

ATTACHMENT C
KART FIXED ROUTE STUDY REPORT



KART HANFORD

Fixed Route Schedule Study

December 2022



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INTRODUCTION

The Kings Area Regional Transit (KART) Hanford Fixed Route Schedule Study is a comprehensive look at fixed-route transit service in the City of Hanford. In 2024, the KART Hanford Transit Center will be relocated half a mile east along West 7th Street which will have a significant impact on transit operations. Moving the central hub affects the running times on all local routes, requiring a systematic restructuring in order to maintain departure times every half hour (or “half-hourly pulses”) among all vehicles that serve the hub. With the upcoming Transit Center relocation, the changing travel patterns emerging from the pandemic, and the future development accompanying the new high-speed rail station, the time is right for a restructuring of Hanford’s fixed-route bus service. KART operates 15 various routes, but this study focuses only on the nine local routes that serve the city of Hanford. The commuter routes that connect to external cities and other counties are not a part of this study. The proposed service plan outlined in this report responds to these changes in local mobility needs. The service changes will be implemented in 2024 in conjunction with the opening of the new KART Multimodal Transit Center.

EXISTING CONDITIONS

Market Assessment

The Market Assessment evaluated the local demand for transit, looking at the built environment, population and rider characteristics, major job centers, and regional travel patterns.

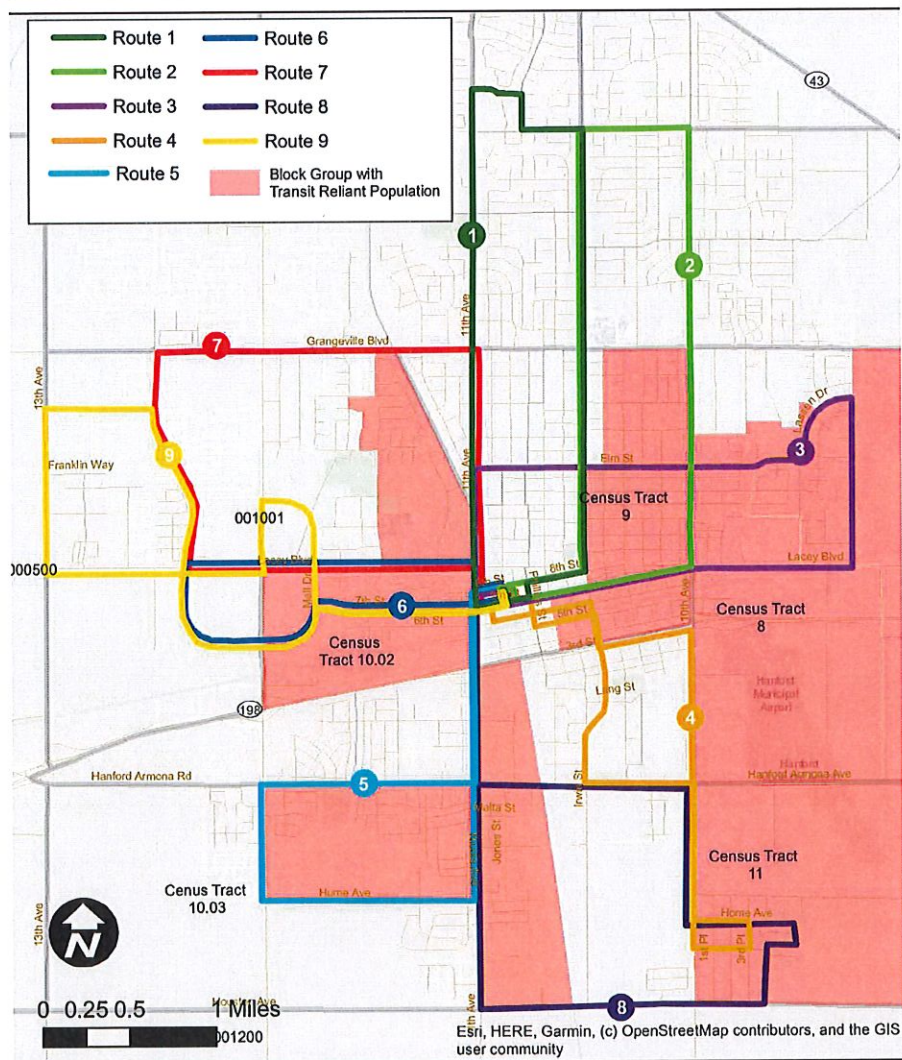
When planning public transit service, it is important to understand that the density, diversity of destinations, and design of the built environment are key factors that influence transit's effectiveness. Transit is most successful when there are concentrations of both people and jobs (density), a variety of places such as job centers and stores that generate all-day and all-week demand (diversity of destinations), and walkable, people-oriented streets (design). In addition to these factors, there are certain demographic characteristics that are correlated with higher transit demand. Households that do not have a vehicle, low-income populations, minority

populations, seniors, youth, college-aged residents, and persons with disabilities are all more likely to use transit service due to traditionally lower rates of private vehicle accessibility. Understanding where these populations are concentrated can help determine where there may be more demand for transit service. Collectively, these elements indicate where transit can be most successful and where it is most needed.

Demographics

Compared to the rest of California, Hanford has a higher population of youth (representing 15% of the city's population), elderly (14%), persons with disabilities (15%), and persons living below the poverty line (15%), resulting in higher overall characteristics of a population more likely to rely on transit. These populations exist in areas east of 11th Avenue and near Highway 198. The areas with the highest concentrations of populations that are traditionally more reliant on transit can be seen in Figure 1.

Figure 1: Transit Reliant Population



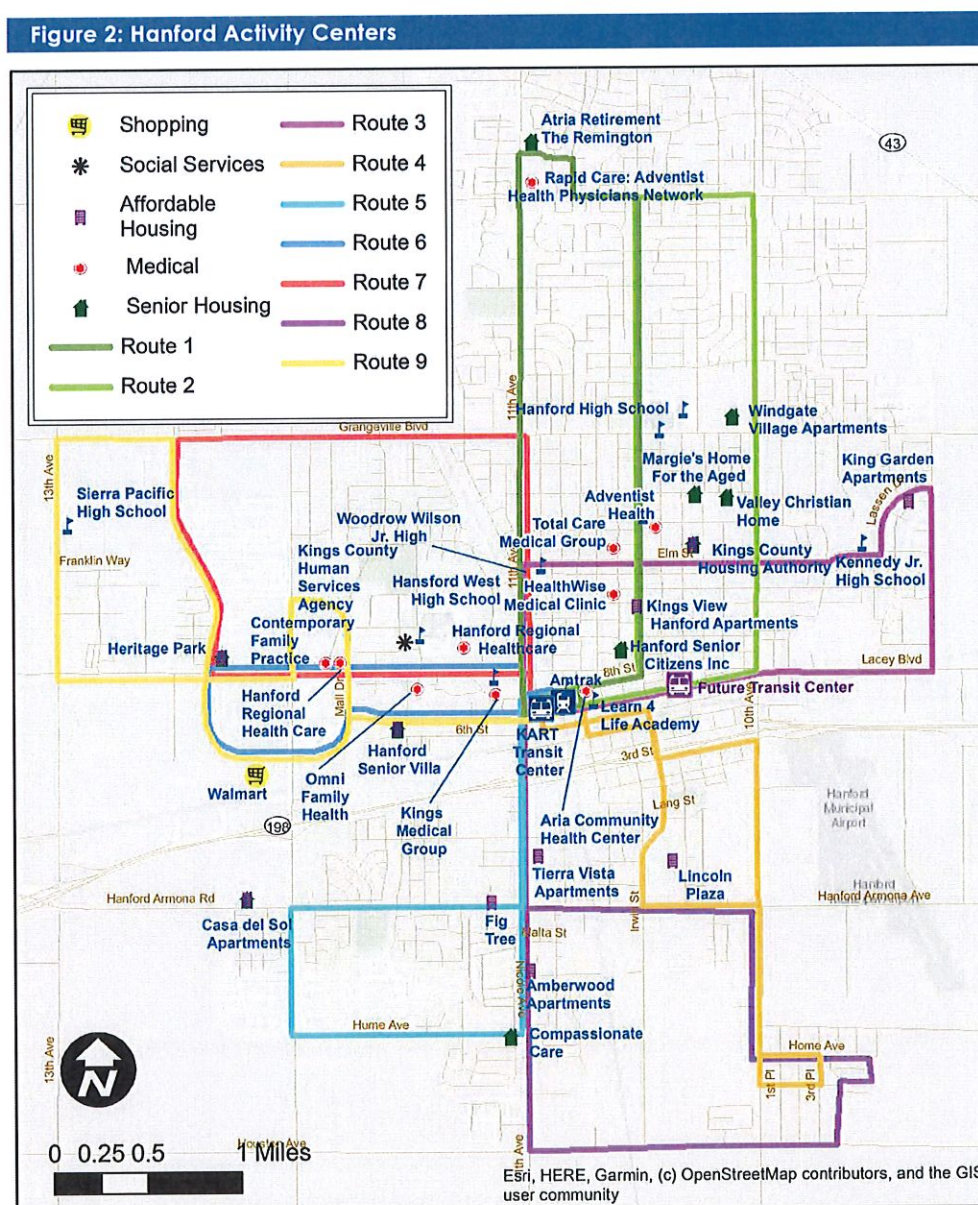
Between 2013 to 2019, Hanford's total population grew by 3.5%, while the senior population grew by 7.5%. Nearly half of this population increase took place in downtown Hanford where Hanford's planned multimodal Transit Center will be located. A projected increase in population growth over the next decade, especially among the elderly and college-age residents, will additionally impact transit needs.

Per an onboard survey conducted on KART buses, a quarter of passengers mentioned that they use transit to get to work. Of those respondents, only half can rely on transit for a round trip due to lack of transit availability after working hours or the amount of time it

takes to get home. While most employed riders would otherwise be fully reliant on transit, this means that riders must find some other means of travel to return home from work.

Additionally, as of 2021, surveys showed that 6% of riders were high school students. Students are likely using public transit to get to and from school campuses that are not within a 2-mile walking distance and thus are not provided student transportation by their schools.

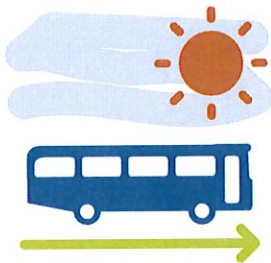
Figure 2 provides an overview of Hanford activity centers which generate trip demand. All of these existing activity centers in Hanford are well-served by the fixed-route network.



Customer Profile

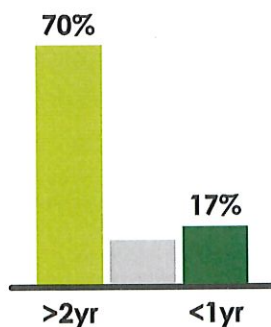
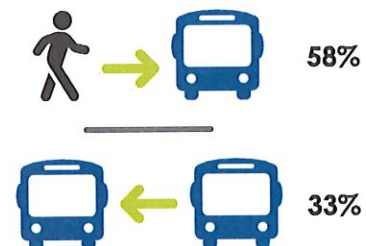
A 2021 two-week onboard survey of KART services was conducted and over 250 responses were collected from current riders that provided important insights into Hanford transit use.

It is important for Hanford's economy to continue providing transit service because the **top two reasons that riders use the KART bus network were for work (22%) and shopping (20%).**



43% of riders take the bus only one way, meaning they must find another mode to complete their return trip. The high number of one-way trips may be a factor of the one-way route design that requires riders to travel the entire 30-minute loop in order to arrive back at their initial starting point.

Additionally, **most passengers either transfer (33%) or walk (58%) to their stop**, indicating the importance of convenient, well-timed route transfers and pedestrian access. The number of respondents who said they walk to the bus is considerably lower than in other systems where response rates often exceed 90%. The fact that one-third of respondents were transferring emphasizes that the current route structure with one-way loops and little east/west crosstown movements does not serve many complete trips and requires riders to transfer at the central hub. This also means that the relocation of the hub will have a significant impact on transfer activity.



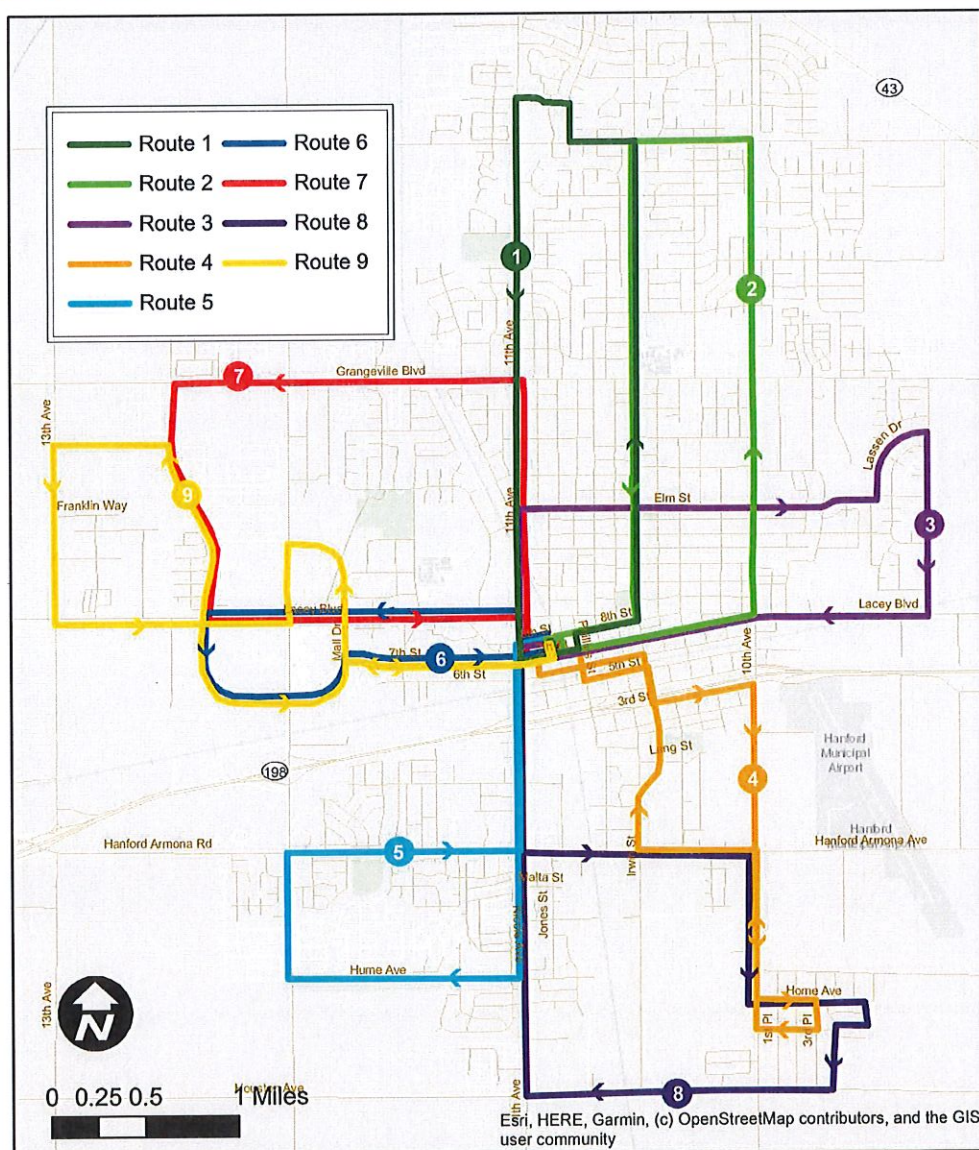
Furthermore, the **majority of passengers (70%) have been riding the bus for two or more years**, a positive reflection on KART's ability to maintain its riders during the pandemic. Meanwhile **17% of passengers had been riding less than a year**, indicating that there may be a market to further increase new ridership. While opinions toward KART were overall favorable (scoring an average of 4.6 out of 5), there were some improvements to be desired such as additional service on weekends and later service on weekdays, as well as improvements for bus stop amenities.

Service Evaluation

KART provides public transportation in Hanford and is operated by the Kings County Area Public Transit Agency (KCAPTA). KCAPTA operates as a Joint Powers Authority (JPA) between the cities of Hanford, Lemoore, and Avenal and partners with the County of Kings to provide transit service in these communities, unincorporated areas of Kings County and service to Visalia and Fresno. KCAPTA currently contracts with MV Transportation to provide operations and maintenance for KART. While KART provides multiple transportation services, this project was focused primarily on the nine Hanford fixed-route services.

At the beginning of this study, KART operated Hanford's one-directional local Routes 1 through 9. Route 8 was recently eliminated. Weekday routes have a half-hour headway and start operating between 6:30 AM - 7:15 AM, and end service between 7:15 PM - 8:00 PM. Saturday service operates once an hour (except Route 6, which has a 30-minute headway), operating between 9:30 AM - 5:00 PM. There is no current service available on Sundays. A map of local Routes 1 - 9 can be found in Figure 3.

Figure 3: KART Hanford Routes



Ridership

Prior to the COVID-19 pandemic, Hanford annual ridership exceeded 476,000 in Fiscal Year (FY) 2014-15. While ridership was declining between 2015 and 2018 (17%), these numbers dipped to a low of nearly 152,000 in FY 2019-20 due to COVID-19. As of the first half of FY 2021-22, ridership is showing signs of recovery and is expected to be nearly 40% higher than FY 2019-20 ridership. See Figure 4 for more information on Hanford annual ridership.

Routes 6, 3, and 9 carry the most passengers, while Routes 7 and 4 carry the fewest. Routes 6 and 9 serve the primary retail and healthcare destinations in Hanford and Route 9 is the sole route serving the College of the Sequoias. Route 3 serves high density residential complexes on the east side of town. Conversely, Route 4 serves a long stretch of cemetery and open space that doesn't generate ridership while Route 7 also serves some low density residential areas.

Figure 4: Hanford Annual Ridership

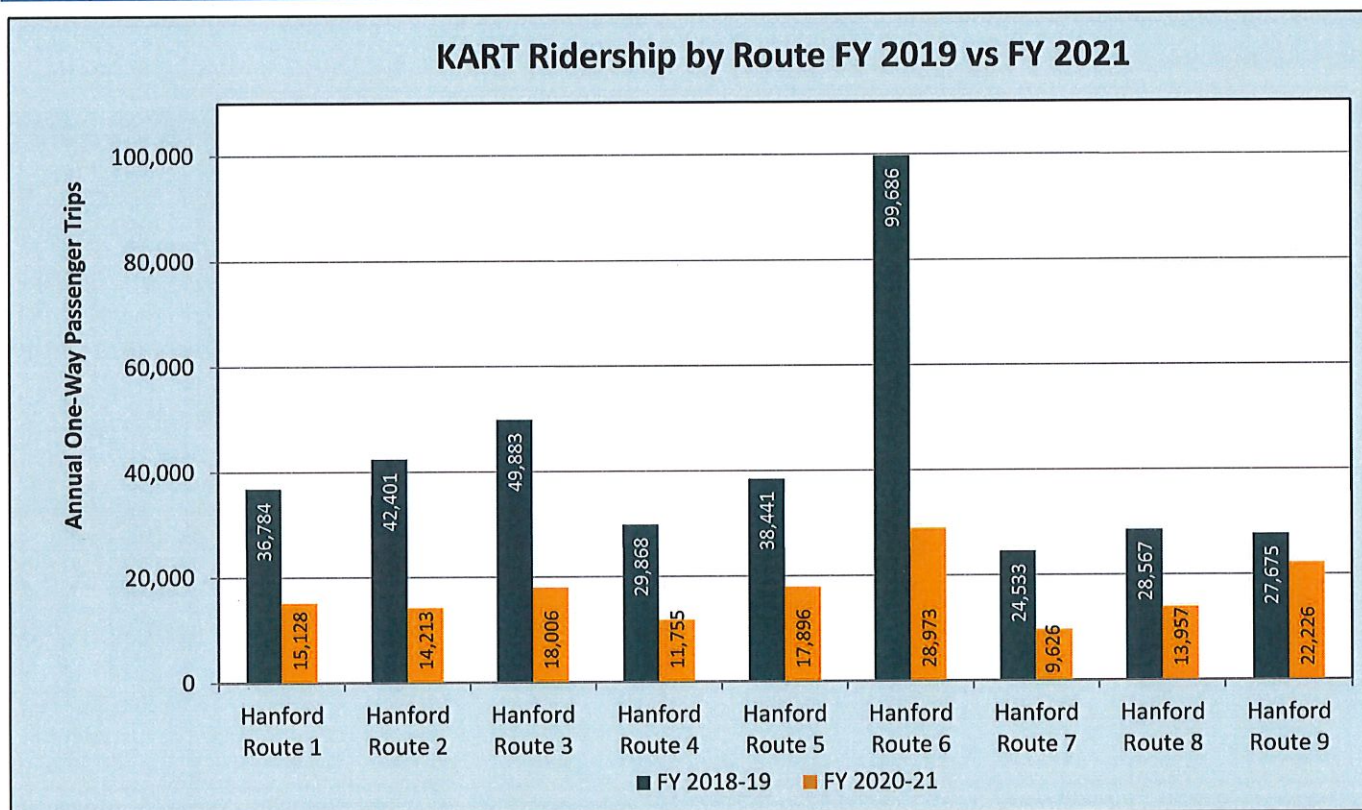
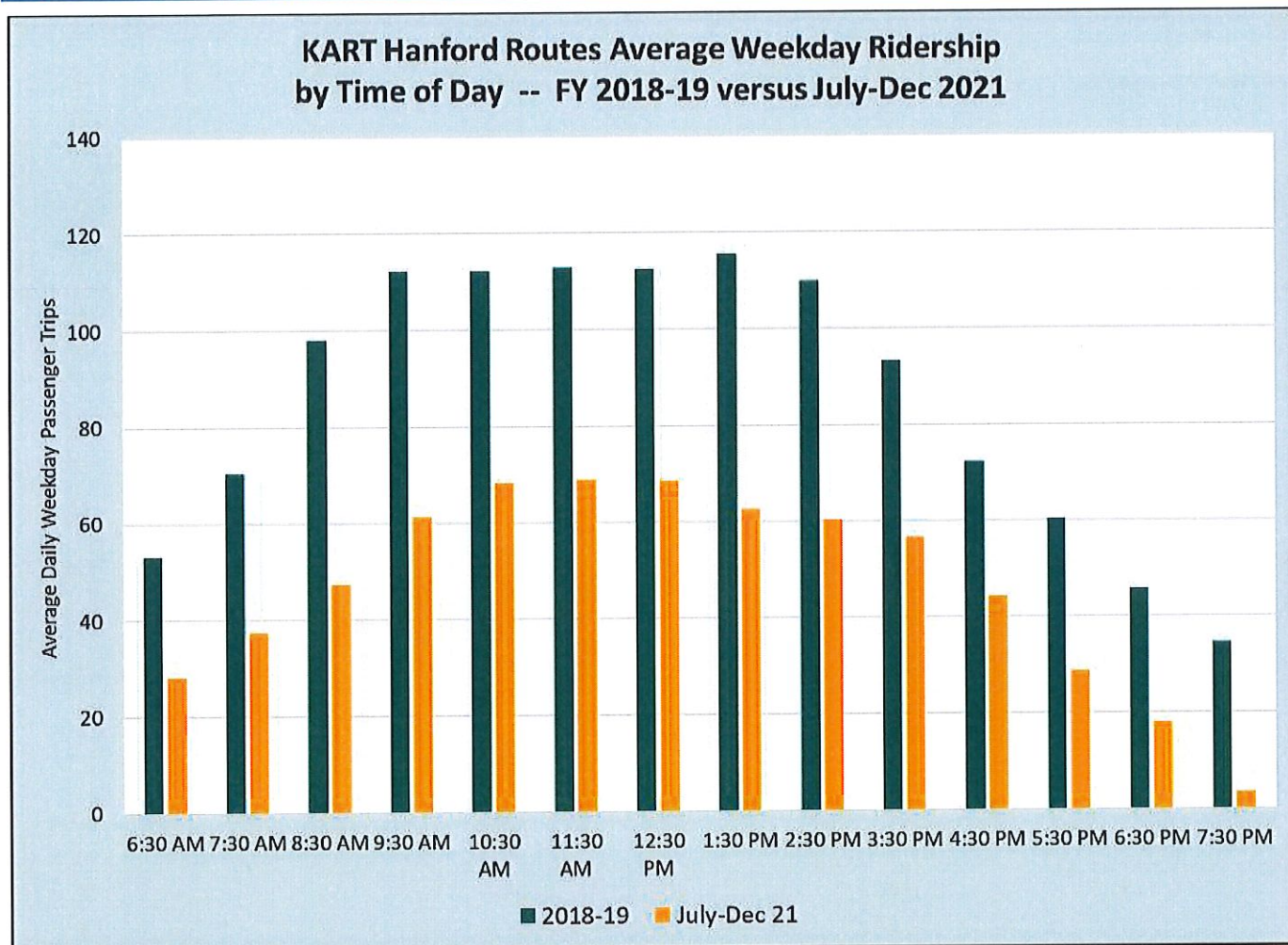


Figure 5 shows average weekday ridership by time of day for FY 2018-19 and for July to December 2021 (first half of FY 2021-22), as calculated using data from the UTA automated fare box system. As shown, in FY 2018-19, over 100 passengers were carried each hour on the Hanford routes from 9:30 AM through 2:30 PM, with a sharp drop after 5:30 PM. Unlike most transit systems that display a strong double-peak ridership pattern with

highest ridership levels around 6:00 to 8:00 AM and 2:00 to 5:00 PM, KART Hanford routes display more of a bell curve with ridership peaking during the middle of the day. This suggests riders are using the bus for a range of trip purposes including shopping, running errands, going to medical appointments, etc., rather than just traveling to work or school.

Figure 5: Hanford Ridership by Time of Day



at Walmart where there is also access to Target (129 boardings and alightings), and Lacey at Centennial Plaza where there is an Aldi Foods Co and Dollar Tree (45 boardings and alightings). More than half of all KART Hanford route activity is at these three stops, which in the first half of FY 2021-22 equated to over 600 boardings and alightings daily at these shopping locations.

Legend: Average Daily Activity

- Route 1: 2 - 4
- Route 2: 5 - 14
- Route 3: 15 - 16
- Route 4: 17 - 26
- Route 5: 27 - 65
- Route 6: 27 - 65
- Route 7: 27 - 65
- Route 8: 27 - 65
- Route 9: 27 - 65

Map Labels: Grangeville Blvd, 11th Ave, 10th Ave, 9th St, 8th St, 7th St, 6th St, 5th St, 4th St, 3rd St, 2nd St, 1st St, Franklin Way, Lacey Blvd, Lacey Dr, Hanford Municipal Airport, Hanford Armona Rd, Hume Ave, Jones St, Alta St, Irving St, 13th Ave, 12th Ave, 11th Ave, 10th Ave, 9th Ave, 8th Ave, 7th Ave, 6th Ave, 5th Ave, 4th Ave, 3rd Ave, 2nd Ave, 1st Ave.

Scale: 0 0.25 0.5 Miles

Source: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Performance

Operating statistics, including service hours and miles and passenger trips from FY 2020-21 and FY 2018-19, were examined for a performance analysis to determine the efficiency and effectiveness of KART services as shown in Figure 7.

Productivity was determined by the number of passenger trips carried per revenue hour of service. Due to the pandemic, overall productivity dropped from 17.3 passengers carried per hour in 2018-19 to 5.5 passengers in 2020-21. Ridership dropped by 63% while annual vehicle hours actually increased by 20%, further contributing to the reduction in productivity. The most productive route, Route 6, dropped from 43.2 to 9.4 passengers per hour, which was due to all other

routes going from 60-minute headways to 30-minute headways, and to Route 9 in combination with Route 6 providing 15-minute headways between Walmart/Target and the KART Transfer Center.

TRAVEL QUALITY

Considering the travel experience from the rider's perspective is essential when evaluating transit service. Travel time, service frequency, and the need to transfer are important characteristics that influence a person's decision to ride transit for a particular trip.

A review of the comparative auto to transit travel time between 56 different origin-destination pairs (all trips between eight different stops) found that many trips on transit can take six to nine times as long as driving

Figure 7: KART Performance Measures

Route	Vehicle Hours	Vehicle Miles	Passenger Trips			Operating Cost	Operating Cost/ Passenger Trip
			Total	per Hour	per Mile		
Fiscal Year 2020-21							
1	3,123	38,071	15,128	4.8	0.4	\$314,962	\$20.82
2	2,974	36,899	14,213	4.8	0.4	\$299,940	\$21.10
3	3,020	32,086	18,006	6.0	0.6	\$304,587	\$16.92
4	3,123	37,701	11,755	3.8	0.3	\$314,962	\$26.79
5	3,123	31,654	17,896	5.7	0.6	\$314,962	\$17.60
6	3,077	20,513	28,973	9.4	1.4	\$310,314	\$10.71
7	2,814	33,393	9,626	3.4	0.3	\$283,839	\$29.49
8	3,020	41,890	13,957	4.6	0.3	\$304,587	\$21.82
9	3,123	46,401	22,226	7.1	0.5	\$314,962	\$14.17
Total	27,398	318,607	151,780	5.5	0.5	\$2,763,114	\$18.20
Fiscal Year 2018-19							
1	2,595	25,923	37,899	14.6	1.5	\$239,536	\$6.32
2	2,471	26,091	45,149	18.3	1.7	\$228,111	\$5.05
3	2,510	21,848	65,246	26.0	3.0	\$231,646	\$3.55
4	2,595	25,671	30,616	11.8	1.2	\$239,536	\$7.82
5	2,595	21,554	39,287	15.1	1.8	\$239,536	\$6.10
6	2,557	31,427	110,484	43.2	3.5	\$236,001	\$2.14
7	2,339	23,612	26,157	11.2	1.1	\$215,866	\$8.25
8	2,510	29,620	29,629	11.8	1.0	\$231,646	\$7.82
9	2,595	31,595	21,287	8.2	0.7	\$239,536	\$11.25
Total	22,767	237,341	405,754	17.8	1.7	\$2,101,413	\$5.18

based on the existing KART fixed-route network. Trips that may take only five minutes to drive can take over 45 minutes on transit because the trip requires a transfer and because the routes only operate in one direction. One of the goals of this study is to reduce the travel time between major stop locations in order to make transit more competitive with travel in a car. Similar transit studies across the country have found that transit is most competitive when it takes no more than 2.5 times longer than driving. The trips on current KART service that achieve this ratio were those that started or ended at the KART Transfer Center or those with origins and destinations that were along the same route and therefore did not require a transfer to complete the trip.

Impacts on Recommendations

The demographics of Hanford indicate a higher propensity to use transit than exists on average throughout the state of California. The recommended plan will focus on the neighborhoods with the highest likelihood to use transit. These tend to be neighborhoods that were developed decades ago, many of which have a street grid that enables fixed-route transit to serve the area effectively. Many newer neighborhoods have

cul-de-sacs, curved street patterns and walls separating them from main arterial streets, which impede access to transit service.

Uncompetitive travel times compared to driving and a high percentage of trips that require transfers are two issues that the recommendations will address.

Replacing one-way loop routes with bi-directional service will significantly reduce travel time for many customers. For example, currently, if a person is traveling between two points on the same route, a round trip will take 30 minutes. However, if for example, it takes seven minutes in one direction to make the trip, on a one-way loop it takes 30 minutes to make the round trip but only 14 minutes to make the round trip on bi-directional service. When the customer needs to transfer to make their trip, it can take 60 minutes to make a round trip with one-way loops compared to as little as half that time with bi-directional service.

The need to transfer can be reduced by operating more routes that pass through the Transit Center on their trips (instead of always ending service there) and more direct service to the main retail hub in the southwest area of Hanford.

PUBLIC AND STAKEHOLDER INVOLVEMENT

Two surveys were conducted for this study, including an onboard passenger survey of the KART Hanford Routes (November 2021), as well as an online survey for West Hills Community College Lemoore (January-February 2022). Additional outreach was held in October 2022 to solicit feedback on the recommended route network.

KART Hanford Survey Results

In November 2021, KART riders participated in an onboard passenger survey in Hanford. Surveys were conducted on all routes for two weeks with staff available on an assortment of different trips. The surveys consisted of a one-page questionnaire made up of multiple choice, short-answer, and comment format, with the opposite sides available in English or Spanish. Out of the 268 passengers that responded, 83% completed the survey in English while 17% completed it in Spanish. Route 6 had the highest response with 21% of survey responses completed by customers of this route, while Route 3 had the fewest responses accounting for only 3% of the total responses. The number of responses per question varied, while some questions received multiple answers.

Among respondents, 91% said that they had no access to a vehicle while 72% stated they had no driver's license. The majority of respondents were between the ages of 25-64 (60%).

Through the onboard surveys, it was found that most people board midday on weekdays (39%), with 44% of boardings and 31% of alightings at the KART Transfer Center. Walmart was a notable location for boardings (6%) and alightings (10%). The top two trip purposes were for work (22%) and shopping (20%).

Additionally, 57% of respondents said they used KART buses for round-trip service to and from their destinations, meaning that the remaining 43% of riders required an additional mode of travel to complete their trips. Seventy percent of passengers responded that they have been using KART buses for 2+ years; 47% said they ride the bus daily, while an additional 31% said they ride the bus 3-4 days per week, which suggests most KART riders are reliant on public transit. Most respondents (72%) indicated that there was no particular reason why they do not ride the bus more often. Of those who did give a response, 44% indicated

that they had no need to go to additional places. Meanwhile, other respondents mentioned they do not take multiple daily trips due to timing concerns (16%) or that it takes too long to ride the bus (16%).

Desired improvements to KART bus service included running earlier and/or later Saturday service (78%) and earlier and/or later weekday service (64%). Twenty-seven percent of respondents specifically asked for both. These improvements were additionally captured through passenger comments. Further comments primarily included compliments about KART service.

October Outreach

Three outreach events were held in Hanford October 6 and 7, 2022. Two of the pop-up events were held at the KART Transfer Center – one in the afternoon of October 6 and the other during the morning of October 7. The third event was held during the Hanford Thursday Market on the evening of October 6. During these pop-up events, individuals could review maps showing existing and proposed route networks and view the location of the proposed multimodal Transit Center. They also had the opportunity to ask questions of the consulting team and express their opinions in writing and verbally. In addition to these events, an online survey was made available beginning two weeks prior to the pop-up events and continued for a week following. The pop-up events and survey were promoted on KART buses, local media, and social media.

Comments about the proposed route changes were either supportive or neutral. No comments were received that require rethinking any of the proposals. There were a few negative comments about the location of the new transit center. However, some were based on confusion and addressed by the consultant team. For example, one person who walks to board the bus at the current KART Transfer Center location was assured that their mobility needs would still be met by one of the two routes that will continue to stop on the street adjacent to the current KART Transfer Center. The key takeaway is that no person who took the survey or met with KART and the consulting team at the pop-up events will be unable to use transit to meet their mobility needs as a result of the relocation of the KART Transfer Center and the restructured route network that would be implemented when the new transit center opens.

West Hills Community College Lemoore Online Survey Results

In addition to the onboarding surveys for KART Hanford routes, in late January and early February of 2022 an online survey was sent to West Hills Community College (WHCC) students who attend the Lemoore campus – a major transit trip generator in Kings County. The online survey included 30 questions in multiple choice, short-answer, or comment formats. Some questions included multiple answers, and therefore the number of answers per question varies.

Of the 127 respondents, 76 individuals (60%) confirmed that they ride KART buses while the other 51 (40%) said they do not. One hundred and twenty-three respondents (97%) said they were enrolled at WHCC, with 54% taking over 12 units. 53% of respondents confirmed to be taking classes via an online/in-person hybrid model, with 31% exclusively in-person and the other 16% online. Most respondents said they lived in Hanford (47%), with Lemoore being the second largest community (31%).

Below are the key takeaways from the online survey:

- » When asked if they have used KART in the region, 76 respondents (60%) answered yes, while 51 (40%) said no. Most students take Route 20, the intercity route between Hanford and Lemoore (77%). Other popular routes include Route 2, Route 6, and Route 5.
- » Of those respondents who indicated they use KART, 72% use the bus to get to WHCC, while 34% of those who don't use KART indicated that they may be willing to in the future.
- » In terms of travel to WHCC, 82% of respondents said they walk to and from the bus stop while 13% get a ride. Sixty-six percent board in the morning, and 81% leave campus in the afternoon. Most respondents board in Hanford (54%), with Lemoore being the next largest boarding community (28%). Of those that board in Hanford, the top two locations were the KART Transfer Center (37%), although 11% of the total respondents referred to it as the Amtrak Station. In Lemoore, most students board at Best Buy (29%) or the Starbucks on Cinnamon Drive (14%). Most students ride directly between their home and campus (57%), while over a quarter additionally go to other locations. Meanwhile, 9% of riders said they take the bus to school only, while only 5% ride the bus to their homes exclusively. Of those who ride KART, 43% said they require a transfer while 48% said they do not. The remainder did not respond to this question.
- » When asked what improvements could be made to encourage more KART ridership, 66% of respondents said that they would like to see free fares for college students paid by student fees. When asked if respondents would support such a fee, nearly half said they would support it, while 28% said they would not, and over 25% said they were not sure.

More detail on the outreach effort and results are presented in Appendix C.

GUIDING PRINCIPLES AND DESIGN STRATEGY

While the primary goal of the study is to restructure the fixed-route network around the new Transit Center, the secondary goal is to improve local mobility and the customer experience. However, making improvements to the customer experience without increasing the available resources involves important tradeoff decisions in the design process. The following design principles were applied to the KART network to develop the final service recommendations to create a stronger network and a better rider experience.

The main design tradeoff for the KART network is providing one-directional or bi-directional service. Currently, all routes operate as one-way loops. The loop takes 30 minutes (or less) to complete, so all routes can meet every half hour at the KART Transfer Center. One-way service has the benefit of allowing KART to cover a broader geography in a set amount of time. The downside of one-way service is that riders have to travel around the entire loop in order to get back to where they started their trip. This means that every rider's trip will be a minimum of 30 minutes if they do not transfer. With bi-directional service, riders only need to ride the portion of the route between their origin and destination. If their destination is only seven minutes away from their origin, their round trip will be 14 minutes, rather than the 30 minutes required with one-way service. The downside of bi-directional service is that a single bus covers less unique geography in a given amount of time. Given the significant travel time benefits of bi-directional service, this plan proposes bi-directional transit operations as much as possible throughout the network.

Additional design considerations for this plan include the following:



Space Routes Half a Mile Apart – Routes should be spaced roughly a half-mile apart. Transit planning best practices show that riders are generally willing to walk about a quarter-mile to a transit stop (approximately a five-minute walk). Half-mile spacing means that a rider in the middle of two routes will be at most a quarter-mile from either route. When routes are closer together, they tend to compete for ridership; on the other hand, when routes are farther apart, it forces potential riders to walk farther distances which reduces transit's attractiveness. The existing street network in Hanford is well-positioned to support this network design – major north/south arterials 10th Avenue, Douty Street, and 11th Avenue are all a half-mile apart.



Minimize One-Way Loops – One-way loops are often necessary, especially at the ends of the routes when buses need to turn around. The size of these loops should be minimized to promote bi-directional service wherever possible. In some cases, the design of the existing street network dictates the size of the loop and what streets are available for the bus to use to turn around.



Minimize Off-Route Deviations – Routes are designed to operate directly on major corridors with few off-route deviations to serve destinations. Compared to many other cities around the country, Hanford has done a remarkable job of locating its major developments and key activity centers along major corridors. This makes it easier for transit to efficiently serve these locations without significant off-route deviations.



Maintain Clockface Headways – Routes should operate at clockface headways, essentially factors of 60 minutes. Schedules that operate every half hour or hour are customer-friendly and easy for riders to remember. For this reason, when designing the routes, it was important to make sure that the routes could be completed within one hour to maintain even 30-minute service.



Maintain Pulsing at Transit Center – Given the importance of transferring within the Hanford fixed-route network, it is critical that all routes meet at the Transit Center at the same time in order to reduce transfer wait times. Currently, all routes start/end at the Transit Center, so riders can transfer between buses while the operators are taking their layover. Under the proposed plan, the Transit Center is not always the end of the route, however incorporating layovers at the Transit Center still allow for pulsing and the ability for customers to transfer. However, by relocating the Transit Center half a mile to the east does create a situation where some route segments cannot pulse every 30 minutes. However, a route design and schedule has been developed where all route segments can pulse once an hour.

SERVICE RECOMMENDATIONS

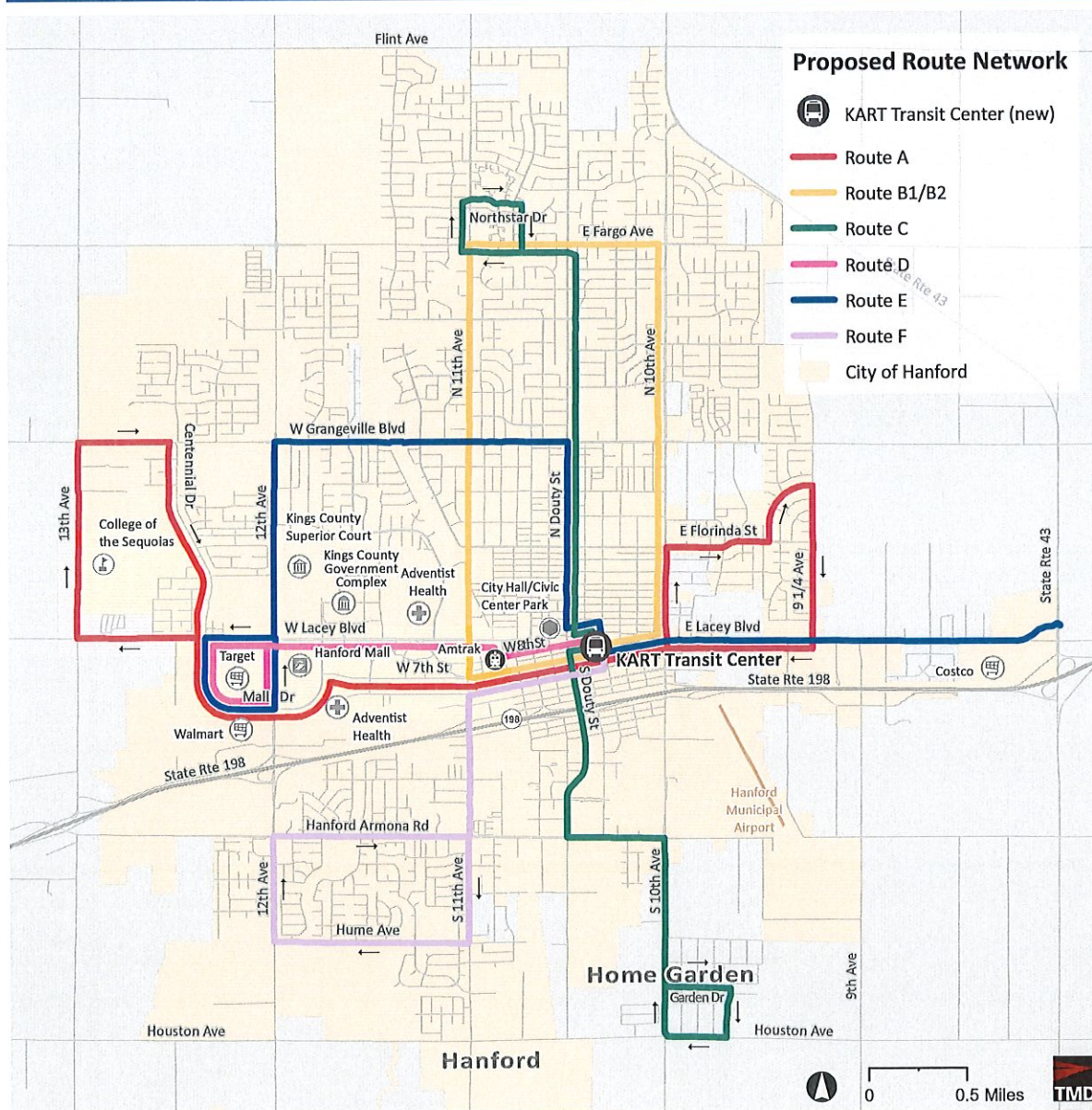
Service Recommendations

The route numbers listed here refer to *existing* route designations. Letters refer to the *proposed* route designations.

- » **Route 1 (C)** remains on Douty Street providing bi-directional (two-way) service on Douty and is interlined with Route 4.
- » **Route 2 (B1/B2)** provides bi-directional service on 10th and 11th Avenues and Fargo Avenue.
- » **Routes 3 & 9 (A)** are combined providing bi-directional service on 7th Street. Service on Lacey Boulevard provided by new Route D.

- » **Route 4 (C)** eliminates loop on S. 10th Avenue, provides bi-directional service on Douty between 7th Street and Hanford Armona Road and is interlined with Route 1.
- » **Route 5 (F)** no change.
- » **Route 6 (D)** Provides bi-directional service on Lacey.
- » **Route 7 (E)** provides bi-directional service on Grangeville Boulevard serves Douty, 12th Avenue and Walmart/Target/Hanford Mall. It also travels east to Costco.
- » **Route 8** is eliminated (already enacted), however much of the route is served by Route C.
- » **Route 9 (A)** is combined with Route 3.

Figure 8: KART Proposed Route Network



Network Recommendations

The guiding principles of the study along with the comprehensive analysis of current service and population data informed the proposed route network. The proposed network is designed to improve the customer experience of public transportation riders in the Hanford community. At first glance, the coverage offered in the new proposed network resembles the existing KART network in Hanford; the key population and jobs centers will continue to be served by the KART network, with service provided on the principal corridors in Hanford, including 7th Street, Lacey Boulevard, Fargo Avenue, Douty Street, Centennial Boulevard, Mall Drive, and 10th, 11th, and 12th Avenues. The proposed network does expand coverage in a few areas of Hanford, including sections of Grangeville Boulevard, Lacey Boulevard, and 12th Avenue.

The principal transit service expansion proposed in the new KART network is derived from the addition of bi-directional service. Where service currently operates in Hanford, the addition of bi-directional service allows customers to reduce their travel time, while continuing

to facilitate convenient transfers on familiar schedules based on clockface headways at the new Transit Center on W. 7th Street in downtown Hanford. (For example, a trip would arrive at five to ten minutes before the hour and half hour all day on weekdays, and the next trips would depart at the hour and half hour.) The transfers mean that each route convenes at the Transit Center facility at least once an hour, but often twice, which offers all customers a two-seat ride to anywhere in the network. This effectively expands access and improves the customer experience for riders in the Hanford community.

The proposed route network is comprised of seven routes, including the B1 and B2 loop routes that provide bi-directional service on 10th & 11th Avenues. Each route operates on a 30-minute headway during the week, and a 60-minute headway on Saturdays. The existing span of service is maintained with service operating from 6:30 AM to 8:00 PM on weekdays and 9:30 AM to 5:00 PM on Saturdays. A route summary is provided in Figure 9.

Figure 9: KART Proposed Route Network Frequency & Span

Route	Route Name	Frequency (min.)		Span	
		Weekday	Saturday	Weekday	Saturday
A	7th Street	30	60	6:30am-8:00pm	9:30am-5:00pm
B1	10th & 11th Ave. Loop Counterclockwise	30	60	6:30am-8:00pm	9:30am-5:00pm
B2	10th & 11th Ave. Loop Clockwise	30	60	6:30am-8:00pm	9:30am-5:00pm
C	Douty	30	60	6:30am-8:00pm	9:30am-5:00pm
D	Lacey	30	60	6:30am-8:00pm	9:30am-5:00pm
E	Grangeville	30 ¹	60	6:30am-8:00pm	9:30am-5:00pm
F	11th Ave.	30	60	6:30am-8:00pm	9:30am-5:00pm

¹ It is recommended that this route operate on a 30-minute service, however cost constraints may require that this route operate on a 60-minute headway, at least initially.

Route Recommendations

On the following pages, the route profiles of the proposed route network are presented along with the summary of the proposed service provided by each route. The frequencies and service spans are included in the route profile sheets, for weekday and Saturday service.

Route A

7th Street



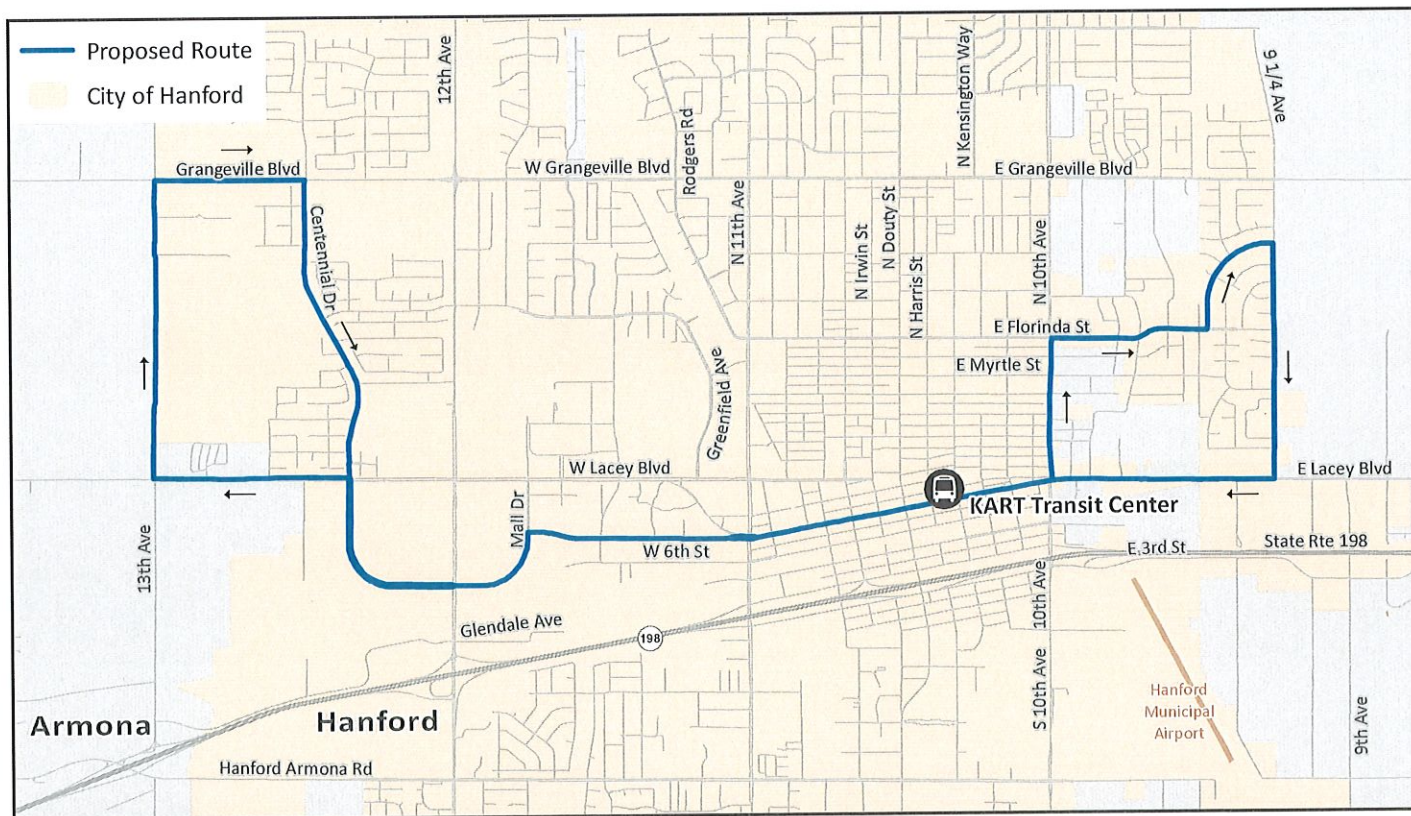
KART

KINGS AREA REGIONAL TRANSIT

Route Recommendations

Route A will operate primarily east-west on 7th Street, connecting residential areas across Hanford to many of the region's shopping, education, and medical facilities. Key destinations served by Route A include Walmart and other shopping destinations on Centennial Drive and Mall Drive, the College of the Sequoias Hanford campus, Sierra Pacific High School, the Hanford Sports Complex, and the Hanford Amtrak Station. The route spans from 9 1/4 Ave. to 13th Ave., and it will operate every 30 minutes on weekdays and every 60 minutes on Saturdays. At the new Transit Center, riders will be able to transfer to all routes on the hour, to Routes B, C, D, and F at 0:30 after the hour, and to Route E at 0:20 and 0:35 after the hour.

PROPOSED		
Service Element	Frequency (Min)	Span
Weekday	30	6:30am-8:00pm
Saturday	60	9:30am-5:00pm



Route B

10th-11th Ave. Loop



KART

KINGS AREA REGIONAL TRANSIT

Route Recommendations

Route B will operate as a bidirectional loop on 10th Ave., 11th Ave., Fargo Ave., and 7th Street. By offering bidirectional travel options, Route B provides customers in many residential areas in the northern Hanford area with flexibility, convenience, and reliability to reach destinations in Downtown Hanford as well as local schools, religious centers, and the Hanford Amtrak Station. The route will operate every 30 minutes on weekdays and every 60 minutes on Saturdays. At the new Transit Center, riders will be able to transfer to all routes on the hour, to Routes C, D, and F at 0:30 after the hour, and to Routes A and E at 0:20 and 0:35 after the hour.

	PROPOSED	
Service Element	Frequency (Min)	Span
Weekday	30	6:30am-8:00pm
Saturday	60	9:30am-5:00pm



Route C

Douty

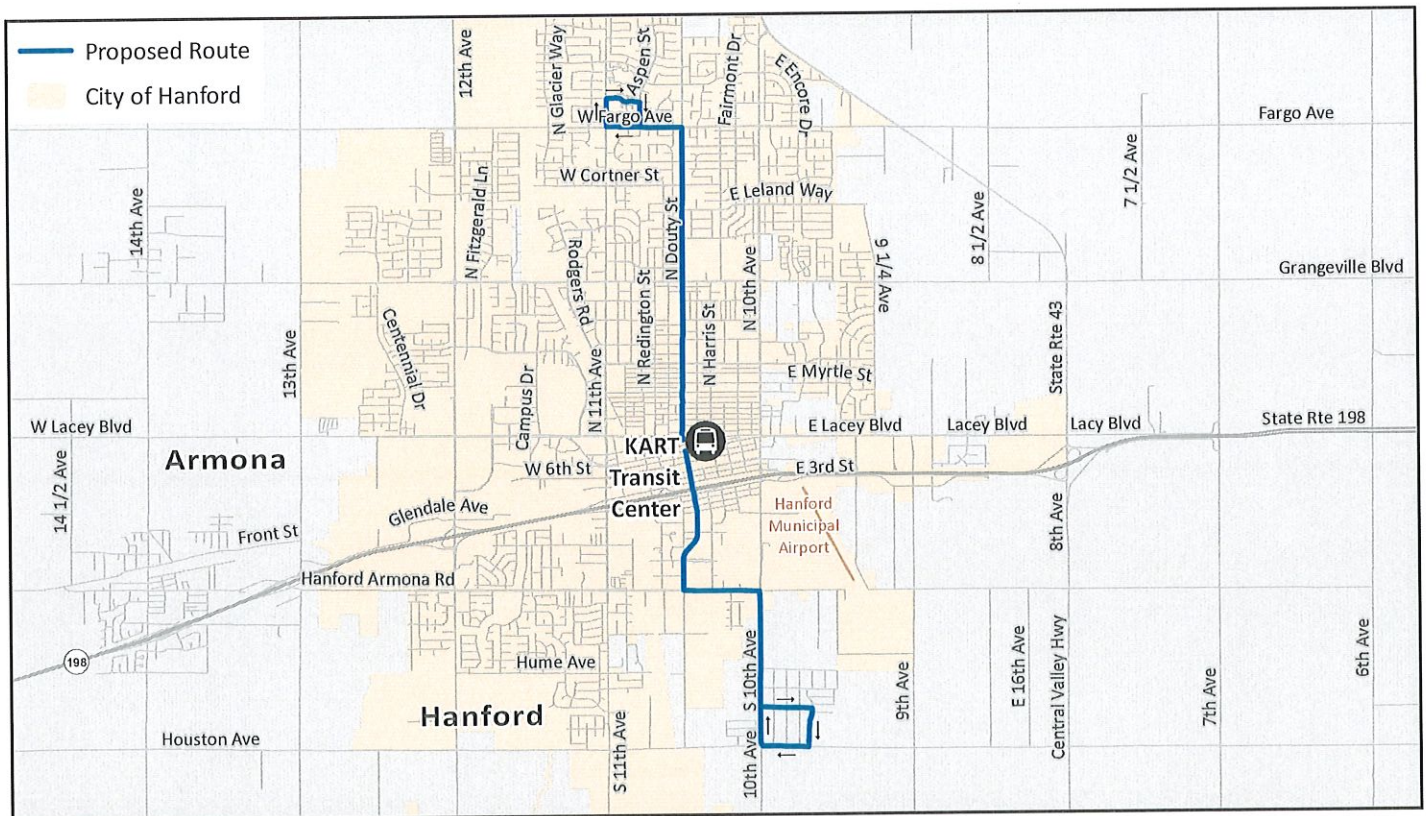


KART
KINGS AREA REGIONAL TRANSIT

Route Recommendations

Route C will provide a north-south backbone service on Douty Street, from the Fargo Crossings Shopping Center in northern Hanford to the Home Garden area in southern Hanford. The route serves a diverse set of destinations including local schools, medical offices, parks, sports facilities, religious centers, and Downtown Hanford. The route will operate every 30 minutes on weekdays and every 60 minutes on Saturdays. At the new Transit Center, riders will be able to transfer to all routes on the hour, to Routes B, D, and F at 0:30 after the hour, and to Routes A and E at 0:20 and 0:35 after the hour.

	PROPOSED	
Service Element	Frequency (Min)	Span
Weekday	30	6:30am-8:00pm
Saturday	60	9:30am-5:00pm



Route D

Lacey



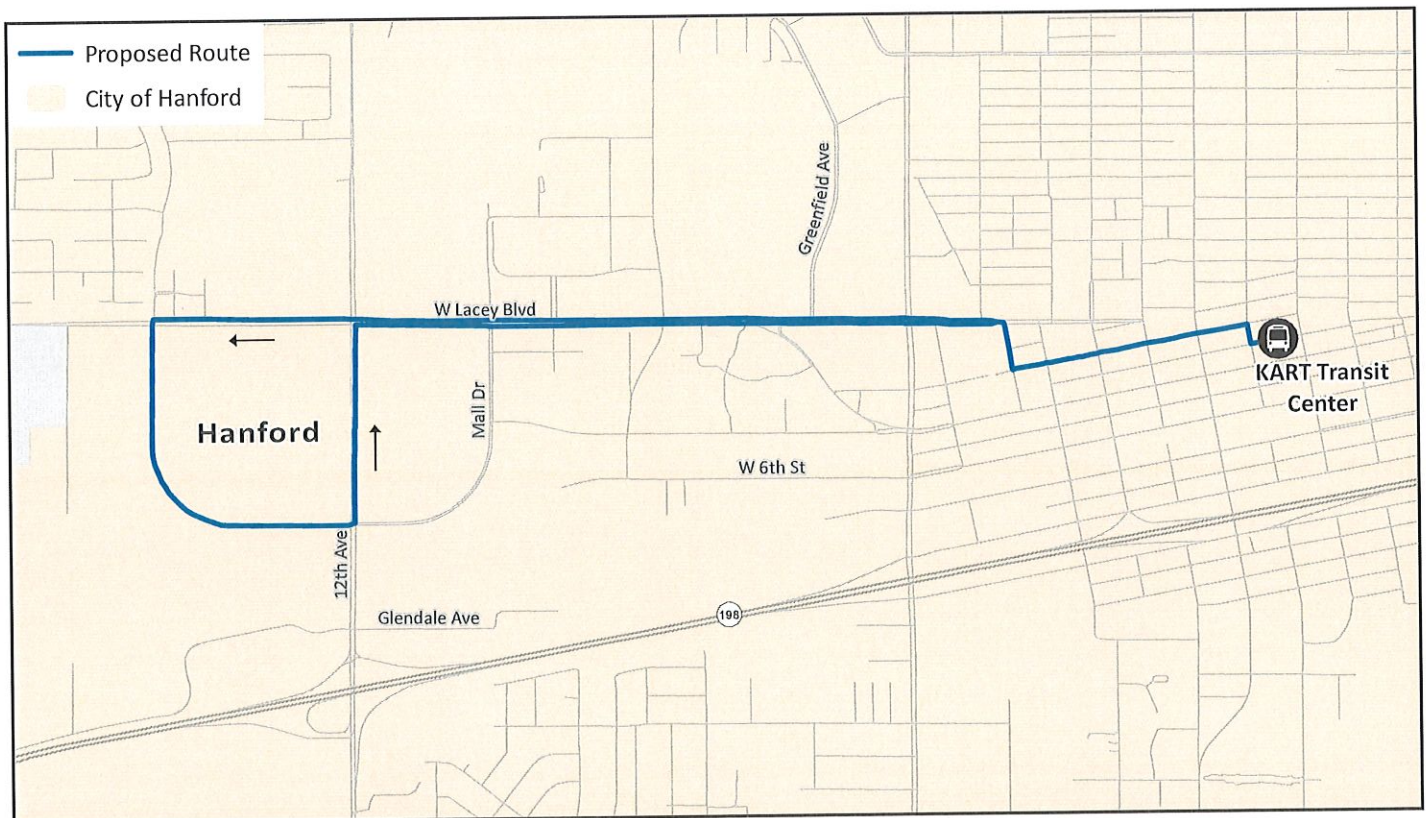
KART

KINGS AREA REGIONAL TRANSIT

Route Recommendations

Route D is the shortest route in the proposed network, and it will primarily operate on Lacey Blvd, providing a direct link between the new Transit Center and Walmart and other shopping destinations on Centennial Drive and Mall Drive. Additional destinations served by Route D include the Kings County government offices and medical and dental offices on Lacey Blvd. The route will operate every 30 minutes on weekdays and every 60 minutes on Saturdays. At the new Transit Center, riders will be able to transfer to all routes on the hour, to Routes B, C, and F at 0:30 after the hour, and to Routes A and E at 0:20 and 0:35 after the hour.

	PROPOSED	
Service Element	Frequency (Min)	Span
Weekday	30	6:30am-8:00pm
Saturday	60	9:30am-5:00pm



Route E

Grangeville-Costco Loop



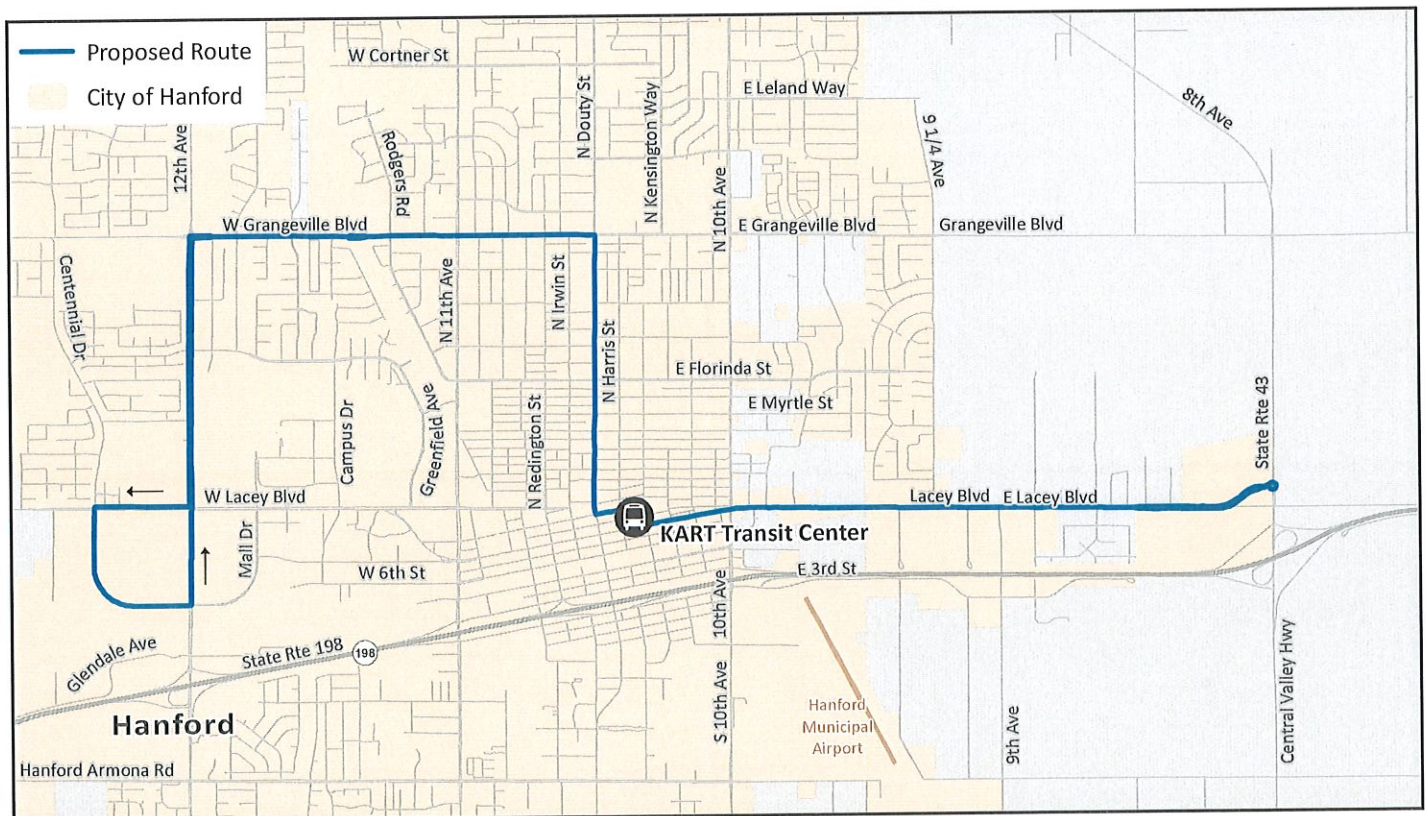
KART

KINGS AREA REGIONAL TRANSIT

Route Recommendations

Route E will cover a wide territory in the Hanford area, operating from Centennial Drive and 12th Ave. in the west to 8th Ave. in the east. The route connects Walmart and Costco to residential communities in northern Hanford on Grangeville Ave., Douty St., and Lacey Blvd. as well as medical offices, local schools, and religious centers. The route will operate every 30 minutes on weekdays and every 60 minutes on Saturdays. At the new Transit Center, riders will be able to transfer to all routes on the hour, to Routes B, C, D, and F at 0:30 after the hour, and to Route A at 0:20 and 0:35 after the hour.

	PROPOSED	
Service Element	Frequency (Min)	Span
Weekday	30	6:30am-8:00pm
Saturday	60	9:30am-5:00pm



Route F

11th Ave.



Route Recommendations

Route F will serve the southwestern Hanford area on 11th Ave., Hanford Armona Rd., 12th Ave., and Hume Ave. The route uses 7th St. in Downtown Hanford and stops at the Hanford Amtrak Station before taking 11th Ave. south to cross Highway 198. The route also serves Centennial Park, Martin Luther King Jr. Elementary School, and a number of apartment and mobile home complexes. The route will operate every 30 minutes on weekdays and every 60 minutes on Saturdays. At the new Transit Center, riders will be able to transfer to all routes on the hour, to Routes B, C, and D at 0:30 after the hour, and to Routes A and E at 0:20 and 0:35 after the hour.

	PROPOSED	
Service Element	Frequency (Min)	Span
Weekday	30	6:30am-8:00pm
Saturday	60	9:30am-5:00pm



The majority of the proposed route network covers areas in Hanford that are served currently by KART service. On these corridors, the existing bus stops will align with the routes on the new route network, which is beneficial for its cost savings to the agency as well as the familiarity for current riders who will be able to find KART public transit service at the same locations where they currently board and alight the bus. Where there is no existing service, it is recommended that the agency consider implementing bus stop amenities, depending on available resources. These amenities can include installing bus stop signs, benches, shelters, and trash cans.

Based on public transit industry best practices, it is recommended that new stops be added to the KART service network based on the following guiding principles: maintain an average of four stops per mile, add stops in each direction to accommodate bi-directional travel, place stops at the far-side of an

intersection to minimize potential travel delays for the bus at stoplights and stop signs, add stops where there are observed gaps with long distances far from stops, and add stops for new developments and important trip generators.

In the proposed route network, a number of additional proposed stops are located in areas that are not currently served by KART transit service. These areas include Lacey Boulevard in the eastern Hanford area and Grangeville Boulevard and 12th Avenue in the northern Hanford area. Additionally, there are new stops proposed on corridors that are currently served by KART service in one direction only, whereas the proposed network includes bi-directional service. These areas include Grangeville Boulevard, Fargo Avenue, 10th Avenue and 11th Avenue in the northern Hanford area.

Appendix A provides the complete list of existing and proposed stop locations based on the new proposed route network.

Plan Benefits and Impacts

As is the case with the existing KART network in Hanford, many customers will require a transfer to complete their journeys. These transfers are a key component of the KART network, allowing the agency to provide two-seat rides to all locations served in the network. This remains to be the case for trips in the proposed route network. Based on the current KART service in Hanford, the team conducted a travel time comparison analysis for a series of origin-destination pairs, in both directions,

which represent a number of possible trips in the KART service area in Hanford. The results of this travel time comparison were positive, with the proposed network offering time reductions in over 68% of the sample trips. The average change in travel time was a reduction of over six minutes. There were only modest travel time increases when comparing the existing network to the proposed network, with three trips offering travel time increases of only one minute. A summary of the travel time comparisons is provided in Figures 10 and 11.

Figure 10: Travel Time Comparison Between Existing and Proposed Route Network - Trips Requiring Transfers

Origin-Destination Pair			Existing Network	Proposed Network	Network Comparison
Trip	Origin	Destination	Travel Time (min.)	Travel Time (min.)	Travel Time Savings (min.)
1	College of The Sequoias	Douty & Fargo	36	35	-1
	Douty & Fargo	College of The Sequoias	45	29	-16
2	Walmart	Shaw @ Home Garden Health Center	30	27	-3
	Shaw @ Home Garden Health Center	Walmart	40	26	-14
3	11th & Jana Way	Hanford Armona and Centennial Park	30	28	-2
	Hanford Armona and Centennial Park	11th & Jana Way	36	31	-5
4	9 1/4 and Valley View Apts.	College of The Sequoias	24	28	4
	College of The Sequoias	9 1/4 and Valley View Apts.	36	35	-1
5	11th & Fargo @ Church	Walmart	29	31	2
	Walmart	11th & Fargo @ Church	31	29	-2
6	9 1/4 and Valley View Apts.	Lacey and Kings County Govt. Center	36	19	-17
	Lacey and Kings County Govt. Center	9 1/4 and Valley View Apts.	39	24	-15
7	Northstar and Remington	Shaw @ Home Garden Health Center	33	30	-3
	Shaw @ Home Garden Health Center	Northstar and Remington	40	29	-11
8	Adventist Medical Center (7th @ Adventist)	Fargo @ Rite Aid (Fargo & 10th Ave.)	22	23	1
	Fargo @ Rite Aid (Fargo & 10th Ave.)	Adventist Medical Center (7th @ Adventist)	38	27	-11

The transfers described in Figure 10 will be made possible by the pulse schedule, included in Figure 12. When routes complete their trip and layover at the new Transit Center, passengers will be able to make a transfer to all other routes, with a maximum layover of 11 minutes at least once an hour. Four routes, the B1, B2, C, and F, allow riders to transfer within four to six minutes every half hour on weekdays. In the case of Routes A and E, due to the differing route lengths to serve key destinations in the far eastern and western areas of Hanford (including the College of The Sequoias

Hanford Campus on 13th Avenue and the Costco on Lacey Boulevard), riders will wait 12-15 minutes to transfer to Routes B1, B2, C, and F on the half hour. The majority of the trips will include transfers of under 10 minutes, which is considered to be an accepted industry standard for bus service.

In addition to reducing travel time for customers who transfer, transitioning to more bi-directional service will reduce travel times for some customers who rely on a single route. Figure 11 illustrates a few examples.

Figure 11: Travel Time Comparison Between Existing and Proposed Route Network - Trips Not Requiring Transfers

Origin-Destination Pair			Existing Network	Proposed Network	Network Comparison
Trip	Origin	Destination	Travel Time (min.)	Travel Time (min.)	Travel Time Savings (min.)
1	11th and Fargo	Kings Community Action Organization (KCAO)	8	6	-2
	Kings Community Action Organization (KCAO)	11th and Fargo	22	5	-17
2	10th and Fraternal Hall	Fargo @ Rite Aid (Fargo & 10th Ave.)	6	6	0
	Fargo @ Rite Aid (Fargo & 10th Ave.)	10th and Fraternal Hall	24	8	-16
3	Grangeville and Rogers (YMCA)	Lacey Hanford Mall	17	6	-11
	Lacey Hanford Mall	Grangeville and Rogers (YMCA)	10	8	-2

Figure 12: Proposed Pulse Schedule at New KART Transit Center

Route	Route Name	7:00 AM	7:05 AM	7:10 AM	7:15 AM	7:20 AM	7:25 AM	7:30 AM	7:35 AM	7:40 AM	7:45 AM	7:50 AM	7:55 AM	8:00 AM
A	7th St.	00			15	20			33			50	53	60
A	7th St.	00							35			50		60
B1	10th & 11th Ave. Loop Counterclockwise	00					25	30					55	60
B2	10th & 11th Ave. Loop Clockwise	00					25	30					55	60
C	Douty St.	00					24	30					54	60
C	Douty St.	00					24	30					54	60
D	Lacey Blvd.	00				20		30				50		60
E	Grangeville-Costco Loop	00				18							53	60
E	Grangeville-Costco Loop	00							33				53	60
F	11th Ave.	00					25	30					55	60

Figure 13 shows the two stops that currently generate up to two riders per day that are more the quarter-mile from a bus stop on the proposed network.

Figure 13: Impacted Riders

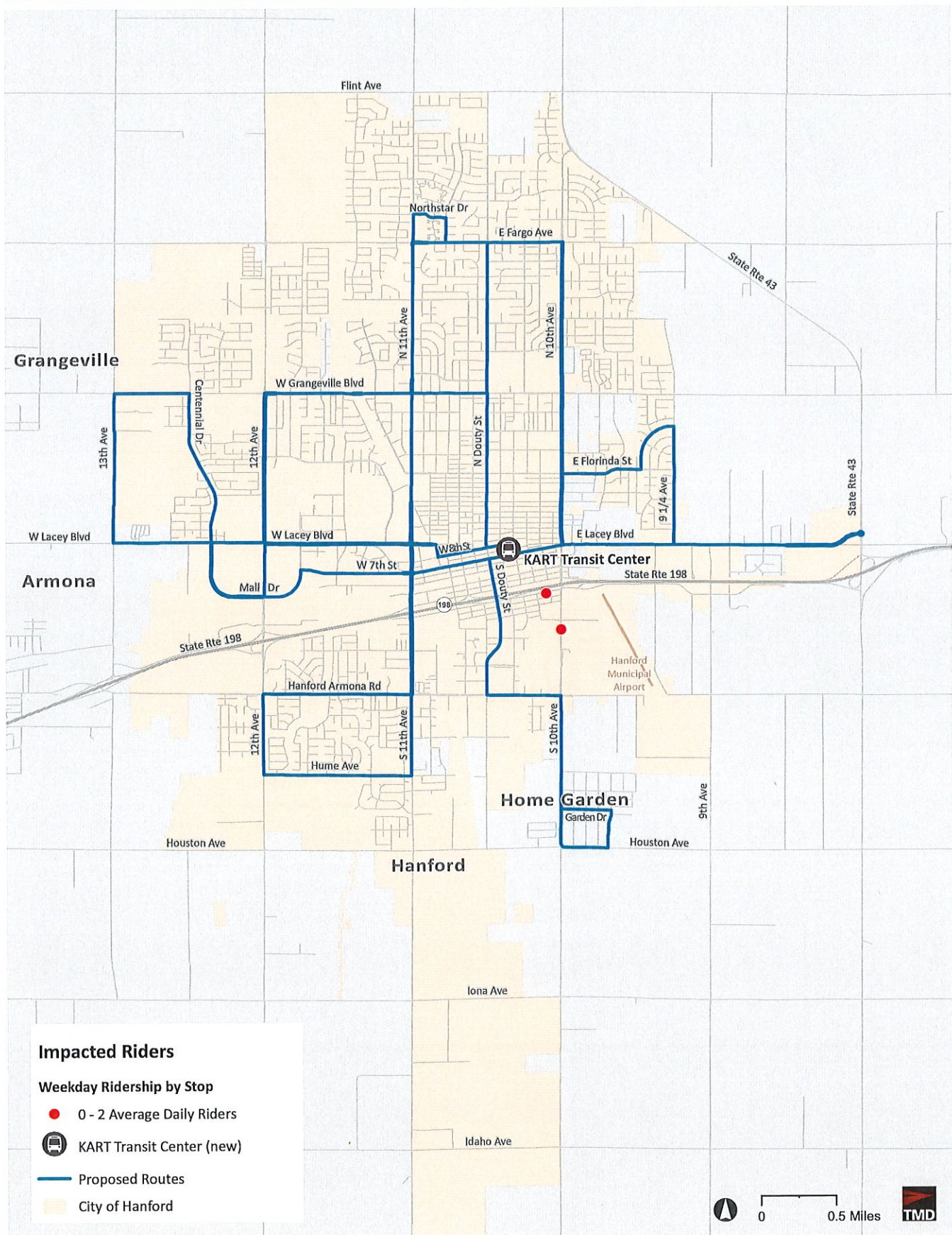
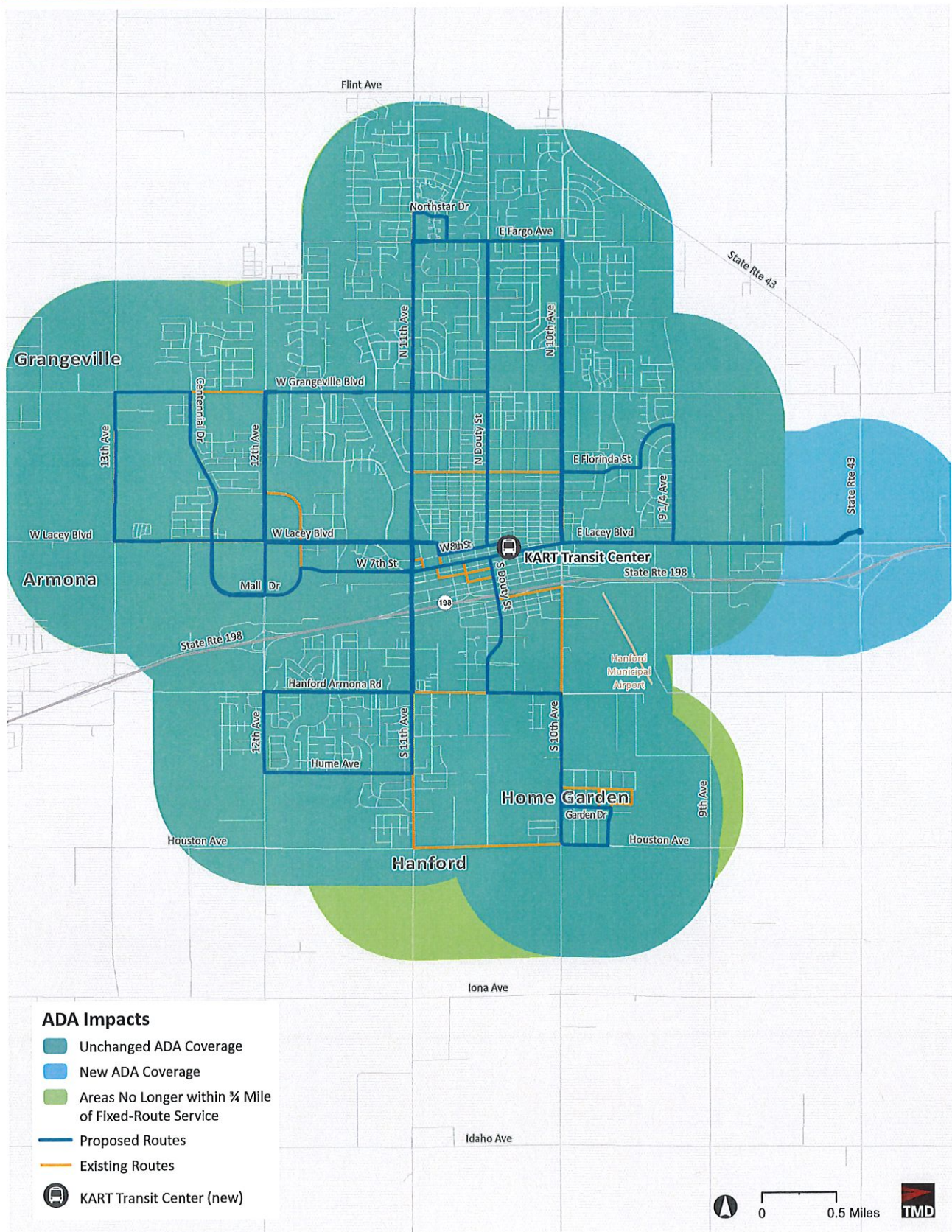


Figure 14 illustrates how ADA coverage changes under the proposed network. The extension of fixed-route service to the east will expand ADA coverage in the eastern portion of Hanford. Small sections of South Hanford will no longer be within three-quarter-mile of fixed-route service, however that does not preclude KART from continuing to provide service there. However, for the most part these areas are currently undeveloped and not likely to generate trips.

Figure 14: ADA Coverage Area Impacts



FINANCIAL AND OPERATIONAL IMPACTS

No Action Alternative

If no changes were made to the existing route network other than the changes needed to serve the proposed Transit Center instead of the existing KART Transfer Center, the following impacts would result.

The most significant is that Route 9 would no longer be able to pulse with other buses. It would take more than 30 minutes to make the round trip under the best of conditions, and it would have to cross railroad tracks twice each round trip as opposed to none today with the route alignment that serves the existing KART Transfer Center, causing possible further delay on some trips. Therefore, an additional bus would be needed increasing annual revenue hours by 3,807 and the annual operating cost in FY 2024 by \$182,926.²

Route 1 would be extended by about 0.22 miles to serve the new Transit Center increasing round trip running time by about two minutes. Under normal circumstances, this would still allow sufficient recovery time. However, delays turning left from Northstar Drive onto 11th Avenue are currently causing the bus to miss the pulse on some trips at the existing KART Transfer Center. This would be exacerbated by this minor increase in the route distance to serve the new Transit Center. The recommended network does not have any route making this left turn.

Routes 5 and 7 would be extended by one mile round trip to serve the new Transit Center. In both cases, under normal circumstances, there would still be sufficient recovery with this extension. However, in the case of Route 7, it would cross the BNSF mainline track four times each round trip as compared to two crossings currently. This increases the likelihood of missing a pulse due to delays from train activity. By comparison, the recommended network plan does not have any route crossing the BNSF mainline more than twice each round trip.

Future Funding/Growth Scenarios

Scenario 1 Low Revenue

Currently, KART fixed-route service in Hanford is operated with nine buses, although the suspension of Route 8 due to a shortage of bus operators brings the number of vehicles to eight with a corresponding reduction of revenue hours, miles, and operating cost. However, this is a temporary measure, therefore, the nine-bus schedule in operation at the time this study began is assumed to be the baseline or constrained level of service—although the recommendation of this plan is to combine elements of the current Routes 4 and 8 into a single route, and it is not recommended to resume the operations of Route 8. The current service span hours would be retained, and five of the six proposed routes would operate every 30 minutes on weekdays and 60 minutes on Saturday. Proposed Route D would operate every 60 minutes from Monday through Saturday. This route was chosen to operate every 60 minutes for three reasons:

- » The density of the area served by the east extension to Costco is much lower than the rest of the system. This area is currently not served with fixed-route service; therefore, the area would not be receiving a reduction in service.
- » Grangeville is currently served in one direction every 30 minutes, whereas under this proposal Grangeville will be served every 60 minutes but in both directions.
- » Route 7, which serves Grangeville, typically has the lowest ridership of the nine Hanford routes.

This scenario would have a modest increase in cost over the level of service at the time this study began due to all buses having the same span on weekdays and Saturdays. The result would be an additional 1.5 hours on weekdays and five hours on Saturdays or 648 annual hours. This would increase the annual operating cost by \$31,136. Continued recovery from COVID and the improvements that reduce travel time for most trips and extend service to Costco should result in increased ridership and fare revenue, increasing farebox recovery and reducing the subsidy per passenger which can help cover some of this additional cost.

² The cost is based on a 4.81% increase of the FY 23 cost of \$37.21 per hour and \$.72 per mile (\$.35 per mile for maintenance and \$.37 per mile for fuel). This applies to all alternatives and scenarios presented in this report.

Scenario 2 Modest Revenue

This scenario includes four alternatives that increase annual revenue hours by 3,402 to 3,570, depending on the alternative, compared to the level of service provided at the beginning of this study.

Alternative 1 would operate Route D every 30 minutes on weekdays to match the level of service on all other routes. This version would increase annual revenue hours by 3,402. (Saturday service would not be impacted as all routes operate on a 60-minute headway on Saturday.) Notwithstanding the reasons given above as to why Route D was chosen for 60-minute service, there are also several benefits to operating the route every 30 minutes.

- » Sixty-minute service is lifeline service. At 30-minute frequency, customers begin to feel they can use transit for a multitude of trip purposes. Therefore, 30-minute service will be of greater benefit to the communities served by this route.
- » It will increase transfer opportunities for trips to and from destinations along this route. At a 30-minute headway, all 10 route segments of the six routes would pulse once an hour, whereas at a 60-minute headway, one segment would miss the pulse, causing unnecessary delays for riders when making transfers.
- » Although current Route 7 has the lowest ridership, the introduction of bi-directional service and direct access to Walmart and Target will make this route more attractive and increase ridership.

This alternative equals the lowest increase in annual revenue hours of the four alternatives, but is the only alternative that increases the number of buses needed to provide service by one. The increase in annual operating cost is \$163,466.

Alternative 2 would increase the span of service on all routes by 90 minutes each weekday (15 hours per day with service operating 6:30 AM to 9:30 PM). This would increase revenue hours by 3,402 annually. If extended at the end of the day, the last departures from the Transit Center would be at 9:00 PM. As noted above, 64% of respondents have asked for longer service on weekdays and 43% only use the service for one-way (rather than round) trips, with the lack of evening service to return home from work or school as a major reason. However, employees leaving work at 9:00 PM or later and students attending night classes ending at or after 9:00 PM, may still be unable to use transit to

get home since buses departing the transit center at 9:00 PM would not be connecting with any buses upon their return to the transit center. The increase in annual operating cost is \$163,466.

Alternative 3 would increase the weekday span by 60 minutes (14.5 hours - 6:30 AM to 9:00 PM) and the Saturday span by 4.5 hours (12 hours - 9:00 AM to 9:00 PM). This would increase annual revenue hours by 3,483. The extra hour on weekdays would provide additional utility for many customers, but still have the challenge of Alternative 2 for many employees and students. On the other hand, 74% of respondents indicated a desire for a longer span of service on Saturdays, and the existing span of service on Saturdays of under eight hours makes it impossible for most employees to use the bus in both directions. The increase in annual operating cost is \$167,358.

Alternative 4 would increase the Saturday span of service to match weekday service (13.5 hours - 6:30 AM to 8:00 PM) and introduce Sunday service with the current Saturday span of service (7.5 hours - 9:30 AM to 5:00 PM). This would increase annual revenue hours by 3,570. Most businesses that are open on Saturday are also open on Sunday, and the provision of service on Sunday can actually increase ridership on Saturday as the provision of service seven days per week makes the transit system more usable for more trips. The increase in annual operating cost is \$171,539.

Scenario 3 Robust Revenue

As is illustrated in Scenario 2, there are multiple approaches to deploying a modest increase in revenue hours to make KART service in Hanford more useful to the community and address deficiencies identified in surveys conducted earlier this year. Furthermore the cumulative impact in terms of ridership and ultimately productivity could exceed the sum of growth each individual action would generate because the network becomes useful for more trips, and more members of the community will consider KART to meet their mobility needs, and current riders will be able to rely on KART service for even more of their trips.

If all of the four alternatives described in Scenario 2 were implemented together, as described above, the annual revenue hours would increase by 10,905 (Low Alternative in table below). The above scenario choices were made to limit the increase in service hours to be at a level that could potentially be implemented. However, if the weekday service span were to be 16 hours instead of 15 hours, and the weekend span were

to be 12 hours on both Saturday and Sunday (assuming 30-minute weekday service on all routes and 60-minute weekend service on all routes), the increase in annual revenue hours would be 14,108 (High alternative in table below).

Longer-term service will need to be extended to the future High Speed Rail (HSR) station. The HSR Station will become a major transportation hub also serving the proposed Cross Valley bus rapid transit or hybrid rail service, Amtrak San Joaquin trains in advance of full HSR, and potentially other regional services. It appears that a bus will be able to make the round trip between the new Transit Center and the HSR station in 30 minutes including recovery. At first glance simply

extending proposed Route D, which operates as close to the HSR station site as is possible today and would operate via the most direct route, would address this need. However, the proposed Route D matches a shorter eastern segment with a longer western segment. Once extended, the eastern segment would no longer be shorter and would no longer be matched with its longer western segment.

The HSR Station is not likely to open until five to seven years after the routes proposed in this plan are implemented. At that time, it would be prudent to conduct another evaluation of Hanford and regional county routes to determine the best way to serve the HSR Station.

Figure 15: Impacts of Alternatives and Scenarios

IMPACTS OF ALTERNATIVES AND SCENARIOS								
	No Action	Low Revenue	Modest Revenue Alternative One	Modest Revenue Alternative Two	Modest Revenue Alternative Three	Modest Revenue Alternative Four	Robust Revenue Low Alternative	Robust Revenue High Alternative
Annual Revenue Hour Increase	3,807	648	3,402	3,402	3,483	3,570	10,905	14,108
Annual Operating Cost Increase	\$182,926	\$31,136	\$163,466	\$163,466	\$167,358	\$171,539	\$523,985	\$677,889
Estimated Ridership Increase		15,408	18,936	17,010	17,415	17,850	56,451	72,466
Estimated Fare Revenue Increase	\$-	\$5,547	\$6,817	\$6,124	\$6,269	\$6,426	\$20,322	\$26,088
Net Cost Increase	\$182,926	\$25,589	\$156,649	\$157,342	\$161,089	\$165,113	\$503,663	\$651,801

NEW TRANSIT CENTER ACCESS

This section reviews the mobility and accessibility considerations regarding the proposed KART Transit Center. The proposed transit center is first reviewed. Accessibility by various modes (vehicle, pedestrian, bicycle) is then discussed. The capacity of the proposed transit center to accommodate local transit services, regional/intercity transit services, and other mobility services is then evaluated.

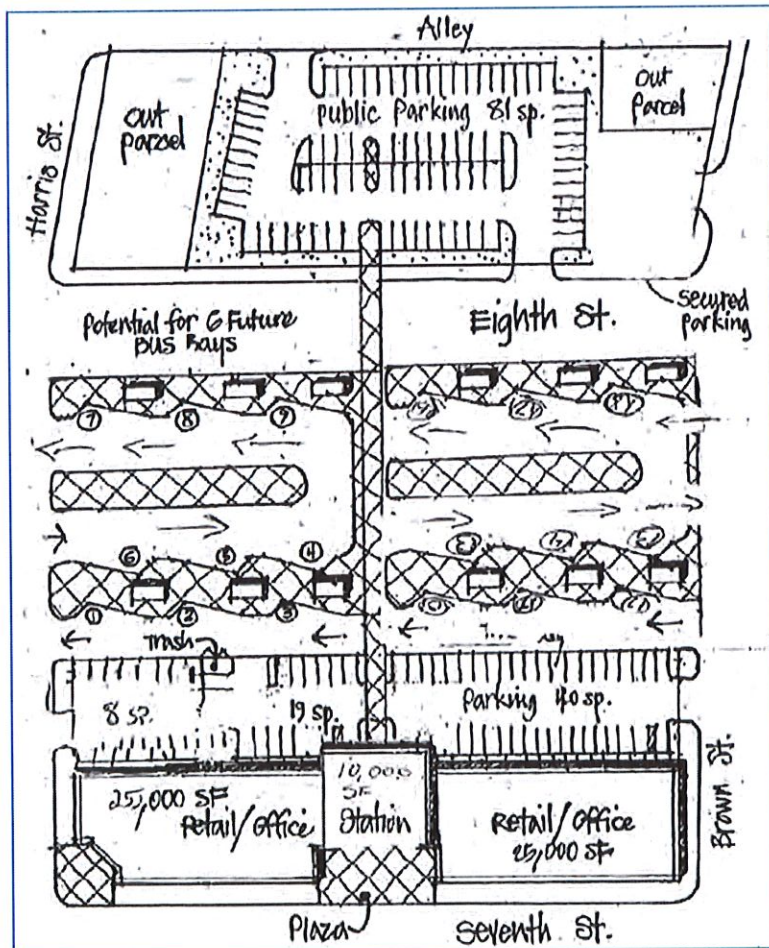
Proposed Transit Center

As described in the KART Transit Station Site Selection Study (Mott McDonald, July 2018), the proposed Transit Center will provide the following:

- » A building providing waiting/ticketing areas and driver relief area
- » Bays for 20 transit vehicles, as well as bus charging stations
- » Parking for park-and-ride and staff vehicles
- » Bike lockers or bikeshare amenities

This facility is planned for a site encompassing the block defined by East 7th Street (to the south), Harris Street (to the west), East 8th Street (to the north), and Brown Street (to the east), along with auto parking on a portion of the block north across East 8th Street. A conceptual site plan (Source, Ultrasystems, KCAPTA) is shown in Figure 16. It is located in the eastern portion of downtown Hanford, five blocks to the east of the existing KART Transfer Center location. The conceptual drawing accommodates 18 buses at one time with the option to increase to 24 instead of the 20 identified in the Mott McDonald Study.

Figure 16: Conceptual KART Transit Center Site Plan



Existing Access Conditions

Traffic Access

The adjacent roadways consist of City of Hanford streets, all of which provide one travel lane in each direction. Traffic control at intersections consists of the following:

- » E. 7th Street / N. Harris Street – Traffic Signal
- » E. 7th Street / N. Brown Street – Stop signs on the Brown Street approaches
- » E. 8th Street / N. Harris Street – All-Way Stop signs
- » E. 8th Street / N. Brown Street – Yield sign on the E. 8th Street approach

LSC staff conducted PM peak-period traffic counts on October 6th, 2022. Based on these counts, the roadway volumes shown in Figure 17 were defined. As shown, 7th Street is substantially busier than the other adjacent streets.

Traffic operations are evaluated based upon the Level of Service (LOS), which is a scale ranging from LOS A (very little delay) to LOS F (longer delays and stop-and-go traffic conditions). The City of Hanford has a standard of LOS C or better. The KART Transit Center Draft Transportation Impact Assessment (Fehr & Peers, September 2019) provides an analysis of existing peak-hour intersection LOS, as follows:

- » E. 7th Street / N. Harris Street – LOS A (9-second delay on average)
- » E. 7th Street / N. Brown Street – LOS B (14-second delay on worst movement)
- » E. 8th Street / N. Harris Street – LOS A (8-second delay on average)
- » E. 8th Street / N. Brown Street – LOS A (3-second delay on worst movement)

The transportation impact study, moreover, indicates that LOS will be unchanged with the new transit center.

Pedestrian Access

Sidewalks are currently provided along all adjacent streets. At the 7th & Harris intersection and 8th & Harris intersection, crosswalks are provided across all approaches. The signal at 7th & Harris provides a protected pedestrian crossing of busy 7th Street, though no pedestrian actuation is provided. No crosswalks are striped at 7th & Brown or 8th & Brown. ADA ramps are provided at the 7th & Harris, 8th & Harris, and 7th & Brown intersections, but not at the 8th / Brown intersection.

Bicycle Access

There is no specific accommodation for bicyclists on the adjacent roadways, requiring cyclists to share travel lanes with vehicles. The nearest bicycle facilities are Class III (signed bicycle route) on 10th Street (two blocks to the north) and Douty Street (one block to the west). The City of Hanford Pedestrian and Bicycle Master Plan (January 2016) identifies a future Class II (striped bike lanes) facility along 6th Street one block to the west of the site.

Figure 17: Existing Peak-Hour 2-Way Traffic Volumes on Adjacent Streets

Street	Segment	Volume
7th	Harris-Brown	458
Harris	7th-8th	175
Brown	7th-8th	92
8th	Harris-Brown	67

Transit Center Bus Capacity

The planned transit center will provide 18 individual bus bays in the near term – twelve (12) in the westbound direction and six (6) in the eastbound direction. In addition, there is the potential for six additional bays along existing 8th Street in the future. An important question is whether the new center has adequate capacity to support local and regional transit / mobility services.

At present, KART service schedules result in a maximum of five local buses on-site at the peak times, which occurs at the top and bottom of each hour (Routes 1, 3, 4, 5 and 9). Three buses are at the center at 15 and 45 minutes after each hour (Routes 2, 6 and 7). Route 20 is on-site at five and 35 minutes after the hour (and can well be on-site at the top and bottom of the hour). In total, up to six regularly scheduled buses can be on-site at a peak time. In addition, KART's longer regional routes (Routes 13, 14, 15 and 17) have a less consistent schedule over the day. At several times of day, it is possible for buses on up to two of these routes to be on-site at the peak time. The current schedule can result in up to eight buses at one time

The recommended route network described above would result in up to 10 local route buses at peak times. Including one Route 20 bus and two longer regional route buses, the peak would be 13 buses on-site—again also within the 18-bus bay capacity.

Another consideration under the proposed realigned route plan is whether the bus bays are configured to allow efficient ingress and egress by buses. The only specific constraint on bus routing is the desirability of buses exiting the Transit Center and heading east on E. 7th Street to do so at the Harris Street signal, rather than face the delays of making an unsignalized left turn onto E. 7th Street at Brown Street. To access this signal, it is necessary to use a bus bay in the westbound direction in the Transit Center. There are three routes that will require this movement under the proposed routing plan: Route A eastbound, Route B eastbound, and Route E eastbound. Fortunately, the site plan includes a total of 12 westbound bus bays. (All other routes/directions can use bus bays in either direction.) As a result, there is more than adequate capacity and flexibility in the Transit Center site design to accommodate the proposed bus movements.

Capacity for Other Mobility Services

The new Transit Center will also need to support other mobility services, as follows:

- » Cross Valley Corridor bus service – This could result in up to two additional buses at peak times on-site. This service is planned for implementation in late 2024.
- » Amtrak Thruway Route 18 service between Visalia and San Luis Obispo / Santa Maria – One additional bus. Amtrak, the City of Visalia, Tulare County, and KCAPTA are in discussions regarding changes to this routing, which may result in additional runs per day, but no additional vehicles at peak.
- » Uber GoKart service – This publicly supported service could generate two to three peak smaller vehicles on-site.
- » Potential future additional microtransit services.
- » Considering the potential for 13 buses to be on-site at peak times in the near term, there are at least five bus bays available for future expansion.

Summary and Conclusions

- » The proposed transit center will expand regional mobility and accessibility, in that it has more than adequate capacity to accommodate existing and foreseeable future expansion of transit services.
- » Traffic conditions for buses accessing the Transit Center will be good (LOS A or B), with minimal delays. Routing the buses to make use of the signal at Harris Street to make left turns onto 7th Street would minimize any delays.
- » Pedestrian access to the site is good, with sidewalks on all adjacent streets. As part of the Transit Center site improvements, full ADA access should be provided for the site, including curb ramps at the 7th & Brown intersection.
- » While there are no dedicated bicycle facilities serving the site, the low volumes on adjacent streets (particularly Brown Street in the north/south direction and 8th Street in the east/west direction) provide good opportunities for bike access. Improved bicycle connections (such as Class III) should be provided to the Transit Center from the existing Class III route on N. Douty Street (such as along 8th Street). As part of the project to implement Class II bike lanes along 6th Street, it would be beneficial to provide bicycle connection from the transit center to this new facility.



CONCLUSION

The planned relocation of the Hanford Transit Center half a mile to the east presented an opportunity to examine the fixed-route network serving the city of Hanford. The recommendations contained in this plan were developed through a coordinated process that involved reaching out to stakeholders in the community, conducting an onboard survey of current customers, conducting a review of ridership activity by stop on each route, using Replica Data to identify overall travel patterns in Hanford by all modes, and examining of existing and proposed land use.

The recommended route network will reduce travel times for most customers by replacing one-directional loop routes with relatively direct bi-directional routes. The new transit center with 20 bus bays allows for schedules to be designed so that all routes can pulse at the same time, including regional routes that were not part of this study. Currently, half of the routes pulse on the hour and half hour while others pulse 15 and 45 minutes after the hour, increasing the travel time for some customers who must transfer to complete their trip. The recommended network is also simpler and easier to understand which, together with the reduced travel times, is expected to increase ridership.

Multiple scenarios are presented, depending on the level of funding available, however the recommended

network is the same in each scenario. The differences are in the proposed span of service and the frequency of one route. At a minimum, the span of service is not reduced on any route. In some scenarios, frequency is reduced to one segment of existing service. That segment however will receive bi-directional service instead of one-directional service and currently experiences the lowest ridership of all routes.

The proposed route network retains service for all areas of Hanford currently covered by fixed-route KART service, although some customers will have a longer walk to the bus stop. New service is provided along Lacey to the east, serving Costco and setting up for an eventual extension to the Hanford High Speed Rail station when it opens later this decade. At this time, fixed-route service is not extended to other growth areas of Hanford due to factors such as low density or the urban form not being conducive to high transit ridership. These areas will be served by KART's existing microtransit service. With limited resources, it is best to concentrate fixed-route service where ridership potential is highest, and, if additional resources become available, to then increase the span of service and/or improve frequency to make this service useful for more customers and trip purposes.

APPENDIX A

Recommended Bus Stop Locations

Figure 18: Existing and proposed stop locations based on the new proposed route network

STOP NAME	DIRECTION	STATUS	ROUTE(S) SERVED
10th & Birch	Counterclockwise	Existing	B1
10th & Carey	Counterclockwise	New	B1
10th & E 11th	Clockwise	New	B2
10th & Florinda	Clockwise	New	B2
10th & Grangeville	Counterclockwise	Existing	B1
10th & Grangeville	Clockwise	New	B2
10th & Greenwood	Counterclockwise	New	B1
10th & Home	Northbound	Existing	C
10th & Leland	Counterclockwise	Existing	B1
10th & Leland	Clockwise	New	B2
10th & Malone	Counterclockwise	Existing	B1
10th & Malone	Clockwise	New	B2
10th & Myrtle	Eastbound & Counterclockwise	Existing	A, B1
10th & Terrace	Clockwise	New	B2
10th @ Carwash	Eastbound & Counterclockwise	Existing	A, B1
10th @ Fraternal Hall	Counterclockwise	Existing	B1
10th Ave. & Camino Ramon	Southbound	Existing	C
10th Ave. & Camino Ramon	Northbound	New	C
10th Ave. & Garden	Northbound	New	C
10th Ave. & Houston Ave.	Northbound	New	C
11th & Cameron	Clockwise	Existing	B2
11th & Cortner	Counterclockwise	Existing	B1
11th & Cortner	Clockwise	New	B2
11th & Davis	Eastbound	Existing	F
11th & Elm	Counterclockwise	New	B1
11th & Fargo	Clockwise	New	B2
11th & Fargo	Northbound	New	C
11th & Fargo @ Church	Counterclockwise	Existing	B1
11th & Florinda	Clockwise	New	B2
11th & Grangeville	Clockwise	New	B2
11th & Hanford Armona Rd	Eastbound	Existing	F
11th & Jana Way	Counterclockwise	Existing	B1
11th & Lacey	Counterclockwise	New	B1
11th & Lacey	Clockwise	New	B2
11th & Marconi	Westbound	Existing	F
11th & Mulberry	Counterclockwise	New	B1
11th & Mulberry	Clockwise	New	B2
11th & Neville	Counterclockwise	Existing	B1
11th & Neville	Clockwise	New	B2
11th & Washington	Westbound	Existing	F

STOP NAME	DIRECTION	STATUS	ROUTE(S) SERVED
11th @ Castle Square	Westbound	Existing	F
11th @ Cost Less	Westbound	Existing	F
11th @ Davita Dialysis	Counterclockwise	Existing	B1
11th @ DMV	Westbound	Existing	F
11th @ KCAO	Counterclockwise	Existing	B1
11th across Cost Less	Eastbound	Existing	F
12th & Freestone	Eastbound	Existing	F
12th & Glenn	Westbound	New	E
12th & Graham	Eastbound	New	F
12th & Greenfield	Westbound	New	E
12th & Liberty	Westbound	New	E
12th @ Centennial Plaza	Westbound	Existing	E
12th @ Church	Eastbound	New	E
12th @ Courthouse	Eastbound	New	E
12th @ Hanford Mall	Eastbound	New	D, E
12th @ Home Depot	Eastbound	New	E
7th & 11th	Eastbound	Existing	A
7th & Amtrak Station	Westbound & Clockwise	New	A, B2, F
7th & Brown	Eastbound	Existing	E
7th & Campus Dr (NS)	Westbound	New	A
7th & Douty	Eastbound, Northbound & Counterclockwise	Existing	A, B1, C, F
7th & East	Eastbound & Counterclockwise	Existing	A, B1, E
7th & Reagan Way	Eastbound	Existing	A
7th & Redington	Westbound & Clockwise	Existing	A, B2, F
7th @ Adventist Hospital	Eastbound	Existing	A
7th @ Laundry Building	Eastbound & Counterclockwise	New	A, B1, F
7th @ Medical Centers	Westbound	Existing	A
7th @ Senior Villa Apartments	Eastbound	Existing	A
7th @ United Market	Westbound & Clockwise	Existing	A, E, B2
8th & Irwin	Westbound	Existing	D
8th @ Aria Community Health	Eastbound	Existing	D
9 1/4 & Elm	Westbound	Existing	A
9 1/4 & Hawthorne	Westbound	Existing	A
9 1/4 @ King Garden Apartments	Westbound	Existing	A
9 1/4 @ View Road Apartments	Westbound	Existing	A
Centennial & Charlie Chambers	Eastbound	Existing	A
Centennial & Columbia	Eastbound	New	A
Centennial & Ella	Eastbound	New	A
Centennial & Lacey Blvd. (FS)	Eastbound	New	A
Centennial & West Merrit	Eastbound	Existing	A
Centennial @ Hanford Sports Complex	Eastbound	New	A
Centennial @ Target	Westbound	Existing	A
Centennial @ Walmart	Eastbound	Existing	A, D, E

STOP NAME	DIRECTION	STATUS	ROUTE(S) SERVED
Centennial @ Walmart	Westbound	Existing	D, E
COS & Sierra Pacific High School	Eastbound & Westbound	Existing	A
Douty & 11th St	Southbound & Eastbound	Existing	C, E
Douty & 2nd	Southbound	New	C
Douty & 2nd	Northbound	Existing	C
Douty & 5th	Southbound	New	C
Douty & Cortner	Southbound	Existing	C
Douty & Cortner	Northbound	Existing	C
Douty & Fargo	Southbound	Existing	C
Douty & Grangeville	Southbound	New	C
Douty & Grangeville	Eastbound	New	E
Douty & Irwin	Southbound	New	C
Douty & Ivy	Northbound	Existing	C, E
Douty & Lang	Southbound	New	C
Douty & Lang	Northbound	Existing	C
Douty & Leland Way	Northbound	Existing	C
Douty & Library	Northbound	Existing	C
Douty & Malone SB/EB	Southbound & Eastbound	Existing	C, E
Douty & Malone NB/WB	Northbound & Westbound	Existing	C, E
Douty @ Civic Center	Southbound & Eastbound	Existing	C, E
Douty @ Community Care	Northbound & Westbound	Existing	C, E
Douty @ Hanford High School	Northbound	Existing	C
Douty @ Library	Westbound	Existing	E
Douty across Hanford High	Southbound	Existing	C
Douty across St. Brigid Church	Southbound & Eastbound	Existing	C, E
Fargo & Carter Way	Counterclockwise	Existing	B1
Fargo & 10th	Clockwise	New	B2
Fargo & Aspen St	Southbound & Clockwise	New	B2, C
Fargo & Carter Way	Northbound	Existing	C
Fargo & Chestnut	Counterclockwise	New	B1
Fargo & Fir Lane	Northbound & Counterclockwise	New	B1, C
Fargo & Santa Lucia	Clockwise	New	B2
Fargo @ Rite Aid	Counterclockwise	Existing	B1
Florinda & 10th	Eastbound	Existing	A
Florinda & Whitney Drive	Eastbound	Existing	A
Garden Drive & 10th	Southbound	New	C
Garden Drive & 3rd	Southbound	New	C
Grangeville & 11th	Westbound	Existing	E
Grangeville & Centennial	Eastbound	New	A
Grangeville & Douty	Westbound	New	E
Grangeville & Fitzgerald	Eastbound	New	E
Grangeville & Fitzgerald	Westbound	Existing	E
Grangeville & Mulberry	Westbound	New	E
Grangeville & Redington	Eastbound	New	E
Grangeville & Rodgers	Eastbound	New	E

STOP NAME	DIRECTION	STATUS	ROUTE(S) SERVED
Grangeville & Rodgers	Westbound	Existing	E
Grangeville & University	Eastbound	New	E
Grangeville & University	Westbound	Existing	E
Grangeville & Whitmore	Eastbound	New	E
Hanford Armona Rd & 11th 1/2 Ave.	Eastbound	Existing	F
Hanford Armona Rd & 12th	Eastbound	Existing	F
Hanford Armona Rd & Leslie Lane	Eastbound	Existing	F
Hanford Armona Rd @ Centennial Park	Eastbound	Existing	F
Hanford Armona Rd @ Kings Terrace Apartments	Southbound	Existing	C
Hanford Armona Road & 10 1/2 Ave.	Southbound	Existing	C
Hanford Armona Road & Harris	Northbound	Existing	C
Hanford Armona Road & Irwin	Northbound	Existing	C
Hanford Armona Road & Kings Rehab	Northbound	Existing	C
Hume & 11th	Westbound	Existing	F
Hume & Butternut	Westbound	Existing	F
Hume & Echo Lane	Westbound	Existing	F
Hume & Monterey	Westbound	New	F
Hume & Robin	Westbound	New	F
Hume & Robin	Eastbound	New	F
Irwin & Douty	Northbound	Existing	C
KART Transit Center - New	All Directions	New	A, B1, B2, C, D, E, F
Lacey & 11th	Eastbound	New	D
Lacey & 8 3/4	Eastbound	New	E
Lacey & 8 3/4	Westbound	New	E
Lacey & 9 1/4	Eastbound	New	E
Lacey & 9 1/4	Westbound	New	E
Lacey & Carolyn	Eastbound	New	E
Lacey & Carolyn	Westbound	New	E
Lacey & Centennial Dr (FS)	Westbound	New	A
Lacey & Santa Fe	Westbound	New	D
Lacey & Vista Ave.	Westbound	New	E
Lacey @ Carl's Jr.	Westbound	Existing	D
Lacey @ Centennial Plaza	Westbound	Existing	D, E
Lacey @ Chubby's	Eastbound	Existing	D
Lacey @ Costco Center	Eastbound	Existing	E
Lacey @ Costco Center	Westbound	New	E
Lacey @ Four Seasons Mobile Park	Westbound	Existing	A
Lacey @ Government Center	Westbound	Existing	D
Lacey @ Greenfield	Eastbound	Existing	D
Lacey @ Hanford Auto Sales	Eastbound	New	E

STOP NAME	DIRECTION	STATUS	ROUTE(S) SERVED
Lacey @ Hanford Mall	Eastbound	Existing	D
Lacey @ Heritage Park Senior Center	Westbound	Existing	D, E
Lacey @ Kings County Bowl	Westbound	New	A, E
Lacey @ King's Eye Center	Eastbound	Existing	D
Lacey @ Mall Drive	Westbound	Existing	D
Lacey @ Smart & Final	Westbound	Existing	A, E
Lacey across Kings County Bowl	Eastbound	New	E
Lassen Drive & Fernot Way	Westbound	Existing	A
Lassen Drive & Florinda	Westbound	Existing	A
Lassen Drive & Florinda	Eastbound	Existing	A
Lacey @ Panda Express	Eastbound	New	E
Mall & 7th	Westbound	New	A
Northstar @ Remington	Northbound & Southbound	New	C
Shaw @ Home Garden Health Center	Northbound & Southbound	Existing	C

APPENDIX B Draft Timetables

ROUTE A

[illegible]

ROUTE B1		
Transit Center	Fargo and Carter	Transit Center
6:30 AM	6:42 AM	6:55 AM
7:00 AM	7:12 AM	7:25 AM
7:30 AM	7:42 AM	7:55 AM
8:00 AM	8:12 AM	8:25 AM
8:30 AM	8:42 AM	8:55 AM
9:00 AM	9:12 AM	9:25 AM
9:30 AM	9:42 AM	9:55 AM
10:00 AM	10:12 AM	10:25 AM
10:30 AM	10:42 AM	10:55 AM
11:00 AM	11:12 AM	11:25 AM
11:30 AM	11:42 AM	11:55 AM
12:00 PM	12:12 PM	12:25 PM
12:30 PM	12:42 PM	12:55 PM
1:00 PM	1:12 PM	1:25 PM
1:30 PM	1:42 PM	1:55 PM
2:00 PM	2:12 PM	2:25 PM
2:30 PM	2:42 PM	2:55 PM
3:00 PM	3:12 PM	3:25 PM
3:30 PM	3:42 PM	3:55 PM
4:00 PM	4:12 PM	4:25 PM
4:30 PM	4:42 PM	4:55 PM
5:00 PM	5:12 PM	5:25 PM
5:30 PM	5:42 PM	5:55 PM
6:00 PM	6:12 PM	6:25 PM
6:30 PM	6:42 PM	6:55 PM
7:00 PM	7:12 PM	7:25 PM
7:30 PM	7:42 PM	7:55 PM
	Saturday Trips	

ROUTE B2		
Transit Center	Fargo and Santa Lucia	Transit Center
	6:42 AM	6:55 AM
7:00 AM	7:12 AM	7:25 AM
7:30 AM	7:42 AM	7:55 AM
8:00 AM	8:12 AM	8:25 AM
8:30 AM	8:42 AM	8:55 AM
9:00 AM	9:12 AM	9:25 AM
9:30 AM	9:42 AM	9:55 AM
10:00 AM	10:12 AM	10:25 AM
10:30 AM	10:42 AM	10:55 AM
11:00 AM	11:12 AM	11:25 AM
11:30 AM	11:42 AM	11:55 AM
12:00 PM	12:12 PM	12:25 PM
12:30 PM	12:42 PM	12:55 PM
1:00 PM	1:12 PM	1:25 PM
1:30 PM	1:42 PM	1:55 PM
2:00 PM	2:12 PM	2:25 PM
2:30 PM	2:42 PM	2:55 PM
3:00 PM	3:12 PM	3:25 PM
3:30 PM	3:42 PM	3:55 PM
4:00 PM	4:12 PM	4:25 PM
4:30 PM	4:42 PM	4:55 PM
5:00 PM	5:12 PM	5:25 PM
5:30 PM	5:42 PM	5:55 PM
6:00 PM	6:12 PM	6:25 PM
6:30 PM	6:42 PM	6:55 PM
7:00 PM	7:12 PM	7:25 PM
7:30 PM	7:42 PM	7:55 PM
8:00 PM	8:12 PM	
	Saturday Trips	

ROUTE C								
Northstar and Remington	Arrive Transit Center	Leave Transit Center	Garden and Shaw		Garden and Shaw	Arrive Transit Center	Leave Transit Center	Northstar and Remington
		6:30 AM	6:42 AM		6:42 AM	6:54 AM	7:00 AM	7:12 AM
6:42 AM	6:54 AM	7:00 AM	7:12 AM		7:12 AM	7:24 AM	7:30 AM	7:42 AM
7:12 AM	7:24 AM	7:30 AM	7:42 AM		7:42 AM	7:54 AM	8:00 AM	8:12 AM
7:42 AM	7:54 AM	8:00 AM	8:12 AM		8:12 AM	8:24 AM	8:30 AM	8:42 AM
8:12 AM	8:24 AM	8:30 AM	8:42 AM		8:42 AM	8:54 AM	9:00 AM	9:12 AM
8:42 AM	8:54 AM	9:00 AM	9:12 AM		9:12 AM	9:24 AM	9:30 AM	9:42 AM
9:12 AM	9:24 AM	9:30 AM	9:42 AM		9:42 AM	9:54 AM	10:00 AM	10:12 AM
9:42 AM	9:54 AM	10:00 AM	10:12 AM		10:12 AM	10:24 AM	10:30 AM	10:42 AM
10:12 AM	10:24 AM	10:30 AM	10:42 AM		10:42 AM	10:54 AM	11:00 AM	11:12 AM
10:42 AM	10:54 AM	11:00 AM	11:12 AM		11:12 AM	11:24 AM	11:30 AM	11:42 AM
11:12 AM	11:24 AM	11:30 AM	11:42 AM		11:42 AM	11:54 AM	12:00 PM	12:12 PM
11:42 AM	11:54 AM	12:00 PM	12:12 PM		12:12 PM	12:24 PM	12:30 PM	12:42 PM
12:12 PM	12:24 PM	12:30 PM	12:42 PM		12:42 PM	12:54 PM	1:00 PM	1:12 PM
12:42 PM	12:54 PM	1:00 PM	1:12 PM		1:12 PM	1:24 PM	1:30 PM	1:42 PM
1:12 PM	1:24 PM	1:30 PM	1:42 PM		1:42 PM	1:54 PM	2:00 PM	2:12 PM
1:42 PM	1:54 PM	2:00 PM	2:12 PM		2:12 PM	2:24 PM	2:30 PM	2:42 PM
2:12 PM	2:24 PM	2:30 PM	2:42 PM		2:42 PM	2:54 PM	3:00 PM	3:12 PM
2:42 PM	2:54 PM	3:00 PM	3:12 PM		3:12 PM	3:24 PM	3:30 PM	3:42 PM
3:12 PM	3:24 PM	3:30 PM	3:42 PM		3:42 PM	3:54 PM	4:00 PM	4:12 PM
3:42 PM	3:54 PM	4:00 PM	4:12 PM		4:12 PM	4:24 PM	4:30 PM	4:42 PM
4:12 PM	4:24 PM	4:30 PM	4:42 PM		4:42 PM	4:54 PM	5:00 PM	5:12 PM
4:42 PM	4:54 PM	5:00 PM	5:12 PM		5:12 PM	5:24 PM	5:30 PM	5:42 PM
5:12 PM	5:24 PM	5:30 PM	5:42 PM		5:42 PM	5:54 PM	6:00 PM	6:12 PM
5:42 PM	5:54 PM	6:00 PM	6:12 PM		6:12 PM	6:24 PM	6:30 PM	6:42 PM
6:12 PM	6:24 PM	6:30 PM	6:42 PM		6:42 PM	6:54 PM	7:00 PM	7:12 PM
6:42 PM	6:54 PM	7:00 PM	7:12 PM		7:12 PM	7:24 PM	7:30 PM	7:42 PM
7:12 PM	7:24 PM	7:30 PM	7:42 PM		7:42 PM	7:54 PM		
7:42 PM	7:54 PM							
		Saturday Trips						

ROUTE D		
Transit Center	Walmart	Transit Center
6:30 AM	6:41 AM	6:50 AM
7:00 AM	7:11 AM	7:20 AM
7:30 AM	7:41 AM	7:50 AM
8:00 AM	8:11 AM	8:20 AM
8:30 AM	8:41 AM	8:50 AM
9:00 AM	9:11 AM	9:20 AM
9:30 AM	9:41 AM	9:50 AM
10:00 AM	10:11 AM	10:20 AM
10:30 AM	10:41 AM	10:50 AM
11:00 AM	11:11 AM	11:20 AM
11:30 AM	11:41 AM	11:50 AM
12:00 PM	12:11 PM	12:20 PM
12:30 PM	12:41 PM	12:50 PM
1:00 PM	1:11 PM	1:20 PM
1:30 PM	1:41 PM	1:50 PM
2:00 PM	2:11 PM	2:20 PM
2:30 PM	2:41 PM	2:50 PM
3:00 PM	3:11 PM	3:20 PM
3:30 PM	3:41 PM	3:50 PM
4:00 PM	4:11 PM	4:20 PM
4:30 PM	4:41 PM	4:50 PM
5:00 PM	5:11 PM	5:20 PM
5:30 PM	5:41 PM	5:50 PM
6:00 PM	6:11 PM	6:20 PM
6:30 PM	6:41 PM	6:50 PM
7:00 PM	7:11 PM	7:20 PM
7:30 PM	7:41 PM	7:50 PM
	Saturday Trips	

ROUTE E								
Costco	Arrive Transit Center	Leave Transit Center	Walmart		Walmart	Arrive Transit Center	Leave Transit Center	Costco
							6:35 AM	6:44 AM
		6:20 AM	6:36 AM		6:36 AM	6:53 AM	7:00 AM	7:09 AM
6:44 AM	6:53 AM	7:00 AM	7:16 AM		7:16 AM	7:33 AM	7:35 AM	7:44 AM
7:09 AM	7:18 AM	7:20 AM	7:36 AM		7:36 AM	7:53 AM	8:00 AM	8:09 AM
7:44 AM	7:53 AM	8:00 AM	8:16 AM		8:16 AM	8:33 AM	8:35 AM	8:44 AM
8:09 AM	8:18 AM	8:20 AM	8:36 AM		8:36 AM	8:53 AM	9:00 AM	9:09 AM
8:44 AM	8:53 AM	9:00 AM	9:16 AM		9:16 AM	9:33 AM	9:35 AM	9:44 AM
9:09 AM	9:18 AM	9:20 AM	9:36 AM		9:36 AM	9:53 AM	10:00 AM	10:09 AM
9:44 AM	9:53 AM	10:00 AM	10:16 AM		10:16 AM	10:33 AM	10:35 AM	10:44 AM
10:09 AM	10:18 AM	10:20 AM	10:36 AM		10:36 AM	10:53 AM	11:00 AM	11:09 AM
10:44 AM	10:53 AM	11:00 AM	11:16 AM		11:16 AM	11:33 AM	11:35 AM	11:44 AM
11:09 AM	11:18 AM	11:20 AM	11:36 AM		11:36 AM	11:53 AM	12:00 PM	12:09 PM
11:44 AM	11:53 AM	12:00 PM	12:16 PM		12:16 PM	12:33 PM	12:35 PM	12:44 PM
12:09 PM	12:18 PM	12:20 PM	12:36 PM		12:36 PM	12:53 PM	1:00 PM	1:09 PM
12:44 PM	12:53 PM	1:00 PM	1:16 PM		1:16 PM	1:33 PM	1:35 PM	1:44 PM
1:09 PM	1:18 PM	1:20 PM	1:36 PM		1:36 PM	1:53 PM	2:00 PM	2:09 PM
1:44 PM	1:53 PM	2:00 PM	2:16 PM		2:16 PM	2:33 PM	2:35 PM	2:44 PM
2:09 PM	2:18 PM	2:20 PM	2:36 PM		2:36 PM	2:53 PM	3:00 PM	3:09 PM
2:44 PM	2:53 PM	3:00 PM	3:16 PM		3:16 PM	3:33 PM	3:35 PM	3:44 PM
3:09 PM	3:18 PM	3:20 PM	3:36 PM		3:36 PM	3:53 PM	4:00 PM	4:09 PM
3:44 PM	3:53 PM	4:00 PM	4:16 PM		4:16 PM	4:33 PM	4:35 PM	4:44 PM
4:09 PM	4:18 PM	4:20 PM	4:36 PM		4:36 PM	4:53 PM	5:00 PM	5:09 PM
4:44 PM	4:53 PM	5:00 PM	5:16 PM		5:16 PM	5:33 PM	5:35 PM	5:44 PM
5:09 PM	5:18 PM	5:20 PM	5:36 PM		5:36 PM	5:53 PM	6:00 PM	6:09 PM
5:44 PM	5:53 PM	6:00 PM	6:16 PM		6:16 PM	6:33 PM	6:35 PM	6:44 PM
6:09 PM	6:18 PM	6:20 PM	6:36 PM		6:36 PM	6:53 PM	7:00 PM	7:09 PM
6:44 PM	6:53 PM	7:00 PM	7:16 PM		7:16 PM	7:33 PM	7:35 PM	7:44 PM
7:09 PM	7:18 PM	7:20 PM	7:36 PM		7:36 PM	7:53 PM		
7:44 PM	7:53 PM							
		Saturday Trips						
		Weekday Trips in Scenario 2						

ROUTE F			
Transit Center	11th and DMV	Hanford Armona and Leslie	Transit Center
6:30 AM	6:36 AM	6:48 AM	6:55 AM
7:00 AM	7:06 AM	7:18 AM	7:25 AM
7:30 AM	7:36 AM	7:48 AM	7:55 AM
8:00 AM	8:06 AM	8:18 AM	8:25 AM
8:30 AM	8:36 AM	8:48 AM	8:55 AM
9:00 AM	9:06 AM	9:18 AM	9:25 AM
9:30 AM	9:36 AM	9:48 AM	9:55 AM
10:00 AM	10:06 AM	10:18 AM	10:25 AM
10:30 AM	10:36 AM	10:48 AM	10:55 AM
11:00 AM	11:06 AM	11:18 AM	11:25 AM
11:30 AM	11:36 AM	11:48 AM	11:55 AM
12:00 PM	12:06 PM	12:18 PM	12:25 PM
12:30 PM	12:36 PM	12:48 PM	12:55 PM
1:00 PM	1:06 PM	1:18 PM	1:25 PM
1:30 PM	1:36 PM	1:48 PM	1:55 PM
2:00 PM	2:06 PM	2:18 PM	2:25 PM
2:30 PM	2:36 PM	2:48 PM	2:55 PM
3:00 PM	3:06 PM	3:18 PM	3:25 PM
3:30 PM	3:36 PM	3:48 PM	3:55 PM
4:00 PM	4:06 PM	4:18 PM	4:25 PM
4:30 PM	4:36 PM	4:48 PM	4:55 PM
5:00 PM	5:06 PM	5:18 PM	5:25 PM
5:30 PM	5:36 PM	5:48 PM	5:55 PM
6:00 PM	6:06 PM	6:18 PM	6:25 PM
6:30 PM	6:36 PM	6:48 PM	6:55 PM
7:00 PM	7:06 PM	7:18 PM	7:25 PM
7:30 PM	7:36 PM	7:48 PM	7:55 PM
	Saturday Trips		

APPENDIX C

Public Engagement Overview

Introduction - Outreach Strategies

Public outreach was an important element of the KART Hanford Fixed Route Study process. The consultant team developed outreach and public notification strategies which incorporated in-person and virtual engagement tools as the country continues to recover from the Coronavirus pandemic. This appendix provides an overview of the outreach methods, events, and results.

Public outreach efforts continued throughout the study but had two focus phases. Early in the study, the public was asked their opinions of transit, their needs for transit service in Hanford, and their desires for improvements. This was also an opportunity for the study team to explain the planning process and share how the public could stay involved.

Later in the study, outreach efforts focused on presenting solutions to realigning the KART Hanford services to best serve the future multimodal transit center and to solicit opinions on those solutions.

OUTREACH MANAGEMENT

LSC Transportation Consultants, Inc. was contracted to develop the outreach strategies. Under TMD leadership, LSC provided strategic advice and counsel, reviewed project materials and reports, coordinated with the Kings County Association of Governments (KCAG) and KCAPTA, and the project team, and monitored team communications throughout the project.

STAKEHOLDER DATABASE & ONGOING COMMUNICATIONS

In consultation with KCAG and the project team, LSC developed and maintained a stakeholder database throughout the project's duration. The database was used to invite stakeholders to participate in interviews and questionnaires; to notify them of website postings and released reports; and to encourage them to share project information, particularly surveys, with their constituents.

Ongoing Outreach

Several outreach tools were used from start to end of the study, including the following:

- » **Stakeholder Database:** As stated in the previous section, a stakeholder database was maintained throughout the project's duration.
- » **Project Website:** A project website was developed at the onset of the study, at the following address www.reimaginehanfordtransit.com. The website described the study goals, process, and schedule. Throughout the study, interim reports and announcements were posted on the website, as well as links to surveys and a virtual workshop.

First Phase Outreach

The goal of early phase outreach was to identify transit needs in Hanford, solicit opinions on the existing transit services in Hanford, and seek opinions on what could be improved. This was done through the efforts described below.

PASSENGER SURVEYS

Onboard passenger surveys were conducted in November 2021 on KART Routes 1 through 9. A total of 268 passengers participated in the survey, with 223 completed in English and 46 completed in Spanish.

STAKEHOLDER QUESTIONNAIRE AND INTERVIEWS

Stakeholders were contacted multiple times by phone and/or email between November 2021 and February 2022 and asked to participate in an interview, or if they preferred, to complete a questionnaire by email or online. Only a few agreed to interviews, and several completed the online questionnaire or responded by email. Highlights of the findings are listed here:

- » Regarding seniors, it was noted that the number of in-person activities are severely reduced, even though seniors are anxious to return to social engagement.
- » Meals provided to seniors and persons with disabilities shifted from approximately 100 congregate meals pre-COVID (500 meals weekly) to 385 meal deliveries consisting of five frozen meals person per week or nearly 2,000 meals.

- » The food bank (drive-through) has greatly expanded.
- » There are still on-site visits at the senior center for walk-in appointments for MediCal applications, income tax assistance, etc.
- » COVID-19 has made everything unpredictable for junior college enrollment, varying from 50 percent to 60 percent remote learning (January 2022), depending on spikes in illness.
- » Not all changes in schedules or relocated stops have been conveyed to the campuses or students, resulting in confusion and frustration at times.
- » The biggest unmet need amongst college students is for evening service. A lack of evening transportation makes it hard for students to attend evening classes.
- » When KART moves to the new transit center, it will disrupt the students' opportunity to transfer directly from the Amtrak from Corcoran to the KART bus.³
- » The Hanford Joint Unified School District provides transportation to students beyond walking distance of schools, but walking distance is considered a two-mile radius of each of the three campuses.
- » Due to open enrollment, students may go to a school not in their neighborhood. If they live within two miles of their neighborhood school but attend another, they are expected to walk to their neighborhood school where they can catch a shuttle to the school they attend.

WEST HILLS COMMUNITY COLLEGE ONLINE SURVEYS

In late January and early February of 2022, students from the Lemoore Campus of West Hills Community College were given the opportunity to take an online survey about their transit needs and how they utilize KART services. The survey was developed by LSC in coordination with WHCC staff and administered by WHCC using surveymonkey.com. A total of 127 students participated in the survey.

PUBLIC WORKSHOP #1

The first public workshop was held on February 24, 2022 at the KART Hanford Transit Center, and simultaneously, via Zoom. Although the event was advertised on the project website, KCAG website, and KART website, as well as flyers posted and shared with stakeholders, no one from the public attended the event in person or by zoom.

Second Phase Outreach

The goal of second phase outreach was to present the modified fixed-route design for KART Hanford fixed routes to the public and solicit feedback on the recommendations. The outreach events are described below.

VIRTUAL WORKSHOP

A three-and-a-half minute narrated PowerPoint presentation of the study recommendations was posted on the project website. The workshop was announced on various social media, and links were shared on the KCAG website and on flyers posted on buses. This Virtual Online Workshop provided a route-by-route overview of the recommended realignments in a concise, easy to understand format. The public was encouraged to watch the presentation, and then participate in an online survey to answer questions about the changes presented in the workshop.

STAKEHOLDER QUESTIONNAIRE & ONLINE COMMUNITY SURVEY

An online community survey was launched in September, 2022 describing the various service recommendations and asking people to rank their perception of how the options would impact their travels on KART (from a scale of 1, negatively impact, to 5, positively impact). Additionally, stakeholders were contacted and asked to participate in the survey and/or share flyers with their participants announcing the survey. Just two surveys were completed (described below).

PUBLIC WORKSHOP #2

The second public workshop was conducted in person at multiple times and locations in early October. Two pop-up events were held at the KART Transfer Center, and the consultants participated in a booth at the Thursday Night Market. Four posters were available at the events, presenting:

1. A map of the current KART Hanford Routes
2. A map of the recommended KART Hanford route changes
3. A list with brief descriptions of the recommended changes
4. A list of the benefits of the recommended plan

³ This is true for all Amtrak connections and was considered in developing the KART Hanford service plan.

Passersbys were encouraged to review the posters, ask the consultants questions about the proposed changes, and offer verbal or written feedback (in the form of a comment card). Following is a summary of feedback:

» **Feedback comment cards (4)**

- 1 positive
- 1 negative
- 2 both negative/unsure

» **Comments included**

- I am very happy and very good with bus #3 - it is very good (translated from Spanish, in relation to proposed Route 3 changes)
- Do not like chose [sic] of new transit site because people who has to walk has to travel way out of the way! Leave it alone already
- Want a stop at 12th and Grangeville. Closest is Fitzgerald. I live toward Fargo – a long walk
- I'd still like to see a connection along 12th Street between Hammond-Armona Road and the Walmart, Target area. Perhaps a non-Uber shuttle. I'd like to see same scale overlays (posters) of the proposed routes.

» **Verbal comments**

- Want later service (multiple requests)
- Students arriving from Avenal walk to the school by the transit center. It will require a transfer or further walk at the new location.
- Route 12 stops at the TC now, which is walking distance to the Civic Center. Will it still be? (Yes)
- I live on 9th near United Market on route 3. How will that be affected? (TC will actually be closer to her home)
- It will be very nice!

» **Online surveys (2)**

- Ranked all options "5" (very positive); noted "What's most important to me is later hours."
- "I get off at the old bus stop and I'm able to walk to school. Now I will need someone to take me to school at the new bus stop [transit center]."

Incorporating Public Outreach

The Phase 1 input provided an understanding of the transit issues, concerns and desires for improvements of the Hanford fixed routes, and this, in turn, created a direction for the study. For example, the passengers' greatest desires were for "more buses" (i.e., increased frequency), for later service, and for greater convenience. While the study focused on alignment, the span of service is being considered in development of the cost analysis and route schedules. Additionally, the realignment focuses on improving travel time for the majority of transit trips.