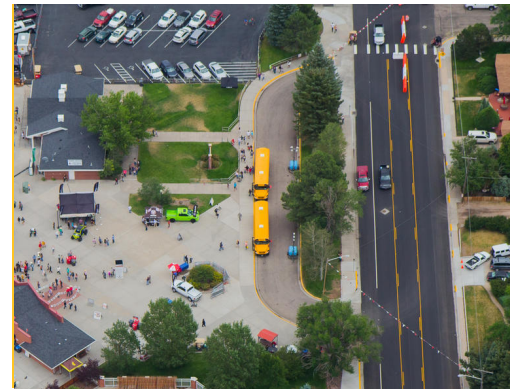


Cheyenne Frontier Days Traffic Study & Transportation Plan



Prepared for:
Cheyenne Metropolitan
Planning Organization



December 20, 2017

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AYRES
ASSOCIATES

Cheyenne Frontier Days

Traffic Study & Transportation Plan

Prepared for:

**Cheyenne Metropolitan Planning Organization (MPO)
Cheyenne Frontier Days**

December 20, 2017

Cheyenne Frontier Days Traffic Study & Transportation Plan



"The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation."



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RESOLUTION NO. 5900

ENTITLED: "A RESOLUTION ACKNOWLEDGING RECEIPT OF THE *CHEYENNE FRONTIER DAYS TRAFFIC STUDY AND TRANSPORTATION PLAN.*"

WHEREAS, Cheyenne Frontier Days (CFD) annually hosts as many as 266,000 guests including rodeo participants, staff and 2,500 volunteers during the ten-day event held the last full week of July; and

WHEREAS, daily ticket sales for the rodeo, night show and gate sales can exceed 40,000 people; and

WHEREAS, CFD events are held in Frontier Park, an 83-acre city/county owned property surrounded by I-25, Lions Park and the "Avenues" neighborhood; and

WHEREAS, traffic to and from Frontier Park is mainly accommodated by on-site parking, parking in the "Avenues" neighborhood, Park N Ride operations and other methods where there are many conflicts between the different transportation modes and users in numerous areas in and around Frontier Park; and

WHEREAS, the CFD Directors asked the Cheyenne MPO Policy Committee for assistance to help them obtain profession traffic engineering and transportation planning assistance to help identify and resolve their growing transportation conflicts; and

WHEREAS, CFD desired to find short-term solutions which could be implemented during the 2018 CFD event plus long-term solutions which could be implemented in the long-term with CFD's Master Plan; and

WHEREAS, the MPO retained the consultant group, Ayres Associates, to produce the *Cheyenne Frontier Days Traffic Study and Transportation Plan*, to collect data, study and provide recommendations for all traffic to and from Frontier Park; and

WHEREAS, the *Cheyenne Frontier Days Traffic Study and Transportation Plan* was developed and guided with a Steering Committee made up of experts from CFD, Laramie County School District #1, the Cheyenne Police Department, Cheyenne Public Works, Cheyenne Transit Program, Wyoming Department of Transportation and the MPO; and

WHEREAS, the goals developed for the *Cheyenne Frontier Days Traffic Study and Transportation Plan*, included resolving conflicts between traffic, pedestrians and Park N Ride buses, improving key intersection traffic operations, reducing the amount of time CPD and volunteers are standing in the street directing traffic, increase overall transportation safety and maximizing Park N Ride operations; and

WHEREAS, the *Cheyenne Frontier Days Traffic Study and Transportation Plan*, was presented to the public at an open house on November 1, 2017 and during a public meeting at the City Planning Commission on November 20, 2017 where the Planning Commission then recommended that the Governing Body of the City of Cheyenne approve the *Cheyenne*

Frontier Days Traffic Study and Transportation Plan; and

WHEREAS, the MPO Citizens' Advisory Committee and MPO Technical Committee both reviewed the *Cheyenne Frontier Days Traffic Study and Transportation Plan* and recommended its approval to the MPO Policy Committee; and

WHEREAS, the Cheyenne Police Department, Street and Alley, Cheyenne Transit Program, Laramie County School District #1, WYDOT and CFD will begin coordination to implement the appropriate recommendations as time and funding allows for the 2018 and subsequent Cheyenne Frontier Days events to effectively and safely manage the traffic to and from Frontier Park.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF CHEYENNE, WYOMING:

THAT, the *Cheyenne Frontier Days Traffic Study and Transportation Plan* dated October 31, 2017, is hereby acknowledged and received by the Governing Body as a guide to implement the short- and long-term recommendations in coordination with Cheyenne Frontier Days to effectively and safely manage the traffic to and from Frontier Park during the 10-day celebration.

PRESENTED, READ, AND ADOPTED THIS 20th DAY OF December, 2017.



Marian J. Orr, Mayor
City of Cheyenne

(Seal)

ATTEST:



Carol Intlekofer, City Clerk

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Steering Committee Members:

Cheyenne Frontier Days:

- Bill Berg
- Tom Hersig
- Buck Reisner
- Ron Newnum

Wyoming Dept. of Transportation

- Joel Meena
- Jeff Mellor
- Mark Wingate

Laramie County School District #1

- Merle Smith
- Nancy Nelson
- Jim Rudell
- Stephanie Ashworth
- Wesley Fuller

City of Cheyenne

- Nathan Beauheim

Cheyenne Police Department

- Lt. Howard Smith
- Sgt. John Gay

Cheyenne Transit Program

- Renae Jording

City Council

- Scott Roybal

Cheyenne MPO

- Tom Mason, Director
- James Sims

Executive Summary

Cheyenne Frontier Days (CFD) annually hosts as many as 266,000 guests including rodeo participants, carnival staff and 2,500 volunteers during the ten-day event held the last full week of July. Daily ticket sales for the rodeo, night show and gate sales can exceed 40,000 people providing an estimated impact of \$28 million on the Cheyenne economy. A major event of this magnitude puts pressure on the surrounding transportation system and parking facilities around Frontier Park, and intersections leading from the Interstate highway system to Frontier Park.

The Cheyenne Metropolitan Planning Organization and Cheyenne Frontier Days retained Ayres Associates to conduct a comprehensive transportation/parking study for the Cheyenne Frontier Day celebration. The study included observation and assessment of existing transportation services, parking, and overall operation. The transportation plan distills these observations into recommendations for short and long-term enhancements designed to increase safety, and improve transportation efficiency issues related to the event, and better achieve the goals of CFD.

Goals

The study Steering Committee agreed to the following transportation system improvement goals:

- Resolve 8th Avenue traffic/pedestrian conflict: Separate pedestrian, bus and traffic conflicts
- Improve key intersection traffic operation
- Reduce amount of time Cheyenne Police Department officers and Cheyenne Frontier Days volunteers are in the roadway directing traffic
- Increase overall transportation safety
- Maximize 'Park N Ride' bus operation

Process

The study process included the following different information sources:

- Steering committee meetings
- One on one interviews
- Field observations during the 2017 event
- Traffic and pedestrian counts at 15 intersections
- Aerial imagery
- Public information meeting

Key Traffic Observations

The following summarizes Ayres Associates field observations and transportation data collected during the 2017 Cheyenne Frontier Days event:

- The highest traffic volumes occurred on Wednesdays at the majority of the study intersections with only the 8th Avenue intersections with Dey Avenue and Carey Avenue experiencing significantly higher Saturday volume levels.

- The highest traffic volumes occurred at the Central Avenue intersection with Yellowstone Road (34,408 vehicles) with the next highest traffic volumes occurring at the Central Avenue intersections with 8th Avenue (22,737) and with Kennedy Road (19,440). Similar traffic pressure was counted at the Pershing Boulevard intersections with Hynds Boulevard/Randall Avenue (16,772) and Snyder Avenue (15,448) intersections.
- High intersection pedestrian activity was counted at the 8th Avenue intersections with Dey Avenue (19,527 on Wednesday and 24,126 on Saturday), Carey Avenue (17,386 – Wednesday and 18,496 - Saturday), and Snyder Avenue (4,369 - Wednesday and 3,965 – Saturday, crossing 8th and south leg of Snyder) along with the Carey Avenue intersection of Lions Park Drive - the park entrance leading to the Cheyenne Botanic Gardens.

Key Operational Observations

The following summarizes key transportation system analysis observations:

- High pedestrian / vehicle conflicts along 8th Avenue
- ‘Park N Ride’ loading / unloading area is not large enough to accommodate the number of patrons wishing to use the service. Location creates conflicts with Main Gate crowds
- Cheyenne Police Department officers and Cheyenne Frontier Days volunteers are in the roadway directing traffic at multiple times during the event, often in roadways with minimal street lighting
- At peak CFD activity times traffic congestion occurs at several key intersections including:
 - Pershing Boulevard / Randall Avenue / Hynds Boulevard
 - Pershing Boulevard / Snyder Avenue
 - 8th Avenue / Carey Avenue
 - Kennedy Road / Central Avenue
- At peak times traffic backs up onto northbound Interstate-25 from the northbound off-ramp at Randall Avenue / Pershing Boulevard
- ‘Park N Ride’ Bull Lot configuration creates pedestrian/vehicle safety conflicts
- Effective communication among key stakeholders before, after and during CFD is imperative to the success of the event and to discuss post-event ‘lessons learned.’
- Cheyenne Frontier Days smart phone app does not provide real-time alerts to users about traffic conditions or parking lot availability.

Key Short-Term Recommendations

Based on study analysis, the following short-term transportation system and parking recommendations have been developed:

- A. Temporarily close the segment of 8th Avenue to westbound traffic between Dey Avenue and Hynds Boulevard. 8th Avenue will remain open for a single lane of eastbound traffic.
- B. Relocate ‘Park N Ride’ passenger loading / unloading area. Short-term recommendation is to move this area west of its current location along 8th Avenue and to create a wider sidewalk and space for passenger boarding as patrons approach to board buses.
- C. ‘Park N Ride’ buses leave Frontier Park by travelling north on Hynds Boulevard to Kennedy Road and Central Avenue to access Interstate-25 at the Central Avenue interchange.
- D. Hynds Boulevard should be converted permanently to a one-way northbound street between Randall Avenue / Pershing Boulevard and 8th Avenue. During CFD, the segment of Hynds

Boulevard should be temporarily operated as one-way northbound from 8th Avenue to Gate V12 with temporary signing on Kennedy Avenue that states 'Access Restricted to Cheyenne Country Club and CFD authorized Gate 12 pass holders'.

- E. Install portable temporary traffic signals, with pedestrian indication signal heads, at the 8th Avenue intersection with Carey Avenue and the Kennedy Road intersection with Central Avenue.
- F. Provide temporary street lighting, particularly at the intersections of 8th Avenue with Carey Avenue and with Dey Avenue.
- G. Allow Cheyenne Police Department officers to utilize manual traffic signal control equipment at the Pershing Boulevard/Randall Avenue/Hynds Boulevard and the Pershing Boulevard/Snyder Avenue Intersections. (The Pershing Boulevard signals at Randall Avenue/Hynds Boulevard are planned to be upgraded prior to the 2018 Cheyenne Frontier Days event while the Pershing Boulevard signals at Snyder Avenue will require City of Cheyenne action; upgrades will allow for push-button officer control.)
- H. During each Cheyenne Frontier Days event, increase the Interstate-25 northbound off-ramp green time at Pershing Boulevard during peak hours: 5:00 p.m. – 8:00 p.m. and 11:00 p.m. to 1:00 a.m. This adjustment will need to be made annually during the event.
- I. Reconfigure the 'Park N Ride' Bull Lot operation so that pedestrians do not have to walk in front of buses. Provide a dedicated pathway area for pedestrians as they approach and leave the bus pick-up/drop-off area.
- J. Conduct annual CFD kick-off and debriefing meetings with City of Cheyenne Traffic Engineering, Cheyenne Police Department, Cheyenne Frontier Days staff/volunteers, Wyoming Department of Transportation, Cheyenne Transit Program, and Laramie County School District Number 1 transit representatives.
- K. Create a full-time staffed Traffic Control Communications Center within Frontier Park for communications of real time traffic/pedestrian control and parking availability information to Cheyenne Police Department, Cheyenne Frontier Days, City Engineering and Traffic, Wyoming Department of Transportation and Cheyenne Transit Programs.
 - i. Utilize the Traffic Control Communications Center to ensure that updates to dynamic message signs are made accurately and timely.
 - ii. Utilize the Traffic Control Communications Center to ensure that traffic controls which change throughout the day to accommodate ingress and egress traffic is in place and removed consistently and according to plan each day of the event.
- L. Utilize the Cheyenne Frontier Day smart phone app for traffic conditions and control updates to provide alerts to CFD patrons. Add a parking option and/or 'Park N Ride'/Cowboy Triangle Maps to the 'Maps' tab on the app.
- M. Close Randall Avenue to westbound traffic between Pershing Boulevard and McComb Avenue with CPD squad cars during CFD evening show egress times to improve Pershing Boulevard traffic operation. A variable message sign located at Snyder Avenue and Pershing Boulevard is recommended to encourage westbound Randall Avenue traffic to use Snyder Avenue to access Pershing Boulevard.

Key Long-Term Recommendations

In addition to the above short-term improvement recommendations a set of longer term recommendations are summarized below:

- A. Construct a permanent relocated 'Park N Ride' bus passenger drop-off/pick-up area accessed from Hynds Boulevard that involves relocation of the Buckin' A Saloon tent within Frontier Park and an enhanced bus access road between the carnival area and carnival parking lot that allows buses to exit Frontier Park via Gate V12 to proceed north on Hynds Boulevard. (This is a change from the CFD Master Plan).
- B. Widen Kennedy Road to maintain a westbound Frontier Park access lane for emergency responders and accommodate an eastbound 'Park N Ride' bus express lane. Kennedy Road should be widened between Central Avenue and Martin Esquibel Drive to match the roadway width between Carey Avenue and Martin Esquibel Drive.
- C. Upgrade and/or install LED street lighting around Frontier Park, particularly along 8th Avenue, Carey Avenue and Hynds Boulevard.
- D. Identify and pave a permanent 'Park N Ride' lot to replace the Bull Lot. Stripe the parking spaces and internal circulation system in this lot to maximize parking efficiency.

Conclusions

In summary, this study evaluated traffic and pedestrian count data, intersection traffic operating conditions, existing transit operation and key stakeholder concerns and operational practices, and observations of existing transportation system performance to develop a set of short and long-term transportation improvement recommendations. The most important recommendation improvements are focused on separating pedestrian and traffic conflicts at the Main Gate to Frontier Park, reducing patron traffic delays at the start and end of the major rodeo and evening shows, and enhancing Park and Ride service.

Communication before, during and after CFD was identified as critical to operation of the transportation services for CFD. Two key recommendations involve development of a CFD kick-off meeting with all stakeholders such as transit service providers, city and WYDOT engineering, police and CFD to finalize event operating details and routes along with a follow-up debriefing meeting a week after the completion of CFD with the second key recommendation involves development of a central on-site transportation control center where all stakeholder managers can communicate real-time transportation control changes and react to changing conditions and problems.

The longer-term recommendation related to the CFD Master Plan moves the planned 'Park N Ride' passenger drop-off/pick-up area from Carey Avenue to a new location accessed from Hynds Boulevard. This change is considered to minimize traffic congestion and safety conflicts along Carey Avenue to maximize 'Park N Ride' bus operation.

Many of the recommendations can be undertaken in time for the 2018 Frontier Days event while other recommendations involve funding considerations and construction plan development such as widening Kennedy Road, constructing sidewalk around the perimeter of Frontier Park and installing upgraded LED street lighting improvements particularly along the 8th Avenue and Carey Avenue corridors. A series of potential new 'Park N Ride' lot sites have been evaluated and provided to CFD officials for use as they consider the potential relocation of the Bull parking lot.

About Cheyenne Frontier Days

Cheyenne Frontier Days (CFD) began as a small rodeo competition in 1897 and has grown into the largest outdoor rodeo in the United States. The main portion of the event is a 10-day stretch over the last two weekends in July each year. Activities include parades (Saturday, Tuesday, Thursday, Saturday), pancake breakfasts (Monday, Wednesday, Friday), a carnival at Frontier Park, an Indian Village, Old Frontier Town vendors area, a Chuckwagon cookoff, rodeo events daily, and concerts or large events in the grandstands nearly every night. Cheyenne Frontier Days draws visitors from all over the world. With all this activity is no wonder it's called "The Daddy of 'Em All!" It is said that the grounds at Frontier Park are the second largest city in the state of Wyoming during a sold-out night show. While Frontier Park is only 83 acres, the impacts of the visitors to CFD are felt all around Cheyenne with the additional traffic on the roads in and around town.

The Cheyenne Frontier Days website indicates that there are 2,500 volunteers who work year-round to ensure the Show is a success each year. During the event, City staff including Cheyenne Police Department and Cheyenne Transit Program is used extensively, as well as additional employees contracted with for the ten-day event including Laramie County School Districts 1 and 2 and security staff at pay to park parking lots. Similarly, WYDOT prepares and installs temporary signage along Interstates 80 and 25 and updated the dynamic message boards that direct vehicular traffic to available CFD parking areas.

Per the CFD Box Office Manager, the seating capacity for a rodeo is approximately 15,000. The standing room only area for the evening night shows has a maximum capacity of approximately 12,200 people. Evening night shows only utilize the west stands for seating, along with the standing room only area, which results in a maximum event crowd of 25,000 people.

Cheyenne Frontier Days periodically completes an economic impact study to quantify the economic benefits generated from visitors outside of Laramie County and the City of Cheyenne and Laramie County. According to this study, completed by Dean Runyan Associates, of Portland, Oregon, the economic impacts resulting from direct visitor spending surrounding the 2015 event totaled approximately \$28 million, which is up from \$25 million in 2012.

Cheyenne Frontier Days, 2017

Study Area

The study encompasses not only the Frontier Park area, but also key intersections, routes, and outlying areas affected by the traffic and transportation operations during the events.



Figure 1: Overview Map of Western Cheyenne

Existing Conditions, 2017

Events at CFD follow generally the same schedule each year: pancake breakfasts on Monday, Wednesday and Friday; parades on Saturday, Tuesday, Thursday, Saturday; Air Guard open house and Thunderbirds air show on Wednesday; Fort D.A. Russell Days on the first weekend; PRCA rodeo daily; and daily evening concerts and events just to name a few. According to *The Hooey*, the Official Newsletter of Cheyenne Frontier Days, September 2017 issue, the combined attendance at all CFD events in 2017 was over 520,000. This equates to an estimated 266,000 guests at the 2017 CFD event.

Table 1: CFD Event Start Times

EVENT	START TIME
Pancake Breakfast	7:00 a.m.
Grand Parade	9:00 a.m.
Carnival / Midway	Opens at 10:30 a.m.
Indian Village	Opens at 10:30 a.m.
Old Frontier Town and the Western Experience	Opens at 10:00 a.m.
Rodeo Grand Entry	12:15 p.m.
Frontier Nights Concert / Event	8:00 p.m.

Quantifying the number of people at Frontier Park is difficult in that not every person at the Park must purchase an entry ticket. The Park offers many attractions which do not require a ticket such as The Western Experience, Indian Village, and Old Frontier Town. Other people at the Park include vendors, carnival employees, contestants and support staff. Additionally, it is estimated that there are approximately 230 CFD volunteers at the Park at any one time. While attendance at the events varies each year, a snapshot of event attendance is provided for 2017 – the study year.

- On Saturday July 29, 13,563 tickets were sold for the afternoon rodeo: the highest rodeo ticket sales for 2017.
- On Saturday July 22, 6,558 gate tickets were sold: the highest daily gate sales count for 2017.
- On Saturday July 29, 19,660 tickets were sold for the night show: the highest night show sales for 2017.

CFD provided ticket and gate sales counts from 2012 – 2017. This information is tabulated in Table 2. While 2017 had the highest ticket sales for the rodeo over the past five years, it did not have the highest ticket sales over the last five years for the night show or gate ticket sales. A comparison of the rodeo and night show attendance data indicates the 2017 traffic data and field observations were equal to or slightly higher than average attendance figures since 2012.

Table 2: CFD Attendance Record Data

Rodeo							
Day of Week	2017	2016	2015	2014	2013	2012	Average
Friday	3,144	4,278	3,800	3,684	--	--	
Saturday	11,933	11,736	13,923	11,588	11,187	12,496	
Sunday	8,146	8,146	7,977	8,905	7,514	7,677	
Monday	13,001	12,374	12,284	6,092	6,170	5,603	
Tuesday	6,107	6,007	5,864	5,489	5,276	5,320	
Wednesday	9,571	10,758	10,033	9,565	9,270	8,498	9,616
Thursday	8,188	7,193	7,839	7,717	8,420	6,656	
Friday	8,110	8,110	7,967	8,927	8,436	10,075	
Saturday	13,563	13,312	13,412	14,342	13,435	11,506	13,262
Sunday	12,419	12,419	11,636	13,385	12,883	11,903	
Total	94,182	94,182	93,238	98,392	87,310	83,413	

Night Show							
Day of Week	2017	2016	2015	2014	2013	2012	Average
Friday	9,524	16,617	18,438	8,239	11,777	20,690	
Saturday	12,830	13,270	15,310	19,302	11,451	17,457	
Sunday	10,593	12,277	12,167	10,114	11,405	8,331	
Monday	5,673	5,802	5,109	5,327	4,676	4,964	
Tuesday	7,596	7,526	6,845	6,559	5,988	6,051	
Wednesday	18,561	18,093	19,197	17,870	20,052	11,519	17,549
Thursday	14,174	8,422	11,886	10,716	14,393	16,399	
Friday	8,834	11,105	16,856	14,604	25,000	8,639	
Saturday	19,660	25,011	23,221	16,890	15,472	17,505	19,738
Sunday	--	--	--	--	--	--	
Total	107,445	118,123	129,029	109,621	120,214	111,555	

Total							
Day of Week	2017	2016	2015	2014	2013	2012	Average
Friday	17,708	23,858	25,865	15,262	15,878	24,750	
Saturday	31,321	31,054	40,172	33,079	27,939	35,221	
Sunday	24,223	24,727	23,765	23,973	23,884	20,901	
Monday	21,260	21,053	20,706	14,397	13,805	14,107	
Tuesday	15,959	16,359	14,831	15,694	14,524	14,377	
Wednesday	34,566	36,641	37,784	36,679	36,271	29,692	35,413
Thursday	25,772	18,773	22,776	23,717	27,266	27,739	
Friday	21,223	23,262	28,578	30,422	40,005	20,657	
Saturday	38,286	44,799	37,383	44,886	35,792	36,258	39,823
Sunday	17,074	12,965	14,715	14,499	13,130	12,753	
Total	247,392	253,491	266,575	252,608	248,494	236,455	

Traffic Data

In order to analyze existing transportation system operation and identify improvements it is necessary to collect traffic and pedestrian count data at key intersections impacted by Cheyenne Frontier Days patrons. Traffic counts were collected of vehicular traffic, pedestrian and bicycle volumes at the 10 study area intersections identified on Figure 2. Traffic counts were collected from 11 a.m. to 1 a.m. on Wednesday, July 26 and Saturday, July 29. The exception to these counting times were: counts at the intersection of CFD Gate V7 (the exit to parking lot C off of Carey Avenue) were taken from 3 p.m. to 1 a.m. and counts at the intersection of CFD Gate V8 (the entrance to parking lot C off of Carey Avenue) were taken from 11 a.m. to 7 p.m. Traffic count data collected by Ayres was supplemented with traffic counts at 5 additional intersections, shown on Figure 3, that were collected by WYDOT from 8 a.m. to 1 a.m. on Saturday July 22, Wednesday, July 26, Friday July 28 and Saturday July 29.

Table 3 summarizes the total number of vehicles and pedestrians that entered each study intersection.

Table 3: 14-Hour Total Intersection Combined Entering Traffic / Pedestrian Volumes

Intersection	11 am to 1 am Wed. July 26 Total	11 am to 1 am Sat. Jul 29 Total
Dey & 8th Ave	28,091	33,518
Hynds & 8th Ave	8,041	8,831
Pershing & Snyder	15,448	14,046
Snyder & 8th Ave	13,656	13,623
Carey & Kennedy	9,180	10,129
Central & Kennedy	19,440	18,916
Carey & Gate V7 EXIT ONLY (3 PM to 1 AM)	4,465	4,967
Carey & Gate V8 ENTER ONLY (11 AM to 7 PM)	4,246	4,563
Carey & 8th Ave	29,387	31,338
Central & 8th Ave	22,737	20,369
Warren & 8th	20,206	17,002
I-25 NB Ramp & Central	19,066	13,937
I-25 SB Ramp & Central	13,072	13,535*
Central & Yellowstone	34,408	30,899
I-25 NB Ramp/Pershing & Randall	16,722	16,355

*Fri, July 28



Figure 2: Traffic Count Location Map - Ayres Associates

CFD TRAFFIC STUDY & TRANSPORTATION PLAN



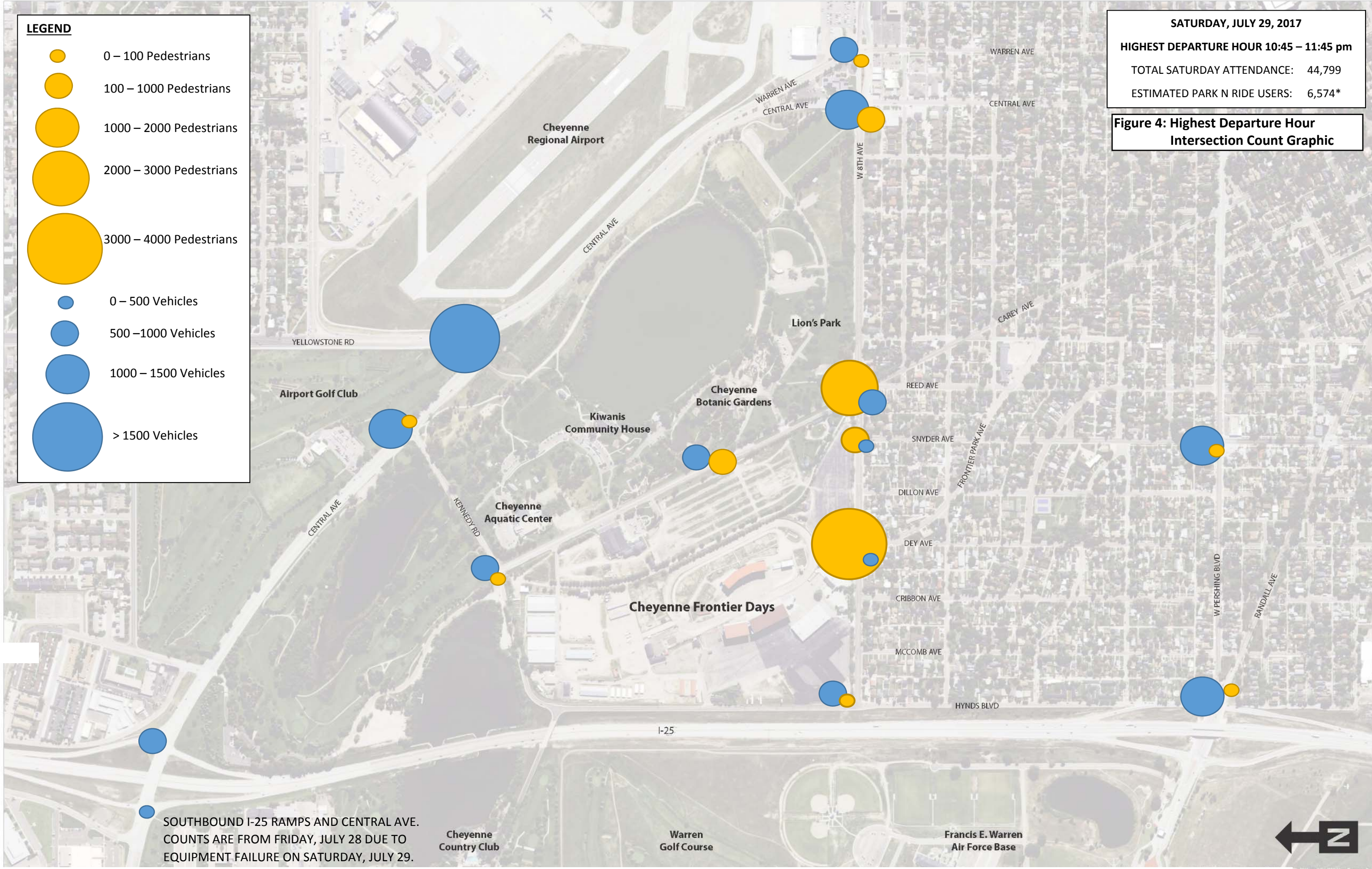
Figure 3: Traffic Count Location Map - WYDOT

Figure 4 depicts the total number of vehicles and pedestrians that entered each of the study intersections from the data shown in Table 3. As shown on Figure 4, the highest traffic volumes occurred on Wednesday at the majority of study intersections with only the 8th Avenue intersections at Dey Avenue and Carey Avenue experiencing significantly higher Saturday volume levels. The highest traffic volumes occurred at the Central Avenue intersection with Yellowstone Road (34,408) with the next highest traffic volumes occurring at the Central Avenue intersections with 8th Avenue (22,737) and with Kennedy Road (19,440). Similar traffic pressure was counted at the Pershing Boulevard intersections with Hynds Boulevard/Randall Avenue (16,772) and Snyder Avenue (15,448).

It is important to note from Figure 4 and Table 4, that high intersection pedestrian activity was counted at the 8th Avenue intersections with Dey Avenue (19,527 on Wednesday and 24,126 on Saturday), Carey Avenue (17,386 – Wednesday and 18,496 - Saturday), and Snyder Avenue (4,369 - Wednesday and 3,965 – Saturday, crossing 8th and south leg of Snyder) along with the Carey Avenue intersection of Lions Park Drive - the park entrance leading to the Cheyenne Botanic Gardens. From this intersection activity data, it is concluded that Central Avenue and Pershing Boulevard carry the highest traffic volumes and that the highest pedestrian volumes occur at the 8th Avenue intersections, particularly at the 8th Avenue intersections with Dey Avenue and Carey Avenue.

Table 4: 14-Hour Total Intersection Pedestrian Volumes

INTERSECTION	WEDNESDAY	SATURDAY
8 th Avenue & Dey Avenue	19,527	24,126
8 th Avenue & Carey Avenue	17,386	18,496
8 th Avenue & Snyder Avenue	4,369	3,965



* Park N Ride estimate is based on the assumption of 3 passengers per vehicle in the Bull Lot for each vehicle entering the Bull Lot after 3:00 p.m. on Saturday. Vehicles parked prior to 3:00 p.m. are not included in this count of 2,364.

Appendix A contains a series of graphs showing the 15-minute count distribution entering each of the study intersections. Several of the intersection graphs demonstrate high peaking volumes that occur between the 4:00 and 10:30 p.m. time periods such as at the 8th Avenue intersections with Dey Avenue, Figure 5, with a peak pedestrian activity reaching 601 pedestrians at 4:00 p.m. and 923 pedestrians at 10:30 p.m. Carey Avenue at 8th Avenue also demonstrates a high peak pedestrian activity approaching 945 pedestrians at 4:00 p.m. and 1,145 pedestrians at 10:30 p.m. as seen in Figure 6. Vehicular traffic at these two intersections is relatively constant throughout the day at about 200 vehicles per 15-minute time period at Dey Avenue and at 250 vehicles at Carey Avenue. In comparison, the Pershing Boulevard intersections demonstrate high vehicular traffic pressure at the 4:00 p.m. and 10:30 p.m. time periods, as seen in Figure 7 and Figure 8.

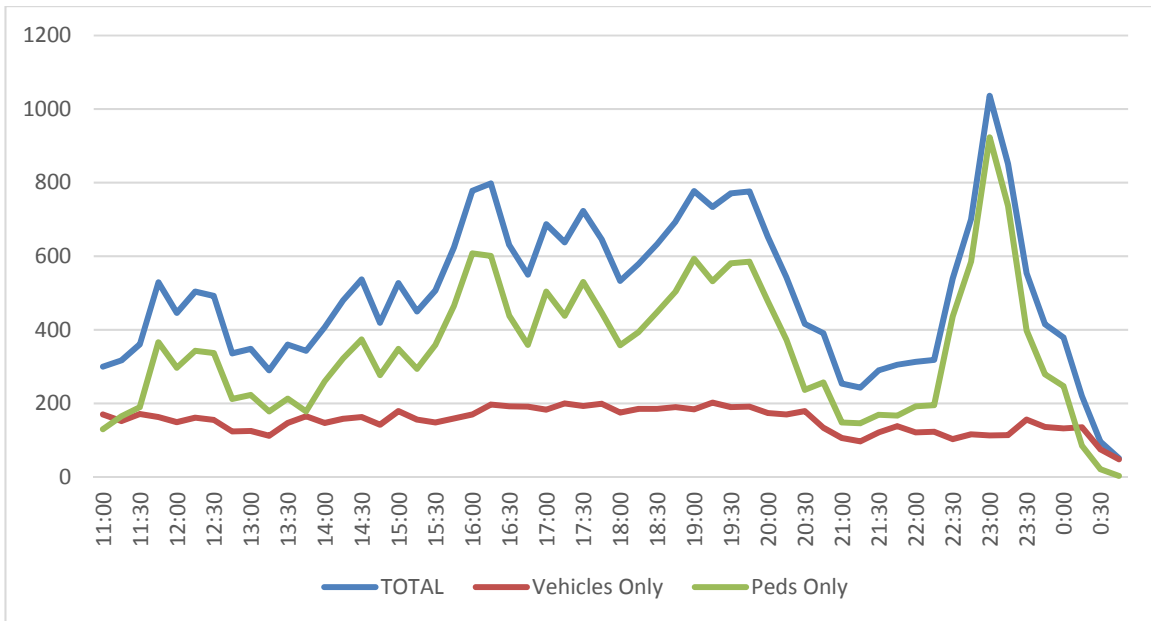


Figure 5: Dey & 8th Avenue Counts - Wednesday, July 26

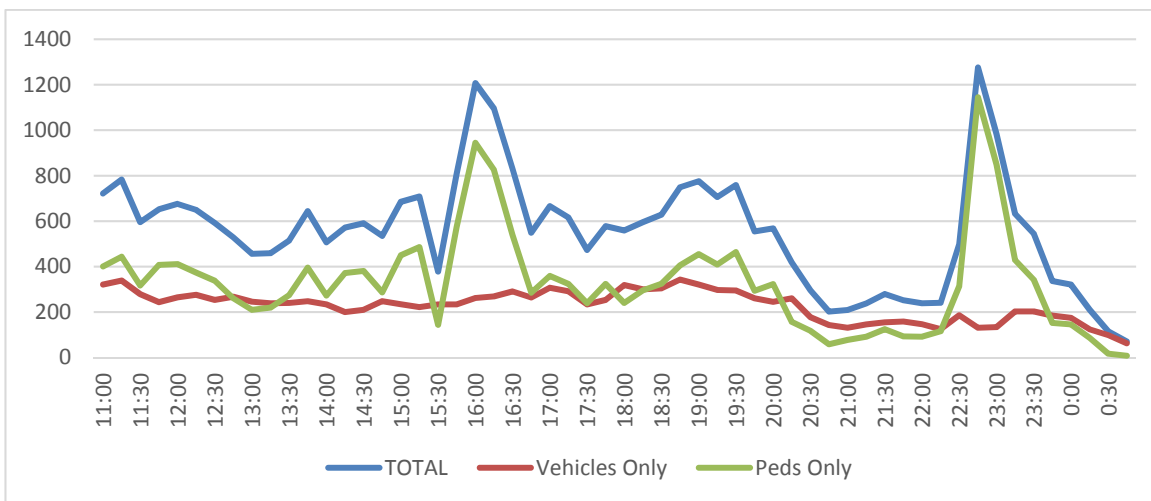


Figure 6: Carey and 8th Avenue Counts - Saturday, July 29

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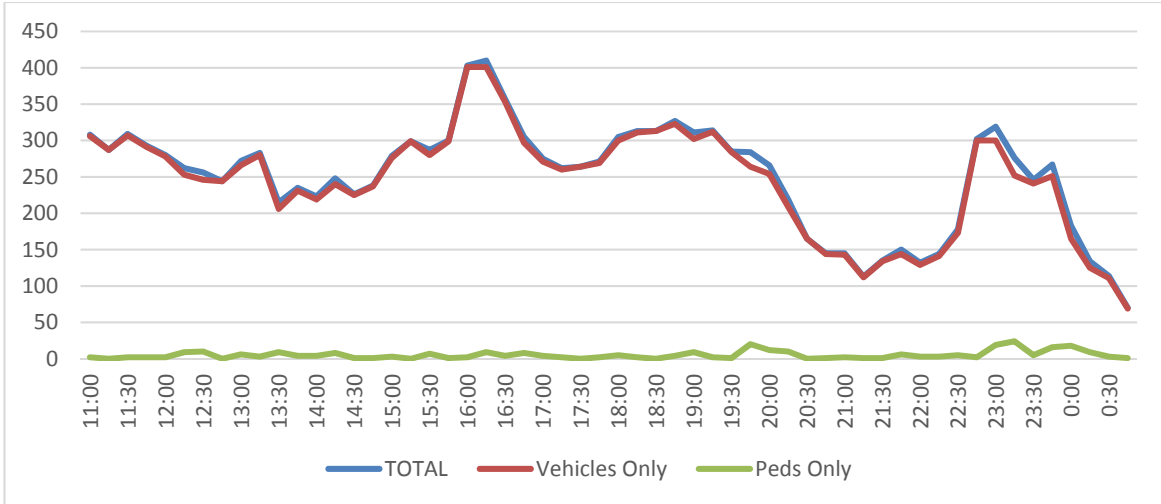


Figure 7: Pershing and Snyder Counts – Saturday, July 29

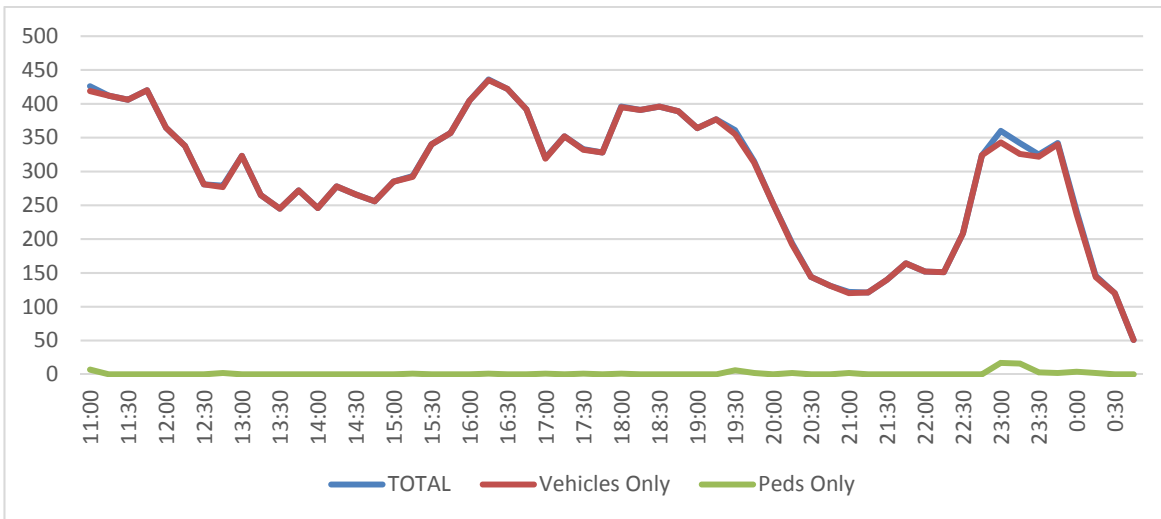


Figure 8: I-25 Northbound Ramp / Pershing /Randall & Hynds Counts – Saturday, July 29

Interestingly, the highest traffic activity intersection at Central Avenue and Yellowstone Road carries a constantly high volume of nearly 700 to 900 vehicles per 15-minute time period that slowly decreases after 4:00 p.m. without demonstrating a sharp 10:30 p.m. volume peak, as seen in Figure 9. The final 15-minute volume activity information provided by the graphs in Appendix A is that the 8th Avenue intersection with Warren Avenue steady decreases after 11:00 a.m. on Wednesday, July 26, see Figure 10. Traffic activity is relatively constant at the Kennedy Road intersections with both Central Avenue and Carey Avenue; approximately 400 and 250 vehicles per 15-minute time period, respectively, until 7:00 p.m. when volumes rapidly decrease until they sharply peak again at 11:00 p.m., see Figure 11.

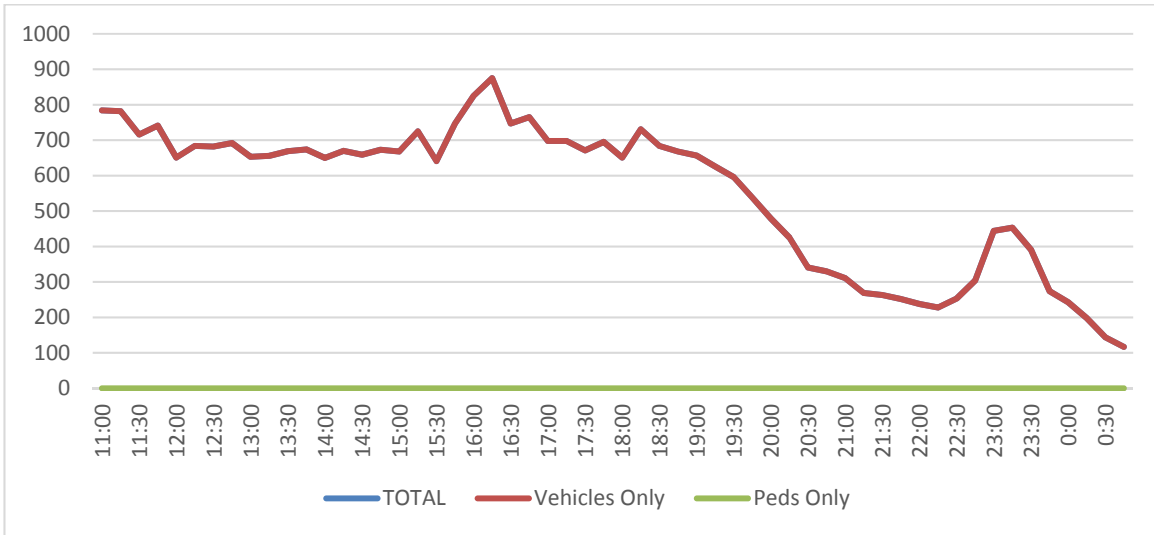


Figure 9: Central and Yellowstone Counts – Saturday, July 29

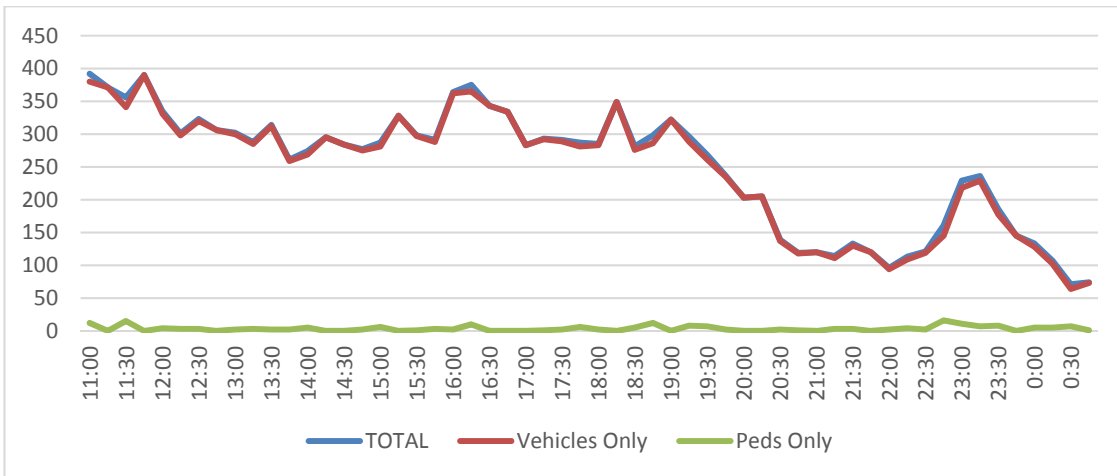


Figure 10: Warren and 8th Avenue Counts - Wednesday, July 26

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

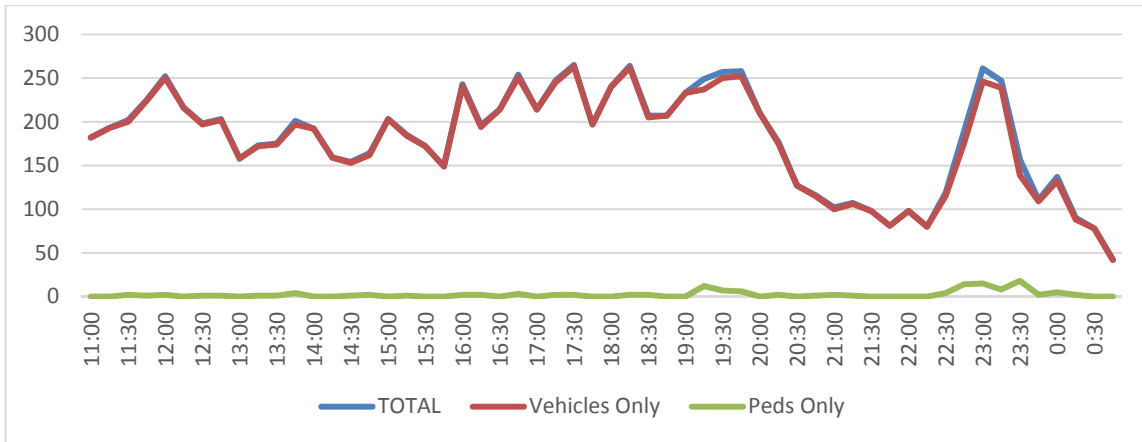


Figure 11: Carey and Kennedy Counts - Saturday, July 29

Some of the primary conclusions from the traffic and pedestrian count data collected at the study area intersections is that:

- 1) 8th Avenue experiences high pedestrian activity between Carey and Dey Avenues which peaks during the 4:00 p.m. and 10:30 p.m. time periods while experiencing low constant traffic demand throughout the day.
- 2) There are high traffic peaks at the Pershing Boulevard intersections with Snyder Avenue and the Hynds Boulevard/Randall Avenue at 4:00 p.m. and 10:30 p.m.
- 3) Traffic at the Kennedy Road intersections with the Carey Avenue and Central Avenue intersections is relatively constant throughout the day with high exiting traffic at 11:00 p.m.

Traffic Routing and Operations

Prior to the start of Frontier Days wayfinding and traffic information signage is installed along with roadway travel lane controls to accommodate visitors and additional traffic generated by CFD. This effort extends beyond the area around Frontier Park and encompasses Interstates 80 and 25 and virtually all collector and arterial streets leading to Frontier Park and the 'Park N Ride' lot. Ayres Associates had four staff members observing CFD operations at various times throughout the event. These observations were done in and around Frontier Park, including along all main traffic routes to and from the Park. A brief summary of these observations is included. Many of these observations reference CFD numbered gates and parking lots, which are shown in Figure 12.



Figure 12: Frontier Park Map

8th Avenue

8th Avenue is the southern boundary of Frontier Park. A traffic barrier is placed in 8th Avenue from just west of Dey Avenue to halfway between Dillon and Snyder Avenues. This barrier prevents vehicles from making left turns from 8th Avenue onto Dey and Dillon Avenues as well as preventing vehicles leaving Lot B from making a left turn onto 8th Avenue. This barrier also directs pedestrians to cross the street at the crosswalk at Dey Avenue. 8th Avenue sees heavy vehicle and pedestrian traffic each day of CFD. The residential neighborhood south of Frontier Park, known as “The Avenues,” is heavily utilized for on-street parking with patrons walking across 8th Avenue to access the Park. During CFD parking on 8th Avenue, adjacent to Frontier Park, where on-street parking is allowed it is restricted to short term pick-up and drop-off parking only. Parking is allowed on the north side of 8th Avenue adjacent to Lions Park, which is located east of Frontier Park.



Figure 13: 8th Ave. Traffic Barrier (Image from Friday, July 28, 12:30 p.m.)

The ‘Park N Ride’ pickup/drop off location is in an existing bus loop on the north side of 8th Avenue, west of Dey Avenue. Staging for ‘Park N Ride’ buses during egress is on the south side of 8th Avenue between Hynds Boulevard and McComb Avenue. ‘Park N Ride’ operations will be discussed in detail in the ‘Park N Ride’ Service section of this report beginning on page 39. The intersection of 8th Avenue and Carey Avenue is extremely busy with both pedestrian and vehicular traffic during CFD. This intersection is two-way stop controlled with stop signs on Carey Avenue. During peak traffic times, this intersection is controlled by CPD officers to facilitate traffic and pedestrian safety. Peak times are approximately 3:15 p.m. to 5:00 p.m., during rodeo egress, and 10:30 p.m. to 12:00 p.m., during night show egress. Depending on traffic load, officers may remain outside these peak times to assist and direct. CPD officers direct vehicular traffic flow as needed to keep the vehicles moving. The officers will stop all vehicular at intervals to allow pedestrians traffic to safely cross the intersection. At these intervals pedestrians are permitted to cross all legs of the intersections including walking diagonally across the intersection.



Figure 14: 8th and Carey Ave.- Looking Southeast

The *8th Avenue Corridor Plan*, Felsburg, Holt & Ullevig, May 2013 explored the warrants for traffic signals at the intersection of 8th Avenue and Carey Avenue. The corridor plan states: "...current traffic conditions fail to satisfy the eight-hour, four-hour and peak hour volume warrants, the combination of pedestrian and traffic volumes fails to satisfy the pedestrian volume warrant, and the average number of accidents at the intersection over a five-year period is lower than the threshold that would suggest the need for a signal for safety-based reasons."

During evening egress, eastbound 8th Avenue traffic is required to turn right, to travel south on Snyder Avenue. This turning movement is forced by placing a Type III barricade in the traffic lane, signed with a 'Right Turn Only Arrow'. This restriction limits the number of eastbound vehicles at the crowded intersection of Carey and 8th Avenues.



Figure 15: 8th and Snyder Ave.-Looking Southeast

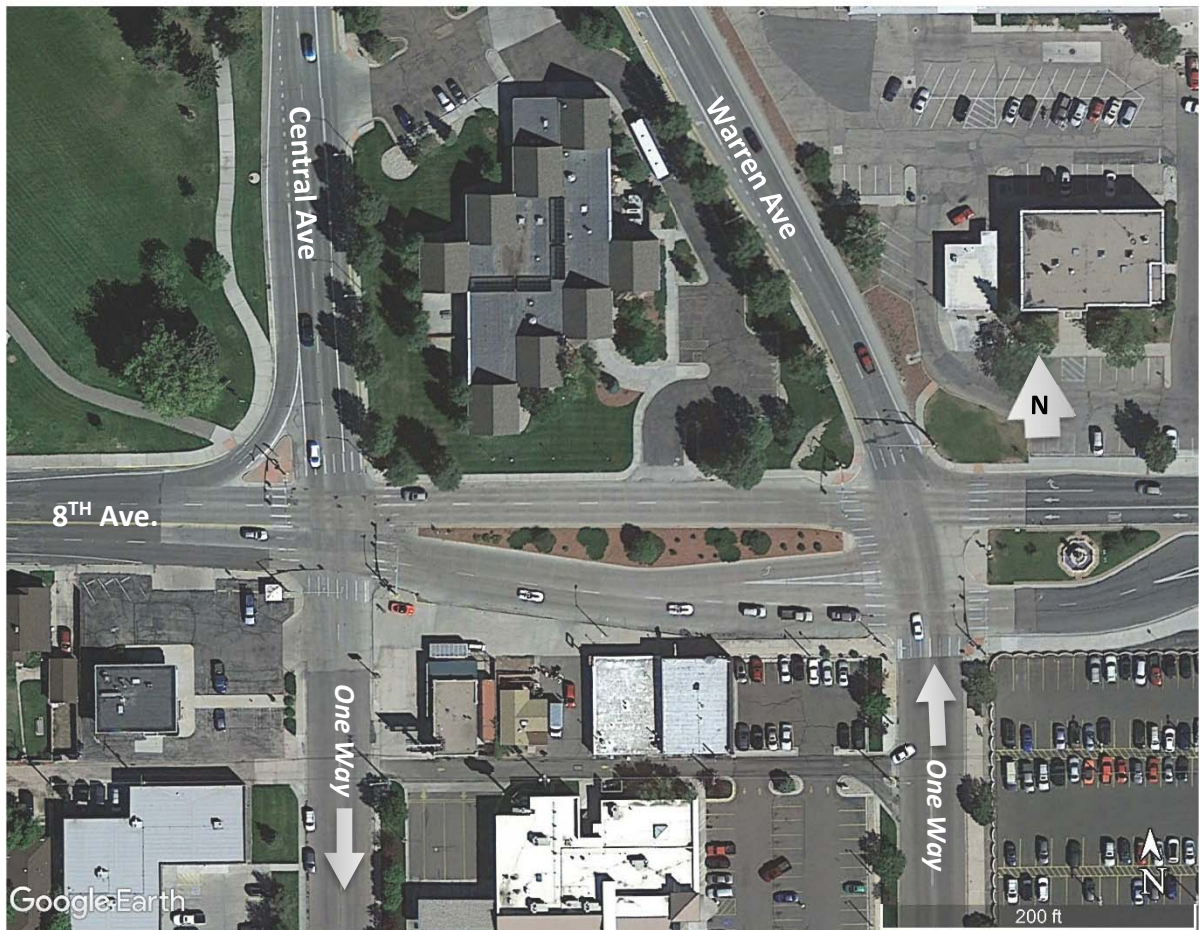


Figure 16: Intersection of 8th, Central and Warren Avenues

During heavy traffic times, vehicular traffic on 8th Avenue can impact the intersections of 8th Avenue and Central/Warren Avenues (a one-way couplet shown in Figure 16.) When traffic is backed up on westbound 8th Avenue it can impact southbound traffic on Central Avenue. Figure 17 shows the free right turn from southbound Central Avenue onto westbound 8th Avenue.

At the intersection of 8th Avenue and Warren Avenue vehicles desiring to head northbound have a dedicated turn lane at this signalized intersection. The left turn lane for eastbound traffic is very short and vehicles often stack up further than the length of the turn lane into the eastbound through lane. The intersection signal does not have a left turn arrow for this movement; vehicles are expected to wait for a gap in traffic prior to making the turn. While there are two northbound lanes on Warren Avenue, frequently vehicles making the left turn will not proceed until the westbound right turn lane has cleared. This can be seen in Figure 18, where eastbound traffic is waiting for traffic in the westbound lane.



Figure 17: 8th and Central Ave. Intersection



Figure 18: 8th Ave. at Warren Ave.

8th Avenue Conclusions:

- 1. Officers hand control the intersection of 8th Avenue and Carey Avenue during peak ingress and egress time periods.**
- 2. Heavy pedestrian traffic results in conflicts between pedestrians and vehicles.**
- 3. Lack of street lighting along entire corridor from Central Avenue to Hynds Boulevard.**

Carey Avenue

Carey Avenue is the eastern boundary of Frontier Park. During Frontier Days only right turns are permitted along Carey Avenue adjacent to Frontier Park and Lions Park. This is accomplished by placing traffic barriers down Carey Avenue to create one northbound travel lane and two southbound travel lanes. Left turns are blocked by the barrier system.



Figure 19: Carey Ave. Traffic Barrier (Image from Wednesday, July 26, 4:15 p.m.)

Public parking is available in Lot C, in Frontier Park, as well as inside Lions Park. Gate V10 is located north of Lot C along Carey Avenue. Gate V10 is heavily used by CFD pass holders, namely contestants. Gate V10 is also utilized by the dedicated CFD volunteer ‘Park N Ride’ bus. Between Kennedy Road and Gate V10 southbound Carey Avenue is configured to provide one travel lane during CFD. Just past Gate V10 traffic cones are used to create two southbound lanes with the right lane signed for vehicles parking in Lot C with the left lane signed for through traffic, headed toward 8th Avenue.

During heavy ingress times, traffic on southbound Carey Avenue is backed up from Gate V8, the entrance to Lot C, to Kennedy Road and along Kennedy Road nearly to the interchange with I-25. This will further be discussed in the Kennedy Road section of this report, beginning on page 25.

Southbound Carey Avenue is striped for two lanes as vehicles approach 8th Avenue. The right lane operates as a shared right turn/through lane while the left lane operates as a dedicated left turn only lane. The northwest quadrant of the intersection of 8th Avenue and Carey Avenue was reconstructed in the summer of 2017. The reconstruction eliminated the free right turn lane, which had been identified in the *8th Avenue Corridor Plan*, Felsburg, Holt & Ullevig, May 2013, as a desired improvement to

increase pedestrian safety and queuing space. The reconstruction of the corner resulted in a curb radius that is too small to allow larger vehicles and vehicles pulling trailers to make the right turn while staying within their travel lane. According to City of Cheyenne staff, the curb radius was designed as large as possible while maintaining safe sight distance between southbound vehicles and pedestrians on this corner. Sight distance is restricted in this area by the existing large decorative entrance column located at the curb line, as shown in Figure 21: Carey Ave. Looking North from 8th Ave. During CFD a variable message sign was placed in the 8th Avenue median to notify vehicles with trailers not to turn right onto 8th Avenue. Despite the variable message sign and turning restrictions, CPD issued several tickets to vehicles with trailers making this illegal turn during CFD. Because these larger vehicles cannot make the turn while remaining in their travel lane they effect traffic in the entire intersection.



Figure 20: Carey Ave. Variable Message Sign



Figure 21: Carey Ave. Looking North from 8th Ave.

Carey Avenue Conclusions:

4. Traffic backs up on southbound Carey Avenue extending along Kennedy and Central Avenues during peak ingress times with vehicles accessing Lot C.
5. Vehicles with trailers cannot make the right turn from Carey Avenue onto 8th Avenue and remain in their travel lane.

Kennedy Road



Figure 22: Kennedy Road

Kennedy Road is the northern boundary of Frontier Park, ending to the east as a T-intersection with Central Avenue. During CFD traffic cones are shifted during different parts of the day along Kennedy between Carey Avenue and Central Avenue to configure lanes differently during egress. At egress time, vehicles are prohibited from making a right turn from Central Avenue onto Kennedy Road. During egress Central Avenue, which typically operates as a four-lane road, with two lanes in each direction, is restricted to one lane in each direction with police officer control. This change allows eastbound traffic on Kennedy Road to turn directly left or right into an open travel lane on Central Avenue.

This stretch of Kennedy Road, between Carey Avenue and Central Avenue is critical to moving traffic in and out of Frontier Park efficiently. As such, the traffic cone pattern changes several times during the

day to accommodate changing traffic demand patterns. During the 2017 event, the traffic cone pattern and lane configuration was not consistent from day to day.

For the duration of CFD northwest bound left turns from Central Avenue onto Kennedy Road are prohibited. While many vehicles on Central Avenue will make a U-turn after the raised center median ends to the northwest, Cheyenne Police Department (CPD) officers indicated that the U-turns don't seem to be a traffic safety problem.

During peak ingress times, specifically after the parade and before the rodeo, traffic coming to Frontier Park from Central Avenue gets backed up such that the right through lane of traffic on Central Avenue is at a standstill with queuing extending along eastbound Central Avenue nearly to its interchange with I-25. This is caused by the number of vehicles trying to go southbound on Carey Avenue to access Gates V10 and V8. Figure 23: Eastbound Central Ave., west of Kennedy Road, shows the traffic backed up in the eastbound through lane on Central Avenue.



Figure 23: Eastbound Central Ave., west of Kennedy Road

On-street parking is permitted on the south side of Kennedy Road between Carey Avenue and Martin Esquibel Street, the road into Lions Park. Between Martin Esquibel Street and Central Avenue the roadway narrows and on-street parking is prohibited. Kennedy Road does not have sidewalk on either side. Pedestrians often walk in the street or just at the back of curb as shown on Figure 24 and Figure 25.



Figure 24: Kennedy Road looking North - Pedestrians walking without sidewalk and traffic backed up to Central Avenue during rodeo ingress



Figure 25: Kennedy Road Looking West - Pedestrians walking in the street

Kennedy Road Conclusions:

6. Officers hand control the intersection of Kennedy Road and Central Avenue during peak egress.
7. Lane configuration and closures were not consistently done each day at the same time or in the same setup.
8. Significant traffic back ups after parades and before rodeo.
9. No sidewalks or pedestrian paths along Kennedy Road.

Hynds Boulevard

Hynds Boulevard is the western border of Frontier Park. Along Frontier Park, Hynds Blvd. has one travel lane in each direction with no shoulders. There is a deceleration/turn lane to enter Gate V12. Gate V12 is restricted to CFD pass holders including volunteers and contestants. At peak ingress times traffic was often backed up on Hynds Boulevard as visitors who were not authorized to enter Gate V12 were trying to find a place to park and were talking with the gate attendant for directions on where to go.

Hynds Boulevard does not have sidewalk but does experience pedestrian traffic walking at the back of curb during CFD. These pedestrians appear to have parked at the Cheyenne Country Club or at Lake Absaraca and are trying to access Frontier Park.

Hynds Boulevard south of 8th Avenue is a residential street with parking permitted on the east side of the road and prohibited, year-round, on the west side of the road. This narrow roadway becomes congested during CFD with larger vehicles pulling trailers trying to access Gate V12, residents accessing their homes, visitors trying to find on-street parking, and the 'Park N Ride' buses.

Hynds Boulevard Observation:

10. Ingress- Traffic backed up on Hynds Boulevard at Gate V12.
11. No sidewalks or pedestrian paths along Hynds Boulevard.

Central Avenue

There is an interchange at I-25 and Central Avenue, which causes Central Avenue to be heavily used by visitors accessing Frontier Park. The northbound off-ramp is a signalized intersection with sensors to detect vehicles on the off-ramp as they approach Central Avenue. These sensors allow the signal green cycle to extend to help traffic clear the ramp. The southbound off-ramp is stop sign controlled. Finding a gap in traffic for the left turn from the southbound off-ramp to Central Avenue can be challenging at times, but it did not appear that this delay was causing traffic to back up onto the interstate during CFD. The Central Avenue and I-25 interchange intersection operated with minimal delays and queuing during CFD.

Pershing Boulevard, Randall Avenue and Hynds Boulevard Intersection



Figure 26: Intersection of Pershing/Randall/Hynds (Image from Friday, July 28, 4:45 p.m.)

The intersection of Pershing Boulevard, Randall Avenue and Hynds Boulevard is heavily used during CFD because it is the interstate interchange closest to the south side of Frontier Park. Many visitors use Pershing Boulevard to access the interstate at egress times. Additionally, 'Park N Ride' buses use this interchange both coming from and going to the 'Park N Ride' lot. There are existing traffic signals at both the northbound and southbound interstate ramps at this location. The intersection on the east side of the interstate is a 5-leg intersection as Pershing Boulevard and Randall Avenue intersect with the I-25 Northbound off-ramp and Hynds Boulevard at this intersection. CPD hand controls this intersection during heavy egress times when they see that traffic starts to gridlock Pershing Boulevard operation.

During the 2017 CFD event, WYDOT increased the green signal time for the northbound off-ramp during peak hours: 5:00 p.m. to 8:00 p.m. and 11:00 p.m. to 1:00 a.m. to allow additional time for 'Park N Ride' buses to proceed through the intersection toward Hynds Boulevard. This signal timing change worked well for the 5:00 p.m. to 8:00 p.m. night show ingress. However, at night show egress on both Wednesday, July 26th and Saturday, July 29th, the 'Park N Ride' bus drivers reported that vehicles were backed up on the off-ramp all the way from the intersection of Pershing/Randall/Hynds onto northbound I- 25. It is unclear whether these backups happened while the intersection was under CPD officer control or signal operation.

WYDOT staff has indicated that this signal is scheduled to be upgraded before the 2018 CFD. The upgrades will include better real-time communication on failed intersections so that WYDOT can alert the City, who is responsible for maintaining the signals. Additionally, signals which are elevated to

“critical” within the WYDOT system will have the capacity to be controlled by police officers with a manual push button from the signal control box.

Pershing Boulevard / Randall Avenue / Hynds Boulevard Intersection Conclusions:

- 12. Officers hand control the intersection during peak egress.**
- 13. Intersection management is complicated by the 5-leg intersection creating excessive delays.**
- 14. Vehicle traffic backs up onto the Interstate at the northbound off-ramp.**

Snyder Avenue and Pershing Boulevard Intersection

The intersection of Snyder Avenue and Pershing Boulevard is signalized. CPD officers control this intersection by hand during heavy CFD egress times to keep traffic moving. As a main roadway out of the “Avenues” neighborhood this intersection sees very heavy traffic during egress. Often traffic on westbound Pershing Boulevard is backed up from I-25 to the intersection with Snyder Avenue. This signal is also slated to be upgraded prior to the 2018 CFD.

Snyder Avenue and Pershing Boulevard Intersection Conclusions:

- 15. Officers hand control the intersection during peak egress due to heavy traffic exiting the Avenues Neighborhood.**

Frontier Park

Many pedestrians access Frontier Park via a sidewalk at the northwest corner of Carey Avenue and 8th Avenue, passing in front of the Indian Village. This sidewalk is 10 feet wide except for in one location directly under the entrance sign. In this location the sidewalk narrows to 6 feet to accommodate landscaping, but restricts pedestrian movement.



Figure 27 : Sidewalk Narrows at Park Entrance

Frontier Park lacks bicycle parking accommodations. Providing bicycle racks and lighting near these racks could encourage this method of travel to reduce automobile traffic volumes.



Figure 28: Dedicated Bicycle Parking is Not Provided

Frontier Park Conclusions:

- 16. Sidewalk narrows at Park entrance near 8th and Carey Avenues.**
- 17. There are no bicycle parking accommodations inside or around the Park**

Lions Park

Lions Park is located on the east side of Frontier Park. Many CFD visitors utilize free parking inside Lions Park because of its close proximity to Frontier Park. Three parking areas inside Lions Park are monitored and reserved for specific uses. These include: several spaces dedicated to Putt Hutt mini golf patrons, the entire parking lot adjacent to the Cheyenne Aquatic Center for pool patrons, and a lot reserved as a “Tow Lot” for vehicles that get towed from the areas around Frontier Park for violating parking rules. For future CFD events it is anticipated that the parking lot adjacent to the Botanic Gardens will be reserved for visitors to the Grand Conservatory. There are 365 public parking spots available inside Lions Park during CFD. According to the City Deputy Director of Community Recreation and Events, the largest problem for Lions Park is keeping vehicles from parking on the turf areas. Signs, such as those shown in Figure 29 are placed in and around Lions Park during CFD but many vehicles, up to 30 per day, are still towed for parking in non-designated areas.



Figure 29: No Parking Sign Inside Lions Park

Many of the streets through Lions Park are narrow and wind around the park areas. In one location, at the northwest end of the median north of the Putt Hutt, there is no 'Keep Right' sign in the median. As Martin Esquibel Street curves in this location a sign here would help to keep southbound traffic on the correct side of this median.



Figure 30: 'Keep Right' Sign Needed

Lions Park Conclusions:

18. 'Keep Right' sign missing from median north of Putt Hutt and Kiwanis Community House.

CFD Parking & Transportation Alternatives

Cheyenne Frontier Days (CFD) welcomes many visitors to the area. The development of efficient transportation alternatives is necessary to creating an environment people enjoy using and want to return to again. Many major event operators claim the memory that lingers most for many people about an event is the experience arriving or leaving the venue. With the alternatives for transportation ranging from walking, biking, ridesharing, busing, and personal vehicle, there’s plenty to choose from with CFD.

On-Site Park Parking

The Frontier Park grounds is the main stage for Cheyenne Frontier Days events. Figure 31: CFD Frontier Park Map shows the range of activity centers within the park. Parking areas on the grounds include a variety of uses –headquarters and volunteer parking, carnival staging, contestant parking, stock barns and pens, parade staging, VIP parking, ADA parking, and paid parking for non-pass holders. The space fills up quickly, leaving little room remaining for patrons in the B and C lots, the two lots which are available for CFD sponsors, participants and public pay-to-park parking.



Figure 31: CFD Frontier Park Map

Figure 32, a labeled aerial image taken Friday, July 28th at 12:30p.m. shows what the area looks like during CFD. During the event the B and C lots were highly utilized. However, C lot is a dirt surface lot, making delineating parking difficult which creates a less efficient parking area that could accommodate

additional vehicles. Adding to some of the issue in C lot is that larger vehicles with trailers are parking in this area, as well. Lot C has 1,000 available parking spaces and Lot B has 366 available spaces. Parking is available to the general public in these two lots for \$20 per vehicle.

During the events, the V7 & V8 gates backed up traffic on Carey Avenue (going south). There were a high number of patrons trying to access these lots, being turned away because of cost or space issues, and then unloading passengers partially or fully in the line of traffic before leaving the gate area and continuing south to find alternative parking solutions.



Figure 32: Labeled Aerial Image of Frontier Park (Image from Friday, July 28, 12:30 p.m.)

Frontier Park Parking Conclusions:

- 19. Cashiering at Gate V8, the entrance to C Lot created vehicle back ups onto Carey Avenue; at peak ingress times these backups extended onto Central Avenue.**

Lions Park Parking

Lions Park has 365 parking spaces available to the public during CFD. Many CFD visitors utilize this free parking because of its close proximity to Frontier Park. As previously mentioned, there are three parking lots inside Lion’s Park which have parking restrictions during CFD. These include dedicated spaces at the Putt Hutt miniature golf business, parking for Aquatics Center patrons only, and parking for Botanic Gardens Grand Conservatory visitors. All other paved parking spaces in the Park are available for public parking. Despite signage, each year during CFD many vehicles are towed because of illegally parking inside Lions Park. Figure 33 shows the various public parking lots and spaces available in both Frontier Park and Lions Park. Public parking spaces available in Lions Park during CFD are shown in purple.



Figure 33: Parking Lots In and Around Frontier Park

CFD operates a Pay to Park lot known as Lot E on the east side of Carey Avenue, opposite the ‘Old West’ Museum. This parking area is not paved; patrons park on non-irrigated park lands and walk across Carey Avenue to access Frontier Park. The cost to park in this lot is \$20 with room for about 130 vehicles. City Community Recreation and Events staff indicated that the Department would be willing to provide an additional ‘Pay to Park’ lot for CFD use in the southeast portion of Lions Park on non-irrigated park land, if that lot were operated by CFD staff for the during the event. This lot, as shown below in Figure 34 is 2.1 acres and could accommodate approximately 160 vehicles, whereas Lot E is 1.7 acres. It is further away from Frontier Park than Lot E and may be a less desirable location for patron parking, but would provide additional parking opportunities should CFD choose to operate this available space as a parking lot.



Figure 34: Lions Park Aerial Image

The ‘Tow’ Lot is also located inside Lions Park. For the 2017 event it was located north of the Children’s Village on the west side of Sloans Lake. This lot is reserved for vehicles which are towed from the area surrounding Frontier Park for violating parking rules. Vehicle owners must pay to remove their vehicle from this lot.

Lake Absarraca Parking

Lake Absarraca Recreation Area is owned by the City of Cheyenne and maintained by the Parks Division. The City leases this land to CFD to provide overnight camping from the Sunday preceding the CFD event through the Monday after CFD ends. Overnight camping is \$40. Additional rodeo and night show overflow event parking is permitted in this area for \$20 per vehicle. A limited number of hook up sites, for water and electricity, are available for CFD contestants only. Horse trailers are not permitted overnight in this lot.



Figure 35: Lake Absarraca Parking Area. Image from Wednesday, July 26, 1:45 p.m.

On Street / Avenues Parking

The Avenues is the neighborhood directly to the south of Frontier and Lions Park, and north of Pershing Boulevard. It is one of the core neighborhoods in Cheyenne and highly desirable. A majority of the homes were built between the early to mid- 1900s. The age of the neighborhood provides the backdrop for some of the current constraints: limited street lighting, narrow sidewalks, as well as smaller garages (typically 1-car).

Given the proximity to the park and free on-street parking many patrons of Frontier Days choose to park in this area and walk to the park. In addition to on-street parking, many homes within a couple blocks of the park also sell spaces for vehicles to park on their front lawn and/or driveway.

To gauge the number of vehicles utilizing on-street parking within the Avenues neighborhood aerial imagery of the area was taken during the afternoon of Cheyenne Day, Wednesday, July 26, 2017, at 1:45 p.m. Cheyenne Day is particularly highly attended by local residents with many of the offices in Cheyenne closing at noon. The rodeo started at 12:15 p.m. that day at Frontier Park. Following the flight, vehicles were counted from the images and compared to a Google Earth flight from Wednesday, September 7, 2016 during daylight hours.

The parked vehicle count area included all of 8th Avenue, Hynds Boulevard, to the centerline of Central Avenue, and north of Pershing Boulevard, as shows in Figure 36. While the Avenues neighborhood includes area all the way to Evans Avenue to the east, Central Avenue and Warren Avenue create a natural barrier through the neighborhood with heavier traffic loads and higher speeds; therefore, this area tends to be less Frontier Days related traffic and was not included in the count. Also, note this count only included on-street vehicles (not in driveways or off-street parking areas).



Figure 36: Avenues Neighborhood Aerial Image

During the July 26th Frontier Days flight, the total number of vehicles in this area was counted at 1,635. The same area showed 465 vehicles during a standard weekday based on historic Google Earth imagery. The increase is more than three and a half times more vehicles within the less than half a mile area that sees the biggest impact from the event. During large night show events, pedestrians are often seen crossing Pershing Boulevard to vehicles parked beyond the Avenues parking count area.

The congestion of traffic, pedestrians, limited street lighting and narrow sidewalks creates large opportunities for conflict within the neighborhood. In addition, the Frontier Days bus routes running through the neighborhood can be delayed by the large number of vehicles on the roadway. Often bus turning movements are restricted because of vehicles parking too close to the intersections to allow for the buses to turn and stay within their travel lane.

The Avenues on-street parking opportunities will continue to be a desirable option for many CFD patrons. Should CFD get larger, so will the traffic, parking and pedestrian safety conflicts and congestion within the neighborhood. Helping patrons understand the other opportunities, such as 'Park N Ride', can be a way to alleviate some of the pressure on the neighborhood and reduce conflicts and congestion for Frontier Days operations.

Public Parking Availability

Public parking in and around Frontier Park is limited when compared to the capacity of a sold-out night show which can accommodate 25,000 visitors.

Table 5: Public Parking Availability near Frontier Park

LOCATION	AVAILABLE SPACES
Frontier Park Lot C	1,000
Frontier Park Lot B	366
Lions Park Lot E	130
Lions Park – Parking Lots	365
Avenues Neighborhood *	1,170

*Avenues parking count area is bordered by Hynds Boulevard, 8th Avenue, Central Avenue and Pershing Boulevard. On Wednesday, July 26th the total number of vehicles parked on-street in this area was counted at 1,635. The same area showed 465 vehicles during a standard weekday based on historic Google Earth imagery. The assumption is that 1,170 CFD visitors can park in the Avenues on-street. This number does not consider vehicles which are parked in driveways or on private residential lots where space for parking is sold to visitors.

‘Park N Ride’ Service

A major study goal is to increase utilization of the ‘Park N Ride’ system – a special shuttle bus service for Frontier Days patrons. Frontier Park is landlocked and cannot expand beyond its current size. As more Frontier Days exhibits and activities are added to the Park, land that has historically been used for parking will be converted to make room for these additions. Therefore, the growth of CFD depends on a robust, user friendly ‘Park N Ride’ system.

‘Park N Ride’ is a system designed to decrease the traffic activity and the number of vehicles parking in or near Frontier Park. Frontier Days partners with Laramie County School District Number 1 (LCSD#1) to provide shuttle bus transportation service between a designated parking lot (Bull Lot) and Frontier Park throughout the day and into the evening until 12:30 a.m. The system is highly utilized by visiting patrons, as well as locals, going to Frontier Days events. The cost to park in the Bull Lot is \$10 per vehicle with the advantage of providing all riders with free Frontier Park admission.



Figure 37 : Bull Lot Location Map

The current Bull Lot is located on property leased from Warren Air Force Base. The Bull Lot, just under 17 acres in size, is located in the southwest quadrant of the Happy Jack Road/ Missile Drive and I-25 interchange, approximately 1.25 miles from Frontier Park, as the crow flies. CFD is investigating the feasibility of alternative sites as the Air Force has indicated they are not planning on renewing the CFD lease to use the Bull Lot.

Going to Frontier Park, buses travel east on Happy Jack / Missile Drive, turning north onto I-25 to the Pershing Boulevard Exit where they head north on Hynds Boulevard. Buses then turn right onto 8th Avenue and make a left U-turn into the bus loop at the Frontier Park Main Gate. A CFD volunteer stops westbound 8th Avenue traffic to allow the buses to turn into the bus loop. The bus loop can currently accommodate up to five standard LCSD#1 yellow buses, but a maximum of four buses were concurrently in the bus loop during the 2017 event. Once loaded, a CFD volunteer stops both eastbound and westbound traffic on 8th Avenue to allow the buses to turn left from the bus loop to head east on 8th Avenue to Snyder Avenue where they turn right and travel south to Pershing Boulevard and west to the I-25 interchange. Once on I-25 the buses continue one exit and travel to Happy Jack Road and into the Bull Lot, completing the shuttle loop. During rodeo and night show departure times buses will stage on the south curb line of 8th Avenue between McComb and Cribbon Avenues so they can quickly turn into the bus loop when the proceeding buses have exited the loop.



Figure 38: Bus Entering Bus Loop



Figure 39: Bus Exiting Bus Loop

Alternative return routes are available to 'Park N Ride' buses should the Pershing Boulevard / I-25 interchange become too congested or backed up. The first alternative route has the buses staying on Snyder Avenue past Pershing Boulevard all the way south to West 24th Street before turning west along 24th to Missile Drive, under I-25, and onto Happy Jack Road where the Bull Lot is located. The second alternative route, should Snyder Avenue become congested due to excess traffic or a traffic crash, is for the buses to travel south on Carey Avenue rather than Snyder Avenue. LCSD#1 buses are a contracted CFD service and as such must follow the prescribed routes. While alternate routes are available, LCSD#1 'Park N Ride' supervisors must get permission from CFD to change the bus routes. Generally, this can happen fairly quickly, as the bus drivers radio to the LCSD#1 'Park N Ride' supervisor to alert them of traffic problems and then the supervisor can request permission from CFD. Real time route improvements to this system can be enhanced by creating a staffed Traffic Control Center inside Frontier Park to facilitate real-time updates and changes to all traffic operations including 'Park N Ride' bus routes, CPD and CFD volunteers.

Figure 40 and Figure 41 contain maps showing the 'Park N Ride' routes the LSCD#1 yellow buses take.



Figure 40: 'Park N Ride' Bull Lot Route Map

A handicapped accessible “special needs” bus that runs on an as-needed basis with calls for service radioed to the driver connects the Bull Lot to and from Frontier Park. The route this bus takes is similar to the other routes, but drops passengers off on the north side of 8th Avenue east of Gate V3. See Figure 41 for full details of this route.

The ‘special needs’ LCSD#1 bus drivers occasionally used their ‘stop arms’ and flashing lights when loading and unloading passengers along 8th Avenue. This resulted in traffic delays as vehicles traveling on 8th Avenue would stop and wait for the bus while their flashers were activated. CPD reports that they would flag traffic past these buses when traffic on 8th Avenue was being impacted.

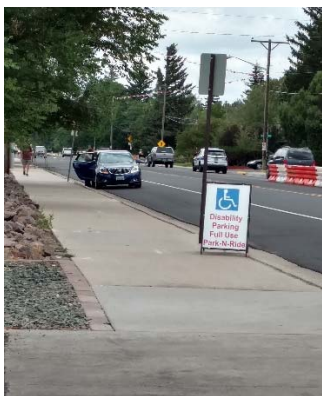


Figure 42: Special Needs Bus Pick-up/Drop-off on 8th Ave.



Figure 41: ‘Park N Ride’/Special Needs ADA Bus Route Map

The location of the current bus loop is not ideal for the large crowds in the area during rodeo and night show egress times. As the loop is directly in front of the Main Gate to Frontier Park, large crowds exit the gate at egress. Many people in these crowds are waiting to get on 'Park N Ride' buses while many people are also trying to get to 8th Avenue and the Avenues Neighborhood area to access their parked vehicles or other transportation options. This creates high safety conflict and queuing problems between pedestrians, buses and vehicles on 8th Avenue and the areas adjacent to the Main Gate. The problem is compounded because of the lack of street lighting on 8th Avenue and the sheer number of pedestrians, vehicles, and buses in this area at the same time. During rodeo egress the 'Park N Ride' bus loading area is crowded with patrons waiting for a bus at the same time that patrons are waiting in line at the Main Gate bag check. This creates further confusion as this undersized area is being used to simultaneously accommodate both groups of people.



Figure 43: Rodeo Egress at Main Gate



Figure 44: Pedestrian/Bus Conflicts within Bus Loop



Figure 45: 'Park N Ride' Bus Entering Bus Loop Delayed Due to Pedestrians



Figure 46: Crowds at Egress between Main Gate and Bus Loop



Figure 47: Crowds at Egress Between Main Gate and Bus Loop

'Park N Ride' operators, LCSD#1 Transportation Staff, utilize metal fences to create four passenger lines for bus loading. These fences are moved into place prior to heavy crowd egress times. The gates work well to channelize patrons adjacent to the bus loop, but only extend about 50 feet back from the bus loop. The remainder of the crowd stands in the mass of people waiting to get on a bus. Two of the four bus loading lines are located south of the ticket building and are generally blocked from view by patrons exiting the Main Gate. These two lines tend to be underutilized because they cannot be seen. 'Park N Ride' passengers complained about the lack of order during event egress and stated that many people were cutting in line as the lines are not clearly defined.

Ayres Associates staff observed 'Park N Ride' bus operation at the Frontier Park bus loop on both Saturday, July 22 and Saturday, July 29 during night show egress and on Tuesday, July 25 at rodeo egress time. Additionally, Ayres Associates staff observed 'Park N Ride' bus operations at the Bull Lot. At Frontier Park four buses were in the bus loop at one time during peak egress times. It took less than four minutes for the buses to enter the bus loop, load with 48 passengers each, and exit onto 8th Avenue.

On July 22 there were 22 LCSD#1 buses running on the Bull Lot 'Park N Ride' loop. Just as the night concert was ending, the first buses to leave the bus loop were able to make the round trip in 20 minutes from the bus loop to the Bull Lot and back into the bus loop. The longest round trip the buses made took just over 27 minutes. The additional seven minutes is attributed to high traffic congestion conditions at the Pershing/Randall/Hynds intersection and the Snyder/Pershing intersection. The total number of vehicles entering the Bull Lot on July 22 after 3:00 p.m. was 735.

On July 29 there were 23 LCSD#1 buses running on the Bull Lot 'Park N Ride' loop. Just as the evening concert was ending, the first bus to leave the bus loop completed the round trip in just under 30 minutes. The longest round trip took just over 43 minutes to complete. Several factors impacted the 'Park N Ride' bus system on July 29, including: a concert patron fight that blocked buses from exiting the bus loop which began at about 11:15 p.m. and took 11 minutes to clear for normal operations to resume; heavy delays at the Pershing/Randall/Hynds intersection which resulted in the buses rerouting to the Snyder Avenue to 24th Street route; and a traffic crash on Snyder Avenue which necessitated the buses to use Carey Avenue rather than Snyder Avenue. The total number of vehicles entering the Bull Lot on Saturday after 3:00 p.m. was 788.

On Tuesday, July 25 at rodeo egress the fastest round-trip bus loop was completed in 21 minutes. The longest round-trip bus loop was completed in 30 minutes. Buses would arrive at the Bull Lot, stop near the pay booth and unload passengers, then return to Frontier Park. It is noted that 'Park N Ride' service is also provided from the Bull Lot to Downtown as part of the Cowboy Triangle. On Tuesday, July 25th the Cowboy Triangle bus would leave and generally return to the Bull Lot within 15 minutes.



Figure 48: 'Park N Ride' Frontier Park Bus Loading Lines

To promote use of the Park N Ride' system, CFD sends all rodeo and night show ticket holders an email prior to the event that includes a Bull Lot location map and user information for the 'Park N Ride', as shown in Figure 49. Additionally, both WYDOT and CFD create and install variable message signs along I-25 that direct travelers to the 'Park N Ride' lot.

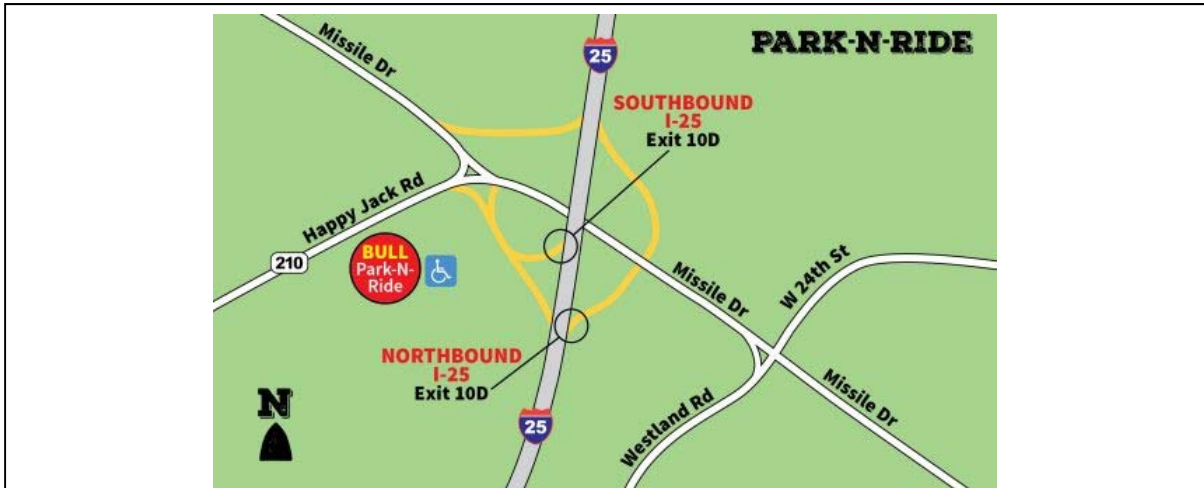


Figure 49: Email from CFD to Ticket Holders

PARK-N-RIDE

Parking on Frontier Park will be at capacity during Frontier Nights®. We encourage you take advantage of our ‘Park N Ride’ service! Buses travel between the “Bull” lot and Frontier Park all day long. A quick five minute bus ride directly to the celebration!

Park-n-Ride is located at I-25 and Happy Jack.
Hours: July 22-29 10:30 a.m.–12:30 a.m.

‘Park N Ride’ Bus Conclusions:

- 20. Pedestrian, vehicle and bus conflicts on 8th Avenue is a safety concern and creates delay for the ‘Park N Ride’ bus route travel times.
- 21. Buses were often stuck in traffic congestion at heavy egress times.
- 22. LCSD#1 Special Needs buses using the swing out pedestrian arms and stop flashers while loading and unloading passengers is causing confusion and delay to vehicular traffic on 8th Avenue.
- 23. Buses have conflicts completing turns at some street corners due to on-street parked vehicles encroaching on the corner radius.
- 24. Traffic conflicts occur along Hynds Boulevard as the street is very narrow and does not allow enough room for on-street parking and two through traffic lanes.

‘Park N Ride’ System Signage Conclusions:

- 25. Westbound Interstate 80 lacks ‘Park N Ride’ lot signage. Current signage directs visitors to exit at I-180/North Greeley Highway to access Frontier Park. Trailblazing guide signs lead visitors to the intersection of 8th Avenue with Warren Avenue and then westbound on 8th Avenue.
- 26. ‘Park N Ride’ passengers commented that they did not know which bus to get on to get to their destination, either Frontier Park, Downtown, or the Bull Lot.

Bull Lot 'Park N Ride' Lot

Currently the City of Cheyenne leases the land known as Bull Lot from the United States Department of the Air Force which authorizes CFD to use this land to provide parking for transportation services during Frontier Days. Figure 50 shows the Bull Lot parking/circulation pattern. This lot is situated to provide designated parking for vehicles with handicap placards, passenger cars, larger pickup trucks, campers, and vehicles with trailers. Throughout the ten-day 2017 CFD event 12,220 vehicles paid to park in this lot. The total lot capacity is around 1,500 vehicles. The lot is unpaved, but does have a layer of compacted asphalt millings which allows for a more stable surface than natural ground. Parking stalls are not painted or delineated, which reduces the number of vehicles that can park in this lot. Permanent improvements have been limited to parking lot lighting since this land is leased and not owned by CFD. There are no permanent structures onsite. Tents are provided for bus driver breaks and parking lot security employees. There are also no permanent signs on the lot with parking aisle delineation done with temporary T-post stakes and flagging. Similarly, bus loading areas and pay stations are designated with T-post stakes and signage installed prior to the start of Frontier Days.

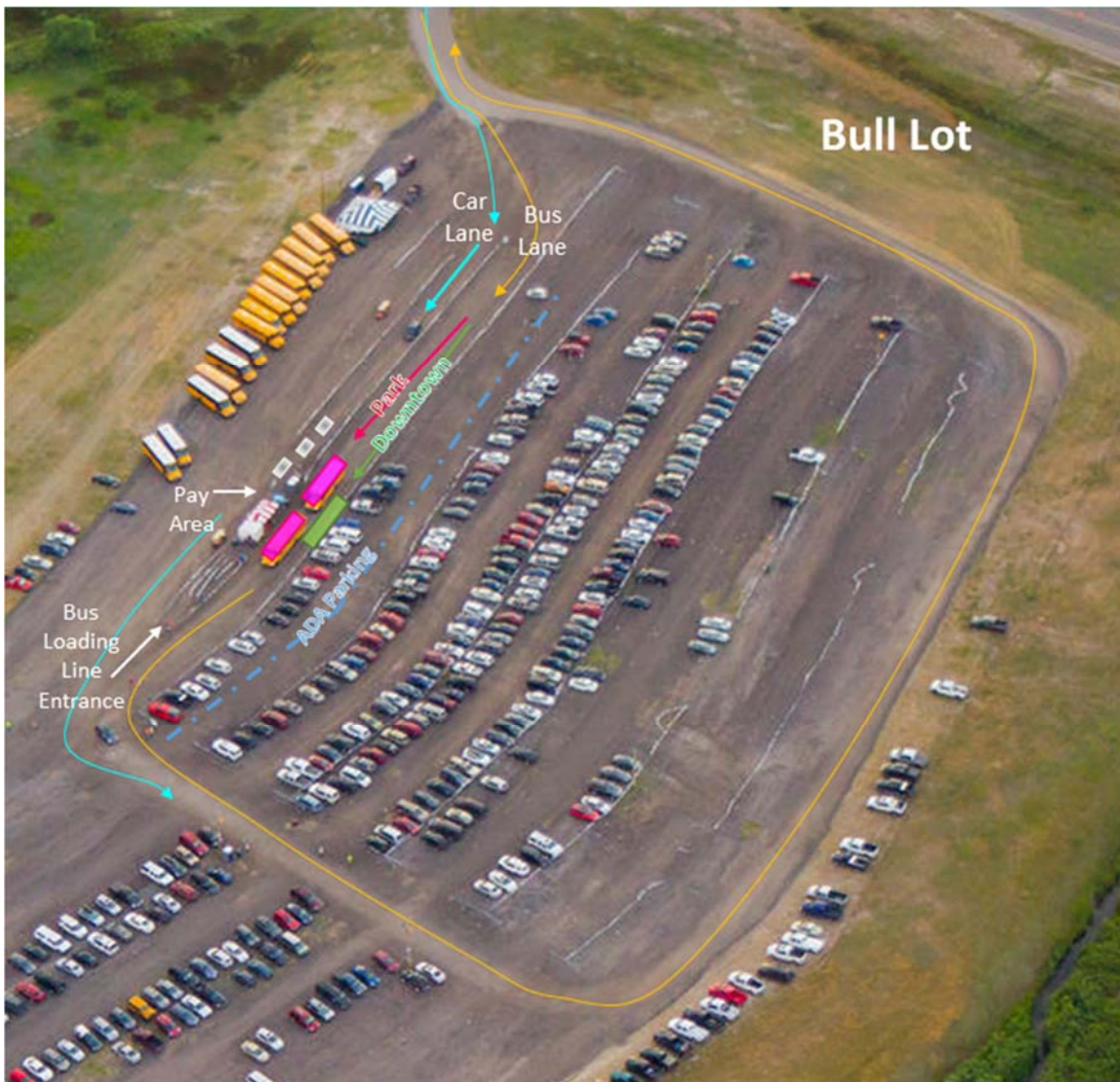


Figure 50: Bull Lot Parking/Circulation Configuration

'Park N Ride' passengers enter the Bull Lot and proceed to the pay tent. The attendant takes their payment and directs them to proceed to a parking place identified by lot attendants/flaggers. After parking the passengers walk to the bus loading area, receive a stamp from a LCSD#1 Transportation employee and board the bus. This stamp allows for entrance to Frontier Park without requiring a gate ticket. Patrons can board a bus for Frontier Park or Downtown. Golf carts are on hand to assist passengers who may have trouble walking across the unpaved lot.

The configuration of the Bull Lot requires passengers getting off a bus to walk directly in front of the bus to return to their vehicles. Ayres Associates staff interviewed 'Park N Ride' patrons with this pedestrian/bus conflict being their number one safety concern. Passengers also expressed concern over pedestrian/vehicle conflicts as there were no designated walk areas to the buses for pedestrians. Some visitors expressed confusion in navigating the lot, not knowing where to go to get on the buses or how to exit the lot. Other comments included a desire for more than one pick up location.



Figure 51: 'Park N Ride' Passengers Walking in Front of Buses



Figure 52: 'Park N Ride' bull Lot Bus Loading Area



Figure 53: Signage at Bull Lot

'Park N Ride' Bull Lot Conclusions:

27. Passengers were concerned with the pedestrian/vehicle conflicts at the Bull Lot. The current lot configuration forces passengers unloading from a bus to walk in front of the bus to access their vehicles. Similarly, the lot lacks a dedicated pedestrian pathway to the bus loading area.

'Park N Ride' – Volunteer Service

CFD provides a 'Park N Ride' service for CFD Volunteers. Because there is limited parking at Frontier Park a volunteer only 'Park N Ride' lot is located at Cheyenne Central High School to accommodate the hundreds of volunteers that are at Frontier Park each day throughout the event. This lot offers free parking to volunteers and dedicated LCSD#1 buses to complete the routes shown in Figure 54 and Figure 55. The route from Central High School to Frontier Park varies depending on the time of day. During evening show egress, vehicles cannot make a right turn from Central Avenue onto Kennedy Road. Therefore, the Volunteer 'Park N Ride' bus takes a different route during evening show egress times. The standard route has the bus entering Frontier Park at Gate V8 along Carey Avenue; the egress route has the bus entering Frontier Park at Gate V12 along Hynds Boulevard.

The volunteer lot at Central High School has 394 available parking spots. As this isn't a 'pay to park' lot, statistics are not kept on how many vehicles use the Volunteer 'Park N Ride' lot. Some volunteers have

told Ayres Associates staff that they prefer to use the Bull Lot for 'Park N Ride' rather than the dedicated volunteer lot because it is closer to their home.

The Volunteer 'Park N Ride' bus can make multiple stops inside Frontier Park, depending on where volunteers are waiting to be picked up or dropped off. Bus drivers have reported that they can get stopped along the internal Frontier Park roads, north of the arena, because of vehicles blocking the roads. Contestants frequently pull in and idle their trucks on these narrow back roads while they register for events. During heavy ingress times the Volunteer 'Park N Ride' bus can get caught in traffic congestion on Kennedy Road and Carey Avenue as it tries to enter Frontier Park via Gate V8.



Figure 54: Volunteer 'Park N Ride' Standard Route

Cheyenne Transit Program Service

For the 2017 CFD the Cheyenne Transit Program (CTP) operated a route that goes from the downtown parking garage to Frontier Park. In previous years CTP provided three to four buses to the Cowboy Triangle. In previous years additional routes were provided including the Ice and Events Center to Frontier Park and Triumph High School to Frontier Park. These alternative routes provided additional ‘Park N Ride’ opportunities for patrons in lots that may be more convenient than the Bull Lot and Downtown. In 2017 CTP was only able to provide one bus for the Cowboy Triangle routes due to ‘out-of-service’ bus reductions for vehicle maintenance. Some Cowboy Triangle route signage was not updated to reflect this change. Signs were placed at Triumph High School and the Ice and Events Center notifying potential patrons of this change.

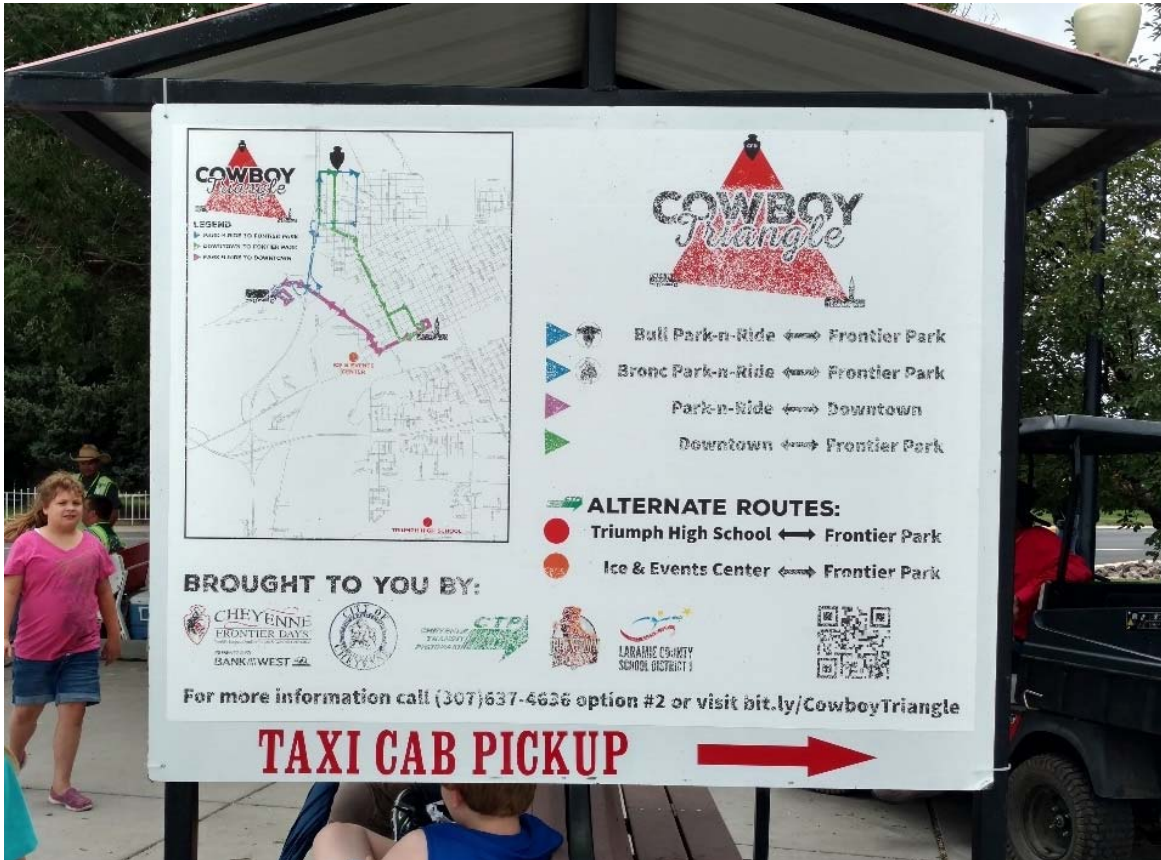


Figure 57: Cowboy Triangle Sign at Frontier Park



Figure 58: CTP Sign at Frontier Park Bus Loop Exit on 8th Avenue

Downtown passenger loading and unloading for the Cowboy Triangle route takes place along the west curb of Pioneer Avenue. The CTP bus(es) are located closer to the North end of the block with the Yellow buses to the Bull Lot located at mid-block.



Figure 59: Downtown Cowboy Triangle Bus Stop Map



Figure 60: Buses at Downtown Cowboy Triangle Bus Stop

Because CTP is partially federally funded, they are required to charge for the service. It costs \$1.50 per passenger for a single direction trip. Figure 61 shows the routes generally used in 2017 for the Downtown to Frontier Park and return trip as part of the Cowboy Triangle. CTP buses can change their routes as needed without obtaining permission from CFD because there is no contract in place between CPD and CFD for this service.

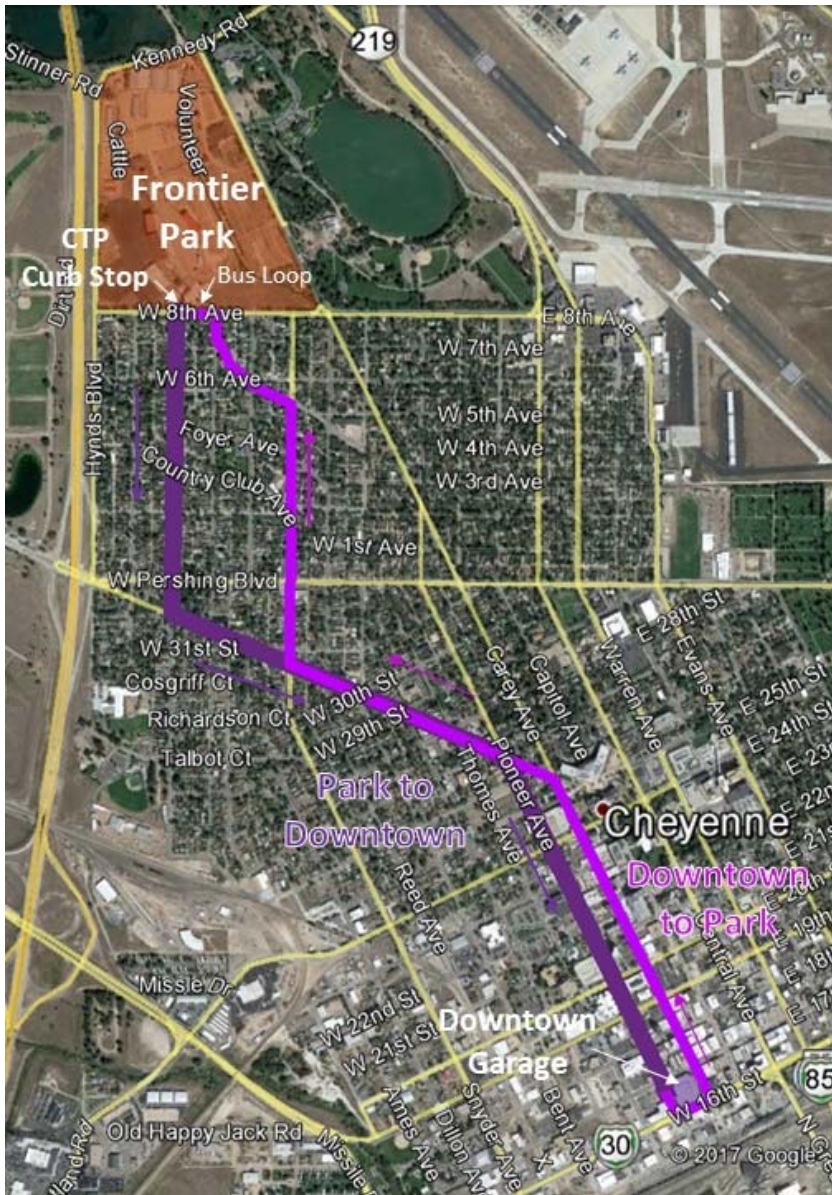


Figure 61: CTP Cowboy Triangle Route - Downtown to Frontier Park

The Downtown to Frontier Park leg of the Cowboy Triangle provided 1,830 rides during the 2017 CFD event. Wednesday, July 26 saw the highest ridership at 361 total riders. Peak times for ridership were from 10 a.m. to 1 p.m., 4 p.m. to 9 p.m. and 10 p.m. to 12 a.m. Appendix C contains a breakdown of CTP ridership by date and time.

CTP buses are smaller than the LCSD#1 buses. Each bus can accommodate 20 seated riders with additional room for people to stand. Frequently, during peak times, the buses are overcrowded. CTP buses are not structurally designed for large capacity loads. Overcrowding on the buses causes maintenance issues and wear on the buses.

Cowboy Triangle Conclusions:

- 30. Some sign information for the Cowboy Triangle and 'Park N Ride' routes were not updated for the 2017 routes.**
- 31. Variability in fleet availability of CTP buses makes it unreliable year to year for Cowboy Triangle support, leading to inconsistency in routes.**

Other Transportation Opportunities

Ride Share: Uber, Lyft and Taxi

During the 2017 CFD, Uber, a company which utilizes a mobile-phone application to connect Uber drivers with passengers who need a ride, was an event sponsor. As a sponsor, there were signs directing visitors to the Uber ride short-term parking at 8th Avenue and the email blast generated by CFD for ticket holders included an ad for Uber. Short-term passenger pick up and drop off locations along the curb in various blocks of 8th Avenue were identified with signage during the event. All available short-term curb parking spaces were in high demand at various times throughout the day, but especially at evening show egress times. Many local residents utilized these locations to pick up and drop off visitors to the Park. The Uber ride-share was heavily used during CFD with reports that Uber corporate called in additional drivers from surrounding communities to be available to service the CFD demand.



Figure 62: Uber Signage at North Side of Lot B



Figure 63: Short-Term Parking Along South Side of 8th Avenue

Private Buses

Numerous private companies operate their own tour buses or vans, bringing visitors to CFD. Some of these companies bring visitors from out-of-town and some are local such as shuttle vans from Cheyenne area campgrounds and hotels. These buses compete for short-term curb parking along 8th Avenue with the other ride share services and private vehicles. CFD Volunteers are given strict instructions not to allow any vehicles, except LCSD#1 buses into the bus loop on 8th Avenue. Several times a day private tour buses and vans attempt to access the bus loop and are denied, causing traffic delays as they block traffic on 8th Avenue for both the designated 'Park N Ride' buses as well as through vehicular traffic.



Figure 64: Private Tour Bus Blocking Traffic on 8th Ave.

Pedi-Cabs

Pedi-Cabs are pedal driven bicycle frame vehicles which serve as taxis. During the 2017 CFD event 13 pedal cabs and their operators were licensed to operate from July 20 to July 30. Both the pedi-cab vehicle and its operator must be licensed through the City of Cheyenne. To qualify as an operator, the applicant must pass a CFD background check. 2017 is the second year pedi-cabs have been operating in Cheyenne during CFD. Pedi-cab are considered a vehicle and must operate as a car, following the same traffic rules as motor vehicles. Pedi-cabs were instructed to stage along the north side of 8th Avenue between Gate V3 and the entrance to the bus loop, opposite Dey Avenue. Cheyenne CPD indicated that pedi-cab operators were seen riding on sidewalks, running red lights and in other ways violating traffic laws. Cheyenne Police indicated they had several conversations with the owner of the pedi-cab company about the rules for operating a pedi-cab and expectations of the operators. CPD further stated that in the future the pedi-cab operators will receive citations for violating traffic rules.



Figure 65: Pedi-Cab Staged on 8th Avenue Opposite Dey Ave.

Traffic Related Communications

Since there are numerous public and private transportation service providers and agencies involved in CFD operations communication is very important to coordinate day to day activities. Over the past several City of Cheyenne Administrations, the Mayor has held planning meetings in preparation for CFD, starting just after the first of each year. These meetings involved the various City Departments including Traffic Engineering, Parks, Special Events and Cheyenne Police Departments. In some years the Cheyenne Transit Program has been involved. Additionally, CFD Security Committee coordinates directly with LCSD#1 to finalize plans for 'Park N Ride' bus routes. For the 2017 event, the CFD Security Committee coordinated with WYDOT to request access to the closed Missile Drive interstate off ramp for 'Park N Ride' buses.

As part of this study, a Steering Committee meeting was held on July 13, 2017, with a second meeting immediately following CFD on August 3rd. Attendance at the meetings included representatives from the following organizations: CFD, Cheyenne MPO, Cheyenne Transit Program, WYDOT Traffic, WYDOT Planning, and LCSD#1 Transportation. These meetings proved very beneficial in having all parties together to discuss operations just prior to and after the 2017 event. It is essential that all parties understand the ingress and egress traffic operations as well as planned 'Park N Ride' bus operation.

Real-time communication between City Engineering, CPD, Cheyenne Transit Program, LCSD#1, WYDOT and CFD is essential to keeping vehicular and pedestrian traffic moving around Frontier Park. Current communication between these entities has generally been limited to word-of-mouth and phone calls. A

staffed Traffic Control Operation Center within Frontier Park would assist with coordinating real time transportation communications. This control center would serve many functions:

- Ensure that lane closures and lane delineation, such as along Kennedy Road at Central Avenue, happens at the same time and in the same manner each day of the event.
- Receive alerts from the various entities of traffic or pedestrian crashes or other operations issues that would require bus re-routing.
- Receive alerts from the various entities of parking lot capacity and push this information out to parking lot staff to redirect vehicles.
- Provide real-time messages on I-25 related to 'Park N Ride' lot use and traffic route congestion problems.
- Coordinate real time traffic control information between CFD, its volunteers and City Police.

Communication Conclusions:

- 32. Cheyenne City Transit Program wasn't involved in the City of Cheyenne pre-CFD planning meetings in 2017.**
- 33. At the CFD Study Steering Committee Meeting in June 2017 there was confusion about the planned routes for the 'Park N Ride' buses.**
- 34. During peak egress and ingress all parties are working to meet their responsibilities, whether it be 'Park N Ride', traffic flow and/or safety. However, these parties are not always in communication with each other.**

Technology for Communications

CFD has created a smart phone app to communicate event information to patrons. These types of apps can be programmed to push traffic and parking alerts out to app users. Updates to this app could include real time traffic alerts and parking updates to CFD patrons. While the app has a 'Maps' tab, it did not contain maps for the 'Park N Ride' / Cowboy Triangle parking options.

WYDOT maintains several permanent dynamic message signs along Interstates 80 and 25. These Dynamic Message Signs (DMS) can be programmed to provide real time information to drivers. WYDOT also assists CFD traffic operations by providing five trailer mounted Portable Dynamic Message Signs (PDMS), the Wyoroad.info website, 511 phone system, text and email alerts, and the Highway Advisory Radio. The permanent DMS are set up according to the programs included in Appendix E. CFD Scenario A is set up for parade days (Saturday, Tuesday, Thursday, Saturday). The goal is to inform public of increase traffic at the parking lots at Frontier Park. The Second Phase informs the public to the alternative of 'Park N Ride'. CFD Scenario B is set up for non-parade days. The messaging is set to inform of the alternative of 'Park N Ride'. CFD scenario C is when the parking lots at Frontier Park are full and the only available parking is at the 'Park N Ride'. CFD Security Committee personnel will monitor parking lot capacity and notify WYDOT to engage CFD scenario C when the public parking lots at Frontier Park reach 75% capacity.

In 2017 two PDMSs were placed on College Dr., one south of the Interstate-80 interchange and the other east of US85. These were used for the closures of College Dr. for the Thunderbird Airshow. Additionally, two PDMSs were placed on WY210 (Missile Drive / Happy Jack Road) for 'Park N Ride' lots. These were turned on when the 'Park N Ride' was open and turned off an hour before parking closes. One PDMS was placed on Interstate-25 northbound south of Exit 12 (Central Avenue). This PDMS is used to inform travelers of heavy event traffic that regularly occurs at Exit 12.

Additional variable message signs are located throughout Cheyenne - on routes to Frontier Park, which provide information to visitors. Some of these variable message signs are owned and operated by CPD and some are owned and operated by the City of Cheyenne. The City variable message signs will need to be upgraded with real-time communication equipment to provide active message change capabilities., a system can be put in place to push parking lot space availability and travel information to these dynamic message signs which will provide additional guidance to visitors.

Technology Conclusions:

- 35. Communication between all traffic related CFD operations is not utilizing available technology for real time communication to assist with traffic management.**
- 36. Information about parking availability is not communicated directly to patrons in real time except at the WYDOT variable message signs along the Interstates.**

Increasing 'Park N Ride' Usage

As Cheyenne Frontier Days attendance grows the demand for parking will continue to increase while available space at Frontier Park for parking will decrease as the event facilities expand. Parking adjacent to Frontier Park, both in the Avenues Neighborhood and in Lions Park is at capacity. The growth of Frontier Days is dependent on the growth of the 'Park N Ride' system to meet customer parking demands. This will be accomplished by making the 'Park N Ride' service more attractive to customers by minimizing shuttle bus travel times between Frontier Park and 'Park N Ride' lots.

Monetary Incentives

Currently patrons that pay for parking at the Bull Lot receive free gate admission for every person in their vehicle. Bull Lot parking costs \$10 per vehicle and saves each person in that vehicle the \$3 Frontier Park gate admission fee. Bull Lot users who have tickets to that days' rodeo or night show are required to also pay \$10 to park, but as their rodeo or night show ticket grants them free gate admission, they do not have the same monetary incentive to use the 'Park N Ride' system as non-ticket holders. CFD should consider including the Park N Ride fee in the rodeo and night show tickets to encourage use of the system. The \$10 parking fee is required of all vehicles each time they enter the parking lot. By making this a daily rate, rather than a per use fee, patrons who wish to visit the park multiple times in one day may choose to use 'Park N Ride' over other parking opportunities.

Reduce Wait Time to Increase Ridership

At night show egress time 'Park N Ride' passengers can wait in line for up to an hour at Frontier Park to board a bus to return to the Bull Lot. This wait time can be very discouraging for would be 'Park N Ride' passengers. Relocating the bus loading/unloading area at Frontier Park can reduce this wait time by:

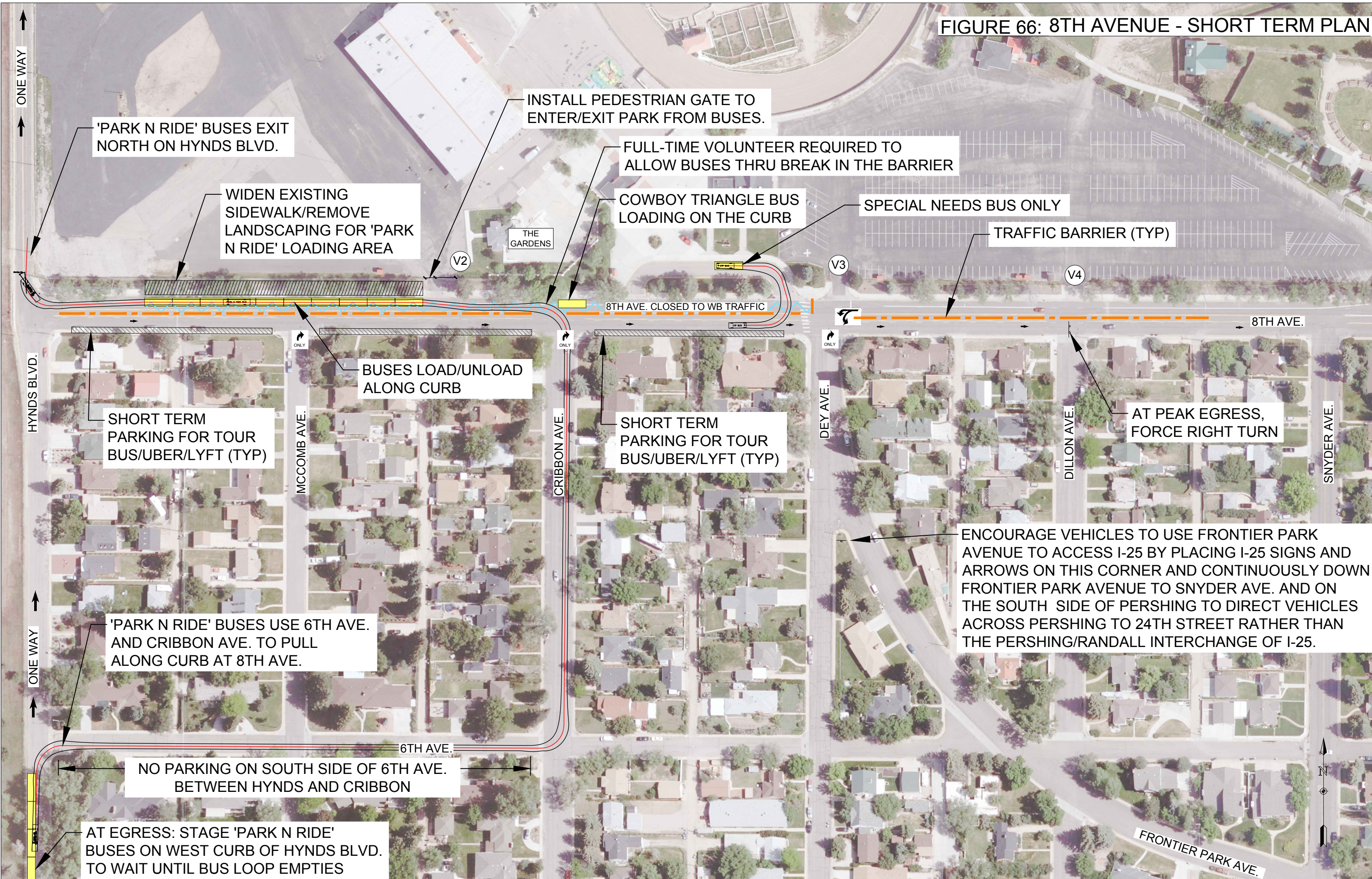
- Allowing more buses to load simultaneously
- Providing a dedicated loading area with sufficient boarding room for line delineation to reduce the confusion and line cutting by those waiting to board the buses and away from the high pedestrian demand leaving Frontier Park to access their vehicles parked in the Avenues Neighborhood
- Providing a different egress bus route to get buses away from the congested intersections along Pershing Boulevard

Several options for a relocated 'Park N Ride' loading area at Frontier Park were explored and can be seen in Appendix D. The long-term Frontier Park Master Plan indicates a relocated bus loop along Carey Avenue between the entrance and exit drives to Lot C. A need exists to provide a short-term solution to improve 'Park N Ride' bus loading and travel time to/from the Bull Lot. The recommended option for next year is shown on Figure 66 and temporarily relocates the 'Park N Ride' Frontier Park passenger loading and discharge area west of its existing location with a separate gate adjacent to the Frontier Park Gardens area. This will require sidewalk widening to accommodate passenger loading needs during rodeo and night show egress times.

The recommended longer-term improvement involves relocating the 'Park N Ride' passenger drop-off/pick-up location along Hynds Boulevard. The recommended improvement locating the passenger drop-off/pick-up area in place of the Buckin' A Saloon Tent as shown in Figure 68. This preferred option creates a new CFD entrance that will require aesthetic improvements and a new service road between the carnival activity and carnival parking lot area. This option clearly separates pedestrian conflicts from the Main Gate area and improves traffic safety along 8th Avenue. Buses leaving CFD can travel north on Hynds Boulevard to reduce existing bus traffic congestion delays encountered along Snyder Avenue and Pershing Boulevard.

It is Ayres Associates professional opinion that the Master Plan bus loop on Carey Avenue can create smaller inefficient parking operation areas for Lot C, and does not provide opportunities to improve 'Park N Ride' bus travel times between Frontier Park and a 'Park N Ride' lot.

FIGURE 66: 8TH AVENUE - SHORT TERM PLAN



'PARK N RIDE' BUSES EXIT NORTH ON HYNDS BLVD.

WIDEN EXISTING SIDEWALK/REMOVE LANDSCAPING FOR 'PARK N RIDE' LOADING AREA

INSTALL PEDESTRIAN GATE TO ENTER/EXIT PARK FROM BUSES.

FULL-TIME VOLUNTEER REQUIRED TO ALLOW BUSES THRU BREAK IN THE BARRIER

COWBOY TRIANGLE BUS LOADING ON THE CURB

SPECIAL NEEDS BUS ONLY

TRAFFIC BARRIER (TYP)

V2

V3

V4

8TH AVE. CLOSED TO WB TRAFFIC

8TH AVE.

HYNDS BLVD.

MCCOMB AVE.

CRIBBON AVE.

DEY AVE.

DILLON AVE.

SNYDER AVE.

SHORT TERM PARKING FOR TOUR BUS/UBER/LYFT (TYP)

BUSES LOAD/UNLOAD ALONG CURB

SHORT TERM PARKING FOR TOUR BUS/UBER/LYFT (TYP)

AT PEAK EGRESS, FORCE RIGHT TURN

'PARK N RIDE' BUSES USE 6TH AVE. AND CRIBBON AVE. TO PULL ALONG CURB AT 8TH AVE.

ENCOURAGE VEHICLES TO USE FRONTIER PARK AVENUE TO ACCESS I-25 BY PLACING I-25 SIGNS AND ARROWS ON THIS CORNER AND CONTINUOUSLY DOWN FRONTIER PARK AVENUE TO SNYDER AVE. AND ON THE SOUTH SIDE OF PERSHING TO DIRECT VEHICLES ACROSS PERSHING TO 24TH STREET RATHER THAN THE PERSHING/RANDALL INTERCHANGE OF I-25.

NO PARKING ON SOUTH SIDE OF 6TH AVE. BETWEEN HYNDS AND CRIBBON

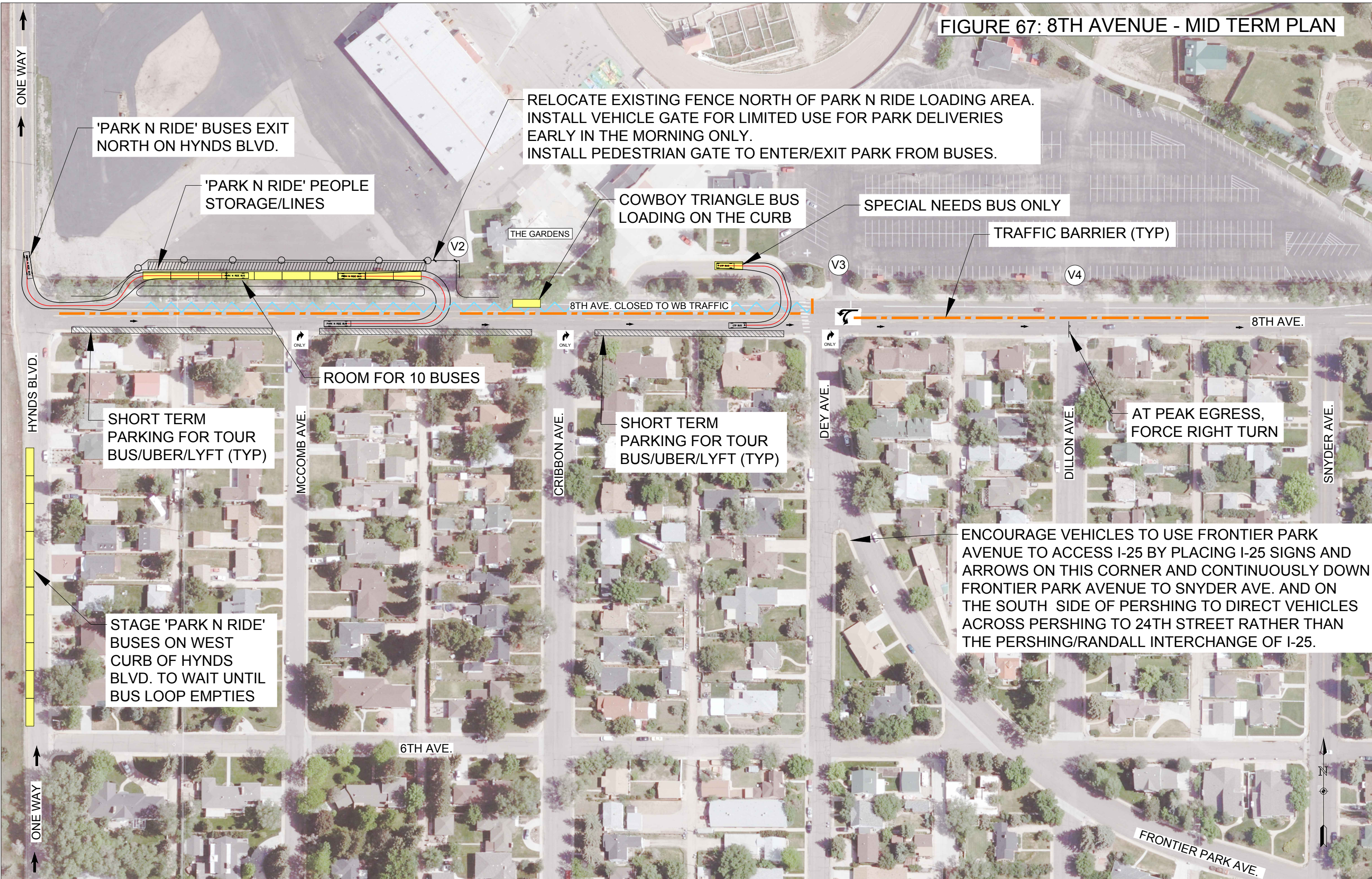
AT EGRESS: STAGE 'PARK N RIDE' BUSES ON WEST CURB OF HYNDS BLVD. TO WAIT UNTIL BUS LOOP EMPTIES

6TH AVE.

FRONTIER PARK AVE.



FIGURE 67: 8TH AVENUE - MID TERM PLAN



'PARK N RIDE' BUSES EXIT NORTH ON HYNDS BLVD.

'PARK N RIDE' PEOPLE STORAGE/LINES

RELOCATE EXISTING FENCE NORTH OF PARK N RIDE LOADING AREA. INSTALL VEHICLE GATE FOR LIMITED USE FOR PARK DELIVERIES EARLY IN THE MORNING ONLY. INSTALL PEDESTRIAN GATE TO ENTER/EXIT PARK FROM BUSES.

COWBOY TRIANGLE BUS LOADING ON THE CURB

SPECIAL NEEDS BUS ONLY

TRAFFIC BARRIER (TYP)

8TH AVE. CLOSED TO WB TRAFFIC

8TH AVE.

HYNDS BLVD.

ROOM FOR 10 BUSES

SHORT TERM PARKING FOR TOUR BUS/UBER/LYFT (TYP)

SHORT TERM PARKING FOR TOUR BUS/UBER/LYFT (TYP)

AT PEAK EGRESS, FORCE RIGHT TURN

MCCOMB AVE.

CRIBBON AVE.

DEY AVE.

DILLON AVE.

SNYDER AVE.

ENCOURAGE VEHICLES TO USE FRONTIER PARK AVENUE TO ACCESS I-25 BY PLACING I-25 SIGNS AND ARROWS ON THIS CORNER AND CONTINUOUSLY DOWN FRONTIER PARK AVENUE TO SNYDER AVE. AND ON THE SOUTH SIDE OF PERSHING TO DIRECT VEHICLES ACROSS PERSHING TO 24TH STREET RATHER THAN THE PERSHING/RANDALL INTERCHANGE OF I-25.

STAGE 'PARK N RIDE' BUSES ON WEST CURB OF HYNDS BLVD. TO WAIT UNTIL BUS LOOP EMPTIES

6TH AVE.

FRONTIER PARK AVE.

ONE WAY

ONE WAY





BUS LOADING AREA CONTINUES SOUTH ON HYNDS BLVD.



Figure 68: Recommended 'Park N Ride' Location

Short-Term CFD Recommendations

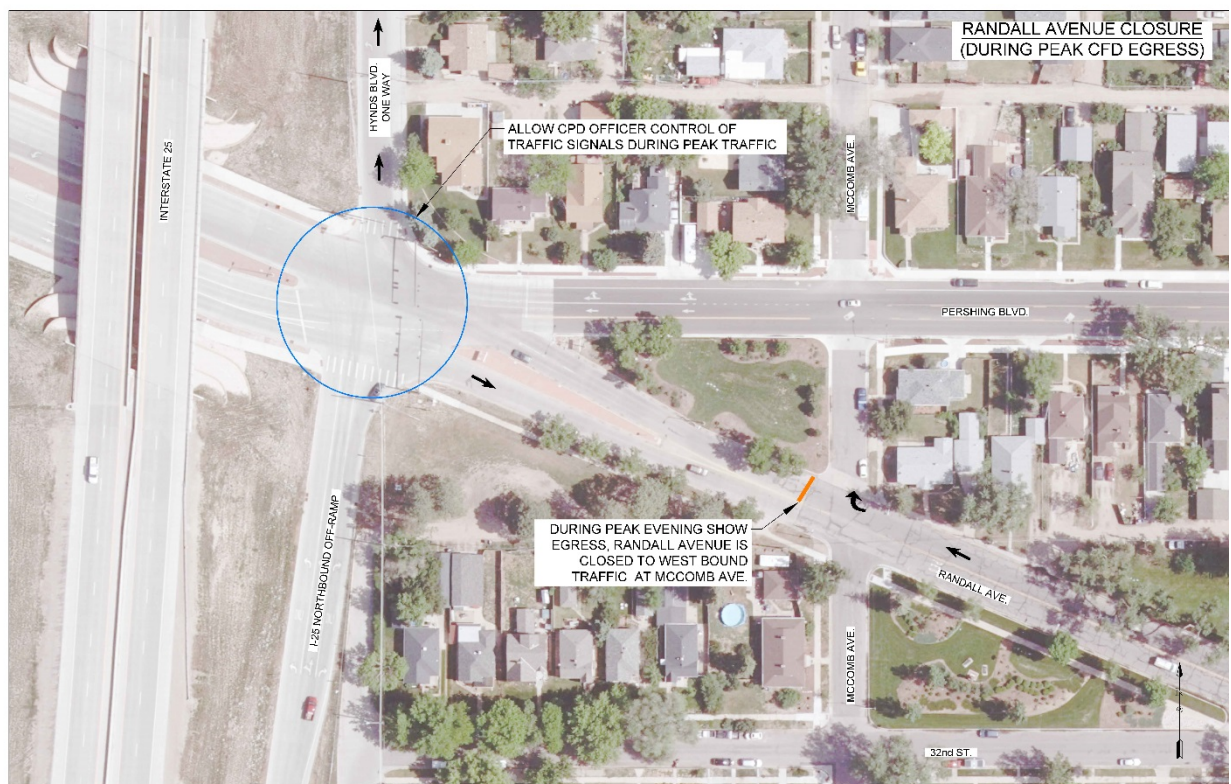
The previous section of this report identified transportation conclusions based on Steering Committee interviews, field observations and data collected by Ayres Associates during the 2017 Cheyenne Frontier Days. The following is a list of recommendations correlated to the numbered conclusions previously listed in this study.

- a. Install portable temporary traffic signals, with pedestrian indication signal heads, at the 8th Avenue intersection with Carey Avenue. Product data sheets for temporary signals have been placed in Appendix G following the October 11, 2017 Steering Committee notes.
- b. Temporarily close the segment of 8th Avenue to westbound traffic between Dey Avenue and Hynds Boulevard. 8th Avenue will remain open for a single lane of eastbound traffic throughout the corridor. Refer to Figure 66 on page 66 and Figure 67 on page 67. Figure 66 indicates 'Park N Ride' buses utilizing the existing north curb line of 8th Avenue for passenger loading / unloading. Figure 67 indicates a dedicated 'Park N Ride' bus loop constructed west of the existing bus loop.
 - i. Access to Lot B at Gate V4 will remain open opposite of Dillon Avenue.
 - ii. Access to 15 Minute Ticket Pick up Parking will remain open opposite of Dey Avenue at Gate V3.
 - iii. Tour bus, taxi, Uber and Lyft curb side short-term parking would be permitted on the south side of 8th Avenue from Hynds Boulevard to Dey Avenue, and on the north side of 8th Avenue from Carey Avenue to Dillon Avenue.
- c. Provide temporary street lighting, particularly at the intersections of 8th Avenue with Carey Avenue and with Dey Avenue.
- d. Increase number of cashiers at Gate V8 entrance to Lot C to reduce park vehicles more efficiently and egress queuing on Carey Avenue, Kennedy Road and Central Avenue. This includes relocating the CFD service vehicle location for exiting Lot C to a location closer to the 'Old West' Museum to reduce conflicts and delays as vehicles enter the parking rows of Lot C and CFD service vehicles compete for space. Refer to Figure 72: V8 Cashiering Diagram on page 76.
- e. Install temporary signage at the exit to Lot C (Gate V7) instructing vehicles with trailers not to turn right onto Carey Avenue but to proceed to 6th Avenue to Hynds Boulevard to access Gate V12.
- f. Install portable temporary traffic signals at Kennedy Road intersection with Central Avenue. Product data sheets for temporary signals have been placed in Appendix F following the October 11, 2017 Steering Committee notes.
- g. Roadway lane configuration and closure plans will be developed and utilized by CPD and CFD Security Committee Volunteers for each day's ingress and egress times. Refer to Figure 71 on page 75 for recommended configuration in the Kennedy Road / Carey Avenue / Central Avenue area.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

- i. Establish a central on-site Traffic Control Communications Center with the responsibility of verifying lane configuration and closure plan was implemented each ingress / egress period,
 - ii. Coordinate police, WYDOT and Volunteer traffic control in response to crashes and congestion problems,
 - iii. Notify CFD patrons of travel routes to CFD, 'Park N Ride' lots and Frontier Park parking availability.
- h. Consider moving the start time of the parade earlier to allow more time for parade participants such as riders, horses, and wagons to return to the park before rodeo ingress begins.
- i. Construct sidewalks along Kennedy Road from Central Avenue to Carey Avenue. Pedestrian facilities should continue along Carey Avenue to 8th Avenue provide access to Frontier Park.
- j. Install signage along Hynds Boulevard, north of 8th Avenue stating that Gate V12 is for pass holders only and directing traffic toward Kennedy Road for parking.
- k. Construct sidewalk along Hynds Boulevard from 8th Avenue to Kennedy Road.
- l. Elevate the traffic signal status at Pershing Boulevard / Randall Avenue / Hynds Boulevard to "Critical" and train CPD officers in manual push button signal control protocol.
- m. Close Randall Avenue to westbound traffic between Pershing Boulevard and McComb Avenue with CPD squad cars during CFD evening show egress times to improve Pershing Boulevard

Figure 69: Randall Avenue Westbound Closure



recommended to encourage westbound Randall Avenue traffic to use Snyder Avenue to access Pershing Boulevard.

- n. During each Frontier Days event, increase the Interstate-25 northbound off-ramp green time at Pershing Boulevard during peak hours: 5:00 p.m. to 8:00 p.m. and 11 p.m. to 1:00 a.m. This adjustment will need to be made annually during the event.
- o. Upgrade the traffic signals at Snyder Avenue and Pershing Boulevard to allow for manual push button signal control. Allow CPD officers to utilize the manual push button signal control during CFD.
- p. Reconstruct narrow section of sidewalk at southeast Frontier Park entrance, near intersection of Carey Avenue and 8th Avenue to eliminate pedestrian obstruction.
- q. Provided numerous bicycle racks on Frontier Park to encourage bicycle travel to and from the Park.
- r. Install a 'Keep Right' sign on median north of Putt Hutt and Kiwanis Community House for southbound traffic.
- s. Reconfigure Gate V8 entrance and cashiering operation to reduce traffic backups on Carey Avenue, Kennedy Road and Central Avenue. Refer to Figure 72: V8 Cashiering Diagram on page 76.
- t. Relocate 'Park N Ride' passenger loading/unloading area at Frontier Park. Appendix D contains concepts and discussions about alternate 'Park N Ride' areas at Frontier Park. The short-term recommendation is to move the 'Park N Ride' loading/unloading area west of the Main Gate as shown in Figure 66 on page 66.
 - i. 'Park N Ride' buses leave Frontier Park by travelling north on Hynds Boulevard to Kennedy Road and Central Avenue to access Interstate-25 at the Central Avenue interchange.
- u. Hynds Boulevard should be converted permanently to a one-way northbound street between Randall Avenue / Pershing Boulevard and 8th Avenue. During CFD, the segment of Hynds Boulevard should be temporarily operated as a one-way northbound from 8th Avenue to Gate V12 with temporary signing on Kennedy Avenue that states 'Access Restricted to Cheyenne Country Club and CFD Authorized Gate 12 Pass Holders.' Proper signage will be critical as Hynds Boulevard will be operating as a one-way south of Gate V12 causing any unauthorized southbound traffic on Hynds Boulevard to do a U-turn at Gate V12.
- v. Utilize bus preemption detectors at traffic signals to provide priority to 'Park N Ride' buses. This will require the installation of bus priority emitters on each 'Park N Ride' bus and receivers for selected traffic signal controllers.
- w. LCSD#1 buses are not required to use their red flashing lights and pedestrian arms when contracted for non-school activities. Prior to CFD, LCSD#1 drivers should be briefed about this regulation.

- x. At all streets, adjacent to 8th Avenue - where on street parking is permitted continue to stripe and sign the corners 5' back from the radius as 'No Parking' to accommodate bus turning movements. It may be necessary to increase the 'No Parking' area for buses turning south onto Snyder Avenue.
- y. Permanently change Hynds Boulevard to a one-way, northbound street between Pershing Boulevard and 8th Avenue.
- z. Place wayfinding signage along westbound Interstate 80 to direct visitors to the 'Park N Ride' lot.
- aa. Increase the size of the magnet that covers the "school bus" sign on the side of the LCSD#1 buses. The magnet covers identify bus routes for the "CFD-Bull Lot" or "CFD-Downtown."
- bb. Reconfigure the 'Park N Ride' Bull Lot operation so that pedestrians do not have to walk in front of buses. Provide a dedicated pathway area for pedestrians as they approach and leave the bus pick-up/drop-off area. Figure 73 provides a reconfigured parking/circulation layout for the Bull Lot.
- cc. Cashiering operation at Gate V8 can be modified to increase parking efficiency and reduce internal operating conflicts as well as reduce backups on Kennedy Road, which can extend to Central Avenue. Refer to Figure 72: V8 Cashiering Diagram.
- dd. CFD on-grounds parking is highly desirable for volunteers and contestants, but more space is needed in the north part of the Park for operations. Additional space is needed for contestants to temporarily park their trucks and trailers to register for rodeo events. Similarly, night show acts continue to grow and require more space for the many trucks that accompany each performer. Reducing the amount of vehicle parking spaces in the northern part of the Park will allow for additional room necessary for the daily event operation. E Lot (the parking lot inside Lions Park) on the east side of Carey Avenue is a 'pay to park' lot operated by CFD during the event. Consider this lot as parking for contestants to free up 1.7 acres of land on the north side of Frontier Park for operations.
- ee. Ensure all maps display correct information for the 'Park N Ride' and Cowboy Triangle bus routes.
 - i. Utilize the existing Downtown kiosks to display Cowboy Triangle information for CFD visitors with alternate transportation options to Frontier Park.
- ff. CTP buses, which are all equipped with handicap lifts, should be used for the "Special Needs" 'Park N Ride' service only, and not for Cowboy Triangle support, to maintain consistency among available routes and parking locations.
 - i. CFD should provide ride tokens to special needs riders to be submitted as payment to the CTP bus driver.

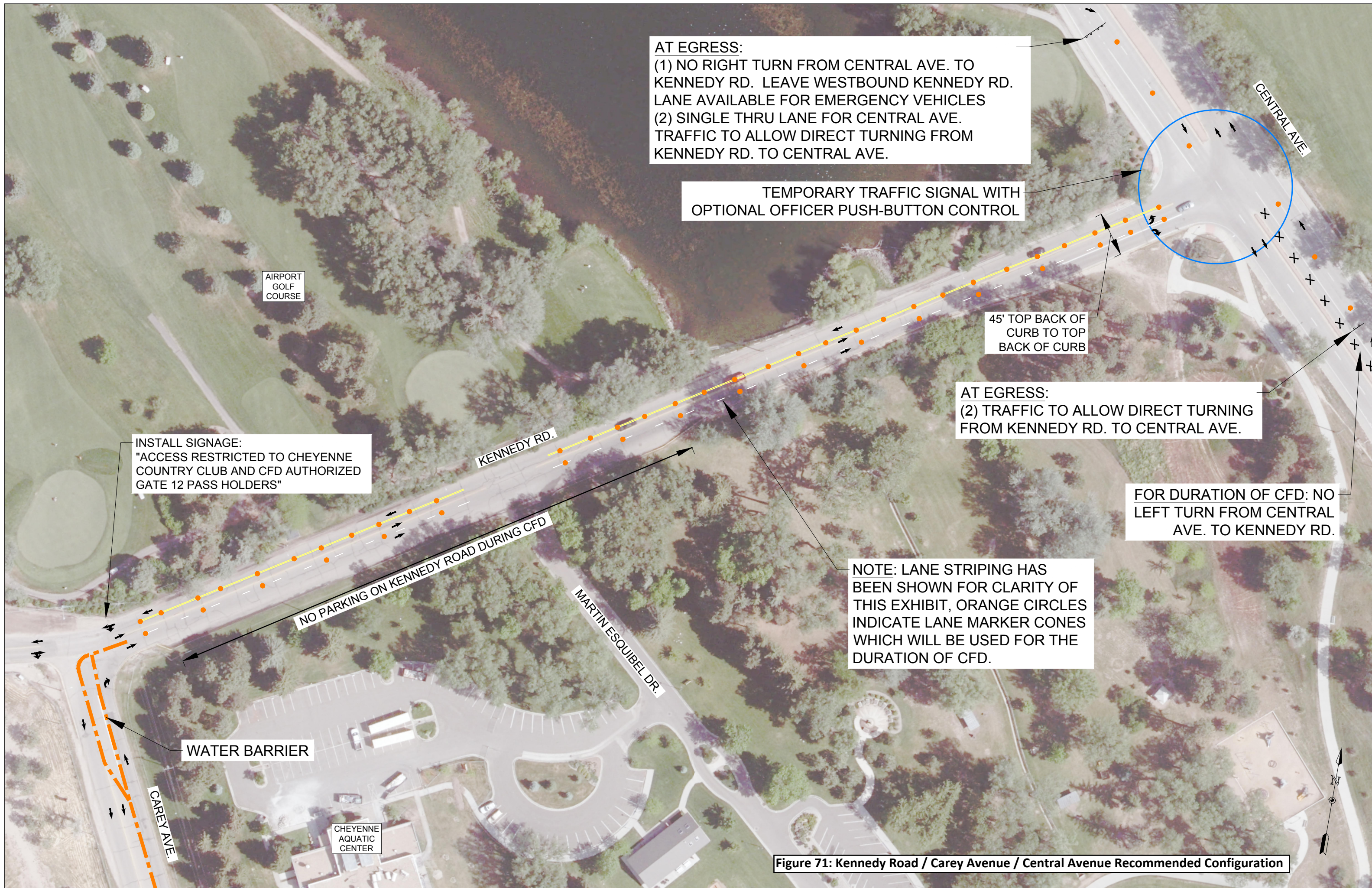


Figure 70: Cheyenne Transit Program Bus with Wheelchair Lift

- gg. Conduct annual CFD kick-off and debriefing meetings with City of Cheyenne Traffic Engineering, Cheyenne Police Department (CPD), Cheyenne Frontier Days (CFD) staff/volunteers, WYDOT, Cheyenne Transit Program (CTP), and Laramie County School District #1 Transit representatives to ensure all parties are prepared for the upcoming event and resolve any issues prior to the year's event. Debrief meetings following the annual event will allow for a discussion on issues that arose during the event such that they can be address for the next year's event.
- hh. Pre-Event meetings shall include clearly defined bus routes for CTP and LCSD#1 buses. This will become particularly important if the Bull Lot is relocated and a new route is required.
- ii. Create a full-time staffed Traffic Control Communications Center within Frontier Park for communications of real time traffic/pedestrian control information to CPD, CFD, City Engineering, WYDOT and Cheyenne Transit Programs.
 - i. Utilize the Traffic Control Communications Center to ensure that updates to dynamic message signs are made accurately and timely.
 - ii. Utilize the Traffic Control Communications Center to ensure that traffic control which changes throughout the day to accommodate ingress and egress traffic is in place and removed consistently and according to plan each day of the event.
 - iii. As temporary variable message signs used for CFD are to be replaced, upgrade them to models that allow for message text to be updated remotely such that they can provide real-time parking and traffic information.
- jj. Create a CFD traffic communications smartphone app for internal use by CPD, City personnel and CFD Volunteers with real-time bus location information. LCSD#1 buses are already equipped with GPS location software. This app would allow all parties to know where the buses are and allow them to be re-routed on the fly if there is a traffic issue that is impacting the buses. CPD officers would be alerted to the change in real time to better anticipate the needs of the intersection they are controlling.
- kk. Utilize the CFD smart phone app for traffic conditions and control updates to provide alerts to CFD patrons.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

- i. Add a parking option and/or 'Park N Ride'/Cowboy Triangle Maps to the 'Maps' tab on the app.
- ii. Send Park N Ride Buses leaving Frontier Park to travel north on Hynds Boulevard to Kennedy Road and Central Avenue to access Interstate-25 at the Central Avenue interchange.
- iii. Allow CPD officers to utilize the manual traffic signal control equipment at the Pershing Boulevard / Randall Avenue / Hynds Boulevard intersection.



AT EGRESS:
(1) NO RIGHT TURN FROM CENTRAL AVE. TO KENNEDY RD. LEAVE WESTBOUND KENNEDY RD. LANE AVAILABLE FOR EMERGENCY VEHICLES
(2) SINGLE THRU LANE FOR CENTRAL AVE. TRAFFIC TO ALLOW DIRECT TURNING FROM KENNEDY RD. TO CENTRAL AVE.

TEMPORARY TRAFFIC SIGNAL WITH OPTIONAL OFFICER PUSH-BUTTON CONTROL

45' TOP BACK OF CURB TO TOP BACK OF CURB

AT EGRESS:
(2) TRAFFIC TO ALLOW DIRECT TURNING FROM KENNEDY RD. TO CENTRAL AVE.

FOR DURATION OF CFD: NO LEFT TURN FROM CENTRAL AVE. TO KENNEDY RD.

INSTALL SIGNAGE:
"ACCESS RESTRICTED TO CHEYENNE COUNTRY CLUB AND CFD AUTHORIZED GATE 12 PASS HOLDERS"

NO PARKING ON KENNEDY ROAD DURING CFD

NOTE: LANE STRIPING HAS BEEN SHOWN FOR CLARITY OF THIS EXHIBIT, ORANGE CIRCLES INDICATE LANE MARKER CONES WHICH WILL BE USED FOR THE DURATION OF CFD.

WATER BARRIER

CAREY AVE.

CHEYENNE AQUATIC CENTER

KENNEDY RD.

MARTIN ESQUIBEL DR.

CENTRAL AVE.

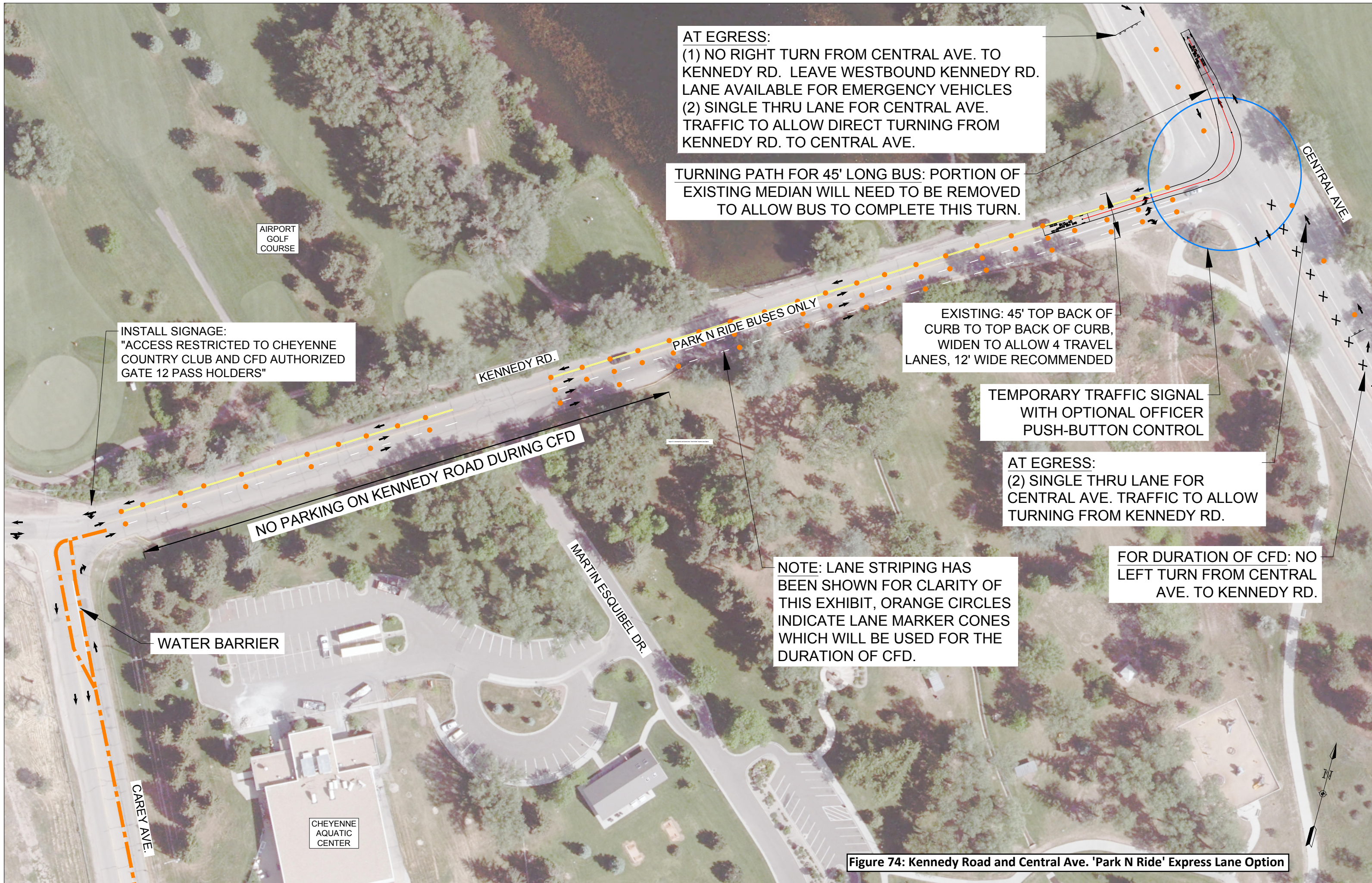
Figure 71: Kennedy Road / Carey Avenue / Central Avenue Recommended Configuration



Figure 72: V8 Cashing Diagram

Long-Term CFD Recommendations

- A. Construct a permanent relocated enhanced 'Park N Ride' bus passenger drop-off/pick-up area accessed from Hynds Boulevard that involves relocation of the Buckin' A Saloon tent within Frontier Park and an enhanced bus access road between the carnival area and carnival parking lot that allows buses to exit Frontier Park via Gate V12 to proceed north on Hynds Boulevard. (This is a change from the CFD Master Plan.)
- B. Widen Kennedy Road to maintain a westbound Frontier Park access lane for emergency responders and accommodate an eastbound 'Park N Ride' bus express lane as shown in Figure 74 on page 79. Kennedy Road should be widened between Central Avenue and Martin Esquibel Drive to match the roadway width between Carey Avenue and Martin Esquibel Drive.
- C. Construct adequate width sidewalks along the entire perimeter of Frontier Park.
- D. Construct a sidewalk along Kennedy Road.
- E. Construct a sidewalk along Carey Avenue adjacent to Frontier Park and Lions Park to provide an alternate pedestrian route from the Avenues Neighborhood to the relocated Main Gate along Carey Avenue.
- F. Upgrade and/or install street lighting around Frontier Park, particularly along 8th Avenue, Carey Avenue and Hynds Boulevard.
- G. Identify and pave a permanent 'Park N Ride' lot to replace the Bull Lot. Stripe the parking spaced in this lot to allow for more vehicle capacity.



AT EGRESS:
(1) NO RIGHT TURN FROM CENTRAL AVE. TO KENNEDY RD. LEAVE WESTBOUND KENNEDY RD. LANE AVAILABLE FOR EMERGENCY VEHICLES
(2) SINGLE THRU LANE FOR CENTRAL AVE. TRAFFIC TO ALLOW DIRECT TURNING FROM KENNEDY RD. TO CENTRAL AVE.

TURNING PATH FOR 45' LONG BUS: PORTION OF EXISTING MEDIAN WILL NEED TO BE REMOVED TO ALLOW BUS TO COMPLETE THIS TURN.

EXISTING: 45' TOP BACK OF CURB TO TOP BACK OF CURB, WIDEN TO ALLOW 4 TRAVEL LANES, 12' WIDE RECOMMENDED

TEMPORARY TRAFFIC SIGNAL WITH OPTIONAL OFFICER PUSH-BUTTON CONTROL

AT EGRESS:
(2) SINGLE THRU LANE FOR CENTRAL AVE. TRAFFIC TO ALLOW TURNING FROM KENNEDY RD.

FOR DURATION OF CFD: NO LEFT TURN FROM CENTRAL AVE. TO KENNEDY RD.

NOTE: LANE STRIPING HAS BEEN SHOWN FOR CLARITY OF THIS EXHIBIT, ORANGE CIRCLES INDICATE LANE MARKER CONES WHICH WILL BE USED FOR THE DURATION OF CFD.

INSTALL SIGNAGE:
"ACCESS RESTRICTED TO CHEYENNE COUNTRY CLUB AND CFD AUTHORIZED GATE 12 PASS HOLDERS"

NO PARKING ON KENNEDY ROAD DURING CFD

WATER BARRIER

Figure 74: Kennedy Road and Central Ave. 'Park N Ride' Express Lane Option

Conclusions

In summary, this study evaluated traffic and pedestrian count data, intersection traffic operating conditions, existing transit operation and key stakeholder concerns and operational practices, and observations of existing transportation system performance to develop a set of short and long-term transportation improvement recommendations. The most important recommendation improvements are focused on separating pedestrian and traffic conflicts at the Main Gate to Frontier Park, reducing patron traffic delays at the start and end of the major rodeo and evening shows, and enhancing 'Park N Ride' service.

Communication before, during and after CFD was identified as critical to operation of the transportation services for CFD. Two key recommendations involve development of a CFD kick-off meeting with all stakeholders such as transit service providers, city and WYDOT engineering, police and CFD to finalize event operating details and routes along with a follow-up debriefing meeting a week after the completion of CFD with the second key recommendation involves development of a central on-site transportation control center where all stakeholder managers can communicate real-time transportation control changes and react to changing conditions and problems.

The longer-term recommendation related to the CFD Master Plan moves the planned 'Park N Ride' passenger drop-off/pick-up area from Carey Avenue to a new location accessed from Hynds Boulevard. This change is considered to minimize traffic congestion and safety conflicts along Carey Avenue in order to maximize 'Park N Ride' bus operation.

Many of the recommendations can be undertaken in time for the 2018 Frontier Days event while other recommendations involve funding considerations and construction plan development such as widening Kennedy Road, constructing sidewalk around the perimeter of Frontier Park and installing upgraded LED street lighting improvements particularly along the 8th Avenue and Carey Avenue corridors.