

## **Selection of Public Infrastructure Projects**

The objective of the Infrastructure Feasibility Study is to prioritize the potential infrastructure projects that best utilize the \$19,511,200 CDBG-DR Infrastructure budget allocation within a 6-year (yr) timeline for design, permitting, and construction (2016-2022). The infrastructure projects shall meet both the eligibility criteria and national objectives of the HUD CDBG-DR grant as outlined in Federal Register 2016-141102:

- National Objective: establishing that the overall area served by each project can be categorized under the low-to moderate Income (LMI) national objective. The LMI objective is defined as: 70 percent (%) of the aggregate of CDBG program funds being used to support activities benefitting low- and moderate-income persons , and/or established a 50% overall low- and moderate income benefit requirement for a CDBG–DR grant. (Federal register page 39696-97)
- Eligibility Criteria (Infrastructure): Typical infrastructure activities include the repair, replacement, or relocation of damaged public facilities and improvements to include, but not be limited to, bridges, water treatment facilities, roads, and sewer and water lines, **along with acquisition of land needed to complete these activities.**

Using the data compiled for the projects in the Project Assessments, projects were further analyzed using a Project Ranking Matrix developed in order to measure benefit of the proposed infrastructure projects and to meet HUD objectives. The **Project Ranking Matrix** is attached.

Using Project Ranking Matrix prioritization weights, points were calculated for each project, and then the projects were prioritized using the **Project Prioritization Matrix** in terms of top/ranked or projects based on “need”. The point calculations and Matrix results and ranking are attached and a color gradation scale is used wherein green indicates the best score per category, yellow indicated middle or average point ranks, and red indicated the categories that scored the least points.

The Matrix Results indicate that the top 5 projects based on points is as follows

1. Area 3- Midtown/Aquarena Springs (75 points)
2. Area 1- Blanco Gardens (66 points)
3. Area 2- Clarewood/Barbara Drive (63 points)
4. Bank Improvement Trail & Blanco River Improvements (61 points)
5. Area 4- Uhland Road (56 Points)

Based on funding objectives, the projects were packaged to complete as many projects as possible with CDBG-DR funding. The sixth ranked project, Rio Vista, was also added for City funding. All projects will be implemented by the City without the use of sub recipients.

## **Description of CDBG-DR Funded Public Infrastructure Projects**

### **1. Midtown**

The Midtown/Aquarena Springs project area is located in San Marcos, TX east of the intersection at IH-35 and Loop 82/Aquarena Springs Drive and is generally bounded by development along Aquarena Springs on the north, IH-35 on the west, Davis Lane on the south, and the Blanco River on the east. The area is primarily multi-family residential and commercial property with businesses located along IH-35. The area is not located within the 100-year flood plain, thus local flooding and inadequate conveyance likely cause the drainage issues reported at this location. City staff has indicated that the Loop 82/Aquarena Springs underpass at IH-35 is one of the first major intersections in the City to flood during significant rainfall events. The area falls within 1 census tract which is 84.13% low-to-moderate income.

**Existing Infrastructure:** This area is primarily drained by TxDOT's IH-35 storm drain system and a small reach of City Storm sewer that both drain to the existing TxDOT ditch continuing south to a lake/pit area near the railroad.

**Drainage issues:** City staff and emergency management has indicated that the IH-35/Aquarena Springs intersection is one of the first major areas within the City to flood when it rains. Topography maps indicate that the lowest point on Aquarena Springs Rd. is located just east of the northbound IH-35 feeder road. Record drawings indicate only 4 TxDOT inlets drain the IH-35 intersection and there is no overland access to the TxDOT ditch for ponded water. This condition results in ponding that limits mobility, and eventually causes flooding of adjacent properties such as the San Marcos Rehabilitation facility.

**Proposed Infrastructure:** Intersection improvements are proposed including curb cuts and inlet improvements adjacent to the low point locations and inlets for the north side/Rehab facility. Clearing of the existing TxDOT ditch is also proposed as it is currently overgrown, and not well-maintained. Downstream at Davis Road, the existing dual 8'x4' culverts will be supplemented with 2 additional culverts as not to constrict flow. Lastly the City will consider a future channel along Davis Road or the Railroad near the Lake to connect to the Blanco River, as the Lake is reported to overflow both west and east in heavy events. The project will require coordination with TxDOT for these improvements.

**Benefits:** Approximately 82 properties would benefit during local rainfall events up to 25-year frequencies with the proposed improvements. Mobility will be improved due to decreased ponding on Aquarena Springs Rd. The project provides LMI benefit, health and safety benefit, helps long-term recovery, and enhances hazard mitigation.

**National Objective:** Low Moderate Income

## 2. Blanco Gardens

The Blanco Gardens subdivision is located in San Marcos, TX on the east side of IH-35 from River Road to Bugg Lane and is generally bounded by Bugg Lane on the north, IH-35 on the west, and River Road on the east and, south. The area is primarily residential with various types of housing including single family, multi-family, as well as manufactured home locations. There are a few businesses located along IH-35, in the Bugg Lane area, and along River Road. The subdivision is entirely located within the 100-year flood plain, as it adjacent to both the San Marcos and Blanco Rivers near their confluence. The subdivision is significantly affected by overflows from the Blanco River in river events 20-years and above. The subdivision falls within 2 census tracts which are 87.99 and 69.88% low-to-moderate income (area weighted composite = 80.58% LMI).

**Existing Infrastructure:** A south side storm sewer system drains parts of Smith Ln, River Rd, Sturgeon, Claire & Mary with a 60-inch outfall into San Marcos River off River Road. A north side storm sewer system drains Bugg Lane and River Road with a dual 48-inch outfall to the Blanco River.

**Drainage issues:** In addition to the Blanco River overflow influence on Blanco Gardens, during local rainfall events the existing storm drain system is undersized and does not meet current City design Criteria for a 25-year storm. The project area is fairly flat, and the drainage patterns are undefined in some locations.

**Proposed Infrastructure:** By adding a new central storm drain system to Conway & Barbara Drives connected to the existing storm drain system, and providing a new 60-inch outfall to the San Marcos River (supplementing the existing 60-inch outfall); both the existing and proposed systems meet the City's required 25-year criteria. Additional 24-inch connections across River Road into the Woods Apartment Ditch are proposed to provide additional relief during lesser events. Road regrading is proposed for this reach of River Road from Linda to Cape Rd. revising the roadway cross-section to drain towards the Woods apartment ditch. Lastly, there is a potential buyout property on Conway that may be purchased for use as a drainage easement to add an inlet and lead system to drain the

alley/easement between Barbara & Conway. (Infrastructure Categories C. Road Systems & Bridges and F. Utilities)

**Benefits:** Approximately 420 properties would benefit during local rainfall events up to 25-year frequencies with the new storm drain system. Mobility will be improved due to decreased ponding in the roadways, and this fairly small system provides relief to a majority of the project area without having to remove and replace what is there today. The project provides LMI benefit, health and safety benefit, helps long-term recovery, and enhances hazard mitigation.

**National Objective:** Low Moderate Income

### 3. Clarewood/Barbara Drive

The Clarewood/Barbara Drive area is located in San Marcos, TX on the east side of IH-35 at the intersection of Highway 80/Hopkins Street and is generally bounded by Highway 80 on the north, IH-35 on the west, Clarewood on the east, and Bugg Road on the south. The area is primarily multi-family residential and commercial with businesses located along IH-35, Clarewood, and Highway 80. The area is almost entirely located within the 100-year flood plain with the exception of a few higher properties along IH-35. The area is significantly affected by the Blanco River overflows in events 20-year and above, as well as backwater from the Bugg Road and Highway 80 storm drain systems when the Blanco River is high. The area falls within 1 census tract which is 87.99% low-to-moderate income.

**Existing Infrastructure:** The Blanco Gardens north side storm sewer system drains Bugg Lane and River Road with a dual 48-inch outfall to the Blanco River. There is no existing system on Clarewood Drive.

**Drainage issues:** As part of Blanco Gardens, this area is influenced by the Blanco River overflows. During local rainfall events, the existing Bugg Lane storm drain system is undersized and does not meet current the 25-year City design Criteria. The project area is fairly flat, Bugg Lane topography drains towards IH-35 instead of the Blanco River outfall, and drainage along Barbara Dr. from Wendell to Bugg Lane is not well defined. Clarewood Drive has no existing storm sewer system, and coupled with the Bugg Lane topography, the area experiences significant roadway ponding in the areas that cannot drain when the system is inundated.

**Proposed Infrastructure:** By adding a new storm drain system to Clarewood Dr. with a connection to both the Bugg Lane system and with a connection to the existing Highway 80 ditch (where ponded water currently flows), the system will meet criteria, and runoff will be captured by the storm drains and ditches instead of ponding in the roadway. Barbara Drive will be regraded to drain to Bugg Lane for adequate drainage. The project will require coordination with TxDOT to outfall into the Highway 80 ditch and some addition of storage volume as detention in this ditch may be required.

**Benefits:** Approximately 76 properties would benefit during local rainfall events up to 25-years with the new storm drain system. Mobility will be improved due to decreased ponding in roadways, and both Clarewood and Barbara Drives will have adequate drainage not available today. The project provides LMI benefit, health and safety benefit, helps long-term recovery, and enhances hazard mitigation.

**National Objective:** Low Moderate Income

### 4. Blanco Riverine Project

Currently for flood events greater than a 20-year and larger, a portion of the river flood flow exits the Blanco River channel and proceeds uncontrolled across the Blanco Gardens area to the west, eventually entering the San Marcos River upstream of the junction with the Blanco River. This overflow creates the highest concentration of damages in the City. There are numerous areas in the Blanco River overbank that allow this overflow to occur. The uncontrolled overflow impacts 1 census tract which is 87.99% low-to-moderate income.

**Existing Infrastructure:** The Blanco Gardens north side storm sewer system drains Bugg Lane and River Road with a dual 48-inch outfall to the Blanco River. The Blanco Gardens south side system drains to an outfall on the San Marcos River. The current storm water infrastructure is not adequate to address drainage issues from local rain events and will be upgraded with two other CDBG-DR projects.

**Drainage issues:** The Blanco Gardens area is influenced by the Blanco River overflows. The Blanco Gardens and Clarewood/Barbara Drive projects will upgrade the storm sewer system to provide capacity for local storm events. However, the infrastructure which would be required to convey the overflow from the Blanco River would be too large to construct within the existing neighborhood.

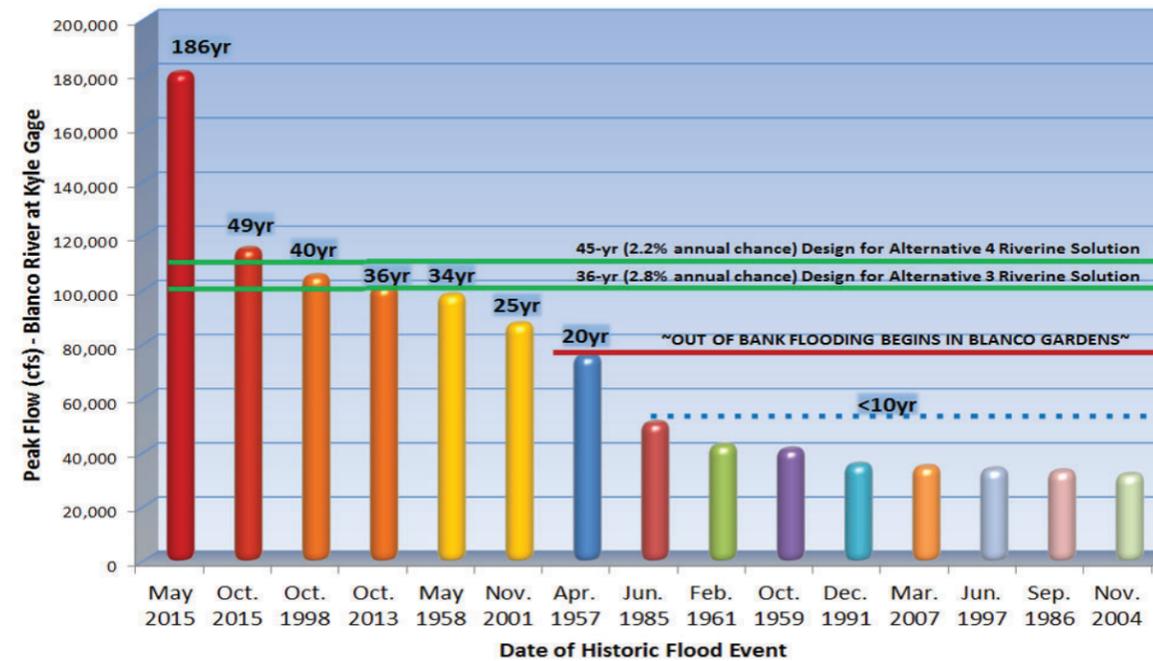
**Proposed Infrastructure:** CDBG-DR funds will be used for land acquisition to support this project.

This project will make bank improvements to block low bank areas in the Blanco River overbank which allow the overflow to occur. With the improvements, the Blanco Gardens area can gain protection from approximately 3-4 feet of river rise. The bank improvements would have the purpose of setting maximum grade limitations, minimum widths and surface. It is possible that the improvements could also provide a dual purpose of a greenway if desired by the community.

The blockage of diversion flow will cause a minor rise in water surface elevation. To address this minor rise, this project will also include flow capacity improvements to the Blanco River. These capacity improvements could include modifications to the channel and/or an overflow channel on the opposite bank.

**Benefits:** The project benefit will reduce the risk for flooding to the Blanco Gardens neighborhood by 44% annually by reducing the level of floods from overtopping the bank from a 20-yr or higher floods to a 36-yr or higher. And during higher floods the flow and depth of water will be reduced. The graphic below illustrates the additional protection based upon previous flood events.

**Historic Flood Events - Blanco River**



**National Objective:** Low Moderate Income

## 5. Uhland Road

The Uhland/County Road project area is located in San Marcos, TX on the east side of IH-35 at the intersection of IH-35 and Uhland Road. The project includes the properties along County Road and Uhland Road in this reach with IH-35 on the west and the Blanco River on the east. The area is primarily residential with multi-family complexes on the south side of Uhland, manufactured housing areas, some commercial property, and the Hays County Jail on the north side of Uhland Road. Two reaches of Uhland Road are located within the 100-year flood plain, and the County Jail is within the 500-year floodplain. The subdivision falls within 2 census tracts which are 55.21 and 84.13% low-to-moderate income (area weighted composite = 73.07% LMI).

**Existing Infrastructure:** County and Uhland Roads currently have limited storm drain and drainage systems. Both roads have a curbs on one side of the road, and limited and/or no defined ditches or inlets to drain the roadways and capture runoff from adjacent properties.

**Drainage issues:** In addition to the lack of drainage infrastructure and adequate roadway drainage, the project area is fairly flat, and the drainage patterns are undefined. There is a low lying area along Uhland Road near the Hays County prison that ponds water and cannot drain.

**Proposed Infrastructure:** By converting the roadways to depressed curb-and-gutter sections with adequate grading, and adding a new storm sewer system with a new 48-inch outfall to the Blanco River, this area would be brought into compliance meeting the City's 25-year design criteria.

**Benefits:** Approximately 166 properties would benefit during local rainfall events up to 25-year frequencies with the new storm drain system and roadway improvements. Mobility will be also improved due to decreased ponding in the roadways. The project provides LMI benefit, health and safety benefit, helps long-term recovery, and enhances hazard mitigation.

**National Objective:** Low Moderate Income

City of San Marcos CDBG-DR Infrastructure Feasibility Study

Prioritization Matrix



Infrastructure Prioritization Score

Prioritization Category	Weight	Criteria	Benefit	Point Range	Measurement or Calculation
% Low-to-Mid Income (LMI) Served	20%	LMI population benefitted by proposed improvement(s)	Reduction of flood damage burden for LMI population	0-20	(Census Tract LMI Percentage) x 20
Flood Risk Reduction	20%	Flood protection level of service provided by proposed improvement(s)	Improved flood protection over existing conditions	0-10	Minimal increase in level of protection = 0 Local or Riverine 25-yr level of protection = 4 Local and Riverine 25-yr level of protection = 7 Above 25yr level of protection = 10
		Number of equivalent structures benefitted by proposed improvement(s)	Reduction in flood damage burden	0-10	0 - 10 structures = 2 10 - 25 structures = 5 25 - 50 structures = 7 Greater than 50 structures = 10
Benefit-Cost Ratio	20%	Estimated cost per equivalent structure benefitted by proposed improvement(s)	Cost effectiveness compared to other alternatives	0-20	Lower Quartile = 0 Lower Middle Quartile = 7 Upper Middle Quartile = 13 Upper Quartile = 20
Leveraged Funding	10%	Identified cost-share opportunity for proposed improvement(s)	Ability to leverage HUD funding to increase benefit to the community	0-10	No potential cost-share opportunity identified = 0 Limited cost-share opportunity(ies) identified = 5 Significant cost-share opportunity(ies) identified = 10
Permitting Requirements / Schedule	10%	Ability to acquire permits and meet overall schedule	Efficiency and grant compliance	0-10	Significant challenges acquiring permit - likely schedule delay = 0 Potential challenges acquiring permit - potential schedule delay = 5 No permit required / no issues obtaining permit - minimal schedule delay = 10
Mobility Improvement	5%	Mobility improvement due to proposed improvement(s)	Improved mobility for emergency responders and general public during storm events	0-5	Minimal mobility improvements = 0 Limited mobility improvements = 3 Significant mobility improvements for emergency responders = 5
Phasing Considerations	5%	Supports phased approach to implementation of larger projects	Supports completion or effectiveness of future regional project beyond current funding	0-5	No connection to larger-scale project = 0 Limited contribution to larger-scale project = 3 Significant contribution to larger-scale project = 5
Project Synergies	5%	Ability to complete simultaneously with companion project	Efficiency and cost effectiveness	0-5	Unrelated to ongoing projects = 0 Limited cost savings if completed with companion project = 3 Significant cost savings if completed with companion project = 5
Environmental Impact/Benefit	5%	Environmental impact/benefit of proposed improvement(s)	Contribution to improved environmental conditions	0-5	Negative environmental impact = 0 Limited environmental impact = 3 Incorporation of green infrastructure and/or improvement in water quality = 5

City of San Marcos CDBG-DR Infrastructure Feasibility Study  
**Prioritization Matrix Results & Ranking**



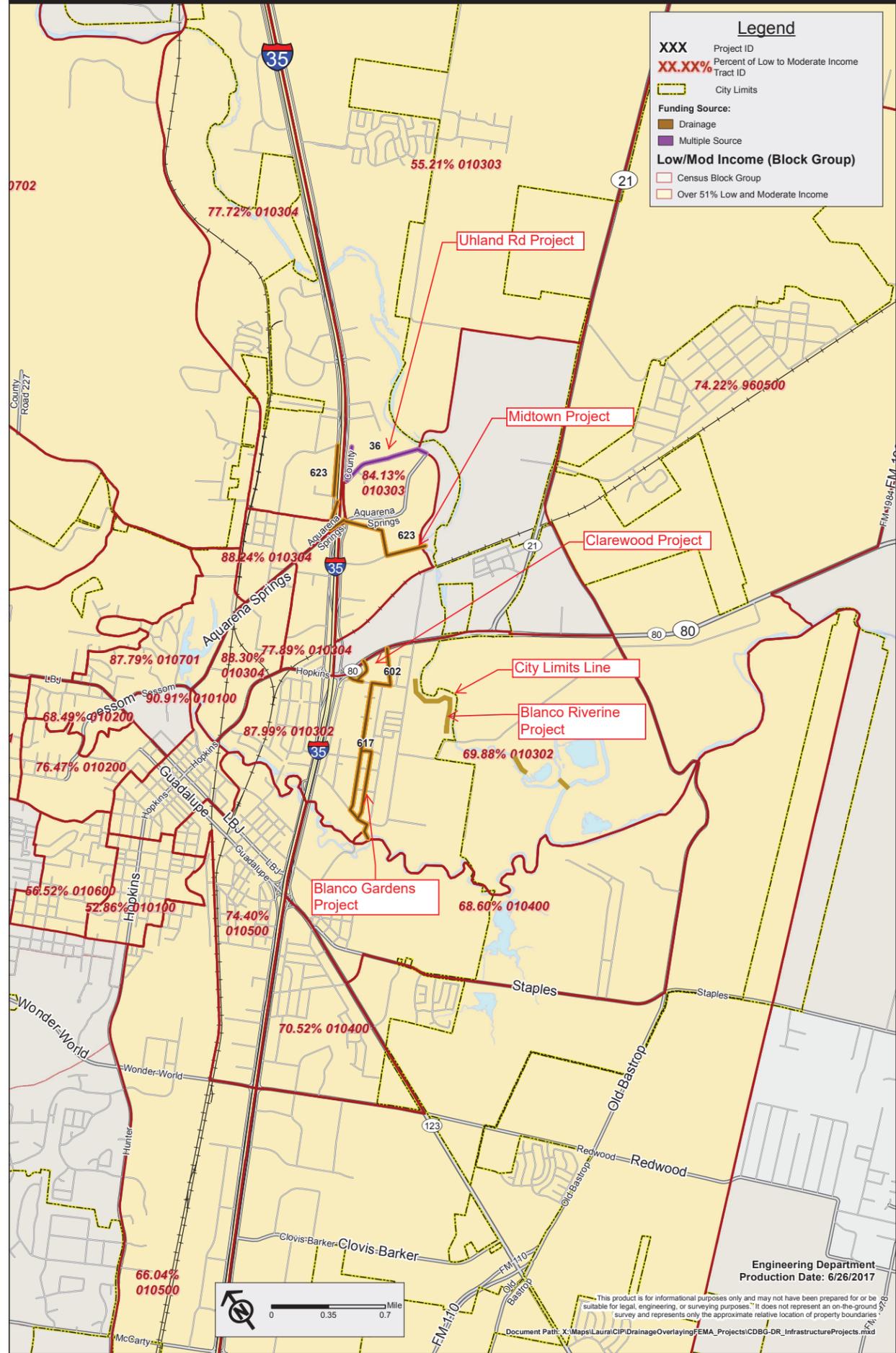
	% LMI Population Served	Flood Risk Reduction: Level of Service	Flood Risk Reduction-# Structures Benefitted	Benefit-Cost Ratio	Leveraged Funding	Permitting Requirements / Schedule	Mobility Improvement	Phasing Considerations	Project Synergies	Environmental Impact/Benefit	Total Prioritization Score (out of 100)	Prioritization Ranking
Area 3- Midtown/Aquarena Springs	17	4	10	20	5	5	5	3	3	3	75	1
Area 1- Blanco Gardens	16	4	10	20	5	0	5	0	3	3	66	2
Area 2- Clarewood	18	4	10	7	5	5	5	3	3	3	63	3
Riverine Project 1-Bike trail	16	10	10	7	5	0	5	5	3	0	61	4
Area 4- Uhland Road	15	4	10	13	0	5	3	0	3	3	56	5
Area 7- Rio Vista	18	4	5	13	0	5	0	0	0	3	48	6
Area 6- River Ridge	16	4	2	0	5	5	3	3	3	3	44	7
Area 5- Fairlawn	11	4	7	0	0	5	3	0	3	3	36	8

	BEST	MID	LEAST
Ranking Color Scale	10	5	1

## Summary of Selected CDBG-DR Infrastructure Projects

Action Plan Public Infrastructure Categories	Applicable Infrastructure Projects	Low Mod National Objective				Location				C.I.P.		
		Area Benefit	Health & Safety Benefit	Help Long Term Recovery	Enhance Hazard Mitigation	Inside City Limit?	Census Block Group	Census Tract LMI %	Residential Housing Units	Design Start Date	Const. Start Date	End Date
C. Road Systems & Bridges Culvert repair/replacement Drainage Ditch repair/replace Road & bridge repair/replacement	Blanco Gardens	Yes	Yes	Yes	Yes	Yes	010302-1&2	87.99/69.88	420	10/6/17	9/7/18	9/1/19
	Clarewood/Barbara Drive	Yes	Yes	Yes	Yes	Yes	010302-2	87.99	76	12/15/17	5/1/19	4/24/20
	Midtown/Aquarena	Yes	Yes	Yes	Yes	Yes	10303	84.13	82	8/3/17	2/21/19	10/21/19
	Uhland Road	Yes	Yes	Yes	Yes	Yes	10303	84.13	166	9/1/17	6/21/19	5/14/20
D. Water Control Facilities Drainage system repair Bank repair/stabilization/enhancement	Blanco Gardens	Yes	Yes	Yes	Yes	Yes	010302-1&2	87.99/69.88	420	10/6/17	9/7/18	9/1/19
	Clarewood/Barbara Drive	Yes	Yes	Yes	Yes	Yes	010302-2	87.99	76	12/15/17	5/1/19	4/24/20
	Midtown/Aquarena	Yes	Yes	Yes	Yes	Yes	10303	84.13	82	8/3/17	2/21/19	10/21/19
	Uhland Road	Yes	Yes	Yes	Yes	Yes	10303	84.13	166	9/1/17	6/21/19	5/14/20
	Blanco Riverine Project	Yes	Yes	Yes	Yes	Yes	010302-1&2	87.99/69.88	420	10/18/17	1/1/20	3/30/22
F. Utilities	Uhland Road	Yes	Yes	Yes	Yes	Yes	10303	84.13	166	9/1/17	6/21/19	5/14/20
G. Parks, Recreation Facilities	Midtown/Aquarena	Yes	Yes	Yes	Yes	Yes	10303	84.13	82	8/3/17	2/21/19	10/21/19
H. Hazard Mitigation Activities	Blanco Riverine Project	Yes	Yes	Yes	Yes	Yes	010302-1&2	87.99/69.88	420	10/18/17	1/1/20	3/30/22

# CDBG-DR Infrastructure Projects

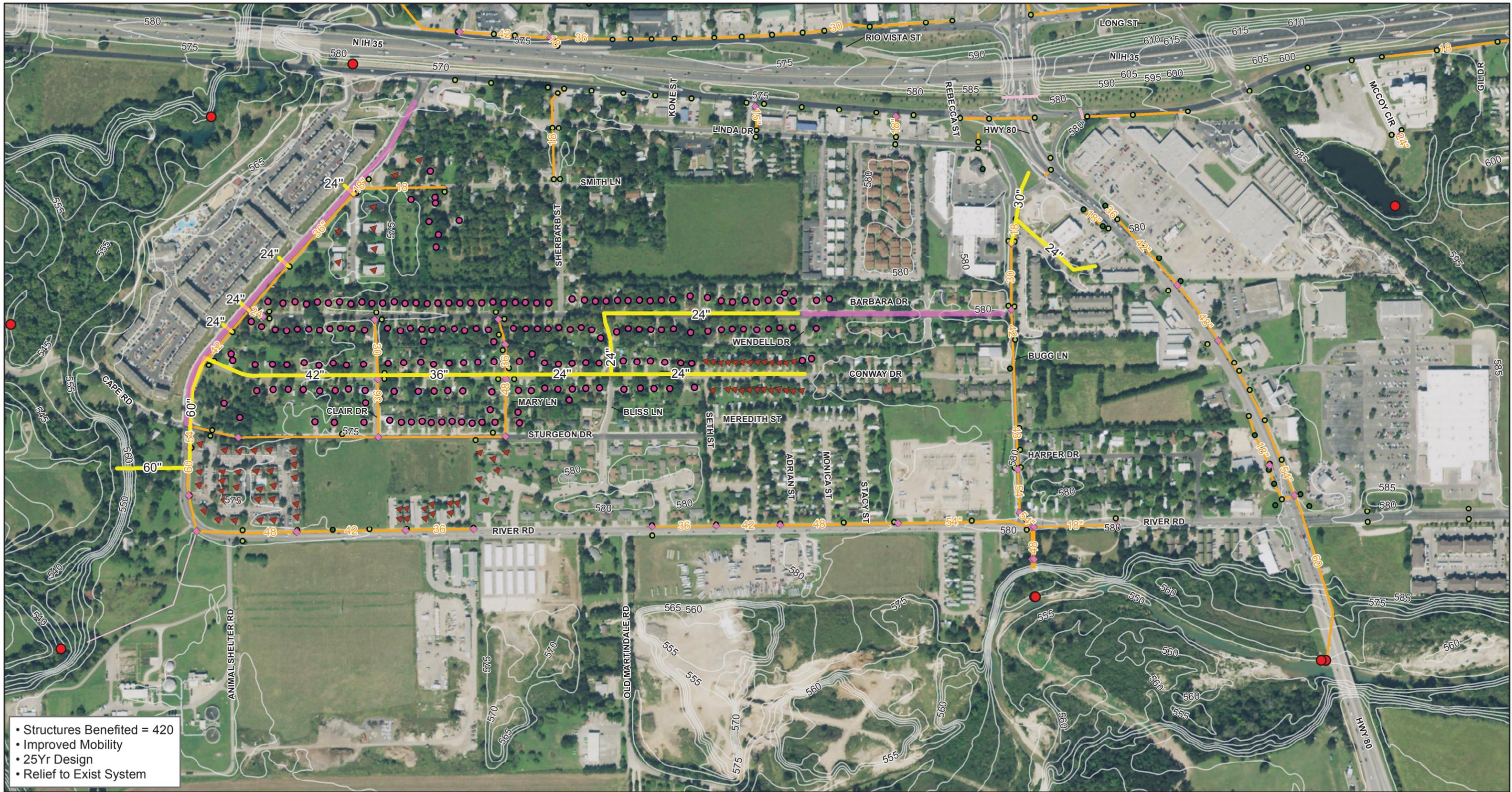


CDBG-DR Funded Infrastructure Projects

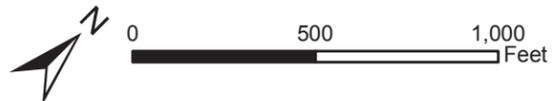
Project ID	Project Name	Project Description	2017	2018	2019	2020	2021	2022	PROJECT TOTAL			PROJECT MAP
									Cost	DR	City/Other	
623**	Midtown/Aquarena Springs	Infrastructure project to resolve local flooding in events up to 25-years in Midtown/Aquarena Springs Area including: Intersection improvements east of intersection of IH-35 and Aquarena Springs Rd. (curb cuts and inlet improvements) to address significant roadway ponding in a low lying area; TxDOT outfall ditch improvements to address overgrown & unmaintained vegetation to increase drainage capacity; and addition of dual 8'x4' culverts to supplement existing Davis Road Culverts to increase stormwater conveyance.	\$ 85,000		\$ 765,000				\$850,000	\$850,000	\$0	
617**	Blanco Gardens	Infrastructure project to resolve local flooding in events up to 25-years in Blanco Gardens area including: addition of a new central storm drain system to Conway & Barbara Drives connected to the existing storm drain system, with a new outfall to the San Marcos River. Includes new storm sewer outlets across River Road into the Woods Apartment Ditch and road regrading on River Road from Linda to Cape Rd. to revise the roadway cross-section to a crowned section. Also considers inlet and lead systems for alleys/easements between Barbara & Conway.		\$ 832,000	\$ 4,168,000				\$5,000,000	\$5,000,000	\$500,000	
602**	Clarewood /Barbara Drive	Infrastructure project to resolve local flooding in events up to 25-years in Clarewood/Barbara Dr. area including: providing a new storm drain system to Clarewood Dr. with a connection to both the Bugg Lane system and the existing Highway 80 ditch; regrading Barbara Drive to drain to Bugg Lane for adequate drainage.		\$ 250,000	\$ 2,250,000				\$2,500,000	\$2,500,000	\$0	
n/a	Blanco Riverine Improvements	CDBG-DR funds will be used for land acquisition to support this project. Infrastructure project to address Blanco River overflow influence on the Blanco Gardens subdivision area along the river bank from Highway 80 to Old Martindale Road. Project includes construction of ~4000 feet of a bank improvements, and an associated overflow channel improvements on the Blanco River for mitigation. Project provides significantly increased protection to Blanco Gardens from overflows in river events up to 36 years.	\$ 1,961,000			\$ 9,539,000			\$11,500,000	\$6,971,200	\$4,528,800	
36***	Uhland Road Improvements	Infrastructure project to resolve local flooding in events up to 25-years in County/Uhland Rd. area including: reconstructing the roadways to depressed curb-and-gutter sections with adequate grading; and adding a new storm sewer system along the whole route with a new outfall to the Blanco River.	\$ 563,000		\$ 3,627,000				\$4,190,000	\$4,190,000		
<b>TOTAL 2017-2022</b>			<b>\$2,609,000</b>	<b>\$1,082,000</b>	<b>\$10,810,000</b>	<b>\$9,539,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$24,040,000</b>	<b>\$19,511,200</b>	<b>\$5,028,800</b>	

### City Funded Infrastructure Projects

Project ID	Project Name	Project Description	2017	2018	2019	2020	2021	2022	Cost	PROJECT TOTAL	DR	City/Other	PROJECT MAP
	Rio Vista Improvments	Infrastructure project to resolve local flooding in events up to 25-years in Rio Vista area including: re-grading of roadways and ditches in 3 areas along Riverside Dr. and Riviera St. to address overland flow and ponding issues by improving conveyance to the San Marcos River.				\$ 70,000		\$ 630,000	\$700,000	\$0		\$700,000	
<b>TOTAL 2017-2022</b>			\$0	\$0	\$0	\$70,000	\$0	\$630,000	\$700,000	\$0	\$700,000		



- Structures Benefited = 420
- Improved Mobility
- 25Yr Design
- Relief to Exist System



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**Legend**

- |                |                                      |                        |
|----------------|--------------------------------------|------------------------|
| ● Outfalls     | ▲ Structures Benefited Multi Family  | — 5ft Contours         |
| ■ Junction Box | ● Structures Benefited Single Family | — Proposed Storm Sewer |
| ● Curb Inlet   | — Existing Storm Sewer               | — Roadway Regrading    |
| ● Area Inlet   | — Culvert                            |                        |

# Blanco Gardens & Clarewood Project Overviews



- Structures Benefited = 76
- Improved Mobility
- 25Yr Design
- Relief to Exist System



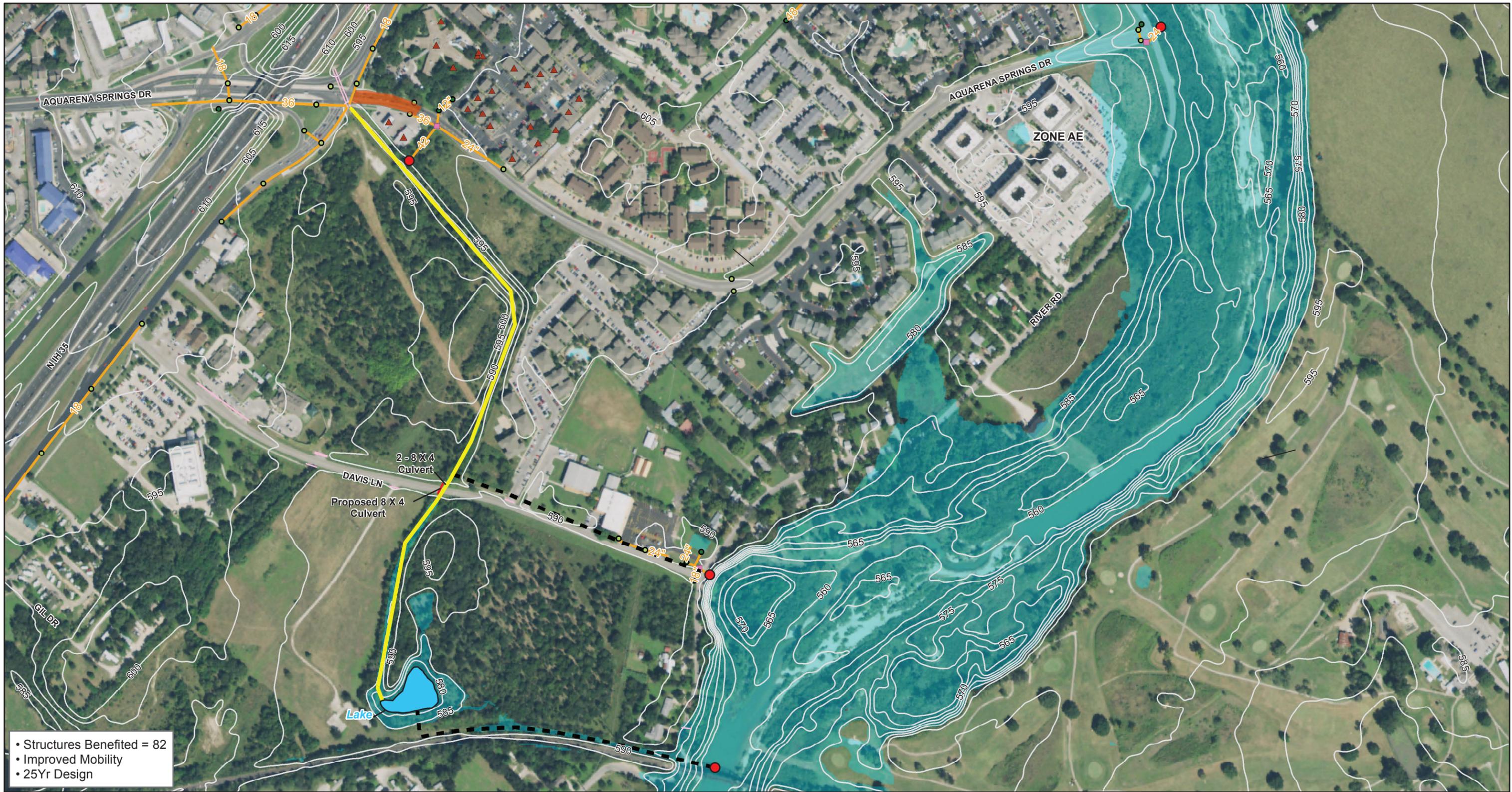
**Legend**

- Junction Box
- Curb Inlet
- Area Inlet
- ▲ Multi Family
- Existing Storm Sewer
- Culvert
- Proposed Storm Sewer
- 5ft Contours
- Roadway Regrading
- 25Yr Floodplain

**Clarewood / Highway 80  
Project Overview**

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 THE CITY OF SAN MARCOS



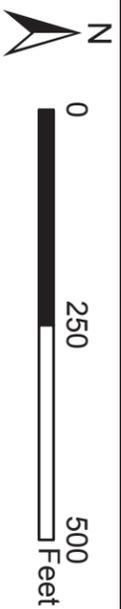
**Legend**

 Outfalls	 Proposed Culvert
 Junction Box	 Proposed Ditch Improvement
 Curb Inlet	 5ft Contours
 Area Inlet	 Future Outfall Improvements
<b>Structures Benefited</b>	 25Yr Floodplain
 Multi Family	 Intersection Improvements
 Existing Storm Sewer	
 Existing Culvert	

# Midtown / Aquarena Springs Project Overview



- Structures Benefited = 166
- Improved Mobility
- 25Yr Design



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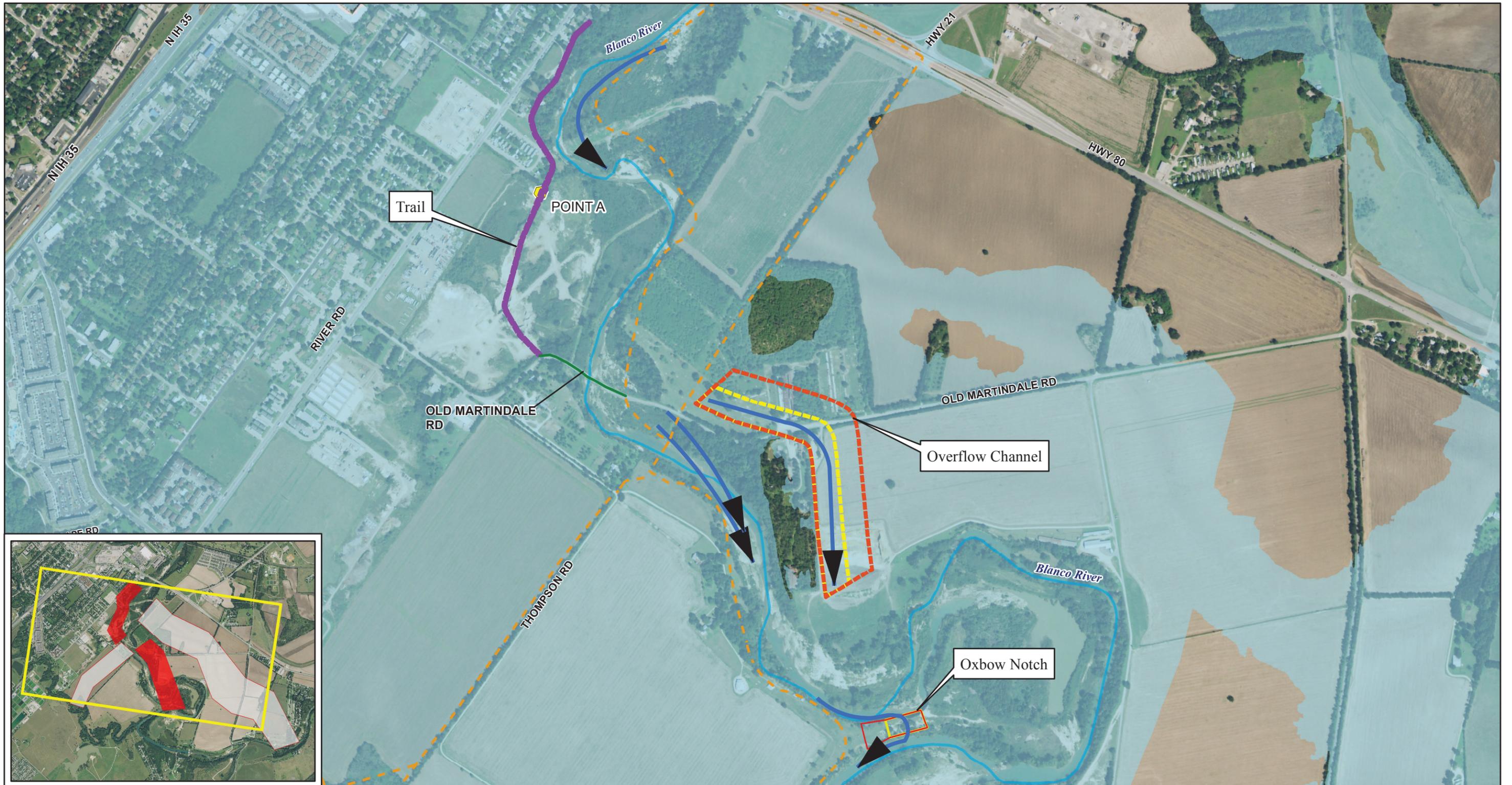


**Legend**

● Outfalls	● Junction Box	— Existing Storm Sewer
● Curb Inlet	● Area Inlet	— Culvert
● Single Family	● Multi Family	— Roadway Regrading
		— 5ft Contours

# Uhland Rd / County Rd

## Project Overview



**Legend**

- Point A
- Flow Arrows
- Streamline
- Trace of Embankment
- Proposed Additional Area (400ft)
- Proposed Additional Area (200ft)
- Preliminary FEMA 100Yr Floodplain
- Future Trail
- Oxbow Notch A1
- Oxbow Notch A2
- Future Trail
- Potential Connection to Trail

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# City of San Marcos

Riverine Project A and D Concept Designs



Legend					
	Point A		25-yr Floodplain		Cross Sections
	Bank Improvement		Flow Arrows		2ft Contours

**CDBG-DR**  
 Figure RD-1  
 Riverine Project D  
 Area Map  
 City of San Marcos

# K.

## Additional Maps