

Chapter 9

TRANSIT INTEGRATION AND BICYCLE PATHS

INTRODUCTION

Transit integration, or intermodal integration as it is sometimes called, consists of the steps taken to coordinate service between two or more different transportation modes, whether provided by one operating entity, or several agencies. These steps are actions taken in the following four areas:

- Schedule coordination
- Common fare structures, fare instruments and fare collection systems
- Common stations
- Combined marketing and information activities.

As a theoretical concept, transit integration is readily understood, and it would be practically impossible to find anyone who would disagree that transit integration is important and desirable, and should be pursued as part of any large scale public transportation program. In practice in the United States, however, this widely supported ideal has generally proven difficult to achieve. The Bay Area, with its many disparate transit operators, and tradition of independent and decentralized transit decision making, offers a typically American mixed bag of transit integration successes, near hits, near misses, and failures.

In Europe, a very much greater emphasis is placed on transit integration, so much so that in major urban areas special institutions are created specifically to ensure that the four main areas of transit integration are given major prominence as matters of public policy. Transit integration is an important part of every major transit project from its inception; it is not just an afterthought. When Americans traveling in Europe are impressed by the way in which commuter and intercity trains, buses, ferries, airports, all are interconnected in a seamless web so that one passes easily and naturally from one carrier to another, from one mode to another, from one place to another, they are reacting to a feature that has been the subject of serious and significant effort.

Transit integration should be approached with a “European” level of seriousness and emphasis in the development of a rail service for the US 101 corridor. Since so many trip origins and destinations in this corridor are located more than a short walk from a railroad station, the market for this service largely consist of trips which must include a bus or shuttle trip at least one end. The overall impression of the commuter rail “product” will depend not only on the rail service itself, the comfortable seating and lighting, the schedule and speed, the stylish stations and paint scheme, and trendy graphics. It will also depend on the other part of the trip – the bus part – and the transition between the two.

In the competitive environment of transportation, especially in relatively affluent areas such as Sonoma and Marin Counties, most people with a driver’s license have a choice of whether or not to use a transit service. Success in attracting customers who have a choice regarding the commuter rail service will depend upon the overall quality and convenience of the entire trip, not just the rail part of it. And, of course, for those who do not have a choice, and must rely on transit, such as the elderly and disabled, a service good enough to attract those who have a choice will also be that much better for everyone. Key issues facing rail service users regarding transit integration would be:

- Do trains and buses connect?
- Are they at the same place at the same time?
- Are they reliable, or are the connections “hit or miss”?
- Is there a consistent service pattern?
- Are there common stations and stops?
- Is there complete information, readily accessible, that explains in ordinary language how to pay a fare, and how to travel from one place to another?
- If you buy a ticket from “A” to “B”, does that ticket really get you to “B”, or do have to go and get change in the middle of your trip to pay an unexpected fare supplement or transfer charge or upgrade?
- Does the connecting bus wander through all kinds of off-line loops and route deviations, or does it take a direct path to your final destination?

Resolving these issues in a customer-friendly way that leaves a positive impression of the entire trip is the goal of a transit integration plan. This chapter is obviously not a complete plan, but it can sketch out some of the transit integration issues, problems and opportunities that an implementing authority would face in developing an attractive system.

It is noted that full compliance with the Americans with Disabilities Act (ADA) is a requirement of this and other transit projects. The exact cost of this compliance has to be determined at a later point. Close coordination with Sonoma and Marin transit providers will facilitate the accomplishment of this compliance.

Bicycle Use of the Rail Right-of-Way

In addition to traditional transit integration, this chapter briefly discusses the concept of the use of the NWP right-of-way shared with bicycles. Recent transportation plans for Sonoma and Marin Counties consider the potential of such shared use. However, there are legitimate concerns about safety. Comments from the federal and state agencies that share oversight on railroad safety matters are cited as well.

SCHEDULE AND ROUTE COORDINATION

Current Operators

There are five main transit operators with which a 101 corridor commuter rail service would connect. These are:

1. Golden Gate Transit (the Golden Gate Bridge, Highway and Transportation District)
2. Petaluma Transit (City of Petaluma)
3. Santa Rosa CityBus (City of Santa Rosa)
4. Sonoma County Transit (Sonoma County)
5. Marin County Transit District

While it does not operate service directly, the Marin County Transit District (MCTD) contracts with Golden Gate Transit (GGT) for provision of additional local service within the County. The MCTD is currently preparing a comprehensive bus service plan for Marin County; many of the service planning details from that plan should be valuable in the eventual development of a detailed integration plan for the commuter rail service.

There is certainly a lot of potential in the scope of present bus service provided by the four main operators to establish a comprehensive service that could exhibit all of the main features of a truly integrated service. The following sections describe the rudiments of service as they presently exist.

Golden Gate Transit - Golden Gate Transit (GGT) is the largest provider of bus service in this corridor. In addition to peak express service to and from San Francisco over Financial District and Civic Center routes, GGT operates connecting routes to its ferry service, and local service, much of it on behalf of the Marin County Transit District. Two important issues relative to schedule and route coordination for Golden Gate Transit would be the timed transfer “meets”¹ at the downtown San Rafael Transit Center at 3rd and Heatherton Streets, and the important all-day US 101 corridor routes 50 and 80.

Outside the peak-oriented commute express network, the San Rafael meets are the heart of the basic GGT service strategy, with many lines connecting every 30 minutes, or at multiples of 30 minutes. The San Rafael meets, occurring regularly at 18-22 minutes and 48-52 minutes after the hour, are arguably the single most important bus transit service feature north of San Francisco. This is a true timed transfer center, with buses of most main lines going in both directions on the route in the facility at the same time. This feature is essential because it makes possible the network-wide connectivity that makes transit usable; once you are on the system, you can travel easily almost anywhere else on the system.

The tracks of the Northwestern Pacific pass right through the Transit Center, and it is proposed that the San Rafael Station for the commuter trains be located on the north side of 3rd Street, just

¹ A time transfer meet would allow a passenger to make a convenient transfer between an arriving train and a departing bus.

across the street from the Transit Center. There is an important opportunity here to provide rail passengers with a web of bus connections to many trip destinations. If one major point of connection were to be stressed for the rail service, this would be it. Bus routes 50 and 80 are among the most important in the Golden Gate system, and as they provide basic all day service on a 30-minute headway in the corridor in both directions, they would clearly be affected by the introduction of commuter rail service in the same corridor.

Petaluma Transit - The City of Petaluma operates a network of five local routes centering on 4th and C Streets in downtown Petaluma. Using smaller buses, the system connects the older parts of the city with the commercial and industrial areas, and newer parts of the city east of 101. The connecting link between the two halves of the system is on Washington Street, an important east-west arterial that crosses the NWP at the traditional railroad station site. There is good potential in this system, using a new transit center near the railroad depot, to connect the commuter rail service with neighborhoods, business parks, and job sites throughout the city.

Santa Rosa CityBus - The City of Santa Rosa operates a comprehensive network of fifteen routes linking downtown with neighborhoods, schools, and job sites. It appears to provide effective coverage of virtually the entire city. The heart of the system is the Santa Rosa Transit Mall, located in the traditional center of downtown on the block of 2nd Street between B Street and Mendocino Avenue. This Transit Mall also accommodates buses of Golden Gate Transit and Sonoma County Transit, and occasionally the Mendocino Transit Authority, so it provides a focused location for bus transit in the community.

The north-south NWP main line runs several blocks to the west of downtown, and the picturesque Santa Rosa Depot, part of “Railroad Square,” is not really served directly by the present service or the Transit Mall. Although the intervening distance is not great, the downtown shopping mall, “Santa Rosa Plaza,” and the US 101 freeway effectively provide a barrier between the Depot and the Transit Mall. Consequently, the near-ideal geographic conditions found in San Rafael, where the bus transit center and the railroad station are essentially in the same place, cannot be replicated in Santa Rosa.

Four of the main CityBus routes do cross the NWP tracks on 3rd Street, a block south of the depot, and could be used to connect with commuter trains if some provisions, such as extending the platform to 3rd Street and crosswalks, were made for passengers.

Sonoma County Transit - Sonoma County Transit provides a service throughout the more urbanized parts of the county. A series of routes, including express service, operate north-south in the 101 corridor between Cloverdale, Healdsburg, Santa Rosa and Petaluma. Additional routes connect the Sonoma Valley, and the Sebastopol-Russian River areas into this network. As noted above, the system has a major focus at the Santa Rosa Transit Mall, where it connects with CityBus, but it also has important focal points at Sonoma, Petaluma, Sonoma State University/Rohnert Park, and Sebastopol. Because of the fairly broad geographic scope of its system, Sonoma County Transit offers many potential points of connection with the commuter rail service, and its north/south corridor services clearly offer significant potential for integrated service concepts between buses and trains.

Marin County Transit District - MCTD management holds that effective train-bus integration would rest on five points. One, that small shuttles meet the trains. Two, that MCTD seek contributions from employers/retailers for the shuttles. Three, that the finalized services be based on *demonstrated* demands. Four, that shuttles would meet trains only during commute periods. Five, there should be fare integration (discussed separately below). The station-specific plans, which have been incorporated in a draft of the MCTD's comprehensive bus service plan, are:

- **Downtown San Rafael:** GGT would handle people moving west on 4th Street in the morning and east on 3rd Street in the evening. MCTD would provide two shuttles. One shuttle would distribute people along the I 580 corridor. Another would operate at large, probably on 3rd and 4th Streets, depending on demand. To the extent that San Francisco-bound commuters want a ferry-rail connection in the short term, this could be provided by an additional shuttle from San Rafael to Larkspur.
- **Marin Civic Center:** Three shuttles would meet trains. Routes were not specified at this point, but two could serve the area north of the station where there are numerous office buildings and warehouses, the Northgate Shopping Mall, and major employers including Fair Issac, Panamax, and Autodesk. The third shuttle could work areas closer to the Civic Center.
- **Novato:** Assuming a downtown station (as yet a site has not been determined²), there would be various shuttles. As examples, one would serve the Firemans Fund office complex and the Buck Center north of downtown. A second would serve Rowland Plaza and Vintage Oaks south of downtown. A third would serve the Bel Marin Keys industrial park.

The shuttles would be 24 feet long with a 15-passenger capacity. The shuttles would be compliant with the standards of the Americans with Disabilities Act. Conceivably, employers could also provide shuttles for their employees arriving by train. This is currently being done with Amtrak intercity trains and Altamont Commuter Express trains in Silicon Valley.

Rail Headway and Bus Service Levels

In making arrangements for trains and buses to meet one another, a bedrock principle is that the basic service headway of the two modes either be identical, or else that one be an arithmetic multiple of the other. On the existing main bus systems, the nearly universal headway module is 30 minutes (and there is a remarkable degree of similarity and regularity in the application of this standard). The bus systems have developed their services so that they are internally integrated. Decisions on routings, running times, schedules and headway were made incrementally over a period of years, guided by the overall context of a 30-minute headway module that permits buses to connect effectively with one another, and the public to be well-served by provision of this level of transit mobility. Unfortunately, the proposal to use a 45-minute headway for the commuter rail service means that the high standard of schedule coordination that would be most desirable in order to achieve transit integration objectives would not be fully met.

² Novato is considering various rail station sites, including downtown and the former Hamilton Air Force Base.

However, an interim step is possible. Although a complete and integrated network cannot be implemented under these conditions, there is enough bus service in operation in enough locations that at least some connections can be made to trains at principal stations. Two considerations provide a basis for some optimism that an interim step can be made to work. First, all five bus operators have indicated a willingness to help develop coordinated services. Second, during peak periods, a few additional bus services are operated by Golden Gate Transit which pass through the San Rafael Transit Center at times outside the regular half-hourly “meets”. As these trips have schedules that are not tied to these pulses, there is some flexibility in making small adjustments to meet trains.

MCTD’s customized shuttle approach at the three Marin County stops notwithstanding, every effort should be made with Golden Gate Transit in designing the final commuter rail service timetable to ensure that southbound trains arrive in San Rafael for a meet, and leave shortly after one. This further requires either a short layover in San Rafael, or else a 30-minute layover between one meet and the next one.

As an example of the connections available with no adjustment to bus schedules for a train that does make the San Rafael meet, and the variation for a train that does not make the meet, consider the case of the first two morning train arrivals in San Rafael. The examples below include arrival train arrival times adjusted by four minutes to permit Train 1 to arrive at beginning of meet:

Train 1, arrives in San Rafael at 7:18 a.m.

Nine bus departures within 5 minutes:

1. 7:20 Route 25 to Larkspur Ferry;
2. 7:20 Route 50 to San Francisco via US 101, Marin City, Sausalito, Park Presidio/Geary Blvd;
3. 7:22 Route 1 to Kentfield/Greenbrae (MGH);
4. 7:22 Route 20 to San Anselmo, Sausalito, San Francisco (local);
5. 7:22 Route 20 to Canal and GGT HQ;
6. 7:22 Route 50 to Novato (101 local stops);
7. 7:22 Route 75 to Phoenix Leasing and GGT headquarters;
8. 7:22 Route 80 to San Francisco via SF Civic Center;
9. 7:22 Route 80 to Novato.

Train 3 arrives in San Rafael 8:03 a.m.

One bus departure within 5 minutes: 8:06 Route 26 to San Francisco Financial District.

Clearly, the effect of making the meet is very important. All trains should have a high level of bus connectivity.

FARE INTEGRATION

Fare integration is one of the basic component parts of an integrated transit network. It is also, by and large, poorly understood in this country. Fare integration consists of two distinct but obviously interrelated parts, both of which must be present in order for transit integration to be a success. These two parts are:

- A common fare structure, and
- A common fare collection system and fare instruments.

The fare structure is the pricing of the service, and it answers such questions as:

- What is the price of a one-way fare from Cloverdale to Petaluma?
- How much is a monthly rail-plus-bus pass between Rohnert Park and San Francisco?
- Is there a cheaper off-peak fare for travel in the middle of the day?
- Is there a reduced-price monthly or semester pass for Sonoma State students?
- Is there one for faculty members?

The fare collection system consists of all the equipment, personnel, paper, tickets, and cash acceptance systems seen by the customer, that are used to extract the customer's cash (according to the fare structure) from his or her wallet or purse, and funnel it into the revenue acceptance system of the operators to support operations. The parts of the fare collection system actually used by customers to show they have paid their fare are the "fare instruments." Tickets, the ticket machines that issue the tickets, transfers, on-board fare boxes, fare inspectors, monthly passes, "smart cards," tokens, and so forth, are all parts of the fare collection system.

In a supermarket, the corollary of the fare structure would be the prices of the items for sale. The corollary of the fare collection system would be the bar coding, cash registers, checkout stands, credit and debit card swipe readers, and checkout clerks.

In an integrated transit system, both fare structures **and** fare collection systems are common to multiple operators. Thus, a trip from Point A to Point B has the same fare whether made by bus, or by two buses with a transfer, or by bus plus train, or by bus plus train plus bus. The pricing is based on the offering of transportation from one location to another, and not on the specifics of the vehicles used to make the trip, and the specific instrument used (ticket or pass) is accepted by all operators used by the customer. Keeping track of the revenue generated by multi-carrier patronage is an accounting issue that has to be worked out between the operating agencies, and formalized in an agreement, but it is not, in an integrated system, a burden laid upon the customer.

Generally, complete fare integration has been resisted by transit operators in the Bay Area, but it will be very important to the success of the Sonoma-Marine commuter rail service. It is clear that the majority of trip origins and destinations in the railroad corridor, whether residences, job sites, schools, government offices, etc., are more than an acceptable walking distance from stations. For the service to be attractive to people who have access to automobiles, and are therefore in a

position to choose whether to use it or not, it must be possible to flow easily through a complete network of trains and buses in order to get from A to B. Part of making that flow easy is fare integration.

California examples offering a high level of fare integration can be found in the San Diego and Sacramento metropolitan areas. In Sacramento, buses and light rail trains of Sacramento Regional Transit (RT) have one universal fare structure and completely common fare instruments (tickets, transfers and passes). This also extends to the adjoining Yolo County Transit Authority (Yolobus) serving Woodland, Davis, West Sacramento and the Sacramento airport. The RT monthly pass is also the Yolobus monthly pass, and RT transfers are accepted on Yolobus. Thus, someone commuting from Woodland to a teaching post at Sacramento State University may use a Yolobus express from Woodland to Downtown Sacramento, RT light rail to University/65th Street station, and the connecting RT buses from that station (buses meet every train) into the campus – all on one pass or cash fare/transfer. It is this high level of fare integration, along with service integration and the introduction of rail service that has helped transit use in the Sacramento area to nearly double since the mid-1980s.

What Exists Now?

Fortunately, some introductory steps in fare integration have already been taken in this corridor that can be built upon as a first step.

First, the major operator, Golden Gate Transit, already has a high degree of internal fare integration, and a logical distance-based zone fare structure. While there are no monthly passes, the system does make multi-ride ticket books available; these, or an electronic counterpart, would probably be a part of a complete rail fare structure. GGT also issues transfers without additional charge for completion of a trip on a second vehicle, an important attribute of an integrated system.

While Golden Gate Transit does not presently extend this level of integration to the other three bus systems in the corridor, it does provide a small credit (10 cents) for passengers starting on those systems, and continuing onto a GGT bus. This is a start.

Sonoma County Transit has an internally integrated fare system, with a distance-based zone fare structure. The zones do not correspond to the Golden Gate zones, as they are more fine-grained and oriented to local trip making. Sonoma County Transit does provide a higher level of fare integration with Santa Rosa CityBus; there is a mutual exchange of transfers for travel on the two carriers in the Santa Rosa zone, even though the basic adult cash fare differs. Sonoma County and CityBus both offer monthly passes, at different rates, and there is a partial honoring of them within the Santa Rosa zone. This, too, is a start.

Petaluma Transit has only a limited degree of fare integration with connecting carriers Golden Gate Transit and Sonoma County Transit. Petaluma accepts their transfers as a 10-cent credit toward a fare, and Petaluma's transfers are similarly accepted by them as a 10-cent credit. Petaluma Transit offers monthly passes, but they are not honored by connecting systems.

What Has Been Assumed So Far in this Study?

While recognizing that transit integration is an inherent component of a successful project, and that fare integration is part of overall transit integration, no specific assumptions were made about inter-system fares in the technical parts of this study. The demand forecasts were prepared using a work-trip based methodology, with capture rates based on experience in other cities; the numbers were factored to represent the total patronage of the system. There is thus an inherent reflection of sorts, a composite of the patronage experience of other commuter rail cities given their success, or lack thereof, in developing effective integration of the commuter rail and other transit systems.

Fare levels developed for purposes of generating operating revenue figures for this study were also based on a composite of practice elsewhere, but they did not directly figure in the development of the demand forecast. Accordingly, at some point additional refinement of demand forecasts, and of revenue estimates which would flow from an integrated system, both based on effective integration of fares and service levels, should be carried out.

Possible Minimum Steps

Given that fare integration is important, and that it consists of two basic areas of concern, an obvious question is what initial steps might be taken in order to achieve reasonable success in the time frame of initial service. It will be important to look at this question in some detail in the course of project development, and have the fare revenue, fare collection equipment and demand implications evaluated systematically by a consultant specializing in these areas. However, within that general understanding, one option to be seriously evaluated would be for the commuter rail operating agency to adopt the Golden Gate Transit zone structure, and the fare structure associated with it, subject to negotiation with GGT and the other operators, and also subject to potential modification.

Since Golden Gate Transit is the largest operator in the corridor, and will likely remain so even with commuter trains in operation, a joint fare structure creates a high degree of integration with a single action. This would be especially true if the fare collection system were also identical, or at least fully complementary, but that aspect needs considerable additional evaluation. Another important concern would be that passenger revenue generated by the GGT fare structure be sufficient to meet commuter rail revenue targets.

Golden Gate Transit has indicated that it is moving to “smart card” technology, as replacement for its tickets, among other things. The implications of this action in light of a probable self-service, proof-of-payment fare collection system on the commuter trains needs to be carefully thought out, as these fare collection approaches are fundamentally different. Smart cards can be an important addition to a group of commonly accepted fare instruments. GGT has also been resistant to a monthly pass, which would be a desirable feature of the commuter rail fare structure. But these issues could be evaluated and negotiated, and, if successfully implemented, prove to be a powerful marketing tool for the rail service. If it were to appear possible to do this, then the negotiations should also include the other bus operators – Petaluma Transit, Santa Rosa

CityBus, Sonoma County Transit, and MCTD – to widen the general applicability of the common fare system. These objectives have been achieved elsewhere, and given the overall interest in coordination and success, it does not seem too far-fetched to believe it could be achieved in the 101 corridor as well.

PHYSICAL ARRANGEMENTS

With schedules and fares well integrated, a third major issue is the physical arrangements at passenger stations. The Sonoma – Marin commuter rail service will be based on fairly simple and straightforward technologies and stations, using the traditional NWP Railroad station sites and buildings wherever appropriate and possible. Since it is unlikely that there will be fast, heavy freight service on the line during passenger hours of service, and no express passenger trains, it should be easy to incorporate the customer-friendly physical characteristics and features of at-grade transit terminals into the stations.

As identified in Chapter 6, major features of assumed for stations relevant for transit integration include:

- Bus turn-around areas
- Shelter
- Information and ticket vending machines (TVMs)
- Lighting and telephones (a non system cost)

Some observations are possible here regarding short-term issues at the major stations on the line.

At San Rafael, the rail station and the bus transit center, as has been noted above, are directly across the street from one another. The street, 3rd, is an important arterial which carries fairly heavy traffic. Although the distance from train-side to bus will not be great, passengers will likely want to walk directly across the street to make their connection. Waiting even one minute for traffic to clear may seem like an eternity when the connection time is only a couple of minutes, and there is the fear that the bus or train, which a passenger can see just a few dozen feet away, may leave without the passenger. If a five-minute “window” is allowed for passengers to connect at the San Rafael meet, then even one minute represents 20 percent of the time available for customers to make their connections. This is an important issue that needs to be addressed in some detail to ensure that a rail-bus connection is workable.

At Petaluma, the traditional depot site, as noted above, is on Washington Street, the arterial which Petaluma Transit buses use to connect the eastern and western halves of its system. Current planning includes the possibility of a new intermodal transit center on Copeland Street, off Washington, a bit west of the tracks. This may be viable for combined bus and rail travel, but needs to be evaluated in terms of the specifics of design for people actually walking, in all kinds of weather conditions, between trains and buses.

At Santa Rosa, the depot, though an attractive building in pleasant historic surroundings, is isolated from the transit systems serving the city that focus on the 2nd Street Transit Mall. With tight running times, and an investment in the present facility, it is unlikely that CityBus and Sonoma County Transit will eagerly embrace a wholesale relocation of the Transit Mall functions to Railroad Square. As a short-term measure, it may be possible to extend one or two routes to circulate to the front of the depot. Also, the first major arterial cross street to the south of the depot, 3rd Street, which crosses the tracks at grade, carries four local CityBus routes connecting downtown Santa Rosa with western and southwestern parts of the city. As a short-term solution, the platform at the depot could be extended south to 3rd Street, and bus stops located near the tracks for a passenger transfer. Similar to the situation in San Rafael, however, passengers wanting an eastbound bus would have to cross a busy arterial; this would require some pedestrian crossing and signal work.

PHASING

The Pre-Implementation Period

In the period leading up to implementation of service, there are obviously many design, procurement, engineering and construction activities which would have to be undertaken. From the foregoing discussion, however, it should be equally obvious that a lot of effort would also have to go into resolution of the many issues leading up to an effective integration of the commuter rail service with the five other existing transit operators in the 101 corridor. An initial list of activities to be undertaken by the implementing agency in this period of project development would include:

- Develop and implement passenger-friendly design criteria in station design, and establish collaborative working relationships with cities and transit operators along the line for the development of community-friendly stations.
- Conduct a practical, detailed, results-oriented design study, in cooperation with the other four transit systems in the corridor, to develop and implement a common fare structure and common fare collection system, including development of inter-agency agreements formalizing accounting systems and methods required to support such a level of integration, and developing specifications for fare collection equipment required for this integrated system.
- All systems adopt the integrated fare structure and fare collection system, associated agreements, and procure and install all necessary on-board and wayside equipment, to be implemented by or on opening day of the commuter rail service.
- Carry out a collaboratively directed, detailed, six-agency service planning study to identify short-term service integration measures that can be implemented for the start-up of rail service, given the constraints caused by a lack of a common headway module.
- Adopt a rail service plan, and five associated bus service plans maximizing service integration possibilities within rail start-up constraints.

Start-up Operation Period – Partial Integration

At start-up, commuter rail service will be provided on a 45-minute peak headway, with some incidental mid-day service. Coincident with the inauguration of this service:

- Implement the integrated fare structure and fare collection system.
- Implement the service adjustments identified for meaningful rail – bus service integration.
- Open the passenger and community-friendly stations.

Results of all aspects of the new service should be closely monitored, and the collaborative relationships developed in the course of planning for implementation retained for purposes of coordination and evaluation. Based on this, the six services should:

- Conduct a collaborative study to refine fare integration.
- Conduct a collaborative study to prepare for the more complete level of service integration, based on a 30-minute rail headway pattern.
- Prepare all necessary agreements, and adopt agreements and plans.

Operation Period with 30-minute Headways – Full Integration

- Implement.
- Evaluate.
- Make adjustments as necessary.

BICYCLE USE OF NWP RIGHT-OF-WAY

Bicycle access along the NWP right-of-way has been considered for years by both Marin and Sonoma Counties. Shared use of the right-of-way for rail operations and bicycles presumably would indicate the need for a bike path paralleling the rail line. As yet, the concept lacks specifics such as how far the bike path must be located apart from the rail tracks, fencing and landscaping – all elements that would factor into assessing the feasibility and safety of sharing the use of the right-of-way with bicycles. Clearly, there are parts of the right-of-way where shared use would be impractical, such as on bridges and through wetlands where the right-of-way is typically narrow.

This section cites recent transportation plans in Sonoma and Marin Counties referencing this issue, as well as comments by the Federal Railroad Administration and the California Public Utilities Commission, the two government agencies charged with oversight regarding rail safety.

Recent Plans

- λ The Sonoma County Transportation Authority’s County-wide Bicycle Plan includes a bike path along the right-of-way and references all other planning studies. The Sonoma County

Bikeways Plan, adopted by the Sonoma County Board of Supervisors in April 1997 and which is considered part of the Sonoma County General Plan, states under Policy A12, “Review railroad rights-of-way proposed for transit use for potential multiple use as Class I bikeways.” The map for this plan also shows a proposed Class I bikeway along the NWP right-of-way in the unincorporated areas between the southern Windsor town limits and the Sonoma/Marin County line.

- λ The draft Marin County Bicycle and Pedestrian Master Plan (January 2000) states that “The Plan recommendations include potential shared use with future rail service where feasible.” The draft final plan will be released in May 2000.

Federal Railroad Administration

The Federal Railroad Administration (FRA) is the federal agency responsible for safety on all US railroads. According to an FRA officer, the bicycle and pedestrian use of railroad rights-of-way is an important safety issue because such users do not necessarily understand the dangers in a rail operating environment. The agency, however, does not have specific rules on the subject. Still, its broad safety authority extends to any subject involving danger to humans in connection with rail transportation. It is certain that the FRA would review a proposal for the shared use of NWP right-of-way with bicycles carefully.

California Public Utilities Commission

Where there is no overlap of authority with the FRA, the California Public Utilities Commission (PUC) has oversight responsibility for rail safety issues in the state, particularly with regard to at-grade crossings. A PUC officer echoed FRA concerns that cyclists and pedestrians may not be aware of the dangers involved with the shared use of a functioning rail right-of-way. Its statutory authority allows the PUC to review any issue which it feels poses an unsafe operating condition on railroad employees and the general public. It is certain that the PUC, like the FRA, would review a shared use concept carefully.

Summary

Clearly, the shared use of railroad rights-of-way by bicycles and pedestrians seems to be of interest in Sonoma and Marin Counties, and nationally. With regard to the NWP right-of-way, specific feasibility studies (including environmental and engineering) of a shared-use concept will enable policy makers to determine whether the shared use of a functioning rail right-of-way with bicycles and pedestrians is workable. While it is recommended that no specific policy be crafted to include or exclude bicycle and pedestrian shared use of the NWP right-of-way at this time, the SMART Commission does support inclusion wherever possible once design specifications have been determined. Additionally, making access possible for bicycles and pedestrians where it does not currently exist should be explored.