Appendix A

Recommended Projects
1. North-South Pathway

Limits: University Ave and Anatomy and Zoology Building

Creates a key north-south connection through the center of campus

EXISTING CONDITIONS

• No parallel route east of dismount zone for north-south movement
• Series of 6’ sidewalks between buildings that are too narrow for bicycle and pedestrian traffic.
• No existing route south of Pitkin Street without using parking lots

RECOMMENDATION

• Construct new 12’ shared path through open spaces between buildings east of the Dismount Zone
• Centerline and pavement markings to reduce conflicts

Construction Cost Estimate: $240,000
2. East Elizabeth Street - University Avenue Path

Limits: Elizabeth Street and University Avenue

Provides convenient access from major campus entry point

RECOMMENDATION

• Remove existing 6’ sidewalk
• Construct new 12’ shared path from Elizabeth Street to the Mason Trail
• Split the path approaching Elizabeth Street to line up with eastbound and westbound bicycle lanes on Elizabeth Street
• Centerline and markings provided to reduce conflicts

Construction Cost Estimate: $51,000

EXISTING CONDITIONS

• Existing 8’ sidewalk from College and Elizabeth intersection to University Avenue that is too narrow for bicycle and pedestrian traffic
• the path aligns with westbound bike lane resulting in contraflow westbound bicycle riding or diagonal intersection crossings
• Important connection to neighborhoods on the east side of campus via Elizabeth Street bike lanes
3. East Drive + Amy Van Dyken Way
Limits: Oval Drive and University Avenue, Oval Drive and West Pitkin Street

Enables two-way bicycle traffic on one-way streets

EXISTING CONDITIONS
- One-way streets result in wrong-way riding
- Left-side bicycle lanes creates unexpected conflicts with motor vehicles at intersections with Oval Drive

RECOMMENDATION
- Convert existing bike lane into a buffered contraflow bike lane
- Add shared lane markings to travel lane spaced 100’ apart

Construction Cost Estimate: $38,000
4. Oval Drive to Transit Depot Connection
Limits: Oval Drive and North Drive

Links high-traffic bicycle areas and helps reduce potential conflicts

RECOMMENDATION

• Construct a new 12’ shared path in coordination with redevelopment of Engineering Parking Lot into parking garage
• Extend pathway to intersect with shared pathway north of Transit Depot
• Centerline and markings provided to reduce conflicts

Construction Cost Estimate: $101,000

EXISTING CONDITIONS

• Currently part of the dismount zone
• Narrow pathway with high traffic
• Building entrances are close to pathway and can lead to pedestrian-bicycle conflicts due to poor sight lines
5. Laurel Hall to Transit Depot Connection

Limits: Oval Drive and North Drive

Formalizes existing high-traffic bicycle route

**RECOMMENDATION**

- Construct a new 12’ shared path in coordination with redevelopment of Engineering parking lot into parking garage
- Remove existing 6’ sidewalk across north end of Oval
- Replace existing sidewalk with 12’ shared path across north end of the Oval
- Centerline and markings provided to reduce conflicts

**Construction Cost Estimate:** $126,000

**EXISTING CONDITIONS**

- Route currently used by bicyclists through parking lot creates potential conflicts with automobile traffic
- Sidewalk through Oval too narrow to be shared by pedestrians and bicyclists
6. Plum Street
Limits: South Shields Street and North Drive

Upgrades existing facility to provide separation for bicyclists

**RECOMMENDATION**

- In near term, stripe buffered bicycle lanes
- In long term, retrofit street with curb-level protected bike lanes

Construction Cost Estimate (near-term): $20,000
Construction Cost Estimate (long-term): $2,502,000

**EXISTING CONDITIONS**

- Standard bicycle lanes on a two-lane roadway
- Wide roadway can encourage higher automobile travel speeds which are addressed today with stop sign at the Intramural Gym
- Converting to buffered bike lanes in fall 2014
7. University Avenue
Limits: Center Avenue Mall and South College Avenue

Upgrades existing facility to provide separation for bicyclists

RECOMMENDATION

- In near term, stripe buffered bicycle lanes
- In long term, retrofit street with curb-level protected bike lanes with design to accommodate high-volume bicycle parking near dismount zone

**Construction Cost Estimate (near-term): $12,000**
**Construction Cost Estimate (long-term): $1,501,000**

EXISTING CONDITIONS

- Standard bicycle lanes on a two-lane roadway
- Wide roadway can encourage higher automobile travel speeds
8. University Avenue
Limits: Meridian Avenue and Dismount Zone

Defines space for bicyclists and pedestrians on former roadway

**RECOMMENDATION**

- In near term, define pedestrian and bicycle spaces on existing roadway by striping two-way bike lane in center of street and pedestrian lanes on edges of street adjacent to sidewalk.
- In long term, construct a separated bicycle and pedestrian pathway utilizing the existing roadway space.

**Construction Cost Estimate (near-term):** $20,000

**Construction Cost Estimate (long-term):** $1,001,000

**EXISTING CONDITIONS**

- Existing roadway where automobile use is prohibited
- There is minimal striping on the roadway
- Bicycles and pedestrians do not adhere to traffic pattern indicated by current striping
9. Oval Drive at Admin Building

Limits: East Drive and Amy Van Dyken Way

Provides bicyclists with shorter route and helps to minimize conflicts

**RECOMMENDATION**

- Remove existing 6’ sidewalk in front of Administration Building along Oval
- Construct 12’ shared path for two-way bicycle travel routed south of existing entry columns at sidewalk to Administration
- Route bicyclists between Statistics and Engineering buildings to access pathway north of Engineering

*Construction Cost Estimate: $51,000*

**EXISTING CONDITIONS**

- Bicyclists riding wrong way on Oval Drive to access destinations to the north and west can create conflicts with automobiles
- Existing sidewalk is narrow (6’ attached sidewalks) and for pedestrian use only

![Map and diagram of Oval Drive at Admin Building]
10. Meridian Avenue
Limits: West Plum Street to South Drive

Creates a key north-south connection through the center of campus

**RECOMMENDATION**

- Street will accommodate transit, bicyclists, and pedestrians
- In near term, stripe buffered bike lanes
- In long term, restrict private automobile access and create a transit- and bike-only street with a separated two-way bicycle facility on the west side of the street.

*Construction Cost Estimate (near-term): $12,000*

*Construction Cost Estimate (long-term): $1,501,000*

**EXISTING CONDITIONS**

- The intersection includes the end of a diagonal shared use path in the southeast corner
- Pedestrians and cyclists often cross the intersection diagonally, which can lead to delays and crashes
- Lack of striping to clearly define the multiple modes use of the roadway
11. Pitkin Street (west portion)
Limits: South Shields Street to Newton’s Corner

Upgrades existing facility to provide separation for bicyclists

RECOMMENDATION

- In near term, restripe street to construct a two-way protected bike lane on south side of street with flexible bollard separation from automobile traffic and remove legacy signage from when street was open to all traffic
- In long term:
  - Install mini circle at intersection with former Braiden Drive separated bikeway to control bicycle traffic speeds through congested area
  - Retrofit street with curb-level protected bicycle lanes

Construction Cost Estimate (near-term): $57,000
Construction Cost Estimate (long-term): $3,039,000

EXISTING CONDITIONS

- In open portion, standard bicycle lanes on a two-lane roadway
- In closed portion, same markings as open portion left over from when street was open to automobiles
- Part of City of Fort Collins 2020 Low-Stress Bicycle Network
12. Pitkin Street (east portion)
Limits: Newton’s Corner to South College Avenue

Provides a high-quality east-west through route

**RECOMMENDATION**

- Remove dismount zone prohibition at Newton’s Corner for east-west travel
- Stripe shared path markings on north side of Newton’s Corner sculpture
- Stripe buffered bike lanes on roadway

*Construction Cost Estimate: $33,000*

**EXISTING CONDITIONS**

- Standard bike lanes are minimal facility type
- Travel lanes are 12.5’ wide and can potentially lead to increased vehicle speeds
- Dismount zone inconveniences through bicycle travel
- Part of City of Fort Collins 2020 Low-Stress Bicycle Network
13. Lake Street
Limits: South Shields Street and South College Avenue

Upgrades existing facilities on this key alternative to Prospect Street

**RECOMMENDATION**
- Potential for retrofit to create a shared street along stadium frontage to Center Avenue
- In long term, construct curb-level protected bike lanes per recommendation of City of Fort Collins West Central Area Plan for entire length from Shields Street to College Avenue, excepting shared street area

*Construction Cost Estimate: $5,004,000*

**EXISTING CONDITIONS**
- Standard bike lanes on two-way roadway

*Shared street example in Orlando, FL*
14. South Drive
Limits: South Shields Street and Health Center Lot

Provides two-way bicycle facility to avoid pedestrian and auto conflicts

**RECOMMENDATION**
- Construct separated two-way bicycle facility on south side of roadway
- Separate two-way bike lane from travel lane with flexible delineators
- Remove parking on south side of South Drive to accommodate this facility

*Construction Cost Estimate (near-term): $38,000*
*Construction Cost Estimate (long-term): $1,090,000*

**EXISTING CONDITIONS**
- Bicyclists currently ride against traffic on street or sidewalk today to access residence halls and dining facilities
- No westbound bicycle facility is present
15. Southwest Campus Bikeways
Limits: West Pitkin Street and West Lake Street; University Avenue and West Lake Street

Creates a key north-south connection through the center of campus

**RECOMMENDATION**
- Widen existing pathway from Pitkin Street to Lake Street into separated bicycle and pedestrian pathways.
- Integrate paths into the east and west side of the proposed stadium

*Construction Cost Estimate: $152,000*

**EXISTING CONDITIONS**
- Existing paths too narrow to accommodate both bicycle and pedestrian traffic
- Some north-south connectivity provided through parking lots which creates potential conflict with automobiles.
16. Pitkin-Shields-Springfield Intersection

Provides a comfortable and safe crossing of South Shields Street

**EXISTING CONDITIONS**

- Offset crossing necessitates biking on Shields Street
- Crossing five-lane arterial street is very difficult without a traffic control or warning to stop north-south traffic on Shields Street
- Part of City of Fort Collins 2020 Low-Stress Bicycle Network

**RECOMMENDATION**

- Construct 2-way side path segment on east side of South Shields Street between West Pitkin Street and Springfield Drive
- Reconstruct median on West Pitkin Street to accommodate 2-way separated bicycle facility on the south side of West Pitkin Street
- Construct two raised crosswalks on West Pitkin Street to provide traffic caliming of turning motorists at the intersection with Shields Street and increased pedestrian and bicyclist visibility
- Install HAWK (High intensity Activated crossWalK) Signal at Shields Street and Springfield Drive in conjunction with new regulatory signage and advance stop line striping to alert motorists of the new pedestrian/bicyclist crossing
- Add median refuge island and new sidewalk ramps for crossing of South Shields Street on the north side of Springfield Drive
- Install curb extensions on southeast corner of West Pitkin Street and northwest corner of Springfield Drive to accommodate the transition from the 2-way separated bike facilities to the 2-way side path and HAWK signalized crossing of Shields Street at Springfield Drive

**Construction Cost Estimate: $310,000**
17. College Avenue & Elizabeth Street Intersection

Decreases opportunity for bicycle/automobile/pedestrian conflicts

**RECOMMENDATION**

- Improve signal timing by increasing crossing time and shortening cycle length
- Add second curb ramp for bicycles that aligns with new crosswalk on south leg of College Avenue at Elizabeth Street
- Add bicycle signals to notify bicyclists of appropriate crossing phase

*Construction Cost Estimate: $18,000*

**EXISTING CONDITIONS**

- Current intersection configurations leads to myriad, unpredictable approaches to crossing the intersection
- Many bicycle/automobile/pedestrian conflict points created through variety of movements
18. Oval Drive Crossings

Calms traffic speeds and highlights bicycle/pedestrian crossings

**RECOMMENDATION**

- Add raised crosswalks to slow vehicular movement and create awareness of bicycle and pedestrian crossings

**Construction Cost Estimate:** $37,000

**EXISTING CONDITIONS**

- East side of oval has difficult sightlines for northbound vehicles to see bicyclists
- Bicyclists were observed using the diagonal pathway across the Oval to access the Engineering building

*Raised crosswalk example from Columbia, MD*
19. Plum Street & Meridian Avenue Intersection

**Existing Conditions**

- Bicycles and pedestrians currently cross intersection in many different routes, including diagonally.
- Intersection includes two streets and the terminus of a shared path

**Recommendation**

- Construct a raised intersection to create a flush crossing for bicycles and pedestrians and to slow vehicular movements
- Add mini traffic circle to deter diagonal movements through the intersection

**Construction Cost Estimate: $18,000**

 Raised intersection example from Cambridge, MA
### EXISTING CONDITIONS

- Bicycle access to and from the diagonal pathway is difficult and lead to unconventional movements.
- Northbound bicyclists observed crossing at various times during signal cycle
- Intersection treatment needed to prevent bicyclists from crossing intersection diagonally or facilitate this movement safely

### RECOMMENDATION

- In near-term, project part of Laurel Street design for City of Fort Collins
- Halve cycle length
- Add two-stage crossing boxes and/or bicycle signals
- With implementation of protected bicycle lane on Laurel, add protected intersection

**Construction Cost Estimate (near-term):** $18,000  
**Construction Cost Estimate (long-term):** $103,000
21. Lake Street and Center Avenue Intersection

Present opportunity for gateway treatment at major bicycle access point

**EXISTING CONDITIONS**

- Current operational challenges with high volumes of multiple modes at peak period
- Intersection is an all-way stop with the northern leg exclusive to pedestrians and bicycles
- Peak period congestion and with confusion about functionality of pathway to the north of the intersection

**RECOMMENDATION**

- If shared street is not implemented per recommendation for Lake Street, construct a raised intersection with gateway treatments to put all modes on equal footing and welcome visitors to campus

*Construction Cost Estimate: $310,000*
22. Elizabeth Street + Shields Street; Parking Lot

Creates safe and comfortable crossing at major campus access point

**RECOMMENDATION**
- In near term, define pathway through parking lot for bicyclists with green painted bike lanes
- In long term, convert intersection to a protected intersection with implementation of Shields protected bike lanes

*Construction Cost Estimate (near-term): $43,000*
*Construction Cost Estimate (long-term): $376,000*

**EXISTING CONDITIONS**
- The three lanes for traffic exiting CSU from the Parking Lot 195 opposite Elizabeth Street are likely necessary only for peak event usage
- Conflicts between through bicyclists and right turning vehicles out of the parking lot
- Currently prioritizes auto movements
- Lack of defined space for bicyclists

Protected Intersection
23. South Drive & Meridian Avenue Intersection

Creates more rational traffic patterns at a high-volume intersection

RECOMMENDATION

- In near term, manage the traffic with Ram Guards
- In long term, construct an intersection with mini traffic circle to direct traffic that accommodates new two-way bike facility on south side of South Drive

Construction Cost Estimate: $207,000

EXISTING CONDITIONS

- Current traffic patterns can be chaotic at peak traffic times of day
- Bicycle movements through intersection are unpredictable due to wrong-way riding on the west leg of South Drive

Mini circle example from Portland, OR
24. Center Avenue & Prospect Street Intersection

Eliminates potential conflicts for automobiles, bicyclists, and pedestrians

EXISTING CONDITIONS

- Major connection point from South Campus to Main Campus for all modes
- Northbound bike lane on Center Avenue terminates before intersection forcing bicyclists to share space with automobiles

RECOMMENDATION

- Investigate feasibility of underpass in conjunction with Aggie Village site development and West Central Plan recommendations for West Prospect Road.

Construction Cost Estimate: $1,000,000

Underpass at Mountain Vista Road and Turnberry Road
25. South Campus East-West Path

Limits: Center Avenue to Mason Trail

Creating a key connection from Campus to the high-use Mason Trail

**RECOMMENDATION**

- Construct shared path from Mason Trail through campus
- Three options exist for the location of this path, and they should be studied to determine which is the most feasible and most useful for bicyclists:
  - Through open space north of NRRC building complex
  - Along Niswender Road
  - North of pond off of the main parking area for the veterinary hospital building

**EXISTING CONDITIONS**

- Current connection from the Mason Trail to South Campus is only along Drake Road or the Spring Creek Trail
- New bicycle/pedestrian bridge near terminus of Pheminster Street is a major destination for bicycle traffic
26. South Campus Bike Lane Upgrades

Limits: Varies

Upgrades existing bicycle facilities

RECOMMENDATION

- In near term, stripe buffered bike lanes on Research Boulevard, Gilette Drive, and Center Avenue
- In long term, add protected bike lanes on all three streets and Rolland Moore Drive as development occurs and traffic increases

Construction Cost Estimate (near-term): $221,000
Construction Cost Estimate (long-term): $12,510,000

EXISTING CONDITIONS

- Center Avenue and Gillette Drive have 6’ bike lanes
- Research Blvd has 13’ shared bike/parking lanes which place bicyclists in the door zone of parked cars
- Rolland Moore Drive has no bicycle facilities
27. Gillette Drive to Research Boulevard Path

**Limits: Gillette Drive to Research Boulevard**

Provides a connection between South Campus destinations

**RECOMMENDATION**

- Construct 12’ shared path across open space between Gillette Drive and Research Boulevard
- Incorporate shared path into design of new surface parking planned for this area
- Reconstruct footbridge to allow for bicyclist and ADA access

**Construction Cost Estimate:** $228,000

**EXISTING CONDITIONS**

- Pedestrians and bicyclists cross this open space on informal dirt “goat paths”
- Footbridge over ditch adjacent to Gillette Drive has stairs at both ends preventing ADA access and easy bicyclist access
28. Rampart Road

Limits: Overland Trail to end of road

Provides a facility for bicyclists and pedestrians to access south Foothills

**EXISTING CONDITIONS**

- No dedicated facilities for bicyclists on Rampart Road, the main entrance to the south part of Foothills Campus
- No sidewalk for pedestrian access

**RECOMMENDATION**

- Construct 12’ shared path to north side of Rampart Road
- Terminate path at connection to Project 30

**Construction Cost Estimate:** $360,000
29. Foothills North-South Path
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Limits: Rampart Road to Laporte Avenue

**Creates north-south route to connect the Foothills Campus**

**RECOMMENDATION**

- Construct a shared path to connect south and north campus along existing fence at the western edge of CSU/Federal buildings

*Construction Cost Estimate: $540,000*

**EXISTING CONDITIONS**

- Unimproved, steep dirt and gravel road connects the north and south portions of Foothills Campus
30. Laporte Drive
Limits: N Overland Trail and End of Laporte Avenue

Provides a bicycle facility up to main Foothills Campus entrance

**RECOMMENDATION**
- In near term, add SHARE THE ROAD signage to Laporte Drive with existing 4’ shoulders
- In long term, restripe to widen shoulders to 6’ bike lanes through narrowing automobile travel lanes

*Construction Cost Estimate (long-term): $125,000*

**EXISTING CONDITIONS**
- Four-foot shoulders exist today and are used by bicyclists accessing the northern portion of Foothills Campus
31. Foothills Trail Connection

Limits: Existing northern and southern portions of Foothills Trail

Provides alternative to riding on high-stress County Route 38

RECOMMENDATION

• Construct unpaved trail connection along recommended alignment.

Construction Cost Estimate: $70,000

EXISTING CONDITIONS

• Gap in the Foothills Trail through the Foothills Campus

• Requires bicyclists to ride along County Route 38 which has poor sight lines and high-speed traffic
32. Rampart Road Extension
Limits: Terminus of shared path to facility access gates

Alerts drivers to presence of bicyclists in a high-traffic area

RECOMMENDATION
- Add shared lane markings and “Share the Road” signs to roadway

Construction Cost Estimate: $6,000

EXISTING CONDITIONS
- 24’ roadway has no markings
- Heavy commuter traffic accesses the Centers for Disease Control facility