



Bee Branch Restoration Alignment Study

Bee Branch Citizen Advisory Committee

**Meeting #5
Optimize Preferred Alternatives**

May 3, 2004

CDM

WHKS & Co.

Agenda

- ◆ **Introduction / Meeting Objectives**
- ◆ **Public Meeting Summary**
- ◆ **Alignments**
- ◆ **Alternative Refinement**
 - ◆ **Open Channel Alternative**
 - ◆ **Pipe Alternative**
 - ◆ **Open Channel Concept**
- ◆ **Alternative Ranking**
- ◆ **Discussion of Refined Alternatives**
- ◆ **Preferred Alternative for Preliminary Design**

Introduction / Primary Objectives

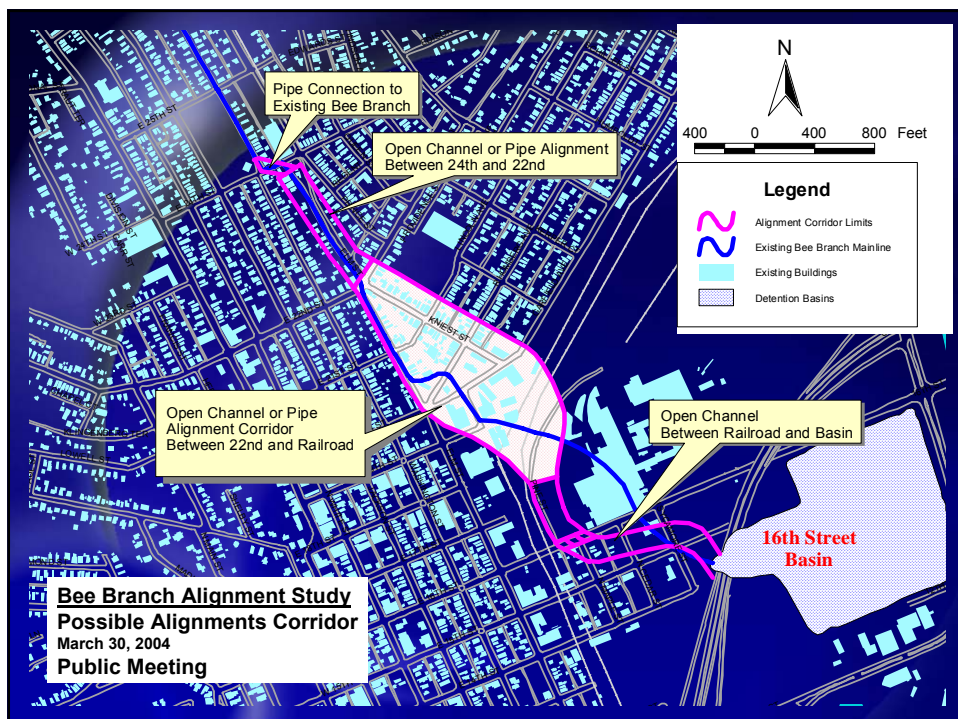
- ◆ Identify any outstanding items from Meeting #4
- ◆ Discuss Public Meeting comments
- ◆ Review selected alignment
- ◆ Select preferred alternative for Preliminary Design

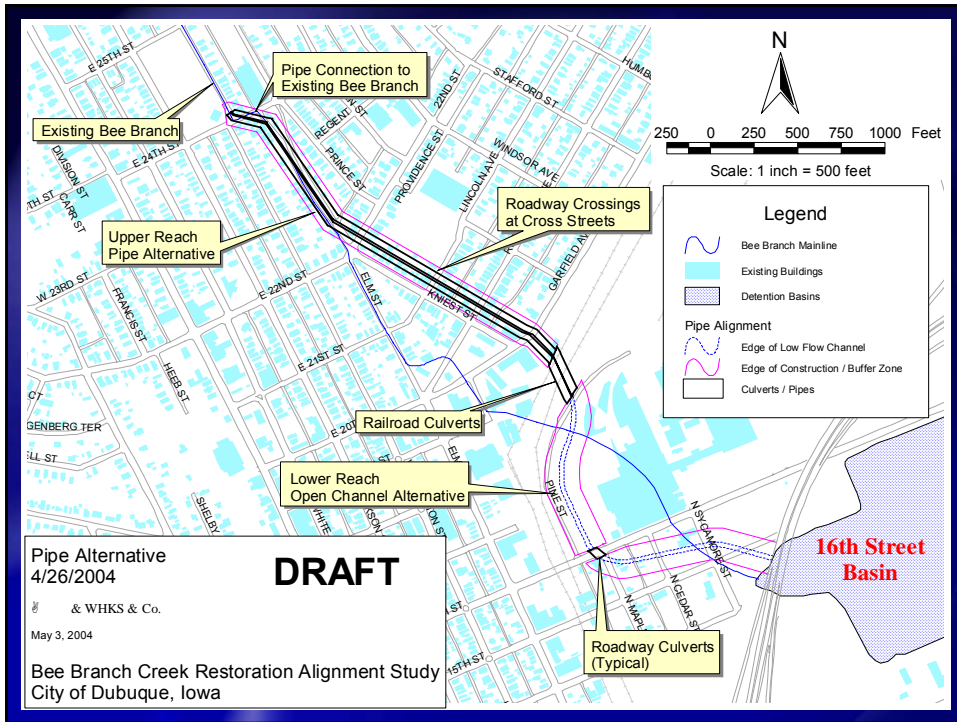
Public Meeting Summary

- ◆ Discuss Public Meeting held March 30, 2004
 - ◆ Outcome
 - Discussions with public were positive
 - BBCAC role
 - ◆ Future Public Meeting Ideas
 - Was the format effective?
 - How well did it serve the public in attendance?
 - Should we conduct the next public meeting the same way when a preferred alternative has been selected?
- ◆ Comfortable with current alignment?

Alignments

- ◆ Discuss BBCAC Alignments selected from Meeting 4
 - Open Channel Alternative
 - Pipe Alternative
- ◆ Discuss outcomes of discussions with the railroad and Audubon School
- ◆ Reach consensus on alignment

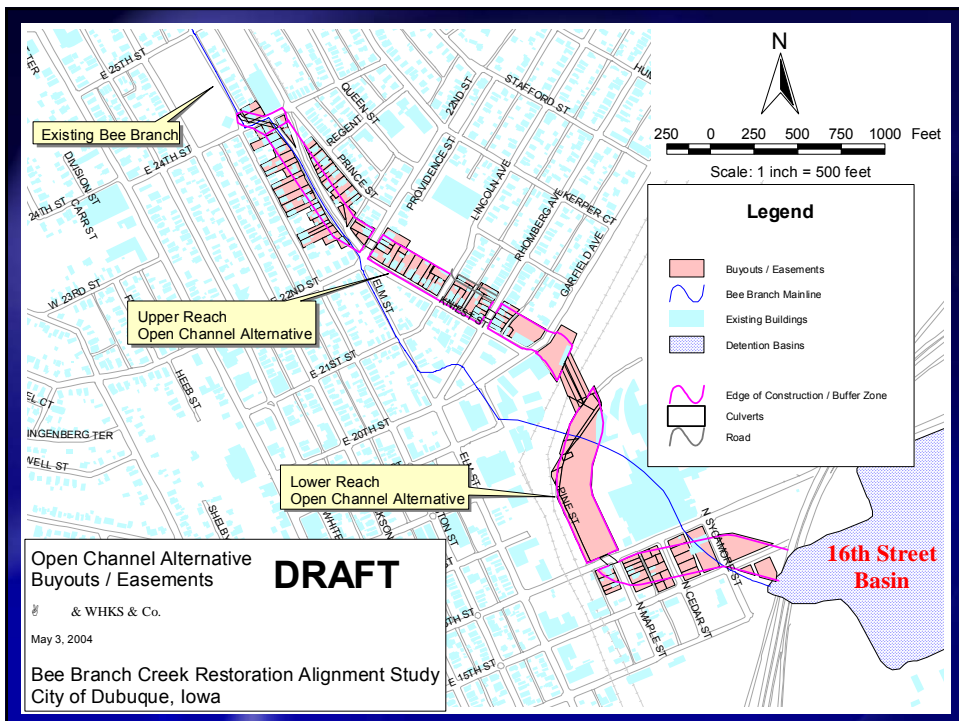
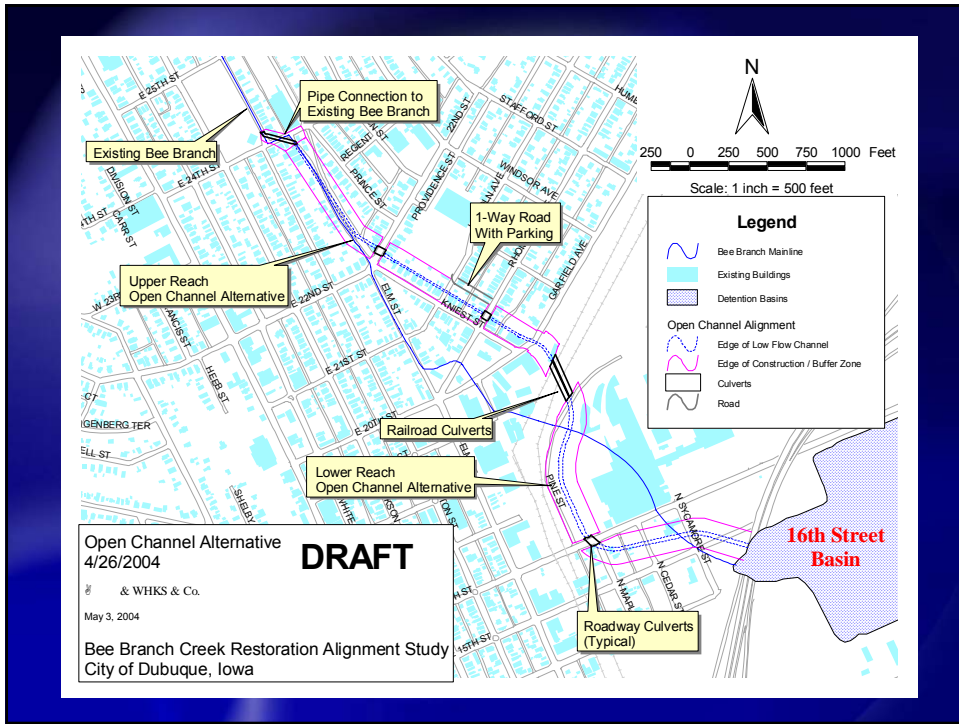




Alternative Refinement (\$25M)

The refined **Open Channel Alternative** along the preferred alignment includes:

- 4,100 feet of open channel, 12-14 feet deep
- 4 bridges
- Road closures at Lincoln, Garfield, Sycamore, Elm, and converting Kniest St. to a one-way street with parking
- New one-way street with parking Lincoln Ave. to Rhomberg Ave. for Audubon School.
- Low flow channel reduced to a width of 15 feet in the reach upstream of railroad.
- 13 commercial; 65 residential acquisitions
- Some additional properties for acquisitions/easements



Preliminary Open Channel Concept View Looking Northwest from 22nd Street Crossing

Existing Conditions



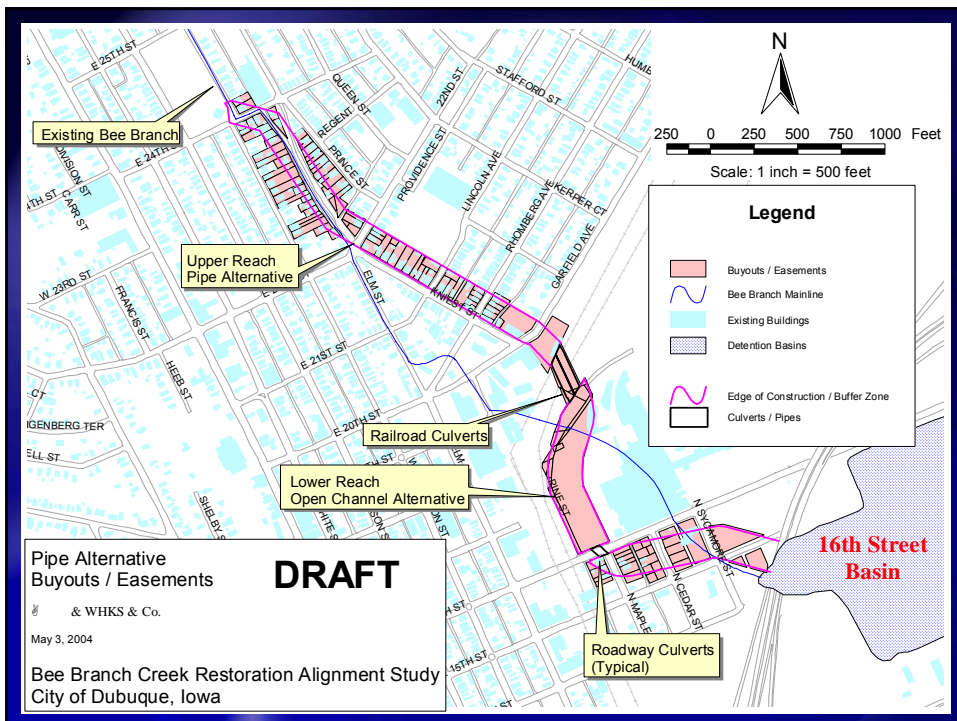
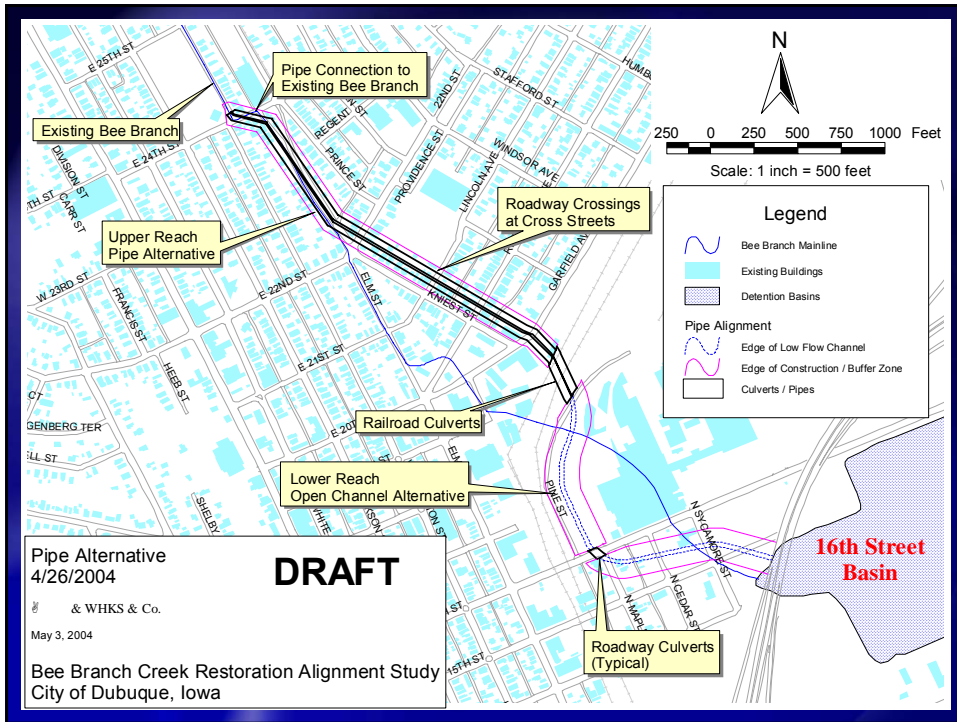
Proposed Channel



Alternative Refinement (\$41M)

The **Pipe Alternative** has been refined from Meeting 4 to follow the preferred alignment and includes:

- 2,740 feet of double box culvert
- 1,360 feet of open channel
- 1 bridge
- Road closures at Elm and Sycamore, and modification of Knies St. to one-way with parking.
- Double box culverts 10 feet tall; 28 and 42 feet wide a piece.
- Open channel section downstream of the railroad tracks same as the channel alternative discussed previously.
- 14 commercial; 64 residential acquisitions
- Some additional properties/easements



Preferred Alternative for Preliminary Design

- ◆ Get direction from BBCAC on “preferred” alternative Preliminary Design
- ◆ Work with BBCAC to develop the recommendation wording that can be sent to Council.
- ◆ Refine the preferred alternative in preparation for final Meeting #6
- ◆ Prepare a summary of the alignment/alternative evolution process.

Alternative Ranking

- ◆ Revised ranking criteria as per BBCAC comments at Meeting 4
- ◆ Provide new ranking with final two alternatives
- ◆ Discuss ranking outcome and scoring

Alternative Evaluation

- ◆ Preserve Commercial/Noncommercial Services
- ◆ Minimize Residential Property Acquisitions
- ◆ Minimize Cost
- ◆ Preserve Neighborhood Access/Connectivity
- ◆ Minimize Health and Safety Risk
- ◆ Enhance Quality of Life
- ◆ Protect Environment

Property Acquisitions

Acquisitions for both the Open Channel and Pipe Alternatives are very similar

		Alternate 1 - Channel		Alternate 2 - Pipe	
Objective	Weight	Raw Score	Weighted Score	Raw Score	Weighted Score
Preserve Commercial Services	2.4	13	22.3	14	24.0
Minimize Residential Acquisitions	2.1	65	21.0	64	20.7

Cost Comparison

Original HDR estimate ≈ \$17 million

Open Channel Alternative Cost ≈ \$25 million

Pipe Alternative Cost ≈ \$41 million

Alternative Evaluation Ranking

	Alternate 1 - Channel	Alternate 2 - Pipe
	Weighted Score	Weighted Score
Preserve Commercial Services	22.3 (13)	24.0 (14)
Minimize Residential Acquisitions	21.0 (65)	20.7 (64)
Minimize Cost	10.8 (\$25M)	18.0 (\$41M)
Preserve Neighborhood Access	10.5	8.4
Minimize Health & Safety Risks	11.2	5.6
Enhance Quality of Life	0.0	-2.6
Protect Environment	-1.0	1.0
TOTAL	74.7	75.1
RANK	1	2

BBCAC Discussion of Evaluation Results

- ◆ What do these results mean?
- ◆ Why are the results so similar?
- ◆ Should the evaluation criteria be revised?
- ◆ Is there a preference by the BBCAC?
- ◆ What are the important considerations that should be discussed prior to a decision?

Cost Impacts

- ◆ Original budget: \$17 million
- ◆ \$5M revenue from DRA – will not materialize
- ◆ Open Channel costs approx \$8 million more than budget
- ◆ Pipe Alternative costs approx \$24 million more than budget
- ◆ Additional revenue sources will be required for the budget shortfall

Potential Schedule (based on \$17 million)

- ◆ Design – 2005
- ◆ Property Acquisition Begins– 2005-2007
- ◆ Construction Complete - 2013
- ◆ Subject to Council Approval and identification of required funding

Decision Point

- ◆ Given the cost constraints, is there consensus on an Open Channel or Pipe Alternative?
- ◆ What additional issues must be resolved?

Discussion of Refined Alternatives

- ◆ Acquisitions comparison
- ◆ Cost effectiveness and funding ideas
- ◆ Desired time frame for completion of preferred alternative
- ◆ Any lingering concerns with alternatives
- ◆ Ways to make the alternatives more acceptable to BBCAC

Likes and Dislikes

- ◆ List characteristics of each alternative that the BBCAC likes
- ◆ List characteristics of each alternative that the BBCAC does not like

Tradeoffs of each Alternative

- ◆ **Affordability**
- ◆ **Constructability (Implementation)**
- ◆ **Schedule**
- ◆ **An “acceptable” solution vs. an “ideal” solution**

Decision Point

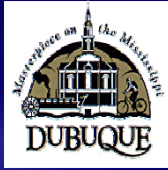
- ◆ **Is there consensus on an Open Channel or Pipe Alternative?**
- ◆ **Any other recommendations to Council?**

Recommendation Options

- ◆ Recommend one alternative
- ◆ Recommend a alternative, with minority opinion
- ◆ No recommendation (can't develop consensus) – Council should choose

Recommendation Wording

- ◆ The BBCAC recommends.....



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