

URBAN CHALLENGE



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CHALLENGE**

Urban Challenge

Team Welcome Meeting



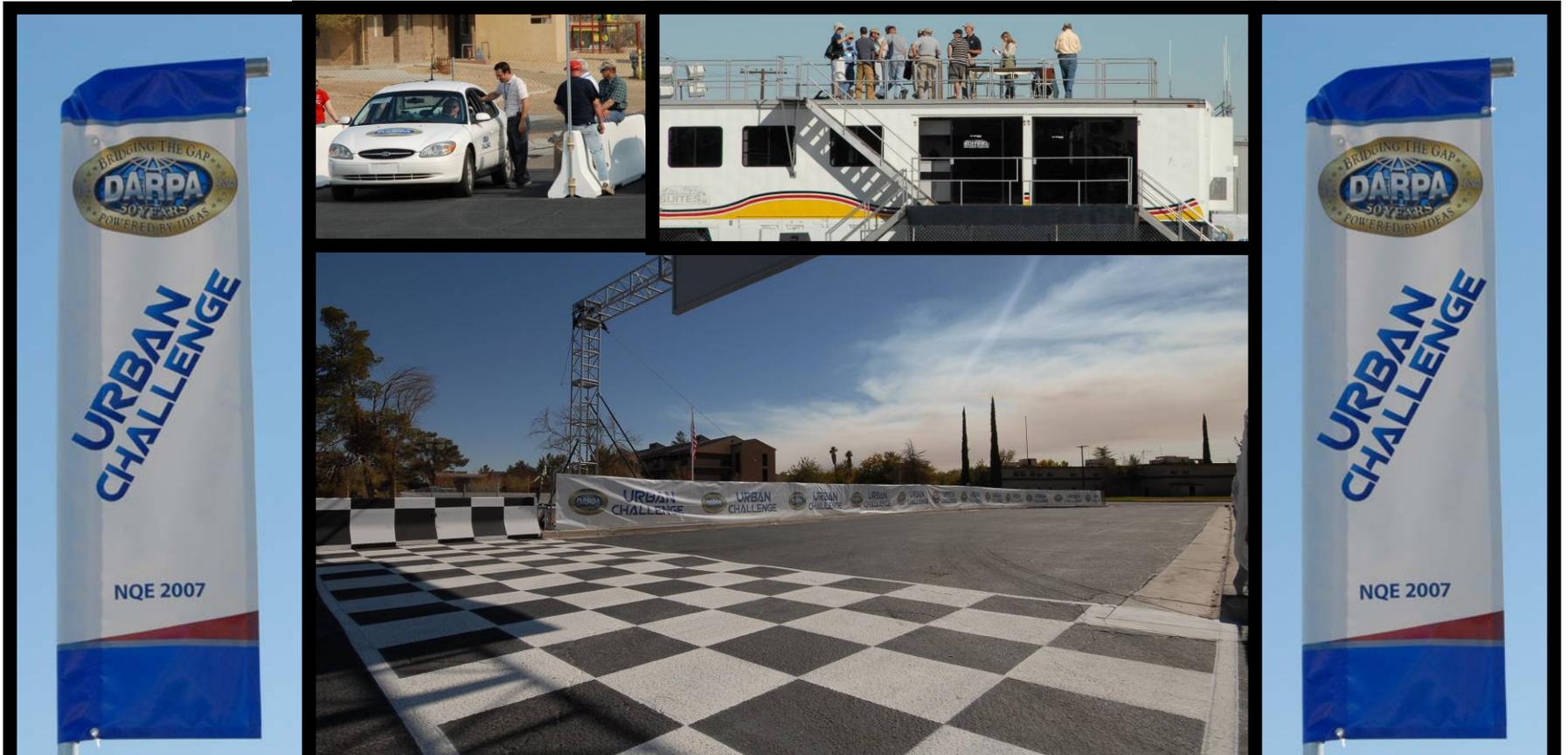
**URBAN
CHALLENGE**

Dr. Tony Tether **Director, DARPA**

Urban Challenge Chief Judge



Welcome to DARPAville !





URBAN CHALLENGE

2007 DARPA Urban Challenge Semifinalist Teams



35 Teams from 22 States

NQE Test Areas



Test Area A

- Left turns
- Merging into traffic

Test Area B

- Navigation
- Parking

Test Area C

- Intersections
- U-Turn



DARPA Officials

150 DARPA Officials who...

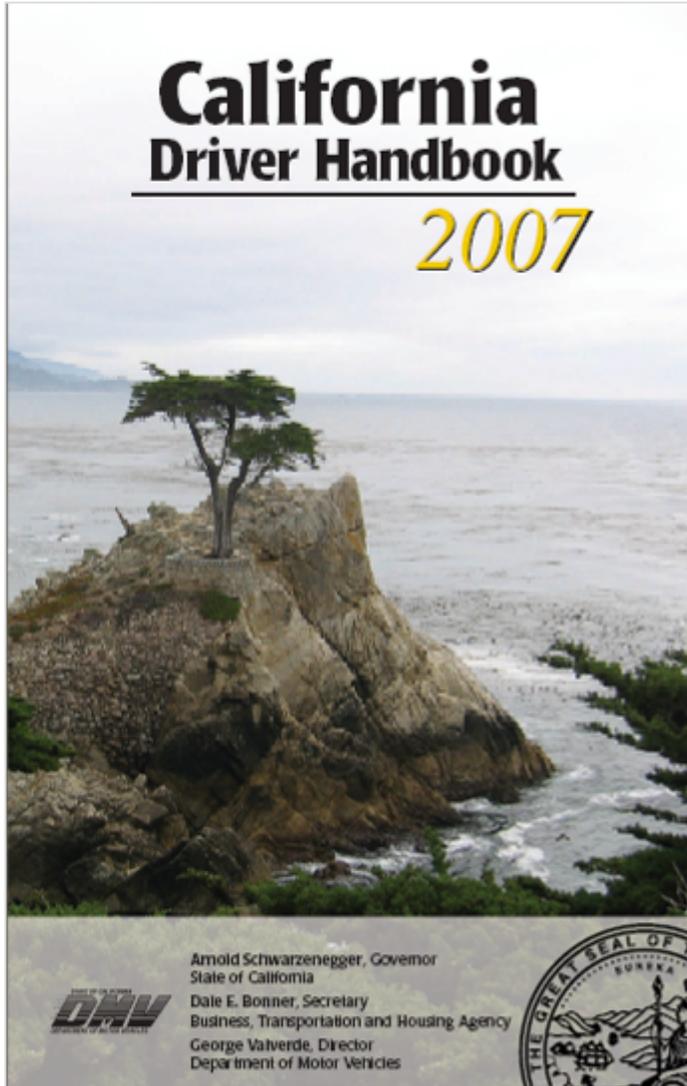


- ...Have studied California Driver Manual
- ...Are thoroughly trained on NQE procedures
- ...Stand ready to fairly assess your vehicle



URBAN CHALLENGE

California Driver's Test



California Driver Handbook

2007

Arnold Schwarzenegger, Governor
State of California
Dale E. Bonner, Secretary
Business, Transportation and Housing Agency
George Valverde, Director
Department of Motor Vehicles



DRIVING PERFORMANCE EVALUATION SCORE SHEET										EVALUATION RESULT Number of errors: _____ <input type="checkbox"/> Passing <input type="checkbox"/> Unsatisfactory															
DATE		DL NUMBER		ROUTE		OFFICE ID. NUMBER		EXAMINER'S SIGNATURE/ID. NUMBER		To pass, you must have no more than 3 errors marked for Items 9-14 under PRE-DRIVE CHECKLIST, no marks in the CRITICAL DRIVING ERROR section, and no more than 15 errors marked for the Scoring Maneuvers.															
PRE-DRIVE CHECKLIST 1. Driver window <input type="checkbox"/> 2. Windshield <input type="checkbox"/> 3. Rear view mirrors <input type="checkbox"/> 4. Turn signals F / B <input type="checkbox"/> 5. Brake lights <input type="checkbox"/> 6. Tires <input type="checkbox"/> 7. Foot brake <input type="checkbox"/> 8. Horn <input type="checkbox"/> 9. Emergency/parking brake <input type="checkbox"/> 10. Arm signals <input type="checkbox"/> 11. Windshield wipers <input type="checkbox"/> 12. Defroster <input type="checkbox"/> 13. Emergency flasher <input type="checkbox"/> 14. Headlights <input type="checkbox"/> 15. Passenger door <input type="checkbox"/> 16. Glove box <input type="checkbox"/> 17. Seat belts <input type="checkbox"/>										PARKING LOT DRIVING Traffic check 1 2 0 0 Speed 0 0		INTERSECTIONS Through Traffic check 1 2 3 4 5 6 7 8 0 0 0 0 0 0 0 0 Speed 0 0 0 0 0 0 0 0 Yield 0 0 0 0 0 0 0 0 Unnecessary stop 0 0 0 0 0 0 0 0 FWY OR HWY Entering 1 Traffic check 0 Signal 0 Speed 0 Spacing 0 Lane position 0 Merge Traffic check 0 Signal 0 Speed 0 Spacing 0 Lane position 0 Steering control 0 Lane Use Traffic check 0 Speed 0 Spacing 0 Lane position 0		BUSINESS/URBAN AND RESIDENTIAL/RURAL Traffic check B R 0 0 Speed 0 0 Spacing 0 0 Lane position 0 0 LANE CHANGE Exiting L R Traffic check 0 0 Signal 0 0 Speed 0 0 Spacing 0 0 Steering control 0 0		BACKING Traffic check E B X 0 0 0 Signal 0 0 0 Speed 0 0 0 Parallel 0 0 0 Control 0		TURNS Approach Traffic check 1 2 3 4 0 0 0 0 Signal 0 0 0 0 Deceleration/Braking 0 0 0 0 Yield 0 0 0 0 Lane use 0 0 0 0 Unnecessary stop 0 0 0 0 Stop Traffic check 1 2 3 4 0 0 0 0 Full stop 0 0 0 0 Gap or Limit line 0 0 0 0 Wheels straight 0 0 0 0 Turn/Complete Traffic check 1 2 3 4 0 0 0 0 Yield 0 0 0 0 Steering control 0 0 0 0 Too wide/short 0 0 0 0 Correct lane 0 0 0 0 Speed 0 0 0 0 Signal 0 0 0 0				COMMENTS			

Driver Performance Evaluation Sheet



How to Succeed

- Follow the Rules and Drive Safely
 - Follow the speed limits
 - Don't cut off other vehicles
 - No excessive delays
 - Finish the missions

and....



...Most of All

**DON'T
HIT
ANYONE!!!**



Schedule Update

- **NQE Test Operations will begin Saturday Morning**
- **Tomorrow will be a practice day**
- **Opening Ceremony will take place as scheduled**



**URBAN
CHALLENGE**

Dr. Norm Whitaker

Urban Challenge
Program Manager





AGENDA

- Schedule
- Area Layout
- Testing Operations
- Practice Area
- General Rules

New Schedule

PRACTICE

NQE

UCE



Team Leader Meeting →

25

26

27

28

29

30

31

1

2

3

OCTOBER

NOVEMBER



Schedule Changes

- **NQE Test Block 1 moves to Monday morning**
- **Test blocks 2 – 4 do not change**
- **Tomorrow will operate the same as today**
- **Opening Ceremony is tomorrow at 0700**



NQE Opening Ceremony

Friday October 26, 2007

0630 **Team Leaders meet in start chute area**

0700 **Opening Ceremony begins**

0800 **Safety inspections begin**

Tomorrow at Practice Area



Session	Practice Area 2	Practice Area 1
0730		
0800	Axion Racing	Team Autonomous Solutions
0830	Team Case	Team Cornell
0900	Team Gray	Team Jefferson
0930	Victor Tango	Team Juggernaut
1000	Ben Franklin Driving Team	Team Berlin
1030	Ody-Era	Team CajunBot
1100	Team Cybernet	MIT
1130	AvantGuardium	Sting Racing
1200	Insight Racing	Stanford Racing Team
1230	SciAutonics/Auburn Engineering	Mojavaton
1330	Intelligent Vehicle Systems	Princeton University
1400	Austin Robot Technology	Team Urbanator
1430	Team LUX	Tartan Racing
1500	Team UCF	The Golem Group
1530	University of Utah	Team AnnieWay
1600	Team Oshkosh	Team Caltech
1630	OSU-ACT	Gator Nation
1700	CarOLO	

- **Flip Areas 1 and 2**
- **GatorNation goes at 1630**
- **CarOLO goes at 1700**



Safety Inspection

Step 1: E-stop setting

Step 2: Safety checklist

Step 3: Manual E-stop test

Step 4: Dynamic DISABLE test

Step 5: E-stop PAUSE test



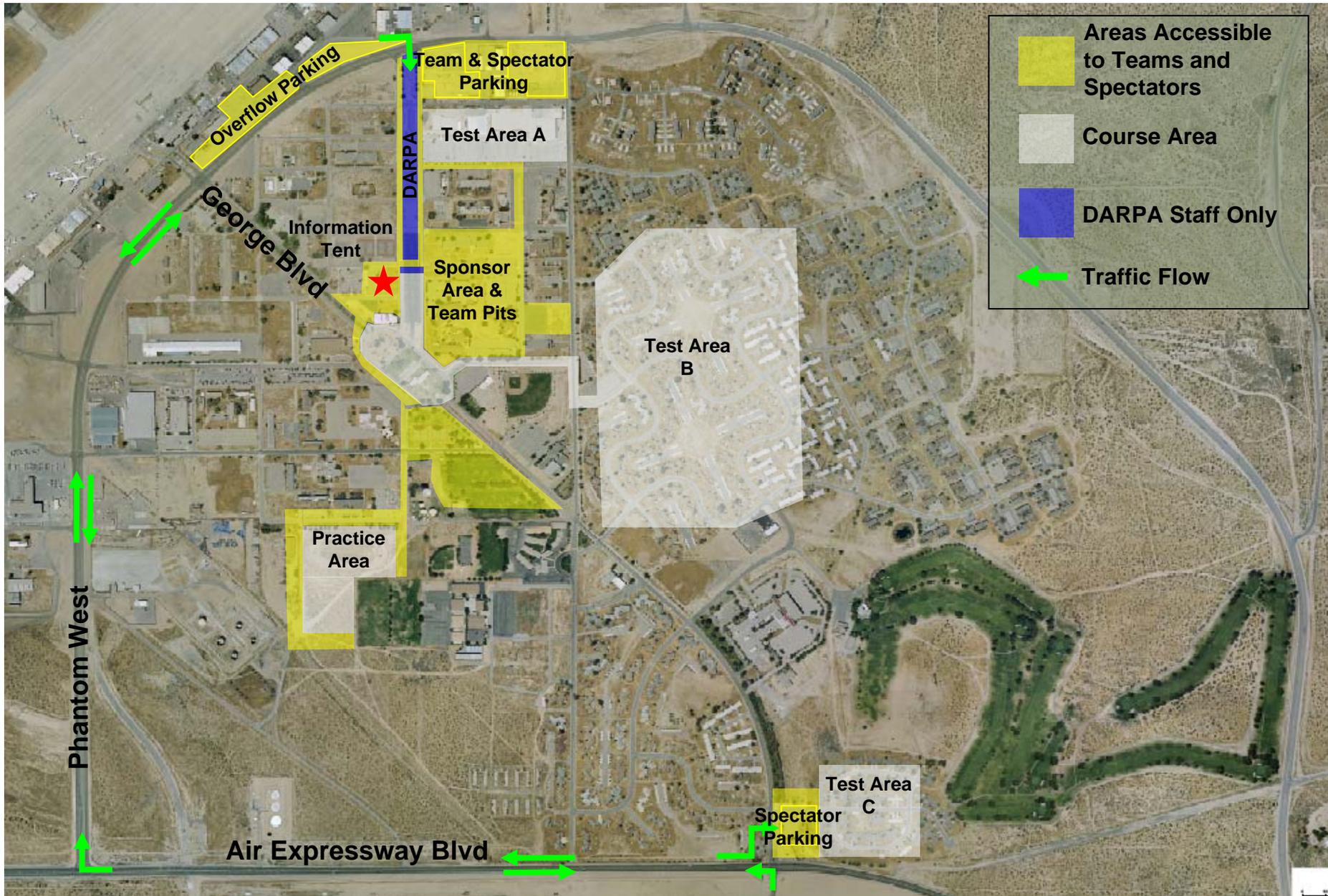
Your Responsibilities

- **Attendance is mandatory**
- **Arrive at least 30 minutes early**
- **Load E-stop test RNDP in advance**
- **Bring test crew in blue vests**



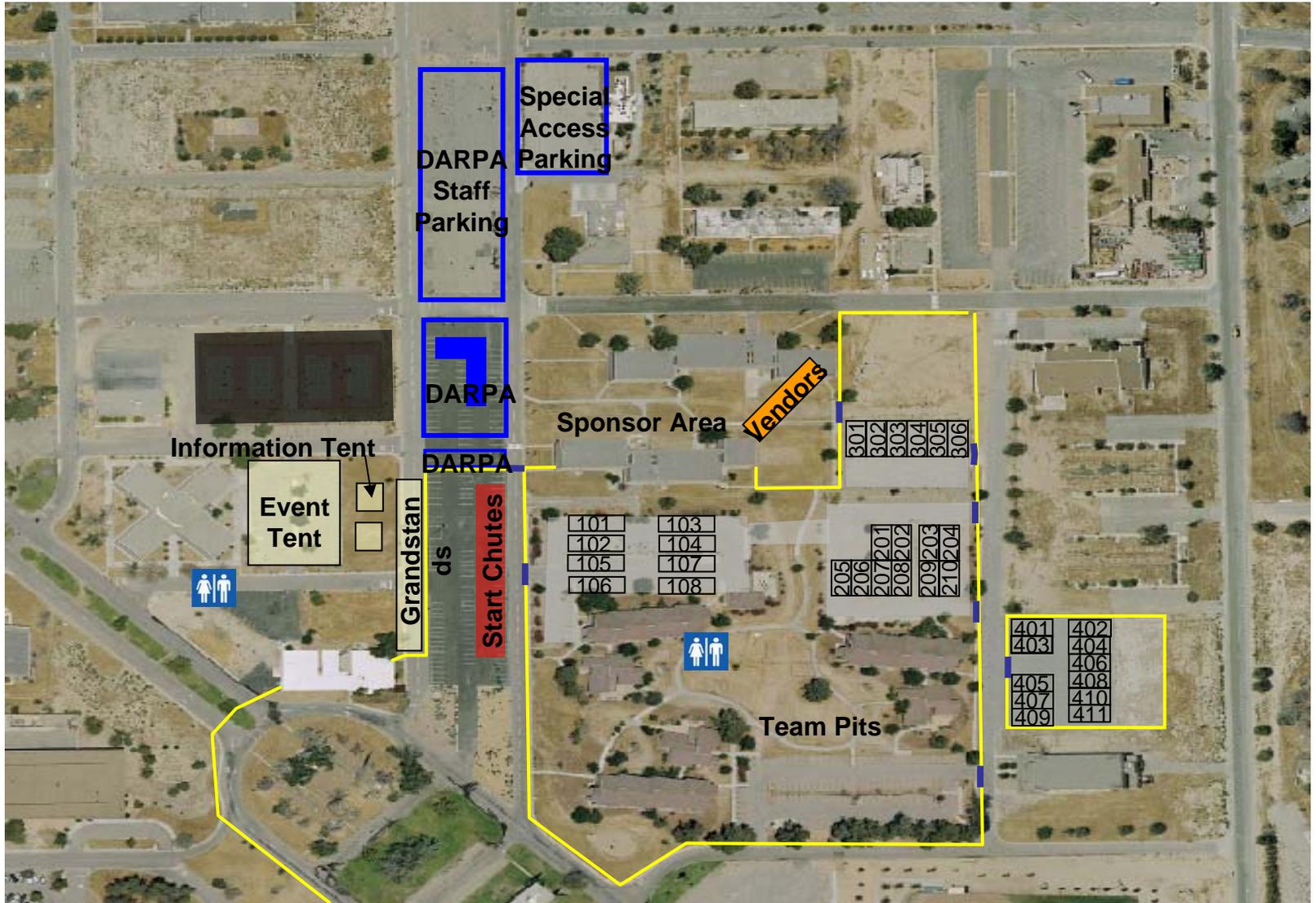
Area Layout

Area Layout





Urban Challenge Operations Area





Practice Area



Practice Area



- Please arrive AT LEAST 30 Mins prior to your scheduled practice time
- During NQE testing a portion of the path to the practice area will cross NQE B course



Practice Area

- Signups in the information tent
- Scheduled by block (40 mins after tomorrow)
- Priority
 - Number of prior opportunities
 - Next to run test course
 - Coin flip
- Escorts will not be provided to the Practice Area



Guidelines



Do

- **Stay in permitted areas. No “scouting”**
- **Check your vehicle out at the Information Tent**
- **Respect your fellow competitors and their space**
- **Show up early**
- **Keep your cell phone on**
- **Make safety your highest priority**



Don't

- **Go in the barracks buildings or any unauthorized location**
- **Drink alcohol in the pit areas**
- **Drive autonomously in the pit area or on public roads**
- **Come in the DARPA areas**



Questions