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# CITY OF RAPID CITY <br> RAPID CITY, SOUTH DAKOTA 57701-5035 <br> Community Planning \& Development Services <br> 300 Sixth Street 

## Rapid City Community Walk Audit

## Background Information

In May 2014, The City of Rapid City was awarded a \$5,000 grant from the South Dakota Department of Health to complete a walk audit throughout Rapid City. This grant was awarded to four communities in South Dakota - Rapid City, Pierre, Sioux Falls, and Burke. The grant is a yearlong process to be completed from May 2014 through May 2015. A walk audit is a facilitated walk through a pre-designated route. During a walk audit, participants will rate or score the area based on how comfortable or uncomfortable they feel while walking through the area. This was completed by the group leader asking a series of questions that were listed on a score sheet. These questions were aimed to prompt conversation amongst the group to hear both the positive and negative aspects of the area that was being scored. Walk audits are a simple way to assess the current conditions and seek areas that could use improvements. The results from the walk audits in Rapid City will be compiled and go into the City's future Long Range Transportation Plan, which is updated every five years.

## Timeline

On May $19^{\text {th }}$, 2014 the Rapid City Journal published a story on the walk audit process, informing the Rapid City area that the grant was received. This was the initial way the community was informed about the grant, and the City received positive feedback from the community inquiring on how to participate. On June $30^{\text {th }}, 2014$ the walk audit team held a kick off planning meeting. At this meeting maps were reviewed to better understand the areas that had the highest concern from the community. The maps identified sidewalk inventory, locations of schools, and locations of the bicycle and pedestrian crashes with motor vehicles (Figure 1). Statistics were reviewed from crash data, as well (Tables 1-3). At this meeting it was also decided that the group would split into leaders and walking participants. The leaders would lead a group of walking participants through the routes. This maximized the area that could be covered during
the walk audits. August $4^{\text {th }}, 5^{\text {th }}$, and $13^{\text {th }}, 2014$ were the meeting dates for the leaders. The leaders were assigned a route to lead the walking participants through. During these meetings, a sample walk audit was held so the leaders could understand how to facilitate an audit. The leaders chose their own dates and time to have their walk audits. The walks took place between September $8^{\text {th }}-18^{\text {th }}$, October $6^{\text {th }}-19^{\text {th }}$, and December $1^{\text {st }}-12^{\text {th }}$. It was decided to have three walking months to gather as much information as possible. The goal was to have each route walked three times, once during each month. This was due to the fact that there might be obstacles or challenges in December that were not present during the walks in September, etc.

## Route Options

The discussion that was had at the kick off planning meeting was analyzed to create walking routes. There were eleven different routes that were created to try to meet the needs of all who participated and showed concerns about certain areas. Each route was approximately one mile to one and a half miles long. This is the ideal length for a walk audit; each walk took about an hour to an hour and a half, depending on the walking speed of the group and how often the group stopped to write comments. The routes that were created had all walking conditions; some areas did not have sidewalks at all, and others had ideal walking conditions. Figure 2 shows the walking routes. Route 1, is along Deadwood Avenue; this route was of concern due to the fact that there are individuals who are walking or bicycling this area to get to and from work. Route 2, is along Plaza Drive, and this area was of concern because this is an area that has residential as well as employers and other community events. The Harmony Heights apartment complex, the Fountain Springs church, Youth and Family Services, as well as many other employers are all located in this area. Route 3 was created because there are many daily activities in this area. Safeway grocery store is located on this route, along with parks, apartment complexes nearby and multiple bus stop locations. Routes 4, 5, 6, and 7 are all located within downtown Rapid City. These routes are important because many people walk downtown often. Especially due to the fact that Rapid City attracts many tourists, besides those that walk downtown daily, it is important that someone not from the area also feels comfortable walking. Route 8 was created to meet the needs of those who might be traveling via foot along Mount Rushmore Road, as well as near the medical facilities and the residential area. Route 9 was created to gather information from those who walk around Youth and Family Services, as well as gathering participants from Girls Inc. Route 10 is an important route for some of our walking participants. This route was requested by Black Hills Works staff, as many of those that are supported through Black Hills Works live in this area and are walking to the bus stops, or across the street to Walmart. The final route is route 11; this route is around Feeding South Dakota.

## Scoring Process

During each walk the group leader would ask a series of questions at four different stopping locations along the route. Prior to the walking days each leader received a packet that included information necessary to facilitate a walk audit.

Included in this packet was information about where to meet the group, a map of the route, a map of stopping locations, a score sheet and waivers for the participants to sign before participating. Each route was broken down into about four stopping locations. This process was decided so the City could receive the most specific results as possible. Each street segment was scored, as opposed to the entire route receiving one score. At each stopping location, the leader would ask a series of six questions from the score sheet - the questions were the same at each stopping location. The questions asked the participants to rate the area, giving a score between one and six, with one being the worst conditions, and six being the best walking conditions. There was a section after each question for participants to list both the positive and negative aspects from that street segment. Figure 3 shows an example of the score sheet. Figures 4-14 show the route maps that were provided to the leaders.

Along with indicating the stopping locations for each route, the maps that were previously given to the leaders also identified starting and ending locations. This process was created to have the questions and answers correspond to each route section. The leaders would complete the route in numerical order along with completing the score sheet in numerical order. At each stop the group would score the area that was just previously walked.

## Participants

The Rapid City walk audits had a total of one hundred and five participants. There were three different walking months, and eleven total walking routes. The goal was to gather participants from all areas of the community. While all feedback was equally as important, the City of Rapid City tried to receive feedback from all individuals who might be using this form of transportation. It was essential that the City heard feedback about the accessibility of the current walking conditions from those who face these challenges daily. Participants were gathered through Rapid City Journal articles, local news stations, social media, and flyers given to local businesses (Figure 15).

## Results

Figure 16 - Figure 21 show the results of the walk audits. The score sheets were returned to the City to be compiled and analyzed. The scores for each street segment were averaged and assigned a color. The best scores are represented in a green color, while the worst scores are represented in a red color on the figures. While reviewing the results, it is important to take note of a few trends that were identified through the walk audits. Some groups compared one street segment to another street segment, opposed to just scoring it based on how comfortable they felt. Some groups did not cross the street at all, as represented in black on the maps. When asking how "comfortable" an individual is walking in a certain area, it is important to note that most have a different definition on what is "comfortable". On questions that ask how "pleasant" the walk was, some stated that the company was great, which is why it received a higher score, but the walking conditions might not have been great.

Routes 1 and 2 received very low scores when asked to rate the sidewalks. Much of this area does not have sidewalks, so those scoring were rating areas where
most walk. Along Deadwood Avenue there is a dirt path that has been worn down from pedestrians and bicyclists. The southern portion of route 5 received one of the highest scores. This segment is through Memorial Park or along the bike path near Omaha Street. This area shows ideal conditions for walking: wide sidewalks, trees, and a sense of place has been created.

When asked "How was it to cross the street?", many of the downtown routes received great scores. These areas generally have crosswalks posted, whereas a crossing on route 10 received a poor score. The group walking this area was from Black Hills Works, both staff and those supported. The group began to cross when the a walk signal was received, and did not have time to finish the crossing on the walk signal. Luckily, the vehicle traffic was alert and did not proceed before the group finished crossing.

Routes 1, 2, and most of 11 scored very poor when asked to "Rate this area for children, elderly and the disabled". These are all routes with a lack of sidewalks, as well as along busy streets.

All of the maps that show results from the walk audits are included as Figures 16 - 21.

Summary of results:

- Deadwood Avenue area (Routes 1 and 2) are in need of sidewalks
- Sidewalk connections from the bike path to the Deadwood Avenue area should be made
- Sidewalks should be installed near Feeding South Dakota, as well as sidewalk connection to the nearest bus stop
- Beautification near the downtown area creates a nicer walk and sense of place
- Countdown timers for crosswalks make walkers more comfortable
- Uneven and cracked sidewalks are dangerous and difficult, especially for the elderly and disabled
- Kansas City Street and the bike path are areas that walkers felt the most comfortable; and believed to have the best walking conditions


## Comments

Throughout this walk audit process, the goal was to receive the most detailed results and feedback as possible. To receive the results that were intended, the score sheet comment sections allowed the participants to explain why the reasoning behind their scoring. After each question on the score sheet there was an area to list the pros/cons of the area. At the end of the score sheet there is an "additional comments" section for the walking route that was just completed. Once the score sheets returned to Rapid City, the comments were compiled into the scoring spreadsheet. The comments range from comments about the infrastructure, to snow removal, to the beautification of Rapid City. Table 4 shows the comments that the walking participants stated.

## Acknowledgement

The City of Rapid City would like to thank everyone who has participated with the community walk audits. This process would not have been possible, or successful without the participants from the Rapid City community members. The feedback that was received is greatly appreciated. If you have any questions or concerns, please do not hesitate to contact Sandy Smith, Sandy.Smith@rcgov.org or (605) 394-4120.



## Stop 1

Team Leader:
Date/Time of walk:

Walking Route:


1. Did this area have sidewalks?

Yes
No
Some
a. If yes, rate the sidewalks (1)____ (2)
(2)___(3)
(3)
(4) ___ (5)
(6)
2. How was it to cross the street?
(1)
(2)
(3)
(4)
(5)
(6)
a. Pros: $\qquad$
b. Cons: $\qquad$
3. How comfortable were you walking in this area?
(1)
(2)
(3)
(4)
(5)
(6)
a. Pros: $\qquad$
b. Cons: $\qquad$
4. How would you rate this area for children/elderly/disabled?
(1)
(2)
(3)
(4)
(5)
(6)
a. Pros: $\qquad$
b. Cons:
5. How comfortable/uncomfortable did the vehicle traffic make you feel?
(1)
(2)
(3)
(4)
(5)
(6)
a. Pros:
b. Cons:
6. How pleasant was your walk?
(1)
(2)
(3)
(4)
(5) $\qquad$ (6)
a. Pros: $\qquad$
b. Cons:
7. Additional comments:


Figure 4


Figure 5


Figure 6


Figure 7


Figure 8


Figure 9


Figure 10


Figure 11


Figure 12


Figure 13


Figure 14

## We want your opinion about walking!

Rapid City was selected to receive a grant for a Community Walk Audit from the South Dakota Department of Health. This grant will assist with promoting a healthier community and lifestyle for Rapid City. For a successful Walk Audit, the City is seeking volunteers to participate in facilitated walks through designated areas to better understand the public views of walking in Rapid City. Interested in volunteering? Contact Sandy Smith for more information!

Who: The City of Rapid City wants your opinion on walking in the community!

What: Community Walk Audits promote healthier lifestyles through an increase of walking in Rapid City. We are looking for volunteers to walk designated areas of Rapid City, and complete a score sheet with your opinions. We are also seeking leaders to lead a group of $8-10$ walkers through these areas!

Where: The walks will be in predetermined areas around Rapid City, the areas will be determined shortly-contact Sandy Smith if there are specific locations you are concerned about!

When: There will be three walks, one in September, one in October and one in December. Contact Sandy Smith for more information about specific walking days.

Why: The results you provide from the Walk Audit will be used for future planning in Rapid City.

## City of Rapid City

For More Information Contact:
Sandy Smith, City of Rapid City
Long Range Planner I
Phone: (605) 394-4120
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| CRASH TYPE | 2002-2011 <br> AVERAGE <br> ANNUAL <br> FREQUENCY | $2012$ <br> FREQUENCY | $2013$ <br> FREQUENCY |
| :---: | :---: | :---: | :---: |
| DART/DASH | 7 | 9 | 7 |
| TURNING VEHICLE | 6 | 6 | 13 |
| THROUGH VEHICLE - TRAFFIC CONTROL | 1 | 2 | 0 |
| THROUGH VEHICLE - NO TRAFFIC CONTROL | 1 | 0 | 0 |
| BACKING VEHICLE | 1 | 0 | 0 |
| WALKING ALONG ROADWAY | 1 | 0 | 1 |
| NON-ROADWAY | 1 | 0 | 0 |
| OTHER | 0 | 1 | 2 |
| DRIVERLESS VEHICLE | 0 | 0 | 0 |
| WALKING INTO VEHICLE | 0 | 0 | 1 |
| UNKNOWN | 0 | 0 | 0 |
| WORKING/PLAYING IN ROAD | 0 | 0 | 1 |
| MULTIPLE THREAT/TRAPPED | 0 | 0 | 0 |
| ASSAULT WITH VEHICLE | 0 | 0 | 1 |
| LAYING IN ROAD | 0 | 0 | 0 |
| UNIQUE MIDBLOCK | 0 | 0 | 0 |
| TOTAL | 20 | 18 | 26 |

TABLE 2
RAPID CITY PEDESTRIAN CRASH AGE DISTRIBUTION
2002-2013

| AGE OF PEDESTRIAN (YEARS) | 2002-2011 <br> AVERAGE <br> ANNUAL <br> FREQUENCY | $2012$ <br> FREQUENCY | $2013$ <br> FREQUENCY |
| :---: | :---: | :---: | :---: |
| 0-5 | 1 | 0 | 0 |
| 6-13 | 4 | 5 | 4 |
| 14-19 | 2 | 1 | 2 |
| 20-24 | 1 | 0 | 1 |
| 25-34 | 2 | 2 | 5 |
| 35-44 | 3 | 4 | 7 |
| 45-54 | 3 | 2 | 2 |
| 55-64 | 2 | 4 | 3 |
| 65 - OVER | 1 | 0 | 2 |
| TOTAL | 20 | 18 | 26 |

TABLE 3
RAPID CITY PEDESTRIAN CRASH RESPONSIBILITY
2002-2013

| YEAR | DRIVER'S FAULT | PEDESTRIAN'S <br> FAULT | NONE/UNKNOWN |
| :---: | :---: | :---: | :---: |
| $2002-2011$ AVERAGE | 10 | 9 | 2 |
| 2012 | 8 | 9 | 1 |
| 2013 | 16 | 9 | 1 |


| Route 1 - Stop 1 | Pros: Trees, but no sidewalks on either side of the street Cons: No crosswalks, no sidewalks, busy street with large trucks, traffic was too fast "This entire area would benefit greatly to have sidewalks. The speed of traffic is terrifying but the side streets have many people/businesses/ employers that would benefit from sidewalks" |
| :---: | :---: |
| Route 1 - Stop 2 | Pros: None <br> Cons: Hard curve in the road made it difficult to see traffic, no sidewalks, very bad especially near the corner, short portion of the walk - less traffic at this time. |
| Route 1 - Stop 3 | Pros: A lot of traffic, someone could stop if a walker needed assistance <br> Cons: Steep slopes, big rocks, bedrock that couldn't walk on, pipe sticking out of the ground about a foot, difficult to try and cross Deadwood Ave. |
| Route 1 - Stop 4 | Pros: Nice area if had sidewalks, nice views, not too hilly. <br> Cons: Hard slope - no extra area to walk, had to walk in the street, no sidewalk - scary. |
| Route 2 - Stop 1 | Pros: Flat, scenic, pretty views, fields <br> Cons: Traffic, no walking space at all, the group walked in the road, no road markings, no sidewalks, difficult for wheelchairs, road cracks, uneven road, fast vehicles, had to walk in single file |
| Route 2 - Stop 2 | Pros: Downhill, had about 100 ft . of sidewalk, less traffic. <br> Cons: Pot holes, uneven road, skinny road, no curb/gutter, no sidewalks, does not feel safe |
| Route 2 - Stop 3 | Cons: Lots of traffic, large trucks, narrow corridor, not easy to escape the area, unsafe |
| Route 2 - Stop 4 | Pros: Fine (physically) for this walking group, grassy area to walk on, wide street <br> Cons: Bad for unfit, strollers, no sidewalks |
| Route 3 - Stop 1 | Pros: Mountain View crossing wasn't as wide <br> Cons: Crosswalks poorly marked, 2 seconds left to cross, disabled would have difficulty, no indicator to cross at Canyon Lake Dr., rocks on sidewalk |
| Route 3 - Stop 2 | Pros: Excellent crossing time across Jackson Blvd., very wide walk area (no rocks) <br> Cons: No push buttons to cross the street, very noisy, traffic is close to pedestrians |
| Route 3 - Stop 3 | Pros: 13 seconds left to cross after completing Cons: Awful for crossing West Main to Jackson Blvd., disabled would be prohibited, uneven roads, weeds, old snow piled up on sidewalks |
| Route 3 - Stop 4 | Pros: Good even sidewalks, good landscaping rocks, bike trails help separate traffic from sidewalk <br> Cons: Never received a crossing signal (after pushing button), some noise, snow issues |
| Route 4 - Stop 1 | Pros: Stop signs, light traffic, doesn't take long to cross, |


|  | well-lit, highly populated, gates for Black Hills Corp Cons: Cars and visibility with children, crosswalk needs to be repainted, trees are low, too many driveways, lots of cars, children darting |
| :---: | :---: |
| Route 4 - Stop 2 | Cons: Confusing, no signs, very broken up, hard to tell where to cross, not safe, no ramps in some areas, "Impossible! Would never let kids walk in this area, lots of traffic, noise" |
| Route 4 - Stop 3 | Cons: Close to road, noisy, fast traffic, garbage, driveways, no buffers, too close to major road, landscape rocks on sidewalks, car exhaust |
| Route 4 - Stop 4 | Pros: Nice and wide, good wide sidewalks <br> Cons: Gutter/sidewalks aren't even, sewer is offset, trees need to be trimmed, crosswalks need timers, inconsistent signage, needs buffer |
| Route 5 - Stop 1 | Cons: Traffic noise, unevenness, cracks, tough grade for wheelchair, dangerous for kids |
| Route 5 - Stop 2 | Pros: Could have conversation with someone - but not comfortably <br> Cons: Weeds, cracks, unevenness, uncomfortable, noise, too close to traffic, very busy street without barriers, dangerous for kids, noisy |
| Route 5 - Stop 3 | Pros: Flowers were beautiful, away from road, less traffic, trees add comfort, nice playground areas Cons: Bridge had drop-off on both sides (near the pond) tough for elderly, may be uncomfortable at night, lack of lighting |
| Route 5 - Stop 4 | Pros: Not as busy as $5^{\text {th }}$ St., more people made it feel safer, traffic wasn't bad at this time of the day Cons: Vehicle traffic is close, noise, no crosswalk to Central HS, uneven sidewalks, no curb cuts near Civic Center, no shade |
| Route 6 - Stop 1 | Pros: Countdown timers on crossing signals, good timing, some wide walks (not all), clean sidewalks Cons: No crosswalk button on $5^{\text {th }}$ St (going south), lots of traffic, not enough cushion between traffic and pedestrians in area, skinny sidewalks, broken glass, needs bike lanes |
| Route 6 - Stop 2 | Pros: Comfortable, not a lot of traffic, 4-way stops, wide intersection, well-marked, plenty of time to cross, away from traffic, sidewalks in good shape <br> Cons: More continuous heavy traffic, no buffers, not good for children |
| Route 6 - Stop 3 | Pros: Crosswalk timers, wide sidewalks, nice landscaping, benches, trash cans, nice landscaping Cons: traffic, ally environment, slanted sidewalks, "Sketchy at night", no buffers |
| Route 6 - Stop 4 | Pros: Plenty of time to cross, wide, less traffic, parking spaces/medians helped <br> Cons: Close to traffic |
| Route 7 - Stop 1 | Pros: Had buffers, attractive, ADA ramps <br> Cons: "Had to look over shoulder the whole time to |


|  | make sure nobody was turning right", too much traffic, sidewalk cracks, needs to be repainted, high traffic area |
| :---: | :---: |
| Route 7 - Stop 2 | Pros: Not too much traffic, parking provides a good buffer between walkers and cars, more comfortable Cons: signage area, narrow by $5^{\text {th }}$ street, shrubs were in walking area, fence is too close to sidewalk, passing would be difficult, elderly/wheelchair problems |
| Route 7 - Stop 3 | Pros: Sidewalk was a good width, more pleasant and prettier than other areas, the planters and flower boxes made the walk more enjoyable <br> Cons: High traffic, alleys should have signage and painted crosswalks, ADA crosses felt awkward for wheelchairs, did not line up with sidewalk |
| Route 7 - Stop 4 | Pros: Access to the ADA ramps seemed wider, parking was used as a buffer <br> Cons: Alleys were uncomfortable to cross, sidewalks were bumpy for wheelchairs |
| Route 8 - Stop 1 | Pros: Good visibility, not a lot of congestion, clear crossing, not super dangerous <br> Cons: No sidewalk, not nice walking by the curb, close to traffic, noise, many utility boxes, no ramps, difficult for strollers, sidewalks are needed for hospital access from hotels |
| Route 8 - Stop 2 | Pros: Nice, good shape, countdown timers, crosswalks, hardly any traffic (on Saturday mornings), grass buffers, smooth, good ramps <br> Cons: Sidewalks were too narrow, walking by curb, traffic not paying attention |
| Route 8 - Stop 3 | Pros: Plenty of stop signs on cross streets, most was separated by grass buffers, sidewalks were far from the street <br> Cons: Cars have to pull out so far to see they block crosswalk, overgrown bushes and trees, lots of traffic, cracked and bumpy, uneven sidewalks |
| Route 8 - Stop 4 | Pros: One of the better areas, not as much traffic <br> Cons: No crosswalks, not handicap accessible on south side of sidewalks, no wheelchair ramp on $6^{\text {th }}$ Street and Flormann Street, trees have low branches |
| Route 9 - Stop 1 | Pros: Not much traffic, good sidewalks for most places, enough space between road and sidewalks, not too difficult to cross the street Cons: Some bumps on the roads and cracks, limited ramps for bikes and handicapped, no easy ramp across College Ave |
| Route 9 - Stop 2 | Pros: Side streets didn't have much traffic, some places easy to walk or push a chair <br> Cons: Water drains on sidewalk in front of school uneven and many cracks, street near school had more traffic |
| Route 9 - Stop 3 | Pros: road was paved, no dips or holes, paved half was easier to walk on and move over for cars approaching Cons: Gravel areas aren't suitable for wheelchairs |


| Route 9 - Stop 4 | Pros: Traffic on side streets was not as busy, nice wide sidewalks, ramps on Anamosa <br> Cons: Very uncomfortable on most of Anamosa St., most of the sidewalks were right next to the street, there were cracks in the sidewalks, missing pieces of sidewalk |
| :---: | :---: |
| Route 10 -Stop 1 | Pros: <br> Cons: More time was needed to cross Lacrosse St., Cars were driving too fast, made walkers feel uncomfortable, walkers didn't have enough time to cross streets |
| Route 10 - Stop 2 | Pros: Sidewalks were wide <br> Cons: Sidewalks had a lot of bumps, the incline of the sidewalk was difficult for those walking and those in wheelchairs/using walkers, cars were too close to sidewalks, gravel on sidewalk made it difficult for wheelchairs and walkers |
| Route 10 - Stop 3 | Pros: <br> Cons: Needs crosswalk, walkers felt safe during this walking time, but if walked at night would not feel safe, needs signage |
| Route 10 - Stop 4 | N/A |
| Route 11 - Stop 1 | Pros: Good lighting <br> Cons: Low hanging tree limbs |
| Route 11 - Stop 2 | Pros: Turning lane to help with traffic, light traffic Cons: Grade of sidewalks, no lighting, fast traffic, empty lot (across from Menards) needs maintenance, overgrown |
| Route 11 - Stop 3 | Pros: Light traffic <br> Cons: Uneven sidewalks, broken, lifted, cracks, sidewalk ends abruptly |
| Route 11 - Stop 4 | Pros: Lights, weeds managed, trail when sidewalk ended <br> Cons: No sidewalk, traffic speed, trash, trail ends, heavy fast traffic |

