

City of Fair Oaks Ranch

5-YEAR DRAINAGE CIP PRESENTATION

JANUARY 20, 2021



Agenda



- Master Plan Overview
- Update on FY22 projects
- In-house Maintenance Program
- Proposed 5-Year Drainage CIP
- Discussion/Challenges
- Recommendations



Master Plan Overview

- Completed in 2018
- Stakeholder Committee
 - 5 workshops
 - 2 surveys
- 60 initial projects narrowed to 46 projects prioritized by stakeholders
- Master Plan approved by council
 - Drainage policy (UDC)
 - Capital Improvement Projects identified
- \$10.40M (2018 dollars) – Public + Private
 - \$7.42M Construction
 - \$2.98M Engineering, Land, Contingencies



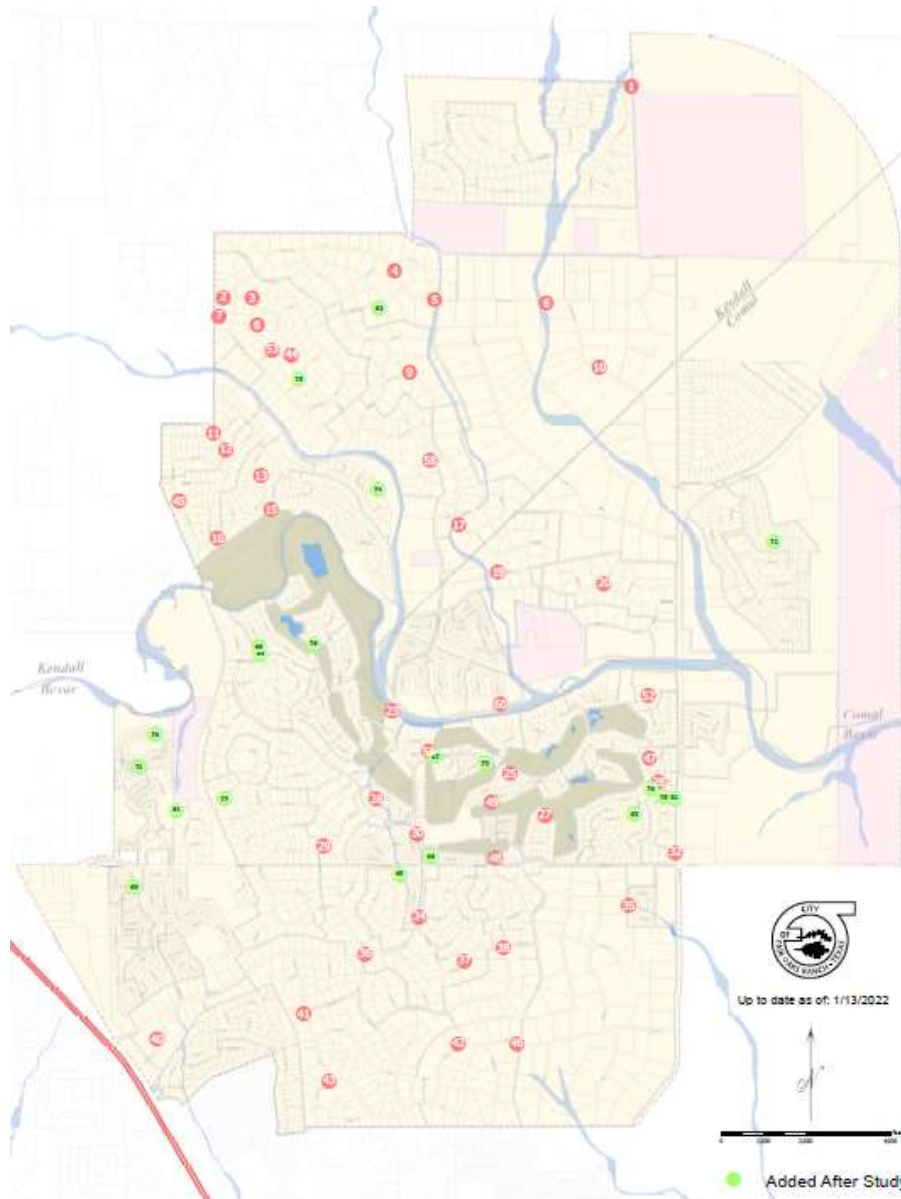


Updates Since Master Plan

- 24 new issues have been identified
 - Each assessed and scored by city staff
 - All considered in development of in-house maintenance program and proposed 5-Yr CIP
- New Issues will continue to be identified
 - Maintenance will address some issues
 - Some issues may result in future updates (additions/subtractions) to CIP
- 5-Yr Roads CIP Approved in Nov '21
 - Some identified drainage issues will be addressed in conjunction w/Street Improvements
 - Ammann Rd Low Water Crossing
 - Rolling Acres Trail Low Water Crossing



Additional Drainage Issues



- Identified in Drainage Master Plan
- Added after Study



FY 22 Project Update



Project No	FY 22 Budget	Phase
5 – 7820 Rolling Acres Trail	\$85,000	Design
17 – 7840 Silver Spur Trail	\$95,000	Design
34 – 2910 Tivoli Way	\$50,000	Design
25 – 7715 Fair Oaks Parkway	\$40,000	Design
36 – 8410 Noble Lark ¹	\$0	Monitor
32 – 29314 Sumpter Drive ²	\$0	Monitor (TxDOT)
37 – 7967 Turf Paradise Lane	\$40,000	Design
30 – 7900 Fair Oaks Parkway ³	\$10,000	Study
61 – 8013 Rocking Horse Lane ⁴	\$75,000	Design/Construction
Total	\$395,000	

¹ Project 36 completed by staff (monitor)

² TxDOT project would address issue (monitor timing) **TxDOT project delayed - Project to be considered for near term CIP**

³ Project 30 completed by staff (verify no adverse impacts)

⁴ New project





In-House Maintenance Plan

- Non-complex drainage issues requiring little to no engineering other than shooting grades
- Primarily regrading, cleaning out ditches/culverts, hydromulching, erosion mat installation within ROW
- Projects also included in 5-yr CIP in case needed improvements exceed in-house capabilities
 - 42 – 7740 Pimlico Lane
 - 46 - 7644 Pimlico Lane
 - 37 - 7967 Turf Paradise Lane
 - 10 - 31520 Meadow Creek Trail
 - 58 - 8037 Rock Oak Circle
 - 59 - 31020 Silver Spur
 - 4 - 8040 Rolling Acres Trail
 - 63 - 8045 Flagstone Hill
 - 2 - 8472 Rolling Acres Trail
 - 3 - 31872 Sunland
 - 53 – 32030 Scarteen
 - 44 – 31988 Scarteen
 - 75 – 8523 Wembley



Consideration of Plat Notes

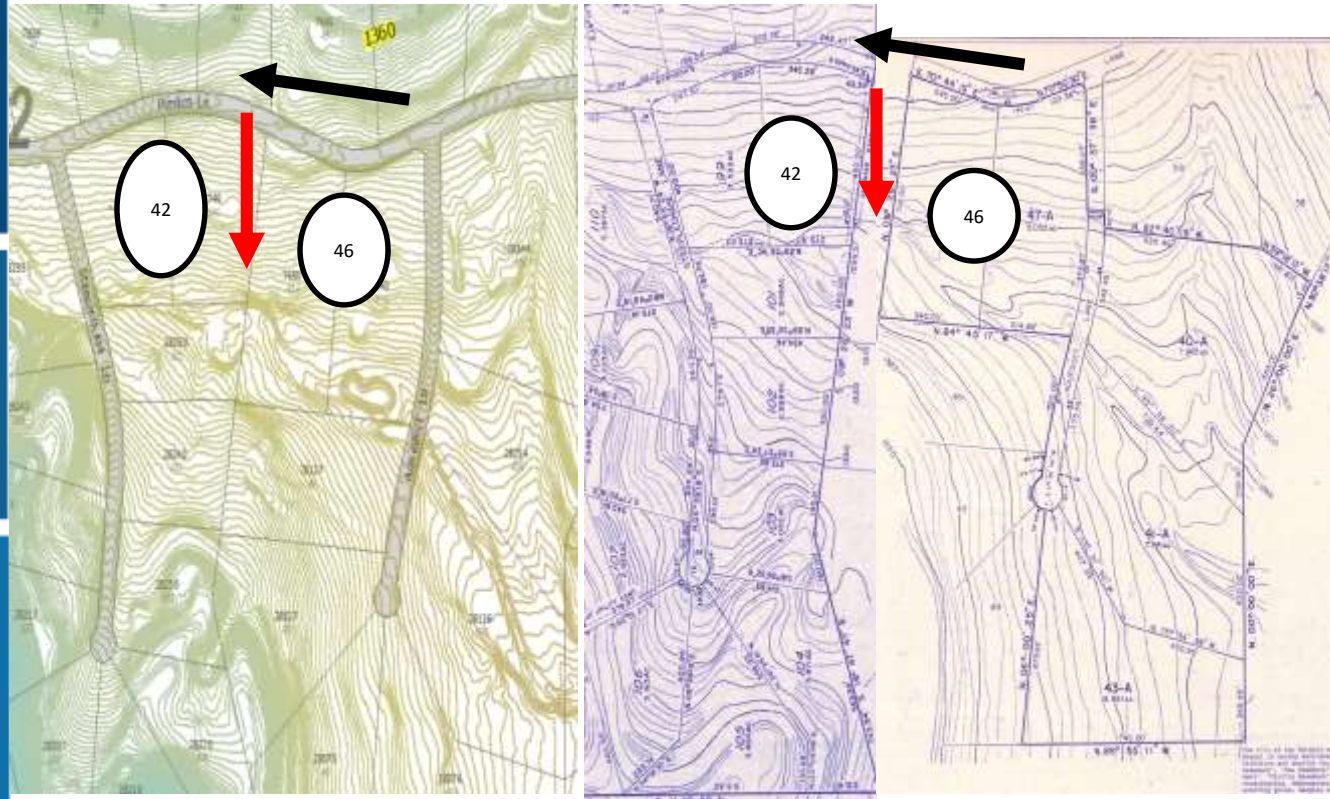
- Some Plat Notes specify maintenance responsibility for drainage easements, below are examples:
 - No Plat Note (older plats do not show easements which was common practice at that time)
 - The maintenance of the turf, grass and landscape vegetation within the easement shall be the duty and responsibility of the property owner.
 - The easement area of each lot and all improvements within it shall be maintained by the owner of the lot except for those improvements for which an authority or utility company is responsible.
 - The maintenance of easements shall be the responsibility of lot owners and not the responsibility of the City of Fair Oaks Ranch.
 - The maintenance of easements shall be the responsibility of lot owners and the responsibility of the City of Fair Oaks Ranch.



Location:

42 – 7740 Pimlico Ln

46 – 7644 Pimlico Ln



↑ Black Arrow is work within ROW.

↑ Red arrow is private property.

Issue: Large amount of water sheet flows over the road and through these properties. Flow from this area meets up with flow from Park and creates the head waters of the Salado Creek

Plat Note:

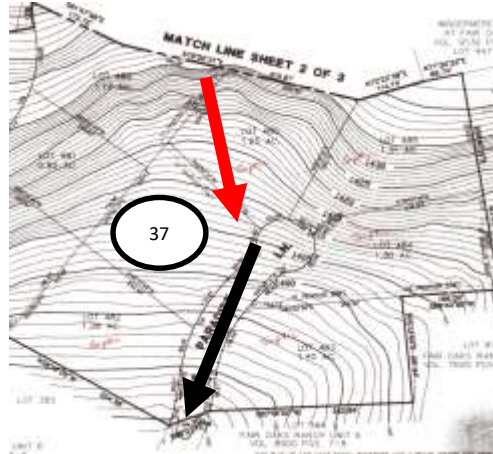
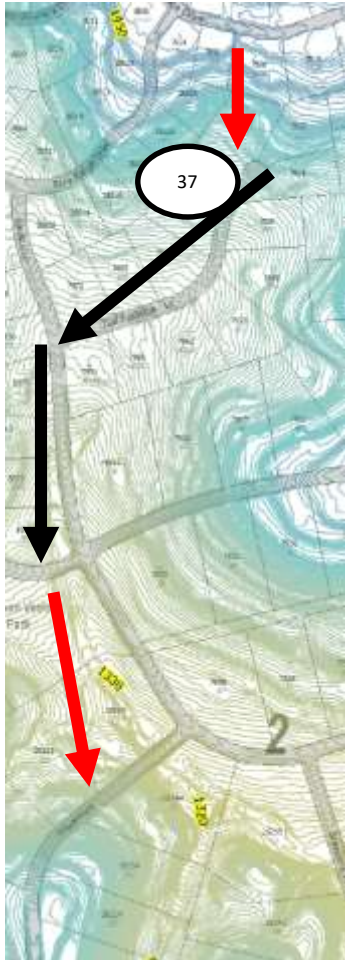
42 & 46 - No Plat Note dedicating ownership. No easements plated.

In house drainage plan:

Regrade right of way (ROW) and clean out ditch and culverts.

Location:

37 - 7967 Turf Paradise Lane



Issue: Large amount of water sheet flows over through these properties. Erosion issues in ROW. During heavy rains sheet flow will cross over Pimlico and start till fill ditch and culvert. Flow from this area heads towards park and further down creates the head waters of the Salado Creek

Plat Note:

37 -The maintenance of easements shall be the responsibility of lot owners and the responsibility of the City of Fair Oaks Ranch. No Plat Note or easement shown on older plat.

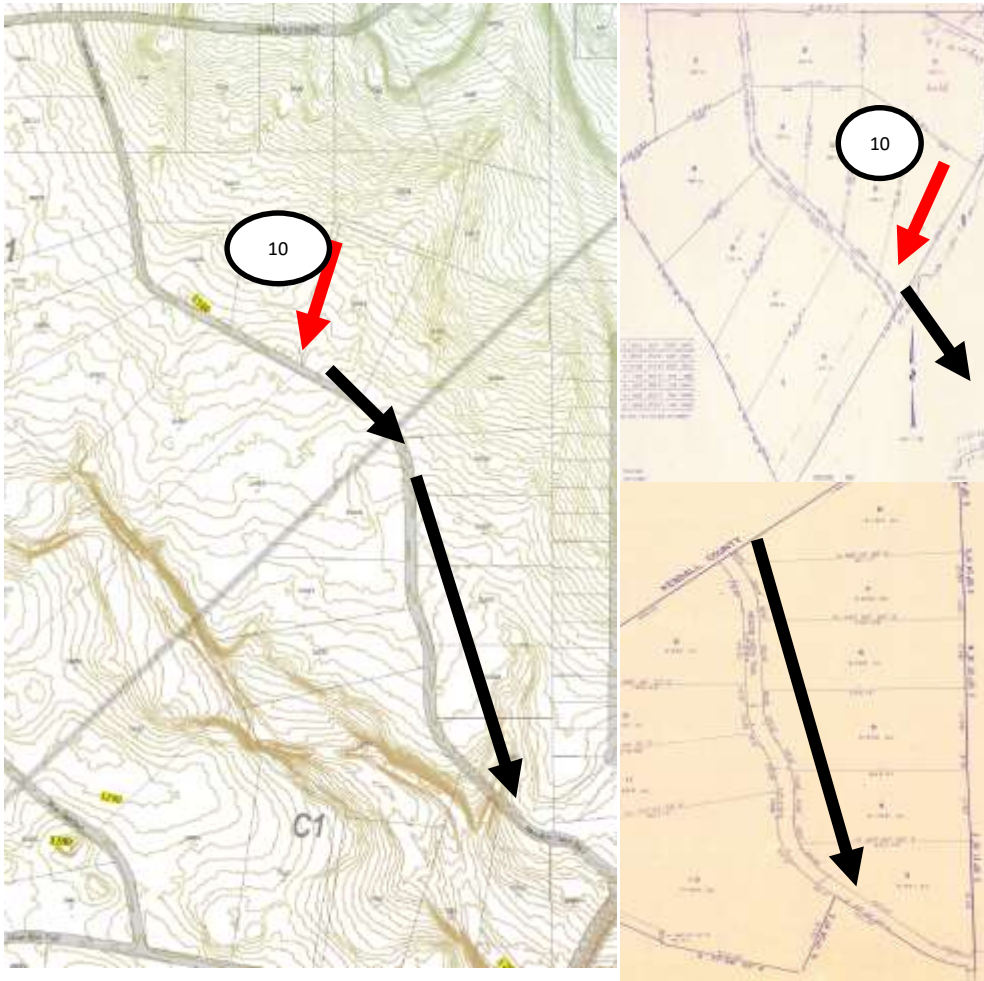
In house drainage plan:

regrade right of way (ROW) and clean out ditch and culverts.



Location:

10 - 31520 Meadow Creek Trail



Issue: Large amount of ponding occurs in low area between dwelling and road. Drainage does not pass road efficiently.

Plat Note:

10 - No Plat Note and no drainage easements platted.

In house drainage plan:

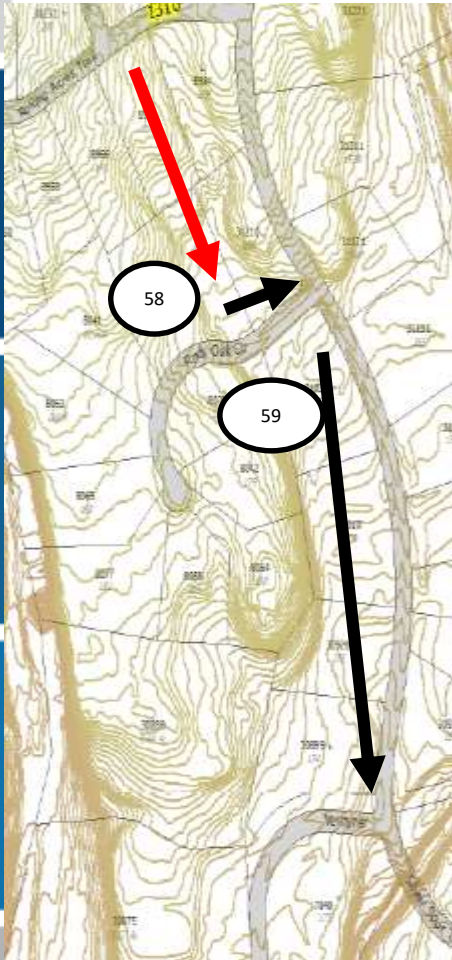
Regrade right of way (ROW) and clean out ditch and culverts.



Location:

58 - 8037 Rock Oak Circle

59 - 31020 Silver Spur



Issue: Drainage flows from the back of the properties to the front and is not contained in the platted drainage easement. Ponding occurs at the front of this lot and ROW. Debris crosses the road and creates issue 59.

Plat Note:

59 - No Plat Note and no drainage easements platted.

58 -The maintenance of easements shall be the responsibility of lot owners and the responsibility of the City of Fair Oaks Ranch.

In house drainage plan:

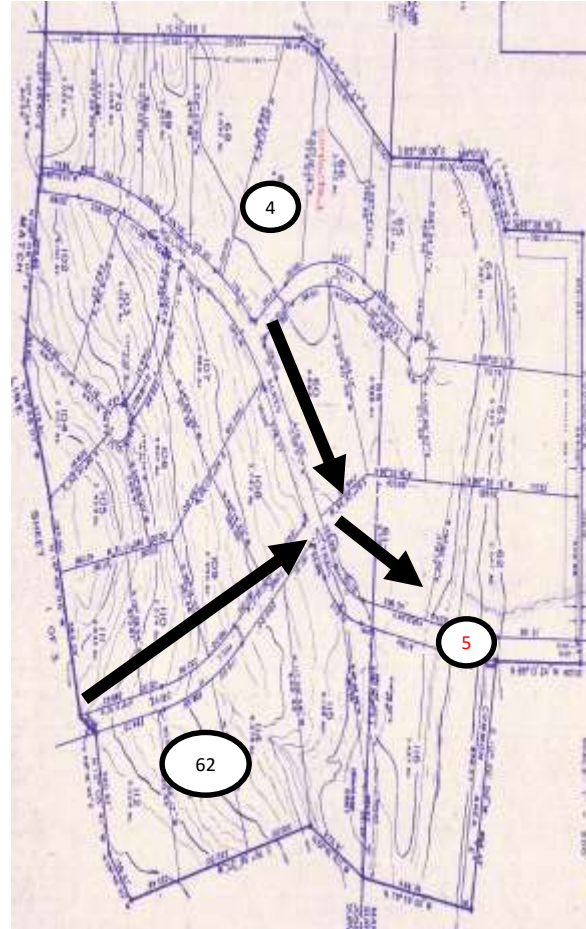
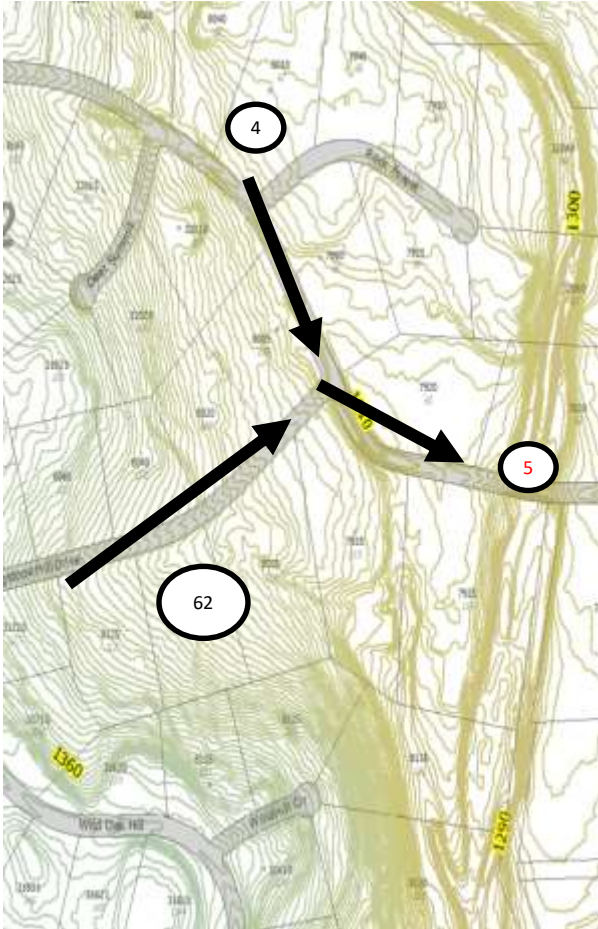
regrade right of way (ROW) and clean out ditch and culverts. Homeowner may be required to correct driveway.



Location:

4 - 8040 Rolling Acres Trail

62 - 8045 Flagstone Hill



Issue: Large amount of water sheet flows over properties. ROW needs to be regraded and positive flow achieved. Flow from this area heads towards Post Oak Creek. 5 is the low water crossing being addressed in CIP

Plat Note:

4, 63 & 5 – No Plat Note and no drainage easements platted.

In house drainage plan: regrade right of way (ROW) and clean out ditch and culverts. CIP will address issue 5.

Location:

2 - 8472 Rolling Acres Trail

3 - 31872 Sunland

7 - 8524 Rolling Acres Trail

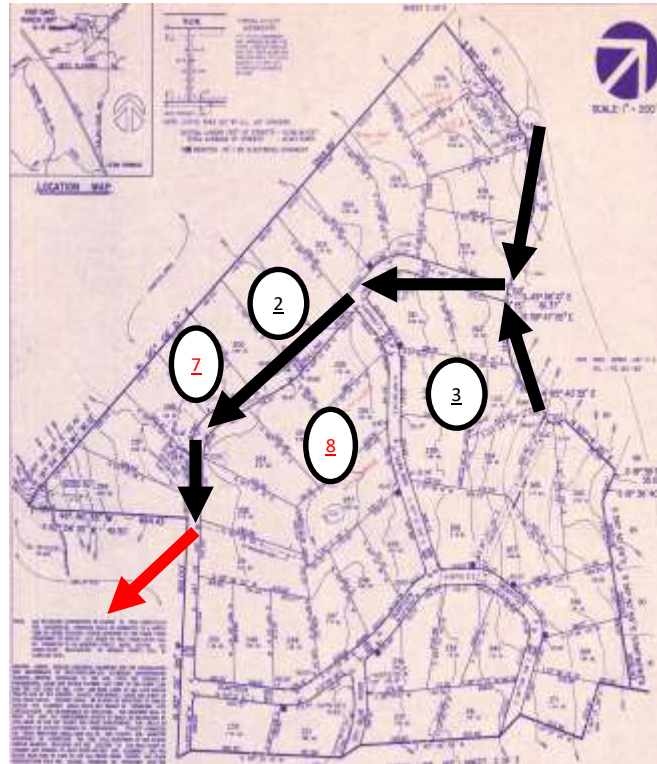
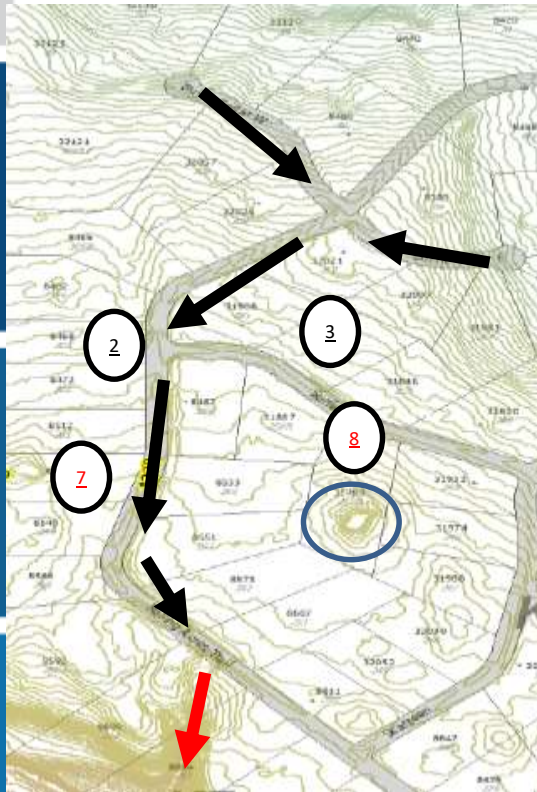
8 - 31789 Sunland

Issue: Large amounts of runoff from North of the city flows through property towards Rolling Acres Trail. Drainage backs up in culverts. 8 has a natural recharge zone takes a large amount of runoff. 7 filled in Recharge zone which now cause a back up in the area. Flow is trying to move toward the Cibolo Creek.

Plat Note:

2,3 & 7 - No Note. 8 - re-plat - The maintenance of the turf, grass and landscape vegetation within the easement shall be the duty and responsibility of the property owner.

In house drainage plan:
regrade right of way (ROW)
and clean out ditch and culverts.



Natural Drainage
Feature

Location:

53 – 32030 Scarteen

44 – 31988 Scarteen


75 – 8523 Wembley

Issue: Sheet flow from Sky Blue Ridge runs towards 44 and 53. Drainage in the area of 44 and 53 is trying to make its way to the natural recharge zone causing issue 8. Sheet flow from Sky Blue Ridge and Wembley head towards issue 75. Driveway with no culvert created issue.

Plat Note:

53, 44, & 75 – No Plat Note

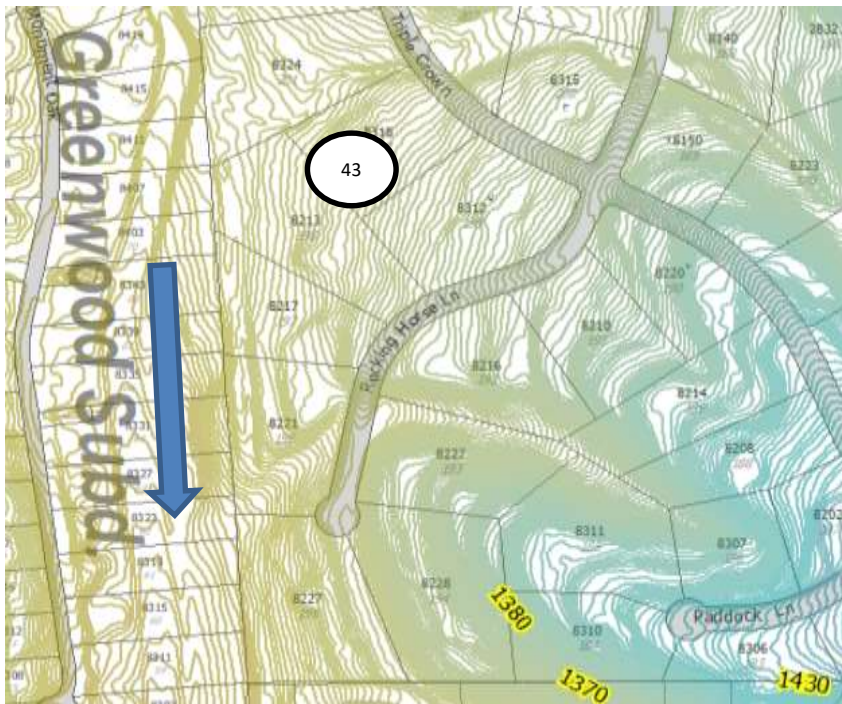
In house drainage plan: regrade right of way (ROW) and clean out ditch and culverts. Homeowner may be required to correct driveway.

 Natural Drainage Feature



Location:

43 – 8312 Triple Crown



Issue: Sheet flow from Triple Crown and northern properties runs south to large drainage easement located in the woods. Drainage easement is located behind the properties on Rocking horse and Triple Crown. Flow brings debris onto property.

Plat Note:

43 - No Plat Note

In house drainage plan:

Maintenance staff is limited on addressing this issue in house due to no easement platted. Flow from this area eventually creates the low water crossing located of I-10 and Old Fredericksburg Road outside of the city.

↑ Blue arrow shows flow of water



Technical Challenges

- Cleaning and regauging ditches/channels to original profile may help but not solve drainage issue due to growth in impervious surface
- Many drainage areas cross private property before discharging into creeks/tributaries
 - Older plats do not show drainage easements as they were not required during that time.
 - Responsibility for maintaining drainage easements vary by plat but primarily falls on the property owner
 - Coordination necessary to minimize impacts to downstream properties
- May discover culverts need future replacement (failed, undersized, nonexistent) to make appreciable drainage improvement



Program Start Challenges

- Challenges filling maintenance positions due to competition in current labor market
- High turnover in maintenance department and need to train new personnel delays program start
- Limited staff focused on other priorities (crack sealing in preparation for upcoming road maintenance, mowing in the spring, etc.)
- May need to pursue contract services initially followed by staff maintaining (similar to road maintenance program)



CIP Development Approach

- “Must Do” Projects
 - Low Water Crossings
 - Impacts to Emergency Vehicle Access
 - Frequent Road Closures
 - Public Infrastructure at Risk
 - Culvert/Roadway Failure
 - Utilities at Risk (i.e. Lift Station near eroding channel)
- “Should Do” Projects
 - Flows from Public ROW impacting private property and solution is contained with public ROW
 - Low Water Crossings with Lower Closure Frequency
 - Undersized Culverts Resulting in Overtopping of Roadway
- “Nice to Do” Projects
 - Flows from public ROW impacting private property and solution requires private property owner coordination/cooperation
 - Private Property Issues
 - Maintenance Related Issues



5-Year CIP “Must Do”

- 12 Projects
 - Low Water Crossings are Focus within this category
 - Total Cost = \$7.68M
 - Project 5 – 7820 Rolling Acres Trail (Design FY 22)
 - Project 17 – 7840 Silver Spur Trail (Design FY 22)
 - Project 36 – 8410 Noble Lark (Staff to Monitor)
 - Project 1 – Ammann Road Low Water Crossing (Roads CIP)
 - Project 6 – 7420 Rolling Acres Trail (Roads CIP)
 - Project 23 – 8402 Battle Intense
 - Project 37 – 7967 Turf Paradise Lane
 - Project 2 – 8472 Rolling Acres Trail
 - Project 4 – 8040 Rolling Acres Trail
 - Project 42 – 7740 Pimlico Lane
 - Project 35 – 28907 Chartwell Lane
 - Project 15 – 8622 Delta Dawn



Project 5 – 7820 Rolling Acres Trail

- Low water crossing (Road Closure gate deploys during large storm events.
- Bridge/Culvert Upgrades needed
- Emergency access is a concern during rain events.
- Align with Roads CIP project
- Criticality Score: 47
- Total Project Cost
 - \$685,000



Project 5	
Item	Score
Estimated Cost	2
Source/Destination	15
Public Infrastructure at Risk	15
Number of Houses Impacted	0
Erosion Issue	0
Green Infrastructure Applicable	0
City Priority	15
Total Score	47



Project 17 – 7840 Silver Spur Trail

- Runoff collects from the north side of the city and passes this point before passing under Keeneland and then to the Cibolo Creek. Post Oak Creek LWC
- Structural Design; Bridge/Culvert upgrades
- Criticality Score: 47
- Total Project Cost
 - \$690,000



Project 17	
Item	Score
Estimated Cost	2
Source/Destination	15
Public Infrastructure at Risk	15
Number of Houses Impacted	0
Erosion Issue	0
Green Infrastructure Applicable	0
City Priority	15
Total Score	47

Project 36 – 8410 Noble Lark Dr

- Runoff flows in a channel next to the right-of-way and has caused erosion in this area.
- Project has been completed by city staff – Staff to monitor
- Criticality Score: 42
- Total Project Cost
 - \$223,066 (if needed)



Project 36	
Item	Score
Estimated Cost	6
Source/Destination	15
Public Infrastructure at Risk	15
Number of Houses Impacted	1
Erosion Issue	2.5
Green Infrastructure Applicable	2.5
City Priority	0
Total Score	42

Project 1 – Ammann Rd LWC

- This project will replace the current road with an elevated concrete bridge above the flood stage.
- Structural design/bridge
- Align with Roads CIP project
- Criticality Score: 26
- Total Project Cost
 - \$1,321,000



Project 1	
Item	Score
Estimated Cost	2
Source/Destination	9
Public Infrastructure at Risk	15
Number of Houses Impacted	0
Erosion Issue	0
Green Infrastructure Applicable	0
City Priority	0
Total Score	26

Project 6 – 7420 Rolling Acres Trail

- Low water crossing (Road Closure gate deploys during large storm events).
- Bridge/Culvert Upgrades needed
- Emergency access is a concern during rain events.
- Align with Roads CIP project
- Criticality Score: 17
- Total Project Cost
 - \$759,566



Project 6	
Item	Score
Estimated Cost	2
Source/Destination	15
Public Infrastructure at Risk	15
Number of Houses Impacted	0
Erosion Issue	0
Green Infrastructure Applicable	0
City Priority	-15
Total Score	17



Project 23 – 8402 Battle Intense

- Battle Intense is often shut down during large rain events. Debris collects and damages this low water crossing.
- Structural Design / Bridge, raise road elevation
- Criticality Score: 17
- Total Project Cost
 - \$3,097,162



Project 23	
Item	Score
Estimated Cost	2
Source/Destination	15
Public Infrastructure at Risk	15
Number of Houses Impacted	0
Erosion Issue	0
Green Infrastructure Applicable	0
City Priority	-15
Total Score	17

Project 37 – 7967 Turf Paradise Lane

- Large amount of runoff sheet flows down the street and across properties.
- Channel Improvements needed
- In-house maintenance w/CIP placeholder
- Criticality Score: 40
- Total Project Cost
 - \$311,787



Project 37	
Item	Score
Estimated Cost	10
Source/Destination	15
Public Infrastructure at Risk	6
Number of Houses Impacted	4
Erosion Issue	2.5
Green Infrastructure Applicable	2.5
City Priority	0
Total Score	40

Project 2 – 8472 Rolling Acres Trail

- Drainage backs up in existing culverts that pass under driveway causing large amounts of runoff to flow across property toward Cibolo Creek.
- In-house maintenance w/CIP placeholder
- Criticality Score: 29
- Total Project Cost
 - \$221,162



Project 2	
Item	Score
Estimated Cost	6
Source/Destination	15
Public Infrastructure at Risk	0
Number of Houses Impacted	3
Erosion Issue	2.5
Green Infrastructure Applicable	2.5
City Priority	0
Total Score	29

Project 4 – 8040 Rolling Acres Trail

- Drainage does not have positive flow in one direction as it crosses Rolling Acres Trail.
- Regrading/Earthwork/Channel Construction
- In-house maintenance w/CIP placeholder
- Criticality Score: 28
- Total Project Cost
 - \$221,162



Project 4	
Item	Score
Estimated Cost	6
Source/Destination	15
Public Infrastructure at Risk	6
Number of Houses Impacted	1
Erosion Issue	0
Green Infrastructure Applicable	0
City Priority	0
Total Score	28

Project 42 – 7740 Pimlico Lane

- Large amount of runoff through the HOA park and towards the Salado Creek.
- Channel and stormdrain piping improvements
- In-house maintenance w/CIP placeholder
- Criticality Score: 27.5
- Total Project Cost
 - \$88,465



Project 42	
Item	Score
Estimated Cost	10
Source/Destination	9
Public Infrastructure at Risk	6
Number of Houses Impacted	0
Erosion Issue	0
Green Infrastructure Applicable	2.5
City Priority	0
Total Score	27.5

Project 35 – 28907 Chartwell Lane

- Channel experiences erosive velocities.
- Erosion Control / Channel Improvements
- Criticality Score: 29.5
- Priority: 2
- Total Project Cost
 - \$794,000



Project 35	
Item	Score
Estimated Cost	2
Source/Destination	6
Public Infrastructure at Risk	15
Number of Houses Impacted	4
Erosion Issue	0
Green Infrastructure Applicable	2.5
City Priority	0
Total Score	29.5

Project 15 – 8622 Delta Dawn

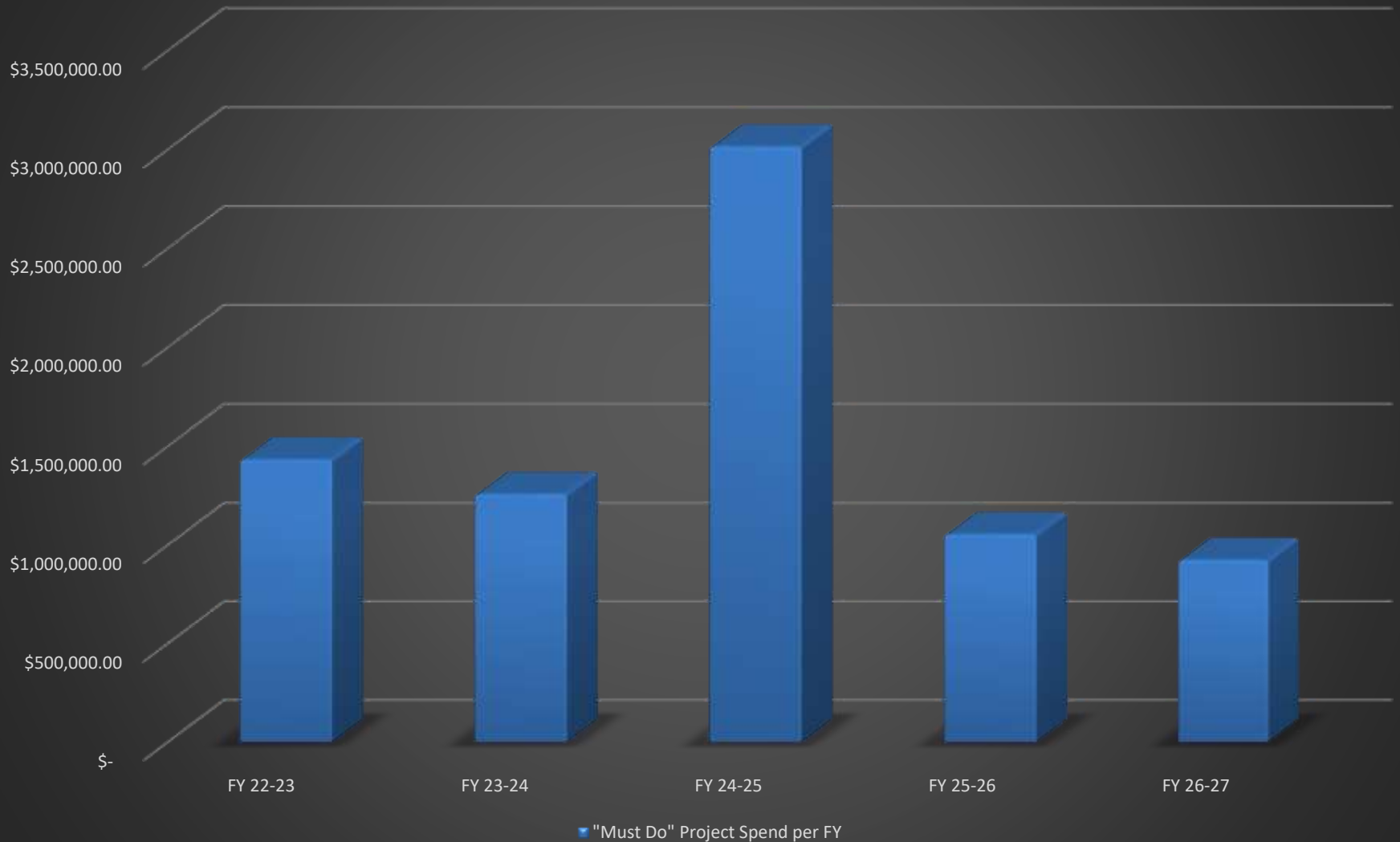
- Erosion is a concern caused by runoff coming from Jodphur near city's sewer lift station
- Erosion Control / Channel Improvements
 - Reinforce channel using erosion control mats or concrete rip rap
 - Widen channel to reduce velocities
- Criticality Score: 29.5
- Total Project Cost
 - \$221,162



Project 15	
Item	Score
Estimated Cost	6
Source/Destination	6
Public Infrastructure at Risk	15
Number of Houses Impacted	0
Erosion Issue	2.5
Green Infrastructure Applicable	0
City Priority	0
Total Score	29.5

5-Year CIP “Must Do”

PROPOSED SPENDING PER FY



5-Year CIP “Should Do”

- 10 Projects
 - Most projects are resolving flows from ROW impacting private properties when issue can be resolved within ROW.
 - Total Cost = \$1.58M
 - Project 34 – 29010 Tivoli Way (Design FY 22)
 - Project 32 – 29314 Sumpter Drive
 - Project 41 – 8426 Triple Crown
 - Project 85 – 7202 Saddle Tan (Project Combined with Project 32)
 - Project 44 – 31988 Scarteen
 - Project 46 – 7644 Pimlico Lane
 - Project 53 – 32030 Scarteen
 - Project 43 – 8312 Triple Crown
 - Project 63 – 8045 Flagstone Hill
 - Project 58 – 8037 Rock Oak Circle



Project 34 – 29010 Tivoli Way

- Large amount of runoff from Windermere crosses Fair Oaks Parkway and is intercepted by homes.
- Additional Analysis required
- Criticality Score: 45.5
- Total Project Cost
 - \$500,000



Project 34	
Item	Score
Estimated Cost	10
Source/Destination	15
Public Infrastructure at Risk	15
Number of Houses Impacted	3
Erosion Issue	0
Green Infrastructure Applicable	2.5
City Priority	0
Total Score	45.5



Project 32 – 29314 Sumpter Drive

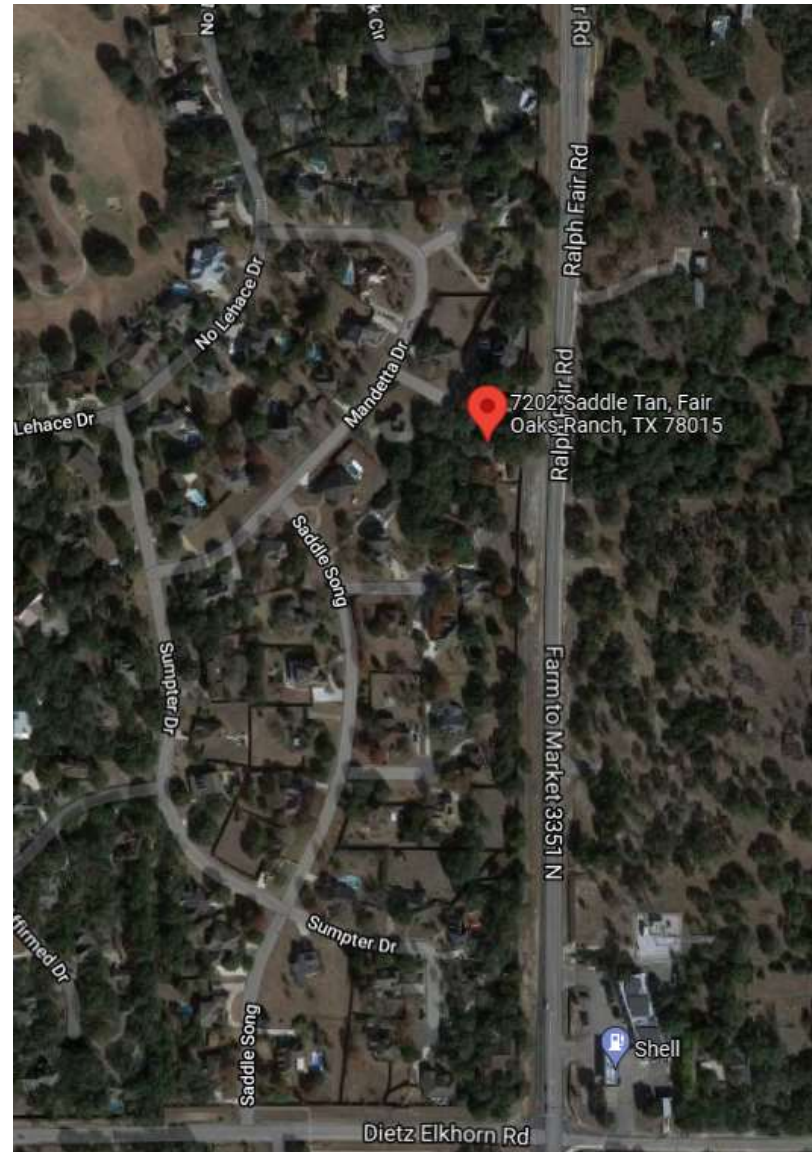
- Runoff flows from Nooner's Store and is intercepted by the homes across Ralph Fair Road. Severe slope accelerates runoff towards homes.
- TxDOT road widening and drainage improvements projected 10+ years out
- TxDOT coordination and Municipal Maintenance Agreement (MMA) required
- Criticality Score: 40.5
- Total Project Cost
 - \$221,162



Project 32	
Item	Score
Estimated Cost	6
Source/Destination	15
Public Infrastructure at Risk	15
Number of Houses Impacted	2
Erosion Issue	0
Green Infrastructure Applicable	2.5
City Priority	0
Total Score	40.5

Project 85 – 7202 Saddle Tan

- Project is being combined with Project 32. Along Ralph Fair Rd corridor.
- TxDOT road widening and drainage improvements projected 10+ years out
- TxDOT coordination and Municipal Maintenance Agreement (MMA) required
- Total Project Cost
 - No Cost Estimate developed



Project 41 – 8426 Triple Crown

- Large amount of runoff flows down right-of-way and through a platted easement. Culvert is undersized and becomes obstructed and eventually backs up.
- Channel Improvements needed
- Criticality Score: 22
- Total Project Cost
 - \$201,923



Project 41	
Item	Score
Estimated Cost	6
Source/Destination	15
Public Infrastructure at Risk	0
Number of Houses Impacted	1
Erosion Issue	0
Green Infrastructure Applicable	0
City Priority	0
Total Score	22



Project 44 – 31988 Scarteen

- Runoff from Sky Blue Ridge runs down road and heads in direction of home.
- Channel Improvements / Regrading needed
- In-house maintenance w/CIP placeholder
- Criticality Score: 28.5
- Total Project Cost
 - \$85,821



Project 44	
Item	Score
Estimated Cost	10
Source/Destination	15
Public Infrastructure at Risk	0
Number of Houses Impacted	1
Erosion Issue	0
Green Infrastructure Applicable	2.5
City Priority	0
Total Score	28.5

Project 46 – 7644 Pimlico Lane

- Large amount of runoff flows over the road and through property towards Salado Creek.
- In-house maintenance w/CIP placeholder
- Criticality Score: 28.5
- Total Project Cost
 - \$85,821



Project 46	
Item	Score
Estimated Cost	10
Source/Destination	15
Public Infrastructure at Risk	0
Number of Houses Impacted	1
Erosion Issue	0
Green Infrastructure Applicable	2.5
City Priority	0
Total Score	28.5



Project 53 – 32030 Scarteen

- City installed berms and swales which have eroded and silted over time. Flooding occurs in driveway and has come close to entering the home.
- Channel Improvements needed
- In-house maintenance w/CIP placeholder
- Criticality Score: 24.5
- Total Project Cost
 - \$221,162



Project 53	
Item	Score
Estimated Cost	6
Source/Destination	15
Public Infrastructure at Risk	0
Number of Houses Impacted	1
Erosion Issue	2.5
Green Infrastructure Applicable	0
City Priority	0
Total Score	24.5



Project 43 – 8312 Triple Crown

- Large amount of runoff moves down Rocking Horse Lane towards the south of the city.
- Additional analysis required
 - Potential to construct a culvert and channel to catch flows before reaching private property
- Criticality Score: 22
- Total Project Cost
 - \$221,162



Project 43	
Item	Score
Estimated Cost	6
Source/Destination	15
Public Infrastructure at Risk	0
Number of Houses Impacted	1
Erosion Issue	0
Green Infrastructure Applicable	0
City Priority	0
Total Score	22



Project 63 – 8045 Flagstone Hill

- Water does not have a clear flow path along the street and makes it way through nearby yard.
- Regrading / Culvert Installation needed
- In-house maintenance w/CIP placeholder
- Total Project Cost
 - No Cost Estimate developed



Project 58 – 8037 Rock Oak Circle

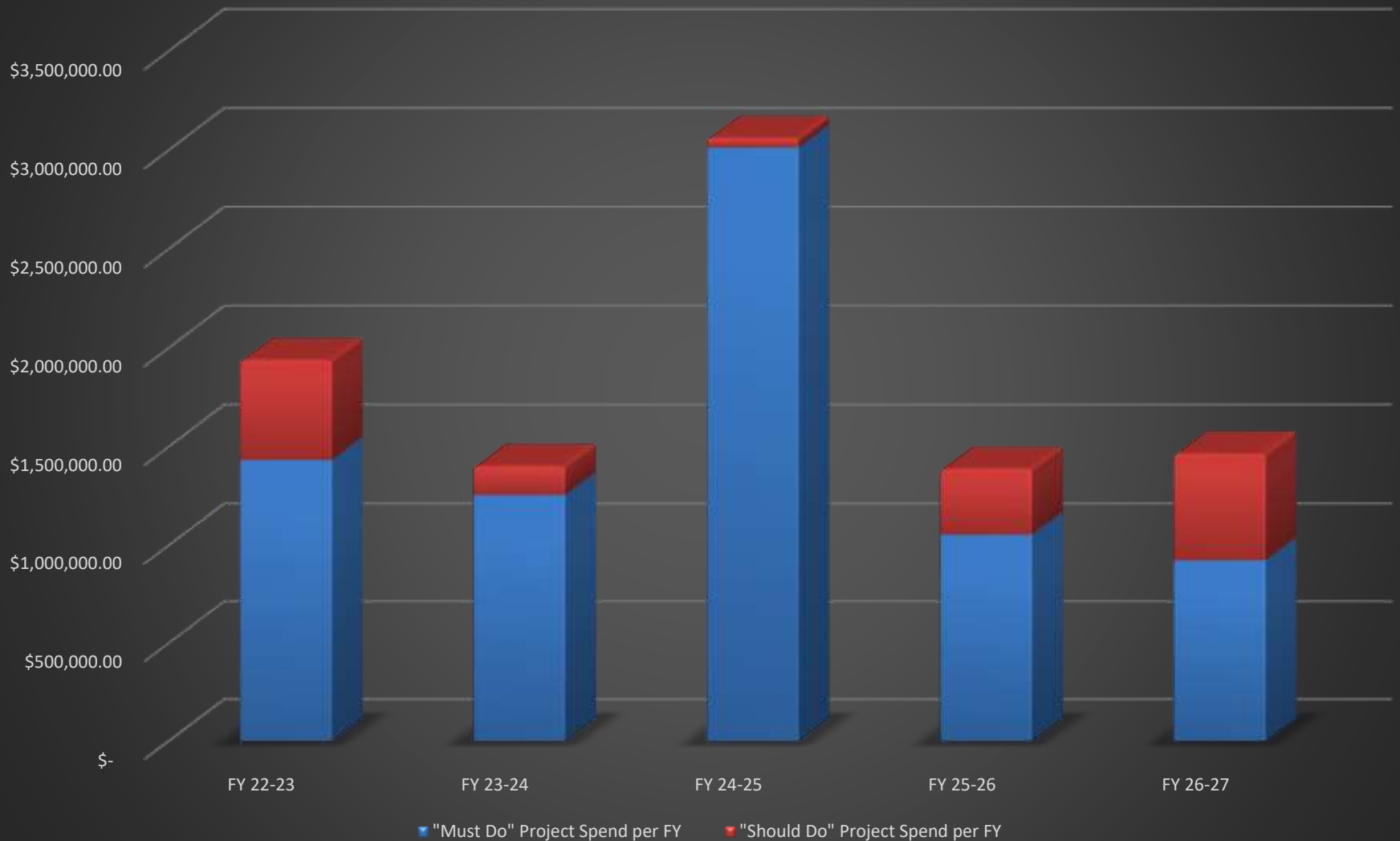
- Water flows between two lots, ponds on property and erodes channel in ROW
- Channel regrading and maintenance
- In-house maintenance w/CIP placeholder
- Criticality Score: 11
- Total Project Cost
 - \$88,465



Project 58	
Item	Score
Estimated Cost	10
Source/Destination	0
Public Infrastructure at Risk	0
Number of Houses Impacted	1
Erosion Issue	0
Green Infrastructure Applicable	0
City Priority	0
Total Score	11

5-Year CIP “Should Do”

PROPOSED SPENDING PER FY



“Nice to Do”

- 47 Locations
 - These projects address Maintenance Related Issues
 - Low spots in roadways where ponding occurs
 - Incorporate into future annual road maintenance plan
 - Other locations included in this category require maintenance and/or improvements on private property or within gated communities
 - Majority of drainage issues cannot be resolved within the city’s ROW and will require HOA/property owner coordination and cooperation.
 - Education of existence, purpose and importance of maintaining drainage easements may help tackle issues



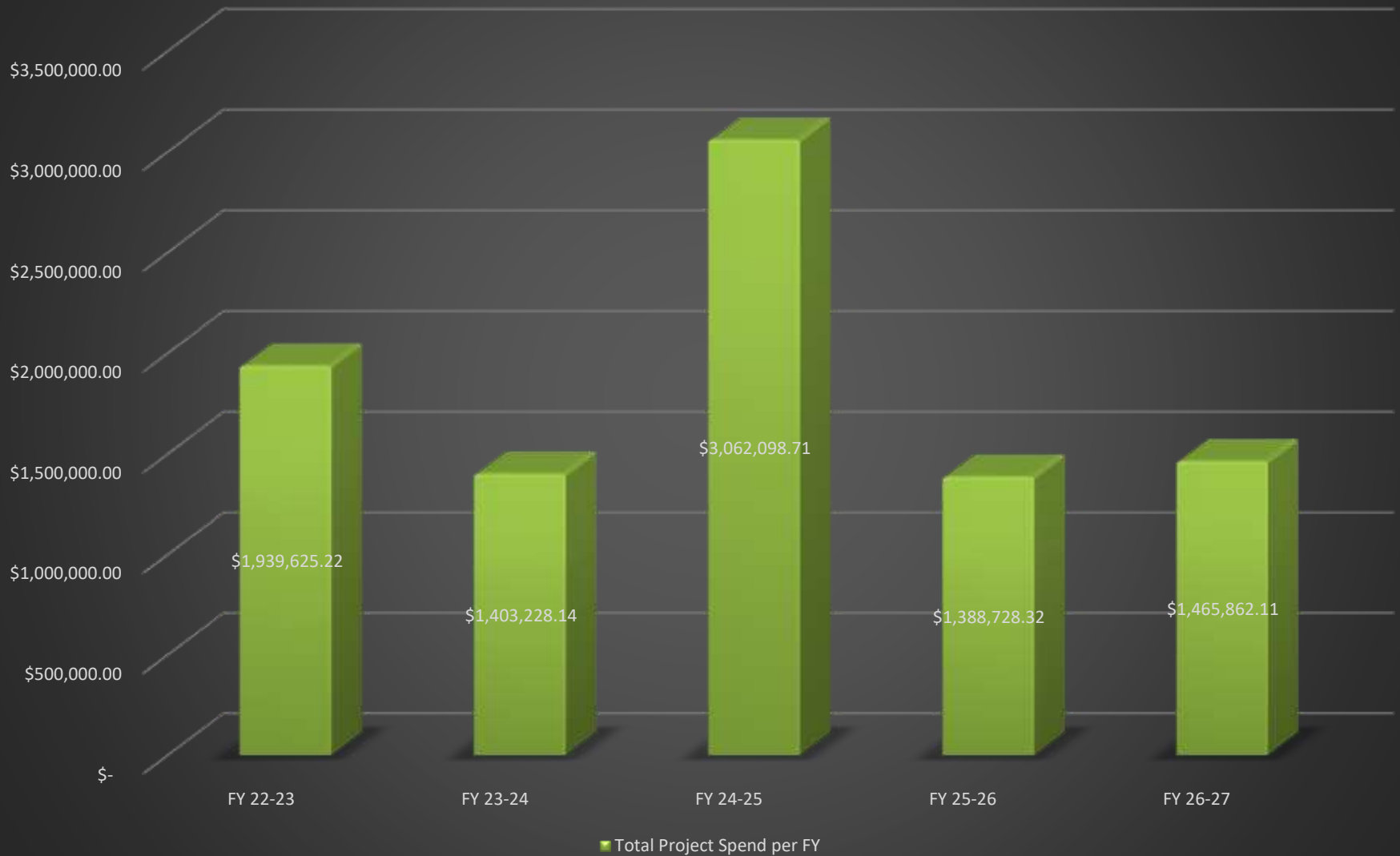
5-Year CIP Overview

Project Type	Cost
Must Do (12 Projects)	\$7.68 M
Should Do (10 Projects)	\$1.58 M
Total (22 Projects)	\$9.26 M



5-Year CIP Spending

PROPOSED SPENDING PER FY

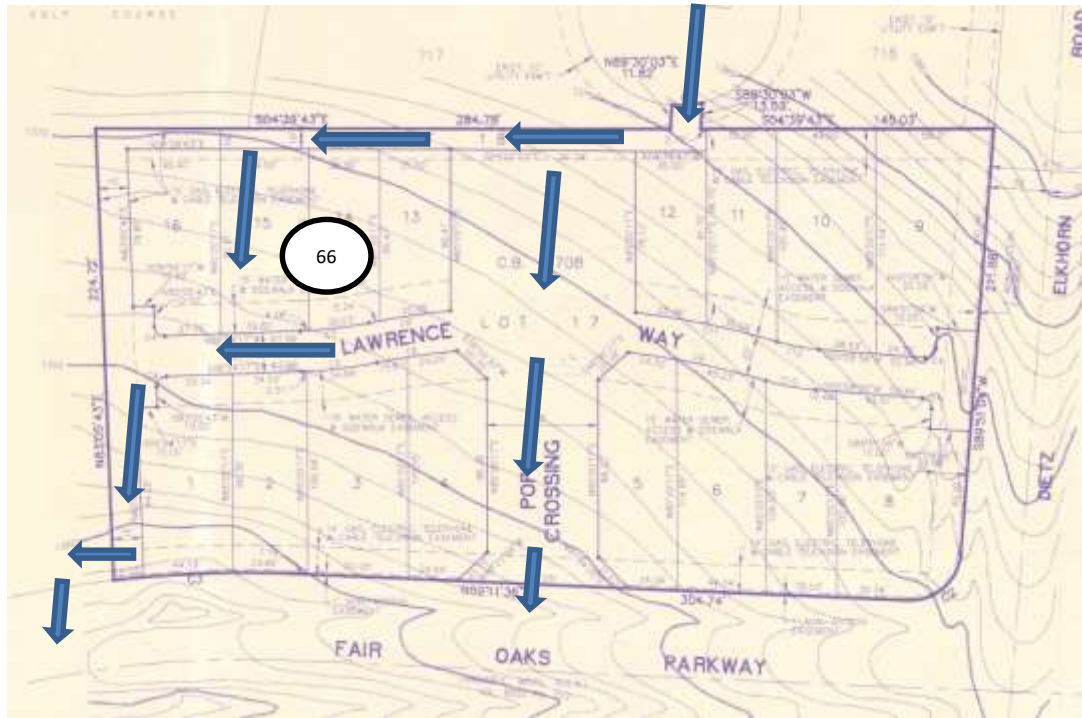


Discussion/Challenges

- City lacks authority to conduct maintenance or make drainage improvements on private property
 - In general, plat notes either state the property owner is responsible for maintaining drainage easements or lacks a plat note
 - In few instances, plat notes state the City shares responsibility for drainage easement maintenance with the property owner
- Obtaining authority needs careful consideration
 - Requires written consent and waiver of liability, often from many property owners if drainage easements cross property lines
 - Some property owners have purposely filled in easements, or built gardens, sheds, fences or other obstructions in easements
 - May requires reimbursement of city's costs or cost-sharing arrangement



Private Gated Communities



NOTE:

1. ALL EASEMENTS SHALL BE DEEMED TO HAVE BEEN DEDICATED FOR THE USE OF ALL VEHICLES AND/OR PERSONNEL OF THE UTILITY COMPANIES AS SHOWN AND/OR ALL VEHICLES AND PERSONNEL OF THE CITY OF FAIR OAKS RANCH WHEN ON OFFICIAL BUSINESS WITHOUT LIABILITY TO THE CITY, AND THE CITY OF FAIR OAKS RANCH MAY ORDER REMOVAL AT ANYTIME ALL OBSTRUCTIONS OF ANY TYPE IN THE EASEMENTS, THE COST OF REMOVAL TO BE BORNE BY THE OWNER.

2. THE MAINTENANCE OF EASEMENTS SHALL BE THE RESPONSIBILITY OF LOT OWNERS AND NOT THE RESPONSIBILITY OF THE CITY OF FAIR OAKS RANCH.

3. THE LOTS SHOWN ON THIS PLAT ARE SUBJECT TO ADDITIONAL EASEMENTS, BLDG. SETBACKS AND RESTRICTIONS AS RECORDED FOR THIS UNIT IN THE PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.

4. LOT 18 IS TO BE USED AS A CART PATH EASEMENT, ALSO IS A UTILITY EASEMENT FOR WATER, ELECTRIC, SANITARY SEWER, TELEPHONE, CABLE TELEVISION AND DRAINAGE.

5. LOT 17 IS A COMMON AREA WHICH INCLUDES PRIVATE STREETS, CONTROLLED ENTRY GATE AND PARKING AREAS, AS WELL AS AN EASEMENT FOR WATER, SANITARY SEWER AND DRAINAGE.

6. CPS METERS SHALL BE RESTRICTED TO THE REAR OF THE BUILDINGS.

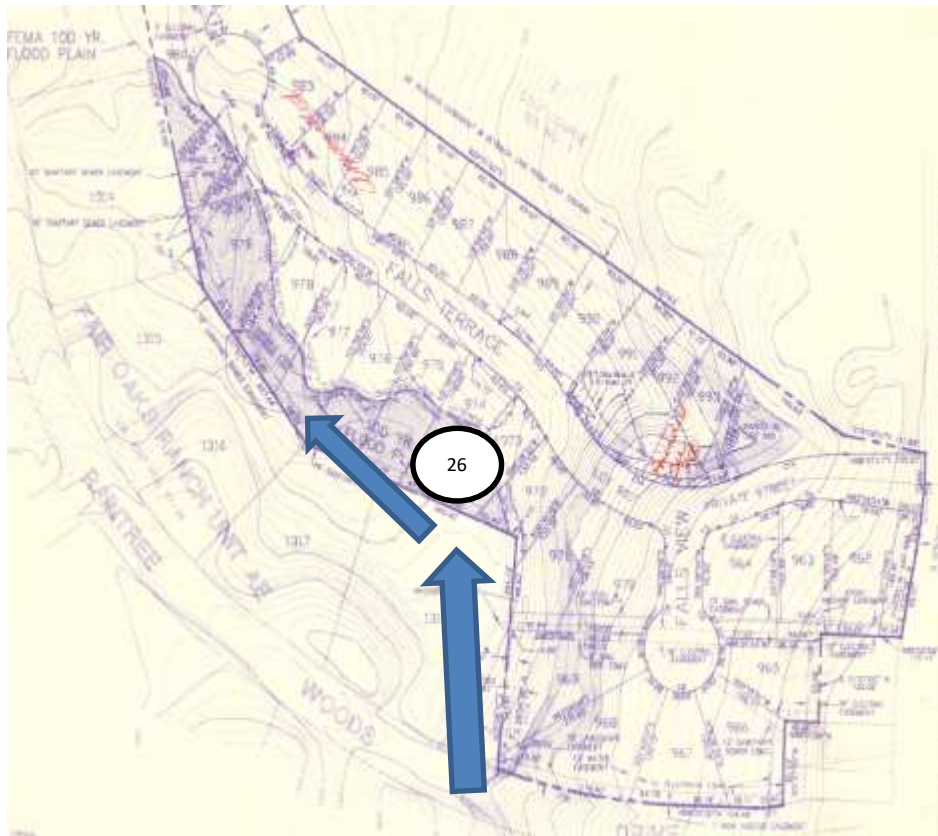
Issue

Water flows from city ROW into a platted drainage easement. Due to easement obstructions, drainage does not flow properly. Water has entered homes in the past.

Plat note:

66 - The maintenance of easements shall be the responsibility of lot owners and not the responsibility of the City of Fair Oaks Ranch.

Private Gated Communities



Issue: Large amount of water run off flows in from Raintree woods.

Plat note:

26 - The maintenance of easements shall be the responsibility of lot owners and not the responsibility of the City of Fair Oaks Ranch.

(Dark area is 100 yr. Flood Plain)

Recommendations

- Current Action
 - Approve proposed 5-Yr Drainage CIP plan
- Future Action
 - Develop strategy to address drainage issues on private property or in gated communities requiring HOA/Owner coordination and cooperation (potential retreat item)
 - Establish Bond Advisory Committee
 - Revisit 5-Yr Drainage CIP annually

