CORVALLIS CITIZENS ADVISORY COMMISSION ON TRANSIT AGENDA

Wednesday, June 17, 2009, 8:20 a.m.
Madison Avenue Meeting Room
500 SW Madison Avenue

I. INTRODUCTIONS

II. APPROVAL OF MINUTES

May 13, 2009

III. CACOT/VISITOR'S COMMENTS

IV. OLD BUSINESS

- Siting Bike Lockers at Downtown Transit Center

V. NEW BUSINESS

VI. INFORMATION SHARING

VII. COMMISSION REQUESTS AND REPORTS

VIII. ADJOURNMENT

Future Meetings:
Wednesday, July 8, 2009, 8:20 a.m., Madison Avenue Meeting Room
Wednesday, August 12, 2009, 8:20 a.m., Madison Avenue Meeting Room
Wednesday, September 9, 2009, 8:20 a.m., Madison Avenue Meeting Room

The Madison Avenue Meeting Room is accessible to the public.
Please contact Tim Bates at (541) 766-6916
if you need special accommodations to attend the meeting.

Accepted
June 17, 2009
by CACOT

CORVALLIS CITIZENS ADVISORY COMMISSION ON TRANSIT
MINUTES
May 13, 2009

Present
Bob Lowry, Chair
Tad Abernathy
Susan Hyne
Tom Kincaid
Robert E. Wilson
Hal Brauner, City Councilor

Staff
Lisa Namba, Public Works
Tim Bates, Public Works
Cindy Hallett, Public Works

Visitors
Charlie Tomlinson, Mayor
Cody Abernathy

Absent
Stephan Friedt, Vice-Chair
Heather Bennett
Brandon Trelstad

SUMMARY OF DISCUSSION

Agenda Item	Information Only	Held for Further Review	Recommendations
I. Introductions	X		
II. Approval of April 8, 2009 Minutes			Approved as corrected.
III. CACOT/Visitor Comments • Mayor Tomlinson	X		
IV. Old Business • None			
V. New Business • Siting Bike Lockers at Downtown Transit Center		X	
VI. Information Sharing • Written Report	X		
VII. Commission Requests and Reports • Nelson-Nygaard report			Requested staff furnish report.
VIII. Adjournment			Adjourned at 9:45 a.m.

CONTENT OF DISCUSSION

I. The meeting was called to order at 8:20a.m. Introductions of Commission members, staff, and visitors were made.

II. Approval of Minutes

Hal Brauner was inadvertently omitted from the list of persons present at the April 8, 2009, meeting. Commissioner Wilson and Abernathy, respectively, moved and seconded the Commission approve the April 8, 2009, minutes as corrected. The motion passed unanimously.

III. CACOT/Visitor Comments

As May is "Volunteer Month," Mayor Tomlinson visited to express his appreciation for the volunteer efforts of the Commissioners. He noted that Councilor Hal Brauner is liaison to most transportation-related boards and commissions the Council is involved in, and does a great job representing the City's interests. Mayor Tomlinson said "whatever we can do to get people onto transit is worth considering."

Councilor Hal Brauner stated that the City Council has been discussing the Sustainability Coalition recommendations and have narrowed their focus to energy and transportation. Councilor Brauner is championing a fareless transit system at Council level. This will require an alternative revenue source and he will recommend referring the discussion to the Administrative Services Committee. Councilor Brauner will be seeking input from CACOT on where routes, frequency and hours might need to be added as the discussion proceeds. Commissioner Wilson expressed concern over whether this would affect paratransit (Dial-A-Bus) fares, since they are linked to the fixed-route fares. He also spoke of the need for a CTS maintenance facility. Councilor Brauner said the Council recognizes the need for the facility and has explored grant opportunities and potential partnerships with the school district. He noted that the American Recovery and Reinvestment Act may be a prime funding source for this project.

Councilor Brauner noted that in addition to CACOT, he serves on several other transportation committees: the Corvallis Area Metropolitan Planning Organization (CAMPO) Policy Board; Van Buren Street Bridge stakeholder group; 9th Street Improvement Project Advisory Committee; Cascades West Area Commission on Transportation; and Linn-Benton Loop Commission. This allows him to have a single voice for the City across a range of transportation discussions.

Chair Lowry informed CACOT that although ODOT's Public Transit Division (PTD) had released a written recommendation to the Public Transit Advisory Committee (PTAC) awarding approximately $328,000 in Job Access and Reverse Commute (JARC) funds to Corvallis for the 09-11 biennium, that recommendation was withdrawn at the PTAC meeting held Monday, May 11th. PTD staff will be re-reviewing the JARC allocations to the three small urbanized areas (Corvallis, Bend, and Rogue Valley). Ms. Namba indicated that staff was aware of this, and said she has already written Public Transit Division Administrator Michael Ward expressing interest in the process that will be used

to make the final allocations.

IV. Old Business

None.

V. New Business

Siting Four (4) Bike Lockers at the Downtown Transit Center (DTC) - Ms. Namba distributed a drawing showing possible locations for four bike lockers at the DTC. The concept of the bike lockers is pay-as-you-go, where a bike could be stored for an hour or day via coin operation. Collection of fees would be entering new territory. Chair Lowry is concerned about how pedestrian flow would be affected if the lockers were placed on Monroe Avenue near the Linn-Benton Loop shelter. Commissioner Wilson suggested locating the lockers in one of the parking spaces proposed for the old Moose building. In response to a question from Councilor Brauner, Ms. Namba stated the Moose lodge project is not proposed to have bike parking on that property. Councilor Brauner wants to be sure there is good pedestrian flow from the DTC to the parking lot to the proposed restroom. Ms. Namba stated that just yesterday, staff learned that the concessionaire will vacate the corner building on June 6, 2009. This presents an opportunity to potentially site the restroom in that building.

Commissioner Hyne stated that combining bus and bike is challenging because the bus can accommodate only two bikes, so it would be difficult to quickly lock a bike and catch the bus on time. She wondered about the likelihood of the lockers becoming homeless shelters. Chair Lowry would like to hold off installation of the bike lockers until after the Moose lodge demolition and construction is completed, and limit the amount of landscape removal and pedestrian disruption. After further discussion, Chair Lowry suggested, since there is no quorum (Commissioner Abernathy had left), to carry over this topic to the next meeting. The lockers will not arrive until the end of June with installation in the fall. Another batch of lockers could potentially go on 1st Street near the informal Valley Vanpool site.

Chair Lowry would like to see CACOT work on the concept of establishing other transit centers where two buses could stop and dwell. Ms. Namba stated staff had submitted a list of high priority items (also known as earmarks) to our Congressional representatives, and satellite transit centers did not make the list, although they were considered.

VI. Information Sharing

Mr. Bates reviewed the Information Sharing Report. Additional information to the report:

- **Job Access and Reverse Commute (JARC)** - An update on this grant application was discussed at the beginning of the meeting.
- **New Buses** - Two buses will arrive May 25, 2009. Gillig bus company will send a field representative to inspect the buses and Luminator will send an installer to install the VIS units.
- **Beaver Bus** - There will be a Beaver Bus get-together celebration on May 11th in the

Memorial Union Quad.

Follow-up issues:

- **Letter of Support** - CACOT provided a letter of support on favor of the City of Albany's JARC application to operate the new Lebanon Loop service. What was requested and what was awarded were different and Mr. Bates questioned Chair Lowry about this. Chair Lowry indicated he'll need to review.
- **City Attorney's approval of AR 09-01** - The next step will be to introduce an Administrative Policy for wheelchair securement. The ADA mandates the term 'mobility device' be replaced with 'wheelchair'. Chair Lowry suggested that transit agencies should be pushing manufacturers to have a uniform design for securement hooks.
- **CTS 2008-09 Budget Expenditures and Revenue** - The pie charts provided to the Commission do not include reimbursement revenue from Philomath and Benton County STF and large capital purchases are excluded from expenditures. In response to questions from Commissioner Wilson, there was discussion about expenses from extra mileage caused by the current location of the First Student facility.

VII. Commission Requests and Reports

Commissioner Hyne noted that three items discussed at the meeting could impact service: JARC funding, the potential for a fareless system, and we may get energy savings if Transit Investment in Greenhouse Gas and Energy Reduction (TIGGER) projects are funded. She suggested that the Commission start thinking about these things and seeking a strategy for responding to these scenarios. Commissioner Wilson said that one approach is to budget for and hire a consultant to examine the options and suggest strategies. Chair Lowry said that the information produced from consultant Nelson-Nygaard seven or so years ago may still be useful. Staff agreed to locate the report.

VIII. Adjournment

Since there was no quorum, Chair Lowry adjourned the meeting.

The meeting was adjourned at 9:45a.m.

NEXT MEETING: June 17, 2009, 8:20 a.m., Madison Avenue Meeting Room

MEMORANDUM

DATE: June 16, 2009

TO: CACOT Members

FROM: Tim Bates, Transit Coordinator

SUBJECT: Information Sharing Report

Job Access Reverse Commute (JARC) - After a last-minute re-review by ODOT of the 09-10 JARC funding amounts, staff was notified that the City of Corvallis will receive $328,040 in JARC funding through ODOT's Discretionary Grant Program for FY 09-11. The City currently receives $318,535, and had applied for $342,670 for the FY 09-11 biennium. These funds require a 50/50 match and are used for expanded Saturday service and for some of the JARC-eligible portion of the service we provide.

ODOT emphasized that this award is a one-time solution to an ongoing funding shortfall. Corvallis, Bend and Rogue Valley, the three small Urbanized Areas, will work with ODOT to develop performance criteria and a process that complies with the FTA's requirement that JARC funds be distributed on a "competitive" basis in the future.

New Buses - Two new CTS buses arrived at First Student in late May. The buses have been inspected by the bus manufacturer's field service rep and declared to be in good working order. It is expected Luminator will send a service representative in early July to install VIS equipment into both buses. This process will take approximately one week. The buses will then be road ready.

Triennial Review - The City's FTA Triennial Review occurred June 10-11. There were only four findings cited in the final report. Two of the findings were addressed on June 16th via an explanatory letter to the FTA and it is expected that the FTA will immediately declare the findings to be closed. The remaining two findings are to be addressed by the City by no later than 60 and 90 days respectively.

Shelter Relocations - Before June 30th, two shelters that are located along routes we no longer service will be relocated to existing stops. The shelter on 35th Street south of Harrison Blvd. will be relocated to Rivergreen Avenue east of Hwy 99W (Route 6). And the shelter on Technology Loop west of 49th Street will be relocated to the east side of 49th Street south of Technology Loop (Routes 3, C3, and Beaver Bus).

Bus Stop Seats - The City recently purchased 6 Simme-Seats. The seats are designed to be affixed to bus stop posts and each one holds two people. They will be delivered to Public Works by no later than June 30th and installed at locations to be determined.

Summer Youth Transit Program - Thanks in part to a generous donation from Allied Waste to the transit fund, this program began operating June 1st. The program runs through September 6th.

Beaver Bus - Last day of service for the 08-09 Beaver Bus service was June 6th. Service resumes October 1, 2009. Ridership for 08-09 was 7,708 for 29 weeks of service. The weekly average was 266

rides. This was a 17% increase over 07-08, which provided 6,563 rides over 29 weekends.

Ready to Ride in 2009 - CTS is joining with other local transit providers to host a special transit event at the Corvallis-Benton Public Library on Saturday, June 27th, 10:00am - 1:00pm. There will be demonstrations and information about the local transit systems. The event is open to the public.

da Vinci Days 2009 - Volunteers are needed to staff the CTS booth on Saturday and Sunday, July 18-19. A sign-up sheet will be circulated at the June CACOT meeting.

CTS Domain Name - CTS has a new web domain, www.corvallistransit.com. This domain will direct users to the CTS website. It is hoped that the easy-to-remember name will draw more visitors to the site.

CTS Service to the 2009 Benton County Fair - At this time there are no plans to have CTS provide transportation to this year's fair. FTA Charter Service regulations prevent the City from cost sharing with Benton County to operate a fair shuttle using the trolley, as has been done in years past. Benton County is sponsoring shuttle service with a loop from the Fairgrounds to Reser Stadium parking lot to Philomath.

Ridership

Percentage increases are based on rides per service hour due to the differences in days of service and revised routes effective September 22, 2008.

CTS provided 53,372 rides in May, an average of 26 rides per service hour, an 11% decrease based on per service hours compared to May, 2008. Ridership for May, 2008 was 56,581, an average of 29 rides per service hour.

Philomath Connection provided 1,710 rides in May, an average of 13 rides per service hour, an 8% per service hour increase over May, 2008. Ridership for May, 2008 was 1,608, an average of 12 rides per service hour.

Beaver Bus provided 1,067 rides in May, an average of 6.4 rides per service hour, an 11% per service hour decrease over May, 2008). Ridership for May, 2008 was 1,281, an average of 7 rides per service hour.

"Honored Rider" bus passes for seniors 75 + years. 9 passes were distributed in May, 2009. A total of 635 Honored Rider passes have been issued since the program began in September, 2004.

Follow-up on issues presented at the May CACOT meeting.

- Commissioner Hyne requested the report done by the City's consultant which addresses possible scenarios which would deal with service reductions. The report is part of the meeting packet.

CITY OF CORVALLIS

Transit Service Reduction Alternatives

Nelson\Nygaard Consulting Associates
833 Market Street, Suite 900
San Francisco, CA 94103

April 2003

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Overview

Corvallis Transit System has robust ridership. Few parts of the system deserve service reductions, and some could profit from additional service. However, due to the financial constraints facing most Oregon municipalities, the City of Corvallis must reduce its budget in many departments. The 2003-4 municipal budget for the City of Corvallis calls for a 7% reduction in the transit operating budget, or roughly $80,000 per year.[1]

This report evaluates several ways to reduce service to meet this target. The report does not make a recommendation, but assesses the pros and cons of each approach.

Evolution of the Existing System

Corvallis Transit System is a service of the City of Corvallis Public Works Department. Its route structure is shown in Figure 1.

The basic route structure, consisting of Routes 1-7, was developed in a detailed study by this consultant, and implemented in 1998 after extensive public outreach.

In 1999, "Service Routes" A and B were added. Originally intended as specialized service for seniors, these have evolved into regular routes with the same bus type and levels of service – and the same mix of many kinds of riders – as Routes 1-7. In many cases, they follow the same routing as one of the basic routes, but provide an additional trip each hour for a net headway of 30 minutes. However, since they are publicized in a different brochure and do not appear on the system map, awareness of them may be limited.

The all-day services, including Routes 1-7 and A-B, are designed and scheduled so that they work together in three ways:

- Routes 2-6 and A-B all serve the downtown transit center (5th & Monroe) at the same times each hour or half hour. In most cases, it is possible to transfer directly from one route to another without significant delay. This is a crucial feature of the system.
- Routes 1, 5, and 7 schedules are offset to provide a bus every 15 minutes along Monroe between 5th Street and Kings Blvd. This segment is the northern boundary of the OSU campus and the site of dense student housing and university-oriented businesses. The high-frequency service along this segment is intended to help tie the campus and downtown together. It remains the highest-ridership segment in the system.
- Routes 3 and A are each hourly, but run 30 minutes apart so as to provide net 30 minute service to their common segments in the southwest part of the city. The

[1] The exact target is $78,480, but this should always be padded upward slightly to allow for contingencies.

same is true of Routes 4 and B, which both serve the Hospital and other key destinations in the Northeast.

In 2001, the system added a bus running during the morning peak period. This bus makes two trips on a modified version of Route 6 and one on a route combining portions of Routes 1 and 7. Its real purpose was to relieve loads on Route 6, and also to serve a growing apartment area south of Goodnight Avenue, extending to Rivergreen, which is beyond the range of the basic Route 6. While these trippers do attract some ridership, the value of the new coverage south of Goodnight Avenue is limited since service is operated only during morning peak hours. In the afternoon, riders must walk from the regular Route 6 service on Goodnight.

Finally, the City of Philomath has joined with Corvallis in funding a Corvallis-Philomath route (called "P" on our maps). This route runs hourly during the peak period with two additional trips in the midday. In Corvallis, it serves Technology Loop, OSU, and the downtown Transit Center. Because it would require renegotiating an intergovernmental agreement, and because the service is so limited, we have not considered reducing it in this study.

How Much Must We Cut?

Transit service is measured in revenue hours. One revenue hour consists of one bus operating in service for one hour. For example, Saturday service consists of six buses operating for seven hours, so each Saturday the system operates 42 (6 x 7) revenue hours. Since there are 52 Saturdays in a year, a total of 2184 (42 x 52) revenue hours are operated on Saturdays in a normal year.

Table 1 shows the number of revenue hours operated on each route.

Figure 1 Existing Service

[insert pdf]

Table 1 Revenue Hours by Route

Route	Buses Needed[2]	WEEKDAY		Annual Revenue Hours	SATURDAY		Annual Revenue Hours
		Service Span (hours)	Daily Revenue Hours		Service Span (hours)	Daily Revenue Hours	
1-Witham Hill	0.75	13	9.75	2486	7	5.25	273
2-9th St/E Walnut	0.75	13	9.75	2486	7	5.25	273
3-Southwest	0.5	13	6.5	1658	7	3.5	182
4-Highland	0.5	13	6.5	1658	7	3.5	182
5-Kings Blvd	1	13	13	3315	7	7	364
6-Southeast	0.5	13	6.5	1658	7	3.5	182
7-Circle / 29th St.	1	13	13	3315	7	7	364
A-Southwest	0.5	13	6.5	1658	7	3.5	182
B-Northeast	0.5	13	6.5	1658	7	3.5	182
Peak trippers (1-2, 6)	1	1.5	1.5	383	0	0	0
Totals	**7**	**118.5**	**79.5**	**20273**	**63**	**42**	**2184**
TOTAL ANNUAL HOURS:							**22457**

The number of revenue hours that must be cut depends on the day of the week. Saturday and Special Event service is more expensive. The marginal cost of a revenue hour of Saturday service is $56.46. Weekday service costs roughly $50/revenue hour.

If Saturday service were cut, then, the amount of service that needs to be cut would be

$80,000 / $56.46 per revenue hour = 1417 annual revenue hours

This amounts to about two thirds of all the Saturday service operated.

If Weekday service is cut, then the amount of service that needs to be cut would be:

$80,000 / $50 per revenue hour = 1600 annual revenue hours.

Observations on Existing Ridership

Tables 2 and 3 show the current route-level ridership, based on typical weekdays and Saturdays during the winter of 2002-3. Both tables also calculate the productivity of

[2] Note: The fractional numbers of buses shown on some routes indicate that a bus alternates between two or more routes. For example, it takes 30 minutes to cycle Route 3, but service is every 60 minutes, so one bus can do Route 3 and another similar route, such as Route 6. Routes A and B share one bus. The most complex arrangement is Routes 1, 2, and 4, which between them require two buses.

service – that is, the number of passengers carried for each hour that a bus was operating.

Table 2 Weekday ridership by Route (based on four typical weeks in Winter '02-03)

	Average ridership per weekday				WEEKDAY PERFORMANCE		
Week beginning:	1/13/2003	11/4/2002	11/11/2002	10/21/2002	Average	Revenue	Productivity
and ending Fri:	1/17/2003	11/8/2002	11/15/2002	10/25/2002	Ridership	Hours	(Riders/Hr)
ROUTE							
1-Witham Hill	291	269	266	290	279	9.75	28.6
2-9th St/E Walnut	106	104	118	120	112	9.75	11.5
3-Southwest	151	141	177	163	158	6.50	24.3
4-Highland	147	125	123	129	131	6.50	20.2
5-Kings Blvd	551	489	568	547	539	13.00	41.4
6-Southeast	242	198	206	242	222	6.50	34.2
7-Circle / 29th St.	311	277	288	265	285	13.00	21.9
A-Southwest	132	107	135	127	125	6.50	19.3
B-Northeast	141	116	128	136	130	6.50	20.0
Peak trippers (1-2, 6)	29	27	28	30	28	1.50	18.8
Totals	**2099**	**1852**	**2037**	**2049**	**2009**	**80**	**25.3**

Table 3 Saturday Ridership by Route (based on four typical Saturdays in Winter '02-03)

	Average ridership per Saturday				SATURDAY PERFORMANCE		
Date:	10/19/2002	10/26/2002	11/9/2002	1/11/2003	Average Ridership	Revenue Hours	Productivity (Riders/Hr)
ROUTE							
1-Witham Hill	74	104	64	66	77	5.25	14.7
2-9th St/E Walnut	53	50	55	36	49	5.25	9.2
3-Southwest	31	48	24	40	36	3.50	10.2
4-Highland	63	58	54	35	53	3.50	15.0
5-Kings Blvd	242	226	217	254	235	7.00	33.5
6-Southeast	63	74	46	58	60	3.50	17.2
7-Circle / 29th St.	71	85	62	77	74	7.00	10.5
A-Southwest	43	66	34	62	51	3.50	14.6
B-Northeast	56	48	57	43	51	3.50	14.6
Totals	**696**	**759**	**613**	**671**	**685**	**42**	**16.3**

Strongest and Weakest Routes

By far the most productive route in the system is the 5-Kings Blvd., which also runs along Monroe serving the northern edge of the OSU campus. No other route comes close to Route 5's performance on either weekdays or Saturdays.

By far the least productive route is the 2-9th St / East Walnut, whose performance of 11.5 boardings per hour on weekdays, and 9.2 on Saturdays, must be considered very poor by any standard. One of the few routes that does not serve OSU, this route has the fewest major destinations, so it relies mostly on residential origins for its business. There is also considerable overlap between Route 2 and neighboring Routes 4, 7, and B, all of which deliver better performance.

Weekday vs. Saturday

Saturday ridership on Corvallis Transit System is surprisingly strong, especially considering that the system runs for only seven hours and therefore cannot be used to commute to any eight-hour work shift. Saturday ridership is typically dominated by service workers and by students and others in the community making non-work, non-school trips (though students are often traveling to the library or to student activities).

Saturday ridership, however, is much more narrowly focused on a few routes. Route 5, which accounts for about 1/4 of the system's ridership on weekdays, accounts for more than 1/3 of it on Saturdays. On most routes, productivity on Saturdays is 70-80% of what it is on weekdays, but three routes – 1-Witham Hill, 3-Southwest, and 7-Circle/29th St – are only about half as productive on Saturdays as on weekdays. While Route 1 is still at a respectable 14.7 boardings/hour on Saturdays, Routes 3 and 7 fall into unacceptable territory, barely exceeding 10 boardings per hour. (Route A, which serves much of the same area as Route 3 but is less focused on employment areas and more on residential ones, performs much better than Route 3 on Saturday.)

Although Route 7 has a low Saturday productivity, it has the third-highest Saturday ridership after Route 5 and Route 1. (Routes 1 and 7 have about the same Saturday ridership, but Route 7 is longer and therefore requires more revenue hours to operate at the same hourly headway.) This means that the top three routes on Saturday, which together account for well over half the system's ridership, are the three routes that run along Monroe, jointly providing service every 15 minutes as far as Kings Blvd. and every 30 minutes as far as 29th.

Ridership by Stop

The busiest boarding/alighting location is of course the downtown transit center, where most of the system's transfers occur. Setting this location aside, Table 4 lists the busiest locations.

The busiest stop of all is the outbound stop at Monroe & Kings, and when this is considered together with the adjacent stop at 23rd, outbound boardings in this general

area exceed 100 per day, or about 5% of the system's ridership. OSU Bookstore's stops in the two directions also both rank in the top 10. The busiest stops not adjacent to the campus are Kings & Fillmore and 49th & Technology.

Apart from OSU, two institutions rank in the top 10 for ridership generation. Open Door Vocational on Route 6 and Western View Intermediate on Route 3 generate 28 and 25 boardings, respectively. The big difference between weekday and Saturday and ridership on Route 3 is explained, clearly, by the large role of Western View Intermediate School in the weekday ridership on this route. While stop-level Saturday data is not available, it is likely that none of these school trips are made on Saturday.

Some locations do not show up as prominently as they might because the configuration of the transit system divides their ridership among several stops. For example, the Aquatic Center shows up on Route B with 10 boardings, but actual ridership that could be coming from this area is closer to 20, when various stops on Circle and Spruce are considered.

Table 4 Highest Boarding activity by Stop (1999 weekday data during OSU school year)

Street	Cross-Street	Direction	Route	Boardings
Monroe	Kings	outbound	1, 5, 7	63
OSU Bookstore		outbound	A	37
Kings	Fillmore	inbound	5	36
Monroe	23rd	outbound	1, 7	33
49th	Technology	inbound	A, 3	31
Open Door Vocational		inbound	6	28
Western View Intermediate Sch.		inbound	3	25
Kings	Mulkey	inbound	5	25
OSU Bookstore		inbound	A, 3	25
Corvallis Clinic (W of Hosp)		inbound	B, 4, 7	24
Kings	Fred Meyer	outbound	5	23
Timberhill Shopping Center		inbound	5	23
Walnut	Rolling Green	inbound	5	23
Jefferson	15th	outbound	6	23
OSU Bookstore		outbound	3	22
49th	Technology	inbound	A	21
Witham Hill	Pinecone	inbound	1	20
Monroe	26th	outbound	1	17
Cheldelin Middle School		inbound	7	15
Conifer	Canterbury	inbound	7	15
Circle	Janssen	inbound	7	15
9th	Circle	inbound	2	14
Monroe	6th	outbound	5	14
Monroe	Memorial	outbound	1	11
Corvallis High School		inbound	4	11
Hwy 99w (3rd)	Circle K	inbound	6	11
Circle	btw Janssen & 9th	outbound	7	11
Hospital		inbound	B, 4, 7	11
Rolling Green	Forest Green	inbound	5	10
Highland	Aquatic Center	inbound	B	10

Key Conclusions

Any attempt to cut service must consider the following realities:

- OSU drives most of the system, generating most of the highest-ridership stops.
- High ridership requires a combination of density, directness, and frequent service. Only Route 5 – the busiest route in the system -- has all three. It is almost continuously lined with dense activity centers and housing including OSU; it is reasonably straight, following the same path that someone might drive to get from one end to the other; and it is the only route that runs every 30 minutes along its entire length. Route 5 productivity, more than 40 boardings/hour, is outstanding for a city of Corvallis's size, even among University markets. It achieves more than 30 boardings per hour during its seven hours of Saturday service, which is also outstanding.
- As in most systems, systemwide productivity is lower on Saturday than on weekdays, but the difference varies dramatically by route. Route 3, which relies on a secondary school and several employment centers, is only half as productive on Saturday as on weekdays. Route 5 remains very busy on Saturday.
- Saturday service currently operates for only seven hours, not long enough to serve any fulltime job that includes a Saturday, as many service sector jobs do. Saturday ridership must be evaluated in light of the service's limited utility. Of course, the lack of Sunday service also limits the system's value to service-sector employees, typically a large share of ridership in most transit systems.

Service Cut Scenarios

There are many ways for Corvallis Transit System to make the required cut. In general, the options presented below presume the following, based on policies and previous actions of the city.

- Weekday service is more crucial than Saturday service, because University classes, secondary schools, and non-service-sector jobs all require service only on weekdays.
- Total elimination of anyone's service – even if the ridership is very poor – is usually not acceptable. Service reduction, even including elimination of all Saturday service, is preferable to elimination in these cases.
- Up to the constraints of the previous point, the system wants to be as productive as possible. Productivity is not just an economic value. It means that the system is providing mobility to the largest possible number of people.

This section presents two possible approaches to the required service reduction. One would take aim entirely at Saturday service. The other would restructure the system in ways that eliminate some problems in the current design, thereby increasing the overall

quality of service while achieving the desired cut. Like any change, the more aggressive restructuring alternative has both more benefits and more potential for complaints, because it will change the travel patterns of many existing riders.

Saturday Service Reduction Scenario

To meet the service reduction target with Saturday service, it would be necessary to eliminate 1417 annual hours of service, or about 27.25 hours on each Saturday.

Current Saturday service consists of six buses operating for seven hours per Saturday. Since the service day is already very short, the most viable cut is to reduce the number of buses operating. To achieve 27.25 hours of cuts on a Saturday, we would need to cut four of the six buses, leaving only two in operation all day.

Obviously, cutting service from six buses to two is a dramatic reduction, retaining only a minimal network of Saturday services. The proposed Saturday service cut would produce the system shown in Figure 2. (Current Saturday service is identical to weekday service in its all-day pattern, which is shown in Figure 1 earlier.). The Saturday cuts would be as follows:

- Routes A, B, 1, 2, and 7 would no longer operate on Saturdays.
- Route 5 would be cut from half-hourly to hourly on Saturdays.
- Routes 3, 4, and 6 would operate hourly on Saturdays, as they do now.

The idea behind this Saturday cut is to retain some coverage to all parts of the city that have significant ridership potential. Some areas are no longer served, but most have the possibility of walking to some service. And as the map clearly shows, there is little duplication of service among the four routes (Routes 3 through 6) that would remain.

No redesign of routes is recommended in this scenario, since for system clarity it is important that the routes running on Saturdays also run on weekdays, and the goal of this scenario is to make no weekday changes.

Routes have been selected for retention not solely based on their individual productivity. Route 3 is retained not because it is productive on Saturdays (it is not), but because Route A, which serves the same area, is moderately productive on Saturday, and also because there would be no alternative services anywhere in southwestern Corvallis. Route 6, also, is retained based on the lack of alternatives in the southeast area. In the north, we selected Routes 4 and 5 to remain because these have no overlap with each other, are of the correct length, and serve all of the highest-demand areas including the Kings Blvd. corridor, the Aquatic Center, and the medical area. Routes B, 1, 2, and 7 all do certain useful things, but they also have some degree of overlap with Routes 4 and 5, so we do not recommend retaining them in a Saturday-only cut.

An exact assessment of ridership impacts is impossible because the current data do not indicate where the ridership is on each route. Passengers who currently ride along Monroe east of Kings, for example, may currently be counted as passengers of Route 1

or Route 7, but they would still be served by Route 5. However, the likely outcome is that total ridership would fall, but that productivity (riders per revenue hour of service provided) would rise, possibly to above the weekday level.

Typically, when the level of service changes along a route, the ridership changes in the same direction but to a lesser degree. If you double the amount of service (say by going from a 60 minute headway to a 30 minute headway), ridership may increase by 70% or 80%, but it will usually not double. Likewise, a 50% cut in service (from 30 minutes to 60 minutes, as proposed on Route 5) will cause a loss of riders, but not 50% of them. As a result, productivity typically goes up in response to a partial service cut, though ridership goes down.

Most of the cuts to other routes are also, in effect, frequency reductions. For example, Route A duplicates large parts of Route 3, including the busy 49th & Technology stop, and Route B duplicates large parts of Route 4, including the medical area and Aquatic Center area. In each case, the schedules are currently offset to provide a net headway of 30 minutes, which will be cut to 60 when one route is deleted. The effect should be a loss of riders, but not half of them, so productivity will rise.

Of course, some riders will also be lost entirely because they have no viable service – mainly riders in northern Corvallis who are far to the west of Kings or far to the east of 9th, as well as some passengers along 35th and 53rd near Harrison. This will certainly be a loss of ridership, but not of productivity.

Lacking detailed data, we can make an educated guess that if five of the seven Saturday buses are cut in the manner proposed, the system ridership on Saturdays will drop from roughly 700 to roughly 450. In other words, although service on Saturdays is being cut by about 70%, Saturday ridership would fall by about 40%. The result would be an increase of productivity such that Saturday and weekday productivity would be about the same.

Figure 2 Saturday Service Reduction Alternative

[insert pdf]

Table 5 Quantity of Service by Route, Saturday Service Reduction Scenario

Route	Buses Needed	WEEKDAY		Annual Revenue Hours	SATURDAY		Annual Revenue Hours
		Service Span (hours)	Daily Revenue Hours		Service Span (hours)	Daily Revenue Hours	
1-Witham Hill	0.75	13	9.75	2486	0		0
2-9th St/E Walnut	0.75	13	9.75	2486	0		0
3-Southwest	0.5	13	6.5	1658	7	3.5	182
4-Highland	0.5	13	6.5	1658	7	3.5	182
5-Kings Blvd	1	13	13	3315	7	3.5	182
6-Southeast	0.5	13	6.5	1658	7	3.5	182
7-Circle / 29th St.	1	13	13	3315	0		0
A-Southwest	0.5	13	6.5	1658	0		0
B-Northeast	0.5	13	6.5	1658	0		0
Peak trippers (1-2, 6)	1	1.5	1.5	383	0		0
Totals	7	118.5	79.5	20273	28	14	728

TOTAL ANNUAL HOURS: 21001

Service Redesign Scenario

As the Corvallis Transit system has evolved, it has become increasingly complex. Not all of the complexity is necessary; it reflects the history of how the system was created, not necessarily the needs of the City now.

A service cut is an ideal time to look for opportunities to make the system simpler and more efficient. Such a plan would:

- Increase the extent of 30-minute frequency service, which achieves far higher ridership in developed areas than hourly service does.
- Decrease the number of routes, eliminating overlaps and generally moving routes further apart so that each has a unique function.
- Retain the major connection points at downtown and Timberhill.
- Simplify the system for ease of public comprehension.
- Retain service within ¼ mile of well over 95% of residents, businesses, and activity centers that are currently served.

The basis of the redesign can be summarized as “You may have to walk a little further, but the service you walk to will be more useful.”

The redesign is based on the stop level data that was summarized earlier in this report, including an evaluation of very low-ridership stops. Using this data, routes are combined or reconfigured so that one route does what two or more routes do today. The resulting savings can go either toward the necessary service cut or toward increasing frequency.

Frequency can be increased in most cases because the quantity of the cut required is relatively small when applied, as it is here, to every day that the system operates. Whereas achieving the service cut target using Saturdays alone requires cutting 2/3 of Saturday service, the cut across all weekdays would require removing about eight revenue hours of service each weekday, which amounts to less than one of the six all-day buses operated. The proposed restructuring saves on Saturday service as well, so the impact on any one day is slightly less than eight revenue hours.

Figure 3 shows the proposed redesign, for comparison with Figure 1 (Existing System). Table 6 shows the revenue hours by route, for comparison with Table 5 (Saturday Reduction Scenario) and Table 1 (Existing System)

Table 6 Quantity of Service by Route, Redesign Scenario

Route	Buses Needed	WEEKDAY		Annual Revenue Hours	SATURDAY		Annual Revenue Hours
		Service Span (hours)	Daily Revenue Hours		Service Span (hours)	Daily Revenue Hours	
3-Southwest	0.5	13	6.5	1658	7	3.5	182
5-Kings Blvd	1	13	13	3315	7	7	364
6-Southeast	0.5	13	6.5	1658	7	3.5	182
7-Circle / 29th St.	1	13	13	3315	7	7	364
8-Witham Hill/Walnut	1	13	13	3315	7	7	364
9-9th	1	13	13	3315	7	7	364
13-Westside loop	0.5	5	2.5	638		0	0
16-South express	0.5	5	2.5	638		0	0
19-High School loop	1	4.5	4.5	1148		0	0
Totals	7	92.5	74.5	18998	42	35	1820

TOTAL ANNUAL HOURS: 20818

Figure 3 Restructuring Scenario

[insert pdf]

The following is a brief description of how the proposed system differs from the existing one:

Kings Blvd. Corridor: Route 5

Route 5, the most successful route in the system by all measures of ridership and productivity, is unchanged.

Southwest Area: Existing Routes 3 and A. Proposed Routes 3 and 13.

Route 3 is retained unchanged with 60-minute service. Route A becomes Route 13 and operates a more limited service day, about three hours in the morning and three hours in the afternoon. When both are running, 30-minute service is still provided to places on both routes, such as the busy 49th & Technology stop.

Southeast Area: Existing Route 6 and Peak Supplemental. Proposed Routes 6 and 16.

Route 6 is retained unchanged. The supplemental peak trips are replaced by Route 16, which runs on both peaks instead of only in the morning, as the current service does. (Routes 13 and 16 would share one bus, so both must operate the same service day.)

Northwest to Downtown and Northside Crosstown Service: Existing Routes 1, 2, 7. Proposed Routes 7 and 8.

Route 2, the system's weakest, would be deleted, though all of its riders would still be within walking distance of service. Route 1-Witham Hill would be redesignated as Route 8 and would be extended to end at the Hospital. There, it would continue as Route 7, which would operate two-way through the Conifer-Conser area, HP, and then via the current Route 7 covering Circle, 29th, Monroe into downtown. Routes 7 and 8 would operate as a continuous two-way loop. East-west service would be available both on Walnut (deviating via the medical area) and on Circle. Routes 7 and 8 would be offset from each other by 30 minutes on their common Monroe/Arnold segment, to retain the net 30 minute frequency there. Both would be offset from Route 5 to retain the net 15-minute frequency along Monroe between Kings and downtown.

Northeast to Downtown: Existing Routes 2, 4, B. Proposed Routes 9 and 19.

The most dramatic change in the proposed structure is this new consolidated, half-hourly route, which replaces portions of three existing routes: 2, 4, and B. In the existing route structure, these hourly routes overlap in confusing ways, and often run just a few blocks apart. Consolidating these services into one route that can run every 30 minutes would create a more useful service that is worth walking to. It would also concentrate service on arterial streets, and simplify the pattern of service at major destinations such as the Aquatic Center.

Here is a brief description of the thinking behind each segment of this new route:

Downtown to Buchanan

In this segment, Route 2 currently runs on 5th, Route B on 9th, and Route 4 outbound on 9th and inbound on 11th. The route 2 segment on 5th appears to generate fewer than 10 riders per day, but we recommend retaining it is part of a new Route 19 (see below).

Along 9th and 11th, Routes 4 and B are offset, so that there is service every 30 minutes outbound on 9th. However, the inbound service is split, with a bus every hour on 11th (Route 4) and one on 9th (Route B). This is confusing and not especially useful, because most of the coverage area is within walking distance of either street.

Obviously, the Route 4 alignment was motivated by the desire to place stop next to Corvallis High School. However, this stop generates only 11 boardings per day. High school riders actually distribute themselves among several stops, sometimes walking to and across 9th to catch outbound B if that better meets their needs.

For this reason, the proposed structure puts the main, frequent service on 9th, which is a faster street with much greater ridership potential and lower neighborhood impacts. The high school stop on 11th is served by a frequent shuttle to the downtown transit center, Route 19, which would operate every 15 minutes but only during peak hours (4.5 hours per weekday, spanning both school peaks). The relative speed of 9th through this segment means that it possible to reach further into the northeast, serving more destinations, than could be done via 11th and Highland.

Buchanan to Garfield

In this segment, Route 4 is currently on Highland while Routes 2 and B are on 9th. At Garfield, Highland and 9th are the equivalent of three blocks apart, and further south they are even closer. Only one of these streets needs to be served to cover the entire area. We recommend using 9th because of its speed and the many service-sector jobs lining the street.

Garfield to Circle

In this segment, which includes the Aquatic Center, Routes 4 and B are currently on Garfield and Route 2 is on 9th. (Southbound Route 4 actually enters Highland at Spruce, a block south of Garfield, creating a confusing mix of stop locations at the Aquatic Center.)

At Circle, Highland is beyond ¼ mile walking distance from 9th, and the Aquatic Center there is a major destination. For this reason, proposed Route 9 would use Highland between Garfield and Circle, but would use 9th south of Circle and north of Highland. This “crook” in Route 9 is not optimal; straight routes are always better. In this case,

however, the design allows us to serve the Aquatic Center, remain within walking distance of all destinations along 9th, and avoid operation on minor streets.

Circle to Hospital area

In this segment, Route 4 is currently northbound on Highland/Satinwood, and southbound on 9th. Route B is two-way on Highland/Satinwood. Route 7 is also southbound on 9th, but goes into town by a much longer route. The one-way splits in this area produce a very confusing service pattern in which the stop you need to go to depends on what time in the hour it is, similar to the 9th-11th problem south of Buchanan.

The proposed system removes all this complexity. Proposed Route 9 would run two-way on 9th from Circle to Elks, then loop the medical area at the end of its trip. Service on Satinwood would be provided by Route 8. The only deleted segment is Highland between Circle and Walnut, but all of this area is within walking distance of service on either Walnut or Circle.

Overall Impact

No net loss in ridership should result from these changes, despite the reduction of 1600 annual revenue hours. A ridership gain is possible due to the streamlined and simplified service, but we conservatively recommend predicting no ridership change. Productivity can be expected to increase slightly as existing riders are served more efficiently.

Localized Impacts

Although many existing passengers would be routed in slightly different ways, the proposed network does not eliminate service to anyone. Many specific route segments and stops would no longer be served, but all are still within ¼ mile of service.

However, all-day service is replaced by peak-hour service in the following low-ridership areas:

- **5th Street, Monroe to Buchanan**

  The only significant ridership on this segment that is not within walking distance of Monroe is at Fillmore, some of which is probably related to the Linn-Benton Community College campus. The campus will be readily accessible from the proposed two-way 30-minute service on 9th Street.

- **35th Street, Jefferson to Harrison**
- **Harrison, 35th to 53rd**
- **53rd, Harrison to West Hills**

  These segments of Route A suffer from the enormity of the route's one-way loop, which makes all trips circuitous in one direction or another. They are also largely undeveloped. There are no destinations at all on Harrison between 35th

and 53rd. The main reasons for covering these segments are the pocket of housing around 53rd & Harrison and the senior housing complex at 35th & Harrison. The senior complex also has service on Harrison but during the last service redesign residents strenuously objected to walking to the stop there. The proposal reduces service to five trips a day, three in the morning and two in the afternoon. At other times of day, the senior housing complex would still be served via stops on Harrison Street.

Conclusion

The tradeoff is simple:

- **An Easy Solution with Some Ridership Loss.** The Saturday Reduction scenario is very easy to understand and to implement. It has a narrow impact, but totally eliminates Saturday service to some riders. It will cause a ridership loss, but a productivity gain.
- **A More Complex and Controversial Solution with No Net Ridership Loss.** The Service Redesign Scenario attacks inefficiencies in the existing system structure and actually improves service while reducing hours. Like any redesign, it is a substantive change, especially in the Northeast area, and it requires more effort to go through the public comment process to refine and implement it. But if the goal is to retain ridership and continue to grow it, the best solution will begin with this scenario.