

EAST BAY MUNICIPAL UTILITY DISTRICT

Fiscal Year 2021 Pipeline Work Plan

for

Outside Agency Project Coordination

Forecasted District Design and Construction
Activities in Paved Streets



August 2020

LISTING OF FORECASTED DISTRICT DESIGN AND CONSTRUCTION ACTIVITIES IN PAVED STREETS

INTRODUCTION

East Bay Municipal Utility District (District) compiled a summary of planned pipeline design and construction activities in paved city and county streets. Projects presented are those with forecasted design or construction activity in Fiscal Year 2021 (FY21), which begins on July 1, 2020 and ends on June 30, 2021. Project schedules are tentative; thus, actual design and construction completion dates will vary. The District is providing data in both a tabular format (included in this document) and in GIS (as a separate electronic file). In case of discrepancy between the two data sets, utilize information provided in the tables.

This work plan for FY21 is submitted in compliance with Government Code, Title 7, Division 1, Chapter 3, Section 65401.

District design and construction projects are organized into the following categories:

1. **Pipeline Infrastructure Renewals (IR).** This category includes projects that replace distribution pipelines with a high break rate that are at the end of their useful life.
2. **Large Diameter Pipeline Replacements.** This category includes the replacement of major transmission pipelines, typically 20-inches in diameter or greater.
3. **System Improvements.** This category includes pipeline projects that improve pressure and flow in the distribution system. For the purposes of this work plan, this category also includes pipeline work associated with Pressure Zone Improvement (PZI) projects and the Water Treatment and Transmission Improvements Program (WTTIP) projects.
4. **Pipeline Relocations.** This category includes projects that relocate existing pipelines to accommodate city, county, or state street improvement projects, and occur at an external agency's request. This work plan only includes those known relocations which are currently in design or construction.
5. **Regulator and Rate Control Station Rehabilitation.** This category includes projects that replace aging pressure or flow controlling devices at various locations in the distribution system.
6. **Capital Improvement Project.** This category includes projects that construct, maintain, improve, or demolish reservoirs, pumping plants (PP), and water treatment plants (WTP), and their associated infrastructure. These projects typically include pipeline work and are incorporated into this work plan for completion.
7. **Polybutylene Replacements.** This category includes planned polybutylene service lateral replacements.
8. **Special Projects.** This category includes projects that develop new conveyance systems to distribute recycled water.

In addition to these categories, the District also designs and constructs pipelines as part of the "system extensions" category, a subset of applicant projects that are initiated via the District's New Business Office. System extension pipelines serve new developments and are typically constructed in unpaved streets. These projects typically have schedules not controlled by the

District and are therefore not included in this document. Note that applicant projects may also include upgrades of existing pipelines in paved streets to meet fire flow requirements set by the local fire agency or by pipeline relocations. These projects are included in this work plan.

Where possible, the District works to avoid construction conflicts and identify opportunities to schedule improvement projects in a cooperative manner by communicating its planned design and construction activities. Any agency that anticipates a construction conflict or an opportunity to work cooperatively on a planned project is encouraged to contact the appropriate person listed on the following table to discuss project specifics.

| AREA | AREA ENGINEER | PHONE NUMBER | EMAIL |
|--|---|---------------------|--|
| North Area Contact <i>Contra Costa County Public Works (West), El Cerrito, Hercules, Kensington, Pinole, Richmond, and San Pablo</i> | Oscar Herrera | (510) 287-1005 | oscar.herrera@ebmud.com |
| Central Area Contact <i>Albany, Berkeley, Emeryville, Oakland (NW of Broadway), Port of Oakland</i> | Oscar Herrera <i>through January 2021</i> Kristina Zuniga <i>beginning February 2021</i> | (510) 287-1102 | oscar.herrera@ebmud.com kristina.zuniga@ebmud.com |
| East Area Contact <i>Alamo, Contra Costa County Public Works (East), Danville, Lafayette, Moraga, Orinda, Pleasant Hill, San Ramon, Walnut Creek, Central Contra Costa Sanitary District, and Dublin San Ramon Services District</i> | Dustin La Vallee | (510) 287-1152 | dustin.lavallee@ebmud.com |
| South Area Contact <i>Alameda, Alameda County Public Works (Ashland, Castro Valley, Eden Township, San Lorenzo), Castro Valley Sanitary District, Hayward, Oakland (SW of Broadway), Oro Loma Sanitary District, Piedmont, and San Leandro</i> | Emiliano Esparza | (510) 287-1191 | emiliano.esparza@ebmud.com |

FORECASTED DESIGN AND CONSTRUCTION ACTIVITY FOR FY21

FY21 design projects are currently in design or will be designed in FY21. These projects may reach the construction phase as early as this fiscal year. Because these projects are in the design phase, they represent the greatest opportunity for project coordination with affected agencies.

FY21 construction projects have been designed and are currently in construction or expected to be ready for construction within the fiscal year. The District seeks to maintain a construction backlog from which projects can be selected for construction in an efficient cost-effective manner. Many of the projects in the tables that follow will be constructed in FY21. Projects that are not built in FY21 will carry over to subsequent fiscal years in the construction backlog.

To maintain a high level of service reliability, the District is replacing aging distribution pipelines at an increased rate. Distribution pipelines are generally classified as any pipeline

within the District’s service area 16 inches in diameter or smaller with customer service lateral connections. The District continues to pursue improvements to efficiently increase pipeline replacement rates with a goal of reducing main breaks and minimizing water loss within the distribution system. In FY20, the District met its goal to replace 17.5 miles of distribution pipelines. The District’s goal for FY21 is to replace 20 miles of distribution pipelines.

Projects in the tables below are arranged alphabetically by city first, and then by project.

Pipeline Infrastructure Renewal (IR) Design

The District will design approximately 20 miles of pipeline infrastructure renewals in FY21. Projects will be selected from Table A, which includes replacement pipelines already in design or carried over from FY20.

Table A – Pipeline IR Design Projects, FY21

| Street | City | Limits | Length (feet) |
|---------------|-----------------------------------|--|----------------------|
| Carolyn St | Alameda County (San Leandro) | <i>Carolyn St (Manchester to Strang) Manchester Rd (Foothill to Arlington) Windsor Dr (Manchester to Horne) Berkshire Dr (Manchester to Horne) Selborne Dr (Berkshire to Gramercy) Strang Ave (Saratoga to end)</i> | 7,045 |
| Bolla Ave | Alamo Contra Costa County (CC Co) | <i>Bolla Ave: Angela Ave to St Alicia Ct Angela Ave: Stone Valley Rd to end Miranda Ave: Bolla Ave to Miranda Ct</i> | 3,460 |
| Finley Ln | Alamo | <i>Finley Ln (Danville Blvd to end)</i> | 915 |
| Talbot Ave | Albany | <i>Talbot Ave (Solano Ave to 731 Talbot Ave) Washington Ave (Talbot Ave to Masonic Ave) Masonic Ave (Portland Ave to Washington Ave)</i> | 1,985 |
| Dwight Way | Berkeley | <i>Dwight Way (Milvia Street to Shattuck Ave) Milvia Street (Channing Way to Blake St) Shattuck Ave (Dwight Way to Parker Street) Channing Way (Milvia St to Martin Luther King Jr. Way) Parker Street (Shattuck to Dana St)</i> | 4,420 |
| Fairlawn Dr | Berkeley | <i>Fairlawn Dr (Queens Rd to zone gate) Queens Rd (1398 Queens to Shasta) Shasta Rd (Queens to Miller)</i> | 840 |

Continued: Table A – Pipeline IR Design Projects, FY21

| Street | City | Limits | Length (feet) |
|------------------------|---------------|--|--------------------------|
| Hearst Ave | Berkeley | Hearst Ave (7th St to San Pablo Ave) 7th St (Delaware St to Hearst Ave) 8th St (Delaware St to Hearst Ave) | 2,080 |
| La Loma Ave | Berkeley | La Loma Ave (Buena Vista Way to 1401 La Loma) La Loma Ave (1369 La Loma to Glendale) Glendale Ave (La Loma to end) Buena Vista Way (La Loma to 3070 Buena Vista) Buena Vista Way (Le Roy to Greenwood) Del Mar Ave (Buena Vista to Parnassus) Le Roy Ave (Rose to Hawthorne) | 6,673 |
| Le Roy Ave | Berkeley | Hilgard Ave (Euclid Ave to Le Roy Ave) Le Roy Steps/Ave (Hilgard Ave to Le Conte Ave) Le Conte Ave (Le Roy Ave to La Loma Ave) | 1,863 |
| Oregon St | Berkeley | Oregon St (Fulton St to Telegraph Ave) | 1,290 |
| San Diego Rd | Berkeley | San Diego Rd (Southampton to 775 San Diego) Southampton Ave (Arlington to San Diego) Somerset Pl (Southampton to end) Tunbridge Lane Path (Southampton to end) | 2,200 |
| Kingston Cluster | Castro Valley | Peterson Way (Northwood Dr to Remco St) Northwood Dr (Kingston Way to Peterson Way) Kingston Way (Mayflower Dr to Northwood Dr) | 1,140 |
| Rizzo Cluster | Castro Valley | Rizzo Ave (Orange to 21428 Rizzo) Orange Ave (Grove to Lake Chabot) Baywood Ave (Grove to 21736 Baywood) Tanglewood Dr (Grove to 21538 Tanglewood) Jeffer St (Belle St to end) | 3,170 |
| Camino Tassajara | Danville | Gil Blas Road (Lomitas Road to Molitas Road) Molitas Road (Gil Blas Road to Camino Tassajara) Camino Tassajara (Molitas Road to Ramona Rd) | 4,385 |
| Sycamore Cir | Danville | Sycamore Cir (R/W 2451 to Hydrant H-10118) | 1,140 |
| Avenida Nueva | Diablo | Avenida Nueva (Alameda Diablo to Diablo Rd) El Centro (Avenida Nueva to end) | 1,705 |
| Lexington Cluster Ph 1 | El Cerrito | Lexington Ave (Moeser Ln to Stockton Ave) Kearney St (Moeser Ln to Eureka Ave) Moeser Ln (San Pablo Ave to Liberty) Stockton Ave (Lexington Ave to Kearney St) Waldo Ave (Lexington Ave to Kearney St) | 5,590 |

Continued: Table A – Pipeline IR Design Projects, FY21

| Street | City | Limits | Length (feet) |
|---|---|--|--------------------------|
| Lexington Cluster Ph 2 | El Cerrito | <i>Lexington Ave (Eureka to Fairmount Ave) Liberty St (Eureka to Fairmount Ave) Oak St (Central Ave to end) Willow St (Liberty St to Oak St) El Cerrito Plaza (Liberty and Fairmount Ave) Lincoln Ave (Lexington Ave to Liberty St) Central Ave (Lexington Ave to Liberty St)</i> | 5,630 |
| Norvell St (Coordinate with Wildcat Pipeline Large Diameter project in El Cerrito) | El Cerrito | <i>Norvell St (Lincoln Ave to Fairmount Ave) Lincoln St (Elm St to Norvell St) Liberty Street (Hill St to 200 ft S of Hill St) Lynn St (Pomona to San Carlos) Lynn St (Ashbury to Pomona) Richmond St (Potrero Ave to 80ft North)</i> | 3,185 |
| Poppy Ct | Hercules | <i>Poppy Ct (Lupine Rd to end)</i> | 1,245 |
| Highgate | Kensington | <i>Highgate Rd (Edwin Dr to Sunset Dr) Highgate Ct (Highgate Rd to end) Sunset Dr (Arlington Ave to Franciscan Way)</i> | 4,812 |
| Lenox Rd | Kensington CC Co | <i>Lenox Rd (Beverly Ct to Kingston Rd)</i> | 350 |
| W Ruby St | North Richmond Contra Costa County (CC Co.) | <i>W Ruby St (1st St to 201 W Ruby St)</i> | 275 |
| 61st Ave | Oakland | <i>61st Ave (Tevis St to End)</i> | 600 |
| 62nd St | Oakland | <i>62nd St (Telegraph Ave to Colby St) 61st St (Canning St to Colby St) Both sides of Colby Park</i> | 2,510 |
| 66th Ave. Cluster | Oakland | <i>65th Ave (MacArthur Blvd to end) 66th Ave (MacArthur Blvd to Outlook Ave)</i> | 2,175 |
| 71st Ave | Oakland | <i>71st Ave (International Blvd to Orral St) 69th Ave (International Blvd to Flora St)</i> | 1,810 |
| Barner Cluster | Oakland | <i>Alida St (Coolidge Ave to Barner Ave) Coolidge Ave (Prop 269 to Morgan Ave) Carmel St (Coolidge Ave to Maple Ave) Barner Ave (Morgan Ave to Alida St) Barner Pl (Barner Ave to end) Morgan Ave (Barner Ave to Maple Ave) Maple Ave (California St to Morgan Ave) California St (Maple Ave to end) Sylvan Ave (Maple Ave to end)</i> | 7,600 |

Continued: Table A – Pipeline IR Design Projects, FY21

| Street | City | Limits | Length (feet) |
|--------------------------------|---------|--|---------------|
| Bellevue Ave | Oakland | <i>Bellevue Ave (Perkins St to Staten Ave) Bellevue Ave (Grand Ave to Van Buren Ave) Staten Ave (Bellevue Ave to Palm Ave) Van Buren Ave (Perkins St to Bellevue Ave) Perkins St (Grand Ave to Van Buren Ave)</i> | 4,290 |
| Burdeck Drive | Oakland | <i>Burdeck Dr (3200 Burdeck Dr to end)</i> | 2,360 |
| Chapman, 29th Ave, Derby | Oakland | <i>Chapman St (23rd Ave to 29th Ave) Chapman St (29th Ave to Lancaster St) 29th Ave (Ford St to E 7th St end) Derby Ave (Chapman to E 7th St)</i> | 2,838 |
| Castlewood Cluster | Oakland | <i>Castlewood St (Golf Links Rd to Encina Ave) Golf Links Rd (Castlewood St to 98th Ave) 10' Path (Golf Links Rd to Castlewood St) 98th Ave (Las Vegas to Golf Links Rd) Espinosa Ave (Las Vegas Ave to Golf Links Rd) Las Vegas Ave (Farrell St to 98th Ave) Encina Ave (Golf Links Rd to Alcalá Ave) Alcalá Ave (Encina Ave to Oak Knoll Blvd) Oak Knoll Blvd (Castlewood St to Granada Ave)</i> | 5,500 |
| Clemens Rd | Oakland | <i>Waterhouse Rd (Clemens to Casterline) Clemens Rd (Oakmore to Fruitvale)</i> | 3,000 |
| Grand View Cluster | Oakland | <i>Grand View Drive (Gravatt Drive to Vicente Lane) Westview Drive (Grand View Drive to West View Place) Vicente Place (Vicente Rd to West View Dr) Vicente Rd (Grand View Drive to Vicente Place) 10 foot Path (Vicente Place to 80' on 10 foot path) Westview Place (West View Place Drive to 100')</i> | 2,560 |
| Hanly Rd | Oakland | <i>Hanly Rd (Hydrant 4257 to Waterhouse Rd) Waterhouse Rd (Hanly Rd to Lyman Rd) Benevides Ave (El Centro to end)</i> | 1,900 |
| Hood Cluster | Oakland | <i>Hood St (Mark to end) 107th Ave (Peralta Oaks to Shelton) Peralta Oaks Dr (107th Ave to Peralta Oaks Ct) Peralta Oaks Dr (Peralta Oaks Ct to end) R/W 3276 and 3318</i> | 2,500 |
| Kerrigan Dr, Bemis, Lochard St | Oakland | <i>Kerrigan Dr (Overmoor to end) Lochard St (Malcolm Roderick to 11456 Lochard) Bemis St (Ettrick to end) Aberfoil (Rodderick to Elvessa) Ettrick (Bemis to Turner)</i> | 7.300 |

Continued: Table A – Pipeline IR Design Projects, FY21

| Street | City | Limits | Length (feet) |
|------------------|-------------|---|--------------------------|
| Lawlor Cluster | Oakland | 99th Ave (MacArthur Blvd to Burr St) Lawlor St (99th Ave to 98th Ave) Springfield St (98th Ave to end) Longfellow Ave (99th Ave to 100th Ave) | 3,000 |
| MacArthur Blvd | Oakland | MacArthur Blvd (Athol Ave to 1311 MacArthur Blvd) MacArthur Boulevard (1459 MacArthur Blvd to Ardley Ave) | 4,600 ft |
| Margarido Dr | Oakland | Margarido Dr (Acacia Ave to Broadway Ter) Beechwood Dr (Country Club Dr to Romany Rd) Romany Rd (Beechwood Dr to Glenbrook Dr) Broadway Ter (Glenbrook Dr to Country Club Dr) Country Club Dr (Broadway Ter to Acacia Ave) Glenbrook Dr (Beechwood Dr to Broadway Ter) Bowling Dr (Country Club Dr to Glenbrook Dr) Lincolnshire Dr (Country Club Dr to Westminster Dr) Ocean View Dr (Alpine Terr to Acacia Ave) | 9,760 |
| Monte Cresta Ave | Oakland | Monte Cresta Ave (Linda to Kingston Ave) Kingston Ave (Monte Cresta Ave to Monte Vista Ave) El Dorado Ave (Fairmount Ave to Bayo Vista Ave) Fairmount Ave (Moss Ave to El Dorado Ave) | 2,540 |
| Mountain Blvd | Oakland | Mountain Blvd (Snake Rd to E-32059-B) Snake Rd (E-32061-A) | 630 |
| Norton Cluster | Oakland | Norton Ave (Wisconsin St to Herrier St) Rettig Pl/Wisconsin St (Laurel Ave to end) Wisconsin St (Rettig Pl to Loma Vista Ave) Rettig Ave (Wisconsin St to end) Herrier St (Norton Ave to East Lake Ave) East Lake Ave (Herrier St to end) Kiwanis St (East Lake Ave to end) Midvale Ave (Wisconsin St to Kiwanis St) | 6,205 |
| Oakdale Cluster | Oakland | Outlook Ave (Seminary Ave to Lundholm Ave) Lundholm Ave (Outlook Ave to dead end near Seminary Ave) Oakdale Ave (Seminary Ave to Nairobi Pl) | 4,000 |
| Outlook: Central | Oakland | Bantry Ave (73rd Ave to Outlook Ave) Outlook (73rd Ave to Parker Ave) 76th Ave (Outlook Ave to MacArthur Blvd) 75th Ave (Hillmont Dr to MacArthur Blvd) E-18876 (2921 75 th Ave and 2929 75 th Ave) Ney (73 rd Ave to 76 th Ave) 73 rd Ave (MacArthur Blvd to Ney Ave) | 6,800 |

Continued: Table A – Pipeline IR Design Projects, FY21

| Street | City | Limits | Length (feet) |
|-------------------|---------------------|---|--------------------------|
| Outlook: South | Oakland | <i>Hillmont Dr (Parker Ave to Partridge Ave) Outlook Ave (Parkier to Tully Pl) Tully Pl (Outlook Ave to Hillmont Dr)</i> | 2,500 |
| Sunnyhills Rd III | Oakland | <i>Sunnyhills Rd (Northvale Rd to Hillcroft Cir) Rosemount Rd (Verreda Rd to Sunnyhills Rd) Hillcroft Cir (Sunnyhills Rd to Sunnyhills Rd) Larkspur Rd (Hillcroft Cir to end) E-19566 (2C35)</i> | 4,000 |
| Suter Cluster | Oakland | <i>Suter St (35th Ave to High St) Courtland Ave (Fleming Ave to Camden St)</i> | 4,165 |
| Tara Rd | Orinda | <i>Tara Road: Southwood Drive to Nonie Road</i> | 2,625 |
| Wildwood Ave | Piedmont Oakland | <i>Wildwood Ave (Grand Ave to Sylvan Way) Sylvan Way (Wildwood Ave to End)</i> | 1,610 |
| Grayson | Pleasant Hill | <i>Grayson Rd (Reliez Valley Rd to Heritage Hill Dr) Grayson Ln (Grayson Rd to end)</i> | 3,680 |
| Silverhill Dr | CC Co. | <i>Silverhill Ct/Dr (Reliez Valley Rd to End) Silverhill Way (Reliez Valley Rd to Silverhill Ct)</i> | 2,500 |
| Pleasant Hill Rd | Pleasant Hill | <i>Pleasant Hill Rd (Grayson Rd to 61 Jemco Ct Driveway) Kingsley Ct (Pleasant Hill Rd to end)</i> | 1,465 |
| 18th St | Richmond | <i>18th St (Roosevelt Ave to end)</i> | 860 |
| 20th St | Richmond | <i>20th St (Esmond Ave to Roosevelt Ave) Grant Ave (20th St to 22nd St) 22nd St (Grant Ave to Garvin Ave)</i> | 3,430 |
| 33rd St | Richmond | <i>33rd St (Barrett Ave to MacDonald Ave)</i> | 1,010 |
| 35th St Ph. 2 | Richmond | <i>35th Street: Esmond Ave to Cerrito Ave Garvin Ave: 33rd Street to 35th Street 33rd Street: Garvin Ave to Clinton Ave</i> | 2,665 |
| 42nd St | Richmond | <i>42nd St (Wilson Ave to MacDonald Ave)</i> | 2,570 |
| Escuela Ct | Richmond | <i>Escuela Ct (S 45th St to end)</i> | 300 |
| Lassen St Ph.1 | Richmond | <i>McBryde: San Pablo Ave to end Lassen Street: McBryde Ave to Esmond Ave McLaughlin Street: McBryde Ave to Esmond Ave Esmond Ave: San Pablo Ave to End Humboldt Street: McBryde Ave to Esmond Ave</i> | 4,960 |
| Lassen St Ph.2 | Richmond | <i>Lassen Street: McBryde Ave to Solano Ave McLaughlin Street: McBryde Ave to Solano Ave Solano Ave: San Pablo Ave to Humboldt Street Humboldt Street: McBryde Ave to Solano Ave Garvin Ave: San Pablo Ave to End</i> | 6,200 |

Continued: Table A – Pipeline IR Design Projects, FY21

| Street | City | Limits | Length (feet) |
|---------------|-----------------|---|--------------------------|
| Mendocino St | Richmond | <i>Mendocino Street: Plumas Ave to Tehama Ave Tehama Ave: Shasta Street to Mendocino Street Shasta Street: Tehama Ave to Plumas Ave Sutter Ave: Carlson Blvd to San Pablo Ave Burlingame Ave: Shasta St to Mendocino St Plumas Ave: Shasta St to Mendocino St</i> | 4,140 |
| Oscar St | Richmond | <i>Oscar St (Imperial Ave to Tehama Ave) Imperial Ave (Monterey St to San Joaquin St) Tehama Ave (Monterey St to San Joaquin St)</i> | 1,775 |
| Rosewood Ave | Richmond | <i>S 41st St: Carlson Blvd to Potrero Ave Rosewood Ave: S 41st St to S 43rd St S 43rd St: Carlson Blvd to Potrero Ave Sycamore Ave: S 43rd St to S 45th St S 45 St: Carlson Blvd to S 45 St</i> | 3,185 |
| Rodeo Ave | Rodeo CC Co. | <i>1st St (Parker Ave to end) Garretson Ave(2nd St to end) 2nd St (Sharon Ave to Lake Ave) 2nd St (Rodeo Ave to 520 2nd St) Rodeo Ave (1st St to end) Lake Ave (3rd St to end) 4th St (Harris Ave to Parker Ave)</i> | 6,395 |
| Merle Cluster | San Leandro | <i>Group 1: E Merle Ct (Alice Ave to W Merle Ct) W Merle Ct from (E Merle Ct to Dowling) Helen Ave (E Merle to Mitchell) Dowling (E Merle to Mitchell) Group 2: Chetland Rd (Oakes to Begier) Begier Ave (Chetland to Superior) Superior Ave (Begier to Oakes) Oakes Blvd (Superior to east end) Diehl Ave (Dutton to MacArthur)</i> | 6,600 |
| Morrow Dr | San Pablo | <i>Alan Ct (Morrow Dr to end) Morrow Dr (Hillcrest Rd to end) Hillcrest Rd (5941 Hillcrest Rd to 1700 Hillcrest Rd)</i> | 2,520 |
| Pine Ave | San Pablo | <i>Pine Ave (Rumrill to 23rd St)</i> | 2,765 |
| Ralston Ave | San Pablo | <i>Ralston Ave (McBryde Ave to Sonoma St) Bernhard Ave (Ralston Ave to end) McBryde Ave (Sonoma St to Park Ave)</i> | 1,630 |
| Sutter Ave | San Pablo | <i>Sutter Ave (Rumrill Rd to 23rd St)</i> | 2,790 |
| Trenton Blvd | San Pablo | <i>Trenton Blvd (Kelley Ave to Gaint Rd)</i> | 1,205 |

Continued: Table A – Pipeline IR Design Projects, FY21

| Street | City | Limits | Length (feet) |
|------------------|-------------------------------------|---|---------------|
| Grover Ln | Walnut Creek | <i>Grover Ln (Grover Ct to end)</i> <i>Edgemont Cir (Grover Ln to end)</i> | 680 |
| Julianne Ct | Walnut Creek unincorporated (CC Co) | <i>Julianne Court: Montecillo Drive to End</i> | 485 |
| Miramonte Rd | Walnut Creek | <i>Miramonte Rd (Springside Rd to Terrace Rd)</i> <i>Carmello Rd (Miramonte Rd to Terrace Rd)</i> <i>Terrace Rd (Miramonte Rd to Carmello Rd)</i> | 2,875 |
| Santa Rita Dr | Walnut Creek | <i>Santa Rita Dr (Santa Rita Dr to Santa Rita Ct)</i> <i>Santa Rita Ct (Santa Rita Dr to end)</i> | 800 |
| Shady Glen Rd | Walnut Creek | <i>Shady Glen Rd (Oakdene Ct to San Miguel Dr)</i> <i>Vallecito Ln (San Miguel Dr to Norris Rd)</i> <i>Norris Rd (San Miguel Dr to Vallecito Ln)</i> | 3,620 |
| Sierra Dr | Walnut Creek | <i>Sierra Dr (Walker Ave to San Miguel)</i> | 1,365 |
| Springbrook Rd | Walnut Creek | <i>Springbrook Rd (1632 Springbrook to Surrey Way)</i> <i>Hillcroft Wy (Springbrook Rd to Placer Ridge Rd)</i> <i>R/W 616 (Hillcroft Way to Camino Diablo)</i> <i>Rodriguez Ln (Springbrook Rd to end)</i> | 4,215 |
| Sunnyhills Rd II | Oakland Piedmont | <i>Sunnyhills Rd (Midcrest to zone gate on Indian Rd)</i> <i>Creed Rd (Trestle Glen to end)</i> <i>Trestle Glen (Park Blvd to Cavanaugh Ct)</i> | 1,821 |
| Whyte Park Wy | Walnut Creek | <i>Whyte Park Wy (Center St to Bridge Rd)</i> <i>Panoramic Wy (Olympic Blvd to Sequoia Ave)</i> <i>Grandview Pl (Panoramic Way to end)</i> | 1,825 |

Pipeline Construction

The District forecasts construction of approximately 20 miles of pipeline IR projects in FY21. The District will select projects from Table B, which includes previously designed projects from the backlog and newly selected replacement projects. Projects in construction as of August 2020 are marked with a (‡) in the *Street* column.

Table B – Pipeline IR Construction Projects, FY21

| Street | City | Limits | Length (feet) | Size & Material [†] |
|------------------------------|-------------------------|---|---------------|------------------------------|
| Maubert/ 159th Cluster | Alameda County (ALA Co) | <i>Maubert Ave (159th Ave to 163rd Ave)</i> <i>159th Ave (Marcella to Maubert)</i> | 3,000 | 6" iPVC |

Continued: Table B – Pipeline IR Construction Projects, FY21

| Street | City | Limits | Length (feet) | Size & Material [†] |
|---------------------------|---|--|---------------|--------------------------------------|
| Bolla Ave | Alamo Contra Costa County (CC Co) | <i>Bolla Ave: Angela Ave to St Alicia Ct Angela Ave: Stone Valley Rd to end Miranda Ave: Bolla Ave to Miranda Ct</i> | 3,460 | 6" & 8" iPVC |
| Gateview Ave [‡] | Albany | <i>Gateview Ave: Washington Ave to end</i> | 960 | 6", 8" iPVC |
| Talbot Ave | Albany | <i>Talbot Ave (Solano Ave to 731 Talbot Ave) Washington Ave (Talbot Ave to Masonic Ave) Masonic Ave (Portland Ave to Washington Ave)</i> | 1,985 | 6" iPVC |
| Ordway St [‡] | Albany Berkeley | <i>Ordway St: Posen to Sonoma Posen Ave: Peralta to Ventura Ventura Ave: Posen to Sonoma Ave Beverly Pl: Ventura to Posen Ave Peralta Ave: Gilman to Posen</i> | 4,170 | 6 iPVC |
| Colusa [‡] | Berkeley | <i>Colusa Ave (San Lorenzo Ave to Tacoma Ave) San Lorenzo Ave (Ensenada Ave to Santa Rosa Ave) Capistrano Ave (Miramar Ave to The Alameda) Tacoma Ave (Colusa Ave to The Alameda) Ensenada Ave (San Lorenzo Ave to Tacoma Ave)</i> | 5,800 | 6" iPVC |
| Dwight Way | Berkeley | <i>Dwight Way (Milvia Street to Shattuck Ave) Milvia Street (Channing Way to Blake St) Shattuck Ave (Dwight Way to Parker Street) Channing Way (Milvia St to Martin Luther King Jr. Way) Parker Street (Shattuck to Dana St)</i> | 4,420 | 6" & 8" iPVC 6" & 8" ML&PCS |
| Ensenada | Berkeley | <i>Ensenada Ave (Peralta Ave to Portland Ave)</i> | 500 | 8" iPVC |
| Fairlawn Dr | Berkeley | <i>Fairlawn Dr (Queens Rd to zone gate) Queens Rd (1398 Queens to Shasta) - trnsfr svcs only Shasta Rd (Queens to Miller) - trnsfr svcs only</i> | 840 | 8" ERDIP |

[†] Pipe Material: DI: Ductile-Iron | ERDIP: Earthquake Resistant Ductile-Iron Pipe | HDPE: High-Density Polyethylene | iPVC: Enhanced Polyvinyl Chloride | ML&PCS: Mortar-Lined and Plastic Coated Steel | PVC: Polyvinyl Chloride | STL: Steel

Continued: Table B – Pipeline IR Construction Projects, FY21

| Street | City | Limits | Length (feet) | Size & Material [†] |
|----------------------|----------------------|---|---------------|------------------------------|
| La Loma Ave | Berkeley | <i>La Loma Ave (Buena Vista Way to 1046 La Loma)</i> <i>La Loma Ave (1369 La Loma to Glendale)</i> <i>Glendale Ave (La Loma to end)</i> <i>Buena Vista Way (La Loma to 3070 Buena Vista)</i> <i>Buena Vista Way (Le Roy to Greenwood)</i> <i>La Vereda and Hilgard (La Loma to end)</i> <i>Del Mar Ave (Buena Vista to Parnassus)</i> <i>Hilgard (Le Roy to Le Roy steps)</i> <i>Le Roy Ave (Rose to Hawthorne)</i> | 6,043 | 6" & 8" ERDIP |
| San Antonio | Berkeley | <i>San Antonio Ave (San Ramon Ave to Arlington Ave)</i> <i>The Alameda (Thousand Oaks Blvd to San Antonio Ave)</i> <i>Vallejo St (The Alameda to San Ramon Ave)</i> <i>San Ramon Ave (San Antonio Ave to San Fernando Ave)</i> <i>San Juan Ave (Santa Clara Ave to San Fernando Ave)</i> <i>Santa Clara Ave (San Ramon Ave to San Juan Ave)</i> <i>Menlo Pl (Thousand Oaks Blvd to The Alameda)</i> <i>Santa Rosa Ave (San Miguel Ave to Menlo Pl)</i> <i>San Miguel Ave (Thousand Oaks Blvd to Santa Rosa Ave)</i> | 7,300 | 6" iPVC |
| San Diego Rd | Berkeley | <i>San Diego Rd (Southampton to 775 San Diego)</i> <i>Southampton Ave (Arlington to San Diego)</i> <i>Somerset Pl (Southampton to end)</i> | 2,200 | 6" & 8" ERDIP |
| Easy St [‡] | Castro Valley ALA Co | <i>Easy Street: Cambrian Drive to Crest Ave</i> | 616 | 8" iPVC |
| Jeffer St | Castro Valley ALA Co | <i>Jeffer St (Belle St to end)</i> | 409 | 6" iPVC |
| Rizzo Cluster | Castro Valley ALA Co | <i>Rizzo Ave (Orange to 21428 Rizzo)</i> <i>Orange Ave (Grove to Lake Chabot)</i> <i>Baywood Ave (Grove to 21736 Baywood)</i> <i>Tanglewood Dr (Grove to 21538 Tanglewood)</i> | 2,759 | To be determined |
| Walnut Cluster | Castro Valley ALA Co | <i>Walnut Rd (Almond Rd to Reamer Rd)</i> <i>Vineyard Rd (Walnut Rd to Parker Rd)</i> <i>Parker Rd (Vineyard Rd to Reamer Rd)</i> | 5,550 | 6" - 8" STL |

[†] Pipe Material: DI: Ductile-Iron | ERDIP: Earthquake Resistant Ductile-Iron Pipe | HDPE: High-Density Polyethylene | iPVC: Enhanced Polyvinyl Chloride | ML&PCS: Mortar-Lined and Plastic Coated Steel | PVC: Polyvinyl Chloride | STL: Steel

Continued: Table B – Pipeline IR Construction Projects, FY21

| Street | City | Limits | Length (feet) | Size & Material [†] |
|-------------------------------------|-------------------|---|---------------|------------------------------|
| Vista Del Rio | Crockett | <i>Vista del Rio St (Crestview to end)</i> | 2,530 | 6" iPVC & 2" Copper |
| Camino Tassajara | Danville | <i>Gil Blas Road: Lomitas Road to Molitas Road Molitas Road: Gil Blas Road to Camino Tassajara Camino Tassajara: Molitas Road to Contada Cir</i> | 3,395 | To be determined |
| Everett St | El Cerrito | <i>Everett St (Waldo Ave to Fairmount Ave)</i> | 3,150 | 6" iPVC |
| Lexington Cluster Ph 1 [‡] | El Cerrito | <i>Lexington Ave (Moeser Ln to Stockton Ave) Kearney St (Moeser Ln to Eureka Ave) Moeser Ln (San Pablo Ave to Liberty) Stockton Ave (Lexington Ave to Kearney St) Waldo Ave (Lexington Ave to Kearney St)</i> | 5,590 | 6" & 8" iPVC |
| Lexington Cluster Ph 2 | El Cerrito | <i>Lexington Ave (Eureka to Fairmount Ave) Liberty St (Eureka to Fairmount Ave) Oak St (Central Ave to end) Willow St (Liberty St to Oak St) El Cerrito Plaza (Liberty and Fairmount Ave) Lincoln Ave (Lexington Ave to Liberty St) Central Ave (Lexington Ave to Liberty St)</i> | 5,630 | 6" & 8" iPVC |
| Norvell St | El Cerrito | <i>Norvell St (Lincoln Ave to Fairmount Ave) Lincoln St (Elm St to Norvell St) Liberty Street (Hill St to 200 ft S of Hill St) Lynn St (Pomona to San Carlos) Lynn St (Ashbury to Pomona) Richmond St (Potrero Ave to 80ft North)</i> | 3,185 | 6" ML&PCS |
| Village Dr | El Cerrito | <i>Village Dr (Errol Dr to Seaview Dr) Errol Dr (Seaview Dr to Bonnie Dr) Bonnie Dr (Errol Dr to 620 Bonnie Dr) Balra (Eureka Dr to Zone Gate) Ricardo Ct (Seaview to end)</i> | 3,830 | 6" & 8" HDPE |
| El Centro [‡] | El Sobrante CC Co | <i>Alhambra Rd: Hilltop Dr to Granada Rd El Centro Rd: Hilltop Dr to Lambert Rd Santa Maria Rd: Hilltop Dr to Lambert Rd Granada Rd: Santa Maria Rd to end Lambert Rd: El Centro to Santa Maria Rd</i> | 6,045 | 6 iPVC |
| Juanita Dr [‡] | El Sobrante CC Co | <i>Juanita Dr: Allview Ave to Kelvin Rd Manor Rd: Hilltop Dr to Fulton Way Kelvin Rd: Juanita Dr to Manor Rd</i> | 2,295 | 6 & 8 iPVC |

[†] Pipe Material: DI: Ductile-Iron | ERDIP: Earthquake Resistant Ductile-Iron Pipe | HDPE: High-Density Polyethylene | iPVC: Enhanced Polyvinyl Chloride | ML&PCS: Mortar-Lined and Plastic Coated Steel | PVC: Polyvinyl Chloride | STL: Steel

Continued: Table B – Pipeline IR Construction Projects, FY21

| Street | City | Limits | Length (feet) | Size & Material [†] |
|----------------------------------|----------------------|--|---------------|--------------------------------|
| Kelvin [‡] | El Sobrante CC Co | <i>Kelvin Rd: Juanita Dr to Rincon Rd Rincon Rd: Manor Rd to Donna Mae Ct Donna Mae Ct: Rincon Rd to end Bishop Pine Lane: Kelvin Rd to end Bayview Ct: Rincon Rd to court</i> | 3,160 | 6 & 8 iPVC |
| Franciscan Way and Anson Way | Kensington | <i>Anson Way (Franciscan Way to Eureka Ave) Franciscan Way (Highgate Rd to Eureka Ave)</i> | 2,600 | To be determined |
| Highgate Rd | Kensington CC Co | <i>Highgate Rd (Edwin Dr to Sunset Dr) Highgate Ct (Highgate Rd to end) Sunset Dr (Arlington Ave to Franciscan Way)</i> | 4,812 | 8" ERDIP |
| Lenox Rd | Kensington CC Co | <i>Lenox Rd (Beverly Ct to Kingston Rd)</i> | 350 | To be determined |
| 33rd Ave | Oakland | <i>33rd Ave (San Leandro to end)</i> | 120 | 6" PVC |
| 61st Ave | Oakland | <i>61st Ave (Tevis St to end)</i> | 600 | To be determined |
| 68th & Outlook Ave (North Phase) | Oakland | <i>Outlook Ave (68th Ave to 73rd) 68th Ave (Outlook Ave to Foothill Blvd) Laird Ave (68th Ave to end)</i> | 3,865 | 6" & 8" ERDIP |
| 68th & Outlook Ave (South Phase) | Oakland | <i>Bantry Ave (73rd to Outlook) Outlook (73rd to Tully Pl) Hillmont Dr (Parker Ave to Tully Pl) 76th Ave (Outlook Ave to Ney Ave)</i> | 4,000 | 6" & 8" ERDIP |
| 94th Ave Cluster | Oakland | <i>94th Ave (B St to Holly) B St (93rd Ave to 94th Ave) 96th Ave (A St to International) E St (92nd Ave to 98th Ave)</i> | 4,111 | 6" & 8" iPVC DI on E St. |
| Beau Forest | Oakland | <i>Beau Forest Dr (Thornhill to Valley View)</i> | 1,195 | 6" iPVC |

[†] Pipe Material: DI: Ductile-Iron | ERDIP: Earthquake Resistant Ductile-Iron Pipe | HDPE: High-Density Polyethylene | iPVC: Enhanced Polyvinyl Chloride | ML&PCS: Mortar-Lined and Plastic Coated Steel | PVC: Polyvinyl Chloride | STL: Steel

Continued: Table B – Pipeline IR Construction Projects, FY21

| Street | City | Limits | Length (feet) | Size & Material [†] |
|--|---------|---|---------------|---------------------------------|
| Castlewood Cluster | Oakland | Castlewood St (Golf Links Rd to Encina Ave) Golf Links Rd (Castlewood St to 98th Ave) 10' Path (Golf Links Rd to Castlewood St) 98th Ave (Las Vegas to Golf Links Rd) Espinosa Ave (Las Vegas Ave to Golf Links Rd) Las Vegas Ave (Farrell St to 98th Ave) Encina Ave (Golf Links Rd to Alcalá Ave) Alcalá Ave (Encina Ave to Oak Knoll Blvd) Oak Knoll Blvd (Castlewood St to Granada Ave) | 5,500 | Std. Weight STL |
| Chapman, 29th Ave, Derby | Oakland | Chapman St (23rd Ave to 29th Ave) Chapman St (29th Ave to Lancaster St) 29th Ave (Ford St to E 7th St end) Derby Ave (Chapman to E 7th St) | 2,838 | To be determined |
| Golf Links Cluster | Oakland | Golf Links Rd (Burgos Ave to end) Calafia Ave (Dorisa to 3501 Calafia) | 1,062 | 6, 8" iPVC |
| Grand View Cluster | Oakland | Grand View Drive (Gravatt Drive to Vicente Lane) Westview Drive (Grand View Drive to West View Place) Vicente Place (Vincente Rd to West View Dr) Vicente Rd (Grand View Drive to Vicente Place) 10 foot Path (Vicente Place to 80' on 10 foot path) Westview Place (West View Place Drive to 100') | 2,560 | 6" - 8" STL & 2" Copper |
| Hayes Cluster | Oakland | Hayes St (Seminary to 62nd Ave) Holway St (Seminary to 62nd Ave) | 1,507 | 6" DI |
| Hillegass and Regent | Oakland | Hillegass Ave (Woolsey to Alcatraz) Regent (Woolsey to Alcatraz) Benvenue (Woolsey to Alcatraz) | 2,845 | 6" iPVC |
| Hood Cluster | Oakland | Hood St (Mark to end) 107th Ave (Peralta Oaks to Shelton) Peralta Oaks Dr (107th Ave to Peralta Oaks Ct) Peralta Oaks Dr (Peralta Oaks Ct to end - kill only) R/W 3276 and 3318 (kill only, relocate hydrant) | 2,500 | 6" & 8" ERDIP 12" DI or iPVC |
| International Blvd Phase II [†] | Oakland | E. 12th St (High St to 52nd Ave) 52nd Ave (E. 12th St to International Blvd) | 3,830 | 16" ML&PCS |

[†] Pipe Material: DI: Ductile-Iron | ERDIP: Earthquake Resistant Ductile-Iron Pipe | HDPE: High-Density Polyethylene | iPVC: Enhanced Polyvinyl Chloride | ML&PCS: Mortar-Lined and Plastic Coated Steel | PVC: Polyvinyl Chloride | STL: Steel

Continued: Table B – Pipeline IR Construction Projects, FY21

| Street | City | Limits | Length (feet) | Size & Material [†] |
|--------------------------------|---------|--|---------------|------------------------------|
| Kerrigan Dr, Bemis, Lochard St | Oakland | <i>Kerrigan Dr (Overmoor to end)</i> <i>Lochard St (Malcolm Roderick to 11456 Lochard)</i> <i>Bemis St (Ettrick to end)</i> <i>Aberfoil (Rodderick to Elvessa)</i> <i>Ettrick (Bemis to Turner)</i> | 7,300 | 6" & 8" iPVC |
| Margarido Dr | Oakland | <i>Margarido Dr (Acacia Ave to Broadway Ter)</i> <i>Beechwood Dr (Country Club Dr to Romany Rd)</i> <i>Romany Rd (Beechwood Dr to Glenbrook Dr)</i> <i>Broadway Ter (Glenbrook Dr to Country Club Dr)</i> <i>Country Club Dr (Broadway Ter to Acacia Ave)</i> <i>Glenbrook Dr (Beechwood Dr to Broadway Ter)</i> <i>Bowling Dr (Country Club Dr to Glenbrook Dr)</i> <i>Lincolnshire Dr (Country Club Dr to Westminster Dr)</i> To be scheduled with Ocean View Dr (see Table D) | 9,760 | 6" & 8" ML&PCS |
| Mira Vista Ave | Oakland | <i>Mira Vista Ave (Elwood to Valle Vista)</i> | 1100 | 6" iPVC |
| Monadnock Cluster | Oakland | <i>Monadnock Wy (Seminary to 62nd Ave)</i> <i>63rd Ave (Camden to MacArthur)</i> | 1,815 | 6" iPVC |
| Montgomery St | Oakland | <i>Montgomery St (Ridgeway to John)</i> | 710 | 6" iPVC |
| Mountain Blvd | Oakland | <i>Mountain Blvd (Snake Rd to E-32059-B)</i> <i>Snake Rd (E-32061-A)</i> | 630 | 8" & 16" ML&PCS |
| Nicol Cluster | Oakland | <i>Nicol Ave (Fruitvale to Maple)</i> <i>Maple Ave (Nicol to School)</i> <i>School St (Curran to Berlin)</i> <i>Curran Ave (School to south end)</i> <i>Berlin Wy (School to Maple)</i> <i>Coolidge Ave (Bona to Nicol)</i> | 6,425 | 4", 6", 8" DI |
| Perkins and Jayne | Oakland | <i>Perkins St (Warwick to Orange)</i> <i>Jayne Ave (Perkins to Lee)</i> | 2,119 | 6" & 8" iPVC |
| Quigley Cluster | Oakland | <i>Quigley St (35th Ave to end)</i> <i>39th Ave (Quigley to Redding)</i> <i>Redding St (38th Ave to Maybelle)</i> <i>Loma Vista Ave (MacArthur to California)</i> <i>Kansas St (35th Ave to 38th Ave)</i> <i>39th Ave (Masterson to Bayo)</i> | 7,780 | 6" iPVC 12" ML&PCS |
| San Juan St | Oakland | <i>San Juan (Harrington to 38th Ave)</i> | 370 | 6" iPVC |

[†] Pipe Material: DI: Ductile-Iron | ERDIP: Earthquake Resistant Ductile-Iron Pipe | HDPE: High-Density Polyethylene | iPVC: Enhanced Polyvinyl Chloride | ML&PCS: Mortar-Lined and Plastic Coated Steel | PVC: Polyvinyl Chloride | STL: Steel

Continued: Table B – Pipeline IR Construction Projects, FY21

| Street | City | Limits | Length (feet) | Size & Material [†] |
|------------------------|-------------------------|--|---------------|------------------------------|
| Seneca St | Oakland | <i>Seneca St: Zone gate (10' path) to cul-de-sac, 6" pipe at Seneca Res</i> | 1,470 | 8" HDPE |
| Sunnyhills Rd II | Oakland Piedmont | <i>Sunnyhills Rd (Midcrest to zone gate on Indian Rd) Creed Rd (Trestle Glen to end) Trestle Glen (Park Blvd to Cavanaugh Ct)</i> | 1,821 | To be determined |
| Walnut Cluster | Oakland | <i>Walnut St (55th Ave to 6" Steel) 56th Ave (Walnut to end) 57th Ave (Walnut to end) Beal St (Walnut to end)</i> | 1,785 | 4" & 6" DI |
| 41st, 42nd, and Linden | Oakland Emeryville | <i>41st St (Adeline to Linden) Linden (41st St to 42nd St) 42nd St (Adeline to Linden)</i> | 1,134 | 6" & 8" DI |
| 109th Ave | Oakland/ San Leandro | <i>109th Ave (Sunnyside to Myers) Oak Voltaire Ave (Durant to 109th Ave) Oak Warwick Ave (Durant Ave to Broadmoor Blvd) San Leandro</i> | 2,740 | 6" & 8" iPVC |
| Las Aromas Cluster | Orinda | <i>La Espiral (Las Aromas to 109 La Espiral) Las Aromas (La Espiral East to Las Aromas PP) E Altarinda Dr (Las Cascades to E End)</i> | 3,945 | 12" & 6" ML&PCS |
| Tara Rd | Orinda | <i>Tara Road: Southwood Drive to Nonie Road</i> | 2,625 | 8" iPVC |
| Wildwood Ave | Piedmont Oakland | <i>Wildwood Ave (Grand Ave to Sylvan Way) Sylvan Way (Wildwood Ave to End)</i> | 1,610 | 8" iPVC |
| Manor Dr | Piedmont | <i>Manor Drive: Arroyo Ave to Cambridge Way</i> | 1,316 | 6" iPVC |
| 35th St Ph. 2 | Richmond | <i>35th Street: Esmond Ave to Cerrito Ave Garvin Ave: 33rd Street to 35th Street 33rd Street: Garvin Ave to Clinton Ave</i> | 2,665 | 6" iPVC |
| 46th & Nevin Ave | Richmond | <i>46th St (Wilson Ave to Nevin Ave) Nevin Ave (46th St to Wilson Ave)</i> | 730 | 6" STL |
| 6 th St | Richmond | <i>Pennsylvania to Lucas Ave</i> | 590 | 6" PVC |
| Lassen St Ph.1 | Richmond | <i>McBryde: San Pablo Ave to end Lassen Street: McBryde Ave to Esmond Ave McLaughlin Street: McBryde Ave to Esmond Ave Esmond Ave: San Pablo Ave to End Humboldt Street: McBryde Ave to Esmond Ave</i> | 4,960 | 6" iPVC & ML&PCS |

[†] Pipe Material: DI: Ductile-Iron | ERDIP: Earthquake Resistant Ductile-Iron Pipe | HDPE: High-Density Polyethylene | iPVC: Enhanced Polyvinyl Chloride | ML&PCS: Mortar-Lined and Plastic Coated Steel | PVC: Polyvinyl Chloride | STL: Steel

Continued: Table B – Pipeline IR Construction Projects, FY21

| Street | City | Limits | Length (feet) | Size & Material [†] |
|------------------|-------------|---|---------------|------------------------------|
| Lassen St Ph.2 | Richmond | <i>Lassen Street: McBryde Ave to Solano Ave McLaughlin Street: McBryde Ave to Solano Ave Solano Ave: San Pablo Ave to Humboldt Street Humboldt Street: McBryde Ave to Solano Ave Garvin Ave: San Pablo Ave to End</i> | 6,200 | 6" iPVC & ML&PCS |
| Mendocino St | Richmond | <i>Mendocino Street: Plumas Ave to Tehama Ave Tehama Ave: Shasta Street to Mendocino Street Shasta Street: Tehama Ave to Plumas Ave Sutter Ave: Carlson Blvd to San Pablo Ave Burlingame Ave: Shasta St to Mendocino St Plumas Ave: Shasta St to Mendocino St</i> | 4,140 | 6" iPVC |
| Rosewood Ave | Richmond | <i>S 41st St: Carlson Blvd to Potrero Ave Rosewood Ave: S 41st St to S 43rd St S 43rd St: Carlson Blvd to Potrero Ave Sycamore Ave: S 43rd St to S 45th St S 45 St: Carlson Blvd to S 45 St</i> | 3,185 | 6" iPVC |
| S 33rd St | Richmond | <i>Waller Ave to Ohio Ave</i> | 855 | 6" PVC |
| Tunnel Ave | Richmond | <i>E Richmond Ave Nicholl Ave to Scenic Ave</i> | 480 | 6" STL & PVC |
| Ventura St | Richmond | <i>Ventura Street: Sierra Ave to Dimm Street Dimm Street: Ventura Street to Humboldt Street</i> | 760 | 6" ML&PCS |
| Andover Cluster | San Leandro | <i>Edgemoor Street: Manor Blvd to Fargo Ave Dewey Street: Manor Blvd to Fargo Ave Andover Street: Manor Blvd to Fargo Ave</i> | 3,012 | 6", 8" iPVC |
| Endicott Cluster | San Leandro | <i>Endicott St (Manor to end) Crosby St (Manor to 14959 Crosby) Garside Ct (Crosby to end)</i> | 1,890 | 6" iPVC |
| Merle Cluster | San Leandro | <i>Group 1: E Merle Ct (Alice Ave to W Merle Ct) W Merle Ct from (E Merle Ct to Dowling) Helen Ave (E Merle to Mitchell) Dowling (E Merle to Mitchell) Group 2: Chetland Rd (Oakes to Begier) Begier Ave (Chetland to Superior) Superior Ave (Begier to Oakes) Oakes Blvd (Superior to east end) Diehl Ave (Dutton to MacArthur)</i> | 6,600 | 4" & 6" iPVC |

[†] Pipe Material: DI: Ductile-Iron | ERDIP: Earthquake Resistant Ductile-Iron Pipe | HDPE: High-Density Polyethylene | iPVC: Enhanced Polyvinyl Chloride | ML&PCS: Mortar-Lined and Plastic Coated Steel | PVC: Polyvinyl Chloride | STL: Steel

Continued: Table B – Pipeline IR Construction Projects, FY21

| Street | City | Limits | Length (feet) | Size & Material [†] |
|----------------------------------|-------------------------------------|---|---------------|------------------------------|
| Dover Ave [‡] | San Pablo | <i>Dover Ave: Rumrill Blvd to 16th St</i> | 1,240 | 6" ML&PCS |
| Bonanza St Cluster | Walnut Creek | <i>Locust St: Civic Dr to Mt Diablo Blvd Bonanza St: Shuey Ave to N Main St</i> | 2,380 | 8" ML&PCS |
| Julianne Ct | Walnut Creek unincorporated (CC Co) | <i>Julianne Court: Montecillo Drive to End</i> | 485 | 8" iPVC |
| Lincoln Ave Cluster [‡] | Walnut Creek | <i>Lincoln Avenue (North Main Street to Carmel Drive) Carmel Drive (Lincoln Avenue to end of main) Carmel Court (Carmel Drive to end of main)</i> | 1,715 | 8" STL 8" PVC |

Large Diameter Pipeline Replacements

In FY21, the District will design and construct replacement projects for major water transmission pipelines, as identified in Table C.

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[†] Pipe Material: DI: Ductile-Iron / ERDIP: Earthquake Resistant Ductile-Iron Pipe / HDPE: High-Density Polyethylene / iPVC: Enhanced Polyvinyl Chloride / ML&PCS: Mortar-Lined and Plastic Coated Steel / PVC: Polyvinyl Chloride / STL: Steel

Table C – Large Diameter Pipeline Replacement Program Projects FY21

| Project | City/ County | Street | Limits | Size & Material[†] | Length (feet) | Proposed Method of Pipe Installation | Planned Design Schedule | Planned Construction Schedule |
|---|-------------------------|--|------------------------------|--|--------------------------|---|--|--|
| Summit Pressure Zone South Pipeline Replacement Phase 1 | Berkeley / Oakland | <i>Dwight Way R/W 1685, Clark Kerr Campus Piedmont Ave Forest Ave Claremont Blvd Garber St Tanglewood Rd Claremont Ave</i> | Dwight Way to Claremont Ave | 24” STL 12”, 22”, and 36” HDPE | 6,800 | trench | Design completion Nov 2020 | Start Apr 2021 End Aug 2022 |
| Wildcat Pipeline Improvement | Berkeley | <i>Stuart St Ellsworth St</i> | Benvenue Ave to Bancroft Way | 48” STL | 5,550 | trench | Design completed Aug 2019 | Start Feb 2020 End Dec 2021 |
| Wildcat Pipeline Improvement | El Cerrito | <i>Lynn Ave Ashbury Ave C St Behrens St Fairmount Ave Norvell St Lincoln Ave Richmond St Elm St Hill St</i> | San Carlos Ave To Liberty St | 6” STL 36” STL | 16,000 | trench | Design completion Jan 2021 | Start May 2021 End Aug 2023 |

[†]Pipe Material: HDPE: High-density polyethylene / STL: Steel

Continued: Table C – Large Diameter Pipeline Replacement Program Candidates FY21

| Project | City/ County | Street | Limits | Size & Material [†] | Length (feet) | Proposed Method of Pipe Installation | Planned Design Schedule | Planned Construction Schedule |
|---|-----------------|--|---|--|---------------|--|--|--------------------------------------|
| E 15 th St | Oakland | 10 th St: 4 th Ave to 7 th Ave 7 th Ave: 10 th St to 11 th St 11 th St: 7 th Ave to 12 th Ave 12 th Ave: 11 th St to 15 th St 15 th St: 12 th Ave to 25 th Ave 25 th Ave: 15 th St to 12 th St 12 th St: 25 th Ave to 26 th Ave | 4 th Ave to 26 th Ave | 20" & 36" STL | 12,500 | trench | Design completion Nov 2021 | Start Feb 2022 |
| D Street Pipeline Replacement | Oakland | 69 th Avenue Rusdale St 82 nd Ave D St 85 th St G Street | International Blvd to 90 th St | 24" STL | 7,500 | trench | Start Sep 2020 Design completion Sep 2022 | Start Apr 2023 |
| Oakland Inner Harbor Pipeline Crossing | Oakland Alameda | Madison St Jackson St 4 th St Fallon St Embarcadero Marina Village Pkwy Challenger Dr Atlantic Ave Sherman St | 8 th St (Oakland) to Lincoln Ave (Alameda) | 24" STL (Oakland) 32" HDPE (Alameda) 32" HDPE (Oakland Inner Harbor) | 12,900 | horizontal directional drilling (HDD) and trench | Design completed Dec 2020 | Start Summer 2021 End Winter 2022 |
| Estudillo Ave Pipeline Replacement (Bayfair PP Replacement) | San Leandro | Estudillo Ave | MacArthur Blvd to new Bayfair PP | 20" HDPE 16" STL | 2,600 | slipline (1,500 LF) and trench (1,100 LF) | Design completed Mar 2019 | Start Sept 2019 End Jun 2021 |

[†]Pipe Material: HDPE: High-density polyethylene | STL: Steel

System Improvements

In FY21, the District anticipates the design and construction of the following system improvement projects as presented in Table D.

Table D – System Improvements - Design and Construction Activity for FY21

| Project | City | Length (feet) | Size & Material | Design | Construction |
|---|-------------|------------------------|-----------------|-----------|--------------|
| Woodmont Transfer Services (Grizzly Peak to Vistamont Ave) | Berkeley | Transfer Services Only | N/A | FY21 | FY21 |
| Maloney PP & Sobrante WTP Specification No. 2135 (Valley View Road n/o D Avila Way) | El Sobrante | 60 | 12" STL | FY19 | FY21 |
| Maud Ave (Maud Regulator – South of Romagnolo to Kelly St) | Hayward | 1,600 | 8" PVC | FY20 | FY21 |
| R/W 687 Abandonment and Replacement (South of Highland Ct) | Lafayette | 500 | 16" STL | FY21 | FY22 |
| 36th Ave (E. 8th to end) | Oakland | Service transfers only | N/A | FY21 | FY21 |
| Excelsior Ave Improvements | Oakland | 2,000 | 8" TBD | FY21 | FY22 |
| Grand Ave (Weldon Ave to Lake Merritt) | Oakland | 2,000 | 8" & 12" TBD | FY22 | FY23 |
| Ocean View Drive | Oakland | 510 | 8" STL | FY20 | FY21 |
| Happy Valley PP - Miner Road (Lombardy to Tiger Tail) | Orinda | 2,500 | 16" STL | FY20/FY21 | FY21/FY22 |
| Madera Lane Pipeline Extension | Orinda | 300 | 6" PVC | FY20-FY21 | FY21 |
| Westside PP Replacement Discharge and Suction Line (Spec 2168) | Orinda | 500 | 12" & 8" STL | FY20-FY21 | FY22-FY23 |
| Westside PP Replacement Pipeline Improvements – El Toyonal / La Encinal (Spec 2149) | Orinda | 6,600 | 12" HDPE & STL | FY19/FY20 | FY20/FY21 |
| Pershing Dr (between Peralta Ave and Lorraine Blvd) | San Leandro | 250 | 6" PVC | FY21 | FY22 |

Pipeline Relocations

In FY21, the District anticipates the design and construction of the following pipeline relocation projects as presented in Table E. The table below identifies relocation projects in which design was completed (or is currently in progress). Note that future projects are highly dependent on actions of outside agencies and work schedules can vary significantly. An (*) indicates that the project has not been mapped as part of the FY21 ArcGIS dataset.

Table E – Anticipated Pipeline Relocation Projects FY21

| Project | City/County | Length (feet) | Size & Material | Agency/Applicant | Design | Construction |
|--|-------------------------------|-----------------------------|-------------------|-------------------------------------|--------|--------------|
| Hesperian Boulevard Street Improvements | Alameda County | 50 | 8" STL | Alameda County | FY21 | FY21 |
| Mission Boulevard Street Improvements | Alameda County | 4,000 | 8" STL | Alameda County | FY21 | FY22 |
| Washington Ave | Albany | 215 | 8" IPVC | City of Albany | FY20 | FY21 |
| E 14th Street Improvements* | Ashland, Alameda County | 830 | 8" STL | Alameda County | FY19 | FY20 |
| San Pablo Ave Green Stormwater Spine (SPAGSS) – El Cerrito | El Cerrito | 375 | 8" STL | Association of Bay Area Governments | FY19 | FY20/FY21 |
| SPAGSS - Emeryville | Emeryville, Oakland, Caltrans | 330 | 8" STL | Association of Bay Area Governments | FY19 | FY20/FY21 |
| Hilltown | Hercules | 24" - 1,450; 36" - 1,450 | 24" STL & 36" STL | DK Engineering | FY21 | FY22 |
| Sycamore Crossings | Hercules | 1,450 | 24" STL | Sycamore Crossing Lane Developers | FY21 | FY22 |
| 42nd and High Street Relocations | Oakland | 1,500 & 850 | 8" & 12" TBD | City of Oakland | FY21 | FY22 |
| Laney College Learning Center | Oakland | 420 | 36" HDPE | CSW Stuber-Stroeh | FY21 | FY22 |
| Maybelle Avenue | Oakland | 80 | 6" STL | City of Oakland | FY21 | FY21 |
| Oak Knoll Development | Oakland | 20 | 8" STL | Goodfellow Brothers | FY21 | FY21 |
| Hampton Road & Crocker Avenue | Piedmont | 195 | 6" STL | City of Piedmont | FY21 | FY21 |
| Appian Way | Pinole | 500 | 8" PVC | City of Pinole | FY20 | FY21 |

| Project | City/County | Length (feet) | Size & Material | Agency/Applicant | Design | Construction |
|-----------------------------------|-------------|---------------|-------------------|-------------------|-----------|--------------|
| Yellow Brick Road Urban Greening* | Richmond | 800 | 6" & 8" TBD | City of Richmond | FY21 | FY21/FY22 |
| Rumrill Blvd (Complete Streets) | San Pablo | 2,050 | 12", 8", & 6" STL | City of San Pablo | FY20/FY21 | FY21/FY22 |

Rate Control Stations and Regulators

In FY21, the District plans to design and construct the following distribution system pressure regulators and rate control stations as presented in Table F. Construction activity affecting paved streets will vary, depending on the layout of the final design.

Table F – Regulator and Rate Control Station Construction Projects FY21

| Street | City | Regulator/RCS Name | Vicinity | Phase |
|----------------------|---------------|---|--|--------------|
| Cull Canyon Rd | Castro Valley | Cull Creek Regulator | <i>50 ft south of Heyer Ave</i> | Design |
| Villareal | Castro Valley | Villareal Regulator | <i>2790 ft south of La Mirada Dr</i> | Design |
| Circle Dr | El Sobrante | Circle Regulator | <i>5720 Circle Dr</i> | Design |
| Monte Verde Dr | El Sobrante | Orion Regulator | <i>6601 Monte Verde Dr</i> | Design |
| Oak St | Hayward | Oak Rate Control Station | <i>120 feet north of Grove Wy</i> | Construction |
| 82 nd Ave | Oakland | 82 nd Ave Rate Control Station | <i>3000 82nd Ave</i> | Design |
| Bancroft Ave | Oakland | 98 th Rate Control Station | <i>100 feet north of 98th Ave</i> | Construction |
| Bancroft Ave | Oakland | Sequoia Rate Control Station | <i>100 feet north of 98th Ave</i> | Construction |
| Campus Dr | Oakland | Campus Regulator | <i>Campus Dr at Crystal Ridge Ct</i> | Design |
| Campus Dr | Oakland | Keller Regulator | <i>13808 Campus Dr</i> | Design |
| Painted Pony Rd | Richmond | Painted Pony Regulator | <i>Painted Pony Rd at Clearwater Ct</i> | Construction |
| Gramercy Dr | San Leandro | Gramercy Regulator | <i>15939 Gramercy Dr</i> | Design |

Capital Improvement Projects (Other)

This category includes water treatment plant (WTP), pumping plant (PP), and reservoir improvements or demolition. Projects in this category may have associated pipeline renewal or replacements in conjunction with the planned construction activities. Projects with construction anticipated to begin in FY21 are provided for partner agency reference in Table G.

Table G- Planned Capital Improvement Projects Construction FY21

| Project Name | City | Description | Construction |
|--|-------------|---|---------------------|
| San Ramon PP Drainage Improvements | Danville | Provide drainage improvements around perimeter of San Ramon Pumping Plant (PP) to intercept groundwater infiltration into the below-grade PP. | FY21-FY22 |
| Sobrante WTP Control System Improvements | El Sobrante | Replacement of existing programmable logic controllers (PLCs) and Moore controller plant controls system. Installation of District furnished distributed controls system (DCS) control cabinets, testing, and wiring of new DCS units. | FY21-FY22 |
| Sobrante WTP Interim Maintenance and Safety Imp's | El Sobrante | Demolition and replacement of reclaim roofs, rebuild clarifier roofs, demolition and replacement of operations building roofs. Demolition and replacement of existing flocculator walls, aeration valves, and filter wash control valves. | FY21-FY22 |
| San Pablo Reservoir Hypolimnetic Oxygen System (HOS) | El Sobrante | Installation of a hypolimnetic oxygenation system. Includes a submerged pumping system, speece cone, motor control center (MCC), and incoming PG&E feed. Also includes roadway modification, equipment foundations, and requires much of the work be performed on a floating barge. | FY21-FY23 |
| Seneca Reservoir Demolition | Oakland | Demolition of the Seneca Reservoir facility and preparation of the property for sale. Specific scope items include: 1) Demolishing and removing the Seneca Reservoir roof and framing, concrete columns and floor panels, inlet/outlet tower, piping and appurtenances. All concrete material is to be crushed, recycled, and left onsite, 2) Abandoning approximately 300 feet of 36-inch inlet/outlet pipeline, and installing a trash trap at the inlet of the 30-inch-diameter overflow drain. In support of this demolition, approximately 1,470 ft of pipe will be replaced in Seneca St. | FY21-FY22 |

Continued: Table G- Planned Capital Improvement Projects Construction FY21

| Project Name | City | Description | Construction |
|---|---|---|---------------------|
| USL WTP Control System Improvements | Oakland | Replacement of existing controls PLC and Moore controller plant controls system. Installation of District furnished DCS control cabinets, testing, and wiring of new DCS units. | FY21-FY22 |
| Happy Valley and Sunnyside PP and Miner Road Pipeline | Orinda | Construction of two new pumping plants and new 16-inch discharge pipeline on Miner Road (Phase 2) | FY21-FY23 |
| Westside PP Relocation | Orinda | Relocation of Westside PP, installation of Encinal regulator, and demolition of Encinal Reservoir and PP | FY21-FY23 |
| FY21 Steel Tanks (Castaneda 1 & 2 and Glen Res Demo) | San Ramon (Castaneda 1 & 2) Lafayette (Glen) | Recoating of steel reservoirs and others improvements (valve pit improvements, exterior access stairs, access road improvements, etc.) | FY21-FY24 |
| Inline WTP CO ₂ Addition | Walnut Creek, Lafayette, Orinda | Installation of carbonic acid feed system, chemical feed pumps, MCC's, and chemical diffuser system. Construction of foundation support for carbonic acid feed, carbon dioxide storage tank, and modification of existing MCC's for power feed. | FY21-FY22 |
| WTP Chemical Safety Systems Improvements | Walnut Creek, Lafayette, Orinda, Oakland, El Sobrante | Replacement of all chemical piping, installation of new tanks, HVAC equipment, leak detection systems, installation of concrete vaults, integration into controls system, and fabrication of PLC panels for chemical feed control. Note that Orinda WTP improvements will be included in a separate contract to be awarded in FY22. | FY21-FY25 |

Polybutylene Service Lateral Replacements

Customer service laterals are typically short lengths of pipe, less than 25 feet, which connect the water main below the street to the water meter at each customer location. Polybutylene service laterals are replaced on an emergency basis if they fail and during the course of pipeline repair and replacement work if the polybutylene lateral connection is exposed. In these cases, the service lateral is replaced with a new copper service lateral.

The District currently does not have any planned replacement projects scheduled for polybutylene service laterals apart from the emergency repair and previously discussed pipeline IR work.

Special Projects (Recycled Water)

The District will complete the construction of approximately 5 miles of recycled water system pipeline in FY21. Additional recycled water projects were designed and construction documents will be released for bidding as grant funds become available to the District. Project extents have

only been finalized for the Gilman Interchange Recycled Water Pipeline. Other project extents are still under discussion, but available information is summarized where known. An “*” indicates that the project has not been mapped as part of the FY21 ArcGIS dataset. Recycled water pipeline projects are identified in Table H.

Table H- Special Projects Requiring Construction in FY21

| City | Project | Description | Design | Construction |
|----------------------|--|---|-----------|--------------|
| Berkeley | East Bayshore Recycled Water Project –Gilman Interchange Recycled Water Pipeline | Install approximately 2,000 feet of 12-inch pipeline within East Shore Frontage Road from Page to Gilman & along Gilman while Alameda County Transportation Commission (ACTC)/Caltrans/City of Berkeley install a bike path & improve the Gilman/East Shore Highway Intersection. ACTC is lead agency; District to provide pipeline drawings & specs to be included in construction specifications. | FY17-FY21 | FY22-FY23 |
| Albany/Berkeley* | East Bayshore Recycled Water Project – Recycled Water Transmission Pipeline | Design and install approximately 3 miles of 12-inch to 16-inch pipeline along Seventh Street in Ashby to connect and extend the existing recycled water pipeline in Emeryville with the recycled water pipeline on Buchanan in Albany. | FY22-FY25 | FY25-FY27 |
| Berkeley/Emeryville* | East Bayshore Recycled Water Project –Ashby Interchange Recycled Water Pipeline | Install approximately 2,000 feet of 12-inch pipeline to cross Ashby extending the recycled water pipeline on Christie north when ACTC/Caltrans improves the Ashby Interchange. ACTC is the lead; District is to work with ACTC to be included in the project. | FY22-FY23 | FY23-FY26 |