

CAPITAL IMPROVEMENT PLAN FY2020 - FY2024

PROGRAM: DRAINAGE

Program Priority: **14**

PROJECT NAME: Rustic Oaks Subdivision Drainage Improvements

CIP NUMBER:

CONTACT PERSON: Christopher Sims

PROJECT COST BY FISCAL YEAR

| Project Cost | Previously Appropriated | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Future Years | Total |
|-------------------|-------------------------|------------------|------------|------------------|------------|------------|--------------|------------------|
| Planning/Design | | 99,289 | | | | | | \$99,289 |
| Land | | 90,000 | | | | | | \$90,000 |
| Construction | | | | 143,887 | | | | \$143,887 |
| Equip/Furnishings | | | | | | | | \$0 |
| Total Cost | \$0 | \$189,289 | \$0 | \$143,887 | \$0 | \$0 | \$0 | \$333,176 |

FUNDING SOURCE BY FISCAL YEAR

| Funding Source | Previously Appropriated | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Future Years | Total |
|----------------------|-------------------------|------------------|------------|------------------|------------|------------|--------------|------------------|
| Prior Bonds | | | | | | | | \$0 |
| Authorized GO Bonds | | 189,289 | | 143,887 | | | | \$333,176 |
| Future Bonds | | | | | | | | \$0 |
| Potential Grant(s) | | | | | | | | \$0 |
| Park Dedication Fees | | | | | | | | \$0 |
| 4B Funding | | | | | | | | \$0 |
| CRF Funds | | | | | | | | \$0 |
| Other: Cash | | | | | | | | \$0 |
| Total Funding | \$0 | \$189,289 | \$0 | \$143,887 | \$0 | \$0 | \$0 | \$333,176 |

PROJECT DESCRIPTION

The project will consist of a drainage study and HEC-RAS Model of Magnolia Creek & Cedar Gully to ensure all drainage areas feeding into the creek are accounted for and to ensure the improved flows from the proposed drainage improvements can discharge into the creek without negatively impacting downstream neighborhoods along Mag. Creek & Cedar Gully.

The project includes the installation of grass, concrete and gravel paver overflow swales at 8 of the 9 existing drainage easement sites within the subdivision. It is anticipated that at least 3 of the easements would be better suited as a Drainage ROW (See post-Harvey "Landing, Rustic Oaks and Countryside Drainage" PER). The sites may require slope paving along Mag. Creek/Cedar Gully to prevent long term erosion of Landing Ditch banks. Due to this, it is anticipated that a US Corp of Engineers Nationwide Permit could be required. **If a USACE permit is needed, this will be the critical path for the project and should be started as early as possible. The USACE could permit this work under a Nationwide Permit or a Standard Individual Permit. A NWP is typically a 6 month process but a SIP is typically a 2 year process.**

PROJECT JUSTIFICATION

The Rustic Oaks Subdivision drains directly into Magnolia Creek and Cedar Gully through 9 drainage outfalls in the subdivision. The easements do not have defined swales and coupled with existing fences and heavy vegetation the sheet flow is being, at a minimum, partially blocked through the easements. As currently graded, the existing drainage easements do not have sufficient capacity to carry a 1% exceedance event's sheet flow from the streets to Magnolia Creek/Cedar Gully. This factor, combined with blockage of the drainage easements by fences and/or vegetation, causes excessive ponding in the street during a 1% exceedance event.

ADDITIONAL CONSIDERATIONS

| | YES | NO | Recurring M&O Costs | Amount |
|---------------------------------------------------------------------------------------------|-----|----|----------------------------|------------|
| Is the project necessary under State/Federal Mandate, contractual obligation, or City Code? | | NO | Personnel/Benefits (50xx) | \$0 |
| | | | Supplies (51xx) | \$0 |
| Will this project create future Capital Projects? | | NO | Repairs/Maintenance (52xx) | \$0 |
| Is your request in the current C I P ? | NO | | Services (53xx) | \$0 |
| If yes, has the cost of the project changed? | YES | | TOTAL | \$0 |

CAPITAL IMPROVEMENT PLAN FY2020 - FY2024

PROGRAM: DRAINAGE

Program Priority: **5**

PROJECT NAME: Countryside Subdivision Drainage Improvements

CIP NUMBER:

CONTACT PERSON: Christopher Sims

PROJECT COST BY FISCAL YEAR

| Project Cost | Previously Appropriated | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Future Years | Total |
|-------------------|-------------------------|------------------|------------|------------------|------------|------------|--------------|------------------|
| Planning/Design | | 112,928 | | | | | | \$112,928 |
| Land | | 90,000 | | | | | | \$90,000 |
| Construction | | | | 213,176 | | | | \$213,176 |
| Equip/Furnishings | | | | | | | | \$0 |
| Total Cost | \$0 | \$202,928 | \$0 | \$213,176 | \$0 | \$0 | \$0 | \$416,104 |

FUNDING SOURCE BY FISCAL YEAR

| Funding Source | Previously Appropriated | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Future Years | Total |
|----------------------|-------------------------|------------------|------------|------------------|------------|------------|--------------|------------------|
| Prior Bonds | | | | | | | | \$0 |
| Authorized GO Bonds | | 202,928 | | 213,176 | | | | \$416,104 |
| Future Bonds | | | | | | | | \$0 |
| Potential Grant(s) | | | | | | | | \$0 |
| Park Dedication Fees | | | | | | | | \$0 |
| 4B Funding | | | | | | | | \$0 |
| CRF Funds | | | | | | | | \$0 |
| Other: Cash | | | | | | | | \$0 |
| Total Funding | \$0 | \$202,928 | \$0 | \$213,176 | \$0 | \$0 | \$0 | \$416,104 |

PROJECT DESCRIPTION

The project will consist of a drainage study and HEC-RAS Model of Magnolia Creek to ensure all drainage areas feeding into the creek are accounted for and to ensure the improved flows from the proposed drainage improvements can discharge into the creek without negatively impacting downstream neighborhoods along Mag. Creek.

The project includes the installation of grass, concrete and gravel paver overflow swales at 8 of the 9 existing drainage easement sites within the subdivision. It is anticipated that at least 3 of the easements would be better suited as a Drainage ROW (Sites E7, E8 and E9 - See post-Harvey "Landing, Rustic Oaks and Countryside Drainage" PER). Three sites may require slope paving along Mag. Creek to prevent long term erosion of Landing Ditch banks. Due to this, it is anticipated that a US Corp of Engineers Nationwide Permit could be required. **If a USACE permit is needed, this will be the critical path for the project and should be started as early as possible. The USACE could permit this work under a Nationwide Permit or a Standard Individual Permit. A NWP is typically a 6 month process but a SIP is typically a 2 year process.**

PROJECT JUSTIFICATION

The Countryside Subdivision drains directly into Magnolia Creek through 9 drainage outfalls to the east of the subdivision. The easements do not have defined swales and coupled with existing fences and heavy vegetation the sheet flow is being, at a minimum, partially blocked through the easements. As currently graded, the existing drainage easements do not have sufficient capacity to carry a 1% exceedance event's sheet flow from the streets to Magnolia Creek. This factor, combined with blockage of the drainage easements by fences and/or vegetation, causes excessive ponding in the street during a 1% exceedance event.

ADDITIONAL CONSIDERATIONS

| | YES | NO | Recurring M&O Costs | Amount |
|---------------------------------------------------------------------------------------------|-----|----|----------------------------|------------|
| Is the project necessary under State/Federal Mandate, contractual obligation, or City Code? | | NO | Personnel/Benefits (50xx) | \$0 |
| | | | Supplies (51xx) | \$0 |
| Will this project create future Capital Projects? | | NO | Repairs/Maintenance (52xx) | \$0 |
| Is your request in the current C I P ? | NO | | Services (53xx) | \$0 |
| If yes, has the cost of the project changed? | YES | | TOTAL | \$0 |