

# KYLE FIELD TRANSPORTATION PLAN

## **2020 Look Ahead Report (These Plans Were Developed Before Covid-19 Virus Effects)**

### **Texas A&M Transportation Institute**

**By Madison Metsker-Galarza and Tim Lomax**

The 7<sup>th</sup> year of the Kyle Field Transportation Plan would have seen changes in campus design, the transportation plan, and the messaging – even before the Covid-19 crisis. The experience from the first six Plan seasons, as well as decades of prior operating knowledge provides a great base to work from, and the people working the Plan and the partners around the Plan will work to ensure a great fan experience – whenever football returns to Kyle Field.

The new tailgating areas that will emerge due to the Aggie Park reconstruction project will be a source of change. New pedestrian-friendly features with the completion of wide sidewalks and bus stops along West Lamar Boulevard in front of the Memorial Student Center and the new Innovative Learning Classroom Building will also enhance the bus service and pedestrian environment.

The 2020 Kyle Field Transportation Plan will be similar in one way to previous years; it will be the product of a large coordination and communication effort including the groups noted below and others. Improving the fan experience during gameday weekends in and around the 4<sup>th</sup> largest Texas downtown requires several mobility services and options for getting to, around and away from campus. The team that creates and deploys the Kyle Field Transportation Plan continues to successfully meet these expectations by incorporating a variety of fan interests and gameday operations requirements.

- Texas A&M Transportation Services
- City of College Station
- City of Bryan
- Brazos County
- Bryan-College Station Chamber of Commerce
- Downtown Bryan Association
- Experience BCS
- Tailgate Guys
- Texas A&M University Athletics
- Texas A&M University Marketing and Communications
- Texas A&M University Student Affairs
- Texas A&M Transportation Institute
- Texas A&M Ventures
- 12<sup>th</sup> Man Foundation
- Texas Department of Transportation (TxDOT)
- Local and state safety and law enforcement agencies

Note: Ms. Metsker-Galarza works for Texas A&M Transportation Services (December 9, 2019).

## Overview

The 2020 Look Ahead Report reviews seasons 2013 through 2019 (other annual reports and game evaluations are published at [tti.tamu.edu/kyle](http://tti.tamu.edu/kyle)) and the Appendix has a summary of the transportation plan. The 2019 Season highlights include another successful Thursday football game, improved pedestrian environment around Kyle Field thanks to additional efforts around the No-Wheel Zone, continued improvement in postgame traffic operations and achievement of the two-hour traffic control removal goal for all seven games (beginning the conversion to regular operations within 90 minutes for all games).

### Game Times

Many of the transportation elements and the performance results differ according to kickoff times and game results. Exhibit 1 displays key factors used in the evaluations.

**Exhibit 1. 2019 Game Statistics**

2019 Opponent	Kickoff Time	Attendance	3rd Quarter Score	
			TAMU	Opponent
Texas State	7:37 p.m.	98,016	31	0
Lamar	6:02 p.m.	97,195	48	3
Auburn	2:41 p.m.	101,681	3	21
Alabama	2:39 p.m.	106,749	20	34
Miss State	11:03 p.m.	102,025	42	17
UT San Antonio	11:03 p.m.	100,635	35	7
So Carolina	6:39 p.m.	104,957	13	3

### Future Issues – Overview

The 2020 season will likely see new challenges and opportunities from the following:

- Changes in tailgating activity with the closure of Aggie Park for reconstruction and facility expansion.
- Wider sidewalks on West Lamar in front of the new Innovative Learning Classroom Building.
- Communication and marketing efforts to provide more specific routing directions for fans, especially pregame. The congestion patterns during pregame show that some fans could benefit from using different streets and travel paths to arrive at their parking lot.
- Refining the Wellborn Contraflow set-up and take-down operation to ensure safe, smooth and consistent operation.

Beyond the 2020 season, there will also be other building and roadway construction projects that may affect gameday traffic. These include (but are not limited to):

- Raising the level of Wellborn Road at Holleman and Deacon to match the elevation of the Union Pacific Railroad tracks – These projects will improve railroad crossing

operations but will require some lane closures which can reduce road capacity. Agencies are working to avoid football season construction effects.

- FM 2818 (Harvey Mitchell Parkway) construction – Between 2020 and 2023 there will be a six-lane superstreet built between Stotzer Parkway and Wellborn Road. Generally, this will look like frontage roads built outside the existing roadway and then the existing roadway will be demolished. The configuration of the roadways will change during this period, but the 2020 season changes should be modest.
- SH 6 (Earl Rudder Freeway) construction – The freeway will be widened to six lanes from SH 21 to SH 40 (WD Fitch) and interchange improvements will also be implemented. Some additional road construction will be performed to improve operations around Texas Avenue South and Rock Prairie. Construction will begin in 2022.
- Bush-Wellborn interchange construction – This three-level interchange design and the construction schedule are still being developed, but there will likely be some football transportation plan changes. The significant effects will likely not begin until 2023 or 2024, after the substantial completion of the FM 2818 project.

## **2019 Football Thursday in Aggieland**

### ***“Two Days in One” Part II***

The second Texas A&M Thursday football game on a “live” campus benefitted from the 2018 Northwestern State game. The 2019 Texas State game, just as the 2018 game, had hundreds of people committed to planning and operating classes, labs and the football game. The Transportation Services and Texas A&M Marketing Teams coordinated media opportunities (including print, television, and radio affiliates) and local publications. And many student, faculty and staff groups provided time on their meeting agendas and space in their email newsletters for Football Thursday messaging.

The second-year messages were more direct than the 2018 communication. The 2018 experience showed several congestion peaks on Wellborn Road at different times of day. The peak around game time was understandable, but some of the congestion seemed to be the result of residents and commuters using their regular travel routes. The 2019 message, then, became “Plan ahead, Allow extra time and Avoid Wellborn Road.” The congestion graphs in Exhibits 2, 3, 4, and 5 show some success in reducing congestion relative to 2018, especially considering that attendance was 3,000 fans higher, and Athletic Department observations suggested there were 8,000 to 10,000 more fans inside Kyle and at tailgates around the stadium. Fans may have had more confidence that the complications around Football Thursday would be resolved after the 2018 experience.

The typical 2019 weekday congestion levels are also shown as comparisons.

- Morning congestion was higher in 2019 than 2018, but like the typical day congestion.
- Midday congestion was lower in 2019 than the 2018 employee early departure period.
- After about 5:30 p.m., the 2019 congestion pattern was like the 2018 gameday and 2019 typical day.
- The postgame congestion levels were higher in 2019 than 2018. The higher number of fans in the stadium and in the tailgate areas in 2019 than 2018 contributed to the worse traffic situation. The postgame traffic congestion, however, was only as bad as the levels seen during the early evening peak period and was never close to the rush hour peak.

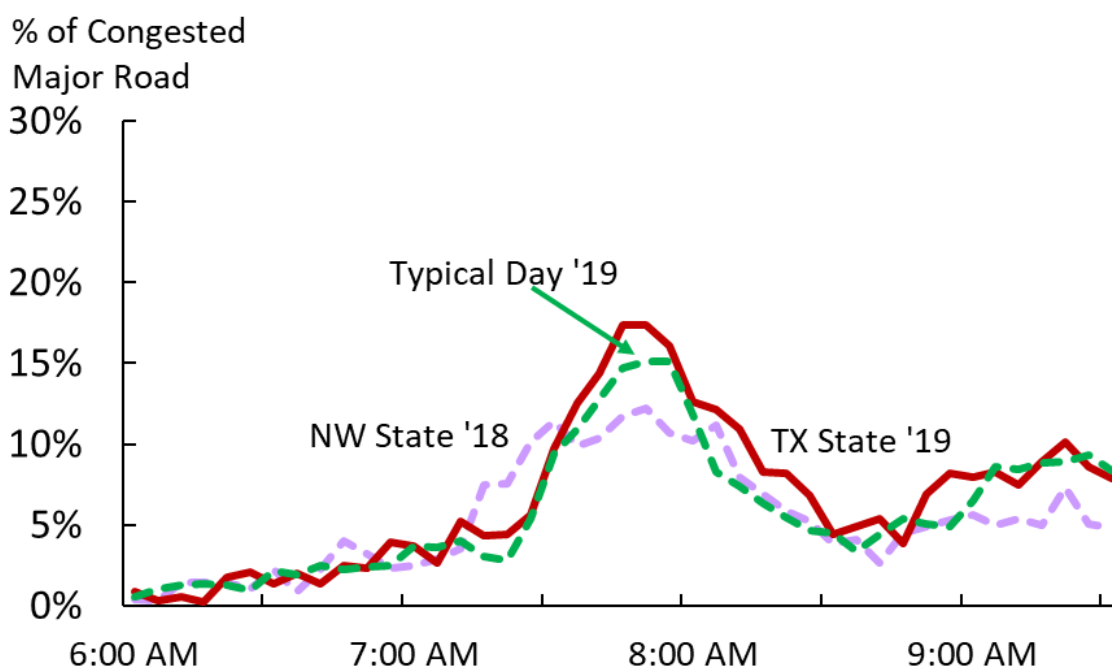
The parking plan for the 2019 game was like the 2018 game. The 2018 game showed that there was an initial small rush of fans into parking areas around Reed Arena at the 3:30 p.m. lot opening time, but most did not arrive until later. Since there were plenty of empty spaces to accommodate both fans and students, the 2019 plan allowed students, faculty and staff to remain in the lots until 4:30 p.m. (except the gameday numbered reserve spaces in A Lot 62 and H Lot 61). This allowed parking for one or two more class periods in 2019, meaning fewer students had to adjust their parking plans.

The transit plan coupled with more direct messaging was simpler for 2019. There was some confusion in 2018 about transit operation around the transition from class day to gameday routes. The communication plan for 2019 assured students that all class day routes would

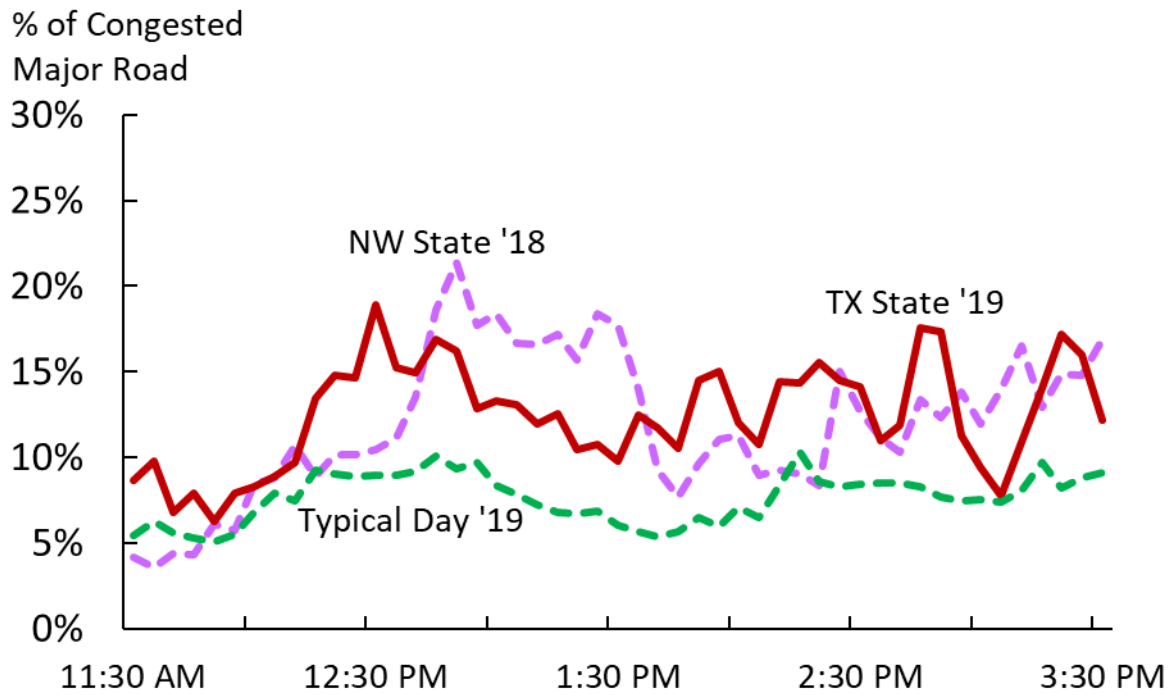
continue service. The messaging was direct – “Buses can get you to campus and back home” – and faculty were assured that their students would be able to use transit all day. The MSC and Trigon area bus stops were relocated at the same time (5:30 p.m.) and with a simpler, easier-to-understand plan. There were fewer instances of confused students waiting at bus stops that had no service. And, encouragingly, fewer students standing next to signs saying, “Bus Service Has Been Relocated”!

Most other specific actions and decision processes were the same for 2019 as 2018; additional information can be found in the 2019 Look Ahead Report and the 2019 Texas State game report at [tti.tamu.edu/kyle](http://tti.tamu.edu/kyle)

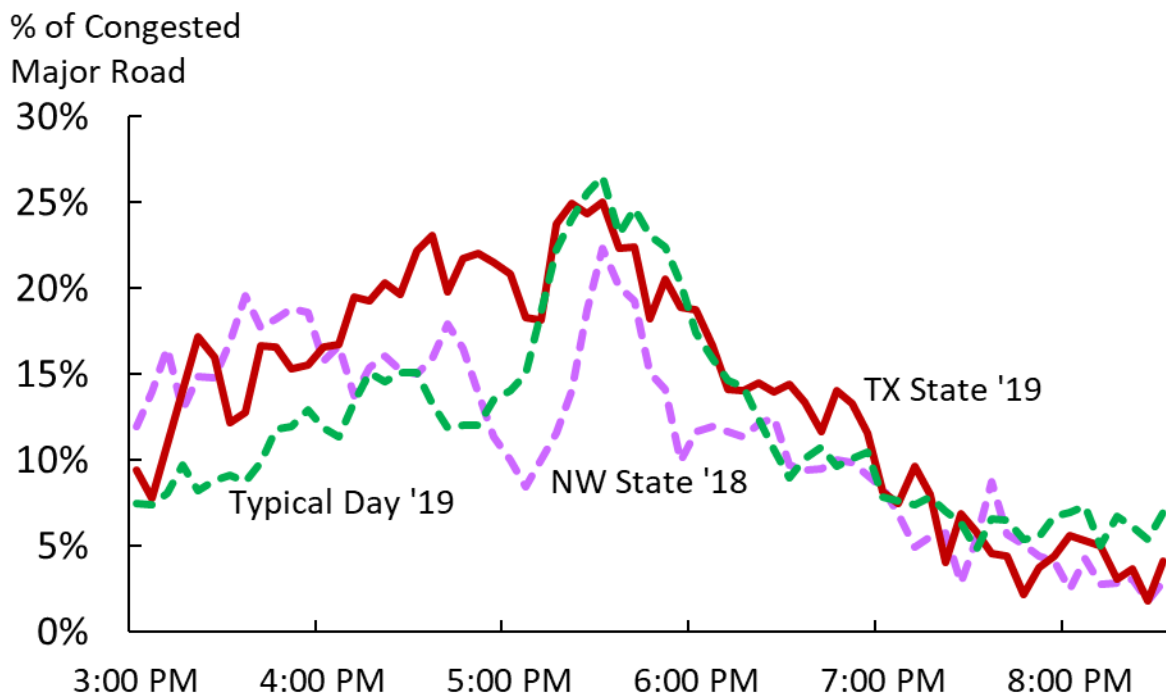
**Exhibit 2. Early Morning Traffic Congestion**



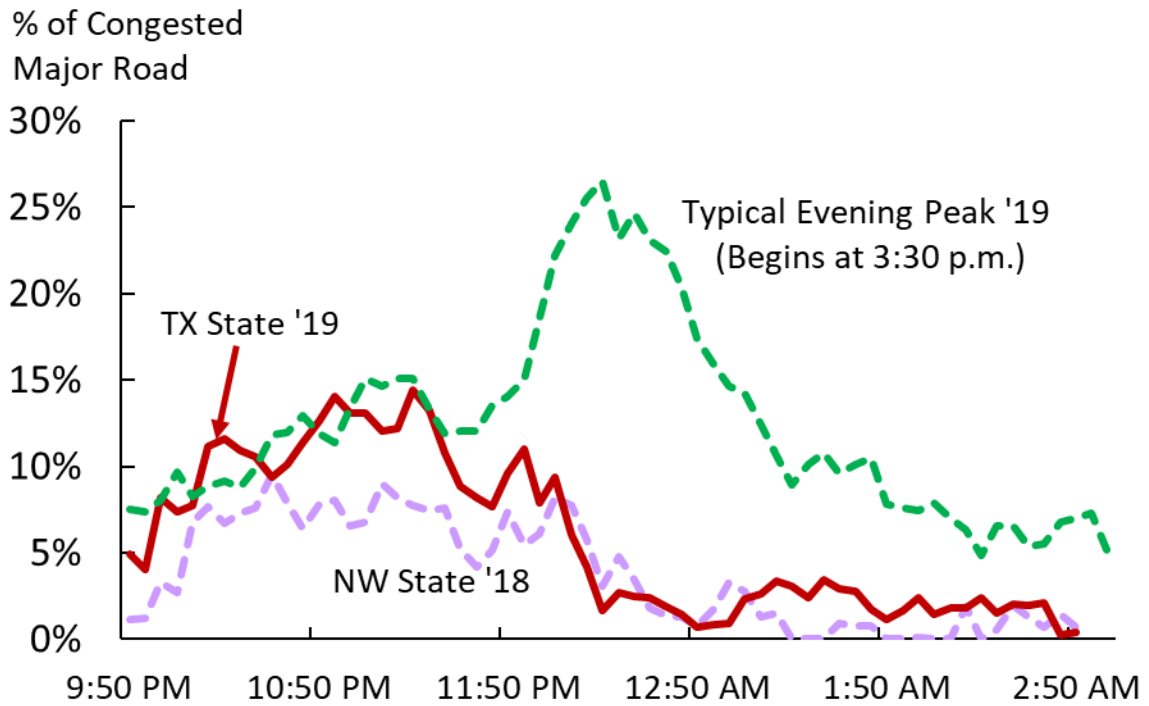
**Exhibit 3. Midday Traffic Congestion**



**Exhibit 4. Evening Traffic Congestion**



### Exhibit 5. Texas State Postgame Congestion Analysis



## 2019 Trends

Previous “Look Ahead” reports and the Appendix provide more information about the initial 2014 transportation plan modifications and the changes in subsequent seasons. This section highlights the 2019 season parking, transit and traffic operations and overall trends since 2013.

- ***Operational Improvements***

- City and campus work together in gameday transportation planning, in real-time operations (traffic signals, law enforcement and traffic officers) and in pre-positioning resources such as Public Works and tow vehicles to rapidly respond to incidents.
- The College Station Police and Public Works Departments modified the operation at the Bush/Wellborn intersection to consistently provide more southbound traffic flow. Buses and pedestrians crossing Bush were held for longer periods until a larger number of pedestrians were waiting. This allowed both Bush and Wellborn vehicle traffic to flow unimpeded for a longer time, providing more road space that could accommodate vehicles exiting campus parking lots and garages.

- ***Pregame Operations***

- Four significant pregame street closures enacted in 2017 were tweaked slightly to maintain the good pedestrian experience and get more consistent vehicle traffic performance.
- During the season, the plan around the Doug Pitcock ‘49 Hotel and Conference Center was modified to eliminate a traffic and pedestrian conflict zone. Joe Routt Blvd at Wellborn Road was closed at 2 hours prior to kickoff. Fans and rideshare companies were using this area as a drop-off/pick-up location, causing vehicles to stack onto Wellborn Road and making it difficult for bus operations. The new closure reduced vehicle traffic around the Pepsi Fan Zone, improving that experience and safety along Wellborn Road.
- The No Wheel Zone around Kyle Field was very well supported by staff from the partner organizations and compliance from bike and skateboard riders, pedicabs and gameday staff was much better during the high-volume pedestrian times.

- ***Postgame Operations***

- Postgame traffic operations ran according to plan, and on-site staff were empowered to suggest changes in the plan during the postgame period as situations changed. The monitoring cameras and radio communications as well as telephone conversations between the Kyle Command Center and the City of College Station Traffic Control Center give command staff good situational awareness and ability to adapt to changing needs.



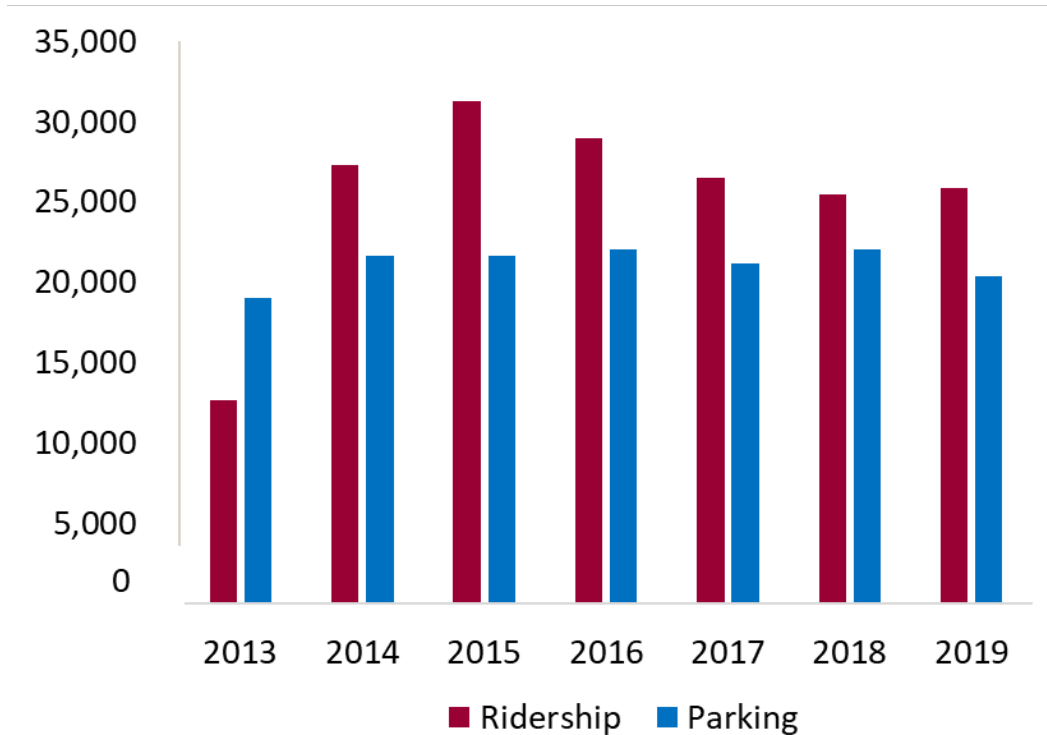
- Monitoring cameras from Texas A&M Transportation Services and the City of College Station, the ability to change traffic signal timings, and staff actions are important elements of the postgame operation.
  - The City of Bryan provides traffic signal timing that supports postgame operations and are deploying more technology to improve their ability to respond to growing football gameday, other event and weekday traffic demands.
  - On- and off-campus staff are rotated to new positions – partly in a conscious effort to improve flexibility and expertise and partly due to the College Station Police Department off-duty sign-up process that means an officer is rarely at the same position from game-to-game. These realities challenge the operations staff to provide consistent service.
  - Congestion will continue to be a feature of the postgame period. Six years of operations experience shows that a combination of experienced and dedicated staff, resources, technology and communication to fans creates a plan that accommodates a 25 to 30 percent increase in gameday fan population. The plan has resulted in congestion improvements with less postgame traffic control deployment time; but we are still the 4<sup>th</sup> largest downtown in Texas.
- ***Infrastructure Construction Projects***
    - New construction projects will be initiated every year by the cities, the county, the campus and Texas Department of Transportation as they work to meet the community's transportation needs. The planning efforts and communication between various agencies have been successful in reducing the effect on gameday transportation operations. The transportation plan will evolve to accommodate the new construction projects as they are implemented.
    - The second season of the diverging diamond interchange at Stotzer Pkway/FM 2818 operated smoothly. A consistent traffic signal timing program handled the varying demands and the City of College Station used the airport access street turnaround to accommodate the larger demands of SEC game traffic.

### **Parking and Bus Ridership Trends**

The biggest difference between 2013 and the seasons with the larger Kyle Field design has been bus ridership (Exhibit 6). A combination of expanded route structure, close-to-Kyle bus stop locations and faster and more reliable bus routes have played a role in doubling the transit ridership. This general trend has been experienced in both on- and off-campus ridership.

Between 1,000 and 2,000 more cars are parked on campus for the typical gameday, with parking volumes around 24,000 for the larger games. The remainder of the larger football crowds have been accommodated by a combination of bus ridership, bike and walk trips from off-campus areas, and parking in areas that are near campus. For 2019, the trend in typical game statistics was higher bus ridership and lower parking volume than 2018.

**Exhibit 6. Parking and Ridership per Game Averages by Year**



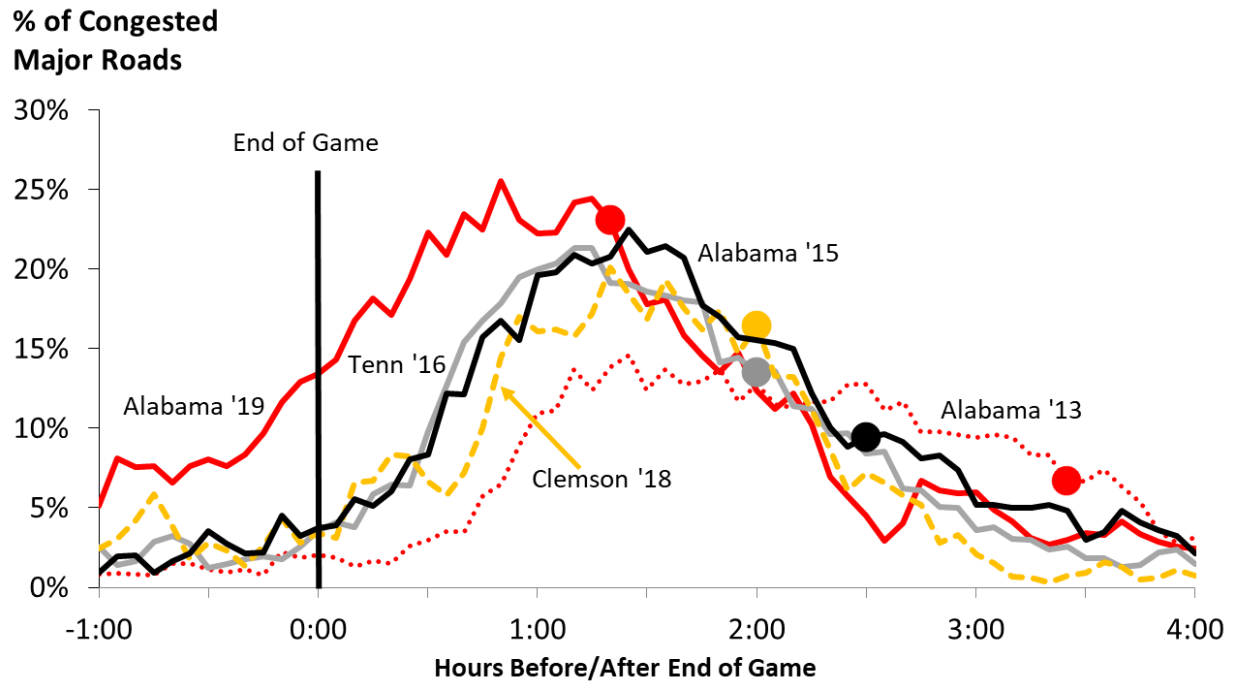
### **Traffic Congestion**

The biggest difference in traffic congestion patterns with the new plan is that more capacity is focused on fans trying to leave the immediate Kyle Field area; this allows them to get back to their hotel, game weekend condo, apartment, house or restaurant, and provides more routes for those leaving town to get back to their homes. Consequently, the near-campus bottlenecks have been removed and traffic can use more of the street network, meaning that the congestion measure peaks at higher levels, but traffic is a problem for less time.

With more experience through the years, the traffic control is being picked up earlier and the traffic congestion goals are being met. In some games in 2014 and 2015, leaving traffic control in place until all traffic had been handled resulted in more overall congestion. Outbound traffic controls clogged the increasing volume of incoming postgame traffic looking for restaurants and entertainment venues.

The games in Exhibit 7 had similar large-sized crowds – more than 120,000 fans in the Kyle Field area. All the post-2013 games show the same general congestion graph shape – a higher congestion peak because traffic flow gets past the near campus bottlenecks more easily, the desired relatively steep decline in congestion level and the end of traffic controls well before the 2013 game.

**Exhibit 7. Postgame Traffic Congestion for Large Attendance Football Gamedays**



## Parking Trends

Parking totals for each area in 2019 are presented in Exhibit 8. The non-conference games historically have lower parking volume, as do the 11 a.m. games (Mississippi State and UTSA) – and these trends continued in 2019. The good weather and continued fan enthusiasm meant the end-of-season South Carolina game had the second highest volume, following Alabama, but ahead of the 2:30 p.m. kickoff against #12 Auburn.

The west and north edges of campus had the most variability in parked vehicles with the Veterinary Medicine/Agronomy Road and Research Park lots showing some games with almost double the parked volume of the smallest games. The Main Campus and Reed areas are fairly stable with a significant amount of 12<sup>th</sup> Man Foundation parking.

**Exhibit 8. Parking Area Totals for 2019**

<b>2019 Game Totals</b>	<b>Aug 29 TX State</b>	<b>Sept 14 Lamar</b>	<b>Sept 21 Auburn</b>	<b>Oct 12 Alabama</b>	<b>Oct 26 MS State</b>	<b>Nov 2 UTSA</b>	<b>Nov 15 So Caro</b>	<b>Typical</b>
<b>Main</b>	4,410	4,730	4,900	4,740	4,520	4,590	5,330	<b>4,800</b>
<b>East Main</b>	-	1,870	1,660	1,920	1,360	1,360	2,080	<b>1,710</b>
<b>Reed/Agriculture</b>	8,920	9,280	9,300	9,220	9,290	9,260	9,340	<b>9,280</b>
<b>Research Park</b>	2,140	2,150	3,010	3,680	2,180	1,940	2,630	<b>2,600</b>
<b>Vet/Agronomy</b>	1,120	2,090	2,380	2,620	1,520	1,350	2,480	<b>2,070</b>
<b>Total</b>	<b>16,590</b>	<b>20,120</b>	<b>21,250</b>	<b>22,180</b>	<b>18,870</b>	<b>18,500</b>	<b>21,860</b>	<b>20,460</b>

Exhibit 9 summarizes the overall parking volume for each major gameday parking area from 2013 to 2019. Parking facility, plan and policy changes in each year have resulted in alterations in campus parking patterns. The 2016 Cain Garage opening, and the 2017 RV parking changes are perhaps the most significant changes since 2014. Parking for several hundred Kyle Field workers has also played a role in changing parking numbers. In 2014, they were accommodated on Fan Field in Research Park, in 2015 in the Agronomy Road area, and for the 2016 and 2017 seasons they parked in the Vet School area. Worker parking moved to Lot 88 adjacent the General Services Complex on Agronomy Road in 2018. This lot had been used by RVs through the 2016 season and was mostly empty in 2017.

The drop in parked volume in 2019 was likely due to some combination of fewer game attendees (despite the large attendance numbers), rideshare and drop-off activities and parking in neighborhoods around campus. The ‘typical’ game values for 2018 and 2019 remove the Thursday football games which have fewer fans in seats and tailgate areas and a lower number of parked vehicles. The lower East Main parking number is due to the Polo Garage construction removing about 700 parking spaces from the inventory.

**Exhibit 9. Typical Game Parked Vehicles by Campus Area - 2013 to 2019**

Parking Areas	2013	2014	2015	2016	2017	2018	2019
Main Campus	4,290	4,660	4,570	5,430	5,050	5,180	4,800
East Main	2,030	2,320	2,370	2,240	2,670	2,230	1,710
Reed/Agriculture	9,400	8,900	8,430	8,930	8,910	9,680	9,280
Research Park	1,510	3,040	3,320	3,240	2,640	2,650	2,600
Vet/Agronomy	1,770	2,720	2,980	2,190	1,880	2,300	2,070
<b>TOTAL</b>	<b>19,000</b>	<b>21,640</b>	<b>21,670</b>	<b>22,030</b>	<b>21,150</b>	<b>22,040</b>	<b>20,460</b>

The game-by-game data in Exhibit 10 further illustrates the trends. The 2019 season had four games with fewer than 20,000 parked vehicles, the first season with more than two such games since the stadium was expanded. The Alabama game had a top ten number of parked vehicles since 2014, but other games had relatively lighter parking loads. The Thursday night game combined with higher transit ridership, the smaller numbers for the non-conference games and the 11 a.m. Mississippi game resulted in the lowest parked vehicle total since the six-game 2014 season.

**Exhibit 10. Parking Area Totals for 2013 Through 2019**

2013		2014		2015		2016	
Rice	17,820	Lamar	21,400	Ball State	22,160	UCLA	21,970
Sam Houston	19,410	Rice	20,970	Nevada	19,320	PVAMU	18,090
Alabama	23,700	Univ Miss	23,630	Miss State	22,440	UTenn	24,520
SMU	18,910	LA Monroe	18,740	Alabama	23,590	NMSU	21,520
Auburn	20,110	Missouri	21,070	So Carolina	18,450	Univ Miss	23,950
Vanderbilt	17,700	LSU	21,130	Auburn	21,990	UTSA	19,380
UT-El Paso	19,560			W Carolina	20,530	LSU	20,850
Miss State	19,460						
Total	156,670	Total	126,940	Total	148,480	Total	150,280
<b>Typical</b>	<b>19,000</b>		<b>21,640</b>		<b>21,670</b>		<b>22,030</b>
2017		2018		2019		Kickoff Time	
Nich St	20,280	NW State	17,250	TX State	16,590	Earlier than 12:30 p.m.	
LA-Lafyt	17,560	Clemson	23,520	Lamar	20,120	Between 12:30 and 5:00 p.m.	
So Carolina	21,630	LA-Monroe	21,140	Auburn	21,250	After 5:00 p.m.	
Alabama	22,690	Kentucky	22,970	Alabama	22,180		
Miss St	21,430	Univ Miss	20,480	Miss State	18,870		
Auburn	19,810	AL-B'ham	21,600	UTSA	18,500		
NMexico	21,040	LSU	22,540	So Carolina	21,860		
Total	144,440	Total	149,500	Total	139,370		
<b>Typical</b>	<b>21,150</b>		<b>22,040</b>		<b>20,460</b>		

### Less Efficient Parking Due to Use of A&M Parking Permit

The combination of prepaid, 12<sup>th</sup> Man Foundation donor parking and cash at arrival provides a good mix of parking assets. The other gameday parking method – faculty, staff and students using their permit (referred to as “any valid permit” (AVP)) is a less efficient operation, as demonstrated in vehicle occupancy studies conducted in 2015 and 2018 (see the 2019 Look Ahead Report for a more detailed description of the results). A&M students, faculty and staff with a valid permit are able to park on gamedays for no additional charge in some parking areas. This policy requires the traffic plan to handle more vehicles, pushes some gameday paying parkers farther from Kyle and reduces the ability of A&M Transportation Services to pay for staff and resources to accommodate gameday operations, and essentially adds to the regular permit costs for those who do not attend football games.

The 2019 season saw a second successive year of decline in the valid permit use to just below the number of paid parkers (season permit holders are not included in either calculation) (Exhibit 11). The pregame and postgame traffic plans were forced to handle an additional 6,400 vehicles during the season due to the lower number of people in the vehicles using a valid A&M permit. It is unlikely additional buses will be available in the near-term and new road space is still a few years away. As existing parking spaces are converted into classroom, office, and lab buildings, the inefficient parking pattern will be a greater strain on the systems. Preliminary solutions to these constraints include requiring any valid permit vehicles to carry at least two people (the same concept as using the high-occupancy vehicle lanes on big city freeways), reducing the number of lots accepting any valid A&M permit, or charging a parking fee between the usual \$20 charge and zero for these permits to park in campus lots.

**Exhibit 11. Paid Parkers Compared to Any Valid Permit Parkers**

Season	Total AVP	Total Paid Parkers	Percent AVP
2013	29,450	46,630	39%
2014	28,280	34,980	45%
2015	32,070	36,780	47%
2016	31,840	35,300	47%
2017	34,540	28,550	55%
2018	30,910	30,190	51%
2019	28,120	29,510	49%

## Shuttle Bus Service Trends

Texas A&M University Transit has provided fans an alternative method to get to campus for 16 years and operated gameday bus service for more years than that. The ‘teenage’ Get to the Grid shuttle has provided a free parking and shuttle option, and on-campus routes served many parking areas. The post-2013 gameday route structure includes service to the Bonfire Memorial, along Agronomy Road and the Stotzer Parkway parking areas, as well as three routes around west campus. Four routes of modified regular day operations provide service to off-campus student apartment areas.

The unprecedented demand at the 2013 Alabama game showed the importance of bus and traffic plans to be tightly coordinated. Both before and after the game, the buses on west campus were moving slower than pedestrians were walking due to competition from auto traffic. The Kyle Field Transportation Plan concentrated on reducing conflicts in regular vehicle, bus and pedestrian traffic streams. The plan ultimately meant that fewer sections of road were used for cars, leaving more sections for buses to travel unimpeded to parking lots, particularly those farther from Kyle Field.

On the upside, the well-trained drivers and alert operations staff allow the TAMU transit fleet to have exceptional flexibility, allowing buses to shift between routes so they can serve the largest waiting groups, contributing to shorter lines pregame and postgame. While this type of operation is normally accomplished in other cities with full-time professional drivers, TAMU transit operates with a mix of full-time professionals and student drivers.

Exhibit 12 provides the route level ridership data for the 2019 season. Leaving aside the Thursday game, the off-campus route ridership varied in a narrow range from about 9,500 to 11,000 riders. The Downtown Bryan route had very good ridership in every game and had four games over 1,500 riders, after posting only one such day in the first four years (28 games) of operation. The other park-and-ride service (Get to the Grid from the American Momentum Bank parking lot) also had a good ridership year with two games over 5,000 riders after only four such games in the previous 24 games. The parking lot was nearly full for four games suggesting an equilibrium may have been reached, and that fans are following the messaging about the parking lot status and moving to other options when the lot is close to full.

On-campus ridership varied across a larger range than off-campus service. The Agronomy and Bush Library route variation is usually tied to the parking totals for those areas. The Bush Library and Reed/Olsen routes also carry a significant number of fans between the Reed Arena tailgates and Kyle Field. The Polo Garage construction undoubtedly caused fans to avoid the area served by Bonfire, a trend that should reverse with the garage completion for the 2020 season. The Para Route ridership combines the paratransit service with the worker shuttle from the General Services Complex – the likely home for worker parking for several years.

### Exhibit 12. 2019 Football Game Bus Ridership

2019 Route Ridership	Aug 29 TX State	Sept 14 Lamar	Sept 21 Auburn	Oct 12 Alabama	Oct 26 MS State	Nov 2 UTSA	Nov 15 So Caro	Typical
Get to Grid	3,180	4,690	4,290	4,890	4,580	5,010	5,230	4,780
D'twn Bryan	650	1,610	1,640	1,910	1,450	1,590	1,360	1,600
Apartments	4,200	3,580	4,320	4,210	3,430	3,540	3,890	3,830
<b>Off-Campus Total</b>	<b>8,030</b>	<b>9,880</b>	<b>10,250</b>	<b>11,010</b>	<b>9,460</b>	<b>10,140</b>	<b>10,480</b>	<b>10,210</b>
Agronomy	2,220	2,190	2,800	3,160	2,850	2,140	2,930	2,670
Bonfire	-	1,300	1,720	1,980	1,380	1,430	2,020	1,640
Bush Library	4,400	4,990	7,300	7,210	5,640	6,110	7,210	6,410
Lot 58	300	800	970	940	470	840	900	820
Para	1,490	1,790	2,080	2,000	1,560	1,850	2,180	1,910
Reed/Olsen	450	750	950	720	610	690	1,000	790
Stotzer	1,190	1,050	1,100	1,360	1,020	1,250	1,130	1,150
WHR	740	1,380	1,330	1,320	1,260	830	1,020	1,190
<b>On Campus Total</b>	<b>10,790</b>	<b>14,250</b>	<b>18,250</b>	<b>18,690</b>	<b>14,790</b>	<b>15,140</b>	<b>18,390</b>	<b>16,580</b>
<b>TOTAL</b>	<b>18,820</b>	<b>24,130</b>	<b>28,500</b>	<b>29,700</b>	<b>24,250</b>	<b>25,280</b>	<b>28,870</b>	<b>26,790</b>

Exhibit 23 shows the increase in both on- and off-campus bus ridership from 2018 to 2019. The two park-and-ride lots contributed the highest ridership since 2015, as did the four routes serving student apartment areas. The drop in ridership to/from the 12<sup>th</sup> Man parking lots was more than offset by an increase in riders on buses serving other on-campus lots.

### Exhibit 23. On- and Off- Campus Typical Football Game Bus Ridership - 2013 to 2019

Routes	2013	2014	2015	2016	2017	2018	2019
<b>Off-Campus</b>	<b>6,500</b>	<b>12,620</b>	<b>11,100</b>	<b>9,490</b>	<b>8,900</b>	<b>9,200</b>	<b>10,210</b>
Park-and-Ride	4,350	9,380	6,450	5,880	5,400	5,760	6,380
Apartments	2,150	3,240	4,650	3,610	3,500	3,440	3,830
<b>On-Campus</b>	<b>6,180</b>	<b>14,650</b>	<b>20,190</b>	<b>19,450</b>	<b>17,560</b>	<b>16,300</b>	<b>16,580</b>
12th Man	1,360	2,960	4,030	5,530	4,620	4,780	3,130
Other On-Campus	4,820	11,690	16,160	13,920	12,940	11,520	13,450
<b>TOTAL</b>	<b>12,680</b>	<b>27,270</b>	<b>31,290</b>	<b>28,940</b>	<b>26,460</b>	<b>25,500</b>	<b>26,790</b>

The typical 2019 game ridership value was higher than either 2017 or 2018, and the three games with ridership more than 28,000 was the same as the 2016 season (Exhibit 14).



#### Exhibit 14. Football Game Bus Ridership - 2013 to 2019

2013		2014		2015		2016	
Rice	14,040	Lamar	25,720	Ball State	34,050	UCLA	30,340
Sam Houston	16,820	Rice	24,800	Nevada	28,610	PVAMU	23,330
Alabama	22,490	Univ Miss	31,010	Miss State	32,840	UTenn	32,320
SMU	11,360	LA Monroe	23,370	Alabama	33,900	NMSU	27,290
Auburn	12,810	Missouri	31,070	So Carolina	23,030	Univ Miss	30,490
Vanderbilt	10,490	LSU	27,670	Auburn	29,590	UTSA	27,010
UT-El Paso	10,440			W Carolina	28,750	LSU	26,150
Miss State	12,820						
Total	111,270	Total	163,640	Total	210,770	Total	196,930
<b>Typical</b>	<b>12,680</b>		<b>27,270</b>		<b>31,290</b>		<b>28,940</b>

2017		2018		2019		Kickoff Time	
Nich St	26,680	NW State	18,080	TX State	18,820	Earlier than 12:30 p.m.	
LA-Lafyt	23,590	Clemson	27,730	Lamar	24,130	Between 12:30 and 5:00 p.m.	
So Carolina	25,340	LA-Monroe	23,100	Auburn	28,500	After 5:00 p.m.	
Alabama	29,060	Kentucky	27,010	Alabama	29,700		
Miss St	25,460	Univ Miss	25,710	Miss State	24,250		
Auburn	25,620	AL-B'ham	25,030	UTSA	25,280		
NMexico	26,600	LSU	24,420	So Carolina	28,870		
Total	182,350	Total	171,080	Total	179,550		
<b>Typical</b>	<b>26,460</b>		<b>25,500</b>		<b>26,790</b>		

Exhibit 15 summarizes the year-to-year changes in the gameday bus route ridership. The Get to the Grid operated from a much larger location in 2013 and 2014, and the success of the Downtown Bryan service – which has seen increased ridership every season – has somewhat replaced the losses in park-and-ride volume. Off-campus apartment ridership was also higher than every year other than 2015. Agronomy, Lot 58 and Reed/Olsen had notable high ridership seasons among the on-campus routes. Bonfire saw a decline related to the Polo Garage construction removing parking spaces. The movement of stadium worker parking from the Veterinary Medicine area along Stotzer Blvd to the north end of Parking Area 88, where the paratransit service also operates caused a dramatic change in ridership from Stotzer to the Para route. Bush Library and WHR saw rebounds in ridership from the lower 2018 levels.

**Exhibit 15. Shuttle Bus Route Ridership from 2013 to 2019**

<b>Route Ridership</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Get to Grid	4,350	9,380	5,430	4,640	4,140	4,410	4,780
D'twn Bryan	-	-	1,020	1,240	1,260	1,350	1,600
Apartments	2,150	3,240	4,650	3,610	3,500	3,440	3,830
<b>Off-Campus Total</b>	<b>6,500</b>	<b>12,620</b>	<b>11,100</b>	<b>9,490</b>	<b>8,900</b>	<b>9,200</b>	<b>10,210</b>
Agronomy	860	2,830	4,820	2,490	2,390	2,400	2,670
Bonfire	1,550	2,510	2,890	2,910	2,950	2,200	1,640
Bush Library	2,230	6,070	8,060	7,590	6,640	6,090	6,410
Lot 58	-	-	-	740	750	640	820
Para	180	280	390	190	210	190	1,910
Reed/Olsen	40	650	830	780	560	640	790
Stotzer	140	1,020	1,870	3,470	3,050	3,070	1,150
WHR	1,180	1,290	1,330	1,280	1,010	1,070	1,190
<b>On Campus Total</b>	<b>6,180</b>	<b>14,650</b>	<b>20,190</b>	<b>19,450</b>	<b>17,560</b>	<b>16,300</b>	<b>16,580</b>
<b>TOTAL</b>	<b>12,680</b>	<b>27,270</b>	<b>31,290</b>	<b>28,940</b>	<b>26,460</b>	<b>25,500</b>	<b>26,790</b>

## Traffic Congestion Trends

The congestion goals for the Kyle Field transportation plan are designed around maintaining safe travel paths with a reasonable amount of extra travel time for pedestrians, bicyclists and vehicles. The plan explicitly recognizes the difficulties in loading and unloading the Kyle Field area, which regularly has more than 120,000 spectators and extra tailgaters. This demand is equivalent to the 4<sup>th</sup> largest Texas downtown in the 15<sup>th</sup> largest Texas metro area. The lack of freeways, and basically no new roadway capacity accompanying the stadium expansion, meant that the plan relied on aggressively operating the network, as well as accepting that some traffic congestion will exist. Staff from Texas A&M Transportation Services, the City of College Station, and Texas A&M Transportation Institute work together to monitor, analyze and adapt to the changing gameday transportation situation from the College Station Traffic Control Center, Kyle Field Command Center and many campus intersections, parking lots and garages.

The policy approach from both on- and off-campus entities is to provide as much exiting capacity as practical to reduce the amount of time that traffic congestion affects postgame travel to homes, hotels, condos, restaurants, and entertainment venues. The on- and off-campus agencies have a goal of beginning to remove traffic controls within two hours postgame – a goal that has been accomplished for most games since 2014 and for all 28 games since 2016.

The major road system serving the Kyle Field exit traffic plan is analyzed before and after the game using traffic speed data. The percentage of about 43 miles of road (86 miles of directional road) that show slow-and-go or stop-and-go traffic congestion are estimated every 5 minutes using data from INRIX, a leading provider of traffic information.

- North-South Roads – Earl Rudder Frwy (SH 6), Texas Ave, Wellborn Rd
- East-West Roads – Villa Maria Rd, University Drive/Stotzer Parkway, George Bush Dr, Harvey Rd, Rock Prairie Rd, William D Fitch Parkway (SH 40)
- Loop Road – Harvey Mitchell Parkway (FM 2818)

Congestion data for the 2013 Alabama game (nearest comparable crowd size to the renovated Kyle Field) are used as the comparison point for transportation plan conditions. The postgame “congestion goal” of 8 percent of these roads is like the edges of the average weekday evening rush hour between 2015 and 2018. The pregame and postgame graphs also show the morning and evening peak patterns. Weekday congestion levels increased in 2019, suggesting a new, higher goal value might be considered. Congestion patterns change with attendance, start and end times, opponent, weather conditions, and game score. The key goal is to remove the traffic controls as soon as possible so that regular travel patterns can resume, although some congestion will exist.

### **Pregame Traffic Congestion**

Several changes have been made to the pregame traffic plan since 2013.

- The parking lot entry process brings vehicles off the streets before credentials or permits are checked.
- Traffic on the streets around the parking lots flows better because the signage at the curb informs parkers before they turn into the lots.
- Well-trained parking staff is more efficient at getting parkers into their lots and off the roads. This is particularly important on west campus where some large lots see very high demand.
- Traffic signals operate with the morning peak period signal timing during most of the pregame period, providing sufficient incoming traffic capacity.
- Social media, Destination Aggieland push notifications and pregame emails to parking lot permit holders are used to alert fans to the best entry routes and changes in pregame schedules.

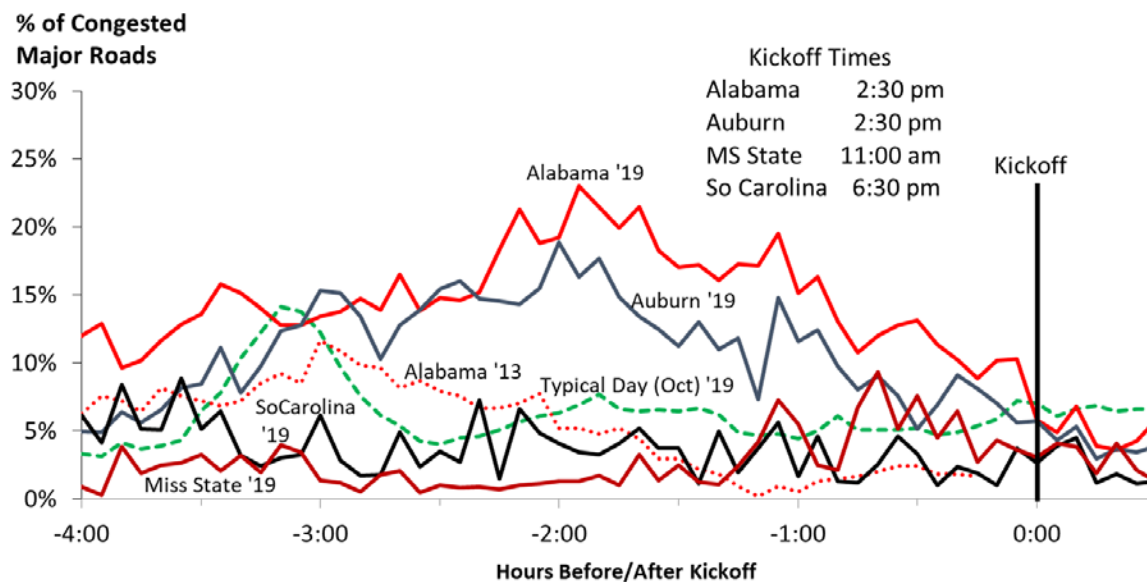
Thursday football games are a special challenge with students, faculty and staff traffic conflicting with entering football fans. The special Football Thursday section describes those efforts when pregame traffic occurred during the weekday evening peak period. Pregame congestion peaked at levels near the Thursday game for only the Alabama game (Exhibits 16 and 17). Other than Texas State, only the Alabama and Auburn games peaked at levels above the typical weekday levels. Other games showed relatively low congestion levels peaking around 10 percent of the major roadway system. The morning kickoff games – Mississippi State and UT-San Antonio – followed a predictable pattern – very low congestion levels until an hour pregame and then higher congestion but, due to the smaller in-stadium crowds, not to levels seen during the very large games.

### **Postgame Traffic Congestion**

The big SEC game traffic patterns were similar – congestion peaking around 75 to 90 minutes postgame at between 20 percent and 25 percent (Exhibits 18 and 19). Traffic controls were being removed on campus before an hour postgame for every game, and on City streets before 90 minutes. Congestion levels reached the ‘goal line’ of 8 percent of the major road system by 2½ hours postgame. The smaller games showed a congestion peak at about 15 percent before 60 minutes.

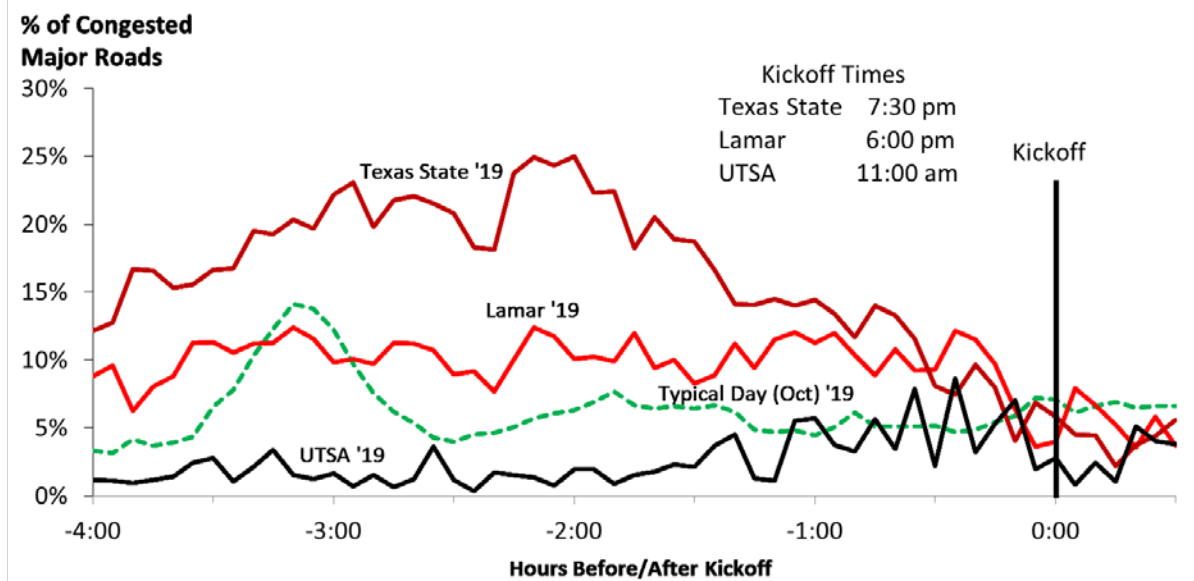
The biggest improvement from 2018 to 2019 was at the Bush-Wellborn intersection where more green time was given to vehicle traffic by waiting until the pedestrian traffic formed larger groups before crossing. This allowed the campus parking areas that move through this intersection to clear at least 15 minutes faster than in the past and had minimal effect on pedestrian wait times. The Union Pacific Railroad also played an important role by keeping their train operations away from the postgame traffic plan.

**Exhibit 16. 2019 Gameday Pregame Congestion – SEC Games**



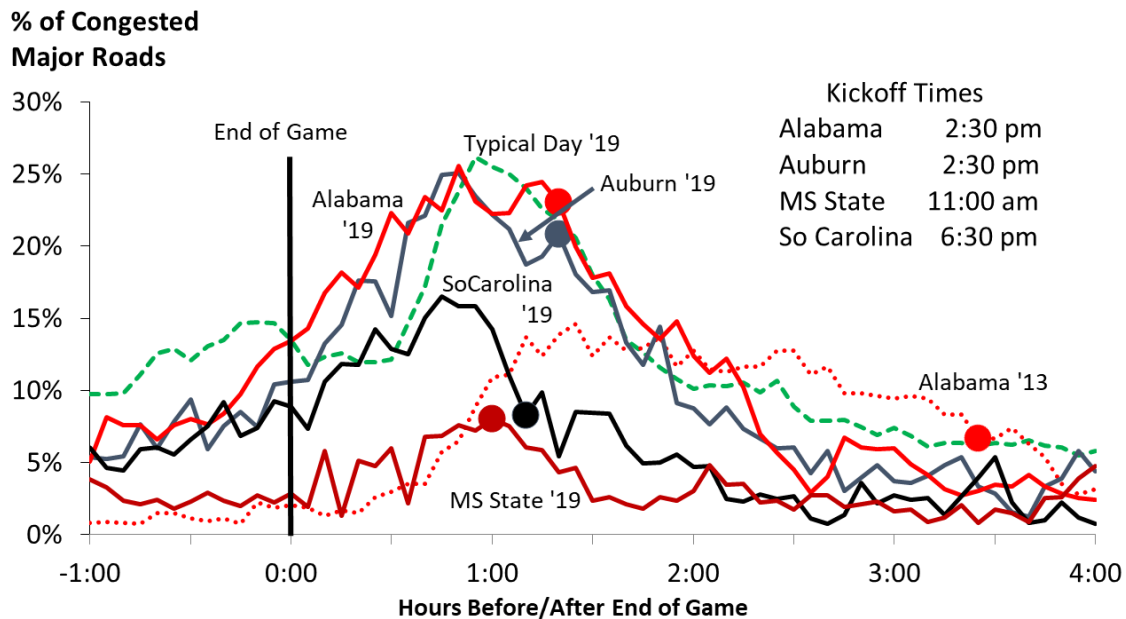
*Note: Traffic speed information provided by INRIX, a leading provider of traffic information.*

**Exhibit 17. 2019 Gameday Pregame Congestion – Non-Conference Games**



*Note: Traffic speed information provided by INRIX, a leading provider of traffic information.*

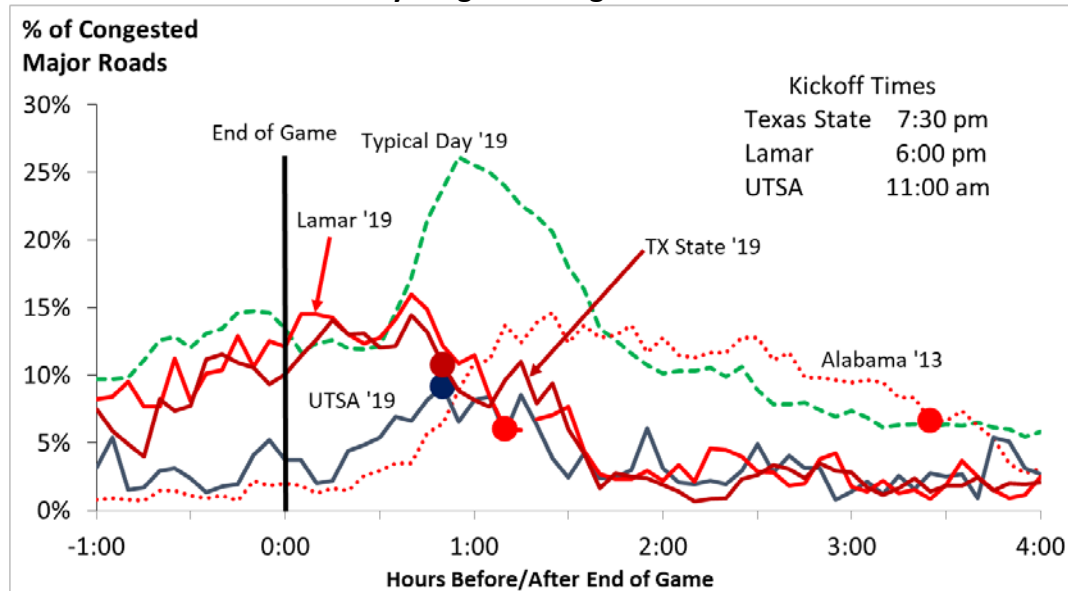
**Exhibit 18. 2019 Gameday Postgame Congestion – SEC Games**



*Note: Traffic speed information provided by INRIX, a leading provider of traffic information.*

*Note: Dot indicates when traffic control began to be removed by City of College Station (goal is within 2 hours of game end).*

**Exhibit 19. 2019 Gameday Pregame Congestion– Non-Conference Games**



*Note: Traffic speed information provided by INRIX, a leading provider of traffic information.*

*Note: Dot indicates when traffic control began to be removed by City of College Station (goal is within 2 hours of game end).*

## **New Transportation Plan Elements for 2020**

The basic transportation plan has not changed since 2014, but changes are made every year to adapt to new parking and roadway configurations and to take advantage of improved operational capabilities. Highlights of the important changes planned for the 2020 season before the Covid-19 crisis are listed below. When game and attendance plans are decided for the next football season, new plan elements will be created if necessary.

- The Polo Garage will be open in Fall 2020, putting more parking spaces in the northeast corner of campus. Bus and traffic plans will be reviewed and modified if necessary.
- The transportation group will take advantage of the plan's flexibility to use the available road capacity and traffic signal green time. The changes in parking patterns mean that the postgame traffic plan must be adapted to where the cars are for each game. One significant game-to-game variation is on Fan Field where between 660 and 1,730 vehicles parked in 2019. This lot connects to the Discovery Drive contraflow which requires a fair amount of personnel and time to set up. For some games, contraflow is useful for under 30 minutes; for big games that are close at the end, contraflow can be needed for more than an hour. To take advantage of the set-up effort, the transportation group will look to offer this route to some of the traffic coming from Reed Arena for the short duration post-traffic games. This will give those fans another travel path option and make more efficient use of the available road space and green signal time.
- Penberthy Boulevard is converted to two lanes southbound to George Bush Drive during postgame operations to unload the Reed Arena lots efficiently. Unfortunately, some drivers do not observe the "use two lanes" signs. Additional signage and some traffic cones will be deployed to improve the two-lane flow.
- The FM 2818 improvement project will affect postgame traffic control as construction phasing changes from year-to-year. The eventual new roadway will be on the outside of the existing road, so much of the construction during 2020 and perhaps 2021 can occur away from regular traffic operations. But the Wellborn Road overpass will be narrowed for several months, and the Bush, Luther and Holleman intersections will be affected at some point as the new design is installed. Staff will work to minimize the traffic effects on gamedays and workdays.
- Pregame traffic could benefit from more fans using FM 2818 to access the west campus parking areas. This route will be encouraged by the social media accounts and Destination Aggieland. These same channels have been used to alert fans about filling parking areas and shuttle route status for several years. With several pre-paid and day-of-game parking areas, as well as two free off-site park-and-ride routes, it is important to alert arriving fans to their options before they arrive on campus – to assure that their choice is the most desirable and to help them avoid traffic problems.

The partnership between College Station Police and Public Works and Texas A&M Transportation Services will monitor operations and work with many stakeholders to ensure the safe and efficient movement of pedestrians and vehicles to improve the fan experience.

## **Appendix - The Revised 2014 Kyle Field Transportation Plan**

The 2014 plan relied on a combination of fewer route choices and better communication about fan travel options. This was manifest in a few significant changes that have remained relatively constant through the subsequent seasons. Big picture elements guide the plan design:

- Overall philosophy – “Let the leavers leave” – Fans, residents and both on-and off-campus leadership indicated a desire to have traffic conditions return to something close to normal as soon after the game as possible. This is accomplished by making the outbound routes as efficient as possible for those wishing to leave.
- “Know Before You Go” – Fans and residents are encouraged to study their travel options before arriving at the game, and while choosing their parking locations. The award-winning Destination Aggieland smartphone app and the gameday website present the same consolidated information. The app has evolved into a year-round information source and communication device for sports, cultural and community events.
- Use of the significant City of College Station investment – The City’s \$5 million upgrade in signals, controllers and monitoring cameras connected to the Traffic Control Center in 2014 provided gameday transportation operators with the ability to monitor the traffic conditions and adjust traffic signal timing and officer instructions during entry and exit traffic flow to optimize the plan.
- Improved bus travel – Bus routes serve many apartment complexes, two park-and-ride locations and all on-campus parking areas. Routes were designed to avoid most of the usual congestion spots, and the traffic routes were designed to facilitate bus travel with minimal staffing and resources.

Many specific routing and access designs help implement these broad philosophies:

- Jointly funded traffic operations plan: Together the City of College Station and Texas A&M Transportation Services fund the postgame traffic plan for placing barricades and positioning officers.
- Wellborn Road contraflow: Four of the five lanes on Wellborn north of Southwest Parkway are used in the southbound direction. Turns from Wellborn Rd are prohibited in that section and about 85 percent of the Southwest Parkway intersection green time is for southbound traffic. A tow truck is positioned near the north end of the corridor to respond to problems.
- Discovery Drive contraflow: All four lanes operate outbound from west campus. The non-signalized intersection of Research Parkway at Stotzer Parkway is closed to outbound traffic, and the almost 4,000 parking spaces on west campus are directed out Discovery.
- FM 2818 at Holleman: Much more than half of the traffic from west campus uses this intersection to leave the area, so most of the green time at the 2818/Holleman intersection is given to FM 2818. Holleman travelers can use other routes to enter either the Wellborn contraflow lane or go south to Rock Prairie Road.
- University Drive green time: Approximately 3/4s of the green time at intersections east of Texas Avenue is dedicated to Kyle Field exiting traffic.



- Park-and-ride lots: There are more than 1,500 parking spaces at two locations. American Momentum Bank offered their parking lot for Kyle shuttle service when the previous location cancelled the service. Additionally, there is a shuttle from downtown Bryan supported by the merchants and the City.
- Ample parking and on-campus shuttle service: At least 27,000 parking spaces are available for gameday parking and all the distant lots and many of the premium donor spaces are served by a bus route.
- Using simple directions to improve pedestrian safety, reduce traffic conflicts and create better bus service. Vehicles are routed away from pedestrians and buses, and car traffic is separated in ways that reduce the amount of inefficient 'turn-taking.' On west campus, parking lots north of Kimbrough Blvd/Research Parkway are routed north to Stotzer Parkway and lots to the south are routed to George Bush Drive. Kimbrough Blvd (the only east-west road on west campus) is not used as a through road but is used for four different traffic flows with empty pieces of road between. Most of Kimbrough Blvd/Research Parkway is used to provide congestion-free bus service.
- Better communication with fans. The Destination Aggieland app and gameday website, along with Facebook and Twitter accounts provide predictable routing maps and update information as needed. The fan site TexAgs is used to distribute information and to update fans on operating procedures before gameday. The TexAgs channel is particularly useful when problems are being addressed, as it offers a chance for better dialogue and explanation than twitter or a web posting.
- Game evaluation reports are posted at [tti.tamu.edu/kyle](http://tti.tamu.edu/kyle) to provide fans and stakeholders with an overview of the performance for the plan. This site also contains all evaluation reports from past seasons.