

# About The SORC And Its History

The Sandhills Open Road Challenge was founded in 2001. The event has enjoyed tremendous success due to the support of volunteer course workers, local communities, area fire departments, and emergency medical personnel. The SORC is recognized as America's most challenging open road race reflecting the tradition of the great European rally events.

The SORC is a non-profit organization. All proceeds are donated to local civic organizations. Principle beneficiaries are the foundation to construct a much needed Arnold Community Center, local fire departments, public schools and high school scholarship funds.

A first ever "One Mile Shoot Out" was held in 2002, an event that has now been copied by several other racing organizations.

The success of our event rests upon the efforts of the people of Arnold and the warm welcome they give to all of the racers. Comprised of less than 500 residents Arnold offers a touch of Western hospitality unmatched by any other American racing event.

# SANDHILLS OPEN ROAD CHALLENGE

The Sandhills Open Road Challenge is argued by many to be the most challenging open road race in America. The course is comprised of 55 miles of narrow blacktop county road that offers enough twists, turns, and straight aways to keep the most ardent racer busy. A North leg of 29 miles with a 26 mile return offers drivers two races in one event. Drivers will find the chicanes, “90’s” and “S” curves to be the perfect antidote to boredom and with tech speeds of up to 140 MPH racers are advised to have a full tank of adrenaline.

## A CLASS FOR EVERY DRIVER

With four divisions and nine classes the SORC has a spot for every driver no matter their skill level:

### Unlimited Division

120 Tech Speed Classes: 80, 90, 95

140 Tech Speed Classes: 100, 105, 110, 115, 120

The open road race begins promptly on Saturday at 8:30 A.M.

### WHAT KIND OF CARS CAN COMPETE?

The SORC accepts any car and driver that complies with the safety and qualification rules. See the rules page for specific information. Motorcycles are not permitted.

### IS RACING EXPERIENCE REQUIRED?

Drivers and Navigators must be 18 the day of the race to participate in the event. Drivers are not required to have racing experience in the 80 - 105 MPH classes, but it is strongly recommended.

### WHAT IS TECH SPEED?

Tech Speed represents the maximum speed drivers may attain. Tech speed is determined by the level of safety equipment and classification. (i.e.) the 100 MPH Class has a tech speed of 140 MPH.

### WHAT IS TARGET SPEED?

Target Speed is the pre-designated average speed for each class. The 80 MPH class has a target speed of 80 MPH.

# SORC SHOOTOUT

The SORC One Mile and Half Mile Shootout is a solo type of drag racing

The One Mile Shootout was conceived as a supplemental event to the SORC in 2002. It has become an event unto itself and is eagerly anticipated by drivers and spectators alike. It is now an event emulated by at least three other racing organizations. The shootout venue consists of a straight and very smooth road with more than two miles of shutdown area for maximum safety.

Each driver selects a class that is appropriate to the safety standards established for the respective class. Cars must meet the "Tech" requirements for the *Grand Sport Division* (roll bar, 5-point harness, etc.) to qualify for the One Mile class. All others will be limited to the Half Mile Shootout. Cars with the capability to exceed 200 MPH must have a roll cage which complies with SORC specifications. If you exceed 200 MPH, and do not have a roll cage, you will be forced to run the remainder of the event in the Half Mile group. And you will not be entitled to the King of the Hill award. In order to receive the King of the Hill award, your vehicle must pass all specifications during tech. Also, when you tech in, you will be required to declare if you are going for the One Mile or the Half Mile King of the Hill award. You cannot go for both in the same year with the same car.

The open road race has no effect on the class selected for this event. Drivers will make two passes for record (three if time permits). There are no practice runs. Winners are selected from the cars which post the closest matching times from the two runs. The fastest single speed will receive the "King of the Hill" award. First, second, and third place awards will be given in both events to drivers with the closest matching speeds. Consider the following: Driver A's two runs are separated by .4 MPH and driver B has .7 MPH difference in his two runs. Driver A wins. In case of a tie the fastest time will determine the winner.

The rules for the **Street Class Champion** are found on page 8.

## Burnout Contest

The Burnout contest is very simple, we stage your car, allow you to burn your tires for 15 seconds. Then the crowd or judges determine if you move onto the next level of competition. The only requirement is that if you are entered in the Road Race you will not be allowed to use your race tires for the burnout. So be prepared to bring a set to use.

Also after you do the burnout, there will not be any doing cookies or showing display of acceleration while leaving the staging area. If this happens, you may be subject to a full disqualification from the Road Race, and other SORC events. Decision is final by the Race Director.

# Pre-Race Regulations

The SORC maintains the highest standards of event and participation safety. These standards are developed with the cooperation of the Custer County Supervisors. Before any participant receives a green flag, the following requirements must be met.

- A. All emergency vehicles and personnel must be in place.
- B. All direct roads intersecting the course must have a course worker in place with communication established with the race director.
- C. End to end radio communications will be maintained along the course at all times.
- D. Airplanes are flying assigned observation patterns.
- E. All flag personnel and race officials are in place at their assigned positions.

## Technical Safety Inspection “Tech” & Drivers Meetings

All vehicles must complete the technical safety inspection to insure compliance with the minimum requirements established by the SORC for the division entered. There are no exceptions to this rule.

Make sure that your car and equipment are ready for inspection when presenting your car to inspectors.

All drivers are required to attend all drivers meetings.

Drivers who have never competed in the SORC must attend the 1st Time Drivers Meeting. Failure to attend may result in disqualification.

## Acceptance of Rules, Regulations, and Specifications

All persons or groups making official entry in SORC events are assumed to know all event rules, and requirements.

Every participant or team in a SORC event, is expected to conduct themselves according to the highest standards of behavior and sportsmanship. Entrants shall also be responsible for the conduct of those accompanying them to the event such as crew, family, and friends.

# Rules of the Road

The following rules are critical to your safety. These rules must be followed, and are not negotiable. The SORC Board of Directors relies upon entrants to follow these rules in order to offer a safe event and insure the future of the SORC and its success.

1. **Obey all race officials and emergency personnel.** They are there to protect you and the event.
2. **Drive safely.** You are fully responsible for your actions on the course. Keep looking far ahead at all times.
3. **Obey all course flags.** Obey the flag people on the course; they are your eyes for what is ahead. Disregarding flag signals creates an unsafe event and could result in your expulsion.

## FLAGS IN USE:

A. **Red flag.** Stop as soon as possible, move off of the road as much as you can. Get out of your car, and stand next to the fence. If there is no fence get at least 100 ft from the roadway. Do not proceed on the course until a course worker has notified you. If you are injured, stay in your car or lie down near the road.

B. **Waving yellow flag.** Exercise extreme caution. There is something partially blocking the roadway ahead of you, or wildlife is near the road.

C. **Steady yellow flag.** Slow down and exercise caution. Something is in the roadway ahead, wildlife, oil, debris, etc...

4. **Pass only on the left.** Passing is permitted only on the left side while on a straight-away. If you are overtaken, you must allow the car behind you to pass. Drivers are encouraged to discuss their course strategy with other drivers near them in the grid. If you attempt to pass, make sure the car in front of you knows that you intend to pass. Be alert and conscious of what the other driver is doing.

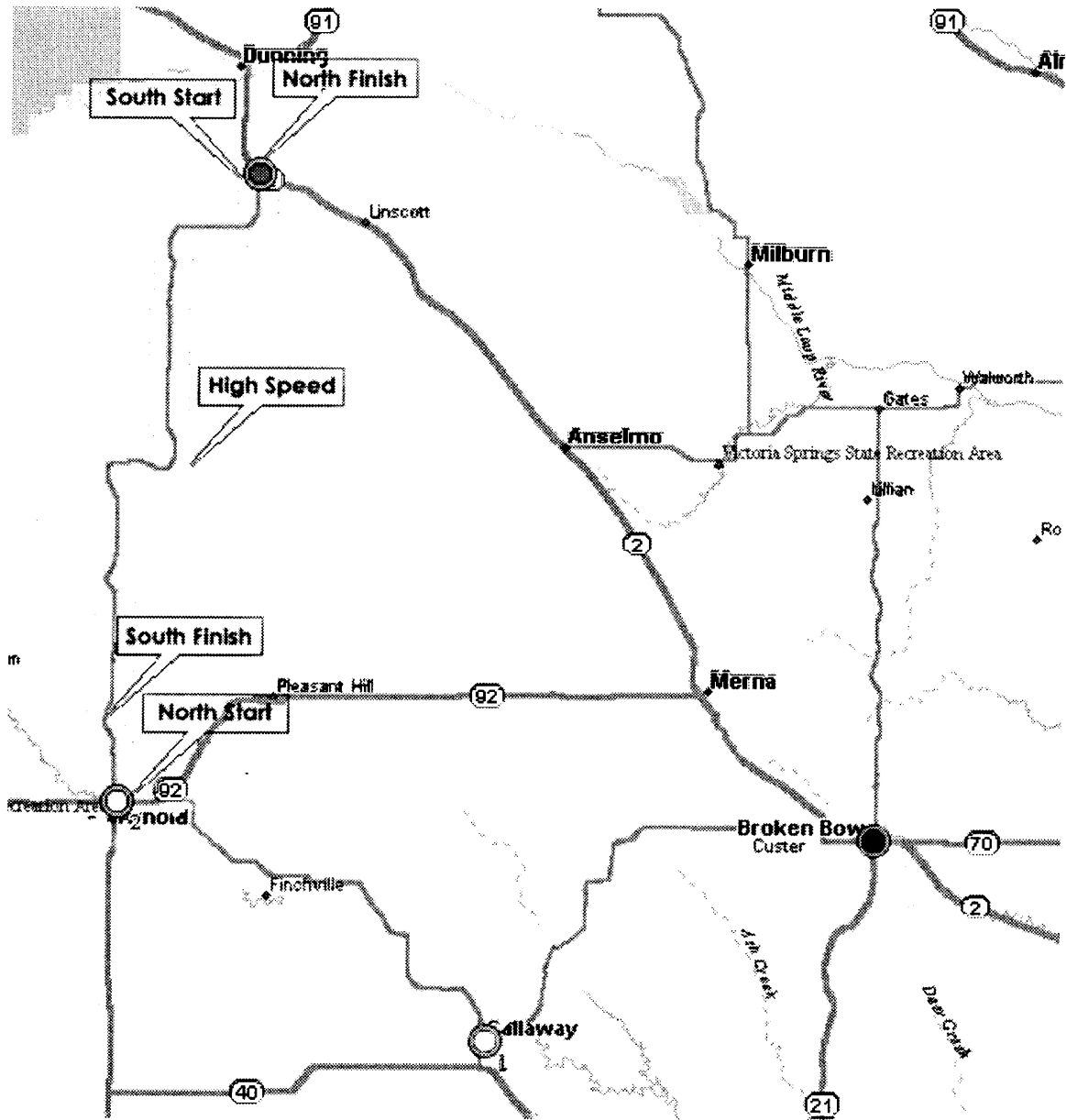
5. **Minimum speed on the course.** Excluding turns and corners, where speed reduction is necessary, drivers must maintain a minimum speed within 20 mph under assigned target speed. Important: Minimum speed for the Unlimited Class is 120 MPH. Do not slow down to below the minimum speed at the finish line in an effort to “hit” your time. This is dangerous; the car behind you is traveling at or near their Tech speed.

6. **Never reverse direction on the course.** Unless directed to do so by race officials a driver is never permitted to reverse course direction.

7. **Never exceed your Tech Speed.** Violation of this rule can result in disqualification.

# Map Of Our Races

The South Finish line is not shown; you will see it when you run the course that weekend.



## Minimum Safety Requirements For Each Class

<b>Classes</b>	<b>80</b>	<b>90</b>	<b>95</b>	<b>100</b>	<b>105</b>	<b>110</b>	<b>115</b>	<b>120</b>	<b>UNL</b>
<b>2.5lb fire extinguisher</b>	X	X	X	X	X	X	X	X	
<b>Competition fire system</b>									X
<b>Factory Seat Belts</b>	X	X	X						
<b>U-rated Tires</b>	X	X	X						
<b>Z-rated Tires</b>				X	X	X	X	X	
<b>Non-synthetic clothing</b>	X								
<b>SFI 32 A1 Fire suit</b>				X	X	X	X	X	X
<b>SA2000 Helmet</b>	X	X	X	X	X	X	X	X	
<b>SA-2005 Helmet</b>									X
<b>Racing Tires</b>									X
<b>Rollbar</b>				X	X	X	X	X	
<b>Rollcage</b>									X
<b>Fuel Cell</b>									X
<b>Driveshaft loop</b>									X
<b>5-6pt. Harness</b>				X	X	X	X	X	X

# STREET CLASS CHAMPION SHOOTOUT

The Street Class Champion Shootout is comprised of two classes: One Mile and the Half Mile. Participants must declare their entry into this class at the time of registration. KOTH recipients can not be considered for the Street Class Champion award.

**VEHICLE TYPE:** Vehicles in competition must be four-wheeled cars, trucks. No dragsters, buggies, or flip-up or lift-off bodies allowed.

**COMPETITORS LEGAL REQUIREMENTS:** Must have current street registration, a legal rear license plate with current registration decal, current proof of insurance, and a current driver's license. No dealer or manufacturer plates allowed.

**SAFETY REQUIREMENTS:** Competitors must meet SORC safety requirements for the respective shootout class entered.

**STREET LEGAL EQUIPMENT REQUIRED:** Working head lights, tail lights, brake lights, turn signals, and horn. Safety-glass windshield. Mufflers required; exhaust system may not terminate more than 12 inches ahead of the rear axle. All exhaust gases released from the engine must pass through mufflers at all times. Cars may not be "uncorked" in any way during competition.

**ENGINES:** Must be a gasoline or diesel four-stroke piston or rotary type. All cars must be self starting. No push starts are allowed.

**DOORS & WINDOWS:** Cars must have working doors and windows.

**TIRES:** The entire competition, including the street driving, must be run on one set of DOT-approved tires. The use of racing slicks, or drag radials is not allowed.

**CAR INTERIORS:** Floor and tunnel where visible must be upholstered or carpeted. Headliner and door panels required. Production cars must use a full dashboard and frame. Upholstered side-by-side driver and passenger seats and a steering column in the conventional location are required.

**FUEL:** No fuel may be added to the vehicles tank until after returning to Arnold via prescribed return route. Fuel tanks may not be larger than original factory capacity. Modified or kit cars are limited to fuel tanks no larger than 20 gallon capacity. Maximum octane level is 103. Any competitor caught adding fuel or with a supplemental fuel system will be immediately disqualified. Injection into the engine of any substance other than the specified gasoline, diesel, propane, water, or nitrous oxide is not allowed.

**TRAILERS:** Competitors may not trailer their car South of Hwy 40 or North of Hwy 30 while en-route to the event site. Drivers must drive their car to Arnold via Callaway in the parade caravan after conclusion of the event.

**SUPPORT VEHICLES:** No chase vehicle or support vehicle of any kind may accompany the competing vehicles during any part of the competition.

**CAR REPAIR AND TUNING:** With the exception of adjusting tire pressure, vehicles may not be worked on at anytime until after returning to Arnold. Cars must race as they were driven to the track.

**EVENT WINNER:** Plaques in both classes will be awarded to the fastest average speeds of two passes (three if time permits). Closest matching speeds of the three passes will be used as a tie-breaker.

# CLASSES: 80, 90, & 95 MPH

Technical Speed: 120 MPH  
Navigators are highly recommended

The following are the minimum requirements for the Touring Division.

1. The 80, 90, and 95 will have a tech speed of 120 mph. This speed may not be exceeded at any time.
2. A 2.5 lb. minimum, automotive BC fire extinguisher, with a secure quick-release mounting bracket is required. The extinguisher must be within easy reach of the Driver.
3. Over the shoulder style OEM lap belts and harness are the MINIMUM standard. If your car does not come with these style belts, then you will have to contact us before approval to race.
  - A. Belts must be in "as new" condition.
  - B. The use of a five point racing harness system is highly recommended.
4. DOT approved "U" rated tires (or better) will be considered the minimum requirement. DOT approved "H", "V" or "Z" rated tires are recommended. See page 20.
5. A SNELL Foundation SA2000 (or later) helmet in good condition is the Minimum Standard, shatter proof eye protection is recommended (shatter proof eyeglasses will be considered the minimum standard.)
6. Non-synthetic clothing (cotton, wool, leather, etc.) covering torso, arms and legs, plus gloves and leather topped shoes (both without holes) is the minimum standard. Golf gloves and athletic shoes with holes are not acceptable.
7. No open exhaust allowed during the road race. You have to have some sort of a collector (muffler, side pipe, glass pack, etc.) OR you will need to have a minimum of 2 ft. of pipe past the header or manifold collector.
8. A radio scanner is recommended.
9. Perfect times can be found on **page 25**.

# CLASSES: 100, 105, 110 115 & 120 MPH

Technical Speed: 140 MPH  
Navigators are highly recommended

1. Drivers who have not successfully completed the 115 MPH class in the SORC are not eligible to enter the 115 MPH class. No exceptions to this policy will be considered.
2. Cars must be capable of attaining a speed of 145 in the One Mile Shoot Out to qualify for the 120 MPH class and 135 MPH for the Half Mile Shoot Out.
3. Cars must be capable of attaining a speed of 135 in the One Mile Shoot Out to qualify for the 115 MPH class and 125 MPH for the Half Mile Shoot Out.
4. If you do not participate in the Shootout, it will be up to the decision of the race directors to allow your car to run in these classes.
5. A 2.5 lb. Minimum, automotive BC fire extinguisher, with a secure quick-release mounting bracket is required. The extinguisher must be within easy reach of the Driver.
6. A five or six point safety harness system that includes three inch (3") shoulder and lap belts. See pages 21-22.
  - A. All belts must be in "as new" condition.
  - B. Sternum belts are recommended for seats, which do not support the shoulder straps. However, large metal buckles on the sternum strap are not recommended.
  - C. The use of a "cam-lock" seat belt locking system is recommended.
7. An approved 4 pt. Roll Bar is minimum requirement (with Harness bar and diagonal brace) into the 100 thru 120 mph classes. See pages 17 and 18.
8. DOT approved "Z" rated tires (or better) will be considered the minimum requirements. See page 20.
9. A SNELL Foundation SA2000 (or later) helmet is the minimum standard; shatterproof eye protection is required.
  - A. A neck restraint is recommended.
  - B. Shatter proof eye protection or full-face helmet is required.
  - C. A padded helmet support is recommended.
  - D. Arm restraints are recommended.
10. No open exhaust systems are allowed during the road race. You must have some sort of a collector (muffler, side pipe, glass pack, etc.) OR you will need to have a MINIMUM of 2' of pipe past the header or manifold collector.

11. An SFI approved Suit with a 32 A/1 Rating for Driver/Navigator is required.
12. A radio scanner is recommended.
13. Aftermarket fuel cells need to meet specs.

**-- Notes --**

# UNLIMITED DIVISION

Classes: Unlimited

Minimum Technical Speed: 120 MPH

The following are the minimum requirements for the Unlimited Division.

1. Drivers who have not successfully completed the 120 MPH class in the SORC are not eligible to enter the "Unlimited" class. No exceptions to this policy will be considered. Cars must be capable of attaining a speed of 155 MPH in the One Mile Shoot Out to enter this class or 145 MPH in the Half Mile Shoot Out.
2. All Drivers and Navigators must be at least 21 years of age unless otherwise approved by the SORC Event Director.
3. A competition approved fire system and fuel cell. **See Page 22.**
4. A five or six point safety harness system that includes three-inch (3") shoulder and lap belts. **See Page 21.**
  - A. Arm Restraints or window nets are required.
5. A competition approved Roll Cage. **See Page 19.**
6. Approved racing tires. **See Page 20.**
7. A padded steering hub and collapsible steering column is required.
8. A SNELL Foundation SA2005 (or later) helmet in good condition as the minimum standard.
  - A. The use of a full-face helmet is mandatory.
  - B. A padded helmet support is required (headrest).
  - C. A neck restraint device is also recommended.
9. A drive shaft loop for front engine rear-wheel drive vehicles is required that would impede a ground strike by the front of the drive shaft.
10. No open exhaust allowed during the road race. (Mufflers, side pipes, glass pack, etc.) are required or a MINIMUM of 2 ft of pipe past the header or manifold collector.
11. The fire suppression system must include the engine and passenger compartment.
12. Recommendations:
  - A. A larger steering wheel is recommended. (The intent is to slow steering response at speed).
  - B. A radio scanner is recommended.

**See Chart on page 7 for minimum requirements.**

# PICKUP SPECIFICATIONS

## 1. Standard Cabs Only:

A. **80, 90, 95 Classes:** Abide by the requirements set. **See Page 9.**

B. **100, 105, 110, 115, 120:** You will need the roll bar mounted inside the cab and have all of the equipment required for these classes.

## 2. If the roll bar is mounted in the box:

A. You will qualify for the full one-mile shootout only if you have all other requirements for the 140 tech speed.

B. You will be limited to running in the 120 tech speed classes for the road race.

C. The roll bar cannot be any more than 14 inches from the middle of your helmet to the roll bar mounted in the box. The roll bar must be mounted as close to the cab as you can. If need be, contour the bar to match the back of the cab of the pickup.

## 3. Inside Roll Bar Requirements. For Standard Cab Pickups Only.

A. Minimum of a 4 pt. bar, along with a diagonal cross brace and full-width shoulder harness bar. Bar size will need to meet bar size ratio to weight of pickup. Mounting will need to be as required in our roll bar specs. **See page 17-18.**

## 4. Club Cab, or extended cab pickups:

A. Abide by the requirements set in the 120 tech speed.

B. 140 tech speed: Roll bar will be mounted inside the cab above the driver just as in a car. Also, follow requirements for the 140 tech speed. **See roll bar specs. on pages 17-18.**

# RULES, REQUIREMENTS, REGULATIONS & SPECIFICATIONS

1. Soft cloth items are OK as long as they are secured so as not to fly around.
2. Non-breakable drink containers properly secured in such a fashion that they can't move, such as taped to the roll bar.
3. Laptops, clipboards, etc. must be secured such that they cannot move in case of an incident. NOTE: If your car has an airbag it cannot be mounted in front of the participants unless the airbag has been disabled. (See additional below). Clipboards if handheld must be collapsible.
4. Handheld stopwatches are OK.

All other items must be out of the passenger compartment when you approach the Start Line or you will not be allowed to run.

**\* More on Laptops:** No HAND HELD lap tops unless they are hard mounted and out of the path of the air bag system and in a fashion that doesn't obstruct the view outside of the vehicle. At your option, if your vehicle is equipped with a factory airbag shut off or an approved aftermarket installation (documentation required: National Highway Traffic Safety Administration form 603) you may hard mount a lap top or other device in front of the passenger as long as the passenger is wearing a 5 pt. harness. Bottom line, the laptop has to be mounted solid so it will not move during an impact, or rollover. We do not want it to become a projectile. You will have to figure a custom way of mounting the laptop, in your own vehicle. Currently there is not a race kit for laptops. Check with our website if there is any new updates to this area.

## RECOMMENDATIONS:

1. We are recommending 10 lb. fire suppression systems and dual interior nozzles for those in the Unlimited Division who are carrying passengers.
2. Drive shaft loops are recommended for Grand Sport and Unlimited Divisions.
3. A Blow Proof Bell Housing is recommended for those in the Unlimited Classes.

### 1. ACCEPTANCE:

A. Any and all persons and groups making an official entry in SORC sanctioned events are assumed to know the Rules, Requirements, Regulations and Specifications. Participation in the event shall constitute acceptance of them by every participant.

B. The decision of the SORC officials in their interpretation and enforcement is final.

### 2. ENTRY:

A. An official SORC application for entry must be legibly completed, signed, entry fee enclosed, and received by the SORC.

\*B. SORC reserves the right to reject any entry.\*

### 3. SPONSOR DECALS AND CAR NUMBERS

A. Sponsor Decals:

Event sponsor decals will be provided, along with a diagram for affixing them to your vehicle at registration. EVENT SPONSOR DECALS MUST BE AFFIXED TO YOUR VEHICLE BEFORE GOING THROUGH TECHNICAL INSPECTION. EVENT SPONSOR DECALS MUST BE AFFIXED TO YOUR VEHICLE AT THE START LINE.

**B. Car Numbers:**

Car numbers will be provided at registration. Indicate the requested desired car number, and two alternates, on the appropriate form. In cases of duplication the requested number will be awarded to the earliest dated entry. Permanent car numbers will be assigned to lifetime members.

Car numbers **MUST** be displayed on both sides of your vehicle. The third number will be displayed on the hood, if possible. If not, then use roof or trunk lid. Other decals, logos, and advertising are permitted, if displayed tastefully. The use/display of any numbers on the car other than those provided may cause confusion to timing/scoring spotters. SORC cannot be responsible should any entrant not using the official number decals not be properly scored.

**4. REGISTRATION:**

A. Registration is required for all participants. You must register at the event prior to your car being teched.

**5. MEDIA SPONSORS, ASSOCIATE SPONSORS AND EVENT OFFICIALS:**

A. Anyone participating in this event must be registered by SORC. This includes, but is not limited to: the media, sponsors, associate sponsors, and event officials.

B. Credentials will be issued and will be used to control access to restricted areas as designated.

C. The credentials must be visible at all times during the event.

**6. WAIVERS:**

A. Any and all persons admitted to the pre-grid, pits and/or other designated restricted areas of SORC sanctioned events must obey all Rules, Requirements, Regulations, and Specifications set forth by SORC.

B. Each person admitted must complete and sign all releases of liability requested by SORC.

C. All participants empower SORC to represent them in assigning rights for reproduction of sanctioned events by electronic, broadcast and/or print media and automatically assign rights to utilize their name, facsimile, etc., in media-related materials and/or advertising and promotion of sanctioned events.

**7. PARTICIPATION LIMIT:**

A. Entry of more than one car per driver is not permitted in any single event.

**8. AGE REQUIREMENTS:**

A. The Driver must be at least 18 years of age at the start of the event.

B. The navigator should be 18 years of age at the start of the event. General License Requirements: All Drivers must have a valid state, military or international driver's license.

**9. DRIVER'S MEETING:**

A. ALL driver entrants must attend the Thursday & Friday drivers meeting preceding the actual event day (unless otherwise waived by the appropriate SORC officials).

B. A photocopy of the participant's valid competition license or a written statement of approved experience must be on file at the time of registration.

**10. DRIVER CHANGES:** Changes must be reported to Registration prior to the mandatory Driver's Meeting.

**(Rules continued):**

- A. If a Driver wishes to change places with a Navigator, and they are qualified and correctly registered, the change may be made at the discretion of the Race Director as late as the final Pre-Grid.
- B. No other Driver changes will be allowed after Registration closes.

**11. DRIVER/NAVIGATOR MEETINGS:** Driver/Navigator meetings are MANDATORY.

- A. It is each Driver/Navigator's responsibility to learn of each meeting and attend.
- B. Failure to attend these meetings will cause disqualification.

**12. PROTESTS:**

Directly following the race, preliminary results will be posted and awards will be granted based on those results. The results will not be finalized until all times are checked. Normally results are posted 7-10 days after the race. During this time the entrants can come forward with their protests on possible timing and scoring errors.

Protests will be considered at the next regular board meeting of SORC after the Event.

**13. EVENT OFFICIALS:**

The SORC Race Director will be the event master for each event. It is his/her responsibility to supervise the safety of the event. A Driver/Navigator's access to the course is at the sole discretion of the Race Director. The Race Director may designate the following positions for each event: Chiefs of: Technical Inspection, Tires, Touring Pace Car Driver, Timing, Communications, Worker and any other appointments he/she deems appropriate.

**14. TIMING:**

- A. An electronic timing system will be used. If the electronic system fails, the manual backup will be considered official.
- B. Participants will be timed from a standing start.
- C. All participants are encouraged to synchronize their watches with the official timing clock at the start line.

**15. DISQUALIFICATION:**

A. Race Directors have the right to disqualify any participant from the race, due to willful misconduct during any of the SORC events. If acts of misconduct are bad enough they may not be allowed to start the race. The decision is final by the Directors.

B. If anyone reports to the board of any willful, unsafe driving practices from a participant at any time during, before, and or after the SORC event, the board will have the right to investigate and disqualify any individual(s) whom are found guilty of this violation. Practice on the road all you want, but please abide all traffic laws and speed limits.

C. A vehicle that exceeds the Speed Threshold (Tech Speed) as determined by the Division/Class Requirements will be disqualified.

D. Any entry finishing the event with an average speed which exceeds your target speed by 10 mph or more will be disqualified.

E. Disregarding or over driving a flag signal will cause disqualification.

**16. PENALTIES:**

A. If a disqualification occurs the Driver/Navigator will not receive their radar speeds or average speed results. The Driver/Navigator will be advised of the reason for the disqualification, but the exact numbers (speed) will be withheld.

# ROLL BAR SPECIFICATIONS

1. **ROLL BAR:** A 4 pt. Roll Bar is mandatory in the Grand Touring and Grand Sport Divisions, with a harness bar and a diagonal brace.

2. **BASIC DESIGN CONSIDERATIONS:** The basic purpose of the roll bar/roll cage is to protect the driver in case the vehicle rolls over. This purpose should not be forgotten.

A. The top of the roll bar shall not be below the top of the driver's helmet in a closed car and a minimum of two (2) inches above the driver's helmet in an open car when the driver is in the normal driving position. It shall not be more than six (6) inches behind the driver.

B. Cars with factory built or factory reinforced roll structures may be allowed in the Grand Sport Division. They will be evaluated on a per car basis. The decision of the Event Director will be final.

C. The two vertical members forming the side of the hoop shall not be less than fifteen (15) inches apart, inside dimensions, at their attachment point to the uppermost chassis member.

D. An inspection hole of at least 3/16-inch diameter must be drilled in a non-critical area of the roll bar member to facilitate verification of wall thickness. This should be at least three inches from any weld or bend.

3. **MATERIAL:** The roll bar hoop and all braces must be of seamless, ERW (Electric Resistance Welded), DOM (Drawn Over Mandrel) or CREW (Cold Rolled Electric Welded) mild steel tubing.

A. The size of the tubing to be used must be determined on the basis of the weight and speed potential of the car.

4. **FABRICATION:** The main vertical hoop must be one continuous length of tubing with smooth continuous bends and no evidence of crimping or wall failure.

A. All welding must be of the highest quality with full penetration. Arc welding should be used whenever possible. All attachment points must be welded 360 degrees around the tube.

B. Gussets should be welded at the junction of any tubes.

5. **BRACING:** It is recommended that braces be of the same size tubing as used for the roll bar itself.

A. All roll bars must be braced in a for or aft direction with the brace attached within six (6) inches of the top of the hoop, and at an angle of at least thirty (30) degrees from vertical.

B. It is required that a diagonal brace be used to triangulate the main hoop, and it is highly recommended that this brace be attached at the top on the driver's side and attached to the bottom on the "passenger" side.

C. A head rest is required if not part of the seat.

6. **MOUNTING PLATES:** Roll bars and braces must be attached to the frame of the car whenever possible. Mounting plates must be used for this purpose. When the main hoop is attached to sheet metal, such as a floor attaching point for unibody cars, the mount plate must be at least 36 square inches (6" x 6" plate) on both sides of the sheet-metal.

A. A minimum of double-nutted grade 5 bolts for self-locking or welded nuts shall be used to bolt to the car. No bolts are needed if the bar is welded to the car's frame.

B. In the case of cars with unitized or frameless construction, mounting plates must be used to secure the roll bar structure to the floor of the car. The important consideration is that the load be distributed over as large an area as possible. A back-up plate of equal size and thickness must be used on the opposite side of the panel with the plates through-bolted together.

**(Roll Bar Specs Continued)**

**7. REMOVABLE ROLL BARS:** Removable roll bars and their braces must be very carefully designed and constructed to be at least as strong as a permanent installation. If one tube fits inside another to facilitate removal, the removable portion must bottom on the permanent mounting, and the mounting hardware used to secure each joint must be grade five (5) or better. It is recommended that the telescope section be at least eight (8) inches in length.

**8. INSTALLATIONS ON CARS OF SPACE FRAME OR FRAMELESS DESIGN:** It is important that the structures be attached to cars in such a way as to spread the loads over a wide area. It is not sufficient to simply attach the roll bar to a single tube or junction of tubes. The roll bar must be designed in such a way as to be an extension of the frame. Considerable care must be used to add as necessary to the frame structure itself in such a way as to properly distribute the loads. It is not true that a roll bar can only be as strong as a single tube of the frame. On cars of frameless construction, consideration should be given to using a vertical roll bar hoop of 360 degrees completely around the inside of the car, and attaches with suitable mounting plates. This type of roll bar then becomes a substitute for the frame.

**9. OTHER DESIGNS:** Deviations from the above will be considered.

**10. ROLL BAR PADDING:** Roll bar padding should be used to protect the Driver/Navigator in all areas of possible contact.

**11. MINIMUM TUBING SIZING:** The size of the tubing to be used shall be determined on the basis of the weight and speed potential of the car.

**Under 1500 lbs.** ERW, CREW 1.50" O.D. X .120 wall  
DOM 1.50" O.D. X .090 wall

**1500 to 2700 lbs.** ERW, CREW 1.75" O.D. X .120 wall  
DOM 1.50" O.D. X .090 wall

**2700 lbs. & over** ERW, CREW 1.75" O.D. X .120 wall  
DOM 1.75" O.D. X .090 wall

# ROLL CAGE SPECIFICATIONS

**1. ROLL CAGE DIVISION REQUIREMENTS:** A roll cage is mandatory in the Unlimited Divisions.

A. The cage may be removable or may be permanently welded, or any combination thereof, providing that all aspects of the cage meet these rules.

B. A NASCAR style roll cage is highly recommended.

C. Material, Fabrication, Bracing and Installation specifications are the same as the specifications for a Roll Bar. See Section X, pages 15 & 16 for detailed information.

D. All roll cage surfaces that may come in contact with the driver must be padded with high-density padding such as Ethafoam or Ensolite.

E. None of the tubing may show any signs of crimping or wall failure. All bends must be Mandrel type.

F. One continuous length of roll bar tubing shall be used as the main hoop. The main hoop must consist of not more than four (4) bends maximum, totaling one hundred eighty (180) degrees +/- ten (10) degrees.

G. At least one (1) diagonal brace must be used in the same plane as the main hoop. One end of the diagonal brace shall attach to the corner of horizontal part, of the main hoop above the drivers' head, within twelve (12) inches of the drivers'-side corner.

H. The forward hoops extend from the main hoop (in a forward direction) to the floor by following the roof and the "A" pillar of the car. There must be a bar connecting the two (2) forward hoops at the top of the windshield mounted as close to the roof as possible.

I. The main hoop must have two (2) braces extending to the rear. The braces shall be attached as near as possible to the top of the main hoop, and no more than six (6) inches below the top.

J. At least two (2) door bars on the driver and passenger sides must be used. The top bar must extend forward and pass the occupants between their shoulder and elbow.

K. The roll cage shall be mounted to the floor of the car in six, seven, or eight points. All cage attachment points must be mounted to plates.

L. Welded mounting plates must be at least 0.080-inch thick.

M. The attaching points of a bolt-in cage to the body must use reinforcing plates to sandwich the body. A least three bolts are required for each bolt-in plate and the plate must be at least 3/16 inch thick. All hardware must be SAE grade 5 or better with 5/16 inch diameter minimum. All nuts must be held by safety wire or a locking system, such as lock washer, or jam-nuts.

N. All welding must be of the highest quality with full penetration. Arc welding should be used whenever possible. All attachment points must be welded 360 degrees around the tube.

O. All required bars must be made of the same material and meet with at least the minimum specifications for size and thickness.

**2. SPECIFICATION:** See Roll Bar Specification for the roll cage fabrication specification.

# TIRE REGULATIONS

All individuals who are participating in either the Road Race or the Mile Shootout must run a tire that is speed rated for your division that you will be running in. This also implies to all radials and racing slicks. If the tire you choose to use is not speed rated, SORC will not allow you to run in our event.

**Tire Speed Rating Information:** The following information is made available to the participant in order to assist their preparation.

Q = 100 mph R = 106 mph S = 112 mph T = 118 mph  
U = 124 mph H = 130 mph V = 149 mph Z = 149 mph+  
W = 168 mph Y = 186 mph

**1. LOAD CARRYING CAPACITY:** ALL TIRES MUST HAVE AN EQUAL OR GREATER LOAD CARRYING CAPACITY THAN THE ORIGINAL TIRE. (i.e., The base tire for a 1999 Mustang is a P205/65R15 rated @ 1400 lbs. Any replacement tire must have a load rating of at least 1400 lbs. Regardless of the speed rating or what Division/Class the vehicle is competing).

**2. SPEED RATING:** ALL TIRES MUST HAVE AN EQUAL OR GREATER SPEED RATING THAN ORIGINAL EQUIPMENT (OEM) REGARDLESS OF WHAT DIVISION/CLASS THE VEHICLE IS COMPETING IN. (i.e., A 1992 BMW 535i comes equipped with 225/60VR15 tire from the factory. The car must have tires with an equal or higher speed rating to compete in any class).

A. **80, 90, 95 Class:** DOT approved "U" rated tires (or better) will be considered the Minimum Standard.

B. **100, 105, 110, 115, 120 Class:** DOT approved "Z" or "W" rated tires are required. Should not be more than two years old.

C. **Unlimited Division:** Approved racing tires are required - OR -

D. Unlimited class cars may use certain DOT tires known to us to have been tested to speeds above the known limit of the tire.

**3. RACING TIRES:** Refer to Heading on this page.

**4. REQUIREMENTS:**

A. Tubes will not be allowed in tubeless tires in any class.

B. IN ANY SPEED CATEGORY, TIRES OR WHEELS MAY NOT RUB ON ANY PART OF THE SUSPENSION, FRAME, OR BODYWORK.

C. Tires must be in excellent condition and suitable for sustained use at the car's maximum speed.

D. The use of repaired tires in Grand Sport and Unlimited Divisions is not recommended.

E. It is highly recommended that tires used within 10 mph of their maximum speed rating should be shaved to 4 or 5/32".

F. Tires must be mounted on wheels of proper width as listed by the tire and wheel manufacturer.

# SPECIFICATIONS FOR HELMETS, HARNESSSES, CLOTHING, FUELS & EXHAUST

## ALL CLASSES EXCEPT THE UNLIMITED CLASS:

A SNELL Foundation SA2000 (or later) helmet is the Minimum Standard. Shatter proof eye protection is recommended. Shatter proof eyeglasses will be considered the Minimum Standard. A full face helmet is recommended, along with a Hans device.

## UNLIMITED:

A SNELL Foundation SA2005 (or later) helmet with shatter proof eye protection is required. A full face helmet is recommended (required for Unlimited Division) along with a neck resistance device.

## CLOTHING SPECIFICATIONS

Name and blood type is required on the drivers and navigators helmet.

The following are the specifications for the 120 tech speed:

Non-synthetic clothing (cotton, wool, leather, etc.) covering the torso, arms and legs, plus gloves and leather topped shoes (both without holes) is the minimum standard. Golf gloves and athletic shoes with holes are not acceptable.

The following are the specifications for the 140 tech speed:

1. A fire resistant driving suit and underwear for the driver/navigator is recommended.
2. A one- or two-piece fire resistant driving suit, socks and gloves (leather palms are okay) are considered the minimum requirement for both drivers and navigators.
3. A head sock for drivers/navigators with long hair (or facial hair) is required.

## RESTRAINT SYSTEMS

### 1. SEAT BELT REQUIREMENTS

**120 Tech Speed:** Factory stock belts, OEM or better, in good condition, not frayed or excessively worn are the Minimum Required. All seatbelts will be required to be over the shoulder style.

**140 Tech Speed:** A five (5) or six (6) point harness system is mandatory.

- A. Three (3) inch lap and shoulder belts are the Minimum Standard required.
- B. Mounting points must be at, or on the roll cage, frame member or body panel.
- C. The belts should be mounted in such a way so as not to cause undue spinal compression and never above horizontal.
- D. If mounted to the body panel adequate spreader plates should be used.
- E. Belts must be mounted on a frame member or roll cage in the Unlimited Division.
- F. Mounting to sheet metal (or fiberglass) is specifically prohibited.
- G. Arm restraints are recommended.

**(Specs Continued)**

**2. BELT/RESTRAINT AGE REQUIREMENTS:**

- A. All belts/restraints must be in “as new” condition.
- B. The belts must not be more than 24 months old in the Unlimited Division.

**3. ARM RESTRAINTS:**

Arm restraints or window nets are mandatory in Unlimited and highly recommended in all other Divisions.

**4. SEATS:**

Seats must be firmly affixed to the roll cage and/or basic structure of the car. The use of proper racing seats is recommended. Aluminum, steel or fiberglass material is recommended.

**FIRE SYSTEM AND FUEL CELL**

**1. FIRE SYSTEMS:**

- A. A fire system must be installed on all Unlimited cars.
- B. An on-board system uses lines routed through the car, inside the perimeter of the roll cage, with a single actuator to engage in case of emergency.
- C. An on-board system may use Halon 1301 or 1211 only.
- D. A five (5) pound minimum is required, with a minimum of two (2) nozzles (one (1) in the cockpit and one (1) in the engine bay) with a manual or auto release.
- E. Systems may also use AFFF material (i.e. SPA Lite, ZERO 2000, Coldfire 302) 2.25 liter minimum. If such a system is used, the appropriate atomizing nozzles shall be used. All AFFF internally pressurized system bottles shall use a working pressure gauge. All AFFF bottles must be marked with the recommended “filled weight.”
- F. All system cylinders shall be securely mounted.
- G. On-board systems may also use the CEA614 provided that the lines and nozzles are replaced as per the manufacturer’s (3M) instructions.

**2. FUEL CELL/TANK DESCRIPTION:**

- A. A fuel cell is required on all Unlimited cars and cars using aftermarket fuel tanks.
- B. There must be a solid metal bulkhead completely separating the fuel tank, fuel cell, filler neck hoses, and/or vent lines, from the driver compartment.
- C. Good quality fuel cells contain a bladder constructed of Nylon or Dacron woven fabric impregnated and coated with a fuel resistant elastomer.
- D. The cell shall be in a container made of at least 0.036-inch steel, 0.059-inch aluminum, or 0.125-inch Marlex, fully surrounding the bladder.
- E. Foam internal baffling is required.
- F. The filler cap, line, vent hoses, etc. must be designed so that no fuel will escape if the car is partially or totally inverted.

**3. INSTALLATION:**

- A. Fuel cells must be located within twelve (12) inches of the original tank. This measurement is taken from the perimeter edge of the original tank to the perimeter edge of the fuel cell.
- B. Additional reinforcements may be added to aid in the installation of the cell, but they shall not attach to the roll cage.
- C. Floor structure may be modified to aid in the installation of the cell.
- D. Steel location strapping is strongly recommended to keep the fuel cell from dislocating in a crash.

(Specs Continued)

#### 4. RESTRICTIONS:

A. Installing a fuel cell that hangs significantly close to the ground or is mounted closest to the rear of the vehicle, even if the installation meets with these rules, may be deemed unsafe and therefore excluded from the event.

B. Rotary-molded cells will not be allowed. Most or all, JAZ and RCI brand cells are examples of rotary-molded cells that will not be allowed. All cells have to be made out of metal.

## FUEL AND AFTERMARKET BLOWERS, NITROUS OXIDE TURBOS

### FUEL

Gasoline, methanol, gasohol, diesel, natural gas and propane permitted. Nitro methan prohibited.

### NITROUS OXIDE

***\*\*Nitrous Oxide Will Not Be Allowed For The Road Race, Only Can Be Used In The Shootout\*\****

Nitrous bottles in driver compartment must be equipped with a relief valve and vented outside of driver's compartment. Bottles must be stamped with a DOT-1800 pound (124 bars) rating and permanently mounted (no hose clamps or tie wraps). Hoses from bottle(s) to solenoid must be high pressure steel braided or FIA permitted hoses. External heating of bottle(s) prohibited.

We also recommend that you have a NOS sticker on your car to designate to our tech people that you have a "bottle on board."

### SUPERCHARGER, TURBOCHARGER

Permitted on gasoline and methanol-burning cars. Supercharger restraint system required on Roots type supercharger when methanol is used as a fuel.

### EXHAUST SYSTEM

Competition exhaust permitted. Exhaust must be directed out of car to rear, away from driver and fuel tank.

A. No open exhaust allowed during the road race, you have to have some sort of a collector. (Muffler, side pipe, glass pack, etc.) ALTERNATIVELY, you will need to have a MINIMUM of 2 ft. of pipe past the header or manifold collector.

B. For the One Mile Shootout, you are allowed to run open exhaust. ONLY IN THE SHOOTOUT will this be allowed.

# TEAM RACING

## TEAM REQUIREMENTS;

Each Team will need to have a captain. **You will need a minimum of five members to make up a team. In addition, can have a maximum of 10 members to a team.** The Team Captain will be responsible for submitting their list of members to our secretary.

There will be a separate entry form that the captain will need to fill out.

The deadline for final team registration is no later than immediately after the drivers meeting on Thursday evening.

Teams will have 5 cars of the same marquee, or other common interest. There can be more than one team per marquee, all teams must have a common ground of some sort. Whether it is making of car, state they are from, cylinder of engine, something that would bring a team together.

Drivers can only be on one team for this event.

Cars entered in the Unlimited class, can join a team but their score will not count.

## Team Scoring and Awards:

A. There will only be one First place award for Team Racing

B. Team scoring will be based upon the variance of, actual time to the perfect time, for the class (speed category) entered by individual team members. For example: In the 125 MPH class, the perfect time is 43:12.00. Team member's actual time is 43:11.00, making a variance of 1.00 second; in the 105 MPH class, the perfect time is 51:25.71. Team member's actual time is 51:24.21, making the variance 1.50.

C. All team members will receive a score. The best five (5) individual scores (smallest variances) will be added together and the sum will be the team raw score. For example: individual team member scores are .05, .06, 1.0, 1.4, 1.5, 2.0, 2.4 and 3.0. The sum of the best five scores is 5.0; therefore, the raw score for the team is 5.0.

D. Penalties will be applied to the raw score. A DQ (Disqualification) will have a 2.0-second penalty added to the team raw score. For example: the team raw score is 5.0, but two (2) team members were DQ'd, thus acquiring 4.0 seconds in penalty points. The final team score is 5.0 plus 4.0 equal 9.0 seconds. DNS (did not start) and DNF (did not finish) are not assessed penalty points.

E. Teams must have at least five team members successfully complete the race to receive a final team score and be eligible for awards.

**F. The Team Challenge Coordinator and Race Directors will settle all disputes involving awards.** Their decision will be final.

G. In the event of a tie, it will be resolved in favor of the team with the most 1st place finishes, or if still a tie, the most 2nd place finishes, etc.

## Perfect Times For Each Division and Class

<b>Total Leg #1 North</b>		
class	Min	Sec
80	21	31.500
90	19	8.000
95	18	7.579
100	17	13.200
105	16	24.000
110	15	39.273
115	14	58.435
120	14	21.000

28.7 Miles

<b>Total Leg 2 South</b>		
class	Min	Sec
80	19	57.000
90	17	44.000
95	16	48.000
100	15	57.600
105	15	12.000
110	14	30.545
115	13	52.696
120	13	18.000

26.6 Miles

<b>CkPt 1 North to Finish</b>		
class	Min	Sec
80	15	58.950
90	14	12.400
95	13	27.537
100	12	47.160
105	12	10.629
110	11	37.418
115	11	7.096
120	10	39.300

21.31  
Miles

<b>CkPt 2 North to Finish</b>		
class	Min	Sec
80	8	31.650
90	7	34.800
95	7	10.863
100	6	49.320
105	6	29.829
110	6	12.109
115	5	55.930
120	5	41.100

11.37 Miles

<b>CkPt 1 South to Finish</b>		
class	Min	Sec
80	3	37.350
90	3	13.200
95	3	3.032
100	2	53.880
105	2	45.600
110	2	38.073
115	2	31.200
120	2	24.900

4.83 Miles

<b>CkPt 2 South to Finish</b>		
class	Min	Sec
80	11	4.650
90	9	50.800
95	9	19.705
100	8	51.720
105	8	26.400
110	8	3.382
115	7	42.365
120	7	23.100

14.77 Miles

# Lodging Info

In Arnold, there are families that enjoy opening up their homes to racers and their families. They enjoy your company, so if you are interested please contact:

Diane Conner at 308-848-2587 in the evening  
or you can email her at:  
[dconner@gpcom.net](mailto:dconner@gpcom.net)

Note: If you email her, please state, where you are from, how many will be in your party, and how many beds you will need.

## Hotels in the Area:

### Arnold:

Arnold Motel - 308-848-2223

Winsome Inn & Suite's - 308-848-2462

### Callaway:

Motel 4 - 308-836-2226

### Broken Bow:

Arrow Hotel Suites - 308-872-6662

Bosselman's Pump & Pantry - 308-872-6842

Big 12 Motel - 308-872-2412

Gateway Motel, Inc - 308-872-2478

Super 8 Motel - 308-872-6428

Wagon Wheel Motel - 308-872-2412

Area towns that also have hotels are North Platte and Gothenburg.

## ***2010 SORC BOARD OF DIRECTORS***

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