and the protective surfacing beneath it.
 - Toddlers: The maximum fall height for free standing and composite climbing structures should be 32 inches.

Upper Body Equipment:

- The fall height of upper body equipment is the distance between the highest part of the equipment and the protective surface below.

5.3.2.1.3 Climbing rungs

Some of the access methods discussed in §5.2 are also considered climbing devices; therefore, the recommendations for the size of climbing rungs are similar.

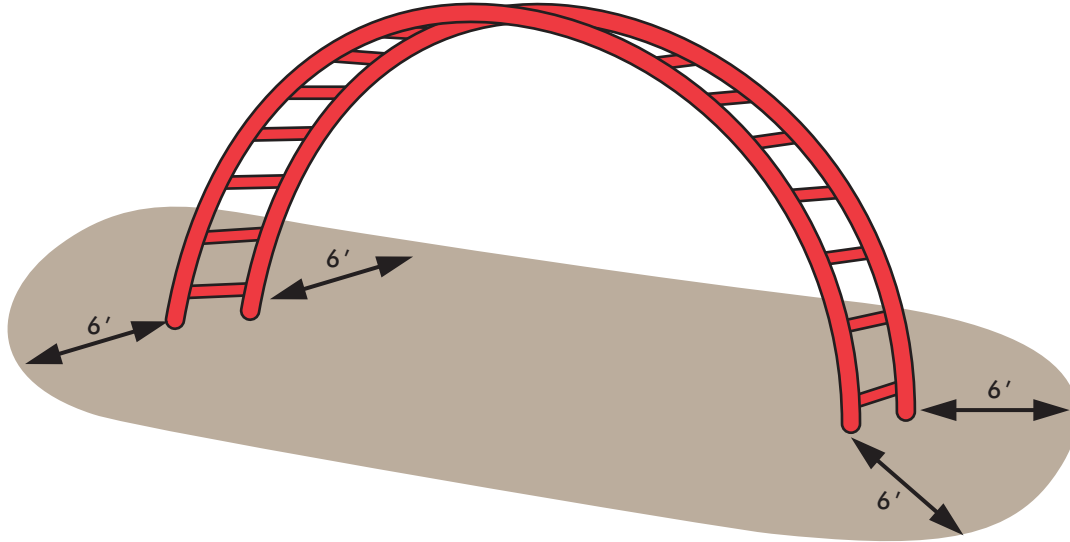


Figure 8. Use zone surrounding a freestanding arch climber

- Rungs should be generally round.
- All rungs should be secured in a manner that prevents them from turning.
- Climbing rungs should follow the same diameter recommendations as in §5.2.2.

5.3.2.1.4 Use zone

- The use zone should extend a minimum of 6 feet in all directions from the perimeter of the stand alone climber. See Figure 8.
- The use zone of a climber may overlap with neighboring equipment if the other piece of equipment allows overlapping use zones and
 - There is at least 6 feet between equipment when adjacent designated play surfaces are no more than 30 inches high; or
 - There is at least 9 feet between equipment when adjacent designated play surfaces are more than 30 inches high.

5.3.2.1.5 Other considerations

- Climbers should not have climbing bars or other rigid structural components in the interior of the climber onto

which a child may fall from a height of greater than 18 inches. See Figure 9 for an example of a climber that **DOES NOT** follow this consideration.



Figure 9: Climber with rigid structural components that DOES NOT meet 5.3.2.1.5

5.3.2.2 Arch climbers

Arch climbers consist of rungs attached to convex side supports. They may be free standing (Figure 10) or be provided as a more challenging means of access to other equipment (Figure 11).

- Arch climbers should not be used as the sole means of access to other equipment for preschoolers.
- Free standing arch climbers are not recommended for toddlers or preschool-age children.
- The rung diameter and spacing of rungs on arch climbers should follow the recommendations for rung ladders in Table 6.

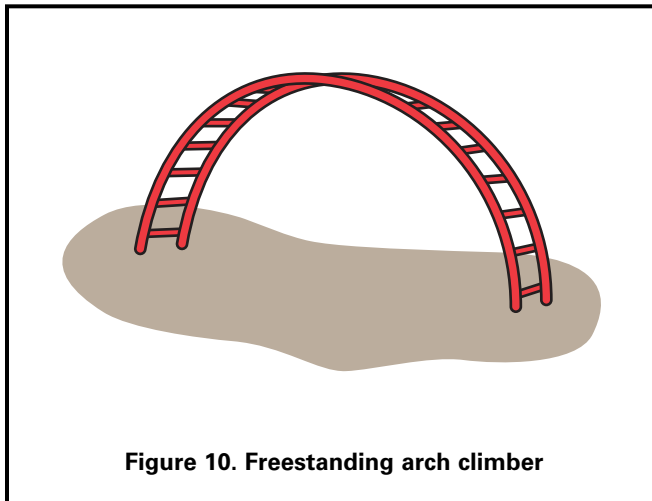


Figure 10. Freestanding arch climber

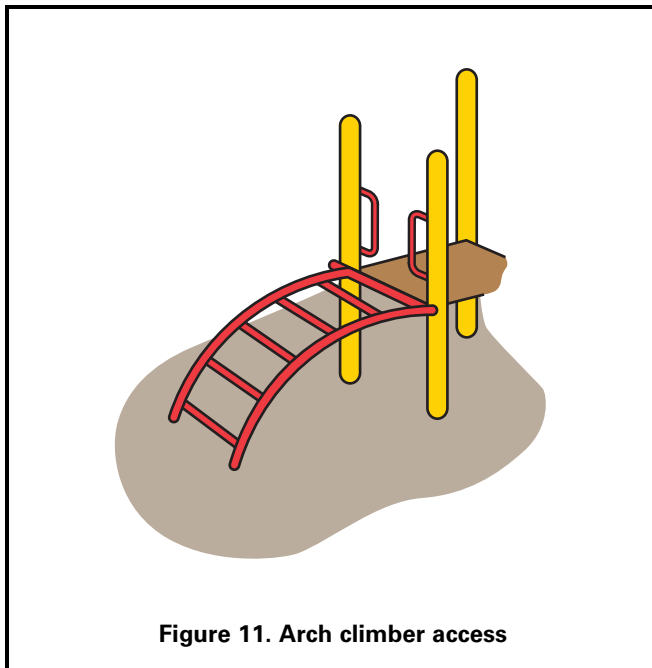


Figure 11. Arch climber access

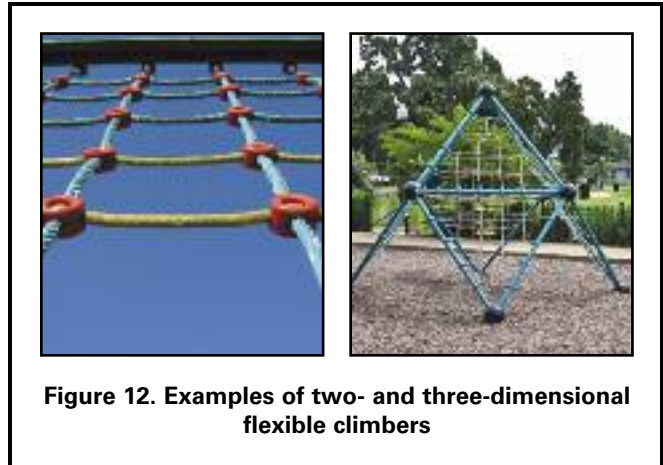


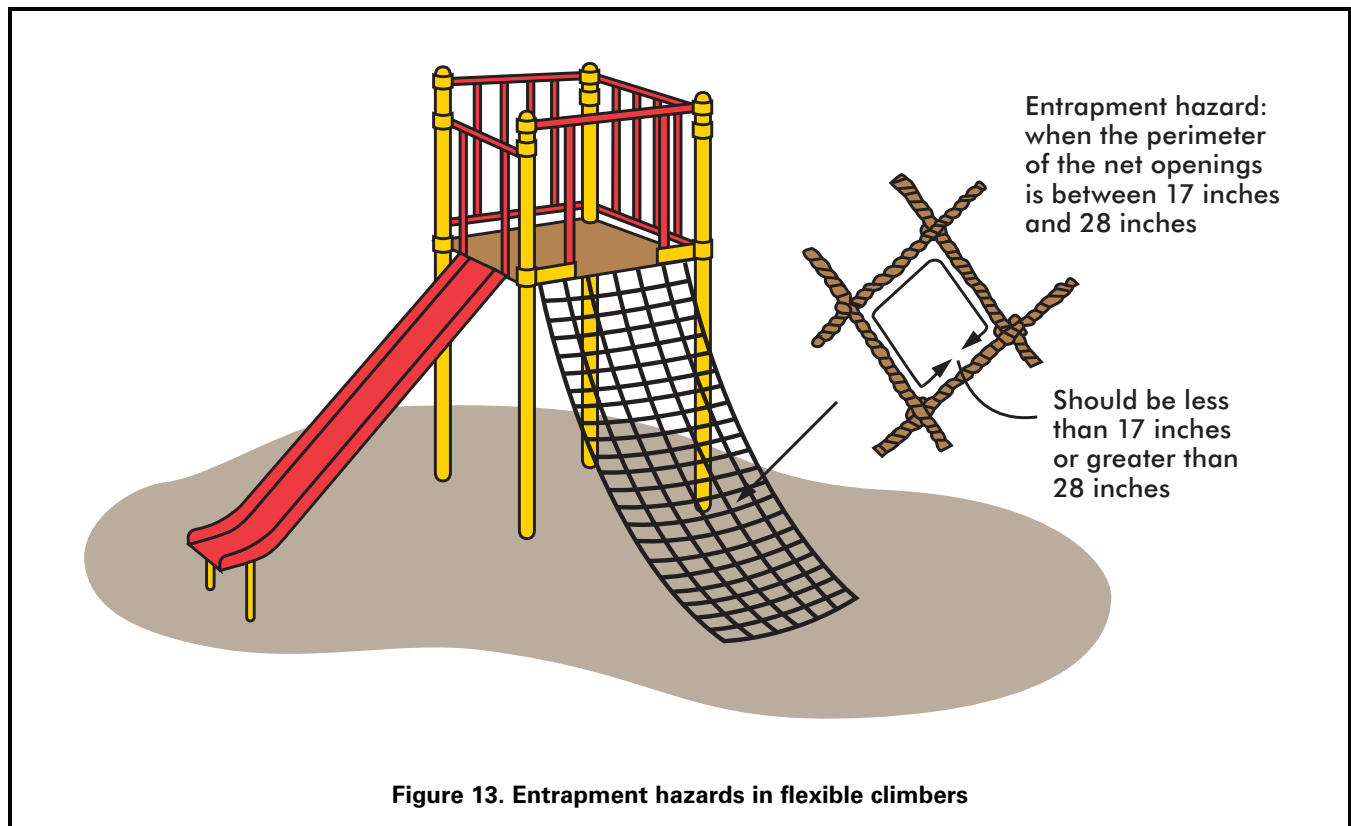
Figure 12. Examples of two- and three-dimensional flexible climbers

5.3.2.3 Flexible climbers

Flexible climbers use a grid of ropes, chains, cables, or tires for climbing. Since the flexible parts do not provide a steady means of support, flexible climbers require more advanced balance abilities than rigid climbers.

Rope, chain, and cable generally form a net-like structure that may be either two or three dimensional. See Figure 12. Tire climbers may have the tires secured tread-to-tread to form a sloping grid, or the tires may be suspended individually by chains or other means.

- Flexible climbers that provide access to platforms should be securely anchored at both ends.
- When connected to the ground, the anchoring devices should be installed below ground level and beneath the base of the protective surfacing material.
- Connections between ropes, cables, chains, or between tires should be securely fixed.
- Flexible climbers are not recommended as the sole means of access to equipment intended for toddlers and preschool-age children.
- Free-standing flexible climbers are not recommended on playgrounds intended for toddlers and preschool children.
- Spacing between the horizontal and vertical components of a climbing grid should not form entrapment hazards.
- The perimeter of any opening in a net structure should be less than 17 inches or greater than 28 inches (see Figure 13).



5.3.2.4 Horizontal (overhead) ladders

Horizontal (overhead) ladders are a type of climber designed to build upper body strength. They are designed to allow children to move across the ladder from end to end using only their hands.

Four-year-olds are generally the youngest children able to use upper body devices like these; therefore, horizontal ladders should not be used on playgrounds intended for toddlers and 3-year-olds. The recommendations below are designed to accommodate children ages 4 through 12 years.

- The first handhold on either end of upper body equipment should not be placed directly above the platform or climbing rung used for mount or dismount. This minimizes the risk of children impacting rigid access structures if they fall from the first handhold during mount or dismount.
- The horizontal distance out to the first handhold should be:
 - No greater than 10 inches but not directly above the platform when access is from a platform.
 - At least 8 inches but no greater than 10 inches when access is from climbing rungs.
- The space between adjacent rungs of overhead ladders should be greater than 9 inches to prevent entrapment.
- Horizontal ladders intended for preschool-age children should have rungs that are parallel to one another and evenly spaced.
- The maximum height of a horizontal ladder (i.e., measured from the center of the grasping device to the top of the protective surfacing below) should be:
 - Preschool-age (4 and 5 years): no more than 60 inches.
 - School-age: no more than 84 inches.
- The center-to-center spacing of horizontal ladder rungs should be as follows:
 - Preschool-age (4 and 5 years): no more than 12 inches.
 - School-age: no more than 15 inches.
- The maximum height of the take-off/landing platform above the protective surfacing should be:
 - Preschool-age (4 and 5 years): no more than 18 inches.
 - School-age: no more than 36 inches.

5.3.2.5 Overhead rings

Overhead rings are similar to horizontal ladders in terms of the complexity of use. Therefore, overhead rings should not be used on playgrounds intended for toddlers and 3-year-olds. The recommendations below are designed to accommodate children 4 through 12 years of age.

Overhead rings differ from horizontal ladders because, during use, the gripped ring swings through an arc and reduces the distance to the gripping surface of the next ring; therefore, the spacing distance recommendations for horizontal ladders do not apply.

- The first handhold on either end of upper body equipment should not be placed directly above the platform or climbing rung used for mount or dismount. This minimizes the risk of children hitting rigid access structures if they fall from the first handhold during mount or dismount.
- The horizontal distance out to the first handhold should be:
 - No greater than 10 inches but not directly above the platform when access is from a platform.
 - At least 8 inches but no greater than 10 inches when access is from climbing rungs.
- The maximum height of overhead rings measured from the center of the grasping device to the protective surfacing should be:
 - Preschool-age (4 and 5 years): 60 inches.
 - School-age: 84 inches.
- If overhead swinging rings are suspended by chains, the maximum length of the chains should be 7 inches.
- The maximum height of the take-off/landing platform above the protective surfacing should be:
 - Preschool-age (4 and 5 years): no more than 18 inches.
 - School-age: no more than 36 inches.

5.3.2.6 Sliding poles

Vertical sliding poles are more challenging than some other types of climbing equipment. They require upper body strength and coordination to successfully slide down the pole. Unlike other egress methods, there is no reverse or stop, so a child cannot change his or her mind. Children who start a sliding pole must have the strength to slide the whole way or they will fall.

- Sliding poles are not recommended for toddlers or preschool-age children since they generally don't have the upper body and/or hand strength to slide.

- Sliding poles should be continuous with no protruding welds or seams along the sliding surface.
- The pole should not change direction along the sliding portion.
- The horizontal distance between a sliding pole and any structure used for access to the sliding pole should be between 18 inches and 20 inches.
- The pole should extend at least 60 inches above the level of the platform or structure used for access to the sliding pole.
- The diameter of sliding poles should be no greater than 1.9 inches.
- Sliding poles and their access structures should be located so that traffic from other events will not interfere with the users during descent.
- Upper access should be on one level only.
- The upper access area through the guardrail or barrier should be 15 inches wide at most.

5.3.2.6.1 Fall height

- For sliding poles accessed from platforms, the fall height is the distance between the platform and the protective surfacing beneath it.
- For sliding poles not accessed from platforms, the fall height is the distance between a point 60 inches below the highest point of the pole and the protective surfacing beneath it.
- The top of the sliding pole's support structure should not be a designated play surface.

5.3.2.7 Track rides

Track rides are a form of upper body equipment where the child holds on to a handle or other device that slides along a track above his or her head. The child then lifts his or her feet and is carried along the length of the track. Track rides require significant upper body strength and the judgment to know when it is safe to let go. These are skills not developed until children are at least school-age; therefore, CPSC staff recommends:

- Track rides should not be used on playgrounds for toddlers and preschool-age children.
- Track rides should not have any obstacles along the path of the ride, including anything that would interfere in the take-off or landing areas.

- Two track rides next to each other should be at least 4 feet apart.
- The handle should be between 64 inches and 78 inches from the surfacing and follow the gripping recommendations in §5.2.2.
- Nothing should ever be tied or attached to any moving part of a track ride.
- Rolling parts should be enclosed to prevent crush hazards.

5.3.2.7.1 Fall height

- The fall height of track ride equipment is the distance between the maximum height of the equipment and the protective surface beneath it.
- Equipment support posts with no designated play surfaces are exempt from this requirement.

5.3.3 Log rolls

Log rolls help older children master balance skills and increase strength. Children must balance on top of the log as they spin it with their feet. See Figure 14.

- Log rolls are not recommended for toddlers and preschool-age children. These children generally do not possess the balance, coordination, and strength to use a log roll safely.
- Log rolls should have handholds to assist with balance.
- The handholds should follow the guidelines in §5.2.2.
- The highest point of the rolling log should be a maximum of 18 inches above the protective surface below.
- When not part of a composite structure, the use zone may overlap with neighboring equipment if the other piece of equipment allows overlapping use zones (see §5.3.9) and
 - There is at least 6 feet between equipment when adjacent designated play surfaces are no more than 30 inches high; or
 - There is at least 9 feet between equipment when adjacent designated play surfaces are more than 30 inches high.

5.3.3.1.1 Fall height

The fall height of a log roll is the distance between the highest portion of the rolling log and the protective surfacing beneath it.



Figure 14. Log roll

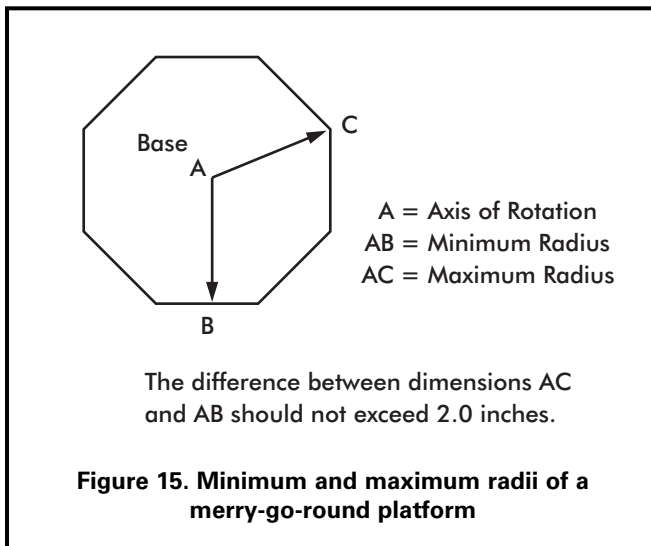
5.3.4 Merry-go-rounds

Merry-go-rounds are the most common rotating equipment found on public playgrounds. Children usually sit or stand on the platform while other children or adults push the merry-go-round to make it rotate. In addition, children often get on and off the merry-go-round while it is in motion. Merry-go-rounds may present a physical hazard to preschool-age children who have little or no control over such products once they are in motion. Therefore, children in this age group should always be supervised when using merry-go-rounds.

The following recommendations apply when the merry-go-round is at least 20 inches in diameter.

- Merry-go-rounds should not be used on playgrounds intended for toddlers.
- The standing/sitting surface of the platform should have a maximum height of:
 - Preschool: 14 inches above the protective surface.
 - School-age: 18 inches above the protective surface.
- The rotating platform should be continuous and approximately circular.
- The surface of the platform should not have any openings between the axis and the periphery that permit a rod having a diameter of 5/16 inch to penetrate completely through the surface.

- The difference between the minimum and maximum radii of a non-circular platform should not exceed 2.0 inches (Figure 15).



- The underside of the perimeter of the platform should be no less than 9 inches above the level of the protective surfacing beneath it.
- There should not be any accessible shearing or crushing mechanisms in the undercarriage of the equipment.
- Children should be provided with a secure means of holding on. Where handgrips are provided, they should conform to the general recommendations for hand gripping components in §5.2.2.
- No components of the apparatus, including handgrips, should extend beyond the perimeter of the platform.
- The rotating platform of a merry-go-round should not have any sharp edges.
- A means should be provided to limit the peripheral speed of rotation to a maximum of 13 ft/sec.
- Merry-go-round platforms should not have any up and down (oscillatory) motion.

5.3.4.1 Use zone

- The use zone should extend a minimum of 6 feet beyond the perimeter of the platform.
- The use zone may not overlap other use zones, unless the rotating equipment is less than 20 inches in diameter and the adjacent equipment allows overlap.

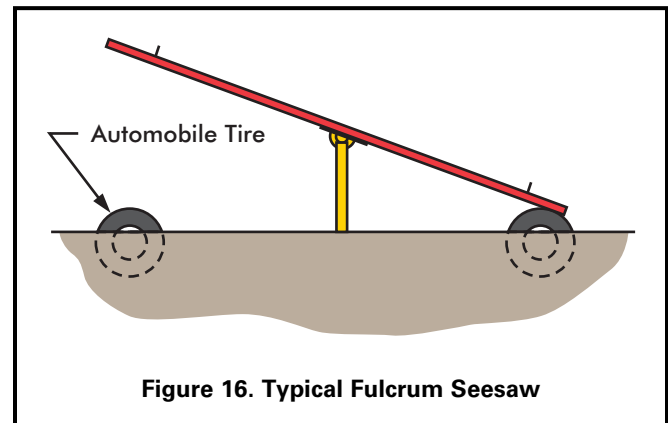
5.3.4.2 Fall height

The fall height for a merry-go-round is the distance between the perimeter of the platform where a child could sit or stand and the protective surfacing beneath it.

5.3.5 Seesaws

5.3.5.1 Fulcrum seesaws

The typical seesaw (also known as a “teeter totter”) consists of a board or pole with a seat at each end supported at the center by a fulcrum. See Figure 16. Because of the complex way children are required to cooperate and combine their actions, fulcrum seesaws are not recommended for toddlers or preschool-age children.



- The fulcrum should not present a crush hazard.
- Partial car tires, or some other shock-absorbing material, should be embedded in the ground underneath the seats, or secured on the underside of the seats. This will help prevent limbs from being crushed between the seat and the ground, as well as cushion the impact.
- The maximum attainable angle between a line connecting the seats and the horizontal is 25°.
- There should not be any footrests.

5.3.5.2 Spring-centered seesaws

Preschool-age children are capable of using spring-centered seesaws because the centering device prevents abrupt contact with the ground if one child dismounts suddenly. Spring-centered seesaws also have the advantage of not requiring two children to coordinate their actions in order to play safely. Spring-centered seesaws should follow the recommendations for spring rockers including the use of footrests (§5.3.7).

5.3.5.3 Use zone for fulcrum and spring-centered seesaws

- The use zone should extend a minimum of 6 feet from each outside edge of the seesaw.
- The use zone may overlap with neighboring equipment if the other piece of equipment allows overlapping use zones and
 - There is at least 6 feet between equipment when adjacent designated play surfaces are no more than 30 inches high; or
 - There is at least 9 feet between equipment when adjacent designated play surfaces are more than 30 inches high.

5.3.5.4 Handholds

- Handholds should be provided at each seating position for gripping with both hands and should not turn when grasped.
- Handholds should not protrude beyond the sides of the seat.

5.3.5.5 Fall height

The fall height for a seesaw is the distance between the highest point any part of the seesaw can reach and the protective surfacing beneath it.

5.3.6 Slides

Children can be expected to descend slide chutes in many different positions, rather than always sitting and facing forward as they slide. These other positions should be discouraged at all times to minimize injuries.



Slides may provide a straight, wavy, or spiral descent either by means of a tube or an open slide chute. They may be either free-standing (Figure 17), part of a composite structure, or built on the grade of a natural or man-made slope (embankment slide). Regardless of the type of slide, avoid using bare metals on the platforms, chutes, and steps. When exposed to direct sunlight the bare metal may reach temperatures high enough to cause serious contact burn injuries in a matter of seconds. Provide shade for bare metal slides or use other materials that may reduce the surface temperature such as, but not limited to, plastic or coated metal.

5.3.6.1 Slide access

Access to a stand-alone slide generally is by means of a ladder with rungs, steps, or a stairway with steps. Slides may also be part of a composite play structure, so children will gain access from other parts of the structure. Embankment slides use the ground for access.

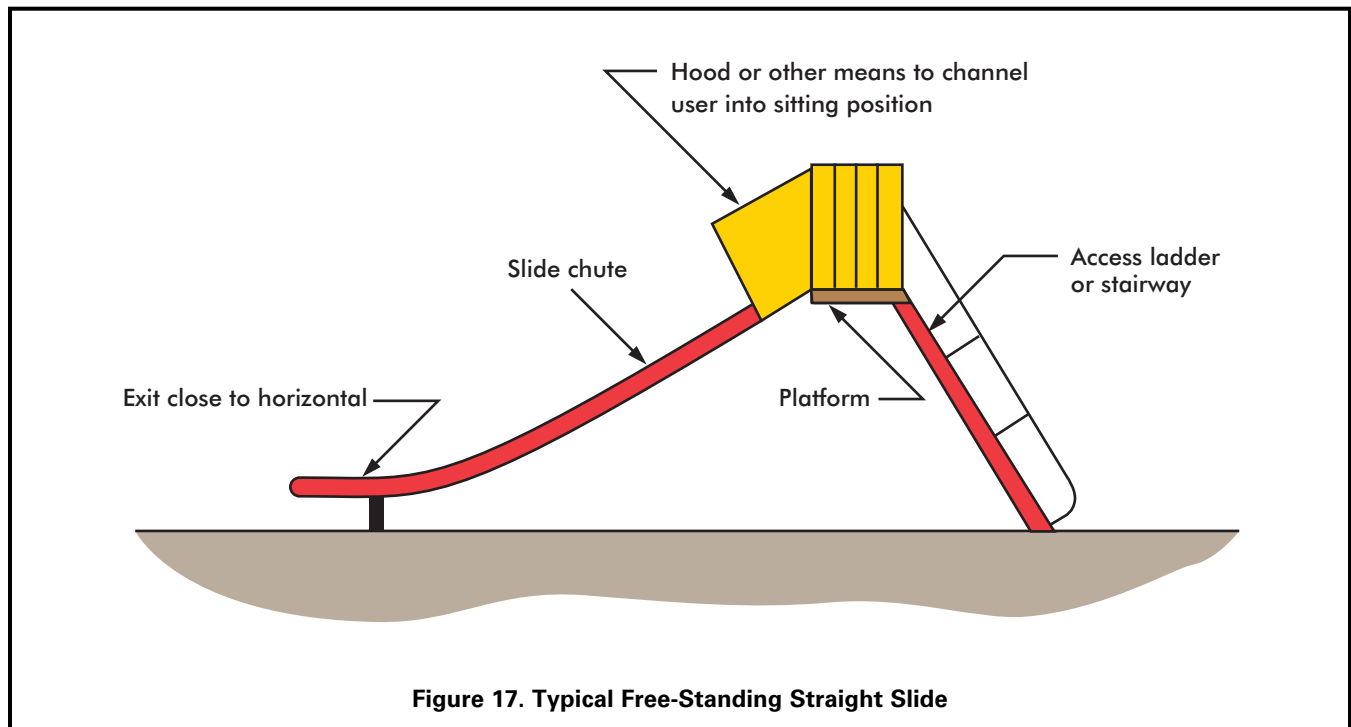


Figure 17. Typical Free-Standing Straight Slide

5.3.6.2 Slide platform

All slides should be provided with a platform with sufficient length to facilitate the transition from standing to sitting at the top of the inclined sliding surface. Embankment slides are exempt from platform requirements because they are on ground level; however, they should not have any spaces or gaps as noted below.

The platform should:

- Be at least 19 inches deep for toddlers.
- Be at least 14 inches deep for preschool-age and school-age children.
- Be horizontal.
- Be at least as wide as the slide chute.
- Be surrounded by guardrails or barriers.
- Conform to the same recommendations as general platforms given in §5.1.1.
- Not have any spaces or gaps that could trap strings, clothing, body parts, etc. between the platform and the start of the slide chute.
- Provide handholds to facilitate the transition from standing to sitting and decrease the risk of falls (except tube slides where the tube perimeter provides hand support). These should extend high enough to provide hand support for the largest child in a standing position, and low enough to provide hand support for the smallest child in a sitting position.
- Provide a means to channel a user into a sitting position at the entrance to the chute, such as a guardrail, hood, or other device that discourages climbing.

5.3.6.3 Slide chutes

5.3.6.3.1 Embankment slides

- The slide chute of an embankment slide should have a maximum height of 12 inches above the underlying ground surface. This design basically eliminates the hazard of falls from elevated heights.
- Embankment slides should follow all of the recommendations given for straight slides where applicable (e.g., side height, slope, use zone at exit, etc.).
- There should be some means provided at the slide chute entrance to minimize the use of embankment slides by children on skates, skateboards, or bicycles.

5.3.6.3.2 Roller slides

- Roller slides should meet applicable recommendations for other slides (e.g., side height, slope, use zone at exit, etc.).
- The space between adjacent rollers and between the ends of the rollers and the stationary structure should be less than 3/16 inch.
- Frequent inspections are recommended to insure that there are no missing rollers or broken bearings and that the rollers roll.

5.3.6.3.3 Spiral slides

- Spiral slides should follow the recommendations for straight slides where applicable (e.g., side height, slope, use zone at exit, etc.).
- Special attention should be given to design features which may present problems unique to spiral slides, such as lateral discharge of the user.
- Toddlers and preschool-age children have less ability to maintain balance and postural control, so only short spiral slides (one 360° turn or less) are recommended for these age groups.

5.3.6.3.4 Straight slides

- Flat open chutes should have sides at least 4 inches high extending along both sides of the chute for the entire length of the inclined sliding surface.
- The sides should be an integral part of the chute, without any gaps between the sides and the sliding surface. (This does not apply to roller slides).
- Slides may have an open chute with a circular, semicircular or curved cross section provided that:
 - A. The vertical height of the sides is no less than 4 inches when measured at right angles to a horizontal line that is 8 inches long when the slide is intended for toddlers, 12 inches long when the slide is intended for preschool-age children, and 16 inches long when the slide is intended for school-age children (Figure 18); or
 - B. For any age group, the vertical height of the sides is no less than 4 inches minus two times the width of the slide chute divided by the radius of the slide chute curvature (Figure 19).

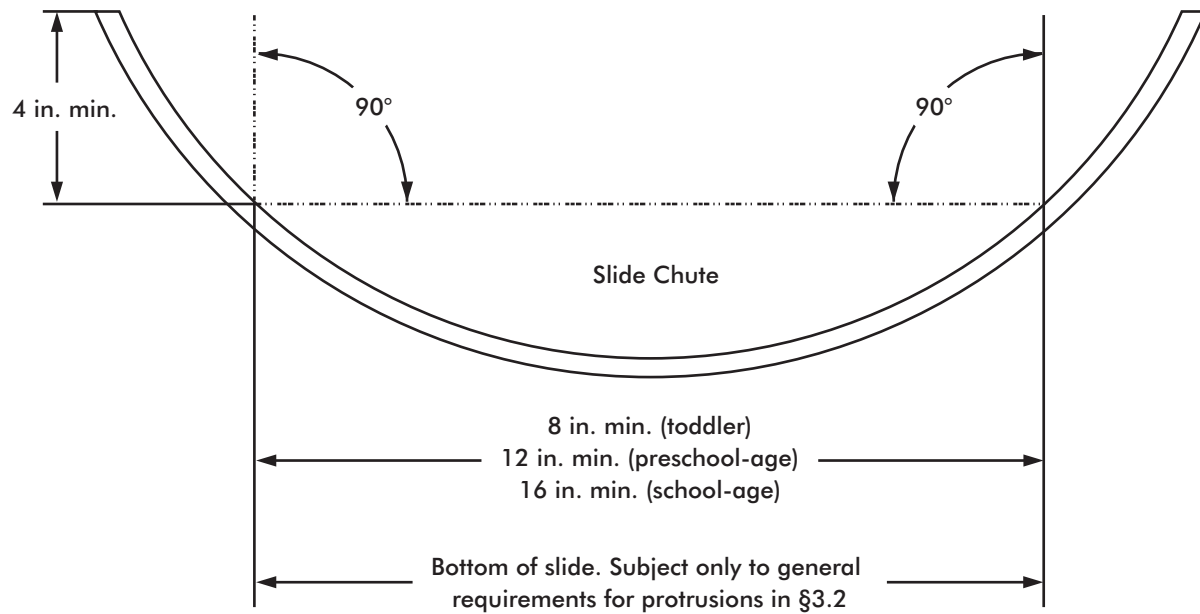


Figure 18. Minimum Side Height for Slide with Circular Cross Section

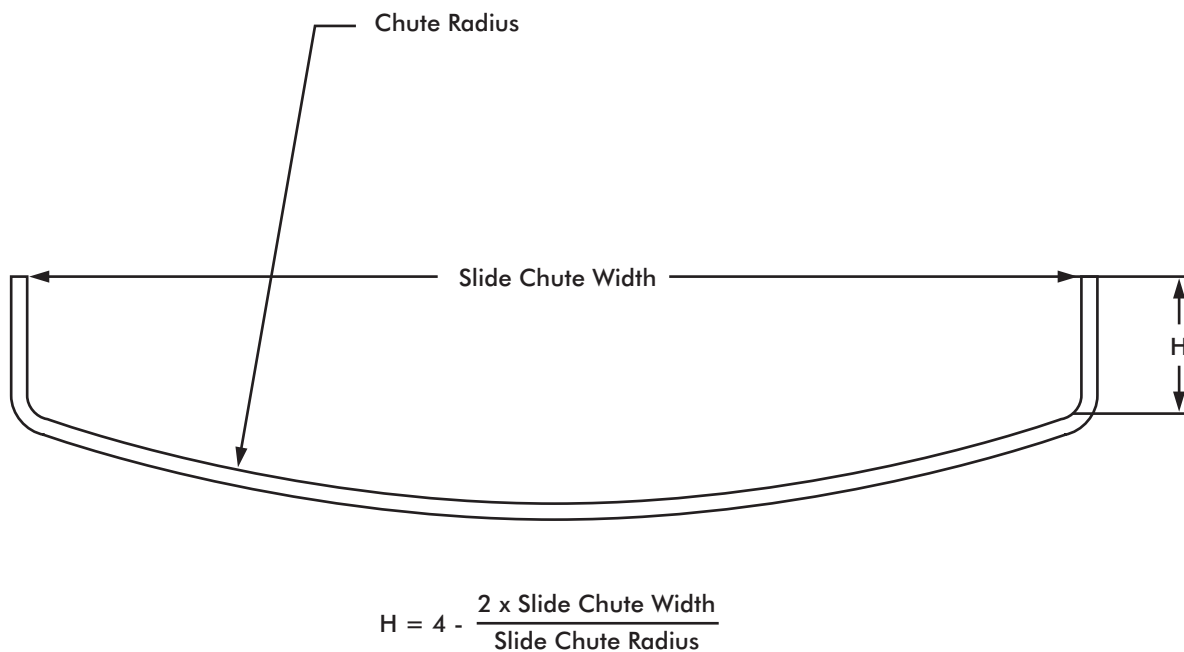


Figure 19. Formula for Minimum Vertical Side Height for Slide with Curved Chute

- For toddlers:
 - The average incline of a slide chute should be no more than 24° (that is, the height to horizontal length ratio shown in Figure 20 does not exceed 0.445).
 - No section of the slide chute should have a slope greater than 30° .
 - The slide chute should be between 8 and 12 inches wide.
- For preschool- and school-age children:
 - The average incline of a slide chute should be no more than 30° (that is, the height to horizontal length ratio shown in Figure 20 does not exceed 0.577).
 - No section of the slide chute should have a slope greater than 50° .

5.3.6.3.5 Tube slides

- Tube slides should meet all the applicable recommendations for other slides (e.g., side height, slope, use zone at exit, etc.).
- Means, such as barriers or textured surfaces, should be provided to prevent sliding or climbing on the top (outside) of the tube.
- The minimum internal diameter of the tube should be no less than 23 inches.
- Supervisors should be aware of children using tube slides since the children are not always visible.

5.3.6.4 Chute exit region

All slides should have an exit region to help children maintain their balance and facilitate a smooth transition from sitting to standing when exiting. The chute exit region should:

- Be between 0 and -4° as measured from a plane parallel to the ground.
- Have edges that are rounded or curved to prevent lacerations or other injuries that could result from impact with a sharp or straight edge.
- For toddlers the chute exit region should:
 - Be between 7 and 10 inches long if any portion of the chute exceeds a 24° slope.
 - Be no more than 6 inches above the protective surfacing.
 - Have a transition from the sliding portion to the exit region with a radius of curvature of at least 18 inches.
- For preschool- and school-age the chute exit region should:
 - Be at least 11 inches long.
 - Be no more than 11 inches above the protective surfacing if the slide is no greater than 4 feet high.
 - Be at least 7 inches but not more than 15 inches above the protective surfacing if the slide is over 4 feet high.

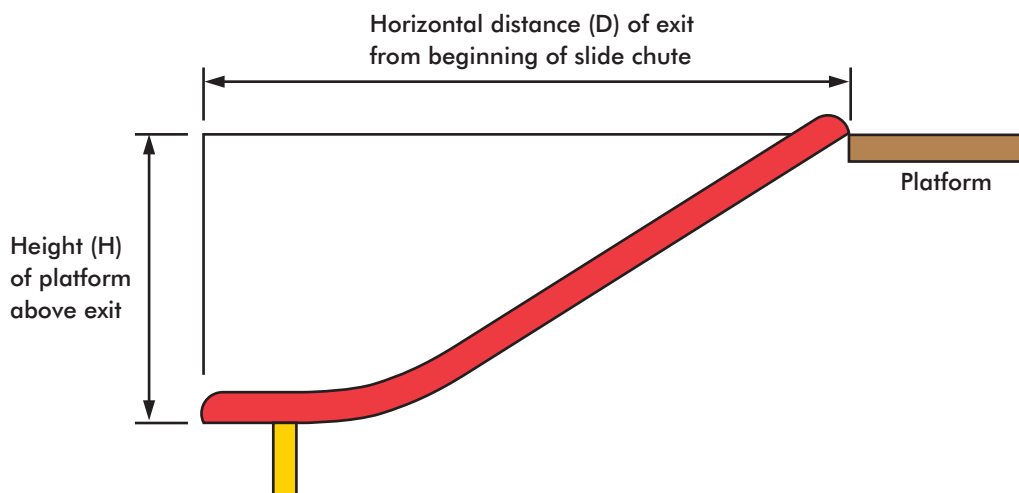


Figure 20. Slide Slope

5.3.6.5 Slide use zone

Toddlers:

- In a limited access environment
 - The use zone should be at least 3 feet around the perimeter of the slide.
 - The area at the end of the slide should not overlap with the use zone for any other equipment.
- In public areas with unlimited access
 - For a stand-alone slide, the use zone should be at least 6 feet around the perimeter.
 - For slides that are part of a composite structure, the minimum use zone between the access components and the side of the slide chute should be 3 feet.
 - The use zone at the end of the slide should be at least 6 feet from the end of the slide and not overlap with the use zone for any other equipment.

Preschool- and school-age (see Figure 21):

- The use zone in front of the access and to the sides of a slide should extend a minimum of 6 feet from the perimeter of the equipment. This recommendation does not apply to embankment slides or slides that are part of a composite structure (see §5.3.9).
- The use zone in front of the exit of a slide should never overlap the use zone of any other equipment; however, two or more slide use zones may overlap if their sliding paths are parallel.
- For slides less than or equal to 6 feet high, the use zone in front of the exit should be at least 6 feet.
- For slides greater than 6 feet high, the use zone in front of the exit should be at least as long as the slide is high up to a maximum of 8 feet.

5.3.6.6 Fall height

The fall height for slides is the distance between the transition platform and the protective surfacing beneath it.

5.3.6.7 Entanglement hazard

Children have suffered serious injuries and died by getting parts of their clothing tangled on protrusions or gaps on slides.

To reduce the chance of clothing entanglement:

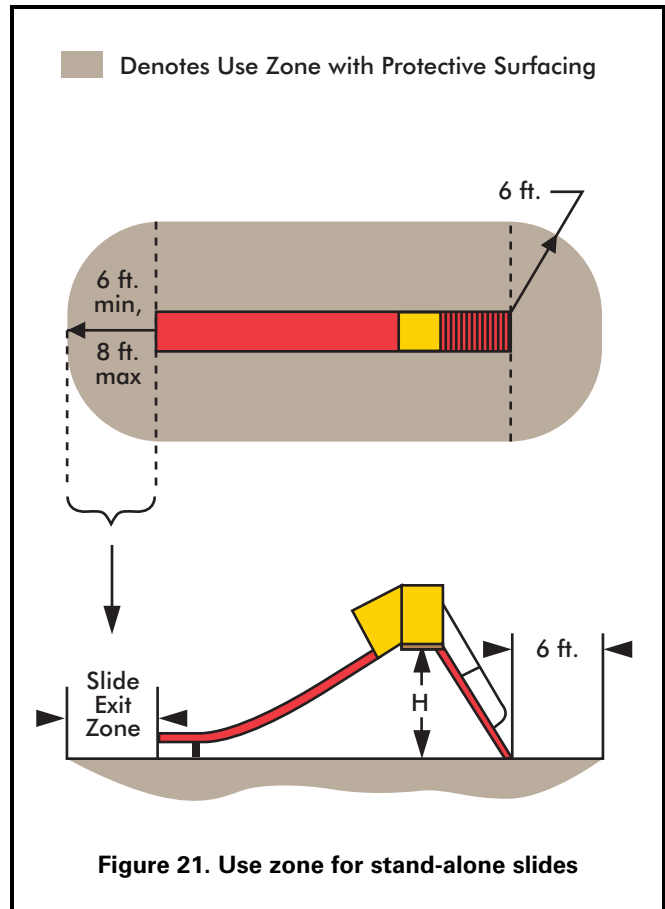


Figure 21. Use zone for stand-alone slides

- Projections up to 3 inches in diameter should not stick up more than 1/8 inch from the slide.
- There should be no gaps at the tops of slides where the slide chute connects with the platform that can entangle clothing or strings.
- See Appendix B for full recommendations and details of the protrusion test procedure.

5.3.6.8 Other sliding equipment

Equipment where it is foreseeable that a primary use of the component is sliding should follow the same guidelines for entanglement that are in 5.3.6.7.

5.3.7 Spring rockers

Toddlers and preschool-age children enjoy the bouncing and rocking activities presented by spring rockers, and they are the primary users of rocking equipment. See Figure 22. Older children may not find it challenging enough.

- Seat design should not allow the rocker to be used by more than the intended number of users.



Figure 22. Example of spring rocker

- For toddlers:
 - The seat should be between 12 and 16 inches high.
 - Spring rockers with opposing seats intended for more than one child should have at least 37 inches between the seat centers.
- For preschoolers:
 - The seat should be between 14 and 28 inches high.
- Each seating position should be equipped with handgrips and footrests. The diameter of handgrips should follow the recommendations for hand gripping components in §5.2.2.
- The springs of rocking equipment should minimize the possibility of children crushing their hands or their feet between coils or between the spring and a part of the rocker.
- The use zone should extend a minimum of 6 feet from the “at rest” perimeter of the equipment.
- The use zone may overlap with neighboring equipment if the other piece of equipment allows overlapping use zones and
 - There is at least 6 feet between equipment when adjacent designated play surfaces are no more than 30 inches high; or

- There is at least 9 feet between equipment when adjacent designated play surfaces are more than 30 inches high; and
- The spring rocker is designed to be used from a seated position.

5.3.7.1 Fall height

The fall height of spring rockers is the distance between either (1) the highest designated playing surface or (2) the seat, whichever is higher, and the protective surfacing beneath it.

5.3.8 Swings

Children of all ages generally enjoy the sensations created while swinging. Mostly they sit on the swings; however, it is common to see children jumping off swings. Younger children also tend to swing on their stomachs, and older children may stand on the seats. To prevent injuries, these behaviors should be discouraged.

Swings may be divided into two distinct types:

- Single axis: Sometimes called a to-fro swing. A single-axis swing is intended to swing back and forth in a single plane and generally consists of a seat supported by at least two suspending members, each of which is connected to a separate pivot on an overhead structure.
- Multi-axis: A multi-axis swing consists of a seat (generally a tire) suspended from a single pivot that permits it to swing in any direction.

5.3.8.1 General swing recommendations

- Hardware used to secure the suspending elements to the swing seat and to the supporting structure should not be removable without the use of tools.
- S-hooks are often part of a swing’s suspension system, either attaching the suspending elements to the overhead support bar or to the swing seat. Open S-hooks can catch a child’s clothing and present a strangulation hazard. S-hooks should be pinched closed. An S-hook is considered closed if there is no gap or space greater than 0.04 inches (about the thickness of a dime).
- Swings should be suspended from support structures that discourage climbing.
- A-frame support structures should not have horizontal cross-bars.

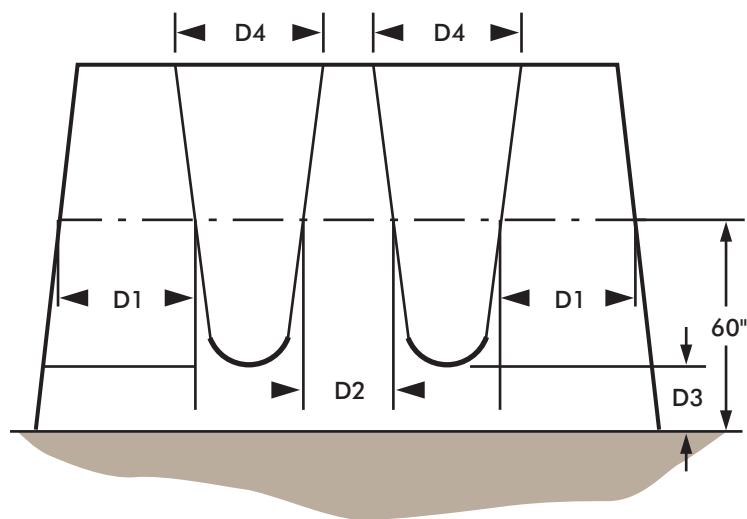


Figure 23. Minimum Clearances for Single-Axis Swings

Table 7. Minimum clearance dimensions for swings

Reason	Dimension	Toddler Full bucket	Preschool-age Belt	School-age Belt
Minimizes collisions between a swing and the supporting structure	D1	20 inches	30 inches	30 inches
Minimizes collisions between swings	D2	20 inches	24 inches	24 inches
Allows access	D3	24 inches	12 inches	12 inches
Reduces side-to-side motion	D4	20 inches	20 inches	20 inches

- Fiber ropes are not recommended as a means of suspending swings since they may degrade over time.
- Swing structures should be located away from other equipment or activities to help prevent young children from inadvertently running into the path of moving swings. Additional protection can be provided by means of a low blockade such as a fence or hedge around the perimeter of the swing area. The blockade should not be an obstacle within the use zone of a swing structure or hamper supervision by blocking visibility.

5.3.8.2 Fall height

The fall height for swings is the vertical distance between the pivot point and the protective surfacing beneath it.

5.3.8.3 Single-axis swings

5.3.8.3.1 Belt seats used without adult assistance

- The use zone to the front and rear of single-axis swings should never overlap the use zone of another piece of equipment.
- To minimize the likelihood of children being struck by a moving swing, it is recommended that no more than two single-axis swings be hung in each bay of the supporting structure.

- Swings should not be attached to composite structures.
- Swing seats should be designed to accommodate no more than one user at any time.
- Lightweight rubber or plastic swing seats are recommended to help reduce the severity of impact injuries. Wood or metal swing seats should be avoided.
- Edges of seats should have smoothly finished or rounded edges and should conform to the protrusion recommendations in 5.3.8.5.
- If loose-fill material is used as a protective surfacing, the height recommendations should be determined after the material has been compressed.
- The full bucket seat materials should not present a strangulation hazard, such as might be presented with a rope or chain used as part of the seat.
- Openings in swing seats should conform to the entrapment criteria in §3.3.
- Full bucket seat swings should be suspended from structures that are separate from those for other swings, or at least suspended from a separate bay of the same structure.
- Full bucket seat swings should not allow the child to enter and exit alone.
- Pivot points should be more than 47 inches but no more than 96 inches above the protective surfacing.

5.3.8.3.2 Full bucket seat swings

Full bucket seat swings are similar to single-axis swings since they move in a to-fro direction. However, full bucket seat swings are intended for children under 4 years of age to use with adult assistance.

- The seats and suspension systems of these swings, including the related hardware, should follow all of the criteria for conventional single axis swings.
- Full bucket seats are recommended to provide support on all sides of a child and between the legs of the occupant (see Figure 24).



Figure 24. Example of full bucket seat swings

5.3.8.3.3 Use zone for single-axis swings – belt and full bucket

The use zone in front of and behind the swing should be greater than to the sides of such a swing since children may deliberately attempt to exit from a single-axis swing while it is in motion. See Figure 25.

- The use zone for a belt swing should extend to the front and rear of a single-axis swing a minimum distance of twice the vertical distance from the pivot point and the top of the protective surface beneath it.
- The use zone for a full bucket swing should extend to the front and rear a minimum of twice the vertical distance from the top of the occupant's sitting surface to the pivot point.
- The use zone in front of and behind swings should never overlap with any other use zone.
- The use zone to the sides of a single-axis swing should extend a minimum of 6 feet from the perimeter of the swing. This 6-foot zone may overlap that of an adjacent swing structure or other playground equipment structure.

5.3.8.4 Multi-axis (tire) swings

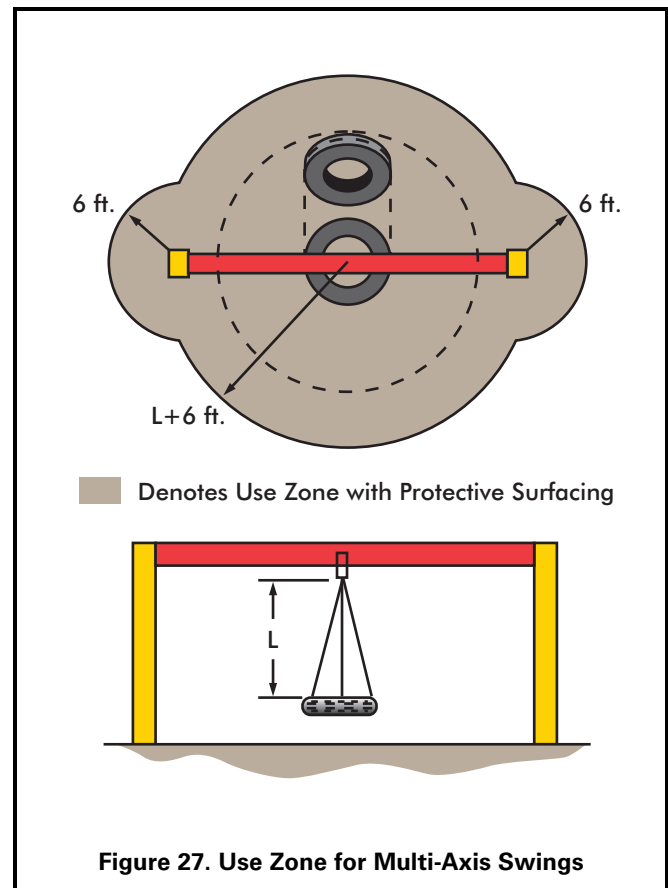
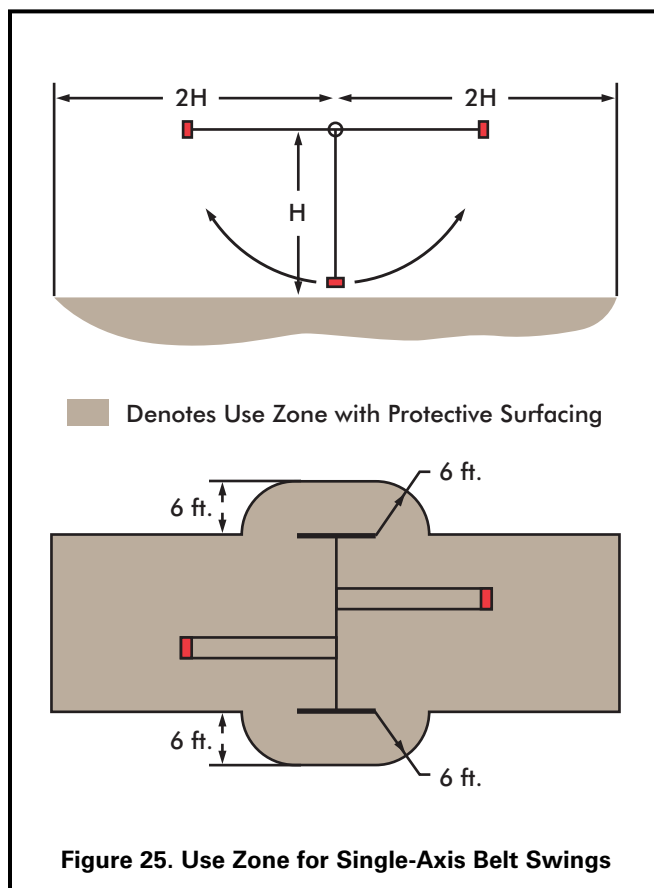
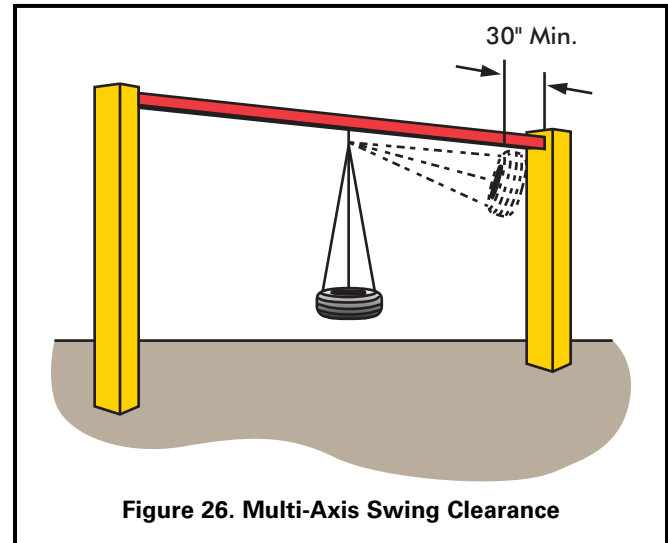
Tire swings are usually suspended in a horizontal orientation using three suspension chains or cables connected to a single swivel mechanism that permits both rotation and swinging motion in any axis.

- A multi-axis tire swing should not be suspended from a structure having other swings in the same bay.
- Attaching multi-axis swings to composite structures is not recommended.

- To minimize the hazard of impact, heavy truck tires should be avoided. Further, if steel-belted radials are used, they should be closely examined to ensure that there are no exposed steel belts or wires that could be a potential protrusion or laceration hazard. Plastic materials can be used as an alternative to simulate actual automobile tires. Drainage holes should be provided in the underside of the tire.
- Pay special attention to maintenance of the hanger mechanism because the likelihood of failure is higher for tire swings due to the added stress of rotational movement and multiple occupants.
- The hanger mechanisms for multi-axis tire swings should not have any accessible crush points.
- The minimum clearance between the seating surface of a tire swing and the uprights of the supporting structure should be 30 inches when the tire is in a position closest to the support structure (Figure 26).
- The minimum clearance between the bottom of the seat and the protective surface should not be less than 12 inches.

5.3.8.4.1 Multi-axis swing use zones

- The use zone should extend in any direction from a point directly beneath the pivot point for a minimum distance of 6 feet plus the length of the suspending members (see Figure 27). This use zone should never overlap the use zone of any other equipment.



- The use zone should extend a minimum of 6 feet from the perimeter of the supporting structure. This 6-foot zone may overlap that of an adjacent swing structure or other playground equipment structure.

5.3.8.5 Protrusions on suspended members of swing assemblies

Protrusions on swings are extremely hazardous because of the potential for impact incidents. Nothing, including bolts or other parts, on the front, back, or underside of a swing should stick out more than 1/8 of an inch. See test procedures in Appendix B.

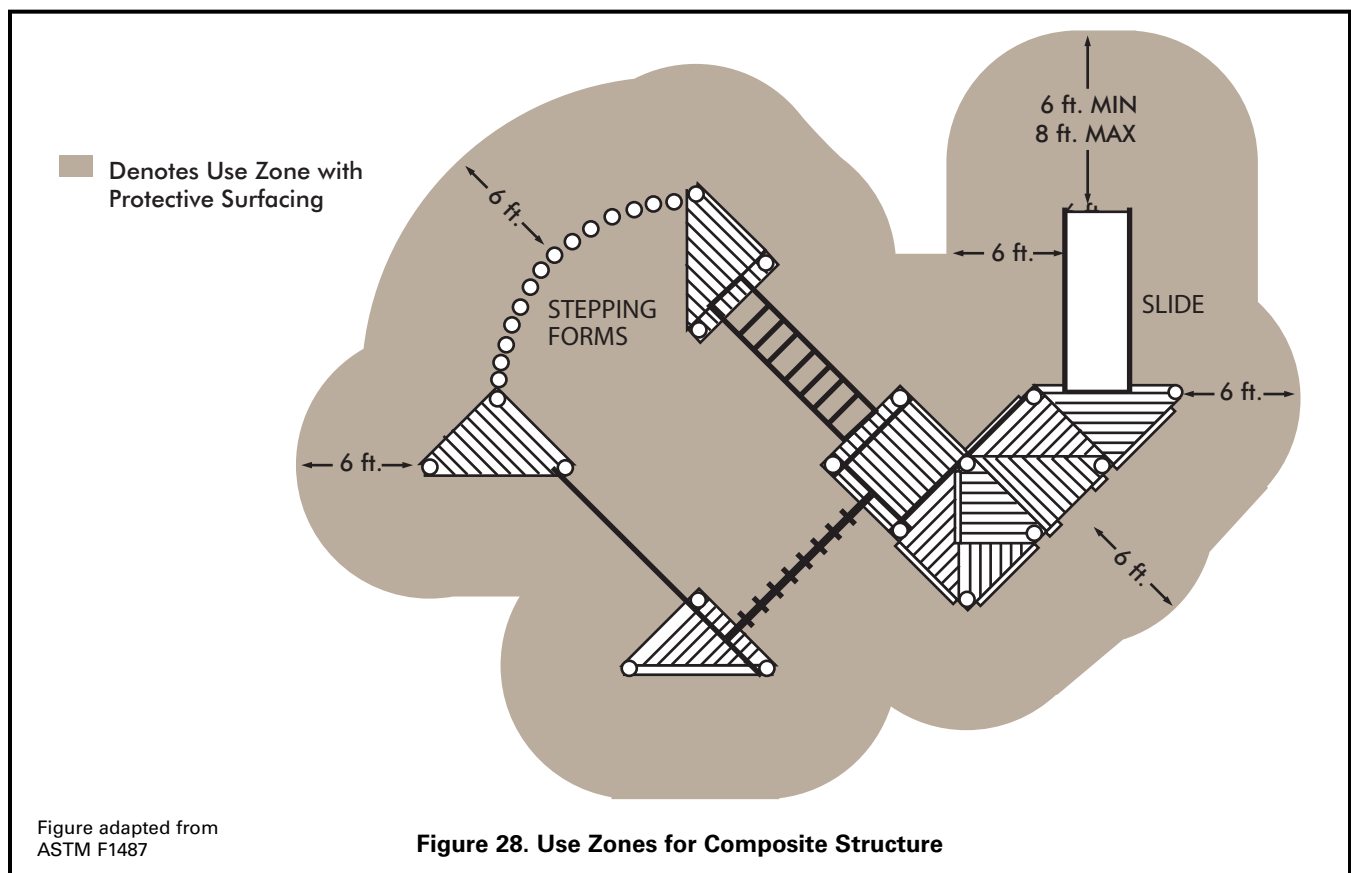
5.3.9 Fall height and use zones for composite structure

When two or more complementary play components are linked together in a composite structure (e.g., combination climber, slide, and horizontal ladder), the use zone should extend a minimum of 6 feet from the external perimeter of the structure (see Figure 28). Where slides are attached to a platform higher than 6 feet from the protective surfacing, the use zone may need to extend further in front of the slide (see §5.3.6.5).

5.3.10 Fall height and use zones not specified elsewhere

Most playground equipment belongs in one of the categories listed above. If it does not, the following general recommendations should be applied:

- The fall height of a piece of playground equipment is the distance between the highest designated playing surface and the protective surface beneath it.
- The use zone should extend a minimum of 6 feet in all directions from the perimeter of the equipment.
- The use zones of two stationary pieces of playground equipment that are positioned adjacent to one another may overlap if the adjacent designated play surfaces of each structure are no more than 30 inches above the protective surface and the equipment is at least 6 feet apart.
- If adjacent designated play surfaces on either structure exceed a height of 30 inches, the minimum distance between the structures should be 9 feet.
- Use zones should be free of obstacles.



APPENDIX A: SUGGESTED GENERAL MAINTENANCE CHECKLISTS

Surfacing (§2.4)

- ☐ Adequate protective surfacing under and around the equipment.
 - ☐ Install/replace surfacing
- ☐ Surfacing materials have not deteriorated.
 - ☐ Replace surfacing
 - ☐ Other maintenance: _____
- ☐ Loose-fill surfacing materials have no foreign objects or debris.
 - ☐ Remove trash and debris
- ☐ Loose-fill surfacing materials are not compacted.
 - ☐ Rake and fluff surfacing
- ☐ Loose-fill surfacing materials have not been displaced under heavy use areas such as under swings or at slide exits.
 - ☐ Rake and fluff surfacing

Drainage (§2.4)

- ☐ The entire play area has satisfactory drainage, especially in heavy use areas such as under swings and at slide exits.
 - ☐ Improve drainage
 - ☐ Other maintenance: _____

General Hazards

- ☐ There are no sharp points, corners or edges on the equipment (§3.4).
- ☐ There are no missing or damaged protective caps or plugs (§3.4).
- ☐ There are no hazardous protrusions (§3.2 and Appendix B).
- ☐ There are no potential clothing entanglement hazards, such as open S-hooks or protruding bolts (§2.5.2, §3.2, §5.3.8.1 and Appendix B).
- ☐ There are no crush and shearing points on exposed moving parts (§3.1).
- ☐ There are no trip hazards, such as exposed footings or anchoring devices and rocks, roots, or any other obstacles in a use zone (§3.6).

Security of Hardware (§2.5)

- ☐ There are no loose fastening devices or worn connections.
 - ☐ Replace fasteners
 - ☐ Other maintenance: _____
- ☐ Moving parts, such as swing hangers, merry-go-round bearings, and track rides, are not worn.
 - ☐ Replace part
 - ☐ Other maintenance: _____

Durability of Equipment (§2.5)

- ☐ There are no rust, rot, cracks, or splinters on any equipment (check carefully where it comes in contact with the ground).
- ☐ There are no broken or missing components on the equipment (e.g., handrails, guardrails, protective barriers, steps, or rungs).
- ☐ There are no damaged fences, benches, or signs on the playground.
- ☐ All equipment is securely anchored.

Leaded Paint (§2.5.4)

- ☐ Paint (especially lead paint) is not peeling, cracking, chipping, or chalking.
- ☐ There are no areas of visible leaded paint chips or accumulation of lead dust.
 - ☐ Mitigate lead paint hazards

General Upkeep of Playgrounds (§4)

- ☐ There are no user modifications to the equipment, such as strings and ropes tied to equipment, swings looped over top rails, etc.
 - ☐ Remove string or rope
 - ☐ Correct other modification
- ☐ The entire playground is free from debris or litter such as tree branches, soda cans, bottles, glass, etc.
 - ☐ Clean playground
- ☐ There are no missing trash receptacles.
 - ☐ Replace trash receptacle
- ☐ Trash receptacles are not full.
 - ☐ Empty trash

NOTES:

DATE OF INSPECTION:

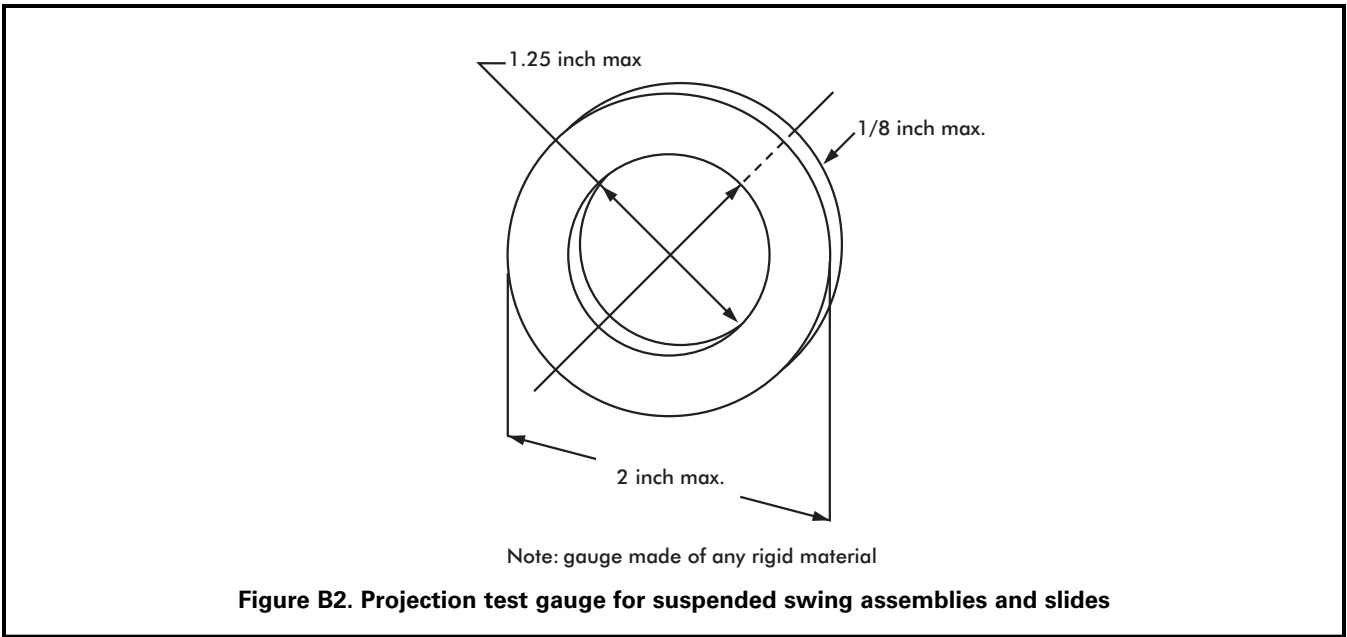
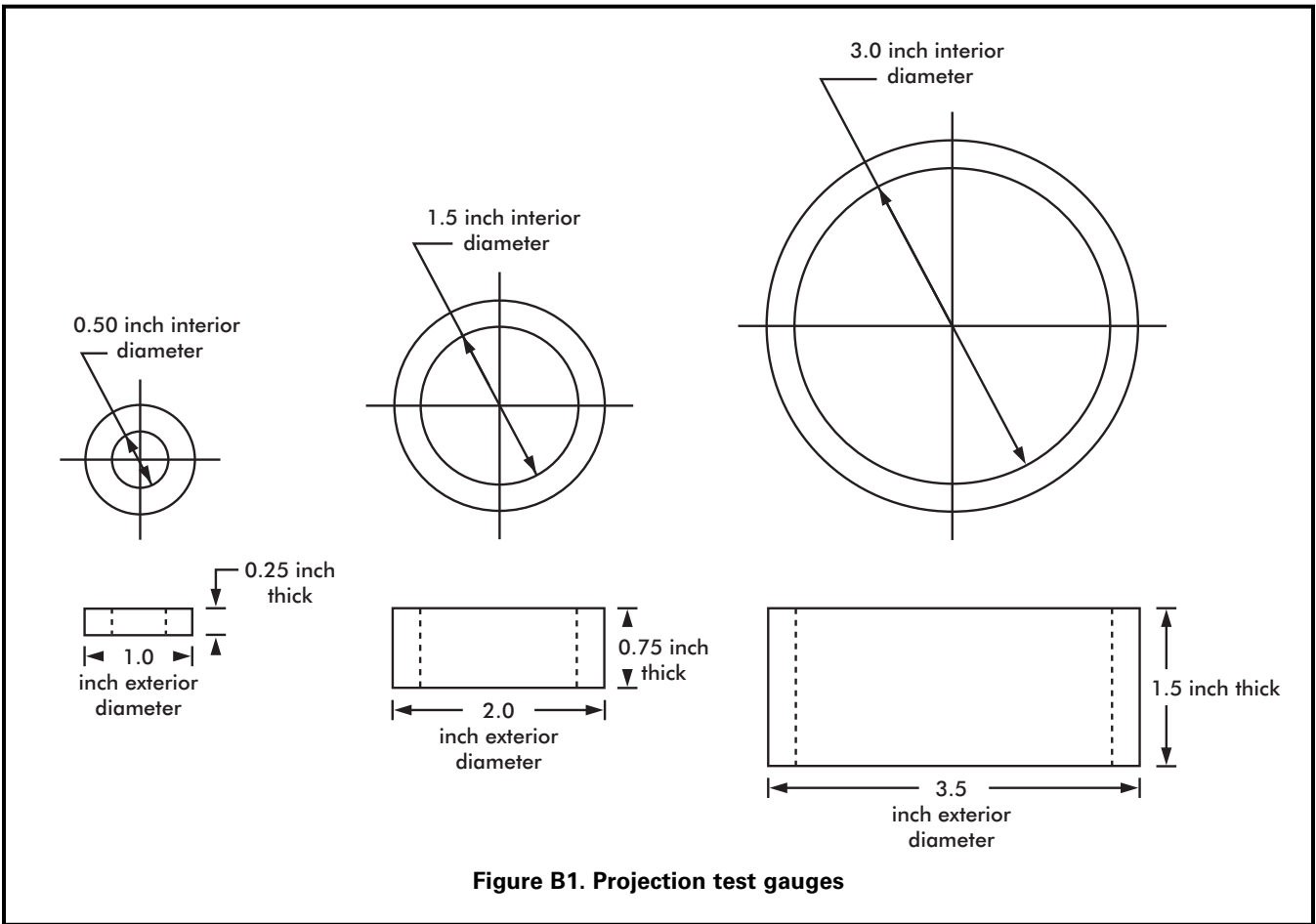
INSPECTION BY:

Routine Inspection and Maintenance Issues

- ☐ Broken equipment such as loose bolts, missing end caps, cracks, etc.
- ☐ Broken glass & other trash
- ☐ Cracks in plastics
- ☐ Loose anchoring
- ☐ Hazardous or dangerous debris
- ☐ Insect damage
- ☐ Problems with surfacing
- ☐ Displaced loose-fill surfacing (see Section 4.3)
- ☐ Holes, flakes, and/or buckling of unitary surfacing
- ☐ User modifications (such as ropes tied to parts or equipment rearranged)
- ☐ Vandalism
- ☐ Worn, loose, damaged, or missing parts
- ☐ Wood splitting
- ☐ Rusted or corroded metals
- ☐ Rot

APPENDIX B: PLAYGROUND TESTING

B.1 Templates, Gauges, and Testing Tools



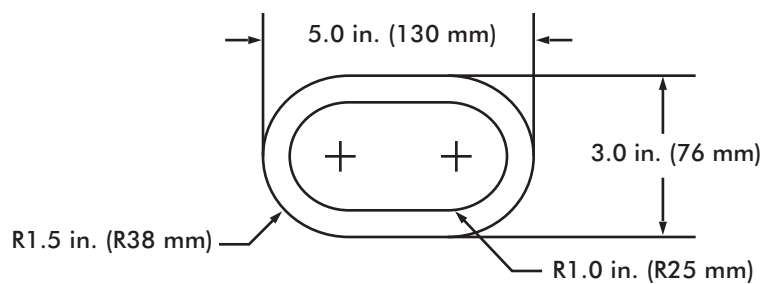


Figure B3. Toddler small torso template

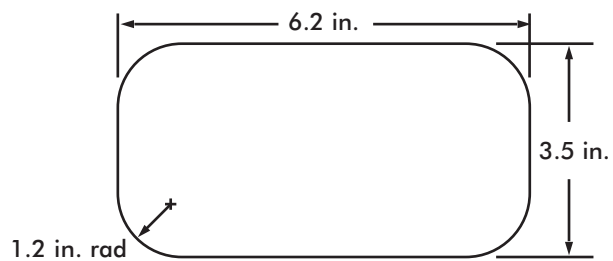


Figure B4. Preschool- and school-age small torso template

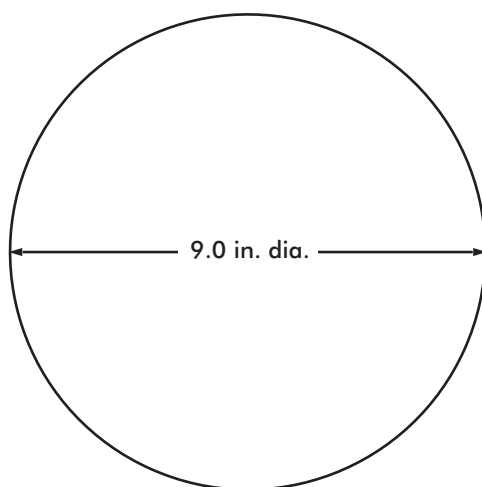
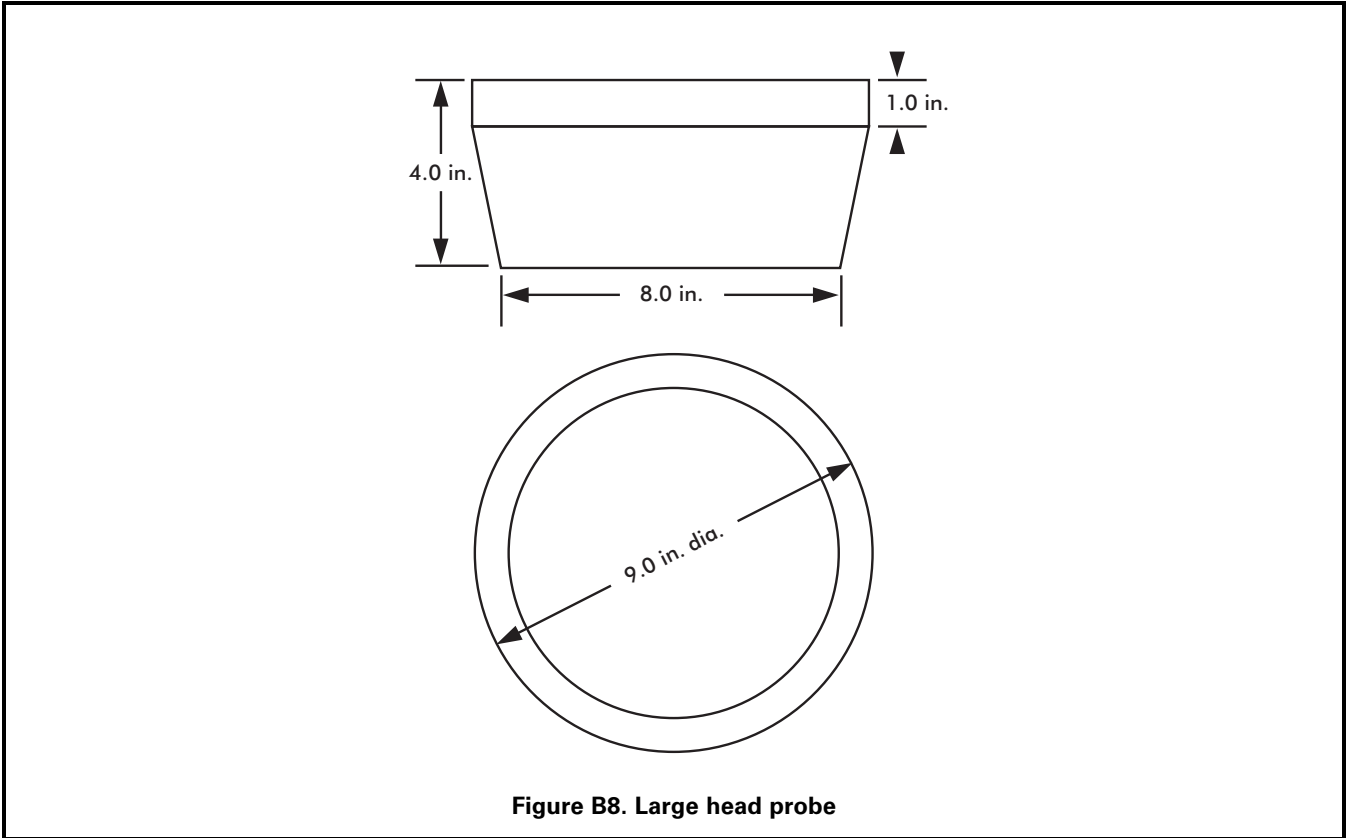
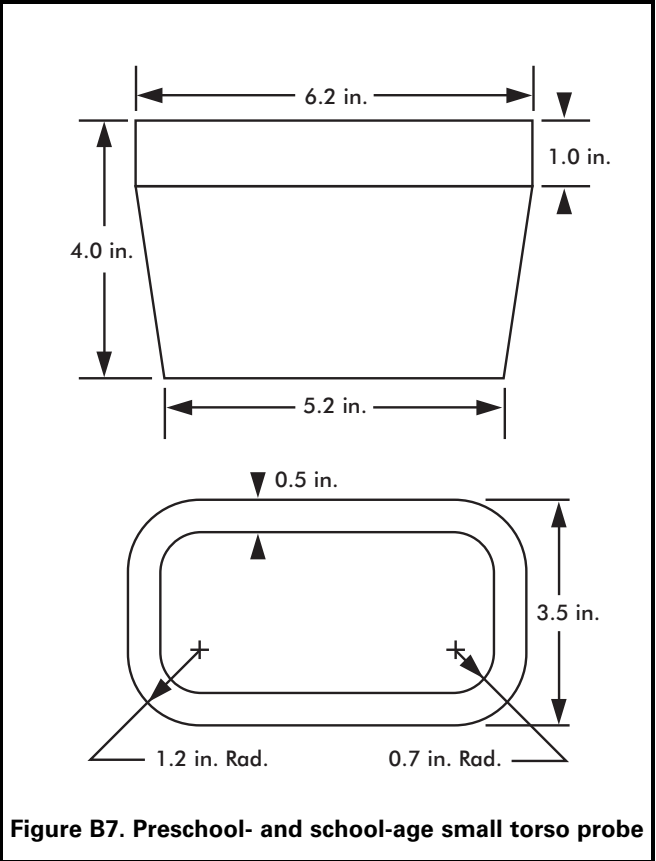
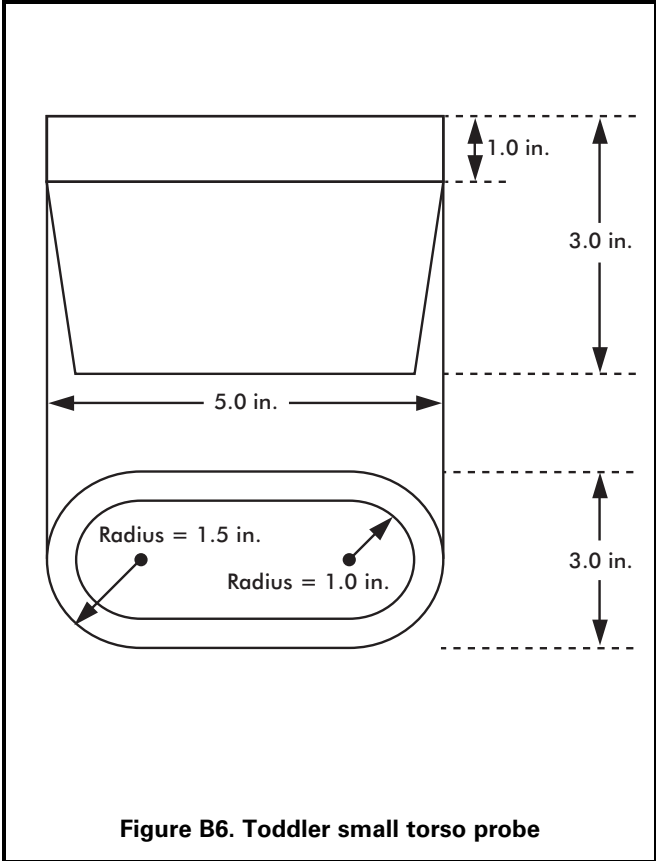


Figure B5. Large head template



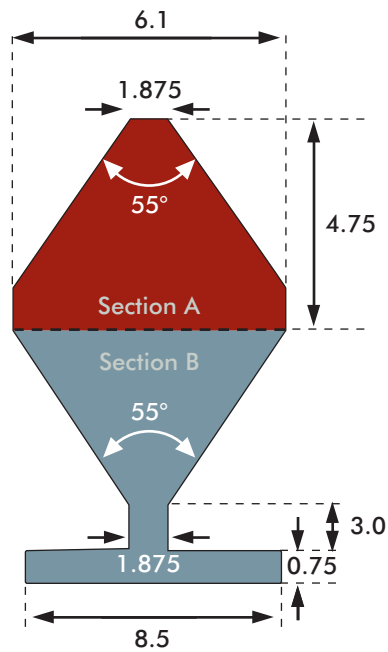


Figure B9. Preschool/School-age partially bound probe (dimensions in inches, template is 0.75 inches thick)

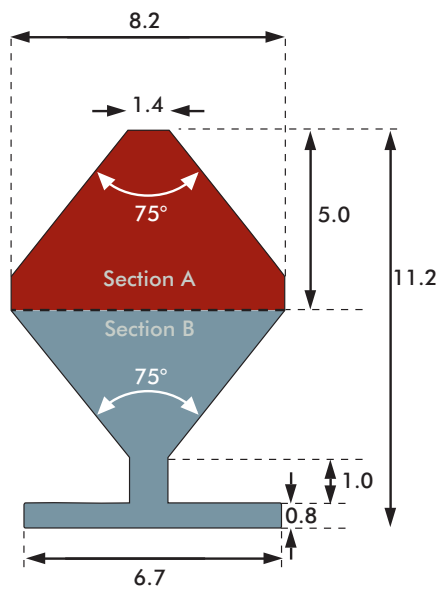


Figure B10. Toddler partially bound probe (dimensions in inches, template is 0.60 inches thick)

APPENDIX B: PLAYGROUND TESTING

B.2 Test Methods

B.2.1 Determining whether a projection is a protrusion

B.2.1.1 Test procedure

- Step 1: Successively place each projection test gauge (see Figure B1) over any projection
- Step 2: Visually determine if the projection penetrates through the hole and beyond the face of the gauge (see Figure B11 below).
- Pass:** A projection that does not extend beyond the face of the gauge passes.
- Fail:** A projection that extends beyond the face of any one of the gauges is considered a hazardous protrusion and should be eliminated.

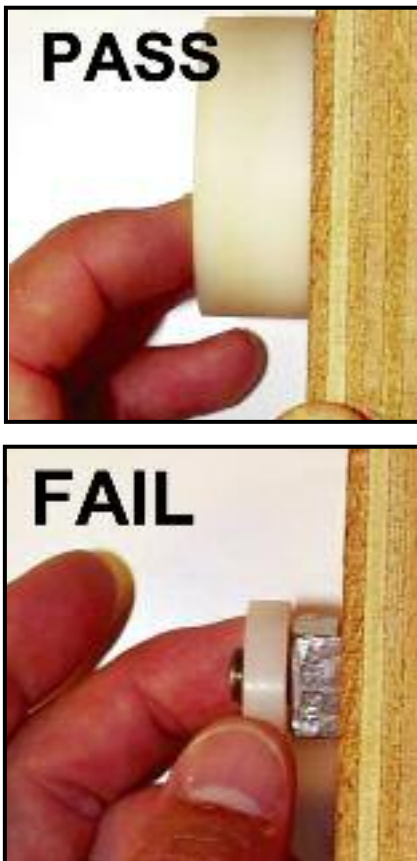


Figure B11. Determining whether a projection is a protrusion

B.2.2 Projections on suspended members of swing assemblies

Given the potential for impact incidents, projections on swings can be extremely hazardous. A special test gauge (see Figure B2) and procedure are recommended. When tested, no bolts or components in the potential impact region on suspended members should extend through the hole beyond the face of the gauge.

B.2.2.1 Test procedure

- Step 1: Hold the gauge (Figure B2) vertically with the axis through the hole parallel to the swing's path of travel.
- Step 2: Place the gauge over any projections that are exposed during the swing's path of travel.
- Step 3: Visually determine if the projection penetrates through the hole and beyond the face of the gauge.

Pass: A projection that does not extend beyond the face of the gauge passes.

Fail: A projection that extends beyond the face of the gauge is considered a hazardous protrusion and should be eliminated.

B.2.3 Projections on slides

To minimize the likelihood of clothing entanglement on slides, projections that (1) fit within any one of the three gauges shown in Figure B1 and (2) have a major axis that projects away from the slide bed should not have projections greater than 1/8 inch perpendicular to the plane of the surrounding surface (Figure B12).

B.2.3.1 Test procedure

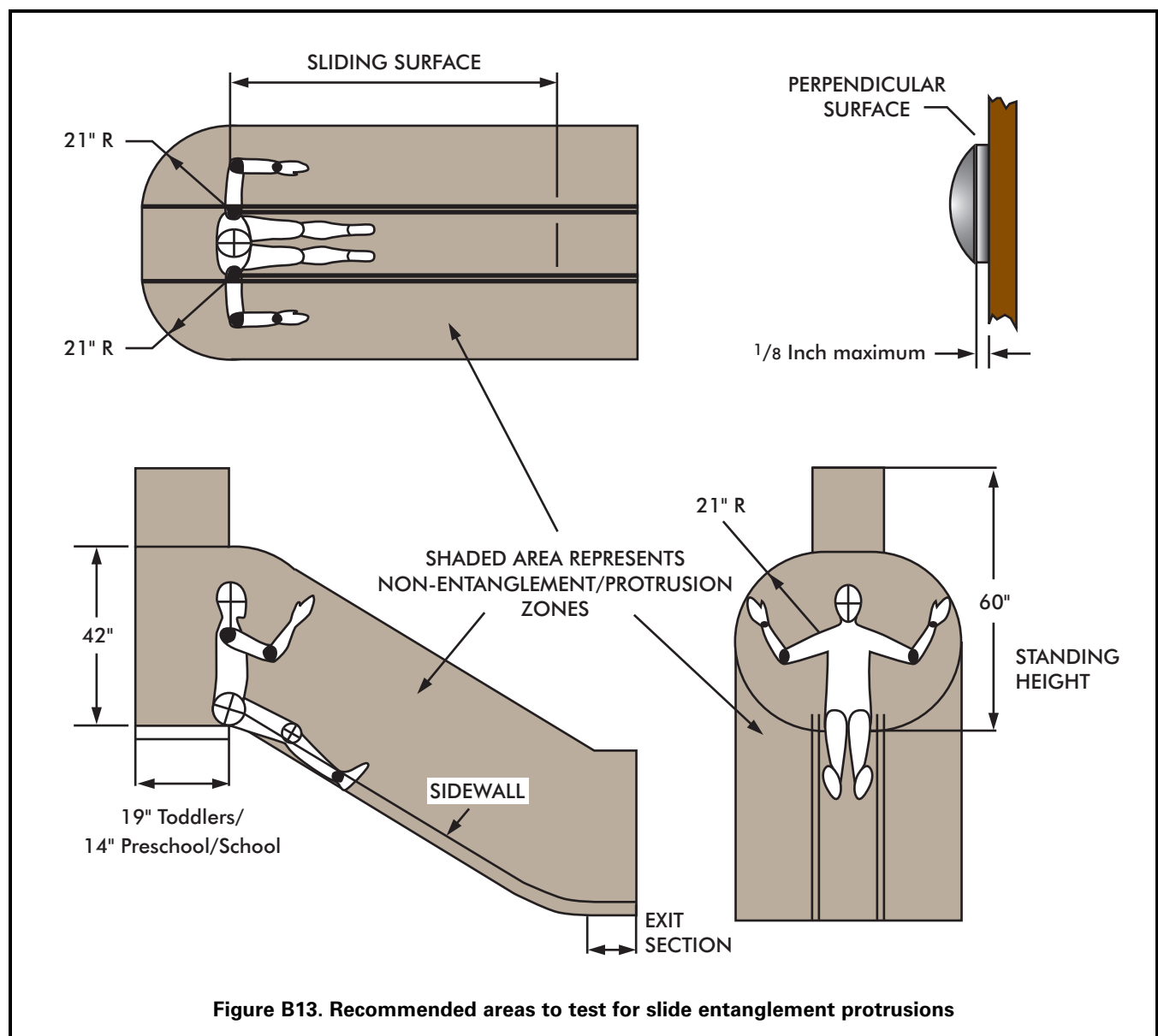
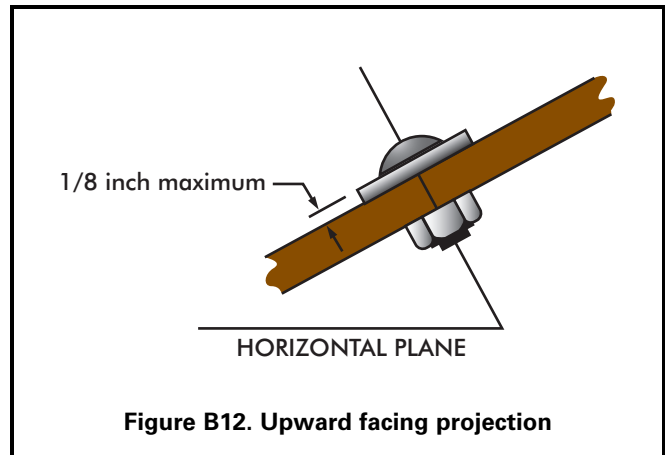
- Step 1: Identify all projections within the shaded area shown in Figure B13.
- Step 2: Determine which, if any, fit inside the projection test gauges (Figure B1).
- Step 3: Place the swing and slide projection gauge (Figure B2) next to the projection to check the height of the projection.

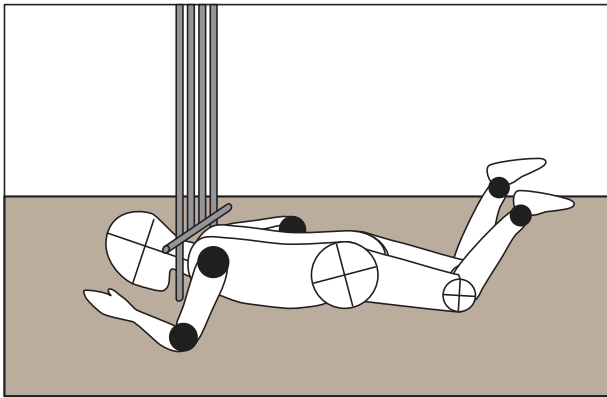
Step 4: Visually determine if the projection extends beyond the face of the slide projection gauge.

Pass: A projection that does not extend beyond the face of the gauge passes.

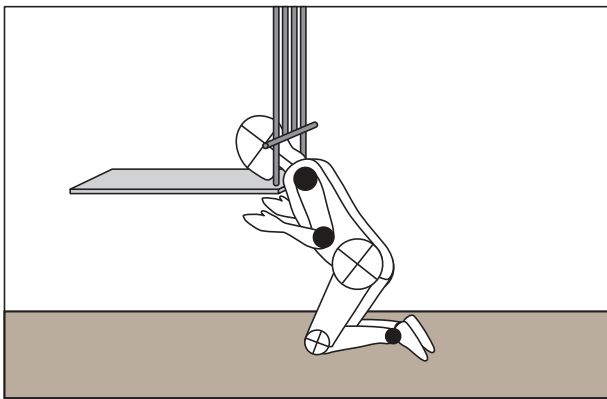
Fail: A projection that extends beyond the face of the gauge is considered a hazardous protrusion and should be eliminated.

NOTE: This test procedure is not applicable to the underside of a slide chute. For a slide chute with a circular cross section, the portion of the underside not subject to this projection recommendation is shown in Figure 18. The general recommendations for projections in §B.2.1 are applicable to the underside of the slide.

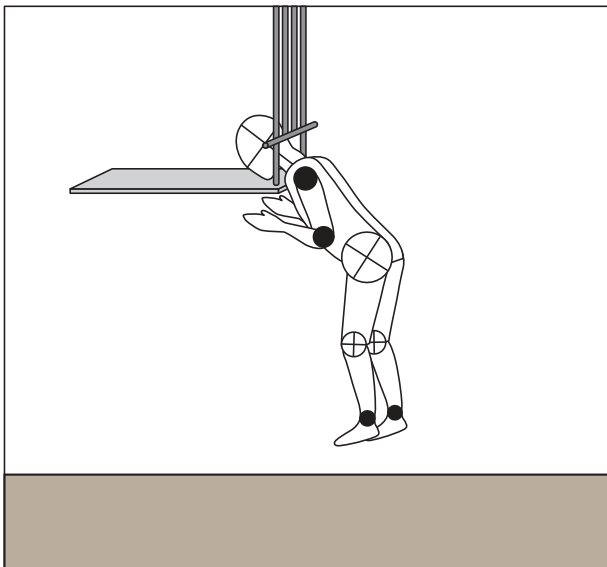




Ground-bounded: Not subject to entrapment recommendations.



Low entrapment



High entrapment

Figure B14. Examples of completely bounded openings

B.2.4 Entrapment

B.2.4.1 General

Any completely-bounded opening (Figure B14) that is not bounded by the ground may be a potential head entrapment hazard. Even those openings which are low enough to permit a child's feet to touch the ground present a risk of strangulation to an entrapped child, because younger children may not have the necessary intellectual ability and motor skills to withdraw their heads, especially if scared or panicked. An opening may present an entrapment hazard if the distance between any interior opposing surfaces is greater than 3.5 inches and less than 9 inches. If one dimension of an opening is within this potentially hazardous range, all dimensions of the opening should be considered together to fully evaluate the possibility of entrapment. The most appropriate method to determine whether an opening is hazardous is to test it using the following fixtures, methods, and performance criteria.

These recommendations apply to all playground equipment, i.e., toddler, preschool-age, and school-age children. Fixed equipment as well as moving equipment (in its stationary position) should be tested for entrapment hazards. There are two special cases for which separate procedures are given: (1) completely-bounded openings where depth of penetration is a critical issue (see Figure B15) and (2) openings formed by flexible climbing components.

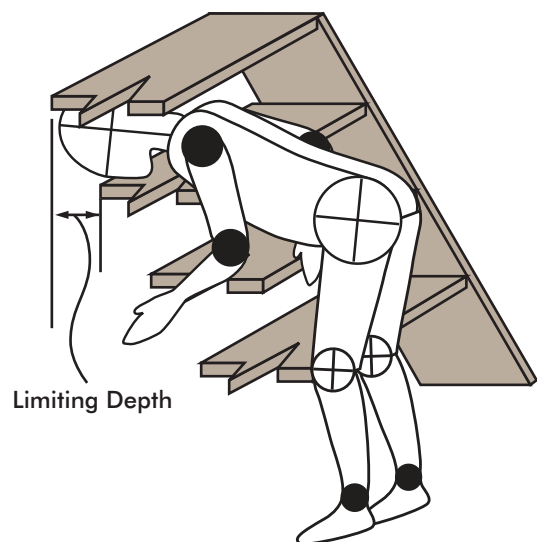


Figure B15. Completely bounded opening with limited depth

B.2.5 Test fixtures

Two templates are required to determine if completely bounded openings in rigid structures present an entrapment hazard. These templates can easily be fabricated from cardboard, plywood, or sheet metal.

B.2.5.1 Small torso template

The dimensions (see Figure B3 and Figure B4) of this template are based on the size of the torso of the smallest user at risk (5th percentile 6-month-old child for Figure B3 and 2-year-old child for Figure B4). If an opening is too small to admit the template, it is also too small to permit feet first entry by a child. Because children's heads are larger than their torsos, an opening that does not admit the small torso template will also prevent head first entry into an opening by a child.

B.2.5.2 Large head template

The dimensions (see Figure B5) of this template are based on the largest dimension on the head of the largest child at risk (95th percentile 5-year-old child). If an opening is large enough to permit free passage of the template, it is large enough to permit free passage of the head of the largest child at risk in any orientation. Openings large enough to permit free passage of the large head template will not entrap the chest of the largest child at risk.

B.2.5.3 Completely bounded openings with unlimited depth

B.2.5.3.1 Test procedure

- Step 1: Select the appropriate small torso template based on the intended users of the playground (Figure B3 for toddler playgrounds, Figure B4 for preschool- and school-age playgrounds).
- Step 2: Identify all completely bounded openings.
- Step 3: Attempt to place the small torso template in the opening with the plane of the template parallel to the plane of the opening. While keeping it parallel to the plane of the opening, the template should be rotated to its most adverse orientation (i.e., major axis of template oriented parallel to the major axis of the opening.)

- Step 4: Determine if the small torso template can freely pass through the opening.

No: **Pass.** Stop

Yes: Continue



- Step 5: Place the large head template in the opening, again with the plane of the template parallel to the plane of the opening, and try to insert it through the opening.

Pass: The large head template can be freely inserted through the opening

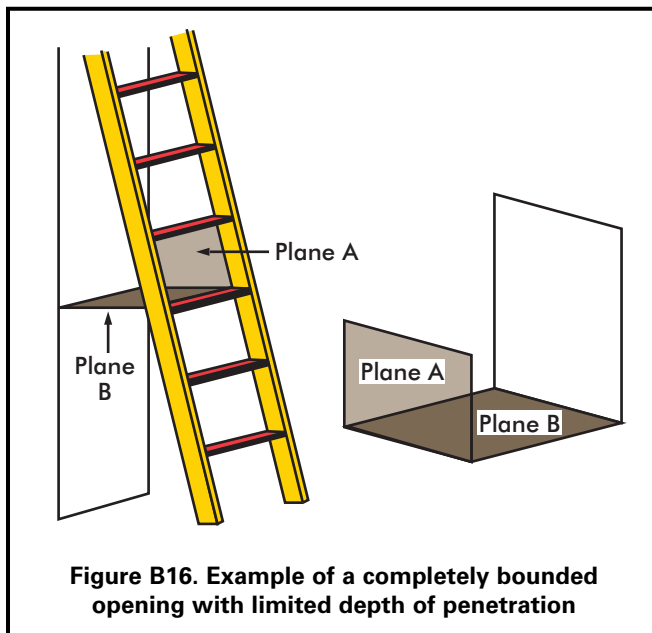
Fail: The opening admits the small torso template but does not admit the large head template.



B.2.5.4 Completely bounded openings with limited depth of penetration

The configuration of some openings may be such that the depth of penetration is a critical issue for determining the entrapment potential. For example, consider a vertical wall or some other barrier behind a step ladder. The entrapment potential depends not only on the dimensions of the opening between adjacent steps but also on the horizontal space between the lower boundary of the opening and the barrier. A child may enter the opening between adjacent steps feet first and may proceed to pass through the space between the rear of the lower step and the barrier and become entrapped when the child's head is unable to pass through either of these two openings. In effect, there are openings in two different planes, and each has the potential for head entrapment and should be tested.

Figure B16 illustrates these two planes for a step ladder as well as for a generic opening. Plane A is the plane of the completely bounded opening in question, and Plane B is the plane of the opening encompassing the horizontal space between the lower boundary of the opening in Plane A and the barrier that should also be tested for entrapment hazards.



B.2.5.4.1 Test procedure

Step 1: Select the appropriate small torso template based on the intended users of the playground (Figure B3 for toddler playgrounds, Figure B4 for preschool-age and school-age playgrounds).

Step 2: Identify all completely bounded openings with limited depth of penetration.

Step 3: Place the small torso template in the opening in Plane A with its plane parallel to Plane A; rotate the template to its most adverse orientation with respect to the opening while keeping it parallel to Plane A.

Step 4: Determine if the opening in Plane A admits the small torso template in any orientation when rotated about its own axis.

No: Pass. The opening is small enough to prevent either head first or feet first entry by the smallest user at risk and is not an entrapment hazard.

Yes: Continue.

Step 5: Place the small torso template in the opening in Plane B with its plane parallel to Plane B; rotate the template to its most adverse orientation with respect to the opening while keeping it parallel to Plane B.

Step 6: Determine if the opening in Plane B admits the small torso template.

No: Pass. The depth of penetration into the opening in Plane A is insufficient to result in entrapment of the smallest user at risk.

Yes: Continue.

Step 7: Place the large head template (Figure B5) in the opening in Plane A with its plane parallel to Plane A. Determine if the opening in Plane A admits the large head template.

No: Fail. A child, whose torso can enter the opening in Plane A as well as the opening in Plane B, may become entrapped by the head in the opening in Plane A.

Yes: Continue.

Step 8: With the plane of the large head template parallel to the opening in Plane B, determine if the opening in Plane B admits the large head template.

No: Fail. The largest user at risk cannot exit the opening in Plane B.

Yes: Pass. The openings in Plane A and Plane B do not pose an entrapment risk.

B.2.5.5 Flexible openings

Climbing components such as flexible nets are also a special case for the entrapment tests because the size and shape of openings on this equipment can be altered when force is applied, either intentionally or simply when a child climbs on or falls through the openings. Children are then potentially at risk of entrapment in these distorted openings.

The procedure for determining conformance to the entrapment recommendations for flexible openings requires two three-dimensional test probes which are illustrated in Figure B6, Figure B7, and Figure B8 are applied to an opening in a flexible component with a force of up to 50 pounds.

B.2.5.5.1 Test procedure

- Step 1: Select the appropriate small torso template based on the intended users of the playground (Figure B3 for toddler playgrounds, Figure B4 for preschool-age and school-age playgrounds).
- Step 2: Identify all completely bounded openings with flexible sides.
- Step 3: Place the small torso probes (Figures B6 and B7) in the opening, tapered end first, with the plane of its base parallel to the plane of the opening.
- Step 4: Rotate the probe to its most adverse orientation (major axis of probe parallel to major axis of opening) while keeping the base parallel to the plane of the opening.
- Step 5: Determine if the probe can be pushed or pulled completely through the opening by a force no greater than 30 pounds on toddler playgrounds or 50 pounds on preschool-age and school-age playgrounds.

No: Pass. Stop

Yes: Continue.



Step 6: Place the large head probe (Figure B8) in the opening with the plane of its base parallel to the plane of the opening.

Step 7: Determine if the large head probe can be pushed or pulled completely through the opening by a force no greater than 30 pounds on toddler playgrounds or 50 pounds on preschool-age and school-age playgrounds.

Yes: Pass. Stop.



No: Fail.



B.2.5.6 Partially bound openings

A partially bound opening is any opening which has at least one side or portion open, such as a U- or V-shaped opening. These openings can still pose an entrapment hazard by allowing the neck to enter but not allowing the head to slip out. A partially bound opening can be any part of the playground equipment where a child could get his or her neck caught, so it includes not only two- or three-sided openings, but also areas of large openings (large enough for the head template to enter) that have the characteristics that can entrap a child's neck. Several examples outlines of this situation are shown in the figures below. Openings that have an outline similar to these figures are often found when two parts of a playground meet, for example, the top of a slide and the side of a guardrail.

Identifying partially bound openings varies depending on the age range of the playground. Openings that should be tested include any opening where:

For toddlers:

- The perimeter of the opening is not closed
- The lowest leg of the opening is tilted upward (i.e. above horizontal) or 45 degrees below horizontal.

For preschool- and school-age:

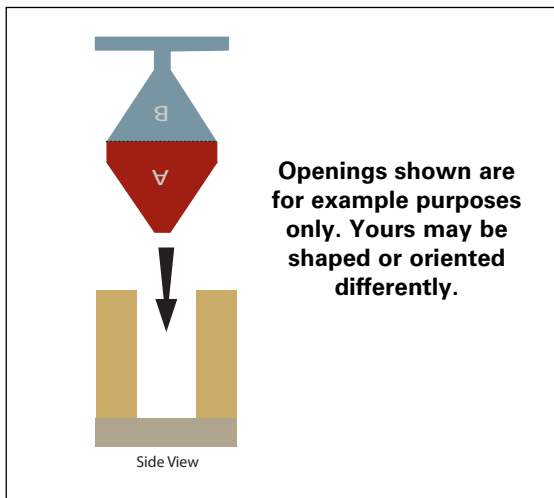
- The perimeter of the opening is not closed
- The lowest leg of the opening is tilted upward (i.e. above horizontal)



Examples of partially bound openings. Note, these examples are intended to illustrate the principle of partially bound openings and may or may not require testing.

B.2.5.6.1 Test procedure

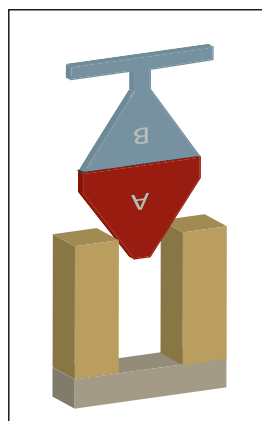
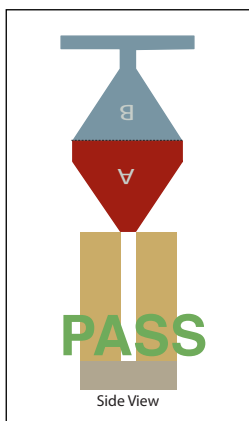
- Step 1: Select the appropriate Partially Bound Template based on the intended users of the playground (Figure B10 for toddler playgrounds, Figure B9 for preschool and school-age playground).
- Step 2: Identify partially bound openings.
- Step 3: Align the template so that the face of the template is parallel to the plane of the opening and the narrow tip of the A section is pointing toward the opening.



- Step 4: Insert the A portion of the template into the opening following the centerline of the opening.
- Step 5: Once inserted as far as possible, determine if there is simultaneous contact between the sides of the opening and both of the top corners at the narrow tip of section A.

Yes: Pass. Stop

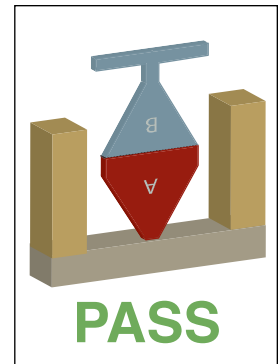
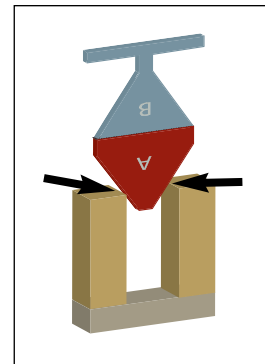
No: continue



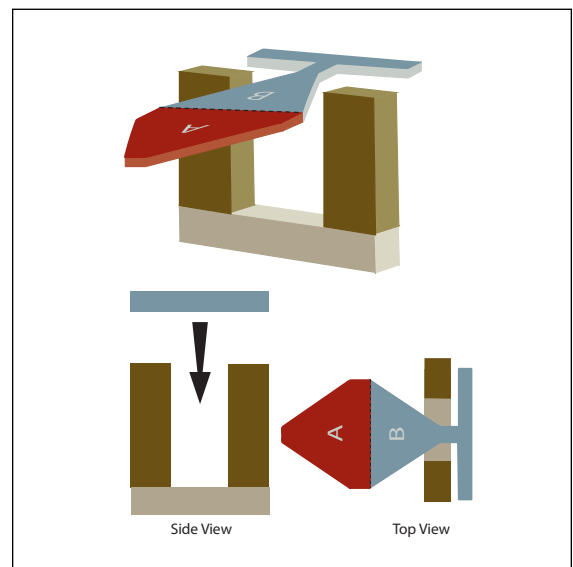
- Step 6: While still inserted as far as possible, determine if there is simultaneous contact between both of the angled sides of section A and the sides of the opening.

Yes: Note the points on the sides of opening where contact was made and continue

No: Pass. The narrow tip should be resting on the lower boundary of the opening with no contact with the sides of the opening. Stop



- Step 7: Remove the template and turn the template so that the face of the template is perpendicular to the opening.
- Step 8: Following the plane of the opening, insert the B portion of the template into the opening so that the narrow part of the B portion is between the sides of the opening.

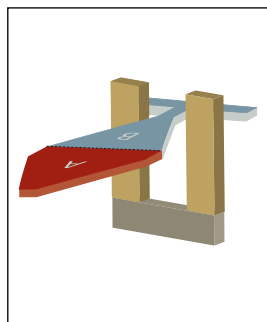
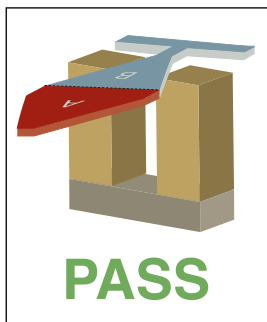


Step 9: Once inserted as far as possible, determine if the B portion is completely past the points where contact was made on the sides of the opening with the A portion.

No: Pass. Stop

Yes: Toddlers:
Fail. Stop

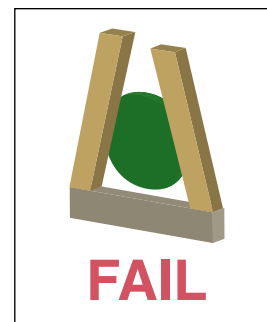
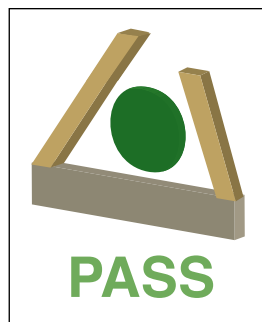
Preschool and
School-age:
Continue



Step 11: Determine if the Large Head Template passes freely through the larger opening.

Yes: Pass

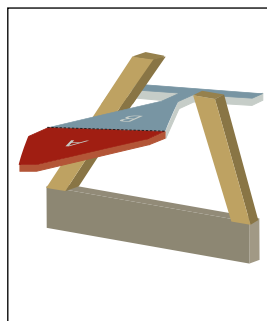
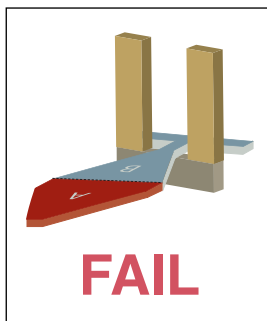
No: Fail



Step 10: Determine if the B portion can reach a point where the opening increases in size.

No: Fail. Stop

Yes: continue



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**SPECIAL STUDY: INJURIES AND DEATHS ASSOCIATED WITH
CHILDREN'S PLAYGROUND EQUIPMENT**

April 2001

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Washington, D.C. 20207**

EXECUTIVE SUMMARY

In support of U.S. Consumer Product Safety Commission (CPSC) efforts to address playground hazards, Directorate for Epidemiology staff conducted a special study of playground equipment-related injuries treated in U.S. hospital emergency rooms from November 1998 through October 1999. Staff also reviewed data on playground-related deaths reported to CPSC from January 1990 through August 2000. Highlights of this analysis include the following:

- ❑ In 1999, an estimated 205,850 playground equipment-related injuries were treated in U.S. hospital emergency rooms. This adjusted estimate translates to a rate of about 7.5 injuries per 10,000 U.S. population in 1999. Age-specific incidence was about 29.1 injuries per 10,000 children younger than 5 years, 34.8 per 10,000 children 5–14 years, and 0.6 per 10,000 population 15 years and older.
- ❑ Approximately 156,040 (75.8 percent) of the 1999 injuries occurred on equipment designed for public use, 46,930 (22.8 percent) occurred on equipment designed for home use, and 2,880 (1.4 percent) occurred on homemade equipment (primarily rope swings).
- ❑ About 45 percent of the injuries involving public equipment occurred in schools, followed by about 31 percent in public parks. Injuries on public equipment also occurred in commercial daycare settings (10 percent), apartment complexes (3 percent), fast food restaurants (2 percent), and other locations (9 percent). About three percent of the injuries involving home equipment occurred in home daycare settings.
- ❑ Overall, fractures were the most commonly reported injury, accounting for 39 percent of all injuries on home and public equipment. Almost 80 percent of these fractures involved the wrist, lower arm, and elbow. About 15 percent of the injuries to the head and face were diagnosed as concussions, internal injuries, and fractures; these injuries accounted for about 5 percent of all surface fall-related injuries in this study.
- ❑ About one-half (53 percent) of the injuries involving public equipment occurred on climbers. About 60 percent of the injuries on climbers occurred on various configurations of overhead “horizontal ladders.” About two-thirds (67 percent) of the injuries involving home equipment occurred on swings.
- ❑ Over 40 percent of the injuries that occurred on public equipment and 30 percent of the injuries that occurred on home equipment involved multi-use structures. For both home and public equipment, however, the multi-use aspects of the equipment (e.g., overlapping use zones, multiple users, etc.) didn’t appear to be causal factors in the injuries that occurred.

- ❑ Overall, about three-fourths (79 percent) of the injuries that occurred on public equipment involved falls, primarily to the surface below the equipment. On home equipment, 81 percent of the injuries were associated with falls. All of the hospitalized injuries (3 percent of the total) resulted from falls.
- ❑ In locations where public equipment was installed, almost 80 percent had protective surfacing under the equipment, most often bark mulch or wood chips. In contrast, only about nine percent of home locations had protective surfacing, most often sand. Dirt and grass were, by far, the most prevalent surfaces present under home playground equipment.
- ❑ From January 1990 through August 2000, CPSC received reports of 147 deaths to children younger than age 15 that involved playground equipment. In the 128 incidents for which location was reported, 90 (70 percent) occurred in home locations and 38 (30 percent) occurred in public locations.
- ❑ Over one-half (56 percent) of the playground equipment-related deaths involved hanging, primarily from ropes, shoestrings, cords, leashes, clothing strings, and other items tied to, or entangled on the equipment. Homemade rope, tire, or tree swings were also involved in a number of hanging deaths. Other causes of playground equipment-related deaths included falls, equipment tipover or collapse, entrapment, or impact with moving components.
- ❑ Comparison of data from the current study to data from a 1988 CPSC study of playground hazards revealed that falls continue to account for the majority of injuries. Injuries associated with public equipment continue to outnumber those on home equipment, and injuries in school settings now appear to be greater than in public parks. Climber-related injuries have increased in public locations, perhaps because of the greater number of multi-use climbing structures. Deaths from swing impact are now rare.
- ❑ Future safety efforts to address playground hazards should include activities to continue to promote the importance of appropriate protective surfacing in both home and public locations; to evaluate various protective surfaces in terms of reducing fractures to the wrist, lower arm, and elbow; to research the appropriateness of certain upper body equipment (e.g., horizontal ladders) for different age groups and skill levels; and to alert caregivers and children to the risk of attaching ropes, cords, and similar items to playground equipment.

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I. BACKGROUND

Each year, over 200,000 people are treated in U.S. hospital emergency rooms for injuries associated with playground equipment, with the majority of these injuries involving children under the age of 15 years. Previous analyses of data by U.S. Consumer Product Safety Commission (CPSC) staff revealed that deaths and serious injuries resulted from falls, hangings, impact with moving equipment, entrapment and contact with protrusions, pinch points, sharp edges and sharp points. ^(1, 2, 3, 4)

CPSC's last in-depth study of playground equipment injuries was conducted in 1988, and published in 1990.⁽¹⁾ Since that time, there have been changes in the types, construction, and usage of equipment in the United States. Composite play structures, such as climber/slide combinations, have become increasingly common in both home and public settings. Materials and techniques of construction are very different from those used in past years, with plastics and wood replacing some of the all-metal structures of the past. Soft contained play equipment, such as the type found in fast-food restaurants and "pay-for-play" settings, has become more popular. There appears to be a greater awareness of surfacing issues, and a wider variety of surfacing materials available than in past years. As playground equipment and surfacing materials have evolved, questions have emerged about the safety of these products and their effectiveness in preventing playground injuries.

Since the 1988 study, a variety of actions have been taken to address playground hazards. In 1991, CPSC replaced its 1981 2-volume handbook set for public playground safety with a single Handbook for Public Playground Safety.^(5,6) The 1991 handbook was then revised and republished in 1997. The new Handbook is intended for use by playground designers, purchasers, installers, and consumers. The ASTM voluntary standard for public playground equipment, first published in 1993, serves as the guideline for manufacturers.⁽⁷⁾ In addition, ASTM voluntary industry standards have been developed/revised for home playground equipment, soft contained playground systems, and playground surfacing.^(8, 9, 10)

Playground equipment is divided into several major groups:

- ❑ PUBLIC PLAYGROUND EQUIPMENT - is usually found in schoolyards, public parks, amusement parks, licensed child care facilities, apartment complexes and other public recreational areas. The CPSC handbook contains recommendations for this type of equipment. There is also an ASTM voluntary standard for public playground equipment (ASTM F1487).
- ❑ PRESCHOOL PLAYGROUND EQUIPMENT - is a subset of public playground equipment. Intended for children 2-5 years of age, it is usually found at licensed child care facilities, preschools, and in separate preschool areas at public playgrounds. The CPSC playground handbook contains a number of specific recommendations for pre-school playground equipment (Section 6.3 of the current handbook).

- ❑ HOME PLAYGROUND EQUIPMENT - is generally found in the yards of private residences. It is usually of lighter weight and less durable than public playground equipment. There is an ASTM voluntary standard (ASTM F1148) for this type of equipment. Home playground equipment may also be found in childcare facilities that are being operated in private residences.
- ❑ SOFT CONTAINED PLAYGROUND EQUIPMENT - is generally found in fast food restaurants, indoor shopping malls and facilities where children pay to play on the equipment. Typically it consists of plastic crawl tubes and slides, climbing nets, ball pits and other padded climbing apparatus. It is enclosed, generally by netting, to minimize the likelihood that a child can fall to the ground surface. There is an ASTM voluntary standard for this type of equipment (ASTM F1918).

In order to assess the need for further actions to address playground hazards, such as revisions to the CPSC handbook or the ASTM voluntary standards, up-to-date injury information was needed. Thus, CPSC staff conducted a special study of playground equipment-related injuries treated in U.S. hospital emergency rooms from November 1998 through October 1999. Staff also reviewed data on playground-related deaths reported to CPSC from January 1990 through August 2000. The analysis of these data is the focus of this report.

II. METHODOLOGY

INJURIES

The injury cases included in this study were identified through CPSC's National Electronic Injury Surveillance System (NEISS), a statistically selected sample of 100 hospital emergency rooms located throughout the United States that report product-related injuries to CPSC on an ongoing basis. The hospitals within NEISS are stratified by size and assigned weights that are used to make national projections of product-related injuries.

From November 1, 1998 through October 31, 1999, a systematic sample (1:10) of playground equipment-related cases reported through NEISS was assigned for telephone investigation to obtain detailed information about these injuries.¹ For these investigations, a structured questionnaire, containing primarily open-ended questions about the hazard scenario, was developed by CPSC staff and used by interviewers under contract to CPSC. During this time period, a total of 756 cases were assigned for telephone follow-up. In 227 of these cases, the victim, parent, or caregiver could not be contacted or was unwilling to provide additional information. In 11 cases, contact was made, but the victim was 15 years or older, so details of the incident were not necessary. In an additional 64 cases (approximately 15.2 percent of the weighted cases for which follow-up was possible), the incident was found to be out of scope because it did not involve playground equipment (e.g., porch swing, infant swing, swimming pool slide, etc.). The remaining 454 cases were followed up with full telephone investigations, and were the basis for this analysis. In 409 of the 454 cases, CPSC field investigators also conducted an on-site investigation. On-site investigations were particularly important in documenting the type of equipment involved, since there is such diversity in equipment today.

DEATHS

CPSC obtains information on playground equipment-related deaths from death certificates, medical examiner and coroner reports, consumer complaints, newspaper clippings, emergency room records, and various other sources. Incident reports from these sources are often assigned for in-depth investigations to collect additional data. These data are extremely useful for characterizing the products and circumstances involved in serious playground equipment-related incidents. For this study, staff reviewed information on deaths reported to CPSC from January 1990 through August 2000.²

¹ The cases in the 1:10 sample were re-weighted according to their stratum to account for non-sampled cases.

² The data files searched were the In-depth Investigation file (INDP), the Injury and Potential Injury Incident file (IPII), the Death Certificate file (DTHS) and the National Electronic Injury Surveillance System (NEISS).

III. RESULTS AND DISCUSSION

INJURIES

Based strictly on the NEISS sample, an estimated 242,751 playground equipment-related injuries were treated in U.S. hospital emergency rooms in 1999 (CV=0.06). Investigative data obtained through the current study, however, suggested that a portion of these injuries (approximately 15.2 percent during the study period) involved products other than playground equipment. Thus, the 1999 estimate was adjusted to 205,853 to reflect the exclusion of these products.³

This adjusted estimate translates to a rate of about 7.5 injuries per 10,000 U.S. population in 1999. Age-specific incidence was about 29.1 injuries per 10,000 children younger than 5 years, 34.8 per 10,000 children 5–14 years, and 0.6 per 10,000 population 15 years and older.

The design and use of playground equipment may affect associated patterns of injury. Based on this study, 22.8 percent of the equipment associated with emergency room-treated injuries was designed for home use, 75.8 percent was designed for public use, and 1.4 percent was homemade (primarily rope swings)(Table 1). Applying these

Table 1.

1999 Estimates of Emergency Room-Treated Injuries Associated with Home, Public, and Homemade Playground Equipment

Type of Equipment	Percent Based on Special Study	Adjusted 1999 Estimate of Injuries
Total	100%	205,850
Public	75.8%	156,040
Home	22.8%	46,930
Home Made	1.4%	2,880

Source: National Electronic Injury Surveillance System (NEISS);
11/1/98 – 10/31/99 Special Study, 01/01/99 – 12/31/99 Surveillance Data
U.S. Consumer Product Safety Commission/EPHA

³ The NEISS estimate for playground equipment-related injuries treated in U.S. hospital emergency rooms during the 11/1/98 – 10/31/99 special study time period was 242,426 (CV= 0.06). Adjusting for out-of-scope cases produced an estimate of 205,577.

percentages to the adjusted 1999 estimate of playground equipment-related injuries resulted in an estimate of 156,040 injuries associated with public equipment, 46,930 injuries associated with home equipment, and 2,880 injuries associated with homemade equipment.

The remainder of this analysis is based on injuries to children younger than 15 years that involved equipment designed for home and public use only.

Victims

Age and Sex

Overall, 30 percent of the victims reported through the current study were of preschool age, i.e., under 5 years (Table 2). School-age children ages 5-9 years were associated with the largest portion of injuries, 56 percent. Older school-age children ages 10-14 years were associated with about 14 percent of the injuries. The ages of the children, however, varied by location of incident, probably due to differences in exposure. Commercial daycare and home locations tended to have the highest proportions of preschool victims.

Females were injured slightly more frequently (55 percent) than males (45 percent).

Table 2.

Playground Equipment-Related Injuries Treated in U.S. Hospital Emergency Rooms,
Ages of Victims by Location of Incident

Age of Victim (Years)	Location of Incident					
	Total	Home	Public Park	School	Comm. Daycare	Other
Total	100%	100%	100%	100%	100%	100%
< 2	3%	5%	8%	0%	2%	<1%
2 – 4	27%	34%	23%	9%	54%	56%
5 – 9	56%	59%	55%	66%	42%	30%
10 – 12	12%	1%	12%	20%	2%	13%
13-14	2%	1%	2%	5%	0%	0%

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10/31/99
U.S. Consumer Product Safety Commission/EPHA

Body Part, Diagnosis, and Disposition

Injuries to the arm and hand (primarily the lower arm, wrist, and elbow) were most common, with 43 percent of the injuries (Table 3). Injuries to the head and face followed, with 34 percent of the injuries, and injuries to the leg/foot, trunk, neck, and other parts of the body were associated with 23 percent of the injuries. By age, however, differences were apparent. For preschool-age children, head/face injuries were most frequent, accounting for almost one-half (49 percent) of the injuries. For older children, head and face injuries accounted for 28 percent of the total, and arm/hand injuries were most common, with almost one-half of the injuries (49 percent).

Table 3.

Playground Equipment-Related Injuries Treated in U.S. Hospital Emergency Rooms,
Body Part Injured by Age of Victim

Body Part	Age of Victim		
	Total	< 5 Years	5 -14 Years
Total	100%	100%	100%
Arm/Hand	43%	30%	49%
Head/Face	34%	49%	28%
Other	23%	21%	23%

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10/31/99
U.S. Consumer Product Safety Commission/EPHA

Overall, fractures were the most commonly reported injury, accounting for 39 percent of the total (Table 4). Lacerations, contusions/abrasions, and strains/sprains were the next largest categories, with 22, 20, and 11 percent of the injuries, respectively. By body part, over three-fourths (76 percent) of the injuries to the arm/hand area were fractures, primarily to the wrist, lower arm, and elbow (also, 78 percent of all injuries diagnosed as fractures involved the wrist, lower arm, and elbow). While 83 percent of the injuries to the head/face were lacerations, contusions, and abrasions, approximately 15 percent were more serious diagnoses—concussions, internal injuries, and fractures.

Approximately 3 percent of the victims were admitted to the hospital for further treatment. All of the hospitalized injuries resulted from falls, and almost all involved arm fractures that required surgery to repair. Most hospitalized cases occurred on equipment designed for public use.

Table 4.

**Playground Equipment-Related Injuries Treated in U.S. Hospital Emergency Rooms,
Diagnosis by Body Part Injured**

Diagnosis	Body Part			
	Total	Arm/Hand	Head/Face	Other
Total	100% ¹	100%	100%	100%
Fracture	39%	76%	<1%	24%
Laceration	22%	<1%	60%	6%
Contus./Abrs.	20%	8%	23%	39%
Strain/Sprain	11%	11%	0%	29%
Concussion	3%	0%	10%	0%
Internal Injury	2%	0%	5%	<1%
Other	3%	5%	2%	<1%

¹Column detail may not add to total due to rounding.

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10/31/99
U.S. Consumer Product Safety Commission/EPHA

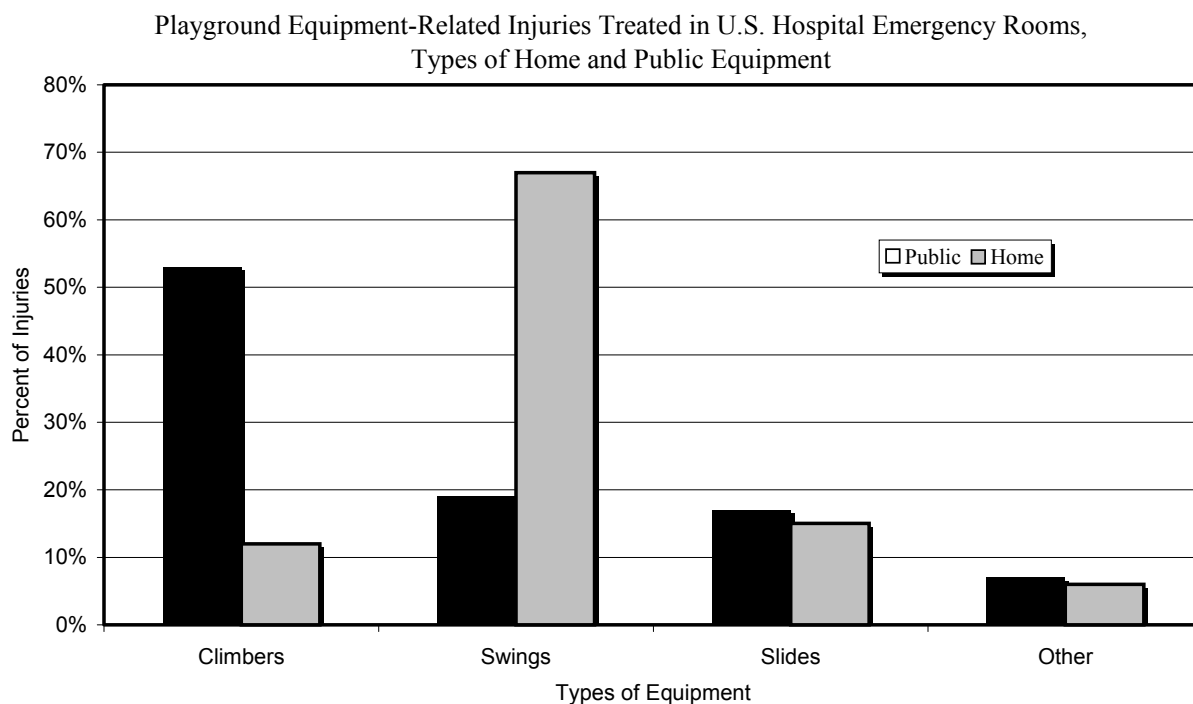
Types of Equipment

Because equipment designed for public use is often constructed and used differently than equipment designed for home use, these categories of equipment are discussed separately below.⁴ Figure 1 illustrates how the percentages of injuries associated with home and public equipment differ by specific equipment type, particularly climbers and swings.

Appendix tables provide further information on the types of public equipment involved in injuries by hazard pattern (Table A1), the ages of victims injured on public equipment by hazard pattern (Table A2), and the ages of victims injured on public equipment by the type of equipment involved (Table A3). Appendix Tables A4 through A6 provide similar information for injuries involving home equipment.

⁴ In about two-thirds of the cases involving both home and public playground equipment, the respondent did not witness the incident. Details about the incident, when provided, were supplied by the victim or others knowledgeable about the circumstances involved.

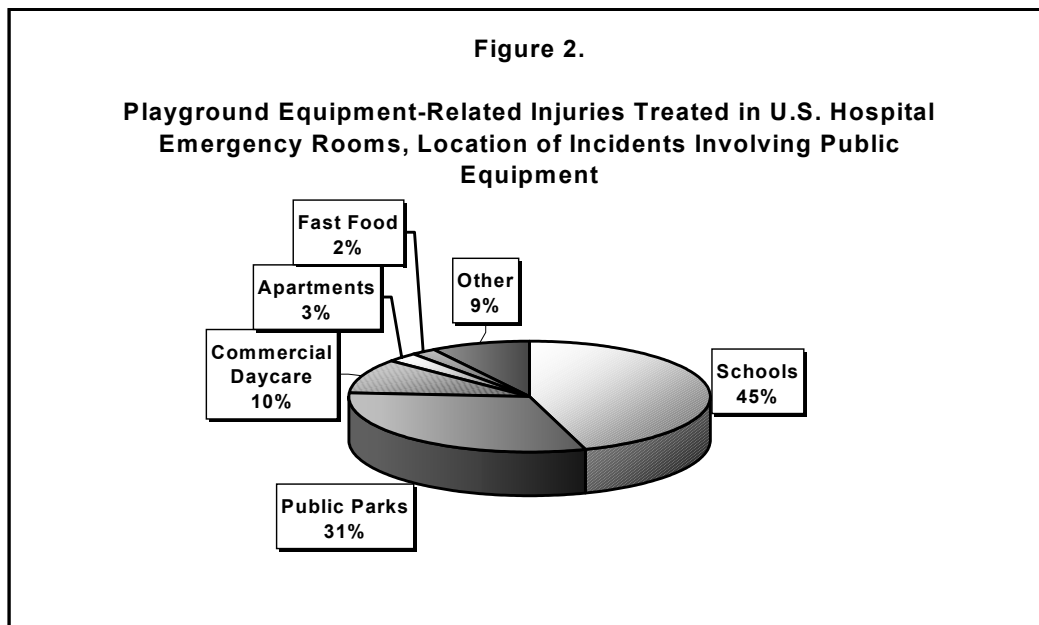
Figure 1.



Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10/31/99
U.S. Consumer Product Safety Commission/EPHA

Public Equipment

Location and Type. About 45 percent of the injuries involving public equipment occurred in schools, followed by about 31 percent in public parks (Figure 2). Injuries on public equipment also occurred in commercial daycare settings (10 percent), apartment complexes (3 percent), fast food restaurants (2 percent), and other locations (9 percent).



Source: National Electronic Injury Surveillance System (NEISS), 11/1/98-10/31/99
U.S. Consumer Product Safety Commission/EPHA

About one-half (53 percent) of the injuries involving public equipment occurred on climbers. Swings and slides were involved in about 19 and 17 percent of the injuries, respectively. See-saws accounted for about three percent of the injuries, and merry-go-rounds, about one percent. Other types of equipment, such as sandboxes, trapeze bars, ball pits, track rides, etc., were involved in about seven percent of the injuries (Table A1).

In one-fourth (25 percent) of the cases involving climbers, the specific type of structure involved in the injury was not reported. Where reported, however, about 60 percent of the injuries on climbers occurred on “horizontal ladders.” These were designed in various configurations, from a straight-ladder style to variations of curved or serpentine. An additional 6 percent of the climbers involved “hand-over-hand” style overhead rings or triangles, and 2 percent of the climbers involved arch climbers. Thus, over two-thirds (68 percent) of the injuries on climbers involved overhead equipment.

Where reported, over 40 percent of the injuries that occurred on public equipment involved multi-use structures. An additional two percent of the injuries involved soft contained equipment, which could also be classified in the category of multi-use equipment or structures. About 35 percent of the injuries that occurred in schools involved multi-use structures, and about 46 percent of the injuries that occurred in public parks involved multi-use structures. In other locations, about 47 percent of the injuries occurred on multi-use structures. However, while multi-use structures were associated with a substantial portion of the injuries reported through this study, the multi-use aspects of the equipment (e.g., overlapping use zones, multiple users, etc.) didn’t appear to contribute to the injuries that occurred.

Age, Materials, and Condition. In about one-half (47 percent) of the incidents on public playground equipment, the age of the equipment was not known, although much of the equipment appeared to be older styles (e.g., “stand-alone” metal equipment), based on the descriptions provided. In the remaining cases, the equipment ranged in age from newly installed to 40 years. About one-third (36 percent) of the equipment of known age was reported to have been less than 5 years old, and over one-half (56 percent) was less than 10 years old. However, about one-fourth (24 percent) of the equipment was reported to be 20 years or older. In schools, about one-third of the equipment (32 percent) was reported to be 20 years or older, as compared to 14 percent for public parks, and 17 percent for other locations. In the majority of cases, the respondents did not know if the equipment was purchased new or used.

Almost one-half (48 percent) of the public equipment was constructed primarily of metal. An additional 19 percent of the incidents involved plastic/metal equipment, and 12 percent of the incidents involved wood/metal equipment. The remaining 21 percent of the incidents involved equipment constructed of wood, plastic, or various combinations of materials such as wood, plastic, metal, and rope. Where equipment materials and age were both reported, about 22 percent of the all-metal structures were less than 10 years old, while about 85 percent of the structures that were made of other materials or combinations of materials were less than 10 years old.

Three-fourths (74 percent) of the public equipment was reported to be in “good” condition and an additional 17 percent was reported to be in “fair” condition. Other equipment was described to be rusted, broken, scarred, or abused. In the majority of cases, it was not known whether the equipment had been repaired or changed prior to the incident.

Home Equipment

Location and Type. All of the injuries involving home equipment occurred in or around private homes. About three percent occurred in home daycare settings.

Over two-thirds (67 percent) of all injuries involving home equipment occurred on swings, followed by slides, with 15 percent of the injuries, and climbers, with 12 percent of the injuries. Other types of equipment, such as trapeze bars, teeter-totters, and the roof of the playhouse portion of a multi-use structure, were associated with about six percent of the injuries (Table A4). Unlike public equipment, few of the injuries involving climbers were reported to have involved overhead ladders.

About 30 percent of the injuries that occurred on home equipment involved multi-use structures. For this analysis, a traditional-style swing set was not considered a multi-use structure. As with public equipment, the multi-use aspects of the equipment didn’t appear to contribute to the injuries that occurred.

Age, Materials, and Condition. In about 17 percent of the incidents on home playground equipment, the age of the equipment was not known. In the remaining cases,

the equipment ranged in age from new to about 20 years. Based on the information reported, home equipment appeared to be newer than that found on public playgrounds. About 72 percent of the equipment was reported to be under 5 years old, and 88 percent was reported to be less than 10 years old. Corresponding figures for public playground equipment were 36 percent and 56 percent, respectively.

Almost one-third (30 percent) of the home equipment was reported to be constructed of combinations of plastic and metal, about 23 percent was reported to be constructed primarily of metal, and about 18 percent was reported to be primarily constructed of wood. The remaining 29 percent of the equipment was reported to be made primarily of plastic or combinations of metal, wood, plastic, and rope.

Over two-thirds (69 percent) of the home equipment was reported to be in “good” condition and an additional 24 percent was reported to be in “fair” condition. A few items of equipment were reported to be rusted or broken. In about 14 percent of the cases, the equipment was said to have been repaired, painted, or had parts replaced.

Hazard Patterns

Public Equipment

Injuries to preschool-age children (under 5 years) most often involved climbers (40 percent) and slides (33 percent). Injuries to school-age children (5 and older) most frequently involved climbers (56 percent) and swings (24 percent) (Table A3). Hazard patterns did not vary substantially by age (Table A2).

Falls. Overall, about 79 percent of the injuries that occurred on public equipment involved falls (Table A2). Specifically, 68 percent of the injuries involved falls to the surface below the equipment, 10 percent involved falls to other parts of the same equipment, and 1 percent involved falls to unidentified surfaces.

Fall-related injuries were most prevalent on climbers, accounting for 86 percent of the total injuries on these products (Table A1). About 80 percent of the injuries associated with swings involved falls, about 69 percent of the injuries associated with slides involved falls, and about 59 percent of the injuries associated with other types of equipment (i.e., see-saws, merry-go-rounds, and other combined) involved falls.

Falls to other parts of the same equipment were reported to have occurred most often on climbers, and usually involved falls to steps or rungs of ladders, horizontal climbing bars, or vertical support poles (Table A1).

On public equipment, 17 percent of the injuries involving falls to the surface occurred from heights of 30 inches or less, 47 percent occurred from heights of 48 inches or less, and 78 percent from heights of 72 inches or less.⁵ Virtually all (99.6 percent) of the injuries involving falls to the surface occurred from distances of less than 10 feet. Fall heights from climbers tended to be greater than fall heights from other equipment, in that 67 percent of the falls from climbers were greater than 48 inches, as compared to 37 percent for other equipment.

The most frequently reported cause of falls, accounting for 40 percent of all fall-related injuries on public equipment, was the child losing his or her grip (primarily on climbing bars or swing chains). Other frequently reported causes included the victim's feet slipping or tripping (16 percent; most often on slides), the victim jumping or dismounting intentionally (14 percent; most often on swings), or the victim losing his or her balance (10 percent; most often on slides). Less often, victims bumped into or were pushed by another person or reached for a part of the equipment and missed.

Impact. About eight percent of the injuries involved impact with stationary equipment, such as when a child ran into a playground structure (Table A1). About three percent of the injuries involved impact with moving equipment, such as a swing.

Other. About 10 percent of the injuries involved other or unspecified hazard patterns (Table A1). Where reported, these injuries generally resulted from contact with hardware, pinch points, sharp edges, etc.

Over two thirds (67 percent) of those injured on public playground equipment had used the equipment on a daily or weekly basis. About eight percent had never used the equipment previously.

On public equipment, about 17 percent of the injuries occurred in the morning (6:00 am – 11:59 am), 42 percent occurred in the early afternoon (12:00 pm – 2:59 pm), 27 percent occurred in mid- to late-afternoon (3:00 pm – 5:59 pm), 13 percent occurred in the evening (6:00 pm – 8:59 pm), and less than 1 percent occurred at night (9:00 pm – 5:59 am). By location, almost 80 percent of the injuries in school settings occurred before 3:00 pm, hours when some form of playground supervision would most likely be present. In parks, about 37 percent of the injuries occurred before 3:00 pm.

Overall, about one-fourth (26 percent) of the incidents on public playground equipment involved other children. In school settings, about 28 percent of the incidents involved other children, as compared to 19 percent in public parks. For incidents involving other children, about one-fourth (24 percent) occurred on playgrounds having 15 or more children present. Most often, these were school playgrounds.

⁵ Recommendations in the CPSC Handbook for Public Playground Safety and the ASTM voluntary standard for public playground equipment (ASTM F 1487) are for a protective barrier for preschool-age children and a guardrail or barrier for school-age children on platforms exceeding 30 inches in height, and a barrier on platforms exceeding 48 inches in height.

Where reported, about one-third (34 percent) of the public playgrounds had separate play areas for different age groups. Similar proportions were found for schools and public parks. Signage about appropriate ages or use of the equipment was generally not present on public playgrounds.

In almost 80 percent of the cases involving public equipment, it was not known if there were any regular maintenance or inspection programs in place. However, where it was reported, the majority of playgrounds were inspected on a fixed schedule and repairs were made as needed.

Home Equipment

The types of equipment and hazard patterns involved did not vary substantially by age of victim on home equipment (Tables A6 and A5).

Falls. Falls were associated with 81 percent of the injuries associated with home playground equipment (Table A4). Specifically, 69 percent involved falls to the surface below the equipment, 10 percent involved falls to other parts of the same equipment, and 2 percent involved falls to an unknown surface.

All of the injuries associated with home climbers involved falls, whereas about 80 percent of the injuries on slides and swings involved falls.

Falls to other parts of the same structure occurred most often when children fell on slide chutes, platforms, and support beams when climbing up a slide backwards. Other scenarios included cases of children falling on ladders or railings of climbers, or falling on the footrest of a glider swing.

On home equipment, 31 percent of the injuries involving falls to the surface occurred from heights of 30 inches or less, 79 percent occurred from heights of 48 inches or less, and 93 percent from heights of 72 inches or less. Almost all (98.7 percent) of the injuries involving falls to the surface occurred from distances of less than 7 feet.

The most frequently reported cause of falls was when victims were jumping or dismounting intentionally from equipment (35 percent, primarily from swings). Other causes included victims losing their grip (primarily on components of climbers), losing their balance (primarily on swings), slipping or tripping (primarily on slides), bumping into or being pushed by another person, reaching for an equipment component and missing, and playing on equipment that broke during the incident.

Impact. Incidents involving impact with moving equipment were associated with about six percent of the incidents. Injuries usually resulted from children being hit by a moving swing (Table A4).

Other. About 13 percent of the injuries on home equipment involved other or unspecified hazard patterns (Table A4). Where reported, these involved such scenarios

as contacting a nearby metal fence while swinging, getting a foot caught in the floor slats of a bench-type glider swing, contacting a protruding bolt on a glider swing, and having a wrist bent back while trying to slow down on a slide. Preschool-age children tended to have a higher proportion of these types of injuries than older children (Table A5).

About 77 percent of those injured on home equipment used the equipment on a daily or weekly basis. Less than three percent had never used the equipment before.

On home equipment, about 17 percent of the injuries occurred in the morning (6:00 am—11:59 am), 16 percent occurred in the early afternoon (12:00 pm—2:59 pm). Almost one-half (46 percent) of the incidents occurred in mid- to late-afternoon (3:00 pm—5:59 pm), and 21 percent occurred in the evening.

About 20 percent of the incidents on home playground equipment involved other children. In the majority of these cases (75 percent), there were three or fewer children present.

Playground Surfacing

Because severe head injuries from falls have the potential for serious long-term consequences or even death, improving the safety of playground surfaces has become an important issue. ASTM test methods to evaluate the suitability of surfacing materials have been based on specific head injury criteria, and CPSC recommendations on appropriate surfacing have been based on the results of these tests.

In locations where public equipment was installed, almost 80 percent had protective surfacing under the equipment, most often bark mulch or wood chips (Table 5). By location, about 74 percent of schools had protective surfacing, as compared to 86 percent for parks, 96 percent for commercial daycare, and 70 percent for other locations. In contrast, only about nine percent of home locations had protective surfacing, most often sand. Dirt and grass were, by far, the most prevalent surfaces present under home playground equipment. Figure 3 illustrates the differences in surfacing types under home and public equipment.

Table 5.

Playground Equipment-Related Injuries Treated in U.S. Hospital Emergency Rooms,
Surfacing Type by Home or Public Equipment

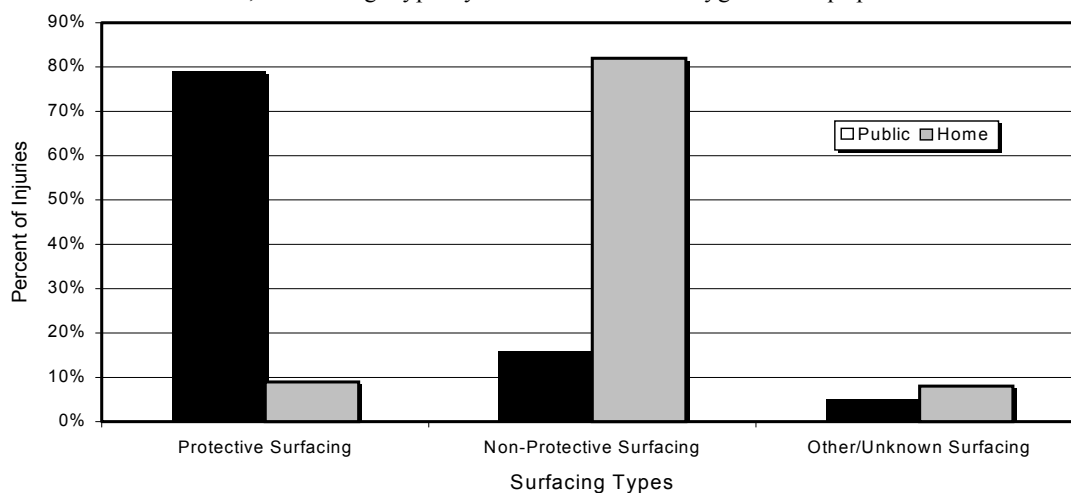
Surfacing Type	Public Equipment	Home Equipment
Total	100%¹	100%
Protective Surfacing	79%	9%
Bark Mulch/Wood Chips	(30%)	(2%)
Sand	(23%)	(7%)
Mats/Poured Resilient Surfaces	(14%)	(0%)
Gravel	(8%)	(0%)
Shredded Tires	(4%)	(0%)
Non-Protective Surfacing	16%	82%
Dirt/Grass	(14%)	(82%)
Concrete/Asphalt	(2%)	(<1%)
Other/Unknown Surfacing	5%	8%

¹ Column detail may not add to total due to rounding.

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10/31/99
U.S. Consumer Product Safety Commission/EPHA

Figure 3.

Playground Equipment-Related Injuries Treated in U.S. Hospital Emergency
Rooms, Surfacing Type by Home or Public Playground Equipment



Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10/31/99
U.S. Consumer Product Safety Commission/EPHA

As noted above, protective playground surfaces are primarily intended to address the risk of serious head injury. Assuming that serious head injuries would include diagnoses of fracture, concussion, and internal organ injury, then serious injuries to the head/face were associated with about five percent of all surface fall-related injuries in this study (Table 6). Thus, small sample sizes precluded the possibility of drawing firm conclusions about the relative severity of fall injuries onto protective versus non-protective surfaces, as well as the contribution of fall heights. However, the few cases that did involve serious head injuries usually occurred on non-protective surfaces or on protective surfaces of insufficient depths (e.g., 1-2 inches) to prevent serious injury.

Table 6.

Playground Equipment-Related Injuries Treated in U.S. Hospital Emergency Rooms,
Body Part/Severity by Surface Type

Body Part/ Severity	Surface Type			
	Total	Protective	Non- Protective	Other/ Unknown
Total	100% ¹	100%	100%	100%
More severe	(59%)	(59%)	(64%)	(18%)
Less severe	(41%)	(41%)	(36%)	(82%)
Head/face	21%	22%	20%	24%
More severe	(5%)	(6%)	(5%)	(0%)
Less severe	(16%)	(16%)	(15%)	(24%)
Arm/hand	57%	53%	68%	19%
More severe	(47%)	(46%)	(51%)	(18%)
Less severe	(10%)	(6%)	(17%)	(2%)
Other	22%	25%	12%	57%
More severe	(7%)	(7%)	(7%)	(0%)
Less severe	(15%)	(18%)	(4%)	(57%)

¹ Column detail may not add to total due to rounding.

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10/31/99
U.S. Consumer Product Safety Commission/EPHA

With regard to the effect of different protective surfaces on fall injuries in general, higher proportions of arm/hand injuries occurred on non-protective surfaces than on protective surfaces. However, differences in the severity of injury among specific types of surfaces (e.g., loose fill versus resilient mats and poured surfaces) could not be evaluated due to small sample size.

Other

Weather

In most instances, weather conditions did not appear to contribute to the incidents involving either public or home playground equipment. In a few cases, it was reported that the weather was hot, and that the victim lost his or her grip on the bars of overhead climbers due to sweaty palms. In a few other cases, it was reported that the victim slipped on the wet step, platform, or chute of a slide.

Disabilities

Disabilities were not reported to be present in most incidents involving either home or public equipment.

DEATHS

A review of the Commission's data files for January 1, 1990 to August 1, 2000 revealed 147 deaths associated with playground equipment.⁶ These deaths do not constitute a statistical sample of known probability of selection, nor do they include all playground equipment-related deaths. They do, however, provide a minimum figure for deaths associated with playground equipment that occurred during that time period. These incidents also provide data about the circumstances surrounding playground fatalities.

Victim Age

Of the 147 deaths, almost one-third (31 percent) involved children younger than five years, and 79 percent involved children younger than ten (Table 7).

Table 7.

Playground Equipment-Related Fatalities,
Age Group by Number and Percent of Deaths

Age of Victim	Deaths	
	Number	Percent
Total	147	100%
< 2	6	4%
2 – 4	40	27%
5 – 9	70	48%
10 – 12	21	14%
13 – 14	9	6%
Unknown	1	1%

Source: In-depth Investigation (INDP), Injury and Potential Injury Incident (IPII), Death Certificate (DTHS) and National Electronic Injury Surveillance System (NEISS) Data Files; 1/90 –8/00
U.S. Consumer Product Safety Commission/EPHA

Location

Based on the available information, it was sometimes difficult to determine whether the playground equipment involved in fatal incidents was manufactured for

⁶ The data files searched were the In-depth Investigation file (INDP), the Injury and Potential Injury Incident file (IPII), the Death Certificate file (DTHS) and the National Electronic Injury Surveillance System (NEISS).

home or for public use. For the purpose of this report, however, it was assumed that equipment found in home locations was designed primarily for home use and that equipment found in public locations (such as parks and schools) was designed primarily for public use. In the 128 cases for which location was specified, 90 incidents (70 percent) occurred in home locations and 38 (30 percent) occurred in public locations (Table 8). Home locations appeared to have a slightly greater proportion of pre-school age victims (34 percent) than public locations (26 percent).

Table 8.

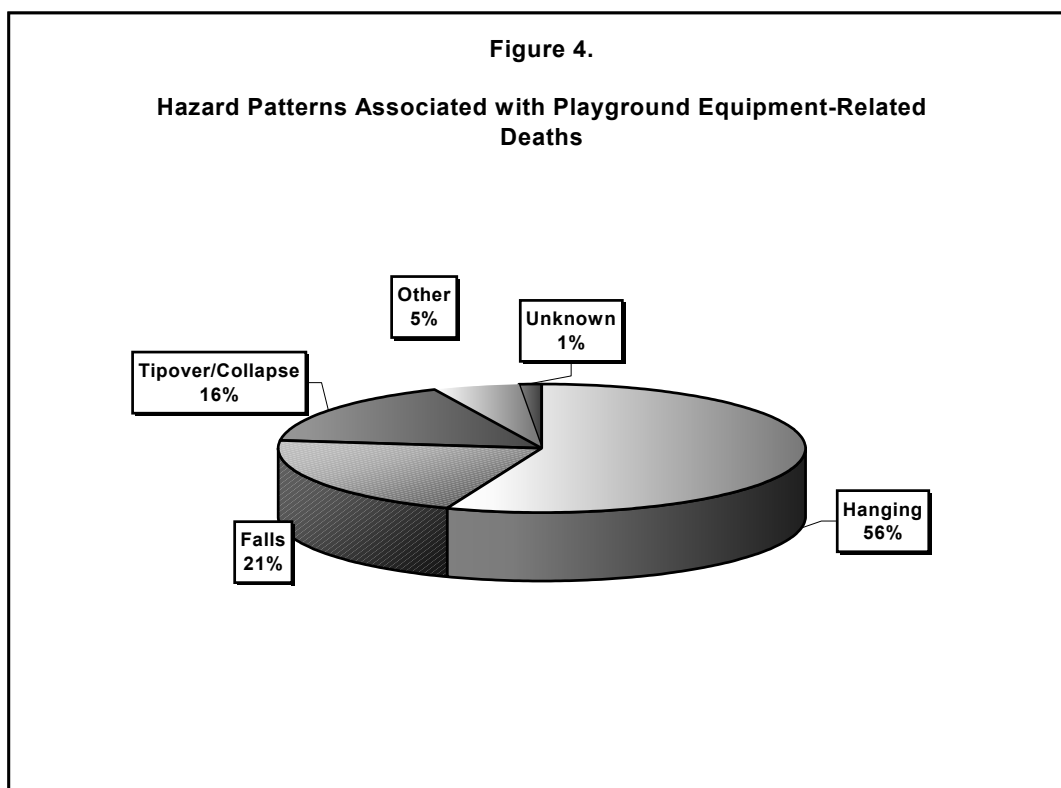
Playground-Related Fatalities, Age of Victim by Location of Incident

Age of Victim	Location			
	Total	Public	Home	Unknown
Total	147	38	90	19
0-1	6	1	3	2
2-4	40	9	28	3
5-9	70	18	44	8
10-12	21	9	10	2
13-14	9	1	4	4
Unknown	1	0	1	0

Source: In-depth Investigation (INDP), Injury and Potential Injury Incident (IPII), Death Certificate (DTHS) and National Electronic Injury Surveillance System (NEISS) Data Files; 1/90 –8/00
U.S. Consumer Product Safety Commission/EPHA

Hazard Patterns

The fatal incidents were analyzed by hazard pattern rather than by type of equipment, since the specific type of equipment involved was not always identified. Where the type of equipment was reported, it is noted below. The top three hazard patterns associated with the 147 deaths were hanging (82 deaths), falls (31 deaths) and tipover or collapse of the equipment (24 deaths) (Figure 4). Other reported hazards, including entrapment and impact, were associated with eight deaths. Information on the circumstances involved in the death was not available in two cases.



Source: In-depth Investigation (INDP), Injury and Potential Injury Incident (IPII), Death Certificate (DTHS) and National Electronic Injury Surveillance System (NEISS) Data Files; 1/90 –8/00
U.S. Consumer Product Safety Commission/EPHA

Hanging

The 82 deaths reported as hangings involved unintentional strangulation due to entanglement in items that were generally not designed to be part of the equipment (e.g., ropes, clothing drawstrings, etc.) or were homemade items (e.g., rope swings).

Most of the entanglements involved items tied to the equipment, tied around the child's neck, or both. Ropes, jump ropes, shoestrings, cords, sashes, and leashes were among the items involved in these types of incidents. Playground slides were most often involved, although climbing equipment and swing sets were also reported. One example of this scenario involved a child who strangled when a cord that had been tied to a slide platform became wrapped around his neck as he went down the tube slide. In another case, a girl strangled when a homemade dog leash around her neck became wedged between equipment components as she went down a slide. A third case involved a girl who became hanged while playing "puppy" with one end of a bathrobe sash tied around her neck and the other end to the top of the slide. A particularly unusual case involved a 5-year-old who had a sled rope around her neck while climbing the slide ladder. When she fell from the top platform, the sled caught on the railings, hanging her. These

incidents illustrate that children can be unaware of the inherent dangers of using the playground equipment in conjunction with objects that are not part of the structure.

An issue that has surfaced since children have started to wear bicycle helmets is the involvement of those helmets in fatal playground incidents. Among the deaths due to hanging were two incidents involving bicycle helmets. Although these incidents did not involve the typical entrapment scenario, they nevertheless indicated how these deaths have occurred. In one case, a 10-year-old male was found near the bottom of a tubular slide hanging from a bicycle inner tube tied to the back of the bike helmet he was wearing. In the second incident, a 6-year-old male was believed to have been balancing on his bicycle seat trying to untangle the rope of a trapeze bar from an overhead horizontal bar. The victim's helmet and head got caught between the trapeze bar/hand-hold assembly and the cord that suspends the trapeze. The helmet's chinstrap tightened around the victim's neck, cutting off his oxygen.

Clothing worn by the victims was involved in a number of incidents, including several with clothing drawstrings, as well as parts of coats, and a mitten string. In some cases, clothing caught on protruding bolts (on a homemade swing, slide, and gym set). In other cases, drawstrings caught on joints or openings on slides, and in one case, a swing set.

Another common hanging scenario involved rope, tire, or tree swings, many of which were identified as homemade. In most of these cases, the victim's neck was either caught or placed in a loop or the rope became entangled around the victim's neck.

Finally, there were a few incidents where the child was hung on components of playground equipment, such as swings and a rope climber. At least some of this equipment appeared to be manufactured products.

Falls

In recent years, the Commission has purchased death certificates reporting falls from only one or two states (with the exception of 1991). Thus, deaths due to falls are under-reported in the Commission's data. Nevertheless, CPSC has received reports of 31 playground fall deaths since 1990. About three-fourths of these deaths involved a head injury. Swings, slides, and climbers were the primary types of equipment involved in fall deaths.

For most incidents involving swings, details about the scenario were not available. However, a few cases provided information about the circumstances involved. In one case, a child tried to do a back flip off of a swing and landed on her head. In another case, a child was seated on a swing that unhooked causing her to fall and sustain a closed head injury. In a third case, a child stood up on a swing and lost her balance, falling and striking her head on asphalt. For some of the deaths involving climbers, there were reports of the fall being caused by slipping or losing grip on components of the climber.

Tipover/Collapse

In 24 incidents, children were fatally injured when playground equipment either tipped over or collapsed. In some cases, the equipment was not anchored to the ground or was not anchored properly. In other cases, the equipment broke or disengaged, hitting the victim. Swing sets were the type of equipment most frequently reported in these incidents. In 11 cases, the equipment was reported to be homemade, although in some cases, this information was not known.

Entrapment

Of the 147 deaths, 3 resulted from a child's head or neck becoming entrapped in the equipment. One death occurred when a child became entrapped between the horizontal rungs of a ladder. The second case involved a child who became entrapped between the leg support and slide of home playground equipment. The third incident involved a child who was wearing a bicycle helmet that became wedged in a gap between two platforms.

Impact

There were three fatalities that involved impact with a moving component of playground equipment. All involved a head injury. The deaths involved being struck by a rotating passenger compartment; an animal swing, and a homemade swing.

Other/Unknown

Four deaths were included in this category. In one case, a 13-year-old boy was lying in a ball pit at a pay-for-play establishment and other teenagers who went down a slide landed on top of him. In another case, a child died from aspiration of gravel from a school playground. In two cases, details about the circumstances involved in the death were not available.

1988 PLAYGROUND STUDY

Comparison of the findings from the current study to those from a 1988 CPSC study of playground hazards⁽¹⁾ revealed a few notable similarities and differences. Population-based rates of injury for both time periods were comparable.

Public equipment continues to be associated with the greatest proportion of injuries, 76 percent in the current study as compared to 70 percent in 1988. Locations in which these injuries occurred, however, appear to have shifted somewhat. In the current study, about 45 percent of the injuries involving public equipment occurred in schools, 31 percent occurred in public parks, and 24 percent occurred in other locations. In 1988, however, about 42 percent of the injuries occurred both in schools and in public parks, and 16 percent occurred in other locations.

During both time periods, climbers accounted for the greatest proportion of injuries on public equipment (Table 9). The proportion of injuries involving climbers in public locations increased from 32 percent in 1988 to 53 percent in the current study. The proportions of injuries associated with slides, swings, and other public equipment declined somewhat. On home equipment, swings and swing sets continued to be associated with the greatest proportion of injuries.

Table 9.

Playground Equipment-Related Injuries Treated in U.S. Hospital Emergency Rooms, Home & Public Equipment /Hazard Patterns from 1988 & 1999/2000 CPSC Studies

Equipment & Hazard Pattern	1988 Study		1998/1999 Study	
	Home	Public	Home	Public
Total	100% ¹	100%	100%	100%
Climbers	31%	32%	12%	53%
Slides	4%	29%	15%	17%
Swings	60%	26%	67%	19%
Other	5%	13%	6%	11%
Falls	73%	74%	81%	79%
Impact	22%	18%	6%	11%
Other	6%	7%	13%	10%

¹ Column detail may not add to total due to rounding.

Source: National Electronic Injury Surveillance System (NEISS),
4/1/88-12/31/88, 11/1/98 – 10/31/99
U.S. Consumer Product Safety Commission/EPHA

In the current study, substantial proportions of the injuries occurred on multi-use structures, about 30 percent of the injuries on home equipment and about 40 percent of the injuries that occurred on public equipment. Information on the specific proportions of home and public multi-use structures was not presented in the 1988 study, although these structures were less common at that time. For both time periods, however, the multi-use aspects of the equipment did not appear to be causal factors in the injuries that occurred.

Falls accounted for about 81 percent of the injuries on home equipment and 79 percent of the injuries on public equipment, in the current study (Table 9). In 1988, falls accounted for 73 and 74 percent of the injuries on home and public equipment, respectively. It is possible that the increased proportion of injuries attributable to falls in recent years may actually be a reflection of a reduction of other hazards such as impact with moving or stationary equipment; contact with hardware, pinch points, sharp edges; etc.

In the current study, about 79 percent of the equipment in public locations was installed over protective surfacing. In 1988, only about 36 percent of the surfaces under public equipment were protective. During both time periods, the surfacing under home equipment was predominantly dirt or grass. It is encouraging that the proportion of public playgrounds having protective surfacing appears to have increased in recent years.

Since the 1988 study, deaths from swing impact appear to have almost disappeared. Strangulation due to entanglement on ropes, shoestrings, cords, leashes, clothing strings, and similar items continues to be the most common scenario involved in fatal playground incidents. The majority of fall-related deaths continue to be related to head injury, although generally not on recommended surfaces.

Reasons for the differences between the two time periods may be related to changes in exposure (e.g., increased use of after-school programs, commercial daycare, etc.); improved construction and materials (e.g., fewer sharp edges, protruding hardware components, heavy swings, etc); changes in equipment types (e.g., more multi-use structures, fewer swings and merry-go-rounds, etc.); and increased recognition of hazards (importance of protective surfaces, improved layout, etc.).

IV. CONCLUSIONS AND RECOMMENDATIONS

Fall-related injuries continue to account for more injuries on playground equipment than any other hazard scenario. Reported fall-related deaths most often involved head injury. Actions taken to address severe head injuries from falls include the development of the CPSC Handbook for Public Playground Safety, which includes guidelines on protective surfacing, and an ASTM safety standard, which provides a test method to evaluate the impact attenuation of playground surfaces. While serious head injuries (i.e., fractures, concussions, and internal injuries) accounted for only a small portion of the fall-related injuries in this study, adequate protective surfaces were not present in most of the serious cases. Particularly since death may occur, the installation and maintenance of appropriate protective surfaces are important in reducing the risk of severe head injury. It is encouraging that the proportion of public playgrounds having protective surfacing has increased in recent years. However, home equipment continues to be installed over dirt and grass, surfaces which do not offer much protection against serious head injuries.

CPSC developed the recommendations for protective surfacing on playgrounds to address the risk of serious head injury. The effectiveness of various safety surfaces in reducing the frequency and severity of other fall-related injuries is not known, and may be an area for future research. Fractures of the hand and arm, particularly the wrist, lower arm, and elbow, were the most common injuries treated in hospital emergency rooms during the special study time period. While generally not life-threatening, these injuries can nevertheless be debilitating and may have long-term consequences. Most of the hospitalized injuries involved serious fall-related fractures of the hand and arm.

A number of recommendations in the CPSC Handbook and the ASTM standards address fall hazards through modification of the equipment, such as with guardrails and barriers. However, for specific equipment types, additional consideration may need to be given to the ages and skill levels of the intended users. For climbers especially, fall-related injuries were common, particularly with overhead equipment such as horizontal ladders. While four-year-olds are generally the youngest children capable of using upper body equipment, perhaps some equipment configurations are difficult even for older children to negotiate successfully.

With regard to playground equipment-related deaths, hanging and fall-related deaths continue to be the most common hazard scenarios. While installation and maintenance of appropriate protective surfacing and certain equipment modifications may address most of the fatal fall incidents, hanging deaths remain problematic. Voluntary ASTM standards and CPSC guidelines for playground equipment and children's clothing drawstrings have addressed some aspects of clothing entanglement.^(6, 7, 8, 11, 12) However, children have also become entangled in other items that were not designed to be part of the equipment (e.g., ropes, cords, leashes, etc.) or were homemade (e.g., rope swings). To consumers, this may be a "hidden hazard."

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11. American Society for Testing and Materials. *ASTM F 1816 Standard Safety Specification for Drawstrings on Children's Upper Outerwear*. West Conshohocken, PA: American Society for Testing and Materials, 1997.
12. *Guidelines for Drawstrings on Children's Outerwear*. Washington, D.C.: U.S. Consumer Product Safety Commission, 1996.

APPENDIX

Table A1. Injuries Associated with Public Playground Equipment,
Type of Equipment by Hazard Pattern

Type of Equipment	Hazard Pattern						
	Total	Falls to Surface	Falls to Equipment	Falls to Unk Surface	Impact, Moving Equipment	Impact, Stationary Equipment	Other, Unknown
Total	100% ^{1,2} (100%) ³	100% (68%)	100% (10%)	100% (1%)	100% (3%)	100% (8%)	100% (10%)
Climbers	53% (100%)	55% (70%)	77% (14%)	68% (2%)	0% (0%)	58% (9%)	29% (5%)
Swings	19% (100%)	21% (76%)	5% (3%)	21% (1%)	69% (12%)	4% (2%)	11% (5%)
Slides	17% (100%)	16% (65%)	6% (4%)	6% ($<1\%$)	0% (0%)	10% (5%)	45% (26%)
See-Saws	3% (100%)	2% (48%)	0% (0%)	0% (0%)	27% (27%)	10% (23%)	$<1\%$ (2%)
Merry-Go-Rounds	1% (100%)	$<1\%$ (31%)	2% (19%)	0% (0%)	0% (0%)	0% (0%)	5% (50%)
Other	7% (100%)	5% (52%)	9% (13%)	5% (1%)	4% (2%)	18% (20%)	9% (12%)

¹ Detail may not add to total due to independent rounding.

² Upper percents sum vertically.

³ Lower percents sum horizontally.

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10/31/99
U.S. Consumer Product Safety Commission/EPHA

Table A2. Injuries Associated with Public Playground Equipment,
Age of Victim by Hazard Pattern

Age of Victim (Years)	Hazard Pattern						
	Total	Falls to Surface	Falls to Equipment	Falls to Unk Surface	Impact, Moving Equipment	Impact, Stationary Equipment	Other, Unknown
Total	100% ^{1,2} (100%) ³	100% (68%)	100% (10%)	100% (1%)	100% (3%)	100% (8%)	100% (10%)
< 2	3% (100%)	2% (48%)	2% (7%)	0% (0%)	2% (2%)	0% (0%)	14% (43%)
2 – 4	24% (100%)	21% (63%)	30% (13%)	16% (<1%)	7% (1%)	23% (8%)	41% (15%)
5 – 9	55% (100%)	61% (74%)	57% (10%)	10% (<1%)	36% (2%)	59% (9%)	20% (5%)
10 – 12	15% (100%)	16% (70%)	11% (7%)	6% (<1%)	7% (2%)	10% (5%)	26% (15%)
13 – 14	3% (100%)	0% (0%)	0% (0%)	68% (27%)	47% (52%)	8% (22%)	0% (0%)

¹ Detail may not add to total due to independent rounding.

² Upper percents sum vertically.

³ Lower percents sum horizontally.

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10 /31/99
U.S. Consumer Product Safety Commission/EPHA

Table A3. Injuries Associated with Public Playground Equipment,
Age of Victim by Type of Equipment

Age of Victim (Years)	Type of Equipment						
	Total	Climbers	Swings	Slides	See-Saws	Merry-Go- Rounds	Other
Total	100% ^{1,2} (100%) ³	100% (53%)	100% (19%)	100% (17%)	100% (3%)	100% (1%)	100% (7%)
< 2	3% (100%)	0% (0%)	2% (10%)	11% (64%)	4% (4%)	63% (21%)	0% (0%)
2 – 4	24% (100%)	21% (45%)	8% (6%)	40% (29%)	0% (0%)	25% (1%)	58% (19%)
5 – 9	55% (100%)	65% (60%)	53% (18%)	42% (13%)	66% (4%)	12% (<1%)	29% (4%)
10 – 12	15% (100%)	12% (41%)	30% (38%)	7% (8%)	31% (7%)	0% (0%)	13% (7%)
13 – 14	3% (100%)	3% (48%)	8% (52%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)

¹ Detail may not add to total due to independent rounding.

² Upper percents sum vertically.

³ Lower percents sum horizontally.

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10 /31/99
U.S. Consumer Product Safety Commission/EPHA

Table A4. Injuries Associated with Home Playground Equipment,
Type of Equipment by Hazard Pattern

Type of Equipment	Hazard Pattern					
	Total	Falls to Surface	Falls to Equipment	Falls to Unk Surface	Impact, Moving Equipment	Other, Unknown
Total	100% ^{1,2} (100%) ³	100% (69%)	100% (10%)	100% (2%)	100% (6%)	100% (13%)
Climbers	12% (100%)	12% (66%)	41% (34%)	0% (0%)	0% (0%)	0% (0%)
Slides	15% (100%)	13% (62%)	30% (20%)	0% (0%)	0% (0%)	26% (18%)
Swings	67% (100%)	71% (73%)	2% (<1%)	100% (3%)	100% (9%)	74% (14%)
Other	6% (100%)	5% (54%)	27% (46%)	0% (0%)	0% (0%)	0% (0%)

¹ Detail may not add to total due to independent rounding.

² Upper percents sum vertically.

³ Lower percents sum horizontally.

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10 /31/99
U.S. Consumer Product Safety Commission/EPHA

Table A5. Injuries Associated with Home Playground Equipment,
Age of Victim by Hazard Pattern

Age of Victim (Years)	Hazard Pattern					
	Total	Falls to Surface	Falls to Equipment	Falls to Unk Surface	Impact, Moving Equipment	Other, Unknown
Total	100% ^{1,2} (100%) ³	100% (69%)	100% (10%)	100% (2%)	100% (6%)	100% (13%)
< 2	5% (100%)	3% (46%)	0% (0%)	0% (0%)	7% (8%)	17% (46%)
2 – 4	37% (100%)	36% (68%)	35% (10%)	0% (0%)	47% (7%)	45% (16%)
5 – 9	57% (100%)	59% (72%)	65% (11%)	100% (4%)	46% (5%)	33% (8%)
10 – 12	1% (100%)	2% (100%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)
13 – 14	<1% (100%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)	5% (100%)

¹ Detail may not add to total due to independent rounding.

² Upper percents sum vertically.

³ Lower percents sum horizontally.

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10 /31/99
U.S. Consumer Product Safety Commission/EPHA

Table A6. Injuries Associated with Home Playground Equipment,
Age of Victim by Type of Equipment

Age of Victim (Years)	Type of Equipment				
	Total	Climbers	Slides	Swings	Other
Total	100% ^{1,2} (100%) ³	100% (12%)	100% (15%)	100% (67%)	100% (6%)
< 2	5% (100%)	5% (13%)	7% (23%)	4% (63%)	0% (0%)
2 – 4	37% (100%)	34% (11%)	38% (15%)	36% (65%)	54% (8%)
5 – 9	57% (100%)	60% (13%)	51% (14%)	58% (69%)	46% (5%)
10 – 12	1% (100%)	0% (0%)	0% (0%)	2% (100%)	0% (0%)
13 – 14	1% (100%)	0% (0%)	4% (100%)	0% (0%)	0% (0%)

¹ Detail may not add to total due to independent rounding.

² Upper percents sum vertically.

³ Lower percents sum horizontally.

Source: National Electronic Injury Surveillance System (NEISS), 11/1/98 – 10 /31/99
U.S. Consumer Product Safety Commission/EPHA

City of Belleville

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www.bellevilleonthelake.com



To: Belleville City Council
From: Jason Smith, MPA – City Manager
Date: 5/1/2025
Re: Giffels Webster Quote - Rec Plan Refresh

RECOMMENDATION: *Motion to authorize Giffels Webster to amend the 5-year Parks Plan Refresh to DNR Compliance for \$6,200.*

After submitting the five-year Parks Plan refresh last year, the DNR has finally reviewed the plan and given feedback on the submission. Essentially, because the DNR no longer allows for “refresh” plans, all plans are considered “new” and must follow more stringent guidelines.

As Giffels Webster has been working on the Master Plan, components from that can be taken and used for the Parks Plan, saving some time to complete the process. Additionally, Giffels Webster is skilled in the proper formatting and processes required by the DNR to have a properly submitted plan that will be approved at the state level, qualifying us for grant funding when available.

Your consideration and concurrence are appreciated.

Prepared for...

Belleville Recreation Plan

April 2025

Project Goal: Assist Belleville with preparation of the 2026-2030 Recreation Plan in conjunction with the Michigan DNR guidelines for recreation plans.

PROPOSED SCOPE OF WORK

We propose to help complete the Recreation Plan, primarily by our planning team, with input from engineering and landscape architecture as appropriate. This will include the following elements:

ELEMENT ONE: PLAN REVIEW & RESEARCH

We will prepare all required notices associated with the DNR's requirements for community recreation plans.

- Review the material prepared to date and add photos, illustrations, as appropriate.
- Meet with the Parks & Recreation Commission to review and discuss draft Recreation Plan and affirm the plan's goals, objectives and action items.

ELEMENT TWO: PUBLIC INPUT

- Utilized survey results from the Master Plan related to the City's current recreation facilities and programming.
- Facilitate public open house to continue community discussion on recreation plan.
- Utilize online platform created during the Master Plan that will serve as a "virtual open house" to try reaching residents who may have a hard time attending public meetings.

ELEMENT THREE: FINALIZE PLAN

- Meet with the Parks & Recreation Commission to review and discuss public input.
- Complete plan based on findings from the board.
- Facilitate public hearing at the Parks & Recreation Commission.

Timeline & Cost: 6-7 Months— \$6,200

municode codification

POWERED BY CIVICPLUS

Recodification, Supplementation, and Online Code Hosting Services

City of Belleville, MI

PRESENTED BY:

J.R. Riley, Legal Account Executive

Contact

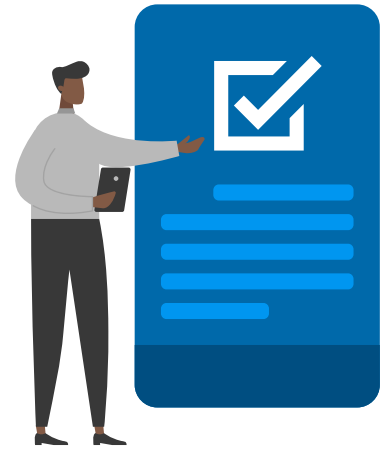
850-696-7012

JRiley@civicplus.com



Recodification

During the recodification process, the attorney assigned to your project will organize and examine all ordinances and code-related material in order to produce a code of ordinances that is free from conflicts and inconsistencies and conforms to state statutes. Your codification attorney will be available to consult with you and your staff at any time during the recodification process. This personal dialogue ensures that your code will accurately reflect the intent of your ordinances and the unique needs of your community. The complete process is outlined below, followed by the scope of services for supplementation and online hosting of your new code.



Recodification Process

1. **Ordinances** – Only legislation of a general and permanent nature, passed in final form by you, as set forth in this proposal, will be included in the code. All material that we receive will be acknowledged via e-mail to establish a record of included ordinances. Legislation not of a general and permanent nature is not included as part of the code and does not need to be provided to us. Notations can be added in the code to reference legislation adopted by reference, if elected.
2. **Attorney Analysis and Review of Material** – Your codification attorney, along with their team of legal editors, proofreaders, and indexers will be assigned to this project. Our legal team will research legislation permanent in nature submitted by you to ensure conformity with state statutes and to determine if there are any inconsistencies or conflicts within the legislation itself. If requested, we will suggest a structure and organization for the code and provide a table of contents indicating the recommended structure.
3. **Page Format Options** – Based on our experience codifying legislation for thousands of customers, we have devised a standard style that has proven time and again to provide the most user-friendly and readable code for staff and residents alike. We will provide our Style Guide which outlines this effective style and layout. Any deviations from this style will add time and cost to your project. Please reach out for additional information.
4. **References** – We will provide state statutes references within the code. Editorial notes will be provided as appropriate. Internal cross references within the code will be hyperlinked in the online version.
5. **Legal Memorandum** – We will provide you with a user-friendly Legal Memorandum containing all our analyses and recommendations. This memorandum will reflect our attorney's Legal Review and will provide you with recommendations to remove conflicts and inconsistencies; delete obsolete provisions; conform to state statutes, when appropriate; and ensure compliance with your charter (if included in the project). This approach facilitates collaboration and dissemination among departments, thus making the process as easy for you as possible.
6. **Conference** – Within 45 days of your receipt of the Legal Memorandum, we will conduct a conference via either telephone or webinar to review the Legal Memorandum and our recommendations. All interested personnel may be included, but your attorney and clerk are essential. Issues discovered during the legal research will be discussed at the conference, with the goal of the conference being to come to agreement on any required changes. Your attorney has the final decision-making authority for



resolution of issues brought up at the conference or noted in the Legal Memorandum. Up to three hours is included in the contract with additional hours available for purchase.

7. **Editing and Proofreading** – Our team will edit the text of your code to reflect proper grammar and stylistic consistency. We will not reword any provision that changes the substantive intent of the code unless you approve the revision. However, non-substantive revisions to improve readability are a part of the process. We will proofread your code. The text will be reviewed for sense and structure and to ensure the implementation of the decisions by your attorney and our attorney.
8. **Index, Graphics, and Tables** – Our team will create a hierarchical, subject matter Index (if elected) and all tables (contents, ordinance disposition, etc.) for your code as necessitated by the materials provided. We will insert the graphics you have provided into the printed and electronic versions of the code.

The following tables will be created and are included in the quoted cost: supplement history table, code comparative table, and ordinance history table. An additional hourly charge applies for creation, modification, addition, or updating of any table or schedule (including traffic and fee tables or schedule) other than those enumerated above.

Tabular matter, defined as algebraic formula, or other materials that require special programs or extra editorial time to modify and prepare for inclusion can also be reviewed and included for an additional charge.

9. **Post Conference Code Draft** – After editing and proofreading, one post-conference code draft (Proofs) incorporating solutions captured in the Legal Memorandum and agreed upon at the legal conference will be delivered to you for final review prior to printing and shipping. You will have 30 days to review and provide any needed corrections. We guarantee typographical correctness. Any errors attributable to our team will be corrected at no charge during the term of this agreement. Any new legislation adopted after the code draft is provided will be held for your first supplement unless you would like to add it to the project for an additional charge.
10. **Sample Adopting Ordinance** – Our attorney will provide a sample adopting ordinance upon completion of the recodification.
11. **Printing and Binding** – We will print your new code on high quality acid-free paper, with an SFI (Sustainable Forest Initiative) certification. These copies will be housed in heavy duty, three-post leatherette binders (with four color choices), name-stamped on the front and spine of each binder. Divider tabs for each major section of the code and index (if elected) will also be provided.

Your Role

Your participation in the Scope of Services for Codification of the code is anticipated to be as follows:

- Provide all ordinances and code material in an editable, electronic format, preferably Microsoft Word format.
- Provide images, graphics, and tabular matter, preferably in original electronic format.
- Be available to answer any questions from the codification attorney conducting the project.
- Attend the conference to discuss the findings of the Legal Memorandum.
- Work with the codification attorney to resolve the findings of the Legal Memorandum.
- Determine the desired formatting and style of the new code.
- Return the draft code within 30 days with any revisions noted.
- Adopt the new code.





Codification Timeline

STEP 1	Immediately	CUSTOMER sends signed contract and all applicable material. CIVICPLUS acknowledges contract, provides a Disposition List of all ordinances/material received.
STEP 2	Within 2 Weeks	CIVICPLUS provides a project introduction letter outlining all phases of the project and all material received to date. CUSTOMER confirms CivicPlus has all applicable materials.
STEP 3	Within 6-10 Months	CIVICPLUS submits Legal Memorandum. CUSTOMER attorney reviews Legal Memorandum and prepares questions/comments for conference.
STEP 4	Within 45 Days	CIVICPLUS hosts Legal Memorandum conference. CUSTOMER attorney and other interested officials meet virtually with CivicPlus to discuss issues of concern noted in the Legal Memorandum and come to an agreement on the implementation of recommended changes.
STEP 5	Within 2-4 Months	CIVICPLUS submits final code draft. CUSTOMER reviews code draft, and returns it to CivicPlus within 30 days, with all corrections noted for final implementation and publication.
STEP 6	Within 3-5 Months	CIVICPLUS delivers final code and model adopting ordinance. CUSTOMER adopts code and provides CivicPlus with a copy of the officially enacted adopting ordinance. CivicPlus ships the code and publishes code online via our Online Code Hosting system. Supplementation begins anew with Supplement No. 1.

MEETING DEADLINES

The time frame for completion of the codification project is within 15 to 24 months from our receipt of all relevant material in an editable, electronic format and excepting any delays occasioned by your submission of the material or return of the draft code. More time would need to be added to this project timeline if the materials provided must be converted to an editable, electronic format as well as incurring additional fees. Adhering to an established schedule of deadlines is critical to the success of this project and will ensure the contents of the Legal Memorandum remain current and complete at the time the code is adopted and published. Legislation added to the project must be approved and received prior to the established cutoff date.

To ensure a successful project completion, it is important that a conference is held to discuss the findings of the Legal Memorandum within 45 days of its receipt, and that the subsequent code draft we provide be returned within 30 days with any revisions noted. Following the delivery of the final code draft for customer proofing, any extensive changes requested in the code content, and/or any material added to the code that was not previously contemplated, will be subject to an additional code draft update fee. Further, if the code draft is not returned within 30 days, additional update fees may apply.



Supplementation Services

Our supplementation process has been designed for timeliness, efficiency, simplicity, and most of all, for our customers' convenience. Supplements will be provided on your chosen schedule, and you will be billed on an annual basis. Color printing and an increase in the desired number of supplement hard copies may result in an increase in the annual fee.

We pride ourselves on a turnaround time of 40 to 45 days for printed supplements and can provide our always-up-to-date electronic update services within 15 days. The online code is updated within three days after shipping the supplement; there is no additional fee for this service. Rush supplements will be assessed an additional one-time fee. A recent analysis of our printed supplement services indicated an editorial error rate of less than 0.1 percent, which is made possible by our attention to detail, ongoing communication with our customers, and strict quality control checks to ensure we continue to produce the best printed and electronic supplements available in our industry. Any errors attributable to CivicPlus during the preparation, printing, and maintenance of the code will be corrected at no cost. The printed supplement process is outlined as follows:

Supplementation Process

- Initial Receipt** – The receipt of the new legislation will be acknowledged within 24 hours. Our production support team will record the adoption date, effective date, and ordinance number(s). You will be advised promptly if any pertinent information is missing from your submission. Your material will then be immediately forwarded to our supplement team for codification. If our OrdBank service is elected (advance legislation service), the legislation will be posted online within 48 hours as a PDF under "adopted legislation not yet codified" at this time.
- Editorial Review** – Our editorial team will review all ordinances received to determine whether the ordinance should be included in your code; where the ordinance should be placed; whether the ordinance conflicts with your existing code format; what material should be removed from your existing code; whether history notes will be added; what tables will be updated; and whether the table of contents in the front of the code and at the chapter/title level should be amended. If any significant errors or numbering issues are noted, your editor will contact you for clarification. Our editorial team will make no substantive changes to your legislation; however, minor typographical errors will be corrected as part of the supplement process. Should the editorial, legal, or proofreading team find discrepancies in your ordinances, we will communicate with you promptly.
- Indexing** – If an Index is elected, your supplement will be sent to our indexing team, where new legislation is indexed and cross-referenced in all appropriate locations.
- Proofreading** – The proofreader assigned to your editorial team will then examine your supplement line by line to ensure editorial accuracy, code hierarchy, and layout and confirm that your supplement is grammatically correct and free of errors in spelling and capitalization. Finally, your supplement is examined line by line again to ensure that the improvements made by

Printed Supplementation Process	
	Submission of Materials
	Editorial Review
	Mark Up
	Indexing
	Proofreading
	Corrections
	Printing & Shipping
	Upload to the Internet



the editorial team are thorough and accurate. The original ordinance is compared with the newly added text to ensure editorial accuracy.

5. **Posting the Supplement Online** – After your supplement has been completed, your online code will be updated within one to three days, and we will provide any electronic products requested. You will receive a notification that the website has been updated via email. If our CodeBank Compare + eNotify service is elected, subscribers will be notified when the online code is updated. When your code is updated, all internal cross-reference links are updated on our Online Code Hosting system.
6. **Printing and Shipping** – We will print, cut, hole-punch, insert divider tabs (if elected), and ship your supplement to you per your elected schedule.

If you utilize OrdBank and a CivicPlus Agenda and Meetings Management solution, your newly adopted legislation will be posted on the landing page of your online code of ordinances within one minute of sending said legislation to CivicPlus. The history notes throughout your code of ordinances will also be automatically linked and associated to the meeting in which your newly adopted legislation was considered. If you are interested in learning more about our CivicPlus Agenda and Meetings Management solutions, please let me know.

Online Code Hosting

Our Online Code Hosting system is continuously enhanced and improved by our in-house team of Internet Technology professionals. It includes Standard and upgradeable Premium features, designed to provide a wide variety of additional capabilities for researching and navigating your code and preserving its history.

Our system is extremely user-friendly and requires no special training or login information. In addition, we offer a variety of on-demand video tutorials. We can also host a personalized training webinar for you and your staff to demonstrate our online features and capabilities before your new code goes live online.

The screenshot displays the 'CITY OF BOULDER COLORADO' online code hosting interface. At the top, a search bar contains 'supplement 127'. Navigation links include 'NOTIFICATIONS', 'SIGN IN', 'HELP', and a 'Select Language' dropdown. The left sidebar shows a tree view of the 'Municipal Code' with the current version 'MAR 18, 2022 (CURRENT)'. The main content area displays 'Municipal Code Supplement 150', noting it was updated on March 18, 2022, and codified through Ordinance No. 8514. A green button labeled 'VIEW WHAT'S CHANGED' is prominent. A disclaimer at the bottom states: 'This Code of Ordinances and/or any other documents that appear on this site may not reflect the most current legislation adopted by the Municipality.'

Online Code Hosting Standard Features

Responsive Design – We designed our intuitive User Interface (UI) to provide easy access to our full suite of features from any device, including a tablet or mobile device running iOS or Android.

4-2-1. - Legislative Intent.

The purpose of this chapter is to protect the health and welfare by requiring all persons to be licensed to offer for sale any alcohol beverage. The city council may issue local licenses for sale of such beverage in accordance with state law, and that the city's licensing requirements shall be those for state licenses under state law.

Ordinance No. [8173 \(2017\)](#)

4-2-2. - City License to Sell Required.

[Share Link](#)
[Print](#)
[Download \(docx\)](#)
[Email](#)
[Compare](#)

Print/Save/Email – With delivery available in Microsoft Word or PDF format, users can share a link, print, download (as a Microsoft Word document), or email files at the section, article, or chapter levels or even non-sequential sections from multiple portions of your code(s).

Not all codification companies enable you to download Microsoft Word documents directly from the website. Being able to do so enhances your ability to draft new legislation.

Social Media Sharing – You and your users can share code sections via Facebook and Twitter. This functionality makes it easier for you and your team to utilize social media to engage your community and enhance your level of transparency.

Browsing – Online Code Hosting provides a persistent breadcrumb trail when browsing or searching and a Previous/Next button at the top and bottom of any document you're viewing. The table of contents and content pane also sync as you scroll to deliver the most intuitive reading experience possible.

Ease of Navigation – Our collapsible table of contents, continuous next-hit feature, and internal and external hyperlinking and cross-referencing features simplify and enhance the navigation of your online code, allowing your staff and residents the capability of simultaneously searching your code, ordinances, minutes, resolutions, budgets, and more.

Searching – Our powerful search engine allows users to easily search the code using keywords or phrases and print, download, or email any portion of your code. Search starts on a dedicated page, then moves to a persistent right-hand sidebar as you cycle through the

The screenshot displays the Hometown, FL online code hosting interface. The top navigation bar includes the city logo, name, a search bar with 'animals' entered, and links for notifications, sign in, help, and language selection. The main content area shows the breadcrumb trail: Hometown, Florida - Code of Ordinances, ... / PART I - GENERAL ORDINANCES / Chapter 6 - ANIMALS. The left sidebar contains a table of contents for the code, with 'Chapter 6 - ANIMALS' selected. The main content area displays 'Chapter 6 - ANIMALS[1]' with footnotes and the start of 'ARTICLE I. - IN GENERAL'. The right sidebar shows search results for 'animals', listing four items: 'Chapter 6 - ANIMALS', 'Sec. 6-8. - Animals in vehicles.', 'Sec. 6-3. - Duties of animal control officer.', and 'Sec. 6-9. - Collection of animal'.



results, which enables a user to quickly move through search results and view results simultaneously. The section also indexes your code, returning more accurate, granular results. Search results can be sorted by relevance or book order.

- **Advanced Searching** – Conduct searches using Natural Language (think Google) or Boolean Logic, including simple or advanced searches supporting stemming, wildcards, proximity searches, and a global synonym list.
- **Multiple Publications** – Multiple publications (e.g., code, zoning) incorporated into the Online Code Hosting system will be searchable from one interface.
- **Narrow Searching** – Search terms can be applied to the entire code or narrowed within specific chapters or sections with the ability to sort results by relevance or book order.
- **Stored Searching** – Online Code Hosting allows all search result listings to be bookmarked under your browser's bookmark tabs; users need only conduct a search and press Ctrl+D to add the search result listing to your browser's tabs.
- **Searchable Ordinances** – With our OrdBank service, ordinances posted pre- and post-codification are full-text searchable.
- **Search All Content Types** – If you use our OrdBank or MuniDocs service, you can search any combination of your code, ordinances, and MuniDocs simultaneously; Search results are labeled for easy identification.

Internal Cross-Reference Linking – Cross-references within your code are linked to their respective destination article, chapter, or section.

Mouseover (clue tips) – Navigate to your code, and any linked cross-reference will quickly display in the pop-up preview window.

Collapsible TOC – The table of contents collapses, providing additional real estate with which you may view your code. Easily view your maps, graphs, and charts by enlarging the item.

Translation – Google Translate allows users to view our hosted codes in over 100+ languages.

Static Linking – Copy links of any section, chapter, or title to share via email or social media.

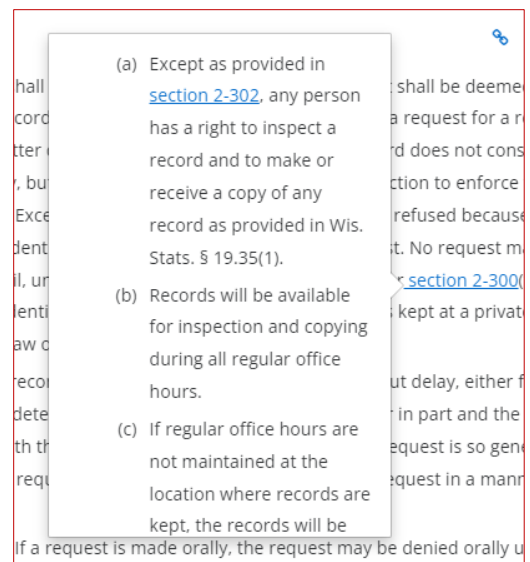
Scrolling Tables and Charts – Headers stay fixed while you scroll through the table/chart.

GIS – We can provide a permalink to any code section and assist staff in creating a link from your GIS system to relevant code sections.

In-line Images and PDFs – We take great care to ensure that your images match online and in print and are captured at the highest quality possible. Our online graphics can be enlarged by hiding the table of contents to maximize the image. CivicPlus can also incorporate PDFs of certain portions of the code that have particular viewing and layout requirements.

Public Notes – Post public notes or documents within the online code to inform residents about current issues pertinent to any specific section of your code.

Website Accessibility – The User Interface and all HTML content viewed via our Online Code Hosting System's web application are WCAG 2.1 Level AA compliant. While we take several steps to improve the accessibility of PDF documents uploaded to the Online Code Hosting System, we cannot guarantee full ADA compliance of PDF documents. If a fully ADA compliant PDF document is uploaded to our Online Code Hosting System, it will remain compliant while stored in our system. Each PDF document uploaded to our system is OCR scanned and document title, primary language, and other PDF metadata fields, and base level of tags for screen readers are set.



Hosting and Security – Our tech stack includes HTML5 and CSS3, Javascript (AngularJS), and a RESTful API written in C# running on .Net Core. All content is rendered in standard HTML and is viewable in all modern browsers, including PC: Microsoft Internet Explorer 10 or later, Firefox 3.6 or later, macOS®: Safari™ 5.0 or later, and Chrome 18 or later. We host our Online Code Hosting System in Microsoft's Azure Government secure cloud environment and guarantee an SLA of 99.95 percent uptime. SSL encryption is used by default to secure access to the site, and the entire system is backed up to multiple geographic locations within the Azure Government cloud ecosystem.

Support – Phone, email, and web support for residents and staff: 24-hour email response; phone support from 7 a.m. to 8 p.m. CT. We offer a variety of video tutorials, and we are always available to host a personalized webinar for you and your staff to demonstrate our online features.

There are multiple premium features available to enhance your staff and residents' experience using and searching through your code – most available for purchase in our Premium Bundle or à la carte.

Premium Features

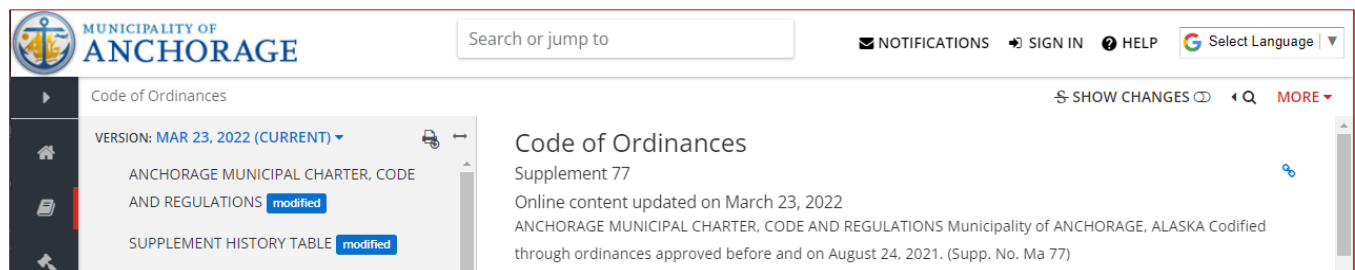
We recommend our **Premium Bundle** for the most transparent and feature-rich code possible at the best cost savings. The bundle includes our annual online code hosting and maintenance service along with each of the following features:

- Custom Banner
- CodeBank
- CodeBank Compare + eNotify
- OrdBank
- MuniPRO Service

OrdLink and MuniDocs can be added to a **Premium Bundle**, if desired.

Summary of All Premium Features

Custom Banner – We can customize the look and feel of your code to match your website more closely.



The screenshot displays the 'Municipality of Anchorage' website interface for the 'Code of Ordinances'. The header includes the logo, a search bar with the text 'Search or jump to', and links for 'NOTIFICATIONS', 'SIGN IN', 'HELP', and 'Select Language'. The main content area is titled 'Code of Ordinances' and 'Supplement 77', with a note that 'Online content updated on March 23, 2022'. It lists 'ANCHORAGE MUNICIPAL CHARTER, CODE AND REGULATIONS' and 'SUPPLEMENT HISTORY TABLE', both marked as 'modified'. A sidebar on the left shows a navigation menu with 'Code of Ordinances' selected. The bottom of the page features the 'civicplus.com' logo and the page number '8'.

CodeBank – Our CodeBank feature provides an online archival system for previous supplements of your code. Empower your staff and residents to access every previous code version with one click.

CodeBank Compare + eNotify – Our CodeBank Compare service is a powerful feature that allows users to select a past version of your online code and compare it to any other version. The differences will be shown via highlights (added material) or strikethrough (deleted material). Users will be notified of the changes in the table of contents and within the text of the code via “modified,” “new,” or “removed” badges. Users can also select an option to view all of the changes in a single view, complete with strikethrough and highlights showing the specific textual changes made. In addition, the CodeBank Compare service will show all amendments to your code that were implemented during the most recent update. Please note that the CodeBank feature is required to access CodeBank Compare.

The screenshot displays the Municipality of Anchorage CodeBank interface. The top navigation bar includes the logo, a search bar, and links for notifications, sign in, help, and language selection. The main content area shows a comparison of code versions for '16.100.035 - Review, certific...'. The left sidebar lists various code sections, with '7.20.020 - Solicitation and acceptance of bids' marked as 'modified'. The central pane shows the text of the code with highlights and strikethroughs indicating changes. The right sidebar shows a list of recent changes, including '16.100.040 - Number of vehicles operated per license' and '16.100.045 - Eligibility for transport', both marked as 'new'.

The screenshot shows the eNotify service enrollment form. It includes a 'Get Notified' header, a brief description of the service, and a form with fields for 'Email' and 'Profession'. Below these fields is a 'Publications' section with a list of checkboxes for selecting publications to receive notifications for. The 'Code of Ordinances' section is expanded, showing options for 'CODE OF THE CITY OF ARVADA, COLORADO', 'SUPPLEMENT HISTORY TABLE', 'Part I - CHARTER', 'Chapter 1 - GENERAL PROVISIONS', 'Chapter 2 - ADMINISTRATION' (which is selected), and 'Chapter 6 - ALCOHOLIC BEVERAGES'. At the bottom of the form are 'CLOSE' and 'SUBMIT' buttons.

Our eNotify service allows users to enroll online and receive email notifications each time the online code is updated. Please note that the CodeBank Compare feature is required to utilize the eNotify service.



OrdBank – With our OrdBank solution, newly adopted, amendatory legislation will be posted online between supplements. Upon completion of your supplement, the ordinances will be linked in your history notes and stored in your OrdBank Repository under the “OrdBank” tab. All ordinances for codification and all ordinances for linking via our OrdBank feature can be emailed to us at municodeords@civicplus.com.

Arvada, Colorado - ... / Chapter 102 - UT... / ARTICLE II. - WAT... / DIVISION 6. - WA... / Sec. 102-161. - R... VERSION: DEC 30, 2021 (CURRENT) ▼ ➤ DIVISION 5. - SEWAGE ▼ DIVISION 6. - WATER FEES AND RATES Sec. 102-161. - Residential water fees within city. Sec. 102-161.5. - Residential water fees within the Jefferson Center Metropolitan District, the Leyden Rock Metropolitan District, the Leyden Ranch Metropolitan District, and Candelas Filings 2, 3, 4 and designated properties in	latest edition of the AWWA Manual M22, "Sizing Water Service Lines and Meters," which is hereby adopted by reference, justifies the change. Calculations so made will be submitted to the Utilities Director for review and approval. (Code 1981, § 33-77; Ord. No. 2574, § 1, 11-21-1988; Ord. No. 2671, § 14, 10-16-1989; Ord. No. 2763, § 3, 11-5-1990; Ord. No. 2823, § 11, 7-1-1991; Ord. No. 2931, § 10, 10-19-1992; Ord. No. 2938, § 1, 12-14-1992; Ord. No. 3127, § 10, 10-24-1994; Ord. No. 3202, § 5, 8-7-1995; Ord. No. 3223, § 7, 10-23-1995; Ord. No. 3262, § 9, 4-15-1996; Ord. No. 3297, § 1, 10-21-1996; Ord. No. 3403, § 15, 10-20-1997; Ord. No. 3489, § 1, 10-26-1998; Ord. No. 3560, § 3, 10-11-1999; Ord. No. 3650, § 1, 10-23-2000; Ord. No. 3722, § 1, 10-8-2001; Ord. No. 3773, § 1, 10-21-2002; Ord. No. 3839, § 1, 10-13-2003; Ord. No. 3920, § 1, 11-8-2004; Ord. No. 3969, § 1, 10-10-2005; Ord. No. 4027, § 1, 10-16-2006; Ord. No. 4099, § 1, 11-19-2007, eff. 1-1-2008; Ord. No. 4139, § 1, 11-17-2008, eff. 1-1-2009; Ord. No. 4184, § 2, 10-19-2009, eff. 1-1-2010; Ord. No. 4193, § 1, 1-11-2010, eff. 7-1-2010, 1-1-2011; Ord. No. 4361, § 1, 10-22-2012, eff. 1-1-2013; Ord. No. 4411, § 1, 10-21-2013, eff. 1-1-2014; Ord. No. 4465, § 1, 10-20-2014, eff. 1-1-2015; Ord. No. 4524, § 1, 10-19-2015, eff. 1-1-2016; Ord. No. 4571, § 1, eff. 1-1-2017) Sec. 102-161.5. - Residential water fees within the Jefferson Center Metropolitan District, the Leyden
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OrdLink – Before incorporating the ordinances into your code via supplementation, the OrdLink feature can hyperlink newly adopted amendatory ordinances to the amended code section. Linked sections are highlighted in the table of contents, and links are created from the amended sections to the new ordinances. Once the linked ordinances are incorporated into your code, they are added to your OrdBank repository and hyperlinked to your history notes. This service lets everyone know that new ordinances have been adopted. OrdLink must be purchased with OrdBank or as an addition to the Premium Bundle.

VERSION: JUL 29, 2021 (CURRENT) ▼

IRVINE MUNICIPAL CODE

SUPPLEMENT HISTORY TABLE modified

> CHARTER - CITY OF IRVINE

▼ TITLE 1 - GENERAL SERVICES Amended

▼ Division 1 - GENERAL PROVISIONS Amended

- Sec. 1-1-101. - How designated, cited.
- Sec. 1-1-102. - Rules of construction, definitions.
- Sec. 1-1-103. - Headings; catchlines of sections; history notes; etc.
- Sec. 1-1-104. - Incorporation by reference.
- Sec. 1-1-105. - Reference to Code, conflicts

< TITLE 1 - GENERAL SERVICES

Division 2 - CITY COUNCIL >

Division 1 - GENERAL PROVISIONS

Amended by Ordinance No. 21-15 >

Sec. 1-1-101. - How designated, cited.

This Code, which consists of administrative, criminal and regulatory ordinances of this City, shall be known as the "Irvine Municipal Code," and it shall be sufficient to refer to said Code as the "Irvine Municipal Code" in any prosecution for the violation thereof; it shall also be sufficient to designate any ordinance adding to, amending or repealing said Code as an addition to or amendment to or repeal of the "Irvine Municipal Code."

(Code 1976, § 1.A-101)

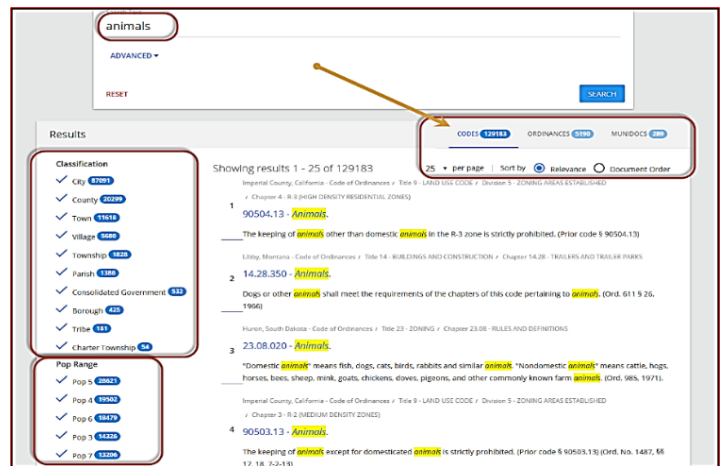
Charter reference— Codification of ordinances, [§ 409](#).

Sec. 1-1-102. - Rules of construction, definitions.

In the construction of this Code and of all ordinances of this City, the following definitions and

MuniPRO Services – MuniPRO searching allows you to search the over 4,300 codes we host (the entire country, a single state, or individually selected codes of your choosing). MuniPRO searches are ideal for researching local regulations of interest or discovering how other communities are dealing with similar issues. In addition, MuniPRO provides subscribers with the following tools:

- **Multiple Code Search** – Search all codes within one state, multiple codes within one state, or search all codes in the U.S. hosted by CivicPlus; search results are sorted by relevancy and indicate the source publication, showing excerpts and keyword highlighting.
- **MuniPRO Saved Searches** – Save frequently used or complex searches for easy retrieval from the MuniPRO Dashboard.
- **MuniPRO Notes** – Create a note and attach it to any section in any publication; note icons are present when viewing the section, alerting the user to a previously written note; a global listing of notes can be accessed and managed from the MuniPRO Dashboard.
- **MuniPRO Drafts** – Begin a new ordinance draft to keep track of pending legislation.
 - Draft icons are present when viewing the section, alerting the user to a previously created draft.
 - A global listing of drafts can also be accessed and managed from the MuniPRO Dashboard.

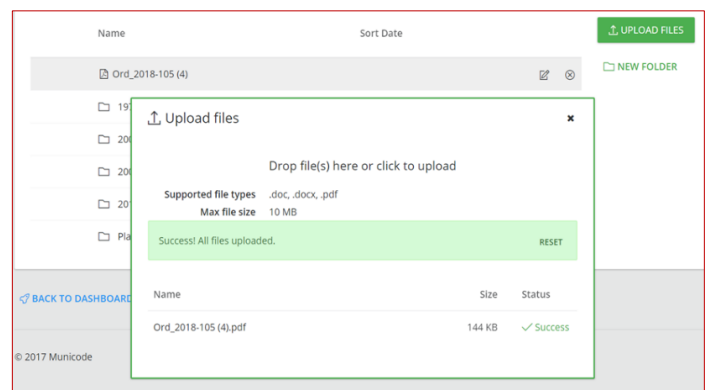


MuniDocs – MuniDocs allows you to upload many types of documents to browse and search alongside your online code and is fully searchable and filterable. After users log in, they are presented with a dashboard that allows them to upload new documents and manage previously uploaded documents. When uploaded, users can pick from a list of predefined document types.

Uploading a document is as simple as dragging and dropping the document from your computer into the upload dialog box on the admin dashboard. Uploaded documents are immediately converted to PDF and indexed for search. Users may upload .rtf, .doc, .docx, and .pdf documents and organize these documents by nested folders.

The public can then browse and search these documents immediately.

Your MuniDocs files can also serve as storage for archived ordinances within MuniDocs. Unlike our online OrdBank feature, these self-loaded archived ordinances will not be linked to the legislation within the online code.



Investment Proposal

CivicPlus can appreciate the monetary constraints facing our governments each day. To help ease these concerns and assist with budgeting and planning, our proposed project and pricing is valid for 90 days upon date received.

Recodification

- Includes Zoning and Charter with materials provided April 2025
- 1,107 single column, 10-point font pages
- Receipt, review, and organization of materials
- Legal analysis and research by a codification attorney
- Legal memorandum by a codification attorney
- Up to three-hour virtual conference with attorney
- Implementation of approved legal findings
- Update state statutes references
- Editorial preparation, proofreading, page formatting, and indexing
- Insertion of tables and graphics
- Final proofreading, corrections, and quality control review
- Print three copies, including three post-stamped binders and tabs
- Sample adopting ordinance prepared by a codification attorney

Supplementation

- Supplementation of legislation permanent and general in nature (omitted legislation not included)
- Includes Zoning and Charter
- Acknowledgment of material
- Editorial work, proofreading, and updating the index
- Updating online code upon completion of each supplement
- Printing up to three black and white copies per print schedule elected, includes instruction sheet and checklist of up-to-date pages
- Freight for supplements
- Images, graphics, and tabular matter
- **(Optional) Increase to Supplementation Plus to update your Code online on a bi-monthly basis (60-days)**

Online Code Hosting

- Mobile friendly site with full functionality and optimal screen resolution on all devices
- In-line images with scrolling tables and charts
- Narrow, pinpoint, and advanced (including Boolean) searching
- Previous and hit buttons
- Persistent breadcrumb trail
- Print or save as formatted Word (DOCX)
- **(Optional) Premium Bundle – Custom Banner, CodeBank, CodeBank Compare + eNotify, OrdBank, and MuniPro Service**



Investment	One-Time
Recodification	\$27,950.00
Gender Neutralization (suggested)	\$1,107.00
Total One-Time	\$27,950.00
	Renewable
Supplementation	\$2,000.00
Online Code Hosting Premium Bundle (recommended)	\$1,375.00
Total Annual Renewable	\$3,375.00
Total Project Cost	\$31,325.00

Standard Invoicing

Additional Fees

- Sales tax will be applied, if applicable
- Actual freight costs will be submitted for initial code delivery, but excluded from annual supplement cost
- Additional pages outside materials submitted for proposal, will be charged \$25.00 per-page changed in the code of ordinance before publication.

Invoicing

- An Initial Term shall commence upon contract signing and continue for **18 months**. Payments for the initial term shall be invoiced as follows(estimated):
 - 25% upon execution of agreement **(\$7,831.25)**
 - 25% upon submission of the legal memorandum **(\$7,831.25)**
 - 25% upon submission of proofs **(\$7,831.25)**
 - Balance upon delivery of final code
 - **Any additional costs will be billed separately, upon delivery**
- The Initial Annual Recurring Services will be invoiced 18 months from the date of signing
- Subsequent Annual Recurring Services shall be invoiced annually on the anniversary date of the Initial Annual Recurring Services and will be subject to a 5% increase start of year 3.



Optional Enhancements

We are confident in the ability of our proposed project to meet your main needs. However, we recommend the following options that could positively impact your experience and goals.

Optional Services & Tools	One-Time	Annual
Codification		
Gender Neutralization of code	\$1,107	N/A
Archival OrdBank, per ordinance	\$25	N/A
One additional hour of virtual conference with attorney	\$200	N/A
Creation, modification, addition, or updating of any table or schedule (including traffic and fee tables or schedules) not described as included.	Quote upon request	N/A
Supplementation		
Code in Microsoft Word (DOCX) (sent via email download)	N/A	\$275
Adobe PDF of each supplement (sent via email download)	N/A	\$275
State Statute Linking	\$75/hour	\$425
Additional copies, reprints, binders, and/or tab orders	Quote upon request	
Online Code Hosting		
Online Code Hosting Only	N/A	\$550
Custom Banner	\$250	N/A
CodeBank	N/A	\$275
CodeBank Compare + eNotify	N/A	\$375
OrdBank	N/A	\$375
OrdLink (must be purchased with OrdBank)	N/A	\$275

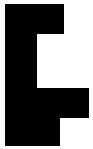


MuniDocs – Upgraded capabilities to host any other municipal documents in a fully searchable format, including Minutes, Agendas, Resolutions, Budgets, and more for self-loading to the MuniDocs platform	N/A	Up to: 25GB \$375 50GB \$675 75GB \$975 100GB \$1,375 Over 100GB – quote upon request
MuniPRO Service – Search over 4,000 codes in our full-service codification library, save frequently used or complex searches, create notes to attach to any publication and draft new ordinances	N/A	\$500.00
Additional MuniPRO service licenses	N/A	\$150 each
Premium Bundle: Online Code Hosting, Custom Banner, CodeBank, CodeBank Compare + eNotify, OrdBank, and MuniPRO Service	N/A	\$1,375

Proposal as Non-Binding Document

A successful project begins with a contract that meets the needs of both parties. This proposal is intended as a non-binding document, and the contents hereof may be superseded by an agreement for services. Its purpose is to provide information on a proposed project we believe will meet your needs based on the information available. If awarded the project, CivicPlus reserves the right to negotiate the contractual terms, obligations, covenants, and insurance requirements before a final agreement is reached. We look forward to developing a mutually beneficial contract.





CAUTION: This email originated from outside the City of Belleville. Maintain caution when opening external links/attachments

As a business owner on Main Street (Perspective Eyecare), I can absolutely sympathize with the concerns of other business owners whose storefronts are being covered by the same vehicles all day long. Thankfully I haven't had an issue with that with my own business, but having lived in Belleville/VBT my entire life, I feel that not enough emphasis is placed on making owning a business easier on Main Street. Personally I'm concerned not only about parking, but also what will happen when the water meters and water bill issue is resolved and caught up. I'm concerned about how property taxes are charged and am thankful the city has taken a step to ease that burden. I'm concerned about how to handle snow removal as well.

All that being said, I still chose to move to Main Street from VBT because I feel that the success of this city lies in the proliferation of independent businesses and the people who choose to patronize them. While I'm sad to see the empty Andrews Drugs store front, I'm hopeful that that space is filled by another independent owner and have had my own lottery-winning dreams of a fresh produce store in that location. Places like Egan's and Moving the Mitten and Garden Fantasy are what will make this town unique, in my opinion, and a big part of that will happen as people feel more and more confident about making the investment into Main Street. If employees from a nearby business were to take up the few parking spaces I have in front of my business all day every day, I'd be pretty discouraged and upset as well.

Recently I asked Jason Smith and Steve Jones if there were plans for a parking lot on the northeast corner of Third and Main, where the gas station used to be many years ago, and was told there were no plans. Rumors abound that that lot is virtually unbuildable due to soil contamination, but even if that isn't true, a centralized, unregulated parking lot like could be had in that location would seem ideal not only for me personally, but for those businesses who are struggling with their neighbors. Add on top of that a two- or three-hour time limit for Main Street parking, and perhaps a solution is staring us in the face. I feel with the new parking on Liberty and Fifth street, the parking at the library or at the medical center on Second street, and additional spots at Third and Main, many of these problems could be alleviated without the need for major construction (angled parking) or parking meters.

Unfortunately it's difficult for me to attend public city meetings to express these views, and I understand if I really want to be the change I wish to see in the city, I need to make a better effort to prioritize this. The one thing that always comes up first in discussions about my move to Main Street is the size of my parking lot. Thankfully I've been able to broker a deal with a friend who also owns a business on Main Street to park my vehicle behind their business, freeing up space for one more customer in mine that they don't need in theirs. I think the byproduct of increased parking lots will be a walkable city, where if I want to go to the library after work and The Bait Shop for dinner and Music Lakeside after, I know there will be worry-free parking available. At the same time, if I want to visit Crafted for coffee and a breakfast burrito while on my way to work, there will be ample parking on Main Street for that kind of short trip.

Please feel free to contact me at this email address or on my personal cell phone at 734-740-0004 if you have any questions. I feel I've shared most or all of my thoughts on this issue but I'm certainly open to more discussion. Thank you for your time.

Regards,

Michael Gentz

**CITY OF BELLEVILLE
RESOLUTION NO. 25-006**

RESOLUTION ADOPTING THE 2021 INTERNATIONAL PROPERTY MAINTENANCE CODE

WHEREAS, the City of Belleville is committed to maintaining safe, healthy, and habitable housing and property conditions for the well-being of its residents and the integrity of its neighborhoods; and

WHEREAS, the International Property Maintenance Code (IPMC), as published by the International Code Council (ICC), establishes minimum maintenance standards for existing residential and non-residential structures; and

WHEREAS, the 2021 edition of the IPMC provides modern, up-to-date provisions to safeguard public health, safety, and welfare in all existing structures by regulating and governing the conditions and maintenance of property, buildings, and structures; and

WHEREAS, the City of Belleville finds it in the best interest of the community to adopt the 2021 IPMC to ensure consistency and effectiveness in property maintenance enforcement efforts; and

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Belleville, Wayne County, Michigan, as follows:

1. The City of Belleville hereby adopts the **2021 International Property Maintenance Code**, as published by the International Code Council, as the official property maintenance code of the City.
2. The City Manager and Building Official are hereby authorized to take any necessary actions to implement and enforce the provisions of the 2021 IPMC, including recommending any local amendments or administrative procedures for Council approval.
3. A copy of the adopted 2021 IPMC shall be kept on file and made available for public inspection in the Building Department.
4. This Resolution shall take effect immediately upon adoption.

MOTION	SECOND

AYES	NAYS	ABSENT	VOTE

State of Michigan)
County of Wayne) ss
City of Belleville)

I, Michelle Bellingham, Deputy City Clerk in and for the City of Belleville, County and State aforesaid, do hereby certify that the foregoing is a true and complete copy of a resolution adopted by the Belleville City Council on this 5th day of May 2025.

IN WITNESS WHEREOF, I have hereto affixed
My signature and the Seal of the City of Belleville,
Michigan, on this 5th day of May 2025.

Michelle Bellingham

ORDINANCE 2025-001

AN ORDINANCE AMENDING SECTION 54 – PARKS AND RECREATION.

WHEREAS, the Belleville City Council wishes to protect and promote the health, safety, and welfare of the City of Belleville, and;

WHEREAS, there exists a need to update and revise the regulations regarding animals within the city, and;

NOW, THEREFORE, THE PEOPLE OF THE CITY OF BELLEVILLE ORDAIN:

Section 54 of the City of Bellville Code of Ordinances is amended to add Section 54-79 as follows:

Section 54-79: Prohibition on Feeding Wild Animals in City Parks

A. Purpose

The purpose of this section is to protect public health and safety, preserve the natural ecosystem, and prevent the habituation of wild animals to human food sources within public parklands in the City of Belleville.

B. Definitions

1. *City* means the City of Belleville, Wayne County, Michigan
2. *Feed or Feeding* means the act of placing, offering, or distributing food, grains, seeds, or any edible material with the intent of attracting or providing nourishment to wild animals.
3. *Person* means any individual, firm, partnership, association, corporation, company, organization, or other legal entity of any kind, including all tree removal companies and people removing trees on behalf of others.
4. *Wild Animal* means any non-domesticated animal that is native to or found in a natural state within the City, including but not limited to birds, squirrels, raccoons, opossums, deer, foxes, and waterfowl.

C. Prohibition

1. No person shall intentionally feed or attempt to feed any wild animal in any public park, trail, or other recreational property owned or operated by the City of Belleville.
2. No person shall place or distribute food, seeds, or edible material in a manner that is likely to attract wild animals in these areas.

D. Exceptions

This section shall not apply to:

1. Authorized wildlife management activities conducted by the City or its agents.
2. Educational programs or events involving wildlife feeding that are approved in writing by the City Manager or Parks and Recreation Director.

E. Enforcement and Penalties

Violation of this section shall be considered a municipal civil infraction punishable by a fine not to exceed \$100 for the first offense, and \$250 for subsequent offenses. Each day a violation continues shall constitute a separate offense.

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This ordinance shall take effect 10 days from the date of its passage.

The foregoing ordinance was duly adopted at a regular meeting of the Belleville City Council held on May 5, 2025.

Michelle Bellingham, Deputy Clerk

Kenneth Voigt, Mayor

Date of First Reading	May 5, 2025
Date of Second Reading	May 19, 2025
Date of Adoption	May 19, 2025
Effective Date	May 29, 2025

**ACCOUNTS PAYABLE EXPENDITURES
COUNCIL MEETING ON**

MAY 5 2025

DATE	AMOUNT	DESCRIPTION	G. TOTAL
5/5/2025	\$202,875.35	EFT	\$202,875.35
5/5/2025	\$15,471.96	CHECKS	\$15,471.96

GRAND TOTAL \$ 218,347.31

CHECK REGISTER FOR CITY OF BELLEVILLE

CHECK DATE 05/01/2025 - 05/01/2025

BANK CODE: CHA2 - CHASE NEW ACCOUNT - CHECK TYPE: EFT

Check Date	Bank	Check	Vendor Name	Description	Amount
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Bank CHA2 CHASE NEW ACCOUNT

Check Type: EFT Transfer CHA2

05/01/2025	CHA2	1101(E)	4424	CITY HALL (PEST CONTROL)	81.62
05/01/2025	CHA2	1102(E)	CINTAS	DPW (MEDICAL SUPPLIES)	97.31
05/01/2025	CHA2	1103(E)	COMCAST	CITY HALL PHONE BILL (APRIL 21, 25 - M	390.98
05/01/2025	CHA2	1104(E)	GREAT LAKES WATER AUTHORITY	CITY WATER BILL MAR 1 TO APRIL 1, 2025	31,343.94
05/01/2025	CHA2	1105(E)	KCI	POSTAGE (CITY WATER BILLS)	1,451.74
05/01/2025	CHA2	1106(E)	KENT COMMUNICATIONS	EGLE PUBLIC NOTICE MAILER	1,144.66
05/01/2025	CHA2	1107(E)	MENARDS	WATER MAIN SUPPLIES	434.23
05/01/2025	CHA2	1108(E)	MISTER MAT RENTAL SERVICE	CITY HALL MAT RENTAL	49.00
05/01/2025	CHA2	1109(E)	PRINCIPAL LIFE	LIFE INSURANCE - MAY 2025	4,310.77
05/01/2025	CHA2	1112(E)	SLC METER LLC	NEW WATER METER SUPPLIES	109,240.00
05/01/2025	CHA2	1113(E)	SUMPTER ACE HARDWARE	WATER MAIN RESTORATION	173.23
05/01/2025	CHA2	1118(E)	VAN BUREN TOWNSHIP	DISPATCH AND LOCKUP SRVICS 2ND QUARTER	52,625.79
05/01/2025	CHA2	1119(E)	VC3, INC	COMPUTER SUPPORT	1,256.75
05/01/2025	CHA2	1121(E)	WATERWORKS CAR WASH	CAR WASHES (FD & DPW)	275.33

Total EFT Transfer:

202,875.35

CHA2 TOTALS:

Total of 14 Checks:

202,875.35

Less 0 Void Checks:

0.00

Total of 14 Disbursements:

202,875.35

CHECK REGISTER FOR CITY OF BELLEVILLE

CHECK DATE 04/22/2025 - 05/01/2025

BANK CODE: CHA2 - CHASE NEW ACCOUNT - CHECK TYPE: PAPER CHECK

Check Date	Bank	Check	Vendor Name	Description	Amount
Bank CHA2 CHASE NEW ACCOUNT					
Check Type: Paper Check CHA2					
04/22/2025	CHA2	8217	KCI	178741 (PRINTING & POSTAGE FOR 2025 MAI	260.49
04/22/2025	CHA2	8220	VOIGT, KENNETH	REIMBURSEMENT (BANNERS)	2,523.56
05/01/2025	CHA2	8221	ACCUSHRED, LLC	PD & CITY - PAPER SHRED	100.75
05/01/2025	CHA2	8222	BELLEVILLE AREA INDEPENDENT	ADVERTISING & AND COUNCIL MEETING	131.25
05/01/2025	CHA2	8223	BELLEVILLE AREA INDEPENDENT	ADVERSTING AND NOTICE OF ANNUAL CEM CLE	94.50
05/01/2025	CHA2	8224	BIES, JASON	POLICE RESERVES (BELLEVILLE HIGH BASKET	470.00
05/01/2025	CHA2	8225	CITY OF ROMULUS	EUTHANIZED DOG	300.00
05/01/2025	CHA2	8226	COLLING, CRIS	POLICE RESERVES (BELLEVILLE HIGH BASKET	300.00
05/01/2025	CHA2	8227	DARI, AHMAD	POLICE RESERVES (BELLEVILLE HIGH BASKET	60.00
05/01/2025	CHA2	8228	DORNBOS SIGN, INC	STREET SIGNS	513.43
05/01/2025	CHA2	8229	DTE ENERGY	190 HIGH	1,962.89
05/01/2025	CHA2	8230	DTE ENERGY	800 N LIBERTY - 9100 3977 6497 - STREET	34.99
05/01/2025	CHA2	8231	DTE ENERGY	27 2ND ST STREETLIGHTING - 9100 4093 55	294.32
05/01/2025	CHA2	8232	DTE ENERGY	132 HIGH ST 9100 067 6587 9	392.45
05/01/2025	CHA2	8233	GIFFELS WEBSTER	PROJECT 1995200 PLANNING SERVICES THROU	2,220.83
05/01/2025	CHA2	8234	GILLESPIE JR., THOMAS A.	POLICE RESERVES (BELLEVILLE HIGH BASKET	310.00
05/01/2025	CHA2	8235	HUBY, DAVED	POLICE RESERVES (BELLEVILLE HIGH BASKET	140.00
05/01/2025	CHA2	8236	ISSA, JIHAD	POLICE RESERVES (BELLEVILLE HIGH BASKET	170.00
05/01/2025	CHA2	8237	KONICA MINOLTA BUSINESS SOLUT	COPIER CLERKS OFFICE	353.76
05/01/2025	CHA2	8238	MATTHEW RAICH	POLICE RESERVES (BELLEVILLE HIGH BASKET	80.00
05/01/2025	CHA2	8239	MICHIGAN ASSOCIATION OF FIRE	8202-UNION DUES	363.00
05/01/2025	CHA2	8240	MISSION SQUARE	4/07/2025 - 4/20/2025	272.00
05/01/2025	CHA2	8241	MOWBRAY, DENNIS	INSPECTOR PAY APRIL 2025	80.00
05/01/2025	CHA2	8242	NEVUE, RICHARD LAWRENCE	POLICE RESERVES (BELLEVILLE HIGH BASKET	430.00
05/01/2025	CHA2	8243	OCCUPATIONAL HEALTH CENTERS O	EMPLOYEE KINGSLEY, ALEX J	226.00
05/01/2025	CHA2	8244	OPTIMUM NATURAL DISTRIBUTORS	5 GALLON FILTERED REFILL X9	65.52
05/01/2025	CHA2	8245	OSBORNE CONCRETE COMPANY	SCREENED TOPSOIL (FILL DIRT)	125.00
05/01/2025	CHA2	8246	OWENS FENCE, INC	LABOR AND EQUIP TO REMOVE FENCE AT 330	775.00
05/01/2025	CHA2	8247	PRIORITY ONE EMERGENCY	PD UNIFORM ALLOWANCE	240.94
05/01/2025	CHA2	8248	SMITH III, JAMES	POLICE RESERVES (BELLEVILLE HIGH BASKET	290.00
05/01/2025	CHA2	8249	T-MOBILE	EMPLOYEE CELLPHONE BILL (3/21/25 - 4/20	936.62
05/01/2025	CHA2	8250	UPPER LEVEL GRAPHICS	PD- BADGES	179.00
05/01/2025	CHA2	8251	WATT, JOSEPH	INSPECTOR PAY	280.00
05/01/2025	CHA2	8252	WAYNE COUNTY ACCTS RECEIVABLE	TRAF SIG ENERGY-10/24	403.10
05/01/2025	CHA2	8253	WELLS FARGO VENDOR FINANCIAL	ACCESSORY SOFTWARE	52.56
05/01/2025	CHA2	8254	ZARB, BERNARD	INSPECTOR PAY APRIL 2025	40.00

Total Paper Check:

15,471.96

CHA2 TOTALS:

Total of 36 Checks:

15,471.96

Less 0 Void Checks:

0.00

Total of 36 Disbursements:

15,471.96