


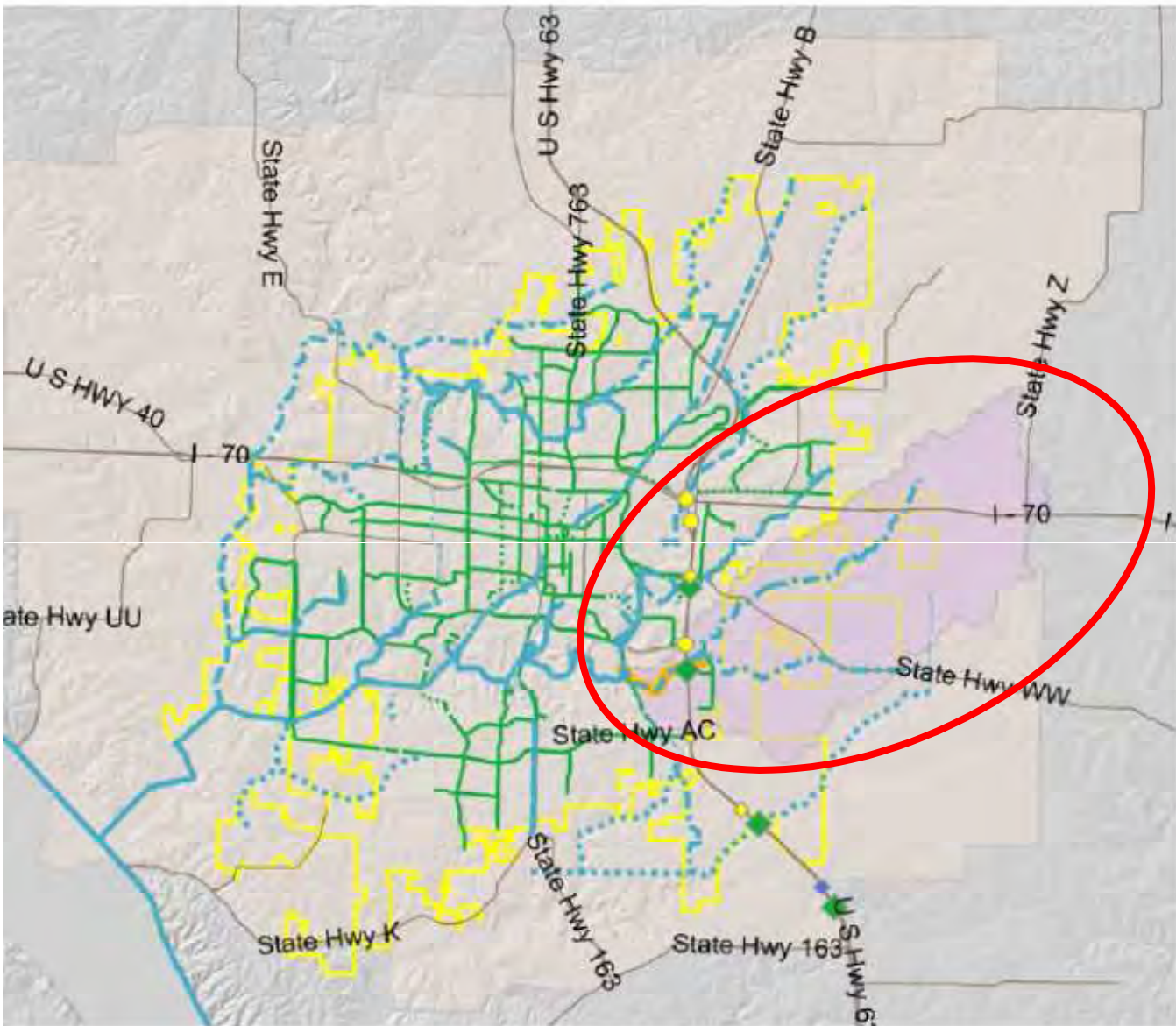
Grindstone Creek Trail Summary

- \$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

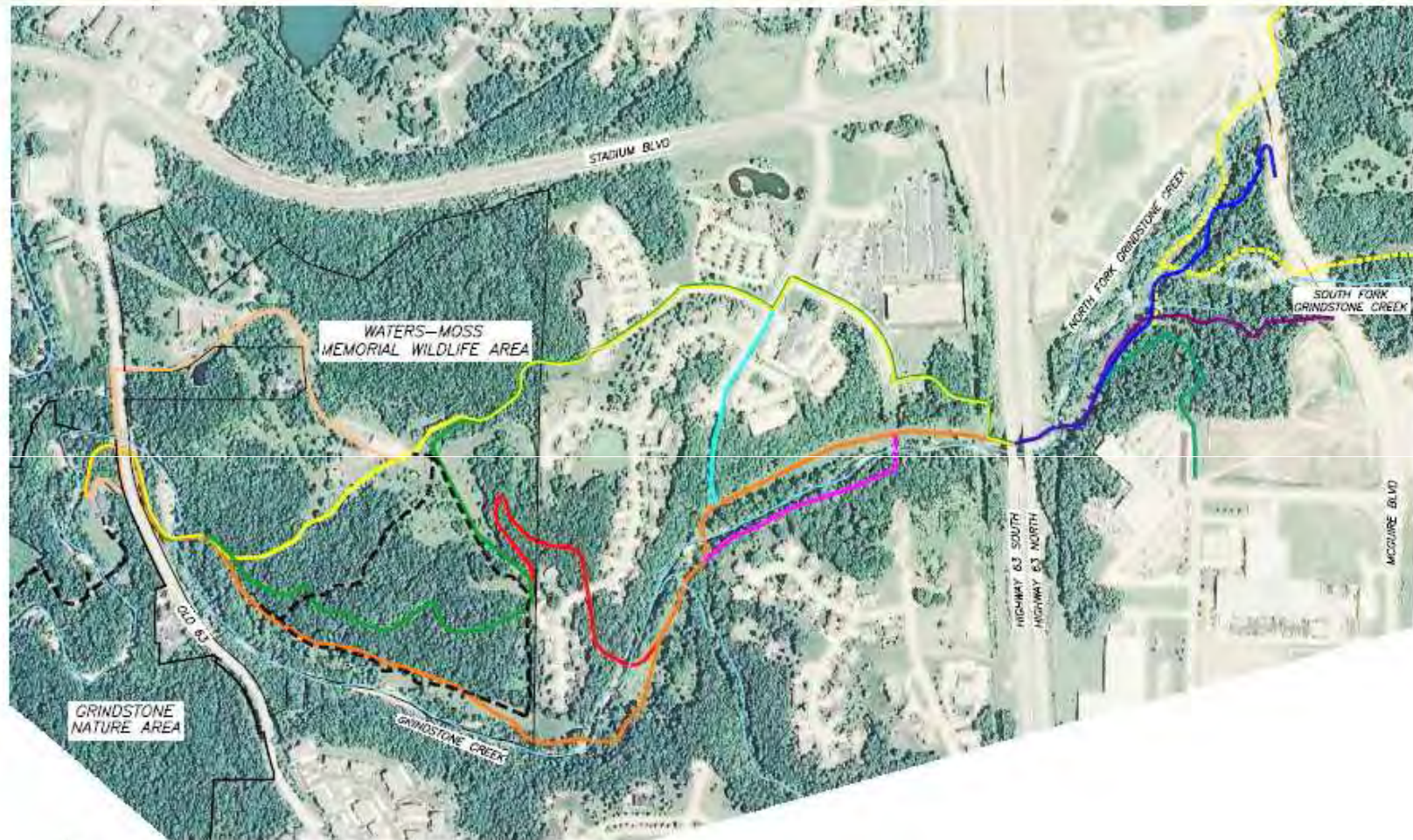
 CITY OF COLUMBIA		
5. What projects will be funded by the 2010 Park Sales Tax, if Proposition 1 is approved by voters? After collecting public input, the City Council passed a resolution at the August 16, 2010 Council Meeting authorizing the 2010 Park Sales Tax funds, if Proposition 1 is passed, to be used for the following projects:		
PROJECT DESCRIPTION	PROJECT AMOUNT	CATEGORY AMOUNT
Acquisition/Land Preservation		\$2,025,000
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	
Improvements to Existing Parks		\$4,765,000
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 - Garth, Grindstone, MLK	\$315,000	
Twin Lakes Recreation Area Improvements	\$250,000	
Trails and Greenbelts		\$2,070,000
Grindstone Trail Development - Grindstone Nature Area to Confluence	\$1,570,000	
Annual Trail Improvements - Major Maintenance	\$500,000	
New Facility/Park Development		\$2,540,000
Barbery Neighborhood Park	\$125,000	
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	
Contingency		\$600,000
TOTAL 5 YEAR PARK SALES TAX PROJECTS		\$12,000,000

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

Grindstone Trail Service 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)

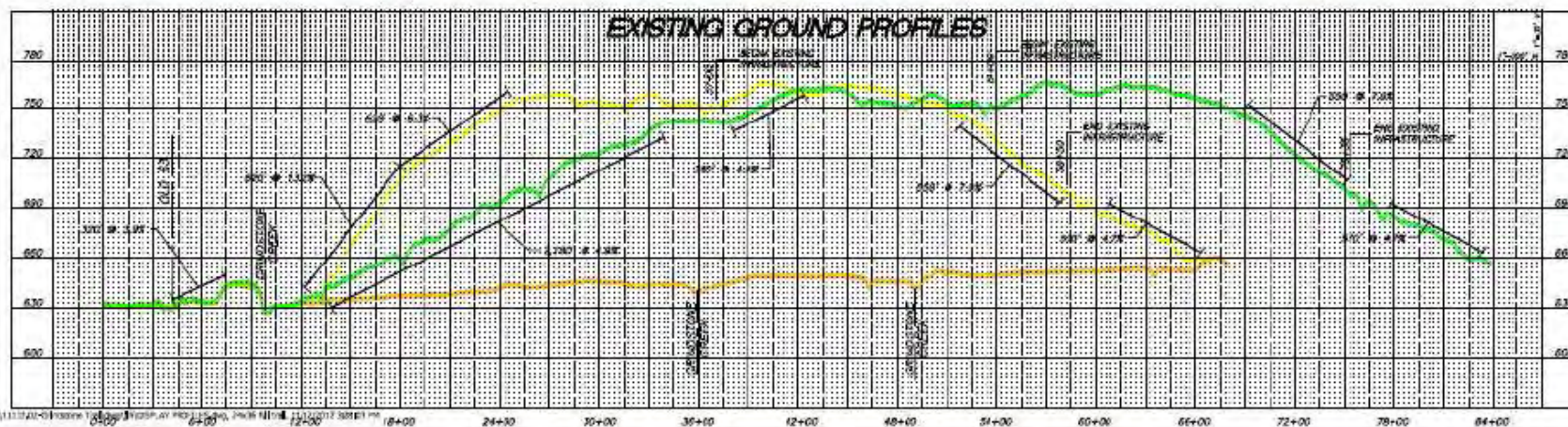


FIGURE 2
ALTERNATE TRAIL ALIGNMENT COMPARISON
WESTERN PORTION (ORANGE, YELLOW & GREEN) GRINDSTONE TRAIL
COLUMBIA, MO

REVISOR



U.S. DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION
WASHINGTON, D.C. 20535

DATE: 8-26-77

TO: DIRECTOR, FBI (100-442871)
FROM: SAC, NEW YORK (100-100000)

SUBJECT: [REDACTED]

2

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



EXISTING GROUND PROFILES

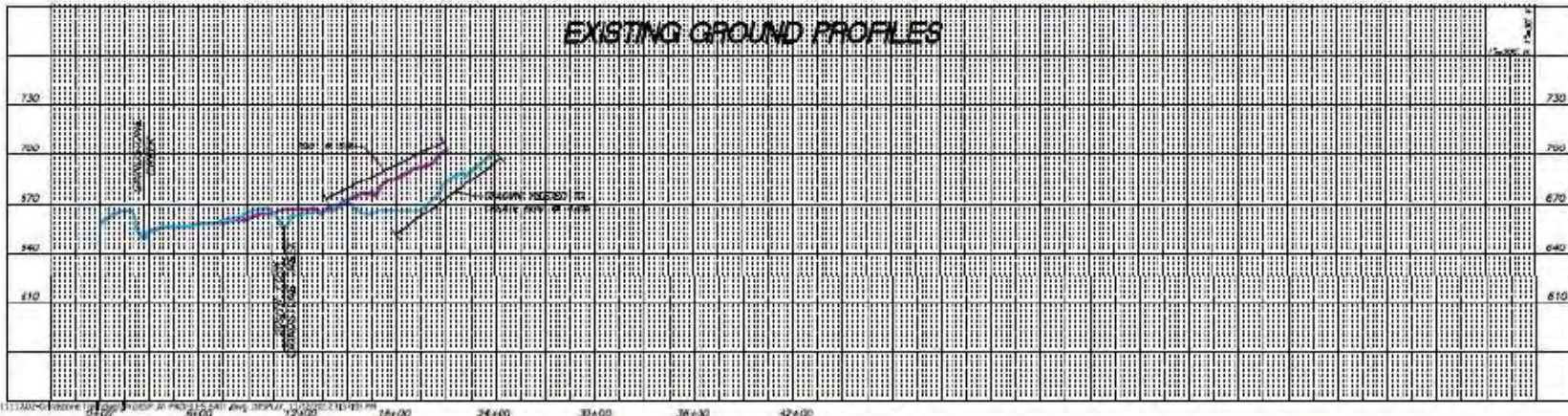


FIGURE 3
ALTERNATE TRAIL ALIGNMENT COMPARISON
EASTERN PORTION (BLUE AND VIOLET) GRINSTONE TRAIL
COLUMBIA, MO

ALISTATE
CONSULTANTS
INCORPORATED
1111 S. 11TH ST.
COLUMBIA, MO 65202
PHONE: 658-1234 FAX: 658-1235

DATE
11/11/11
AM. NUMBER
111111
SCALE
AS SHOWN



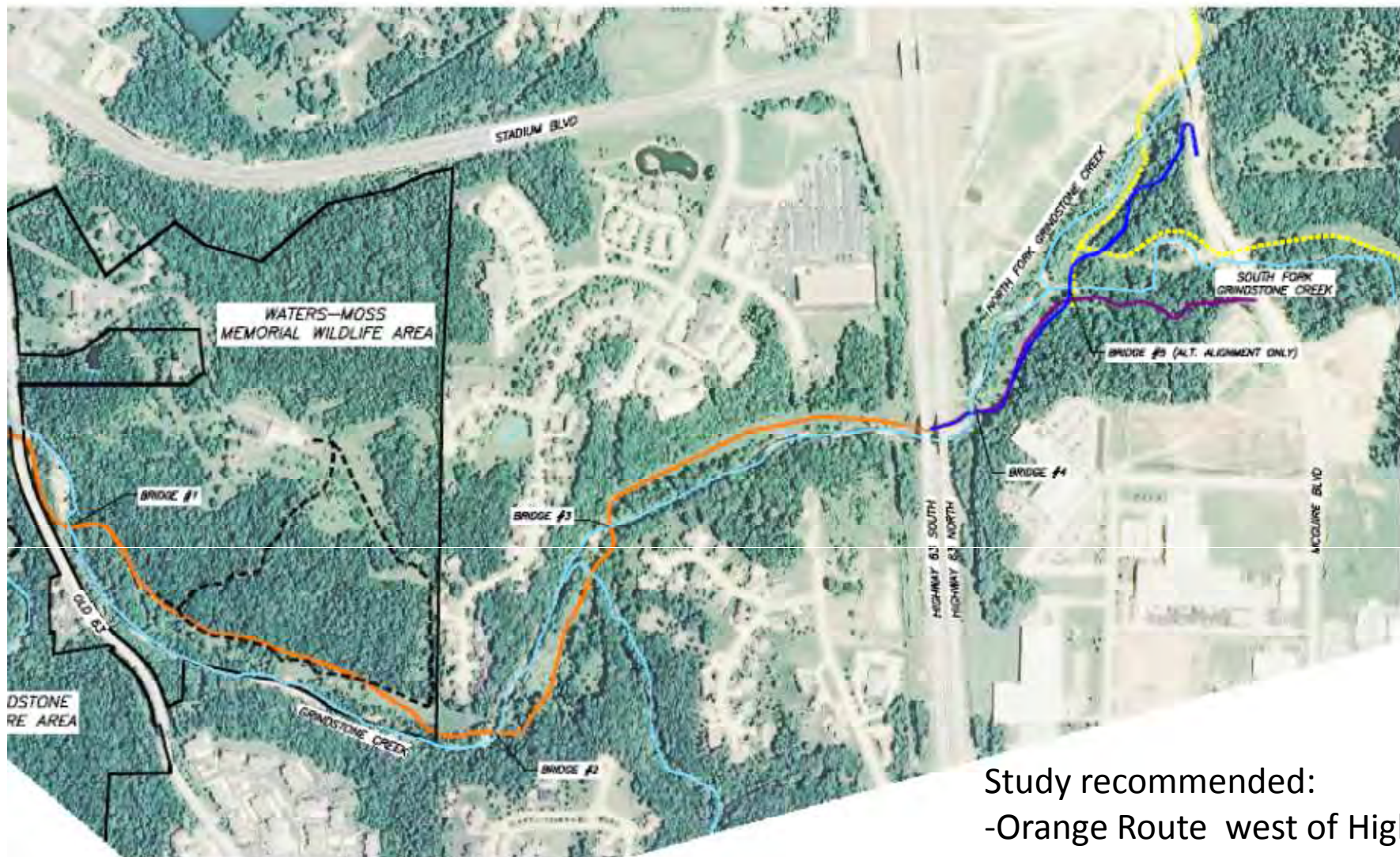
Alternates Were Evaluated for:

- 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

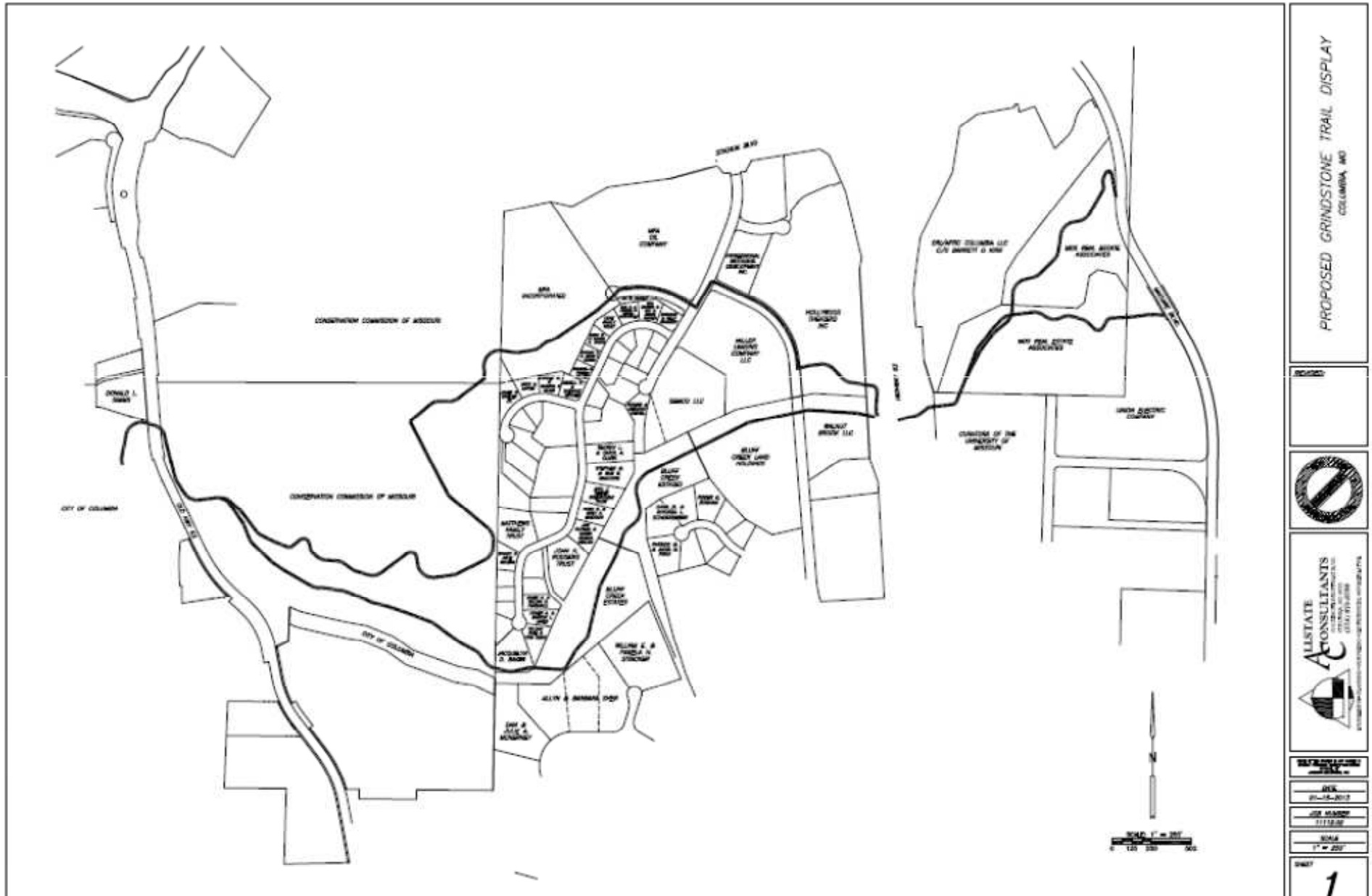


Study recommended:
 -Orange Route west of Highway 63
 -Blue or Violet Route to McGuire Bl

- 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

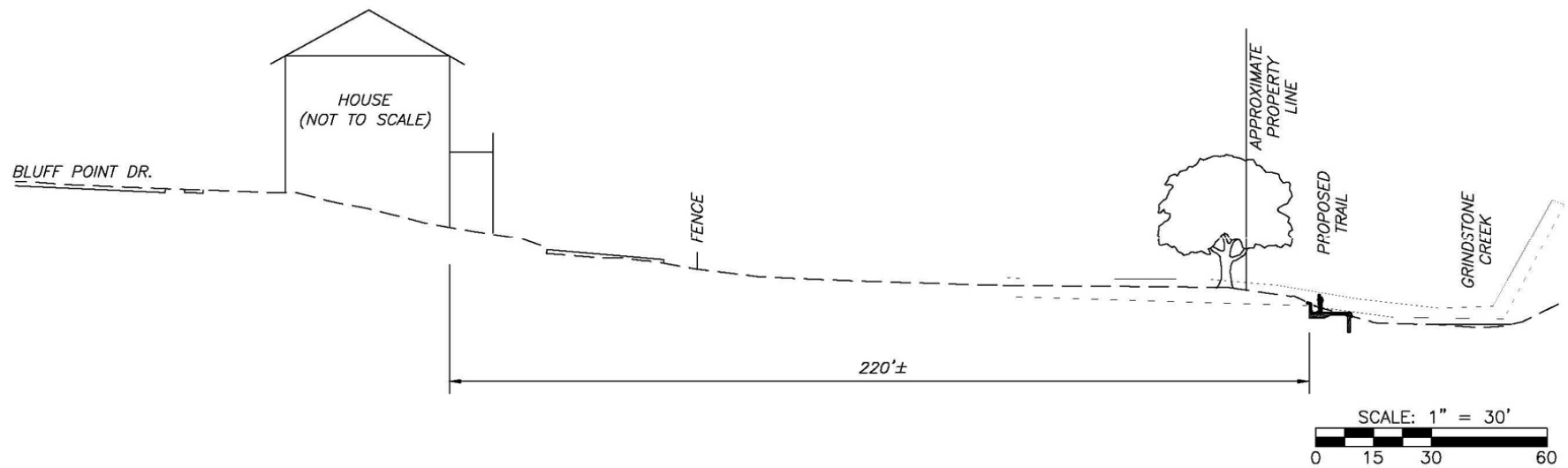


Original recommended route was on City, Homeowner Association
Common Land, MoDOT ROW, MU, Business & Private Properties



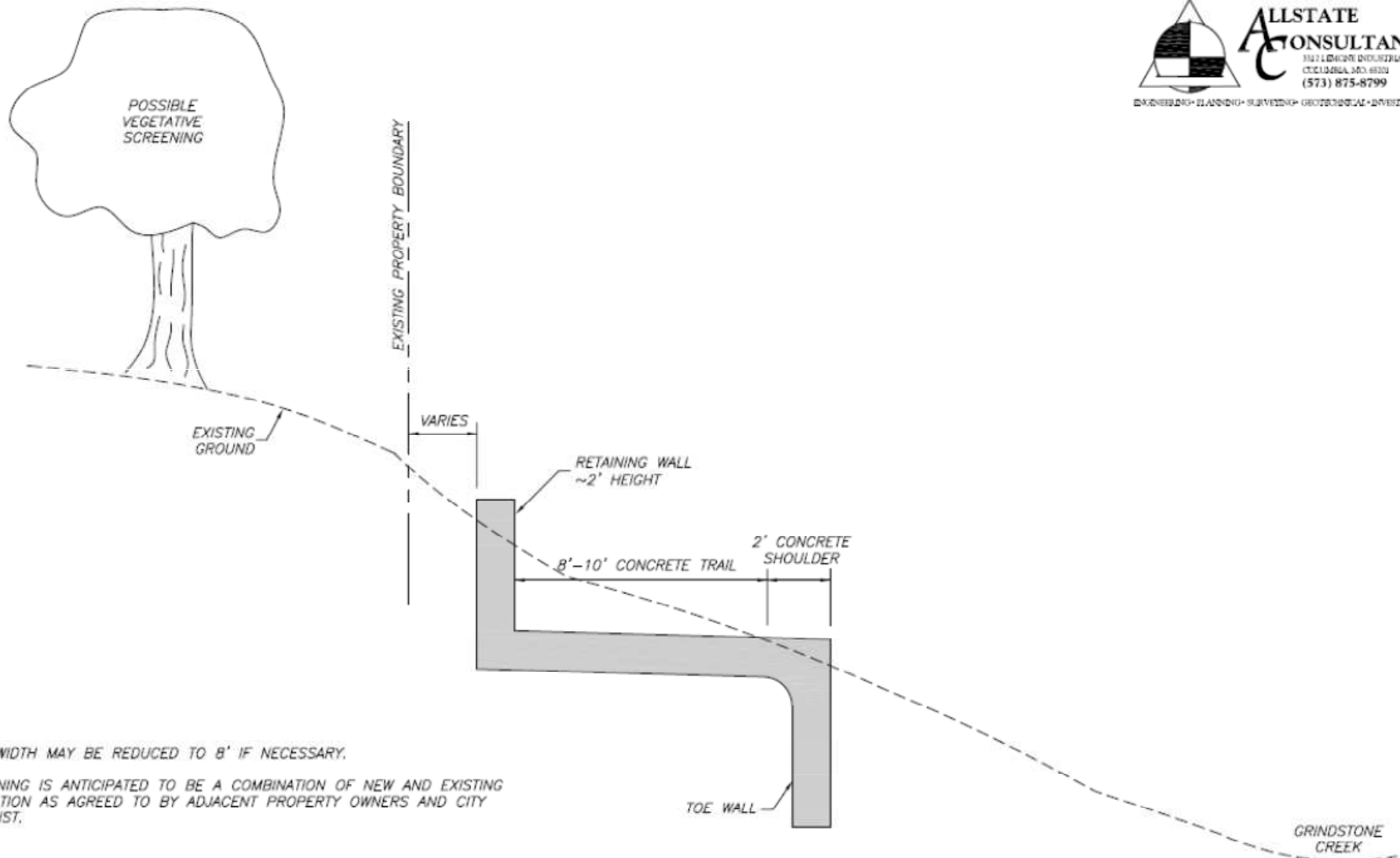


TYPICAL CROSS SECTION THROUGH CREEK, TRAIL, AND RESIDENTIAL LOT



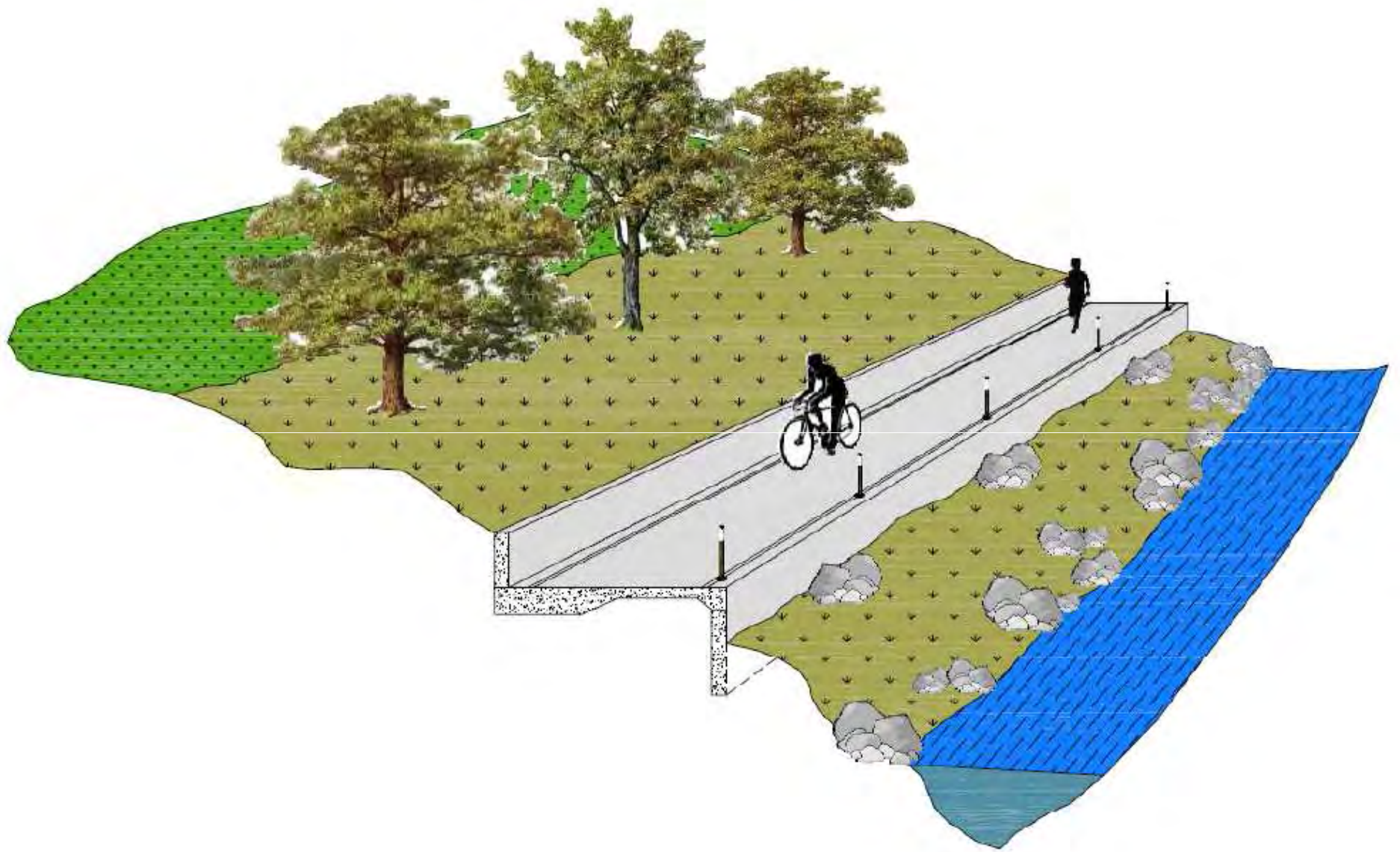
Trail is approximately 200-220 ft from nearest house

PROPOSED DESIGN ALIGNMENT CLARIFICATION GRINDSTONE TRAIL

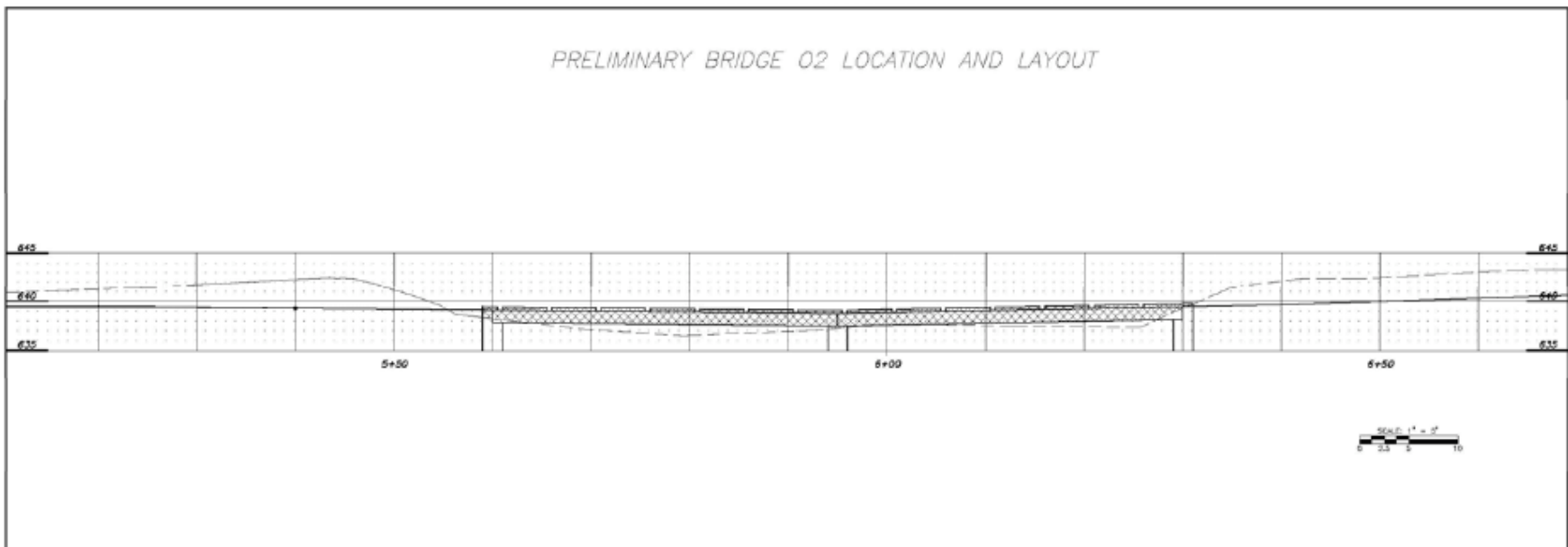


TRAIL WIDTH MAY BE REDUCED TO 8' IF NECESSARY.

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



2014111412-02-Grasshopper-Trail-dwn-TRAIL-DESIGN-dwn-Grasshopper-02-Plan-Profile-11/14/2012 9:47:57 AM



SHEET
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.



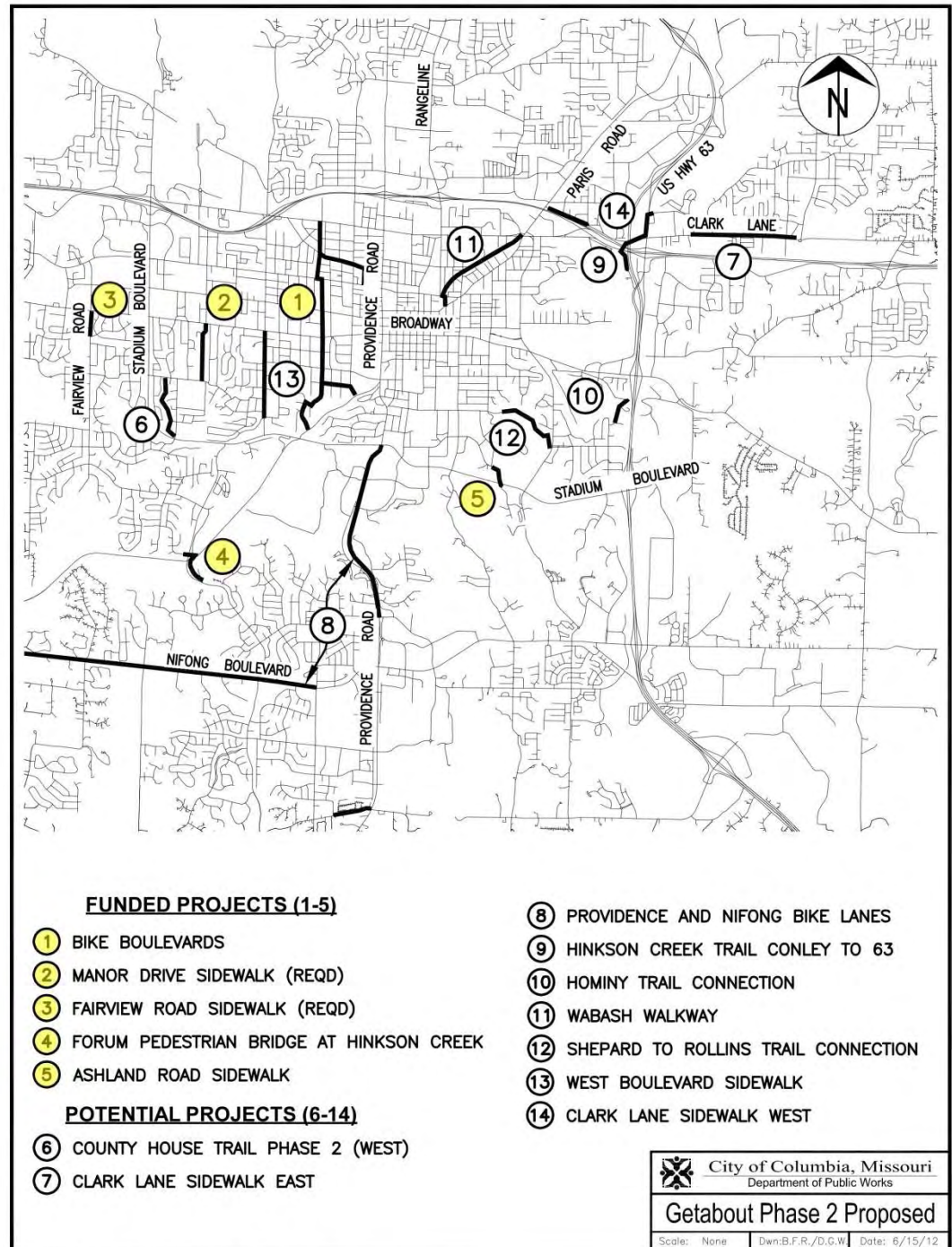
Commissions: Defer Funds from Grindstone to Get About Projects

- 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	County House Trail Phase 2 West. Connects from Rockcreek Drive to County House Trail Phase 1, predominantly on City ROW.	3	3.000	3	1	3	5	3
7	Clark Lane Sidewalk, East. Ballinger to Woodland , north side	2	2.000	2	3	2	1	2
8	Providence and Nifong Bike lanes: Providence (Stadium to Green Meadows), & Nifong (Bethel to Scott) - repair and stripe	7	6.875	6	8	5	6.5	8
9	Hinkson Creek Trail, Conley to 63 (Conley Rd to Clark Lane, Hwy 63)	1	1.500	1	2	1	2	1
10	Hominy Trail Connection (connecting Hominy Trail to Shepard Neighborhood at Pepper Tree Ln)	8	7.125	7	7	8	8	5.5
11	Wabash Walkway, 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	Shepard to Rollins East-West connection (includes bridge over Hinkson Creek)	5	6.250	5	4	4	9	8
13	West Blvd Sidewalk. Westwinds to Stewart plus upgrade the sidewalk from Stewart to Broadway, west side	6	6.000	9	6	6	6.5	5.5
14	Clark Lane Sidewalk, West. 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	Hinkson Creek Trail, Conley to 63 (Conley Rd to Clark Lane, Hwy 63)	3	1	1	133	\$ 555,000	\$ 555,000	Integrates with Conley TDD, important link
7	Clark Lane Sidewalk, East. Ballinger to Woodland , north side	3	1	2	113	\$ 325,800	\$ 880,800	Important link - dangerous for pedestrians.
6	County House Trail Phase 2 West. 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	Clark Lane Sidewalk, West. Eastwood to Paris, north side	3	2	4	72	\$ 410,325	\$ 1,736,125	Important link - dangerous for pedestrians.
12	Shepard to Rollins East-West connection (includes bridge over Hinkson Creek)	6	2	5	137	\$ 1,740,000	\$ 3,476,125	Requires 2 easements
13	West Blvd Sidewalk. 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	Providence and Nifong Bike lanes: 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	Hominy Trail Connection (connecting Hominy Trail to Shepard Neighborhood at Pepper Tree Ln)	6	2	8	84	\$ 180,000	\$ 4,532,825	Recommended by neighborhood
11	Wabash Walkway, 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.
Total Projects (Map Locations 6-14)						\$ 5,076,825		
Possible Sources of Funding								
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

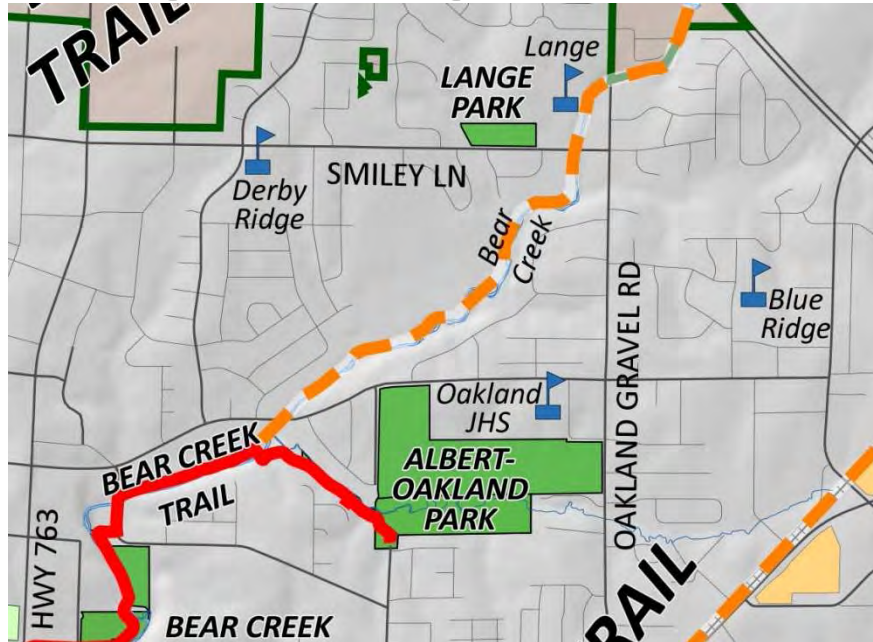
- Grindstone Creek Trail remains on trail master plan as future unfunded trail project.
- Staff recommends that Park Sales Tax Funds be used on these three trail projects:
 - **#6 County House Trail West: \$445,000**
 - **#9 Hinkson Creek Trail-Conley: \$555,000**
 - **#10 Hominy Trail Connector: \$180,000**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



Other P&R Trail Projects

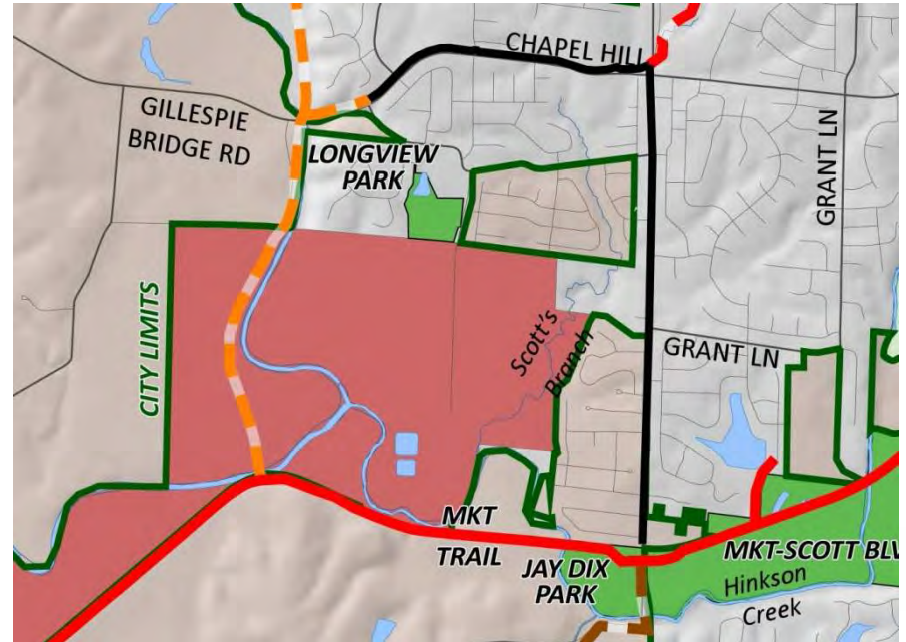
Council may select another trail project.

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

