



- ▶ Welcome

- ▶ Presentation

- ▶ Open House

PHX WATER SMART

Drought Pipeline Project

- ▶ Phoenix Water Supply Overview
- ▶ Drought Pipeline Project Overview
- ▶ Process to Build a Pipeline
- ▶ Alignment Corridor/Constraints
- ▶ Project 1 Alignment & Phases
- ▶ Residential Areas:
 - ▶ Access and Traffic Coordination
 - ▶ Alignment and Timeframe
 - ▶ Constructability
- ▶ Phoenix Mountain Preserve:
 - ▶ Alignment and Timeframe
 - ▶ Constructability
 - ▶ Coordination and Restoration



Phoenix Water Supplies





Water Level Near Capacity - 1998

Water Level in February - 2019

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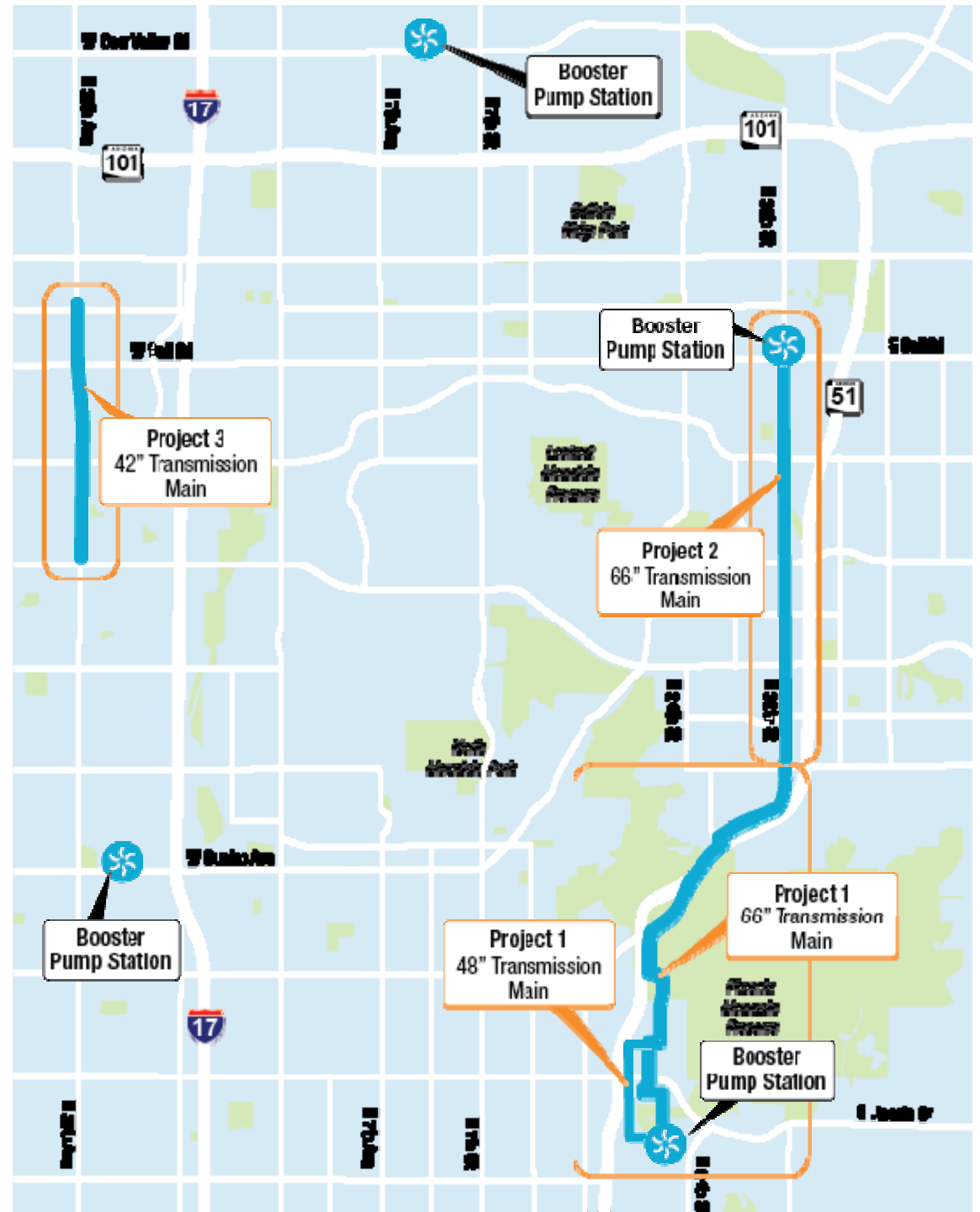
Preparing our Water System for Drought

- The Northern portion of our City is dependent on Colorado River water
- To serve our customers and build resiliency in our water system, WSD needs the infrastructure to move local water supplies North
- These improvements are to provide water supply for our existing customers



Drought Pipeline Project

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What's the Process?

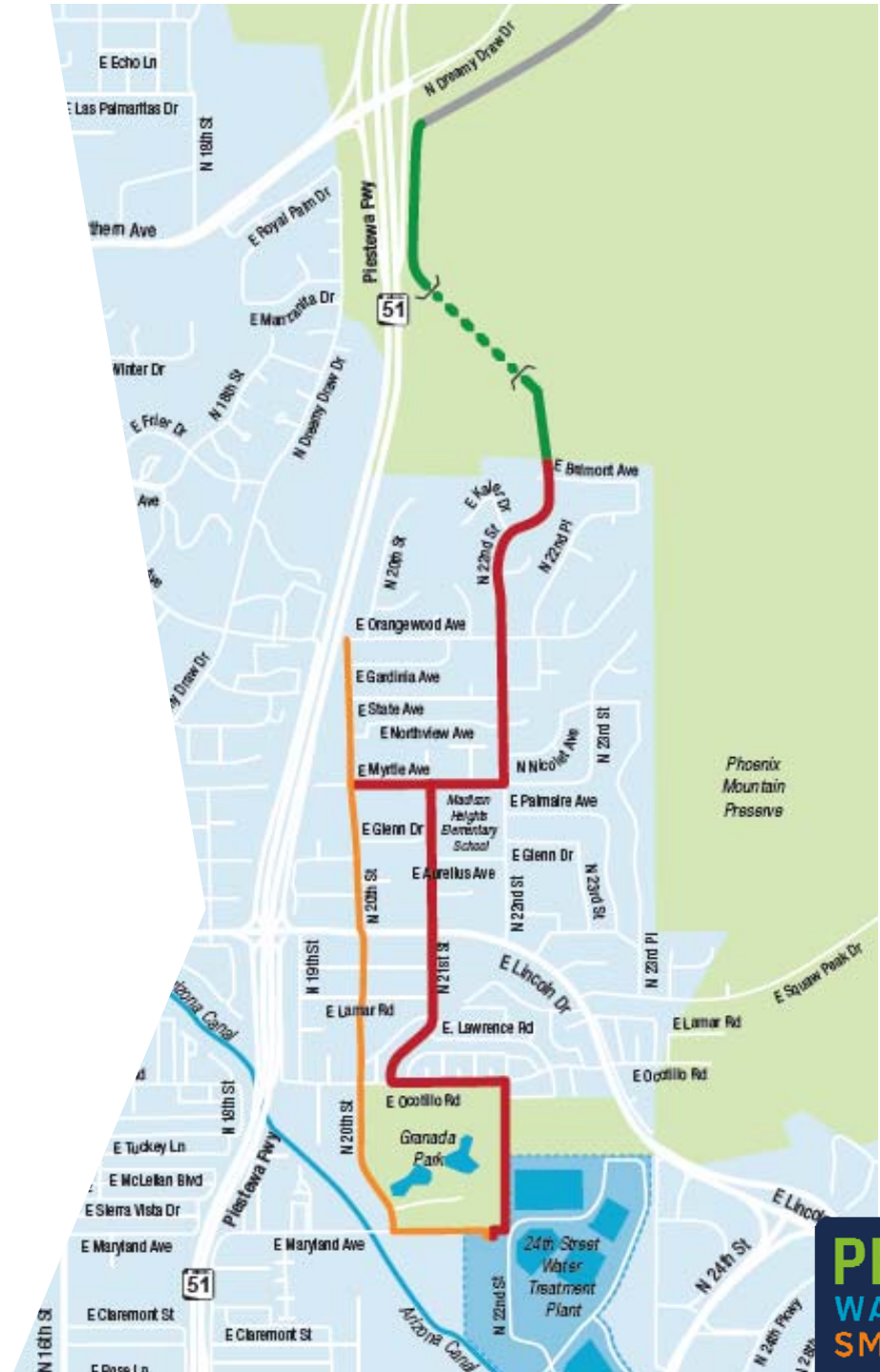
► *Planning*

- *Identify Need*
- *Alignment Study*
 - *Determine Technical Viability*
 - *Identify Corridor*

► *Conceptual Design*

(status of 66" pipeline design)

- *Hire Engineers & Contractors*
- *Detailed Engineering Investigation*
- *Contractor Input*
- *Utility Coordination*
- *Finalize alignment*
- *Stakeholder/Public Involvement*
- *City Departments Coordination*
- *Outside Agency Coordination*



What's the Process?

▶ Preliminary Design

- ▶ Alignment Set
- ▶ Permit Applications
- ▶ Contractor Construction Sequencing

▶ Pre-Final Design

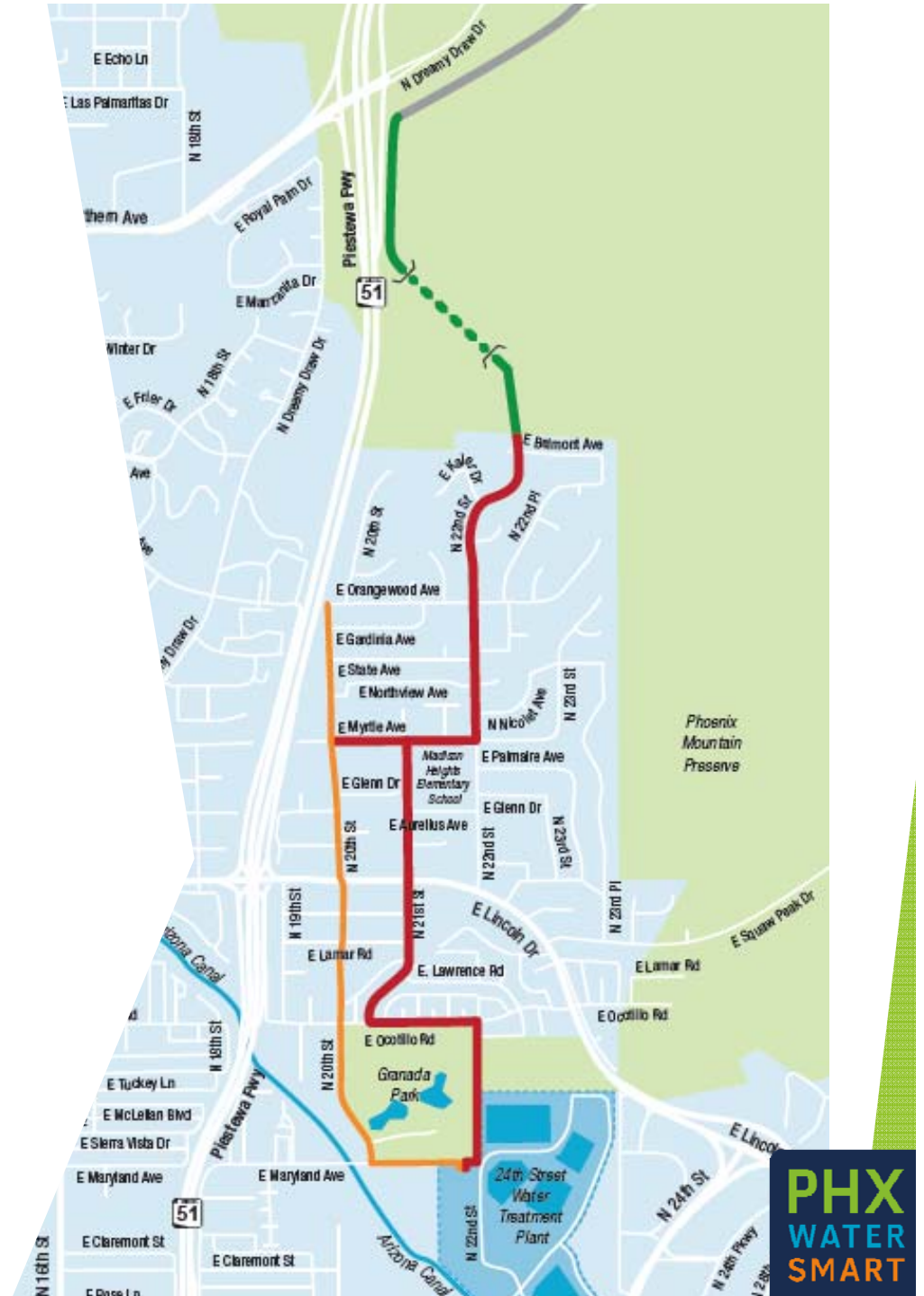
- ▶ Permit Issuance
- ▶ Traffic Control Plans
- ▶ Stakeholder/Public Update
- ▶ Council Approval of Construction Contracts

▶ Final Design

(status of 48" pipeline design)

- ▶ Design Plan Complete
- ▶ Construction Contract Development

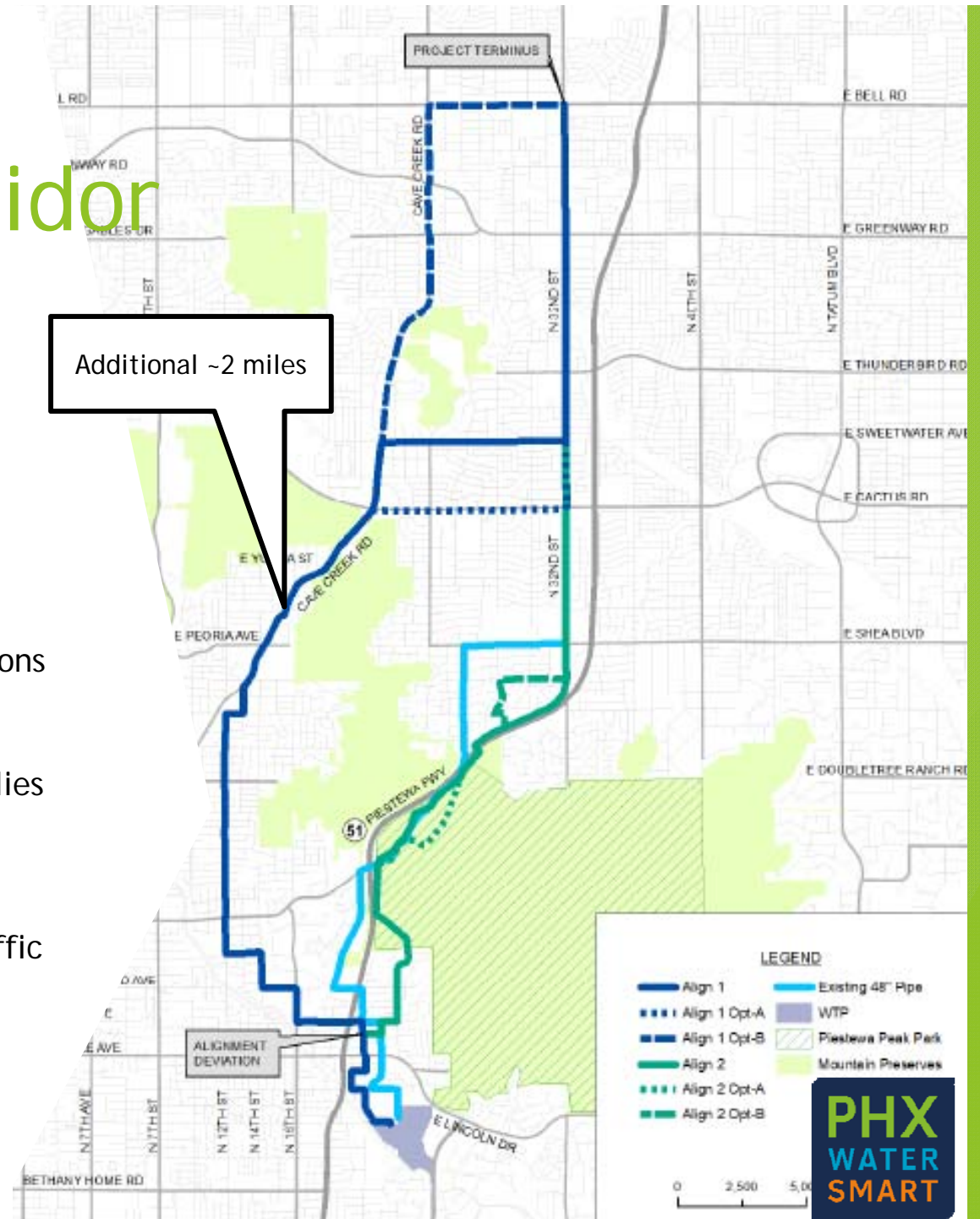
▶ Construction



Planning - Alignment Corridor

► Advantages of Selected Alignment Corridor

- Water Quality
 - Longer Pipes=Older Water
- Optimal Flow & Pressure
- System Redundancy/Interconnections
- Cost Savings
- Fewer Overall Disruptions to Families and Businesses
- Less Maintenance Needed
- Less Roadway Volume / Fewer Traffic Impacts / Shorter Schedule
- No Property Condemnations



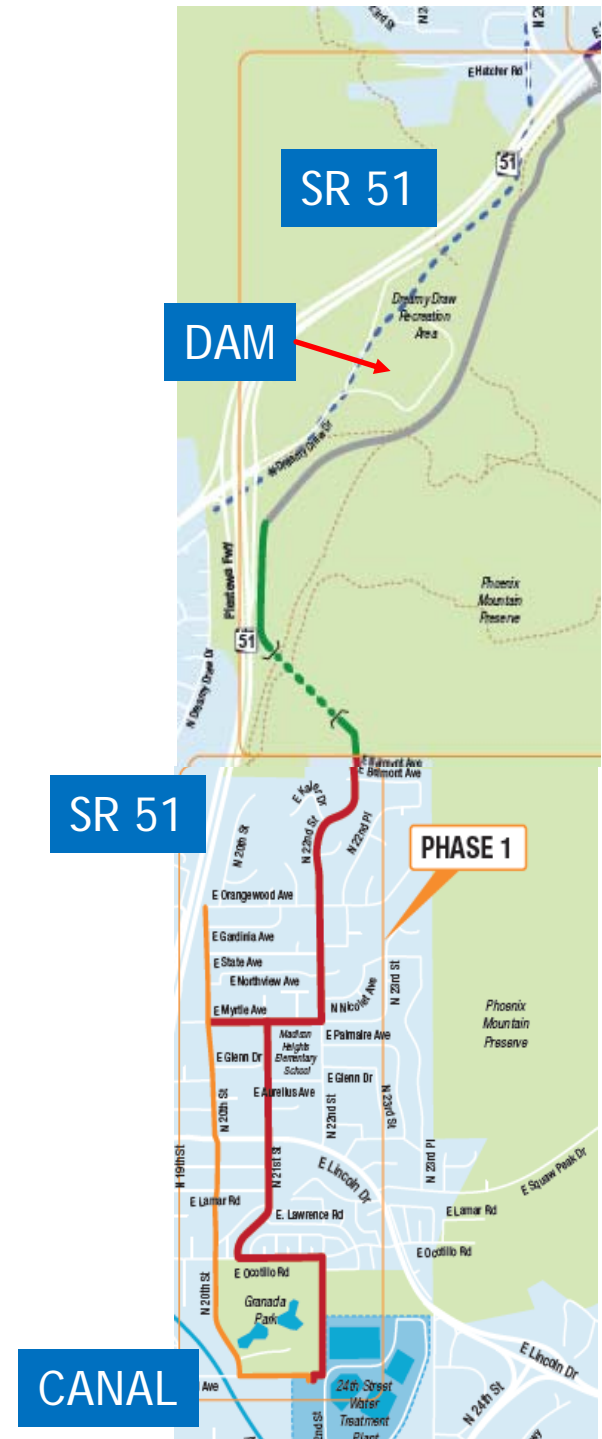
Planning - Alignment Constraints

Considerations:

- ▶ ADOT / SR 51
- ▶ Dam/Army Corps of Engineers
- ▶ Neighborhood/Bridle Trail
- ▶ Tunnel/Preserve

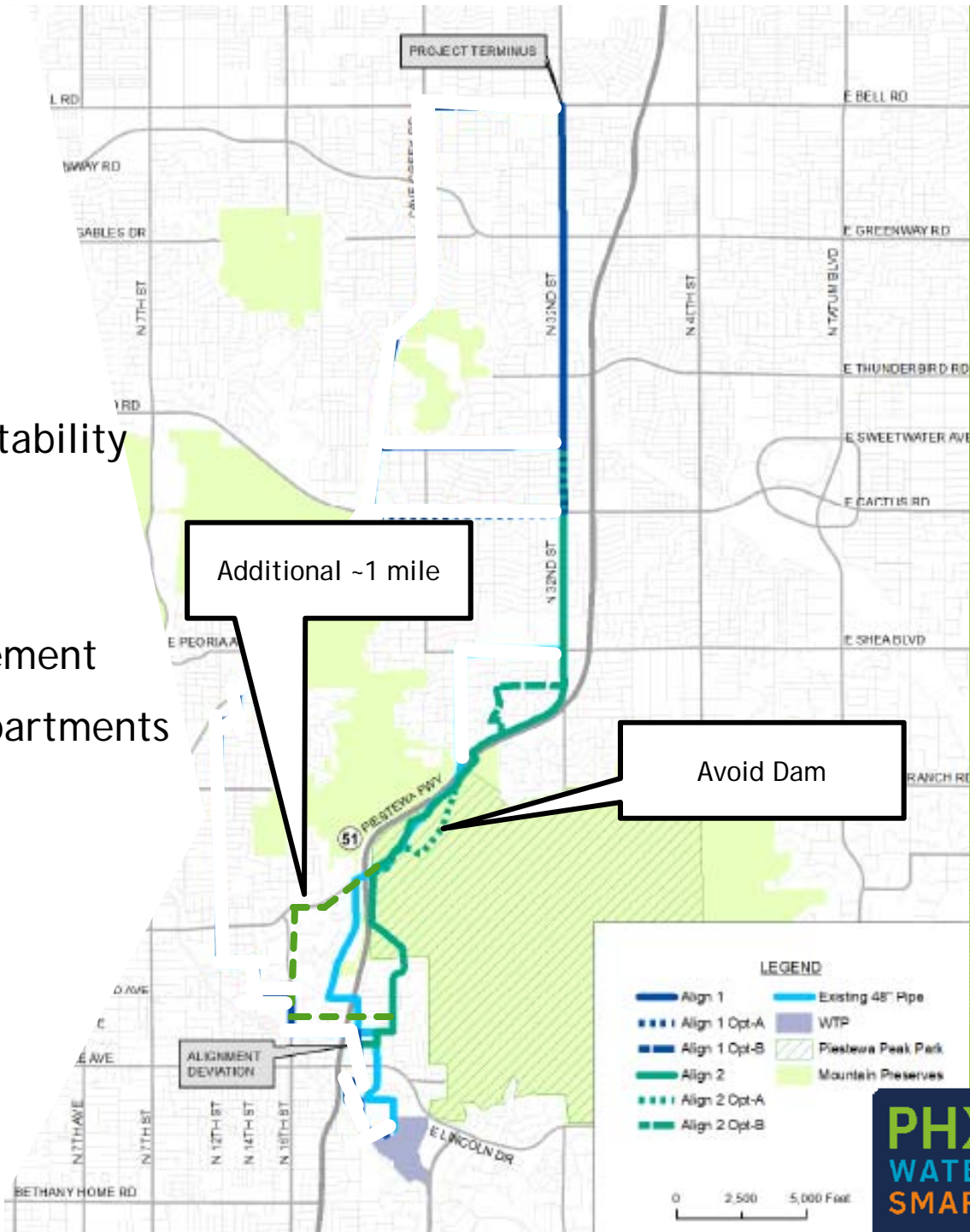
Constraints:

- ▶ Public Safety
- ▶ Flood Control & Structural Stability
- ▶ Topography
- ▶ Pipe Length



Conceptual Design

- ▶ Engineering Investigation
- ▶ Contractor Input/Constructability
- ▶ Utility Coordination
- ▶ Finalize Alignment
- ▶ Stakeholder/Public Involvement
- ▶ Coordination with City Departments



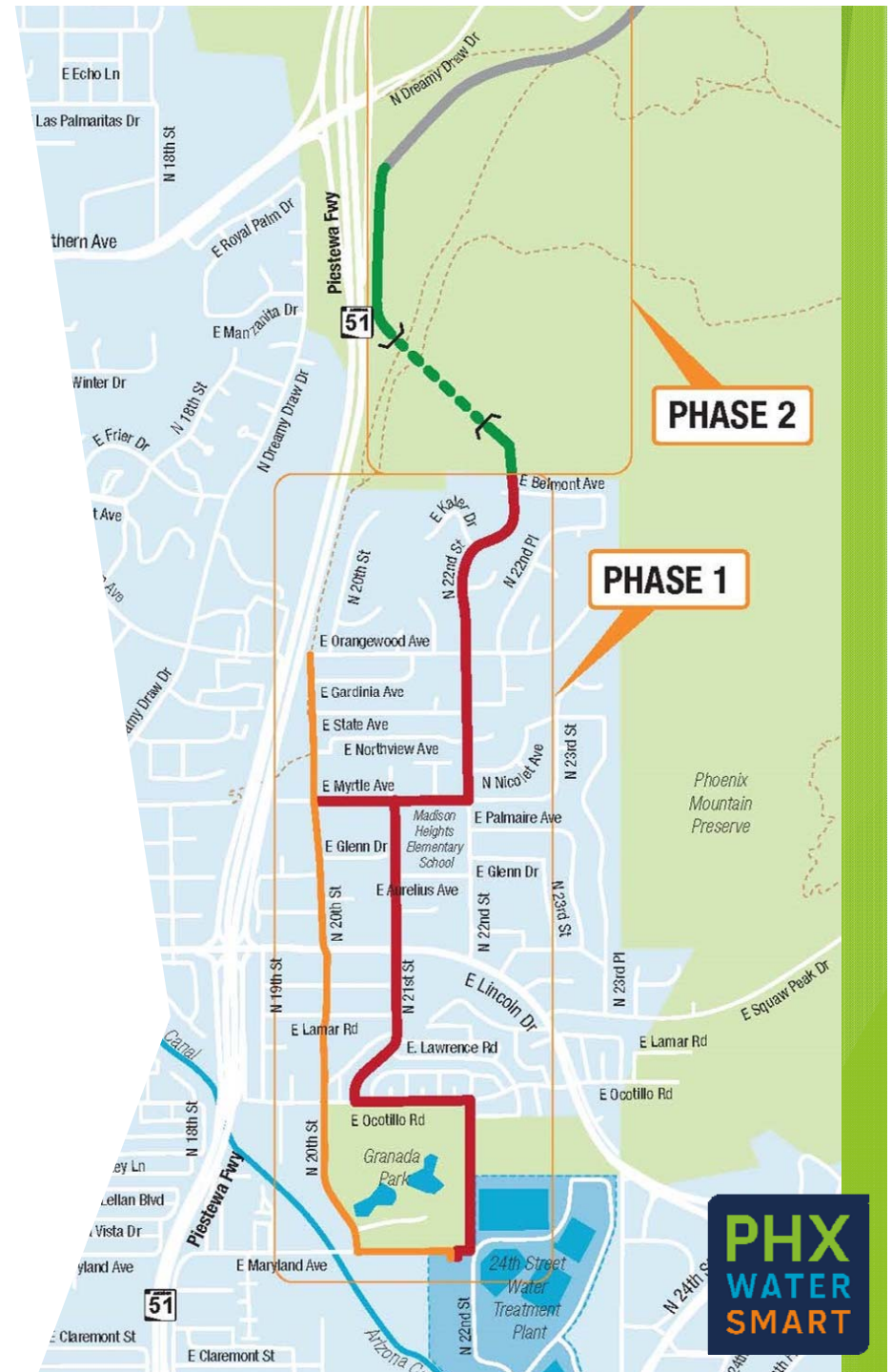
Mountain Preserve and Adjacent Neighborhood Construction Timeline

January 2020 –
Fall 2020

August 2020 –
Summer 2021

Spring 2021 – Fall
2021

Spring 2021 –
Spring 2022

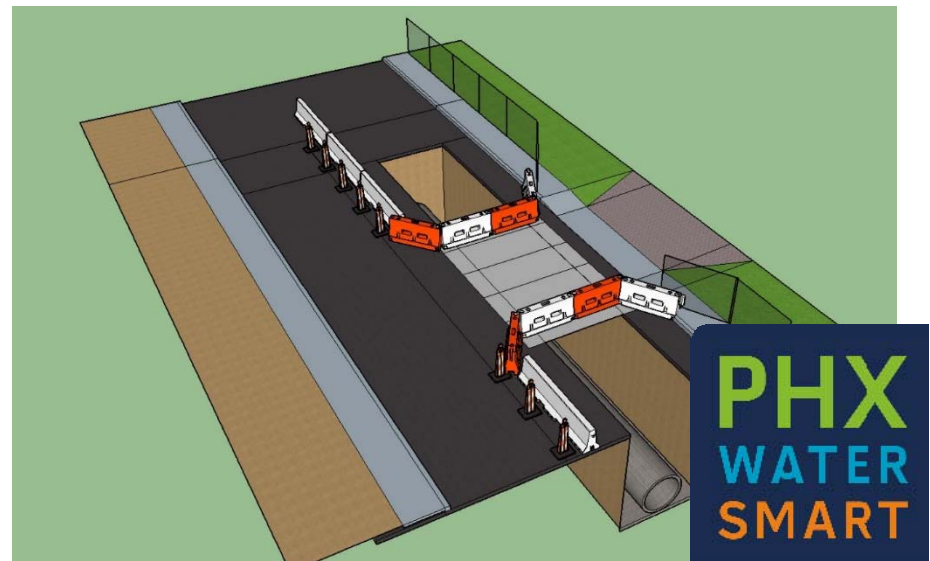
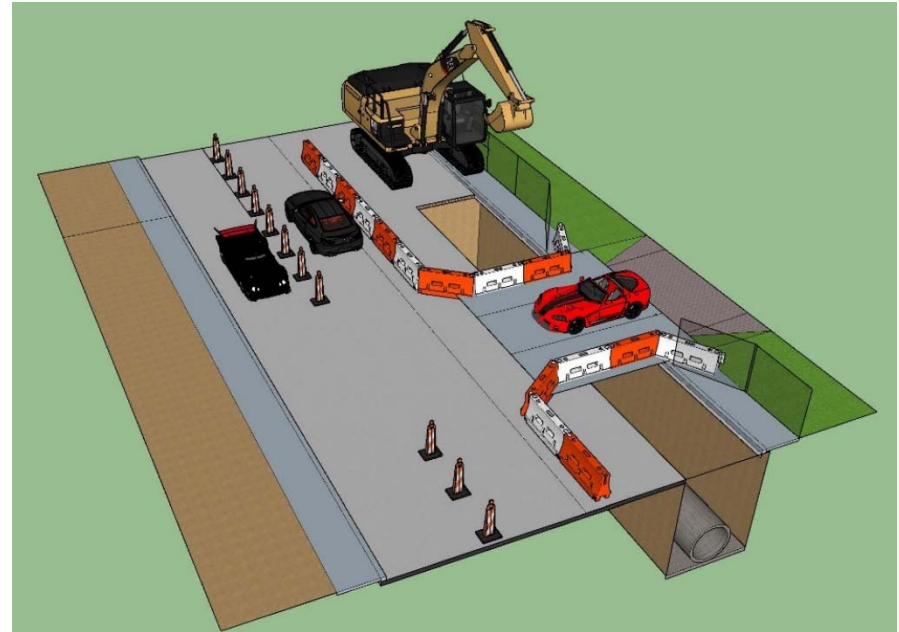




Residential Construction/Traffic Control Coordination

We will maintain:

- ▶ Residential Access
- ▶ Trash Pickup
- ▶ Mail/Deliveries
- ▶ School drop-off/pickup
- ▶ Traffic Control
- ▶ Emergency Responder Access
- ▶ Bus/Public Transportation
- ▶ Safety/Security of Work Area and Equipment



Phase 1 - 20th St & Maryland Ave

▶ 48" Waterline

- ▶ 20th Street North of Glendale Ave

▶ *Jan 2020 through June 2020*

- ▶ 20th Street South of Glendale Ave

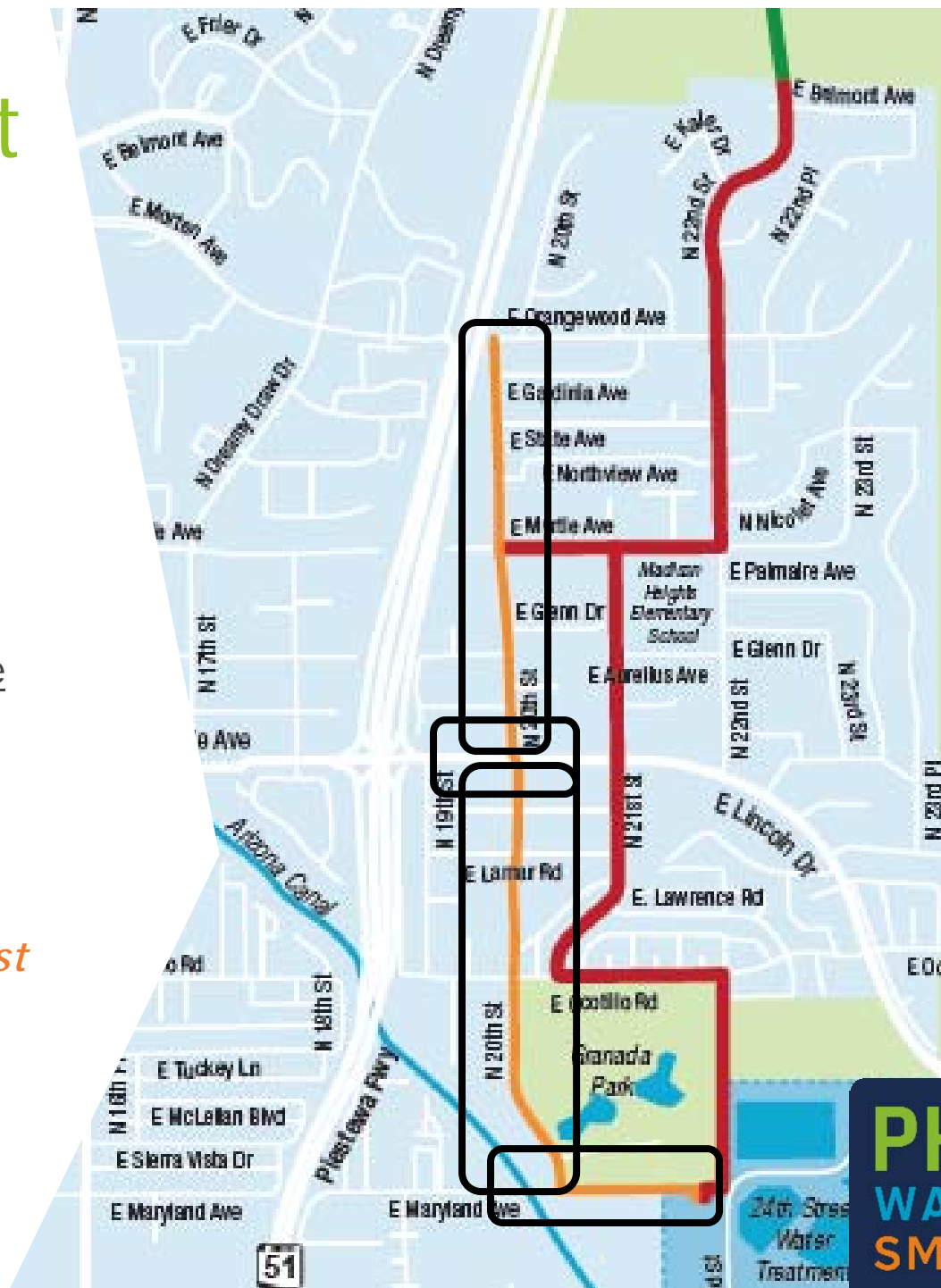
▶ *Feb 2020 through July 2020*

- ▶ Maryland Ave

▶ *Jan 2020 through August 2020*

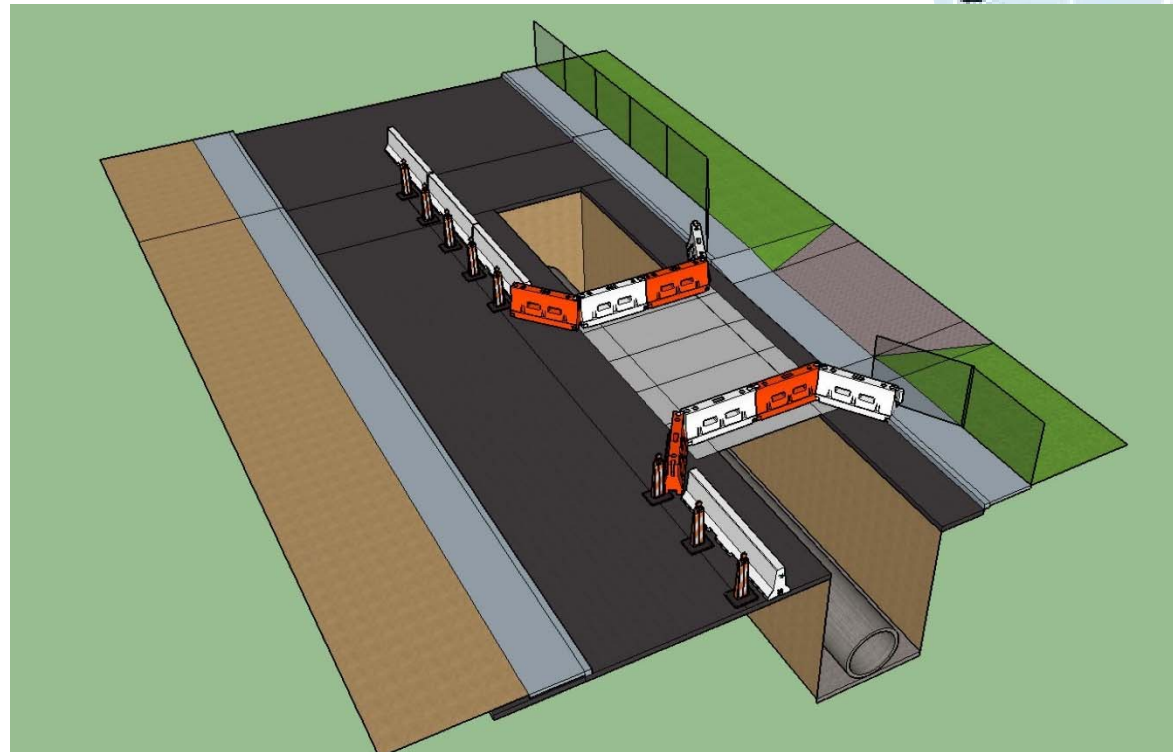
- ▶ Glendale Ave Crossing

▶ No restrictions on Glendale Ave in 2020 - crossing underneath



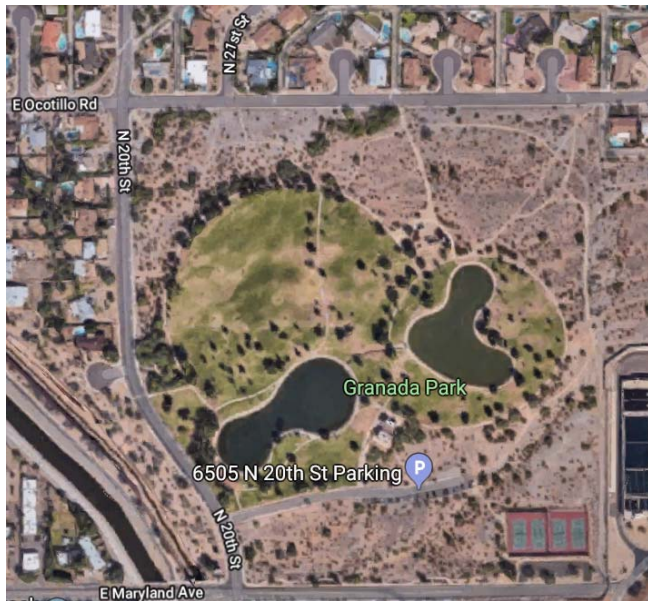
Phase 1 - 20th St & Maryland Ave

- ▶ Impacts to right-of-way beyond sidewalk will be restored
- ▶ Periodic local-traffic only restrictions anticipated along 20th St



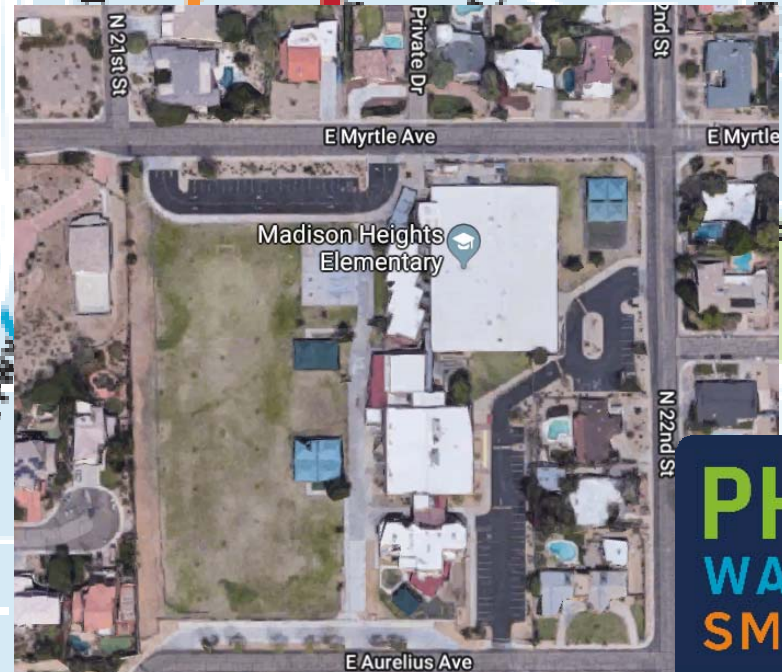
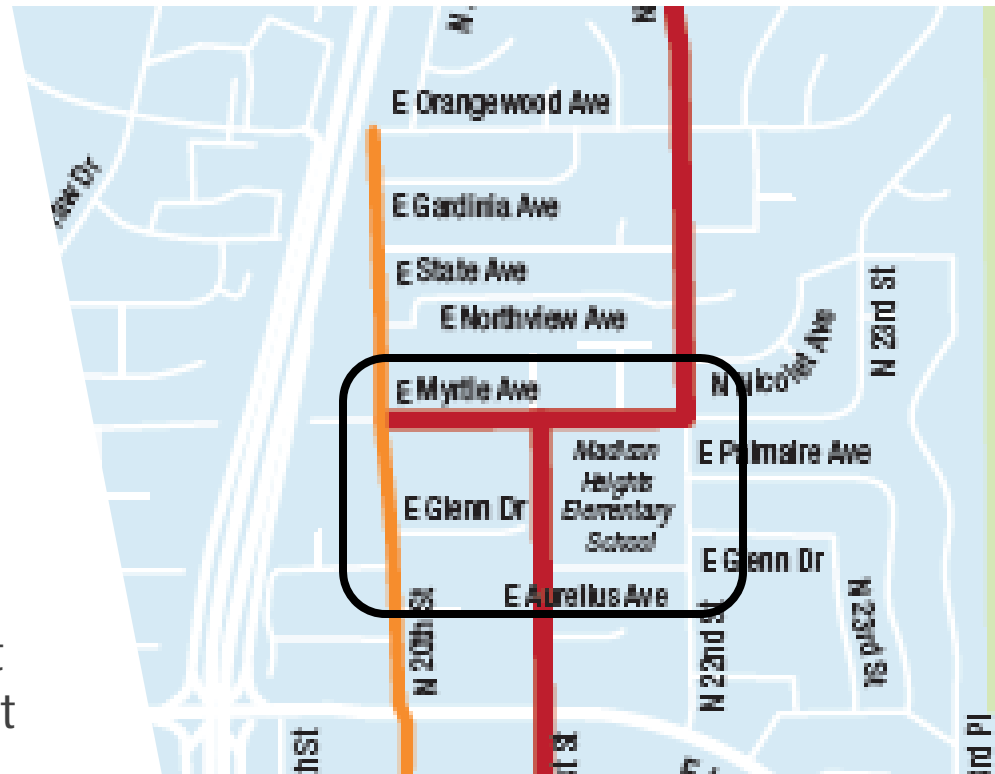
Phase 1 - Granada Park

- ▶ Temporary closure of Tennis Courts and Parking Lot - Planned Summer 2021
- ▶ Limited Parking Restrictions



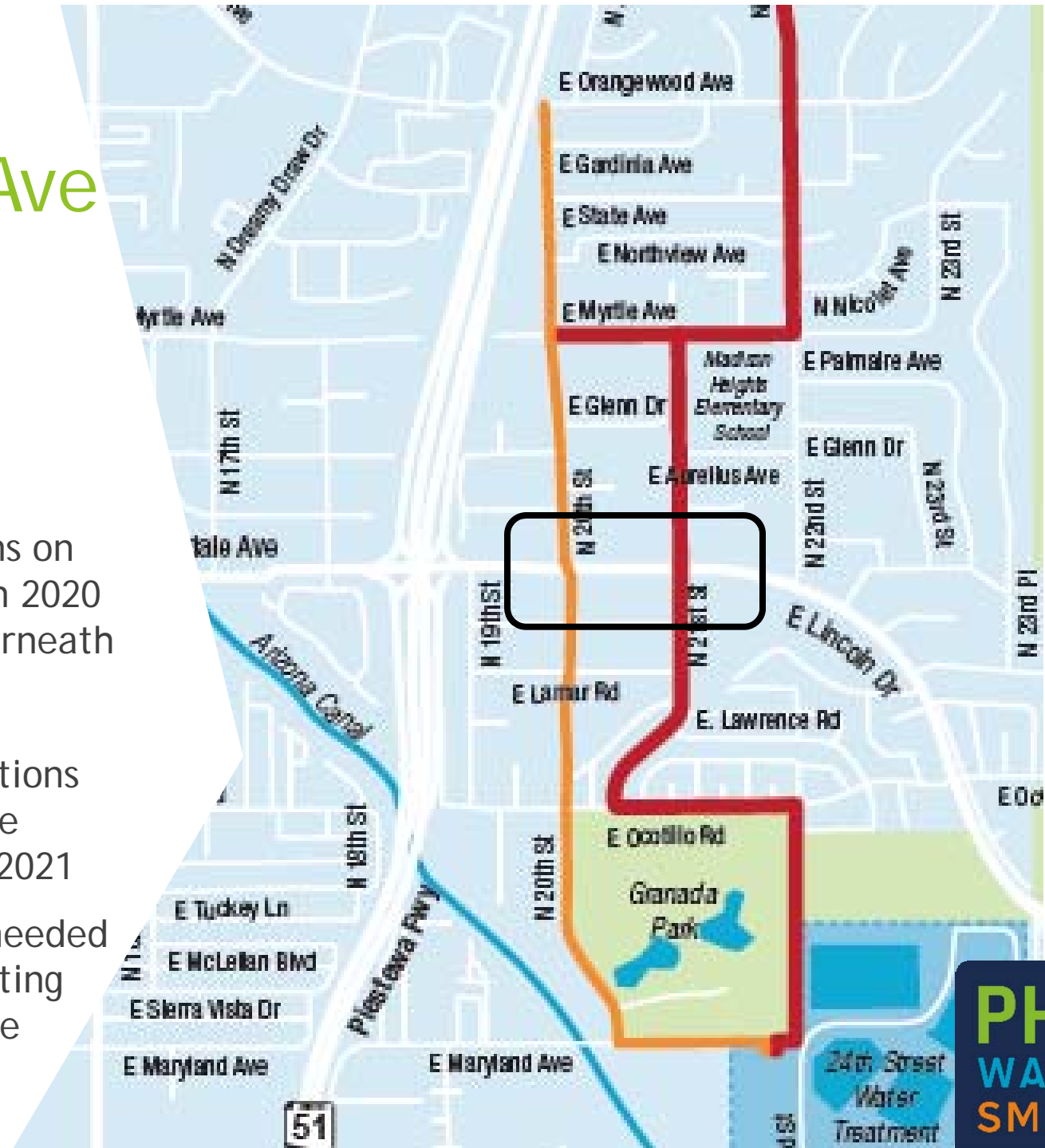
Phase 1 - Madison Heights Elementary

- ▶ Temporary Disruption of Student Drop-Off/Pick-Up along 20th Street in Spring 2020
- ▶ Temporary Disruption of Bus Drop-off and Turf Field in 2020/2021 School Year
- ▶ Construction along Myrtle Ave Planned for Summer Break 2021
- ▶ Advance Notifications will be made to school, parents and residents



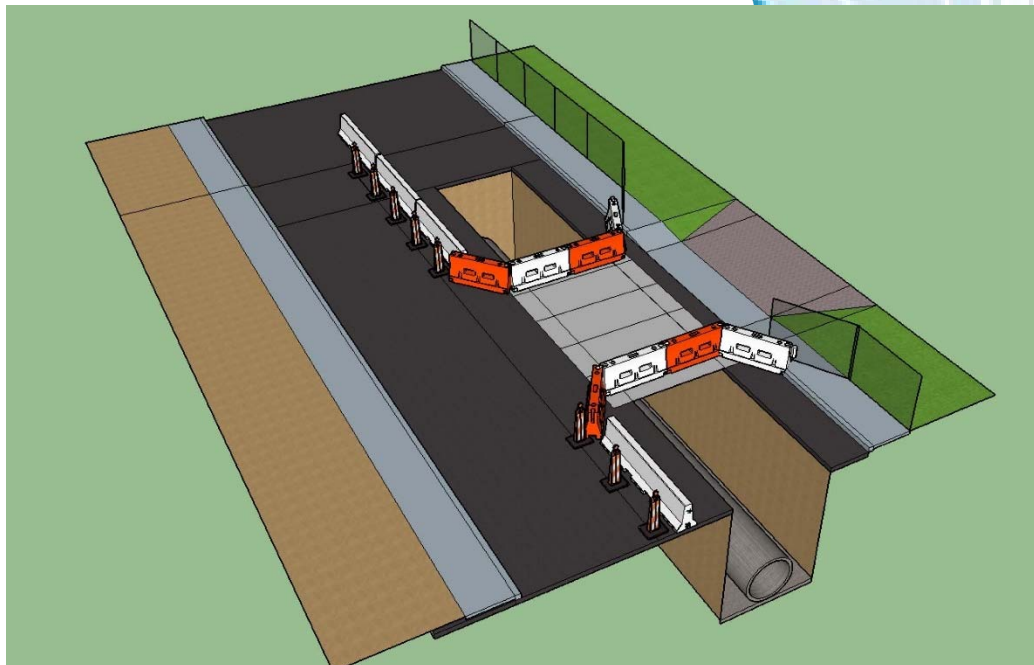
Phase 1 - Glendale Ave & Lincoln Drive

- ▶ Crossing at 20th St
 - ▶ No restrictions on Glendale Ave in 2020 - crossing underneath
- ▶ Crossing at 21st St
 - ▶ Major Restrictions on Glendale Ave anticipated in 2021
 - ▶ Restrictions needed to remove existing 48-inch pipeline



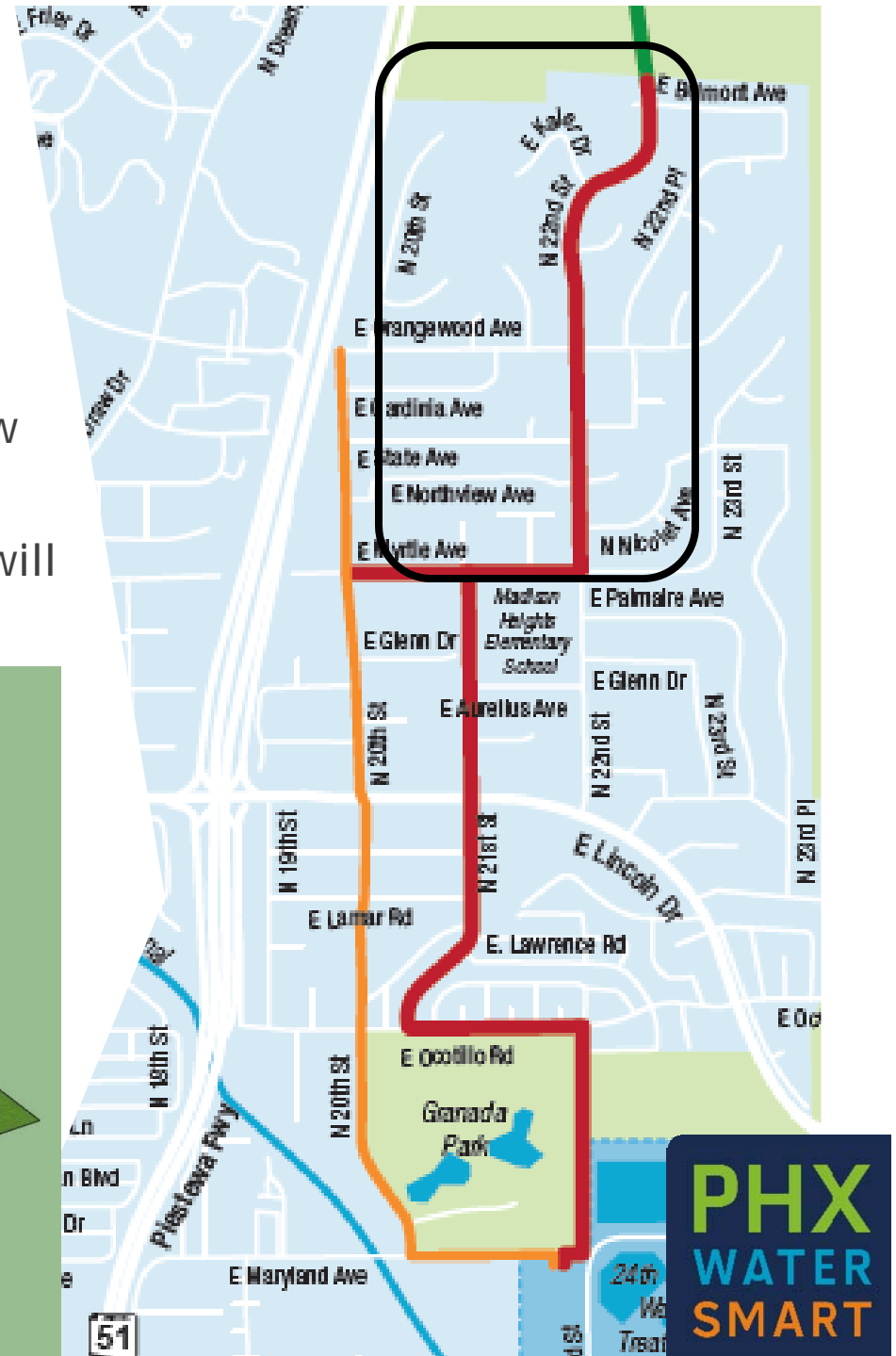
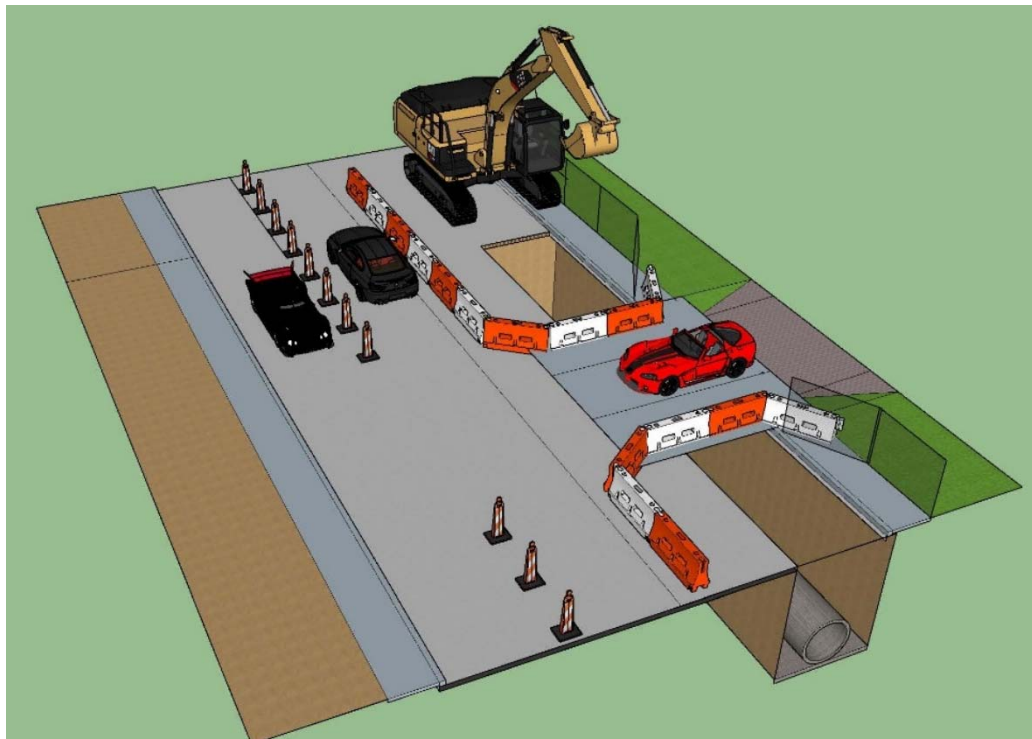
Phase 1 - 21st St

- ▶ Periodic local-traffic only restrictions anticipated along 21st St
- ▶ Impacts to right-of-way beyond sidewalk will be restored



Phase 1 - 22nd St

- ▶ Traffic in/out of the neighborhood is currently limited to 22nd St between Orangewood and Myrtle
- ▶ Construction Traffic Control Plan will allow for local and first responder traffic
- ▶ Impacts to right-of-way beyond sidewalk will be restored

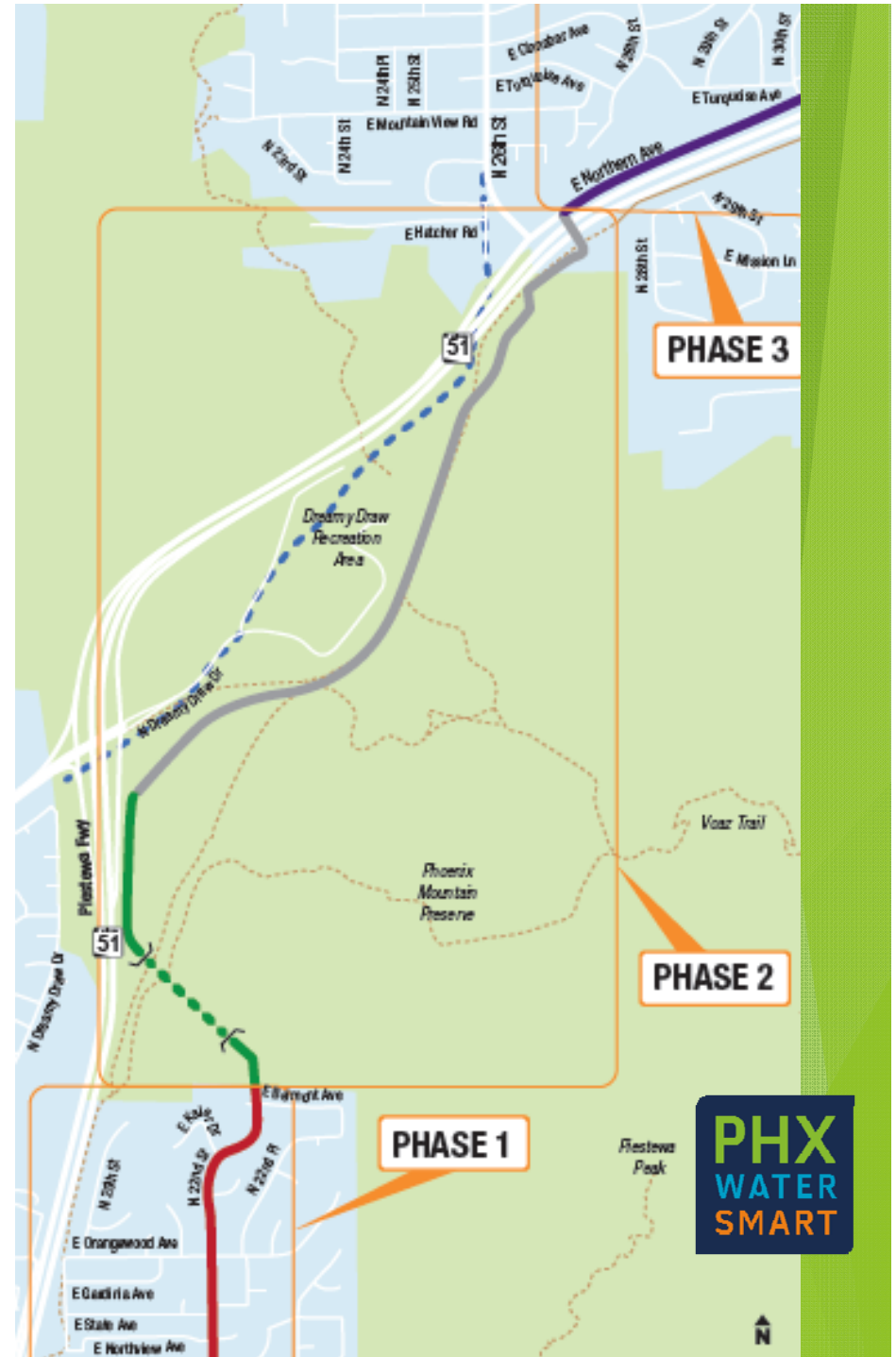


Mountain Preserve Alignment

Spring 2021 -
Fall 2021

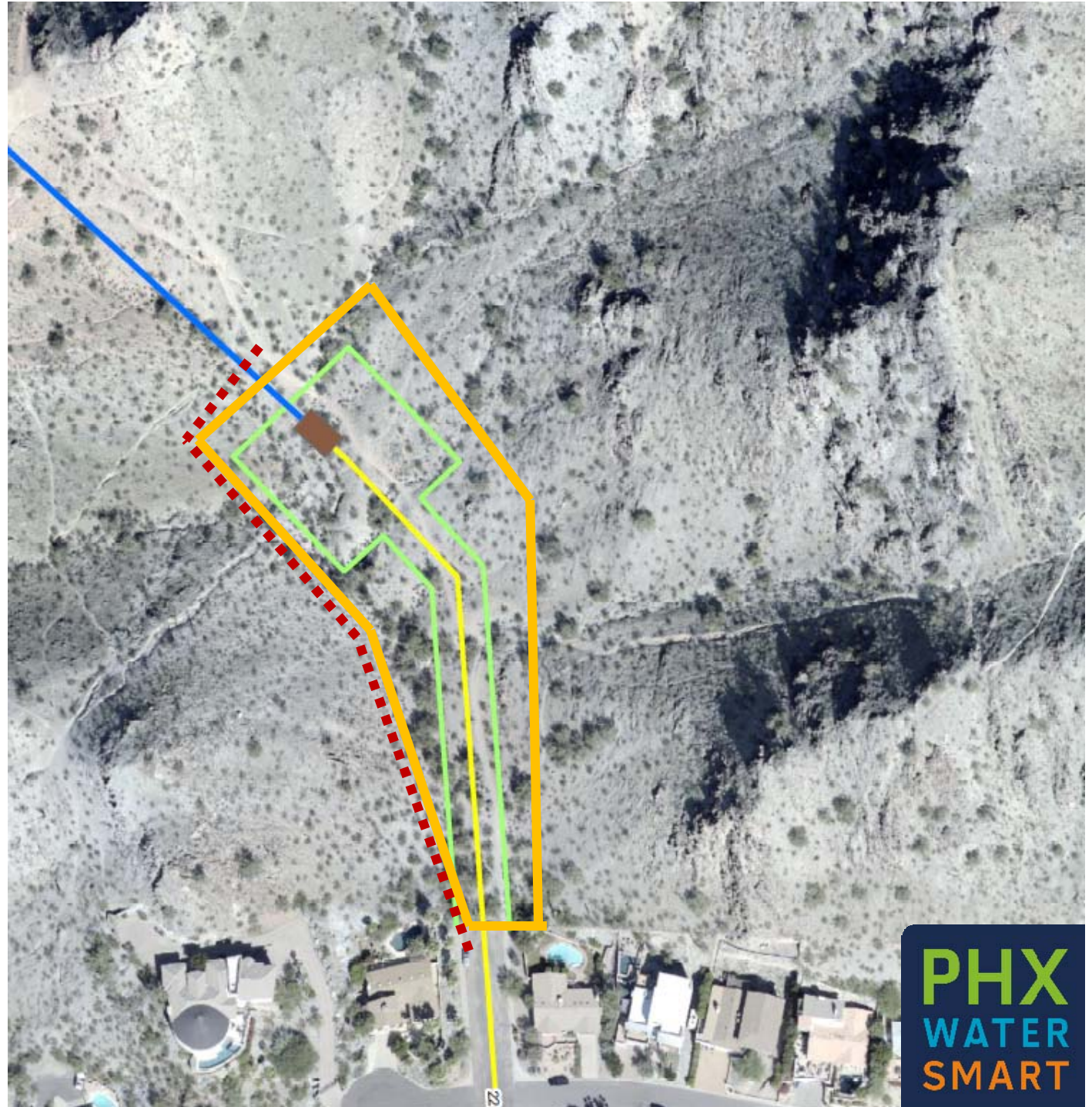
Spring 2021 -
Spring 2022

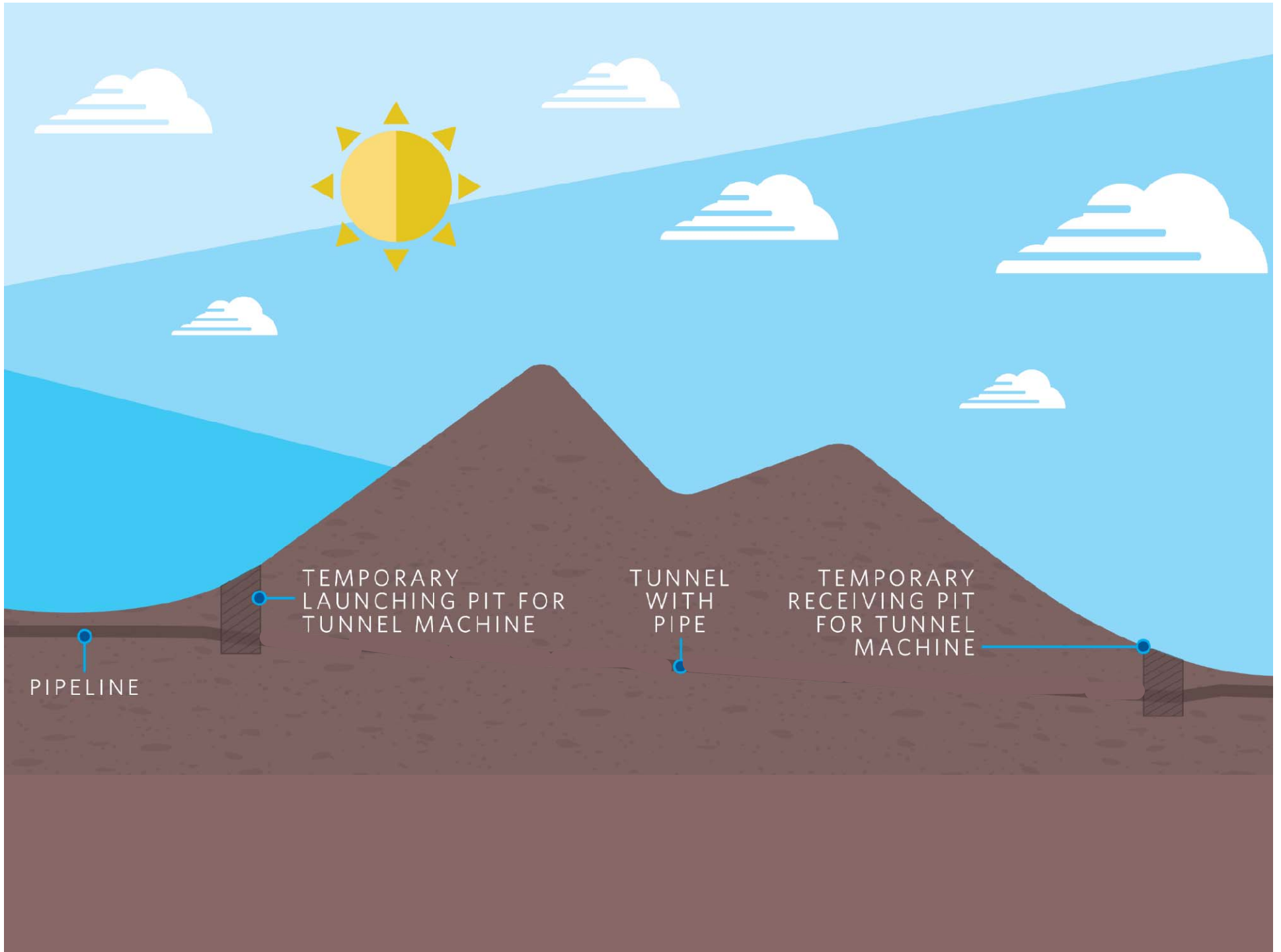
Fall 2021 -
Fall 2022



22nd St Trail Access

- ▶ Full closure limited to pipe installation immediately in 22nd St trailhead area
- ▶ Temporary Construction Fencing will be positioned at a safe distance
- ▶ Signs will be posted allowing for temporary trail access

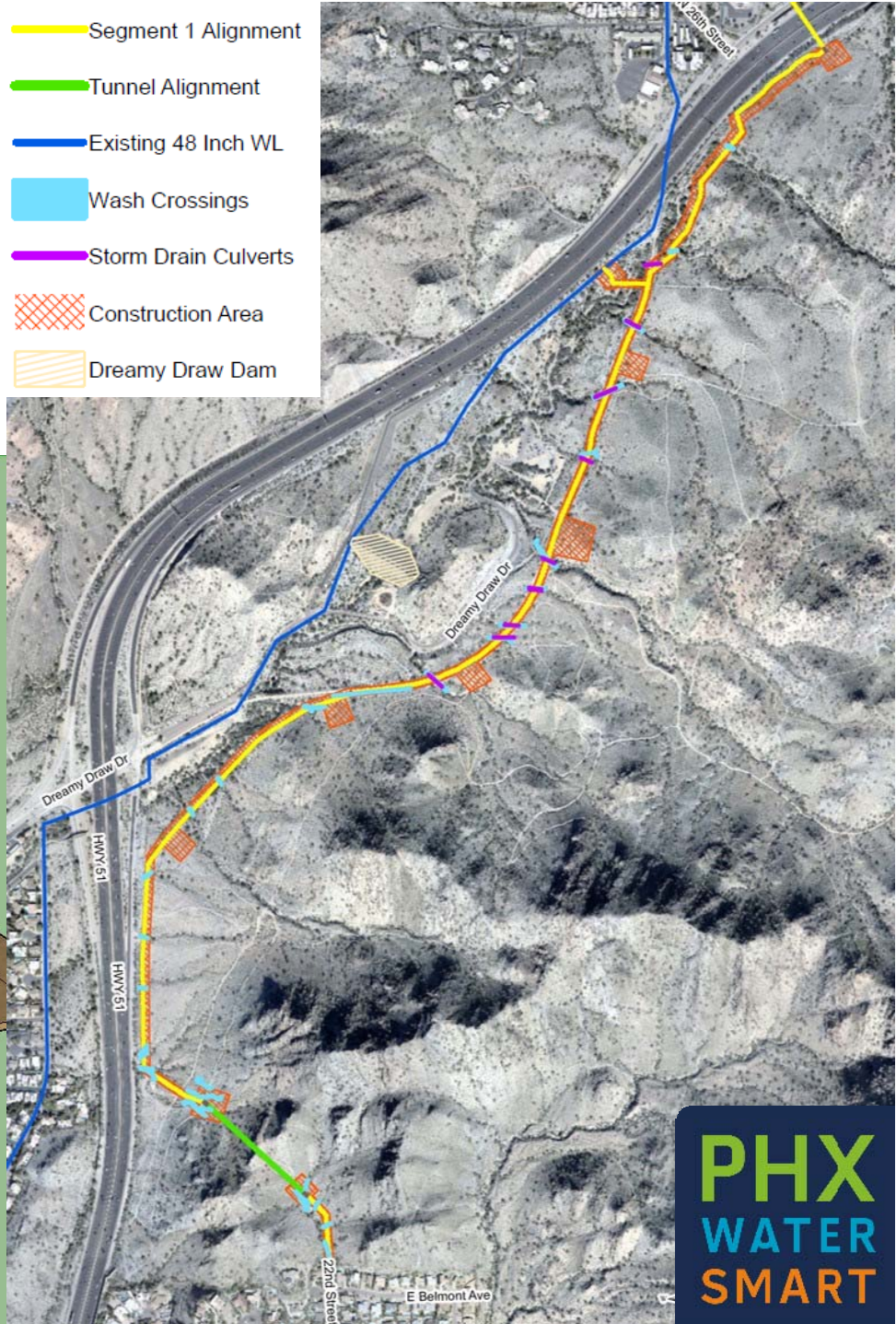
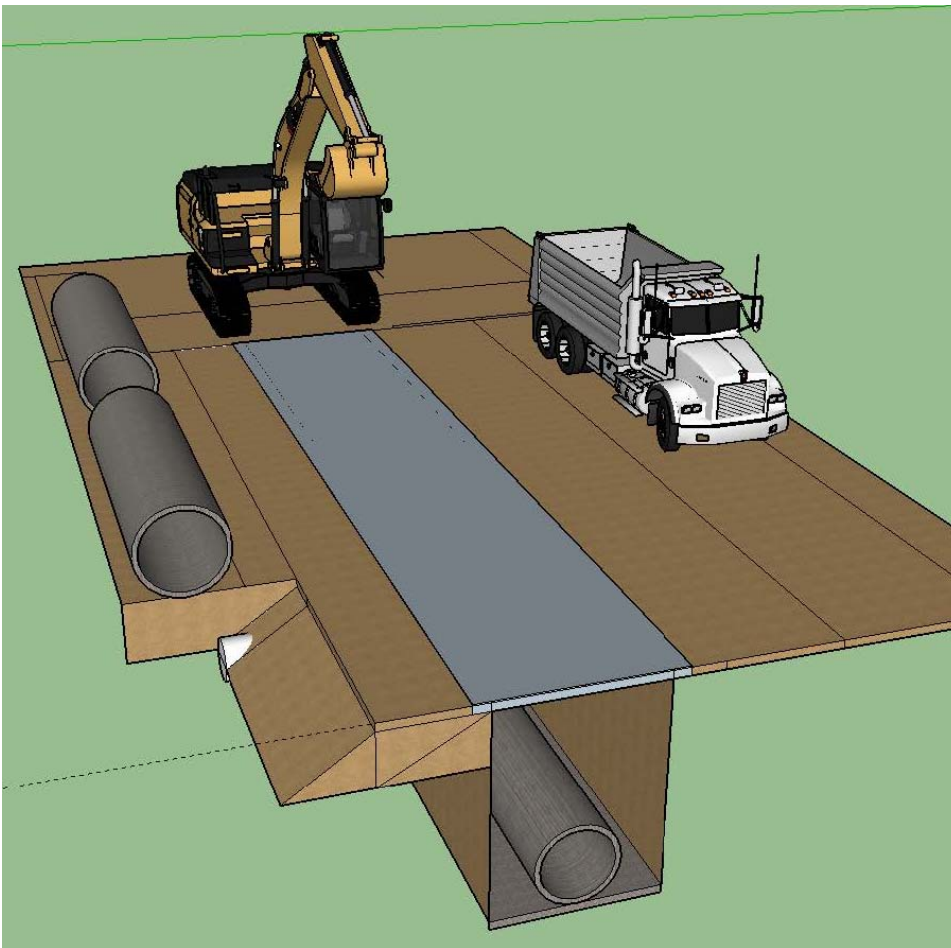


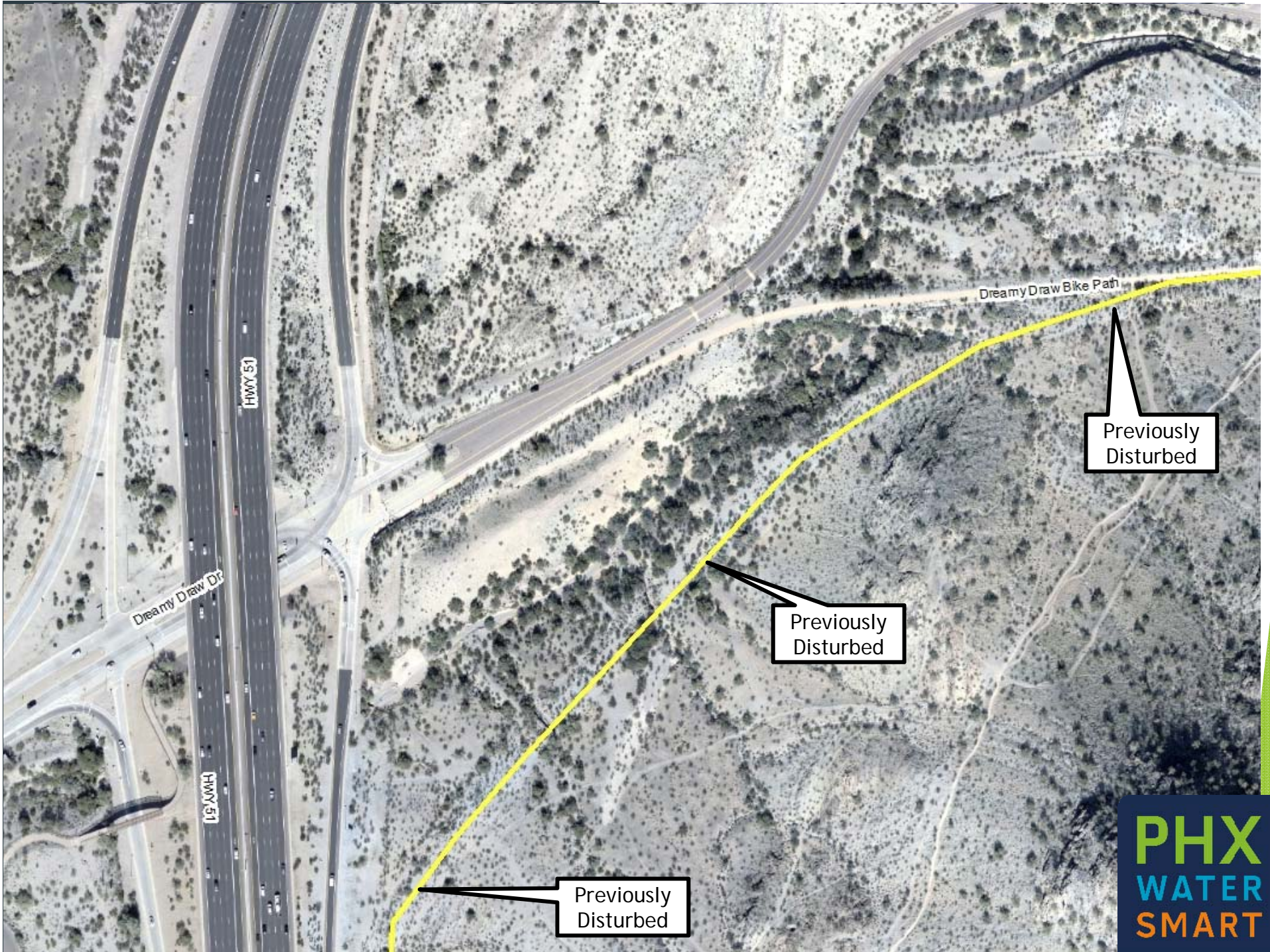


Constructability

- ▶ No Blasting planned or anticipated
- ▶ Other tools available to dig through rock

- Segment 1 Alignment
- Tunnel Alignment
- Existing 48 Inch WL
- Wash Crossings
- Storm Drain Culverts
- Construction Area
- Dreamy Draw Dam

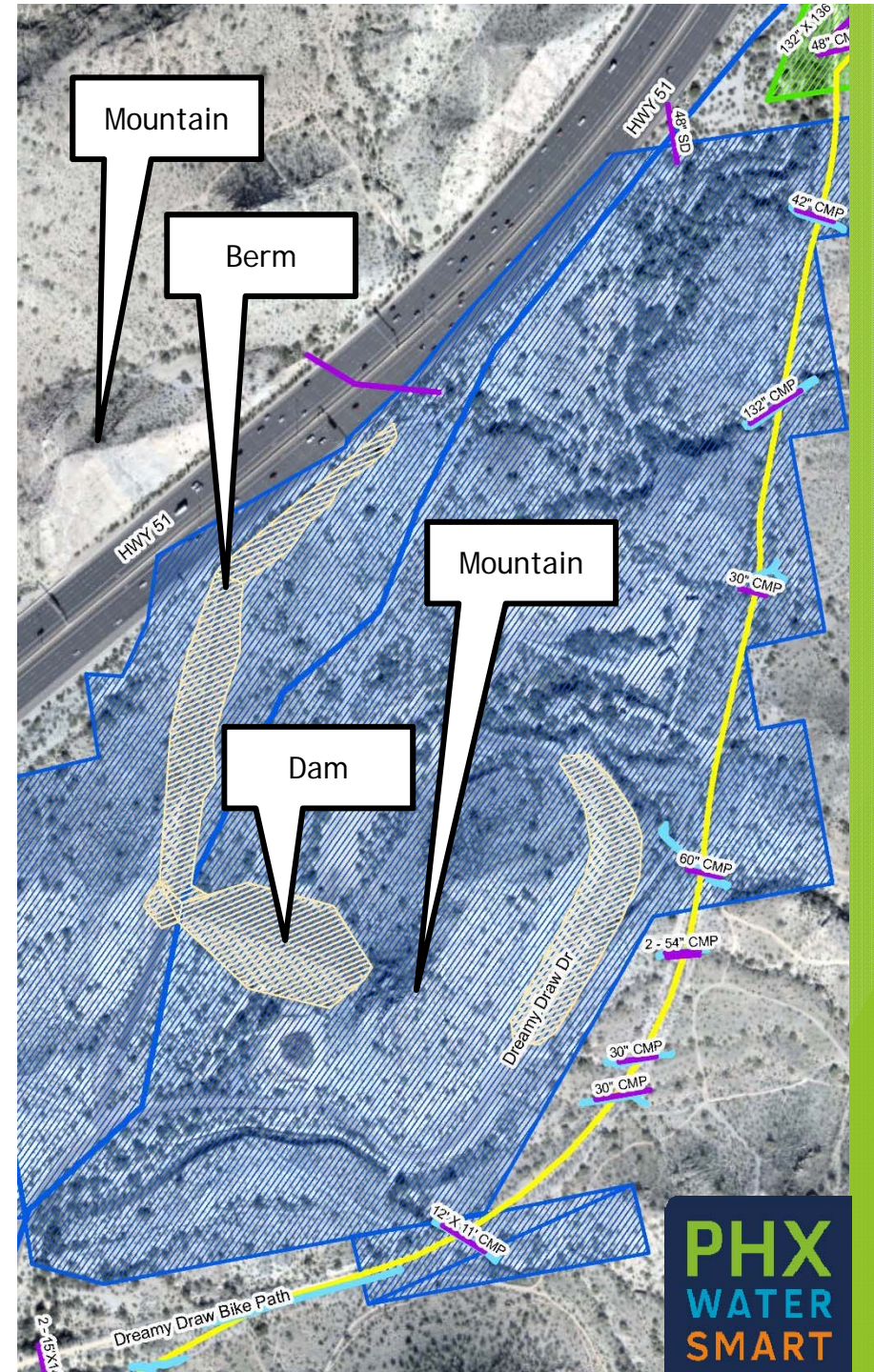






Regulatory Concerns

- ▶ Flood Control District of Maricopa County - Flood plain / Stormwater Runoff
- ▶ Wash Crossings
 - ▶ Army Corps of Engineers 404 permit
 - ▶ Mitigation Plan
 - ▶ Permit Issuance expected late 2020
- ▶ ADOT



Restoration Efforts:

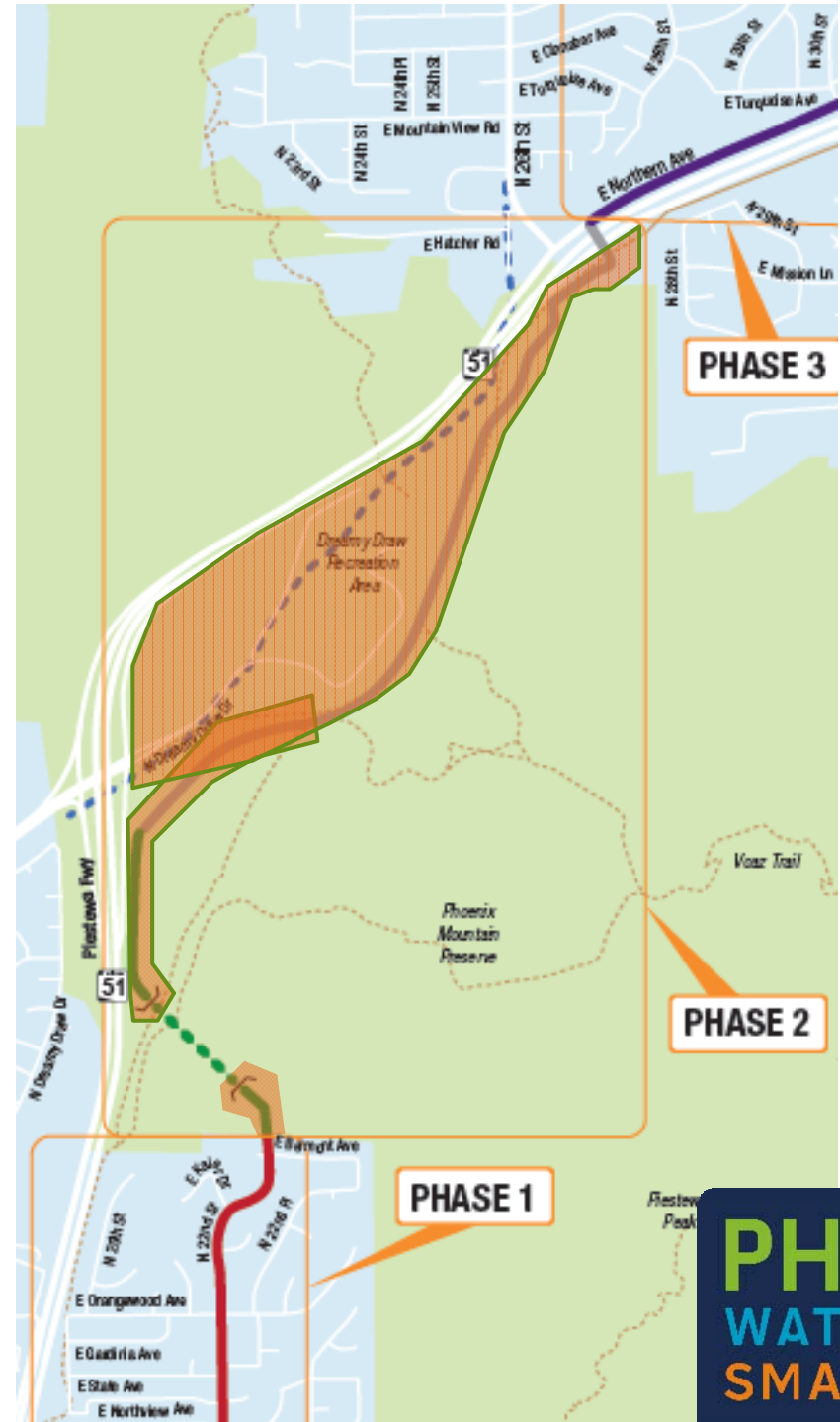
- ▶ Rock Washing/Staining
- ▶ Erosion Control & Re-Grading
- ▶ Landscape, Trees & Native Plants
- ▶ Culvert Crossings
- ▶ Bike Path
- ▶ Hiking Trails



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Park and Hiking Access

- ▶ Work in Southern portions to be performed first (Feb 2021)
- ▶ Temporary Construction Fencing will be positioned at a safe distance
- ▶ Signs will be posted allowing for temporary trail access
- ▶ Temporary Closure of Dreamy Draw Recreation Area and Bike Path
- ▶ New Pedestrian Path
- ▶ Simultaneous with Parks Department Improvements for Dreamy Draw Recreation Area



Stakeholder Involvement

- ▶ November, 2017: Presentation of Selected Alignment to Phoenix Sonoran Preserve and Mountain Parks/Preserve Committee
- ▶ 2018: The need for the pipeline project was explained at more than 50 community meetings held across Phoenix
- ▶ December 2018: Design & Pre-construction contracts approved by Council
- ▶ September 16: Follow-up Presentation to PSPMPPC
- ▶ October 2: Update to Phoenix City Council Transportation, Infrastructure & Innovation Subcommittee
- ▶ October 7: Presentation to Phoenix Mountains Preservation Council
- ▶ October 24: Public Meeting Scheduled at Madison Heights Elementary School
- ▶ October 24: Parks Board Update
- ▶ January 2020: Estimated Construction start on 20th St & on Maryland Ave
- ▶ TBD:
 - ▶ Future Public Meetings
 - ▶ Soils Investigation in Preserve
 - ▶ PSPMPPC Update, Spring 2020
- ▶ February 2021: Estimated Construction start in Phoenix Mountain Preserve at 22nd Street

Frequently Asked Questions

- ▶ **Q: How is the project being funded?**
- ▶ *A: The project is funded by revenue generated from the 2019/2020 city council approved water rate increase, paid by water users. At nearly \$300 million, the Drought Pipeline Project is Phoenix Water Services largest Capital Improvement Project.*

- ▶ **Q: Are you building this infrastructure for growth?**
- ▶ *A: No, The infrastructure is required to move and pump non-Colorado River water to the northern part of the city. We are in the 20-year drought, if continued, there will be restrictions on the Colorado River system, which means the water Phoenix is allotted will be less. The northern part of our city is dependent on the Colorado River.*

Frequently Asked Questions

- ▶ **Q: Why was the current alignment corridor chosen?**
- ▶ *A: There were many advantages and less disadvantages leading to this alignment being chosen, including water quality, impacts to families and businesses, cost and overall efficiency of our water system.*

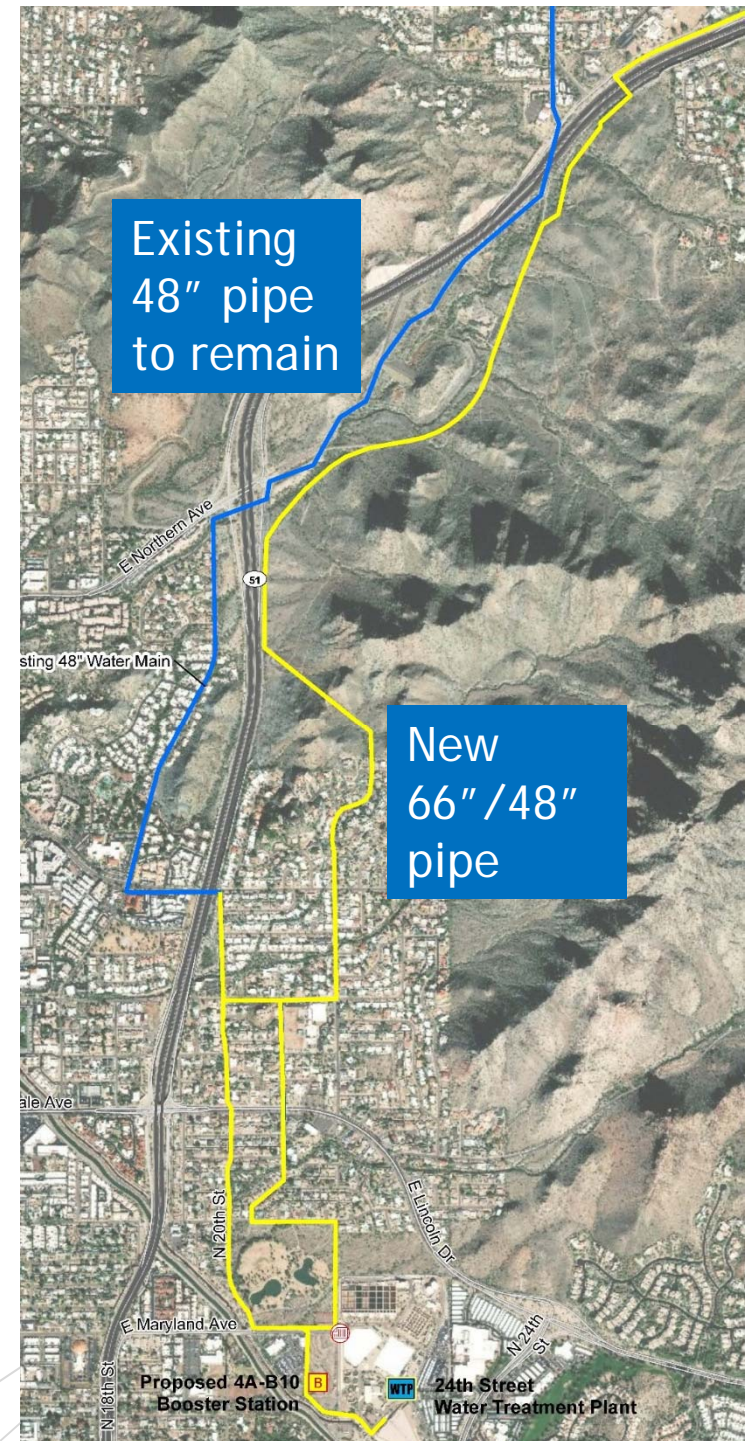
- ▶ **Q: Can you install the 66" pipe next to the 48" pipe?**
- ▶ *A: No, there is no room to install the 66" water pipe next to the existing 48" water pipe. There are other utilities in the area and our policy does not allow to install water pipes at a close proximity due to safety and maintenance concerns.*

Frequently Asked Questions

- ▶ **Q: Is this a permissible use of the Preserve?**
- ▶ **A:** *City Charter 26.3.c: The City Council shall at all times have the power and authority within and in conjunction with any City Mountain Preserve to take appropriate action to:*
 - (4) Develop to the extent necessary City-owned flood control and water treatment facilities located within a City Mountain Preserve area.*
- ▶ *New Pipe from Water Treatment Plant generally parallel to existing 48" Pipeline*

Q: Will there be blasting?

A: *There is no blasting planned or anticipated.*



Frequently Asked Questions

- ▶ **Q: Why are design plans and detailed mapping redacted or not being shared?**
- ▶ *A: Water and Wastewater Infrastructure information is classified as "Critical Infrastructure Information" by the Department of Homeland Security and other regulatory agencies. Specific designs and location maps of such infrastructure are therefore not released publicly for security reasons.*
- ▶ **Q: Will the pipe be above ground?**
- ▶ *A: No, the entirety of the 66" pipeline will be buried. Some equipment (such as hydrants and valves needed for maintenance) will be visible on the surface*

Frequently Asked Questions

- ▶ Q: What are the hours of operation?
- ▶ A: *Work will be performed during City approved working hours, construction notices will be provided to the affected areas.*

- ▶ Q: What will my street look like?
- ▶ A: *Pavement and sidewalks that are impacted will be upgraded/restored per current standards*



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