

Safe Routes to School Technical Assistance Report Caldwell, Idaho

Statement of Need

Caldwell is the fourth largest city in the growing metropolitan area around Boise in southwest Idaho. Caldwell has sidewalks in many of its original neighborhoods but there are also streets without sidewalks, with poorly maintained sidewalks, and/or with little or no room for bike lanes. Many of the city's schools are located in the area where most of the street deficiencies exist. Caldwell has experienced rapid growth in recent years resulting in the annexation of areas in the Vallivue School District. These newest schools are located in neighborhoods that are transitioning from rural to urban and they also may have deficient sidewalks and bike facilities and siting new schools that can easily connect to walkable neighborhoods is a challenging task for Caldwell planners. To answer the challenges the city has a Pathways and Bike Routes Committee and has developed a plan. It will update street standards this year and needs information to support adding Complete Street elements to those standards. The YMCA will be adding a Safe Routes to School coordinator to work in Caldwell this year. To help coordinate safer pedestrian conditions around existing schools, plan future school and park locations and include complete street elements in engineering standards the City of Caldwell has proposed a study that combines aspects of all of these policy areas.

Project Description

In response to a request for technical assistance through the Idaho Transportation Departments' Safe Routes to School program the City of Caldwell identified needs as described above and Idaho Smart Growth was asked to review city policies related to Safe Routes to School. ISG conducted a policy review, bicycle pedestrian count, an assessment of conditions and developed a set of recommendations in relation to the needs for the City of Caldwell. Specifically Idaho Smart Growth (ISG) agreed to:

- A. Assist in providing tools, training volunteers and conducting walking and biking assessments for all schools in the city and develop recommendations to make walking and cycling safer.
- B. Examine existing policies and ordinances for the placement and development of public facilities (schools, parks, etc.). Provide report and presentation on findings.
- C. Assist city's engineering department in identifying Complete Street elements for new street design standards and standard cross sections.

ISG reviewed the City of Caldwell's Comprehensive Plan, zoning code, Pathways and Bike Routes Master Plan, and transportation regulations. We also met with city staff, Pathways and Bike Routes Committee members and school district personnel to better understand the policies examined. A summary of that review is attached as Attachment A. **Idaho Smart Growth also researched and published a Safe Routes to School Policy – Handbook of Best Practices for Idaho (Handbook) attached as Attachment B. The Handbook contains detailed information in support of many of the recommendations below.**

On October 12, 2011 a count of pedestrians and bicyclists was conducted near selected schools in Caldwell by a group of volunteers. Utilizing methodology developed by the National Bicycle & Pedestrian Documentation Project¹ ISG selected the count locations and a total of 1013 pedestrians and bicyclists were counted at 10 sites. This volunteer effort was a partnership with the school district and city personnel, Idaho smart Growth provided maps, count sheets, training, and safety vests for volunteers. The counts were tallied for entry into the national database and are attached as Attachment C.

The recommendations were developed in response to the policy review and the counts and condition assessment. They are contained in two sections below, **Policy Recommendations** and **Recommended Walking and Biking Improvements**. The first section responds to the findings of the policy review and is organized by policy area. The second section responds to the findings at the count locations and in meetings with the city and school district staff to recommend improvements at specific locations near schools.

¹ National Bicycle & Pedestrian Documentation Project, <http://bikepeddocumentation.org/>

Policy Recommendations

Mixed Use Development

1. Develop Mixed Use Zone(s) for neighborhood activity centers, implement cooperatively or with overlay. Mixed use is recognized repeatedly in the Comprehensive Plan of the City of Caldwell as a beneficial strategy to strengthen sense of community, improve community health, provide for more convenient transportation connections and more. The City of Caldwell currently has a zone for mixed use development specific to downtown that is designed to implement the downtown Framework Master Plan, and Traditional Neighborhood and Highway Corridor zones elsewhere. Mixed use in other areas of the city is encouraged through a Planned Unit Development (PUD) process that is designed to allow creativity in design, density and uses. Caldwell could help to incentivize infill and mixed use by organizing a public process to identify locations for neighborhood activity centers where mixed use would be welcomed and to further define the Traditional Neighborhood and Highway Corridor districts. Utilizing form-based² elements and graphics in further defining the zone(s) can still allow for much of the creativity that the city desires. Adopting those locations in the comprehensive land use map with the further defined zones that permit mixed use would give more certainty to both the city and developers about where and what type of mixed use is desired.

2. Consider permitting multi-family residential in commercial zones and as a Conditional Use in all residential zones.

Multi-family residential can be compatible with most commercial uses and allowing it in by right instead of as a special use would make it easier to implement. The city should further define how residential should be integrated with the commercial using form-based or smart code³ elements as requirements in this zone. The city should consider allowing multi-family in some or all residential districts as a special use would help meet many comprehensive plan goals. In order to protect existing residential from incompatible uses this special permit process should identify under what conditions, how many and at what intensity multi-family might be allowed in each district.

3. Review PUD process, streamline to improve incentives for implementing mixed use.

The use of Planned Unit Developments to incent mixed use opportunities could be strengthened by identifying areas where mixed use is desirable (see #1 above) and streamlining the PUD process in those locations. This streamlining could be for instance; 1) Time – moving those projects to the front of the approval line, 2) Process – make mixed use a permitted use in those locations that have already had a comprehensive public planning process for mixed use at that location, or 3) funding based – utilize the timing of the collection of permit fees, or the relative cost of the fees as an incentive.

School Siting

4. Amend school location standards (10-02-14) to add safe routes to school locational criteria and connectivity requirements, utilize these factors in mapping future schools in Public Facilities plan.

The city already requires school sites to obtain a special permit. The city also shares demographic information upon request with the school districts and strives for schools to be cultural and social centers of neighborhoods and for opportunities to share facilities. The standards used to permit schools looks at the proposed location in relation to roadway classification but does not address other issues such as utilizing the demographic data on a more regular basis to assess the location of the proposed school population and likely growth areas in relation to the site(s), analyzing the likely routes students would use to get to the site(s), looking at current conditions along those routes, or comparing with other sites for these conditions. This review should identify any additional public costs that may be needed to safely serve the site(s), such as sidewalk improvements in existing development and crossing improvements – especially on arterials and collectors. In addition, other infrastructure improvements such as roadway improvements to intersections and access points, sewer or water improvements and access to public transit may be analyzed. Amending the standards to require such a review and utilizing it in accepting likely sites for inclusion in the Public Facilities Plan would help the city and the school districts understand the long term costs the community of

² Form Based Codes Institute <http://www.formbasedcodes.org/>

³ Smart Code Central <http://smartcodecentral.org/>

serving potential sites. A full description of the process that can be utilized to develop these standards can be found in the Handbook.

5. Require safe convenient sidewalk/pathway connections to schools in new development, including PUD.

The city requires pathways to connect to schools in PUDs but is less clear in requiring safe, convenient sidewalk connections. The city should develop a standard for pedestrian access to all school sites that includes maximum distance between connections, access on multiple school frontages, and pathways and mid block crossings where needed to meet these standards. With the current requirements for sidewalks, this would ensure safe access to school sites in new development. These standards should apply to all development including subdivisions.

6. When permitting new schools, require sidewalks or pathways on the school site that offer safe convenient access from the perimeter to the school.

The school permitting process should include a review of the on site circulation of pedestrians and bicyclists to ensure that these users can safely access the building itself from all directions and that the site is designed to minimize conflicts between pedestrians/ bicyclists and cars and buses⁴.

Complete Streets

7. Establish broad community stakeholder group to develop Complete Streets Criteria. Use these criteria to guide review and design of new street sections.

The City asked for a review of its existing policies and practices for street design and pedestrian and bicycle plans and features in relation to Complete Streets⁵, a national movement to ensure that streets are completed for everyone and are designed and operated to enable safe access for all users. The city staff and existing policies are supportive of developing a specific Complete Streets policy and practice, a great starting point. However, the practice (current regulations) and Level of Service (LOS) goals of the city prescribes conditions that favor higher speed travel by automobile. Changing those practices to ensure safe travel by other means will likely be met with some resistance and may mistakenly be seen as anti-car travel. In addition design standards for pedestrian and bicycle facilities are evolving quickly and require careful review. Complete Streets implementation has been most successful using a process that includes a broad stakeholder group, including all transportation users, health providers and the development and business community, to define the policy and goals. To overcome the likely questions and ensure that a policy based in local knowledge and conditions we are recommending that an ad hoc committee be formed and public outreach conducted to develop new policy. Specific changes to consider are listed below. There is a lot of good information available from the National Complete Streets Coalition cited above to guide that process.

a. Review paved width and lane width standards for roadways, consider narrower lane widths.

Narrower roadways are safer for all users, including drivers, by slowing speeds⁶. This doesn't necessarily slow overall travel time if they are accompanied with other measures to improve roadway efficiency or to make sure there are appropriate parallel mobility routes. Narrower lanes are supported by ASSHTO standards and narrowing travel lanes can often aid in adding other roadways features, such as bike lanes, to the existing paved width. New street sections may be narrower overall or may reallocate space for other users, such as for bike lanes. LOS goals should support these standards.

b. Require sidewalks to meet ADA standards, consider wider sidewalks and sidewalk buffer requirements. Restrict utility poles, mailboxes and other impediments in sidewalk clear zone. Adopt narrow curb radii at crosswalk corners to slow traffic and create safer conditions for pedestrians.

A Complete Streets standard strives to serve pedestrians and bicyclists well and not minimally. Currently the city requires 5' wide sidewalks on arterials and collectors and 4' wide on local streets. We observed sidewalks on newer local streets with mailboxes and other impediments within the sidewalk clear zone. There are no city requirements for buffers to separate sidewalks from the paved roadway,

⁴ ITE Technical Committee paper on School Site Planning, Design and Transportation
<http://itd.idaho.gov/SR2S/documents/School%20Site%20Planning.pdf>

⁵ National Complete Streets Coalition www.completestreets.org

⁶ Pedestrian and Bicycle Information Center – Narrower Lane Widths
<http://www.walkinginfo.org/library/details.cfm?id=4348>

although buffers are recognized as an amenity in estate PUDs. Current best practice requires a minimum of 5-6' wide sidewalks where there are buffers and 8-10' sidewalks with no buffers⁷. Americans with Disabilities Act (ADA) requires at least 4.5' of clear sidewalk space and has very specific standards on how to place curb cuts and tactile markers (i.e. truncated domes) at intersections as well as maximums on the cross slope allowed. We observed facilities in Caldwell that don't meet these standards. The committee should review all sidewalk standards and update them to meet best practices on widths and buffers and develop a list of locations where improvements are needed to meet ADA requirements and prioritize those improvements.

A shorter curb radius at corners benefits pedestrians by shortening the intersection crossing distance and slowing the turning vehicles⁸. This can also allow a straighter path through the intersection for pedestrians. In places where there is on-street parking and/or bike lanes the width provided by the parking or bike lane increases the effective turn radius available to motorists⁹. The committee should establish maximum curb radius, accounting for the effective radius provided by on-street parking and/or bike lanes, particularly at corners where high pedestrian use is expected.

c. Develop bicycle facility design standards including when to implement bike lanes and when to implement share use roadways (bicycle boulevards or greenways).

Bicycle standards are changing quickly. Defining where on each roadway you want bicyclists and how the designated bicycle network connects to the destinations bicyclists need to access should be done system wide utilizing bike lanes, bike boulevards, bike routes and shared pathways. The Pathways and Bike Routes Master Plan (Master Plan) provides the basis – it currently utilizes all of those designations, the definitions and standards of each should be reviewed and updated with current best practices. Special attention should be given to how to sign and mark pavement at intersections, with prioritization given to making these improvements at the intersections identified in the Master Plan. For shared use roadways the city should utilize the guidance in the Bicycle Boulevard Planning and Design Guidebook and the National Association of City Transportation Officials Urban Bikeway Design Guide¹⁰. Caldwell has a good system of collector streets and plans for an even more robust system. Today those streets are often designated as local mobility corridors with design features and speeds favoring car travel.

These are the corridors that can provide the network backbone for bicyclists and pedestrians. The committee should review the standards for collectors and for the collectors that are in the Master Plan bicycle network develop new standards that are more supportive of bicycle and pedestrian use.

d. Implement connectivity policies by developing connectivity measurements and requirements.

The plans and policies of the city support a connected street and pathway system that provides good pedestrian access to all destinations. The current regulations don't have any way to measure or require the connectivity objectively. We recommend adopting a connectivity index¹¹ or measurement that would allow staff to require connections based on data rather than negotiating for them.

e. Review bicycle parking requirements in zoning ordinance.

The zoning code (10-02-05[6]) includes very detailed bicycle parking requirements. These could be improved with slight modifications that include requirements for bicycle parking for employees as well as

⁷ Creating Safe Routes to Schools: Sidewalks,

<http://guide.saferoutesinfo.org/engineering/sidewalks.cfm>

Walking Info. Org, When Crossing the Street is Dangerous

<http://www.walkinginfo.org/problems/problems-crossing.cfm>

⁸ Curb Radius Reduction

<http://www.walkinginfo.org/engineering/crossings-curb.cfm>

⁹ FHWA Chapter 8: Pedestrian Crossings

<http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks208.htm> section 8.3

¹⁰ Bicycle Boulevard Planning & Design Guidebook

<http://www.ibpi.usp.pdx.edu/media/BicycleBoulevardGuidebook.pdf> and National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide

<http://nacto.org/cities-for-cycling/design-guide/>

¹¹ Roadway Connectivity – TDM Library at VTPI <http://www.vtpi.org/tdm/tdm116.htm>

business patrons, defining distances from entrances where the parking should be located more clearly, and requiring covered bicycle parking for all residential uses.

- f. Identify best practices for school and other high use crossings such as ladder style cross walk markings, advanced stop bars, appropriate signage, rectangular rapid flashing beacons, curb extensions and other traffic calming features.

Most of the crosswalks in the city are unmarked, a few have painted line crosswalks and fewer still have signs or flashing warning signals. Other than at signalized intersections there are no signalized pedestrian crossings. Speeds are relatively high even on the collector streets for pedestrian and bicycle safety¹². Developing clear standards for pedestrian crossings with a range of improvements based on location will help the city prioritize improvements.

- g. Implement recommendations of the Pathways and Bike Route Master Plan.

The network defined in the Master Plan should receive high priority in the city's transportation expenditures. Improvements that will enable safer pedestrian and bicycle access to the city's schools should receive high priority. The city should work with the school districts to understand the hazard bussing routes and mitigate the safety factors on those routes.

Recommended Walking and Biking Improvements

Counts and Review

Idaho Smart Growth assisted the city and school district in counting the number of pedestrians and bicyclists at key locations near schools. The counts showed significant use where infrastructure is inadequate. We also did on-site assessments of these and other locations and we interviewed the school superintendent about safety issues. We measured roadway/lane widths, where existing widths are noted they were measured on the roadways cited at specific sites and may vary along the length of the roadway. If there are parking or travel lanes alongside a curb the measurements include the curb pan and gutter.

Following are recommendations for improvements based on best practices with references noted. If the city adopts these recommendations for further review and design we also recommend that planning and outreach be done jointly with the Caldwell and Vallivue School District. Design work will need to be completed by the engineers in the Public Works Department or by outside consultants.

1. Paint all school crossings with ladder style crosswalks. Add curb extensions as budget allows, complete the routes to schools.

In general we recommend the use of ladder style crosswalk markings at all crossings on routes to Caldwell schools. On multi-lane roadways we recommend the addition of advance stop bars at these crosswalks. Curb extensions and the narrowing of curb radii should be completed at those crossings as budget allows.¹³ Completion of the sidewalk, pathway and bicycle network to the schools should be given top priority.

2. Narrow travel lanes in keeping with complete streets planning.

Consider travel lanes or 10' and 11' for collectors and arterials. Narrowing travel lanes to the new adopted standards from the Complete Streets process should be completed as roadways are overlaid or repaved.

3. Plan for pedestrians and bicyclists with all roadway and intersection widening, prioritize roadway projects near schools.

The city has plans for improvements including roadway and intersection widening in it transportation needs assessment and priority table. These kinds of roadway improvements can often make it less safe for pedestrians and bicyclists by increasing speeds and roadway widths and pedestrian crossing widths. It can be difficult for bicyclists to navigate through turning cars or make turns themselves at these complex intersections. Careful design can overcome many of these barriers.

¹² Literature Review on Vehicle Travel Speeds and Pedestrian Injuries
<http://www.nhtsa.gov/people/injury/research/pub/hs809012.html>

¹³ Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations; Executive Summary
http://safety.fhwa.dot.gov/ped_bike/docs/cros.pdf

4. Complete pedestrian twice yearly counts on the pathway system and at schools using volunteers.

The counts conducted this last fall show considerable pedestrian and some bike use, even in places where the school district expected it to be minimal. Simply multiplying the users found at school release time, 779, by the number of school days, 180, is equal to 140,000 trips a year, at twice a day it equals 280,000 bike/ped trips year. And we only counted a few sites. The city now has the methodology, experience and knowledge to conduct counts on a regular basis. We believe this information will aid the traffic engineers in understanding how to better serve the many pedestrians and bicyclists in the city. We suggest planning for counts in both the spring and fall with the city finding volunteers to count the pathways and partnering with the school district and the YMCA Safe Routes to School program to complete the counts near the schools.

5. Improve pedestrian crossings on Blaine and Cleveland Boulevards.

Blaine and Cleveland connect downtown to the College of Idaho. This couplet has front on housing with alley loaded garages. The crossings at 12th 16th and 22nd Ave. are striped and signed. It is signed at 35 mph and serves as I-84 business loop through Caldwell. ITD owns and maintains it. The two roadways are configured today with two 12' travel lanes with a center stripe and two 8.5' parking lanes. We did not conduct counts on Blaine and Cleveland at the signed intersections; however, the width and the speed of the two roads create a barrier to accessing Lincoln School, the Freshman Academy the Caldwell School District building and the College of Idaho on foot or by bicycle using these crossings.

We recommend developing a design to improve those three crossings with ladder style crosswalk markings, advance stop bars, adding curb extensions to narrow the crossing distance and decrease the curb radii, adding vertical elements to the designs to slow traffic, and lowering the speed limit to 25-30 mph. We further recommend that the city consider adding pedestrian markings, signage and curb extensions at 20th street. As the Complete Streets committee develops standards for crossings it may find that these crossings may also be appropriate for Rectangular Rapid Flashing Beacons or other driver awareness tools particularly at 12th. There are six distinct intersections at these three crossings, if money cannot be found to complete them all at one time we recommend improving the two intersections at 12th Ave. first then 16th. ITD has indicated a willingness to consider these changes however they have also indicated that the couplet is not currently in their capital improvement plan and that funding would likely have to be found locally.

6. Consider bike lanes on Blaine can Cleveland if pavement width justifies, alternatively consider shared use roadways on Arthur and or Dearborn/other.

In order to add one bike lane to each Blaine and Cleveland lane widths would have to be narrowed to 10' and parking lanes narrowed to 8' or parking would need to be removed from one side of the street. The design team should investigate this solution, but we note the challenge of removing parking from front on housing or narrowing lane widths to that extent on a designated highway route.

The other solution to providing bicycle network connectivity between downtown and the college is to designate parallel roadways as bike boulevards and make needed improvements to support the designation, this is the solution currently adopted in the Master Plan. These improvements are relatively inexpensive¹⁴ and include on-street 'sharrow' markings, street sign bicycle designations, other signage supporting a shared roadway and potentially turning stop signs to make the bike boulevards through streets. The most successful boulevards also have a public awareness campaign. We investigated the connections various routes might provide and there are strengths and weaknesses to each. The plan adopted for implementation should consider the overall network connections.

Arthur St. provides a good connection to downtown and to the existing pathway system there, as identified on the Master Plan. The pathway connection is shown at 12th Ave. We recommend that Arthur St. from 10th Ave to 12th Ave. be striped with bike lanes as well, it is easily wide enough at 49'-52'. A safe crossing at 10th Ave, likely with a flasher or signal, should be added. At the south (College) end of Arthur the Master Plan shows a connection to the College on 21st and continuing south turns left at 22nd using Georgia Ave. to

¹⁴ Bicycle Boulevard Planning & Design Guidebook

<http://www.ibpi.usp.pdx.edu/media/BicycleBoulevardGuidebook.pdf>

National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide

<http://nacto.org/cities-for-cycling/design-guide/>

reach Griffiths Park and the existing pathway there. The plan should be implemented. A safe crossing should be added at 21st Ave. and markings/signage and wayfinding added to Georgia Ave.

On the other side of Cleveland there are a number of choices. Dearborn, which runs by the library, is shown in the Master Plan connecting with a dogleg to 10th Ave., however Dearborn dead ends at the College at a location that has a number of conflicting pedestrian paths and parking lots and the dogleg at the north requires bicyclists to go out of direction. Fillmore St might be considered as another choice, it runs past the Freshman Academy and could connect at 12th Ave. to Grant St. and then 10th Ave, also connecting Lincoln School on the route and utilizing the pedestrian crossing on 10th Ave. at Grant. The library is still easily accessible from this route. On the south (College) end the bike route could continue through the college campus on Fillmore St and Wisconsin Ave., connecting to Oak St and then to the Master Plan designated route on Indiana Ave.

7. Replace flashing pedestrian warning signal on 10th Avenue at Grant with Rectangular Rapid Flashing Beacon (RRFB). Look for other locations that might justify RRFB.

The flashing warning signal that is currently installed is controlled manually at Lincoln School. It is sometimes left on or off accidentally and we are told anecdotally that it is generally ignored by drivers. Rectangular Rapid Flashing Beacons¹⁵ are a user activated signal that increases driver yielding behavior for relatively low cost. In addition ladder style markings should be painted on all four legs of the intersection.

8. Improve pedestrian crossings at key school adjacent locations on 10th Ave. Consider bike lanes on 10th Ave. south of Grant St.

Bicycle pedestrian counts were conducted at school locations on 10th Ave. 107 users were found at the Jefferson Middle Scholl crossing. The 10th Ave. crossing can be made safer for students at Wilson Elementary and Jefferson Middle Schools. Though sidewalks are available on 10th Ave. near Wilson Elementary and Jefferson Middle Schools the roadway width, few safe crossings and speed make crossing difficult. There are currently crossings at 10th Ave. and Linden and in front of Jefferson Middle School. A new crossing should be considered at 10th Ave. and Chaparro St.. Ladder style markings, RRFBs, curb extensions or median islands, reduced curb radii, and more should be considered for design improvements. Strictly enforce school zone travel speed during morning and afternoon school travel times.

There is room on 10th Ave from Amber north to Grant St. to consider continuous on-street bike lanes and restricting parking to one side of the street. The pavement width measured from 39.5 to 42' in width between Amber and Grant St. Travel lanes are 12', 14' and 13', parking lanes are mostly on the west side and are 7.5' to 8' and much of the section from Linden to Logan has a 6' bike lane/route. The housing along 10th Ave generally has a sideyard facing 10th Ave. and the Master Plan shows a bike route for some, but not all of 10th Ave. If travel lanes are narrowed two 5' bike lanes and one 7.5' parking lane can be striped in the existing footprint. Where the road widens near the golf course the bike lanes could be widened to 6' and the parking to 8'. This would not replace a lower speed parallel bike route to the east of 10th Ave. but would safely accommodate bicyclists who need to access the many destinations on 10th Ave.

9. Develop a plan for improvements on Montana Ave. that include sidewalks and improved crossings. Improve crosswalks serving Syringa Middle School on Montana and Linden.

The bicycle and pedestrian counts completed at Washington Elementary and Syringa Middle Schools show 56 users at Washington and 217 and 107 users at Syringa on Montana and Linden respectively. The lack of safety improvements at these crossings may be affecting use especially at Washington. Montana Ave. is a lightly improved two lane roadway from Ustick to Linden and lacks sidewalks near the schools. The lack of sidewalks and high speed has prompted the school district to require safety bussing for all students. Improvements on Montana Ave. that include sidewalks and better crossings could potentially save the taxpayers money now spent on bussing students for safety reasons. The school district has built a pathway from Washington Elementary School to Montana adjacent to Alder St. The pathway intersects Montana Ave. at Alder St. At this intersection Montana Ave is a 26' wide pavement with two 12' travel lanes and a fog line on either side. There are no sidewalks on either side.

¹⁵Rectangular Rapid Flashing Beacons guidance
<http://safety.fhwa.dot.gov/intersection/resources/techsum/fhwasa09009/>

We recommend beginning improvements on Montana Ave. by developing a plan and building a sidewalk on the east side of Montana from Alder to Beech Sts. Improve the crosswalk at the pathway on Montana Ave. and Alder St. with a ladder style crosswalk, curb extensions, and appropriate signs or signals. Additionally, though they are local streets, we suggest striping parking on both sides of the street on Alder and Beech Sts. for two blocks east of the school to establish a narrower vehicle travel space. We recognize that the city is waiting for a developer to make the sidewalk improvements along the west side of Montana Ave. north of Alder to Cherry St. We recommend building a sidewalk on that stretch now and developing a mechanism to have development, when it occurs, pay the city back later. Further improvements should be made on Montana Ave. at Willow St. and on Linden St. at Washington Ave. on the crosswalks serving Syringa Middle School. We recommend improving these crosswalks with ladder style crosswalks, curb extensions and or median island refuges, and appropriate signs or signals.

These three sets of improvements, if completed in the near term, would improve safety now while a comprehensive plan and funding is developed for improving the length of Montana Ave. We recommend completing them in the order listed as funding becomes available.

Finally the paved roadway width on Washington Ave. south of Washington School to Spruce St. is 34' to 36' with development only on the east side of the street. We recommend striping a bike lane/pathway on the west side of Washington Ave. from Spruce St. to the school connecting the pathway at Spruce to the school building entrance. When development of the abutting parcel occurs a sidewalk can be established here.

10. Consider a road diet (4 travel lanes to 2 travel lanes and one center turn lane with bike lanes) for Indiana Ave from Cleveland Blvd to Linden and striped and marked bike lanes from Linden to Ustick.

Although colleges and high schools are outside the jurisdiction of Safe Routes to School, we are commenting on recommended changes to Indiana Ave. because of the important destinations along Indiana, including the college, the high school and the YMCA, that are often used by other school students and the importance of looking at the bicycle and pedestrian system as a network. Striped bike lanes would provide a safer alternative on this roadway than shared use lanes.

Road diets¹⁶ are an effective method to increase safety and efficiency for all road users, including motorists, on four lane facilities of all volumes. In addition a road diet increases the productivity of a roadway by helping it safely serve additional modes. Indiana Ave. from Cleveland Blvd. to Linden St. is a four lane section with no parking, it has two 12' and two 14' (including gutter pan) travel lanes for a total of 52' paved width. Traffic volumes measured by COMPASS in 2009 are 2020 vehicles per day, well below the volume that would dictate need for a four lane roadway. This roadway can be converted from four lanes to two lanes and a center turn lane with narrowed travel lanes, two 5' bike lanes, one 7.5' on-street parking on one side of the street in this footprint. The roadway narrows south of Linden at Willow to two 12' travel lanes and two 10' parking lanes for a 44" total. This is still enough width to accommodate two travel lanes, two bike lanes and one parking lane. The roadway widens again near the high school to two 13' travel lanes, one 14' center turn lane and two 8' parking lanes (or a right turn lane in some instances) for 56' total. There is little demand for parking on-street parking on the west, leaving room for two travel lanes, two bike lanes, a center turn lane, and one parking lane and accommodating the right turns. Completing a bicycle lane on Indiana would provide important system connectivity to the bicycle network in Caldwell and enhance safety for all users; pedestrians (with a buffer), bicyclists (with the bike lane) and motorists (by reducing conflicts). We recommend considering this option using a public outreach process to help plan for the changes.

Implementation

Idaho Smart Growth acknowledges that implementing these recommendations will require the city to devote staff time and funding to organize committees, plan and conduct public outreach, and complete design work. We believe that the resulting improvements will be well worth the time, money and effort. We are prepared to continue to assist with this effort if resources can be found to support our assistance.

¹⁶ Road Diets; Fixing the Big Roads
<http://www.walkable.org/assets/downloads/roaddiets.pdf>

Attachment A: Review of City Policies

Caldwell (46,237)

| Mixed Use | | |
|--------------------|-------------------------|--|
| | Policies | <ol style="list-style-type: none"> 1. Policies in many sections of the Comprehensive Plan encourage mixed use development and compact mixed use neighborhoods, i.e. Health and Wellness – 1-1; Encourage mixed use developments, neighborhood commercial uses and infill; Land Use 2; Create a strong sense of community and place through mixed use neighborhoods. 2. Mixed use to be allowed in land use designations through a Planned Unit Development process. |
| | Zoning | <ol style="list-style-type: none"> 1. Mixed Use is a permitted use in city center, Traditional Neighborhood Districts and Highway Commercial. 2. Implemented through a Planned Unit Development process elsewhere. |
| School Siting | | |
| | Policies | <ol style="list-style-type: none"> 1. Support for schools as the social and cultural centers of neighborhoods. 2. Encourages shared use of school facilities. 3. Collector streets identified as preferred location for safe access and improved connectivity. 4. Strive for better connectivity, safer access and pedestrian friendly transportation options to schools. 5. Provide school district officials with demographic information to assist in analyzing growth. ★BP 6. Adopted Public Facilities plan includes schools. |
| | Zoning | <ol style="list-style-type: none"> 1. Special use in all districts. 2. Development standards for new schools but none related to access. (10-02-14) |
| Sidewalks | | |
| | Policies | <ol style="list-style-type: none"> 1. Support for street design standards that balance needs and support pedestrian circulation. 2. Pathways and Bike Route Master Plan pathways provide continuity to the sidewalk system. 3. Develop a pathway system that connects recreational sites with neighborhoods and services. 4. Encourage detached sidewalks and tree-lined street in residential estate neighborhoods. |
| | Plans -Maps | <ol style="list-style-type: none"> 1. Establishing a continuous network of sidewalks identified as a high priority need in Comprehensive Plan. 2. Network with Pathways and Bike Route Master Plan paths |
| | Development Regulations | <ol style="list-style-type: none"> 1. Major pathways required in all residential subdivisions as part of the landscaping code. (10-07-11) 2. Detached sidewalk an amenity in Planned Unit Development code. (10-03-07) |
| | Design requirements | <ol style="list-style-type: none"> 1. 5', vertical curb on arterials/collectors, 4', rolled curbs on local roadways and in industrial areas. 2. 8' minimum width on major pathways. 3. PUD standards require 5' micro pathways connections to school bus pick up locations, but not schools. |
| Bicycle Facilities | | |
| | Policies | <ol style="list-style-type: none"> 1. Pathways and Bike Route Master Plan, principles include safety, accessibility, continuity and destinations and identifies schools as a popular destination. The plan establishes design standards, corridors that should be completed to create a network and implementation steps. ★BP 2. Require bike lanes on half-mile collector roads and other appropriate locations. 3. Require bicycle parking at new businesses and high density residential. |
| | Plans -Maps | Pathways and Bike Route Master Plan |

Attachment A: Review of City Policies

| | | |
|-----------------------------|-------------------------|--|
| | Development Regulations | <ol style="list-style-type: none"> 1. Major pathways required in all residential subdivisions as part of the landscaping code. (10-07-11) 2. Police Chief to designate bike paths standards induced in plan; no standards for roadways outside plan 3. Detailed bicycle parking for commercial and multi-family residential. |
| | Design requirements | Pathways and Bike Route Master Plan identifies pathway standards. |
| Connectivity | | |
| | Policies | <ol style="list-style-type: none"> 1. Pathways and Bike Route Master Plan includes continuity as a principle for the bike network 2. Priority on sidewalks to connect important community facilities including schools. 3. Provide good interconnectivity, connectivity to adjacent development, discourage cul-de-sacs. 4. Require public street connections with existing streets or identified (future) connections. 5. Encourage safe interconnected bicycle and pedestrian ways in new residential development. |
| | Development Regulations | None |
| | Design requirements | None |
| Pedestrian Crossings | | |
| | Policies | Install traffic control devices, such as pedestrian crosswalks or traffic signals when schools are built. |
| | Design requirements | Traffic Commission determines location and design (09-05-09) |
| Recommendations | | |
| | | <ol style="list-style-type: none"> 8. Develop Mixed Use Zone(s) for neighborhood activity centers, implement cooperatively or with overlay. 9. Consider permitting multi-family residential in commercial zones and ad CU in all residential zones. 10. Review PUD process, streamline to improve incentives for implementing mixed use. 11. Amend school location standards (10-02-14) to add safe routes to school locational criteria and connectivity requirements, utilize these factors in mapping future schools in Public Facilities plan. 12. Require safe convenient sidewalk/pathway connections to schools in new development, including PUD. 13. When permitting new schools, require sidewalks or pathways on the school site that offer safe convenient access from the perimeter to the school 14. Establish broad community stakeholder group to develop Complete Streets Criteria. Use these criteria to guide review and design of new street sections. <ol style="list-style-type: none"> a. Review paved width and lane width standards for roadways, consider narrower lane widths. b. Require sidewalks to meet ADA, consider wider sidewalks, sidewalk buffer requirements and narrower curb radii. c. Develop bicycle facility design standards including when using bike lanes and when using share use roadways (bicycle boulevards or greenways). d. Implement connectivity policies by developing connectivity measurements and requirements. e. Review bicycle parking requirements in zoning ordinance. f. Identify best practices at high use crossings (schools) such as ladder cross walk markings, stop bars, appropriate signage, rectangular rapid flashing beacons, curb extensions and other traffic calming. g. Implement recommendations of the Pathways and Bike Route Master Plan. |

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Safe Routes to School – Handbook of Local Policy Best Practices for Idaho

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This handbook was produced by Idaho Smart Growth with support from the Idaho Transportation Department, Safe Routes to School Program.

Graphics by John Neary

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Safe Routes to School Handbook of Best Practices

Summary

Introduction

In recent decades, in response to a variety of pressures, schools have increasingly been built in locations that are not walkable and many centrally located schools have been closed, as a result today two-thirds of schools are located far from where children live. At the same time, the number of children walking and bicycling to school has shrunk dramatically, fewer than half of all children now meet recommended levels of physical activity, and obesity rates in children and adolescents have more than tripled, with a third of children now overweight or obese.

The Safe Routes to School Program addresses the immediate consequences of this on routes to school and on schools grounds but little has been done to examine and respond to the policies that lead to decisions about how and where to locate schools in the first place and the infrastructure in place to serve them. This handbook begins that examination for local governments and school districts in Idaho. It offers an array of best practices in policy that can help reverse that trend and recommendations for how to use them.

Background

In 2010, Idaho Smart Growth conducted sixteen presentations on promoting policies that support safe routes to schools. The workshops were conducted across the state of Idaho and nearly 200 individuals attended. Each participant was asked to complete a survey about the level of policy support for safe routes to schools within their communities. Responses were received from individuals representing thirty-four cities and three counties. Later 2 more

cities were added. In the fall of 2010, the results of the survey findings were published by Idaho Smart Growth.

An independent review of adopted policies was initiated in late 2010 to verify the participating communities perceptions about safe route policies within their community and to review both policy and development regulation support for safe routes to schools.

Format of this Report

This report summarizes the policies, regulations and practices that support safe routes to schools, identifies best practices and reviews thirty-six Idaho communities' policies. The report is organized around basic principles of land use and pedestrian access that are imperative in creating safe routes to schools and yet are not generally part of school based safe routes programs. The principles are as follows:

Principle #1 – Mixed Uses. Mixed-use development is designed with a variety of land uses in close proximity. Residences are mixed in with schools, parks, community centers and perhaps retail and offices in a compact area through good design. Development of mixed uses near residential neighborhoods creates greater opportunities for those uses to be connected as destinations to the residential development nearby. This also allows schools to be located near both residences and other destinations. When students have nearby destinations and pedestrian networks that provide direct safe connections it increases the probability they will walk and bike. Policy direction for mixed uses should be provided in the community's comprehensive plan and implemented through mixed use zoning or other regulations that permit mixed use development.

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Principle – #2 School Siting. Children are better able to travel safely between home and school, and more likely to walk or bike, when schools are located within community centers and near their residence. Placing other public services, such as parks and libraries, near the residences of the citizens they serve allows all community members to walk and bike to those services. Communities that co-locate or share facilities are likely to find efficiencies that may save taxpayers dollars overall. Policy direction for school siting should be provided in the city's and school districts plans and implemented through zoning regulations. Joint processes for facility planning should be adopted between school districts, cities and affected agencies should analyze the impacts of school location and site size.

Principle #3 – Plans, design and regulations for Sidewalks Bikeways and Crosswalks (Complete Streets). Children that walk or bicycle to school need safe and well-designed facilities between their home and school. A child's journey to school on a bicycle or by foot will likely require crossing a street. Local plans, policies and maps should be developed to provide direction on where non-motorized facilities should be located and how they should be designed to support safe routes to schools. Many situations arise at street crossings that can impact the safety of the crossing for all pedestrians, these concerns should also be addressed within the local plans. Prioritizing the improvement plan for pedestrians and bicycles can be used to fix existing deficiencies, while requirements, design specifications and regulations included in zoning and subdivision ordinances will ensure the implementation of safe routes in new development.

Principle #4 – Connectivity. Connectivity refers to how many connections there are in pathway or roadway networks and the directness of links between connections. A well-connected roadway or pathway network has many short links, numerous intersections (nodes), and minimal dead-ends (cul-de-sacs). As

connectivity increases, travel distances decrease and route options increase, allowing shorter more direct travel between destinations. Connectivity influences the walking and biking routes that children use and highly connected neighborhoods encourage more walking and biking to school due to shorter distances and the ability to choose safer routes. Policy direction for connectivity should be provided in the community's comprehensive plan and implemented through zoning and subdivision regulations that may include minimum standards such as a connectivity index. Existing networks can be measured and missing connections or links identified for improvements.

Community Review and Best Practices

The following sections summarize what was found in the review of the thirty-six communities' Comprehensive Plans and development regulations (zoning and subdivision codes). It is organized under the principles. Best practices are identified and are highlighted where they are found in the cities' plans and regulations. **Appendix B**, is a summary survey of each community reviewed. If not included in your printed copy find it on the Idaho Smart Growth website at: http://www.idahosmartgrowth.org/index.php/resources/resource/best_practices/

How to Use the Best Practices: This document is intended to introduce relevant issues, policies and regulations affecting safe routes to school and describe best practices to address them. The best practices are intended to guide cities and school districts who want to locate schools and other public facilities where there are opportunities to walk and bike safely, to improve walking and biking conditions in their city, to provide for overall community health and to work toward fiscal responsibility. The variation among cities and school districts across Idaho in size, procedures, municipal code, and overall challenges and context is great, and there is no one-size-fits-all solution. Utilize the practices that make sense for your situation in your locale.

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1. Mixed Uses

Existing Policy

Most communities identify a mix of uses as a goal for improving the development patterns within their community. Many communities have analyzed existing and new development areas where mixed use is desirable. (Boise, Chubbuck, Coeur d'Alene, Driggs, Garden City, Hailey, Idaho Falls, Lewiston, McCall, Meridian, Moscow, Pocatello, Sandpoint, Twin Falls) Some have mapped these areas including mixed use designations on the Land Use Map. Some communities' policies, such as Caldwell and Salmon, support mixed use in planned unit developments (PUD's), rather than through specific land use designation. Garden City and Victor identify mixed use through an overlay zoning district. Driggs specifies the types of mixed uses with specific zoning requirements in each.

Mixed use policies can provide improved pedestrian connections within and to mixed use locations, however few of the communities reviewed have adopted policies that recognize the potential benefit of locating schools within mixed use activity areas. Pocatello's Comprehensive Plan provides the best example identifying schools as an integral component of a mixed use area. Boise's new plan also references schools as a component of mixed uses activity centers.

Existing Zoning

Although there is much policy support for mixed use, there is often an additional layer of approval such as a planned unit development (PUD) process or conditional use (CU) application to build mixed use in locations where the policy indicates they are desired. This may result in fewer mixed use projects. For instance, every city reviewed, with the exception of Dalton Garden, has provisions to allow planned unit development, yet only a handful have zones where mixed use is an allowed use as part of a simple subdivision proposal. Cities that have specific mixed use zones adopted into their codes are: Boise, Driggs, Garden City, Lewiston, Meridian,

Middleton, Nampa, Pocatello, and Twin Falls. Several other communities including Boise, Caldwell, Lewiston, and McCall, list

A pedestrian friendly mixed use neighborhood center



mixed use as an allowed use within certain commercial zoning districts, primarily downtown zones.

A peculiar general provision appears in the zoning codes for several cities, such as Rigby and Sandpoint, designating on the zoning map that a school site shall only be used for a school or for single family residential units. The intent appears to protect those sites for their intended purpose, but may hinder to the use of a school facility as a community or recreation center or any other type of joint use that is desirable in a mixed use area.

Best Practices

Encouraging mixed-uses requires policies that identify and support locations geographically where mixed use is desired. These policies

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should be supported in turn by zoning that allows the use as a permitted uses in those places. Specific practices should include:

1. Identify mixed use areas in Comprehensive Plans with policy describing why mixed use is supported in those locations.
 - a. In larger cities identify sub-areas within your city and plan for a mix of uses in each of those sub-areas.
2. Analyze existing school sites in relation to identified mixed use areas and provide for connections between them, analyze potential school sites for inclusion in identified mixed use areas.
3. Update zoning codes to allow mixed use in identified area(s) as a permitted use rather than via a special permit process (i.e. with a PUD or CU).
4. Ensure compatibility with existing development and encourage pedestrian orientation of new development by using design based zoning and setbacks, often called form-based codes.
5. Identify walking sheds (¼ to ½ mile walking distance) and services within those for each residential neighborhood.
6. Adopt tools that make it easier to build or retrofit mixed uses, such as a Specific Area Plan Ordinance.
7. Allow closed/obsolete institutional, warehouse and similar buildings to be adapted for reuse as mixed use.

How to Use the Best Practices: There is support for mixed use in many Comprehensive Plans, however it may be difficult and more expensive to build mix use when it is administered through conditional use permits or planned unit developments. Identifying specifically where your community wants mixed uses and adopting specific zones with standards on design and form that can be administered through a subdivision process may make it more likely that mixed uses will be achieved.

Recommendation: Identify locations for mixed uses and establish zones and standards that permit those uses at the sites identified.

Community Examples of Best Practices

City of **Boise**: Comprehensive Plan direction that neighborhoods are served by a hierarchy of mixed use activity centers including schools. Activity centers for mixed use identified and mapped, in zoning mixed use allowed in downtown and in pedestrian commercial zone, accessory dwelling units are allowed in all residential zones;

City of **Driggs**: Comprehensive Plan supports mixed use. Accessory dwelling units are allowed in all residential zones, there are several variants of mixed use zone with concentrations on commercial, residential, trade, etc., some have administrative approvals after initial approval;

City of **Garden City**: Designations on land use map for mixed use areas and several associated zones including Work-live-create (WLC), Neighborhood commercial node (NCN), and Transit oriented development (TOD) Overlay Districts;

City of **Greenleaf**: accessory dwelling units are allowed in all residential zones;

City of **Idaho Falls**: Comprehensive Plan identifies several zones for mixed use including downtown and along the Snake River greenbelt, have developed an associated zone;

City of **Lewiston**: Comprehensive Plan identifies appropriate mix of uses by neighborhood and corridors; Special zones developed by neighborhood to match policy, in addition mixed use allowed in the downtown;

City of **Pocatello**: Comprehensive Plan includes concept of “New Neighborhoods” that should include a variety of housing types and prices, a mix of residential, commercial and office uses, and convenient access to public facilities such as parks and schools.

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2. School Siting

Existing Policy

The Idaho Local Land Use Planning Act (LLUPA) section; School Facilities and Transportation (Idaho Statutes §67-6508c) requires comprehensive plans to include “An analysis of public school capacity and transportation considerations associated with future development.” Most communities’ plans include a general discussion about school enrollment and capacity of schools to meet future needs, and the comprehensive plan goals on locating schools are relatively strong. However the transportation considerations are often absent. The meaning of the phrase “transportation considerations” is ambiguous, and probably the reason this provision is generally ignored. However this allows (perhaps requires) that a full range of transportation options for access to school facilities should be considered. The communities that provide a comprehensive policy direction for both school location and transportation are: Boise, Chubbuck, Driggs, Kimberly, Meridian, Nampa, and Pocatello.

One of the purposes of LLUPA (§67-6502I) is “To allow local school districts to participate in the community planning and development process so as to address public school needs and impacts on an ongoing basis.” Many communities call for an examination of school siting such as coordinating the planning of future schools sites, making schools community focal points and more. We found little evidence that those goals are being carried out with formal agreements between cities and school districts, through a permitting process or with zoning requirements. Communities that map existing and/or future schools include: Ammon, Boise, Caldwell, Lewiston, Meridian, Moscow, Nampa, Salmon and Twin Falls.

In the absence of collaboration unilateral local decisions determine;

- ◆ Whether older schools or other public buildings are well-maintained and/or renovated,

- ◆ Where new schools or other public services are built,
- ◆ The size of school sites, park sites and other public facilities,
- ◆ School enrollment size or public facility service area,
- ◆ Whether a community co-locates public facilities with schools,
- ◆ Whether the residences of the students and other citizens being served are nearby the site selected,
- ◆ The walking and biking conditions to the site,
- ◆ Whether the site design and layout are convenient for pedestrians and bicyclists.

All of these factors have a significant impact on whether students and community members can walk or bike to a site and on overall tax payer costs to serve a site yet there is often little discussion about community wide impacts and costs. We found no broad school or public facility cost benefit analyses requirements.

Existing Zoning

Of the zoning codes reviewed, schools are either permitted in some but not all zoning districts, subject to a special (conditional) use, or not addressed in the zoning code at all. Kimberly has a special zoning sub-district for schools.

Few communities have any specific standards in their review of a school and none of the codes reviewed contain provisions that establish criteria for review of school location in relation to safe routes to schools. The few specific standards for schools commonly require a site plan review with general criteria. Specific standards for schools have been adopted in the cities of Ammon, Caldwell, Garden City, Hayden, Idaho Falls, Lewiston, Meridian and Nampa. Ammon, Idaho Falls and Nampa have a site plan review requirement with general criteria.

Several cities have location criteria related to the traffic volumes or the functional class of the adjacent streets: Meridian encourages elementary schools to be located in the middle of neighborhoods with access from local streets and middle and high schools should take access of a designated arterial or collector streets. Hayden

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permits schools that are located on an arterial or collector street, but requires a special use permit at other locations. Caldwell requires schools to be located on collectors.

Some communities, including Ammon, Boise, Chubbuck, Hailey require pedestrian and bicycle connections to the school from the surrounding area but there is little regulation of pedestrian and bicycle access to the building once on the site.

Best Practices

The Idaho code sections cited above offer ample opportunities within City Comprehensive Plans to implement best practices on siting schools. The location of future schools and an analysis of school capacity should be examined. Minimum practices should include a map of existing and future school sites, and identification of location criteria for future schools including safe pedestrian access and connections. A census of existing students and forecast of future students in close coordination with the school district's forecasting would augment the analysis and allow a more rigorous examination of proposed school sites and school and community needs related to those sites. A full range of transportation options for access to school facilities should be examined.

To further this analysis and meet these best practices in codes and regulation cities and school districts should work collaboratively to establish a special use permit (or similar process) for schools. Specify conditions to be reviewed, such as those listed below, and criteria for decisions as appropriate in each community. Encourage citizen comment. Administer through a conditional use permit or other accepted special use process. Require **a comparative analysis of all available alternative sites on these criteria:**

1. Analyze community needs, educational needs and opportunities to share facilities. Determine the site size on that analysis, not on arbitrary acreage standards. **Encourage smaller compact campuses.** Include renovating or adding on to existing facilities.

2. Identify current or funded sidewalks and bikeways or bike and pedestrian pathways serving the site(s).
3. Identify current or funded connections to the surrounding neighborhood and resulting choices of safe pedestrian and bicycle routes serving the site(s).
4. Map access points serving the site(s), encourage site access from multiple street frontages.
5. Analyze the streets adjacent to the site(s) for traffic speed and volume and functional class.
6. Identify conflicts between motorists, bicyclists and pedestrians in accessing the site.
7. Map the location of the site(s) in geographical relationship to the students residing in their service area. Determine the percentage of children attending the site(s) that will be able to walk or bike safely to the site, encourage site(s) that provide walking and biking access to the highest percentage of students within the proposed boundary.
8. Determine the capacity of existing infrastructure to serve the site, such as roadways, sewer, water, broadband, and more, ensure that it is sufficient.
9. Identify opportunities to share facilities, such as parks and libraries.
10. Determine the health impacts of the site(s) location.
11. Consider equity in providing high quality facilities to students of all backgrounds proportionately.
12. Communities that have Safe Routes to School Program should incorporate the data and lessons learned from those programs into the criteria for review of future school sites.

Further criteria should be examined regarding the design of the site itself during the permitting process:

1. Require direct, safe and convenient pedestrian and bicyclist access from all frontages. Where multiple street frontages are not possible require multiple pedestrian and bike pathway

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connections to the site to shorten distance on walking and biking routes.

2. Require a safe gathering place for those on foot once you are on the site.
3. Require a site design that separates car and bus drop off areas away from pedestrians and bicyclists.

A school integrated into the neighborhood with a safe gathering place



Future Acquisitions Map: An under-utilized provision in state statutes that could be used to support coordinating land use with school siting is the ability to adopt a future acquisitions map. (Idaho Statutes §67-6517) This is an optional provision, but the map can include school sites. If such a plan is adopted, it suspends the time of review on any permit for sites identified on the map. Mapping of sites that meet the criteria above could provide incentive to utilize the criteria above to coordinate land use, infrastructure improvements (pathways and sidewalks) and school sites.

Examine transportation conditions: Cities may expand the analysis of “transportation considerations” related to schools as required by LLUPA within Comprehensive Plans with the following:

1. Incorporate school district transportation plans into the Comprehensive Plan. Include a map of safety bus routes required for students within 1½-mile whose route is unsafe.
2. Analyze the quality of the walking and biking facilities within a 1½-mile walking distance to each school and conditions near school bus stops and other facilities used by students.
3. Develop strategies to improve and create safe routes to schools with specific action steps (i.e. include in school district or city Capital Improvement Plan) to rectify unsafe conditions found.
4. Prioritize actions that eliminate safety bus routes.
5. Develop strategies and action steps to prevent unsafe conditions in future new development and new school siting.

Idaho Code §33-1501 provides for bussing of children who live further than 1½-miles from their school. “Safety bus routes” are to be provided for those who would experience unsafe walking conditions within the 1½-mile area. In addition to the criteria above cities and school districts could consider analyzing the cost of establishing and maintaining safe walking and biking routes within 1½-miles of an existing or proposed school site compared to an analysis of bussing costs over time where conditions are unsafe. This would allow decision makers to appropriate funds for infrastructure improvements when it makes fiscal sense to minimize the need for and the cost of “safety bus routes.”

With the exception of the safety bussing analysis all of these criteria can also be used to compare site(s) for other public facilities such as parks, libraries and community centers.

How to Use the Best Practices: It has not been common practice for cities and school districts to engage in long-term coordinated planning regarding schools and other public facilities. There are a variety of ways and levels of commitment for cities and school districts to collaborate. Many local governments and school districts have found it useful to develop written agreements detailing roles and responsibilities in coordinated planning. Coordinated planning

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can occur at various points along a continuum, from occasional consultation, to regular meetings and memoranda of understanding, to institutionalized intergovernmental collaboration. City Councils or School Boards may wish to adopt the best practices as policies or as a resolution. Alternatively, they can be adopted as administrative regulations or as internal policies. They can also serve as a jumping off point for more specific policies and procedures that set out further implementation details such as in zoning codes.

Recommendation: To increase collaboration at a minimum each both the city and school district(s) serving it should adopt a **Resolution** outlining goals and develop a collaborative joint **Memorandum of Understanding (MOU)** detailing actions to implement those goals. Internally each entity should examine the most effective way to institutionalize their participation and to document and monitor achievements toward goal outcomes.

Community Examples of Best Practices

*There are many examples of good Comprehensive Plan policy direction on siting schools. **There are few examples of zoning, regulation, data analysis or cooperative agreements as outlined in the best practices above to implement those policies.** In order for these Comprehensive Plan policies to be effective there will need to be better implementation of their direction.*

City of **Ammon**: Map existing and proposed school sites;

City of **Boise**: Comprehensive Plan direction to monitor the use of alternative transportation by school students and goals that schools should be centrally located within neighborhoods to allow for bike and pedestrian access and co-located with parks where feasible;

City of **Chubbuck**: Chapter 13 of Comprehensive Plan devoted to school siting and transportation emphasizing neighborhood schools, and safe walking and biking infrastructure;

City of **Coeur d'Alene**: Comprehensive Plan objective for schools to be located within 5-10 minute walk to the children it serves;

City of **Greenleaf**: Comprehensive Plan calls for coordination on siting schools and sharing facilities, Council liaison to schools;

City of **Hailey**: Comprehensive Plan action step to define a percentage of population within a walking distance of school;

City of **Meridian**: Draft Comprehensive Plan action item to work with district and transportation agencies to map safe routes to schools. Location criteria in code for elementary schools to be located within the center of neighborhoods with access encouraged from local streets;

City of **Moscow**: Comprehensive Plan analyzes existing walking and biking conditions related to school locations and identifies improvements; (This is a strong example for all communities.)

City of **Nampa**: Comprehensive Plan calls for schools that are well located as focal point of neighborhood, with safe access from existing and new residential areas and to identify future school sites prior to development;

City of **Pocatello**: Comprehensive Plan envisions new neighborhoods to include needed services (schools), calls for safe access to schools with minimal busing and to analyze pedestrian and bicycle access to schools;

City of **Salmon**: Comprehensive Plan to analyze routes to school and develop a Safe Routes to School Plan;

City of **Sandpoint**: Comprehensive Plan policy to partner with school district to use schools as community centers;

City of **Twin Falls**: Comprehensive Plan has map of school sites;

City of **Victor**: Comprehensive Plan calls for sharing facilities between school district and city and for support of education by offering assistance in planning for educational facilities.

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Complete Streets

Many streets and roads built over the last 50 years are only safe and comfortable for travel by motor vehicle. They have wide travel lanes that encourage higher speeds, few sidewalks, bike lanes and connections and poorly marked and dangerous pedestrian crossings. The maintenance and rebuilding of these roads provides an opportunity to design and implement “complete streets” which serve the needs of all transportation users including pedestrians, bicyclists, people with disabilities, transit riders, automobile users, freight haulers and citizens of all ages. Such a street system would provide a seamless network of driving, on-street walking, transit and bicycling facilities, and trails connecting schools, homes, shopping, employment centers, recreation areas and other destinations. Complete Streets include good sidewalks, bike facilities, connectivity and pedestrian crossings as described in the sections below.

3. Sidewalks

Existing Policy

The majority of locales reviewed have sidewalk policies and requirements. Many use some but not all best practices. Policies for sidewalks in the communities reviewed ranged from nothing to specific direction for sidewalk safety and access to schools. Most communities identify the need to generally improve their sidewalk environment, and to require sidewalks in new developments. Fewer communities provide guidance on the need for safe and accessible sidewalks to schools. Examples of communities that do provide guidance include: Boise, Idaho Falls, Kimberly, McCall, Meridian, Moscow, Nampa, and Salmon.

Very few places look at sidewalks as a network, analyze the quality and completeness of the network related to the ability to reach destinations on foot, or collect data such as counting users. Only two, Boise/Meridian (through ACHD) and Moscow, prioritize improvements based on a network analysis. The cities of Moscow, Salmon, and Twin Falls have policies that set a priority on sidewalk improvements to schools over other sidewalk needs.

Existing Zoning/Regulation

Sidewalks are regulated for most locales reviewed in two areas.

Development Requirements: Nearly all of the codes reviewed require sidewalks as an improvement for subdivision and/or new development. Few of the cities have special provisions for sidewalks or pedestrian pathways near schools, only Sandpoint requires sidewalks when there is improvement to a single parcel or lot.

Design requirements: The design requirements focus on the width of the sidewalk and on accessibility standards based on the strict federal requirements in the Americans with Disabilities Act (ADA). There are variations in width for sidewalks that are attached or detached from the curb. The most common width requirement was five feet for attached and four feet for detached sidewalks. In some zoning codes, the design of the sidewalk is left to the discretion of the city engineer.

Only a few places specify sidewalk standards near schools. Ammon has explicit reference to special design requirements for sidewalks that directly serve schools. The city requires a five foot minimum width, but “may be required to be wider near schools.” Caldwell requires five foot wide asphalt paved pathways connecting the residential areas to school bus pick up locations, but this requirement only applies within planned unit developments (PUDs). Hailey’s proposed Complete Streets ordinance requires a range of sidewalk widths depending on the functional classification of street, but with a minimum five foot walking space on school routes.

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Best Practices

Note: The standards for pedestrian and bicycle facilities are evolving quickly. The references cited here are the latest available, but may change more quickly than other transportation guidance.

Sidewalks form the backbone of the pedestrian transportation network. Sidewalk installation and the linking of pedestrian routes to destinations and major corridors should always be a priority. The decision to install sidewalks should not be optional. "Sidewalks should be built and maintained in all urban areas, along (non-Interstate) public highway rights-of-way, in commercial areas where the public is invited, and between all commercial transportation stops and public areas" (Institute of Transportation Engineers, Technical Council Committee 5A-5, 1998).

Policy Development Best Practices:

1. Adopt a Complete Streets policy or comparable standards.
2. Require sidewalks in all new and renovated development.
3. Develop and implement a pedestrian master plan. Streets that do not have sidewalks, particularly on routes to schools, should be identified and assessed for improvements. Incorporate the Safe Routes to Schools program principles, focus on inventories of existing sidewalks within 1½ miles of schools and prioritize sidewalk improvements in those areas.
4. Develop a traffic management (traffic calming) plan to slow traffic and enhance pedestrian safety, especially near schools.
5. Conduct counts of pedestrians and use in decision-making.

Design/Maintenance Best Practices:

1. Adopt pedestrian friendly design standards listed below:
 - a. Sidewalks should have a level, hard surface and be separated from motor vehicle traffic by a vertical curb with a buffer. Concrete is the preferred sidewalk material in urban areas, other construction materials and curb treatment may be acceptable, especially in rural areas.

- b. Require a minimum sidewalk width of 5' - 6' where there is a buffer between the sidewalk and road, or 8' - 10' wide on busier roadways in areas without a buffer.

Well-protected Pedestrian zone



- Consider enhanced requirements where a high number of users are expected – i.e. near schools. **Note:** The sidewalk is for pedestrians and should be clear of all obstructions such as mail boxes, utility poles, etc.
- c. Landscaping and trees are preferred in the buffer area as they provide shade/temperature control. Street furniture, or on-street buffers of parked cars and/or bike lanes are acceptable in the buffer area.
 - d. Curb ramps should be required and should meet latest ADA design standards.
 - e. Require a level sidewalk surface with minimal cross slope where sidewalks cross driveways.
 - f. Require short radii curbs at intersections to shorten crossing distances for pedestrians and slow turning vehicles. See more on this topic in pedestrian crossing section, page 19.
2. Sidewalk conditions should be monitored and needed repairs made by the appropriate agency or owner of property.
 3. Sidewalks should be required to be cleared of snow, debris and intrusions of plant material.

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How to Use the Best Practices: Sidewalks are required in new development in most places, however adopted standards may be out of date. There is little data gathered to help prioritize improvements. Retrofitting or improving sidewalks in the existing developed areas is a challenge to budgets.

Recommendation: Make sure that your sidewalk standards, especially width and buffers, are up to date. Gather data, for instance by doing counts of pedestrians and bicyclists, and assessing the condition and design of the infrastructure. Use that information to prioritize improvement plans.

Community Examples of Best Practices

Collaboration between the **Ada County Highway District (ACHD)** and the **school districts** it serves: To prioritize improvements for safe routes projects that eliminate the need for safety bussing; *

City of **Boise:** Zoning code provisions that require paths to connect to schools where needed for connectivity;

City of **Caldwell:** Has a Pathways and Bike Routes Master Plan, puts a priority on sidewalk and pathway connections to important community facilities including schools;

City of **Chubbuck:** Requires sidewalk connections with schools;

City of **Hailey:** 6' minimum width, required in all new construction along entire length of property, to provide pedestrian connections to any existing sidewalks adjacent to the site, and to facilitate future pedestrian connections;

City of **Kimberly:** The Comprehensive Plan Schools component has a very succinct and powerful statement of intent for pedestrian access to schools, that facilities are safe and have good access, particularly pedestrian access; and that schools be the hub for the bike/walk path;

City of **Lewiston:** Policy that pedestrian ways may be required for circulation, or access to schools, playgrounds, shopping centers, transportation, and other community facilities;

City of **McCall:** Comprehensive plan vision of “Green Networks” implemented through a bicycle Pedestrian Master Plan with trails, sidewalks, pathways, schools, civic spaces and parks located;

City of **Meridian:** An action item in the proposed, but not yet adopted, comprehensive plan to work with the school district and transportation agencies to map safe routes to schools. The Meridian Pathway Master Plan contains many exemplary planning and design features including network connectivity, design alternatives for varying conditions and detailed safe crossing standards.;

City of **Moscow:** Comprehensive Plan goal that all transportation systems enable safe access and promote alternative mode use for all modes of mobility, including pedestrians, bicyclists, motorists and public transit users of all ages and abilities. Have set a priority for sidewalk installation/improvement on key routes to schools;

City of **Nampa:** Comprehensive Plan general objective to promote walking as the mode of choice for short trips by giving priority to completion of the pedestrian network that serves special areas, neighborhoods, shopping, schools, and parks;

City of **Pocatello:** Comprehensive Plan goal to expand pedestrian, bicycle and transit facilities to provide transportation alternatives and promote an environment that is inviting for pedestrians, bicyclists and transit riders;

City of **Salmon:** Sidewalk deficiencies and construction schedule for sidewalk improvements outlined with priority for access to schools in the 2004 Transportation Plan;

City of **Twin Falls:** Comprehensive Plan implementation measure to complete a sidewalk assessment that identifies areas where sidewalks are incomplete. Sidewalk development and repair in residential areas, and complete safe routes to schools, recreation areas, and city destinations are given priority.

**The Ada County Highway District serves as the streets department for the reviewed cities of Boise and Meridian*

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Narrower Lane Widths?

*Competition for space in the roadway right-of-way is fierce. One way to find space for bicycles and pedestrians is to narrow vehicle lanes. The common accepted standard for lanes is 12 feet, often this is presented as an American Association of State Highway and Transportation Officials (AASHTO) standard. In fact the AASHTO Green Book is a guide and states that for rural and urban **arterials** lane widths may vary from 10 to 12 feet (Lanes on collector and local roads can be as narrow as 9 feet). It goes on to say that 12-foot lanes should be used where practical on higher speed, free flowing, principal arterials. However, “under interrupted-flow conditions (**roads with signals**) operating at low speeds (**45 mph or less**) **narrower lane widths** are normally quite adequate and **have some advantages**” (emphasis added). Further investigation shows that in general safety and capacity are not adversely impacted by reducing lanes widths to 10 feet and can be improved in some conditions for instance by slowing traffic near pedestrians. In addition narrower lane widths reduce costs with smaller rights-of-way, reduced construction costs and reduced maintenance costs; a critical issue in times of shrinking budgets.*

4. Bicycle Facilities

Existing Policy

Almost universally, bicycle facilities are identified as an important community asset. Most plans identify a need to better plan or improve existing systems and facilities. Yet bicycle facilities are primarily planned for as a recreational pursuit and not as a means of transportation. There are a few notable examples, such as in Boise/Meridian (ACHD), of planning for bicycles for transportation. Donnelly plans to integrate bicycle facilities into their roadway system. Sandpoint has a policy to improve bicycle use as a viable form of transportation. Some communities’ plans link paths with

important community facilities, including schools. Examples of this include Caldwell, Coeur d’Alene, Hailey, Idaho Falls, McCall, Meridian, Ponderay, and Victor.

Many communities have existing bikeway plans. Examples include: Caldwell, Hailey, McCall, Boise/Meridian – ACHD, Donnelly, and Lewiston. However, even where there are adopted bicycle plans based on transportation needs they are generally recognized as a separate plan and rarely incorporated directly into the transportation plan or comprehensive plan, and implementation steps are not clear. There are some exceptions. Hayden has included bicycle planning and classifications of facilities in their Transportation Strategic Plan, and Boise/Meridian, Lewiston, Moscow, Nampa and Sandpoint have policies to reference bicycle plans in the larger plan.

Existing Development Regulations

Requirements for serving bicyclists at the time of development are generally lacking. Boise requires shared use paths to connect to schools. Caldwell leaves the requirements up to the discretion of the Police Chief based on their Bike Route Master Plan. Lewiston also has a discretionary provision based on the City Engineer’s recommendation, but specifically tied to school access. Meridian requires bike lanes on all collector streets, and encourages bikeways in all subdivision. Codes for the cities of Chubbuck and Dalton Garden require a path on both sides of the street. Nearly half of the cities reviewed require bike parking with commercial development.

Existing Design Requirements

Few communities have specific design standards for bike lanes or other bicycle facilities included in their development codes. Exceptions include Donnelly which calls for five-foot bike lanes’ and 10’ separated pathways. McCall requires 15’ of right of way and 10’ of paved surface for bike lanes. McCall and Hailey’s plans integrate bicycle facilities with important community destinations.

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Most rely on other published standards or ones suggested in their master plan. For example, Boise and Meridian rely on ACHD standards and national publications such as the AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities.

Existing Maps

Many communities have policy intent to map sidewalks and bicycle routes integrated with other pedestrian systems. Ammon, Boise, Caldwell, Idaho Falls, McCall, Meridian, Moscow, Salmon and Twin Falls all have a map included in their comprehensive plans. Most maps are integrated with trails and pathways. Ammon and Idaho Falls have incorporated a map of the regional bicycle and pedestrian system, Boise and Meridian reference the county-wide bike plan map produced by ACHD. Ketchum has a map of sidewalk deficiencies, but only in the community core.

Best Practices

Note: *The standards for pedestrian and bicycle facilities are evolving quickly. The references cited here are the latest available, but may change more quickly than other transportation guidance.*

A safe and successful bike network has a clear commitment to bicycles as a mode of transportation. This should be reflected in your vision statement, in all transportation plans and policies and acted upon with implementation strategies. While recreation is an important need, accommodations for recreational bicyclists are not adequate to serve the needs of transportation users.

Policy Development Best Practices: Complete Streets Policies are an accepted best approach to incorporate bicyclists and pedestrians safely into your transportation system. A policy should require facilities for bicyclists and pedestrians on all roadways and only allow exceptions that meet defined criteria. Absent a Complete Streets policy, bicyclists should be recognized as valid transportation users and accommodated on all transportation

facilities. Utilize Safe Routes to School principles to prioritize improvements on routes to schools and bike parking at schools. Conduct counts of bicyclists and use in decision-making.

Plan and Mapping Best Practices:

1. Bicycle and pedestrian plans should be developed as part of a comprehensive, multi-modal transportation plan.
2. Plan to provide the highest level of connectivity for bikes with the lowest level of risk.
3. Identify where you prefer cyclists to ride.
4. Identify how you will provide an efficient safe bike network of corridors that serve probable destinations including all schools.
5. Document and map a design strategy on each corridor identified; creating certainty in the expectations of planners, engineers and users as projects arise.
6. Identify how bikes will cross significant barriers, i.e. waterways, arterials, freeways, railroads. (If ignored they will be forced to join regular traffic without accommodations.)

Design Best Practices: Identify the type of corridor and match appropriate bike facilities with that type in context with cars and pedestrians. There are four basic corridor types for bicycles:

- ◆ **Bike Lane** – on street
- ◆ **Bike Boulevard** – on street
- ◆ **Bike Route** – on street
- ◆ **Shared Pathway** – off street (shared with pedestrians)

Bike Lanes: Dedicated lanes striped on the roadway right-of-way; should be 5' wide, wider on higher speed corridors and where there is on-street parking. Can be separated from car travel lanes with curbs, landscaping, medians, etc., where safety is a concern. Bike lanes are the most common approach for creating a bike network.

Application: Applied more often on busier streets such as arterials and collectors where traffic volumes are higher and providing bicyclist with their own lane is key for safety.

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Intersections: Design should address how bike lanes will continue through the intersection and make various turn movements, i.e. bike lanes should move to the left of right turn only vehicle lanes, space should be provided for bicyclists to move safely left where left turns are likely.

Tools:

1. Striping
2. Curbs/landscaping/medians;
3. Signs; remind motorists to watch for cyclists, indicate who has right-of-way.

Newer practices for bicyclists include:

1. Bicycle boxes' painted on the street ahead vehicles, for bicyclists to move through the intersection first;
2. Bicycle signals provide a green light for bikes seconds before cars to allow bikes to clear the intersection;
3. Contra-flow bike lanes provide bike connectivity on one-way streets, separate with curb where possible.

Bike Boulevards: Cyclists are emphasized over cars on these shared roads – cars share the road with bikes – this is the most effective way to provide a large, well-connected network for cyclists.

Application: On less busy roads with lower speeds and volume, mostly local streets but sometimes collectors.

Tools:

1. Stop cross traffic, usually with stop signs;
2. A slow design speed, 20–25 mph use narrow travel lanes, speed bumps, tables, median islands or other engineered features that slow traffic;
3. Mark the roadway with sharrows or other markings;
4. Use signs to indicate it is a shared roadway.

Bike lane marking



Use Sharrows to mark shared roadways

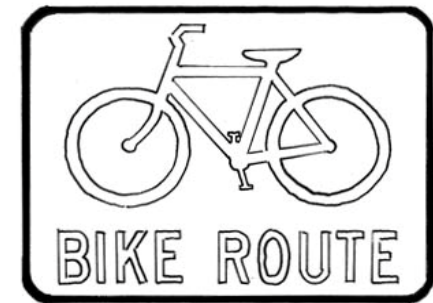
Bike Routes: Routes designated for bicyclists, identified with signs or on-street markings. Marking routes with maps is not adequate.

Application: A mix of roadway types and paths. Identify the safest most direct route for cyclists designed to avoid higher volume roadways where possible.

Tools:

1. Signs identify the bicycle route especially at intersections.
2. Sharrows are markings on the pavement to indicate to motorists that they are on a bike route and remind them they are sharing the road with cyclists.

Use signs to mark bike routes



Shared Pathways:

Physically separated from the roadway and shared with pedestrians. The minimum paved width is 10 ft; wider is desirable where high use is expected. Should connect to other facilities and not just end leaving users stranded. Sidewalks should never be designated as pathways.

Application: Where right of way exists that provides a more direct or safer route for pedestrians and bicyclists. Should:

1. Be physically separated from motor vehicle traffic;
2. Have well-defined origin and destination.

Tools:

1. Way finding signs at both ends and at intersections;
2. Middle stripe if two directional;
3. Appropriate crossing treatments at intersections with roadways.

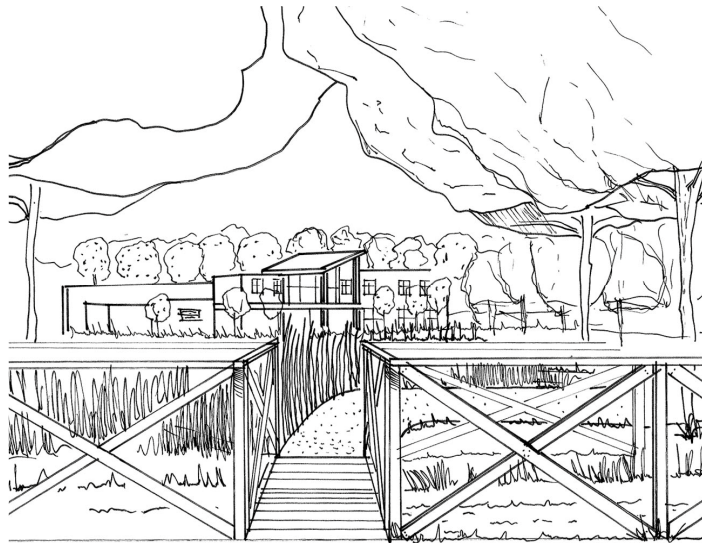
Safety Considerations: Should not be located immediately adjacent to a roadway because of conflicts at intersections, with driveways and with other roads resulting in bicycle/motor vehicle collisions. Studies show that such parallel pathways are approximately twice as dangerous for bicyclists as riding in traffic with motor vehicles.

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More Best Practices:

1. **Signs and Roadway Markings:** Clear signage and roadway markings are critical, especially on networks off main roads and at intersections. Signage should provide directional information and details such as distance in miles or time. Road marking include lanes through intersections sharrows and bike symbols.

Safe pathway connection between a neighborhood and its school



2. **Bike Parking:** Bicyclists need a place to park at their destinations. Parking should be visible and easily accessible, use best current designs, and parking should be covered at residences and where climate or precipitation dictates. Bicycle parking needs should be considered with land use applications including at schools, parks commercial areas and in multi-family residential.
3. **Maintenance:** Bike facilities should be regularly maintained including sweeping to keep roads, lanes and paths clear of debris and snow. Re-stripe and resurface as needed.

4. **Lighting:** Roadway lighting should allow drivers to be able to see cyclists. Lighting is needed on shared use paths for safety and to avoid user conflicts.
5. **Bicycle lights:** Cyclists should be required to have headlights and taillights after dusk.
6. **Education:** Motorists and bicyclists should be educated about safely sharing roadways. This can be done utilizing Safe Routes to School programs and driver education courses.
7. **Enforcement:** Laws promoting safe behavior should be enacted and enforced for both motorists and bicyclists. Law enforcement can use warning signs to help educate both motorists and cyclists when new facilities are developed.

How to Use the Best Practices: Bicycle standards are quickly evolving, planning for bicycles is often separated from the transportation plan. Priorities and expectations can be unclear.

Recommendation: Keep up to date with latest bicycle standards. Integrate bicycle planning with the adopted transportation plan, and any capital improvement plans or work plan and budget. Create clear expectations of how bicycle planning will be implemented.

Community Examples of Best Practices

City of **Boise:** Paths required to connect to schools where other good bicycle connections are absent;

City of **Caldwell:** Pathways and Bike Route Master Plan, principles include safety, accessibility, continuity and destinations and identifies schools as a popular destination. The plan establishes design standards, corridors that should be completed to create a network and implementation steps;

City of **Coeur d'Alene:** Adopted Complete Streets Policy to serve all users within the overall street network to be implemented through new construction and reconstruction with strong process to discourage exceptions;

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City of **Donnelly**: Policy to develop pedestrian, bicycle and transit needs in transportation plan;

City of **Hailey**: Bicycle transportation included in Transportation Master Plan, City has draft Complete Streets policy and adopted Bike Rack standards;

City of **Idaho Falls**: Comprehensive Plan policy, bikeways should tie residential neighborhoods to schools, shopping, and employment;

City of **Lewiston**: Comprehensive Plan policy to encourage pathway linkages to schools, parks, shopping and between neighborhoods;

City of **McCall**: Comprehensive plan vision of “Green Networks” implemented through a bicycle Pedestrian Master Plan with trails, sidewalks, pathways, schools, civic spaces and parks located;

City of **Meridian**: The Meridian Pathway Master Plan only applies to the pathway network but contains many exemplary planning and design features including network connectivity, design alternatives for varying conditions and detailed safe crossing standards;

City of **Moscow**: Comprehensive Plan goal that all transportation systems enable safe access and promote alternative mode use for all modes of mobility, including pedestrians, bicyclists, motorists and public transit users of all ages and abilities. Implementation action to identify and fill the gaps in the City’s existing bicycle lane system and identify future bike lane needs;

City of **Sandpoint**: Comprehensive Plan Policy to prioritize schools, parks, downtown, libraries and other civic destinations as non motorized routes for the transportation network.

maximum distance between connections, and none have adopted an index or other measurements to assess existing or planned connections. Many communities have goals for improved networks of all transportation modes and to better connect their community by expanding pedestrian access and mode choices. Examples include Boise, Coeur d’Alene, Garden City, Hayden, McCall, Nampa, and Pocatello. The City of Driggs has mapped future connections to the collector streets in their city. Caldwell and Pocatello have policies to prioritize connecting important community facilities, like schools and Chubbuck and Meridian both have overlays and policies calling for better connections in new development.

Existing Design and Development Requirements

Regulations on connectivity are provided in the development subdivision code for those communities that address the issue. Only one city, Kimberly, specifically relates connectivity to school location stating “Right of way for pedestrian walkways in the middle of long blocks may be required for pedestrian circulation to schools, parks or shopping areas.” Donnelly and Chubbuck have mid-block or block length limitations that promote connectivity, but do not specifically address schools. Meridian requires pathway connections through long blocks that fail to meet minimum criteria, again with no mention of schools. Idaho Falls and Sandpoint require developers to provide connections identified in pathway plans. More general standards that promote connectivity with adjacent properties or within a development are in the subdivision codes for Boise, Greenfield, Ketchum, McCall and Nampa.

Best Practices

Connectivity refers to the quantity or density of connections in path or road networks and the directness of links between connections. A well-connected road or path network has many short links, numerous intersections (nodes), and minimal dead-ends (cul-de-sacs). As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations

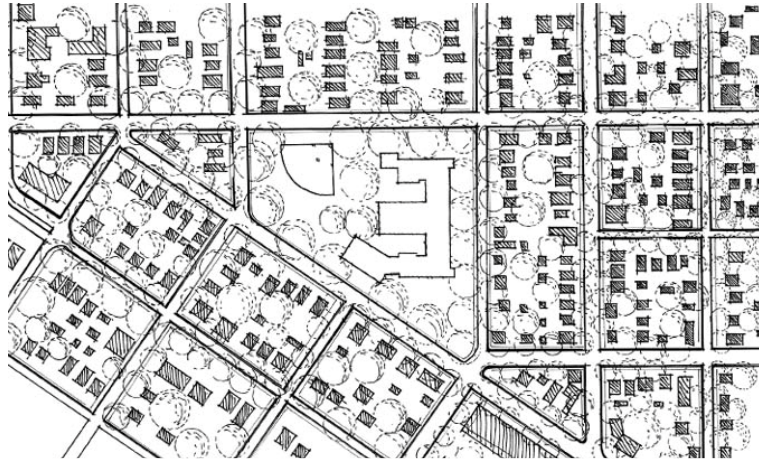
5. Connectivity

Existing Policy

Connectivity is the least addressed and least well-developed policy issue for most communities studied. Few communities specify the

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A school that is well connected to its surrounding neighborhood



and creating a more accessible and resilient system. Relative connectivity is an important predictor of the choice to walk. Pedestrian trips are 18% higher in areas where paths are relatively more direct to nearby destinations on foot than by car.

To increase connectivity a community must overcome a preference for residential cul-de-sacs, popular because they limit traffic volumes and speeds and contribute to a sense of security. However, connected residential streets can have these same attributes if designed appropriately with short blocks, “T” intersections, narrower widths and other traffic calming features. Another objection is that a connected street network requires more land for road right-of-way. This can be offset by reducing street widths, still providing emergency access because of the choice of routes.

Connectivity can be increased during roadway and pathway planning when subdivisions are designed; by adopting street connectivity standards or goals, by requiring alleyways and mid-block pedestrian shortcuts, by constructing new roads and paths to connect destinations, by using shorter street segments and smaller blocks, and by applying traffic calming.

Common street connectivity standards or goals are listed below. Standards should be flexible.

1. Adopt an average intersection spacing of 300-400 feet for local streets and maximum spacing for pedestrian/bicycle connections of 350 feet. These may be mid-block if needed.
2. Limit maximum intersection spacing to ± 600 feet for local streets, $\pm 1,000$ feet on arterials. Limit maximum block size to 5 acres in residential and 12 acres in commercial areas.
3. Reduce street pavement widths.
4. Limit or discourage cul-de-sacs. Limit the maximum cul-de-sac length to 400 feet.
5. Limit or discourage gated communities and other restricted access roads.
6. Require multiple access connections between a development and surrounding arterial streets.
7. Require a minimum connectivity index, or reward developments with high connectivity through incentives.
8. Plan streets to connect in the future as development continues onto adjacent property, clearly sign the “stubs” as future connections.
9. Create Pedways, which are walking networks in major commercial areas connecting buildings and transportation hubs.

How to Use the Best Practices: Connectivity is one of the most effective ways to increase the pedestrian and bicycle travel by shortening distances. Few locales have clear connectivity standards.

Recommendation: Determine a method to measure connectivity, adopt an index as a guide. Make connectivity a part of your application review process.

Community Examples of Best Practices

City of **Boise**: Comprehensive Plan goal to provide a continuous network of sidewalks, bicycle, and pedestrian paths, and roadways

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to connect different areas of neighborhoods. Require future connection stubs in subdivisions where there is a reasonable expectation of adjacent parcel development utilizing the connections for local circulation;

City of **Dalton Gardens**: In blocks over six hundred feet (600') long, crosswalks may be required. (Subdivision Code);

City of **Driggs**: Has a future connections map that identifies future connections to the collector streets in their city;

City of **Hailey**: Has established a benchmark in Comprehensive Plan for a percentage of neighborhoods that should be connected to “destination” areas, including schools and prioritizing improvements within ½ mile of schools;

City of **Moscow**: Comprehensive Plan objective that likely current or future pedestrian destinations (such as parks, schools, and nearby shopping and dining establishments) should be examined and pedestrian pathways should be required in mid block or cul-de-sac locations to provide more direct and efficient pedestrian route opportunities;

City of **Pocatello**: Strong Comprehensive Plan language to provide for a connected network of pedestrian-friendly streets and paths policies to provide safe mid-block pedestrian pathways on local roads with long blocks, promote sidewalks that connect buildings to the public right-of-way for new commercial, institutional and residential development, promote pedestrian and vehicular connections between adjoining developments for new commercial, industrial and institutional development and use streets, pedestrian ways and connectivity development standards to promote streets and pedestrian ways that are well connected and provide a safe environment for pedestrians. Requirement for connections in commercial developments;

City of **Twin Falls**: Implementation Measure in Comprehensive Plan to ensure that all new developments include a unified and fully-

connected system of sidewalks, street trees, trails and open space and to retrofit existing neighborhoods with same.

| Examples of Street Connectivity Standards | | |
|---|----------------------|--|
| Measure | Standard | Notes |
| # of Links/Nodes | >1.5 Minimum | Ratio links/nodes, Excludes links on perimeter arterials |
| Intersections/Square Mile | 250 Minimum | Includes perimeter intersections |
| Block Perimeter | 1,400 ft. Maximum | Measured at street centerline |
| Block Length | 400 ft. Maximum | |
| Emergency Access | 10% Maximum | % of lots rendered inaccessible if one street is blocked |
| Proximity | 65% Minimum | % of units within 1/4 mile walking of village nodes |

6. Pedestrian Crossings

Existing Policy

Most communities reviewed do not have specific policy requirements for pedestrian crossings, Rigby leaves the decision about where crosswalks should be located to the Police Chief and Caldwell gives the Transportation Commission authority to locate and design crossings.

Existing Design and Development Requirements

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An array of design and development requirements for crosswalks are used by the few communities that have adopted them. Caldwell and Rigby take a case-by-case approach using the Traffic Commission and Police Chief, respectively, to determine the crosswalk locations and designs. Dalton Gardens defers to the latest edition of the “Manual of Uniform Traffic Control Devices” (MUTCD) for their design requirements. Hailey has standards included in their draft complete streets ordinance, and Meridian applies the standards in their Pathway Master Plan to pathway intersections. Subdivision requirements in two communities, Coeur d’Alene and Dalton Gardens call for crosswalks to be located in blocks exceeding a certain length: 1,000’ in Coeur d’Alene and 600’ for Dalton Gardens. Many seem to rely on the MUTCD without detailing how they will determine which MUTCD compliant design they will use.

Best Practices

A child walking or biking to school will likely cross one or more streets. Good, safe design should keep the street crossing simple and should be guided by these simple principles;

Crossing with ADA compliant curb ramp and ladder style crosswalk markings



1. **Identify good crossing locations:** Where are the likely pedestrian destinations (i.e. schools, parks, shops)? Develop the shortest safe routes for crossing – do not ask pedestrians to travel out of direction to cross, provide crossings that are in line with the sidewalk so that pedestrians with visual impairments can easily negotiate them; and establish good sight distances for both drivers and pedestrians.
2. **Slow motor vehicle speeds:** Consider traffic calming devices such as narrower lane widths and vertical elements in medians or along the roadway edge buffer – these strategies signal motorists to travel more slowly. Pedestrians are much safer when motorists are traveling less than 25 mph.
3. **Reduce curb radius:** Shorter curb radius at corners benefits pedestrians by shortening the intersection crossing distance, slowing the turning vehicles, and allowing a straighter path through the intersection for pedestrians. In places where there is on-street parking and/or bike lanes the width provided by the parking or bike lane increases the actual turn radius used by motorists.
4. **Reduce crossing distances:** Use curb extensions (curb bulb-outs) and median islands to reduce the crossing distance and length of time pedestrians are exposed to traffic. Median islands also simplify the crossing by breaking it into two pieces with safe refuge in between. Curb bulb-outs prevent cars from parking too close to the crossing and blocking sight distance at the crossing and they reduce curb radius slowing vehicle turns.
5. **Use appropriate signage:** As recommended in the MUTCD signs can improve the rate and distance at which drivers yield. These include pedestrian warning signs, stop/yield here signs, cross here arrows, in-roadway stop/yield signs and more. Follow MUTCD guidance for appropriate installation.
6. **Use appropriate pavement markings and traffic controls:** Use accepted pavement markings, warning signs, flashers and traffic signals, when warranted, by following the MUTCD. Marked crosswalks and high visibility crosswalks indicate

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preferred pedestrian crossing sites, warning signs or flashers tell motorists to expect pedestrians, and advance stop bars provide better sight distance. These tools do not slow motorists or increase safety by themselves and should be used in combination with traffic calming or other strategies to slow speeds. (Further guidance can be found in the resources listed in Appendix A.)

Crossings can be made safer on nearly any type of roadway including arterials using the principles above. However busier high traffic roads may require even more robust treatments especially near schools. These may be used in combination with the strategies above following MUTCD guidance:

- **Traffic signals** that serve both cars and pedestrians when warranted and properly designed can enhance pedestrian safety. Walk signals should change automatically when the traffic signal changes. Pedestrian heads with a countdown feature let pedestrians and drivers know how much time is left in the signal cycle and improve safety.
- Rectangular Rapid Flashing Beacons (**RRFB**) can increase yield rates on busier roads. The paired rectangular yellow beacons employ a stutter flash similar to emergency vehicles and are activated by the pedestrian.
- **HAWK (High-Intensity Activated crossWALK)** beacons are a two red over one yellow signal that is dark until activated by the pedestrian. It then flashes yellow, then solid yellow, then a brief solid red then wig wag red that allows motorists to proceed once the pedestrian has cleared the crossing.

- **Crossing Guards** to assist students and ensure that traffic stops or yields can increase safety in all conditions.

How to Use the Best Practices: Pedestrian crossings can be made safer and more visible. There is no one approach each crossing needs to be analyzed and treated appropriately.

Recommendation: Assess the pedestrian crossings that you would like to improve and determine the best treatment for each location utilizing the most appropriate tools listed above.

Community Examples of Best Practices

City of **Coeur d'Alene**: Crosswalk required through any block exceeding one thousand feet (1,000') in length or in any block of lesser length where crosswalk is to provide circulation or access to schools;

City of **Hailey**: Crossing locations near schools are a basis for introducing traffic calming to slow traffic;

City of **Kimberly**: Pedestrian walkways in the middle of long blocks required when warranted for pedestrian circulation to schools, parks or shopping areas;

City of **McCall**: requires that pedestrian and bicycle crosswalks be not less than ten feet (10') wide, and that they provide access to schools, playgrounds, shopping centers, transportation and other community facilities;

City of **Sandpoint**: A design directive to encourage diversity in transportation modes to make the city more walkable by making sidewalks and crossings safer and changing the land use pattern to support.

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Appendix A

Resources

General

Active Living, learn about
<http://www.activeliving.org/>

Form Based Codes Institute
<http://www.formbasedcodes.org/>

FHWA Pedestrian and Bicycle Safety
http://safety.fhwa.dot.gov/ped_bike/

Idaho Transportation Department Bicycle Pedestrian Program
http://www.itd.idaho.gov/bike_ped/

Idaho Transportation Department Safe Routes to School Program
<http://itd.idaho.gov/sr2s/home.htm>

National Complete Streets Coalition
www.completestreets.org

National Center for Safe Routes to School Guide
<http://guide.saferoutesinfo.org/>

Pedestrian and Bicycle Information Center
<http://www.pedbikeinfo.org/>

Project for Public Spaces (PPS)
<http://www.pps.org/transportation/>

Smart Code Central
<http://smartcodecentral.org/>

Victoria Transport Policy Institute (VTPI)
<http://www.vtpi.org/>

Walking, learn about
<http://americawalks.org/>

Guides and Manuals

Bicycle Boulevard Planning & Design Guidebook
<http://www.ibpi.usp.pdx.edu/media/BicycleBoulevardGuidebook.pdf>

Creating Safe Routes to Schools: Sidewalks,
<http://guide.saferoutesinfo.org/engineering/sidewalks.cfm>

Designing Walkable Urban Thoroughfares; A Context Sensitive Approach:
<http://www.ite.org/emodules/scriptcontent/Orders/ProductDetail.cfm?pc=RP-036A-E>

DRAFT AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities
<http://design.transportation.org/Documents/DraftBikeGuideFeb2010.pdf>

How to Develop a Pedestrian Safety Action Plan – FHWA
<http://www.itd.idaho.gov/SR2S/program/PedestrianSafetyActionPlanFHWA0512.pdf>

Manual of Uniform traffic Control Devices (MUTCD)
http://mutcd.fhwa.dot.gov/pdfs/2009/pdf_index.htm

National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide
<http://nacto.org/cities-for-cycling/design-guide/>

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Technical Issue Specifics

<http://www.missionped.org/archive/curbrad.html>

Curb Radius Reduction

<http://www.walkinginfo.org/engineering/crossings-curb.cfm>

Developing Curb Ramp Designs Based on Curb Radius

<http://www.ite.org/safety/ITEjournal-curbs.htm>

FHWA Chapter 8: Pedestrian Crossings

<http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks208.htm>

FHWA Chapter 7: Curb Ramps

<http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks207.htm>

Guidelines for Street Corners

<http://www.portlandonline.com/shared/cfm/image.cfm?id=61750>

High Intensity Activated Crosswalk (HAWK) signal information,

video:http://www.youtube.com/watch?v=_7x_4Wu8EnQ&feature=endscreen&NR=1

flyer:<http://www.achdidaho.org/Community/Docs/HAWK%20Information%20Sheet.pdf>

Idaho State Department of Education Best Practices Maintenance Plan

<http://www.sde.idaho.gov/site/facilities/>

ITE Technical Committee paper on School Site Planning, Design and Transportation

<http://itd.idaho.gov/SR2S/documents/School%20Site%20Planning.pdf>

Literature Review on Vehicle Travel Speeds and Pedestrian Injuries

<http://www.nhtsa.gov/people/injury/research/pub/hs809012.html>

North Carolina DOT Guide to Multi-use Pathways

http://www.campo-nc.us/BPSG/docs/NCDOT_on_Multi_Use_Pathways.pdf

Pedestrian and Bicycle Information Center – Narrower Lane Widths

<http://www.walkinginfo.org/library/details.cfm?id=4348>

Rectangular Rapid Flashing Beacon (RRFB)

<http://safety.fhwa.dot.gov/intersection/resources/techsum/fhwasa09009/>

Road Diets; Fixing the Big Roads

<http://www.walkable.org/assets/downloads/roaddiets.pdf>

Roadway Connectivity – TDM Library at VTPI

<http://www.vtpi.org/tdm/tdm116.htm>

Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations; Executive Summary

http://safety.fhwa.dot.gov/ped_bike/docs/cros.pdf

Curb Radius: Better Walking Through Geometry

Walking Info. Org, When Crossing the Street is Dangerous

<http://www.walkinginfo.org/problems/problems-crossing.cfm>

Attachment B: Handbook of Best Practices

Appendix B

Community Reviews – 36 Individual City Surveys and Recommendations

find on Idaho Smart Growth website at:
<http://www.idahosmartgrowth.org>

Attachment C – Pedestrian Bicycle Counts – Caldwell, October 12, 2011

| Location | Illinois at Taft - Southbound | | | | | |
|---------------|-------------------------------|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 14:00-14:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14:15-14:30 | 0 | 0 | 3 | 0 | 0 | 3 |
| 14:30-14:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14:45-15:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00-15:15 | 0 | 0 | 0 | 6 | 0 | 6 |
| 15:15-15:30 | 0 | 0 | 8 | 4 | 0 | 12 |
| 15:30-15:45 | 1 | 4 | 17 | 10 | 0 | 32 |
| 15:45-16:00 | 3 | 2 | 6 | 3 | 0 | 14 |
| Total | 4 | 6 | 34 | 23 | 0 | 67 |
| Totals | 10 | | 57 | | 0 | 67 |

| Location | 10th and Spruce - northbound on 10th | | | | | |
|---------------|--------------------------------------|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 14:30-14:45 | 2 | 1 | 1 | 1 | 0 | 5 |
| 14:45-15:00 | 0 | 3 | 10 | 7 | 0 | 20 |
| 15:00-15:15 | 0 | 0 | 4 | 2 | 0 | 6 |
| 15:15-15:30 | 1 | 1 | 1 | 0 | 0 | 3 |
| 15:30-15:45 | 1 | 1 | 2 | 3 | 0 | 7 |
| 15:45-16:00 | 2 | 0 | 3 | 5 | 0 | 10 |
| 16:00-16:15 | 0 | 1 | 0 | 1 | 0 | 2 |
| 16:15-16:30 | 0 | 1 | 7 | 1 | 0 | 9 |
| Total | 6 | 8 | 28 | 20 | 0 | 62 |
| Totals | 14 | | 48 | | 0 | 62 |

| Location | 10th and Spruce - southbound on 10th | | | | | |
|---------------|--------------------------------------|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 14:30-14:45 | 1 | 1 | 0 | 1 | 0 | 3 |
| 14:45-15:00 | 0 | 0 | 10 | 6 | 0 | 16 |
| 15:00-15:15 | 0 | 0 | 0 | 1 | 0 | 1 |
| 15:15-15:30 | 1 | 1 | 0 | 0 | 0 | 2 |
| 15:30-15:45 | 3 | 1 | 3 | 2 | 0 | 9 |
| 15:45-16:00 | 0 | 0 | 3 | 1 | 0 | 4 |
| 16:00-16:15 | 0 | 0 | 1 | 0 | 0 | 1 |
| 16:15-16:30 | 0 | 1 | 8 | 0 | 0 | 9 |
| Total | 5 | 4 | 25 | 11 | 0 | 45 |
| Totals | 9 | | 36 | | 0 | 45 |

| Location | Pathway - south of Jefferson Middle school | | | | | |
|---------------|--|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 14:30-14:45 | 1 | 0 | 1 | 0 | 0 | 2 |
| 14:45-15:00 | 0 | 2 | 13 | 13 | 0 | 28 |
| 15:00-15:15 | 0 | 0 | 9 | 27 | 0 | 36 |
| 15:15-15:30 | 0 | 0 | 1 | 0 | 0 | 1 |
| 15:30-15:45 | 0 | 0 | 0 | 1 | 0 | 1 |
| 15:45-16:00 | 0 | 0 | 2 | 0 | 0 | 2 |
| 16:00-16:15 | 0 | 0 | 0 | 1 | 0 | 1 |
| 16:15-16:30 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | 1 | 2 | 27 | 42 | 0 | 72 |
| Totals | 3 | | 69 | | 0 | 72 |

| Location | Montana and Linden - Northbound on Montana | | | | | |
|---------------|--|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 14:45-15:00 | 1 | 1 | 6 | 7 | 0 | 15 |
| 15:00-15:15 | 0 | 0 | 7 | 4 | 0 | 11 |
| 15:15-15:30 | 0 | 0 | 4 | 0 | 0 | 4 |
| 15:30-15:45 | 0 | 1 | 3 | 2 | 2 | 8 |
| 15:45-16:00 | 3 | 1 | 0 | 0 | 0 | 4 |
| 16:00-16:15 | 0 | 1 | 4 | 4 | 0 | 9 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 4 | 24 | 17 | 2 | 51 |
| Totals | 8 | | 41 | | 2 | 51 |

| Location | Linden and Montana - Westbound on Linden | | | | | |
|---------------|--|----------|-------------|----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 14:45-15:00 | 0 | 0 | 2 | 2 | 0 | 4 |
| 15:00-15:15 | 0 | 0 | 1 | 2 | 0 | 3 |
| 15:15-15:30 | 0 | 2 | 0 | 0 | 0 | 2 |
| 15:30-15:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:45-16:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00-16:15 | 2 | 0 | 0 | 0 | 0 | 2 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 2 | 0 | 0 | 0 | 0 | 2 |
| Total | 4 | 2 | 3 | 4 | 0 | 13 |
| Totals | 6 | | 7 | | 0 | 13 |

| Location | Montana & Willow - Southbound on Montana | | | | | |
|---------------|--|-----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 14:45-15:00 | 0 | 7 | 6 | 4 | 0 | 17 |
| 15:00-15:15 | 1 | 2 | 2 | 0 | 0 | 5 |
| 15:15-15:30 | 1 | 1 | 1 | 4 | 0 | 7 |
| 15:30-15:45 | 0 | 0 | 5 | 0 | 0 | 5 |
| 15:45-16:00 | 1 | 0 | 4 | 3 | 2 | 10 |
| 16:00-16:15 | 0 | 1 | 5 | 5 | 1 | 12 |
| 16:15-16:30 | 0 | 1 | 2 | 0 | 0 | 3 |
| 16:30-16:45 | 1 | 0 | 0 | 0 | 0 | 1 |
| Total | 4 | 12 | 25 | 16 | 3 | 60 |
| Totals | 16 | | 41 | | 3 | 60 |

| Location | Linden and Montana - Eastbound on Linden | | | | | |
|---------------|--|----------|-------------|----------|----------|----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 14:45-15:00 | 0 | 4 | 1 | 0 | 0 | 5 |
| 15:00-15:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:15-15:30 | 0 | 0 | 1 | 0 | 0 | 1 |
| 15:30-15:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:45-16:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00-16:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:15-16:30 | 0 | 0 | 0 | 3 | 0 | 3 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 4 | 2 | 3 | 0 | 9 |
| Totals | 4 | | 5 | | 0 | 9 |

Attachment C – Pedestrian Bicycle Counts – Caldwell, October 12, 2011

| Location | Syringa Pathway - Northbound | | | | | |
|---------------|------------------------------|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:00-15:15 | 0 | 0 | 8 | 10 | 0 | 18 |
| 15:15-15:30 | 0 | 0 | 13 | 0 | 0 | 13 |
| 15:30-15:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:45-16:00 | 0 | 0 | 1 | 0 | 0 | 1 |
| 16:00-16:15 | 0 | 0 | 0 | 1 | 0 | 1 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 22 | 11 | 0 | 33 |
| Totals | 0 | | 33 | | 0 | 33 |

| Location | YMCA Pathway - Southbound | | | | | |
|---------------|---------------------------|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:00-15:15 | 0 | 0 | 0 | 1 | 0 | 1 |
| 15:15-15:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:30-15:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:45-16:00 | 1 | 0 | 10 | 22 | 0 | 33 |
| 16:00-16:15 | 0 | 0 | 2 | 0 | 0 | 2 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 12 | 23 | 0 | 36 |
| Totals | 1 | | 35 | | 0 | 36 |

| Location | Syringa Pathway - Eastbound | | | | | |
|---------------|-----------------------------|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:00-15:15 | 0 | 0 | 2 | 43 | 0 | 45 |
| 15:15-15:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:30-15:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:45-16:00 | 1 | 0 | 0 | 0 | 0 | 1 |
| 16:00-16:15 | 0 | 0 | 1 | 1 | 0 | 2 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 3 | 44 | 0 | 48 |
| Totals | 1 | | 47 | | 0 | 48 |

| Location | YMCA Pathway - Northbound | | | | | |
|---------------|---------------------------|----------|-------------|----------|----------|----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:00-15:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:15-15:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:30-15:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:45-16:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00-16:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 |
| Totals | 0 | | 0 | | 0 | 0 |

| Location | Locust & Montana - Eastbound on Locust | | | | | |
|---------------|--|-----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:00-15:15 | 4 | 8 | 23 | 26 | 0 | 61 |
| 15:15-15:30 | 2 | 3 | 4 | 6 | 0 | 15 |
| 15:30-15:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:45-16:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00-16:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 6 | 11 | 27 | 32 | 0 | 76 |
| Totals | 17 | | 59 | | 0 | 76 |

| Location | Syringa Pathway - Westbound | | | | | |
|---------------|-----------------------------|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:00-15:15 | 1 | 0 | 0 | 4 | 0 | 5 |
| 15:15-15:30 | 0 | 0 | 2 | 4 | 0 | 6 |
| 15:30-15:45 | 0 | 1 | 0 | 2 | 0 | 3 |
| 15:45-16:00 | 1 | 0 | 0 | 0 | 0 | 1 |
| 16:00-16:15 | 0 | 0 | 0 | 1 | 0 | 1 |
| 16:15-16:30 | 0 | 0 | 1 | 0 | 0 | 1 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 12 | 0 | 0 | 12 |
| Total | 2 | 1 | 15 | 11 | 0 | 29 |
| Totals | 3 | | 26 | | 0 | 29 |

| Location | Montana and Willow - northbound on Montana | | | | | |
|---------------|--|-----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:00-15:15 | 4 | 8 | 28 | 26 | 0 | 66 |
| 15:15-15:30 | 2 | 3 | 4 | 6 | 0 | 15 |
| 15:30-15:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:45-16:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00-16:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 6 | 11 | 32 | 32 | 0 | 81 |
| Totals | 17 | | 64 | | 0 | 81 |

| Location | Montana and Alder - southbound on Montana | | | | | |
|---------------|---|----------|-------------|----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:00-15:15 | 0 | 4 | 3 | 1 | 0 | 8 |
| 15:15-15:30 | 0 | 1 | 0 | 2 | 0 | 3 |
| 15:30-15:45 | 1 | 0 | 0 | 0 | 0 | 1 |
| 15:45-16:00 | 0 | 0 | 0 | 1 | 0 | 1 |
| 16:00-16:15 | 0 | 1 | 0 | 1 | 0 | 2 |
| 16:15-16:30 | 0 | 1 | 1 | 0 | 0 | 2 |
| 16:30-16:45 | 0 | 0 | 2 | 0 | 0 | 2 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 1 | 1 |
| Total | 1 | 7 | 6 | 5 | 1 | 20 |
| Totals | 8 | | 11 | | 1 | 20 |

Attachment C – Pedestrian Bicycle Counts – Caldwell, October 12, 2011

| Location | Montana and Alder - northbound on Montana | | | | | |
|---------------|---|----------|-------------|----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:00-15:15 | 0 | 0 | 3 | 1 | 0 | 4 |
| 15:15-15:30 | 0 | 0 | 0 | 1 | 0 | 1 |
| 15:30-15:45 | 2 | 1 | 1 | 2 | 0 | 6 |
| 15:45-16:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00-16:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:15-16:30 | 0 | 1 | 0 | 1 | 0 | 2 |
| 16:30-16:45 | 1 | 0 | 0 | 1 | 0 | 2 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 2 | 4 | 6 | 0 | 15 |
| Totals | 5 | | 10 | | 0 | 15 |

| Location | Alder and Montana - Eastbound on Alder | | | | | |
|---------------|--|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:00-15:15 | 0 | 0 | 4 | 4 | 0 | 8 |
| 15:15-15:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:30-15:45 | 0 | 0 | 5 | 6 | 0 | 11 |
| 15:45-16:00 | 0 | 0 | 2 | 0 | 0 | 2 |
| 16:00-16:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 11 | 10 | 0 | 21 |
| Totals | 0 | | 21 | | 0 | 21 |

| Location | Laster Street - Westbound @Lewis&Clark | | | | | |
|---------------|--|----------|-------------|-----------|----------|------------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:15-15:30 | 0 | 2 | 1 | 4 | 0 | 7 |
| 15:30-15:45 | 6 | 3 | 51 | 53 | 0 | 113 |
| 15:45-16:00 | 0 | 0 | 0 | 1 | 0 | 1 |
| 16:00-16:15 | 0 | 0 | 1 | 0 | 1 | 2 |
| 16:15-16:30 | 0 | 0 | 2 | 0 | 0 | 2 |
| 16:30-16:45 | 0 | 0 | 0 | 1 | 0 | 1 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00-17:15 | 0 | 1 | 0 | 1 | 0 | 2 |
| Total | 6 | 6 | 55 | 60 | 1 | 128 |
| Totals | 12 | | 115 | | 1 | 128 |

| Location | Grant Street - | | | | | |
|---------------|----------------|-----------|-------------|-----------|----------|------------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:15-15:30 | 3 | 1 | 8 | 4 | 0 | 16 |
| 15:30-15:45 | 5 | 8 | 21 | 16 | 0 | 50 |
| 15:45-16:00 | 0 | 0 | 2 | 4 | 0 | 6 |
| 16:00-16:15 | 0 | 2 | 0 | 5 | 0 | 7 |
| 16:15-16:30 | 2 | 0 | 1 | 3 | 0 | 6 |
| 16:30-16:45 | 0 | 2 | 3 | 3 | 0 | 8 |
| 16:45-17:00 | 2 | 0 | 3 | 3 | 0 | 8 |
| 17:00-17:15 | 1 | 1 | 3 | 2 | 0 | 7 |
| Total | 13 | 14 | 41 | 40 | 0 | 108 |
| Totals | 27 | | 81 | | 0 | 108 |

| Location | Laster Street - Eastbound @Lewis&Clark | | | | | |
|---------------|--|----------|-------------|-----------|----------|-----------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 15:15-15:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:30-15:45 | 1 | 4 | 8 | 23 | 0 | 36 |
| 15:45-16:00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00-16:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 1 | 0 | 1 |
| 16:45-17:00 | 0 | 0 | 2 | 0 | 0 | 2 |
| 17:00-17:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 4 | 10 | 24 | 0 | 39 |
| Totals | 5 | | 34 | | 0 | 39 |

| Location | All locations combined | | | | | |
|--------------------|------------------------|-----------|-------------|------------|----------|-------------|
| | Bicycles | | Pedestrians | | Others | |
| Time | Female | Male | Female | Male | | Total |
| 14:00-14:15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14:15-14:30 | 0 | 0 | 3 | 0 | 0 | 3 |
| 14:30-14:45 | 4 | 2 | 2 | 2 | 0 | 10 |
| 14:45-15:00 | 1 | 17 | 48 | 39 | 0 | 105 |
| 15:00-15:15 | 10 | 22 | 94 | 158 | 0 | 284 |
| 15:15-15:30 | 10 | 15 | 48 | 35 | 0 | 108 |
| 15:30-15:45 | 20 | 24 | 116 | 120 | 2 | 282 |
| 15:45-16:00 | 12 | 3 | 33 | 40 | 2 | 90 |
| 16:00-16:15 | 2 | 6 | 14 | 20 | 2 | 44 |
| 16:15-16:30 | 2 | 5 | 23 | 8 | 0 | 38 |
| 16:30-16:45 | 4 | 2 | 5 | 6 | 0 | 17 |
| 16:45-17:00 | 2 | 0 | 17 | 3 | 1 | 23 |
| 17:00-17:15 | 1 | 2 | 3 | 3 | 0 | 9 |
| Grand Total | 68 | 98 | 406 | 434 | 7 | 1013 |
| Grand Total | 166 | | 840 | | 7 | 1013 |

| | |
|--|------|
| Total users during School Release hours | 779 |
| Total of all users counted on October 12, 2011 | 1013 |