

EASEMENT ACQUISITION DOESN'T HAVE TO BE LIKE A TRIP TO THE DENTIST



2018 PNWS-AWWA Conference

April 26, 2018

Tony Fisher, PE, PMP - BHC Consultants, LLC



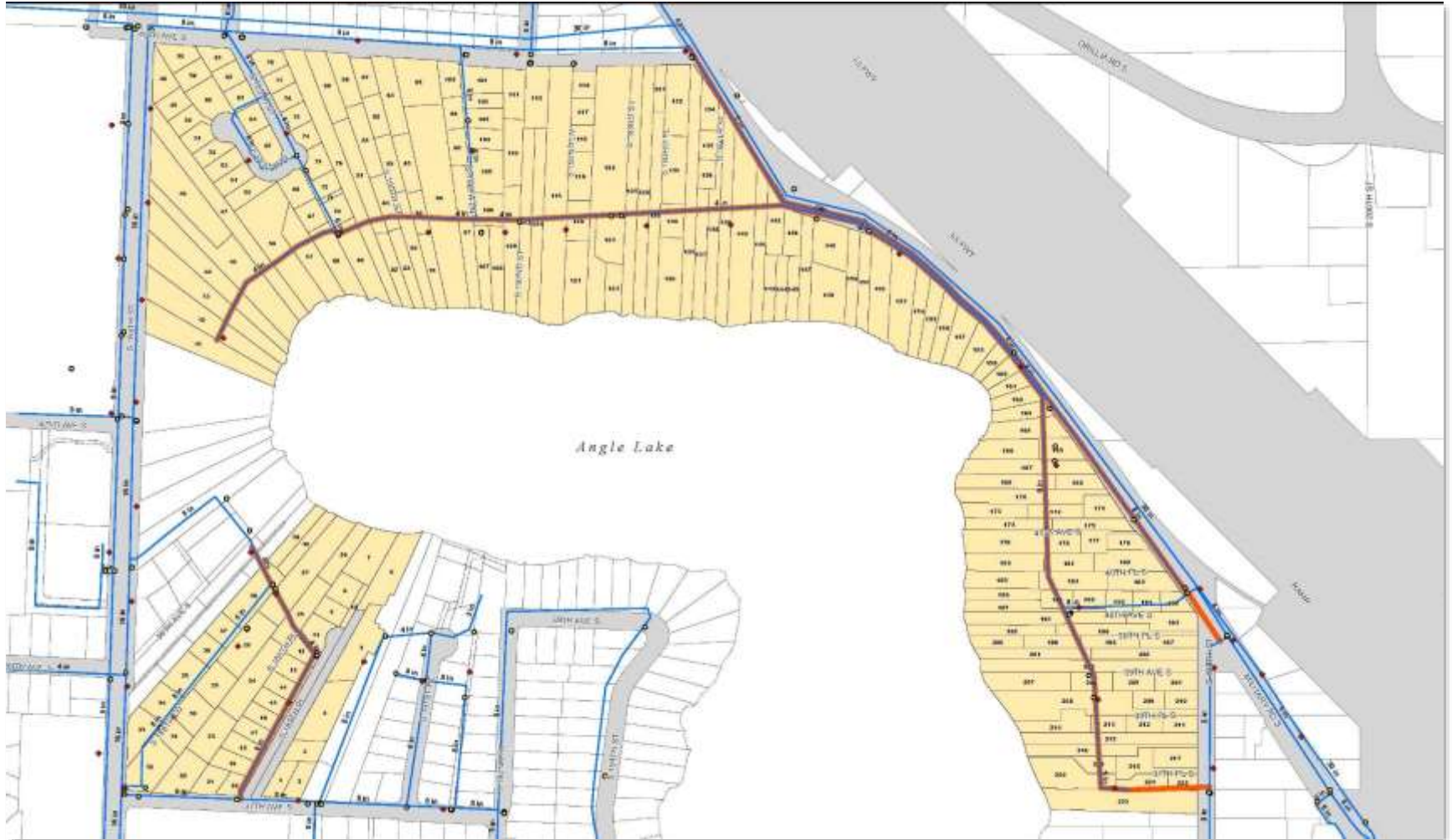
The Team!



- Highline Water District
 - Jeremy Delmar – Engineering Manager
- BHC Consultants
 - Tony Fisher – Project Manager
 - Gary Bourne & Noah Allen – Easement Negotiators
 - Talia Tittlefitz & Abby Weber – Easement Coordinators
- Survey
 - Mike Bowen, KPG
- Aerial Orthophotography
 - Jeff Kenner, Aerometric, Inc



The Project





What Are The Root Issues?



- History of Costly Failures
- Undersized AC Water Mains
- Insufficient Isolation Valves
- Challenging Access
- Dense Development
- Encroaching Building and Landscaping
- Missing Easement Documentation
- Minimal As-Built Records





The Challenge!



- Replace 8,500 feet of 6" & 8" Water Main
- Improve Access and Reliability
- Eliminate Transverse Crossings of Properties
- Backyard Construction
- Acquire 110 Permanent and Temporary Easements
- Keep the District Out of the News





The Approach

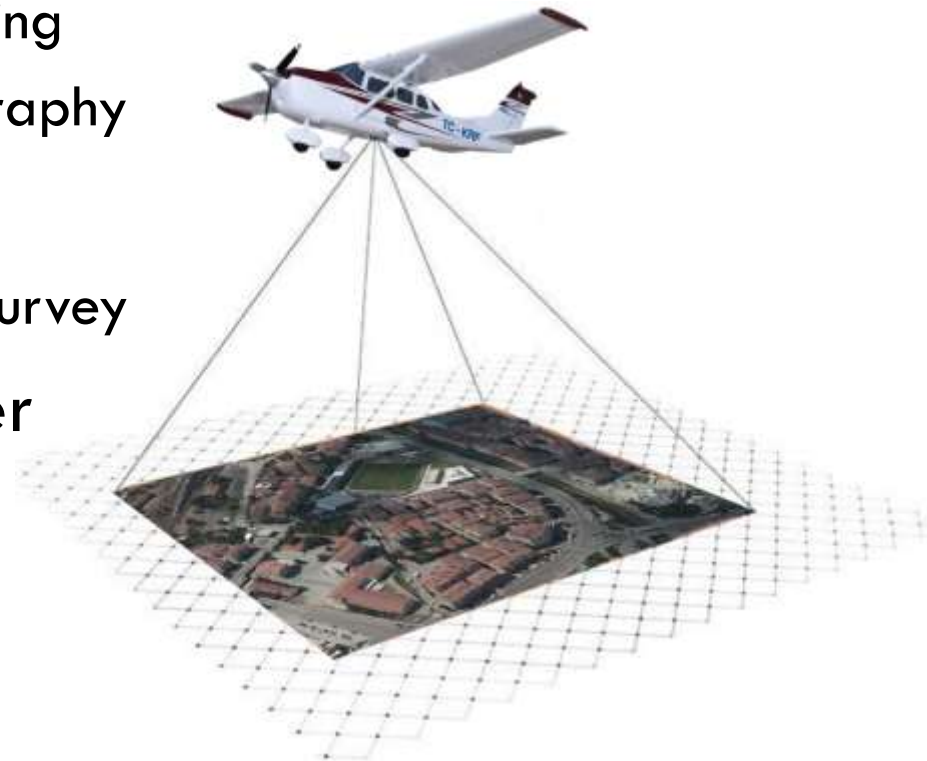
- Aerial Survey
- Alignment Selection
- Comprehensive Public Outreach Program
- Acquire Easements
- Develop Design Documents
- Bid Project
- Construct Project





Aerial Survey

- Flown Specifically for this Project
 - High Resolution Images
 - Extremely Useful for Planning
 - \$18,200 for Orthophotography
- Base Map for Design
 - Supplemented with Field Survey
- Invaluable for Homeowner Meetings





Aerial Photos



Angle Lake
AC Main
Replacement

Proposed Upgrades
& Easements
100 Scale Map Book

Highline Water
District

Feb 2014 Proposed Alignment

Legend

- Fire District Post No.
- Existing Hydrant
- Existing Meters
- Existing Water Main
- Existing Water Services
- Existing Water Main to be Abandoned
- Easements
- Temporary Easement
- Permanent Easement
- Proposed Alignment

1 inch = 100 feet

Water System: Highline Water District (2011)
Map Update: Issue Date: April 2012
Aerial Photo: NWS 2012

Data sources: Highline Water District. Highline Water District does not collect current or actual conditions. This map is a geographic representation based on information available. It does not represent survey data. No warranty is made concerning the accuracy, timeliness, or completeness of data appearing on this map.

MAP DATE: SEPTEMBER 2012



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Figure 8



Aerial Photos



Angle Lake AC Main Replacement

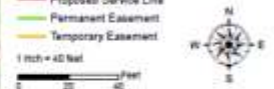
40' Scale Map Book

Highline Water
District

May 2015
Proposed Alignment

Legend

- Fire District Post No.
- Easements
- Existing Hydrant
- Existing Meter
- Existing Water Main to be Abandoned
- Existing Water Main
- Existing Water Services
- Proposed Hydrant
- Proposed Meter
- Proposed Alignment
- Proposed Service Line
- Permanent Easement
- Temporary Easement





Alignment Selection

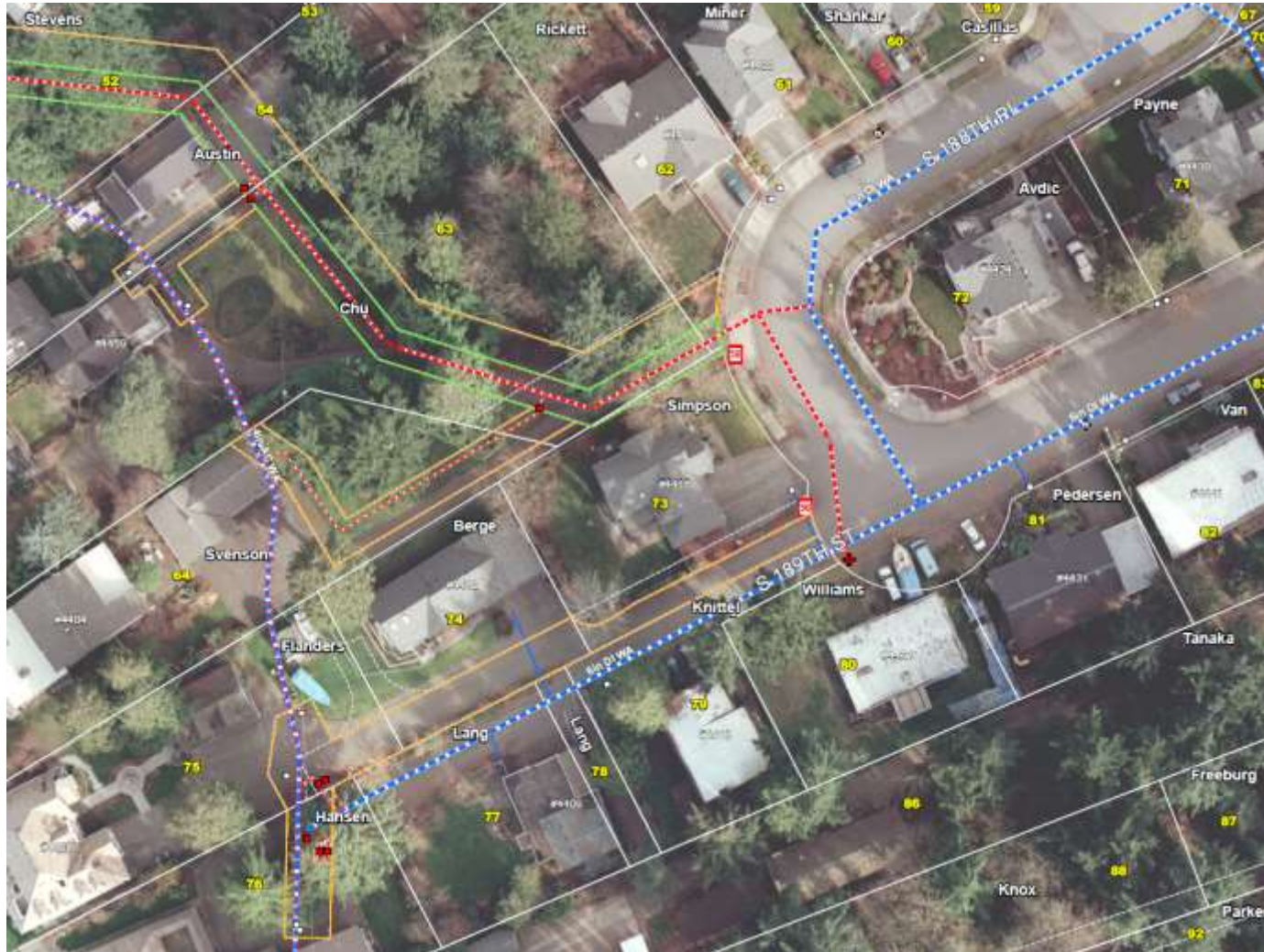


- Aerial Survey Used for Initial Alignments
- Check Alignments in Field
 - Identify potential construction challenges
 - Verify obstacles
 - Verify access
- Investigate Construction Methods
 - Open Cut Trenches
 - CIPP
 - HDD
- Work Closely with District Maintenance Staff





Avoid Hedge



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Comprehensive Public Outreach



- Easement Acquisition is Significant Challenge
- Public and Property Owners are Prime Stakeholders
- Community Project v. District Project
- Engage Early and Often
 - Public meeting
 - Individual meetings
 - FAQ flyers
 - Door hangers
- Be a Good Neighbor





Goal: Acquire 110 Easements



- Within a Reasonable Time Frame
- Avoid Condemnation
- Appease the Public
- Avoid Bankrupting the District





Direct Purchase v. Negotiate



Activity	Direct Purchase	Negotiate Easements
Surveying, Engineering, Public Outreach	\$230,000	\$442,000
Appraisals	\$200,000	\$0
Easement Purchases	\$400,000	\$0
Total	\$830,000	\$442,000



Easement Acquisition



- Do Our Homework First
 - ▣ Boilerplate Documents
 - Access Agreements
 - Easement Forms
 - Title Reports
 - ▣ Tracking Database
 - Property Identification Numbers (PINs)
 - Track All Conversations
- Friend v. Foe
 - ▣ Public Meeting to Introduce Project
 - ▣ Access Agreements
 - ▣ Individual and Group Meetings
 - ▣ Phone Calls and Text Messages



Home Owner Negotiations



- Stake Alignment and Easement Limits
- Establish Rapport
 - Meet with Property Owners
 - Review alignment
 - Make adjustments before spending design dollars
 - Avoid landmark dogwood tree
 - Discuss Impacts
 - Restoration (driveways, landscaping, fences)
 - Poor soils behind failing retaining wall
 - Access during construction
 - Service interruptions
 - Hydrant and meter locations





Other Home Owner Concerns



- **Restrictions on Future Development**
 - ▣ Limits on Development within Easement Area
 - ▣ Subdividing Property
 - Shift alignment to coincide with property line where feasible
 - Identify planned developments and locate main accordingly
 - Re-routed water main in different direction
- **Property Value Impacts**
 - ▣ Better Reliability, Pressure, and Fire Flow Protection Enhances Property Value



Accommodate Future Subdivision



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Resolve Issues



■ Restoration

- Hot Mix Asphalt (HMA) paving
- Sod v. hydroseed
- Homeowner preferred plants
- Replace fences to logical limits

■ Poor Soils behind Failing Retaining Wall

- Replace retaining wall
- Over-excavate to replace soils





Resolve Issues



- **Access During Construction**
 - Identify property owner access requirements
 - Document restrictions and requirements
 - Provide alternative access where feasible
- **Service Interruptions**
 - Limited to short term during connections and service transfers
- **Existing Hydrant Locations v. Proposed Hydrant Locations**
 - Fire code spacing requirements
 - Fire truck access



Negotiation Challenges



- Neighbor and Family Feuds
 - Act as mediators
 - Gently nudge towards decisions
- Cleared Property without Permit
 - Wanted District to assist in resolving permit issues
 - Wanted sports court



Negotiation Keys



- Personable Negotiators with Technical Knowledge
- Empower Easement Negotiators
- Know Our Limits
 - Acceptable restoration efforts
 - Restrictions on alignment shifts
 - Hydrant and meter access needs





Addressed Challenges

■ Drainage Issue

- Existing dry well failing near water main alignment
- Replaced dry well and added drainage pipe

■ Cracked and Crumbling HMA Driveways

- Replace entire driveway (numerous locations)

■ Provide Additional Hydroseeding

- Hydroseed is cost effective negotiating tool

■ Yard Hydrant Challenge

- Existing main located under garage
- Revised alignment eliminates existing yard hydrant
- Provided yard hydrant with isolation valves



Failing Retaining Wall





Failing Retaining Wall





Failing Retaining Wall





Final Acquisition



- Prepare Easement Documents
 - ▣ Legal Descriptions
 - Based on centerline of water main
 - ▣ Easement Exhibits
 - Snap shots of design documents
- Obtain Signatures
 - ▣ Mail or Email Documents
 - ▣ Meet with Property Owner
 - ▣ Easement Negotiators were also Notaries



Temporary Easement Conditions



Exhibit B
Depiction of Temporary Water Main Easement
PIN 25

Page 2 of 2

NOTES:

1. THE EASEMENT RIGHTS GRANTED BY THIS EASEMENT INCLUDE NECESSARY WORK AND WORK AREA TO LOCATE AND RELOCATE WATER METERS AND PRIVATE WATER SERVICE LINES AS DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION.
2. THE GRANTOR/PROPERTY OWNER SHALL OWN AND BE RESPONSIBLE TO MAINTAIN ANY NEW WATER SERVICE LINE INSTALLED BETWEEN THE WATER METER TO SERVE THE PROPERTY AND THE HOUSE LOCATED ON THE PROPERTY.
3. THE GRANTEE/DISTRICT WILL REPLACE THE EXISTING DRIVEWAY WITH 3-INCHES OF HOT MIX ASPHALT (HMA) AND A MINIMUM OF 6-INCHES OF BASE COURSE.
4. THE GRANTEE/DISTRICT WILL REMOVE THE EXISTING RETAINING WALL AND REPLACE WITH A STRUCTURALLY SOUND RETAINING WALL PER THE DETAILS INCLUDED AS ATTACHMENT 1 TO THIS TEMPORARY EASEMENT.

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PIN #25-T
Angle Lake AC Water Main Replacement



Success!



- All Easements Acquired
 - Took approximately 2 years for easement acquisition and design
 - Numerous meetings
 - No condemnation proceedings
- Established Rapport Reduced Construction Complaints/Issues
- Saved District about \$400,000



**A SPECIAL THANK YOU TO
HIGHLINE WATER DISTRICT
FOR THIS OPPORTUNITY**



Questions?

