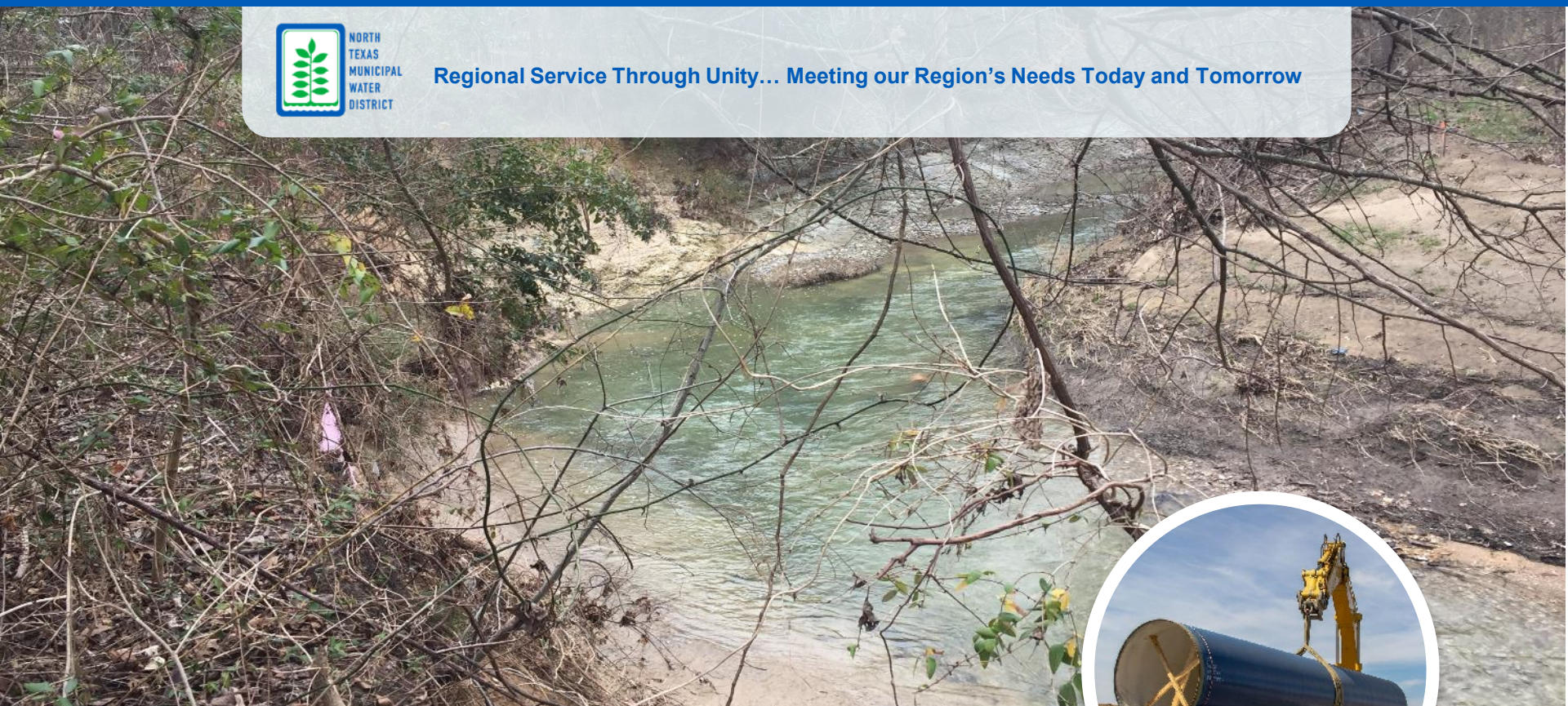




Regional Service Through Unity... Meeting our Region's Needs Today and Tomorrow



## MCKINNEY-PROSPER TRANSFER SEWER

September 3, 2020

Virtual Information Meeting







## OVERVIEW

- **NTMWD Services and Communities Served**
- **Purpose of Meeting**
- **Project Benefits to McKinney**
- **Project Information and Route Alignment**
- **Questions**





## HISTORY OF NTMWD

### 10 Original Member Cities

Farmersville, Forney, Garland, McKinney, Mesquite, Plano, Princeton, Rockwall, Royse City, and Wylie

*“We decided we were all in this together. We couldn’t do it separately.”*

- 
- 1951 – Created by Texas Legislature to Provide Water Service
  - 1956 – Began Providing Treated WATER to Member Cities
  - 1970s – Expanded to WASTEWATER Service
  - 1973 – Richardson added as Member City
  - 1980s – Expanded to SOLID WASTE Service
  - 1998 – Allen added as Member City
  - 2001 – Frisco added as Member City





# REGIONAL PROVIDER: WATER, WASTEWATER, SOLID WASTE











## BY THE NUMBERS DID YOU KNOW?



Service area of 2,200 square miles in 10 counties

Serving 1.8 million people in one of the fastest-growing regions in the country

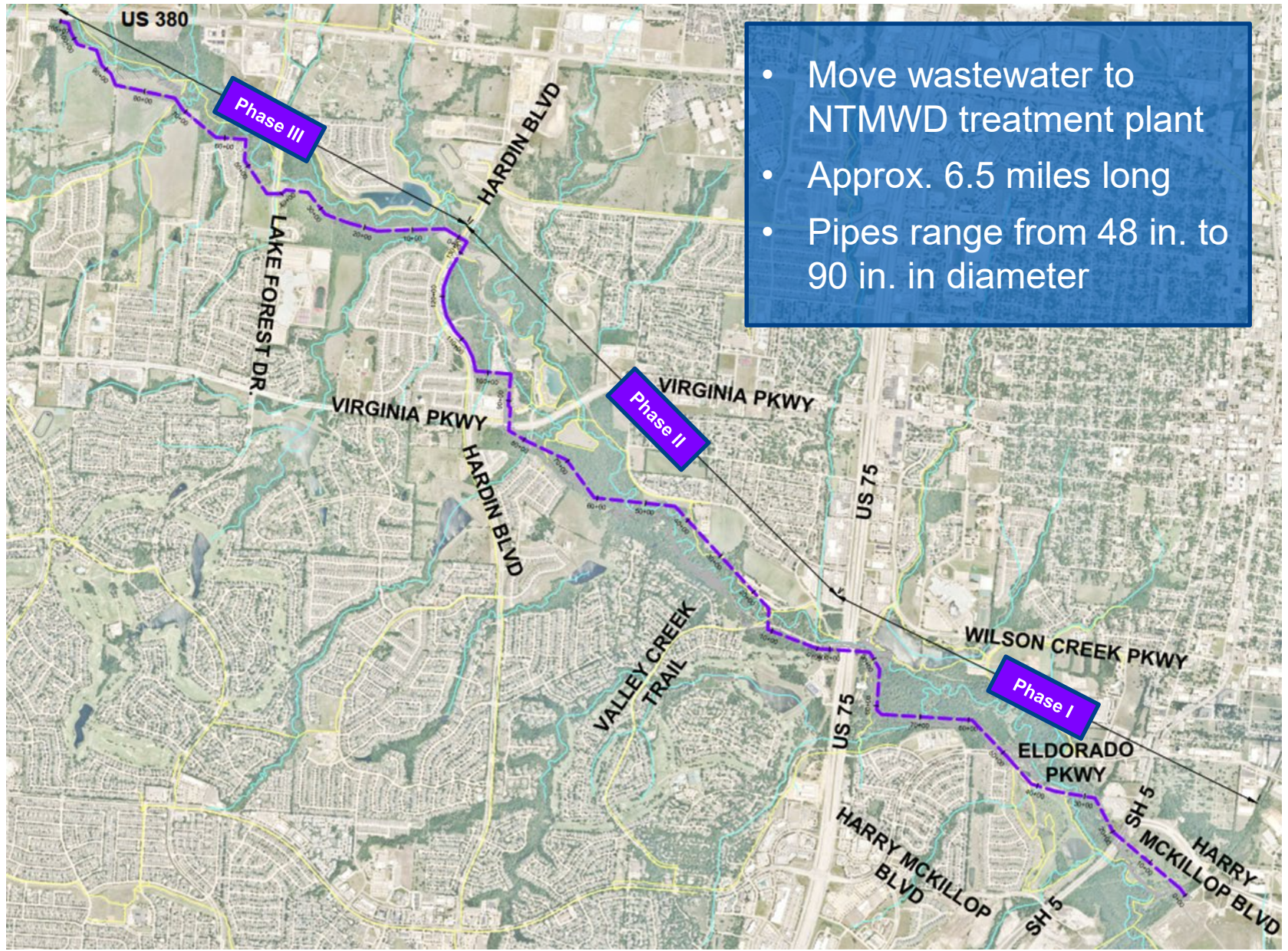
 <p><b>18</b></p> <p>MAJOR RAW &amp; TREATED WATER PUMP STATIONS</p>	 <p><b>250+ MILES</b></p> <p>LARGE-DIAMETER WASTEWATER PIPELINES</p>	 <p><b>3</b> TRANSFER STATIONS</p> <p>up to 3,295 tons of solid waste/day</p>
 <p><b>60</b></p> <p>WATER TREATMENT PLANTS 806+ MGD Capacity (million gallons/day)</p>	 <p><b>13</b></p> <p>WASTEWATER TREATMENT PLANTS</p>	<p>-----</p> <p><b>1 million+</b> tons/year accepted at landfill</p> 
 <p><b>575+ MILES</b></p> <p>WATER TRANSMISSION PIPELINES</p>	 <p><b>151+ MGD</b></p> <p>WASTEWATER TREATMENT CAPACITY MGD (million gallons/day)</p>	



Rev. Feb. 2020



# MCKINNEY-PROSPER TRANSFER SEWER OVERALL ALIGNMENT



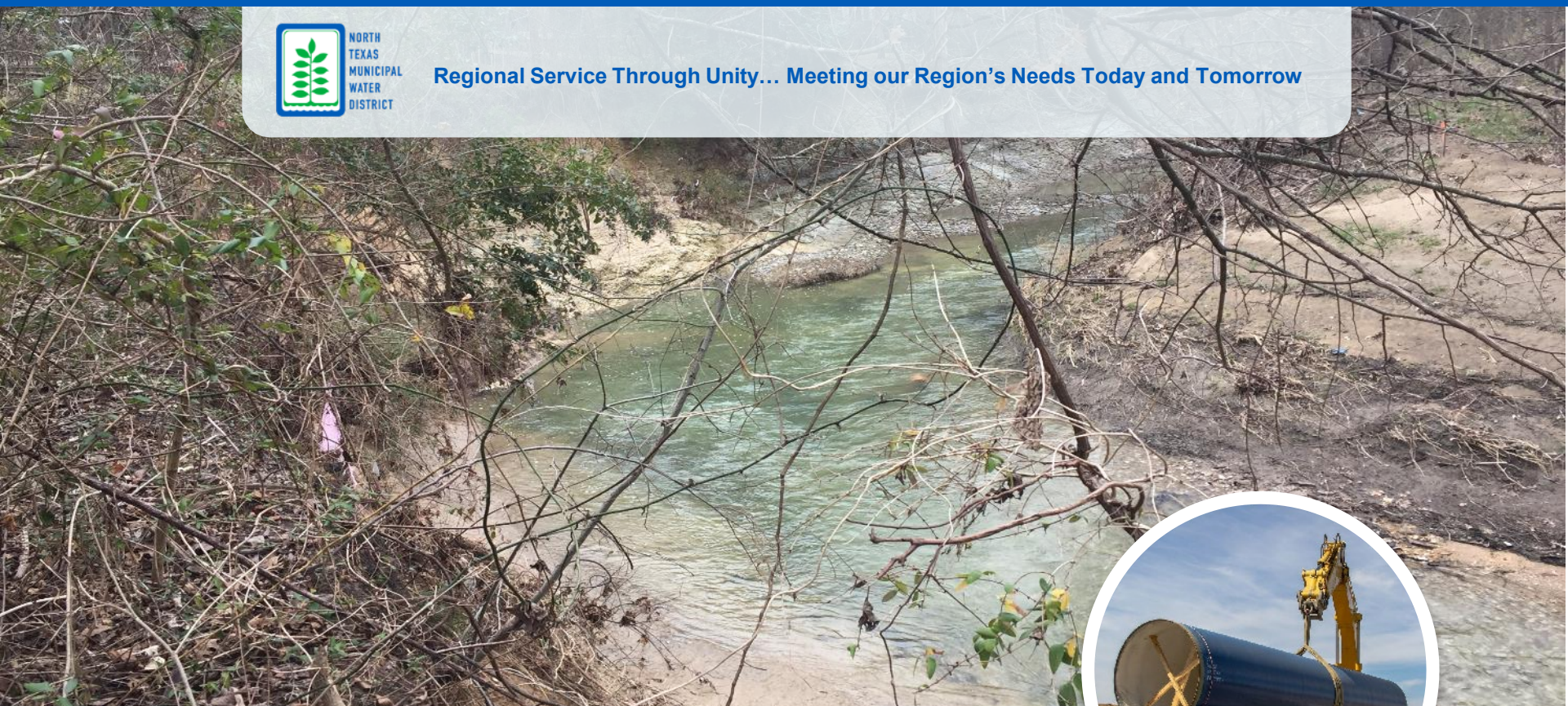
- Move wastewater to NTMWD treatment plant
- Approx. 6.5 miles long
- Pipes range from 48 in. to 90 in. in diameter





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Website:  
**www.ntmwd.com/Projects**  
**Select McKinney-Prosper Transfer Sewer Pipeline**



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# MCKINNEY-PROSPER TRANSFER SEWER

## BACKGROUND

- Flow model projections identified the need for additional capacity in this corridor to transport City of McKinney and Prosper flows to the treatment facility.
- Project expanded to avoid need for future parallel pipe.
- Multiple corridors were examined
- Alignment generally paralleling Wilson Creek was determined to be the only feasible option based on the following criteria:
  - Developed areas
  - Critical utilities
  - Floodplain & U.S. Corps of Engineers (USACE) Jurisdiction
  - Topology
  - Maintainability



# MCKINNEY-PROSPER TRANSFER SEWER

## PROJECT OVERVIEW

- Install gravity-flow pipeline to provide wastewater capacity for projected build-out growth in McKinney and Prosper
- Approx. 6.5 miles of wastewater pipeline ranging from 48-inches to 90-inches in diameter
- From US-380 to the Wilson Creek Lift Station at the old City of McKinney landfill
- To serve long-term needs of McKinney and avoid future projects in the Wilson Creek corridor





# MCKINNEY-PROSPER TRANSFER SEWER

## TIMELINE

### DESIGN

- Summer 2017 – Summer 2021

### PHASE I CONSTRUCTION

- Spring 2021 – Summer 2022

### PHASE II CONSTRUCTION

- Fall 2021 – Winter 2022

### PHASE III CONSTRUCTION

- Fall 2022 – Fall 2023





## MCKINNEY-PROSPER TRANSFER SEWER

### COMMITMENTS:

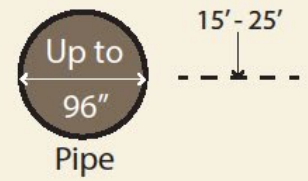
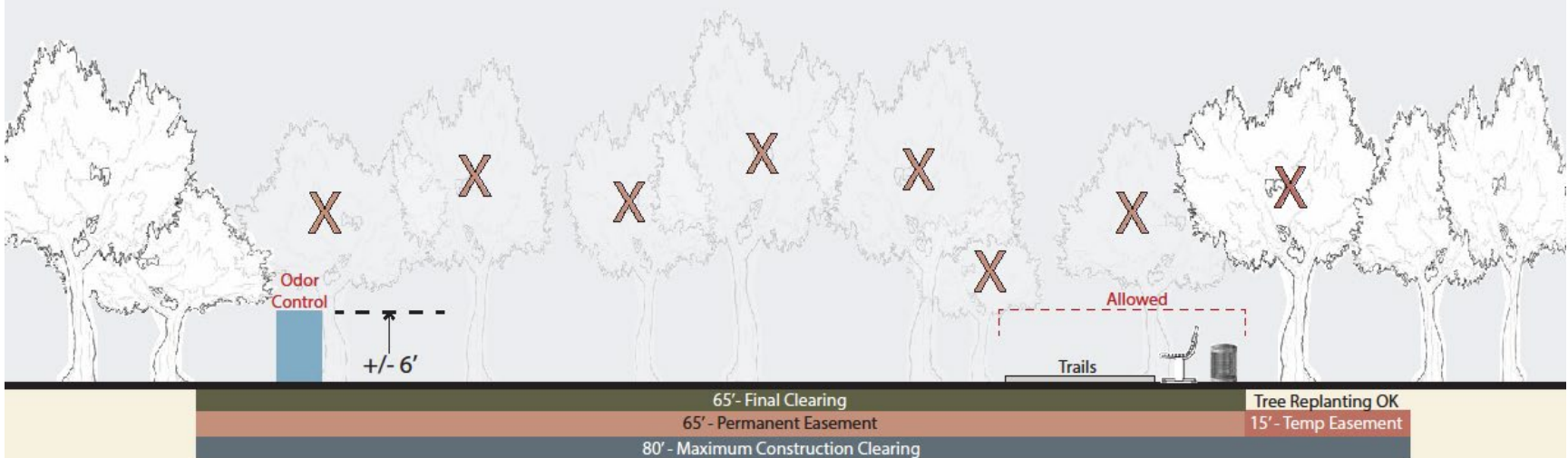
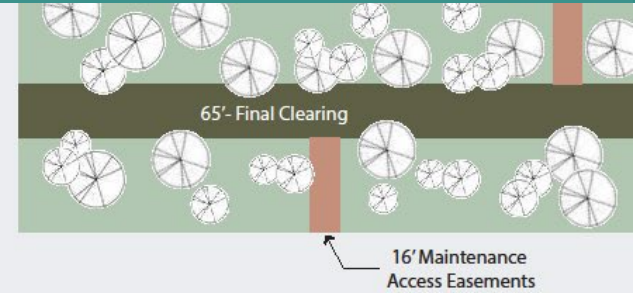
- **Minimize impact on trees**
  - Tree survey performed to identify trees based on trunk size and species.
  - Alignment shifted to minimize impact to trees
- **Maintain tree buffer between proposed alignment location/existing land uses**
  - 150-foot buffer behind Malvern Elementary, McKinney Community Center, and Mountain Creek Drive.
- **Avoid sensitive park areas and phase construction with seasonal park usage**
  - Route minimizes disruption through Disc Golf Course, avoids Bonnie Wenk Park, and aligns with Gray Branch Park Master Plan.
- **Trenchless construction methods underneath all roadways**
  - Tunnel 8 road crossings to avoid traffic impacts
- **Alignment located on public use land where possible**
  - The majority of anticipated easements are City of McKinney properties





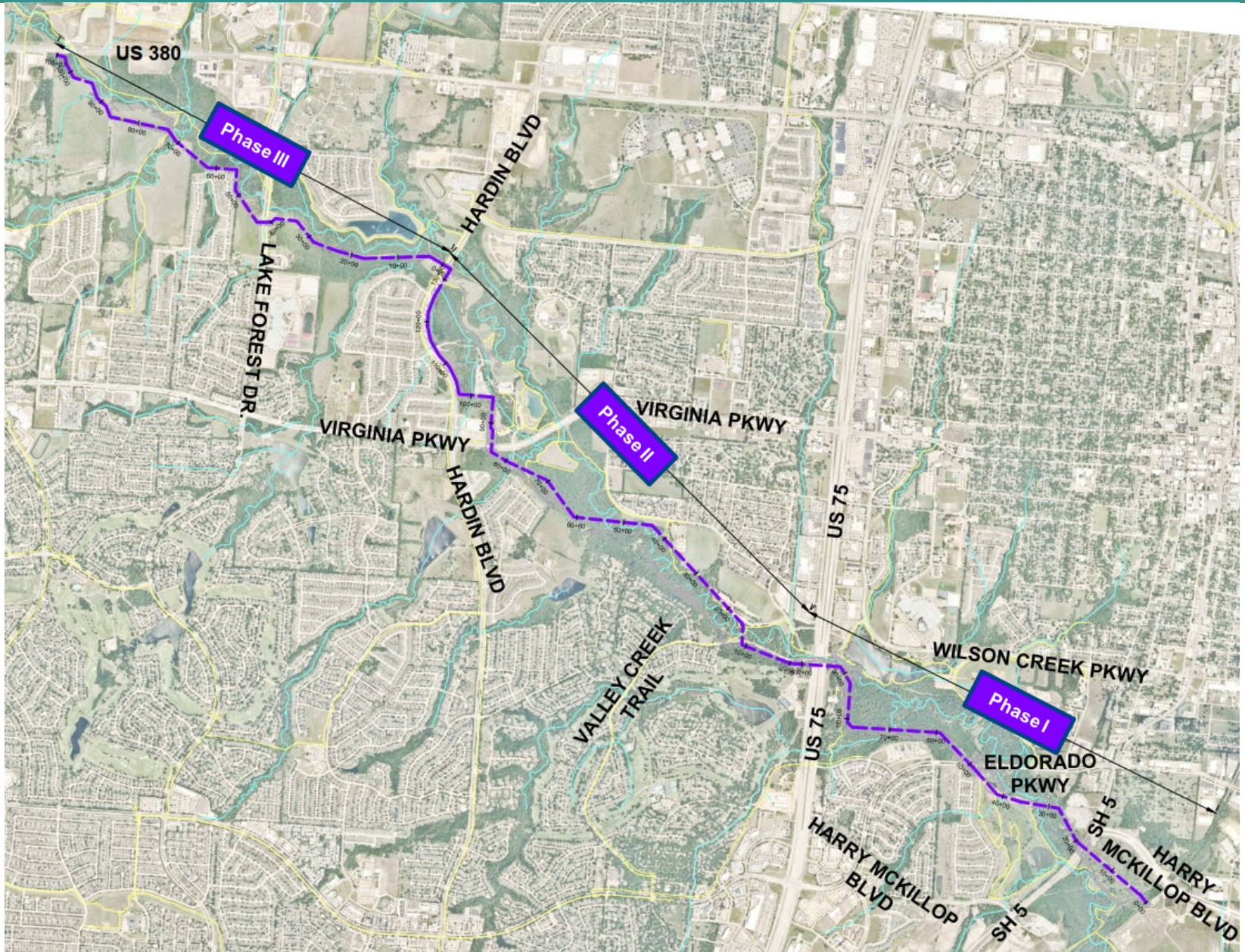
# MCKINNEY-PROSPER TRANSFER SEWER

## EXAMPLE OF CLEARING & EASEMENT IMPACTS





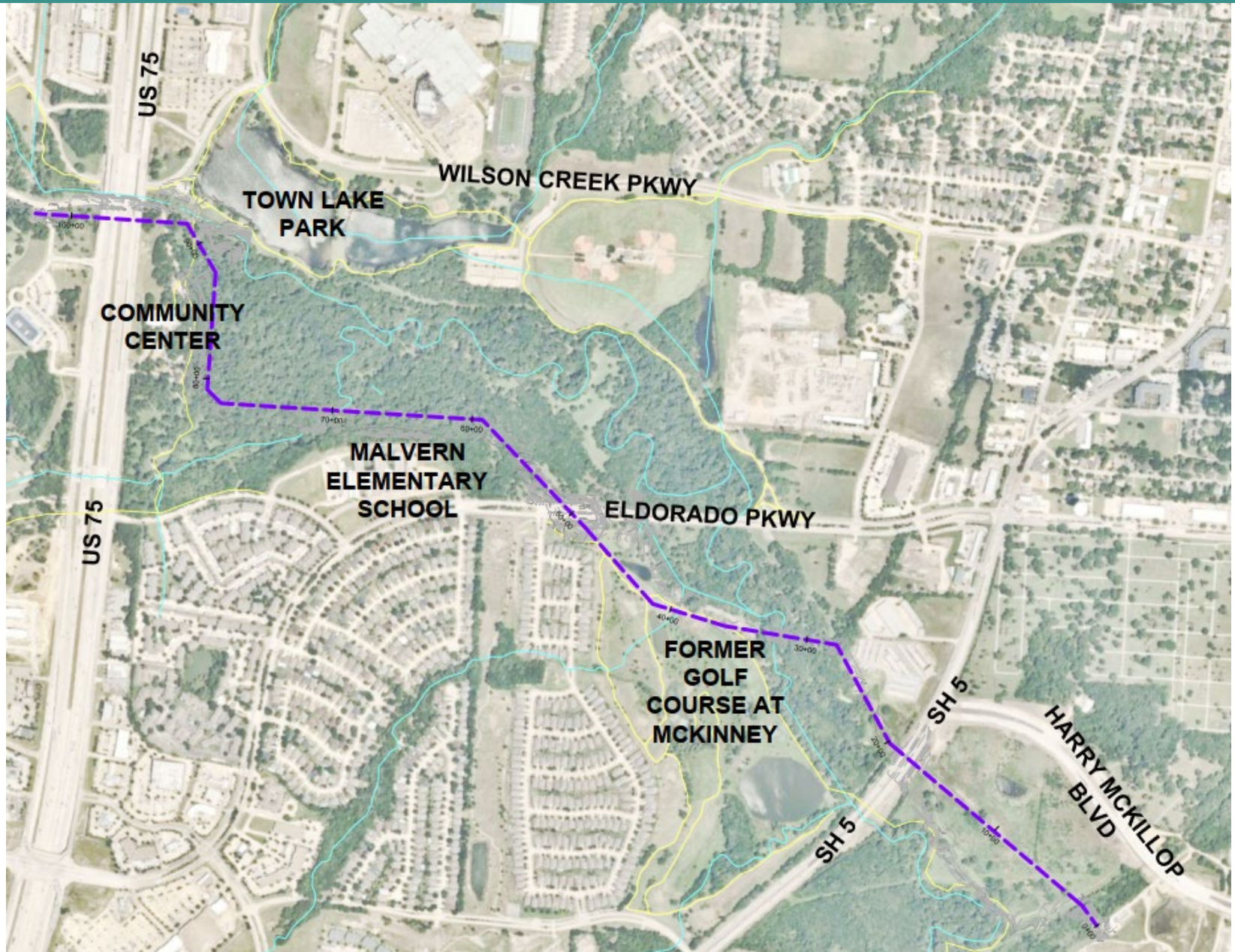
# MCKINNEY-PROSPER TRANSFER SEWER OVERALL ALIGNMENT





# PHASE I ALIGNMENT

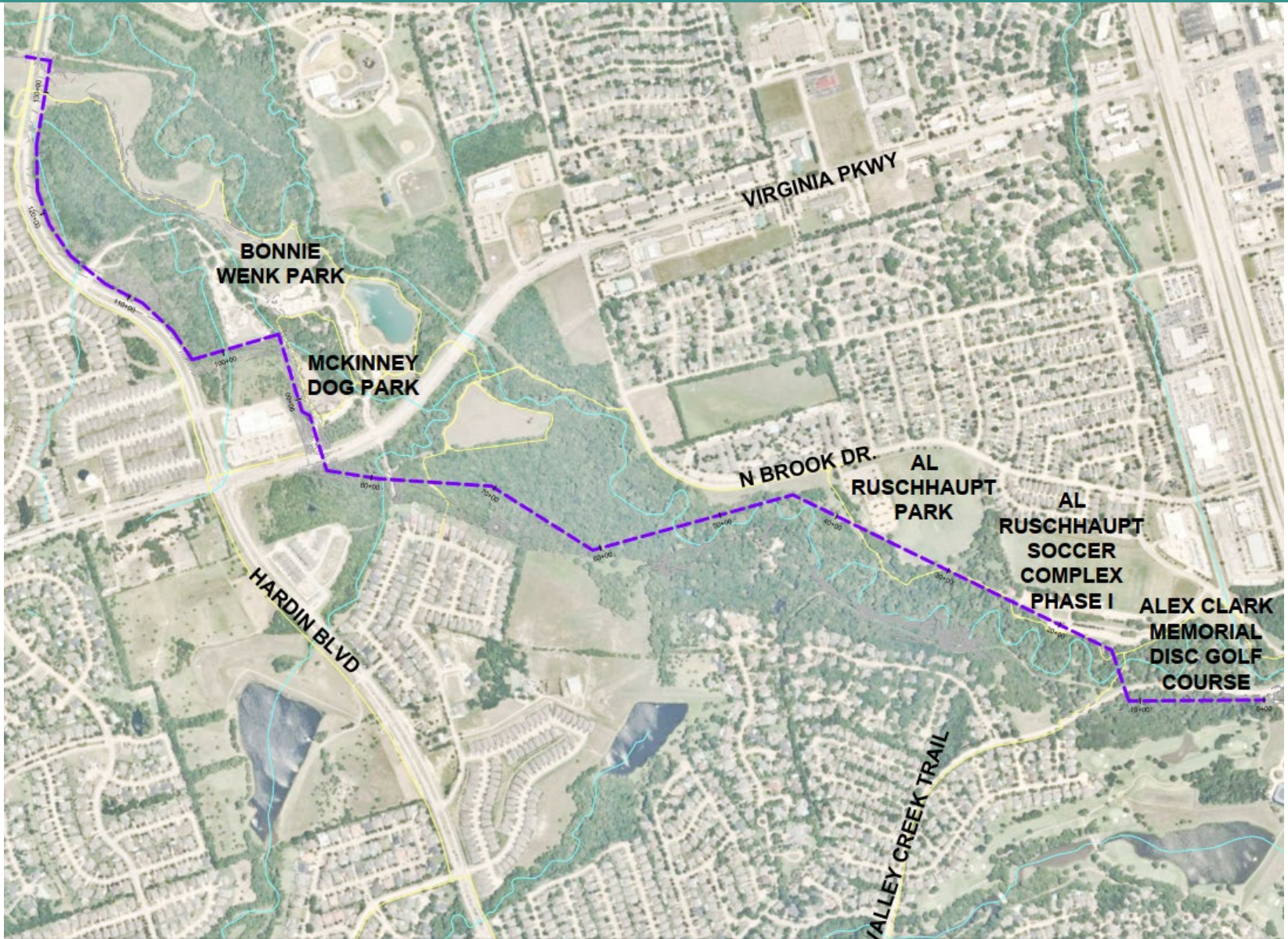
Estimated Start of Construction: Spring 2021





# PHASE II ALIGNMENT

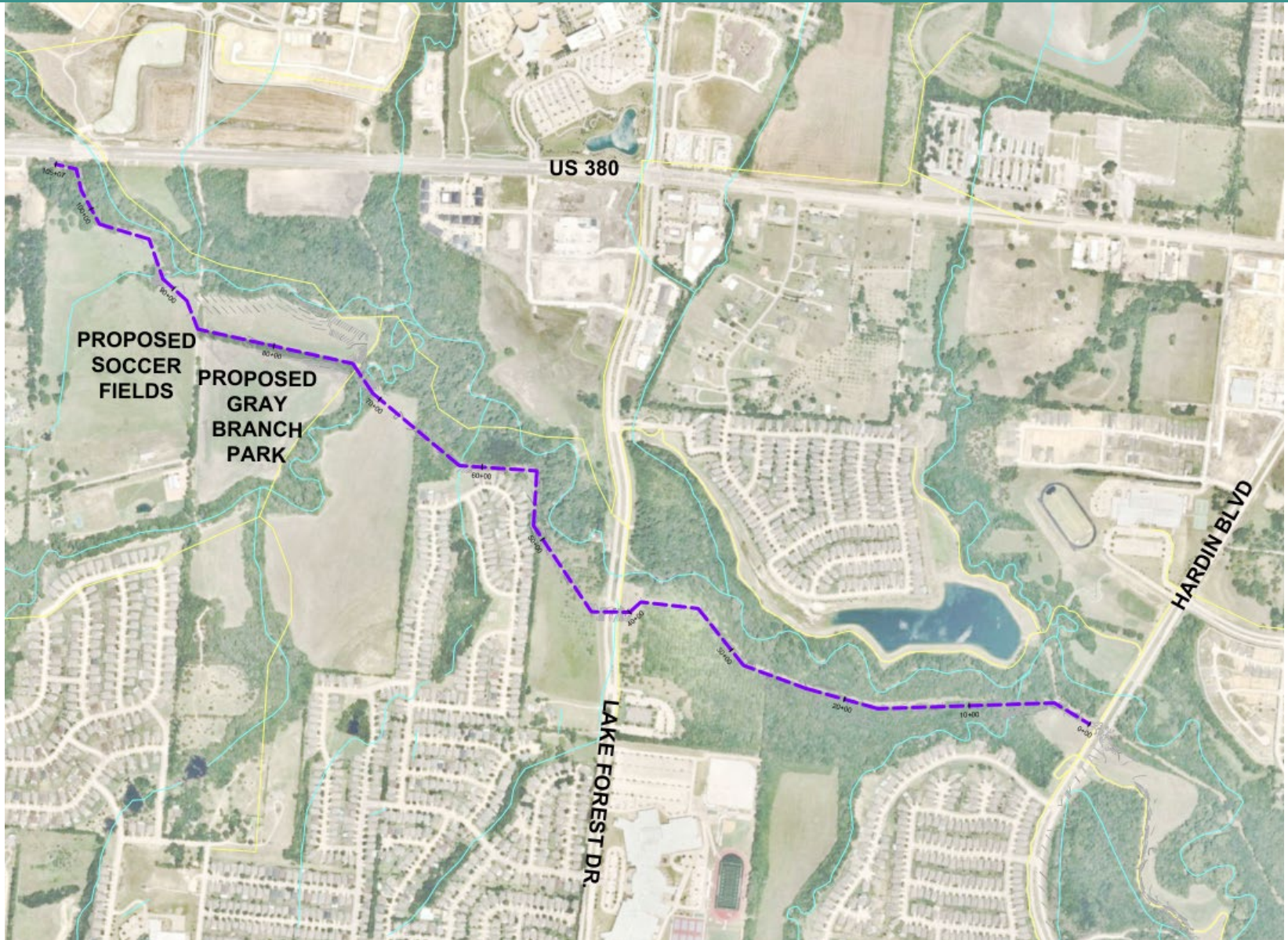
## Estimated Start of Construction: Fall 2021





# PHASE III ALIGNMENT

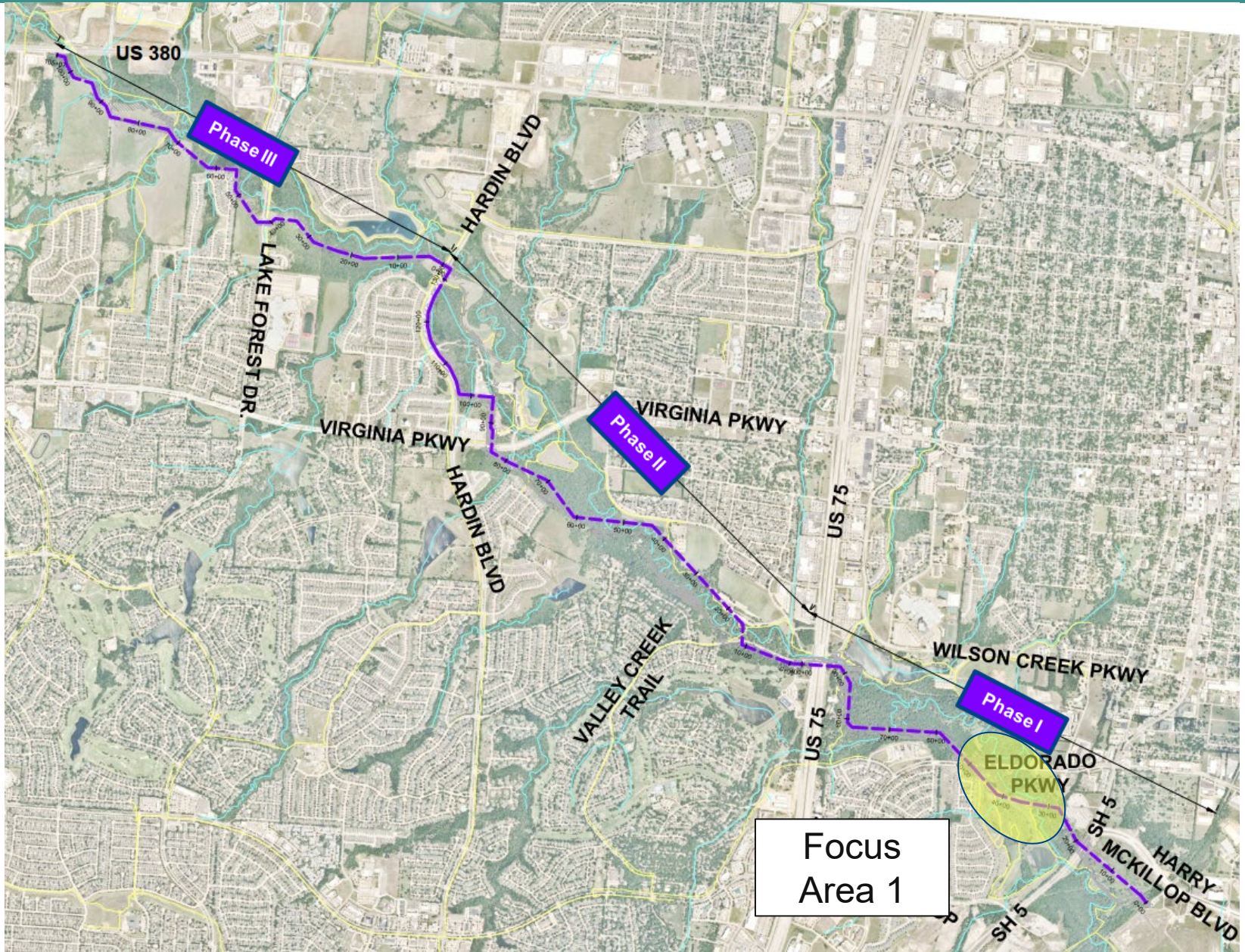
## Estimated Start of Construction: Fall 2022





# MCKINNEY-PROSPER TRANSFER SEWER

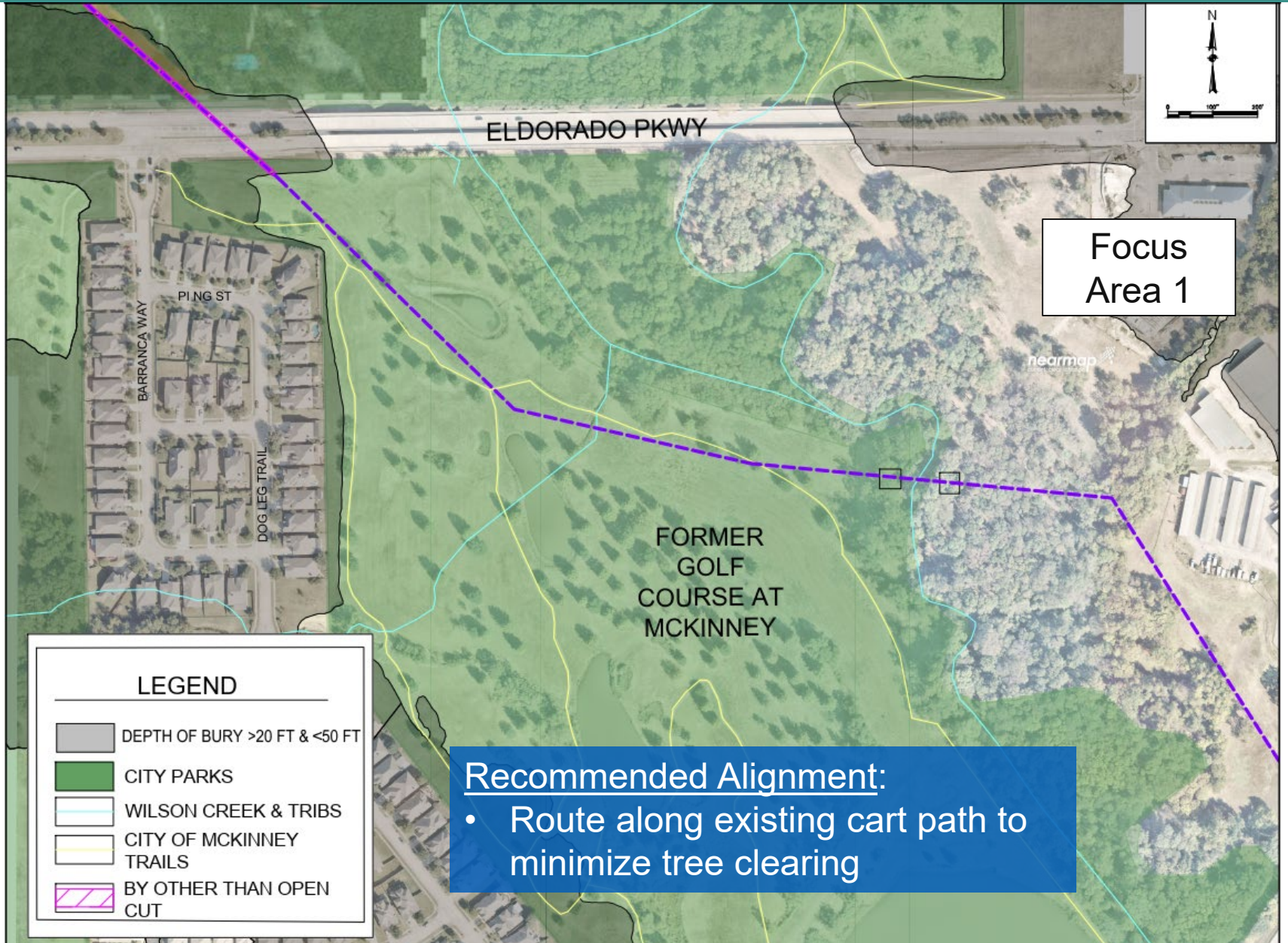
## Focus Area 1 – Phase I Construction





# FOCUS AREA 1 – PHASE I CONSTRUCTION

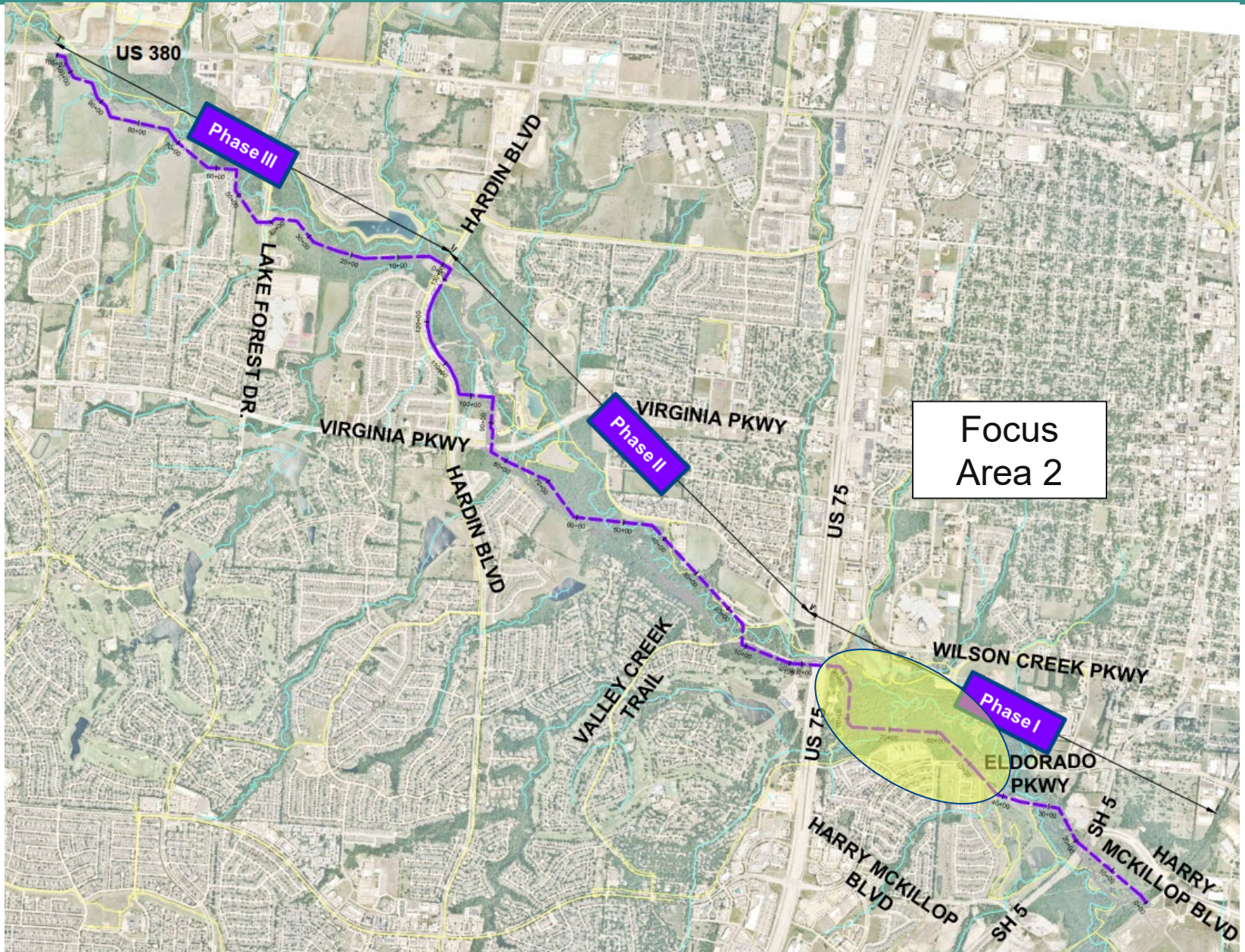
## Former Golf Course & Residences Of Barranca Way





# MCKINNEY-PROSPER TRANSFER SEWER

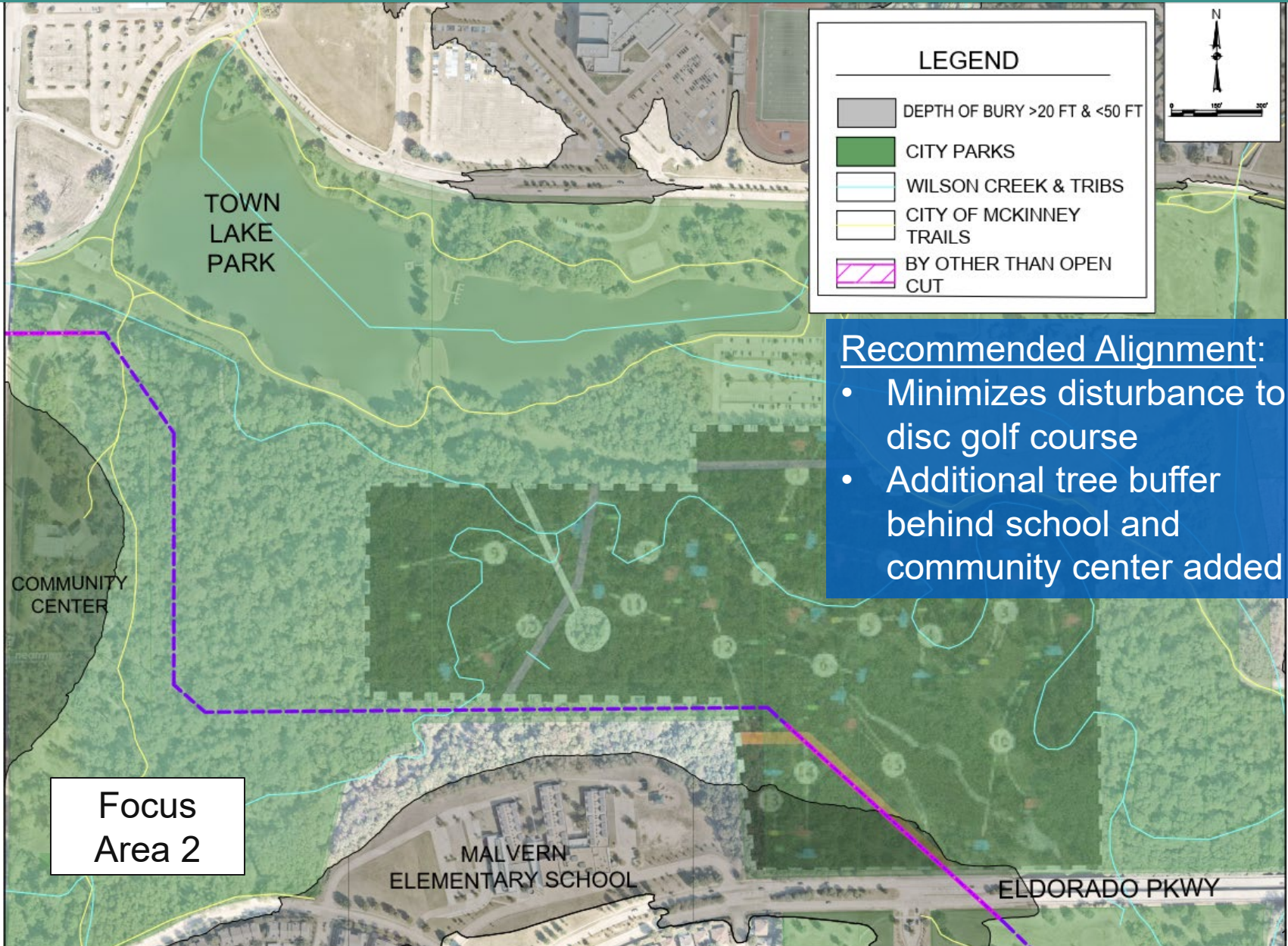
## Focus Area 2 – Phase I Construction





# FOCUS AREA 2 – PHASE I CONSTRUCTION

## Towne Lake Disc Golf Course & McKinney Community Center



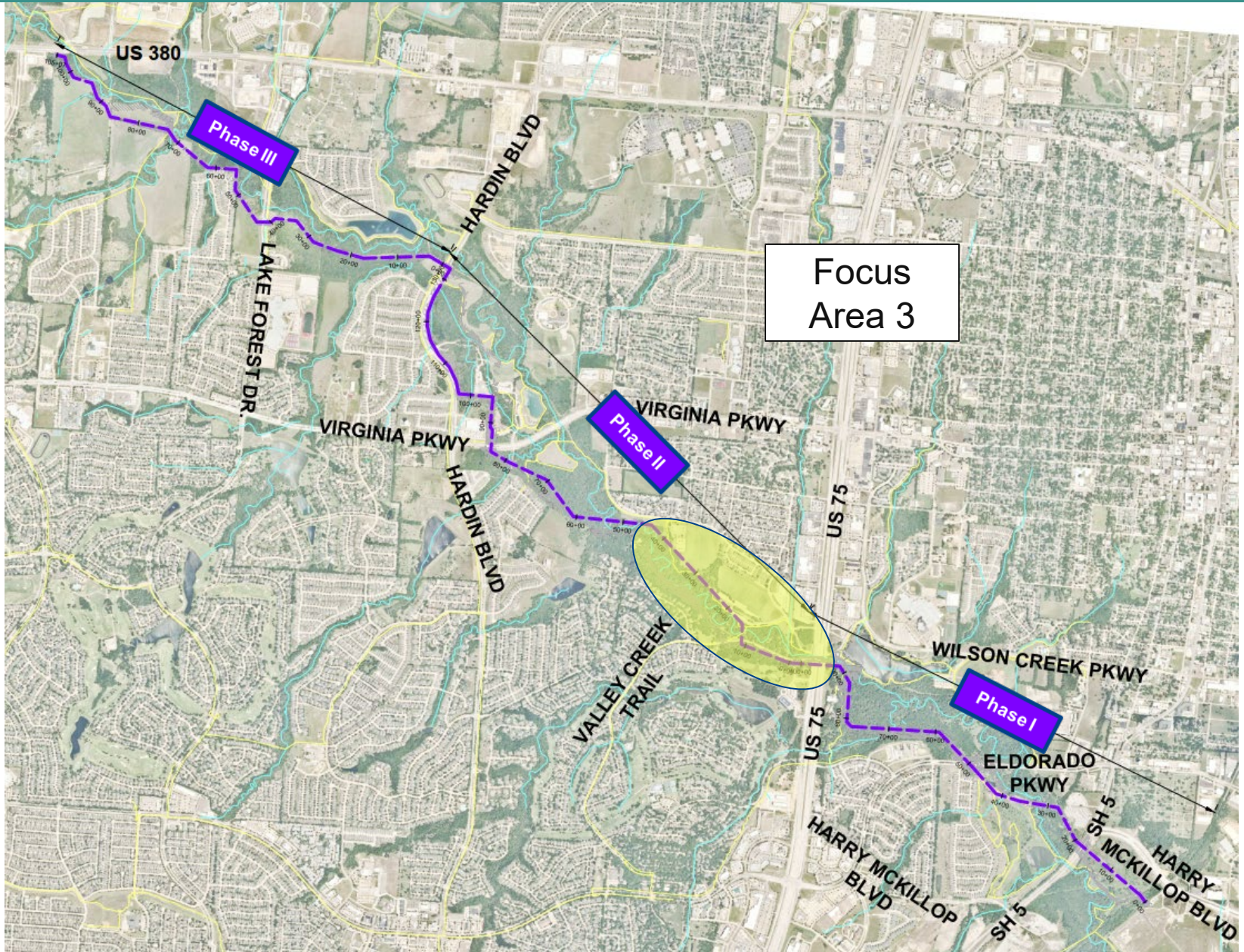
Recommended Alignment:

- Minimizes disturbance to disc golf course
- Additional tree buffer behind school and community center added



# MCKINNEY-PROSPER TRANSFER SEWER

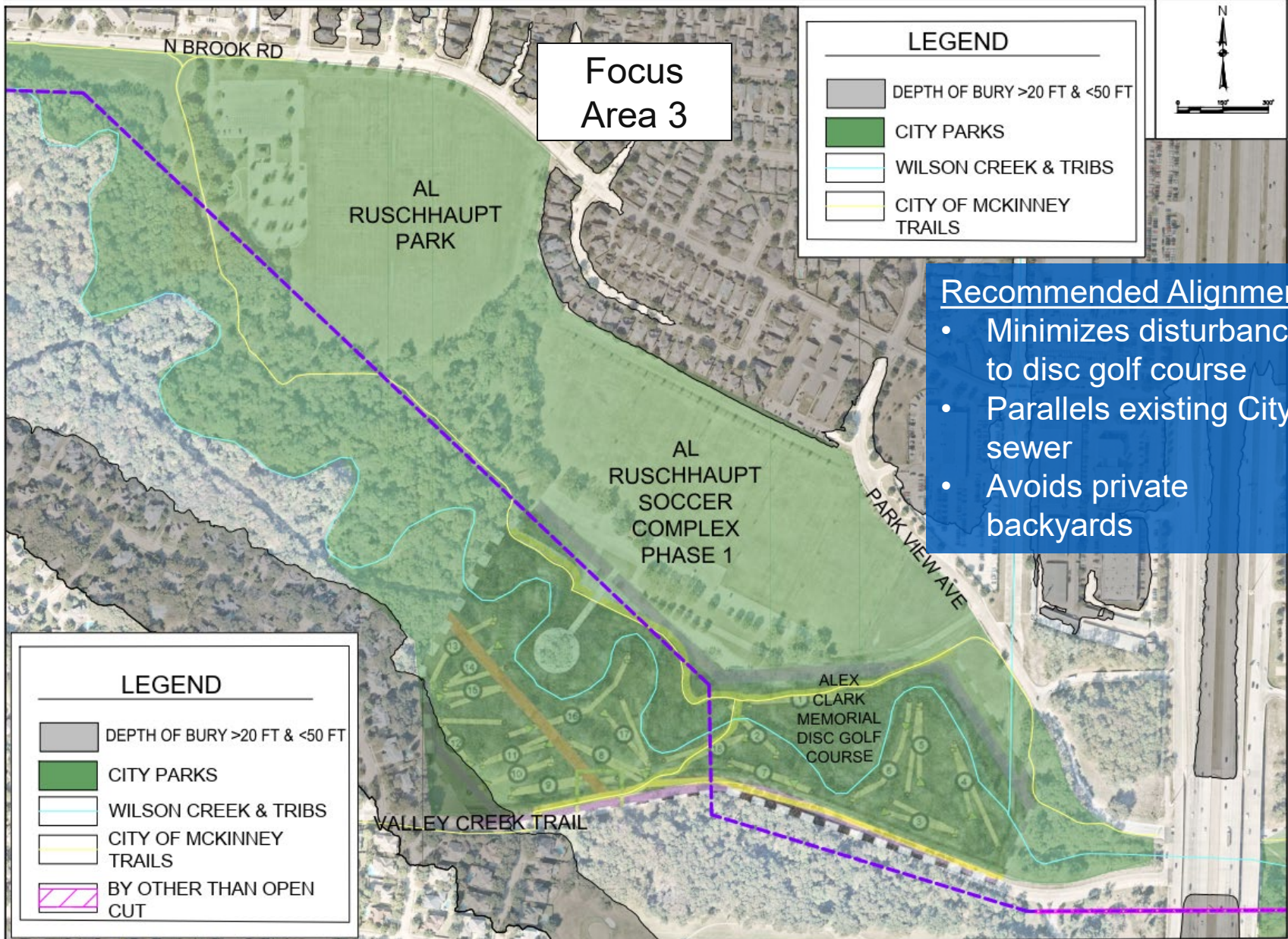
## Focus Area 3 – Phase II Construction





# FOCUS AREA 3 – PHASE II CONSTRUCTION

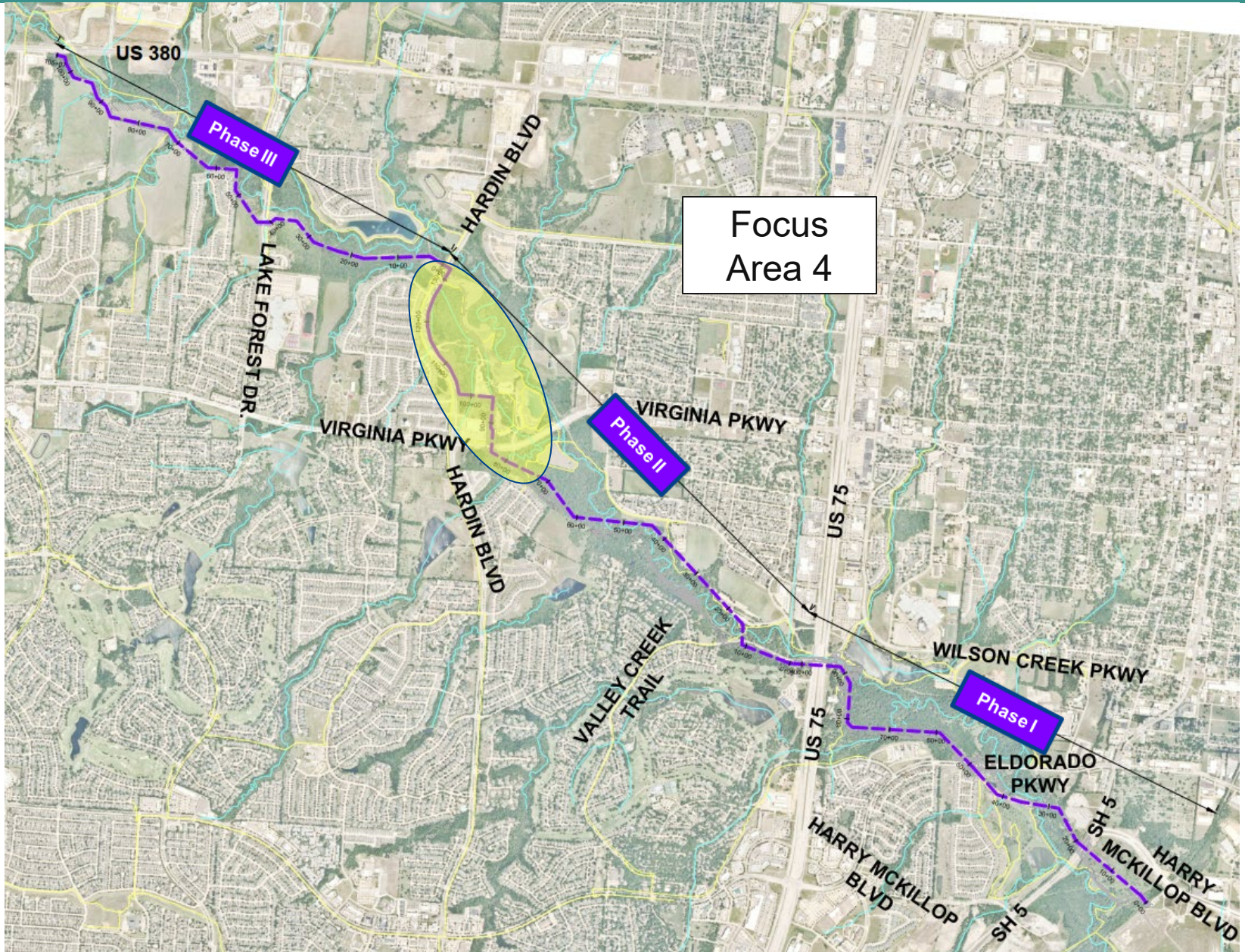
## Alex Clark Memorial Disc Golf Course & Al Ruschhaupt Park





# MCKINNEY-PROSPER TRANSFER SEWER

## Focus Area 4 – Phase II Construction



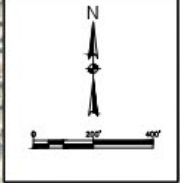




# FOCUS AREA 4 – PHASE II CONSTRUCTION

## McKinney Dog Park & Bonnie Wenk Park

Focus Area 4

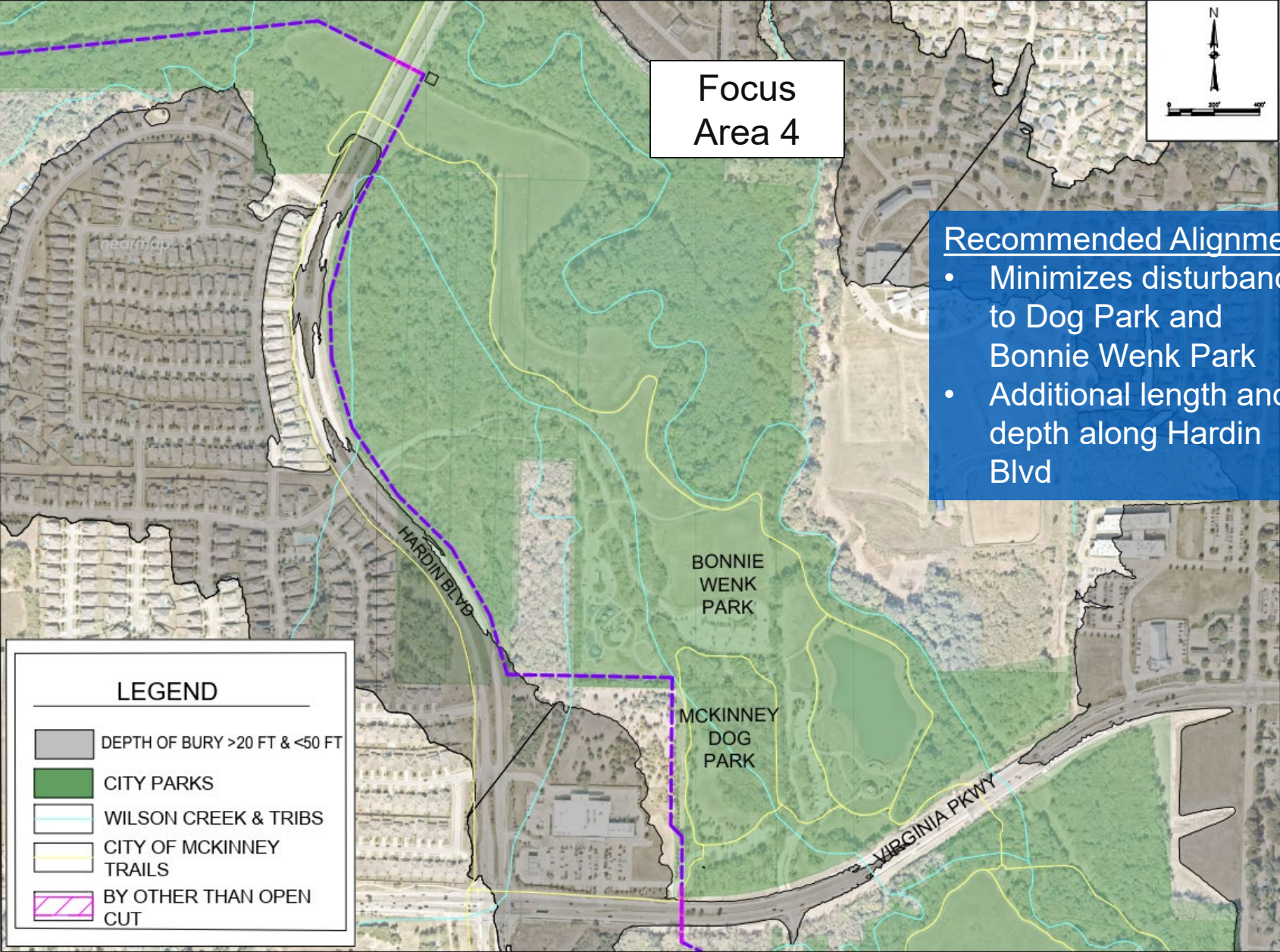


Recommended Alignment:

- Minimizes disturbance to Dog Park and Bonnie Wenk Park
- Additional length and depth along Hardin Blvd

**LEGEND**

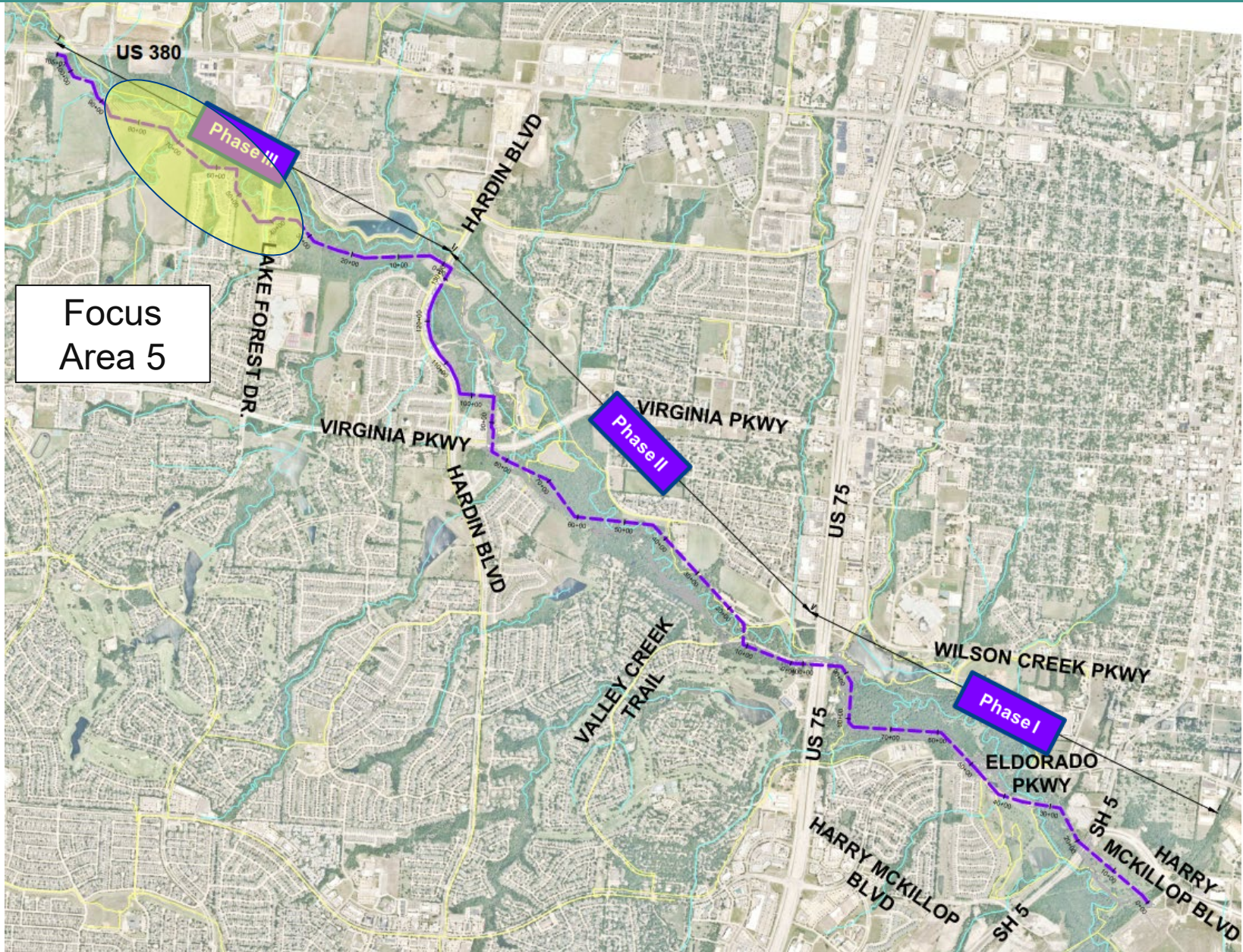
- DEPTH OF BURY >20 FT & <50 FT
- CITY PARKS
- WILSON CREEK & TRIBS
- CITY OF MCKINNEY TRAILS
- BY OTHER THAN OPEN CUT





# MCKINNEY-PROSPER TRANSFER SEWER

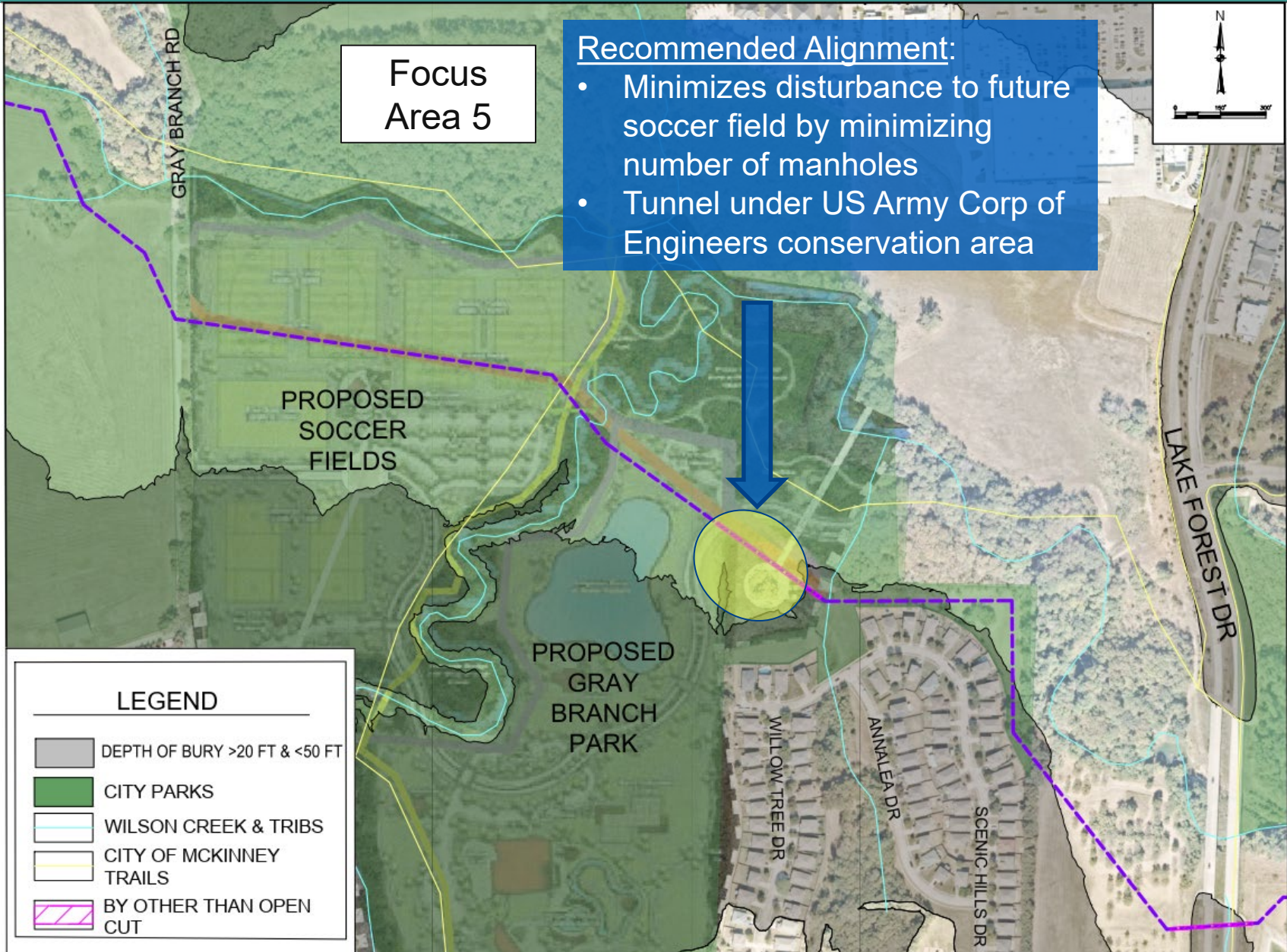
## Focus Area 5 – Phase III Construction





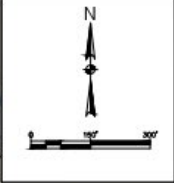
# FOCUS AREA 5 – PHASE III CONSTRUCTION






## Scenic Hills Drive & Gray Branch Park



Focus Area 5

- Recommended Alignment:
- Minimizes disturbance to future soccer field by minimizing number of manholes
  - Tunnel under US Army Corp of Engineers conservation area



LEGEND	
	DEPTH OF BURY >20 FT & <50 FT
	CITY PARKS
	WILSON CREEK & TRIBS
	CITY OF MCKINNEY TRAILS
	BY OTHER THAN OPEN CUT





# MCKINNEY-PROSPER TRANSFER SEWER

## CONCLUSION

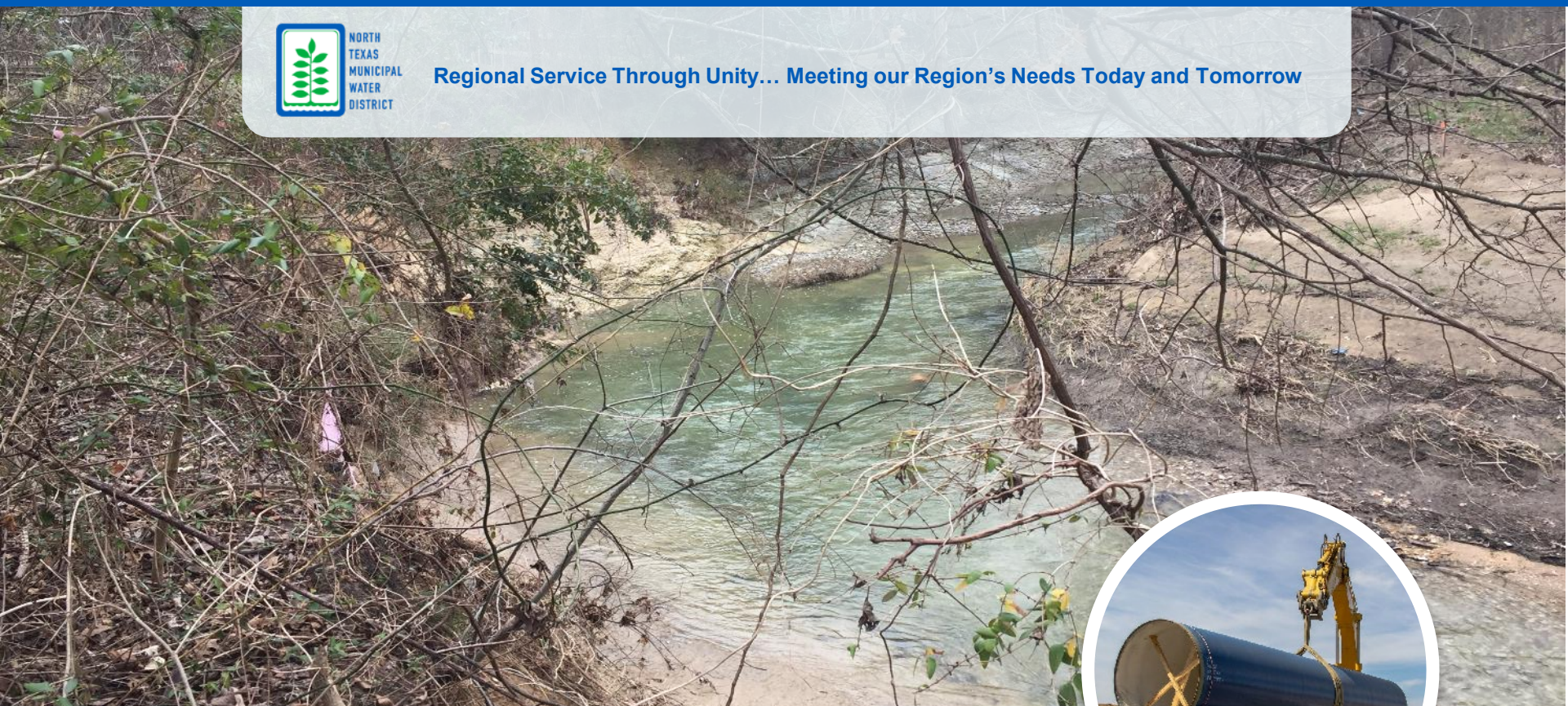
- Serves long term needs of McKinney and avoids future projects in the Wilson Creek corridor
- Restores existing City sewer capacity for fast-growing portion of McKinney and helps reduce potential for overflows
- Provides opportunity to remove above-ground creek crossings in City's system





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# MCKINNEY-PROSPER TRANSFER SEWER TYPICAL CONSTRUCTION CROSS SECTION

