2023 Texas A&M Football Transportation Plan
Look Ahead Report
Texas A&M Transportation Institute

By Debbie Albert and Tim Lomax

The 9th season of the Kyle Field Transportation Plan was the first of several football seasons that dealt with large transportation construction projects. In most corridors, the transportation service provided to 2022 game attendees was not hindered by the construction, but due to the project underway at FM 2818, the operating practices used by campus and city staff had to change. The decrease in monitoring and operating assets caused by the construction generally involves a "return to old school" operations with more law enforcement officers operating traffic signals and more complicated plans to use the smaller available road space.

The 2023 football season traffic challenges will include construction bottlenecks. Expect delays on the south end of the transportation plan on FM 2818 and Wellborn Road, and to the north on , FM 158 (William Joel Bryan), FM 1179 (Villa Maria/Briarcrest), and Texas Avenue. This construction in Bryan will affect fans going to downtown Bryan to use the park and ride shuttle service as well as drivers who listen to our advice to go north away from Kyle Field before trying to cut across town. Additionally, although not in town, the SH 6 construction at FM 2, south of Navasota, is still underway, but this season four travel lanes will be open and help ease congestion for fans coming from and returning home to Houston. There will be special emphasis on communicating the ways that fans and community residents can plan to avoid, or at least understand, the problems.

Aggie football traffic operations have been most successful when all the partners and fans understand the plans and their options. The 2023 Kyle Field Transportation Plan will be the product of a large coordination and communication effort including the groups noted below and others. Improving the fan experience during game weekends in and around the 4th 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 activities 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
- Brookshire Brothers
- Revel XP
- Texas A&M Hotel and Conference Center
- 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 Sports Properties
- Texas Department of Transportation (TxDOT) and their contractors
- 12th Man Foundation
- Local and state safety and law enforcement agencies
- Local Hotels and Motels

Overview

The 2023 Look Ahead Report makes predictions based on reviews of seasons 2013 through 2022 (other annual reports are published at: https://tti.tamu.edu/kyle/). The 2022 season highlights included reopening of Aggie Park, a second season of virtual parking permits, completion of the Aggie Expressway, opening a new opportunity for fans coming from Houston, a new street closure of northbound Bizzell Road at George Bush Drive to help fans leaving the game exit more efficiently, record downtown Bryan shuttle ridership, and achievement of the two-hour traffic control removal goal for six of the seven games.

For the 2023 season, some on- and off-campus construction projects that would have affected gameday were completed during the off-season. The indoor track and football venues were finished and TxDOT and the City of Bryan completed most of the roadwork on Texas Avenue from University Drive to downtown Bryan. Completion of these efforts will reduce the complexity of the 2023 gameday traffic planning (and is appreciated by the transportation operations staff!). TxDOT and the City of College Station also completed the improvement of the Holleman/Wellborn intersection and the adjacent railroad crossing.

Unfortunately, the 2023 season will still have significant new challenges:

- The FM 2818 roadwork schedule has slipped and completion is now estimated for August 2024. The 2023 season issues are described near the end of this report.
- Removal of H Lot 61 from the gameday parking inventory. The Aplin Center (the largest Buc-cee's on the planet) will begin construction in the Fall, and this parking and tailgating resource will not be available.
- The City of College Station's new intersection at Deacon/Wellborn will not be completed for the 2023 season; traffic will continue to be constrained in this area.

Growth in all the factors affecting gameday crowds will continue to present challenges but some of the construction projects provide opportunities and longer-term solutions. The expansion of Highway 6 on the east side of town and the Bush-Wellborn interchange project will challenge the transportation plan in the near-term, but offer easier and safer travel once completed.

2022 Experience

Previous reports (https://tti.tamu.edu/kyle/) provide details for games and seasons from 2013 to 2022. This section summarizes the 2022 season results for parking volume, shuttle bus ridership, and traffic congestion.

Game Times

Transportation elements such as traffic routes and bus service are modified to accommodate the different demands of kickoff times, attendance and third quarter score (Exhibit 1).

Exhibit 1. 2022 Game Information

2022 Home Games	Kickoff	Attendance	3rd Quarter Score	
			TAMU	Opponent
Sam Hous St	11:03 a.m.	97,946	24	0
App State	2:35p.m.	92,664	14	14
Miami	8:10p.m	107,245	17	6
U Miss	6:39p.m	101,084	14	24
Florida	11:07a.m	97,797	24	34
U Mass	11:02a.m	90,177	13	3
LSU	6:10 p.m.	93,578	24	17

Parking

Parking volume peaked in the mid-season games against Miami and Mississippi, with over 23,000 cars parked for both games and similar geographic distributions across the five campus parking areas (Exhibit 2). East Main, Research Park and Veterinary/Agronomy areas – the farther out parking locations – see the greatest differences between big games and huge games (we don't have small or medium games anymore). The two non-conference 11 a.m. games – against Sam Houston and Massachusetts - were the lowest attended games, although the game against lightly regarded Appalachian State also had a small parking volume, especially since the game was at 2:30 p.m.

Growth from 2021 occurred primarily in the Reed/Agriculture area (Exhibit 3) with more parkers in the West Campus Garage and return of the G Lot 104 parking lot. Much of this area is devoted to 12th Man Foundation parking which is usually sold out for the season – the number of West Campus Garage sales varies by game but improvements in postgame traffic conditions have made the garage a more desirable parking and walk-to-Kyle situation.

Exhibit 2. 2022 Parked Vehicles by Campus Area

2022 Game Totals	Sept 3 Sam Hous	Sept 10 App State	Sep 17 Miami	Oct 29 U Miss	Nov 5 Florida	Nov 19 UMass	Nov 26 LSU	2022 Typical
Main	5,010	4,885	5,920	5,605	4,900	4,425	5,240	**5,260**
East Main	1,490	1,595	2,390	2,320	1,485	995	1,840	**1,855**
Reed/Agriculture	8,820	8,800	9,345	9,335	9,190	8,925	9,395	**9,150**
Research Park	2,365	2,130	3,420	3,155	2,595	1,190	2,360	**2,670**
Vet/Agronomy	1,655	1,990	2,755	2,615	1,795	1,550	2,530	**2,225**
Total	**19,340**	**19,400**	**23,830**	**23,030**	**19,965**	**17,085**	**21,365**	**21,155**

Parking facility, plan and policy changes in each year explain some of the variation in campus parking patterns. The opening of two parking garages (Stallings Boulevard in 2016 and Polo Road in 2020) and the 2017 recreational vehicle parking consolidation on RV Field 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 2015 in the Agronomy Road area, and for the 2016 and 2017 seasons they parked in the Vet School area. Worker parking has been in Lot 88 adjacent the General Services Complex on Agronomy Road since 2018. This lot had been used by RVs through the 2016 season and was mostly empty in 2017.

Exhibit 3. Typical Game Parked Vehicles by Campus Area - 2013 to 2022

Parking Areas	2013	2014	2015	2016	2017	2018	2019	2021	2022
Main Campus	4,290	4,660	4,570	5,430	5,050	5,180	4,800	5,210	5,260
East Main	2,030	2,320	2,370	2,240	2,670	2,230	1,710	1,800	1,855
Reed/Agriculture	9,400	8,900	8,430	8,930	8,910	9,680	9,480	8,420	9,150
Research Park	1,510	3,040	3,320	3,240	2,640	2,650	2,600	2,750	2,670
Vet/Agronomy	1,770	2,720	2,980	2,190	1,880	2,300	2,070	2,050	2,225
Total	**19,000**	**21,640**	**21,670**	**22,030**	**21,150**	**22,040**	**20,660**	**20,230**	**21,155**

Note: 2020 data is not included due to COVID-19 stadium capacity restrictions

Shuttle Ridership

Texas A&M University Transit has provided fans an alternative method to get to, around and from campus for 34 years. Football service has expanded to serve many off-campus areas and all the parking areas used on a typical gameday. The Downtown Bryan route has established itself as a desirable, free parking and shuttle option, as well as supporting the downtown merchants. The post-2013 gameday route structure includes service to the Bonfire Memorial and the RVs in Lot 58, a paratransit route and five other 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 being tightly coordinated. Both before and after the game, the buses on west campus were moving slower than pedestrians 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 A&M Transit fleet to have exceptional flexibility, allowing buses to shift between routes so they can serve the largest waiting groups. While this type of operation is normally accomplished in other cities with full-time professional drivers, Texas A&M Transit operates with a mix of full-time professionals and part-time student drivers.

Bus ridership was relatively high for three of the first four 2022 games, and then declined as the football team struggled (Exhibit 4). The Downtown Bryan and apartment routes had strong ridership for most of the season, which likely led to lower on-campus parking volumes. The 11 a.m. kickoff times contributed to lower ridership for the Florida and Massachusetts games .

The five off-campus routes also showed continued strong growth over the last several years (Exhibit 5). The Downtown Bryan route has notably seen increased ridership every year since its opening. The Bush Library route, to the far west campus parking area with a stop at the Reed Arena area tailgate spots, also saw increased ridership.

Exhibit 4. 2022 On- and Off- Campus Football Bus Ridership

2022 Game Totals	Sept 3 Sam Hous	Sept 10 App State	Sep 17 Miami	Oct 29 U Miss	Nov 5 Florida	Nov 19 UMass	Nov 26 LSU	2022 Typical
D'twn Bryan	3,805	2,995	2,455	2,505	2,555	1,695	2,395	2,785
Apartments	5,590	5,205	5,395	5,230	4,460	3,275	3,380	4,875
Off Campus	**9,395**	**8,200**	**7,850**	**7,735**	**7,020**	**4,970**	**5,775**	**7,665**
Agronomy	2,705	2,350	3,065	2,500	2,085	1,820	2,905	2,600
Bonfire	1,360	1,440	1,570	1,550	1,200	960	1,365	1,415
Bush Library	6,455	6,070	7,610	7,280	6,550	4,700	6,570	6,755
Lot 58	445	620	665	560	485	420	695	580
Para	2,940	2,585	2,415	2,750	2,495	2,370	2,515	2,615
Reed/Olsen	700	715	775	435	380	950	700	620
Stotzer	665	885	720	770	705	580	590	725
WHR	900	930	965	800	865	450	790	875
On Campus	**16,170**	**15,595**	**17,785**	**16,640**	**14,765**	**12,250**	**16,130**	**16,180**
TOTAL	**25,565**	**23,795**	**25,635**	**24,375**	**21,785**	**17,220**	**21,905**	**23,845**

Exhibits 5 and 6 show the increase in both on- and off-campus bus ridership from 2013. The drop in off-campus ridership brought by the elimination of the large Get to the Grid parking

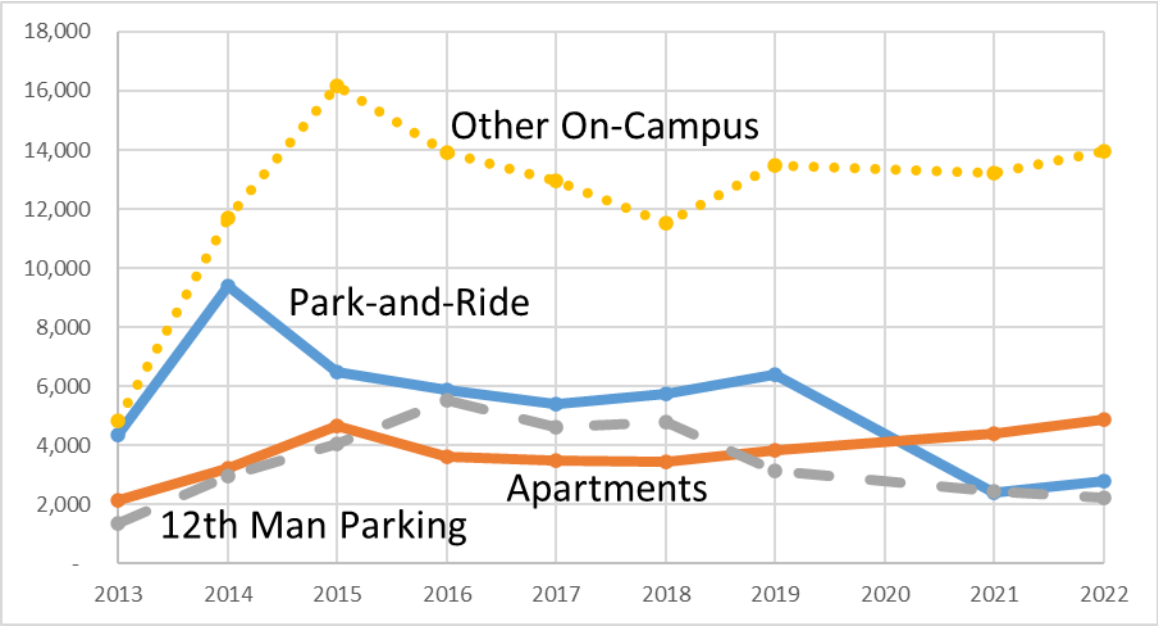
location has been somewhat offset by the increase in the Downtown Bryan route and the off-campus apartment routes. Routes serving the 12th Man Foundation season ticket holder parking lots have been declining since 2016. Another pattern seen since the new route structure in 2014 is the use of shuttles to move tailgaters from their parking area to their party. Additional stops were provided to allow this to happen more easily, and particularly for afternoon and evening games these stops provide improved gameday experiences.

Exhibit 5. On- and Off- Campus Football Bus Ridership - 2013 to 2022

Route Ridership	2013	2014	2015	2016	2017	2018	2019	2021	2022
Get to Grid	4,350	9,380	5,435	4,645	4,145	4,410	4,780	-	-
D'twn Bryan	-	-	1,025	1,235	1,260	1,345	1,595	2,405	2,785
Apartments	2,145	3,240	4,645	3,605	3,500	3,440	3,830	4,380	4,875
Off Campus	**6,495**	**12,620**	**11,105**	**9,485**	**8,905**	**9,195**	**10,205**	**6,785**	**7,660**
Agronomy	855	2,830	4,815	2,495	2,390	2,405	2,680	2,505	2,600
Bonfire	1,550	2,510	2,895	2,910	2,950	2,205	1,640	1,405	1,415
Bush Library	2,235	6,070	8,060	7,590	6,635	6,090	6,410	6,445	6,755
Lot 58	-	-	-	735	750	640	820	705	580
Para	185	280	395	190	210	195	1,910	2,145	2,615
Reed/Olsen	40	645	830	775	565	635	785	685	620
Stotzer	135	1,015	1,865	3,475	3,045	3,070	1,150	875	725
WHR	1,180	1,295	1,330	1,280	1,015	1,065	1,190	870	875
On Campus	**6,180**	**14,645**	**20,190**	**19,450**	**17,560**	**16,305**	**16,585**	**15,635**	**16,185**
TOTAL	**12,675**	**27,265**	**31,295**	**28,935**	**26,465**	**25,500**	**26,790**	**22,420**	**23,845**

Note: 2020 data is not included due to COVID-19 stadium capacity restrictions

Exhibit 6. Football Bus Route Ridership - 2013 to 2022



It is notable that every gameday since 2014 (except for 2020 games) has had higher ridership than all gamedays prior to 2014 (including the enormous 2013 Alabama game). The typical – and even the low ridership games – are usually double the typical pre-2014 games.

A typical game has more ridership pregame than postgame across all route types and all game times. The pregame rides to tailgates, the Pepsi Fan Zone and other activities are not usually a part of the postgame service. The postgame bus waiting lines, although they are cleared before an hour postgame, probably deter some fans from using bus service. Other riders walk to areas like Northgate before going home or to their hotels. Inclement weather and game time also affect ridership, with bad weather and later games increasing ridership on all route types.

Parking and Bus Ridership Summary

The biggest difference between 2013 and the seasons with the larger Kyle Field design has been bus ridership (Exhibit 5). 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.

Exhibit 6 explores the difference between games with SEC opponents or ranked teams (labeled "big games") and other games. In the recent few years, the difference in parking volume between these two types of games has widened, while the gap in bus ridership has narrowed. Exhibit 7 provides bus ridership and parking information for each home game since 2013.

Exhibit 5. Parking and Ridership per Game Averages - 2013 to 2022

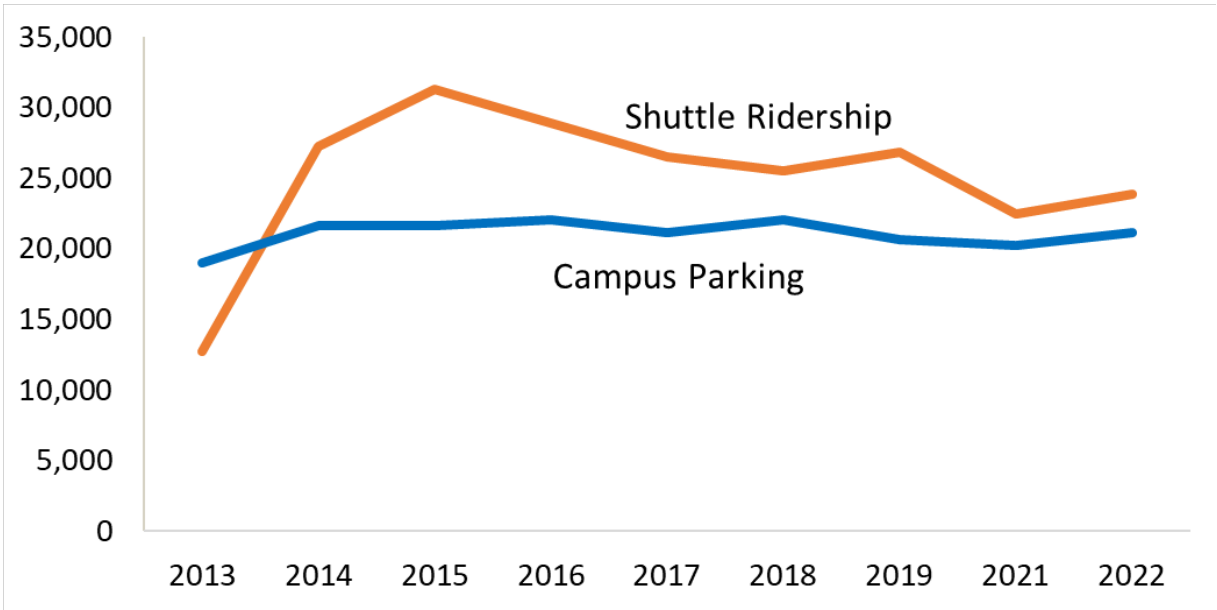


Exhibit 6. Parking and Ridership for Average Big and Small Games - 2013 to 2022

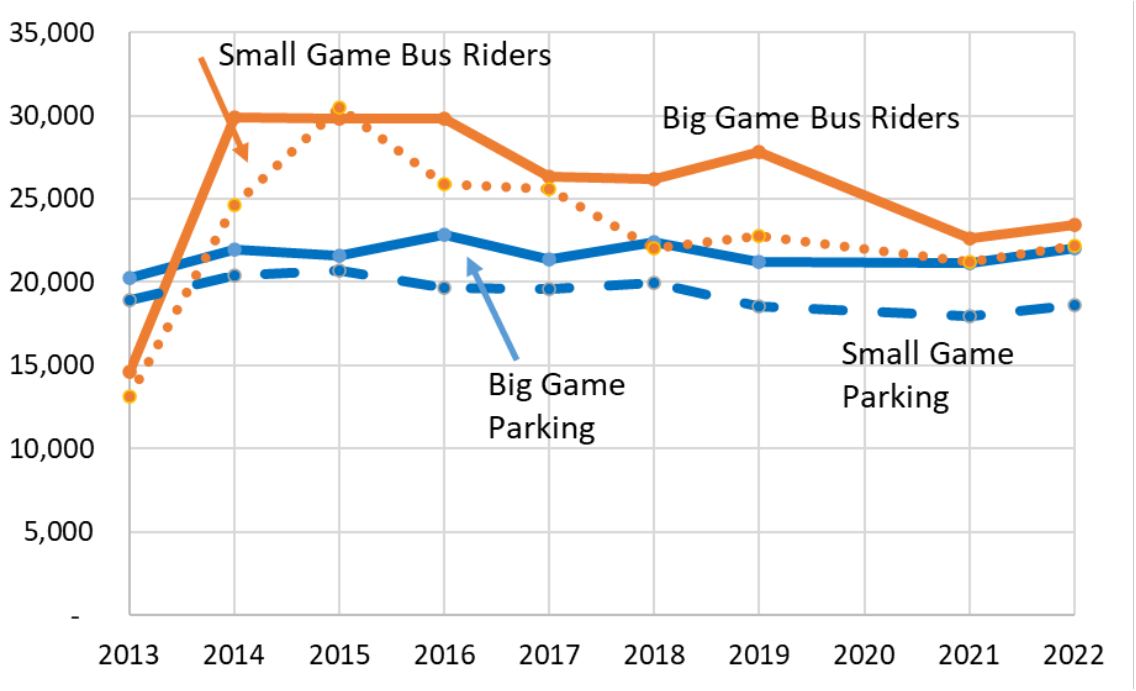


Exhibit 7. Campus Parking and Bus Ridership During Football Gamedays – 2013 to 2022

2013	Ridership	Parking	2014	Ridership	Parking	2015	Ridership	Parking
Rice	14,040	17,820	Lamar	25,720	21,400	Ball State	34,050	22,160
Sam Houston	16,820	19,410	Rice	24,800	20,970	Nevada	28,610	19,320
Alabama	22,490	23,700	Univ Miss	31,010	23,630	Miss State	32,840	22,440
SMU	11,360	18,910	LA Monroe	23,370	18,740	Alabama	33,900	23,590
Auburn	12,810	20,110	Missouri	31,070	21,070	So Carolina	23,030	18,450
Vanderbilt	10,490	17,700	LSU	27,670	21,130	Auburn	29,590	21,990
UT-El Paso	10,440	19,560				W Carolina	28,750	20,530
Miss State	12,820	19,460						
Total	**111,270**	**156,670**		**163,640**	**126,940**		**210,770**	**148,480**
Typical	*12,680*	*19,000*		*27,270*	*21,640*		*31,290*	*21,670*

2016	Ridership	Parking	2017	Ridership	Parking	2018	Ridership	Parking
UCLA	30,340	21,970	Nicholls St	26,680	20,280	NW State	18,080	17,250
PVAMU	23,330	18,090	Louisiana	23,590	17,560	Clemson	27,730	23,520
Tennessee	32,320	24,520	So Carolina	25,340	21,630	LA-Monroe	23,100	21,140
New Mex St	27,290	21,520	Alabama	29,060	22,690	Kentucky	27,010	22,970
Univ Miss	30,490	23,950	Miss State	25,460	21,430	Univ Miss	25,710	20,480
UTSA	27,010	19,380	Auburn	25,620	19,810	AL-B'ham	25,030	21,600
LSU	26,150	20,850	NMexico	26,600	21,040	LSU	24,420	22,540
Total	**196,930**	**150,280**		**182,350**	**144,440**		**171,080**	**149,500**
Typical	*28,940*	*22,030*		*26,460*	*21,150*		*25,500*	*22,040*

2019	Ridership	Parking	2021	Ridership	Parking	2022	Ridership	Parking
Texas State	18,820	16,710	Kent St	21,670	18,400	Sam Hous St	25,565	19,340
Lamar	24,130	20,330	New Mexico	19,750	17,020	App State	23,795	19,400
Auburn	28,500	21,490	MS State	20,550	19,490	Miami	25,635	23,830
Alabama	29,700	22,390	Alabama	22,100	22,330	U Miss	24,375	23,030
Miss State	24,250	18,990	So Carolina	22,490	20,640	Florida	21,785	19,965
UTSA	25,280	18,660	Auburn	25,520	22,090	U Mass	17,220	17,085
So Carolina	28,870	22,100	PVAMU	22,190	18,420	LSU	21,910	21,365
Total	**179,550**	**140,670**		**154,270**	**138,390**		**160,285**	**144,015**
Typical	*26,790*	*20,660*		*22,060*	*20,230*		*23,845*	*21,155*

Kickoff Time
Earlier than 12:30 p.m.
Between 12:30 and 5:00 p.m.
After 5:00 p.m.

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

The combination of prepaid, 12th 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 regular Texas A&M parking permit (referred to as "any valid permit" (AVP)) is a less efficient operation, as demonstrated in vehicle occupancy studies conducted in 2015 and 2018. A&M students, faculty and staff with a valid permit can park on gamedays for no additional charge in some parking areas. This policy requires:

1. the traffic plan to handle more vehicles,
2. pushes some gameday paying parkers farther from Kyle,
3. reduces the ability of A&M Transportation Services to pay for staff and resources to accommodate gameday operations, and
4. essentially adds to the regular permit costs for those who do not attend football games.

Studies in 2015 and 2018 found that the 'any valid permit' parkers had about half a person less in each vehicle than the cash payers. No surprise for economic students (free goods are always overconsumed), but in this case the typical 4,000+ A&M permits seen on gamedays could accommodate 1,500 to 2,000 additional gameday fans if they had the same persons-per-vehicle ratio as the paying customers. As crowds grow, and parking resources change, this policy should be re-examined to see if the efficiency and fairness decisions might change in coming years. The percentage of parkers using their regular parking permit has declined since 2017, but was still in excess of 4,100 spaces on the average 2022 gameday (Exhibit 8).

It is unlikely additional buses or more road space near campus will be deployed in the next several years. The A&M Campus Master Plan shows parking spaces being converted into classroom, office, and lab buildings; the inefficient A&M permit parking access will be a greater strain on the parking and bus systems. Preliminary solutions to these constraints include requiring parkers using A&M permits to carry at least two people in their vehicle (the same concept used in the freeway carpool lanes in big cities), reducing the number of lots accepting A&M permits, or charging a lower gameday parking fee for these permits.

Exhibit 8. Paid Parkers Compared to Texas A&M Permit Parkers – 2013 to 2022

	Total Any Valid Permit	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%
2021	30,240	37,670	45%
2022	29,190	38,740	43%

Congestion

The congestion goals for the Kyle Field transportation plan are designed around maintaining safe pedestrian, bicyclist and vehicle travel paths that have a reasonable amount of extra travel time given the size and scale of the event. 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 4th largest Texas downtown, in the 15th largest Texas metro area. The lack of freeways, and basically no new roadway capacity, meant that the plan relied on aggressively operating the network, as well as accepting that some traffic congestion will exist. Staff from A&M Transportation Services, the City of College Station, and Texas A&M Transportation Institute combine to monitor, analyze, and adapt to the changing gameday transportation situation using equipment in the College Station Traffic Control Center, Kyle Field Command Center and the new-in-2021 Polo Road Building Control Center. From these locations the staff can direct officers and staff on the campus and city streets to adjust the transportation plan to fit the changing needs of spectators and the community.

The policy approach from both on- and off-campus entities is to provide rapid response to incidents on gamedays and 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 almost all games since 2014 and for six of the seven 2022 games.

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 to produce summary graphs. Congestion levels for Fall Semester evening commutes are provided for comparison.

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

Congestion data for the 2013 Alabama game (nearest comparable pre-expansion crowd size to the renovated Kyle Field) are used as the comparison point for pre-transportation plan conditions. The 2013 transportation plan allowed fans much more freedom of choice for their gameday exit routes and did not have significant City of College Station investments. For the Alabama game in 2013, congestion did not peak for more than an hour postgame (vehicles could not get out of parking lots to the city streets) and congestion remained between 10 and 12 percent for about two hours. City staff was not able to begin removing traffic controls until 3½ hours postgame, and some intersections still had significant gameday traffic at 4 hours

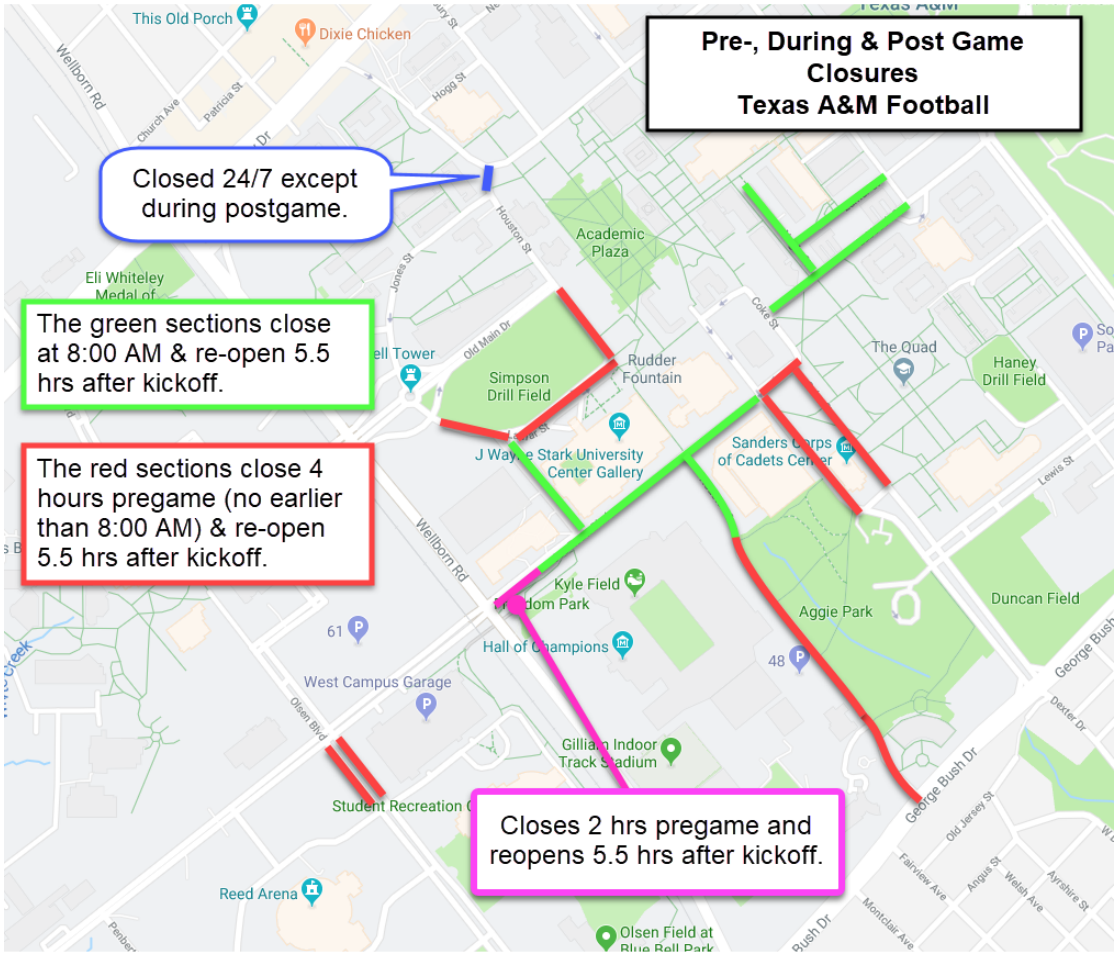
postgame. The lower congestion level “peak” point was caused by the exiting vehicles not being able to reach much of the city street network due to the near-campus bottlenecks that could not be resolved with the limited resources of that era.

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. The plan is designed to return conditions to those like weekday afternoon peak traffic.

Pregame Traffic Congestion

The parking entry process begins with information to help fans find the right parking area and/or shuttle route, the best route and arrival time, the range of entertainment options on gamedays and then uses lot entry procedures that attempt to minimize the congestion caused by the payment and permit checking process. A set of pedestrian safety road closures as kickoff approaches (Exhibit 9) removes many vehicle-pedestrian conflicts, improves the gameday environment and reduces the on-campus traffic congestion.

Exhibit 9. Pregame Road Closure and Restricted Access Areas



The early season evening kickoff big games – Mississippi and Miami – had higher attendance and more pregame traffic congestion until 90 minutes pregame (Exhibit 10). With so much time before kickoff, fans were generally able to make their way onto campus for tailgating and other festivities without overloading the city streets. The 11:00 a.m. Florida game, by contrast, had higher congestion levels in the last hour before kickoff, typical for morning games against all opponents.

The smaller game congestion graph in Exhibit 11 shows similar trends – the 11 a.m. Sam Houston State and Massachusetts games had congestion peaks around an hour pregame, while the Appalachian State game congestion was relatively high for a longer period.

Exhibit 10. 2022 Gameday Pregame Congestion – SEC and Miami Games

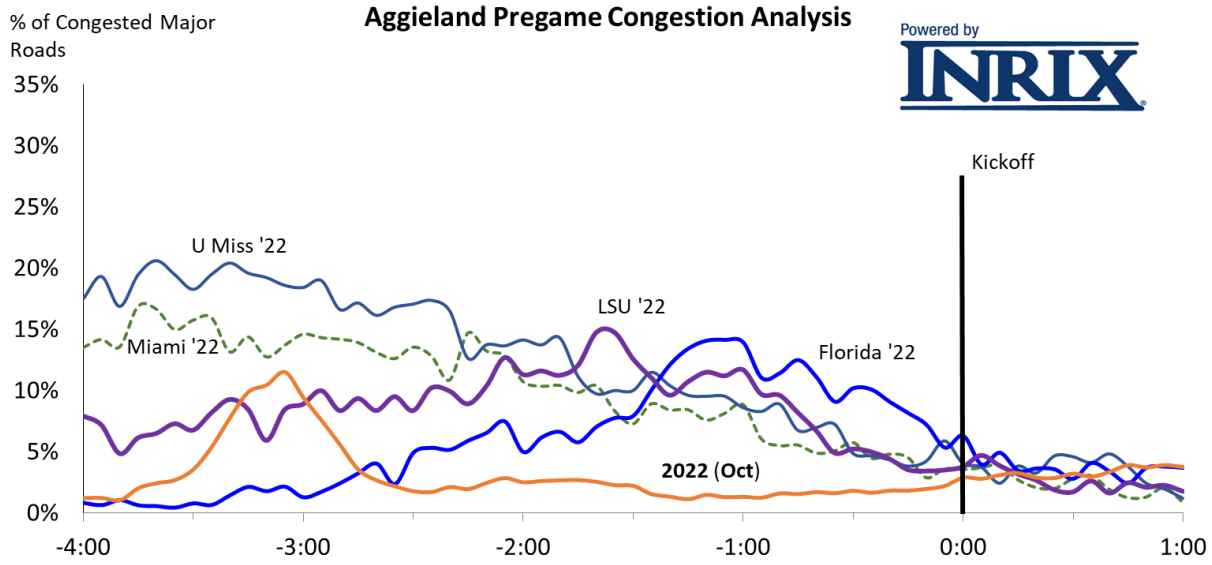


Exhibit 11. 2022 Gameday Pregame Congestion – Smaller Games

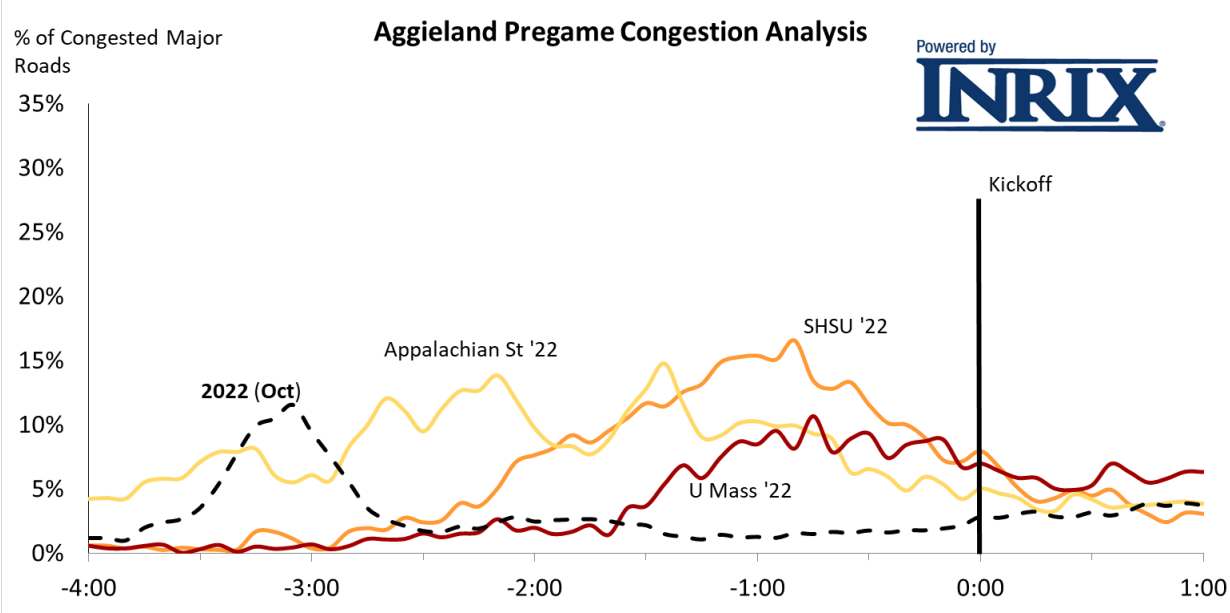
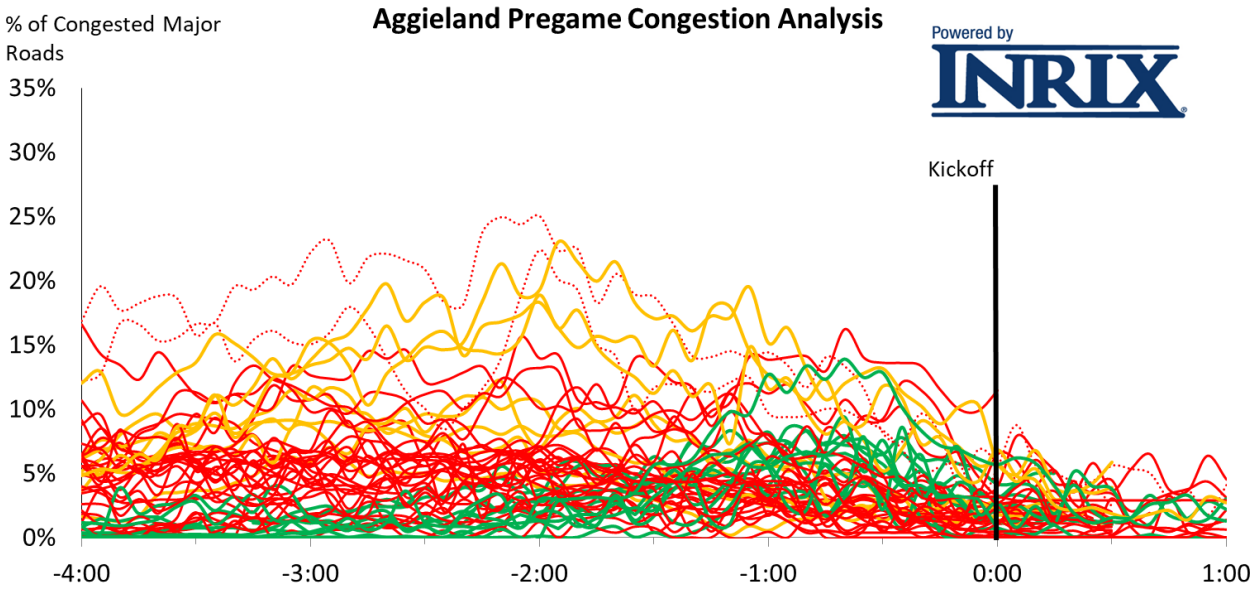


Exhibit 12 shows the congestion patterns for all football home games since the beginning of the larger capacity Kyle Field in 2014.

- The morning kickoff games (green lines) all show very little congestion before 90 minutes pregame.
- Mid-afternoon games (gold lines) which have generally had the largest attendance typically have the highest congestion peaks.
- Evening games (red lines) usually have consistent congestion levels across many hours of the pregame period.
- Congestion levels decline rapidly as kickoff time approaches.
- Thursday night games (dotted red lines) look more like afternoon games even though they started at night.

Exhibit 12. Pregame Traffic Congestion Since 2014



Postgame Traffic Congestion

All four large attendance games had similar postgame congestion patterns – congestion began increasing around the game end, reached a peak around an hour postgame and was below 10 percent of the gameday road network by two hours postgame. The postgame LSU field invasion slowed the congestion increase, but the lower levels of non-game traffic typically seen during the Thanksgiving holiday games meant congestion dissipated relatively quickly. Miami was the only game where traffic control was still in place at the two-hour postgame goal, but barricades and officers began to be removed shortly after that time.

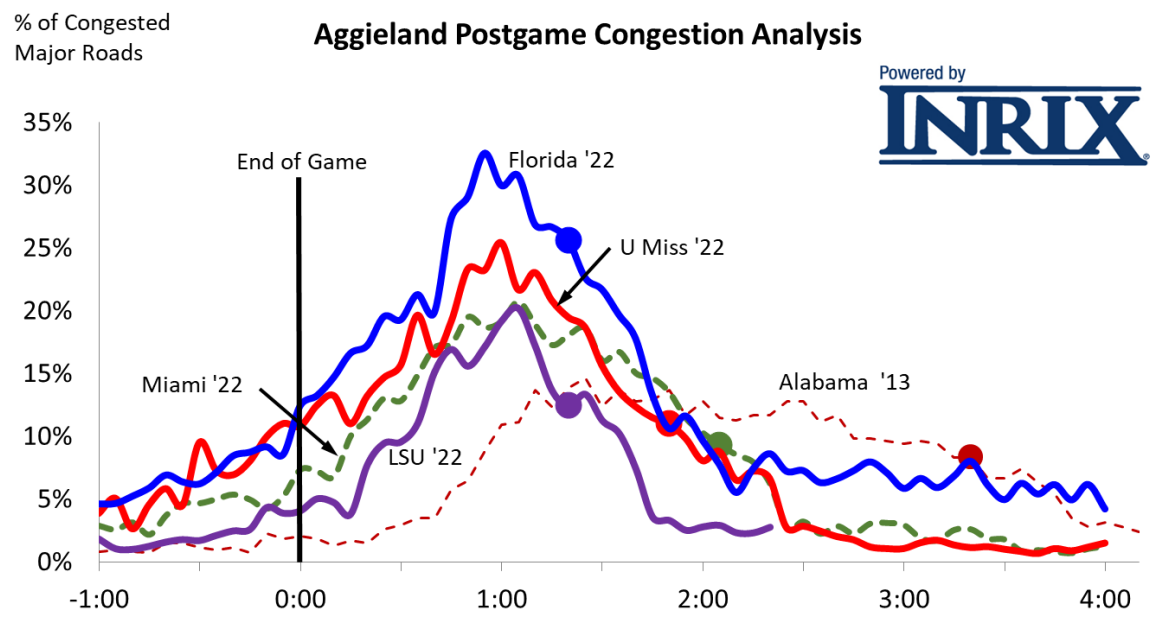
The smaller attendance games, on the other hand, could not have been more different. The Appalachian State game followed the typical game-end pattern seen in the larger games. The Massachusetts game was also fairly typical for a bad weather, smaller Aggie game with fans departing the stands early and congestion declining quickly after game ended.

And then there was the Sam Houston State game…. At the end of halftime (the game end time in Exhibit 14), lightning and approaching heavy rain caused many fans to leave while postgame traffic control was still being set. The cones were deployed on Wellborn Road and FM 2818; however, several on-campus intersections and the George Bush Drive barricades were not. A modified exit plan was implemented with City of College Station police officers working the traffic signals at key intersections to clear the roadways, but with little of the usual priority for buses or departing vehicles. Congestion levels peaked at 25 percent, similar to the 2022 big games. With many empty seats and after an evaluation of congestion patterns, the decision was made to remove the city street barricades midway into the three-hour long game delay. Backups on roads that are normally closed (such as northbound Wellborn Road near Kyle Field and eastbound George Bush Drive approaching Wellborn) contributed to higher-than-usual congestion percentages. The second half ended at the four-hour “postgame” mark and the remaining crowd exit resembled a normal game with few tailgaters sticking around to endure

the poor weather conditions. There was a secondary peak of 18 percent congested roadways following the end of the game and lasted about an hour. This traffic was quickly handled with staff support and minimal barricades and cones.

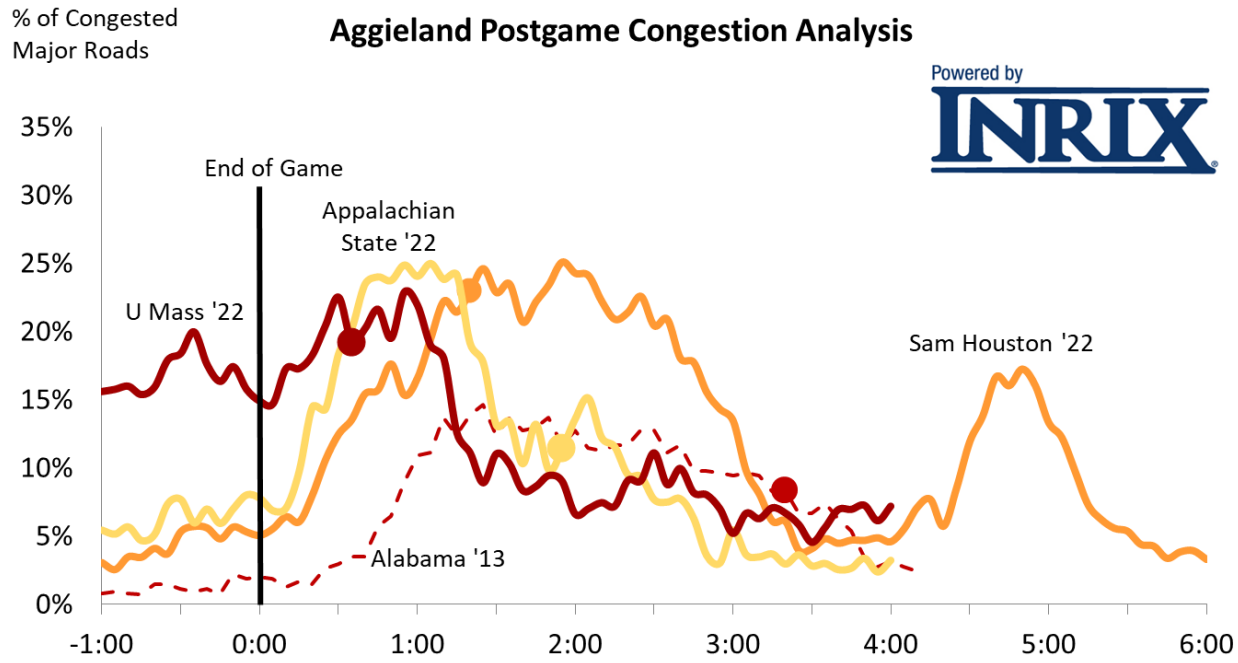
- The Takeaway - The Sam Houston State game congestion provides some insight into the experience that might occur if the extensive traffic controls and exit routes were not used for the postgame period. Although the 11 a.m. game crowd was less than 98,000, the lack of typical traffic control meant that the after-halftime congestion was as high as most games and lasted much longer than even the largest games.

Exhibit 13. 2022 Gameday Postgame Congestion – Miami and SEC Games



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

Exhibit 14. 2022 Gameday Postgame Congestion – Smaller Games

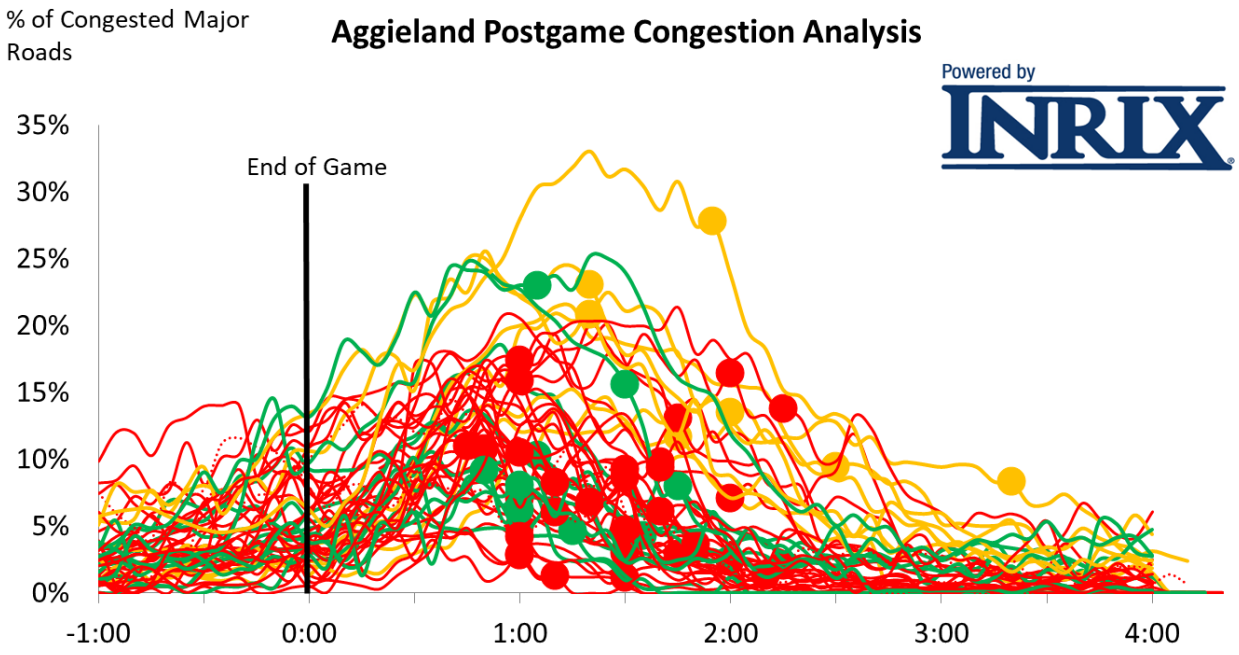


Note: Dot indicates when traffic control began to be removed by City of College Station (goal is within 2 hours of game end.

Trends in postgame congestion are illustrated in Exhibit 15, with the same color scheme as Exhibit 12 – green for morning games, gold for mid-afternoon and red for evening games (dotted lines are Thursday night games). The 2013 Alabama postgame congestion was also included for comparison.

- With morning games more often being large Aggie victories, there are more green lines that show early postgame congestion.
- Likewise, the mid-afternoon games are usually big games against significant opponents and the congestion levels are more often higher than the other two groups.
- There are few games where traffic control begins to be removed after two hours postgame. The largest outlier is the 2013 Alabama game with traffic control removed at 3:20 postgame.
- Congestion in most games does not begin to increase until after the end of the game, and in most cases it climbs rapidly as vehicles are able to leave parking lots and use city streets.
- In most games, congestion reaches a peak and then begin to drop – there are very few games with long congestion "plateaus" that would suggest extended congestion problems.

Exhibit 15. Postgame Traffic Congestion Since 2014



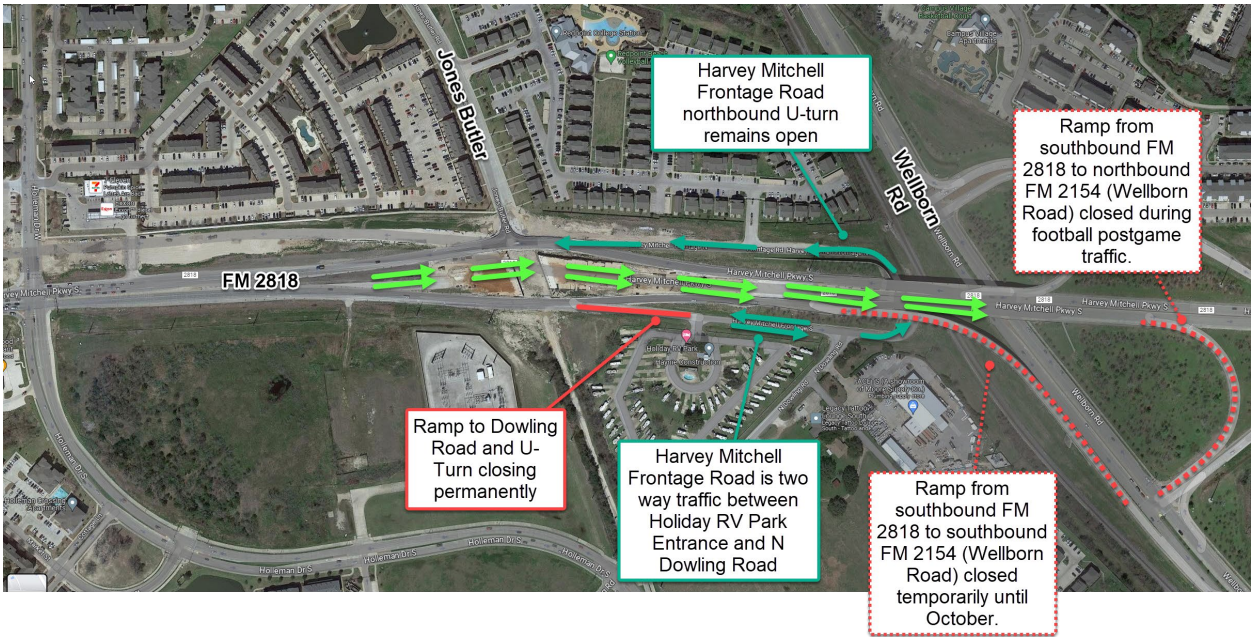
Note: Dot indicates when traffic control began to be removed by City of College Station (goal is within 2 hours of game end.

Changes for the 2023 Kyle Field Transportation Plan

Large road construction projects and new on-campus building construction will challenge the transportation plan and football fans in the next few years. For the 2023 football season, FM 2818 and the new Aplin Center on H Lot 61 will create new travel paths and alter the capacity for pregame and postgame traffic. The strategies below were developed during post-season reviews, construction phasing update meetings and discussions with partners that either address problems or use opportunities to improve safety and reduce traffic congestion.

- The FM 2818 project will change the roadways open to traffic, and also reduce the capacity on the available routes. Early in the Fall, there will be no direct access from eastbound FM 2818 to southbound Wellborn while the overpass is rebuilt (Exhibit 16).
    - There will be more effort to provide several route options for the west campus parking lots. These may include greater publicity around the go-north-to-go-south routes that use University or Villa Maria to get to Highway 6 and then south.
    - Traffic staff will open more routes for west campus parking lots to get to Wellborn Road during the postgame period. This will mean more rapid traffic adjustments and more careful monitoring of pedestrian travel and traffic congestion patterns.
    - It is likely that the traffic that would like to use the southbound Wellborn Road exit ramp will find many alternate paths including Holleman South, several streets through the Southwood Valley subdivision and possibly Texas Avenue and Highway 6.
    - There may be opportunities for TxDOT and the contractor to open roads sooner, but the project is already several months behind schedule.

Exhibit 16. FM 2818 Traffic Flows at Wellborn Road



- The new Aplin Center will be built on H Lot 61, requiring those vehicles to be parked elsewhere. This lot also has many vehicles who use Wellborn Road during the postgame period; eliminating the H Lot 61 spaces will likely allow more west campus parking lot exit paths to use the Wellborn Road capacity.
- Postgame traffic control on the Texas Avenue side of campus was altered in 2022 to reduce the “cut-through” traffic between University Drive and George Bush Drive. The traffic signal timing, traffic routes and deployment times for campus and city streets will continue to be adjusted in 2023.

Addressing the Traffic Problems Caused by the FM 2818 Construction

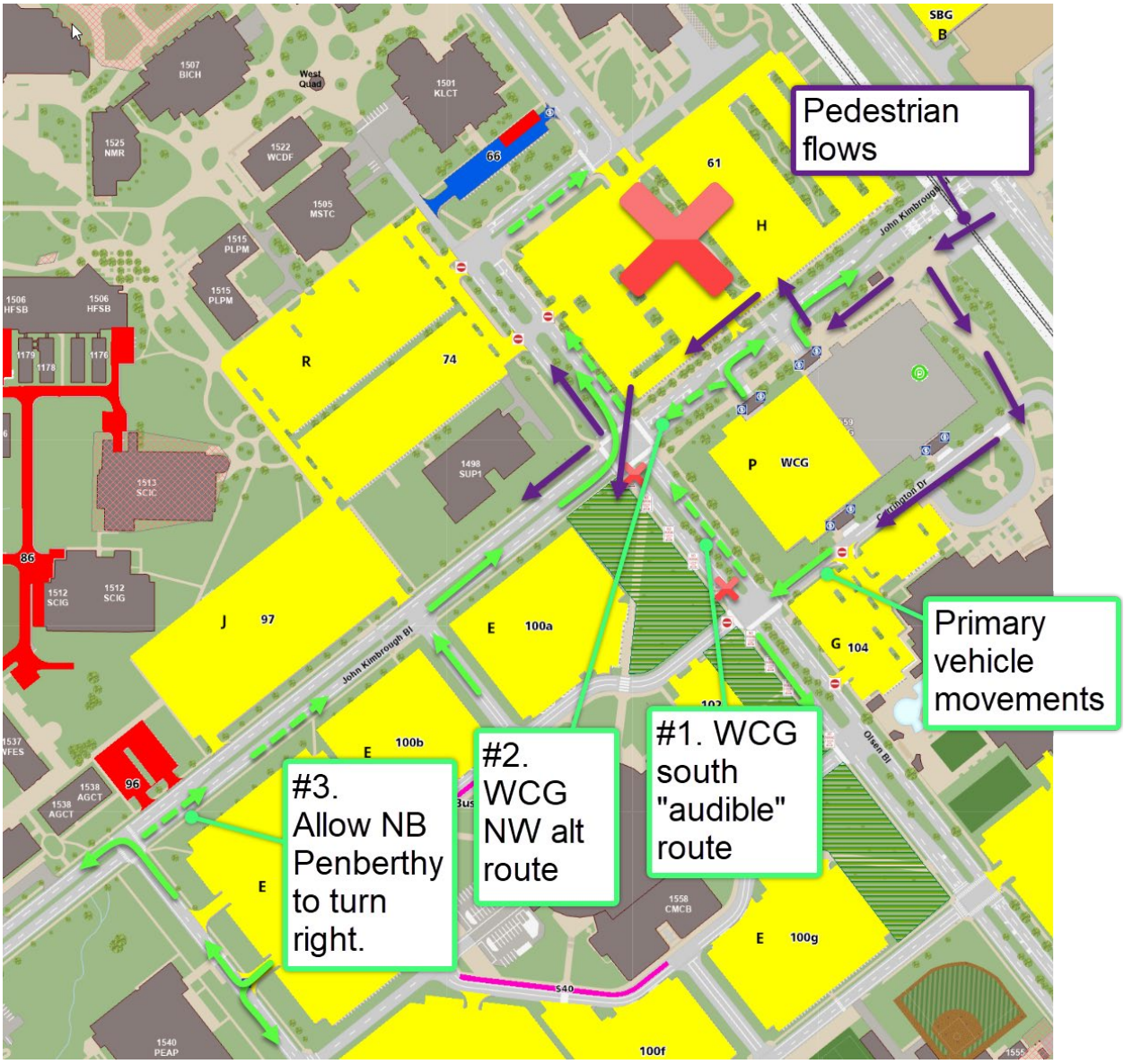
To improve the event operations and reduce the amount of neighborhood cut-through traffic, several strategies will be used to route more of the FM 2818 traffic to the Wellborn Road contraflow. Some of these strategies, shown in Exhibit 17 and detailed below, can be implemented from the start of postgame traffic and it may be more appropriate to begin others after some other key actions have occurred.

1. West campus vehicle traffic flow modifications - Once pedestrian traffic crossing Olsen Blvd between Corrington and Kimbrough declines a variety of vehicle traffic paths can be opened. Traffic from the south side of West Campus Garage is allowed to go north on Olsen to Old Main rather than south on Olsen Boulevard to George Bush Drive and then west to FM 2818. This could potentially be implemented sooner to help reduce FM 2818 vehicle traffic volume.

2. West Campus Garage northwest driveway – Vehicles can be allowed to exit the northwest driveway of the West Campus Garage and go west in the eastbound lanes to Olsen Blvd and then north to Old Main to access Wellborn Road. This would provide two different traffic paths from the north side of West Campus Garage (the other turns traffic from the northeast driveway east on Kimbrough towards Wellborn Road). This would take advantage of the additional street capacity freed up by the closure of H Lot 61 (about 850 vehicles) and extra queue space to get to Wellborn Road. This could result in fewer vehicles going out of the south side of the garage towards George Bush Drive.

3. More options for E Lot 100c – All of the Lot 100c traffic can be sent north on Penberthy and be given the option to turn left towards Discovery and Stotzer Parkway or right towards Olsen and the Wellborn Road contraflow lanes. When pedestrian traffic declines and E Lots 100a and b vehicle flows start to lighten, the E Lot 100c traffic can also be allowed to travel toward Wellborn Road. Previous traffic plans had northbound Penberthy traffic turn west and use the Discovery Drive contraflow lane to Stotzer Parkway. Much of this traffic eventually goes south on FM 2818 mixing with other west campus traffic flow from George Bush Drive. Giving traffic the option to turn east on Kimbrough from Penberthy will reduce the demand on FM 2818.

Exhibit 17. West Campus Alternate Traffic Flows



Appendix - The Revised Kyle Field Transportation Plan

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

- 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 was incorporated into the Texas A&M Mobile app. The information is also linked to the 12thman.com gameday website so the same consolidated information is presented. The app has year-round transportation and parking information 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 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, free off-campus parking spaces and all on-campus parking areas. Routes were designed to avoid most of the usual congestion spots, and the vehicle and pedestrian 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 from George Bush Drive to Southwest Parkway are used in the southbound direction. Turns from Wellborn Road are prohibited in that section and about 85% of the 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 is closed to outbound traffic, and 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 during the postgame period: Approximately 3/4s of the green time at intersections east of Texas Avenue is dedicated to Kyle Field exiting traffic toward Highway 6.
- Park-and-ride bus service: The specific locations and routes have changed over the years, but the commitment to providing a free parking option and a close-to-Kyle drop-off location has been maintained. The service to downtown Bryan supported by the merchants and the city began in 2015 and has seen increased ridership every year.
- Ample parking and on-campus shuttle service: All of the 27,000 on-campus gameday parking spaces are served by a bus route that stops near Kyle Field.
- Using simple directions to improve pedestrian safety, reduce traffic conflicts and creating 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 Boulevard/Research Parkway are generally routed north to Stotzer Parkway and lots to the south are generally 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 Boulevard/Research Parkway is used to provide congestion-free bus service.
- Better communication with fans. The Destination Aggieland component of the Texas A&M mobile app and the gameday.12thman.com 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 gamedays. The TexAgs channel was particularly useful in 2014 and 2015 when the plans were being refined, 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 to provide fans and stakeholders with an overview of the performance of the plan. This site also contains all evaluation reports from past seasons.