


# Grindstone Creek Trail Summary

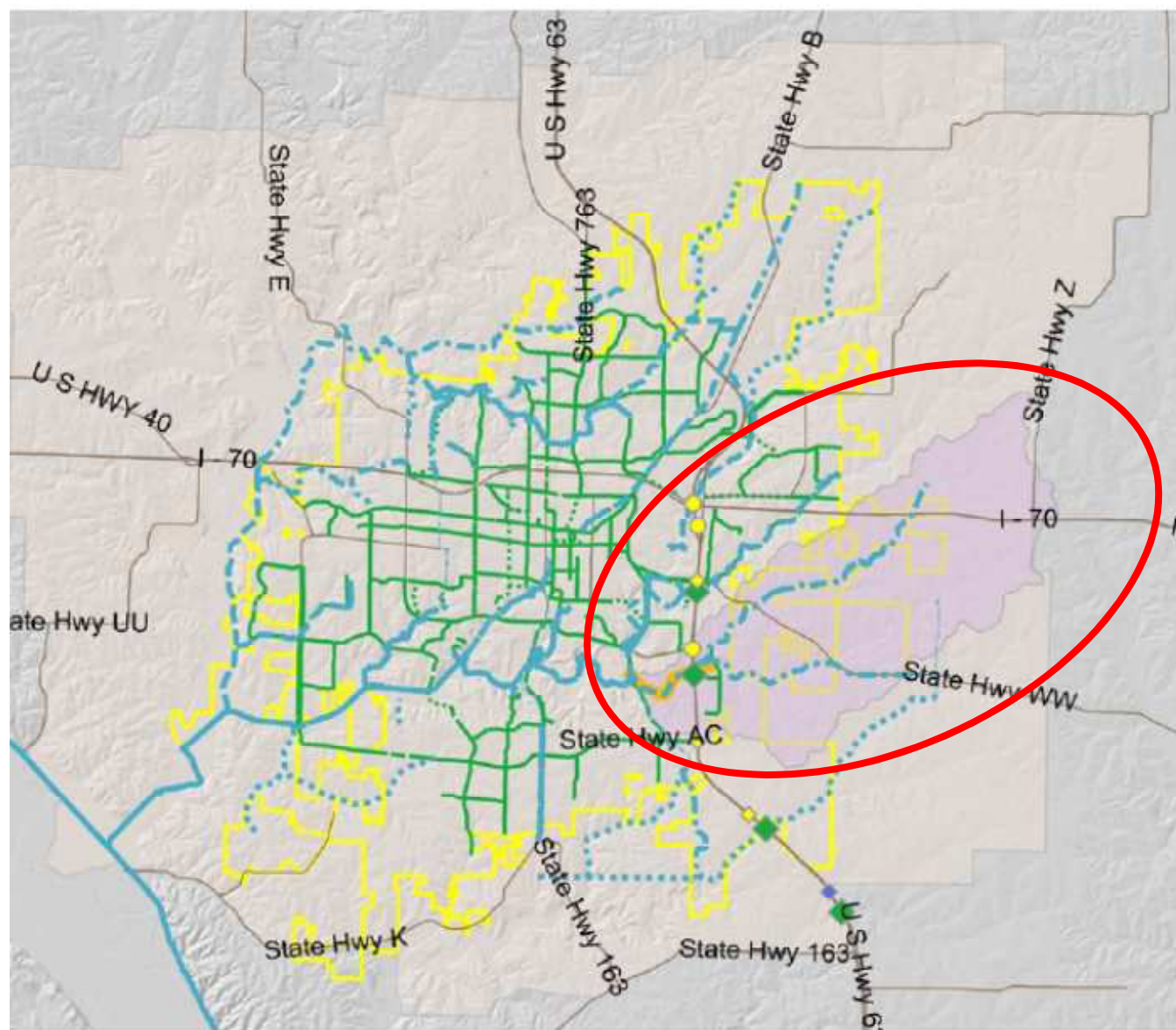
- \$1.57 million budget (appr \$1.4 million balance)
  - 2010 Park Sales Tax
  - Included in Council Resolution & ballot promotions that voters approved in November 2010.
- Included in lease with MDC on Waters-Moss Wildlife Area
- Only recreational trail in this portion of city that provides connection to an estimated:
  - 5,000 residents
  - 3,000 jobs
  - Battle High School

 <b>CITY OF COLUMBIA</b>		
<b>5. What projects will be funded by the 2010 Park Sales Tax, if Proposition 1 is approved by voters?</b> After collecting public input, the City Council passed a resolution at the August 16, 2010 Council Meeting authorizing the 2010 Park Sales Tax funds, if Proposition 1 is passed, to be used for the following projects:		
PROJECT DESCRIPTION	PROJECT AMOUNT	CATEGORY AMOUNT
<b>Acquisition/Land Preservation</b>		<b>\$2,025,000</b>
Acquire Land for community parks, greenbelts, green space, wildlife corridors, and natural area preservation	\$1,525,000	
Acquire land for new neighborhood parks (an amount up to)	\$500,000	
<b>Improvements to Existing Parks</b>		<b>\$4,765,000</b>
Annual Roads and Parking Improvements	\$750,000	
Annual Joint City/School Playground Projects	\$125,000	
Annual Park Improvement Major Maintenance	\$600,000	
Albert-Oakland Park - New Restroom	\$125,000	
Albert-Oakland Park - Athletic Field Renovations	\$150,000	
Armory Renovation - Activity/Meeting Room Flooring	\$75,000	
Atkins Park Phase II - Restrooms, Concessions, Field	\$850,000	
Cosmo-Bethel Park - Light Tennis Courts, Trail	\$150,000	
Cosmo Park - Football/Lacrosse Field Improvements	\$150,000	
Cosmo Park - New Restroom Soccer/Football Fields	\$125,000	
Cosmo Park - Steinberg Playground Renovation	\$500,000	
Douglass Park - Playground Renovation, Fitness Stations	\$100,000	
Downtown Optimist Park Renovation	\$50,000	
Fairview Park - Shelter Replacement, Playground, Parking	\$175,000	
Nifong Park - Maplewood Barn, Parking	\$200,000	
Shepard Boulevard Tennis Court Renovation	\$75,000	
Trail Restroom Improvements - <del>Carthage, Grindstone, MLK</del>	\$315,000	
Twin Lakes Recreation Area Improvements	\$250,000	
<b>Trails and Greenbelts</b>		<b>\$2,070,000</b>
Grindstone Trail Development - Grindstone Nature Area to Confluence	\$1,570,000	
Annual Trail Improvements - Major Maintenance	\$500,000	
<b>New Facility/Park Development</b>		<b>\$2,540,000</b>
<del>Barbery Neighborhood Park</del>	<del>\$125,000</del>	
Jay Dix Neighborhood Park	\$125,000	
Strawn Road Neighborhood Park	\$125,000	
Gans Creek Rec Area/Phillips Park - Phase I	\$1,750,000	
Norma Sutherland Smith Park - Phase I	\$250,000	
Waters-Moss Park - Phase I	\$165,000	
<b>Contingency</b>		<b>\$600,000</b>
<b>TOTAL 5 YEAR PARK SALES TAX PROJECTS</b>		<b>\$12,000,000</b>

For more information on the Park Sales Tax - its purpose, history, and past projects funded go to:  
[www.GoColumbiaMo.com](http://www.GoColumbiaMo.com)  
 (Search Word: GoParkSalesTax)

# Grindstone Trail Service Area

MAPWINDOW



## Possible Hwy 63 Crossing Points

### Categories: Type

- Existing Roadway Overpass
- Existing Roadway Underpass
- Through Existing Culvert
- Under Existing Creek Bridge

## Parks - Trails Plan

### Categories

- Existing
- By Others
- Proposed Primary
- Proposed Secondary
- Proposed Tertiary

## Getabout Bike System

### Categories

- Existing
- Funded
- Proposed

## Proposed\_Grindstone\_Trail

## MoDOT Roads

## Approx. Trail Service Area

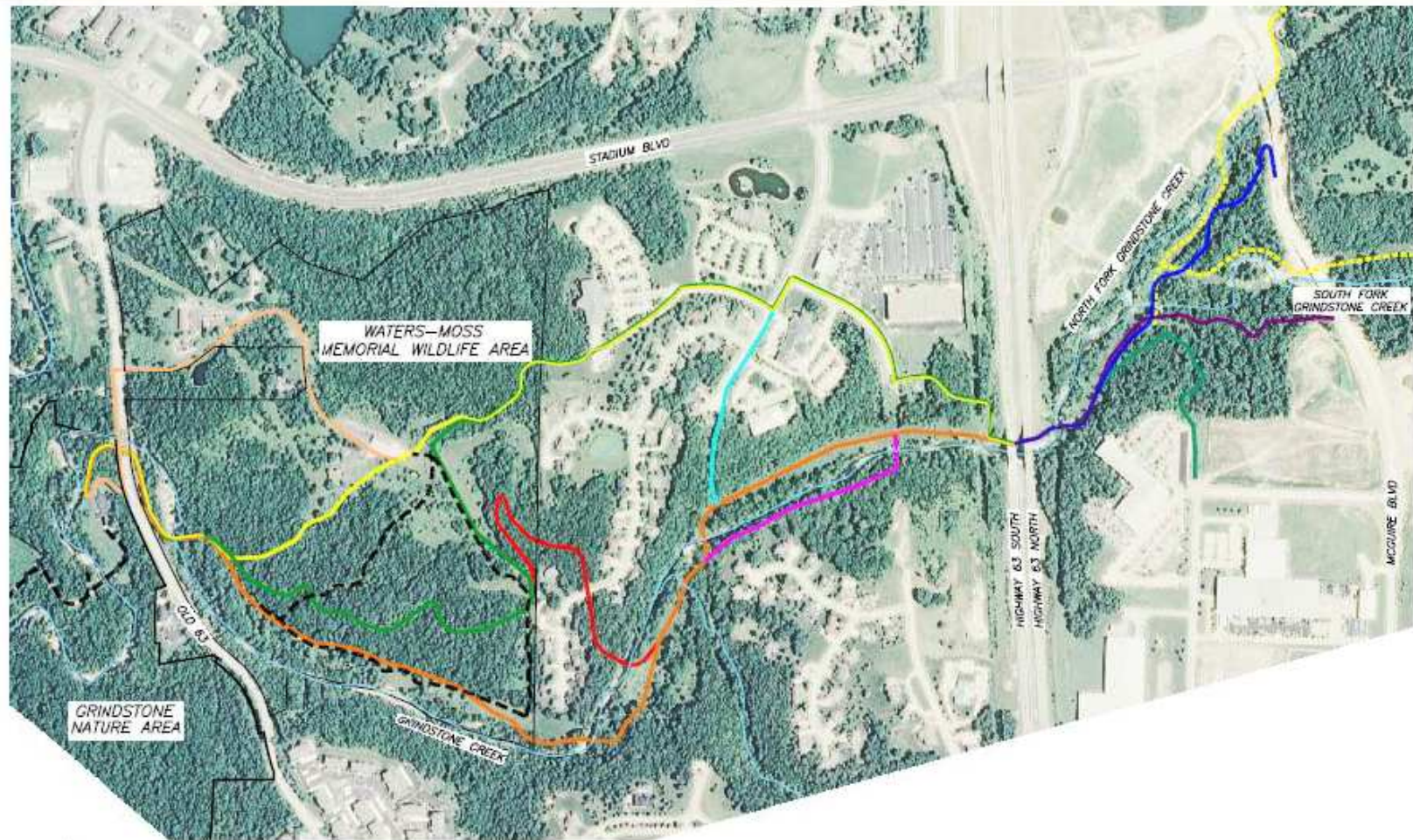
## Columbia City Limits

## Columbia Metro. Area





# 10 Separate Routes were Originally Considered



- RED ALIGNMENT
- ORANGE ALIGNMENT
- YELLOW ALIGNMENT
- GREEN ALIGNMENT
- BLUE ALIGNMENT
- VIOLET ALIGNMENT
- MAGENTA ALIGNMENT
- CYAN ALIGNMENT
- BLUE-GREEN ALIGNMENT
- MAROON ALIGNMENT
- FUTURE TRAILS
- EXISTING TRAILS IMPROVED SURFACE
- EXISTING MINOR NATURAL SURFACE

FIGURE 1  
TRAIL ALTERNATES  
GRINDSTONE TRAIL PROJECT  
COLUMBIA, MISSOURI

REVISION:



DATE	8-28-2012
JOB NUMBER	11112.00
SCALE	1" = 200'

SHEET  
1



### 5 Routes Were Carried Forward to Detailed Review (3 Western)

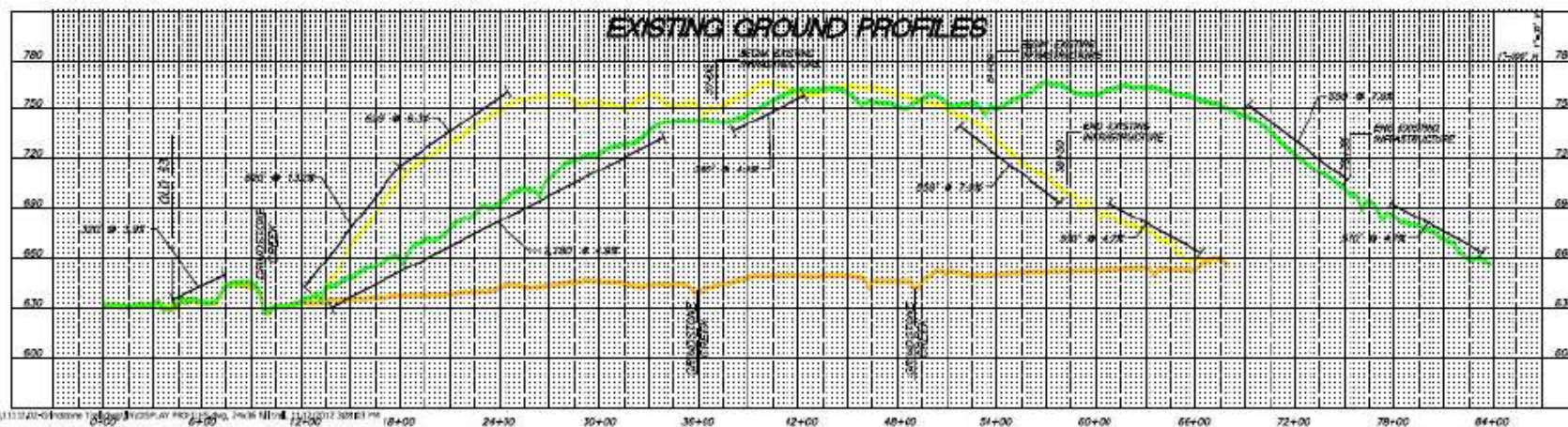
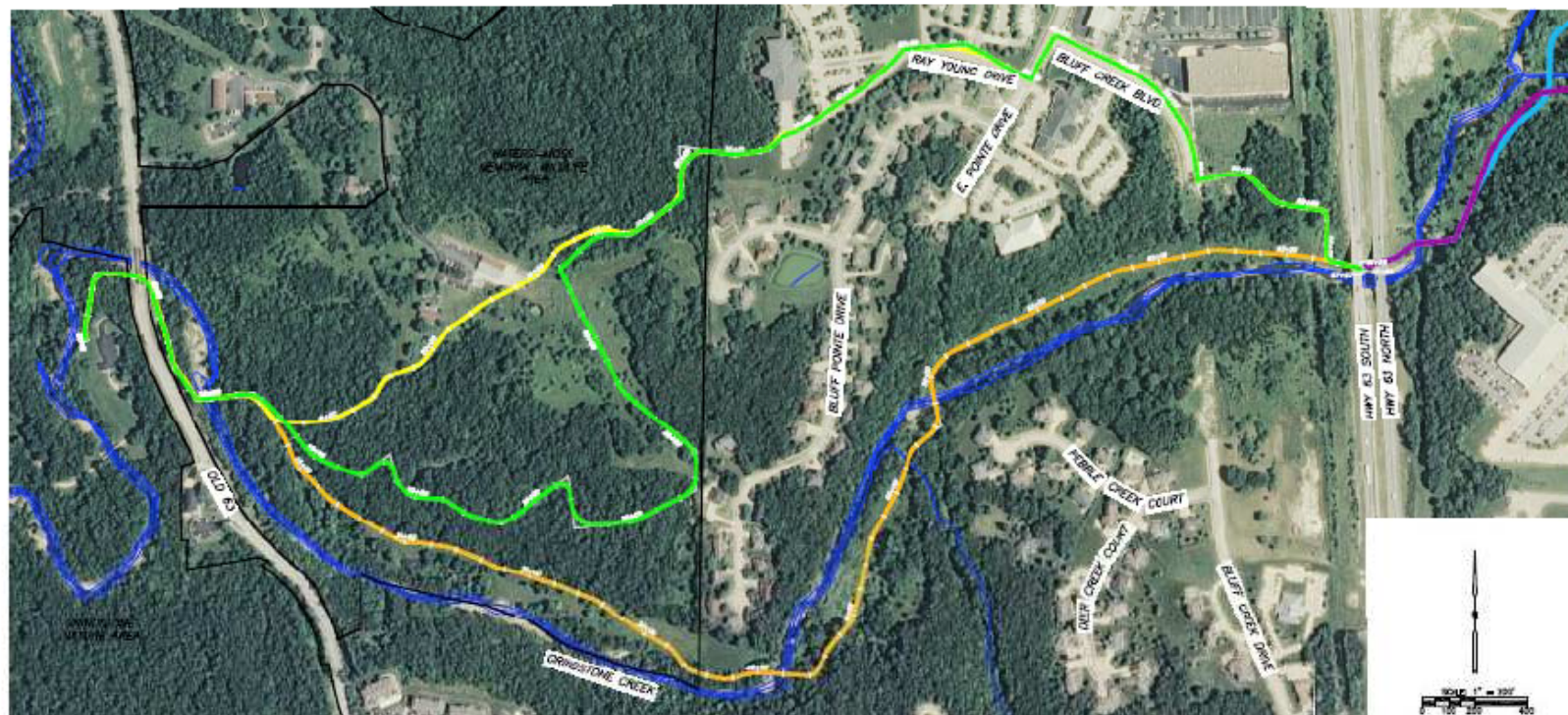


FIGURE 2  
ALTERNATE TRAIL ALIGNMENT COMPARISON  
WESTERN PORTION (ORANGE, YELLOW & GREEN) GRINDSTONE TRAIL  
COLUMBIA, MO

REVIEW

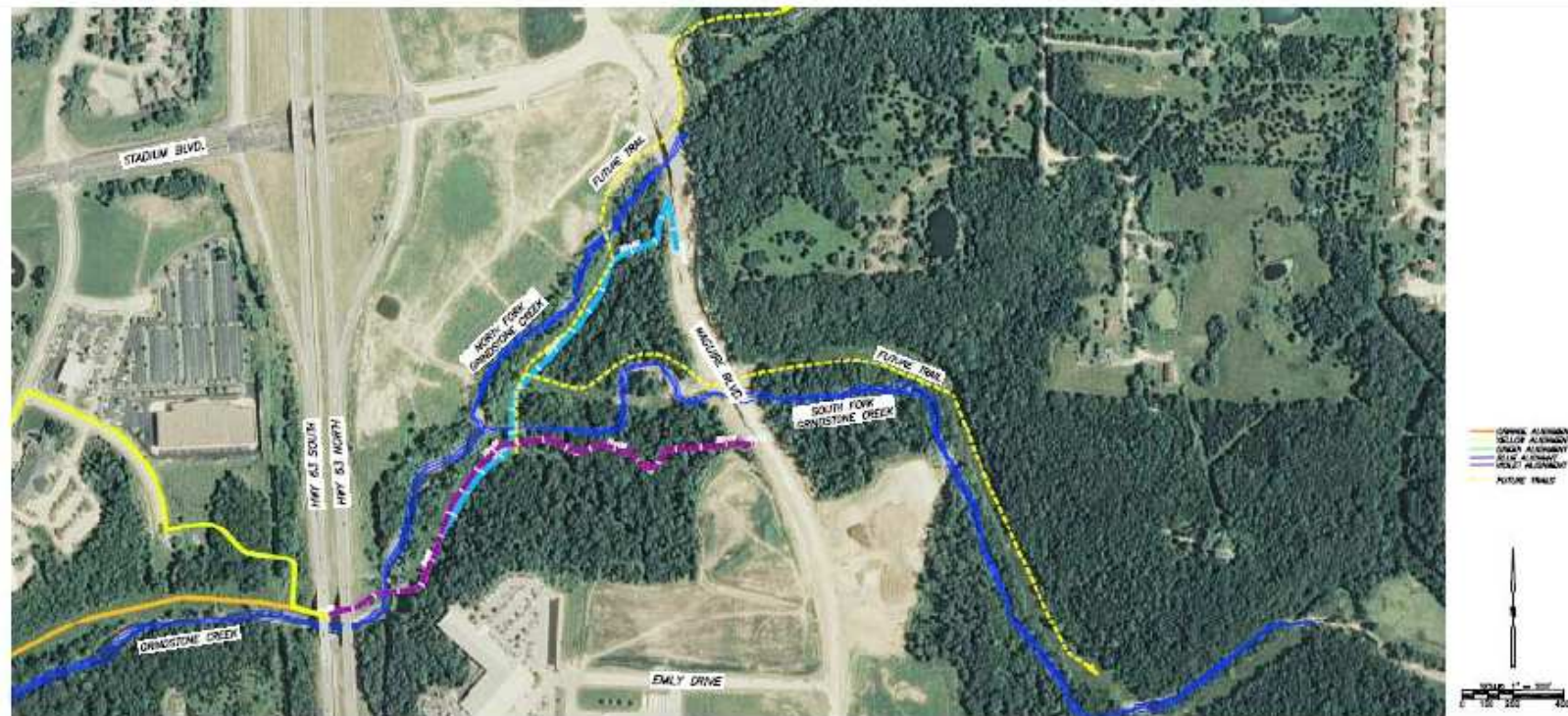


**WV**  
8-26-19  
JOS  
1711202  
SOPAL  
AT SOWH

2



# 5 Routes Were Carried Forward to Detailed Review (2 Eastern)



## EXISTING GROUND PROFILES

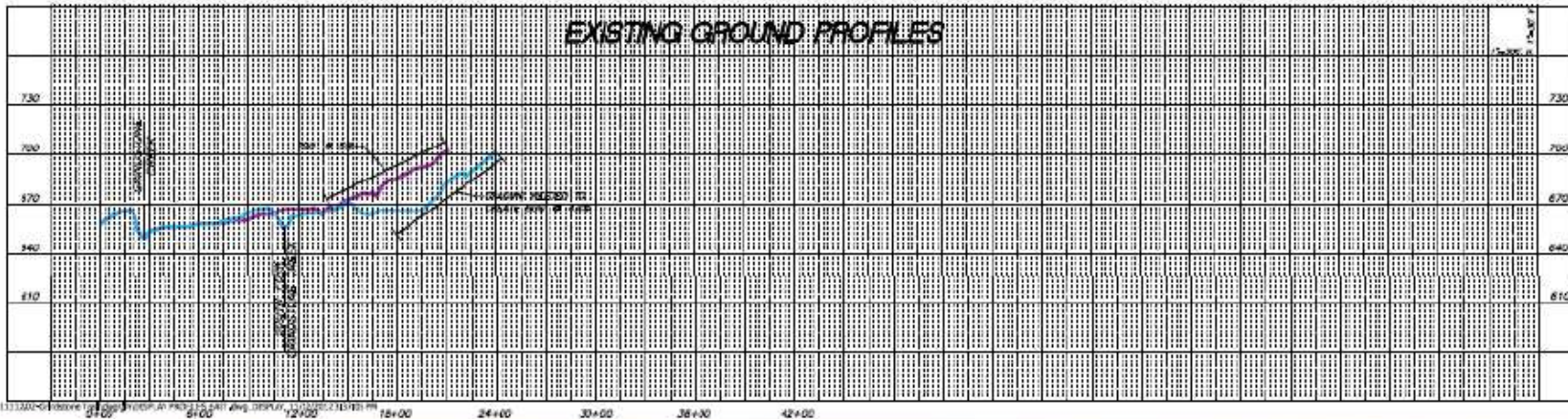


FIGURE 3  
ALTERNATE TRAIL ALIGNMENT COMPARISON  
EASTERN PORTION (BLUE AND VIOLET) GRINDSTONE TRAIL  
COLUMBIA, MO



DATE: 11/25/11  
AM: NANKS  
11/11/12  
SCALE: AS SHOWN  
3



## **Alternates Were Evaluated for:**

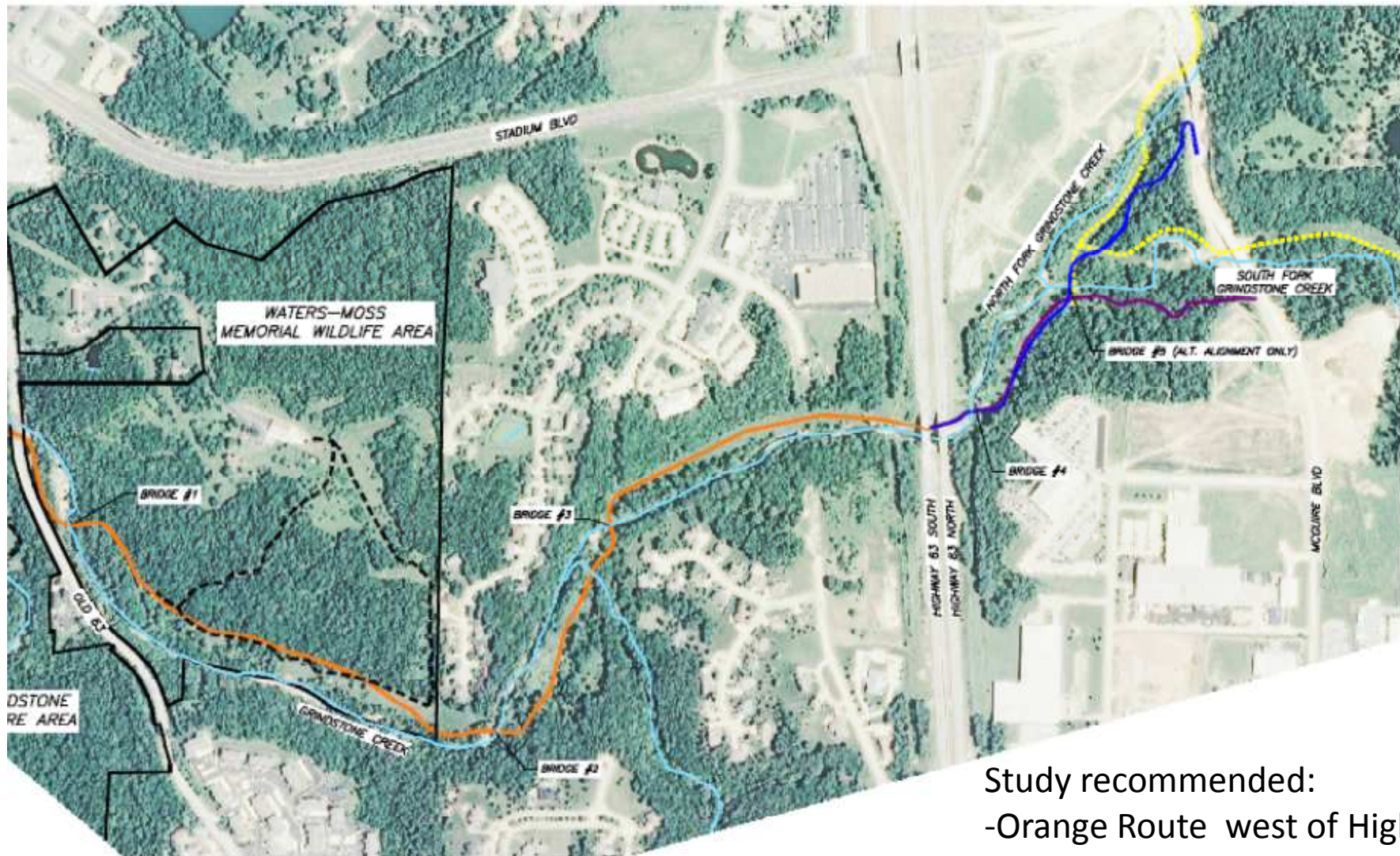
- Impacts on adjacent properties
- Impacts on specific destinations
- Impacts relative to trail users in adjacent neighborhoods
- Terrain
- Public safety
- Environment and sustainability
- Maintenance and operations
- Initial construction costs





# Engineering Study Recommendations

- West Side – Orange Alignment
  - Safest
  - Most accessible to the full range of users
  - Most likely to encourage regular use
- East Side – Blue alignment recommended due to a slight advantage in long term costs, but Violet alignment is acceptable because it has lower initial costs.
  - Each provides connection to the North and South Fork of the Grindstone Creek



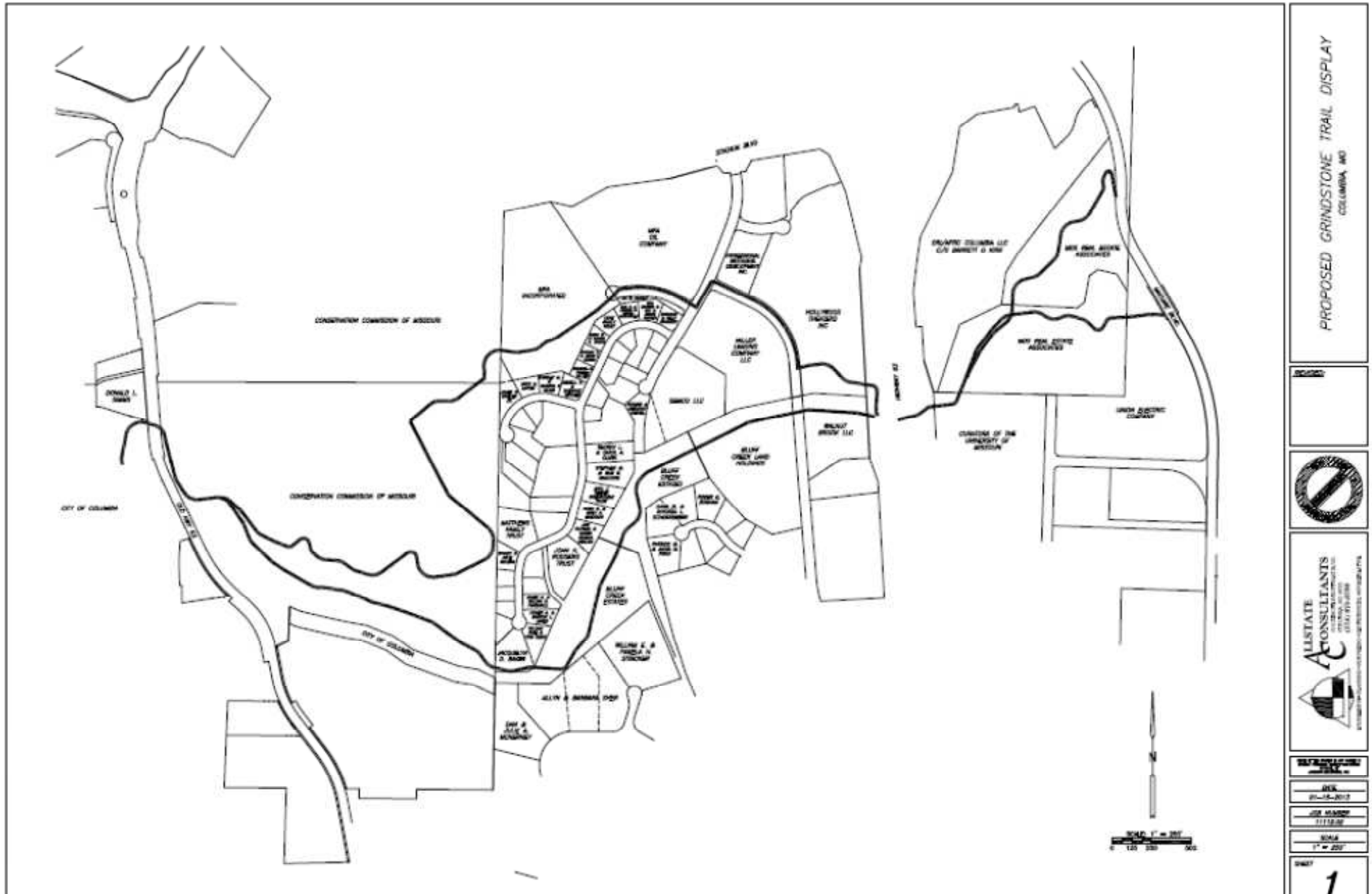
Study recommended:  
 -Orange Route west of Highway 63  
 -Blue or Violet Route to McGuire Bl

- ORANGE ALIGNMENT (PROPOSED ALIGNMENT)
- VIOLET ALIGNMENT (PROPOSED ALIGNMENT)
- BLUE ALIGNMENT (PROPOSED ALTERNATE TO THE VIOLET ALIGNMENT IF ADDITIONAL FUNDING BECOMES AVAILABLE)
- FUTURE TRAILS
- EXISTING TRAILS IMPROVED SURFACE
- EXISTING MINOR NATURAL SURFACE





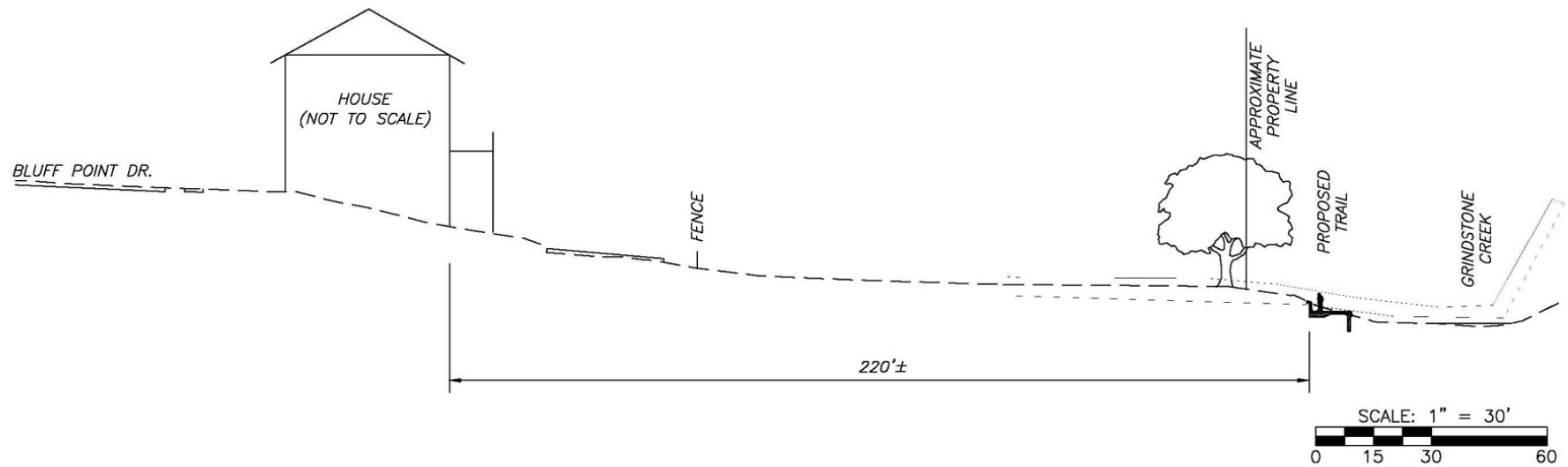
Original recommended route was on City, Homeowner Association  
Common Land, MoDOT ROW, MU, Business & Private Properties





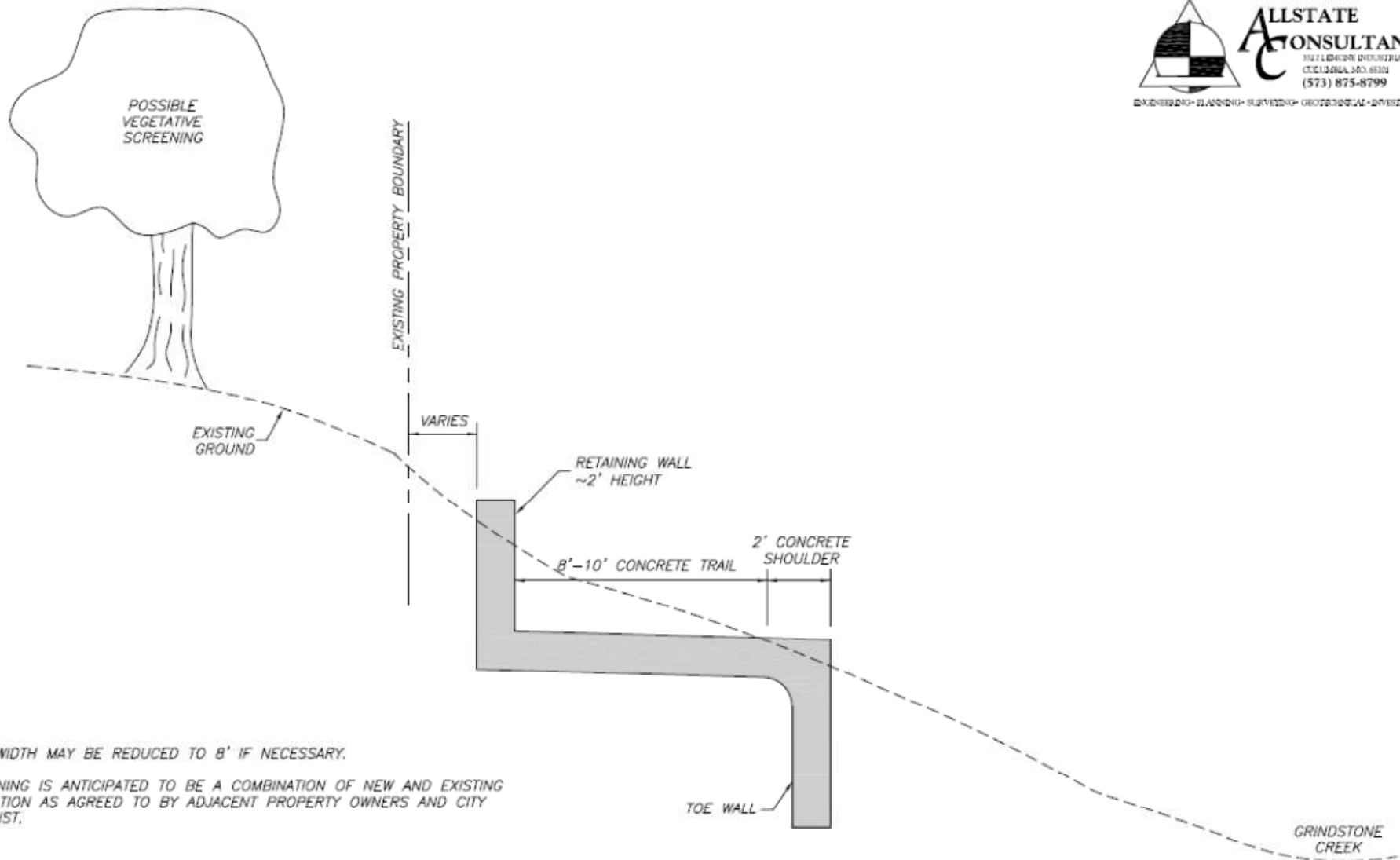


*TYPICAL CROSS SECTION THROUGH CREEK, TRAIL, AND RESIDENTIAL LOT*



Trail is approximately 200-220 ft from nearest house

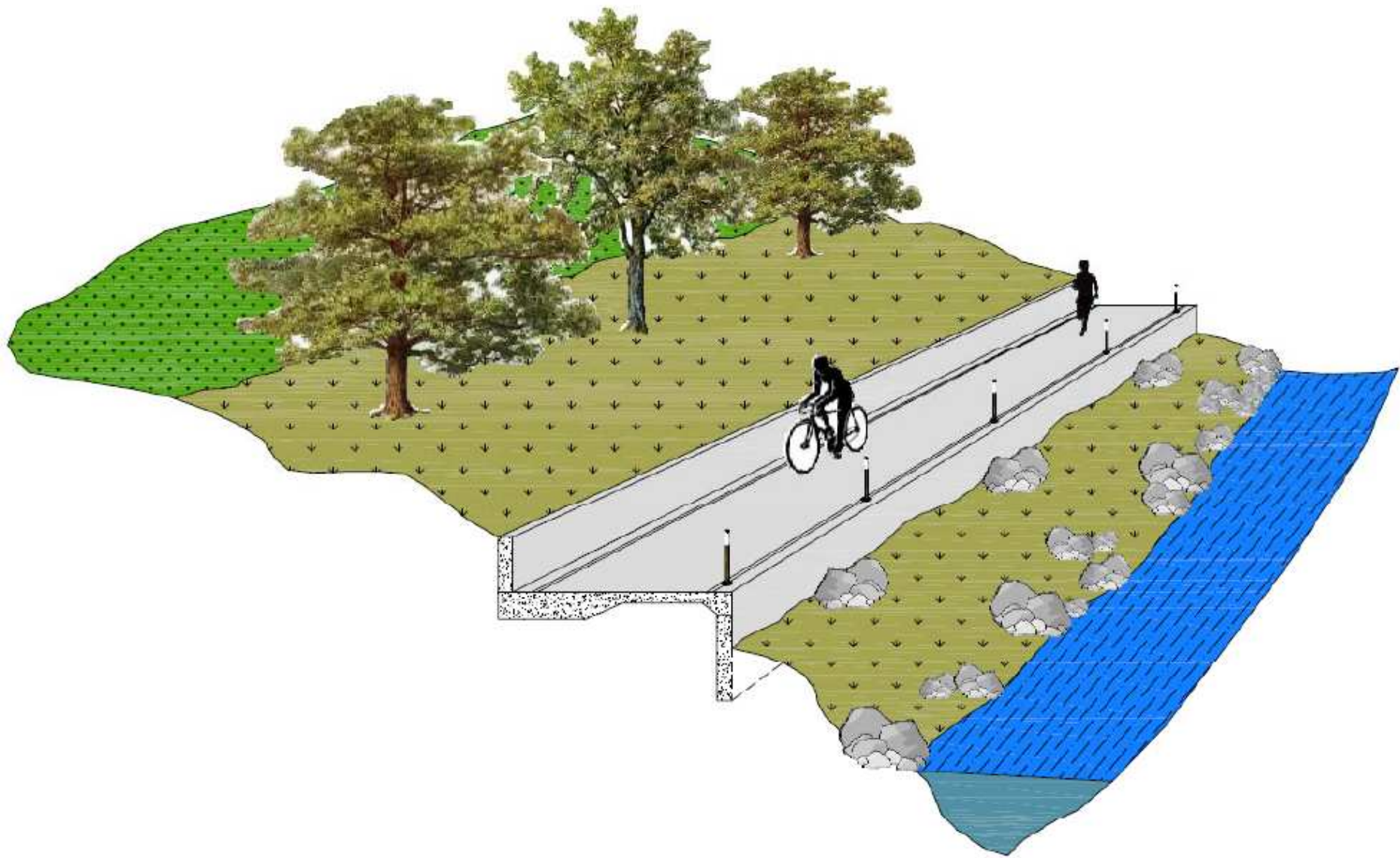
## PROPOSED DESIGN ALIGNMENT CLARIFICATION GRINDSTONE TRAIL



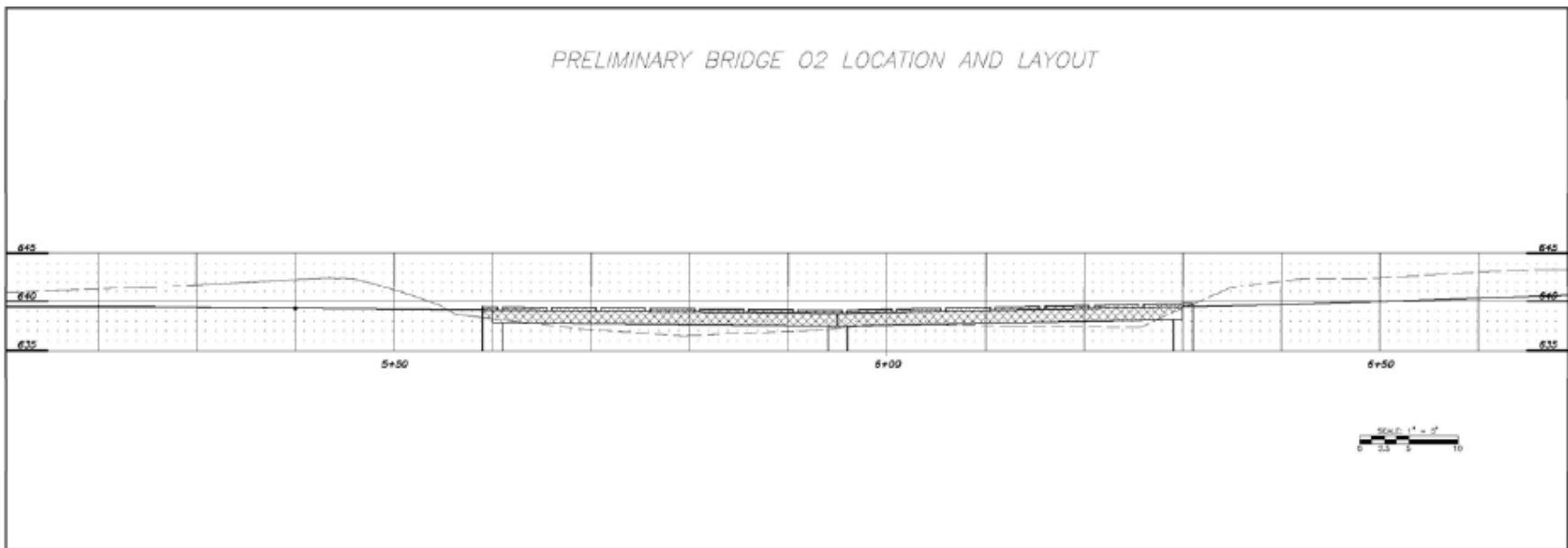
TRAIL WIDTH MAY BE REDUCED TO 8' IF NECESSARY.

SCREENING IS ANTICIPATED TO BE A COMBINATION OF NEW AND EXISTING  
VEGETATION AS AGREED TO BY ADJACENT PROPERTY OWNERS AND CITY  
ARBORIST.





2014111412-02-Grindstone-Trail-hunt-TRAIL-DESIGN-dwn-Drawn-02-Plan-Profile-14/14/2012-9-42-57 AM



1



## Similar Bridge, County House Trail





# **Grindstone Creek Trail Environmental Assessment**

- Table 9 of the alignment report qualitatively compared impacts of various alternatives in terms of
  - Amount of area disturbed
  - Utilization of existing infrastructure
  - Minimizing the future system footprint
  - Surface water impacts – wetland and stream
  - Vegetative impacts
  - Forested area impacts
  - Erosion impacts
  - Wildlife corridors
  - Greenhouse gas production
  - The human environment
  - Endangered species





## **Environmental Assessment**

- 70% of the proposed orange alignment will be along existing sewer easement or other infrastructure. (21% of the green alignment and 26% of the yellow alignment)
- 50% of the proposed violet alignment or 81% of the alternate blue alignment will be along existing sewer easement or other infrastructure



# Environmental Assessment

- The alignments that are selected for final design will be required to comply with:
  - **The Clean Water Act (sections 404 and 401)**
    - Jurisdictional streams and wetlands are required to be identified and impacts to be avoided, minimized and mitigated
  - **The Endangered Species Act**
  - **National Flood Insurance Program**
  - **Columbia storm water ordinance**
  - **State and local land disturbance regulations**





## **Grindstone Creek Funding**

- Recommended route now includes 4 or 5 bridges.
- Based on engineer's high-end estimate, project exceeds budget by \$600,000.
- Options include:
  - **Use park staff to construct trail & contract bridges.**
  - **Transfer fund balance from Hominy Trail Project.**
  - **Construct gravel trail instead of concrete.**
  - **Utilize Park Sales Tax contingency funds.**
  - **Combination of the above.**
- Recommend if project is approved, more detailed engineering will finalize cost estimates.



# **Public Input Meeting**

## **August 30, 2012**

Meeting held at Waters-Moss: 63 responses

Online Survey: 8/31- 9/17: 20 responses

- Approve of Grindstone Trail: 55
  - Orange alignment
  - Alternate alignment due to eminent domain
- Oppose Grindstone Trail: 28
  - Due to eminent domain
  - Generally opposed to trail
  - Opposed to trail citing existing abundance of trails or too expensive





## **Council Requested Commission Feedback**

1. Provide Council with feedback as to whether the Commission supports the concept of deferring the Grindstone trail project and utilizing its funding to assist in completing high priority projects identified through the GetAbout Planning process.
2. Provide Council any feedback the Commission might have as to the preferred priority order of the nine projects being considered for funding.



## **Commissions: Defer Funds from Grindstone to Get About Projects**

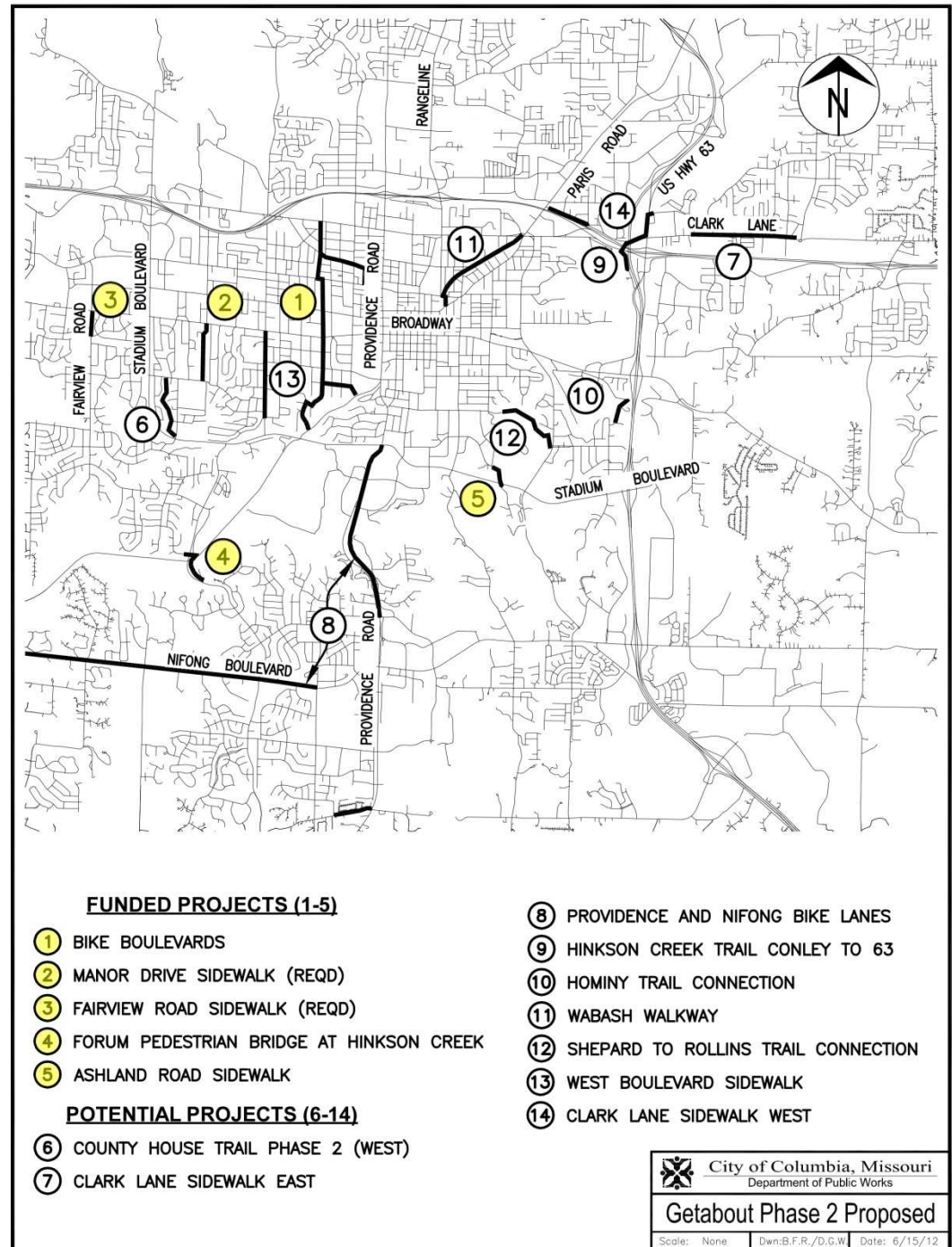
- Bike and Ped Commission: No
- Disability Commission: Yes
- Energy & Environment: No
- Parks and Recreation: No

Commissions that voted “no” supported funding the Grindstone Creek Trail as proposed.





# Revised Priority Order of GetAbout Round 2 Projects. Commission & Staff



# GetAbout Phase 2 Project Ranking

21-Dec-12

Project		Ranking Comm and Staff	Average Comm and Staff	Staff		Commissions		
				GetAbout staff	Parks and Rec Staff	Parks and Rec Comm	Environ and Energy Comm	Bike/Ped Comm Rank
6	<b>County House Trail Phase 2 West.</b> Connects from Rockcreek Drive to County House Trail Phase 1, predominantly on City ROW.	3	3.000	3	1	3	5	3
7	<b>Clark Lane Sidewalk, East.</b> Ballinger to Woodland , north side	2	2.000	2	3	2	1	2
8	<b>Providence and Nifong Bike lanes:</b> Providence (Stadium to Green Meadows), & Nifong (Bethel to Scott) - repair and stripe	7	6.875	6	8	5	6.5	8
9	<b>Hinkson Creek Trail, Conley to 63</b> (Conley Rd to Clark Lane, Hwy 63)	1	1.500	1	2	1	2	1
10	<b>Hominy Trail Connection</b> (connecting Hominy Trail to Shepard Neighborhood at Pepper Tree Ln)	8	7.125	7	7	8	8	5.5
11	<b>Wabash Walkway,</b> Pedway along COLT Right of Way from Wabash Station to Paris Road, connecting to bike lanes and sidewalks on Paris. Future phase to connect to Vandiver.	9	7.250	8	9	9	3	8
12	<b>Shepard to Rollins East-West connection</b> (includes bridge over Hinkson Creek)	5	6.250	5	4	4	9	8
13	<b>West Blvd Sidewalk.</b> Westwinds to Stewart plus upgrade the sidewalk from Stewart to Broadway, west side	6	6.000	9	6	6	6.5	5.5
14	<b>Clark Lane Sidewalk, West.</b> Eastwood to Paris, north side	4	5.000	4	5	7	4	4



Map Loc #	GetAbout Candidate Capital Projects	Ward	Mode shift potential	Commission & staff ranking	Survey Votes	Estimated Cost	Running Total	Comments
9	<b>Hinkson Creek Trail, Conley to 63</b> (Conley Rd to Clark Lane, Hwy 63)	3	1	1	133	\$ 555,000	\$ 555,000	Integrates with Conley TDD, important link
7	<b>Clark Lane Sidewalk, East.</b> Ballinger to Woodland , north side	3	1	2	113	\$ 325,800	\$ 880,800	Important link - dangerous for pedestrians.
6	<b>County House Trail Phase 2 West.</b> Connects from Rockcreek Drive to County House Trail Phase 1, predominantly on City ROW.	4	1	3	140	\$ 445,000	\$ 1,325,800	Neighborhood Connector. has support, 3 easements reqd
14	<b>Clark Lane Sidewalk, West.</b> Eastwood to Paris, north side	3	2	4	72	\$ 410,325	\$ 1,736,125	Important link - dangerous for pedestrians.
12	<b>Shepard to Rollins East-West connection</b> (includes bridge over Hinkson Creek)	6	2	5	137	\$ 1,740,000	\$ 3,476,125	Requires 2 easements
13	<b>West Blvd Sidewalk.</b> Westwinds to Stewart plus upgrade the sidewalk from Stewart to Broadway, west side	4	2	6	97	\$ 567,400	\$ 4,043,525	Priority 1 on sidewalk master plan, deferred Phase 1 project
8	<b>Providence and Nifong Bike lanes:</b> Providence (Stadium to Green Meadows), & Nifong (Bethel to Scott) - repair and stripe	5	1	7	129	\$ 309,300	\$ 4,352,825	Important on-street connections
10	<b>Hominy Trail Connection</b> (connecting Hominy Trail to Shepard Neighborhood at Pepper Tree Ln)	6	2	8	84	\$ 180,000	\$ 4,532,825	Recommended by neighborhood
11	<b>Wabash Walkway,</b> Pedway along COLT Right of Way from Wabash Station to Paris Road, connecting to bike lanes and sidewalks on Paris. Future phase to connect to Vandiver.	1,3	2	9	91	\$ 544,000	\$ 5,076,825	Requires 19 easements. Bypasses narrow section of Paris road.
<b>Total Projects (Map Locations 6-14)</b>						<b>\$ 5,076,825</b>		
<b>Possible Sources of Funding</b>								
Additional Round 2 funding						\$ 5,930,000		
Committed to Projects 1-6 plus non capital and operating costs						\$ (3,360,000)		
Possible contingency remaining from Round 1						\$ 1,000,000		
					Subtotal	\$ 3,570,000		
Proposed Grindstone Trail re-allocation						\$ 1,400,000		
					Total	\$ 4,970,000		



# Current GetAbout Rankings

Based on commission and staff rankings, the following projects could be funded:

Ranking	Map#	Description	Cost
1	9	Hinskon Trail: Conley	\$555,000
2	7	Clark Lane Sidewalk East	\$325,800
3	6	County House Trail: West	\$445,000
4	14	Clark Lane Sidewalk: West	\$410,325
5	12	Shepard-Rollins: East-West	\$1,740,000
TOTAL			\$3,476,125
Available GetAbout Balance			\$3,570,000



## **Council Options**

Discuss Grindstone Creek Trail and GetAbout issues separately.

- **Grindstone Creek Trail Project (GCT)**
  - **Complete Public Input process by scheduling a public hearing.**
  - **Following public hearing, Council has multiple options.**





## **Council Options: Grindstone**

1. Approve entire Grindstone Creek Trail Project as recommended.
2. Approve a portion of Grindstone Creek Trail Project & defer remaining balance to GetAbout Projects.
  - a. **Connect Waters-Moss to Grindstone Nature Area. Estimated cost: \$600,000**
  - b. **Connect east end of trail from Maguire to Hollywood. Estimated cost: \$687,000**
3. Approve deferring all funds from Grindstone Creek Trail project to GetAbout Projects.



## **GetAbout Grant Requirements**

- There are very strict restrictions regarding the use of federal funds.
- Mixing Park Sales Tax funds with GetAbout funds may jeopardize grant funding.
- Staff strongly suggests that the two funds be kept separate.
- If Park Sales Tax funds are used, suggest selecting projects that can be funded entirely by either PST or GetAbout funds.



## **Option #2a: Construct West End of Grindstone Creek Trail**

- West end of Grindstone Creek Trail will connect Waters-Moss to Grindstone Nature Area.
- Estimated construction costs \$600,000.
- Defer PST \$700,000 to GetAbout Projects.
- Staff recommends that Park Sales Tax Funds be used for one or two trail projects:
  - **#6 County House Trail West: \$445,000**
  - **#9 Hinkson Creek Trail-Conley: \$555,000**
  - **#10 Hominy Trail Connector: \$180,000**



Grindstone Nature Area

ALIGNMENT STUDY  
ORANGE ROUTE

ALIGNMENT STUDY  
GREEN ROUTE

PROPOSED WATERS  
MOSS CONNECTION

LOW WATER BRIDGE  
ALTERNATE

Waters-Moss

Hinkson Creek Trail







## **Option #2b: Construct East End of Grindstone Creek Trail**

- East end of trail would connect Maquire Blvd to Hollywood Theaters.
- Estimated construction cost: \$687,000.
- Defer PST \$625,000 to GetAbout Projects.
- Staff recommends that Park Sales Tax Funds be used for one or two trail projects:
  - **#6 County House Trail West: \$445,000**
  - **#9 Hinkson Creek Trail-Conley: \$555,000**
  - **#10 Hominy Trail Connector: \$180,000**



## **Construct Only Both Ends of Grindstone Creek Trail**

- Recommendation came from Public Input meeting and constructs each end of the trail leaving the middle section unfunded.
- West End: \$600,000
- East End: \$687,000
- Total: \$1,287,000
- No funds available for GetAbout projects.
- May free up unspent funds from other projects such as the Hominy Creek Trail.





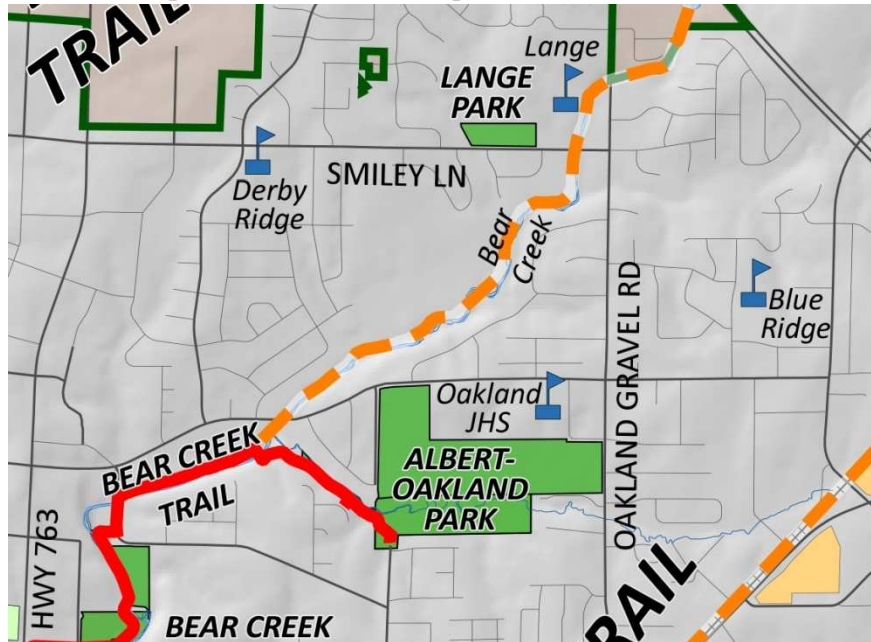
## **Option #3: Defer All Funds of Grindstone Creek Trail to GetAbout Projects**

- Grindstone Creek Trail remains on trail master plan as future unfunded trail project.
- Staff recommends that Park Sales Tax Funds be used on these three trail projects:
  - **#6 County House Trail West: \$445,000**
  - **#9 Hinkson Creek Trail-Conley: \$555,000**
  - **#10 Hominy Trail Connector: \$180,000**
  - Total: \$1,180,000**
- Not enough PST funding to completely construct the Shepard-Rollins Connector.

# Other P&R Trail Projects

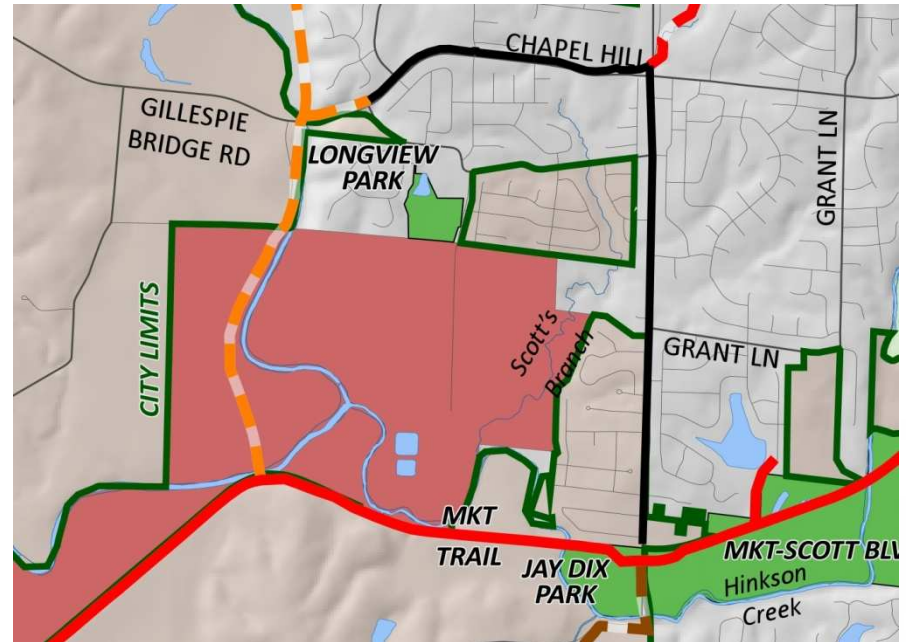
Council may select another trail project.

## Bear Creek Trail: Blue Ridge to Lange



Estimated cost: \$1,300,000

## Perche Creek Trail: Phase I



Estimated cost: \$1,400,000-\$2,000,000



## **Proposed Next Steps**

- Staff prepares a report to Council formally documenting the Commission responses and identifying Council options.
  - **Report will recommend that a public hearing be scheduled on the Grindstone Creek Trail project.**
  - **Following public hearing, Council could take official action by directing staff to proceed with whichever option is determined appropriate.**
- Council directs staff to schedule a public hearing.





**The following additional slides provide information regarding the department's policy on trail planning (will not be presented during worksession).**



# Environmental Assessment

- Because federal funds are not being used, the NEPA process is not required which means we are not required to:
  - Obtain a categorical exclusion or produce an environmental assessment or environmental impact statement (including additional public comment opportunities)
  - Conduct a cultural resource assessment
  - Conduct an assessment of impacts on publically owned lands and plan to minimize impacts
  - Assess environmental justice issues
  - Assess noise impacts
  - Assess air quality impacts



# Why do we build trails along creeks?

- Creek corridors are undeveloped linear spaces
  - Due to periodic flooding there are no buildings
- Separation from automobile traffic
  - You can travel for several miles without crossing roads
- Best places in town for nature viewing
  - Aesthetically pleasing areas to de-stress
- The areas adjacent to creeks are flat for comfortable biking and walking







Good for alternate modes of transportation, but not necessarily good for recreational trails.



# Why concrete trails?

- Best longevity. Should last 20+ years.
- Best consistency of surface. Does not wash or break apart in flood areas or on steep slopes.
- Steel in concrete keeps it from deflecting preventing tripping hazards or barriers for wheel chairs.
- Cleaner surface during and after rains. Keeps commuters clean as well as less wear and tear on bikes.
- We don't have to put tons of gravel in our creeks and natural areas every time it rains.





**Gravel build-up in natural areas after flooding.**

- **P&R staff replaces about 179 tons of gravel that washes into the adjacent creeks after every major storm event.**
- **On average over 1,000 tons of gravel each year.**

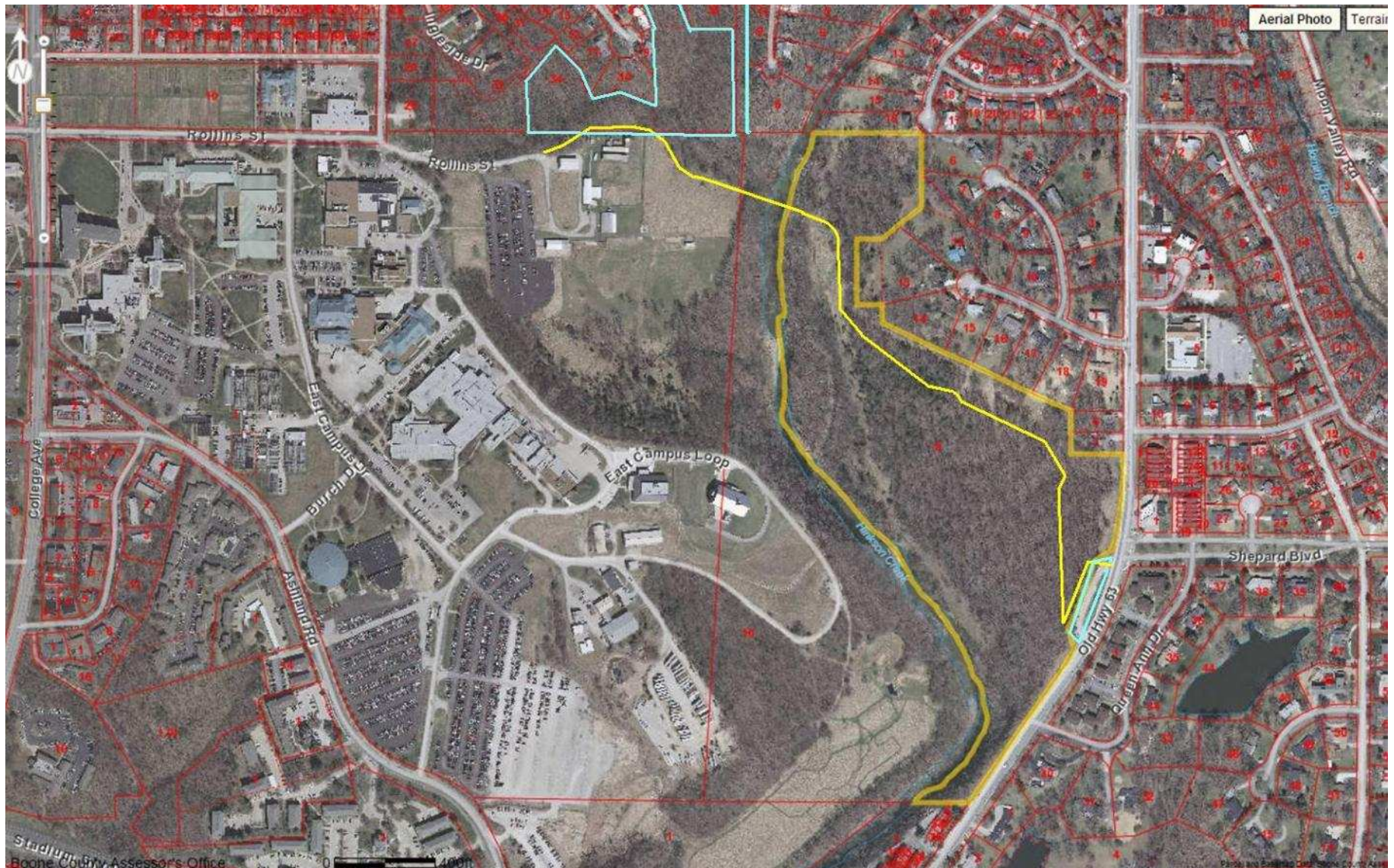




**20+ year old concrete trail, still in excellent shape.  
Albert-Oakland Park, 8-ft trail.**



# Shepard-Rollins Connector \$1.7m





# Shepard-Rollins: Maguire Connection

