KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
101 S Capitol Boulevard, Suite 301, Boise, ID 83702 P 208.338.2683 F 208.338.2685

DRAFT MEMORANDUM

Date:	March 7, 2012	Project #: 11962
To:	Jeff Lowe, Ada County Highway District Project Manager	
Cc:	Project Management Team (PMT) and Project Advisory Committee (PAC)	
From:	Andy Daleiden, PE, Marc Butorac, PE, PTOE; Yuri Mereszczak, PE; and Alison Tanaka	
Project:	Kuna Downtown Corridor Plan	
Subject:	Evaluation of Initial Streetscape and Corridor Concepts	

This memorandum summarizes the development and assessment of the initial streetscape and corridor concepts for the Kuna Downtown Corridor Plan (KDCP). The project team gathered ideas and input from numerous stakeholders, including agency staff from our Project Management Team (PMT) and Project Advisory Committee (PAC), attendees of Public Workshop #1 held on February 2, 2012 at Kuna High School, and members of the Kuna Senior Center which the team visited on March 2, 2012. From this input, the project team developed 23 initial corridor alignment concepts that could potentially serve the future transportation needs of the downtown. Each of these concepts was then evaluated using the agreed upon project evaluation criteria to assess their effectiveness in meeting the goals and objectives of the project. In addition, a range of 22 possible streetscape cross sections were developed and evaluated using the agreed upon project evaluation criteria.

The remainder of this memorandum summarizes the concepts and evaluation results and **recommends the seven corridor and eight streetscape concepts that should be carried forward for further evaluation**. These recommended concepts will be presented to the public via a website survey beginning March 9, 2012 and running until March 23, 2012, giving the public the opportunity to view the concepts and offer feedback on the recommendations. Following the website survey, feedback from the public will be incorporated into refinement of the recommended concepts and/or recommendation of other concepts. These final recommended concepts will be further refined to include the pedestrian and bicycle networks, local street connections, and intersection control types and presented at the upcoming PMT and PAC meetings and Public Workshop #2 on April 19, 2012.

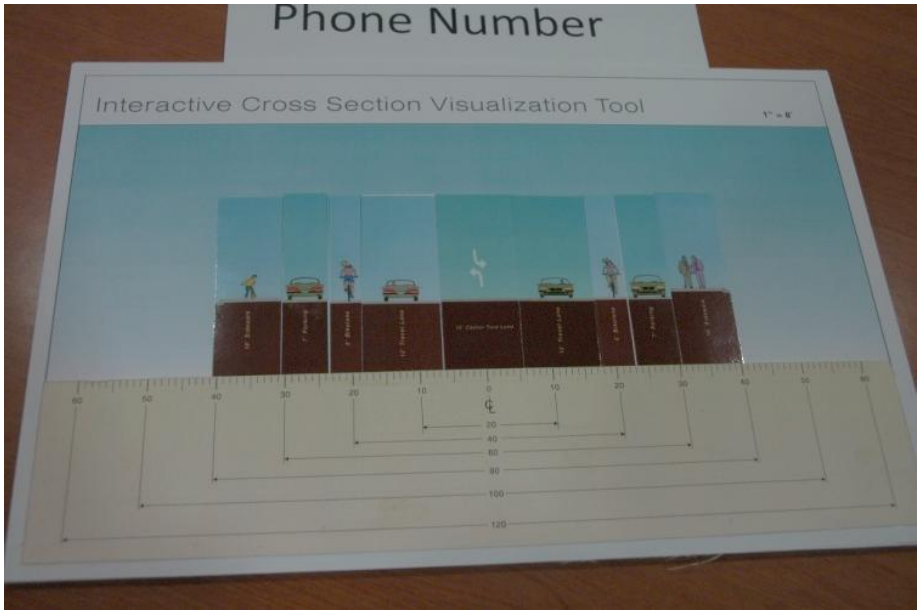
CONCEPT DEVELOPMENT PROCESS

Public Workshop #1 was held from 5:30 p.m. to 8:00 p.m. at Kuna High School on February 2, 2012. Additionally, PMT and PAC meetings were held earlier that day. Attendees at Public Workshop #1 and the PMT and PAC meetings were encouraged to develop initial corridor concepts and streetscape concepts for the study area based on their local knowledge and the additional information provided at the workshop. Approximately 60 people attended the public workshop and a total of 16 comment sheets, 26 corridor concepts, and 13 streetscape concepts were gathered. At the Kuna Senior Center meeting workshop, approximately 25 members participated in the workshop and provided the project team with an additional 8 corridor concepts, 5 streetscape concepts, and 3 comment sheets. **In total from these public and advisory committee meetings, the project team received 19 comment sheets, 46 corridor concepts, and 35 streetscape concepts.**

Attendees were encouraged to participate in two work stations to: 1) develop a set of initial streetscape concepts for Main Street, and 2) develop an initial set of corridor concepts for the study area. The attendees were divided into two groups and each group had approximately 30 minutes at each station and then the groups switched places. At the streetscape work station, attendees used a cross-section tool to identify different elements (i.e., travel lanes, median, bike lanes, on-street parking, sidewalks, and landscaping) for their preferred streetscape. Most of the attendees worked in groups of three or more. The project team took photos of each attendee's streetscape concept. Figures 1 and 2 illustrate the streetscape concept work station from Public Workshop #1.

Figure 1. Streetscape Concepts Being Developed at Public Workshop #1

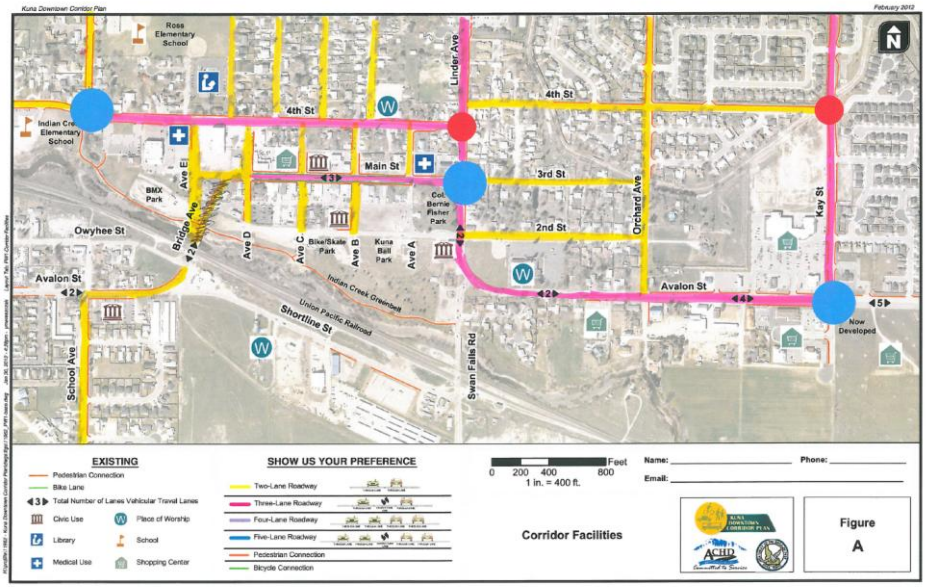
Figure 2. Streetscape Concept Example from Public Workshop #1



At the corridor work station, attendees used aerials and a set of markers and stickers to identify their preferred roadways (2, 3, 4, 5-lanes) intersections types (i.e., roundabout, traffic signals, all-way stop, two-way stop), and new pedestrian and bicycle connections. Attendees completed this effort on two 11x17 aerials and added their contact information to them. Most of the attendees worked on their own or in groups of two. Overall, a majority of the attendees stayed for the entire workshop. Figures 3 and 4 illustrate the corridor concept work station from Public Workshop #1.

Figure 3. Corridor Concepts Being Developed at Public Workshop #1

Figure 4. Corridor Concept Example from Public Workshop #1



The project team reviewed all 46 corridor concepts developed through the three public forums held on February 2, 2012 and one public forum on March 2, 2012 and consolidated them into 23 unique corridor concepts. For this initial concept development, these concepts are focused on the Avalon Street/Linder Avenue/Main Street/Bridge Avenue corridor. Following this initial evaluation of these corridor concepts, the recommended corridor concepts will be refined to include the pedestrian and bicycle networks, local street connections, and intersection control types. Similarly, the project team reviewed all 35 streetscape concepts and consolidated them into 22 unique streetscape concepts.

CORRIDOR CONCEPTS

The 23 unique corridor concepts for the Avalon Street/Linder Avenue/Main Street/Bridge Avenue corridor have been categorized into six groups, as described below. The corridor concepts are denoted with a "C" followed by a number (i.e., 1, 2, 3, 4, 5, and 6) representing the group the concept is assigned to, then followed by a "-" and a number, representing the unique concept identification number within its assigned group. All corridor concepts described above are depicted in figures in Appendix A.

- **Group 1: Reduced Capacity on Main Street (Road Diet)** – This group has a total of two concepts, labeled as C1-1 and C1-2. Both concepts remove the center turn lane median on Main Street, which results in a reduction in the cross-section from three vehicular travel lanes to two vehicular travel lanes.

- **Group 2: Increased Capacity on Avalon Street –** This group has a total of four concepts, labeled as C2-1, C2-2, C2-3, and C2-4. Each concept includes some level of widening on Avalon Street of 3-lanes, 4-lane, and 5-lanes, which results in an increased capacity on the corridor.
- **Group 3: Increased Capacity on Avalon Street with Bridge/Avenue "E" Realignment –** This group has a total of two concepts, labeled as C3-1 and C3-2. Both concepts are similar to Group 2, but also include a realignment of Bridge Avenue with Avenue "E". These two concepts both have a "T" intersection at the intersection of Bridge Avenue and Main Street.
- **Group 4: Downtown Couplet** - This group has a total of two concepts, labeled as C4-1 and C4-2. Concept C4-1 includes a one-way couplet comprised of 2nd Street and Main Street and Concept C4-2 includes a one-way couplet comprised of 4th Street and Main Street. Both concepts include widening of Avalon Street East to five lanes.
- **Group 5: Widening of Indian Creek Bridge** - This group has a total of three concepts, labeled as C5-1, C5-2, and C5-3. Each concept includes widening of the Avalon Street corridor to 3-lanes, 4-lanes, or 5-lanes, and a new bridge on Bridge Avenue over Indian Creek.
- **Group 6: Grade Separated Facilities –** This group has a total of ten concepts, labeled as C6-1 through C6-10. These concepts include some type of new bridge crossing over Indian Creek and the railroad tracks via Bridge Avenue, Swan Falls Road, School Avenue, an extension of Avalon Street over the park area, and/or an Avalon Street bypass via an extension of Shortline Street to connect with SH 69.

Corridor Concept Evaluation

Evaluation criteria were developed in collaboration with the PMT and PAC to assess the corridor concepts. Eleven criteria are used in the evaluation and are described below:

- Vehicular Mobility (Non-Freight) - Assesses the quality of flow for passenger vehicles.
- Freight Mobility – Assesses the quality of flow for trucks.
- Pedestrian Mobility – Assesses the ease of movement for pedestrians, including the addition of sidewalks or pathway connections.

- Bicycle Mobility – Assesses the ease of movement for bicyclists, including the addition of bicycle connections.
- Local Access – Assesses access to neighborhoods, businesses, and public facilities.
- Safety – Assesses the safety for all modes of travel and access for emergency services.
- Impacts to Natural Environment – addresses the environmental impacts to the Indian Creek area, parks, and/or other open spaces.
- Impacts to Built Environment – addresses the impacts to right-of-way or impacts to structures.
- Land Use Compatibility – assesses the concept's consistency with the comprehensive plan and accommodation for future growth.
- Flexibility of Implementation – assesses the constructability and phasing of the concept
- Cost Effectiveness - Qualitatively evaluates the relative overall magnitude of design and construction costs of the corridor elements.

Each corridor concept was assigned a score of -1 (poor), 0 (fair) or 1 (good) depending on how the concept does or does not meet each of the specific evaluation criteria. This evaluation was performed through independent analyses to assess each concept individually and relative to other concepts to determine its effectiveness in meeting the various project goals, objectives, and evaluation criteria. The scores in each category were summed to provide a total score for each concept and these scores are summarized below in Table 1. Gray shading highlights corridor concepts that are initially recommended for further evaluation. Appendix B includes the detailed evaluation of each corridor concept.

Table 1 Evaluation Matrix of Corridor Concepts for Avalon Street/Linder Avenue/Main Street/Bridge Avenue

Evaluation Criteria	C1-1	C1-2	C2-1	C2-2	C2-3	C2-4	C3-1	C3-2	C4-1	C4-2	C5-1	C5-2	C5-3	C6-1	C6-2	C6-3	C6-4	C6-5	C6-6	C6-7	C6-8	C6-9	C6-10
Vehicular Mobility (Non-Freight)	-1	**-0.5**	-1	-1	**0**	**1**	-1	0	0	**0**	-1	**0**	0	1	1	1	1	0	**1**	1	**1**	0	1
Freight Mobility	-1	**-1**	-1	-1	**-1**	**-1**	-1	-1	-1	**-1**	-1	**-1**	-1	1	1	1	1	0	**1**	1	**1**	0	1
Pedestrian Mobility	-1	**0**	1	0	**0**	**0**	1	0	1	**1**	1	**1**	-1	0.5	0.5	0.5	0	1	**0.5**	0	**0.5**	0.5	0
Bicycle Mobility	-1	**1**	1	1	**1**	**1**	1	1	1	**1**	1	**1**	0	0.5	0.5	0.5	0	1	**0.5**	0	**0.5**	0.5	1
Local Access	-1	**0**	-1	0	**0**	**1**	-1	0	0	**0**	0	**1**	0	0	0	0	0	0	**1**	1	**1**	1	0
Safety	-1	**-1**	-1	-1	**-1**	**0**	0	0	1	**1**	-1	**0**	-1	1	1	1	0	1	**1**	1	**1**	1	1
Impacts to Natural Environment	1	**1**	1	1	**1**	**1**	0	0	0	**1**	1	**1**	1	-1	-1	-1	-1	-1	**-1**	-1	**-1**	-1	-1
Impacts to Built Environment	1	**1**	1	0	**1**	**0**	0	0	-1	**-1**	1	**0**	-1	-1	-1	-1	-1	-1	**-1**	-1	**-1**	-1	-1
Land Use Compatibility	-1	**0**	-1	-1	**0**	**0**	0	0	0	**0**	0	**0**	-1	0	0	0	0	1	**1**	0	**1**	-1	0
Flexibility of Implementation	1	**1**	1	1	**1**	**1**	1	1	0	**0**	0	**0**	-1	-1	-1	-1	-1	-1	**-1**	-1	**-1**	-1	-1
Cost Effectiveness	1	**1**	1	1	**1**	**-1**	0	0	0	**0**	-1	**-1**	-1	-1	-1	-1	-1	-1	**-1**	-1	**-1**	-1	-1
Corridor Concept Total Score	-3	**2.5**	1	0	**3**	**3**	0	1	1	**2**	0	**2**	-6	0	0	0	-2	0	**2**	0	**2**	-2	0

Based on the initial evaluation of the corridor concepts as shown in Table 1, the project team assigned the 23 corridor concepts into the following three categories; "Recommended for Further Review", "Under Consideration for NO Further Review", and "Recommended for NO Further Review".

The "Recommended for Further Review" concepts were those with a total score of greater than "1." These concepts appear to satisfy many of the project goals and objectives and should be carried forward to the next phase of evaluation. Corridor Concepts C1-2, C2-3, C2-4, C4-2, C5-2, C6-6, and C6-8 are initially recommended and assigned by the project team to this category.

"Under Consideration for NO Further Review" are those concepts scoring generally neutral on the matrix chart and are currently under consideration by the project team to determine whether they should be further evaluated during the next phase of the project. These include C2-1, C2-2, C3-1, C3-2, C4-1, C5-1, C6-1, C6-2, C6-3, C6-5, C6-7, and C6-10.

"Recommended for NO Further Review" concepts are those scoring lowest in the matrix and are recommended by the project team to no longer be assessed during subsequent evaluation phases, as they do not satisfy most of the project goals and objectives. These include concepts C1-1, C5-3, C6-4, and C6-9. Table 2 summarizes the project team's initial corridor concept recommendations for the Avalon Street/Linder Avenue/Main Street/Bridge Avenue corridor.

Table 2 Project Team's Initial Corridor Concept Recommendations

Initial Project Team Recommendations	Corridor Concepts
Recommended for Further Review	C1-2, C2-3, C2-4, C4-2, C5-2, C6-6, and C6-8
Under Consideration for NO Further Review	C2-1, C2-2, C3-1, C3-2, C4-1, C5-1, C6-1, C6-2, C6-3, C6-5, C6-7, and C6-10
Recommended for NO Further Review	C1-1, C5-3, C6-4, and C6-9

STREETSCAPE CONCEPTS

The 22 unique streetscape concepts for Main Street have been grouped into two distinct categories: "Asymmetrical" and "Symmetrical" concepts. The "Symmetrical" concepts feature two, three-, and five-lane streetscapes with identical half-street cross-sections, while the "Asymmetrical" concepts generally place the pedestrian and bicycle facilities, or on-street parking facilities on only one side of the roadway and feature two- and three-lane concepts. All streetscape concepts described below are depicted in figures in Appendix C.

Streetscape Concept Groups

The two groups include "Asymmetrical" and "Symmetrical" streetscape concepts. The "Asymmetrical" streetscape concepts are denoted with an "A" and the "Symmetrical" streetscape concepts are

denoted with an "S" prior to the concept number (i.e., 1a, 2a…). Some concept numbers include an "a", "b", "c' notation, which represents concepts that have the same cross-section width.

There are six "Asymmetrical" streetscape concepts labeled A1a, A2a, A3a, A3b, A4a, and A5a. All of these concepts have cross-section widths that range between 71 and 80 feet. There are sixteen "Symmetrical" streetscape concepts. These concepts include six streetscape concepts with a width less than 80 feet, eight streetscape concepts with a width equal to 80 feet, and two streetscape concepts with a width greater than 80 feet.

Streetscape Concept Evaluation

Evaluation criteria were developed with the PMT and PAC to assess the streetscape concepts. Seven criteria are used in the evaluation and are described below:

- Aesthetic Enhancement - Assesses the visual character of the corridor.
- Environmental/Livability Factors – Assesses the impacts to the built environment based on an existing right-of-way of 80 feet for Main Street.
- Multimodal Safety - Evaluates the relative safety and comfort provided for all users, especially non-auto travelers.
- Maintenance - Considers the issues and requirements related to ongoing maintenance and upkeep, including drainage system, pavement, and landscape maintenance.
- Functionality - This criterion considers the effectiveness and efficiency for the facility to serve all travel modes—passenger cars, trucks, buses, bicycles and pedestrians, and meet projected traffic demands.
- Cost Effectiveness - Qualitatively evaluates the relative overall magnitude of design and construction costs of the streetscape elements.

Each streetscape concept was assigned a score of -1 (poor), 0 (fair) or 1 (good) depending on how the concept does, or does not meet each of the specific evaluation criteria. This evaluation was performed through independent analyses to assess each concept individually and relative to other concepts to determine its' effectiveness in meeting the various project goals, objectives, and evaluation criteria.

The scores in each category were summed for a total score of each concept and these scores are summarized below in Table 3. Gray shading highlights streetscape concepts that are initially recommended for further evaluation. Appendix D includes the detailed evaluation of each streetscape concept.

Table 3 Evaluation Matrix of Streetscape Concepts for Main Street

Evaluation Criteria	A1a	A2a	A3a	A3b	A4a	A5a	S1a	S2a	S3a	S3b	S3c	S3d	S4a	S4b	S4c	S4d	S4e	S4f	S4g	S4h	S5a	S6a
Aesthetic Enhancement	0	0	**0**	0	0	**0**	1	1	**1**	**0.5**	**0**	**1**	1	1	0	-1	0	0	0	**1**	0	1
Environmental/Livability Factors	1	0	**0**	0	0	**0**	1	0	**0**	**0**	**0**	**0**	0	0	0	0	0	0	0	**0**	-1	-1
Multimodal Safety	0	-1	**0**	-1	-1	**1**	1	1	**1**	**1**	**1**	**1**	0.5	-1	-1	-1	0	-0.5	-1	**1**	0	0
Maintenance	0	0	**0**	0	0	**0**	-1	-1	**-1**	**0**	**0**	**0**	-1	-1	0	0	0	0	0	**-1**	0	-1
Functionality	0	0	**1**	0	1	**1**	-1	0	**1**	**0.5**	**0.5**	**0.5**	1	0	0	-0.5	1	1	0	**0.5**	0	1
Cost Effectiveness	-1	-1	**0**	0	0	**0**	-1	-1	**-1**	**-1**	**-0.5**	**-0.5**	-1	-1	1	-1	-1	-0.5	-0.5	**-1**	-1	-1
Streetscape Total Score	0	-2	**1**	-1	0	**2**	0	0	**1**	**1**	**1**	**2**	0.5	-2	0	-3.5	0	0	-1.5	**0.5**	-2	-1

The 22 streetscape concepts have initially been qualitatively assessed by the project team against the proposed corridor needs, project goals, and evaluation criteria listed above. Based on the initial high level assessments, the project team has assigned the 22 streetscape concepts into the following three categories; "Recommended for Further Review", "Under Consideration for NO Further Review", and "Recommended for NO Further Review".

The "Recommended for Further Review" concepts were ones with a positive total score on the evaluation matrix that appear to meet the project goals and should be carried forward to the next phase of evaluation. Streetscape Concepts A3a, A5a, S3a, S3b, S3c, S3d, S4a, and S4h are initially recommended and assigned by the project team to this category.

"Under Consideration for NO Further Review" are concepts scoring generally neutral on the matrix chart and are currently under consideration by the project team to determine whether they should be further evaluated during the next phase. These include A1a, A4a, S1a, S2a, S4c, S4e, and S4f.

"Recommended for NO Further Review" concepts are those scoring lowest in the matrix and have been initially recommended by the project team to no longer be assessed during subsequent evaluation phases, as they do not meet the project goals. These include concepts A2a, A3b, S4b, S4d, S4g, S5a, and S6a. Table 4 summarizes the initial project team's streetscape concept recommendations for Main Street.

Table 4 Initial Project Team's Streetscape Concept Recommendations

Initial Project Team Recommendations	Streetscape Concepts for Main Street
Recommended for Further Review	A3a, A5a, S3a, S3b, S3c, S3d, S4a, and S4h
Under Consideration for NO Further Review	A1a, A4a, S1a, S2a, S4c, S4e, and S4f
Recommended for NO Further Review	A2a, A3b, S4b, S4d, S4g, S5a, and S6a

NEXT STEPS

At this time, we encourage the public, PMT, and PAC to review the initial project team's recommendations presented in this memorandum and to provide the team with comments on whether you support or do not support the **recommended corridor (C1-2, C2-3, C2-4, C4-2, C5-2, C6-6, C6-8)** and **streetscape (A3a, A5a, S3a, S3b, S3c, S3d, S4a, S4h) concepts** being carried forward for further evaluation. Please provide any comments to Jeff Lowe by March 23, 2012.

APPENDIX

- Appendix A – Corridor Concept Figures
- Appendix B – Corridor Concepts Detailed Evaluation
- Appendix C – Streetscape Concept Figures
- Appendix D – Streetscape Concepts Detailed Evaluation