MID-PENINSULA WATER DISTRICT

Capital Improvement Program

FY 24/25 Update

Supersedes FY 19/20 Update

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TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

1.0 CIP DEVELOPMENT HISTORY

In 2014 as part of its long-term strategic planning, the Mid-Peninsula Water District (District) undertook a comprehensive review and assessment of its water system infrastructure and facilities. This significant challenge involved a team of senior operations personnel with many years of District institutional knowledge, management with many years of public utility and water operations experience and master planning, and the District Engineer experienced with water system operations and infrastructure/facilities design and engineering. The goal was to develop a comprehensive, prioritized Capital Improvement Program (CIP) and functional hydraulic model.

Following development and hydraulic model calibration in late 2015, the District generated a comprehensive list of 92 projects estimated at approximately $52 Million (2015 dollars). In May 2016, the District adopted the Comprehensive System Analysis and Capital Improvement Program FY 16/17 Update in addition to authorizing a 5-year funding plan of $25 Million. Most projects were based on distribution system / fire flow analyses in addition to those identified by District personnel from maintenance / operational perspectives. Exhibits illustrate each project's location, project background/existing conditions, proposed improvements, benefits, and budget.

The District updated the FY 16/17 report in FY 19/20 adding 10 additional projects. This FY 24/25 update adds an additional 10 projects and updates the FY 19/20 budget to reflect 2024 dollars.

Please refer to Appendix A for a CIP summary and Appendix B for programmed project exhibits. This update supersedes previous updates.

2.0 FY 24/25 CIP UPDATE

2.1 FY 24/25 BUDGET

The original FY 16/17 Update construction budgets were based on bid tabulations for contracts awarded in 2015. Since 2015 construction costs dramatically increased due to a highly saturated construction market with overly abundant work with the same pool of contractors. As a result, costs drastically outpaced generally accepted annual inflation rates of 3-4%. The average cost of 8" pipe installation increased from $250/LF (2015) to $450/LF (2020). This was further evident by the 2019 bid results for the District's Notre Dame Ave, Cliffside Ct, Tahoe Dr Area Water Main Project. Costs have since increased as part of this FY 24/25 due to ongoing effects from the pandemic along with higher-than-average inflation over the past few years.

Construction budgets for water main projects are generally separated into three categories: 1) fire hydrants, 2) service connections, and 3) water main which includes a roll up of all other costs associated with the project such as blowoffs, air release valves, vaults, road restoration, etc. The 2020 CIP budgets were based on actual 2019 bid results for water main installation projects both within the District and nearby jurisdictions. The budgets were also expanded to include construction inspection, approximately 10% of the overall construction cost assuming bundled projects.

The FY 24/25 CIP budgets were generated in a similar fashion to both previous CIP report iterations.

2.2 FY 24/25 CIP ADDITIONS

Since the FY 19/20 Update, the District identified 10 new projects and added them to the CIP list. Projects include additional water main replacements due to observed maintenance issues, structural / seismic modifications / coating of storage tanks, among others. Please refer to Table 1 for FY 24/25 CIP additions and subsequent sections for project descriptions.

Table 1 – FY 24/25 CIP Additions

CIP	DSA	Project Name	Budget (2024)
24-01	n/a	Erlin Dr Improvements	$745,000
24-02	n/a	Arbor Ave Improvements	$1,060,000
24-03	n/a	Middle Rd Improvements	$2,105,000
24-04	n/a	Shelford Ave Improvements	$960,000
24-05	n/a	Marsten Ave Improvements	$150,000
24-06	n/a	Hartford Ave Improvements	$785,000
24-07	n/a	Folger Property Improvements	$4,590,000
24-08	n/a	Exborne Tank (West) Recoating	$675,000
24-09	n/a	Hallmark Tank (North) Retrofit/Recoating	$3,050,000
24-10	n/a	West Belmont Tank (North) Recoating	$130,000
		Total:	**$14,250,000**

Please refer to the CIP Zone breakdowns later in this report for brief descriptions of each project. Project exhibits in Appendix B provide additional description and background.

2.3 FY 19/20 UPDATE VS FY 24/25 UPDATE

At the time of the FY 19/20 Update, the District completed 13 projects with actual expenditures of $6 Million; had 5 projects under construction, and identified 84 remaining projects either classified as Under Design or Nonprioritized for an additional total estimated expenditure (including construction, engineering, contingency) of $80 Million.

Since the FY 19/20 update, the District completed an additional 15 projects with actual expenditures of $12 Million with an additional estimated expenditures of $6 Million allocated to current construction projects. After completion of the current construction projects, the District will have expended approximately $24 Million over the course of 30 projects. The remaining projects decreased to 78 projects valued at approximately $95 Million.

Although the overall projects decreased slightly, the overall CIP budget increased to $95 Million from $80 Million. Reasons include the unexpected flooding of the Dairy Lane Operations Center and resulting reconstruction needs of the facility ($13 Million), the addition of the Folger Property Emergency Center ($5 Million), and higher than usual inflation.

The District also created and implemented ranking criteria for the nonprioritized water main replacement projects as part of this update. The ranking criteria included metrics involving benefits to the immediate area or system, pipe material, pipe age, number of services and hydrants affected, static pressures, among others. Leak data was also considered, however is currently under analyzation with the District's new GIS system and was not included in the ranking. Refer to Appendix D for the ranking criteria.

3.0 CIP PROJECTS - COMPLETED

Since the FY 19/20 Update, the District completed the projects shown in Table 2. Please refer to Appendix C for project exhibits. Total expenditures are inclusive of planning, design, construction, and construction support/inspection.

Table 2 - CIP Projects - Completed

CIP	Project Name	Date Comp	Total Expenditures*
15-22	Arthur Ave Improvements	2016	$696,905
15-23	Dekoven/Hallmark Tanks Seismic Evaluation	2016	$88,748
15-30	Alameda de las Pulgas Improvements	2016	$655,765
15-31	Monserat Ave CC Abandonment	2017	$10,000
15-14	Mezes Ave Improvements	2018	$291,421
15-43	North Rd CC / Davey Glen Improvements	2018	$1,038,664
15-44	South Rd Abandonment	2018	$465,856
15-51	Francis Ave / Ct Improvements	2018	$513,817
15-53	Academy Ave / Belburn Dr Improvements	2018	$325,754
15-65	Folger Dr Improvements	2018	$605,765
15-73	Karen Rd Improvements	2018	$555,232
15-74	Malcom Ave Improvements	2019	$195,027
15-87	Hillcrest Pressure Regulating Station	2019	$853,323
15-06	Zone 5 Fire Hydrant Upgrades	2020	$39,975
15-10	Notre Dame Ave Loop Closure	2020	$1,231,347
15-28	Tahoe Dr Area Improvements	2020	$867,732
15-38	Cliffside Ct Improvements	2020	$153,392
15-49	Mid-Notre Dame Ave Abandonment	2020	$341,931
15-60	Escondido Way CC Abandonment	2021	$6,500
15-72a	SR 101 Crossing at PAMF Hospital – Phase 1	2021	$846,002
15-86	Folger Pump Station Demolition	2022	$160,265
15-29	Belmont Canyon Rd Improvements	2023	$659,500
15-40	Hastings Dr Improvements	2023	$55,020
15-76	El Camino Real Improvements	2023	$3,398,999
15-88	Vine St (Zone 5) Improvements	2023	$1,033,752
20-01	Hastings Dr Service Connection Replacements	2023	$778,486
20-08	SCADA Improvements	2023	$240,030
20-07	Harbor Boulevard Water Main Replacement	2024	2,582,017
		Total:	**$18,691,225**

**Unaudited totals. Subject to change.

15-06 – Zone 5 Fire Hydrant Upgrades – Added 4 hydrants along Solana Drive and Altura Way improving fire flow protection and flushing operations.

15-10 – Notre Dame Avenue Loop Closure – Replaced/newly installed a combination of 2,230 LF of 8" DIP to eliminate dead ends, replaced aging / undersized infrastructure, and improved fire flows.

15-14 – Mezes Avenue Improvements – Replaced 310 LF of 4" PVC with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-22 – Arthur Avenue Improvements – Replaced/newly installed a combination of 880 LF of 8" DIP to replace aging / undersized infrastructure, eliminated two dead ends between Zone 2 and Zone 3, installed a PRV connection between the Zones, and improved fire flows.

15-23 – Dekoven / Hallmark Tanks Seismic Evaluation – Performed a structural analysis to ensure the tanks will remain operational after a 975-year earthquake.

15-28 – Tahoe Drive Area Improvements – Replaced 900 LF of 4" CIP with 8" DIP to replace aging / undersized infrastructure and improved fire flows.

15-29 – Belmont Canyon Road Improvements – Replaced 900 LF of 4" – 8" CIP with 8" DIP to eliminate a local bottle neck, replaced aging infrastructure, and improved fire flows.

15-30 – Alameda de las Pulgas Improvements – Replaced 1,455 LF of 6" - 8" CIP with 8" DIP to eliminate bottlenecks, replace aging infrastructure prone to breaks, minor reconfigurations to simplify system.

15-31 – Monserat Avenue Cross Country Abandonment – Abandoned 355 LF of 6" CIP to eliminate an inaccessible cross-country water main.

15-38 – Cliffside Court Improvements – Replaced 330 LF of 4" PVC with 8" DIP to replace aging / undersized infrastructure and improved fire flows.

15-40 – Hastings Drive Improvements – Abandoned 550 LF of 4" CIP/PVC.

15-43 - North Road Cross Country / Davey Glen Road Improvements – Abandoned 400 LF of cross country 6" CIP and replaced 1,400 LF of 6"-8" CIP with 8" DIP to eliminate the cross-country water main, reduce district maintenance, and replace aging infrastructure.

15-44 - South Road Abandonment – Abandoned 1,325 LF of 4" CIP paralleling an 8" PVC and reconnected side streets to the 8" PVC to reduce maintenance, eliminate aging infrastructure and improve fire flows.

15-49 – Mid-Notre Dame Avenue Improvements – Abandoned 650 LF of 6" CIP paralleling an 8" CIP to remove aging infrastructure and reduce maintenance.

15-51 – Francis Avenue / Court Improvements – Replaced 830 LF of 4" PVC with 8" DIP and added an additional fire hydrant to eliminate undersized infrastructure and improve fire flows.

15-53 – Academy Avenue / Belburn Drive Improvements – Abandoned 600 LF of 4" PVC paralleling a 6" CIP and replaced 300 LF of 4" PVC with 8" DIP to eliminate undersized infrastructure and improve fire flows.

15-60 – Escondido Way Cross Country Abandonment – Abandoned 300 LF of 4" CIP located between two homes to eliminate aging / undersized infrastructure.

15-65 – Folger Drive Improvements – Replaced 830 LF of 6" CIP with 8" / 10" DIP to replace aging infrastructure and improve fire flows.

15-72A - SR 101 Crossing at PAMF Hospital – Phase 1 – Abandons 500 LF of 12" AC under SR 101 in favor of a new 12" PVC crossing near PAMF eliminating aging infrastructure, dead ends, creates a looped system, and constructs a serviceable underground inter-tie utility vault. Phase 1 installed 700 LF of 12" PVC along the PAMF easement.

15-73 – Karen Road Improvements – Replaced 800 LF of parallel 12" AC and 8" CIP with a single 8" PVC to replace aging infrastructure and minimize maintenance.

15-74 - Malcolm Avenue Improvements – Installed 550 LF of 8" DIP to allow a Zone 1 and Zone 2 boundary reconfiguration improving static pressures, eliminated 4 dead ends, and created looped systems in both Zones.

15-76 - El Camino Real Improvements – Replaced 4,100 LF of 8" CIP with 8" DIP to replace aging infrastructure, reduce maintenance, and improve fire flows.

15-86 – Folger Pump Station Site Demolition – Demolished the existing pump station building at the abandoned Folger Pump Station site.

15-87 – Hillcrest Pressure Regulating Station – Installed a pressure regulating station off the District's Zone 1 connection to SFPUC to eliminate Zone 1 pressure fluctuations.

15-88 – Vine Street Improvements – Replaced 1,400 LF of 6" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

20-01 – Hastings Drive Service Connection Replacements – Replaced 119 polyethylene services with copper pipe per the District's standard detail.

20-07 – Harbor Boulevard Improvements – Replaces 2,100 LF of 12" AC water main with 12" PVC due to extensive leaks and repairs.

20-08 – SCADA Improvements – Replaced the old SCADA system with a new modern cloud-based system.

4.0 CIP PROJECTS - UNDER CONSTRUCTION

The following projects are currently under construction.

Table 3 – CIP Projects - Under Construction

CIP	Project Name	Date Comp	Construction Budget*	As-Bid**
15-75a	Old County Rd Improvements – Phase 1*	2024	$2,722,000	$3,942,300
15-79	F St Improvements*	2024	$204,000	$30,000
15-82	Ralston Ave Improvements	2024	$308,000	$445,000
		Total:	**$3,234,000**	**$4,417,300**

*Construction budgets only.
**Unaudited totals.

15-75A - Old County Road Improvements -Phase 1 – Abandons 6,475 LF of parallel water mains and installs 3,700 LF of 8" PVC to replace aging infrastructure, reduce maintenance, and improve fire flows. Phase 1 includes work between Ralston Avenue and Bragato Road and all planning and design.

15-79 – F Street Improvements – Installs 400 LF of new 8" DIP to replace an out-of-service 10" CC with an unknown break location, relocates District facilities out of private property, increases system redundancy. This project was revised to an emergency bypass system.

15-82 - Ralston Avenue Improvements – Replaces 500 LF of 6" CIP with 8" PVC to replace aging infrastructure.

5.0 CIP PROJECTS – REMAINING BY ZONE

The projects presented in this section include unconstructed projects or those currently under design. Costs reflected in the following tables represent 2024 budgets inclusive of construction, planning, design, construction support, construction inspection, and contingency costs for each specific project.

Table 4 – CIP Projects – Remaining Costs by Zone

Zone	Number of Projects	Cost
1	13	$11,515,000
2	24	$22,115,000
3	12	$20,670,000
4	1	$1,470,000
5	7	$3,510,000
6	2	$1,050,000
7	5	$5,185,000
8	8	$5,715,000
9	0	$0
DW	6	$19,765,000
Total	**78**	**$ 90,995,000**

Table 5 – CIP Projects - Under Design

CIP	DSA	Project Name	Budget (2024)
15-09	012	Dekoven Tank Utilization Project	$2,045,000
15-19	022	Oak Knoll Dr Improvements	$1,435,000
		Total:	**$3,480,000**

15-09 – Dekoven Tank Utilization Project – A replacement / new installation combination of 2,300 LF of 12" DIP allowing abandonment of two cross country water mains and zone wide fire flow improvement.

15-19 – Oak Knoll Drive Improvements –Replaces 920 LF of 4" PVC with 8" DIP, relines or installs 350 LF 8" HDD DIP to reduce a long dead end, replace aging / undersized infrastructure, and improve fire flows.

Table 6 - Zone 1 CIP Projects

CIP	DSA	Project Name	Budget (2024)
15-68	073	Wessex Way Dead End Improvements	$375,000
15-69	074	Sussex Ct Improvements	$175,000
15-70	075	Shoreway Rd Improvements	$285,000
15-71	076	Wessex Way Loop Improvements	$250,000
15-72B	077	SR 101 Crossing at PAMF – Phase 2*	$2,765,000
15-75B	080	Old County Road Improvements – Phase 2*	$2,065,000
15-77	082	Sixth Ave (Zone 1) Improvements	$280,000
15-78	083	Civic Ln Improvements	$1,495,000
15-80	085	Bragato Rd Improvements	$785,000
15-81	086	Sixth / O'Neill Ave Improvements	$2,470,000
15-84	n/a	Ralston Ave Regulator Relocation	$415,000
15-85	n/a	O'Neill Slough Bridge Crossing Assessments	$60,000
20-03	n/a	Laxague Dr 18” CCP Abandonment	$95,000
		Zone 1 Total:	**$11,515,000**

*Project currently under design.

Brief descriptions of the Zone 1 projects follow. Please refer to the corresponding exhibits in Appendix B for more detailed descriptions and backgrounds.

15-68 - Wessex Way Dead End Improvements – Replaces 250 LF of a dead end 4” PVC with 8” PVC to replace aging / undersized infrastructure and improve fire flows.

15-69 - Sussex Court Improvements – Replaces 150 LF of a dead end 4” PVC with 8” PVC in addition to a new fire hydrant to replace aging / undersized infrastructure and improve fire flows.

15-70 - Shoreway Road Improvements – Abandons 850 LF of 8” AC paralleling a 12” PVC to eliminate aging infrastructure and reduce maintenance.

15-71 - Wessex Way Loop Improvements – Eliminates an 825 LF 6” PVC dead end by installing 250 LF of 8” PVC to loop the water main within the Sterling Place Development, provides system redundancy, improves fire flows, and improves water quality.

15-72B - SR 101 Crossing at PAMF Hospital – Phase 2 – Abandons 500 LF of 12” AC under SR 101 in favor of a new 12” PVC crossing near PAMF eliminating aging infrastructure, dead ends, creates a looped system, and constructs a serviceable underground inter-tie utility vault. Phase 2 installs 400 LF of !2” PVC under SR 101 and 1,200 LF of 8” PVC along Shoreway Road.

15-75B - Old County Road Improvements -Phase 2 – Abandons 6,475 LF of parallel water mains and installs 3,700 LF of 8” PVC to replace aging infrastructure, reduce maintenance, and improve fire flows. Phase 1 includes work between Ralston Avenue and Marine View Avenue. Planning and design included under Phase 1.

15-77 - Sixth Avenue (Zone 1) Improvements – Installs 200 LF of 8" DIP and a 6" PRV to eliminate 4 dead ends, provide Zone 1 redundancy with a Zone 2 connection, and to improve water movement.

15-78 – Civic Lane Improvements – Replaces 1,900 LF of various sized water main with new 8" DIP to replace aging infrastructure, shorten a dead end, loop the water main, and improve fire flows.

15-80 – Bragato Road Improvements – A replacement / new installation combination of 1,000 LF of 8" PVC to replace aging infrastructure, shorten a dead end, loop the water main, and improve fire flows.

15-81 - Sixth / O'Neill Avenue Improvements – Abandons 1,400 LF of 4"-8" CIP/PVC and replaces 1,500 LF of 18" CC with DIP to eliminate parallel water mains, reduce maintenance, and improve fire flows.

15-84 – Ralston Avenue Regulator Relocation – Relocates the regulating station to a more accessible location.

15-85 – O'Neill Slough Bridge Crossing Assessments – Assesses existing water main conditions, their associated suspension systems, and seismic resistance.

20-03 – Laxague Drive 18" CCP Abandonment – Abandons 2,000 LF of 18" CCP to prevent the potential of dead-end water from feeding back into the system and to improve water quality.

Table 7 - Zone 2 CIP Projects

CIP	DSA	Project Name	Budget (2024)
15-41	042	Mills Ave Improvements	$370,000
15-42	043	North Rd Improvements	$370,000
15-45	046-049	Hainline Dr and Vicinity Improvements	$1,595,000
15-46	050	Miramar Terrace Improvements	$1,135,000
15-47	051	Virginia Ave Improvements	$885,000
15-48	052	Willow Ln Improvements	$540,000
15-50	054	Fairway Dr Improvements	$1,210,000
15-52	056	Chevy / Clee St Improvements	$740,000
15-54	058	Villa Ave Improvements	$1,420,000
15-55	059	Covington Rd Improvements	$920,000
15-56	060	Carlmont Dr Improvements	$300,000
15-57	061	Alomar Ave Improvements	$670,000
15-58	062	Fernwood Way Improvements	$750,000
15-59	063	Valdez Ave Improvements	$910,000
15-61	066	Chula Vista Dr Improvements	$715,000
15-62	067	Sixth Ave Improvements	$1,975,000
15-63	069	Lower Notre Dame Ave Improvements	$1,515,000

CIP	DSA	Project Name	Budget (2024)
15-64	070	Tierra Linda Improvements	$85,000
15-66	071	Vine St (Zone 2) Improvements	$640,000
15-67	n/a	Village Dr Area Improvements	$1,445,000
20-04	094	Laurel Ave Cross-Country Abandonment	$85,000
24-02	n/a	Arbor Ave Improvements	$1,060,000
24-03	n/a	Middle Road Improvements	$2,105,000
24-08	n/a	Exborne Tank (West) Recoating	$675,000
		Zone 2 Total:	**$22,115,000**

Brief descriptions of the Zone 2 projects follow. Please refer to the corresponding exhibits in Appendix B for more detailed descriptions and backgrounds.

15-41 - Mills Avenue Improvements – Replaces 280 LF of 4" CIP with 8" DIP and adds an additional fire hydrant to replace aging / undersized infrastructure and improve fire flows.

15-42 - North Road Improvements – Abandons 500 LF of 8" CIP paralleling an 8" PVC and relocates services to the 8" PVC to eliminate aging infrastructure and reduce maintenance.

15-45 – Hainline Drive and Vicinity Improvements – Abandons 400 LF of cross country 4" CIP, replaces 1,750 LF of 4" CIP with 8" DIP along with additional hydrants to eliminate a cross-country water main and to improve fire flows.

15-46 – Miramar Terrace Improvements – Replaces 1,250 LF of 4" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-47 – Virginia Avenue Improvements – Abandons 210 LF of cross country 6" CIP/PVC and replaces 970 LF of 6" CIP with 8" DIP to abandon an inaccessible cross-country water main, replace aging infrastructure, and improve fire flows.

15-48 – Willow Lane Improvements – Abandons 230 LF of cross country 4" CIP in favor of a new 600 LF 8" DIP located within the roadway and adds a fire hydrant to eliminate a cross-country water main and improve fire flows.

15-50 – Fairway Drive Improvements – Replaces 1,450 LF of 4" PVC with 8" DIP and adds an additional fire hydrant to eliminate undersized infrastructure and improve fire flows.

15-52 – Chevy / Clee Streets Improvements – Replaces 800 LF of 4" PVC with 8" DIP and adds an additional fire hydrant to eliminate undersized infrastructure and improve fire flows.

15-54 – Villa Avenue Improvements – Replaces 1,500 LF of 4" PVC / 6" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows. This project also reconfigures water services connections so each resident has their own dedicated service line.

15-55 – Covington Road Improvements – Replaces 1,000 LF of 4" CIP / 6" DIP with 8" DIP and adds an additional fire hydrant to replace aging / undersized infrastructure and improve fire flows.

15-56 – Carlmont Drive Improvements – Abandons 800 LF of 8" CIP paralleling a 10" PVC to reduce maintenance.

15-57 – Alomar Way Improvements – Replaces 750 LF of 4" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-58 – Fernwood Way Improvements – Replaces 820 LF of 4" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-59 – Valdez Avenue Improvements – Replaces 1,000 LF of 4" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-61 – Chula Vista Drive Improvements – Replaces 750 LF of parallel 6" / 8" CIP with a single 10" DIP to complete a uniform 10" water main between Hannibal Pump Station and Exborne Tanks, eliminates aging infrastructure and reduces maintenance.

15-62 – Sixth Avenue Improvements – Abandons 700 LF of cross country 6" – 8" CIP that crosses over an existing creek at two locations and replaces it with a combination of 350 LF 8" and 1,400 LF 10" DIP to relocate the water mains to accessible locations.

15-63 – Lower Notre Dame Improvements – Replaces 3,400 LF of parallel 6" - 8" CIP with a single 10" DIP to replace aging infrastructure and reduce maintenance.

15-64 – Tierra Linda Improvements – Installs an in-line gate valve at Tierra Linda Middle School to monitor water quality under an experimental dead-end scenario.

15-66 – Vine Street (Zone 2) Improvements – Abandons 250 LF of 4" CIP and the Vine Street Regulator, replaces 700 LF of 4" CIP with 6" / 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-67 – Village Drive Area Improvements – Replaces 1,700 LF of 6" CIP with 8" DIP to replace aging infrastructure and eliminate two small dead-end stubs.

20-04 – Laurel Avenue Cross Country Abandonment – Abandons a 360 LF cross country 6" DIP in steep, inaccessible terrain.

24-02 – Arbor Avenue Improvements – Replaces 1,200 LF of 6" DIP with 8" DIP to replace aging infrastructure experiencing multiple leaks.

24-03 – Middle Road Improvements – Replaces 2,600 LF of 6" CIP with 8" DIP to replace aging infrastructure experiencing multiple leaks.

24-08 – Exborne Tank (West) Recoating – Recoats the exterior and interior tank to extend its useful service life.

Table 8 - Zone 3 CIP Projects

CIP	DSA	Project Name	Budget (2024)
15-11	014	Carmelita Ave Improvements	$1,190,000
15-12	015	Buena Vista Ave Improvements	$1,160,000
15-13	016	Monroe, Belle Monti, Coronet Ave Improvements	$2,905,000
15-15	018	Shirley Rd Improvements	$645,000
15-16	019	Williams Ave, Ridge Rd, Hillman Ave Improvements	$2,235,000
15-17	020	Monte Cresta Dr, Alhambra Dr Improvements	$2,000,000
15-18	021	Pine Knoll Dr Improvements	$480,000
15-20	023	Thurm and Bettina Ave Improvements	$1,075,000
15-21	024	Lincoln, Monserat Ave Improvements	$225,000
15-24	026	San Juan Blvd Improvements	$410,000
15-89	n/a	Dekoven Tanks Replacement	$7,590,000
15-90	096	Alameda De Las Pulgas Loop Improvements	$755,000
		Zone 3 Total:	**$20,670,000**

Brief descriptions of the Zone 3 projects follow. Please refer to the corresponding exhibits in Appendix B for more detailed descriptions and backgrounds.

15-11 – Carmelita Avenue Improvements – Replaces 1,300 LF of 4”- 6” CIP/PVC with 8” DIP to replace aging / undersized infrastructure and improve fire flows.

15-12 – Buena Vista Avenue Improvements – Replaces 1,250 LF of 4”- 6” CIP/PVC with 8” DIP to replace aging / undersized infrastructure and improve fire flows.

15-13 – Monroe, Belle Monti, Coronet Avenues Improvements – Replaces 3,200 LF of 4” PVC with 8” DIP to replace aging / undersized infrastructure and improve fire flows.

15-15 – Shirley Road Improvements – A replacement / new installation combination of 720 LF of 8” DIP to eliminate dead ends, replace aging / undersized infrastructure, and improve fire flows.

15-16 – Williams Avenue, Ridge Road, Hillman Avenue Improvements – A replacement / new installation combination of 2,500 LF of 8” DIP to eliminate dead ends, replace aging / undersized infrastructure, minor zone reconfiguration, and improve fire flows.

15-17 – Monte Cresta Drive, Alhambra Drive Improvements – Replaces 2,250 LF of 6” CIP with 8” DIP to replace aging / undersized infrastructure and improve fire flows.

15-18 – Pine Knoll Drive Improvements – Replaces 430 LF of 4” CIP with 8” DIP to replace aging / undersized infrastructure and improve fire flows.

15-20 – Thrum and Bettina Avenues Improvements – Replaces 1,150 LF of 4" PVC with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-21 – Lincoln, Monserat Avenues Improvements – Installs 250 LF of 8" DIP with 8" DIP to eliminate two dead ends, creates a loop, and improves fire flows.

15-24 – San Juan Boulevard Improvements – Abandons 200 LF of 4" CIP paralleling an 8" PVC, replaces 520 LF of 6" CIP with 8" DIP to replace aging / undersized infrastructure, reduce maintenance, and improve fire flows.

15-89 – Dekoven Tanks Replacement – Replaces the existing 1.0 MG and 0.7 MG originally constructed in 1952 with two 0.8 MG tanks to improve seismic reliability.

15-90 – Alameda De Las Pulgas Loop Improvements – Installs 1,100 LF of 8" DIP to eliminate two dead ends, creates a loop, and improves water quality.

Table 9 - Zone 4 CIP Projects

CIP	DSA	Project Name	Budget (2024)
15-08	011	Zone 4 Water Main Improvements	$1,470,000
		Zone 4 Total:	**$1,470,000**

A brief description of the Zone 4 project follows. Please refer to the corresponding exhibits in Appendix B for more detailed descriptions and backgrounds.

15-08 – Zone 4 Water Main Improvements – Replaces 1,300 LF of 4" PVC and 350 LF of 4" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

Table 10 - Zone 5 CIP Projects

CIP	DSA	Project Name	Budget (2024)
15-01	003	Buckland / Shelford Ave Improvements	$195,000
15-02	004	Courtland Rd Improvements	$685,000
15-03	005	Spring Ln Improvements	$325,000
15-04	006	Rose Ln Improvements	$220,000
15-05	n/a	Calwater Intertie	$340,000
24-04	n/a	Shelford Ave Improvements	$960,000
24-06	n/a	Hartford Ave Improvements	$785,000
		Zone 5 Total:	**$3,510,000**

Brief descriptions of the Zone 5 projects follow. Please refer to the corresponding exhibits in Appendix B for more detailed descriptions and backgrounds.

15-01 – Buckland / Shelford Avenues Improvements – Abandons 270 LF of 6" CIP paralleling a 12" DIP. New connections will be made to the 12" DIP along with other pipe installation to improve fire flows.

15-02 – Courtland Road Improvements – Replaces 780 LF of 4" – 6" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-03 – Spring Lane Improvements – Replaces 270 LF of 4" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-04 – Rose Lane Improvements – Replaces 170 LF of 4" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-05 – Calwater Intertie – Installs an intertie connection to permit the District the ability to provide water to Calwater in the event of an emergency.

24-04 – Shelford Avenue Improvements – Replaces 1,200 LF of 2"/6" CIP with 8" DIP to replace aging / undersized infrastructure with extensive leaks and improve fire flows.

24-06 – Hartford Avenue Improvements – Replaces 900 LF of 4" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

Table 11 - Zone 6 CIP Projects

CIP	DSA	Description	Budget (2024)
15-07	010	Dartmouth Ave Improvements	$305,000
24-01	n/a	Erlin Dr Improvements	$745,000
		Zone 6 Total:	**$1,050,000**

A brief description of the Zone 6 project follows. Please refer to the corresponding exhibits in Appendix B for more detailed descriptions and backgrounds.

15-07 – Dartmouth Avenue Improvements – Replaces 300 LF of 4" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

24-01 – Erlin Drive Improvements – Abandons 500 LF of 4" CIP and installs 800 LF of 8" DIP to replace aging / undersized infrastructure, eliminate a cross country main, and improve fire flows.

Table 12 - Zone 7 CIP Projects

CIP	DSA	Description	Budget (2024)
15-25	027	Christian Ct Improvements	$360,000
15-26	028	West Belmont Tank Water Main Improvements	$2,875,000
15-27	029	Lassen Dr Improvements	$1,670,000
24-05	n/a	Marsten Ave Improvements	$150,000
24-10	n/a	West Belmont Tank (North) Recoating	$130,000
		Zone 7 Total:	**$5,185,000**

Brief descriptions of the Zone 7 projects follow. Please refer to the corresponding exhibits in Appendix B for more detailed descriptions and backgrounds.

15-25 – Christian Court Improvements – Replaces 300 LF of 4" CIP with 8" DIP and installs an additional fire hydrant to replace aging / undersized infrastructure, improve flushing capabilities, and improve fire flows.

15-26 – West Belmont Tank Water Main Improvements – A combination of abandonments / replacement / new installation of 1,400 LF of 8" DIP and 2,400 LF of 12" DIP to eliminate cross country and parallel water mains, improve zone wide fire flows, and replace aging infrastructure.

15-27 – Lassen Drive Improvements – Replaces 1,850 LF of 6" CIP with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

24-05 – Marsten Avenue Improvements – Abandons 900 LF of 8" CIP/AC and relocates services to a newly installed PVC pipe.

24-10 – West Belmont Tank (North) Recoating – Recoats the exterior of the northern tank to extend its useful service life.

Table 13 - Zone 8 CIP Projects

CIP	DSA	Description	Budget (2024)
15-32	034	Soho Cir Improvements	$180,000
15-33	035	Paddington Ct Improvements	$225,000
15-34	036	Ridgewood Ct Improvements	$245,000
15-35	037	Bridge Ct Improvements	$325,000
15-36	038	Parkridge Ct Improvements	$330,000
15-37	039	Waterloo Ct Improvements	$180,000
15-39	n/a	Zone 8 - 14" Cross-Country Improvements	$1,180,000
24-09	n/a	Hallmark Tank (North) Structural Retrofit / Recoating	$3,050,000
		Zone 8 Total:	**$5,715,000**

Brief descriptions of the Zone 8 projects follow. Please refer to the corresponding exhibits in Appendix B for more detailed descriptions and backgrounds.

15-32 – Soho Circle Improvements – Replaces 150 LF of 4" PVC with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-33 – Paddington Court Improvements – Replaces 170 LF of 4" PVC with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-34 – Ridgewood Court Improvements – Replaces 200 LF of 4" PVC with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-35 – Bridge Court Improvements – Replaces 280 LF of 4" PVC with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-36 – Parkridge Court Improvements – Replaces 270 LF of 4" PVC with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-37 – Waterloo Court Improvements – Replaces 150 LF of 4" PVC with 8" DIP to replace aging / undersized infrastructure and improve fire flows.

15-39 – Zone 8 – 14" Cross Country Improvements – Installs 8 trench dams, 2 remotely controlled gate valves, and a flow meter and/or pressure gauge vault to allow the District to quickly identify a leak along the water main, the ability to isolate a shorter section of repair length.

24-09 – Hallmark Tank (North) Structural Retrofit / Recoating – Structurally retrofits the north tank to operate at a 16 ft water level and extends service life of the tank by recoating.

Table 14 - District Wide CIP Projects

CIP	DSA	Description	Budget (2024)
15-83	n/a	Emergency Intertie Rebuilds	$955,000
20-05	n/a	Transmission Water Main Assessments	$625,000
20-06	n/a	Automated Chloramine Management Systems	$595,000
20-09	n/a	Modernize DLOC for Resiliency – Phase 1	$3,300,000
20-10	n/a	Modernize DLOC for Resiliency – Phase 2	$9,700,000
24-07	n/a	Modernize Folder Drive Property as Emer. Ops. Cen.	$4,590,000
		District Wide Total:	**$19,765,000**

Brief descriptions of the District Wide projects follow. Please refer to the corresponding exhibits in Appendix B for more detailed descriptions and backgrounds.

15-83 – Emergency Intertie Rebuilds – Rebuilds / reconfigures the existing interties to obtain more accurate meter readings.

20-05 – Transmission Water Main Assessments – Assess the transmission mains supplying the District into Zone 1 and Zone 7 to determine condition and remaining life expectancy.

20-06 – Automated Chloramine Management Systems – Automatically detects tank disinfection residuals and adjusts levels accordingly to maintain an ideal state of chloramine disinfection.

20-09 – Modernize Dairy Lane Operations Center for Resiliency – Phase 1 – Repairs various building deficiencies in addition to improving its structural and seismic reliability. Phase 1 includes design and seismic study updates.

20-10 – Modernize Dairy Lane Operations Center for Resilience – Phase 2 – Repairs various building deficiencies in addition to improving its structural and seismic reliability. Phase 2 includes seismic retrofit and construction.

24-07 – Modernize Folger Drive Property as Emergency Operations Center – Repairs various building deficiencies in addition to improving its structural and seismic reliability. Phase 2 includes seismic retrofit and construction.

6.0 ASSET MANAGEMENT ANALYSIS – WATER MAINS

Following is an updated asset management analysis to determine needed funding per year to replace old and aging infrastructure. The analysis involved compiling water main information including material type, linear footage, date installed and then used to determine infrastructure remaining life and annual replacement costs.

The District has a total 493,738 ft (~94 miles) of water main ranging in size between 4" and 24" in a variety of material types including cast iron (CIP), asbestos cement (ACP), ductile iron (DIP), polyvinyl chloride (PVC), concrete (CCP) and steel (STL). The average age of the water mains throughout the system is approximately 52 years old with an average installation date of 1971. The following assumptions were made in the pipe assessment:

Table 15 – Water Main Life Expectancy

Material	ACP	CIP	DIP	PVC	STL
Years	75	100	100	100	75

Table 16 – Water Main Replacement Costs

Size	8"	10"	12"	18"	24"
Cost/LF (2023)	$450	$450	$500	$550	$600

Using the above life expectancy values and costs, the average life remaining and annual replacement costs were calculated and grouped by water main material as shown in Table 17. Calculations indicate the District needs to replace approximately 14,790 LF (~3 miles) of water main a cost of $7,000,000 each year. For a breakdown of annual replacement costs by pipe size (used to generate Table 17), refer to Appendix D.

Table 17 - Water Main Annual Replacement Costs

Material	% of System	Length (LF)	Average Install Year[1]	Average Age (yrs)[2]	Avg Life Remain (yrs)[3]	Annual Replacement Length (LF)[4]	Annual Replacement Cost[5]
ACP	18.5%	91,445	1965	58	17	5,710	$2,921,900
CIP	35.8%	176,541	1955	68	32	5,470	$2,465,100
DIP	12.4%	61,445	1983	40	60	1,030	$493,100
PVC	28.6%	141,267	1989	34	66	2,170	$986,100
STL	0.7%	3,583	1957	66	9	410	$182,500
Unknown	3.9%	19,456					
Totals		**493,738**	**1971**	**52**	**43**	**14,790**	**$7,000,000**

[1]Average Install Date = Weighted Average of Pipe Lengths * Installation Year
[2]Average Age = Current Year (2023) – Average Install Year
[3]Average Remaining Life = Water Main Life Expectancy – Average Age
[4]Annual Replacement Length = Length / Average Remaining Life
[5]Annual Replacement Cost = (Linear feet * Replacement Costs) / Average Life Remaining

APPENDIX A

CIP Summary

Mid-Peninsula Water District
Capital Improvement Program Summary (FY 24/25 Update)

APPENDIX A

Project Number	DSA	Zone	Project Name	Existing Pipe Information				Quantities			Construction	Planning, Design & CM	Construction Inspection	Contingency	2024 Dollars	Running Total	Ranking Score	Hydraulic Capacity	# Affected Hydrants	System Benefits	Location	Age	Material	No. of Leaks*	Static Pressure	No. of Services	Scheduled Paving
				Size (in)	Material	Age	Static PSI	LF	SRV	HYD																	
UNDER DESIGN																											
15-09	012	3	Dekoven Tank Utilization Project	6	CIP	1960	10-45	2400	14	2	$ 1,483,500	$ 225,000	$ 150,000	$ 186,500	$ 2,045,000	$ 2,045,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
15-19	022	3	Oak Knoll Drive Improvements	4	PVC	1956	65-105	1300	33	2	$ 1,039,500	$ 160,000	$ 105,000	$ 130,500	$ 1,435,000	$ 3,480,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
			Material Totals					**3700**	**47**	**4**				**subtotal (a)**	**$ 3,480,000**												
PRIORITIZED																											
15-72b	077	1	SR 101 Crossing at PAMF Hospital - Phase 2	12	AC	1963	135	1600	0	1	$ 2,015,000	$ 300,000	$ 200,000	$ 250,000	$ 2,765,000	$ 6,245,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
15-89	n/a	3	Dekoven Tanks Replacement	n/a	n/a	n/a	n/a	0	0	0	$ 6,000,000	$ 300,000	$ 600,000	$ 690,000	$ 7,590,000	$ 13,835,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20-05	n/a	DW	Transmission Water Main Assessments	18	CCP	1960	40-185	0	0	0	$ 500,000	$ 50,000	$ -	$ 75,000	$ 625,000	$ 14,460,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24-07	n/a	DW	Moderinze Folger Drive Property as Emergency Operations Cente	n/a	n/a	n/a	n/a	0	0	0	$ 4,590,000	$ -	$ -	$ -	$ 4,590,000	$ 19,050,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20-09	n/a	DW	Modernize Dairy Lane Operations Center for Resiliency - Design	n/a	n/a	n/a	n/a	0	0	0	$ -	$ 3,300,000	$ -	$ -	$ 3,300,000	$ 22,350,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20-10	n/a	DW	Modernize Dairy Lane Operations Center for Resiliency - Construc	n/a	n/a	n/a	n/a	0	0	0	$ 9,700,000	$ -	$ -	$ -	$ 9,700,000	$ 32,050,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24-08	n/a	2	Exborne Tank (West) Recoating	n/a	n/a	n/a	n/a	0	0	0	$ 450,000	$ 115,000	$ 45,000	$ 65,000	$ 675,000	$ 32,725,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24-09	n/a	8	Hallmark Tank (North) Structural Retrofit/Recoating	n/a	n/a	n/a	n/a	0	0	0	$ 2,200,000	$ 330,000	$ 220,000	$ 300,000	$ 3,050,000	$ 35,775,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24-10	n/a	7	West Belmont Tank (North) Recoating	n/a	n/a	n/a	n/a	0	0	0	$ 76,500	$ 30,000	$ 10,000	$ 13,500	$ 130,000	$ 35,905,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
			Material Totals					**1600**	**0**	**1**				**subtotal (b)**	**$ 32,425,000**												
NONPRIORITIZED WATER MAIN REPLACEMENT PROJECTS																	**Ranking Criteria (NonPrioritized Water Main Replacement Projects Only)**										
15-24	026	3	San Juan Boulevard Improvements	4	CIP	1936	155	300	16	3	$ 271,500	$ 70,000	$ 30,000	$ 38,500	$ 410,000	$ 36,315,000	33	5	3	3	1	5	8		5	3	Yes - 2028 (BEL)
15-75b	080	1	Old County Road Improvements - Phase 2	6	AC	1938	125	2400	54	4	$ 1,704,000	$ -	$ 170,000	$ 191,000	$ 2,065,000	$ 38,380,000	33	3	3	3	1	5	10		3	5	Yes - 2022 (BEL)
24-03	n/a	2	Middle Road Improvements	6	CIP	1955	130	2600	33	8	$ 1,528,250	$ 230,000	$ 155,000	$ 191,750	$ 2,105,000	$ 40,485,000	31	3	5	2	1	3	8		4	5	Yes - 2023 (BEL)
15-16	019	3	Williams Avenue, Ridge Road, Hillman Avenue Improvements	4	CIP	1950	140	2600	59	5	$ 1,619,750	$ 245,000	$ 165,000	$ 205,250	$ 2,235,000	$ 42,720,000	30	5	4	0	1	3	8		4	5	
15-47	051	2	Virginia Avenue Improvements	6	CIP	1959	120	1000	17	3	$ 614,000	$ 125,000	$ 65,000	$ 81,000	$ 885,000	$ 43,605,000	30	3	3	2	5	3	8		3	3	
24-01	n/a	6	Erlin Drive Improvements	4	CIP	1954	105	800	5	2	$ 485,000	$ 140,000	$ 50,000	$ 70,000	$ 745,000	$ 44,350,000	30	5	2	2	5	3	8		3	2	
15-08	011	4	Zone 4 Water Main Improvement	4	CIP	1958	90	1700	40	2	$ 1,062,500	$ 160,000	$ 110,000	$ 137,500	$ 1,470,000	$ 45,820,000	29	5	2	3	1	3	8		2	5	Yes - 2021/24 (BEL)
15-26	028	7	West Belmont Tank Water Main Improvements	8	CIP	1956	70	3800	2	2	$ 2,085,500	$ 315,000	$ 210,000	$ 264,500	$ 2,875,000	$ 48,695,000	29	5	2	3	5	3	8		1	2	Yes - 2024 (BEL)
15-46	050	2	Miramar Terrace Improvements	4	CIP	1945	75	1300	21	4	$ 787,750	$ 160,000	$ 80,000	$ 107,250	$ 1,135,000	$ 49,830,000	29	5	3	0	3	4	8		2	4	
15-48	052	2	Willow Lane Improvements	4	CIP	1946	60	600	8	2	$ 357,000	$ 90,000	$ 40,000	$ 53,000	$ 540,000	$ 50,370,000	29	5	2	2	5	4	8		1	2	
15-54	058	2	Villa Avenue Improvements	4	CIP	1946	110	1500	44	3	$ 988,500	$ 200,000	$ 100,000	$ 131,500	$ 1,420,000	$ 51,790,000	29	5	3	0	1	4	8		3	5	Yes - 2024/29 (BEL)
15-63	069	2	Lower Notre Dame Avenue Improvements	6	CIP	1946	125	1700	25	5	$ 1,098,750	$ 165,000	$ 110,000	$ 141,250	$ 1,515,000	$ 53,305,000	29	3	4	0	3	4	8		3	4	Yes - 2029 (BEL)
15-17	020	3	Monte Cresta Drive / Alhambra Drive Improvements	6	CIP	1958	125	2300	48	7	$ 1,449,500	$ 220,000	$ 145,000	$ 185,500	$ 2,000,000	$ 55,305,000	28	3	5	0	1	3	8		3	5	Yes - FY 2025 (BEL)
15-27	029	7	Lassen Drive Improvements	6	CIP	1957	60	1900	46	4	$ 1,204,000	$ 185,000	$ 125,000	$ 156,000	$ 1,670,000	$ 56,975,000	28	3	3	2	3	3	8		1	5	Yes - 2028 (BEL)
15-45	046-049	2	Hainline Drive and Vicinity Improvements	4	CIP	1954	80	1800	42	5	$ 1,150,500	$ 175,000	$ 120,000	$ 149,500	$ 1,595,000	$ 58,570,000	28	5	4	0	1	3	8		2	5	Yes - 2028 (BEL)
15-59	063	2	Valdez Avenue Improvements	4	CIP	1954	90	1000	24	2	$ 631,000	$ 130,000	$ 65,000	$ 84,000	$ 910,000	$ 59,480,000	27	5	2	0	3	3	8		2	4	
15-62	067	2	Sixth Avenue Improvements	6	CIP	1946	150	1750	2	5	$ 1,431,750	$ 215,000	$ 145,000	$ 183,250	$ 1,975,000	$ 61,455,000	27	0	4	2	3	4	8		4	2	Yes - 2029 (BEL)
15-11	014	3	Camelita Avenue Improvements	4	CIP	1951	70	1300	31	3	$ 825,250	$ 170,000	$ 85,000	$ 109,750	$ 1,190,000	$ 62,645,000	26	5	3	0	1	3	8		1	5	Yes - 2021 (BEL)
15-13	016	3	Monroe, Belle Monti, Coronet Avenues Improvements	4	PVC	1970	130	3200	94	6	$ 2,103,500	$ 320,000	$ 215,000	$ 266,500	$ 2,905,000	$ 65,550,000	26	5	4	2	1	1	4		4	5	Yes - 2025/29 (BEL)
15-55	059	2	Covington Road Improvements	4	CIP	1953	100	1000	23	3	$ 640,750	$ 130,000	$ 65,000	$ 84,250	$ 920,000	$ 66,470,000	26	5	3	0	1	3	8		2	4	Yes - 2024 (BEL)
15-57	061	2	Alomar Avenue Improvements	4	CIP	1954	100	750	14	1	$ 444,750	$ 115,000	$ 45,000	$ 65,250	$ 670,000	$ 67,140,000	26	5	2	0	3	3	8		2	3	
15-78	083	1	Civic Lane Improvements	6	CIP	1949	125	1900	20	5	$ 1,082,500	$ 165,000	$ 110,000	$ 137,500	$ 1,495,000	$ 68,635,000	26	3	4	0	1	4	8		3	3	
24-04	n/a	5	Shelford Avenue Improvements	2	CIP	1954	90	1200	10	3	$ 667,250	$ 135,000	$ 70,000	$ 87,750	$ 960,000	$ 69,595,000	26	5	3	0	3	3	8		2	2	Yes - 2025 (SC)
15-03	005	5	Spring Lane Improvements	4	CIP	1958	140	300	6	2	$ 204,000	$ 65,000	$ 25,000	$ 31,000	$ 325,000	$ 69,920,000	25	5	2	0	1	3	8		4	2	Yes - 2021 (BEL)
15-58	062	2	Fernwood Way Improvements	4	CIP	1954	70	850	16	2	$ 517,750	$ 105,000	$ 55,000	$ 72,250	$ 750,000	$ 70,670,000	25	5	2	0	3	3	8		1	3	Yes - 2026 (BEL)
15-67	n/a	2	Village Drive Area Improvements	6	CIP	1959	90	1700	34	4	$ 1,046,000	$ 160,000	$ 105,000	$ 134,000	$ 1,445,000	$ 72,115,000	25	3	3	0	1	3	8		2	5	
15-81	086	1	Sixth / O'Neill Avenue Improvements	4	CIP	1937	125	1500	15	2	$ 1,792,500	$ 270,000	$ 180,000	$ 227,500	$ 2,470,000	$ 74,585,000	25	0	2	3	1	5	8		3	3	
15-01	003	5	Buckland / Shelford Avenue Improvements	6	CIP	1954	30	200	1	1	$ 120,250	$ 40,000	$ 15,000	$ 19,750	$ 195,000	$ 74,780,000	24	3	2	2	3	3	8		1	2	Yes - 2024 (SC)
15-02	004	5	Courtland Road Improvements	4	CIP	1958	110	800	9	2	$ 457,250	$ 115,000	$ 50,000	$ 62,750	$ 685,000	$ 75,465,000	24	5	2	0	1	3	8		3	2	
15-07	010	6	Dartmouth Avenue Improvements	4	CIP	1954	70	300	7	1	$ 194,250	$ 60,000	$ 20,000	$ 30,750	$ 305,000	$ 75,770,000	24	5	2	0	3	3	8		1	2	Yes - 2024 (SC)
15-15	018	3	Shirley Road Improvements	4	CIP	1953	80	750	11	1	$ 429,000	$ 110,000	$ 45,000	$ 61,000	$ 645,000	$ 76,415,000	24	5	2	0	1	3	8		2	3	
15-41	042	2	Mills Avenue Improvements	4	CIP	1954	80	300	12	2	$ 235,500	$ 75,000	$ 25,000	$ 34,500	$ 370,000	$ 76,785,000	24	5	2	0	1	3	8		2	3	
15-61	066	2	Chula Vista Drive Improvements	6	CIP	1941	135	750	10	2	$ 476,250	$ 120,000	$ 50,000	$ 68,750	$ 715,000	$ 77,500,000	24	3	2	0	1	4	8		4	2	
15-80	085	1	Bragato Road Improvements	6	AC	1967	135	1000	8	2	$ 547,000	$ 110,000	$ 55,000	$ 73,000	$ 785,000	$ 78,285,000	24	3	2	0	1	2	10		4	2	
15-04	006	5	Rose Lane Improvements	4	CIP	1961	120	200	5	1	$ 136,250	$ 45,000	$ 15,000	$ 23,750	$ 220,000	$ 78,505,000	23	5	2	0	1	2	8		3	2	
15-18	021	3	Pine Knoll Drive Improvements	4	CIP	1977	110	450	14	2	$ 317,250	$ 80,000	$ 35,000	$ 47,750	$ 480,000	$ 78,985,000	23	5	2	0	1	1	8		3	3	Yes - FY 2029 (BEL)
15-25	027	7	Christian Court Improvements	4	CIP	1962	90	300	11	2	$ 230,250	$ 70,000	$ 25,000	$ 34,750	$ 360,000	$ 79,345,000	23	5	2	0	1	2	8		2	3	
15-66	071	2	Vine Street (Zone 2) Improvements	4	CIP	1953	120	700	16	2	$ 425,500	$ 110,000	$ 45,000	$ 59,500	$ 640,000	$ 79,985,000	23	3	2	0	1	3	8		3	3	
24-06	n/a	5	Hartford Avenue Improvements	4	CIP	1954	50	900	17	2	$ 546,750	$ 110,000	$ 55,000	$ 73,250	$ 785,000	$ 80,770,000	23	5	2	0	1	3	8		1	3	Yes - 2024 (SC)
15-12	015	3	Buena Vista Avenue Improvements	4	PVC	1956	50	1300	27	3	$ 804,250	$ 165,000	$ 85,000	$ 105,750	$ 1,160,000	$ 81,930,000	21	5	3	0	1	3	4		1	4	Yes - 2021/29 (BEL)

Mid-Peninsula Water District
Capital Improvement Program Summary (FY 24/25 Update)

Project Number	DSA	Zone	Project Name	Existing Pipe Information				Quantities			Construction	Planning, Design & CM	Construction Inspection	Contingency	2024 Dollars	Running Total	Ranking Score	Hydraulic Capacity	# Affected Hydrants	System Benefits	Location	Age	Material	No. of Leaks*	Static Pressure	No. of Services	Scheduled Paving
				Size (in)	Material	Age	Static PSI	LF	SRV	HYD																	
15-50	054	2	Fairway Drive Improvements	4	PVC	1975	115	1450	24	2	$ 844,750	$ 170,000	$ 85,000	$ 110,250	$ 1,210,000	$ 83,140,000	20	5	2	0	1	1	4		3	4	Yes - 2021 (BEL)
15-68	073	1	Wessex Way Dead End Improvements	4	PVC	1977	135	250	20	1	$ 238,750	$ 75,000	$ 25,000	$ 36,250	$ 375,000	$ 83,515,000	20	5	2	0	1	1	4		4	3	
15-20	023	3	Thurm and Bettina Avenue Improvements	4	PVC	1978	80	1200	26	1	$ 751,500	$ 150,000	$ 75,000	$ 98,500	$ 1,075,000	$ 84,590,000	19	5	2	0	1	1	4		2	4	Yes - 2021 (BEL)
15-34	036	8	Ridgewood Court Improvements	4	PVC	1976	145	200	8	1	$ 152,000	$ 50,000	$ 20,000	$ 23,000	$ 245,000	$ 84,835,000	19	5	2	0	1	1	4		4	2	
15-52	056	2	Chevy / Clee Streets Improvements	4	PVC	1970	125	800	16	2	$ 494,000	$ 125,000	$ 50,000	$ 71,000	$ 740,000	$ 85,575,000	19	5	2	0	1	1	4		3	3	Yes - 2024 (BEL)
15-69	074	1	Sussex Court Improvements	4	PVC	1977	135	150	4	1	$ 107,250	$ 35,000	$ 15,000	$ 17,750	$ 175,000	$ 85,750,000	19	5	2	0	1	1	4		4	2	Yes - 2029 (BEL)
15-32	034	8	Soho Circle Improvements	4	PVC	1971	65	150	5	1	$ 112,500	$ 35,000	$ 15,000	$ 17,500	$ 180,000	$ 85,930,000	18	5	2	0	3	1	4		1	2	
15-33	035	8	Paddington Court Improvements	4	PVC	1971	45	200	6	1	$ 141,500	$ 45,000	$ 15,000	$ 23,500	$ 225,000	$ 86,155,000	18	5	2	0	3	1	4		1	2	
24-02	n/a	2	Arbor Avenue Improvements	6	DIP	1977	95	1200	23	3	$ 735,750	$ 150,000	$ 75,000	$ 99,250	$ 1,060,000	$ 87,215,000	18	3	3	0	1	1	4		2	4	Yes - 2021 (BEL)
15-35	037	8	Bridge Court Improvements	4	PVC	1976	85	300	9	1	$ 204,750	$ 65,000	$ 25,000	$ 30,250	$ 325,000	$ 87,540,000	17	5	2	0	1	1	4		2	2	
15-36	038	8	Parkridge Court Improvements	4	PVC	1976	85	300	10	1	$ 210,000	$ 65,000	$ 25,000	$ 30,000	$ 330,000	$ 87,870,000	17	5	2	0	1	1	4		2	2	
15-37	039	8	Waterloo Court Improvements	4	PVC	1969	60	150	5	1	$ 112,500	$ 35,000	$ 15,000	$ 17,500	$ 180,000	$ 88,050,000	17	5	2	0	1	2	4		1	2	
15-77	082	1	Sixth Avenue (Zone 1) Improvements	6	PVC	1987	120	200	5	0	$ 176,250	$ 55,000	$ 20,000	$ 28,750	$ 280,000	$ 88,330,000	13	3	0	0	1	1	4		2	2	Yes - 2024 (BEL)
			Material Totals					**14500**	**309**	**39**				**subtotal (c)**	**$ 52,425,000**											

*Leaks are still under analysis with the District's new GIS system.

NONPRIORITIZED NON-WATER MAIN REPLACEMENT PROJECTS																											
15-05	n/a	5	Calwater Intertie	0	0	0	0	0	0	0	$ 215,000	$ 65,000	$ 25,000	$ 35,000	$ 340,000	$ 88,670,000											
15-21	024	3	Lincoln / Monserat Avenue Improvements	0	0	0	50	250	2	1	$ 144,250	$ 45,000	$ 15,000	$ 20,750	$ 225,000	$ 88,895,000											
15-39	n/a	8	Zone 8 - 14" Cross Country Improvements	0	0	0	0	0	0	0	$ 820,000	$ 165,000	$ 85,000	$ 110,000	$ 1,180,000	$ 90,075,000											
15-42	043	2	North Road Improvements	8	CIP	1949	130	0	19	1	$ 234,750	$ 75,000	$ 25,000	$ 35,250	$ 370,000	$ 90,445,000											
15-56	060	2	Carlmont Drive Improvements	8	CIP	1959	90	0	5	1	$ 190,000	$ 60,000	$ 20,000	$ 30,000	$ 300,000	$ 90,745,000											
15-64	070	2	Tierra Linda Improvements	10	CIP	1951	80	0	0	0	$ 50,000	$ 20,000	$ 5,000	$ 10,000	$ 85,000	$ 90,830,000											
15-70	075	1	Shoreway Road Improvements	8	AC	1969	135	0	5	2	$ 180,000	$ 55,000	$ 20,000	$ 30,000	$ 285,000	$ 91,115,000											
15-71	076	1	Wessex Way Loop Improvements	0	0	0	135	250	0	1	$ 153,750	$ 50,000	$ 20,000	$ 26,250	$ 250,000	$ 91,365,000											
15-83	n/a	DW	Emergency Intertie Rebuilds	0	0	0	0	0	0	0	$ 660,000	$ 135,000	$ 70,000	$ 90,000	$ 955,000	$ 92,320,000											
15-84	n/a	1	Ralston Avenue Regulator Relocation	8	PVC	1974	130	0	0	0	$ 275,000	$ 70,000	$ 30,000	$ 40,000	$ 415,000	$ 92,735,000											
15-85	n/a	1	O'Neill Slough Bridge Crossing Assessments	12	DIP	1990	130	0	0	0	$ -	$ 55,000	$ -	$ 5,000	$ 60,000	$ 92,795,000											
15-90	096	3	Alameda De Las Pulgas Loop Improvements	0	0	0	160	1100	0	0	$ 522,500	$ 105,000	$ 55,000	$ 72,500	$ 755,000	$ 93,550,000											
20-03	n/a	1	Laxague Drive 18" CCP Abandonment	18	CC	1959	100	0	0	0	$ 55,000	$ 20,000	$ 10,000	$ 10,000	$ 95,000	$ 93,645,000											
20-04	94	2	Laurel Avenue Cross Country Abandonment	6	DIP	1979	120	0	0	0	$ 50,000	$ 20,000	$ 5,000	$ 10,000	$ 85,000	$ 93,730,000											
20-06	n/a	DW	Automated Chloramine Management Systems	0	0	0	0	0	0	0	$ 400,000	$ 100,000	$ 40,000	$ 55,000	$ 595,000	$ 94,325,000											
24-05	n/a	7	Marsten Avenue Improvements	8	AC	1962	115	0	8	0	$ 94,000	$ 32,000	$ 10,000	$ 14,000	$ 150,000	$ 94,475,000											
			Material Totals					**1600**	**39**	**6**					**subtotal (d)**	**$ 6,145,000**											
															Total Combined (a+b+c+d)	**$ 94,475,000**											

COST ASSUMPTIONS (2024)

Linear foot Cost for 8" DIP	$ 475
Linear foot Cost for 10" DIP	$ 525
Linear foot Cost for 12" DIP	$ 575
Cost per Service	$ 5,250
Cost per Hydrant	$ 15,000

Mid-Peninsula Water District
Capital Improvement Program Summary (FY 24/25 Update)

UNDER CONSTRUCTION

Project Number	DSA	Zone	Project Name	Existing Pipe Information				Quantities			Construction	Planning, Design & CM	Construction Inspection	Contingency	2024 Dollars	Running Total	Ranking Score	Hydraulic Capacity	# Affected Hydrants	System Benefits	Location	Age	Material	No. of Leaks*	Static Pressure	No. of Services	Scheduled Paving
				Size (in)	Material	Age	Static PSI	LF	SRV	HYD																	
15-75a	080	1	Old County Road Improvements - Phase 1	6"-20"	AC/CIP/CC	1930, 40	125-130	3400	67	7	$ 2,722,000	$ 665,000	$ 275,000	$ 368,000	$ 4,030,000	$ 4,030,000											
15-79	084	1	F Street Improvements	6"/10"	PVC/CCP	1963, 2004	120-130	400	2	1	$ 204,000	$ 60,000	$ 20,000	$ 31,000	$ 315,000	$ 4,345,000											
15-82	n/a	1	Ralston Avenue Improvements	6"	CIP	1933	115-120	500	5	1	$ 308,000	$ 80,000	$ 30,000	$ 42,000	$ 460,000	$ 4,805,000											
														Total	**$ 4,805,000**											

COMPLETED

Project Number	DSA	Zone	Project Name	Existing Pipe Information				Quantities			Construction	Planning, Design & CM	Construction Inspection*	Contingency*	Actual Expenditures	Year Completed
				Size	Material	Age	Static PSI	LF	SRV	HYD						
15-22	025	3	Arthur Avenue Improvements	4"/6"	CIP	1956	105-145	880	15	2	$ 575,587	$ 121,318	$ -	$ -	$ 696,905	2016
15-23	n/a	3, 8	Dekoven and Hallmark Tanks Structural and Seismic Evaluation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$ -	$ 88,748	$ -	$ -	$ 88,748	2016
15-30	032	3	Alameda De Las Pulgas Improvements	6"/8"	CIP	1953, 1954	95-155	1460	32	4	$ 655,765		$ -	$ -	$ 655,765	2016
15-31	033	3	Monserat Avenue Cross Country Abandonment	6"	CIP	1956	75-135	n/a	n/a	n/a	$ 10,000		$ -	$ -	$ 10,000	2017
15-14	017	3	Mezes Avenue Improvements	4"	CIP	1960	105-110	310	10	1	$ 235,267	$ 56,154	$ -	$ -	$ 291,421	2018
15-43	044	2	North Road Cross Country / Davey Glen Improvements	6"/8"	CIP	1960, 1961	75-135	1400	17	5	$ 702,426	$ 336,238	$ -	$ -	$ 1,038,664	2018
15-44	045	2	South Road Abandonment	4"	CIP	1940, 1944	50-55	0	19	3	$ 368,307	$ 97,549	$ -	$ -	$ 465,856	2018
15-51	055	1	Francis Avenue/Court Improvements	4"	CIP/PVC	1946, 75, 76	115-130	830	23	2	$ 347,483	$ 166,334	$ -	$ -	$ 513,817	2018
15-53	057, 058	2	Academy Avenue / Belburn Drive Improvements	4"	PVC	1970	105-130	300	25	0	$ 220,300	$ 105,454	$ -	$ -	$ 325,754	2018
15-65	n/a	2	Folger Drive Improvements	6"	CIP	1935, 1959	65-100	830	12	3	$ 496,464	$ 109,301	$ -	$ -	$ 605,765	2018
15-73	078	1	Karen Road Improvements	8"/12"	AC/CIP	1952, 1957	130-135	800	9	2	$ 450,536	$ 104,696	$ -	$ -	$ 555,232	2018
15-74	079	2	Malcolm Avenue Improvements	n/a	n/a	n/a	n/a	550	2	0	$ 195,027		$ -	$ -	$ 195,027	2019
15-87	n/a	1	Hillcrest Pressure Regulating Station	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$ 630,520	$ 222,803	$ -	$ -	$ 853,323	2019
15-06	n/a	5	Zone 5 Fire Hydrant Upgrades	n/a	n/a	n/a	n/a	0	0	7	$ 32,596	$ 7,379	$ -	$ -	$ 39,975	2020
15-10	013	3	Notre Dame Avenue Loop Closure	4"/6"	CIP/PVC	1954, 82	120-175	2230	29	3	$ 1,216,051	$ 15,296	$ -	$ -	$ 1,231,347	2020
15-28	030	7	Tahoe Drive Area Improvements	4"	CIP	1956, 1957	65-85	900	28	4	$ 707,558	$ 160,174	$ -	$ -	$ 867,732	2020
15-38	040	8	Cliffside Court Improvements	4"	PVC	1976	185-190	0	16	0	$ 125,077	$ 28,315	$ -	$ -	$ 153,392	2020
15-49	053	2	Mid-Notre Dame Avenue Abandonment	6"	CIP	1935	55-70	0	10	0	$ 67,568	$ 274,363	$ -	$ -	$ 341,931	2020
15-60	065	2	Escondido Way Cross Country Abandonment	4	CIP	1941	125	0	0	0	$ 6,500	$ -	$ -	$ -	$ 6,500	2021
15-72a	077	1	SR 101 Crossing at PAMF Hospital - Phase 1	n/a	n/a	n/a	130-135	700	0	1	$ 303,477	$ 542,525	$ -	$ -	$ 846,002	2021
15-86	n/a	DW	Folger Pump Station Demolition	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$ 160,265		$ -	$ -	$ 160,265	2022
15-29	031	7	Belmont Canyon Road Improvements	4"/8"	CIP	1956	70-80	900	17	2	$ 575,187	$ 84,313	$ -	$ -	$ 659,500	2023
15-40	041	8	Hastings Drive Improvements	4"	CIP/PVC	1976	80-195	0	0	0	$ 11,149	$ 43,871	$ -	$ -	$ 55,020	2023
15-76	081	1	El Camino Real Improvements	8	CIP	1950, 71	120-130	4100	27	8	$ 2,381,497	$ 1,017,502	$ -	$ -	$ 3,398,999	2023
15-88	098	5	Vine Street (Zone 5) Improvements	6"	CIP	1958	125-145	1400	15	3	$ 841,427	$ 192,325	$ -	$ -	$ 1,033,752	2023
20-01	n/a	8	Hastings Drive Service Connection Replacements	n/a	n/a	n/a	105-190	n/a	119	n/a	$ 778,486		$ -	$ -	$ 778,486	2023
20-08	n/a	DW	SCADA Improvements	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$ 240,030		$ -	$ -	$ 240,030	2023
20-07	n/a	1	Harbor Boulevard Water Main Replacement	12"	AC	1967	125-135	2100	45	7	$ 2,079,315	$ 502,702	$ -	$ -	$ 2,582,017	2024
			*Construction Inspection and Contingency included in Planning, Design & CM							**Totals**	**$ 14,413,865**	**$ 4,277,360**			**$ 18,691,225**	

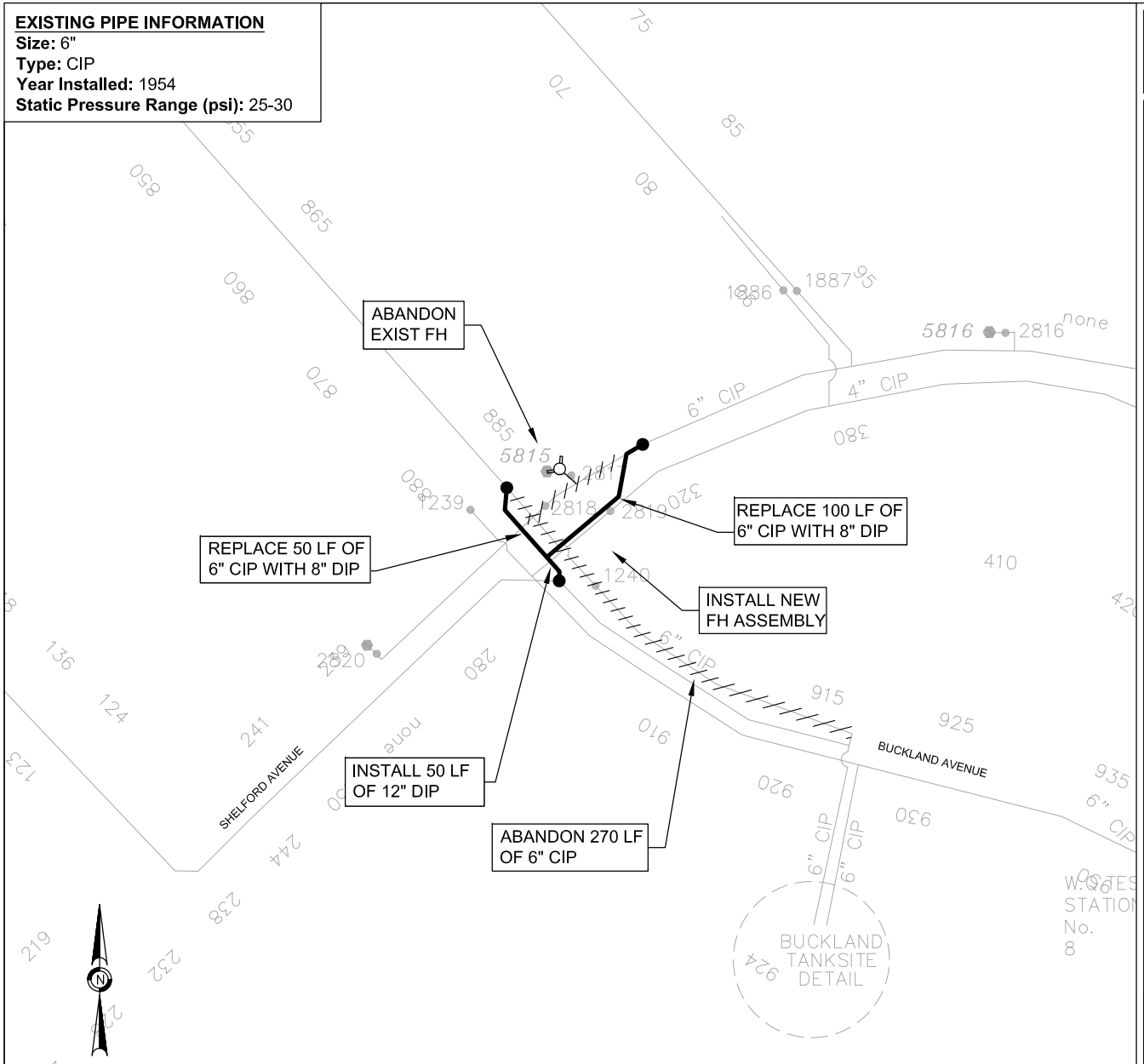
SUPERSEEDED

Project Number	DSA	Zone	Project Name	Existing Pipe Information				Quantities			Construction	Planning, Design & CM	Construction Inspection	Contingency	2020 Dollars	
				Size	Material	Age	Static PSI	LF	SRV	HYD						
20-02	n/a	8	Hallmark Tanks Structural Retrofit / Recoat - See CIP 24-09	n/a	n/a	n/a	n/a	0	0	0	$ 2,600,000	$ 390,000	$ 260,000	$ 325,000	$ 3,575,000	

APPENDIX B

Programmed Projects

EXISTING PIPE INFORMATION
Size: 6"
Type: CIP
Year Installed: 1954
Static Pressure Range (psi): 25-30



BUCKLAND / SHELFORD AVENUES IMPROVEMENTS

PROJECT BACKGROUND

Currently two parallel water mains exist along Buckland Avenue between Shelford Avenue and the Buckland Tank Site: a 6" cast iron pipe (CIP) and a 12" polyvinyl chloride pipe (PVC). This project will abandon the 6" CIP and tie in the water mains at the Buckland/Shelford intersection to the 12" PVC. Hydraulic analysis indicates a fire flow increase of 3% to 37% throughout Zone 5. In addition, a precariously located fire hydrant will be relocated. Distribution System Analysis No. 003

PROPOSED IMPROVEMENTS

Install 50 LF of 12" DIP
Replace 150 LF of 6" CIP with 8" DIP
Replace 1 fire hydrant
Replace 1 service connection

PROJECT BENEFITS

The Buckland/Shelford Avenue Improvements will increase fire flows by 3% to 37% throughout Zone 5.

PROJECT BUDGET (2024)

12" DIP - 50 LF @ $575/LF	$ 28,750
8" DIP - 150 LF @ $475/LF	$ 71,250
Fire Hydrants - 1 @ $15,000/EA	$ 15,000
Service Connections -1 @ $5,250/EA	$ 5,250
Subtotal Construction	$ 120,250
Planning, Design & Construction Support	$ 40,000
Construction Inspection	$ 15,000
Contingency (±10%)	$ 19,750
Project Budget	**$ 195,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

Pakpour Consulting Group, Inc.
6601 Owens Drive, Suite 230
Pleasanton, CA 94588
P: 925.224.7717
www.pcgengr.com

JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN:	BY BL
	CKD JP

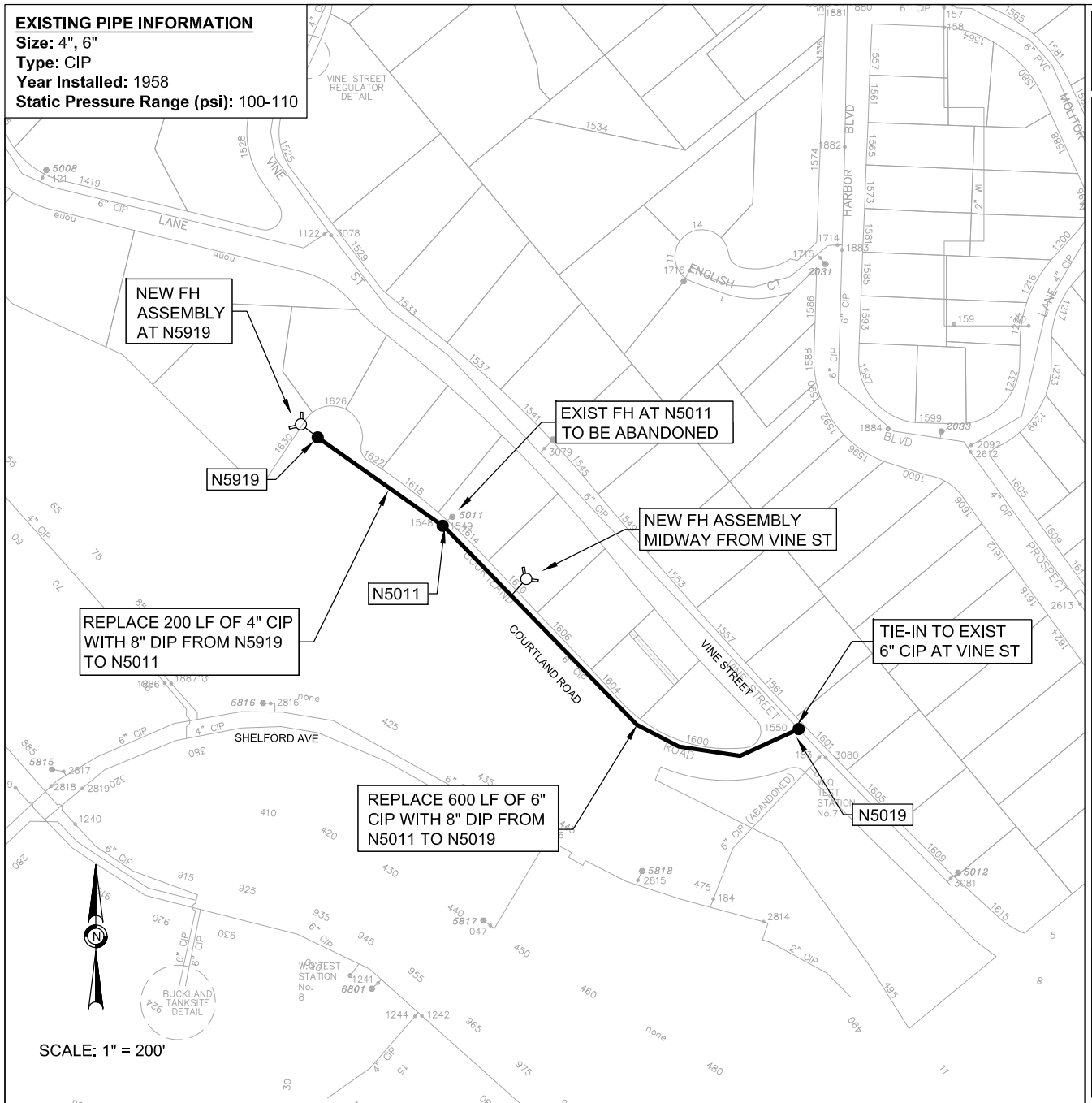
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
BUCKLAND / SHELFORD AVENUE IMPROVEMENTS
PROJECT 15-01

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 6"
Type: CIP
Year Installed: 1958
Static Pressure Range (psi): 100-110



COURTLAND ROAD IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to Courtland Road through a combination of 200 LF 4" cast iron pipe (CIP) and 600 LF 6" CIP. Only one fire hydrant exists along this road located approximately 600 LF from the Vine Street intersection. There are 9 services located on Courtland Road. This project replaces the existing 6" and 4" CIP with new 8" ductile iron pipe (DIP). Two new fire hydrants will be added on Courtland Road along with replacement of all 9 services. Hydraulic analysis indicates a 30% increase in available fire flows to Courtland Road upon completion of this project. Distribution System Analysis No. 004

PROPOSED IMPROVEMENTS

Replace 800 LF of 4"/6" CIP with 8" DIP
Replace 1 fire hydrant
Install 1 new fire hydrant
Replace 9 service connections

PROJECT BENEFITS

The Courtland Road Improvements replaces an aging, undersized 4" and 6" CIP with a new 8" DIP increasing fire flows by approximately 30% in the area, along with an addition of a fire hydrant at the end of Courtland Road.

PROJECT BUDGET (2024)

8" DIP - 800 LF @ $475/LF	$ 380,000
Fire Hydrants - 2 @ $15,000/EA	$ 30,000
Service Connections - 9 @ $5,250/EA	$ 47,250
Subtotal Construction	$ 457,250
Planning, Design & Construction Support	$ 115,000
Construction Inspection	$ 50,000
Contingency (±10%)	$ 62,750
Project Budget	**$ 685,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

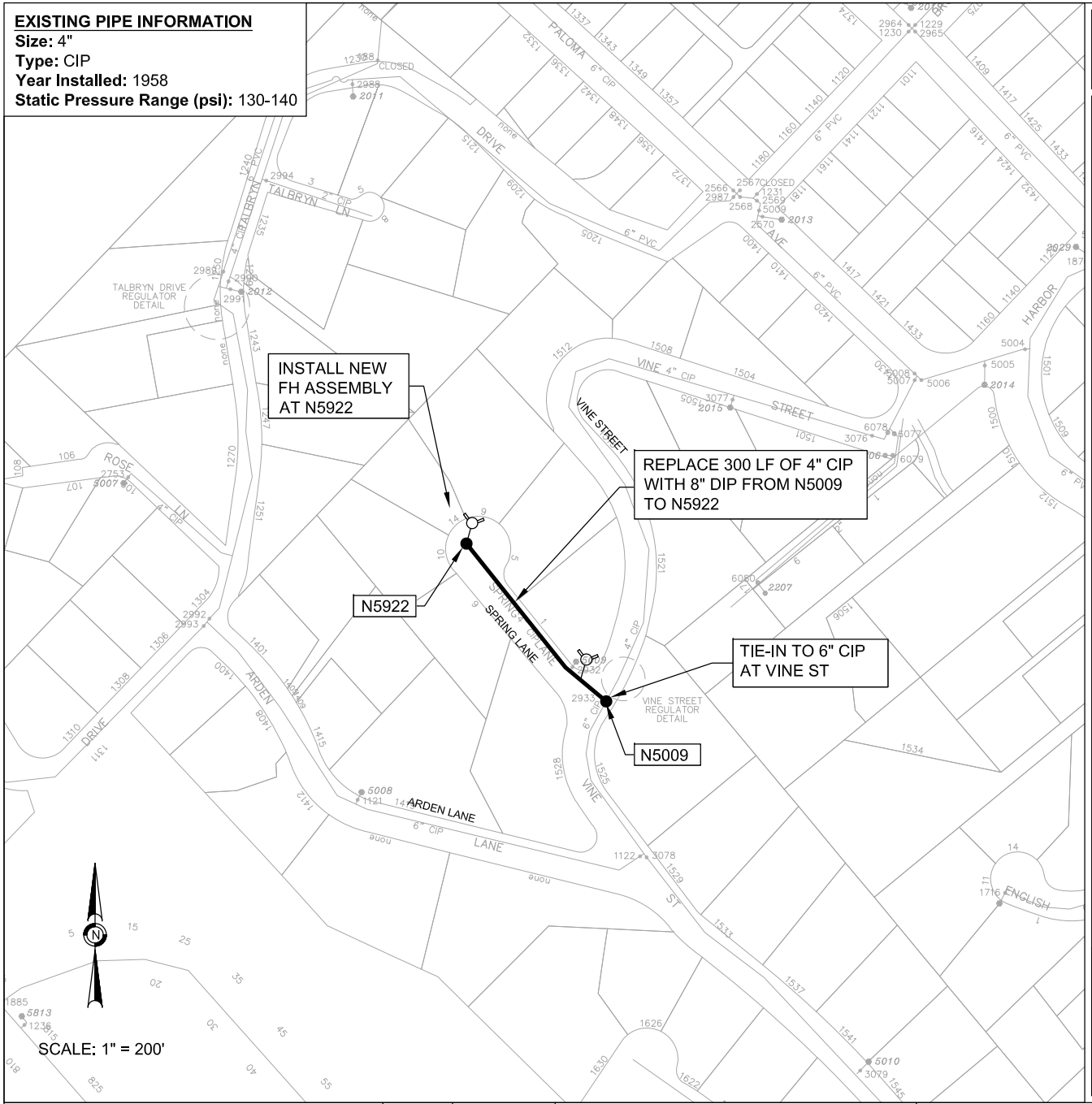
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
COURTLAND ROAD IMPROVEMENTS
PROJECT 15-02

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1958
Static Pressure Range (psi): 130-140



SPRING LANE IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to Spring Lane through a 300 LF 4" cast iron pipe (CIP) and there are 6 services with no hydrants. This project replaces the existing 4" CIP with new 8" ductile iron pipe (DIP). A new fire hydrant will be added at the end of the cul-de-sac along with replacement of all 6 services in addition to an existing hydrant at the Spring Lane/Vine Street intersection. Hydraulic analysis indicates a 38% increase in available fire flows to Spring Lane upon completion of this project. Distribution System Analysis No. 005

PROPOSED IMPROVEMENTS

Replace 300 LF of 4" CIP with 8" DIP
Install 1 new fire hydrant
Replace 1 fire hydrant
Replace 6 service connections

PROJECT BENEFITS

The Spring Lane Improvements replaces an aging, undersized 4" CIP water main with a new 8" DIP increasing fire flows by approximately 38% in the area, along with an addition of a fire hydrant at the end of Spring Lane.

PROJECT BUDGET (2024)

8" DIP - 300 LF @ $475/LF	$ 142,500
Fire Hydrants - 2 @ $15,000/EA	$ 30,000
Service Connections - 6 @ $5,250/EA	$ 31,500
Subtotal Construction	$ 204,000
Planning, Design & Construction Support	$ 65,000
Construction Inspection	$ 25,000
Contingency (±10%)	$ 31,000
Project Budget	**$ 325,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

Pakpour Consulting Group, Inc.
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Pleasanton, CA 94588
P: 925.224.7717
www.pcgengr.com

JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

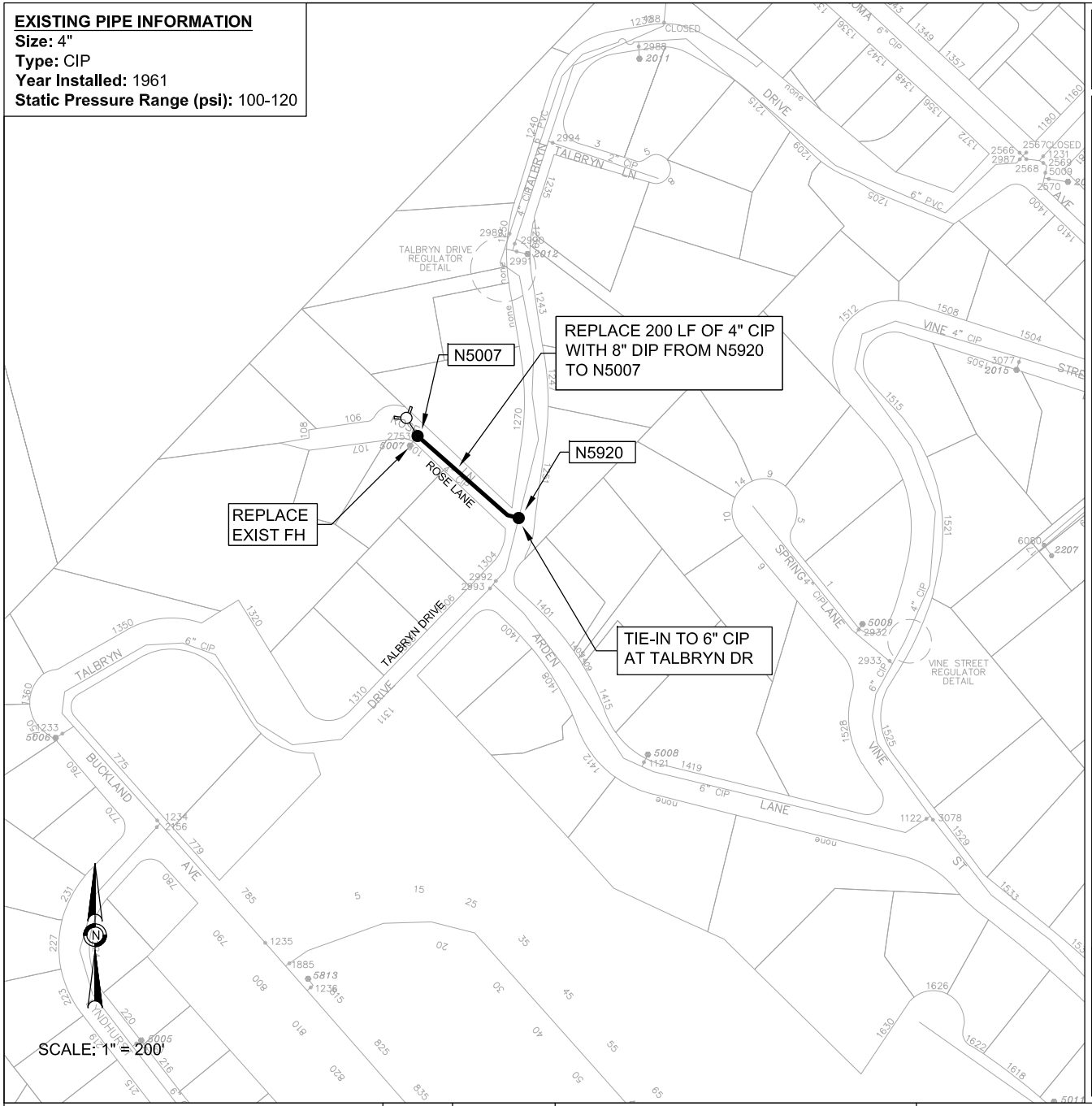
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SPRING LANE IMPROVEMENTS
PROJECT 15-03

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1961
Static Pressure Range (psi): 100-120



ROSE LANE IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to Rose Lane through a 200 LF 4" cast iron pipe (CIP) and there are 5 services. This project replaces the existing 4" CIP with a new 8" DIP. The existing fire hydrant will be replaced at the cul-de-sac along with replacement of all 5 services. Hydraulic analysis indicates a 28% increase in available fire flows to Rose Lane upon completion of this project. Distribution System Analysis No .006

PROPOSED IMPROVEMENTS

Replace 200 LF of 4" CIP with 8" DIP
Replace 1 fire hydrant
Replace 5 service connections

PROJECT BENEFITS

The Rose Lane Improvements replaces an aging, undersized 4" CIP water main with new 8" DIP increasing fire flows by approximately 28% in the area, along with replacing a fire hydrant at the end of Rose Lane.

PROJECT BUDGET (2024)

8" DIP - 200 LF @ $475/LF	$ 95,000
Fire Hydrants - 1 @ $15,000/EA	$ 15,000
Service Connections - 5 @ $5,250/EA	$ 26,250
Subtotal Construction	$ 136,250
Planning, Design & Construction Support	$ 45,000
Construction Inspection	$ 15,000
Contingency (±10%)	$ 23,750
Project Budget	**$ 220,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

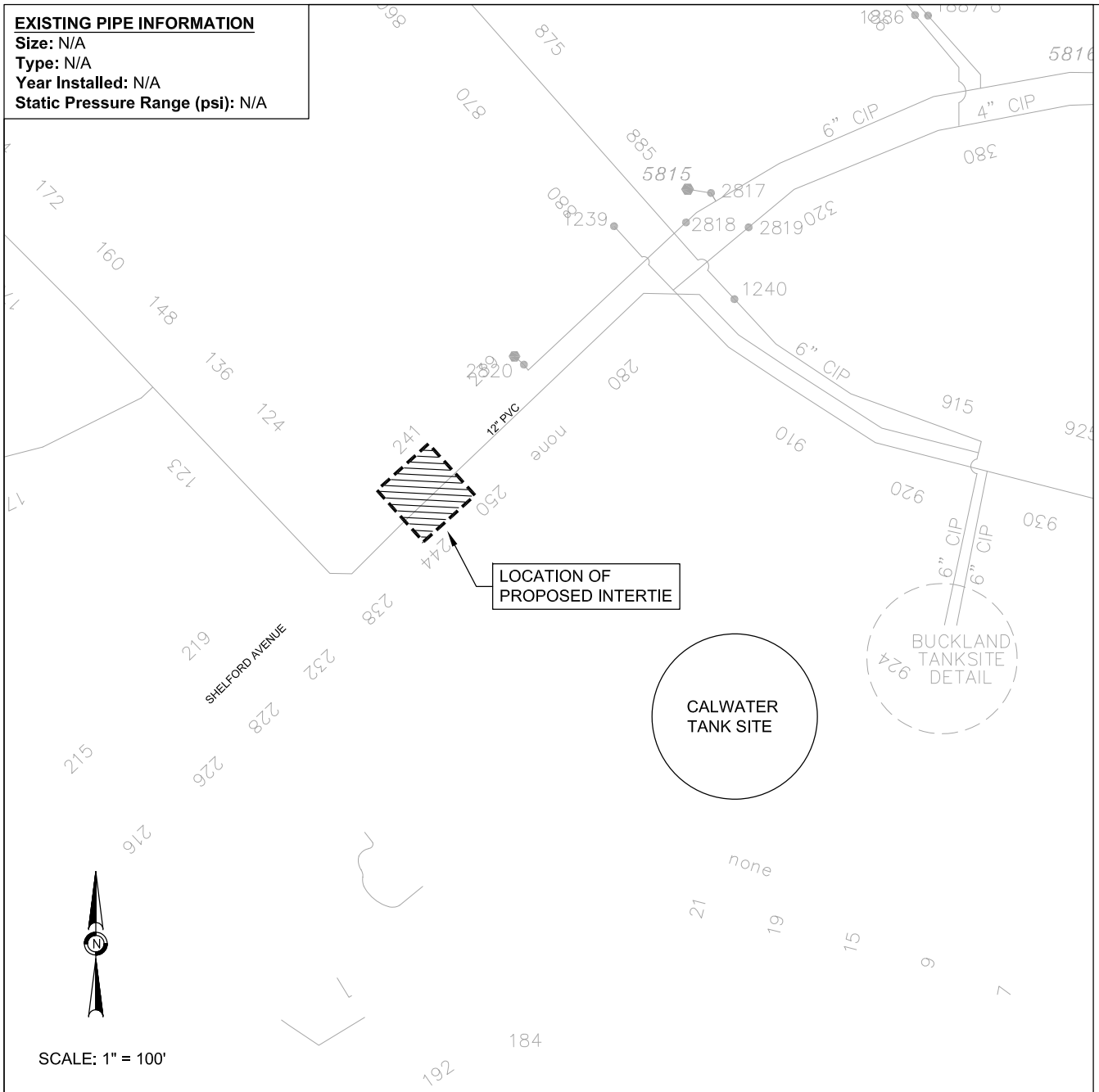
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ROSE LANE IMPROVEMENTS
PROJECT 15-04

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A



CALWATER INTERTIE

PROJECT BACKGROUND

The California Water Service (Calwater) owns a water tank below the District's Buckland Tanks Site located in Zone 5. Access to the Calwater tank site is off Shelford Avenue. The District installed a 12" polyvinyl chloride (PVC) water main in 2010 along Shelford Avenue passing the Calwater tank site driveway. This driveway is an ideal location for an emergency intertie between the two agencies. The Zone 5 existing static pressure at this location is approximately 35 psi. Although the Calwater tanks are lower in elevation than Buckland Tanks, in an emergency, Calwater could still provide water to more than half of Zone 5. Through the intertie the District could supply water to the entire Calwater zone.

PROPOSED IMPROVEMENTS

A metered emergency connection with Calwater

PROJECT BENEFITS

The Calwater Intertie will benefit District customers by allowing water to be available from Calwater during an emergency.

PROJECT BUDGET (2024)

Meter, Backflow and Vault	$ 215,000
Subtotal Construction	$ 215,000
Planning, Design & Construction Support	$ 65,000
Construction Inspection	$ 25,000
Contingency (±10%)	$ 35,000
Project Budget	**$ 340,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

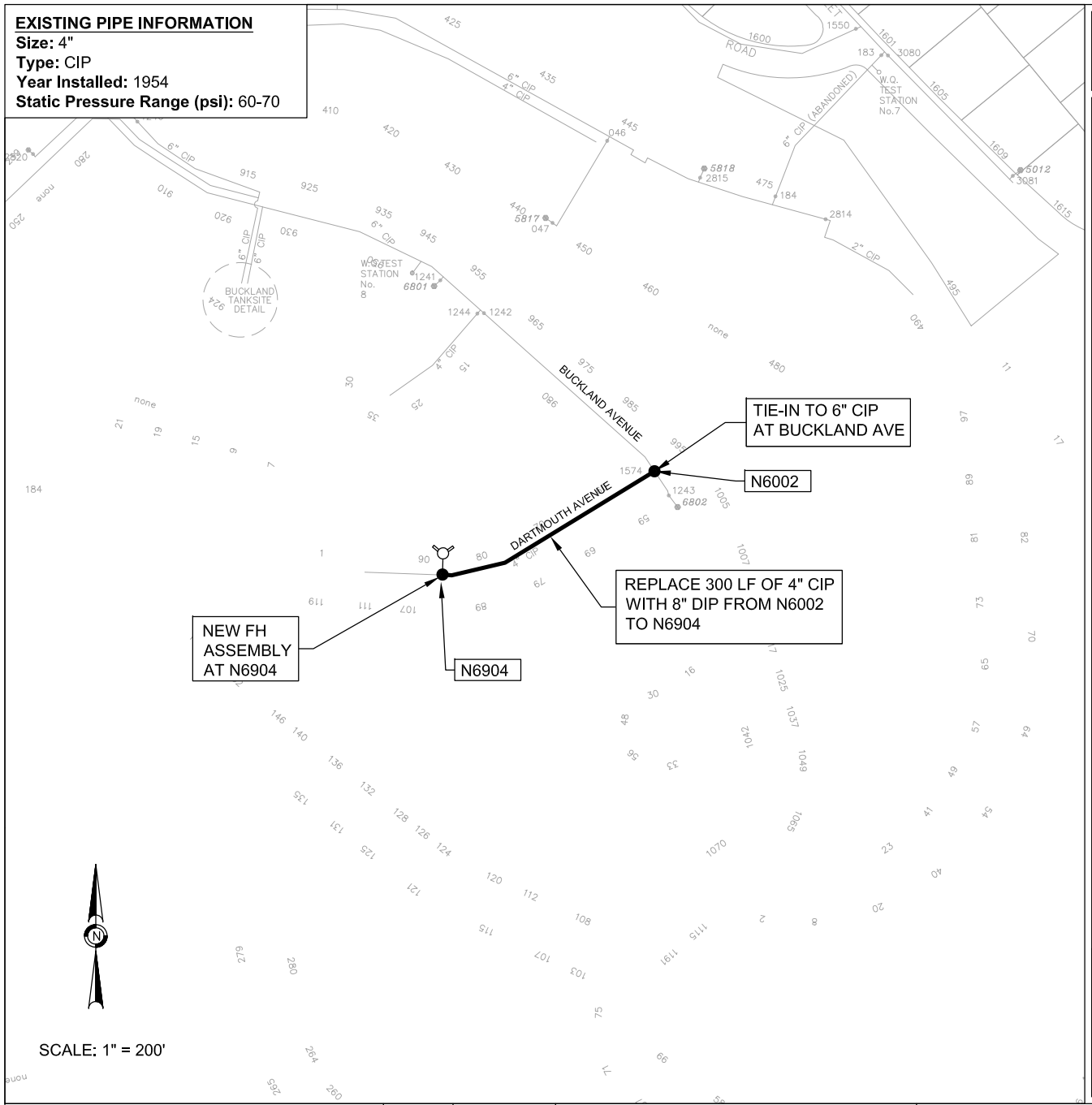
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
CALWATER INTERTIE
PROJECT 15-05

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1954
Static Pressure Range (psi): 60-70



DARTMOUTH AVENUE IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to Dartmouth Avenue through a 300 LF 4" cast iron pipe (CIP). There is a fire hydrant located at the Buckland / Dartmouth intersection however there is no hydrant at the end of Dartmouth Avenue. This project replaces the existing 4" CIP with new 8" ductile iron pipe (DIP) and 7 service connections. Hydraulic analysis indicates a 135% increase in available fire flows to Dartmouth Avenue upon completion of this project. Distribution System Analysis No. 010

PROPOSED IMPROVEMENTS

Replace 300 LF of 4" CIP with 8" DIP
Install 1 new fire hydrant
Replace 7 service connections

PROJECT BENEFITS

The Dartmouth Avenue Improvements replaces an aging and undersized 4" CIP with new 8" DIP increasing fire flows by approximately 135% in the area and also adds an additional fire hydrant in Zone 6.

PROJECT BUDGET (2024)

8" DIP - 300 LF @ $475/LF	$ 142,500
Fire Hydrant - 1 @ $15,000/EA	$ 15,000
Service Connections - 7 @ $5,250/EA	$ 36,750
Subtotal Construction	$ 194,250
Planning, Design & Construction Support	$ 60,000
Construction Inspection	$ 20,000
Contingency (±10%)	$ 30,750
Project Budget	**$ 305,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

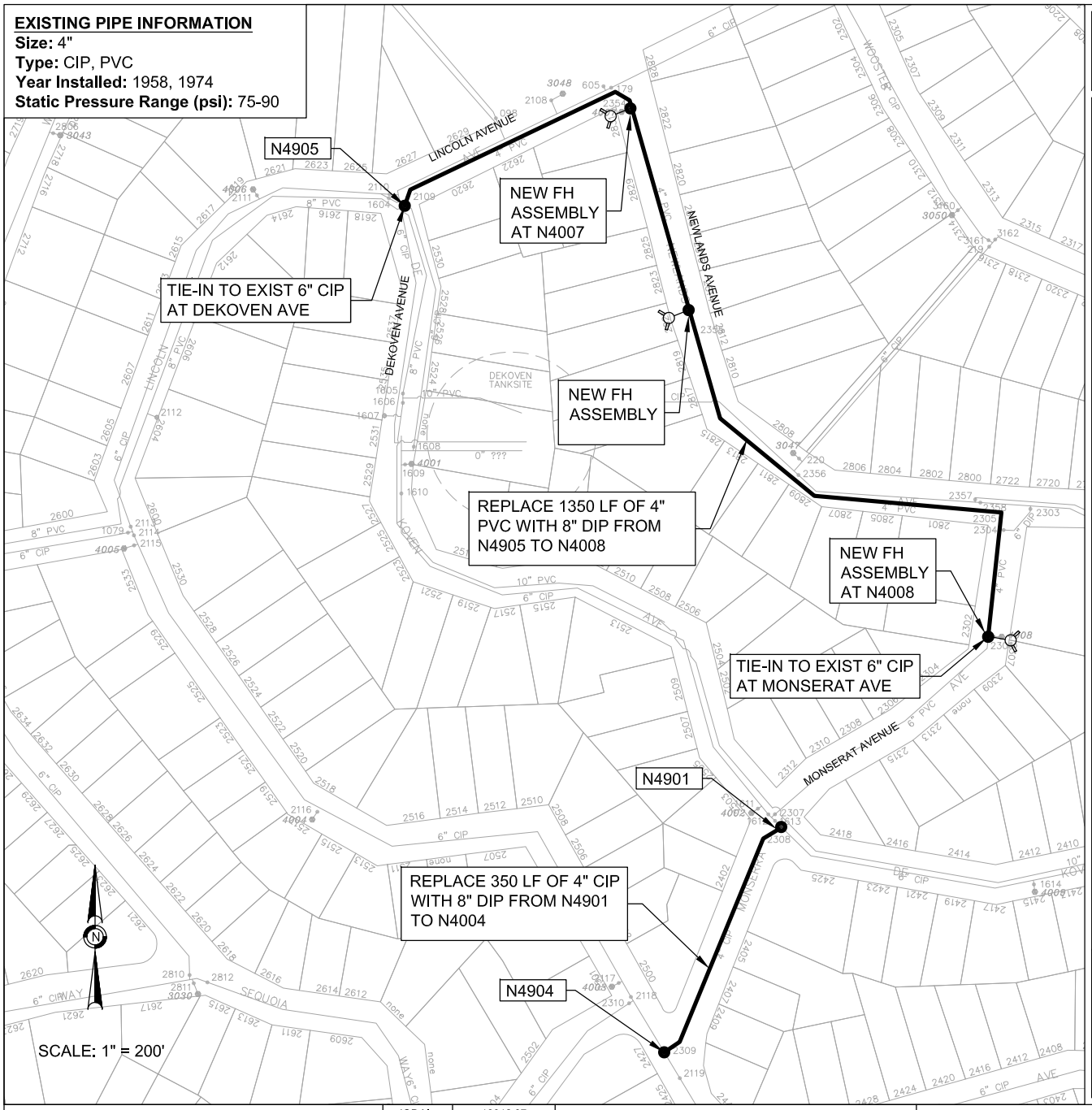
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
DARTMOUTH AVENUE IMPROVEMENTS
PROJECT 15-07

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP, PVC
Year Installed: 1958, 1974
Static Pressure Range (psi): 75-90



ZONE 4 WATER MAIN IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to Lincoln Avenue, Newlands Avenue and Monserat Avenue through a 1,350 LF 4" polyvinyl chloride pipe (PVC) and a 350 LF 4" cast iron pipe (CIP) in Monserat Avenue. The water mains were installed in 1958 and 1974 and static pressures are between 75-90 psi. There is a fire hydrant located at the intersection of Lincoln Avenue (N4007) and Newlands Avenue and another fire hydrant on Monserat Avenue (N4008). There are 40 services located on these water mains. This project replaces the existing 4" PVC and 4" CIP with a new 8" ductile iron pipe (DIP). Upon completion of this project, hydraulic analysis indicates a 105% increase in available fire flows at N4007 and a 48% increase in available fire flows N4008. Distribution System Analysis No. 011

PROPOSED IMPROVEMENTS

Replace 1,700 LF of 4" PVC and 4" CIP with 8" DIP
Replace 3 fire hydrants
Replace 40 service connections

PROJECT BENEFITS

The Zone 4 Water Main Improvements replaces aging, undersized 4" PVC and CIP water mains with a new 8" DIP increasing fire flows by approximately 48% to 105% in the area.

PROJECT BUDGET (2024)

8" DIP - 1,700 LF @ $475/LF	$ 807,500
Fire Hydrants - 3 @ $15,000/EA	$ 45,000
Service Connections - 40 @ $5,250/EA	$ 210,000
Subtotal Construction	$ 1,062,500
Planning, Design & Construction Support	$ 160,000
Construction Inspection	$ 110,000
Contingency (±10%)	$ 137,500
Project Budget	**$ 1,470,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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CKD	JP

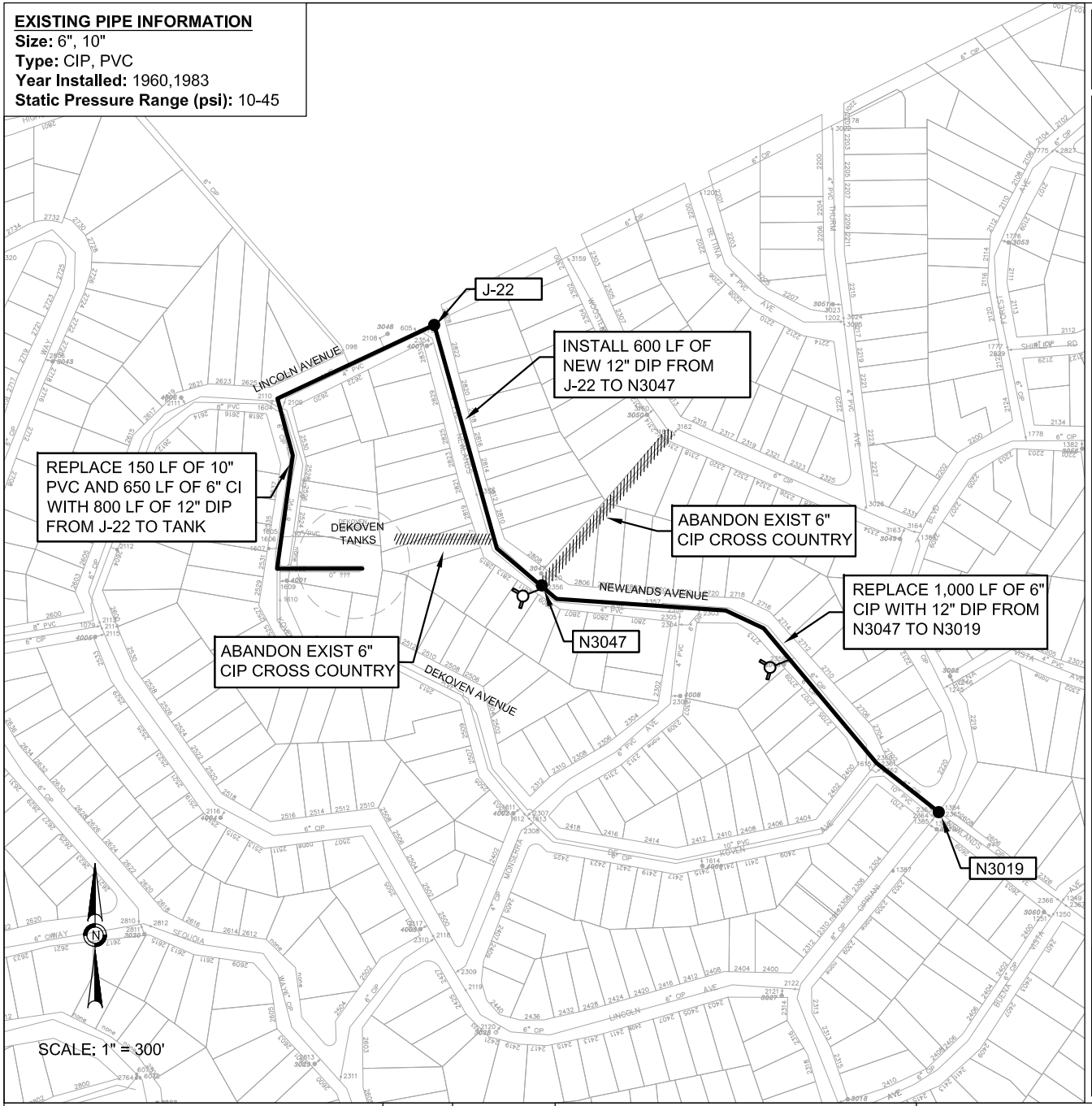
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ZONE 4 WATER MAIN IMPROVEMENTS
PROJECT 15-08

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6", 10"
Type: CIP, PVC
Year Installed: 1960,1983
Static Pressure Range (psi): 10-45



DEKOVEN TANK UTILIZATION PROJECT

PROJECT BACKGROUND

The Dekoven Tank Site serves Zone 3 with total storage capacity of 1.7 million gallons. Water is primarily gravity fed from Zone 7 through the West Belmont Pump Station regulator located on Ralston Avenue. Hersom Pump Station can also provide water to the tank however is infrequently used due to over pressurization of the undersized water mains in the area . Each tank has an 8" outlet connected to a 10" polyvinyl chloride pipe (PVC) transitioning to 6" and 8" cast iron pipe (CIP) shortly thereafter. In addition, a 6" CIP cross country main extends of the backside of the tank to Newlands Avenue. This project increases the tank outlets to 12" and continues a 12" ductile iron pipe (DIP) out to Lincoln Avenue and Newlands Avenue. The project abandons the 6" cross country main between Newlands Avenue and Wooster Avenue.

PROPOSED IMPROVEMENTS

Install new 600 LF of 12" DIP
Replace 150 LF of 10" PVC and 1,650 LF of 6" CIP with 12" DIP
Replace 2 fire hydrants
Replace 14 service connections
Abandon 2 - 6" cross country mains
Abandon 325 LF 8" PVC dead end on Dekoven Avenue

PROJECT BENEFITS

The Dekoven Tanks Utilization Project provides zone wide fire flow improvement, abandons two cross country water mains, and promotes improved water movement.

PROJECT BUDGET (2024)

12" DIP - 2,400 LF @ $575/LF	$ 1,380,000
Fire Hydrants - 2 @ $15,000/EA	$ 30,000
Service Connections - 14 @ $5,250/EA	$ 73,500
Subtotal Construction	$ 1,483,500
Planning, Design & Construction Support	$ 225,000
Construction Inspection	$ 150,000
Contingency (±10%)	$ 186,500
Project Budget	**$ 2,045,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
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CKD	JP

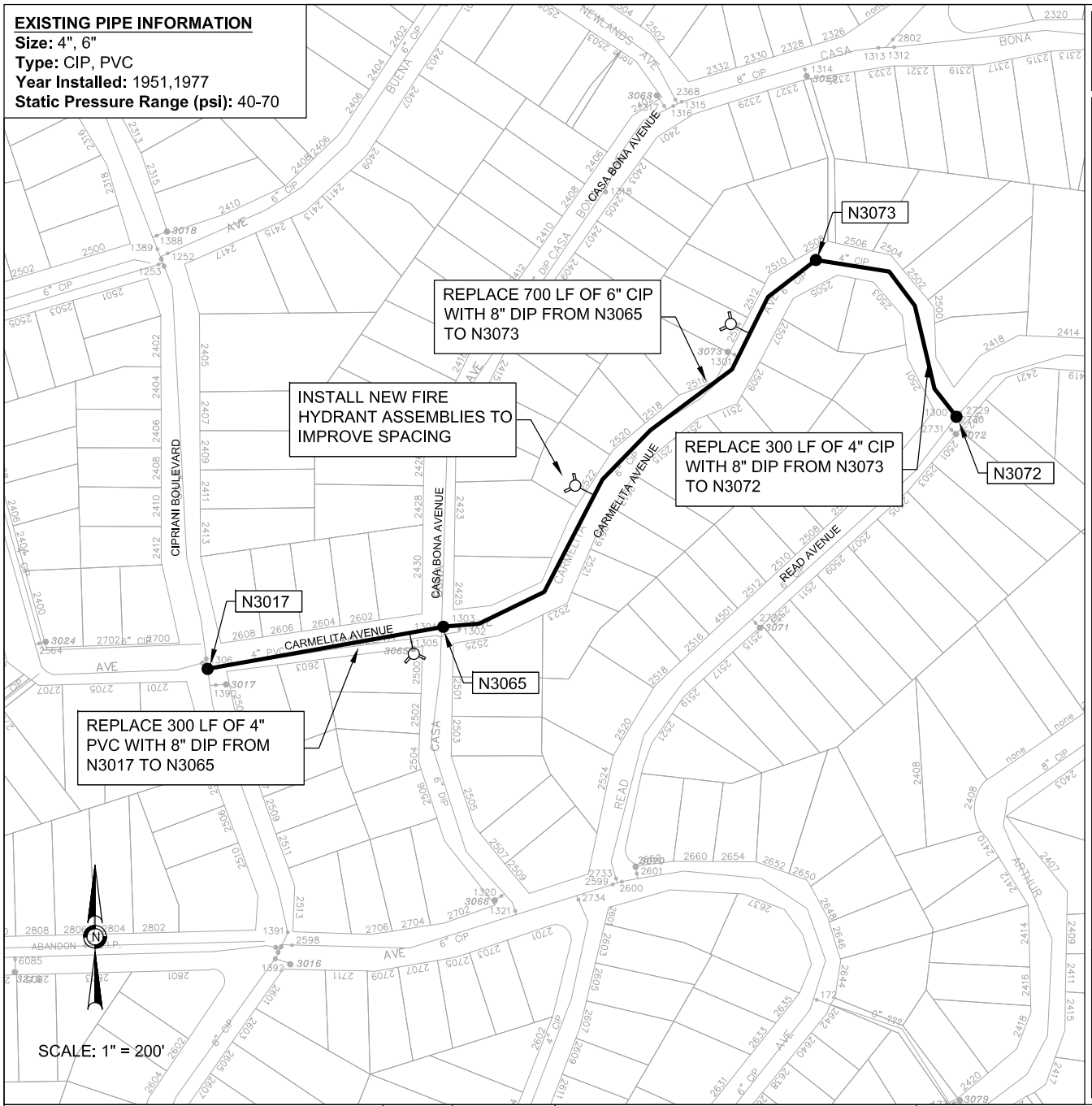
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
DEKOVEN TANK UTILIZATION PROJECT
PROJECT 15-09

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

CARMELITA AVENUE IMPROVEMENTS



PROJECT BACKGROUND

Carmelita Avenue has two 4" water mains: 1) a 300 LF polyvinyl chloride pipe (PVC) and 2) a 300 LF cast iron pipe (CIP). In addition, there is a 700 LF 6" CIP between these two water mains. Due to the undersized mains, the minimum recommended fire flow of 1,500 gpm at 20 psi cannot be achieved. This project replaces the undersized, aging, water mains with 8" ductile iron pipe (DIP). Two hydrants will be replaced along with 31 service connections and the installation of one new hydrant. Hydraulic analysis indicates an 86% increase in available fire flows along Carmelita Avenue upon completion of this project. Distribution System Analysis No. 014

PROPOSED IMPROVEMENTS

Replace 300 LF of 4" PVC w/ 8" DIP
Replace 300 LF of 4" CIP w/ 8" DIP
Replace 700 LF of 6" CIP w/ 8" DIP
Increase fire hydrants from 2 to 3 to improve spacing
Replace 31 service connections

PROJECT BENEFITS

The Carmelita Avenue Improvements replaces aging and undersized 4" PVC, 4" CIP, and 6" CIP water mains with new 8" DIP. Fire flows on Carmelita are also increased by 86%.

PROJECT BUDGET (2024)

8" DIP - 1,300 LF @ $475/LF	$ 617,500
Fire Hydrants - 3 @ $15,000/EA	$ 45,000
Service Connections - 31 @ $5,250/EA	$ 162,750
Subtotal Construction	$ 825,250
Planning, Design & Construction Support	$ 170,000
Construction Inspection	$ 85,000
Contingency (±10%)	$ 109,750
Project Budget	**$ 1,190,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
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	CKD JP

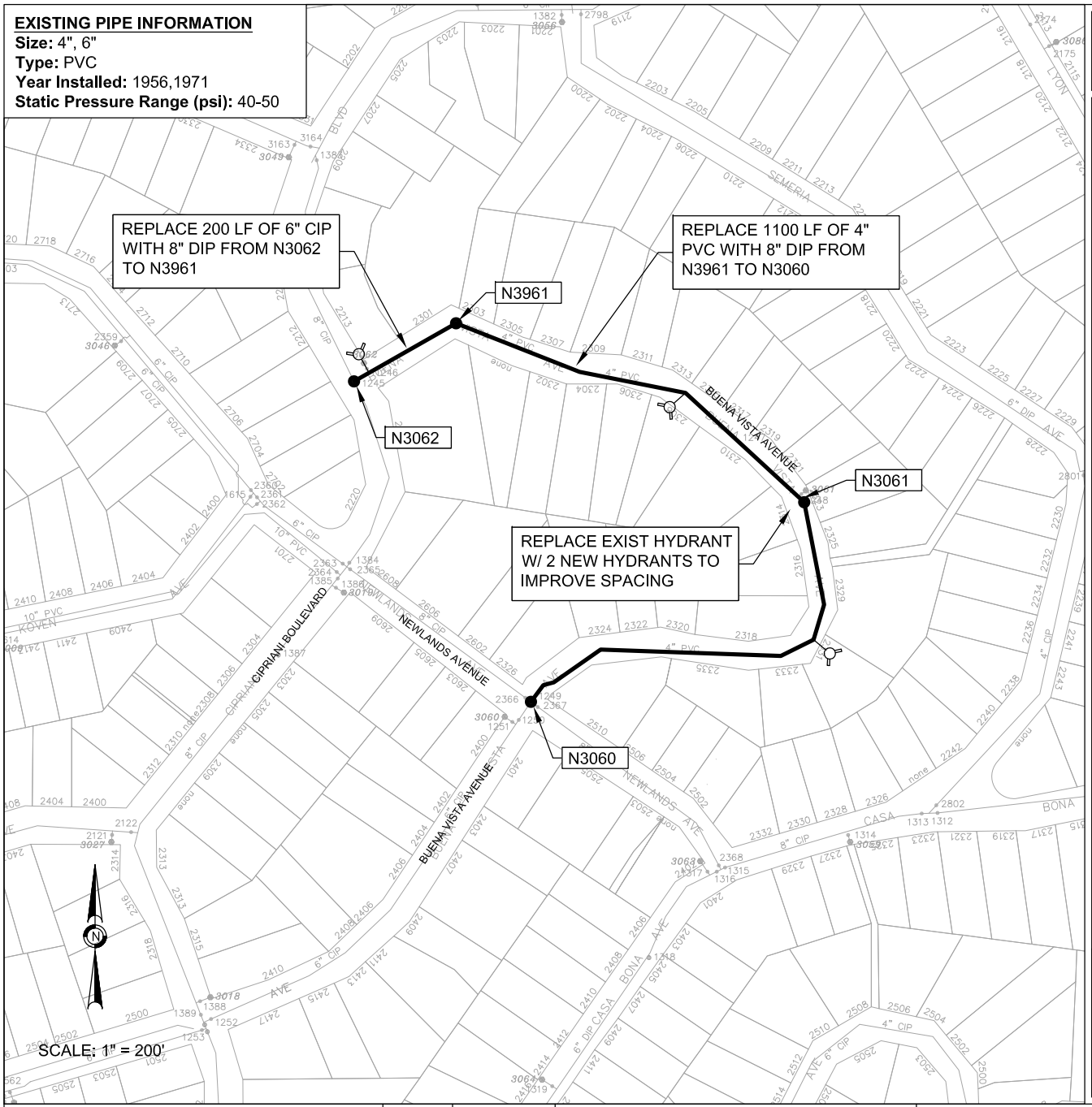
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
CARMELITA AVENUE IMPROVEMENTS
PROJECT 15-11

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 6"
Type: PVC
Year Installed: 1956,1971
Static Pressure Range (psi): 40-50



BUENA VISTA AVENUE IMPROVEMENTS

PROJECT BACKGROUND

The water mains along Buena Vista Avenue between Newlands Avenue and Cipriani Avenue are comprised of an undersized 1,100LF 4" polyvinyl chloride pipe (PVC) and a 200 LF 6" cast iron pipe (CIP) incapable of achieving the minimum fire flow recommendations of 1,500 gpm at 20 psi. This project replaces the undersized water mains with new 8" ductile iron pipe (DIP). Two fire hydrants along with 27 service connections will also be replaced. Hydraulic analysis indicates a 43% to 119% increase in available fire flows along Buena Vista Avenue upon completion of this project. Distribution System Analysis No. 015

PROPOSED IMPROVEMENTS

Replace 1,100 LF of 4" PVC with 8" DIP
Replace 200 LF of 6" CIP with 8" DIP
Increase fire hydrants from 2 to 3 to improve spacing
Replace 27 service connections

PROJECT BENEFITS

The Buena Vista Avenue Improvements replaces aging and undersized 4" PVC and 6" CIP water mains with new 8" DIP. Fire flows on Buena Vista Avenue increase by 43% to 119%.

PROJECT BUDGET (2024)

8" DIP - 1,300 LF @ $475/LF	$	617,500
Fire Hydrants - 3 @ $15,000/EA	$	45,000
Service Connections - 27 @ $5,250/EA	$	141,750
Subtotal Construction	$	804,250
Planning, Design & Construction Support	$	165,000
Construction Inspection	$	85,000
Contingency (±10%)	$	105,750
Project Budget	**$**	**1,160,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
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SCALE	AS NOTED
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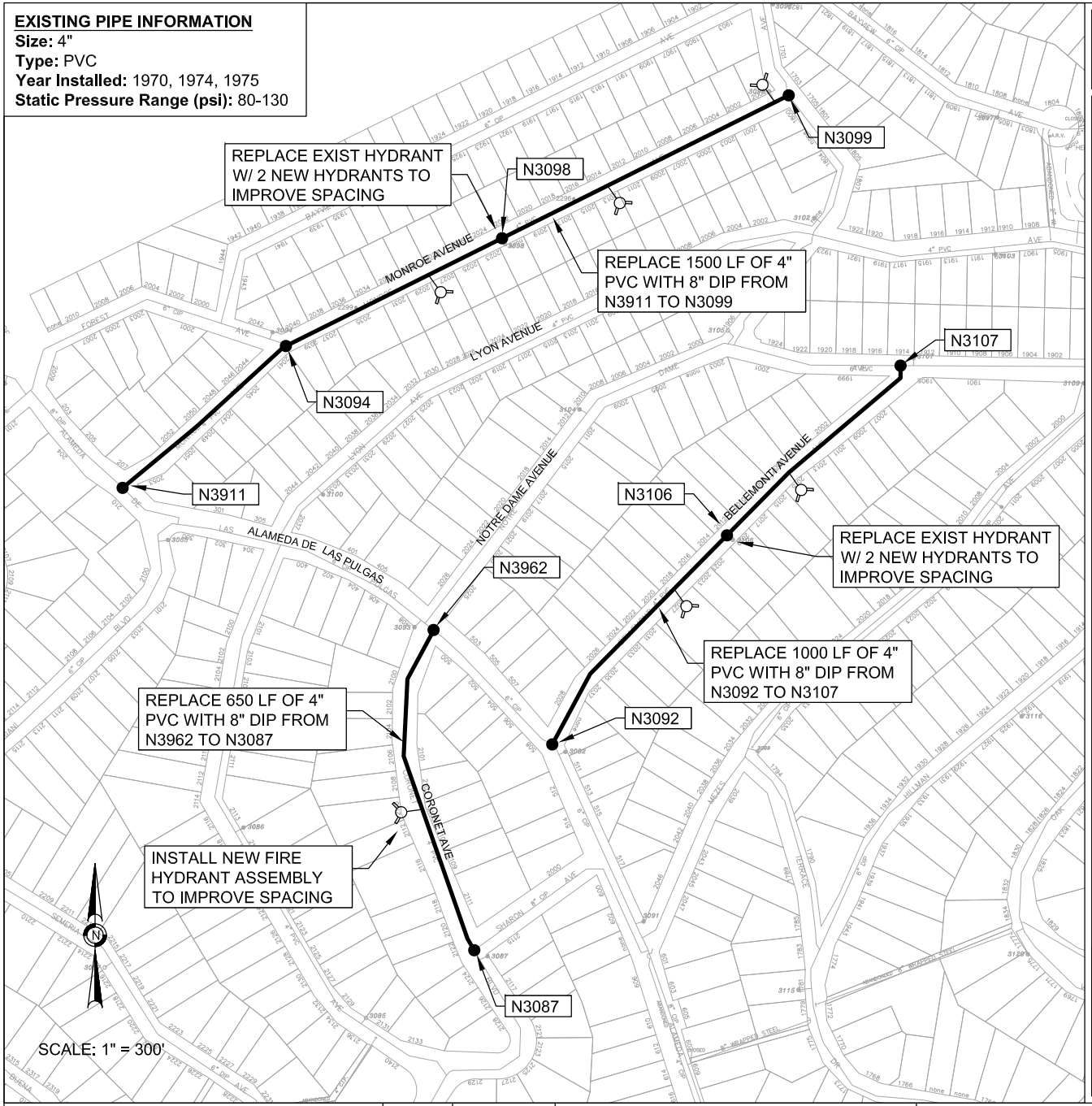
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
BUENA VISTA AVENUE IMPROVEMENTS
PROJECT 15-12

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1970, 1974, 1975
Static Pressure Range (psi): 80-130



MONROE, BELLE MONTI, CORONET AVENUES IMPROVEMENTS

PROJECT BACKGROUND

The water mains along Monroe Avenue, Belle Monti Avenue, and Coronet Avenue are 4" polyvinyl chloride pipe (PVC). The undersized mains are incapable of meeting the minimum recommended fire flow of 1,500 gpm at 20 psi. The majority of the surrounding water mains in the area are comprised of 6" or 8" pipe. This project replaces the 4" PVC water mains with 8" ductile iron pipe (DIP). Also included is installing a direct connection of the water mains at the Sharon Avenue / Alameda De Las Pulgas intersection to eliminate 210 LF of parallel water mains. Three fire hydrants along with 94 service connections will be replaced. Three new hydrants will also be installed to improve hydrant spacing in the area. Hydraulic analysis indicates over a 90% increase in available fire flows upon completion of this project. Distribution System Analysis No. 016

PROPOSED IMPROVEMENTS

Install 50 LF 8" DIP
Replace 3,150 LF of 4" PVC with 8" DIP
Increase fire hydrants from 4 to 6 to improve spacing
Replace 94 service connections
Abandon 210 LF of 8" CIP

PROJECT BENEFITS

The Monroe, Belle Monti, Coronet Avenues Improvements replaces undersized 4" PVC water mains with new 8" DIP and eliminates the parallel mains on Alameda De Las Pulgas. Fire flows along the streets increase between 93% and 100%.

PROJECT BUDGET (2024)

8" DIP - 3,200 LF @ $475/LF	$1,520,000
Fire Hydrants - 6 @ $15,000/EA	$ 90,000
Service Connections - 94 @ $5,250/EA	$ 493,500
Subtotal Construction	$2,103,500
Planning, Design & Construction Support	$ 320,000
Construction Inspection	$ 215,000
Contingency (±10%)	$ 266,500
Project Budget	**$2,905,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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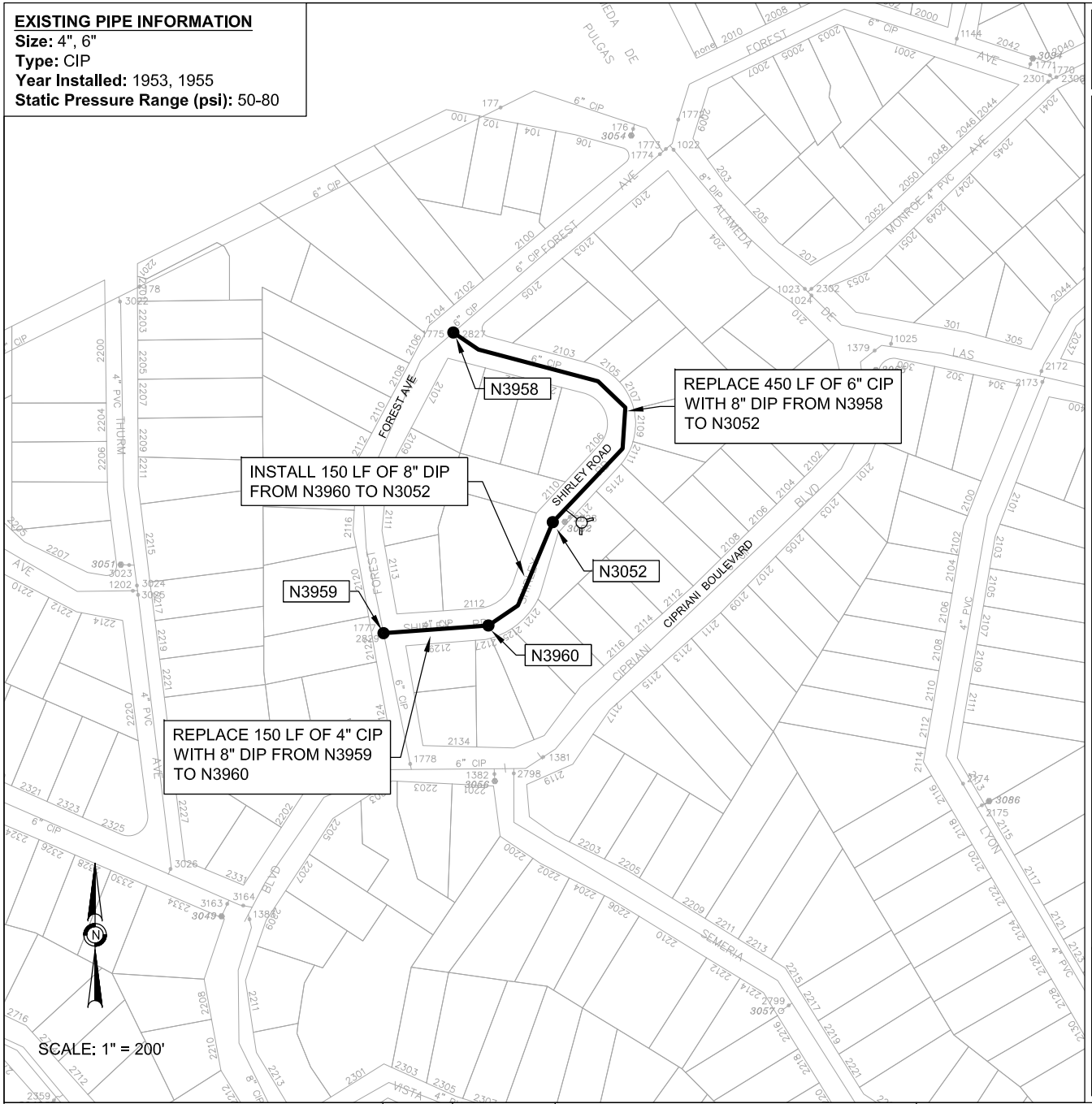
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
MONROE, BELLE MONTI, CORONET AVENUES IMPROVEMENTS - PROJECT 15-13

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 6"
Type: CIP
Year Installed: 1953, 1955
Static Pressure Range (psi): 50-80



SHIRLEY ROAD IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to Shirley Road through a 150 LF 4" cast iron pipe (CIP) from the south and a 450 LF 6" CIP from the north. The existing mains do not connect therefore creating two dead ends and as a result fire flows are below the recommended 1,500 gpm at 20 psi. This project would connect the two dead ends creating a looped water main as well as replacing the 4" and 6" water mains with new 8" ductile iron pipe (DIP). One hydrant and 11 service connections will be replaced. Hydraulic analysis indicates a 74% to 259% increase in available fire flows along Shirley Road upon completion of this project. Distribution System Analysis No. 018

PROPOSED IMPROVEMENTS

Install 160 LF of 8" DIP
Replace 140 LF of 4" CIP and 450 LF of 6" CIP with 8" DIP
Replace 1 fire hydrant
Replace 11 service connections

PROJECT BENEFITS

The Shirley Road Improvements eliminates two dead ends and replaces aging and undersized 4" and 6" CIP water mains with new 8" DIP. Fire flows on Shirley Road increase by 74% to 259%.

PROJECT BUDGET (2024)

8" DIP - 750 LF @ $475/LF	$ 356,250
Fire Hydrants - 1 @ $15,000/EA	$ 15,000
Service Connections - 11 @ $5,250/EA	$ 57,750
Subtotal Construction	$ 429,000
Planning, Design & Construction Support	$ 110,000
Construction Inspection	$ 45,000
Contingency (±10%)	$ 61,000
Project Budget	**$ 645,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures
Planning, Design, & Construction Support: $
Construction: $
Total Expenditures: $

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JOB No.	10012.07
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SCALE	AS NOTED
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CKD	JP

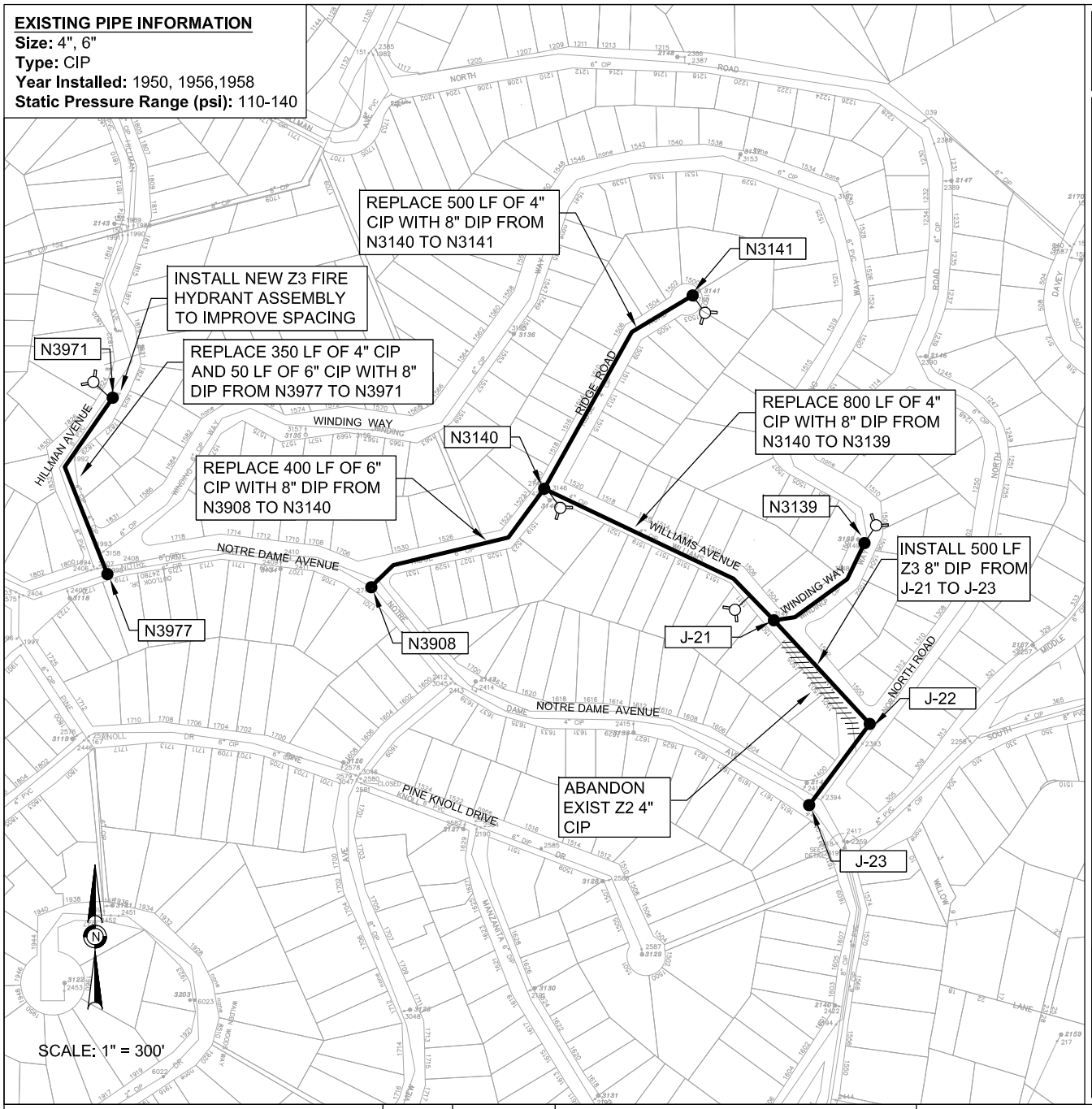
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SHIRLEY ROAD IMPROVEMENTS
PROJECT 15-15

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 6"
Type: CIP
Year Installed: 1950, 1956,1958
Static Pressure Range (psi): 110-140



WILLIAMS AVENUE, RIDGE ROAD HILLMAN AVENUE IMPROVEMENTS

PROJECT BACKGROUND

The three respective water mains on Williams Avenue, Ridge Road, and Hillman Avenue have three dead ends, including a Zone 3 350 LF 4" cast iron pipe (CIP) on Hillman Avenue, a Zone 3 500 LF 4" CIP on Ridge Road and a Zone 2 300 LF 4" CIP on Williams Avenue. Due to the dead ends and the undersized mains, these areas are incapable of meeting the recommended fire flow of 1,500 gpm at 20 psi. This project replaces the aging and undersized 4" and 6" water mains with new 8" ductile iron pipe (DIP). In addition, the project eliminates the Zone 2 dead end by installing a new 500 LF 8" DIP water main between Williams Avenue and Notre Dame Avenue on Zone 3. Five services originally located on Zone 2 will be transferred to Zone 3. Four fire hydrants and 59 service connections will be replaced. Hydraulic analysis indicates a 169% to 182% increase in available fire flows. Distribution System Analysis No. 019

PROPOSED IMPROVEMENTS

Install 500 LF of 8" DIP
Replace 1,650 LF of 4" CIP and 450 LF of 6" CIP with 8" DIP
Replace 4 fire hydrant
Install 1 fire hydrant to improve spacing
Replace 59 service connections

PROJECT BENEFITS

The Williams Avenue, Ridge Road, Hillman Avenue Improvements replaces aging and undersized 4" and 6" water mains with new 8" ductile iron pipe. The Zone 2 dead end on Williams is eliminated by installing a new looped Zone 3 water main. Fire flows on the streets are increased by as much as 182%.

PROJECT BUDGET (2024)

8" DIP - 2,600 LF @ $475/LF	$ 1,235,000
Fire Hydrants - 5 @ $15,000/EA	$ 75,000
Service Connections - 59 @ $5,250/EA	$ 309,750
Subtotal Construction	$ 1,619,750
Planning, Design & Construction Support	$ 245,000
Construction Inspection	$ 165,000
Contingency (±10%)	$ 205,250
Project Budget	**$ 2,235,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

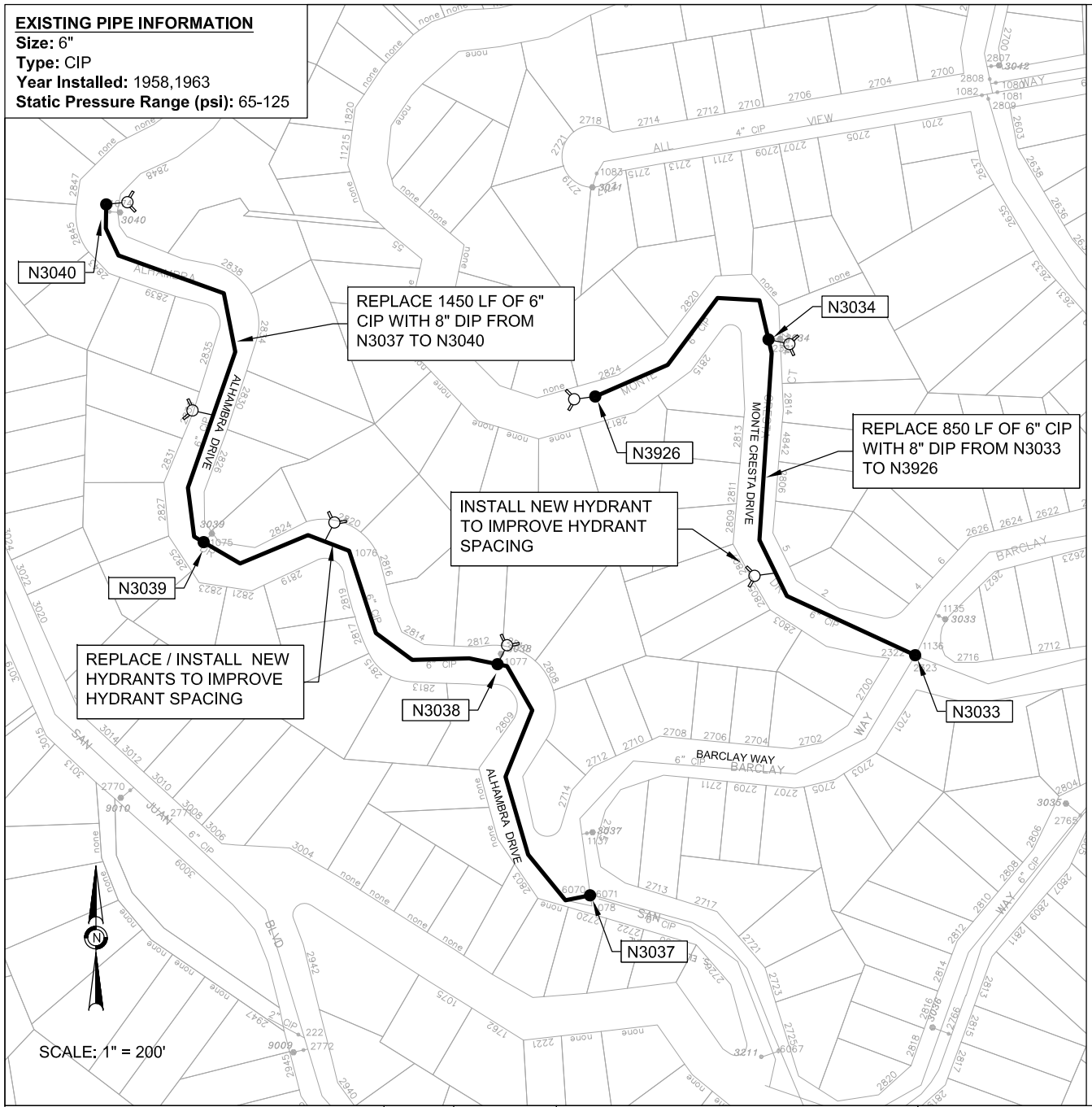
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
WILLIAMS AVENUE, RIDGE ROAD, HILLMAN AVENUE IMPROVEMENTS - PROJECT 15-16

Rev 2 - 2024
Rev 1 - 2023
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: CIP
Year Installed: 1958,1963
Static Pressure Range (psi): 65-125



MONTE CRESTA DRIVE, ALHAMBRA DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Water is provided to Monte Cresta Drive and Alhambra Drive through 850 LF 6" cast iron pipe (CIP) and 1,450 LF 6" CIP dead ends respectively. Fire flows on these streets are below the recommended 1,500 gpm at 20 psi. This project replaces the aging and undersized water mains with new 8" ductile iron pipe (DIP). Five hydrants and 48 service connections will be replaced. Hydraulic analysis indicates increased fire flows on Monte Cresta Drive as high as 60% and Alhambra Drive as high as 72% upon completion of this project. The water age effects of increasing the water mains from 6" to 8" were minimal. Distribution System Analysis No. 020

PROPOSED IMPROVEMENTS

Replace 2,300 LF of 6" CIP with 8" DIP
Increase fire hydrants from 4 to 7 to improve spacing
Replace 48 services

PROJECT BENEFITS

The Monte Cresta Drive and Alhambra Drive Water Main Improvement Project replaces aging and undersized 6" water mains with 8" DIP. Fire flows on these streets increase as much as 72%.

PROJECT BUDGET (2024)

8" DIP - 2,300 LF @ $475/LF	$ 1,092,500
Fire Hydrants - 7 @ $15,000/EA	$ 105,000
Service Connections - 48 @ $5,250/EA	$ 252,000
Subtotal Construction	$ 1,449,500
Planning, Design & Construction Support	$ 220,000
Construction Inspection	$ 145,000
Contingency (±10%)	$ 185,500
Project Budget	**$ 2,000,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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DATE	08/21/24
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CKD	JP

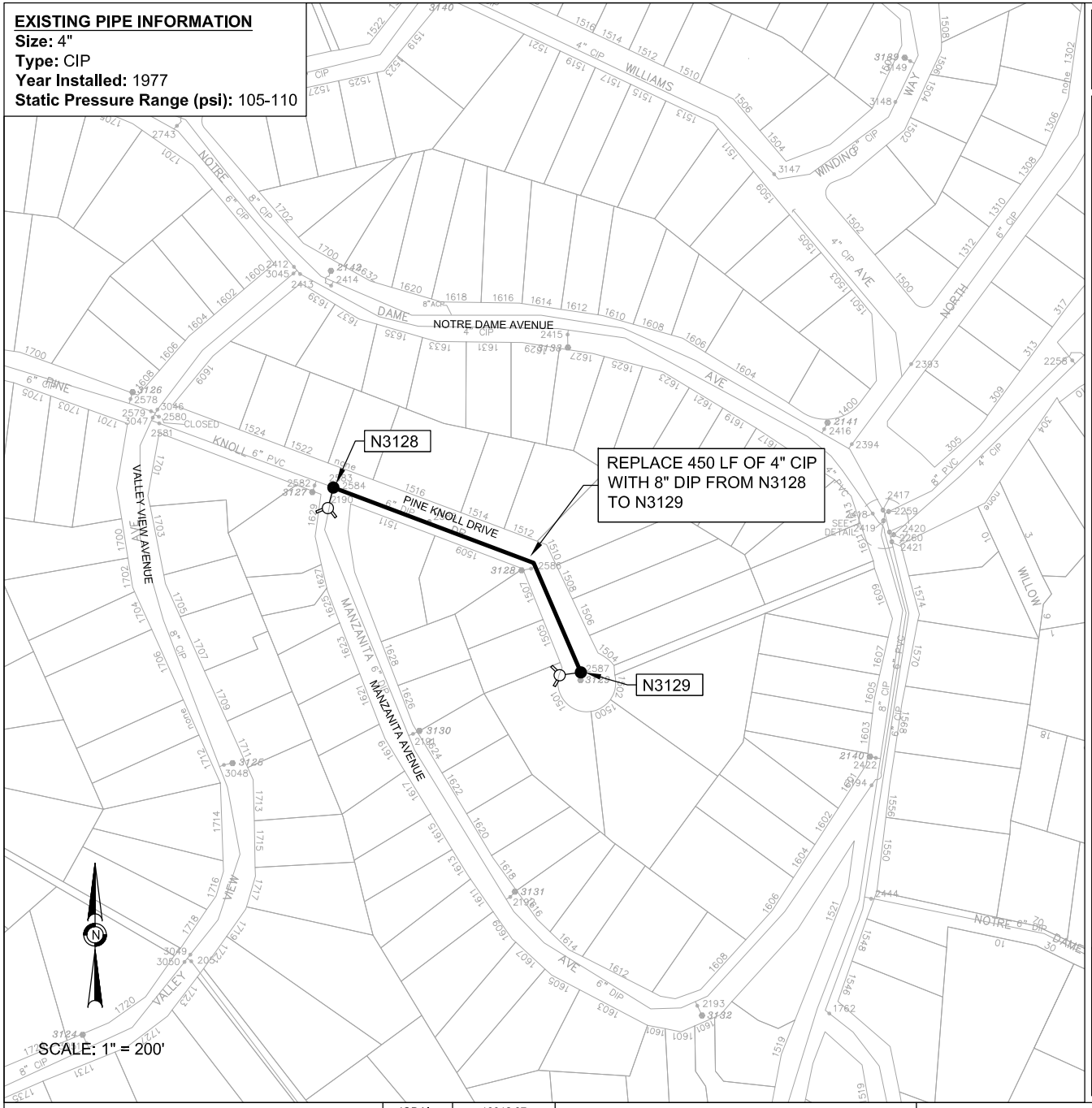
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
MONTE CRESTA DRIVE, ALHAMBRA DRIVE IMPROVEMENTS
PROJECT 15-17

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1977
Static Pressure Range (psi): 105-110



PINE KNOLL DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to the Pine Knoll Drive cul-de-sac through a 450 LF 4" ductile iron pipe (DIP). Fire flows are well below the recommended minimum of 1,500 gpm at 20 psi. This project replaces the aging and undersized water main with a new 8" DIP. Two hydrants and 14 service connections will be replaced. Hydraulic analysis indicates a 161% increase in available fire flows upon completion of this project. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 021

PROPOSED IMPROVEMENTS

Replace 450 LF of 4" CIP with 8" DIP
Replace 2 fire hydrants
Replace 14 service connections

PROJECT BENEFITS

The Pine Knoll Drive Improvements replaces aging and undersized 4" DIP with 8" DIP. Fire flows on the cul-de-sac increase by 161%.

PROJECT BUDGET (2024)

8" DIP - 450 LF @ $475/LF	$ 213,750
Fire Hydrants - 2 @ $15,000/EA	$ 30,000
Service Connections - 14 @ $5,250/EA	$ 73,500
Subtotal Construction	$ 317,250
Planning, Design & Construction Support	$ 80,000
Construction Inspection	$ 35,000
Contingency (±10%)	$ 47,750
Project Budget	**$ 480,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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CKD	JP

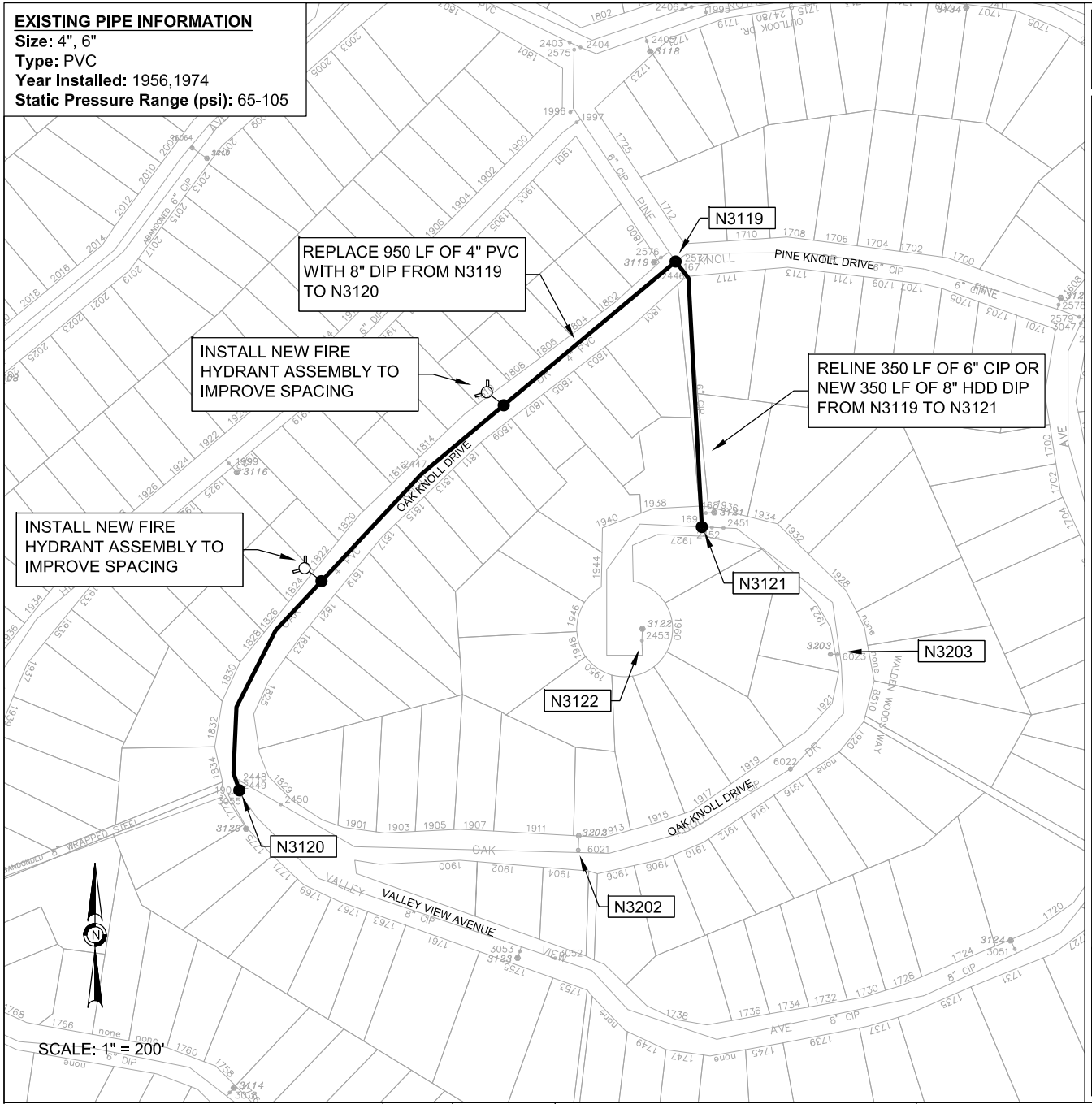
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
PINE KNOLL DRIVE IMPROVEMENTS
PROJECT 15-18

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 6"
Type: PVC
Year Installed: 1956,1974
Static Pressure Range (psi): 65-105



OAK KNOLL DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to a portion of Oak Knoll Drive through a 1,520 LF 6" polyvinyl chloride pipe (PVC). A 350 LF 6" cast iron pipe (CIP) cross country main between 1717 Pine Knoll Drive and 1801 Oak Knoll Drive also fed this area however was recently abandoned. In addition, 950 LF of 4" PVC creates a bottleneck on Oak Knoll Drive between Pine Knoll Drive and Valley View Avenue (there are also no hydrants in this section) and the cul-de-sac on Oak Knoll is 100 feet higher than the surrounding streets. All of these characteristics, especially the cross country abandonment, substantially decrease the amount of available fire flows along both Oak Knoll Drive and portions of Valley View Avenue. This project replaces the undersized 4" PVC on Oak Knoll with an 8" ductile iron pipe (DIP) and also reinstates the cross country water main by either relining the existing 6" CIP or installing a new 8" DIP using horizontal directional drilling (HDD). Two new hydrants will also be added to Oak Knoll Drive. Hydraulic analysis indicates a 18% to 68% increase in available fire flows. Distribution System Analysis No. 022

PROPOSED IMPROVEMENTS

Replace 950 LF of 4" PVC with 8" DIP
Reline 350 LF of 6" CIP or install new 8" HDD DIP
Install 2 new fire hydrants
Replace 33 service connections

PROJECT BENEFITS

The Oak Knoll Drive Improvements replaces an undersized 4" water main with an 8" DIP and reinstates the previously existing cross country water main to provide additional fire flows in the area. Fire flows on Oak Knoll Drive and Valley View Avenue increase by 18% to 68%.

PROJECT BUDGET (2024)

8" DIP 950 LF @ $475/LF	$ 451,250
8" HDD - 350 LF @ $1,100/LF	$ 385,000
Fire Hydrants - 2 @ $15,000/LF	$ 30,000
Service Connections - 33 @ $5,250/EA	$ 173,250
Subtotal Construction	$ 1,039,500
Planning, Design & Construction Support	$ 160,000
Construction Inspection	$ 105,000
Contingency (±10%)	$ 130,500
Project Budget	**$ 1,435,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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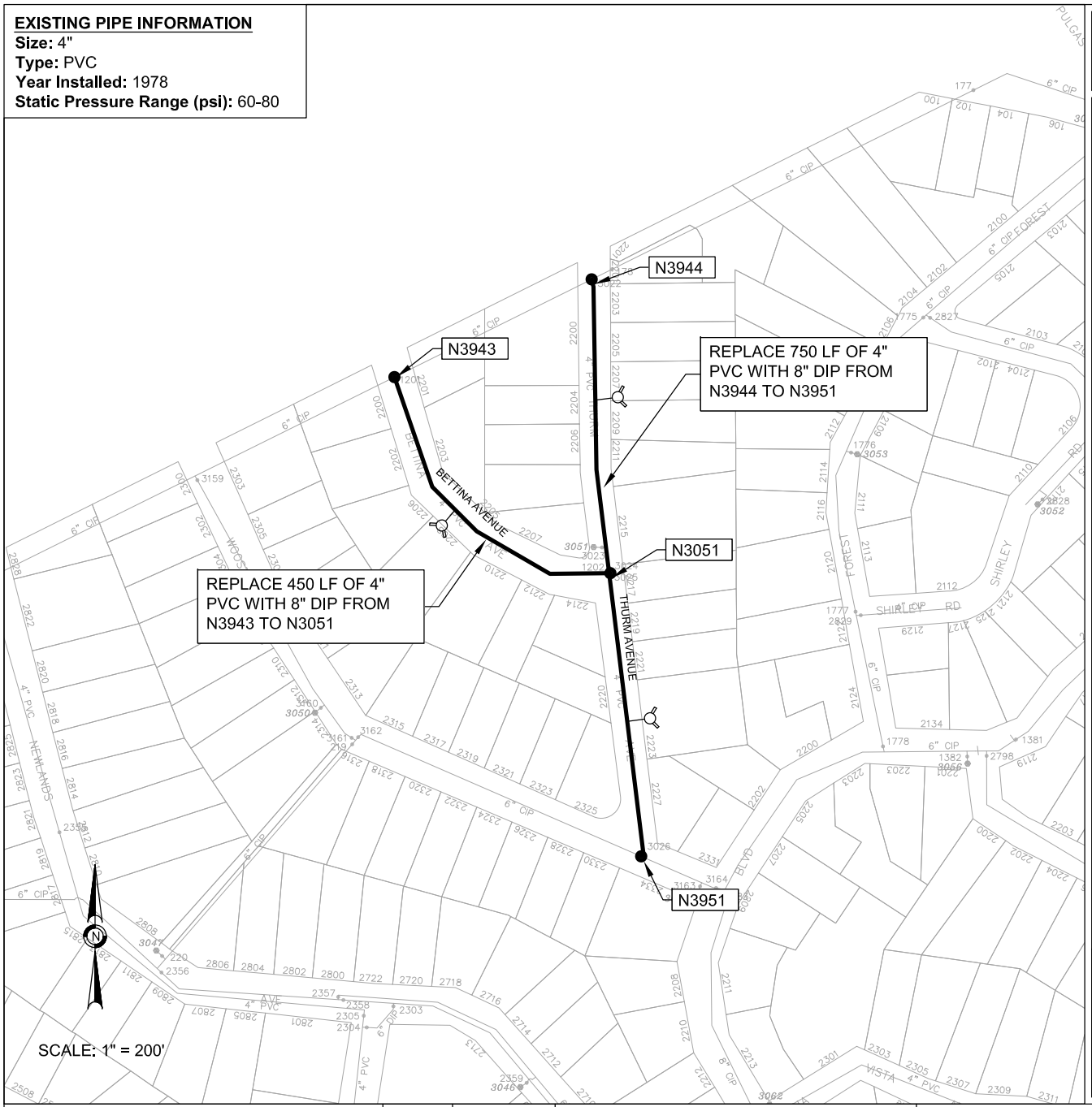
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
OAK KNOLL DRIVE IMPROVEMENTS
PROJECT 15-19

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1978
Static Pressure Range (psi): 60-80



THURM AND BETTINA AVENUES IMPROVEMENTS

PROJECT BACKGROUND

Water is provided to Thurm Avenue and Bettina Avenue through 750 LF 4" polyvinyl chloride pipe (PVC) and 450 LF 4" PVC respectively. This project would replace the existing 4" PVC with 8" ductile iron pipe (DIP). One fire hydrant and 26 service connections will be replaced in addition to adding 2 new hydrants to improve spacing. Fire flows currently meet the minimum recommendation of 1,500 gpm at 20 psi however upon completion of this project, the intersection at Thurm Avenue and Bettina Avenue will see a 36% increase in fire flow. Distribution System Analysis No. 023

PROPOSED IMPROVEMENTS

Replace 1,200 LF of 4" PVC with 8" DIP
Replace 1 fire hydrant
Install 2 new fire hydrants
Replace 26 service connections

PROJECT BENEFITS

The Thurm and Bettina Avenues Improvements will replace 4" PVC water mains with new 8" DIP per industry standards. Fire flows will increase by as much as 36%.

PROJECT BUDGET (2024)

8" DIP - 1,200 LF @ $475/LF	$ 570,000
Fire Hydrants - 3 @ $15,000/EA	$ 45,000
Service Connections - 26 @ $5,250/EA	$ 136,500
Subtotal Construction	$ 751,500
Planning, Design & Construction Support	$ 150,000
Construction Inspection	$ 75,000
Contingency (±10%)	$ 98,500
Project Budget	**$ 1,075,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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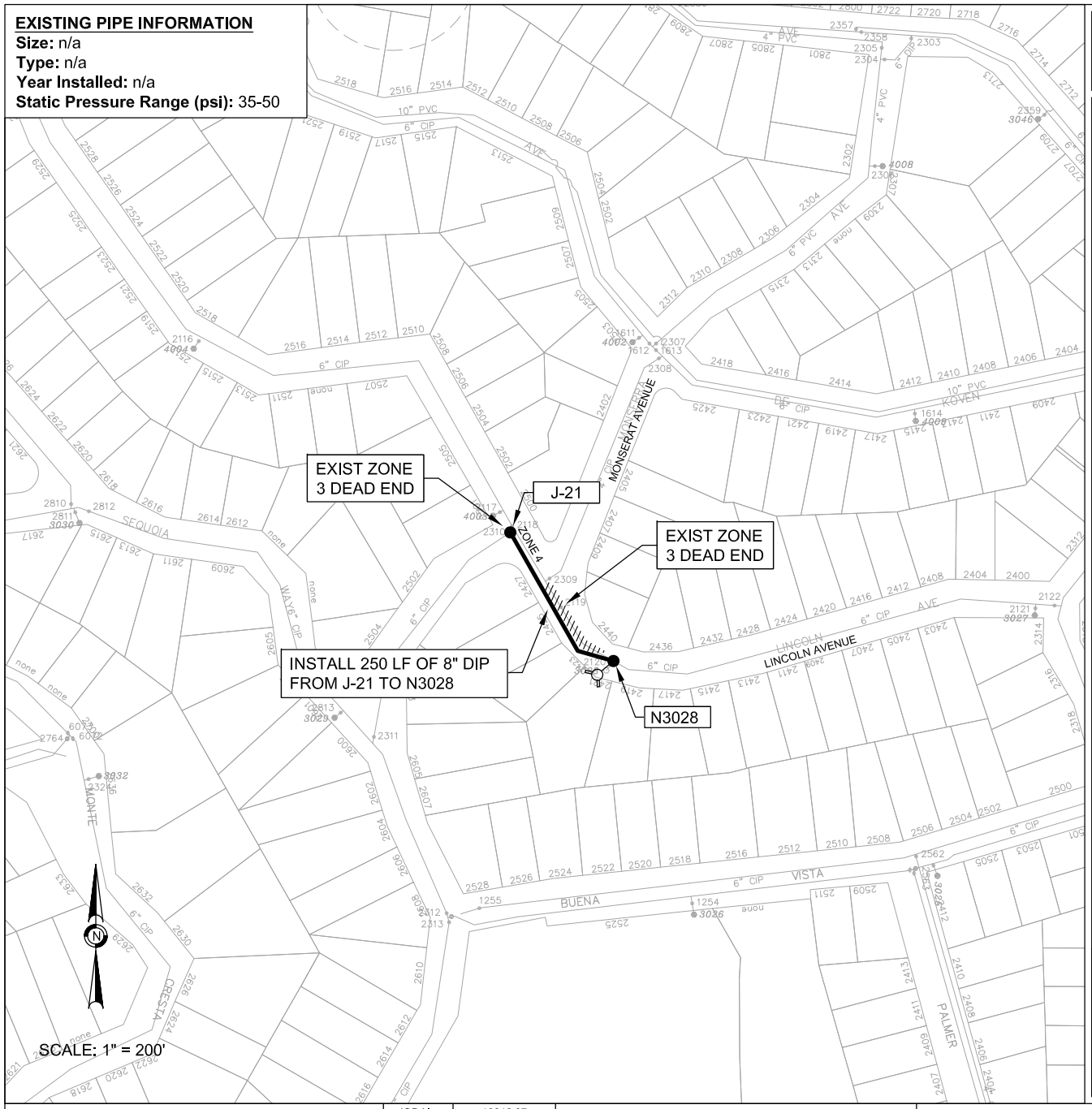
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
THURM AND BETTINA AVENUES IMPROVEMENTS
PROJECT 15-20

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: n/a
Type: n/a
Year Installed: n/a
Static Pressure Range (psi): 35-50



LINCOLN, MONSERAT AVENUES IMPROVEMENTS

PROJECT BACKGROUND

Both the Zone 3 6" cast iron pipe (CIP) water mains on Monserat Avenue and Lincoln Avenue currently connect with Zone 4 at their intersection. Zone 3 is separated from Zone 4 by closed valves on each water main. However, the two mains are not connected directly with one another creating dead ends on each street. As a result, fire flows are below the minimum recommended 1,500 gpm at 20 psi. This project connects the two dead ends with a new 8" ductile iron pipe (DIP) as well as reconfiguring the Zone 3 / Zone 4 connection. One fire hydrant and 2 service connections will be replaced. Hydraulic analysis indicates a 105% to 147% increase in fire flow upon completion of this project. Distribution System Analysis No. 024

PROPOSED IMPROVEMENTS

Install 250 LF of 8" DIP
Replace 1 fire hydrant
Replace 2 service connections

PROJECT BENEFITS

The Lincoln, Monserat Avenues Improvements eliminates two 6" CIP dead ends by connecting them with a new 8" DIP. Fire flows increase by as much as 147%.

PROJECT BUDGET (2024)

8" DIP - 250 LF @ $475/LF	$	118,750
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 2 @ $5,250/EA	$	10,500
Subtotal Construction	$	144,250
Planning, Design & Construction Support	$	45,000
Construction Inspection	$	15,000
Contingency (±10%)	$	20,750
Project Budget	**$**	**225,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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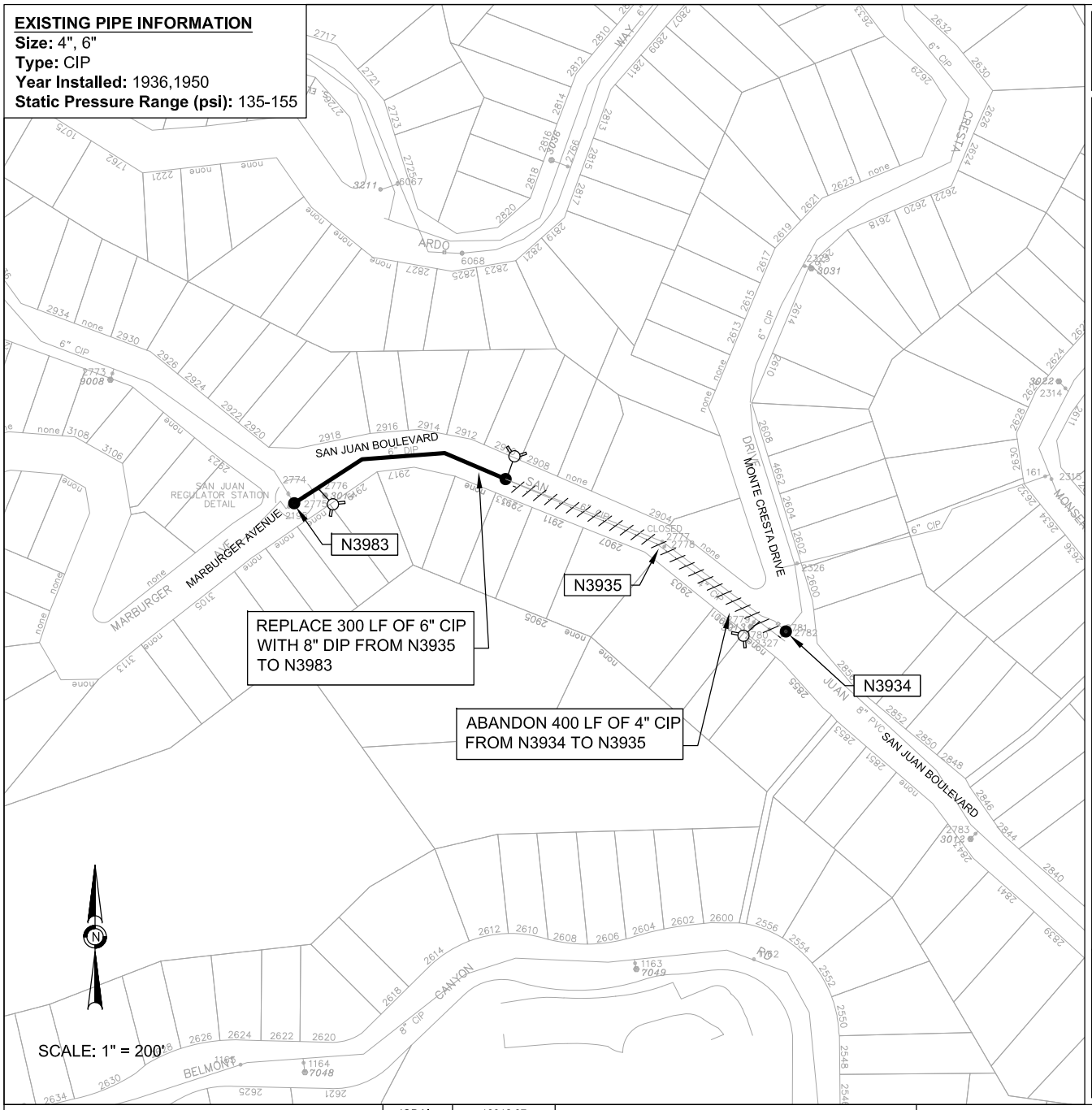
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
LINCOLN, MONSERAT AVENUES IMPROVEMENTS
PROJECT 15-21

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 6"
Type: CIP
Year Installed: 1936,1950
Static Pressure Range (psi): 135-155



SAN JUAN BOULEVARD IMPROVEMENTS

PROJECT BACKGROUND

San Juan Boulevard between Monte Cresta Drive and Marburger Avenue has parallel water mains: 1) a dead-end 400 LF 8" polyvinyl chloride pipe (PVC) and 2) a 400 LF 4" cast iron pipe (CIP) that transitions to a single 300 LF 6" CIP before the San Juan PRV station. Fire flows near Marburger Avenue are below the recommended fire flow of 1,500 gpm at 20 psi due to pipe diameter reductions. This project abandons the parallel 4" CIP along San Juan Boulevard in addition to increasing the 6" CIP along San Juan Blvd to 8" ductile iron pipe (DIP). Two hydrants and 16 service connections will also be replaced. In addition, one additional hydrant will be added to improve hydrant spacing. Hydraulic analysis indicates an 83% increase in available fire flow at the San Juan Boulevard / Marburger Avenue intersection. Distribution System Analysis No. 026

PROPOSED IMPROVEMENTS

Replace 300 LF of 6" CIP with 8" DIP
Abandon 400 LF of 4" CIP
Install 1 new fire hydrant
Replace 2 fire hydrants
Replace 16 service connections

PROJECT BENEFITS

The San Juan Boulevard Improvements eliminates a redundant 4" CIP, and replaces an undersized 6" CIP water main with a new 8" DIP increasing fire flows by 83%.

PROJECT BUDGET (2024)

8" DIP - 300 LF @ $475/LF	$	142,500
Fire Hydrants - 3 @ $15,000/EA	$	45,000
Service Connections -16 @ $5,250/EA	$	84,000
Subtotal Construction	$	271,500
Planning, Design & Construction Support	$	70,000
Construction Inspection	$	30,000
Contingency (±10%)	$	38,500
Project Budget	**$**	**410,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$	
Construction:	$	
Total Expenditures:	$	

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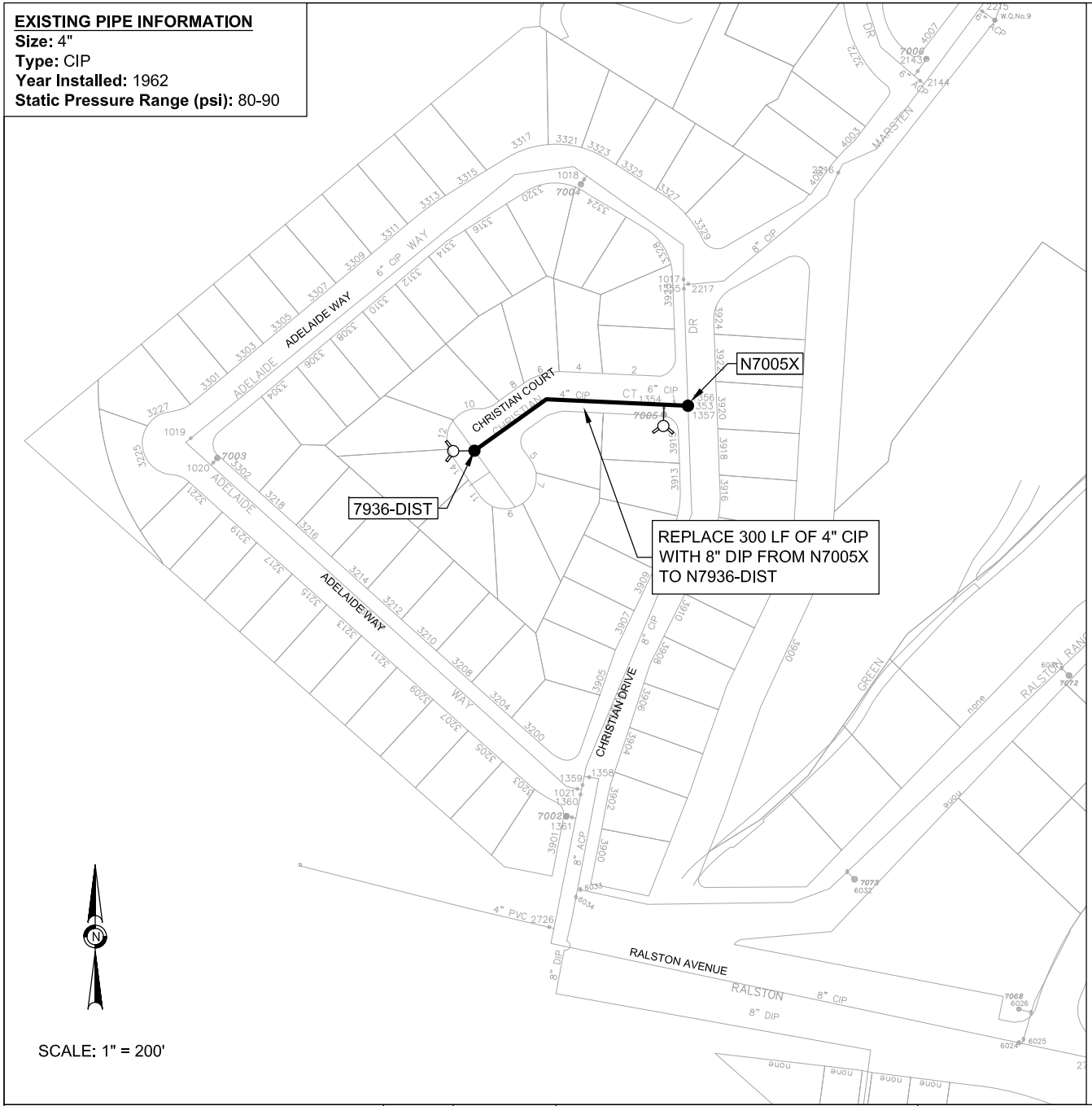
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SAN JUAN BOULEVARD IMPROVEMENTS
PROJECT 15-24

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1962
Static Pressure Range (psi): 80-90



SCALE: 1" = 200'

CHRISTIAN COURT IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to 11 residences on Christian Court through a 300 LF 4" cast iron pipe (CIP). There is a fire hydrant located at the entrance of Christian Court and no fire hydrant exists at the end of the cul-de-sac. This project replaces the existing 4" CIP with a new 8" ductile iron pipe (DIP), replaces the existing fire hydrant, adds an additional hydrant at the end of the cul-de-sac, and replaces all 11 services connections. Hydraulic analysis indicates a 300% increase in available fire flows to Christian Court upon completion of this project. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 027

PROPOSED IMPROVEMENTS

Replace 300 LF of 4" CIP with 8" DIP
Install 1 new fire hydrant
Replace 1 fire hydrant
Replace 11 service connections

PROJECT BENEFITS

The Christian Court Improvements replaces an aging, undersized 4" CIP with a new 8" DIP increasing fire flows by approximately 300% in the area, along with an addition of a fire hydrant at the end of Christian Court.

PROJECT BUDGET (2024)

8" DIP - 300 LF @ $475/LF	$	142,500
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 11 @ $5,250/EA	$	57,750
Subtotal Construction	$	230,250
Planning, Design & Construction Support	$	70,000
Construction Inspection	$	25,000
Contingency (±10%)	$	34,750
Project Budget	**$**	**360,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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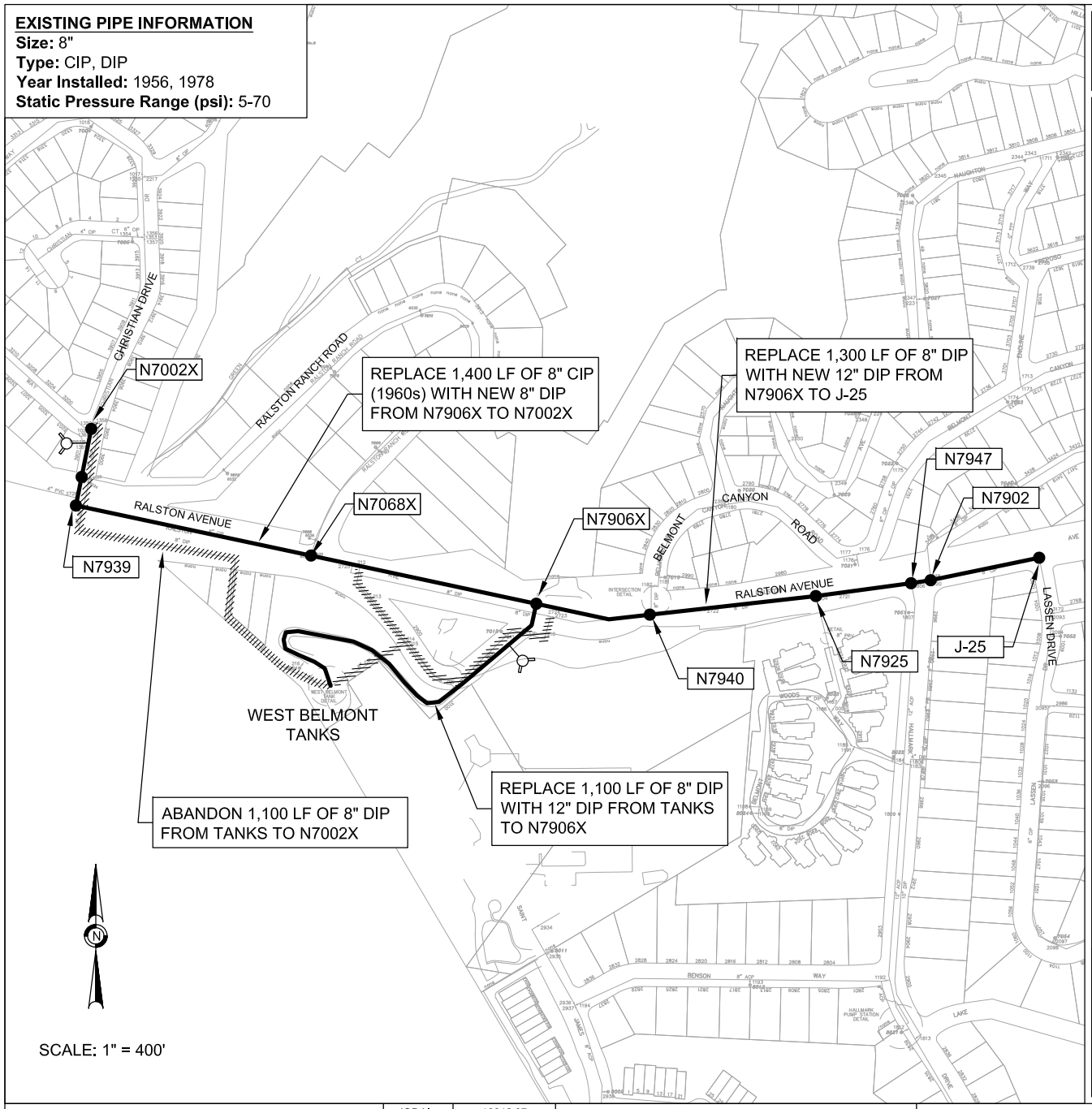
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
CHRISTIAN COURT IMPROVEMENTS
PROJECT 15-25

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 8"
Type: CIP, DIP
Year Installed: 1956, 1978
Static Pressure Range (psi): 5-70



WEST BELMONT TANK WATER MAIN IMPROVEMENTS

PROJECT BACKGROUND

The West Belmont Tanks serve Zone 7 and has dual 645,000 gallon tanks fed by two cross country water mains, an 8" ductile iron pipe (DIP) to the west and an 8" cast iron pipe (CIP) to the east. From the tank site, 8" CIP/DIP runs along Ralston Avenue both west towards Christian Drive and east to the lower portion of Zone 7. Hydraulic analysis indicates many Zone 7 nodes (78 of 135) were below the recommended 1,500 gpm fire flow at 20 psi. This project abandons 1,130 LF of cross country water mains, increases 2,400 LF of 8" DIP/CIP to 12" DIP in addition to replacing 1,400 LF of aging 8" DIP/CIP with new 8" DIP. Hydraulic analysis indicates only 25 nodes could not meet the minimum fire flow requirements with these improvements, a decrease of 53 nodes. Combining this analysis with other Zone 7 capital improvements decreases this number even further. Distribution System Analysis No. 028

PROPOSED IMPROVEMENTS

Replace 1,400 LF of 8" CIP, DIP, AC with 8" DIP
Replace 2,400 LF of 8" CIP/DIP with 12" DIP
Abandon 1,100 LF of 8" DIP cross country
Replace 2 fire hydrants
Replace 2 service connections

PROJECT BENEFITS

The West Belmont Tank Water Main Improvements abandons two cross country water mains, replaces old and aging infrastructure, and increases fire flows zone wide, decreases pipe maintenance.

PROJECT BUDGET (2024)

12" DIP - 2,400 LF @ $575/LF	$ 1,380,000
8" DIP - 1,400 LF @ $475/LF	$ 665,000
Fire Hydrants - 2 @ $15,000/EA	$ 30,000
Service Connections - 2 @ $5,250/EA	$ 10,500
Subtotal Construction	$ 2,085,500
Planning, Design & Construction Support	$ 315,000
Construction Inspection	$ 210,000
Contingency (±10%)	$ 264,500
Project Budget	**$ 2,875,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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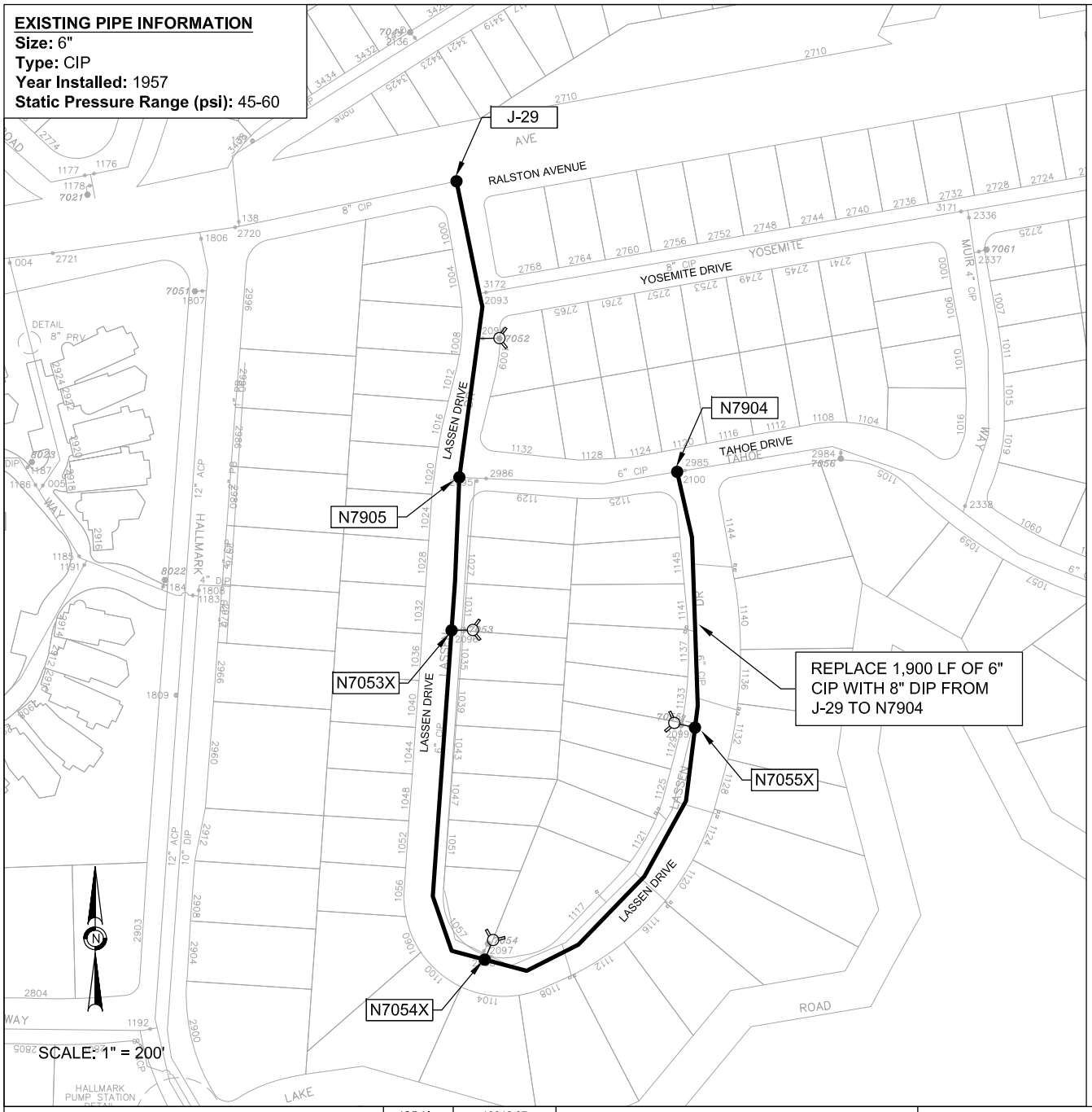
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
WEST BELMONT TANK WATER MAIN IMPROVEMENTS
PROJECT 15-26

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: CIP
Year Installed: 1957
Static Pressure Range (psi): 45-60



LASSEN DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Lassen Drive, located in the lower portion of Zone 7, has 6" cast iron pipe (CIP) water mains incapable of meeting the minimum 1,500 gpm fire flows at 20 psi. This is primarily due to flow restrictions of the 8" water main coming from the West Belmont Tanks. This project replaces 1,900 LF of 6" CIP along Lassen Drive with 8" ductile iron pipe (DIP) along with four fire hydrants and 46 service connections. Although increasing the pipe size on this street has modest improvements as a stand alone project, combining it with the West Belmont Tank Water Main Improvements Project 15-26 (a 12" DIP to this area), increases fire flows in the area an average of 128% and as high as 175% to well above the 1,500 gpm @ 20 psi recommendation. Distribution System Analysis No. 029

PROPOSED IMPROVEMENTS

Replace 1,900 LF of 6" CIP with 8" DIP
Replace 4 fire hydrants
Replace 46 service connections

PROJECT BENEFITS

The Lassen Drive Improvements, when combined with the West Belmont Tank Water Main Improvements, increases fire flows along Lassen Drive an average of 128% and as high as 175%. Old and aging infrastructure is also replaced.

PROJECT BUDGET (2024)

8" DIP - 1,900 LF @ $475/LF	$ 902,500
Fire Hydrants - 4 @ $15,000/EA	$ 60,000
Service Connections - 46 @ $5,250/EA	$ 241,500
Subtotal Construction	$ 1,204,000
Planning, Design & Construction Support	$ 185,000
Construction Inspection	$ 125,000
Contingency (±10%)	$ 156,000
Project Budget	**$ 1,670,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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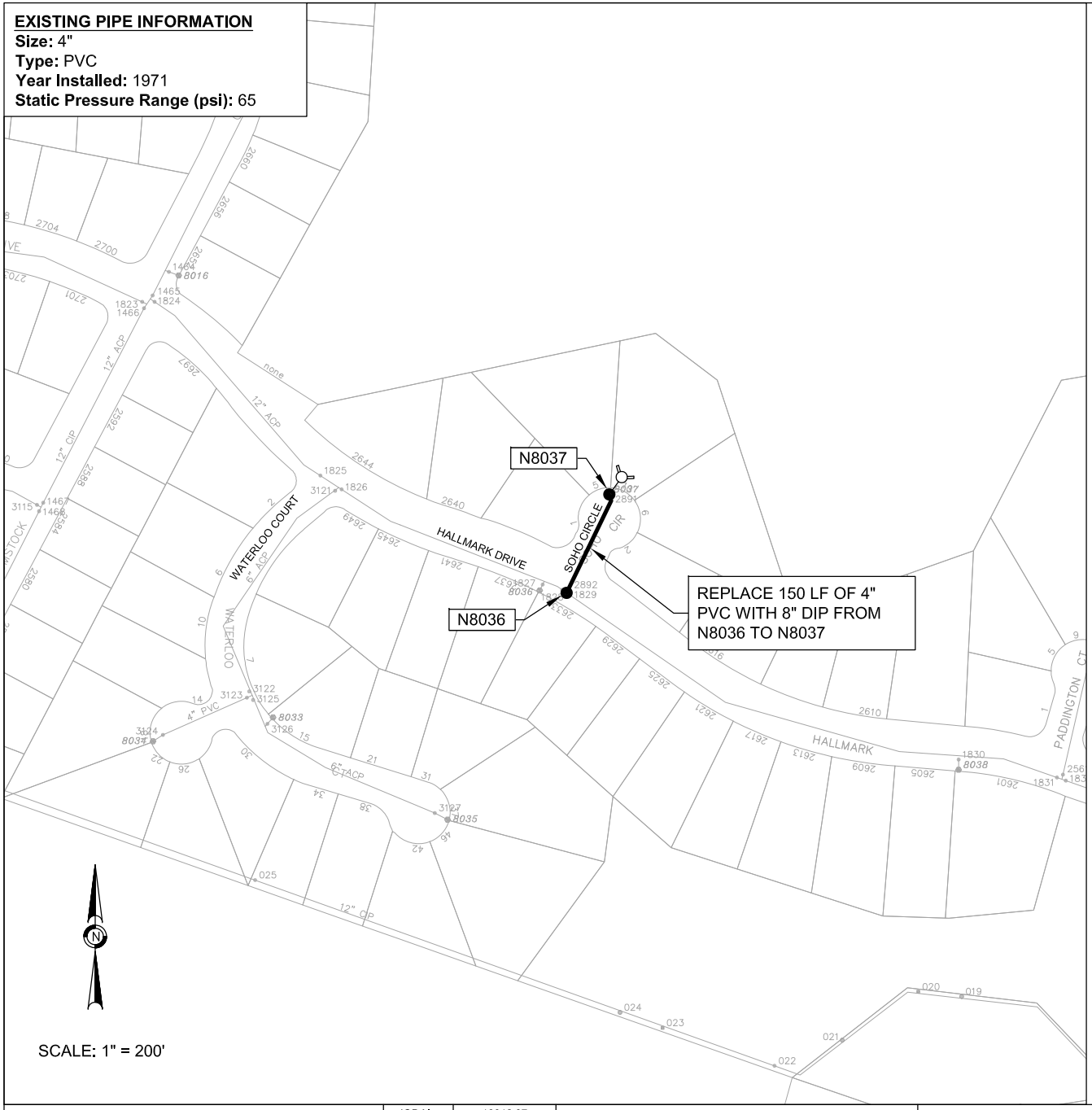
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
LASSEN DRIVE IMPROVEMENTS
PROJECT 15-27

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1971
Static Pressure Range (psi): 65



SOHO CIRCLE IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to 5 residences on Soho Circle through a 150 LF 4" polyvinyl chloride pipe (PVC). The existing available fire flow (588 gpm) on Soho Circle is significantly below the recommended 1,500 gpm at 20 psi residual. This project replaces the existing 4" PVC with a new 8" ductile iron pipe (DIP), replaces the existing fire hydrant, and replaces all 5 services. Hydraulic analysis indicates a 300% increase in available fire flow (2,350 gpm) to Soho Circle upon completion of this project. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 034

PROPOSED IMPROVEMENTS

Replace 150 LF of 4" PVC with 8" DIP
Replace1 fire hydrant
Replace 5 service connections

PROJECT BENEFITS

The Soho Circle Improvements replaces an undersized 4" PVC with a new 8" DIP increasing fire flow by approximately 300% in the area.

PROJECT BUDGET (2024)

8" DIP - 150 LF @ $475/LF	$	71,250
Fire Hydrant - 1 @ $15,000/EA	$	15,000
Service Connections - 5 @ $5,250/EA	$	26,250
Subtotal Construction	$	112,500
Planning, Design & Construction Support	$	35,000
Construction Inspection	$	15,000
Contingency (±10%)	$	17,500
Project Budget	**$**	**180,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
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CKD	JP

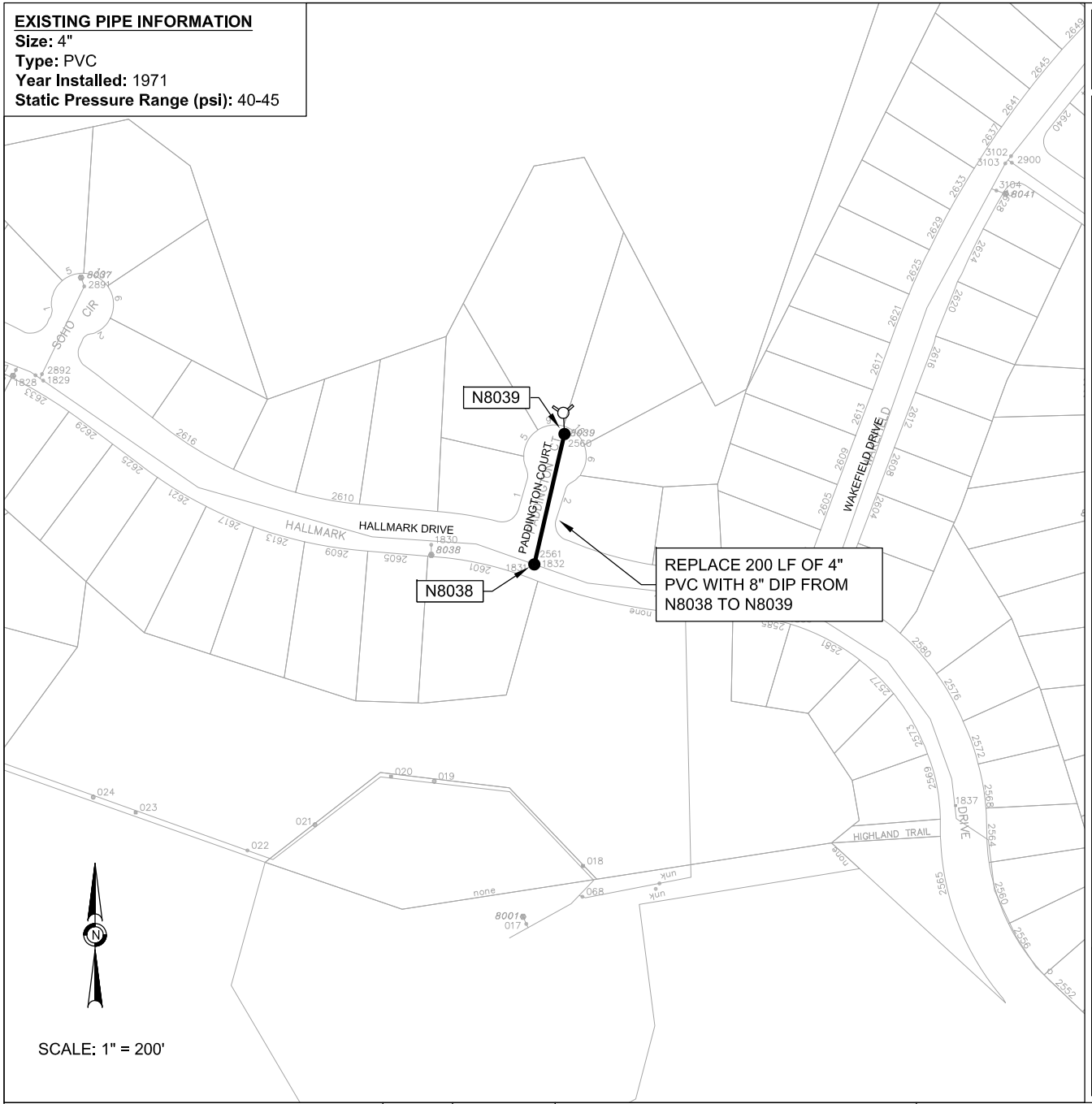
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SOHO CIRCLE IMPROVEMENTS
PROJECT 15-32

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1971
Static Pressure Range (psi): 40-45



PADDINGTON COURT IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to 6 residences on Paddington Court through a 200 LF 4" polyvinyl chloride pipe (PVC). The existing available fire flow (588 gpm) on Paddington Court is significantly below the recommended 1,500 gpm at 20 psi residual. This project replaces the existing 4" PVC with a new 8" ductile iron pipe (DIP), replaces the existing fire hydrant, and replaces all 6 services. Hydraulic analysis indicates a 300% increase in available fire flow (2,350 gpm) to Paddington Court upon completion of this project. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 035

PROPOSED IMPROVEMENTS

Replace 200 LF of 4" PVC with 8" DIP
Replace 1 fire hydrant
Replace 6 service connections

PROJECT BENEFITS

The Paddington Court Improvements replaces an undersized 4" PVC with a new 8" DIP increasing fire flow by approximately 300% in the area.

PROJECT BUDGET (2024)

8" DIP - 200 LF @ $475/LF	$	95,000
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 6 @ $5,250/EA	$	31,500
Subtotal Construction	$	141,500
Planning, Design & Construction Support	$	45,000
Construction Inspection	$	15,000
Contingency (±10%)	$	23,500
Project Budget	**$**	**225,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

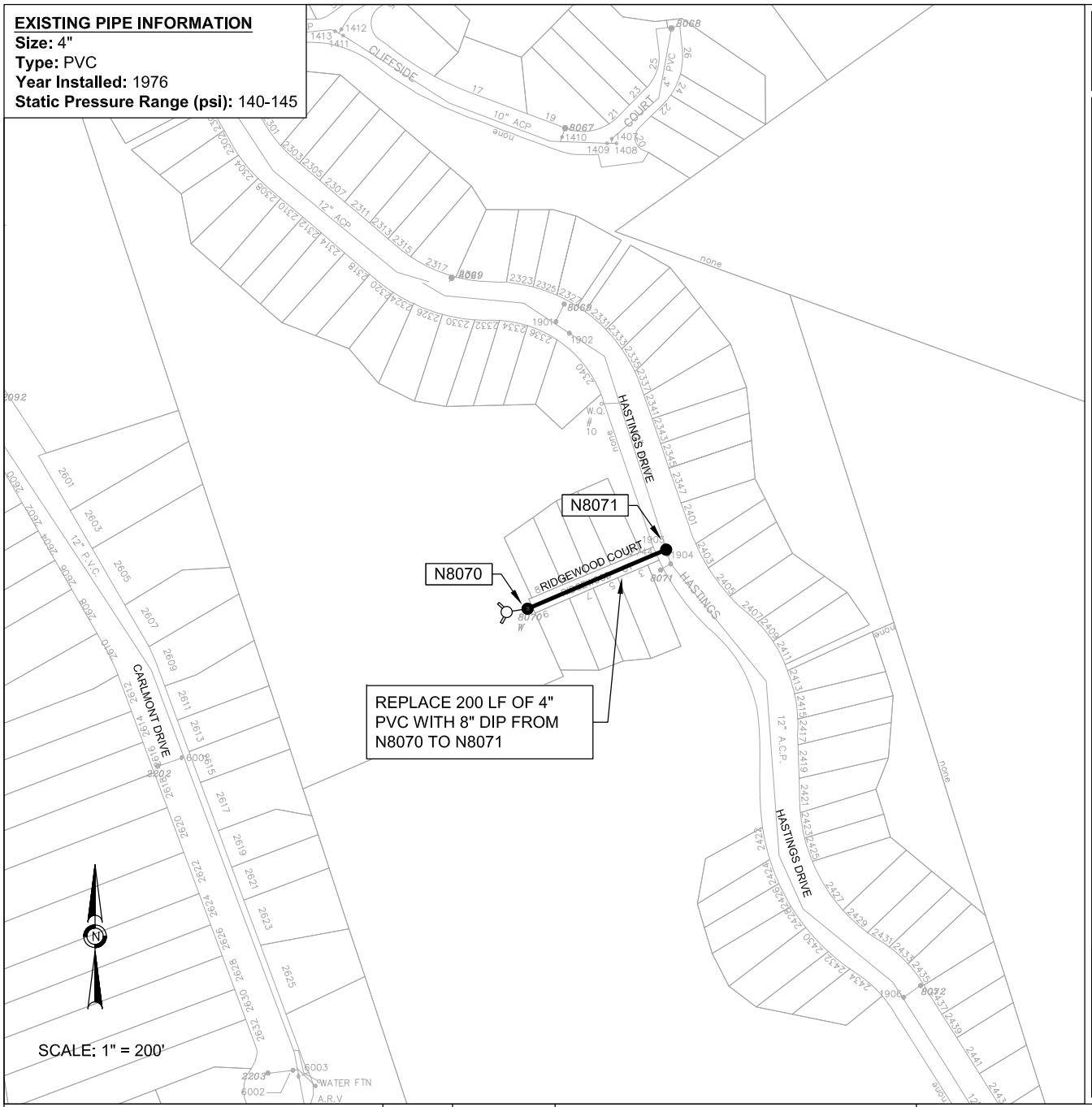
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
PADDINGTON COURT IMPROVEMENTS
PROJECT 15-33

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1976
Static Pressure Range (psi): 140-145



RIDGEWOOD COURT IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to 8 residences on Ridgewood Court through a 200 LF 4" polyvinyl chloride pipe (PVC). The existing available fire flow (588 gpm) on Ridgewood Court is significantly below the recommended 1,500 gpm at 20 psi residual. This project replaces the existing 4" PVC with a new 8" ductile iron pipe (DIP), replaces the existing wharf hydrant, and replaces all 8 services. Hydraulic analysis indicates a 300% increase in available fire flow (2,350 gpm) to Ridgewood Court upon completion of this project. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 036

PROPOSED IMPROVEMENTS

Replace 200 LF of 4" PVC with 8" DIP
Replace 1 fire hydrant
Replace 8 service connections

PROJECT BENEFITS

The Ridgewood Court Improvements replaces an undersized 4" PVC with a new 8" DIP increasing fire flow by approximately 300% in the area.

PROJECT BUDGET (2024)

8" DIP - 200 LF @ $475/LF	$	95,000
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 8 @ $5,250/EA	$	42,000
Subtotal Construction	$	152,000
Planning, Design & Construction Support	$	50,000
Construction Inspection	$	20,000
Contingency (±10%)	$	23,000
Project Budget	**$**	**245,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

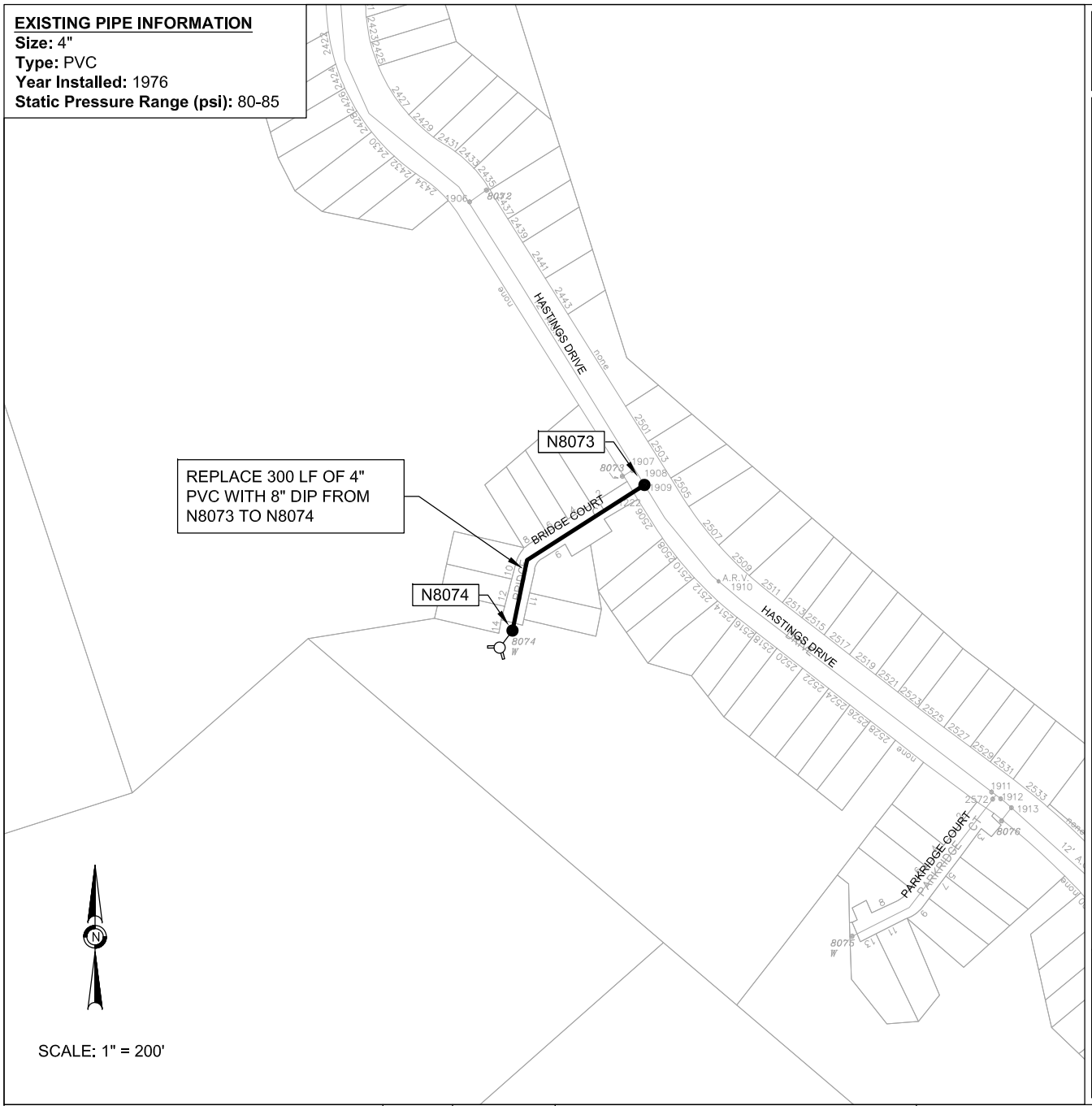
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
RIDGEWOOD COURT IMPROVEMENTS
PROJECT 15-34

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1976
Static Pressure Range (psi): 80-85



BRIDGE COURT IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to 9 residences on Bridge Court through a 300 LF 4" polyvinyl chloride pipe (PVC). The existing available fire flow (588 gpm) on Bridge Court is significantly below the recommended 1,500 gpm at 20 psi residual. This project replaces the existing 4" PVC with a new 8" ductile iron pipe (DIP), replaces the existing wharf hydrant, and replaces all 9 services. Hydraulic analysis indicates a 300% increase in available fire flow (2,350 gpm) to Bridge Court upon completion of this project. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 037

PROPOSED IMPROVEMENTS

Replace 300 LF of 4" PVC with 8" DIP
Replace 1 fire hydrant
Replace 9 service connections

PROJECT BENEFITS

The Bridge Court Improvements replaces an undersized 4" PVC with a new 8" DIP increasing fire flow by approximately 300% in the area.

PROJECT BUDGET (2024)

8" DIP - 300 LF @ $475/LF	$	142,500
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 9 @ $5,250/EA	$	47,250
Subtotal Construction	$	204,750
Planning, Design & Construction Support	$	65,000
Construction Inspection	$	25,000
Contingency (±10%)	$	30,250
Project Budget	**$**	**325,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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CKD	JP

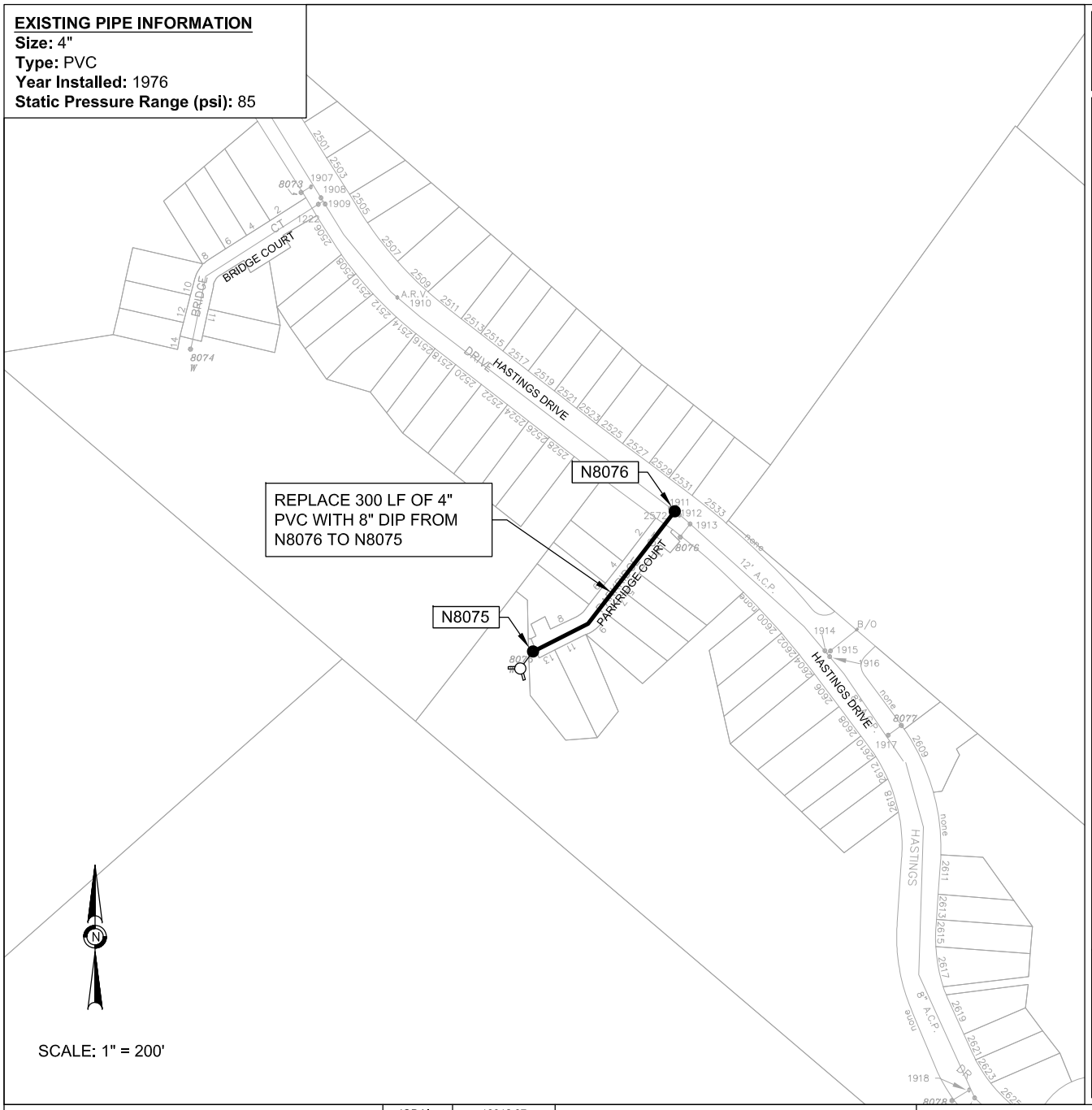
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
BRIDGE COURT IMPROVEMENTS
PROJECT 15-35

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1976
Static Pressure Range (psi): 85



PARKRIDGE COURT IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to 10 residences on Parkridge Court through a 300 LF 4" polyvinyl chloride pipe (PVC). The existing available fire flow (588 gpm) on Parkridge Court is significantly below the recommended 1,500 gpm at 20 psi residual. This project replaces the existing 4" PVC with a new 8" ductile iron pipe (DIP), replaces the existing wharf hydrant, and replaces all 10 services. Hydraulic analysis indicates a 300% increase in available fire flow (2,350 gpm) to Parkridge Court upon completion of this project. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 038

PROPOSED IMPROVEMENTS

Replace 300 LF of 4" PVC with 8" DIP
Replace 1 fire hydrant
Replace 10 service connections

PROJECT BENEFITS

The Parkridge Court Improvements replaces an undersized 4" PVC with a new 8" DIP increasing fire flow by approximately 300% in the area.

PROJECT BUDGET (2024)

8" DIP - 300 LF @ $475/LF	$	142,500
Fire Hydrants -1 @ $15,000/EA	$	15,000
Service Connections - 10 @ $5,250/EA	$	52,500
Subtotal Construction	$	210,000
Planning, Design & Construction Support	$	65,000
Construction Inspection	$	25,000
Contingency (±10%)	$	30,000
Project Budget	**$**	**330,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
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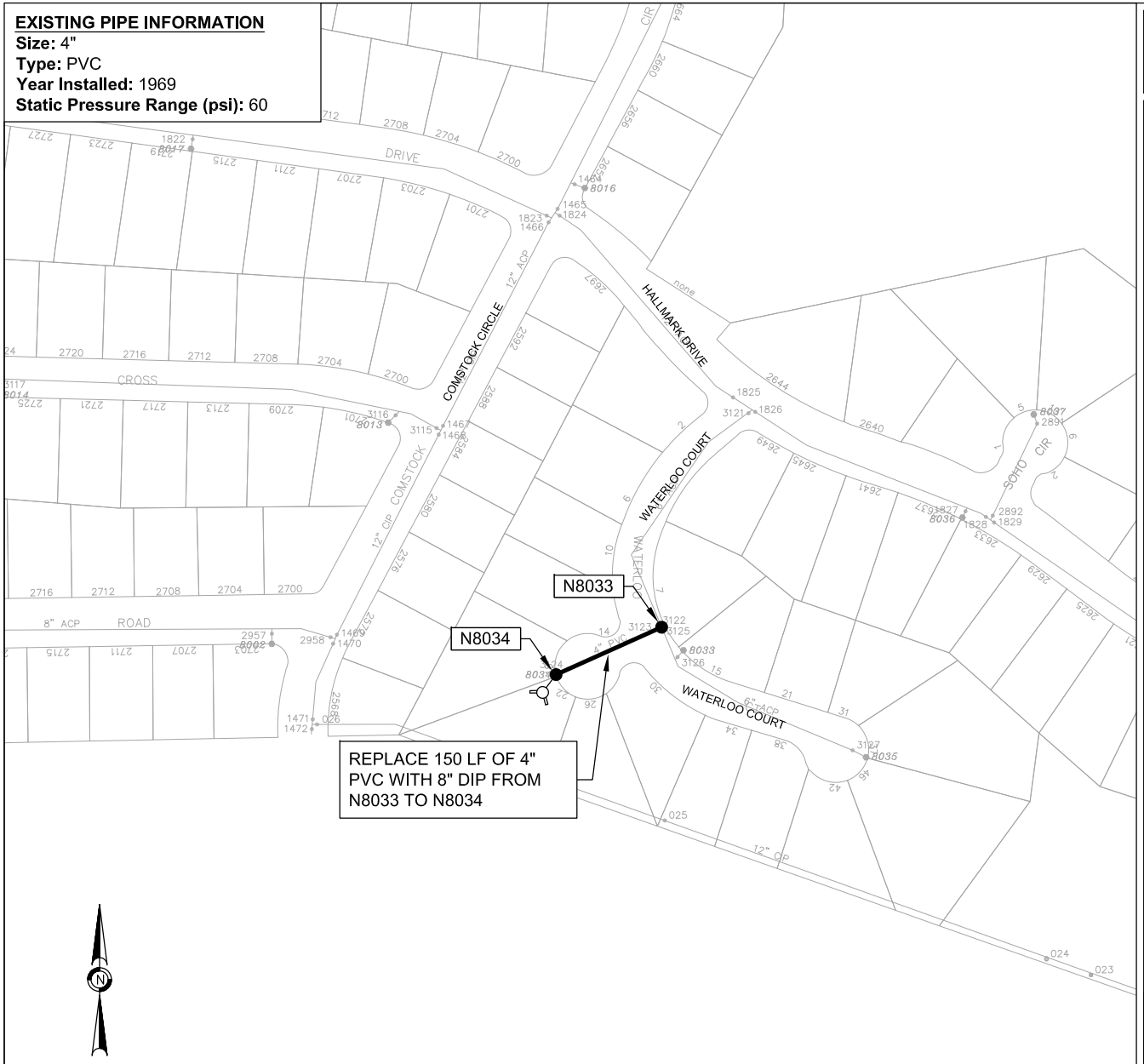
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
PARKRIDGE COURT IMPROVEMENTS
PROJECT 15-36

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1969
Static Pressure Range (psi): 60



SCALE: 1" = 200'

WATERLOO COURT IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to 5 residences on Waterloo Court through a 150 LF 4" polyvinyl chloride pipe (PVC). The existing available fire flow (588 gpm) on Waterloo Court is significantly below the recommended 1,500 gpm at 20 psi residual. This project replaces the existing 4" PVC with a new 8" ductile iron pipe (DIP), replaces the existing fire hydrant, and replaces all 5 services. Hydraulic analysis indicates a 124% increase in available fire flow to 1,316 gpm to Waterloo Court upon completion of this project. Should the District increase the remaining water mains (625 LF) on Waterloo Court from 6-inch to 8-inch, fire flows along the entire court will be approximately 2,340 gpm. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 039

PROPOSED IMPROVEMENTS

Replace 150 LF of 4" PVC with 8" DIP
Replace 1 fire hydrant
Replace 5 service connections

PROJECT BENEFITS

The Waterloo Court Improvements replaces an undersized 4" PVC with a new 8" DIP increasing fire flow by approximately 124% in the area. It also provides future benefit if the entire court is upsized to 8" DIP increasing fire flow by approximately 300%.

PROJECT BUDGET (2024)

8" DIP - 150 LF @ $475/LF	$	71,250
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 5 @ $5,250/EA	$	26,250
Subtotal Construction	$	112,500
Planning, Design & Construction Support	$	35,000
Construction Inspection	$	15,000
Contingency (±10%)	$	17,500
Project Budget	**$**	**180,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
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SCALE	AS NOTED
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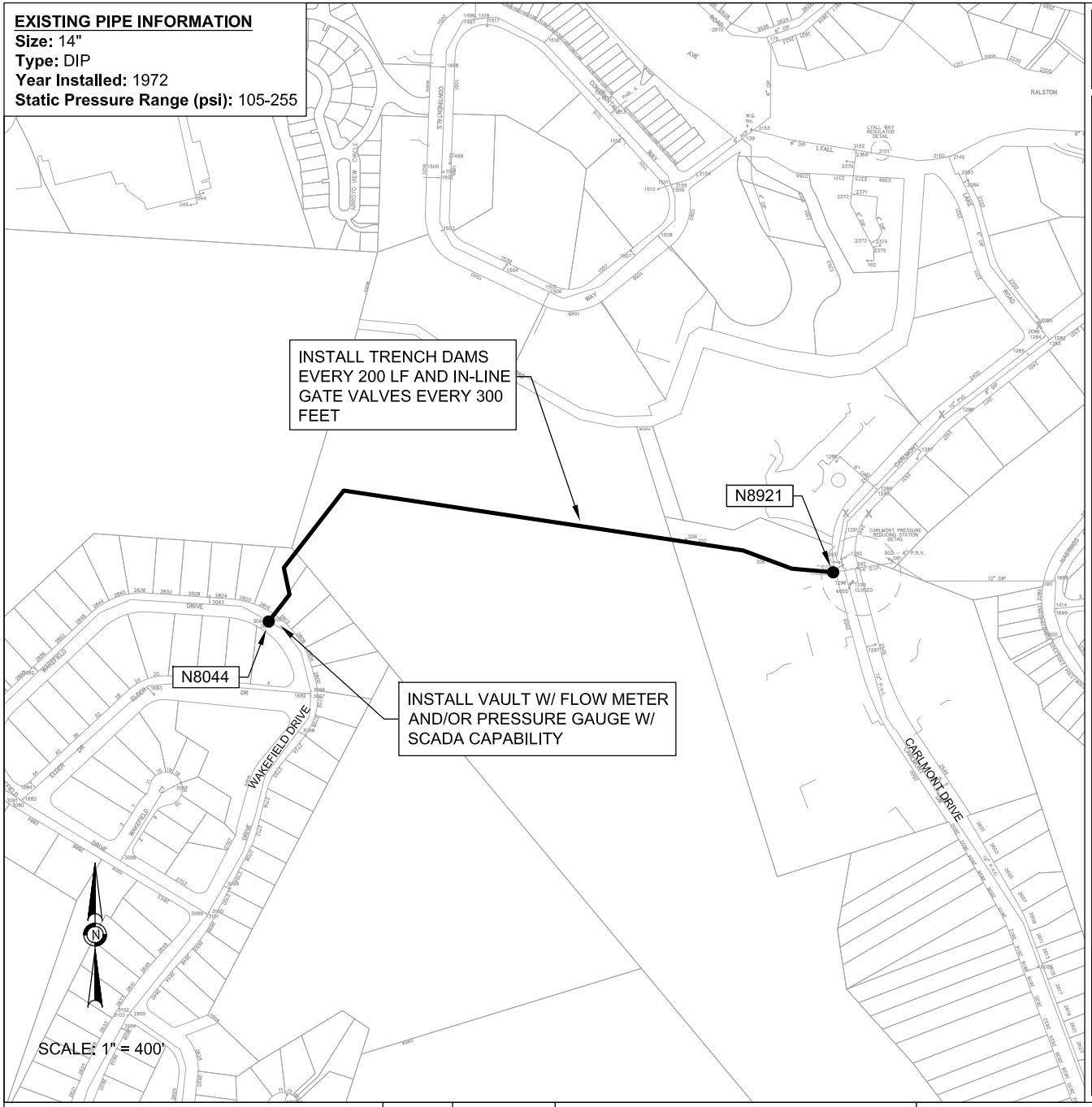
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
WATERLOO COURT IMPROVEMENTS
PROJECT 15-37

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 14"
Type: DIP
Year Installed: 1972
Static Pressure Range (psi): 105-255



ZONE 8 - 14" CROSS COUNTRY IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to residences on Carlmont Drive and Hastings Drive through a single 1,700 LF 14" cross country ductile iron water main located in the John Brooks Memorial Open Space Preserve. Installed in 1972, this water main used Tyton Joint pipe and according to the manufacture, highly likely with unrestrained joints. As constructed, should a leak occur on this alignment, the District is unable to quickly determine where the leak is located, nor isolate a short section of the water main due to the only valves being located at either end of the 1,700 LF. In addition, there is no functionality in place to alert the District if there's a leak besides residents calling the District. This project would clean out the easement area, install trench dams every 200 LF along the slope, remote control gate valves, access vaults to allow jumper installation during breaks, and a flow meter and/or pressure gauge vault with SCADA. During installation, the District will also be able to perform an inspection of the existing water main.

PROPOSED IMPROVEMENTS

Install 7 trench dams, 2 remotely controlled 14" gate valves with access vault for leak bypass, flow meter and/or pressure gauge vault, 4 in-line gate valves.

PROJECT BENEFITS

The Zone 8 - 14" Cross Country Improvements allow the District to quickly identify the location of a leak, isolate a shorter stretch of repair length, and receive immediate notification should a main break occur thereby increasing response times.

PROJECT BUDGET (2024)

Clearing and Grubbing	$ 200,000
Trench Dams - 7 @ $20,000/EA	$ 140,000
In-Line Gate Valves - 4 @ $30,000/EA	$ 120,000
14" Automatic Gate Valves - 2 @ $80,000/EA	$ 160,000
Flow Meter / Pressure Vault	$ 200,000
Subtotal Construction	$ 820,000
Planning, Design & Construction Support	$ 165,000
Construction Inspection	$ 85,000
Contingency (±10%)	$ 110,000
Project Budget	**$ 1,180,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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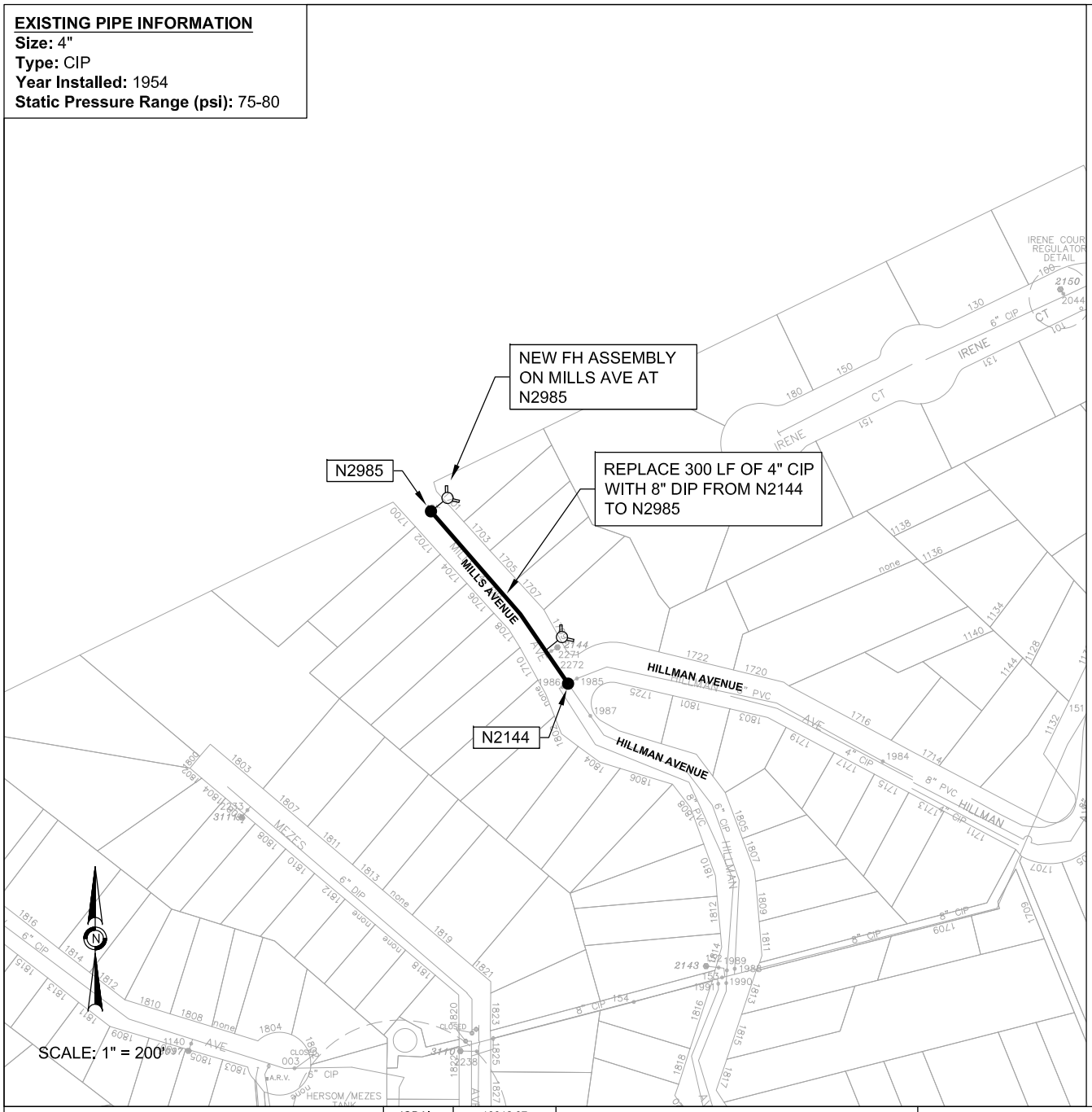
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ZONE 8 - 14" CROSS COUNTRY IMPROVEMENTS
PROJECT 15-39

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1954
Static Pressure Range (psi): 75-80



MILLS AVENUE IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to Mills Avenue through a dead-end 300 LF 4" cast iron pipe (CIP). This water main serves twelve (12) residences and is equipped with an air release valve at the end where Mills Avenue transitions into Camden Avenue. There is one District hydrant on Mills Avenue at the intersection with Hillman Avenue with the next nearest hydrant along Camden Avenue, a Calwater hydrant, approximately 700 feet away. Fire flows along the 4" CIP are well below the recommended minimum of 1,500 gpm at 20 psi. This project replaces the aging and undersized water main with a new 8" ductile iron pipe (DIP), adds an additional fire hydrant at the end of Mills Avenue to shorten the distance between hydrants, and replaces 12 service connections. Hydraulic analysis indicates as much as a 300% increase in available fire flows upon completion of this project. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 042

PROPOSED IMPROVEMENTS

Replace 300 LF of 4" CIP with 8" DIP
Install 1 new fire hydrant
Replace 1 fire hydrant
Replace 12 service connections

PROJECT BENEFITS

The Mills Avenue Improvements replaces an undersized 4" CIP water main with a new 8" DIP, provides additional fire protection with an added fire hydrant, and increases fire flows by as much as 300%.

PROJECT BUDGET (2024)

8" DIP - 300 LF @ $475/LF	$	142,500
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 12 @ $5,250/EA	$	63,000
Subtotal Construction	$	235,500
Planning, Design & Construction Support	$	75,000
Construction Inspection	$	25,000
Contingency (±10%)	$	34,500
Project Budget	**$**	**370,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$	
Construction:	$	
Total Expenditures:	$	

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SCALE	AS NOTED
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CKD	JP

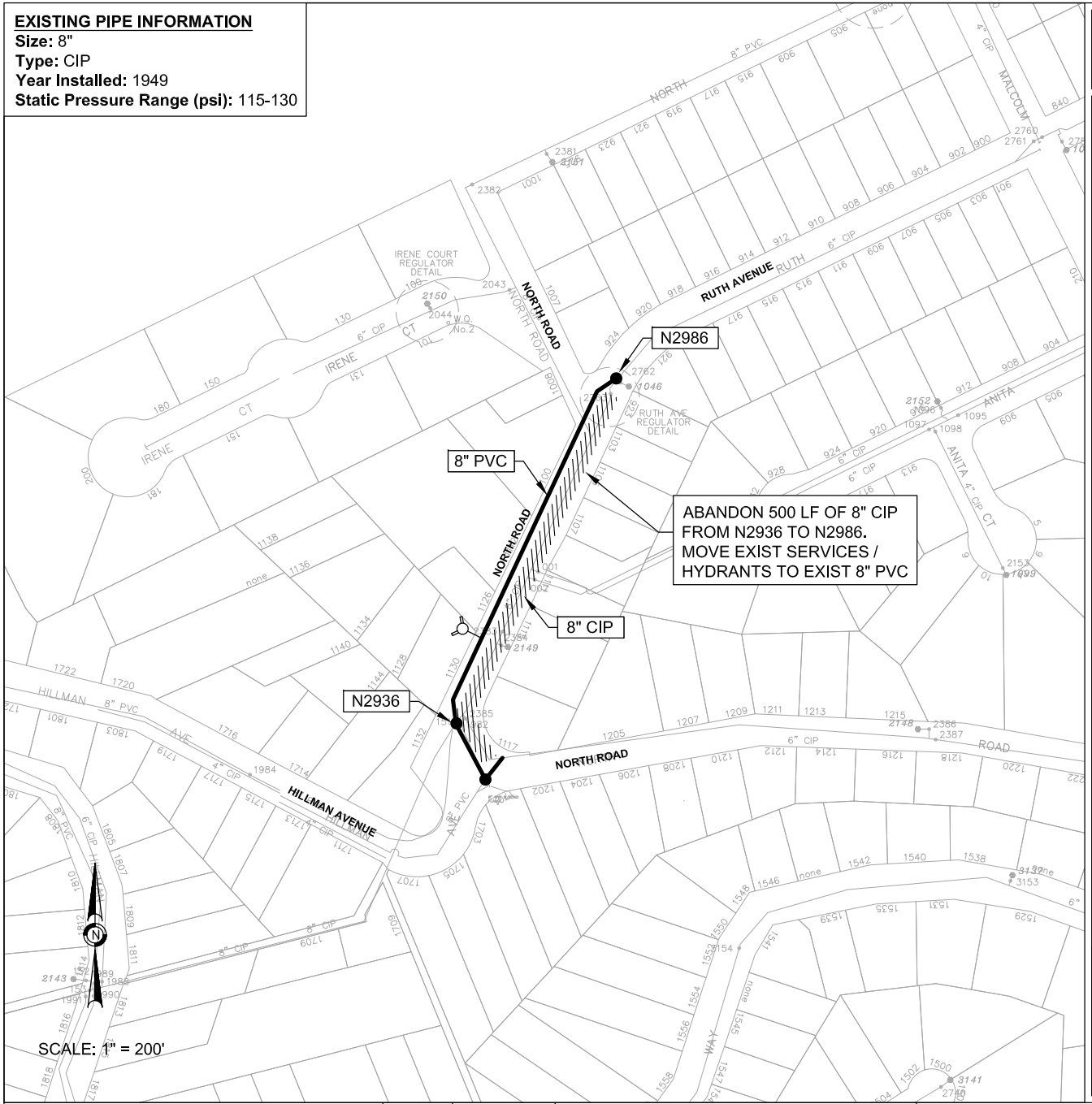
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
MILLS AVENUE IMPROVEMENTS
PROJECT 15-41

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 8"
Type: CIP
Year Installed: 1949
Static Pressure Range (psi): 115-130



NORTH ROAD IMPROVEMENTS

PROJECT BACKGROUND

North Road between Hillman Avenue and Ruth Avenue, approximately 500 LF, has parallel 8" cast iron (CIP) and 8" polyvinyl chloride (PVC) water mains. Fire flows in the area under existing conditions are very strong with the majority of flows around 2,500 gpm. In an effort to reduce the amount of parallel water mains throughout the District, this project abandons the aging 8" CIP and transfers all service connections and fire hydrants to the existing 8" PVC. Hydraulic analysis indicates only an 8% decrease in available fire flows to just above 2,300 gpm with the abandonment, still well above the minimum recommendation of 1,500 gpm at 20 psi. Distribution System Analysis No. 043

PROPOSED IMPROVEMENTS

Abandon an existing parallel 500 LF of 8" CIP
Replace 1 fire hydrant
Replace 19 service connections

PROJECT BENEFITS

The North Road Improvements abandons an old and aging water main and reduces district maintenance.

PROJECT BUDGET (2024)

Pipe Reconnects - 2 @ $50,000/EA	$	100,000
Pipe Abandonment	$	20,000
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 19 @ $5,250/EA	$	99,750
Subtotal Construction	$	234,750
Planning, Design & Construction Support	$	75,000
Construction Inspection	$	25,000
Contingency (±10%)	$	35,250
Project Budget	**$**	**370,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
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SCALE	AS NOTED
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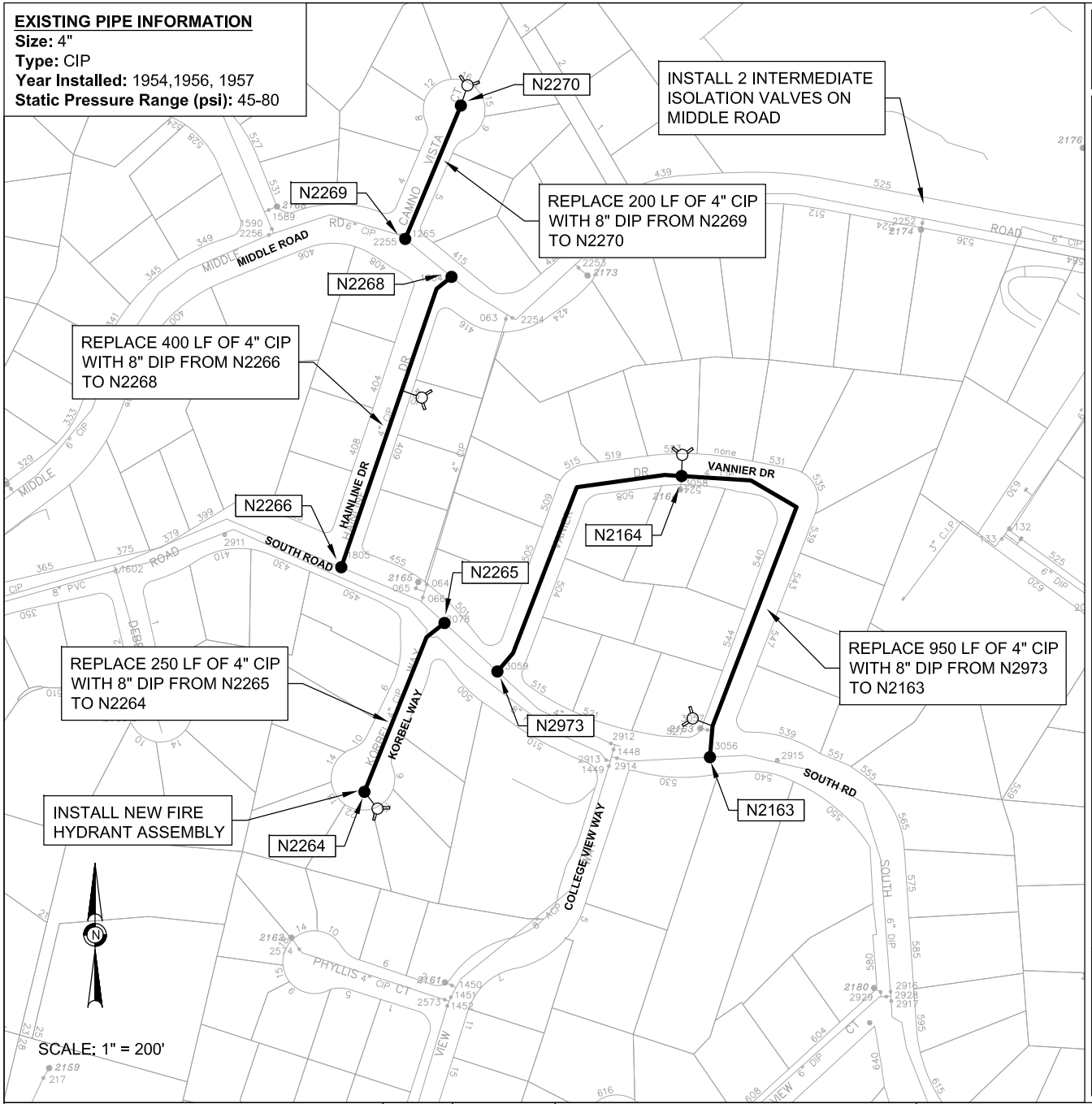
CKD	JP

MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
NORTH ROAD IMPROVEMENTS
PROJECT 15-42

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie



HAINLINE DRIVE AND VICINITY IMPROVEMENTS

PROJECT BACKGROUND

Hainline Drive is located between Middle Road and South Road and has a 400 LF 4" cast iron (CIP) water main with a parallel 400 LF cross country (CC) 4" CIP located in a backyard easement directly behind the residents to the east. In addition, several other streets in the vicinity of Hainline Drive including Camino Vista Court (200 LF), Korbel Way (250 LF) and Vannier Drive (950 LF) also have 4" CIP water mains. Fire flows along all of these streets are well below the recommended 1,500 gpm at 20 psi. This project replaces 1,740 LF of 4" CIP with 8" ductile iron pipe (DIP) in addition to abandoning the 400 LF CC water main off Hainline Drive. Hydraulic analysis indicates no adverse affects of abandoning the CC water main and the 8-inch improvements significantly improve fire flows in the area. This project combined with the South Road Improvements (DSA 045) further improves fire flows with most locations well above 2,000 gpm. Water age analysis on Camino Vista Court and Korbel Way indicate minimal effects with the increase in pipe size. This project also includes the installation of two in-line valves along Middle Road. Distribution System Analysis Nos. 046, 047, 048, 049

PROPOSED IMPROVEMENTS

Abandon 400 LF of 4" CC CIP
Replace 1,800 LF of 4" CIP with 8" DIP
Install 2 new isolation valves on Middle Road
Install 5 new fire hydrants
Replace 42 service connections

PROJECT BENEFITS

The Hainline Drive and Vicinity Improvements corrects fire flow deficiencies in the area and abandons a CC water main.

PROJECT BUDGET (2024)

8" DIP - 1,800 @ $475/LF	$ 855,000
Fire Hydrants - 5 @ $15,000/EA	$ 75,000
Service Connections - 42 @ $5,250/EA	$ 220,500
Subtotal Construction	$ 1,150,500
Planning, Design & Construction Support	$ 175,000
Construction Inspection	$ 120,000
Contingency (±10%)	$ 149,500
Project Budget	**$ 1,595,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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CKD	JP

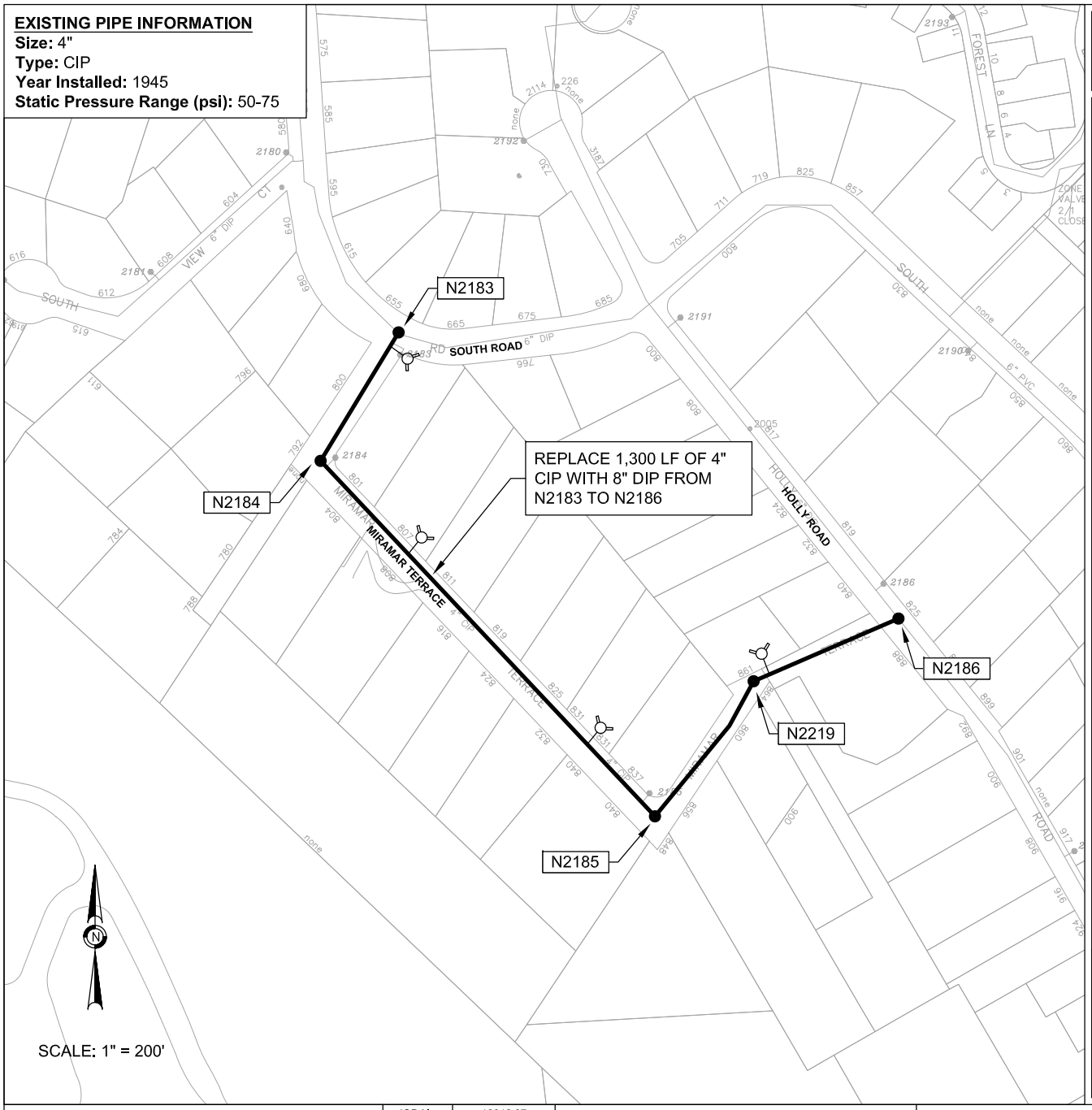
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
HAINLINE DRIVE AND VICINITY IMPROVEMENTS
PROJECT 15-45

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1945
Static Pressure Range (psi): 50-75



MIRAMAR TERRACE IMPROVEMENTS

PROJECT BACKGROUND

Miramar Terrace is located between South Road and Holly Road and has approximately 1,300 LF of 4" cast iron (CIP) water main. The District has reported this water main has experienced several leaks over past years. In addition, it is unable to meet the minimum fire flow recommendation of 1,500 gpm at 20 psi. Current fire flows in the area are in the range of 800 gpm. There are 21 water service connections and three fire hydrants along the alignment. This project replaces the 4" CIP with new 8" ductile iron pipe (DIP) in addition to adding an additional fire hydrant to improve hydrant spacing. Hydraulic analysis indicates upon completion of this project, fire flows increase as much as 175% to 2,250 gpm with the minimum being 1,850 gpm. Distribution System Analysis No. 050

PROPOSED IMPROVEMENTS

Replace 1,300 LF of 4" CIP with 8" DIP
Replace 4 fire hydrants
Replace 21 Service Connections

PROJECT BENEFITS

The Miramar Terrace Improvements replaces aging and undersized 4" CIP with 8" DIP, increases fire flows by as much as 175%, and improves fire hydrant spacing.

PROJECT BUDGET (2024)

8" DIP - 1,300 LF @ $475/LF	$ 617,500
Fire Hydrants - 4 @ $15,000/EA	$ 60,000
Service Connections - 21 @ $5,250/EA	$ 110,250
Subtotal Construction	$ 787,750
Planning, Design & Construction Support	$ 160,000
Construction Inspection	$ 80,000
Contingency (±10%)	$ 107,250
Project Budget	**$ 1,135,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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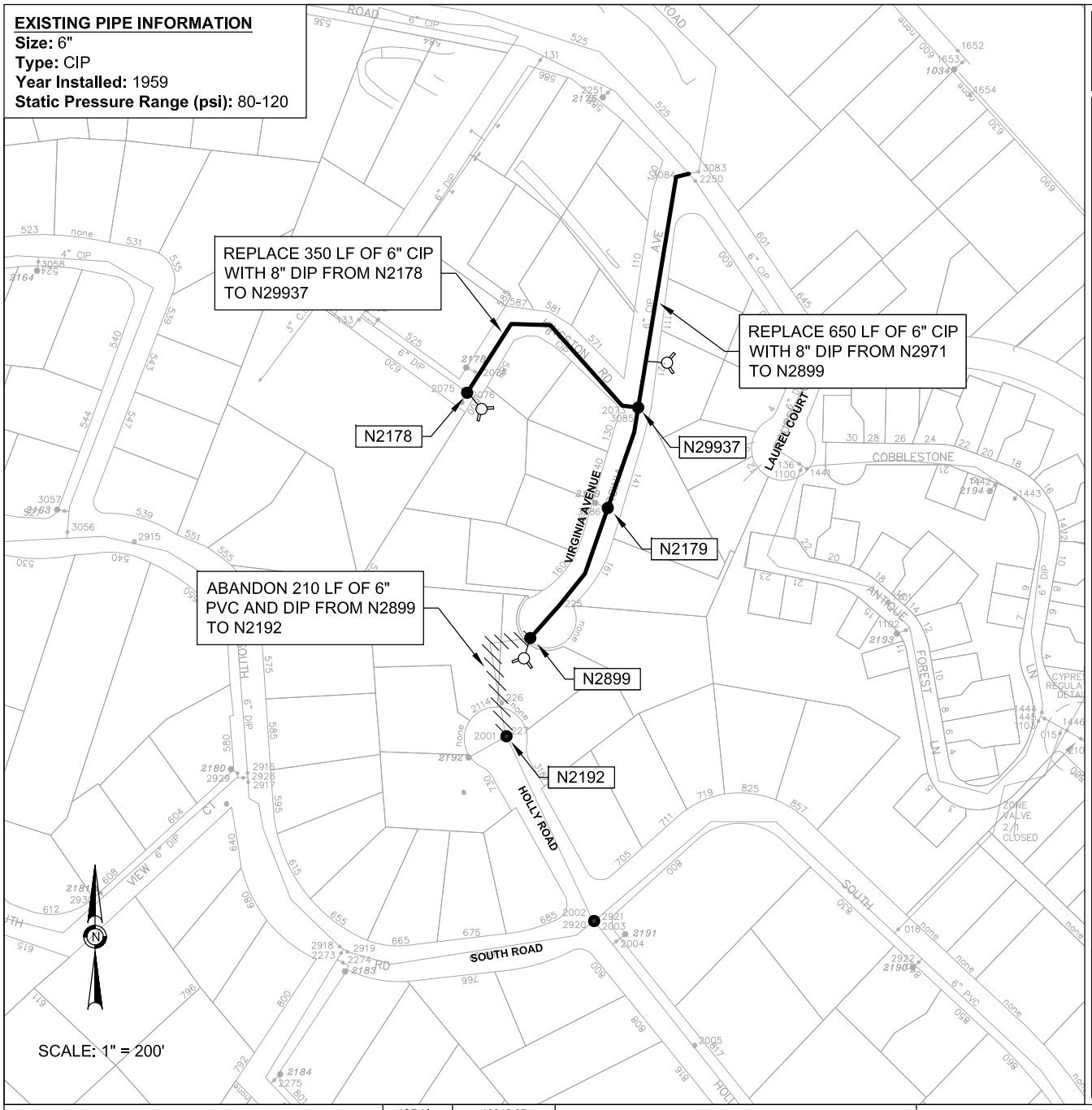
JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
MIRAMAR TERRACE IMPROVEMENTS
PROJECT 15-46

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie



VIRGINIA AVENUE IMPROVEMENTS

PROJECT BACKGROUND

Virginia Avenue and Holly Road are connected by a 210 LF cross country (CC) water main that is a combination of 6" cast iron (CIP) and 6" polyvinyl chloride (PVC) pipe. The CC water main is nearly inaccessible should a main break occur due to a 6-8 foot retaining wall, extensive landscaping and proximity to residences. Fire flows in the area under existing conditions are strong with flows well above 2,000 gpm. Abandonment of this water main creates two dead ends and reduces fire flows on both streets to around 1,300 gpm. To correct the fire flow reductions, 650 LF of 6" CIP on Virginia Avenue and 350 LF 6" CIP on Kingston Road will be replaced with 8" ductile iron pipe (DIP). This project also relocates one cross country service connection to South Road. Hydraulic analysis indicates the abandonment combined with the 8" increase on Virginia Road increase fire flows to above 1,700 gpm and analysis on water age indicates minimal effects with the increase in pipe size. This project does not include upsizing the water main on Holly Road as this is a 6" PVC installed in the mid 1990's and with fire flows near 1,330 gpm we feel this is sufficient at this time. Distribution System Analysis No. 051

PROPOSED IMPROVEMENTS

Abandon 210 LF of 6" CC water main
Replace 1,000 LF of 6" CIP with 8" DIP
Replace 3 new fire hydrants
Replace 16 service connections
Relocate 1 service connection

PROJECT BENEFITS

The Virginia Avenue Improvements abandons an inaccessible CC water main, replaces old and aging water main.

PROJECT BUDGET (2024)

8" DIP - 1,000 LF @ $475/LF	$	475,000
Fire Hydrants - 3 @ $15,000/EA	$	45,000
Service Connections - 16 @ $5,250/EA	$	84,000
Service Relocation - 1 @ $10,000/EA	$	10,000
Subtotal Construction	$	614,000
Planning, Design & Construction Support	$	125,000
Construction Inspection	$	65,000
Contingency (±10%)	$	81,000
Project Budget	**$**	**885,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

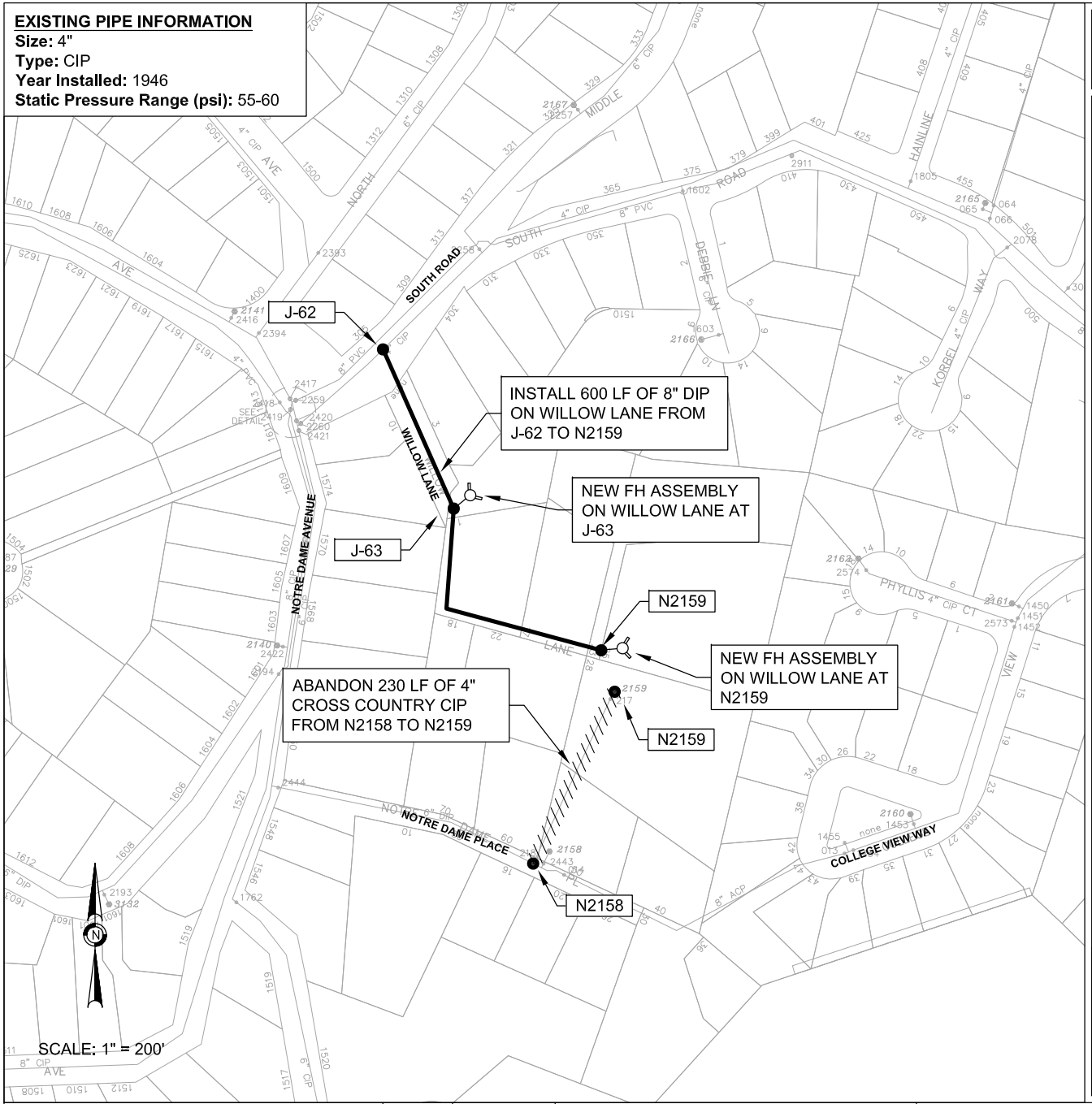
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
VIRGINIA AVENUE IMPROVEMENTS
PROJECT 15-47

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1946
Static Pressure Range (psi): 55-60



WILLOW LANE IMPROVEMENTS

PROJECT BACKGROUND

Willow Lane is a private road providing access to 10 residences. Water is currently provided to 8 of the residents from a 4" cross country (CC) cast iron (CIP) water main located between 50 and 60 Notre Dame Place beginning at 16 Notre Dame Place and ending near 28 Willow Lane. All of the meter boxes are clustered together at the end of the water main causing some residents to maintain up to 300 LF of service line. In addition, the only hydrant serving these 10 homes is located on the end of the 4" CIP where fire flows are approximately 600 gpm, well below the minimum recommendation of 1,500 gpm at 20 psi. This project abandons the existing 4" CC CIP and installs a new 8" DIP along Willow Lane in addition to adding additional hydrants and improving service connection distance. Hydraulic analysis indicates an increase of 231% to 1,950 gpm at 20 psi. This project requires the District to obtain an easement to construct the water main. Distribution System Analysis No. 052

PROPOSED IMPROVEMENTS

Abandon 230 LF of 4" CC CIP
Install 600 LF of 8" DIP
Install 2 new fire hydrants
Replace 8 service connections

PROJECT BENEFITS

The Willow Lane Improvements abandons a cross country water main that is old, aging and undersized and replaces it with an accessible 8" DIP water main, adds additional hydrants for improved fire protection and shortens resident service connections.

PROJECT BUDGET (2024)

8" DIP - 600 LF @ $475/LF	$	285,000
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 8 @ $5,250/EA	$	42,000
Subtotal Construction	$	357,000
Planning, Design & Construction Support	$	90,000
Construction Inspection	$	40,000
Contingency (±10%)	$	53,000
Project Budget	**$**	**540,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/28/25
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JPP

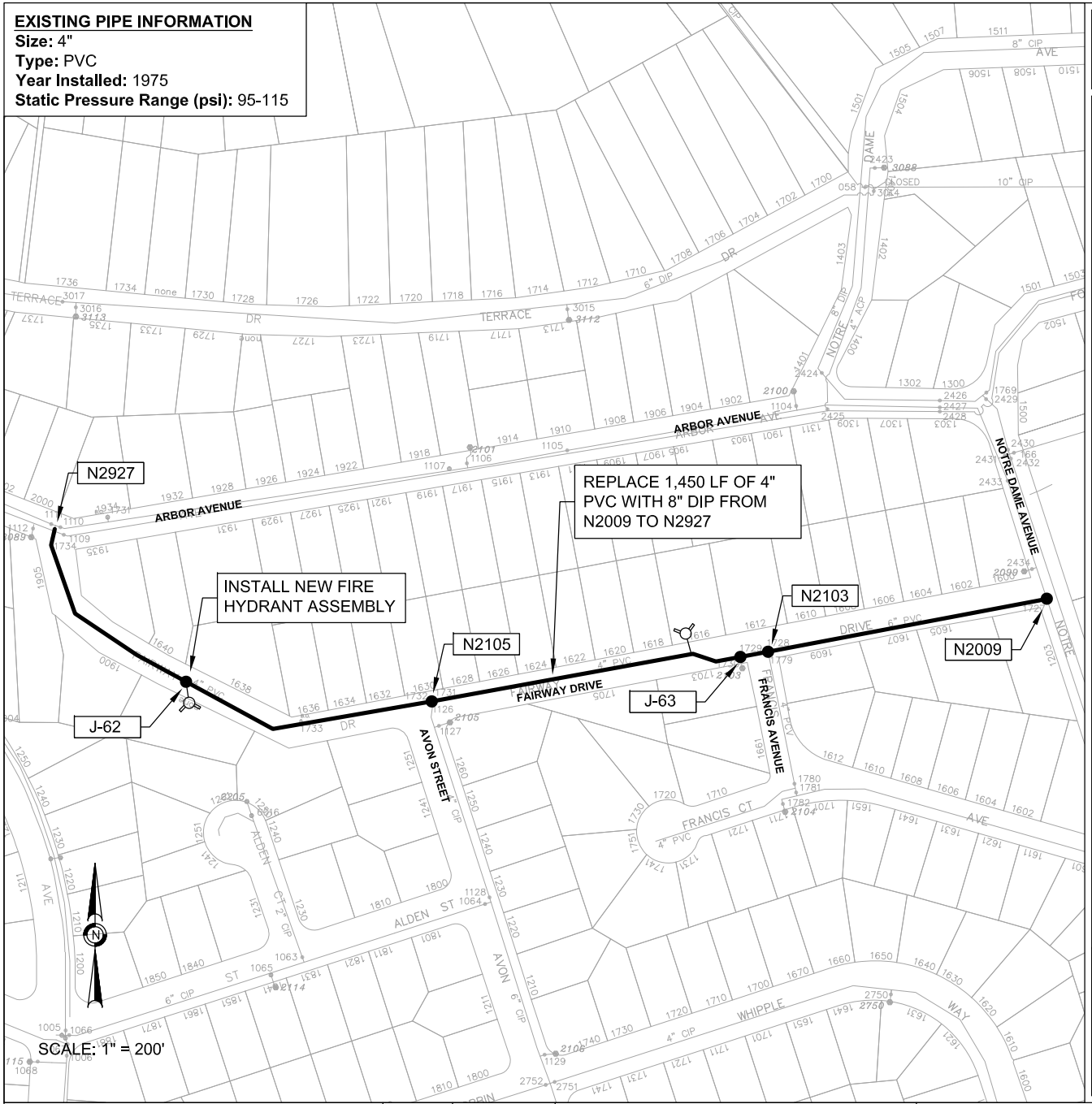
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
WILLOW LANE IMPROVEMENTS
PROJECT 15-48

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1975
Static Pressure Range (psi): 95-115



FAIRWAY DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Fairway Drive is located between Arbor Drive and Notre Dame Avenue and has a 1,450 LF 4" polyvinyl chloride (PVC) water main. Although the water main is PVC and not as old as other water mains in the District, it is incapable of delivering the minimum recommended fire flow of 1,500 gpm at 20 psi. Currently, existing fire flows along Fairway Drive are in the 1,000 gpm range. One fire hydrant is directly located on the 4" PVC at its intersection with Francis Avenue with another located on the 8" PVC branch on Avon Street. The next nearest hydrant is nearly 600 LF away at Arbor Avenue. This project replaces the 4" PVC with an 8" DIP, one fire hydrant, 24 service connections, and adds an additional hydrant between Avon Street and Arbor Avenue. Hydraulic analysis indicates a maximum 149% increase in fire flow to 2,500 gpm. Distribution System Analysis No. 054

PROPOSED IMPROVEMENTS

Replace 1,450 LF of 4" PVC with 8" DIP
Install 1 new fire hydrant
Replace 1 fire hydrant
Replace 24 service connections

PROJECT BENEFITS

The Fairway Drive Improvements replaces an undersized 4" PVC water main with an 8" DIP improving fire flows to 2,500 gpm, provides additional fire protection with the addition of an extra fire hydrant, and matches size of the other water mains in the area.

PROJECT BUDGET (2024)

8" DIP - 1,450 @ $475/LF	$ 688,750
Fire Hydrants - 2 @ $15,000/EA	$ 30,000
Service Connections - 24 @ $5,250/EA	$ 126,000
Subtotal Construction	$ 844,750
Planning, Design & Construction Support	$ 170,000
Construction Inspection	$ 85,000
Contingency (±10%)	$ 110,250
Project Budget	**$ 1,210,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

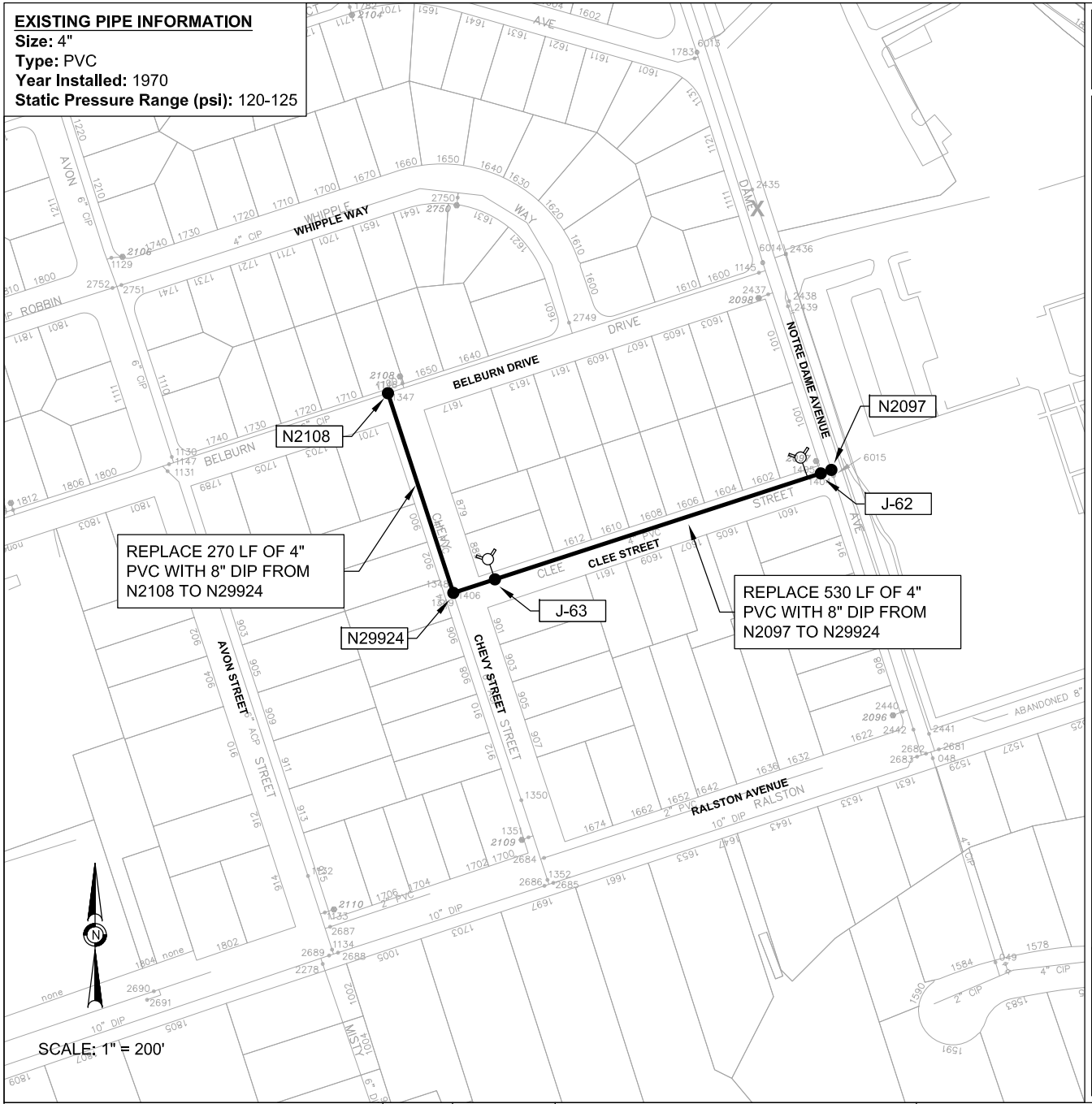
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
FAIRWAY DRIVE IMPROVEMENTS
PROJECT 15-50

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1970
Static Pressure Range (psi): 120-125



CHEVY / CLEE STREETS IMPROVEMENTS

PROJECT BACKGROUND

Chevy Street is located between Ralston Avenue and Belburn Drive and has a 270 LF 4" polyvinyl chloride (PVC) water main between Belburn Drive and Clee Street. Clee Street, between Chevy Street and Notre Dame Avenue also has a 530 LF 4" PVC. Fire flows along these streets are well below the recommended 1,500 gpm at 20 psi with flows around 800 gpm. This project replaces 800 LF of 4" PVC with 8" ductile iron pipe (DIP) and adds an additional hydrant in the area. Hydraulic analysis indicates fire flow increases as much as 220% to over 2,500 gpm upon completion of this project. Distribution System Analysis No. 056

PROPOSED IMPROVEMENTS

Replace 800 LF of 4" PVC with 8" DIP
Install 1 new fire hydrant
Replace 1 fire hydrant
Replace 16 service connections

PROJECT BENEFITS

The Chevy / Clee Streets Improvements replaces undersized 4" PVC water main with 8" DIP, improves fire protection with the addition of a hydrant, and improves fire flows in the area as much as 220%.

PROJECT BUDGET (2024)

8" DIP - 800 LF @ $475/LF	$	380,000
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections -16 @ $5,250/EA	$	84,000
Subtotal Construction	$	494,000
Planning, Design & Construction Support	$	125,000
Construction Inspection	$	50,000
Contingency (±10%)	$	71,000
Project Budget	**$**	**740,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures
Planning, Design, & Construction Support: $
Construction: $
Total Expenditures: $

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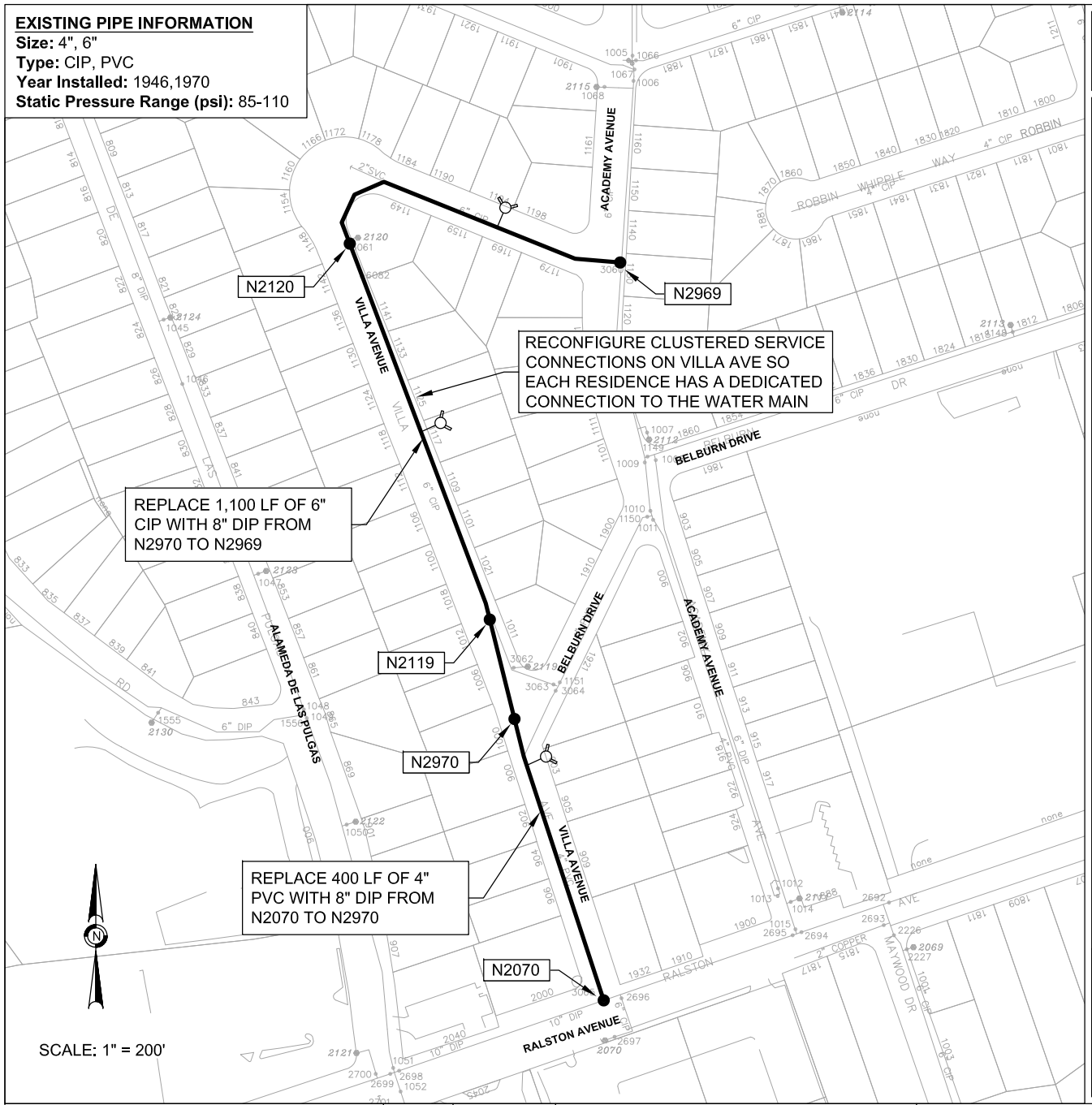
JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
CHEVY / CLEE STREETS IMPROVEMENTS
PROJECT 15-52

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie



VILLA AVENUE IMPROVEMENTS

PROJECT BACKGROUND

Villa Avenue is located between Ralston Avenue and Academy Avenue and has a combination of 400 LF of 4" polyvinyl chloride (PVC) and 1,100 LF of 6" cast iron (CIP) water main. The 4" PVC portion has fire flows (1,080 gpm) well below the minimum recommendation of 1,500 gpm at 20 psi. The 6" CIP portion is one of the oldest water mains in the District and is nearing it's service life. In addition, along the entire 6" CIP alignment, many residents share a common service connection (2 to 4 services on one connection) to the main. This project replaces all of the water main on Villa Avenue with 1,550 LF of 8" ductile iron pipe (DIP), replaces 44 service connections allowing a dedicated service line to each resident, and replaces 3 fire hydrants. Hydraulic analysis indicates upon completion of this project fire flows along Villa Avenue increase to beyond 2,500 gpm. Distribution System Analysis No. 058

PROPOSED IMPROVEMENTS

Replace 1,500 LF of 4" PVC / 6" CIP with 8" DIP
Install 3 new fire hydrants
Replace 44 service connections

PROJECT BENEFITS

The Villa Avenue Improvements replaces undersized 4" PVC water main, reconfigures service connections so each resident has their own dedicated service line, replaces aging water main, and improves fire flows along Villa Avenue to beyond 2,500 gpm.

PROJECT BUDGET (2024)

8" DIP - 1,500 LF @ $475/LF	$ 712,500
Fire Hydrants - 3 @ $15,000/EA	$ 45,000
Service Connections - 44 @ $5,250/EA	$ 231,000
Subtotal Construction	$ 988,500
Planning, Design & Construction Support	$ 200,000
Construction	$ 100,000
Contingency (±10%)	$ 131,500
Project Budget	**$ 1,420,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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CKD	JP

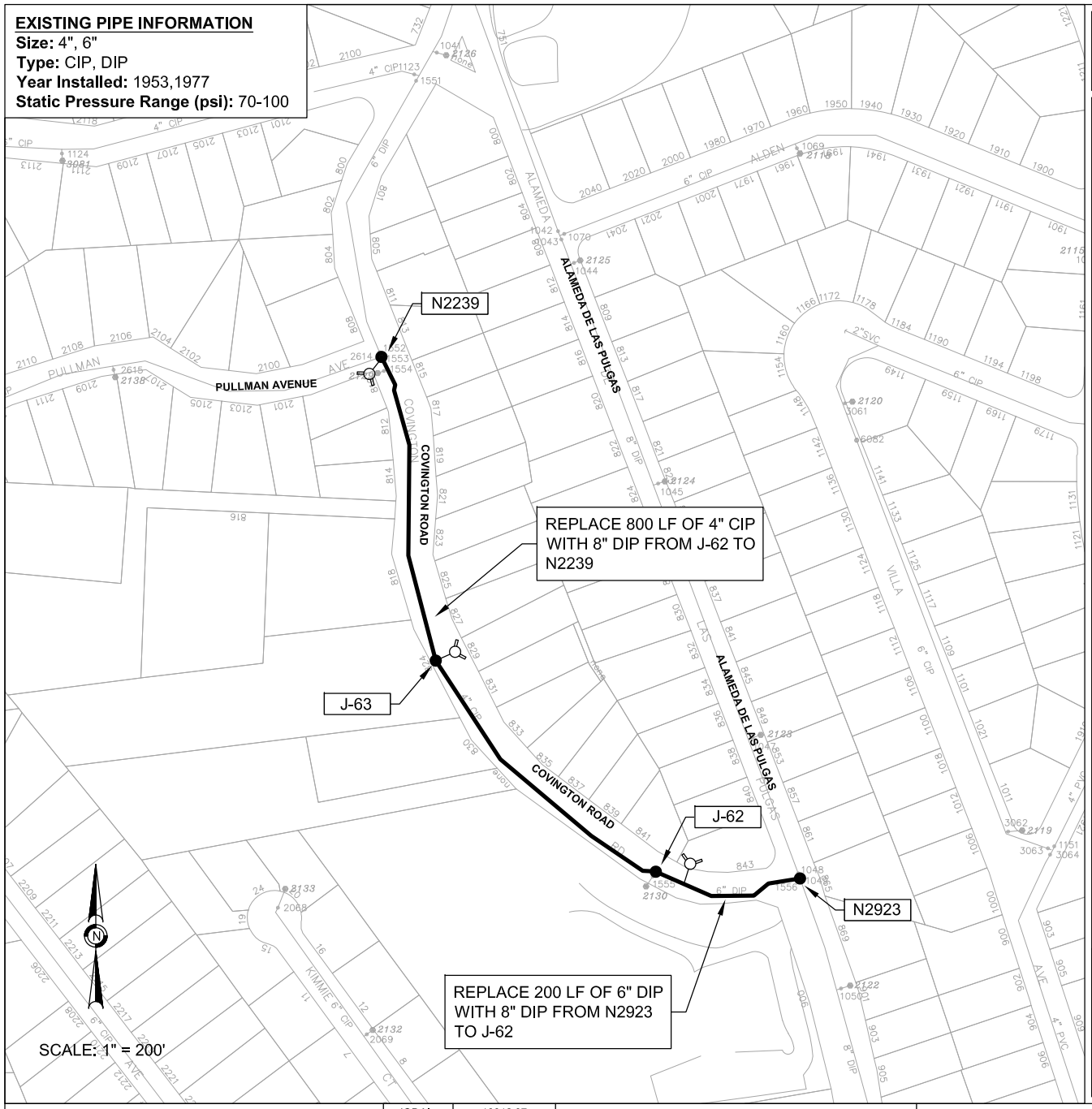
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
VILLA AVENUE IMPROVEMENTS
PROJECT 15-54

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 6"
Type: CIP, DIP
Year Installed: 1953,1977
Static Pressure Range (psi): 70-100



COVINGTON ROAD IMPROVEMENTS

PROJECT BACKGROUND

A portion of Covington Road, located between Alameda De Las Pulgas and Pullman Avenue has 800 LF of 4" cast iron (CIP) water main incapable of meeting the minimum recommended fire flow of 1,500 gpm at 20 psi with fire flows as low as 724 gpm. It also has a small portion of 200 LF of 6" DIP just off Alameda De Las Pulgas. Hydrant spacing is also less than ideal with only two hydrants spaced well beyond 500 LF apart. This project replaces the entire water main between Alameda De Las Pulgas and Pullman Avenue with 8" ductile iron (DIP) water main along with replacement of 23 service connections. The 2 existing fire hydrants will be replaced in addition to adding a third to improve hydrant spacing. Hydraulic analysis indicates upon completion of this project fire flows along Covington Road increase to beyond 2,500 gpm. Distribution System Analysis No. 059

PROPOSED IMPROVEMENTS

Replace 1,000 LF of 4" CIP / 6" DIP with 8" DIP
Install 1 new fire hydrant
Replace 2 fire hydrants
Replace 23 service connections

PROJECT BENEFITS

The Covington Road Improvements replaces undersized 4" CIP water main, replaces aging water main, improves fire protection with the addition of a fire hydrant, and improves fire flows to beyond 2,500 gpm.

PROJECT BUDGET (2024)

8" DIP - 1,000 LF @ $475/LF	$	475,000
Fire Hydrants - 3 @ $15,000/EA	$	45,000
Service Connections - 23 @ $5,250/EA	$	120,750
Subtotal Construction	$	640,750
Planning, Design & Construction Support	$	130,000
Construction Inspection	$	65,000
Contingency (±10%)	$	84,250
Project Budget	**$**	**920,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
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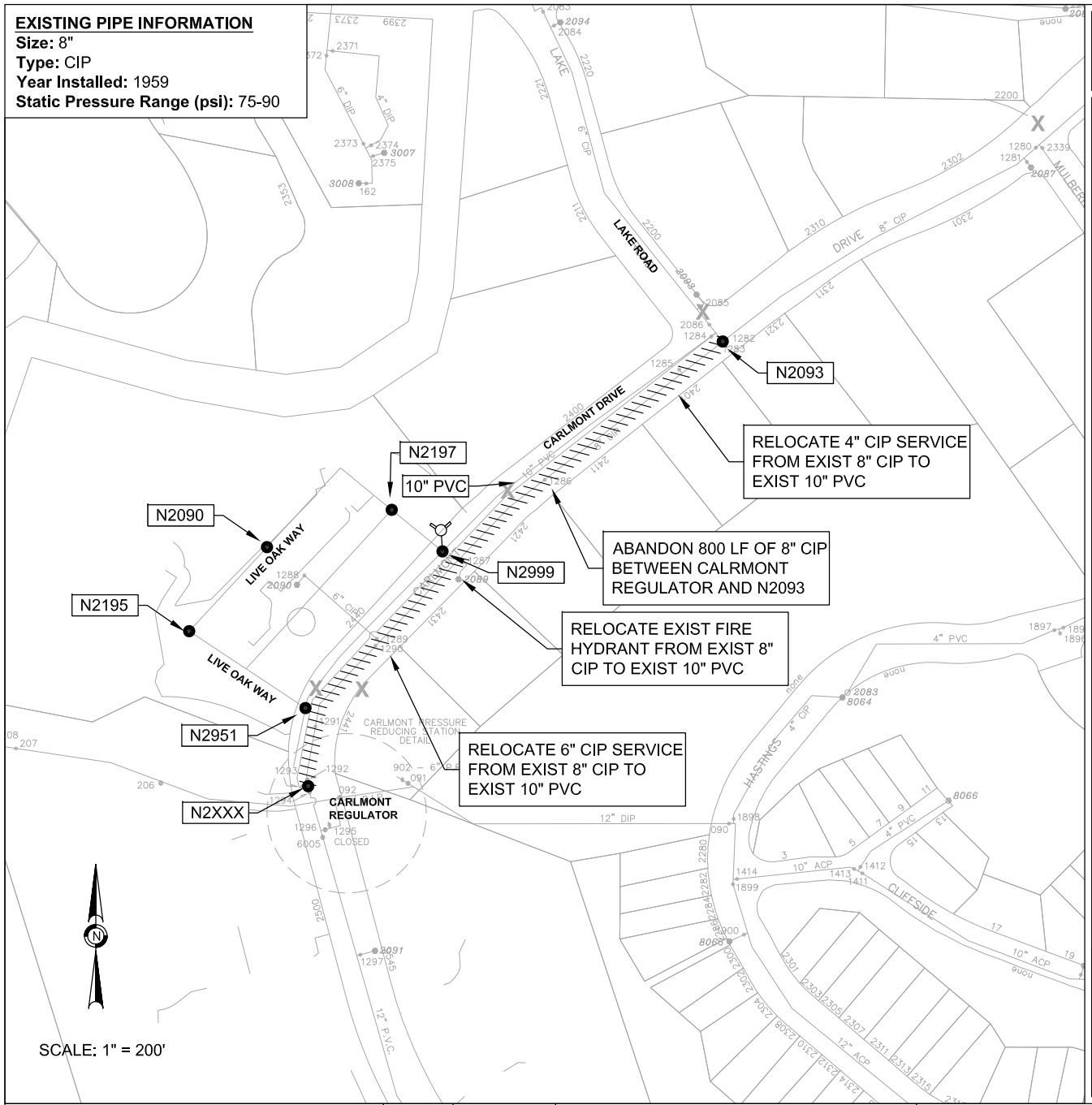
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
COVINGTON ROAD IMPROVEMENTS
PROJECT 15-55

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 8"
Type: CIP
Year Installed: 1959
Static Pressure Range (psi): 75-90



CARLMONT DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Carlmont Drive, between the Carlmont Regulator and Lake Road has two parallel water mains: an 800 LF 8" cast iron (CIP) and 10" polyvinyl chloride (PVC) water main. It is thought perhaps the 8" CIP remained in place, upon construction of the 10" PVC, to leave existing services and one hydrant on the water main to reduce costs at the time. Fire flows in the area are very strong given the area is in the lower part of Zone 2 with majority of flows at or above 2,500 gpm. This project abandons the aging 8" CIP and relocates the services and hydrant to the existing 10" PVC. Hydraulic analysis indicates the 8" CIP provides little hydraulic benefit to the area. Upon abandonment, the area experiences a 15% reduction in fire flow with most locations at 2,140 gpm, still well above the minimum recommendation of 1,500 gpm at 20 psi. Distribution System Analysis No. 060

PROPOSED IMPROVEMENTS

Abandon 800 LF of 8" CIP
Install 1 new fire hydrant
Replace 5 service connections
2 pipe reconnects

PROJECT BENEFITS

The Carlmont Drive Improvements abandons an aging parallel 8" CIP that provides little hydraulic benefit to the system and reduces District maintenance.

PROJECT BUDGET (2024)

Pipe Reconnects - 2 @ $50,000/EA	$	100,000
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 5 @ $15,000/EA	$	75,000
Subtotal Construction	$	190,000
Planning, Design & Construction Support	$	60,000
Construction Inspection	$	20,000
Contingency (±10%)	$	30,000
Project Budget	**$**	**300,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
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CKD	JP

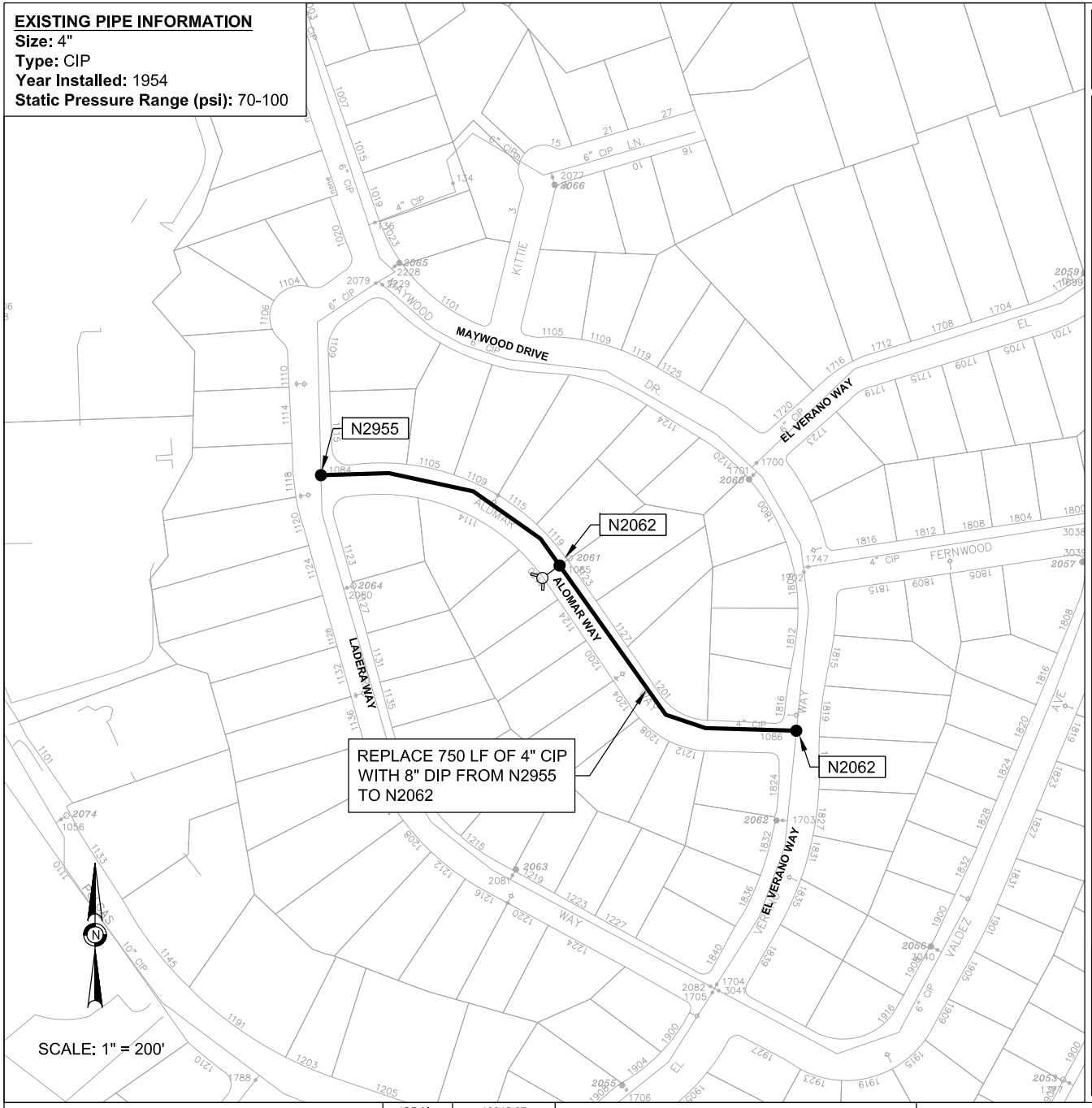
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
CARLMONT DRIVE IMPROVEMENTS
PROJECT 15-56

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1954
Static Pressure Range (psi): 70-100



ALOMAR WAY IMPROVEMENTS

PROJECT BACKGROUND

Alomar Way, located between Ladera Way and El Verano Way, has a 750 LF of 4" cast iron (CIP) water main incapable of meeting the minimum recommended fire flow of 1,500 gpm at 20 psi. Existing fire flows along this water main are just over 1,100 gpm. This project replaces the 4" CIP with 8" ductile iron (DIP), 14 service connections and one fire hydrant. Hydraulic analysis indicates upon completion of this project fire flows along the street in addition to the immediate area increase to above 2,500 gpm. Distribution System Analysis No. 061

PROPOSED IMPROVEMENTS

Replace 750 LF of 4" CIP with 8" DIP
Replace 1 fire hydrant
Replace 14 service connections

PROJECT BENEFITS

The Alomar Way Improvements replaces an undersized and aging water main and increases fire flows to above 2,500 gpm.

PROJECT BUDGET (2024)

8" DIP - 750 LF @ $475/LF	$	356,250
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 14 @ $5,250/EA	$	73,500
Subtotal Construction	$	444,750
Planning, Design & Construction Support	$	115,000
Construction Inspection	$	45,000
Contingency (±10%)	$	65,250
Project Budget	**$**	**670,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

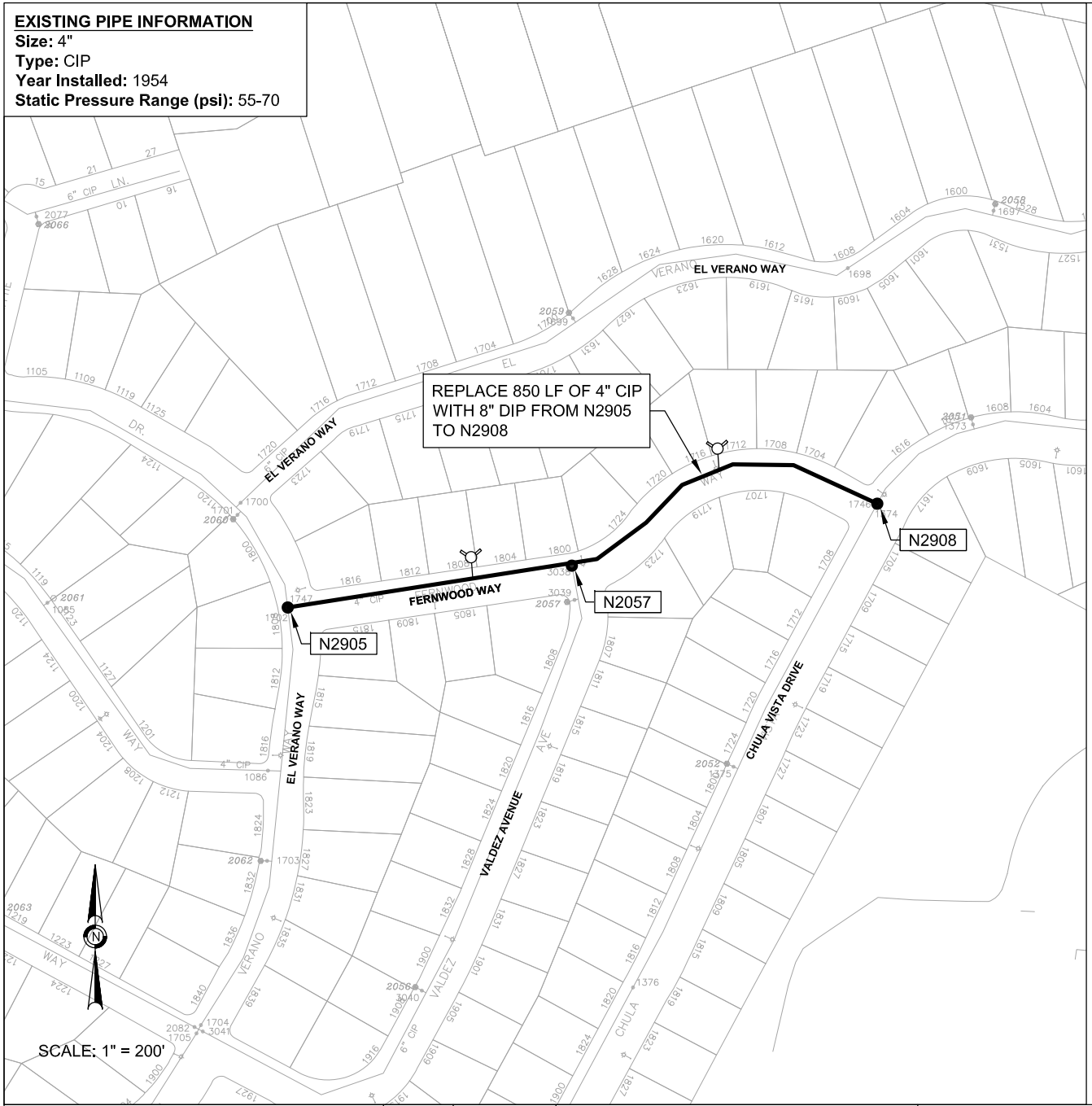
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ALOMAR WAY IMPROVEMENTS
PROJECT 15-57

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1954
Static Pressure Range (psi): 55-70



FERNWOOD WAY IMPROVEMENTS

PROJECT BACKGROUND

Fernwood Way, located between Chula Vista Drive and El Verano Way, has 850 LF of 4" cast iron (CIP) water main constructed in 1954 incapable of meeting the minimum recommended fire flow of 1,500 gpm at 20 psi. Existing fire flows along this water main range between 900 gpm and 1,300 gpm. This project replaces the 4" CIP with 8" ductile iron pipe (DIP), 16 service connections and two fire hydrants. In addition, fire hydrant spacing will be improved to keep spacing to within 500 LF. Hydraulic analysis indicates upon completion of this project fire flows along the street increase to above 2,500 gpm. Distribution System Analysis No. 062

PROPOSED IMPROVEMENTS

Replace 850 LF of 4" CIP with 8" DIP
Install 1 new fire hydrant
Replace 1 fire hydrant
Replace 16 service connections

PROJECT BENEFITS

The Fernwood Way Improvements replaces an undersized and aging water main, improves fire hydrant spacing, and increases fire flows to above 2,500 gpm.

PROJECT BUDGET (2024)

8" DIP - 850 LF @ $475/LF	$	403,750
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 16 @ $5,250/EA	$	84,000
Subtotal Construction	$	517,750
Planning, Design & Construction Support	$	105,000
Construction Inspection	$	55,000
Contingency (±10%)	$	72,250
Project Budget	**$**	**750,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
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CKD	JP

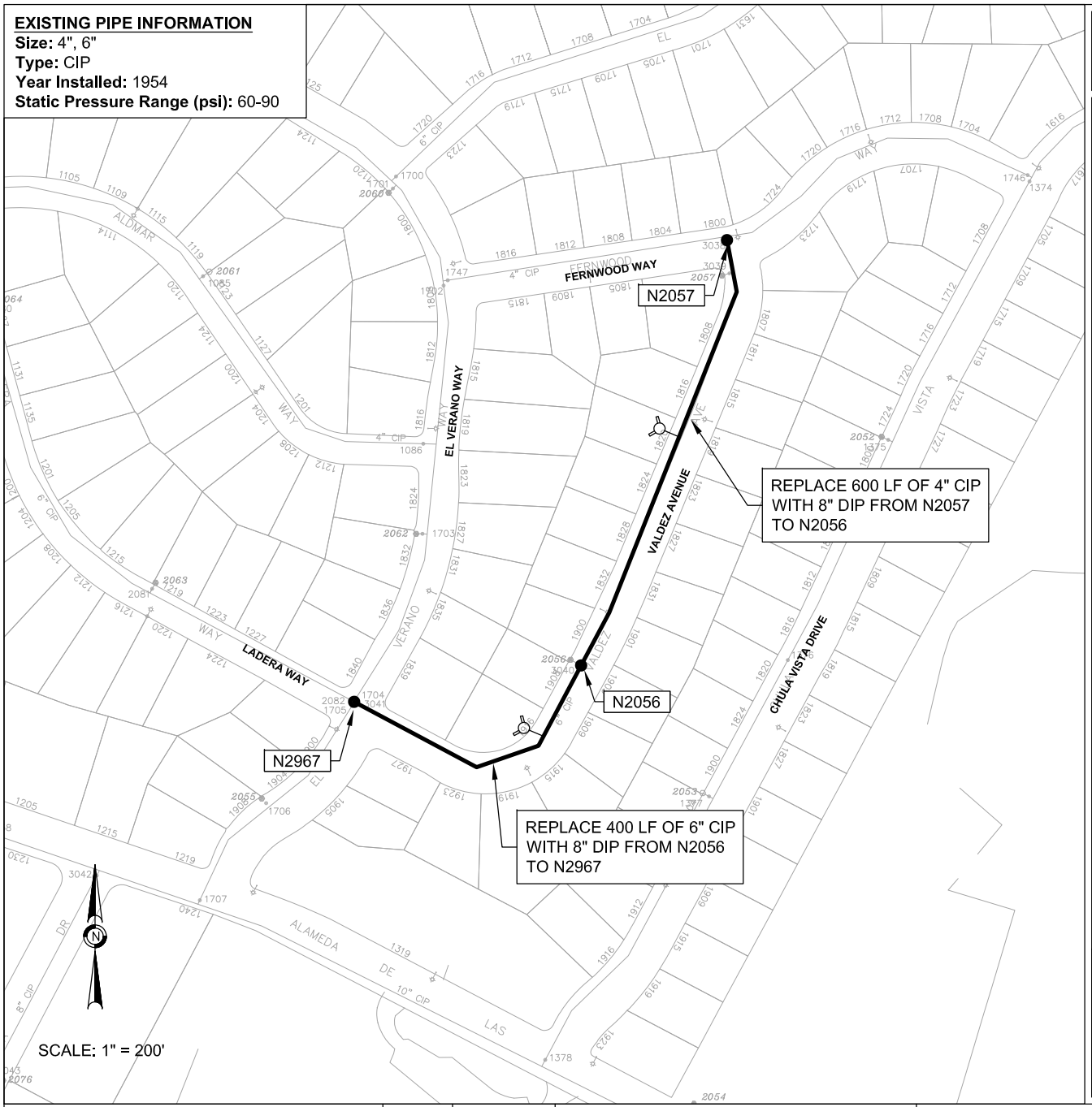
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
FERNWOOD WAY IMPROVEMENTS
PROJECT 15-58

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 6"
Type: CIP
Year Installed: 1954
Static Pressure Range (psi): 60-90



VALDEZ AVENUE IMPROVEMENTS

PROJECT BACKGROUND

Valdez Avenue, located between Fernwood Way and El Verano Way, has 600 LF of 4" cast iron (CIP) and 400 LF of 6" CIP water main incapable of meeting the minimum recommended fire flow of 1,500 gpm at 20 psi. Existing fire flows along this water main are as low as 1,050 gpm. This project replaces the entire water main along Valdez Avenue with 8" ductile iron pipe (DIP), 24 service connections and two fire hydrants. In addition, fire hydrant spacing will be improved to keep spacing to within 500 LF. Hydraulic analysis indicates upon completion of this project fire flows along the street increase to above 2,500 gpm. Distribution System Analysis No. 063

PROPOSED IMPROVEMENTS

Replace 1,000 LF of 4" / 6" CIP with 8" DIP
Replace 2 fire hydrants
Replace 24 service connections

PROJECT BENEFITS

The Valdez Avenue Improvements replaces an undersized and aging water main, improves fire hydrant spacing, and increases fire flows to above 2,500 gpm.

PROJECT BUDGET (2024)

8" DIP - 1,000 LF @ $475/LF	$	475,000
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 24 @ $5,250/EA	$	126,000
Subtotal Construction	$	631,000
Planning, Design & Construction Support	$	130,000
Construction Inspection	$	65,000
Contingency (±10%)	$	84,000
Project Budget	**$**	**910,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

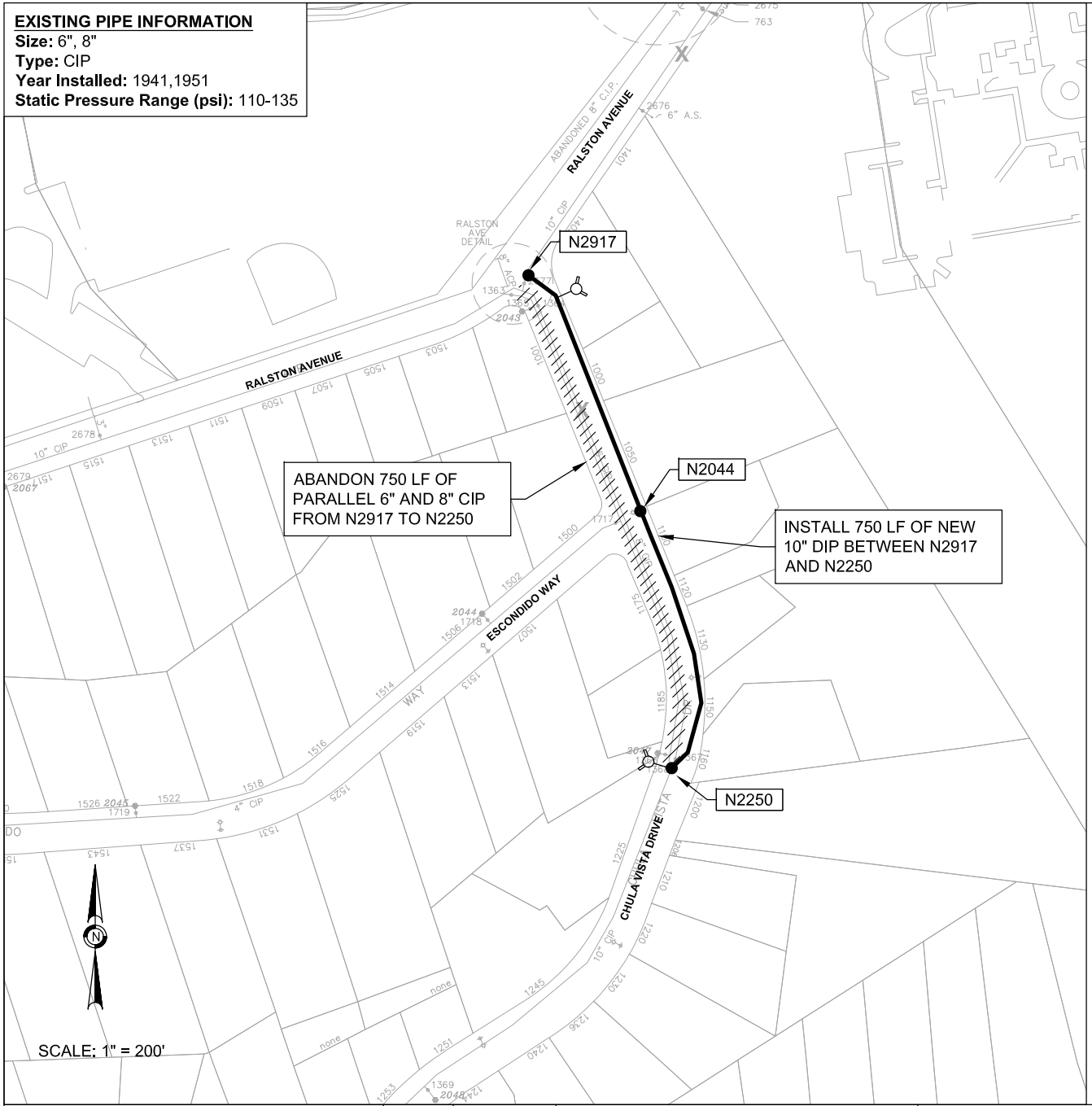
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
VALDEZ AVENUE IMPROVEMENTS
PROJECT 15-59

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6", 8"
Type: CIP
Year Installed: 1941,1951
Static Pressure Range (psi): 110-135



CHULA VISTA DRIVE IMPROVEMENTS

PROJECT BACKGROUND

The primary water main alignment between the Hannibal Pump Station and Exborne Tanks is mostly comprised of single 10" cast iron (CIP) and polyvinyl chloride (PVC) water mains with the exception of an 750 LF section on Chula Vista Drive. This section beginning at Ralston Avenue has 6" and 8" CIP parallel water mains, constructed in 1941 and 1951 respectively, bounded by the 10" water mains. These water mains are near their service life and the District has experienced several leaks in this area in recent years. This project replaces the parallel 6" and 8" CIP with a 10" DIP, 10 service connections and 2 fire hydrants. Hydraulic analysis indicates no fire flow change as the capacity of the 10" water main is the same as the 6" and 8" combined. Fire flows in the area are above 2,500 gpm. Distribution System Analysis No. 066

PROPOSED IMPROVEMENTS

Replace 750 LF of 6" / 8" CIP with 10" DIP
Replace 2 fire hydrants
Replace 10 service connections

PROJECT BENEFITS

The Chula Vista Drive Improvements replaces a parallel 6" and 8" water main with a 10" water main completing a single 10" water main between Hannibal Pump Station and Exborne Tanks, abandons an aging water mains, and reduces District maintenance.

PROJECT BUDGET (2024)

10" DIP - 750 LF @ $525/LF	$	393,750
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 10 @ $5,250/EA	$	52,500
Subtotal Construction	$	476,250
Planning, Design & Construction Support	$	120,000
Construction Inspection	$	50,000
Contingency (±10%)	$	68,750
Project Budget	**$**	**715,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

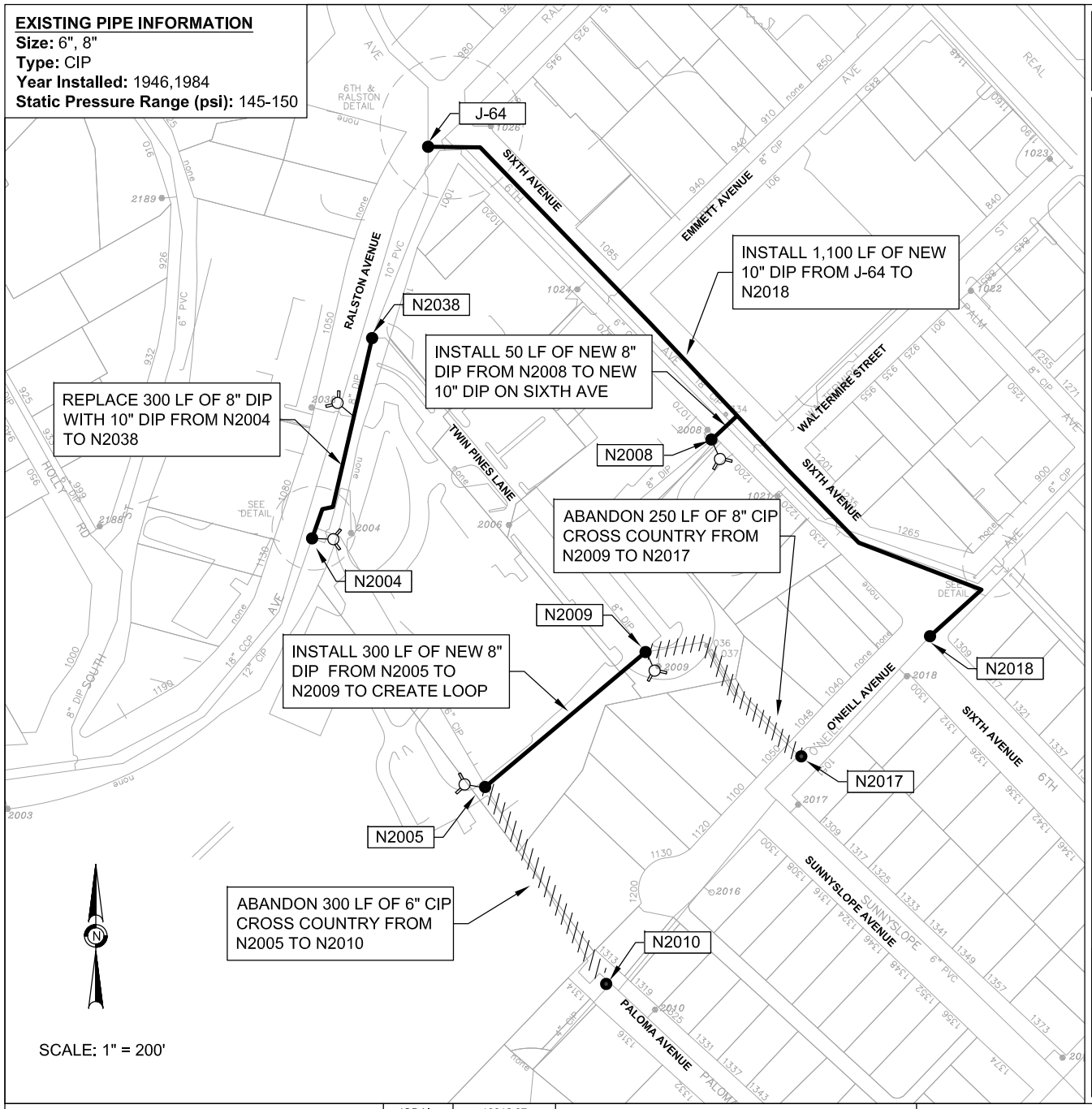
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
CHULA VISTA DRIVE IMPROVEMENTS
PROJECT 15-61

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6", 8"
Type: CIP
Year Installed: 1946,1984
Static Pressure Range (psi): 145-150



SIXTH AVENUE IMPROVEMENTS

PROJECT BACKGROUND

The southern portion of Zone 2 bounded between Sixth Avenue, O'Neill Avenue and Zone 5 is primarily fed from 6" and 8" cast iron (CIP) water mains. Water can also be provided to Zone 2 via an emergency connection from Zone 5 located along Talbyrn Drive. Both CIP water mains begin at Ralston Avenue and run cross country (CC) via dedicated easements from commercial lots to the north to residential lots to the south via suspended crossings over an existing creek. This project abandons the 2 CC creek crossings in favor of a new 1,100 LF 10" ductile iron (DIP) water main installed along Sixth Avenue between Ralston Avenue and O'Neill Avenue. An 8" bottleneck along Ralston would also be increased to 10" DIP. In addition, a total 350 LF 8" DIP in the Twin Pines Lane area would be installed to create a loop north of the creek. Fire flows would be reduced in the area by an average 5% however the majority of the locations are still above the minimum recommendation of 1,500 gpm at 20 psi with flows in the range of 1,900 gpm. Distribution System Analysis No. 067

PROPOSED IMPROVEMENTS

Abandon 700 LF of cross country 6" and 8" CIP
Install 1,400 LF of 10" DIP
Install 350 LF of 8" DIP
Replace 5 fire hydrants
Replace 2 service connections

PROJECT BENEFITS

The Sixth Avenue Improvements replaces two cross country water mains suspended over a creek with a new accessible 10-inch DIP.

PROJECT BUDGET (2024)

Pipe Abandonments - 2 @ $30,000/EA	$ 60,000
10" DIP - 1,400 LF @ $800/LF	$ 1,120,000
8" DIP - 350 LF @ $475/LF	$ 166,250
Fire Hydrants - 5 @ $15,000/EA	$ 75,000
Service Connections - 2 @ $5,250/EA	$ 10,500
Subtotal Construction	$ 1,431,750
Planning, Design & Construction Support	$ 215,000
Construction Inspection	$ 145,000
Contingency (±10%)	$ 183,250
Project Budget	**$ 1,975,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
DRAWN:	BY BL
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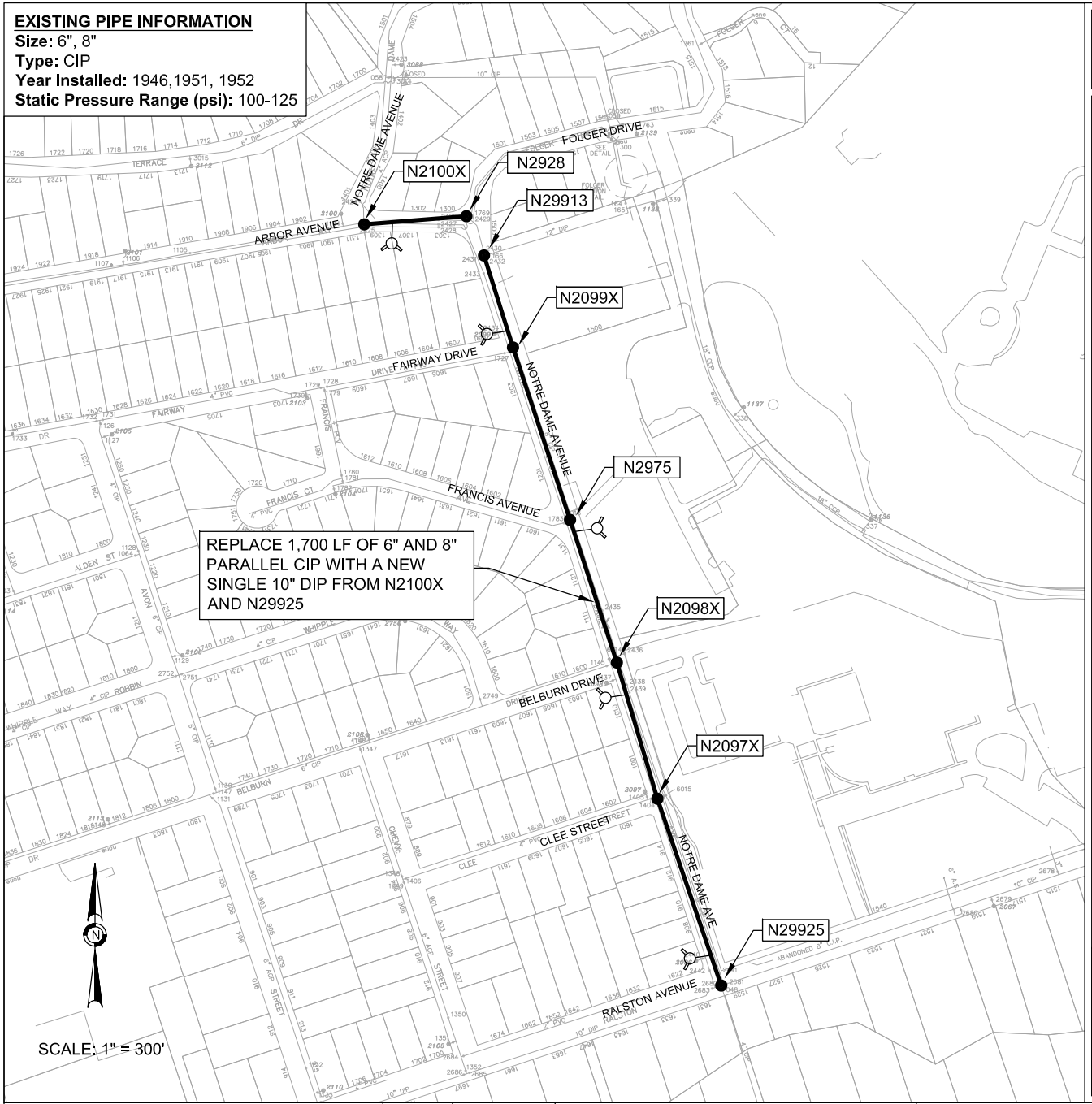
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SIXTH AVENUE IMPROVEMENTS
PROJECT 15-62

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6", 8"
Type: CIP
Year Installed: 1946,1951, 1952
Static Pressure Range (psi): 100-125



LOWER NOTRE DAME AVENUE IMPROVEMENTS

PROJECT BACKGROUND

Notre Dame Avenue has two parallel 1,700 LF water mains between Ralston Avenue and Arbor Avenue: a 6" cast iron pipe (CIP) and an 8" CIP. The water mains along Notre Dame Avenue serve as the primary transmission line between the Hannibal Pump Station and Hersom Tank. Over the past few years the District has experienced several leaks along these alignments. This project replaces the 1,700 LF of parallel water main (3,400 LF total) with a single 1,700 LF 10" ductile iron pipe (DIP). No significant effects were observed in replacing the parallel water mains with a larger 10" water main. Fire flows remained unchanged. Distribution System Analysis No. 069

PROPOSED IMPROVEMENTS

Replace 3,400 LF of 6" and 8" CIP with 1,700 LF of 10" DIP
Replace 5 fire hydrants
Replace 25 service connections

PROJECT BENEFITS

The Lower Notre Dame Avenue Improvements eliminates a 1,700 LF stretch of parallel water main resulting in less maintenance for the District and replaces old and aging water main.

PROJECT BUDGET (2024)

10" DIP - 1,700 LF @ $525/LF	$ 892,500
Fire Hydrants - 5 @ $15,000/EA	$ 75,000
Service Connections - 25 @ $5,250/EA	$ 131,250
Subtotal Construction	$ 1,098,750
Planning, Design & Construction Support	$ 165,000
Construction Inspection	$ 110,000
Contingency (±10%)	$ 141,250
Project Budget	**$ 1,515,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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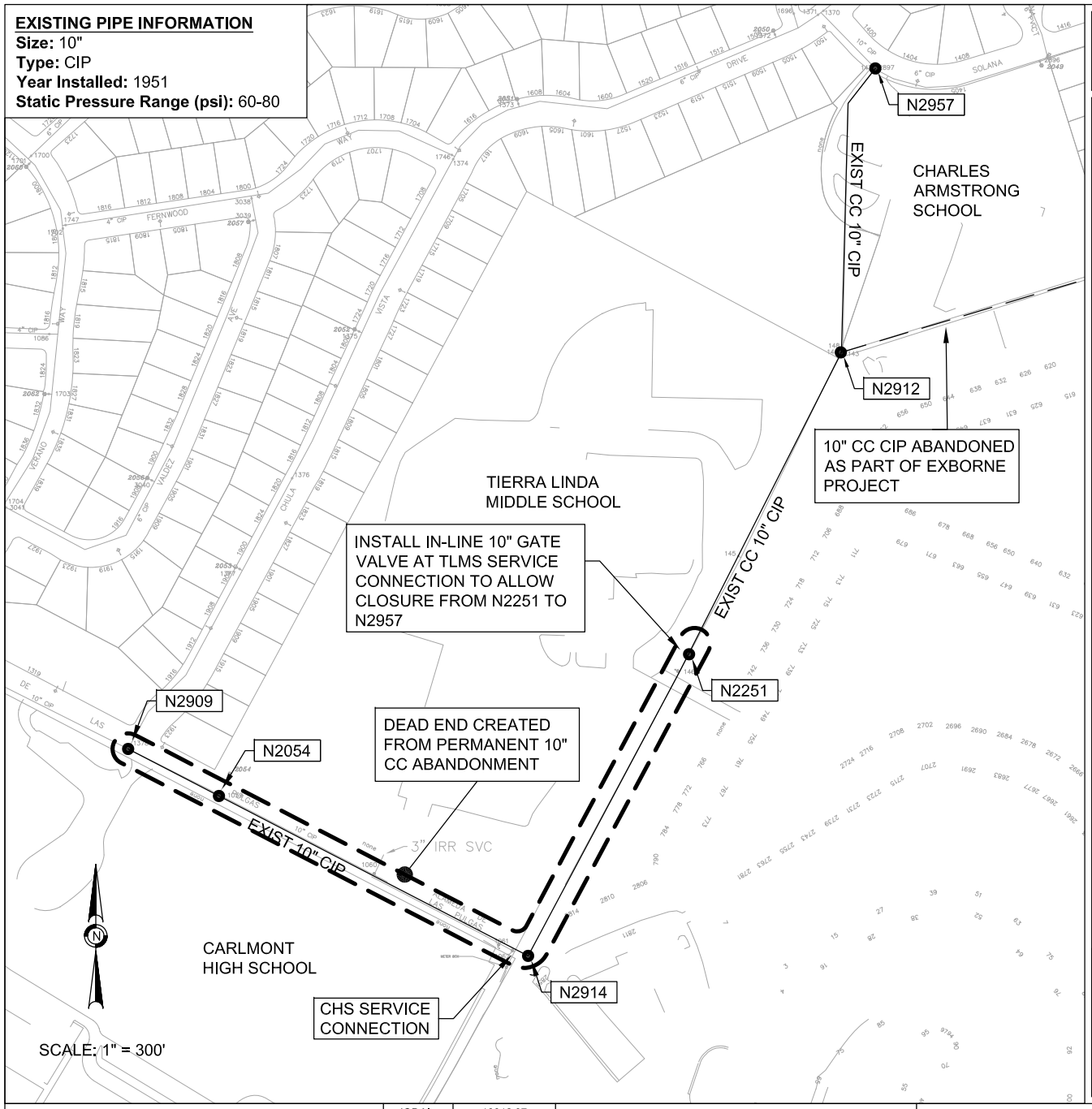
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
LOWER NOTRE DAME AVENUE IMPROVEMENTS
PROJECT 15-63

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie



TIERRA LINDA IMPROVEMENTS

PROJECT BACKGROUND

There is an existing 1,300 LF cross country (CC) 10" cast iron pipe (CIP) located between Solana Drive and Alameda De Las Pulgas originally serving as the primary transmission main bringing water from Zone 8, via the Carlmont Regulator (CR), into Zone 2. After the Hannibal Pump Station construction which became Zone 2's primary source of water, the CR remained in place as Zone 2 redundancy. In 2010, as part of the Exborne Tank Replacement, a portion of the 10" CC CIP was abandoned in favor of a new 10" PVC water main installed on Solana Drive. The remaining CC water main (1,300 LF) remained in place to serve the Tierra Linda Middle School (TLMS) and Carlmont High School (CHS). This project explores the feasibility of abandoning a portion of the 10" CC CIP between the TLMS service connection and Solana Drive by installing an in-line gate valve at TLMS's service connection. This valve would be closed to allow the District to monitor water quality impacts on the perceived dead end created by the abandonment. Should water quality be of concern, the District can explore different alternatives in eliminating the CC; Options may include 1) size reduction of the water main feeding the schools, 2) relocating TLMS's service connection further upstream (allows abandonment of entire CC), transferring both TLMS and CHS to the California Water Service Company. Distribution System Analysis 070

PROPOSED IMPROVEMENTS

Install a 10" in-line gate valve and monitor water quality.

PROJECT BENEFITS

The Tierra Linda Improvements project installs an in-line gate valve at TLMS in order to monitor water quality under an experimental dead end scenario.

PROJECT BUDGET (2024)

10" In-Line Gate Valve @ $50,000	$	50,000
Subtotal Construction	$	50,000
Planning, Design & Construction Support	$	20,000
Construction Inspection	$	5,000
Contingency (±10%)	$	10,000
Project Budget	**$**	**85,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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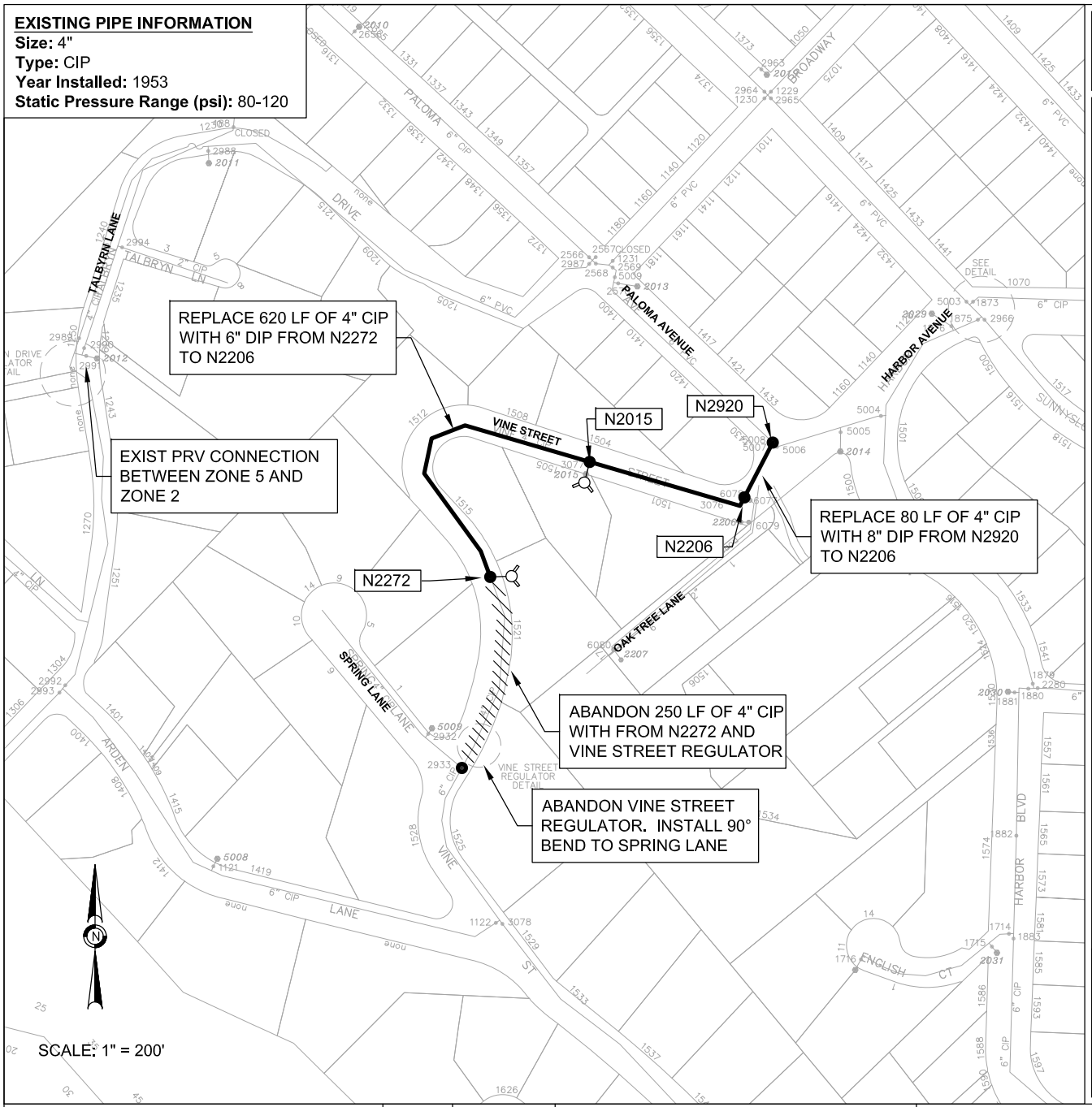
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
TIERRA LINDA IMPROVEMENTS
PROJECT 15-64

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1953
Static Pressure Range (psi): 80-120



VINE STREET (ZONE 2) IMPROVEMENTS

PROJECT BACKGROUND

Vine Street has a 950 LF 4" cast iron (CIP) water main between Harbor Avenue and the Vine Street Regulator located at Spring Lane. This is essentially a long dead end in which there are no Zone 2 customers for the last 250 LF. This water main also has fire flows below the minimum recommended 1,500 gpm at 20 psi with flows as low as 480 gpm. The Vine Street Regulator provides an emergency connection between Zone 5 and Zone 2 and is currently not in use per District personnel. There is another regulator located along Talbyrn Drive able to provide Zone 2 water from Zone 5 in the event of an emergency. This project replaces the 4" CIP with 80 LF of 8" ductile iron (DIP) and 620 LF of 6" DIP and abandons the last 250 LF. The Vine Street Regulator will also be abandoned and a 90 degree bend installed at Vine Street and Spring Lane to reconfigure Zone 5. Fire flows will improve to a minimum 1,300 gpm without creating water quality concerns in the larger sized dead end. Distribution System Analysis No. 071

PROPOSED IMPROVEMENTS

Replace 700 LF of 4" CIP with 80 LF 8" and 620 LF 6" DIP
Abandon 250 LF of 4" CIP and the Vine Street Regulator
Replace 2 fire hydrants
Replace 7 service connections

PROJECT BENEFITS

The Vine Street (Zone 2) Improvements replaces an undersized 4" CIP with new 6" and 8" DIP, shortens a dead end, abandons an unused regulating station, and increases fire flows as much as 171%.

PROJECT BUDGET (2024)

6" DIP - 620 LF @ $425/LF	$	263,500
8" DIP - 80 LF @ $600/LF	$	48,000
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 16 @ $5,250/EA	$	84,000
Subtotal Construction	$	425,500
Planning, Design & Construction Support	$	110,000
Construction Inspection	$	45,000
Contingency (±10%)	$	59,500
Project Budget	**$**	**640,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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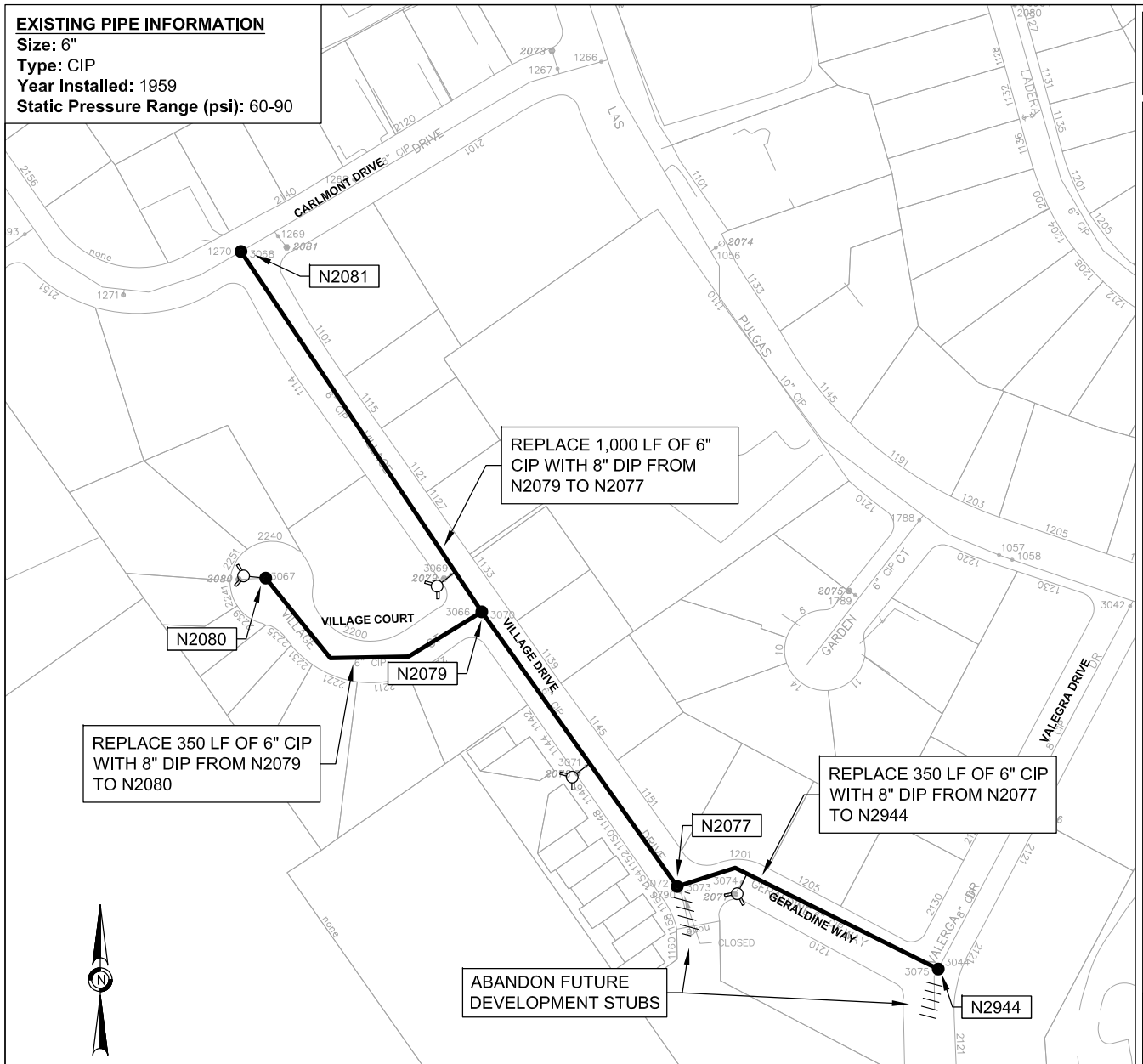
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
VINE STREET (ZONE 2) IMPROVEMENTS
PROJECT 15-66

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: CIP
Year Installed: 1959
Static Pressure Range (psi): 60-90



SCALE: 1" = 200'

VILLAGE DRIVE AREA IMPROVEMENTS

PROJECT BACKGROUND

Village Drive, Village Court, and Geraldine Way have 6" cast iron (CIP) water mains. The District has made several repairs to the water mains in this area. There are also two small dead ends off Geraldine Way originally intended for future development to the south which are currently isolated with closed valves. This project replaces 1,700 LF of 6" CIP with 8" ductile iron (DIP) in addition to abandoning the small dead ends. The District does not anticipate further development so to prevent the accidental opening of the valves and allowing dead end water into the system, the dead ends will be abandoned and the valves removed and the remaining pipe straight-lined past the connection.

PROPOSED IMPROVEMENTS

Replace 1,700 LF of 6" CIP with 8" DIP
Abandon 2 small dead ends
Replace 4 fire hydrants
Replace 34 service connections

PROJECT BENEFITS

The Village Drive Area Improvements replaces an aging 6" CIP water main with a new 8" DIP, and officially abandons two stubs currently valved off.

PROJECT BUDGET (2024)

8" DIP -1,700 LF @ $475/LF	$ 807,500
Fire Hydrants - 4 @ $15,000/EA	$ 60,000
Service Connections - 34 @ $5,250/EA	$ 178,500
Subtotal Construction	$ 1,046,000
Planning, Design & Construction Support	$ 160,000
Construction Inspection	$ 105,000
Contingency (±10%)	$ 134,000
Project Budget	**$ 1,445,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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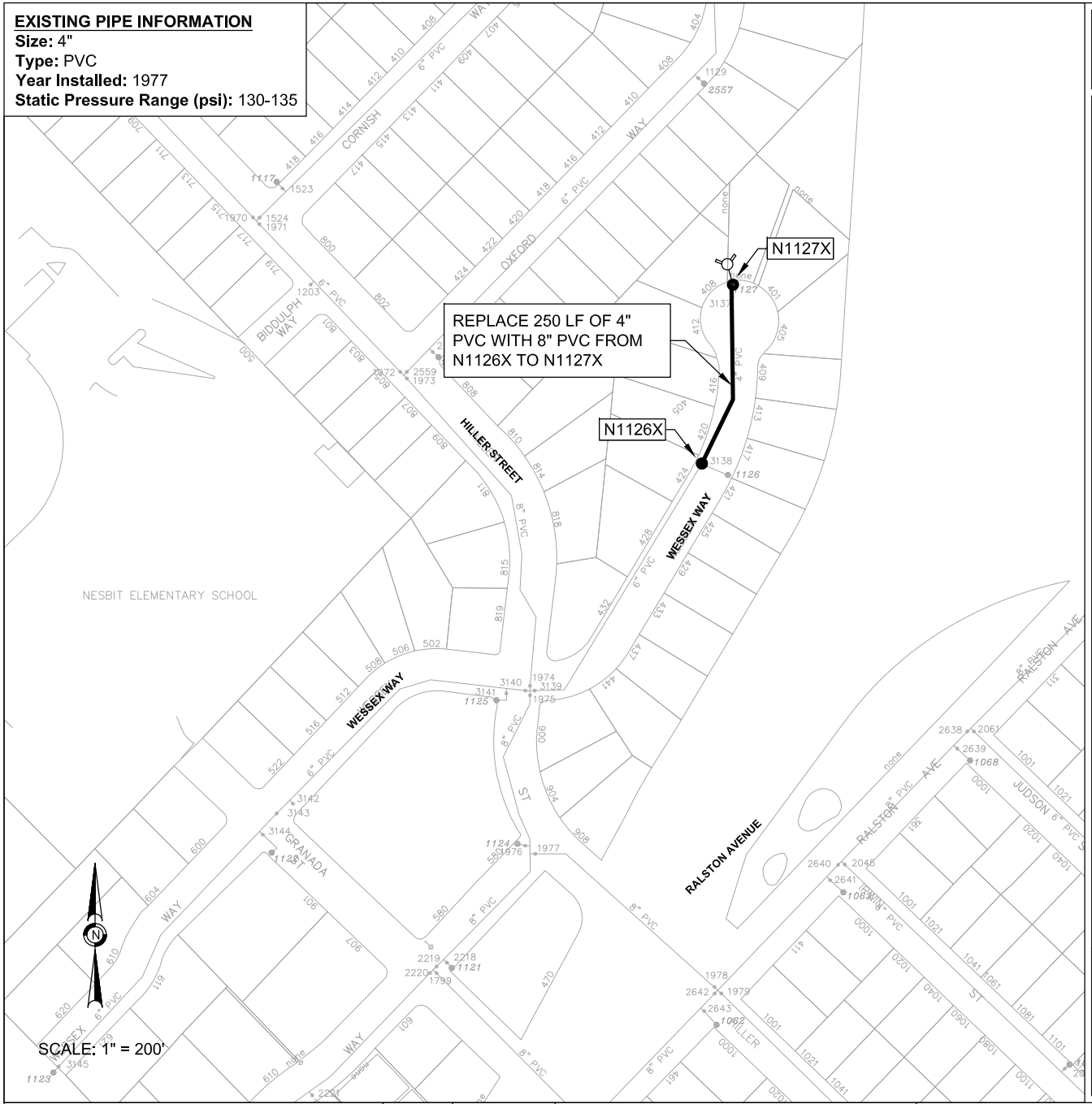
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
VILLAGE DRIVE AREA IMPROVEMENTS
PROJECT 15-67

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1977
Static Pressure Range (psi): 130-135



WESSEX WAY DEAD END IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to Wessex Way, a dead end cul-de-sac off Hiller Street, through a 380 LF 6" polyvinyl chloride (PVC) which transitions to a 250 LF 4" PVC before coming to a dead end. The 4" PVC serves 20 customers in addition to one hydrant located at the end of the water main. The fire flow at this hydrant is 590 gpm and is significantly lower than the minimum recommended 1,500 gpm at 20 psi. This project replaces the existing 4" PVC with a larger 8" PVC increasing fire flows to 1,320 gpm, a 124% improvement. To meet the minimum recommendation of 1,500 gpm, the upstream 6" PVC would also require upsizing to an 8" increasing flows up to 2,350 gpm, a project the District may consider in the future however not critical at this time. Distribution System Analysis No. 073

PROPOSED IMPROVEMENTS

Replace 250 LF of 4" PVC with 8" PVC
Replace 1 fire hydrant
Replace 20 service connections
Cathodic protection of all metallic fittings/materials

PROJECT BENEFITS

The Wessex Way Dead End Improvements replaces an undersized 4" PVC water main with a new 8" PVC, greatly improves fire flows as much as 300% at the dead end, and sets the District up for a future upsizing of the upstream main should the District elect to do so in the future.

PROJECT BUDGET (2024)

8" PVC - 250 LF @ $475/LF	$	118,750
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 20 @ $5,250/EA	$	105,000
Subtotal Construction	$	238,750
Planning, Design, & Construction Support	$	75,000
Construction Inspection	$	25,000
Contingency (±10%)	$	36,250
Project Budget	**$**	**375,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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DATE	08/21/24
SCALE	AS NOTED
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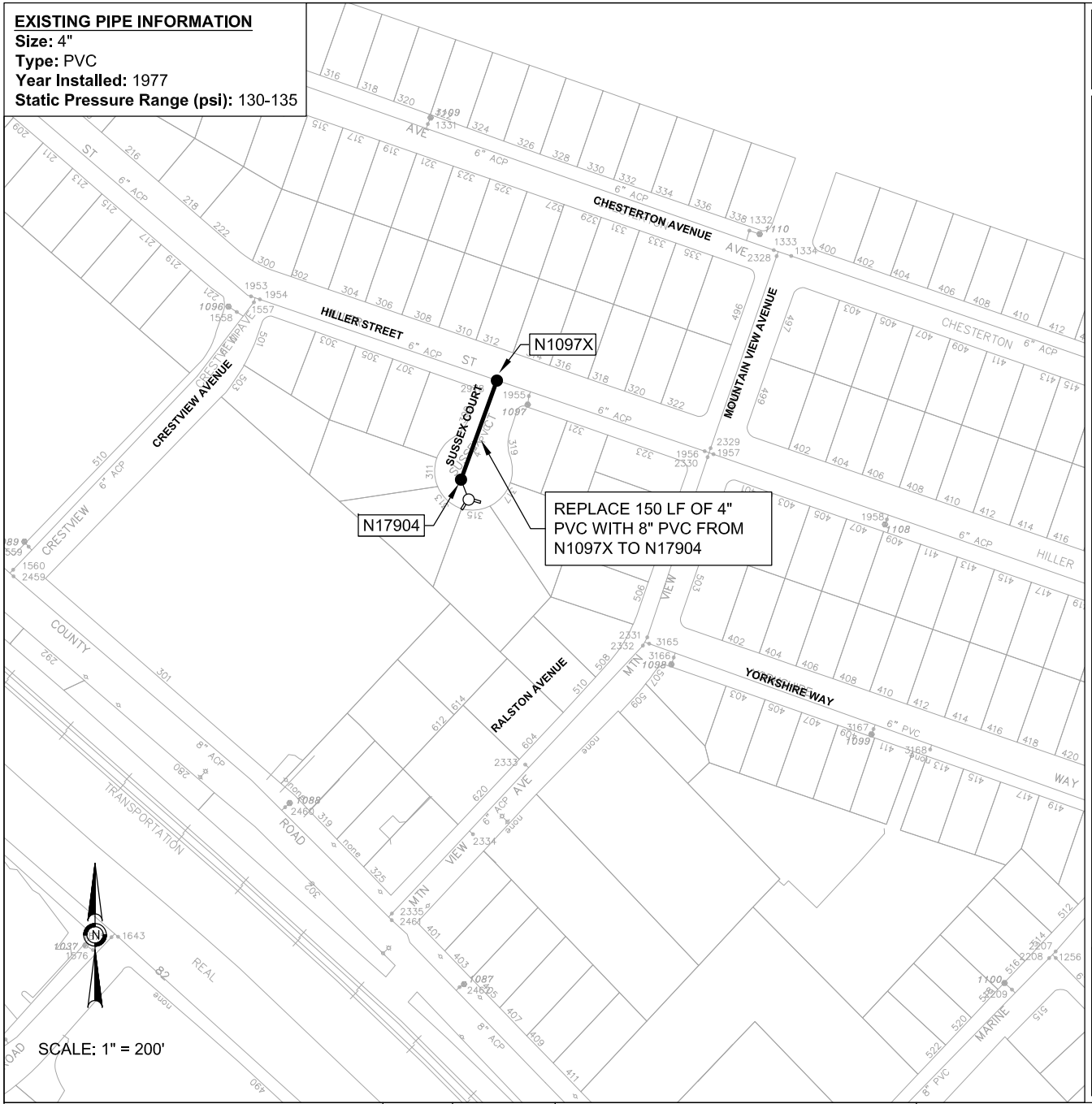
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
WESSEX WAY DEAD END IMPROVEMENTS
PROJECT 15-68

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1977
Static Pressure Range (psi): 130-135



SUSSEX COURT IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to the Sussex Court cul-de-sac through a 150 LF 4" polyvinyl chloride (PVC). This water main serves 4 customers and dead ends with no blowoff or fire hydrant preventing the District the ability to flush the water main. The hydraulic model indicates fire flows on the court would be 590 gpm if a hydrant were installed which is below the recommended minimum of 1,500 gpm at 20 psi. In addition, the District standard for water mains is 8" minimum. This project replaces the undersized water main with a new 8" PVC, replaces 4 service connections, in addition to installing a fire hydrant at the end of the water main. Hydraulic analysis indicates a 295% increase in available fire flows to 2,320 gpm upon completion of this project. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 074

PROPOSED IMPROVEMENTS

Replace 150 LF of 4" PVC with 8" PVC
Replace 1 fire hydrant
Replace 4 service connections
Cathodic protection of all metallic fittings/materials

PROJECT BENEFITS

The Sussex Court Improvements replaces an undersized 4" PVC water main with a new 8" PVC, greatly improves fire flows as much as 295% at the dead end, provides dead end flushing capabilities.

PROJECT BUDGET (2024)

8" PVC - 150 LF @ $475/LF	$	71,250
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 4 @ $5,250/EA	$	21,000
Subtotal Construction	$	107,250
Planning, Design, & Construction Support	$	35,000
Construction Inspection	$	15,000
Contingency (±10%)	$	17,750
Project Budget	**$**	**175,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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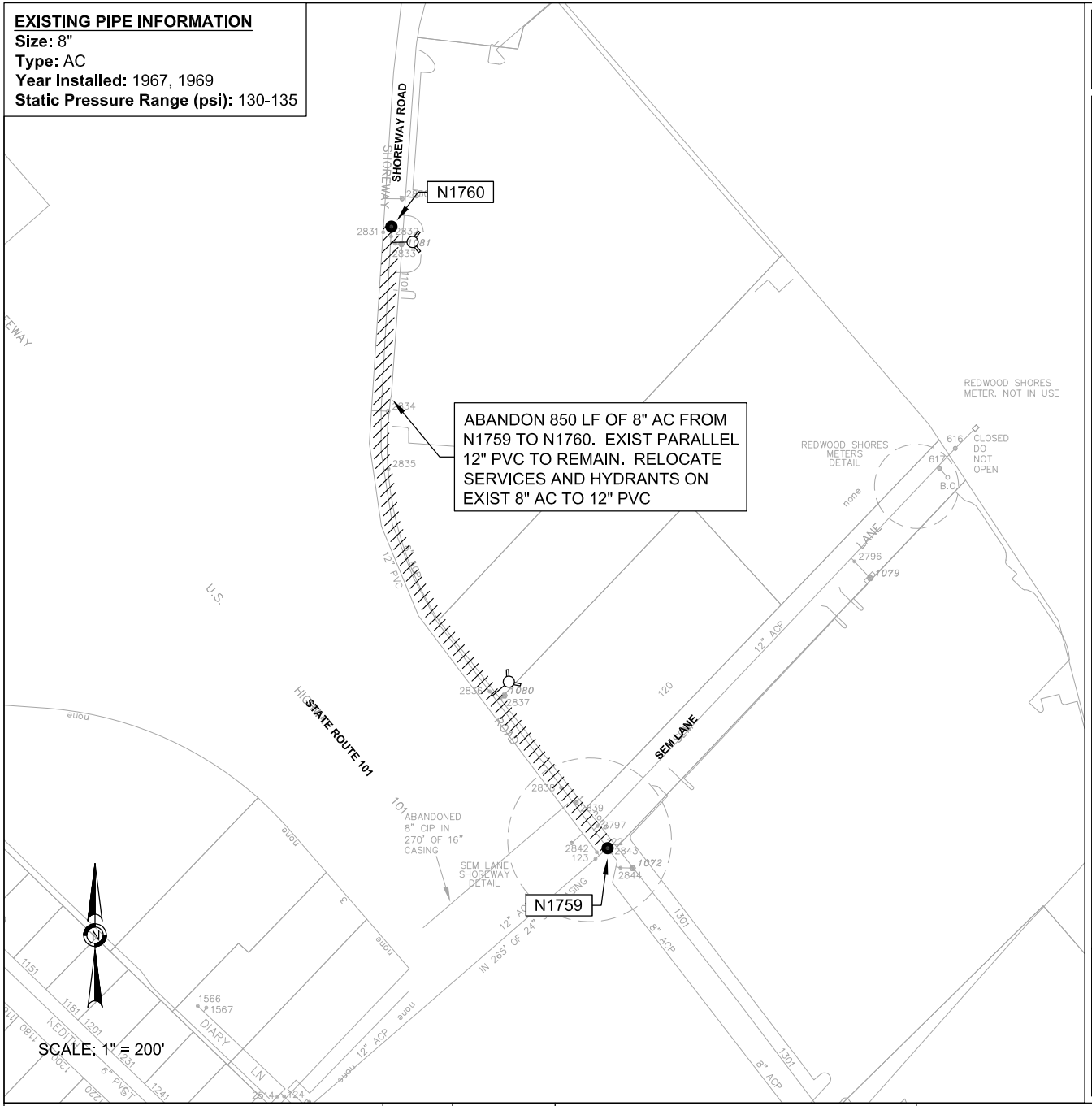
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SUSSEX COURT IMPROVEMENTS
PROJECT 15-69

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 8"
Type: AC
Year Installed: 1967, 1969
Static Pressure Range (psi): 130-135



SHOREWAY ROAD IMPROVEMENTS

PROJECT BACKGROUND

Shoreway Road has two parallel water mains between Sem Lane and 1101 Shoreway Road: an 850 LF 8" asbestos cement (AC) and an 850 LF 12" polyvinyl chloride (PVC). The existing 8" AC has 2 hydrants and 5 service connections. The existing 12" PVC was installed in the late 1980's as part of the Island Parkway development north of Ralston Avenue to supplement the existing 12" PVC crossing under State Route 101 to the same development. The District believes the 8" AC remained in service solely for the purposes of the existing services and hydrants. Hydraulic analysis indicates the 8" AC provides no hydraulic benefit to the system and therefore can be abandoned with no effect on existing fire flows, all of which are above 2,300 gpm. This project abandons the existing 8" AC and relocates the existing 5 services and 2 hydrants to the 12" parallel PVC. Distribution System Analysis No. 075

PROPOSED IMPROVEMENTS

Abandon 850 LF of 8" AC
Replace 2 fire hydrants
Replace 5 service connections
Cathodic protection of all metallic fittings/materials

PROJECT BENEFITS

The Shoreway Road Improvements abandons a parallel water main providing little hydraulic benefit to the system, eliminates an old and aging water main, and reduces maintenance.

PROJECT BUDGET (2024)

Pipe Abandonment - 2 @ $50,000/End	$	100,000
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 5 @ $10,000/EA	$	50,000
Subtotal Construction	$	180,000
Planning, Design, & Construction Support	$	55,000
Construction Inspection	$	20,000
Contingency (±10%)	$	30,000
Project Budget	**$**	**285,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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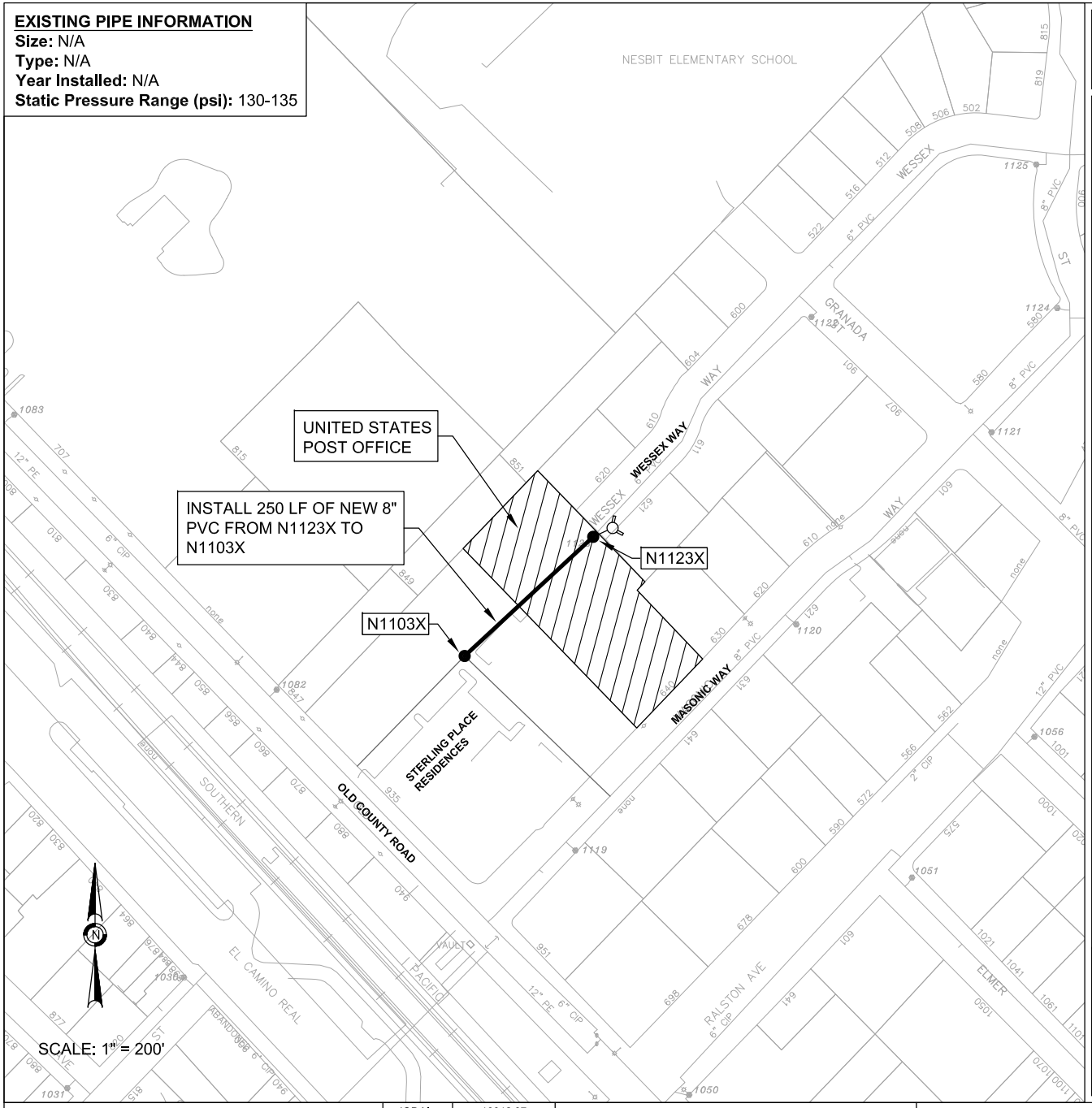
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SHOREWAY ROAD IMPROVEMENTS
PROJECT 15-70

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): 130-135



WESSEX WAY LOOP IMPROVEMENTS

PROJECT BACKGROUND

The existing 825 LF 6" polyvinyl chloride (PVC) dead-end water main along the western side of Wessex Way serves 16 single family residences, 6 apartment/condo buildings, and 9 commercial businesses. The water main dead-ends with a fire hydrant at the rear entrance of the post office located at 640 Masonic Way. Another fire hydrant is located at Wessex Way / Granada Street and fire flows at this location and at the dead-end are slightly above 1,300 gpm, below the minimum recommended 1,500 gpm. This project installs a new 250 LF 8" PVC beginning at the dead-end, crossing through the post office rear parking lot, and connecting to an existing 6" PVC located in the Sterling Place residential complex on the other side of the post office parcel. This project creates a looped system along Wessex Way, provides area redundancy, eliminates a long dead end, and improves fire flows by an average 85% to above 2,350 gpm. This project will require an easement from the post office and potentially the Sterling Place development. Distribution System Analysis No. 076

PROPOSED IMPROVEMENTS

Install 250 LF of 8" PVC
Replace1 fire hydrant
Easement Acquisition
Cathodic protection of all metallic fittings/materials

PROJECT BENEFITS

The Wessex Way Loop Improvements eliminates an 825 LF 6" dead end by looping, improves fire flows along Wessex Way as much as 90% to 2,500 gpm, provides additional system redundancy, and improved water movement and quality.

PROJECT BUDGET (2024)

8" PVC - 250 LF @ $475/LF	$	118,750
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Easement Coordination @ $20,000/LS	$	20,000
Subtotal Construction	$	153,750
Planning, Design, & Construction Support	$	50,000
Construction Inspection	$	20,000
Contingency (±10%)	$	26,250
Project Budget	**$**	**250,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

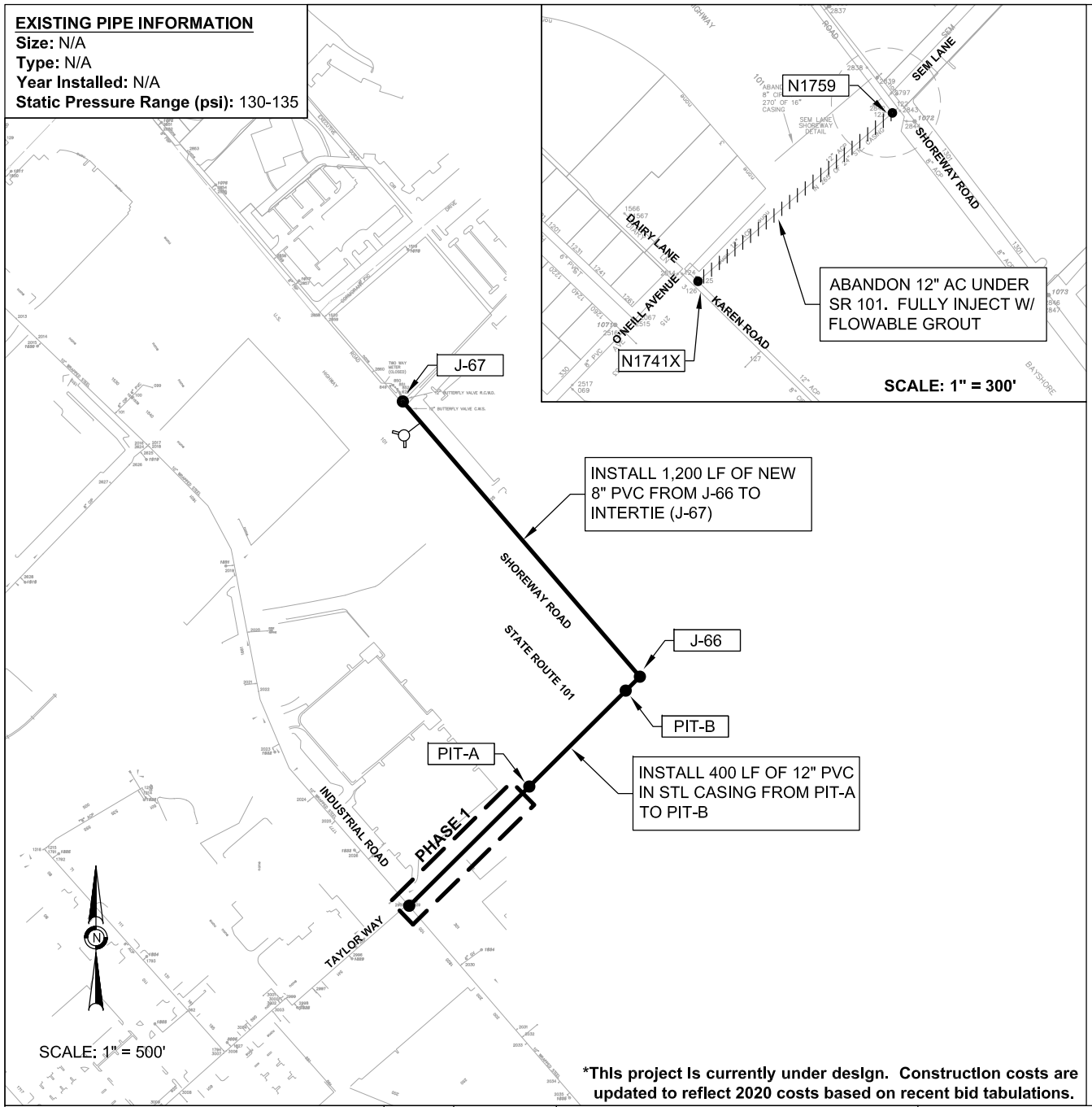
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
WESSEX WAY LOOP IMPROVEMENTS
PROJECT 15-71

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): 130-135



*This project is currently under design. Construction costs are updated to reflect 2020 costs based on recent bid tabulations.

SR 101 CROSSING AT PAMF IMPROVEMENTS - PHASE 2

PROJECT BACKGROUND

Two State Route 101 (SR 101) water main crossings exist in Zone 1 including a 500 LF 12" asbestos cement (AC) crossing between Karen Road and Sem Lane and another 12" polyvinyl chloride (PVC) crossing a half mile to the north. The 12" AC was installed in 1963 in a 36" steel casing. As part of the PAMF development agreement at the south end of Zone 1, the District obtained a 15 ft easement along the northeast side of the PAMF property in addition to a 40 ft x 40 ft area in the northeast corner to serve as a staging area for an alternate SR 101 crossing. This project abandons the aging 12" AC crossing and relocates it to the PAMF easement with a new 1,100 LF 12" PVC water main. To loop the water main back to the existing water main on Shoreway Road requires the installation of an additional 1,200 LF 8" PVC. Hydraulic analysis indicates increased fire flows along Shoreway Road of approximately 200 gpm. Distribution System Analysis No. 077

PROPOSED IMPROVEMENTS - PHASE 2

Install 400 LF of 12" PVC in steel casing and 1,200 LF of 8" PVC
Abandon 500 LF 12" AC
Install 1 fire hydrant, new intertie
Cathodic protection of all metallic fittings/materials

PROJECT BENEFITS

The SR 101 Crossing at PAMF Hospital Improvements replaces an old and aging water main capable of causing major disruptions on SR 101 in the event of a main break, eliminates a dead end, creates a looped system, improves fire flows, and constructs a serviceable underground inter-tie utility vault.

PROJECT BUDGET (2020)

12" PVC SR 101 - 400 LF @ $2,000/LF	$ 800,000
8" PVC - 1,200 LF @ $750/LF	$ 900,000
Abandon 12" AC Crossing @ $100,000/LS	$ 100,000
Intertie	$ 200,000
Fire Hydrants - 1 @ $15,000/EA	$ 15,000
Subtotal Construction	$ 2,015,000
Planning, Design, & Construction Support	$ 300,000
Construction Inspection	$ 200,000
Contingency (±10%)	$ 250,000
Project Budget	**$ 2,765,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

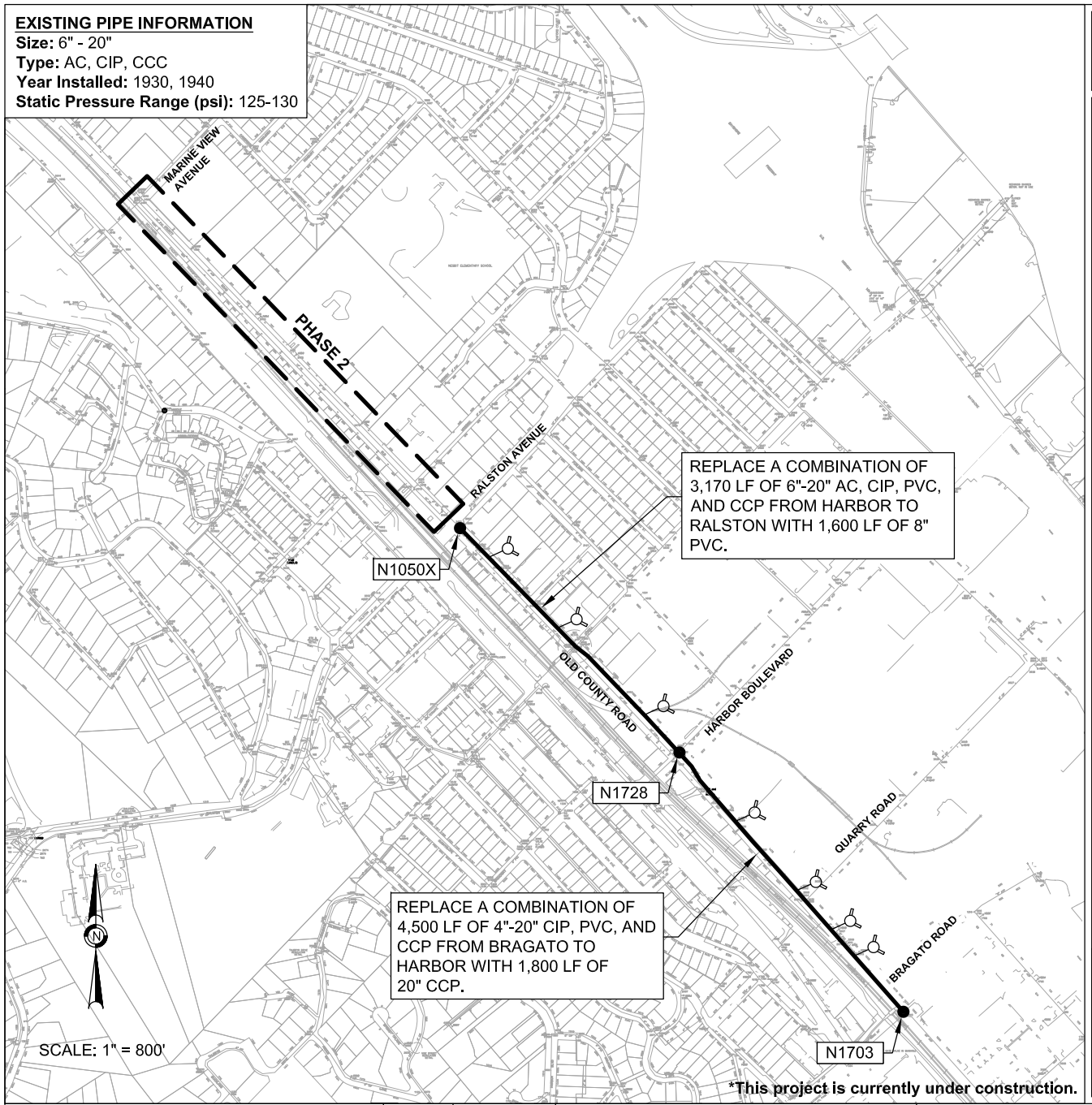
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SR 101 CROSSING AT PAMF IMPROVEMENTS - PHASE 2
PROJECT 15-72B

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6" - 20"
Type: AC, CIP, CCC
Year Installed: 1930, 1940
Static Pressure Range (psi): 125-130



*This project is currently under construction.

OLD COUNTY ROAD IMPROVEMENTS - PHASE 1

PROJECT BACKGROUND

Old County Road spans the entire length of Zone 1 and has approximately 5,000 LF of various 4", 6" and 8" cast iron pipe (CIP) and asbestos cement (AC) water mains installed in the 1930's/1940's located on the road's east side. In addition, approximately 3,100 LF of 10" and 12" polyvinyl chloride (PVC) and polyethylene (PE) water mains in steel casings were installed in the late 1980s and parallel the CIP and AC on the road's left side. There are approximately 111 service connections, 15 fire service connections, and 11 fire hydrants along the CIP/AC water mains. Hydraulic analysis indicates the larger parallel water mains (10"-12") provide no significant fire flow benefit to the zone. This project abandons approximately 6,500 LF of various sized parallel water main and replaces all of the 6"- 8" CIP/AC with 8" PVC (3,700 LF) and 1,800 LF of 20" CC with 20" PVC from Bragato Road to Marine View Avenue. Phase 1 includes work between Bragato Road and Ralston Avenue. Distribution System Analysis No. 080

PROPOSED IMPROVEMENTS

Replace 3,170 LF of 6"-20" AC/CIP/PVC/CCP with 1,600 LF 8" PVC
Replace 4,500 LF OF 4"-20" CIP/PVC/CCP with 1,800 LF 20" PVC
Replace 7 fire hydrants
Replace 7 fire services
Replace 60 service connections

PROJECT BENEFITS

The Old County Road Improvements - Phase 1 replaces old and aging water main, reduces maintenance, and improves fire flows at various locations along Old County Road to as much as 2,500 gpm.

PROJECT BUDGET (2020)

Pipe Abandonments	$ 75,000
20" PVC - 1,800 LF @ $750/LF	$ 1,350,000
8" PVC - 1,600 LF @ $550/LF	$ 880,000
Fire Hydrants - 7 @ $15,000/EA	$ 105,000
Fire Services - 7 @ $6,000/EA	$ 42,000
Service Connections - 60 @ $4,500/EA	$ 270,000
Subtotal Construction	$ 2,722,000
Planning, Design, & Construction Support	$ 665,000
Construction Inspection	$ 275,000
Contingency (±10%)	$ 368,000
Project Budget	**$ 4,030,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

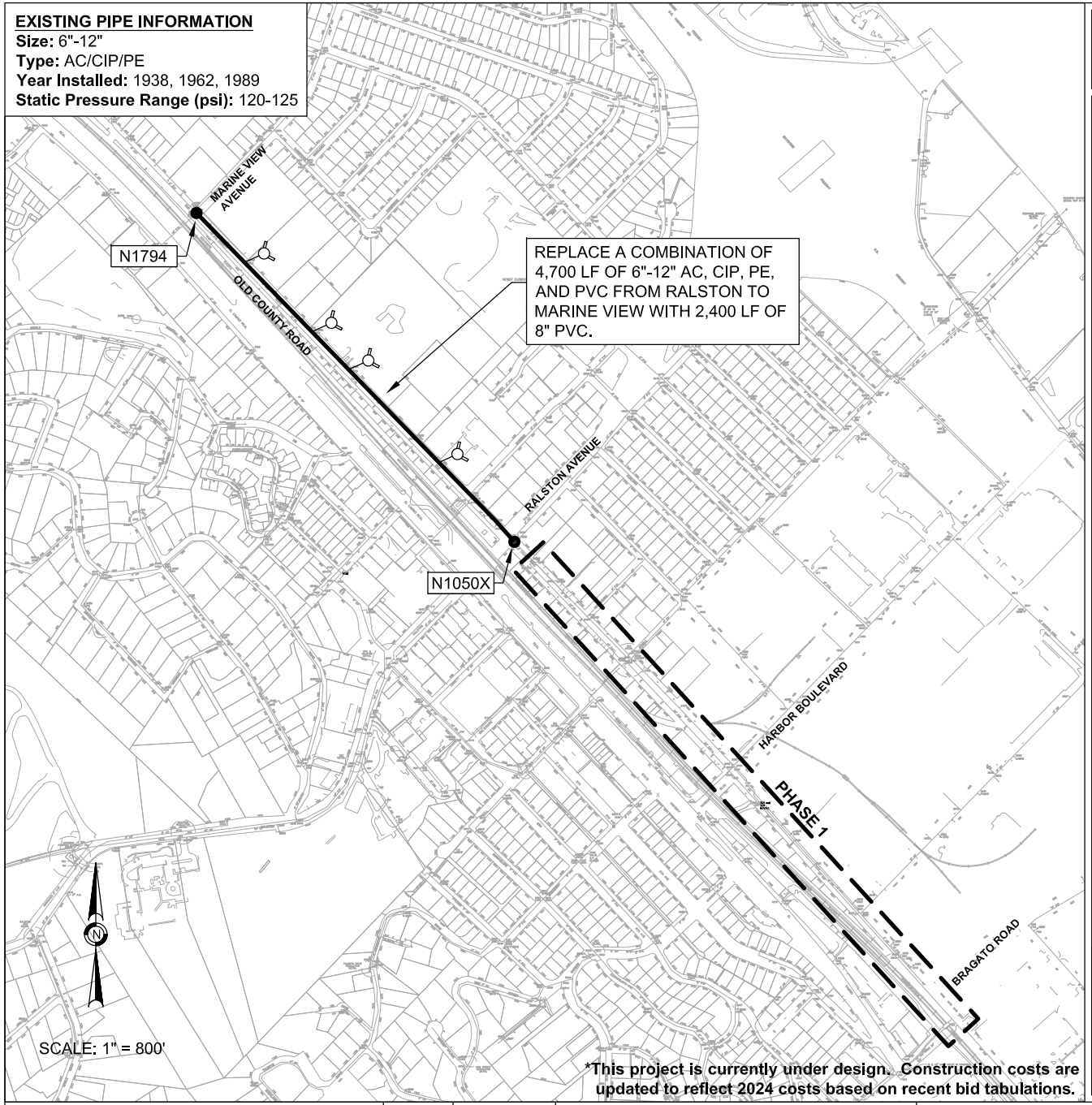
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
OLD COUNTY ROAD IMPROVEMENTS - PHASE 1
PROJECT 15-75A

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"-12"
Type: AC/CIP/PE
Year Installed: 1938, 1962, 1989
Static Pressure Range (psi): 120-125



*This project is currently under design. Construction costs are updated to reflect 2024 costs based on recent bid tabulations.

OLD COUNTY ROAD IMPROVEMENTS - PHASE 2

PROJECT BACKGROUND

Old County Road spans the entire length of Zone 1 and has approximately 5,000 LF of various 4", 6" and 8" cast iron pipe (CIP) and asbestos cement (AC) water mains installed in the 1930's/1940's located on the road's east side. In addition, approximately 3,100 LF of 10" and 12" polyvinyl chloride (PVC) and polyethylene (PE) water mains in steel casings were installed in the late 1980s and parallel the CIP and AC on the road's left side. There are approximately 111 service connections, 15 fire service connections, and 11 fire hydrants along the CIP/AC water mains. Hydraulic analysis indicates the larger parallel water mains (10"-12") provide no significant fire flow benefit to the zone. This project abandons approximately 6,500 LF of various sized parallel water main and replaces all of the 6"- 8" CIP/AC with 8" PVC (3,700 LF) and 1,800 LF of 20" CC with 20" PVC from Bragato Road to Marine View Avenue. Phase 2 includes work between Ralston Avenue and Marine View Avenue. Distribution System Analysis No. 080

PROPOSED IMPROVEMENTS

Replace 4,700 LF of 6"-12" AC/CIP/PVC/PE with 2,400 LF 8" PVC
Replace 4 fire hydrants
Replace 4 fire services
Replace 50 service connections

PROJECT BENEFITS

The Old County Road Improvements - Phase 2 replaces old and aging water main, reduces maintenance, and improves fire flows at various locations along Old County Road to as much as 2,500 gpm.

PROJECT BUDGET (2020)

Pipe Abandonments	$ 75,000
8" PVC - 2,400 LF @ $550/LF	$ 1,320,000
Fire Hydrants - 4 @ $15,000/EA	$ 60,000
Fire Services - 4 @ $6,000/EA	$ 24,000
Service Connections - 50 @ $4,500/EA	$ 225,000
Subtotal Construction	$ 1,704,000
Construction Inspection	$ 170,000
Contingency (±10%)	$ 191,000
Project Budget*	**$ 2,065,000**

***Planning, Design, Construction Support Included In Phase 1**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

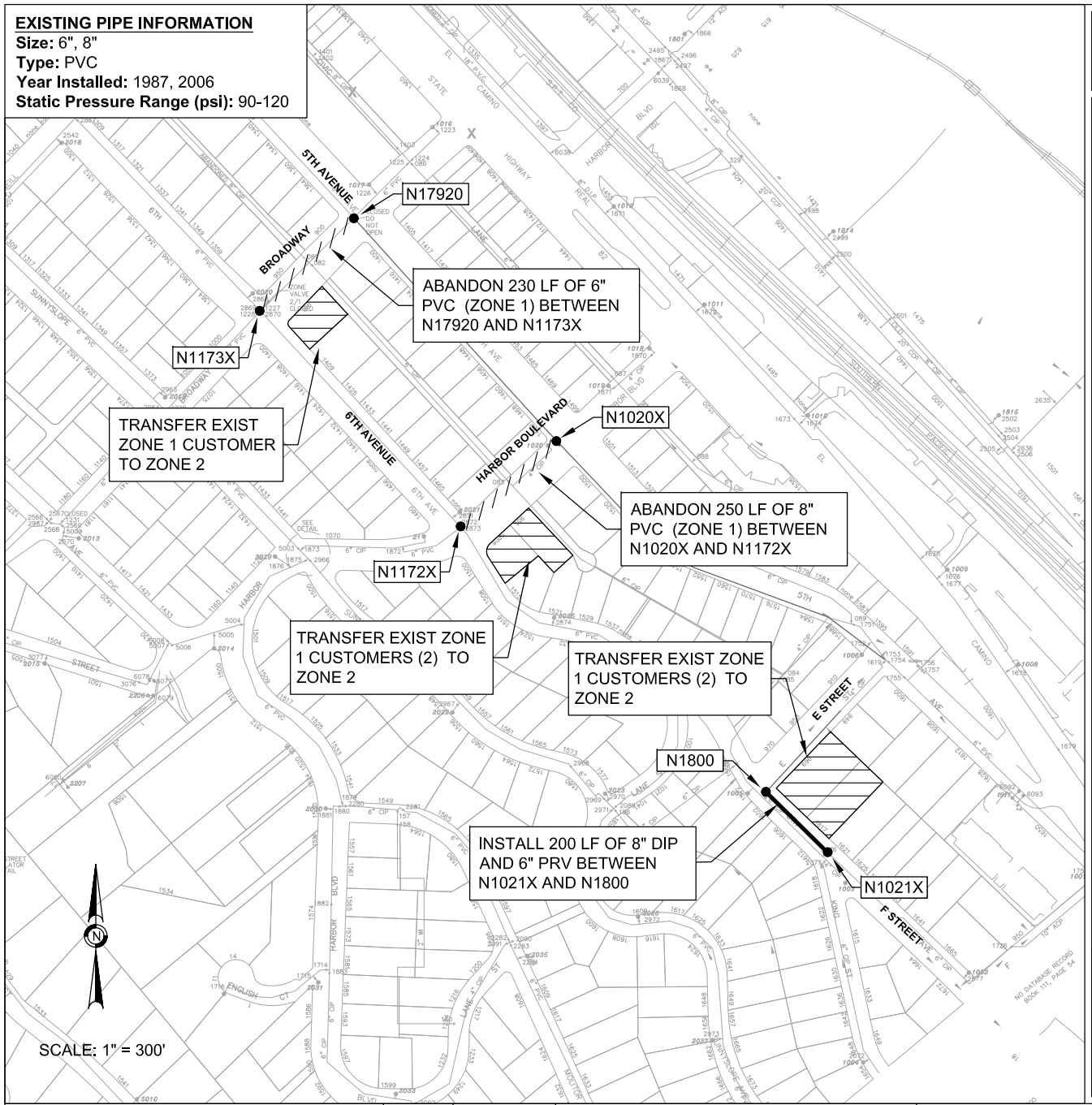
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
OLD COUNTY ROAD IMPROVEMENTS - PHASE 2
PROJECT 15-75B

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6", 8"
Type: PVC
Year Installed: 1987, 2006
Static Pressure Range (psi): 90-120



SIXTH AVENUE (ZONE 1) IMPROVEMENTS

PROJECT BACKGROUND

Sixth Avenue is located in the southwest portion of Zone 1 just off El Camino Real and has a Zone 2 water main along it's length. Fifth Avenue to the east runs parallel to Sixth Avenue and has a Zone 1 water main. The zones are connected by perpendicular Zone 1 water mains along Broadway, Harbor Boulevard, E Street and F Street and are isolated via closed valves thereby creating 4 dead ends in Zone 1. Three of the dead ends are approximately 250 LF with each serving 1 to 2 customers whereas the dead end on F Street is much longer at 700 LF serving multiple customers. This project eliminates the Zone 1 dead ends by abandoning the dead ends along Broadway and Harbor Boulevard in addition to installing a new 200 LF 8" ductile iron (DIP) water main between E and F Streets to loop the area. Five Zone 1 customers would be switched to Zone 2. As part of this project, a new 6" pressure reducing valve would also be installed between Zones 1 and 2 to provide extra redundancy to Zone 1 in the event of an emergency. Distribution System Analysis No. 082

PROPOSED IMPROVEMENTS

Install 200 LF of new 8" DIP
Install 6" PRV
Replace 5 service connections

PROJECT BENEFITS

The Sixth Avenue (Zone 1) Improvements eliminates 4 dead ends in Zone 1, provides additional Zone 1 redundancy with an emergency connection to Zone 2, improves water movement, and reduces maintenance.

PROJECT BUDGET (2024)

8" DIP - 200 LF @ $475/LF	$	95,000
6" PRV @ $50,000/LS	$	55,000
Service Connections - 5 @ $5,250/EA	$	26,250
Subtotal Construction	$	176,250
Planning, Design, & Construction Support	$	55,000
Construction Inspection	$	20,000
Contingency (±10%)	$	28,750
Project Budget	**$**	**280,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

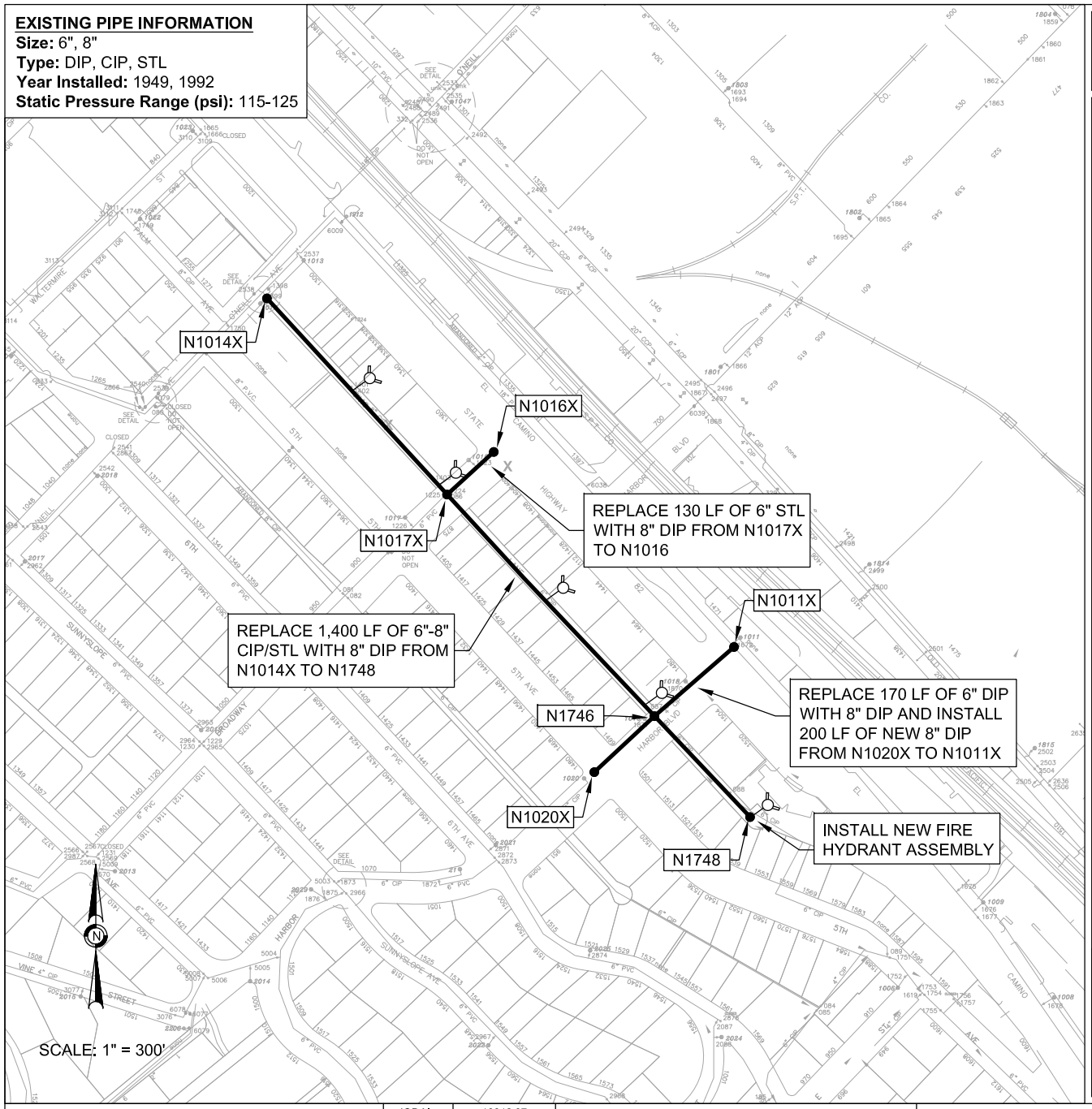
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SIXTH AVENUE (ZONE 1) IMPROVEMENTS
PROJECT 15-77

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6", 8"
Type: DIP, CIP, STL
Year Installed: 1949, 1992
Static Pressure Range (psi): 115-125



CIVIC LANE IMPROVEMENTS

PROJECT BACKGROUND

Civic Lane is a 1,400 LF alleyway located in the southwest portion of Zone 1 beginning at O'Neill Avenue and ending approximately 250 LF beyond Harbor Boulevard. The existing cast iron (CIP) and steel (STL) water mains were were at one time connected at two locations: O'Neill Avenue and the intersection of 5th / Broadway. The O'Neill connection was disconnected due to a planned development leaving only the connection at 5th/Broadway thereby creating a long 1,400 LF dead end serving 20 customers and 5 hydrants. The existing fire flows along the water main are below the recommended 1,500 gpm as a result of the dead end. This project replaces the old and aging water mains along Civic Lane in addition to installing 4 new connections to nearby water mains with 1,900 LF of new 8" ductile iron pipe (DIP) to loop the area and to reduce the overall dead end length to 250 LF. In addition, a fire hydrant will be added at the dead end to allow flushing of the water main. Hydraulic analysis indicates fire flows increase as much as 90% to 2,500 gpm upon completion of this project. Distribution System Analysis No. 83

PROPOSED IMPROVEMENTS

Replace 1,900 LF of various water main with new 8" DIP
Install 5 fire hydrants
Replace 20 service connections

PROJECT BENEFITS

The Civic Lane Improvements replaces old and aging water mains, reduces an existing 1,400 LF dead end to 250 LF, loops the system providing improved water movement/quality, and increases fire flows 90% in select areas.

PROJECT BUDGET (2024)

8" DIP - 1,900 LF @ $475/LF	$ 902,500
Fire Hydrants - 5 @ $15,000/EA	$ 75,000
Service Connections - 20 @ $5,250/EA	$ 105,000
Subtotal Construction	$ 1,082,500
Planning, Design, & Construction Support	$ 165,000
Construction Inspection	$ 110,000
Contingency (±10%)	$ 137,500
Project Budget	**$ 1,495,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

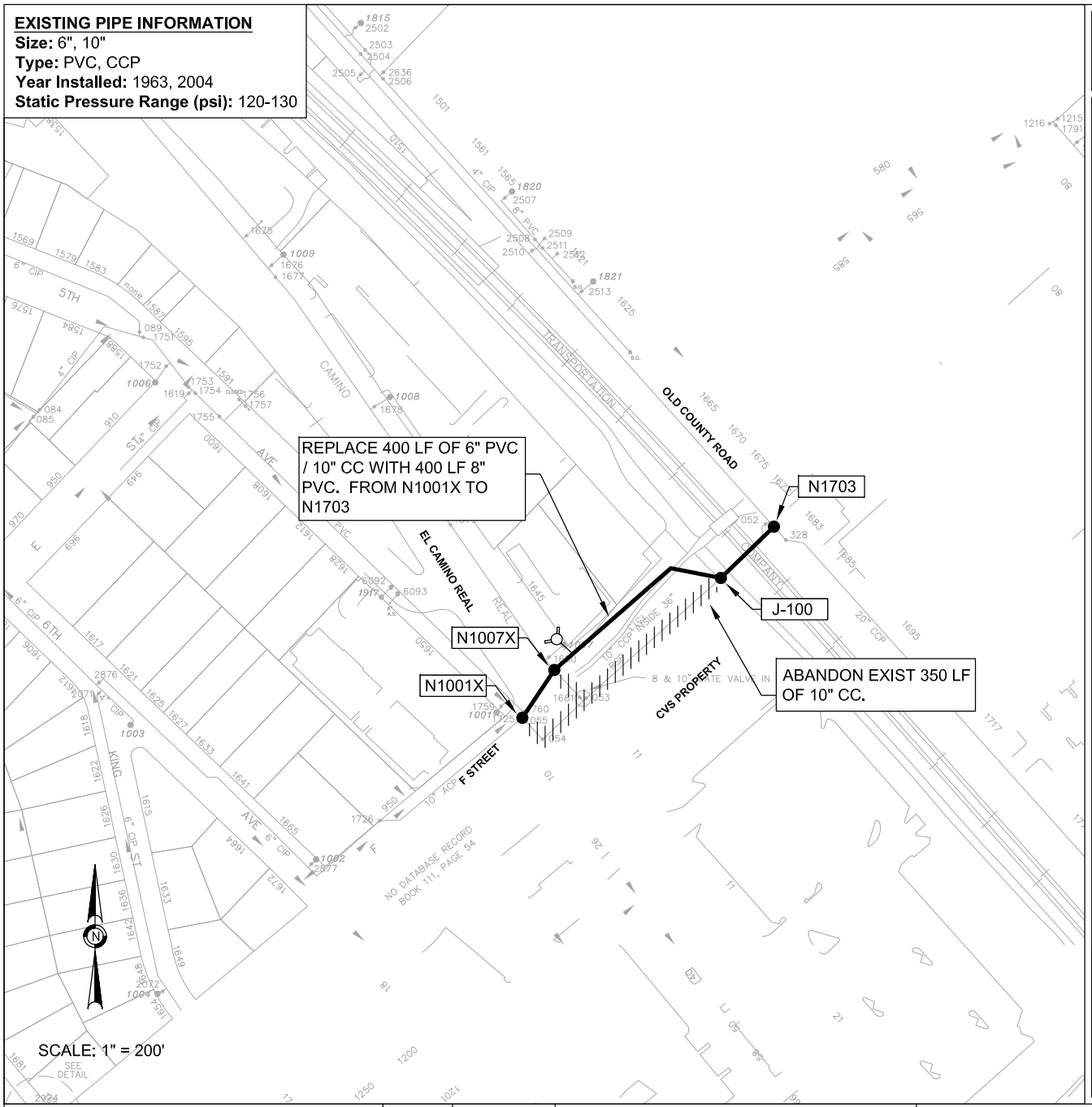
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
CIVIC LANE IMPROVEMENTS
PROJECT 15-78

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6", 10"
Type: PVC, CCP
Year Installed: 1963, 2004
Static Pressure Range (psi): 120-130



F STREET IMPROVEMENTS

PROJECT BACKGROUND

F Street is located in the southern portion of Zone 1 and crosses El Camino Real where it dead ends before the railroad tracks. A short 150 LF 6" polyvinyl chloride (PVC) water main provides service to one business and a hydrant on F Street. Directly south of F Street, the District has a 350 LF 10" concrete (CC) water main located in an easement on CVS property and is 1 of 5 railroad crossings connecting Old County Road with El Camino Real. The 10" CC is currently out of service due to main break with the exact location of the break unknown. This project relocates the existing 10" CC out of the CVS easement to F Street and installs a new 400 LF 8" PVC. The existing 10" CC will be used as a casing for the new 8" PVC underneath the tracks. Hydraulic analysis indicates this particular crossing does not provide significant fire flow benefit however it does provide other benefits including system redundancy and relocation out of an easement onto public right-of-way. Distribution System Analysis No. 084

PROPOSED IMPROVEMENTS

Install 400 LF of new 8" DIP
Replace 1 fire hydrant
Replace 2 service connections

PROJECT BENEFITS

The F Street Improvements replaces old and aging water main, relocates a damaged water main out of the CVS property to public right-of-way, and provides system redundancy.

PROJECT BUDGET (2020)

8" PVC - 400 LF @ $450/LF	$	180,000
Fire Hydrants 1 @ $15,000/EA	$	15,000
Service Connections - 2 @ $4,500/EA	$	9,000
Subtotal Construction	$	204,000
Planning, Design, & Construction Support	$	60,000
Construction Inspection	$	20,000
Contingency (±10%)	$	31,000
Project Budget	**$**	**315,000**

*This project is currently under construction.

PROJECT COMPLETED

Completion Date:

Actual Expenditures
Planning, Design, & Construction Support: $
Construction: $
Total Expenditures: $

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

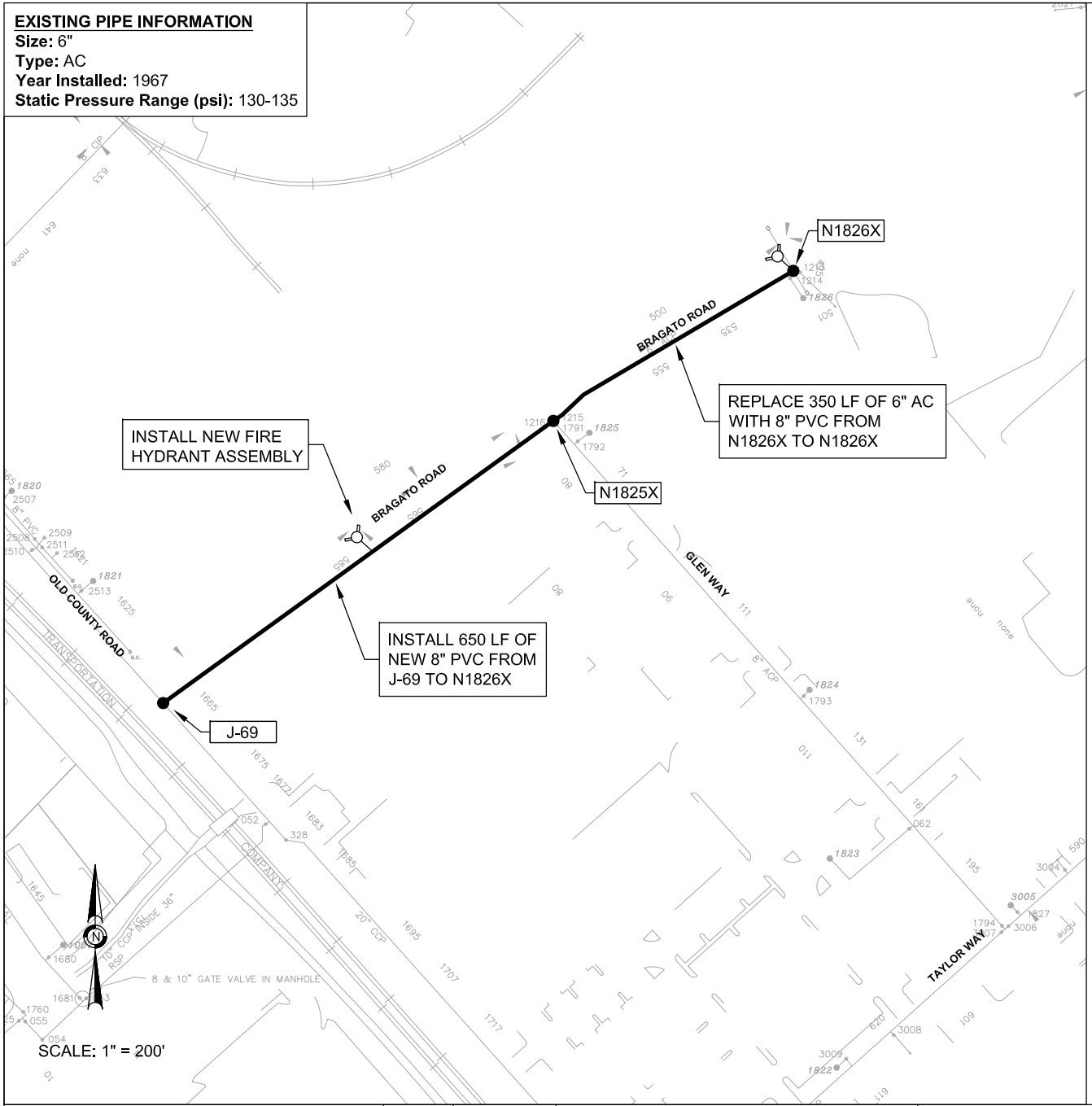
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
F STREET IMPROVEMENTS
PROJECT 15-79

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: AC
Year Installed: 1967
Static Pressure Range (psi): 130-135



BRAGATO ROAD IMPROVEMENTS

PROJECT BACKGROUND

Glen Way and Bragato Road are located in Zone 1 and have a combined 1,250 LF dead end water main beginning off Taylor Way. The water main begins at the Glen Way / Taylor Way intersection with an 8" asbestos cement (AC) and extends north 900 LF. At the intersection of Glen Way / Bragato Road, the water main transitions to a 6" AC and dead ends 350 LF east along Bragato Road. The fire flows at the dead end are 1,320 gpm, below the minimum recommended 1,500 gpm @ 20 psi. This project reduces the existing dead end length by installing a new 650 LF 8" polyvinyl chloride (PVC) water main on Bragato Road between Old County Road and Glen Way effectively looping the majority of the existing water mains. Work would also include replacement of 2 fire hydrants and 8 service connections. Hydraulic analysis indicates a 78% increase in fire flows to 2,350 gpm @ 86 psi at the dead end in addition to an 8% increase to 2,500 gpm on Glen Way. Distribution System Analysis No. 085

PROPOSED IMPROVEMENTS

Install 1,000 LF of new 8" PVC
Install 1 new fire hydrant
Replace 1 fire hydrant
Replace 8 Service Connections

PROJECT BENEFITS

The Bragato Road Improvements replaces old and aging water main, increases fire flows as much as 78%, shortens an existing dead end by 900 LF, loops the water main along Glen Way, and provides system redundancy.

PROJECT BUDGET (2024)

8" PVC - 1,000 LF @ $475/LF	$	475,000
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 8 @ $5,250/EA	$	42,000
Subtotal Construction	$	547,000
Planning, Design, & Construction Support	$	110,000
Construction Inspection	$	55,000
Contingency (±10%)	$	73,000
Project Budget	**$**	**785,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

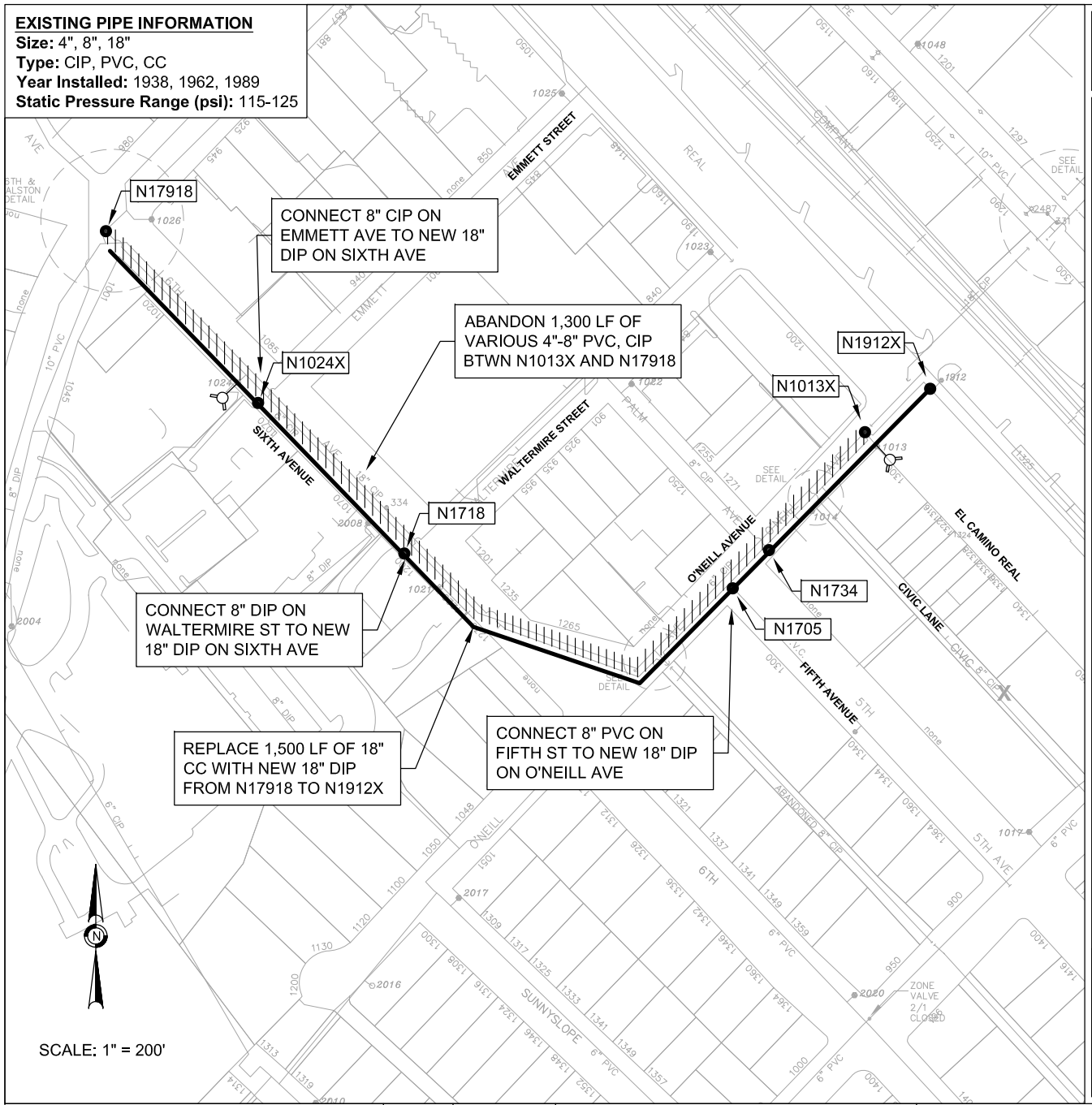
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
BRAGATO ROAD IMPROVEMENTS
PROJECT 15-80

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 8", 18"
Type: CIP, PVC, CC
Year Installed: 1938, 1962, 1989
Static Pressure Range (psi): 115-125



SIXTH / O'NEILL AVENUE ABANDONMENT

PROJECT BACKGROUND

O'Neill Avenue (between El Camino Real and Sixth Avenue) and Sixth Avenue (between O'Neill Avenue and Ralston Avenue) have parallel water mains as part of Zone 1: a 1,400 LF 18" concrete (CC) transmission main and 1,400 LF of 4"-8" cast iron (CIP) / polyvinyl chloride (PVC). The water mains on Emmett Street, Waltermire Street, and Fifth Avenue south of O'Neill are connected to the 4"-8" water main and Fifth Avenue north of O'Neill is connected to the 18" CC. Fire flows along these are below the minimum recommended 1,500 gpm at 20 psi near El Camino Real. This project abandons the smaller parallel water main and replaces the existing 18" CC with a new 18" DIP and reconnects the branched connections (3 total) and services (15) to the 18" DIP. Hydraulic analysis indicates a fire flow improvement of 89% to 2,500 gpm between Fifth Avenue and El Camino Real upon completion of this project. Distribution System Analysis No. 086

PROPOSED IMPROVEMENTS

Abandon 1,400 LF of 4"-8" CIP/PVC
Replace 1,500 LF of 18" CC with 18" DIP
Relocate 3 connections from the 4"-8" CIP/PVC to the 18" DIP
Replace 2 fire hydrants
Replace 15 service connections

PROJECT BENEFITS

The Sixth / O'Neill Avenue Abandonment eliminates parallel water mains, reduces maintenance, increases fire flows by 89% in select areas.

PROJECT BUDGET (2024)

18" DIP - 1,500 LF @ $1,100/LF	$ 1,650,000
Fire Hydrants - 2 @ $15,000/EA	$ 30,000
Service Connections - 15 @ $7,500/EA	$ 112,500
Subtotal Construction	$ 1,792,500
Planning, Design, & Construction Support	$ 270,000
Construction Inspection	$ 180,000
Contingency (±10%)	$ 227,500
Project Budget	**$ 2,470,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/28/25
SCALE	AS NOTED
DRAWN:	BY BL
	CKD JP

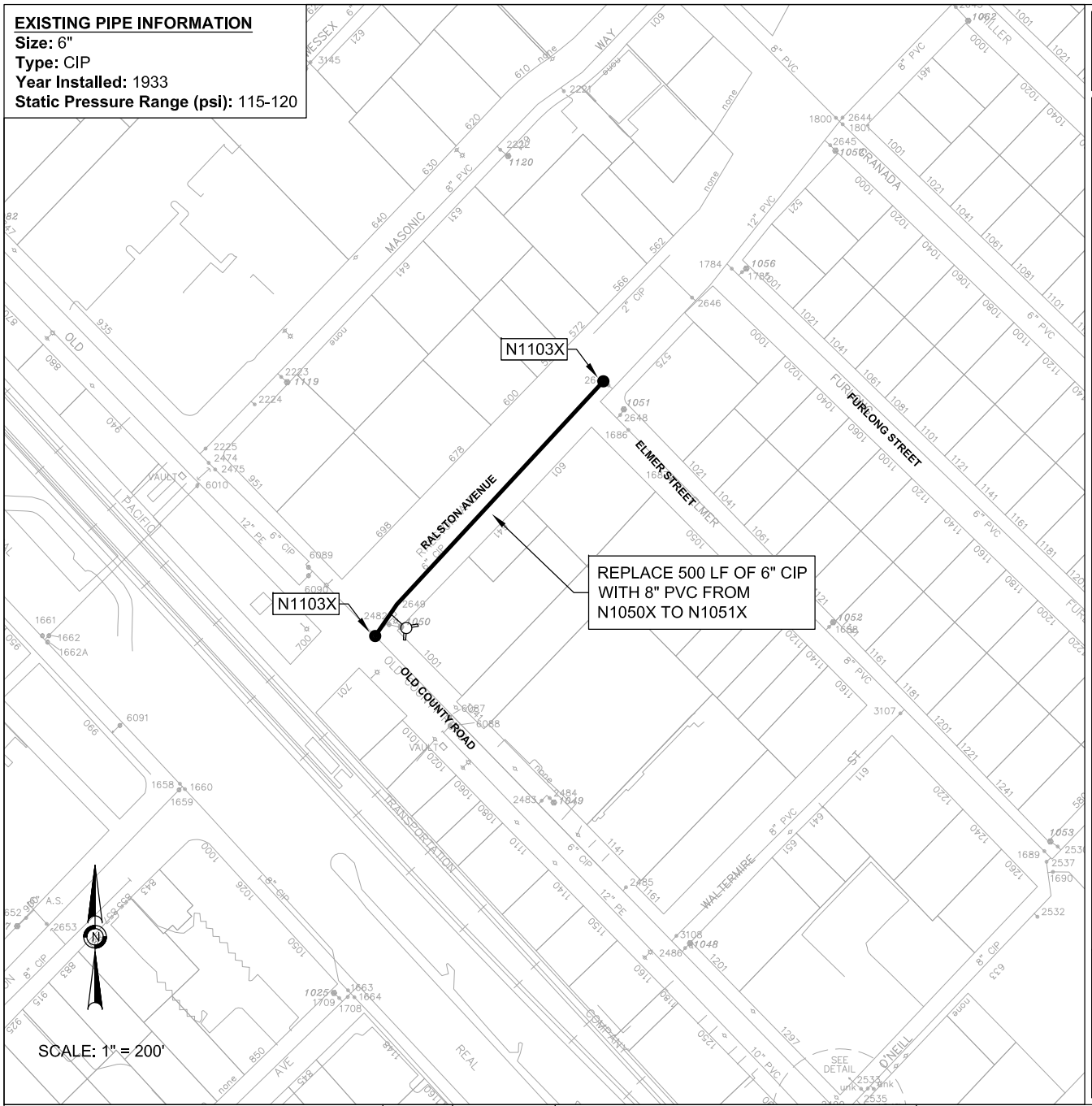
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SIXTH / O'NEILL AVENUE ABANDONMENT
PROJECT 15-81

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: CIP
Year Installed: 1933
Static Pressure Range (psi): 115-120



RALSTON AVENUE IMPROVEMENTS

PROJECT BACKGROUND

The 500 LF 6" cast iron (CIP) water main along Ralston Avenue between Old County Road and Elmer Street was identified by maintenance personnel as a preferred capital improvement project. It is probable this water main could experience a significant break in the future. Given the location on the highly traveled Ralston Avenue, a main break would not be ideal and would cause major traffic disruptions. This project replaces the existing 6" CIP with a new 8" polyvinyl chloride (PVC) in addition to 5 service replacements and 1 fire hydrant. Traffic control on Ralston Avenue will be challenging where night time work may be a possibility to minimize traffic disruptions.

PROPOSED IMPROVEMENTS

Replace 500 LF of 6" CIP with 8" PVC
Replace 1 fire hydrant
Replace 5 service connections

PROJECT BENEFITS

The Ralston Avenue Improvements replaces an old and aging water main capable of creating major traffic disruptions in the event of a main break, and increases the water main to the minimum 8-inches set by the District.

PROJECT BUDGET (2020)

8" PVC - 500 LF @ $450/LF	$	225,000
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 5 @ $4,500/EA	$	18,000
Traffic Control @ $50,000/LS	$	50,000
Subtotal Construction	$	308,000
Planning, Design, & Construction Support	$	80,000
Construction Inspection	$	30,000
Contingency (±10%)	$	42,000
Project Budget	**$**	**460,000**

*This project is currently under construction.

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
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CKD	JP

MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
RALSTON AVENUE IMPROVEMENTS
PROJECT 15-82

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: Varies
Static Pressure Range (psi): Varies

6-INCH CALWATER INTERTIE
LINCOLN AVE / NEWLANDS AVE

6-INCH CALWATER INTERTIE
MARINE VIEW AVE

6-INCH CALWATER INTERTIE
NORTH RD

6-INCH CALWATER / REDWOOD CITY INTERTIE
SHOREWAY RD

6-INCH CALWATER INTERTIE
WITHERIDGE AVE

8-INCH CALWATER INTERTIE
INDUSTRIAL RD (PAMF)

EMERGENCY INTERTIE REBUILDS

PROJECT BACKGROUND
The District has 8 emergency interconnections (interties) throughout the District: 7 with the California Water Service Company (CWS) and 1 with the Estero Municipal Improvement District (EMID-Foster City). The District maintains the 7 interties with CWS and EMID maintains the 8th. The existing configuration for the majority of the interties is shown to the left where the meters are connected directly to 90 degree bends. Although the meters can be installed in this configuration, many manufacturers recommend at least one pipe diameter of straight pipe before and after the meter to reduce reading errors caused by turbulent water. This project reconfigures the intertie locations similar to Industrial Road (pictured bottom) contingent space is available (6 total).

PROPOSED IMPROVEMENTS
Rebuild 6 interties

PROJECT BENEFITS
The Emergency Intertie Rebuilds reconfigures the existing interties to obtain more accurate meter readings.

PROJECT BUDGET (2024)

Rebuild Intertie - 6 @ $110,000/EA	$	660,000
Subtotal Construction	$	660,000
Planning, Design, & Construction Support	$	135,000
Construction Inspection	$	70,000
Contingency (±10%)	$	90,000
Project Budget	**$**	**955,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
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SCALE	AS NOTED
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MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
EMERGENCY INTERTIE REBUILDS
PROJECT 15-83

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 8"
Type: PVC
Year Installed: 1974
Static Pressure Range (psi): 100-130

ABANDON EXISTING PRV VAULT
RETAINING WALL, BUILDING

HANNIBAL PUMP STATION

RALSTON AVENUE REGULATOR RELOCATION

PROJECT BACKGROUND

There is an existing 8' pressure reducing valve (PRV) located along Ralston Avenue directly across 1301 Ralston Avenue. The PRV connects Zones 1 and 2 and allows Zone 2 to provide redundancy and emergency flows to Zone 1. Ralston Avenue is a highly traveled road and there is limited space for District personnel to park their vehicles when servicing the PRV due to the close proximity of the PRV vault to the roadway. This project relocates the existing PRV and associated vault 600 feet west to the Hannibal Pump Station where there is sufficient room for servicing. This requires demolition of the existing vault and building directly behind the vault, reconfiguration of the piping at the existing location, and construction of a new vault at Hannibal Pump Station.

PROPOSED IMPROVEMENTS

Abandon existing PRV Vault and Building
Reconfigure existing piping
Construct new PRV Vault at Hannibal Pump Station

PROJECT BENEFITS

The Ralston Regulator Relocation moves a challenging maintenance location to the Hannibal Pump Station where there is sufficient room.

PROJECT BUDGET (2024)

Demolition @ $110,000/LS	$	110,000
Pipe Reconfiguration @ $55,000/LS	$	55,000
New Regulation Station @ $110,000/LS	$	110,000
Subtotal Construction	$	275,000
Planning, Design, & Construction Support	$	70,000
Construction Inspection	$	30,000
Contingency (±10%)	$	40,000
Project Budget	**$**	**415,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
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MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
RALSTON AVENUE REGULATOR RELOCATION
PROJECT 15-84

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 12"
Type: DIP
Year Installed: 1990, 2002
Static Pressure Range (psi): 125-130

12-INCH DIP SUSPENDED UNDER PEDESTRIAN WALKWAY
O'NEILL SLOUGH SPORTS FOOTBRIDGE

12-INCH TEMPFLEX EXPANSION JOINT (TYP BOTH SIDES)
O'NEILL SLOUGH SPORTS FOOTBRIDGE

12-INCH DIP SUSPENDED ALONG BRIDGE
ISLAND PARKWAY BRIDGE

12-INCH TEMPFLEX EXPANSION JOINT (TYP BOTH SIDES)
ISLAND PARKWAY BRIDGE

O'NEILL SLOUGH BRIDGE CROSSING ASSESSMENTS

PROJECT BACKGROUND

Two 12" ductile iron pipe (DIP) water mains suspend over the O'Neill Sough at two locations just north of Ralston Avenue. One is located on the eastern side of the Island Parkway Bridge and the other, approximately 400 feet west of the bridge, underneath the O'Neill Slough Sports Footbridge. Both water mains serve the development north of the slough which includes a mixture of commercial and residential customers. There is also an emergency connection with the Estero Municipal Improvement District (Foster City) north of the slough which places an added importance on these water mains to remain in service following a seismic event. Both water mains have Tempflex expansion joints at each end of the crossings before they go below ground to allow movement. This project provides a structural review of the suspensions in addition to the existing expansion joints and ground entries.

PROPOSED IMPROVEMENTS

Perform a structural / pipe assessment and report

PROJECT BENEFITS

The O'Neill Slough Bridge Crossing Assessments assess the existing condition of the pipes, their associated suspension system, seismic resistance, and will make recommendations on potential improvements.

PROJECT BUDGET (2024)

Structural Analysis/Report	$	55,000
Contingency (±10%)	$	5,000
Project Budget	**$**	**60,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
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SCALE	AS NOTED
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MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
O'NEILL SLOUGH BRIDGE CROSSING ASSESSMENTS
PROJECT 15-85

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A

*This project is currently under design. Construction costs are updated to reflect 2024 costs based on recent bid tabulations.

DEKOVEN TANKS REPLACEMENT

PROJECT BACKGROUND

The Dekoven Tanks, constructed in 1952, are a critical element of the Zone 3 water distribution system. The existing tanks are 52 and 60 feet in diameter, approximately 48 feet tall and have capacities of 720,000 gallons and 1,000,000 gallons respectively. The tanks are currently operating between 17 feet (pump on) to 30 feet (pump off) and the overflow is located at 47 feet. A recent structural analysis determined the maximum capacity level (MCL) in the tanks should be reduced to 22 feet (from the current 30 feet) to withstand seismic events. However, the District would lose more than half of the tanks capacity and operation staff indicated this may not be feasible during high summer demands. The coatings on each tank are also failing increasing the urgency to rehabilitate or replace the tanks.

Given the seismic vulnerability and the coating failures, the District explored 3 options for rehabilitation / replacement including a) only recoating the tanks and reducing the MCL to 22 feet, b) seismic retrofits to each tank, and c) demolish and rebuild two 800,000 gallon tanks. After a cost analysis of each option and viewing potential construction difficulties, the District determined replacement of the tanks was the best option.

PROPOSED IMPROVEMENTS

Replace the existing 1.0 MG and 0.7 MG tanks with two 0.8 MG tanks.

PROJECT BENEFITS

The Dekoven Tanks Replacement project replaces seismically unsound water tanks with new tanks capable of withstanding seismic events while maintaining existing operating levels.

PROJECT BUDGET (2024)

Tank Replacement	$ 3,500,000
PAX Mixing System/Building	$ 850,000
Site Improvements	$ 1,650,000
Subtotal Construction	$ 6,000,000
Planning, Design & Construction Support	$ 300,000
Construction Inspection	$ 600,000
Contingency (±10%)	$ 690,000
Project Budget	**$ 7,590,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
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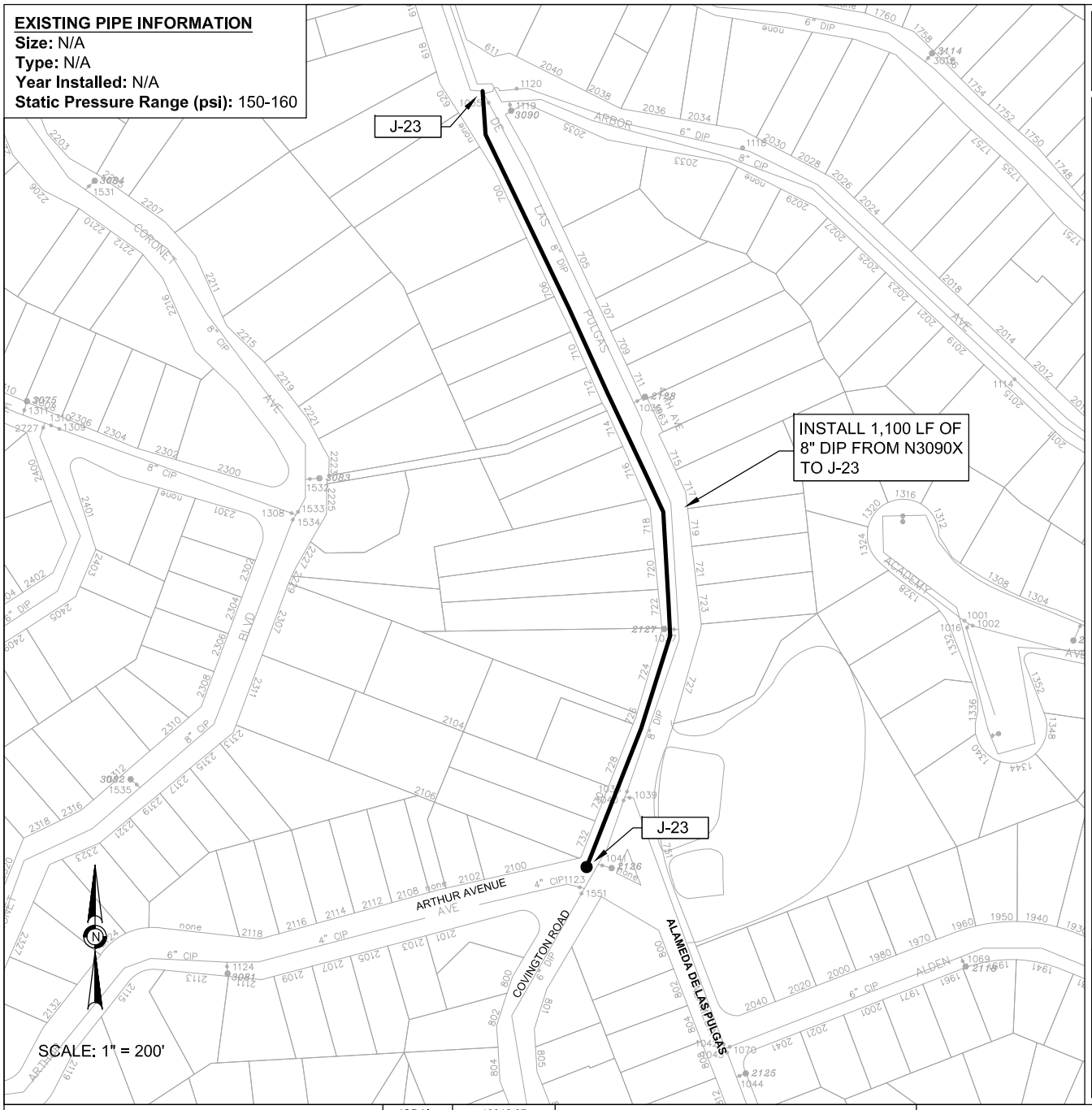
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
DEKOVEN TANKS REPLACEMENT
PROJECT 15-89

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie



ALAMEDA DE LAS PULGAS LOOP IMPROVEMENTS

PROJECT BACKGROUND

Alameda de Las Pulgas (ADLP) is a main collector street running north-south through the middle of the District in Zones 2 and 3. Two Zone 3 dead ends exist along or near ADLP due to the recent abandonment of the Zone 3 water main along Arbor Avenue. The first is a 450 LF dead end on ADLP between Mezes Avenue and Arbor Avenue and the second is an approximate 660 LF along Arthur Avenue ending 200 LF before ADLP. This project would install a 1,100 LF 8" ductile iron pipe (DIP) along ADLP between Arbor Avenue and Arthur Avenue that parallels the existing Zone 2 water main. This project in combination with CIP 15-22 Arthur Avenue Improvements would close the Zone 3 loop and eliminate the dead ends in the area. No services or hydrants would be replaced as these are located along the Zone 2 main. Distribution System Analysis No. 096

PROPOSED IMPROVEMENTS

Install 1,100 LF of 8" DIP

PROJECT BENEFITS

The Alameda De Las Pulgas Loop Improvements eliminates two Zone 3 dead ends and improves water quality.

PROJECT BUDGET (2024)

8" DIP - 1,100 @ $475/LF	$	522,500
Subtotal Construction	$	522,500
Planning, Design & Construction Support	$	105,000
Construction Inspection	$	55,000
Contingency (±10%)	$	72,500
Project Budget	**$**	**755,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ALAMEDA DE LAS PULGAS LOOP IMPROVEMENTS
PROJECT 15-90

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

HALLMARK TANKS
STRUCTURAL RETROFIT / RECOAT

PROJECT BACKGROUND

The Hallmark Tanks, constructed in 1967, are a critical element of the District's water distribution system. The existing tanks are 140 feet in diameter, approximately 24 feet tall and have capacities of 2.5 million gallons each. A structural analysis determined the maximum capacity level (MCL) in the tanks should be reduced to 14.5 feet (from the current 22 feet) allowing adequate freeboard to withstand seismic events. To increase the useable storage in the tanks, structural engineers assessed several retrofit alternatives while also meeting current seismic codes. The four alternatives included 1) lowering the operating level to 14.5 ft (no retrofit required), 2) retrofitting for 16 feet, 3) retrofitting for 22 ft (raising the tank height to ±32 ft), and 4) complete replacement. For each foot of water level increase in the tanks, the District can gain an additional 230,000 gallons.

Following the review of the various alternatives, the District selected Option 2, to retrofit the tanks to a 16 foot operating level. This is primarily due to general operating levels at or below 15 feet and cost implications with Options 3 and 4. As part of this project, the tanks would also be recoated.

PROPOSED IMPROVEMENTS

Structurally retrofit each tank to a 16 ft operating level
Recoat each tank

PROJECT BENEFITS

The Hallmark Tanks Structural Retrofit / Recoat project increases the operating level to 16 feet while still being able to withstand a seismic events. Recoating the tank will also extend the tanks service life.

PROJECT BUDGET (2023)

Structural Retrofit	$ 1,100,000
Tank Recoating	$ 1,500,000
Subtotal Construction	$ 2,600,000
Planning, Design & Construction Support	$ 390,000
Construction Inspection	$ 260,000
Contingency (±10%)	$ 325,000
Project Budget	**$ 3,575,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
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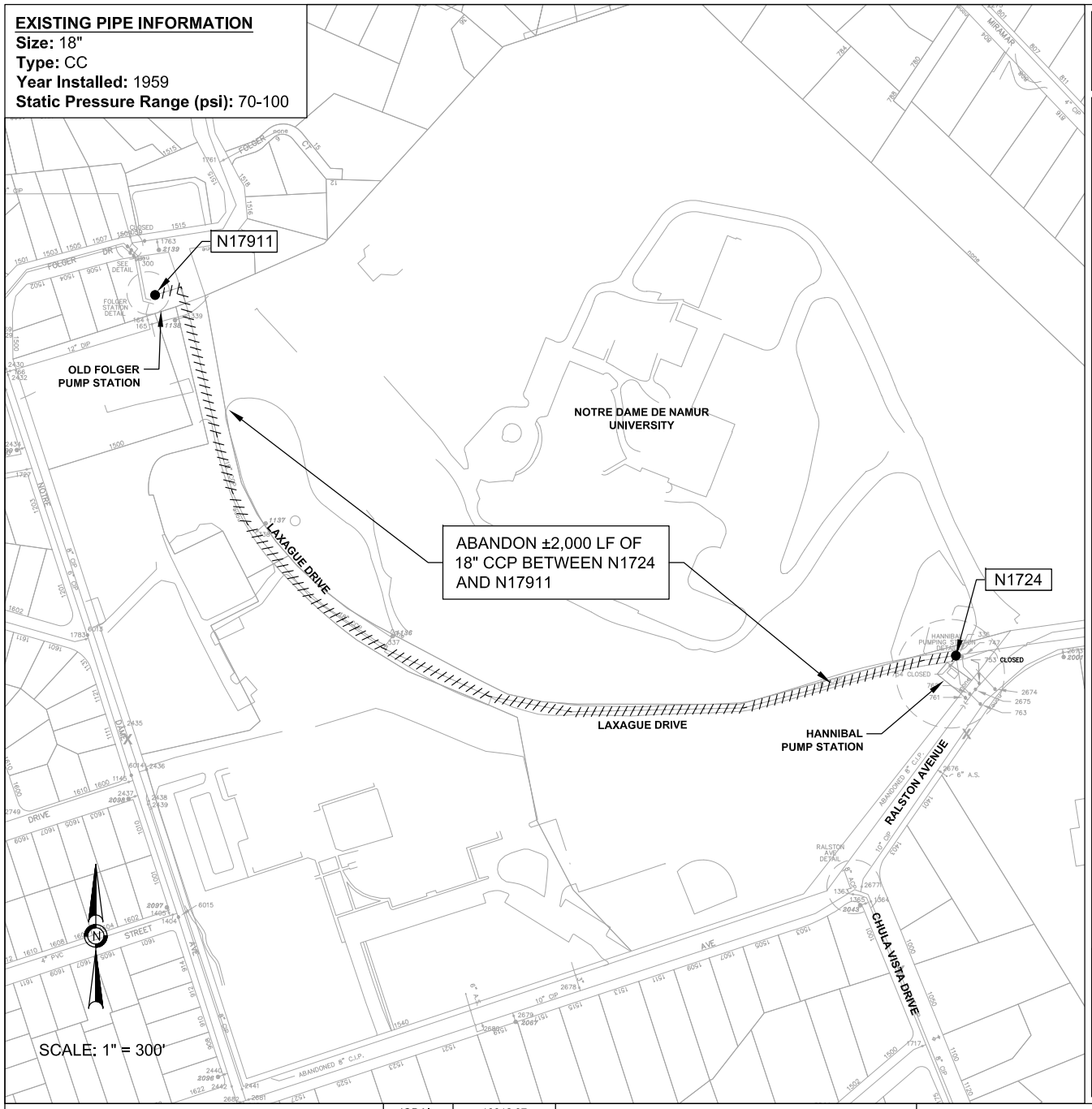
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
HALLMARK TANKS STRUCTURAL RETROFIT / RECOAT
PROJECT 20-02

Rev 1 - 12/23
Original 2020

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 18"
Type: CC
Year Installed: 1959
Static Pressure Range (psi): 70-100



LAXAGUE DRIVE
18" CCP ABANDONMENT

PROJECT BACKGROUND

The Folger Pump Station used to be the primary pump station pumping water to Zones 2 and 3 and was supplied water from an existing 18" concrete cylinder pipe (CCP) running along Laxague Drive and Ralston Avenue. The Folger Pump Station was abandoned in favor of the newer Hannibal Pump Station located at the Ralston Avenue / Laxague Drive intersection. The existing ±2,000 LF of 18" CCP between this intersection and the abandoned pump station became a long dead end and remained in service to serve 3 fire hydrants located on Notre Dame de Namur University's (NDNU) property.

The District has reported water quality issues along this water main due to it's size and infrequent use of the hydrants. Given this water main no longer serves it's original purpose, the District will abandon the water main to eliminate water quality concerns. Should NDNU want to maintain hydrant service, they can explore installing a backflow device near the Hannibal Pump Station and take over the responsibility of maintaining the 18" CCP and backflow device.

PROPOSED IMPROVEMENTS

Abandon ±2,000 LF of 18" CCP

PROJECT BENEFITS

The Laxague Drive 18" CCP Abandonment will eliminate the potential for dead end water to feed back into the system and improve water quality.

PROJECT BUDGET (2024)

Abandonment	$	55,000
Subtotal Construction	$	55,000
Planning, Design & Construction Support	$	20,000
Construction Inspection	$	10,000
Contingency (±10%)	$	10,000
Project Budget	**$**	**95,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support: $

Construction: $

Total Expenditures: $

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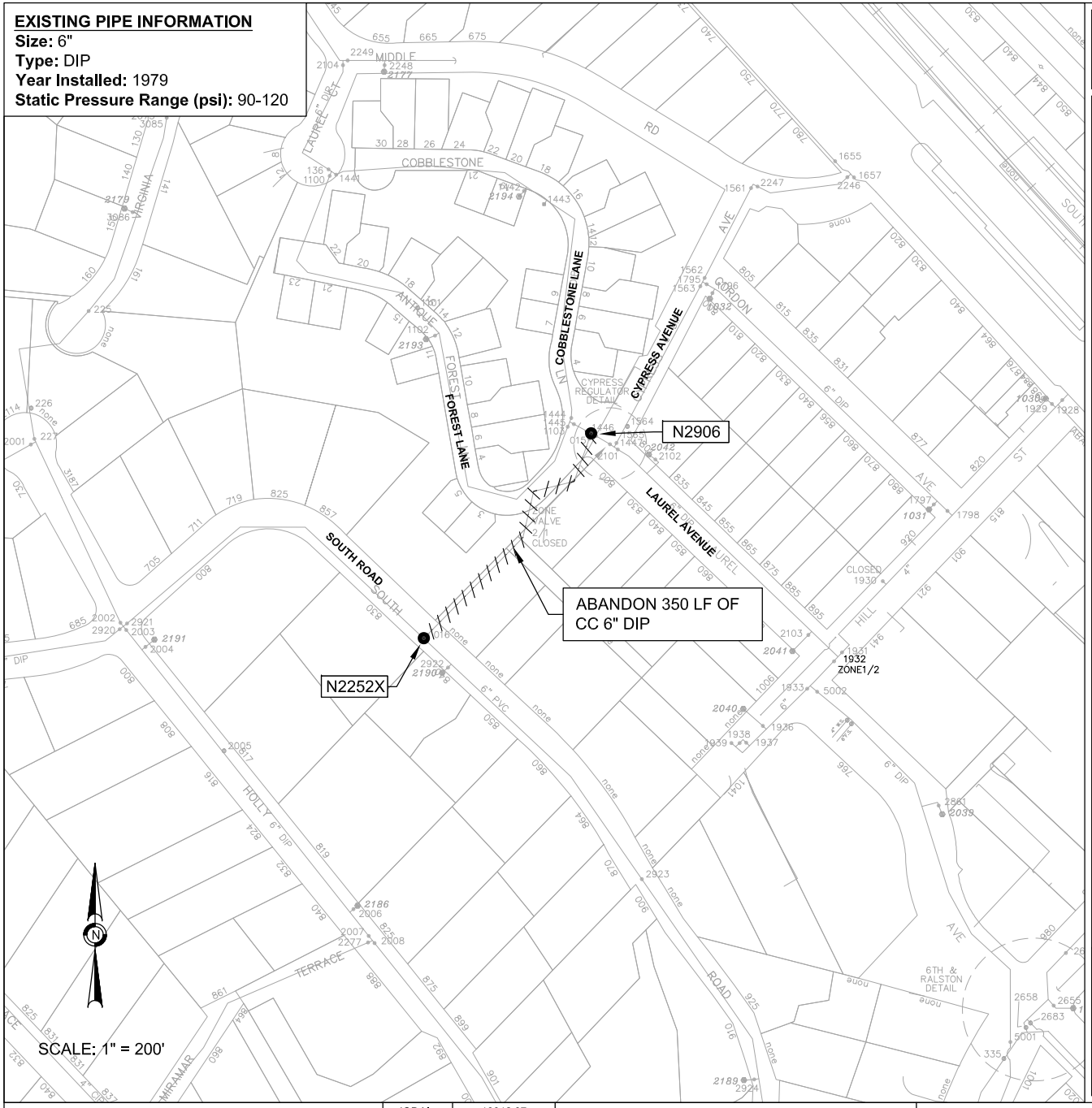
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
LAXAGUE DRIVE 18" CCP ABANDONMENT
PROJECT 20-03

Rev 1 - 2024
Original 2020

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: DIP
Year Installed: 1979
Static Pressure Range (psi): 90-120



LAUREL AVENUE
CROSS COUNTRY ABANDONMENT

PROJECT BACKGROUND

A cross country 6" ductile iron pipe (DIP) water main exists between South Road and the Cypress Avenue / Laurel Avenue / Forest Lane intersection. This water main is located in steep cross country terrain, under or beside an access stairway, and nearly inaccessible. The water main is not in service and is a dead end physically disconnected at South Road with a closed valve at Laurel Road.

Analysis showed reinstatement of this water main provided little fire flow benefit to the surrounding area and is recommended to remain abandoned. This project properly abandons the cross country water main by removing the existing closed valve, capping, and reconfiguring the water mains in the area. Distribution System Analysis No. 094

PROPOSED IMPROVEMENTS

Abandon 360 LF of 6" CC DIP

PROJECT BENEFITS

The Laurel Avenue Cross Country Abandonment eliminates a cross country 6" DIP without adversely affecting fire flows within the area.

PROJECT BUDGET (2024)

Abandonments at each end @ $25,000/ea	$	50,000
Subtotal Construction	$	50,000
Planning, Design & Construction Support	$	20,000
Construction Inspection	$	5,000
Contingency (±10%)	$	10,000
Project Budget	**$**	**85,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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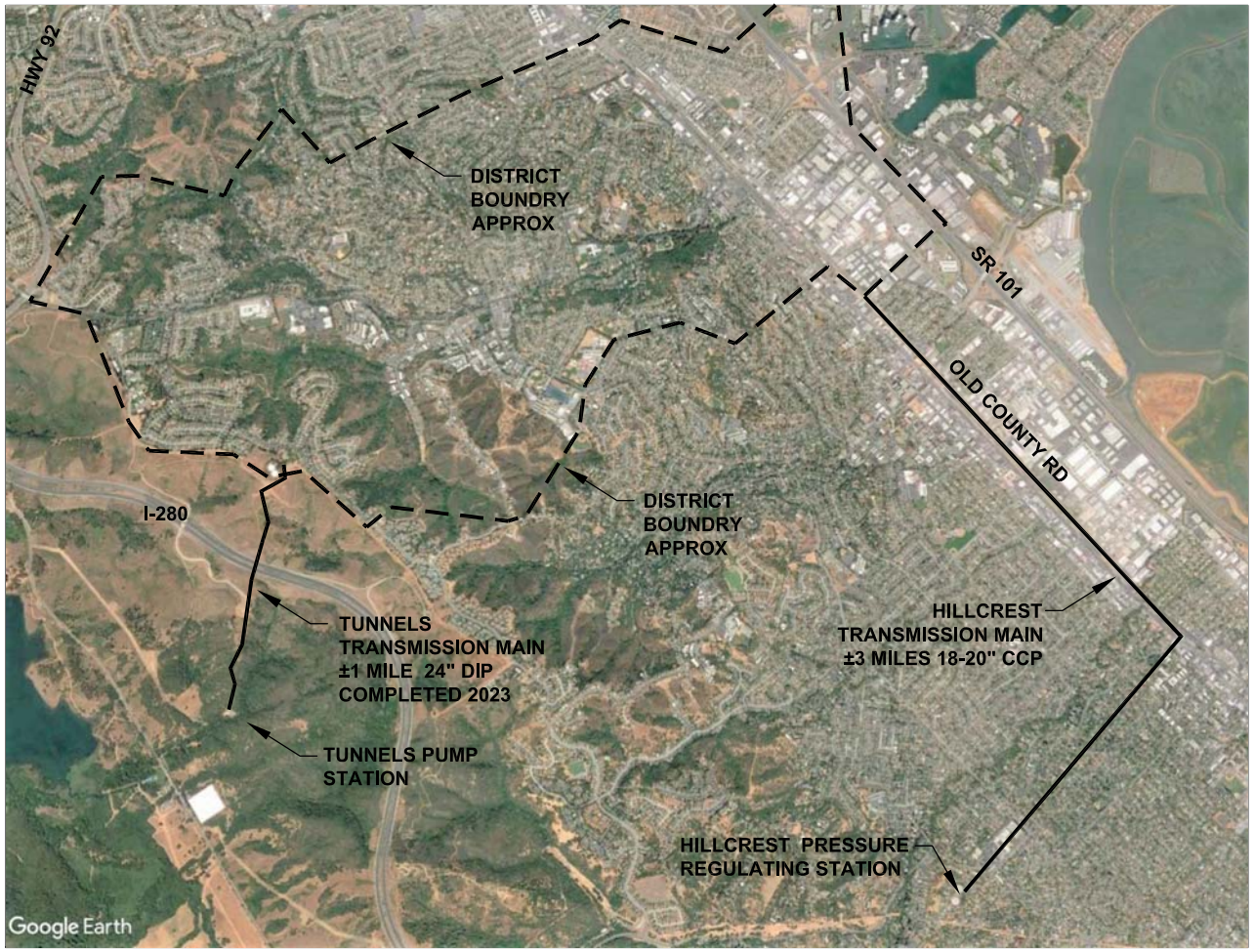
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
LAUREL AVENUE CROSS COUNTRY ABANDONMENT
PROJECT 20-04

Rev 1 - 2024
Original 2020

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 18"-24"
Type: DIP, PVC, CCP
Year Installed: 1960s - 1970s
Static Pressure Range (psi): 40-185



TRANSMISSION WATER MAIN ASSESSMENTS

PROJECT BACKGROUND

The District is supplied water from two source locations being 1) the Tunnels Pump Station located below Hallmark Tanks and 2) the SFPUC Hillcrest Connection located approximately 3 miles south west of the District service area.

The transmission water main between the Tunnels Pump Station and Hallmark Tanks is an approximate 1 mile 24" Ductile Iron Pipe (DIP) and is located in steep, cross country terrain. This water main brings water into Zone 8 allowing the District to feed water from the top down. The transmission main from the Hillcrest Connection to the Hannibal Pump Station is comprised of 18"-20" Polyvinyl Chloride (PVC) and Concrete Cylinder Pipe (CCP). This particular water main brings water into Zone 1 allowing the District to feed water from bottom up.

This project is an assessment of each transmission main to determine the existing conditions, identify any leaks, and remaining life expectancy.

PROPOSED IMPROVEMENTS

Assess the transmission mains supplying the District from the top and bottom.

PROJECT BENEFITS

The Transmission Water Main Assessment determines the existing condition of the water mains, identifies any potential leaks, and remaining life expectancy.

PROJECT BUDGET (2020 - COMPLETED 2023)

Tunnels Assessment	$	200,000
Subtotal Construction	$	200,000
Planning, Design & Construction Support	$	0
Contingency (±10%)	$	20,000
Project Budget	**$**	**220,000**

PROJECT BUDGET (2024)

Hillcrest Assessment	$	500,000
Subtotal Construction	$	500,000
Planning, Design & Construction Support	$	50,000
Contingency (±10%)	$	75,000
Project Budget	**$**	**625,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
TRANSMISSION WATER MAIN ASSESSMENTS
PROJECT 20-05

Rev 1 - 2024
Original 2020

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A

AUTOMATED CHLORAMINE MANAGEMENT SYSTEMS

PROJECT BACKGROUND

The District has 10 above ground storage tanks over 6 sites throughout their service area. To help alleviate thermal stratification and inconsistent disinfection residual, tank mixers are frequently used in the tanks to promote water movement. The District has several tanks already equipped with tank mixers however still experiences inconsistent chloramine residuals at some locations throughout the District. Automated chloramine management systems are available that generate a constant and reliable chloramine residual within the reservoirs by automatically detecting the residual and injecting chlorine and/or ammonia at the location of the tank mixer when the residual drops below a predetermined set point. Water quality is continually monitored to ensure the ideal state of chloramine disinfection. This project would install these systems at the Exborne and West Belmont Tank sites.

PROPOSED IMPROVEMENTS

Install automated chloramine management systems at Exborne and West Belmont Tank sites.

PROJECT BENEFITS

The Automated Chloramine Management System would automatically detect tank disinfection residuals and adjust levels accordingly to maintain an ideal state of chloramine disinfection.

PROJECT BUDGET (2024)

Chloramine Management Systems (2)	$	400,000
Subtotal Construction	$	400,000
Planning, Design & Construction Support	$	100,000
Construction Inspection	$	40,000
Contingency (±10%)	$	55,000
Project Budget	**$**	**595,000**

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
AUTOMATED CHLORAMINE MANAGEMENT SYSTEMS
PROJECT 20-06

Rev 1 - 2024
Original 2020

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A

DAIRY LANE OPERATIONS CENTER RESILIENCY - DESIGN

PROJECT BACKGROUND

The District purchased its Dairy Lane Operations Center in 1999. Minor alterations were made to the building to accommodate operations and administration at that time, but the most significant changes were addition of security fencing and external painting of the structure.

An inspection and seismic study of the structure and property was conducted by Cornerstone Structural Engineering Group in February 2018 and presented to the MPWD Board of Directors on March 22, 2018. It revealed significant structural deficiencies in the roof and shop area. A geotechnical investigation was also performed by Romig Engineers in March 2018 confirming the site is suitable for eismic upgrades and provided recommendations. In January 2023, the property was inundated with water and sustained significant water damage, particularly the office portion.

Beyond flood damage and seismic deficiencies, plumbing and electrical issues require attention, HVAC system upgrades, employee workspace upgrades needed, including employee locker rooms, and general facility modernization. This project is broken into design and construction phases. Actual improvements will be refined over the course of design.

PROPOSED IMPROVEMENTS

Seismic retrofit of the existing structure, flood mitigation features, evaluate and install solar (photovoltaic) panels and electric vehicle charging infrastructure, potential backup power generation ability, and assess District needs and expand office space to accommodate space planning for 75-100 year planning horizon.

PROJECT BENEFITS

The Dairy Lane Operations Center Rehabilitation will seismically retrofit the building to ensure the building remains operational during a seismic event in addition to repairing several deficiencies to extend the useful service life of the building.

PROJECT BUDGET (2024)

Design & Seismic Study Update	$ 3,300,000
Project Budget	$ 3,300,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
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MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
DAIRY LANE OPERATIONS CENTER - DESIGN
PROJECT 20-09

Rev 1 - 2024
Original 2020

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A

DAIRY LANE OPERATIONS CENTER RESILIENCY - CONSTRUCTION

PROJECT BACKGROUND

The District purchased its Dairy Lane Operations Center in 1999. Minor alterations were made to the building to accommodate operations and administration at that time, but the most significant changes were addition of security fencing and external painting of the structure.

An inspection and seismic study of the structure and property was conducted by Cornerstone Structural Engineering Group in February 2018 and presented to the MPWD Board of Directors on March 22, 2018. It revealed significant structural deficiencies in the roof and shop area. A geotechnical investigation was also performed by Romig Engineers in March 2018 confirming the site is suitable for eismic upgrades and provided recommendations. In January 2023, the property was inundated with water and sustained significant water damage, particularly the office portion.

Beyond flood damage and seismic deficiencies, plumbing and electrical issues require attention, HVAC system upgrades, employee workspace upgrades needed, including employee locker rooms, and general facility modernization. This project is broken into design and construction phases. Actual improvements will be refined over the course of design.

PROPOSED IMPROVEMENTS

Seismic retrofit of the existing structure, flood mitigation features, evaluate and install solar (photovoltaic) panels and electric vehicle charging infrastructure, potential backup power generation ability, and assess District needs and expand office space to accommodate space planning for 75-100 year planning horizon.

PROJECT BENEFITS

The Dairy Lane Operations Center Rehabilitation will seismically retrofit the building to ensure the building remains operational during a seismic event in addition to repairing several deficiencies to extend the useful service life of the building.

PROJECT BUDGET (2024)

Seismic Retrofit & Rehabilitation/Construction	$ 9,700,000
Project Budget	$ 9,700,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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	CKD JP

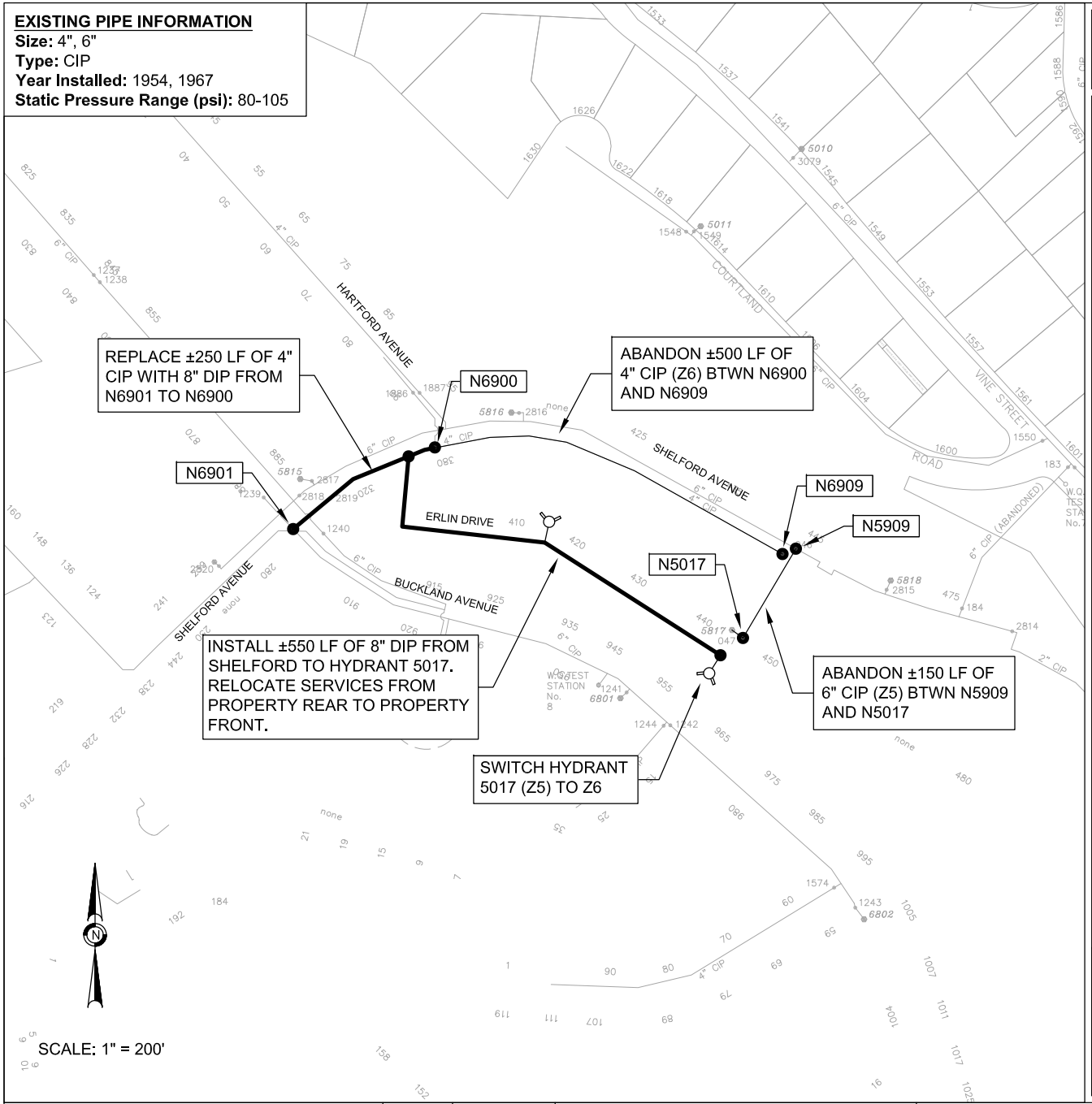
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
DAIRY LANE OPERATIONS CENTER - CONSTRUCTION
PROJECT 20-10

Rev 1 - 2024
Original 2020

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 6"
Type: CIP
Year Installed: 1954, 1967
Static Pressure Range (psi): 80-105



ERLIN DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to residents along Erlin Drive (private road) from a Zone 6 4" cast iron pipe (CIP) water main located along Shelford Avenue below and to the north of Erlin Drive. This water main, where the water meters are located is, at its lowest point, 100 ft below the Erlin Drive homes. In addition, a fire hydrant exists along Erlin Drive of which the lateral transverses the steep, cross country slope, down to Shelford Avenue and connects to the existing Zone 5 6" CIP. This project relocates the meters and hydrant served off the existing Shelford Avenue water mains to a new 550 LF 8" ductile iron pipe (DIP) along Erlin Drive along with upsizing 250 LF of 4" CIP between Buckland Avenue and Erlin Drive. Relocation of the meters will require reconfigurations of customer side plumbing. In addition, Erlin Drive is a private road and will require an easement. Resident water pressures will remain unchanged.

PROPOSED IMPROVEMENTS

Abandon 500 LF of 4" CIP (Z6)
Abandon 150 LF of 6" CC CIP (Z5)
Replace 250 LF of 4" CIP w/ 8" DIP (Z6)
Install 550 LF of 8" DIP (Z6)
Replace 1 fire hydrant
Install 1 fire hydrant
Relocate 5 service connections (back to front)
New water main easement

PROJECT BENEFITS

The Erlin Drive Improvements replaces old infrastructure, improves Zone 5 and 6 hydraulics, and eliminates a CC water main.

PROJECT BUDGET (2024)

8" DIP - 800 LF @ $475/LF	$	380,000
Service Connections - 5 @ $15,000/EA	$	75,000
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Subtotal Construction	$	485,000
Planning, Design & Construction Support	$	125,000
Easement Coordination	$	15,000
Construction Inspection	$	50,000
Contingency (±10%)	$	70,000
Project Budget	$	745,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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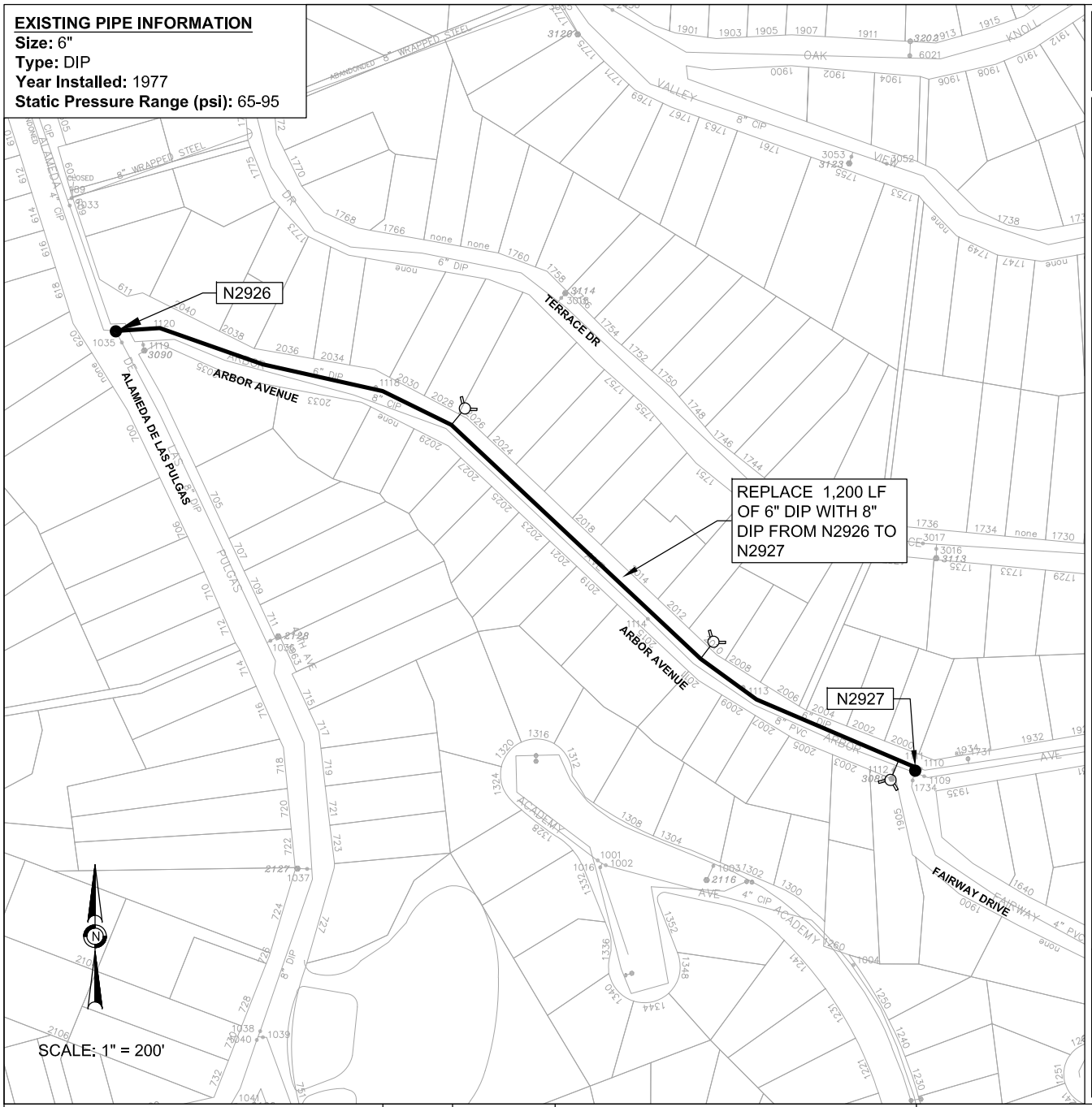
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ERLIN DRIVE IMPROVEMENTS
PROJECT 24-01

Original 2024

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: DIP
Year Installed: 1977
Static Pressure Range (psi): 65-95



ARBOR AVENUE IMPROVEMENTS

PROJECT BACKGROUND

The District has experienced several leaks on the existing Zone 2 6" ductile iron pipe (DIP) water main located along Arbor Avenue between Alameda de las Pulgas and Fairview Drive. This project replaces approximately 1,200 LF of the existing 6" DIP with new 8" DIP.

PROPOSED IMPROVEMENTS

Replace 1,200 LF of 6" DIP w/ 8" DIP
Replace 2 fire hydrants
Install 1 fire hydrant
Replace 23 service connections

PROJECT BENEFITS

The Arbor Avenue Improvements replaces old infrastructure, with a history of extensive leaks, with a new water main.

PROJECT BUDGET (2024)

8" DIP - 1,200 LF @ $475/LF	$ 570,000
Service Connections - 23 @ $5,250/EA	$ 120,750
Fire Hydrants - 3 @ $15,000/EA	$ 45,000
Subtotal Construction	$ 735,750
Planning, Design & Construction Support	$ 150,000
Construction Inspection	$ 75,000
Contingency (±10%)	$ 99,250
Project Budget	$ 1,060,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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DATE	08/21/24
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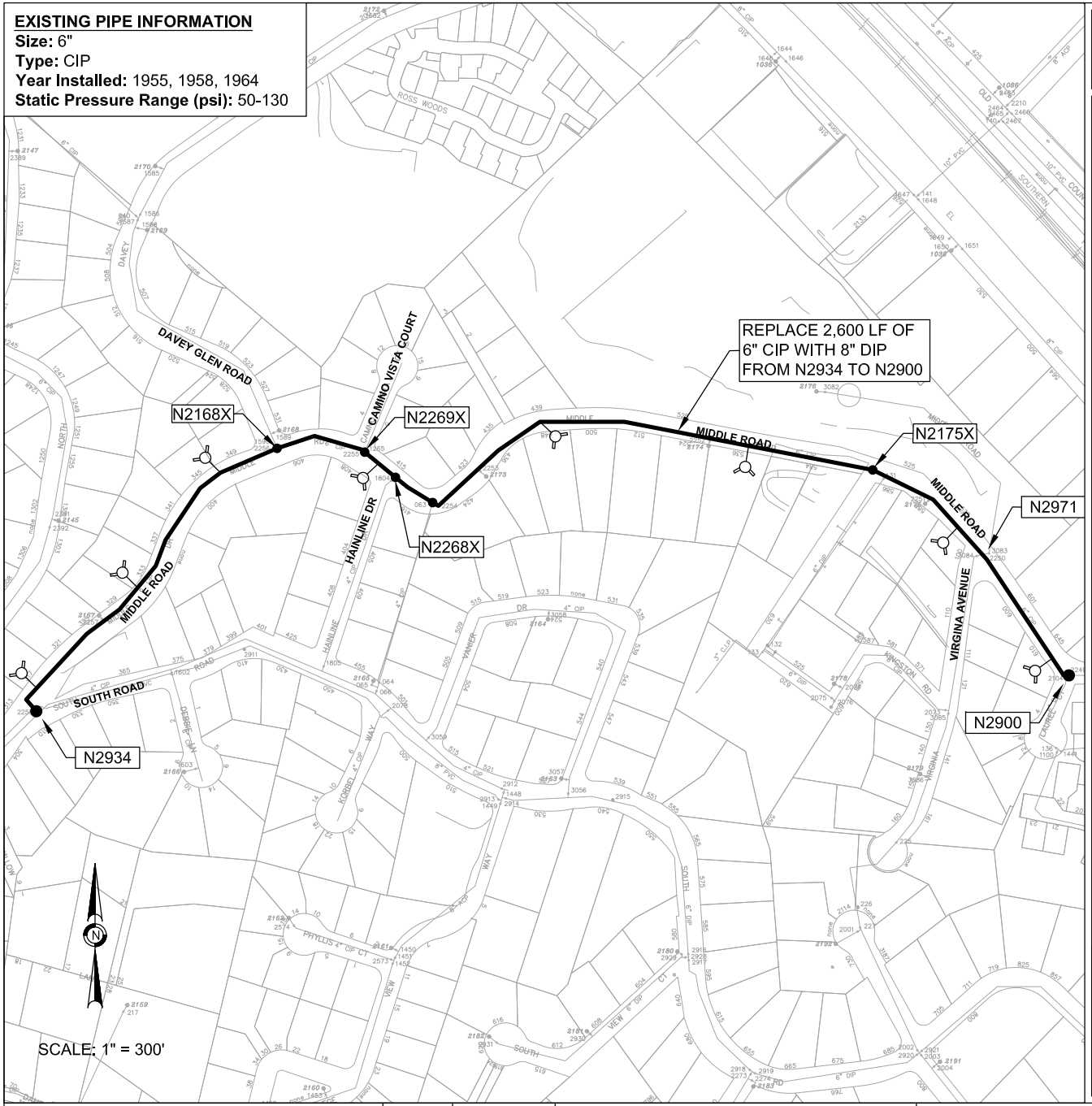
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ARBOR AVENUE IMPROVEMENTS
PROJECT 24-02

Original 2024

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: CIP
Year Installed: 1955, 1958, 1964
Static Pressure Range (psi): 50-130



MIDDLE ROAD IMPROVEMENTS

PROJECT BACKGROUND

The District has experienced several leaks on the existing Zone 2 6" cast iron pipe (CIP) water main along Middle Road between South Road and Laurel Court. This project replaces approximately 2,600 LF of 6" CIP with new 8" ductile iron pipe (DIP).

PROPOSED IMPROVEMENTS

Replace 2,600 LF of 6" CIP w/ 8" DIP
Replace 4 fire hydrants
Install 4 fire hydrants
Replace 23 service connections

PROJECT BENEFITS

The Middle Road Improvements replaces old infrastructure, with a history of extensive leaks, with a new water main.

PROJECT BUDGET (2024)

8" DIP - 2,600 LF @ $475/LF	$ 1,235,000
Service Connections - 33 @ $5,250/EA	$ 173,250
Fire Hydrants - 8 @ $15,000/EA	$ 120,000
Subtotal Construction	$ 1,528,250
Planning, Design & Construction Support	$ 230,000
Construction Inspection	$ 155,000
Contingency (±10%)	$ 191,750
Project Budget	$ 2,105,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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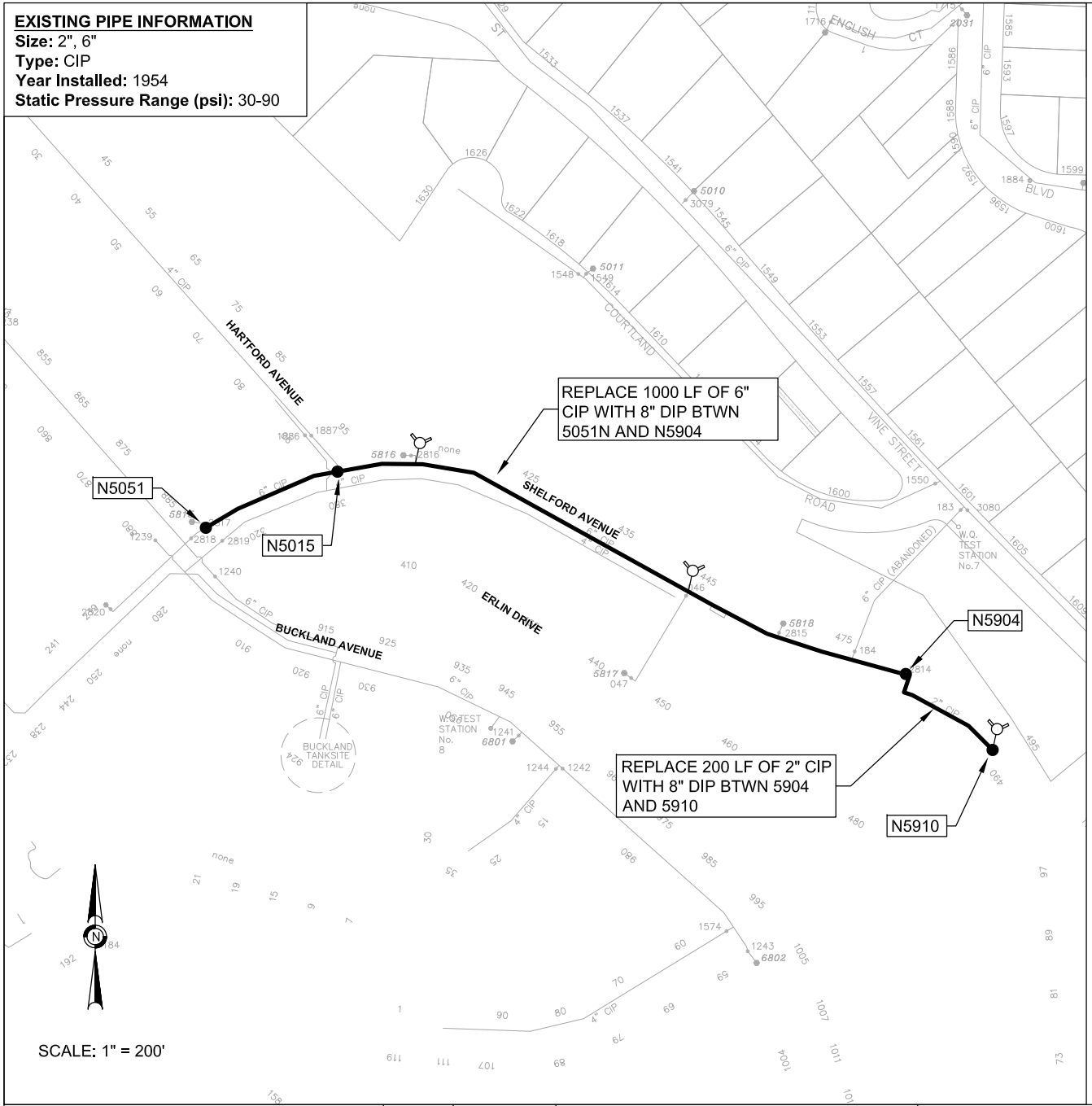
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
MIDDLE ROAD IMPROVEMENTS
PROJECT 24-03

Original 2024

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 2", 6"
Type: CIP
Year Installed: 1954
Static Pressure Range (psi): 30-90



SHELFORD AVENUE IMPROVEMENTS

PROJECT BACKGROUND

The District has experienced several leaks on the existing Zone 5 2" and 6" cast iron pipe (CIP) along Shelford Avenue between Buckland Avenue and 490 Shelford Avenue. This water main is also in a precarious location located along the fill side of Shelford Avenue. This project replaces approximately 1,200 LF of 2" and 6" CIP with new 8" ductile iron pipe (DIP) and relocates it to the cut side of Shelford Avenue.

PROPOSED IMPROVEMENTS

Replace 1,200 LF of 2"/6" CIP w/ 8" DIP
Replace 3 fire hydrants
Replace 10 service connections

PROJECT BENEFITS

The Shelford Avenue Improvements replaces old infrastructure, with a history of extensive leaks, with a new water main.

PROJECT BUDGET (2024)

8" DIP - 1,200 LF @ $475/LF	$	570,000
Service Connections - 10 @ $5,250/EA	$	52,250
Fire Hydrants - 3 @ $15,000/EA	$	45,000
Subtotal Construction	$	667,250
Planning, Design & Construction Support	$	135,000
Construction Inspection	$	70,000
Contingency (±10%)	$	87,750
Project Budget	$	960,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
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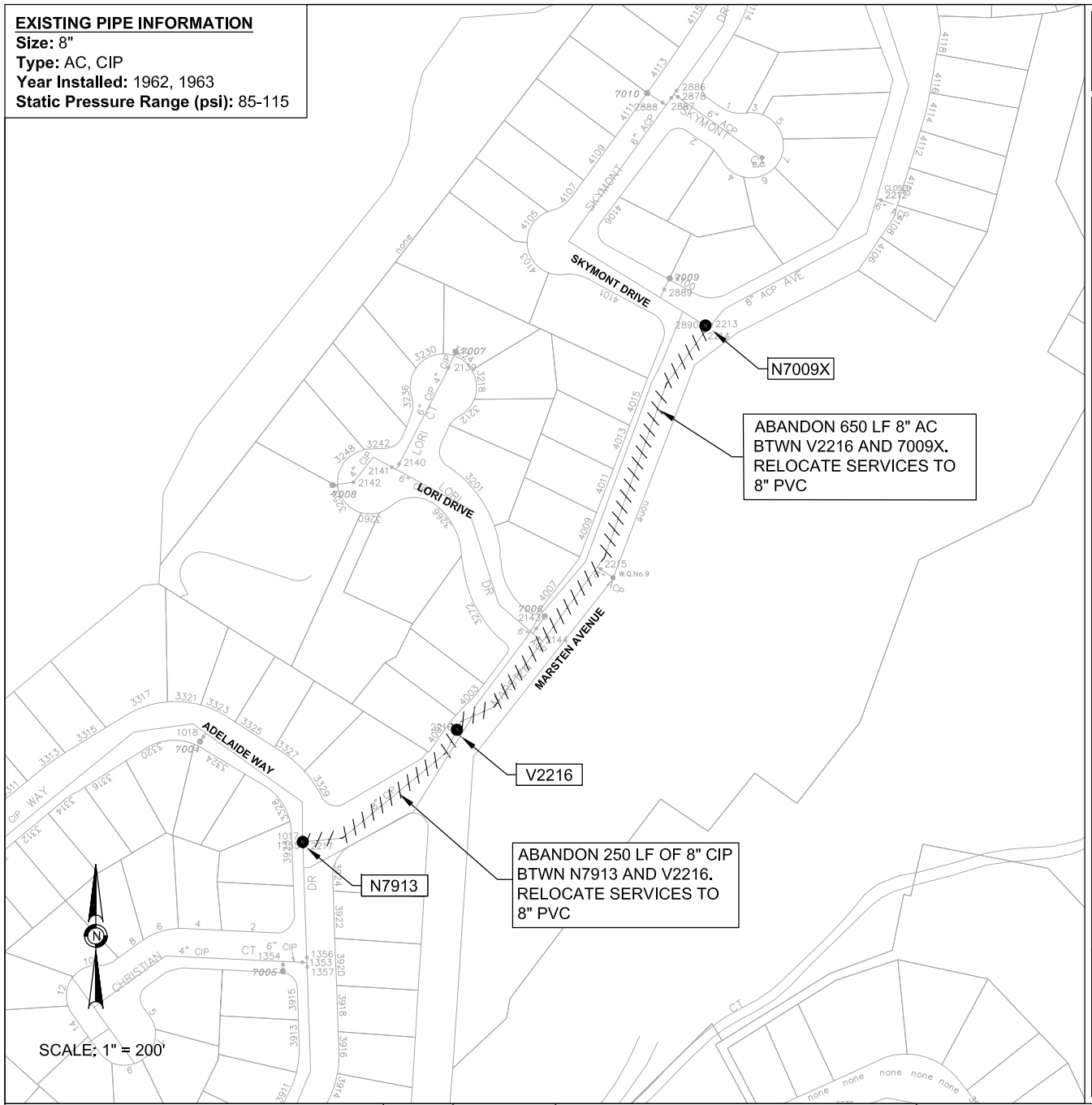
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SHELFORD AVENUE IMPROVEMENTS
PROJECT 24-04

Original 2024

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 8"
Type: AC, CIP
Year Installed: 1962, 1963
Static Pressure Range (psi): 85-115



MARSTEN AVENUE IMPROVEMENTS

PROJECT BACKGROUND

Parallel water mains exist along Marsten Avenue between Adelaide Way and Skymont Drive comprised of variations of 8" polyvinyl chloride (PVC), 8" cast iron pipe (CIP), and 8" asbestos cement (AC). The existing AC and CIP are located along the fill side of the road which is experiencing worrisome settlement. The PVC however is located on the more stable, cut side of the road. Both the CIP and AC will be abandoned and any services currently connected to those pipes will be transferred to the existing 8" PVC.

PROPOSED IMPROVEMENTS

Abandon 400 LF of 8" CIP
Abandon 500 LF of 8" AC
Replace 8 service connections

PROJECT BENEFITS

The Marsten Avenue Improvements abandons aging water mains located in a precarious location and moves service connetions to a more reliable, newer water main.

PROJECT BUDGET (2024)

Abandon 900 LF 8" AC/CIP	$	50,000
Service Connections - 8 @ $5,250/EA	$	42,000
Subtotal Construction	$	92,000
Planning, Design & Construction Support	$	35,000
Construction Inspection	$	10,000
Contingency (±10%)	$	13,000
Project Budget	$	150,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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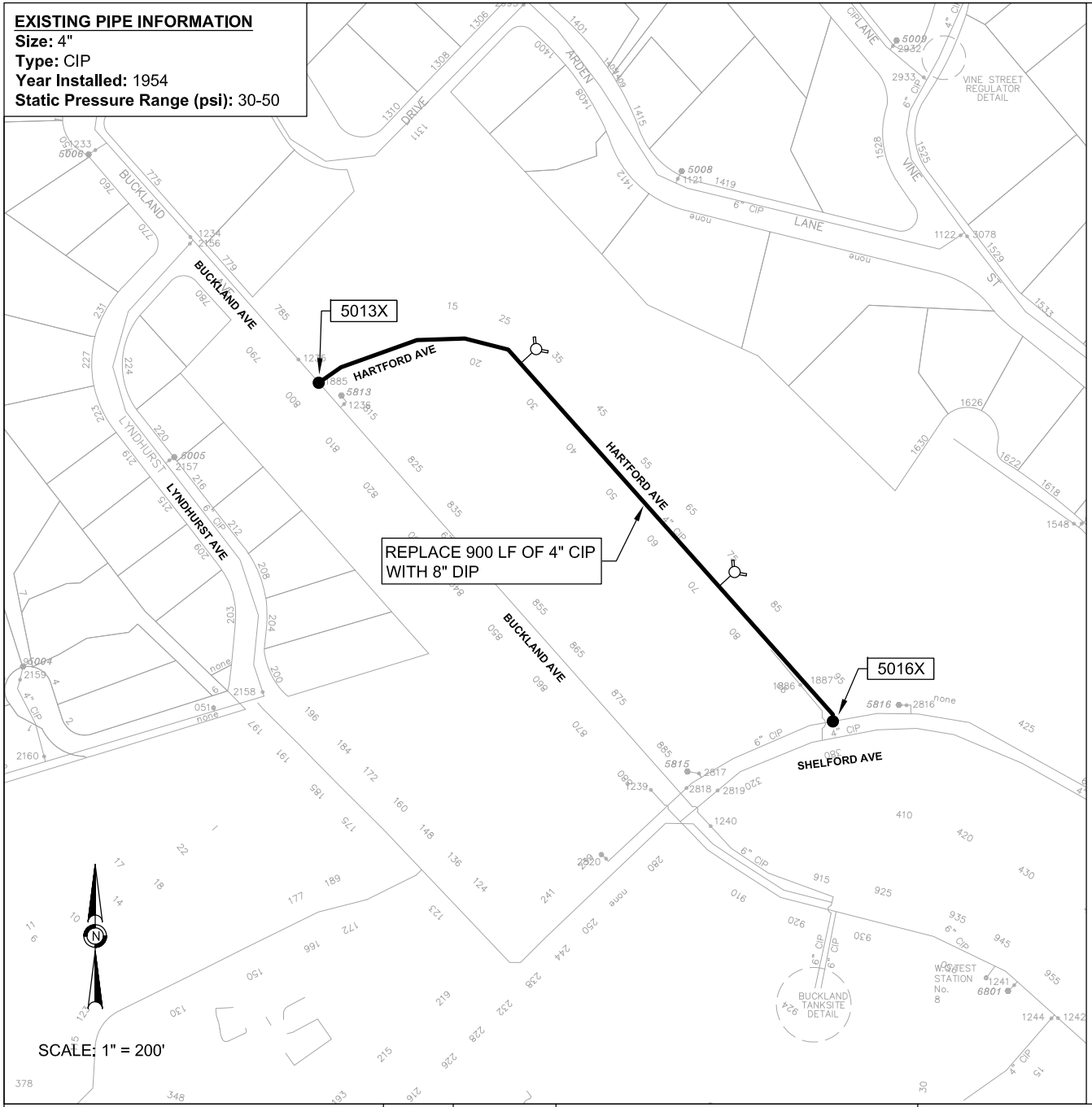
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
MARSTEN AVENUE IMPROVEMENTS
PROJECT 24-05

Original 2024

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1954
Static Pressure Range (psi): 30-50



HARTFORD AVENUE IMPROVEMENTS

PROJECT BACKGROUND

An existing 900 LF 4" CIP is located along Harftord Avenue between Buckland Avenue and Shelford Avenue. In an effort to replace undersized 4" water main throughout the District, this water main will be replaced with new 8" ductile iron pipe (DIP).

PROPOSED IMPROVEMENTS

Replace 900 LF of 4" CIP w/ 8" DIP
Install 2 fire hydrants
Replace 17 service connections

PROJECT BENEFITS

The Hartford Avenue Improvements replaces old and undersized infrastructure with a new, larger water main.

PROJECT BUDGET (2024)

8" DIP - 900 LF @ $475/LF	$	427,500
Service Connections - 17 @ $5,250/EA	$	89,250
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Subtotal Construction	$	546,750
Planning, Design & Construction Support	$	110,000
Construction Inspection	$	55,000
Contingency (±10%)	$	73,250
Project Budget	$	785,000

Add hydrant on Buckland

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$	
Construction:	$	
Total Expenditures:	$	

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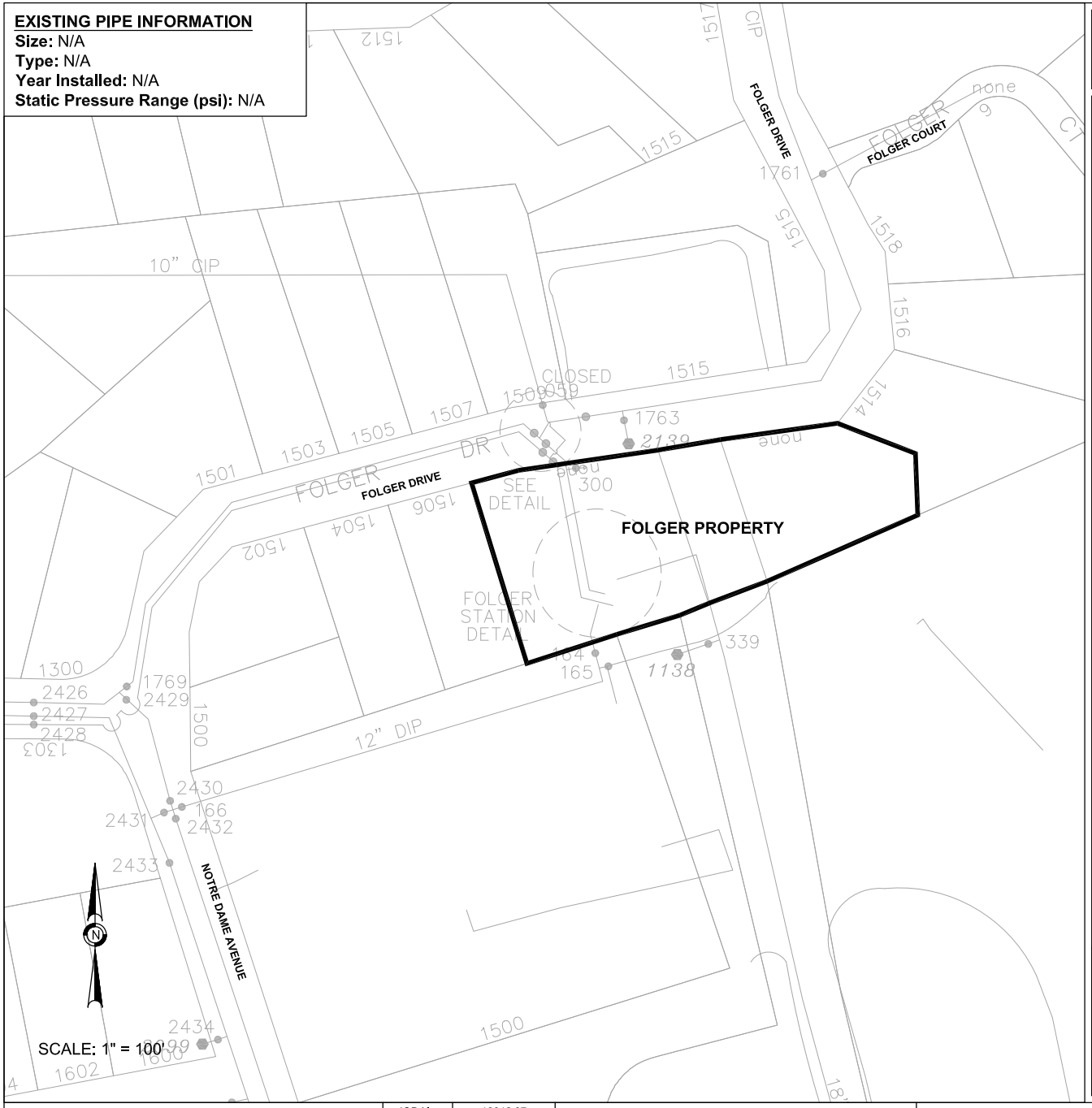
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
HARTFORD AVENUE IMPROVEMENTS
PROJECT 24-06

Original 2024

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A



FOLGER PROPERTY
EMERGENCY OPERATIONS CENTER

PROJECT BACKGROUND

1510 Folger Drive was one of two properties previously used for District Operations but is currently disused due to its small size and location in a residential neighborhood. The property is primarily used for storage and sometimes leased out to contractors for a staging yard. The property is in an ideal location to serve as an emergency operations center and to provide bunk housing for on-call water system operators, two functions the District is currently lacking.

PROPOSED IMPROVEMENTS

Seismic retrofit of existing structure; evaluate and install electric vehicle charging infrastructure and backup power generation; remodel interior of building to include flexible office space, kitchen, full bathroom, and bunk space facilities; relocate District-owned office trailer to site; and add additional shop space for equipment storage.

PROJECT BENEFITS

The Folger Property Improvements would improve workforce resilience and emergency response, provide additional storage, allow continued operation during and following major seismic and storm events. Upgrading electrical infrastructure, with consideration for sufficient capacity and backup power to charge future electric fleet (CARB) will support emergency response and through major power-loss conditions. Upgrading and expanding office space will support emergency operations for District staff, and can be opened up to partner agencies, as needed.

PROJECT BUDGET (2024)

Design / Construction	$ 4,590,000
Project Budget	$ 4,590,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
FOLGER PROPERTY EMERGENCY OPERATIONS CENTER
PROJECT 24-07

Original 2024

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A

EXBORNE TANK (WEST) RECOATING

PROJECT BACKGROUND

The Exborne Tanks in combination with Hersom Tank provide water to Zone 2. The Exborne site has two tanks with 1 MG (West) and 1.5 MG (East) capacities. A 2023 coating investigation of the West Tank concluded the exterior paint system was weathered, chalked, and in fair to poor condition with some localized rust development and topcoat peeling. The interior lining was in poor condition above the highest water level (HWL) and fair below the HWL. The lining of the interior roof has failed and corrosion of the roof structure will continue to advance unless coating replacement occurs. The report recommended spot repairs and an overcoat of the exterior and a full removal/replacement of the interior lining.

PROPOSED IMPROVEMENTS

Recoat the West Tank's exterior and interior.

PROJECT BENEFITS

The Exborne Tank (West) Recoating will extend the service life of the tank an additional 20-30 years.

PROJECT BUDGET (2024)

Exterior Spot Repair / Overcoat	$	100,000
Interior Relining	$	350,000
Subtotal Construction	$	450,000
Planning, Design & Construction Support	$	115,000
Construction Inspection	$	45,000
Contingency (±10%)	$	65,000
Project Budget	$	675,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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	CKD JP

MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
EXBORNE TANK (WEST) RECOATING
PROJECT 24-08

Original 2024

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A

HALLMARK TANK (NORTH)
STRUCTURAL RETROFIT / RECOATING

PROJECT BACKGROUND

The Hallmark Tanks, constructed in 1967, are a critical element of the District's water distribution system providing water to Zone 8 and lower zones. The existing tanks are 140 feet in diameter, approximately 24 feet tall and have capacities of 2.5 million gallons each. A structural analysis determined the maximum capacity level (MCL) in the tanks should be reduced to 14.5 feet (from the current 22 feet) allowing adequate freeboard to withstand seismic events. To increase the useable storage in the tanks, structural engineers assessed several retrofit alternatives while also meeting current seismic codes. For each foot of water level increase in the tanks, the District can gain an additional 230,000 gallons. The District selected to retrofit the tanks to a 16 foot operating level.

A 2023 coating investigation of the North Tank concluded the exterior paint system was weathered, chalked, and in fair condition with some localized rust development and topcoat peeling, primarily at the roof. The interior lining condition and age indicates it is reaching the end of its serviceable life. In addition, the lining on the interior roof is beginning to yield and corrosion of the roof structure will continue to advance. The report recommended full removal/replacement of the exterior coating and interior lining.

PROPOSED IMPROVEMENTS

Structurally retrofit the tank to accommodate a 16 ft operating level. Recoat the exterior and interior.

PROJECT BENEFITS

The Hallmark Tank (North) Structural Retrofit / Recoating increases the operating level to 16 feet while still being able to withstand a seismic events. Recoating the tank will also extend the tanks service life.

PROJECT BUDGET (2024)

Structural Retrofit	$ 600,000
Exterior Recoat	$ 600,000
Interior Relining	$ 1,000,000
Subtotal Construction	$ 2,200,000
Planning, Design & Construction Support	$ 330,000
Construction Inspection	$ 220,000
Contingency (±10%)	$ 300,000
Project Budget	$ 3,050,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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SCALE	AS NOTED
DRAWN:	BY BL
	CKD JP

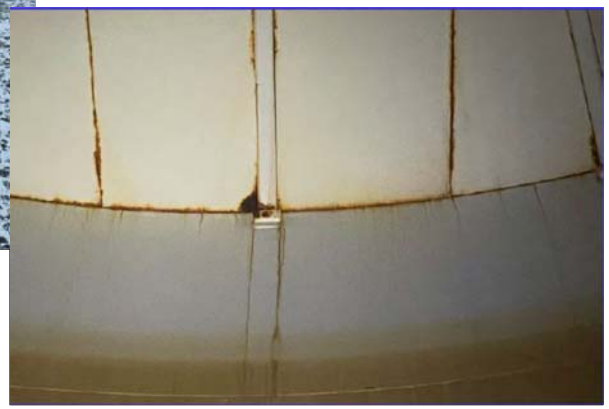
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
HALLMARK TANK (NORTH) RETROFIT / RECOATING
PROJECT 24-09

Original 2024

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A



WEST BELMONT TANK (NORTH) RECOATING

PROJECT BACKGROUND

The West Belmont Tanks provide water to Zone 7 in addition to the lower zones. The Exborne site has two tanks with 1.6 MG capacities. A 2023 coating investigation of the North Tank concluded the exterior paint system was weathered, chalked, and in poor to fair condition with widespread rust development and topcoat peeling, primarily at the shell. The paint adhesion is satisfactory and film thickness measurements indicate the existing paint system is suitable for overcoating. The interior lining was in good condition both above and below the highest water level (HWL) however it is progressing towards the end of its serviceable life. The report recommended spot repairs and an overcoat of the exterior and adding the tank to a 5 year inspection schedule per AWWA.

PROPOSED IMPROVEMENTS

Recoat the North tank's exterior.

PROJECT BENEFITS

The West Belmont Tank (North) Recoating will extend the service life of the tank an additional 20-30 years.

PROJECT BUDGET (2024)

Exterior Spot Repair/Overcoat	$	70,000
Interior Dive inspection	$	6,500
Subtotal Construction	$	76,500
Planning, Design & Construction Support	$	30,000
Construction Inspection	$	10,000
Contingency (±10%)	$	13,500
Project Budget	$	130,000

PROJECT COMPLETED

Completion Date:

Actual Expenditures

Planning, Design, & Construction Support:	$
Construction:	$
Total Expenditures:	$

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MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
WEST BELMONT TANK (NORTH) RECOATING
PROJECT 24-10

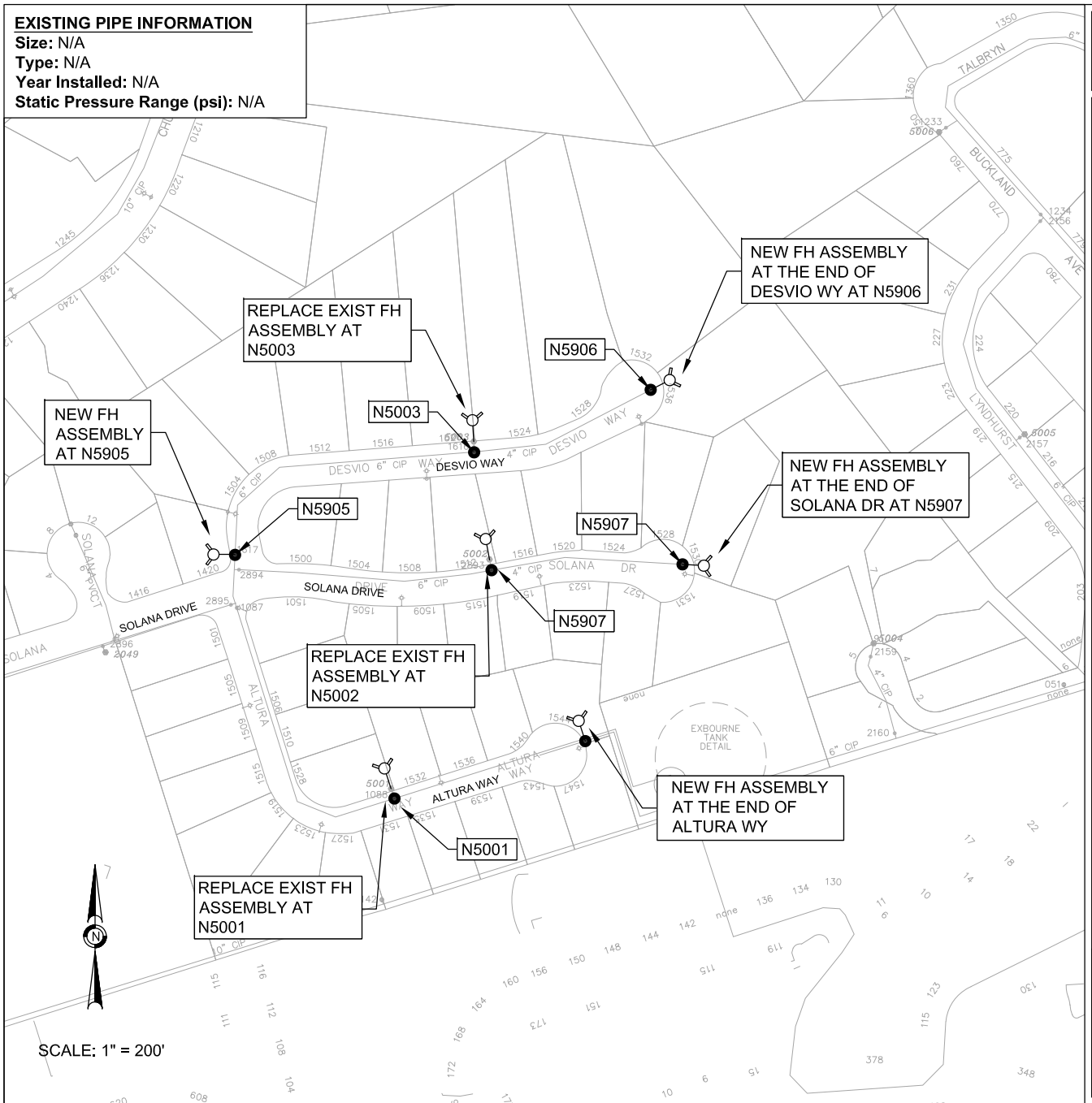
Original 2024

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

APPENDIX C

Completed Projects

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A



ZONE 5
FIRE HYDRANT UPGRADES

PROJECT BACKGROUND

Desvio Way, Solana Drive and Altura Way are each located in Zone 5 and each street has one hydrant located along their midpoints. Desvio Way and Solana Drive are dead end streets with no fire hydrants at their ends and hydrant spacing along all the streets is not optimal. This project improves the hydrant spacing and provides flushing capabilities at the dead ends by installing 4 new fire hydrants. The existing 3 fire hydrants would also be replaced to bring them up to current standards. There will also be an added benefit in increasing fire flow protection to residents in Zone 5.

PROPOSED IMPROVEMENTS

Install 4 new hydrants
Replace 3 fire hydrants

PROJECT BENEFITS

The Zone 5 Fire Hydrant Upgrades improves hydrant spacing in the area, provides flushing capabilities for the dead ends, and provides increased fire protection to Zone 5 residences.

PROJECT BUDGET (2015)*

Fire Hydrants - 7 @ $15,000/EA	$ 105,000
Subtotal Construction	$ 105,000
Planning, Design & Construction Support	$ 30,000
Contingency (±10%)	$ 15,000
Project Budget	**$ 150,000**

*** This project is currently under construction.**

PROJECT COMPLETED

Completion Date:	2020
Actual Expenditures	
Planning, Design, & Construction Support:	$ 7,379
Construction:	$ 32,596
Total Expenditures:	$ 39,975

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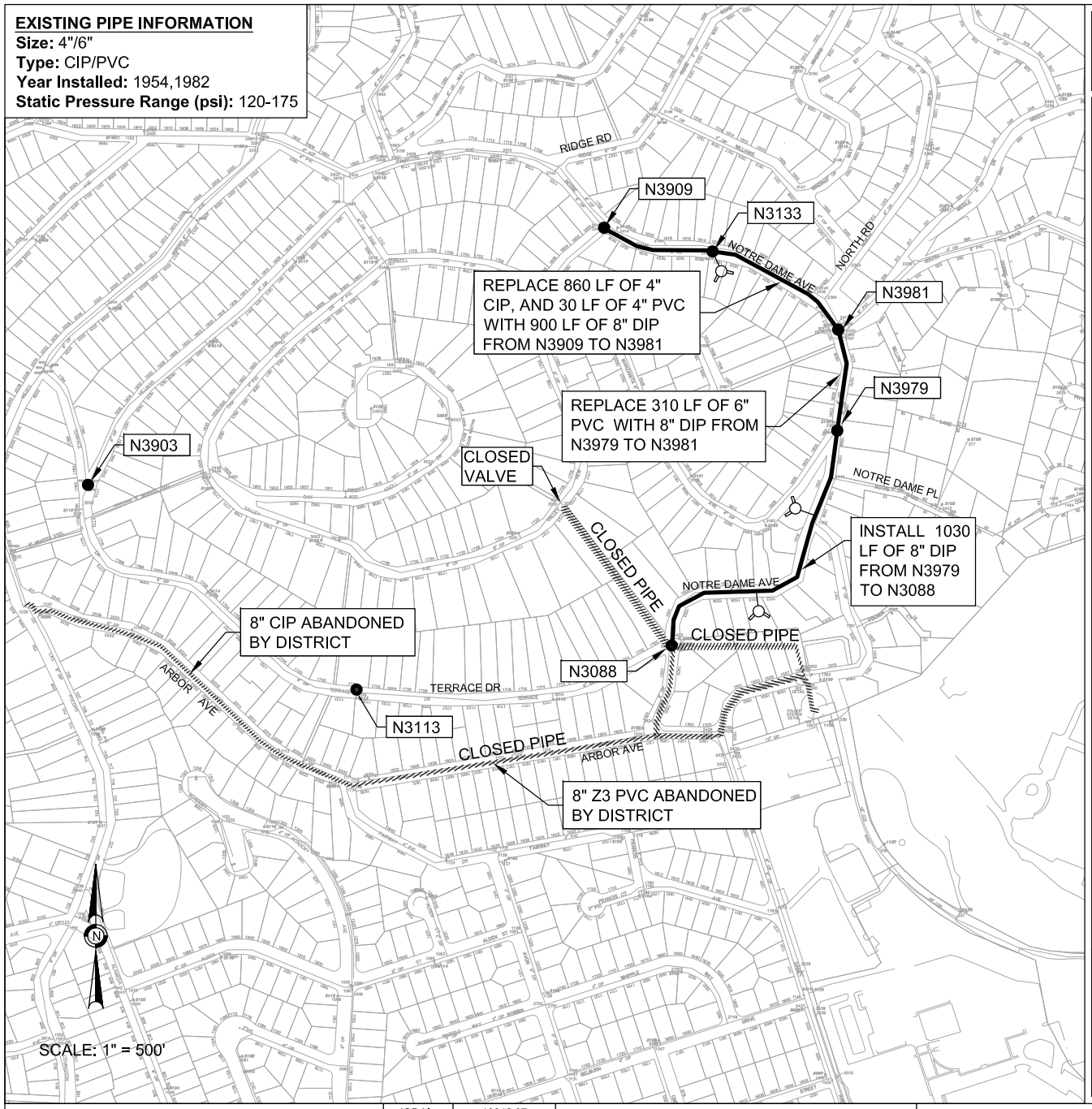
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ZONE 5 FIRE HYDRANT UPGRADES
PROJECT 15-06

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

NOTRE DAME AVENUE LOOP CLOSURE



PROJECT BACKGROUND

According to the District GIS map and District personnel, water mains along Arbor Avenue and a small portion on Notre Dame Avenue were abandoned. As a result, this created a long 2,100 LF dead end on Terrace Drive and the District has reported water quality issues near the end of the dead end main. In addition, several water mains along Notre Dame Avenue (between Valley View Avenue and Manzanita Avenue) and the Terrace Drive dead end are incapable of meeting the minimum recommended fire flow of 1,500 gpm at 20 psi. This improvement will reconnect Terrace Drive with Notre Dame Avenue at Manzanita Avenue with 1,030 LF of new 8" ductile iron pipe (DIP) thereby eliminating the dead end. In addition, 1,200 LF of new 8" DIP will replace aging, undersized 4" and 6" water mains along Notre Dame Avenue. Three fire hydrants and 29 service connections will also be replaced. Hydraulic analysis indicates a 12% to 106% increase in available fire flows along Terrace Avenue and Notre Dame Avenue upon completion of this project. Distribution System Analysis No. 013

PROPOSED IMPROVEMENTS

Install 1,030 LF of new 8" DIP
Replace 860 LF of 4" CIP, 30 LF of 4" PVC and 310 LF of 6" PVC with 1,200 LF of 8" DIP
Replace 3 fire hydrants
Replace 29 service connections

PROJECT BENEFITS

The Notre Dame Avenue Loop Closure eliminates the dead end on Terrace Avenue and replaces aging and undersized 4" and 6" CIP / PVC water mains with new 8-inch DIP. Fire flows increase by 12% to 106%.

PROJECT BUDGET (2015)

8" DIP - 2,230 LF @ $250/LF	$ 557,500
Fire Hydrants - 3 @ $15,000/EA	$ 45,000
Service Connections - 29 @ $3,000/EA	$ 87,000
Subtotal Construction	$ 689,500
Planning, Design & Construction Support	$ 138,000
Contingency (±10%)	$ 82,500
Project Budget	**$ 910,000**

PROJECT COMPLETED

Completion Date:	2020
Actual Expenditures	
Planning, Design, & Construction Support:	$ 15,296
Construction:	$ 1,216,051
Total Expenditures:	$ 1,231,347

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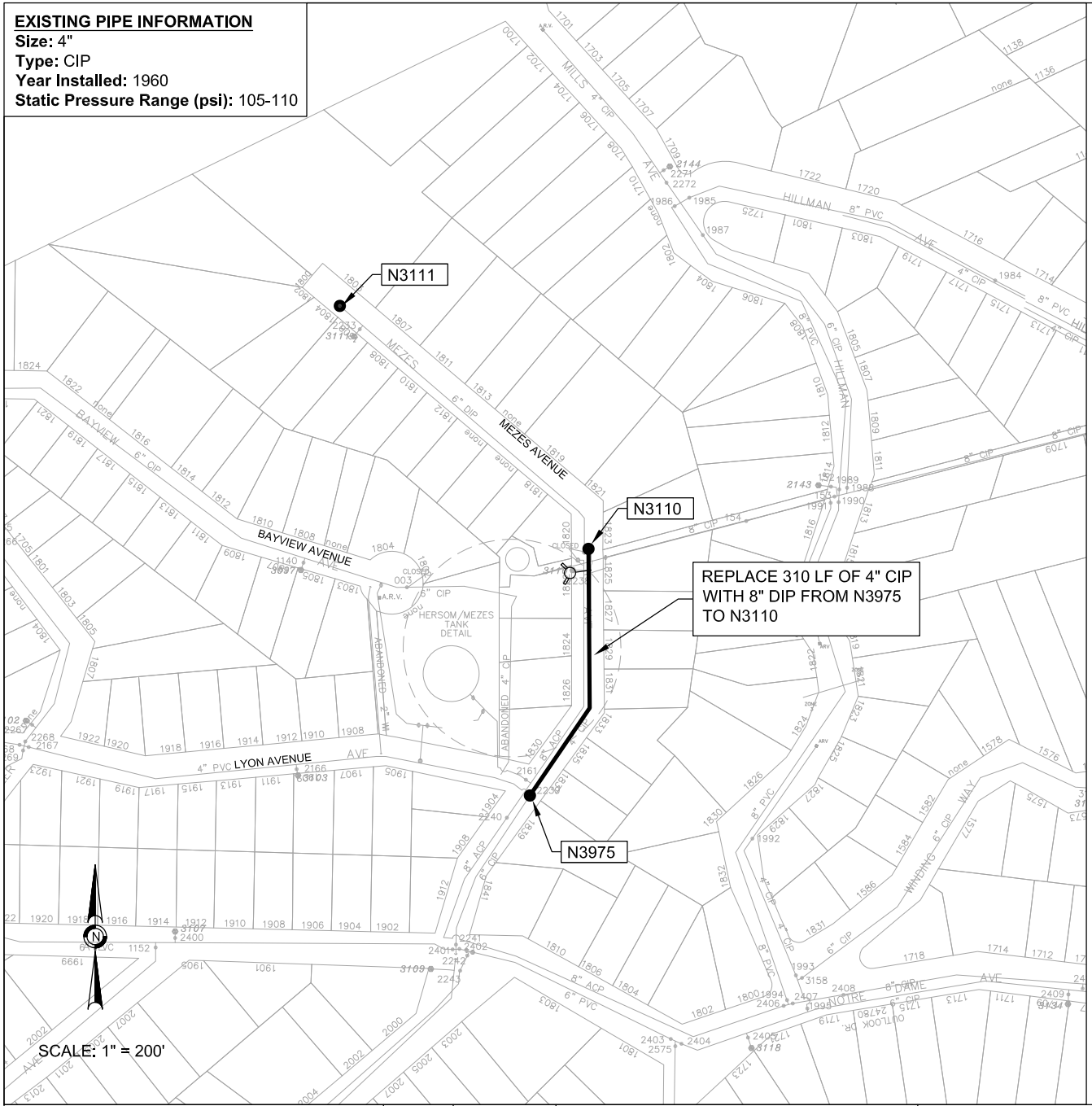
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
NOTRE DAME AVENUE LOOP CLOSURE
PROJECT 15-10

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1960
Static Pressure Range (psi): 105-110



MEZES AVENUE IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to Mezes Avenue through a single 310 LF 4" cast iron pipe (CIP) from Lyon Avenue. It then transitions to a 415 LF 6" CIP and dead ends at the end of Mezes Avenue. Fire flows on this street are below the recommended 1,500 gpm at 20 psi recommendation due to the 4" bottleneck. In addition, the 4" main is over 50 years old. This project would replace the undersized pipe with a new 8" ductile iron pipe (DIP). One fire hydrant and 10 service connections will be replaced. Hydraulic analysis indicates a 192% increase in available fire flows upon completion of this project. This project has a negligible affect on water age increasing from 0.1 to 0.2 days during the winter and no increase during the summer. Distribution System Analysis No. 017

PROPOSED IMPROVEMENTS

Replace 310 LF of 4" CIP with 8" DIP
Replace 1 fire hydrant
Replace 10 service connections

PROJECT BENEFITS

The Mezes Avenue Improvements replaces an undersized 4" water main with 8" DIP. Fire flows at the midway point along Mezes Avenue increase by 192%.

PROJECT BUDGET (2015)

8" DIP - 310 LF @ $ 250/LF	$	77,500
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Service Connections - 10 @ $3,000/EA	$	30,000
Subtotal Construction	$	122,500
Planning, Design & Construction Support	$	37,000
Contingency (±10%)	$	15,500
Project Budget	**$**	**175,000**

PROJECT COMPLETED

Completion Date:		2018
Actual Expenditures		
Planning, Design, & Construction Support:	$	56,154
Construction:	$	235,267
Total Expenditures:	$	291,421

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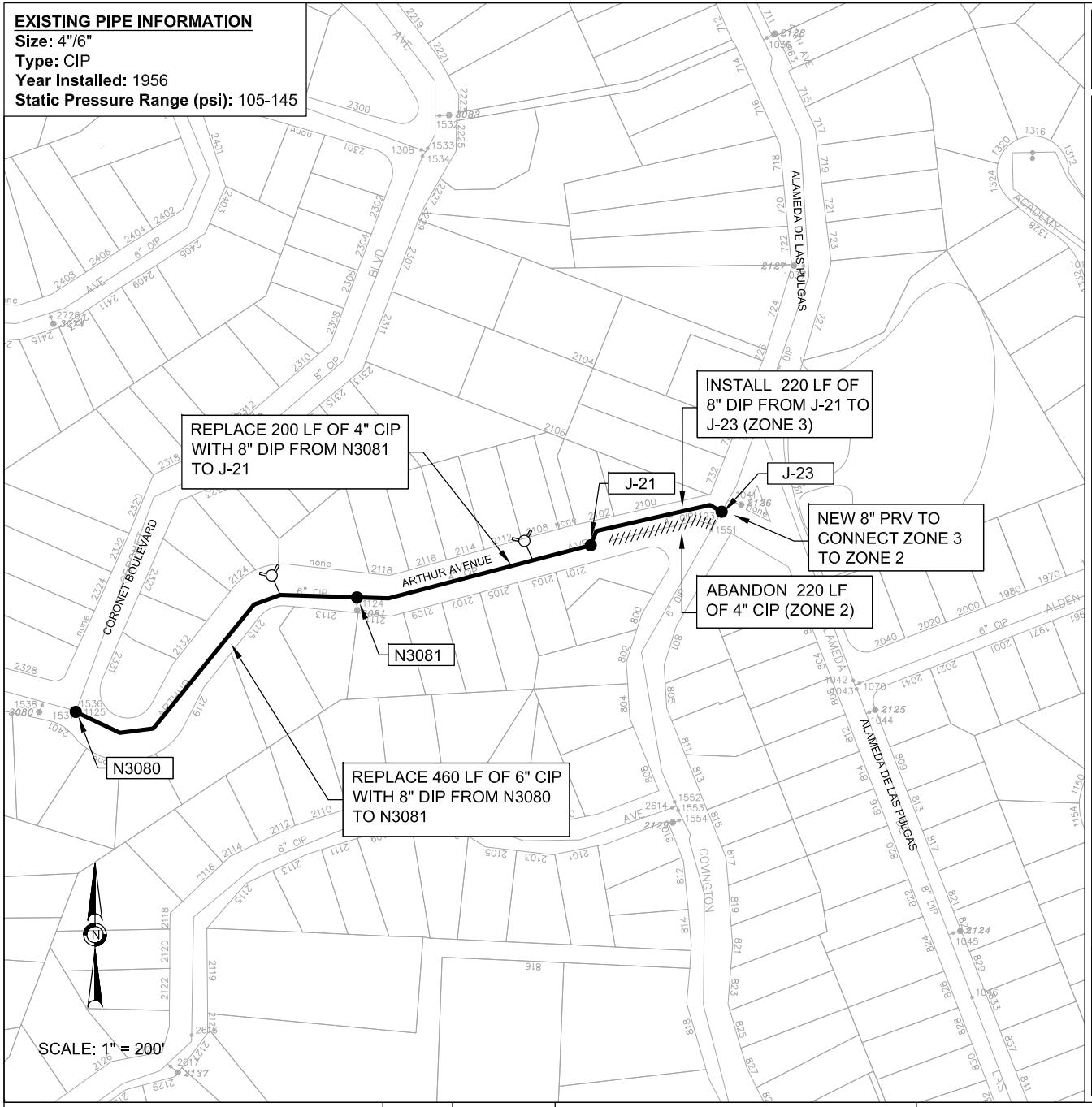
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
MEZES AVENUE IMPROVEMENTS
PROJECT 15-14

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

ARTHUR AVENUE IMPROVEMENTS



PROJECT BACKGROUND

Water is provided to Arthur Avenue through two dead end 4" and 6" cast iron pipe (CIP) water mains: a Zone 3 water main from Coronet Blvd and a Zone 2 water main from Alameda De Las Pulgas. These undersized water mains, installed in the 1950's, are incapable of providing the minimum recommended fire flow of 1,500 gpm at 20 psi. This project replaces the existing 4" and 6" CIP with new 8" ductile iron pipe (DIP). The Zone 2 water main will be abandoned and the Zone 3 water main extended to Alameda De Las Pulgas and connected to Zone 2 with a 8" pressure reducing valve (PRV). Fifteen service connections will be replaced, 3 of which are transfers from Zone 2 to Zone 3. One hydrant will also be replaced and a new one will be installed to improve the existing hydrant spacing. Hydraulic analysis indicates a 281% increase in available fire flows along Arthur Avenue with the completion of this project. Distribution System Analysis 025

PROPOSED IMPROVEMENTS

Replace 660 LF of 4" and 6" CIP (Zone 3) with 8" DIP
Replace 220 LF of 4" CIP (Zone 2) with 8" DIP (Zone 3)
Install a new 8" PRV
Install 1 new fire hydrant
Replace 1 fire hydrant
Replace 15 service connections

PROJECT BENEFITS

The Arthur Avenue Improvements eliminates two dead ends, replaces aging and undersized water mains with new 8" DIP, provides a direct connection between Zone 3 and Zone 2, increases fire flows on the street by 281%, improves fire hydrant spacing.

PROJECT BUDGET (2015)

8" DIP - 880 LF @ $ 250/LF	$	220,000
Fire Hydrants - 2 @ $15,000/EA	$	30,000
8" PRV @ $50,000/EA	$	50,000
Service Connections - 15 @ $3,000/EA	$	45,000
Subtotal Construction	$	345,000
Planning, Design & Construction Support	$	87,000
Contingency (±10%)	$	43,000
Project Budget	**$**	**475,000**

PROJECT COMPLETED

Completion Date: 2016

Actual Expenditures

Planning, Design, & Construction Support:	$	121,318
Construction:	$	575,587
Total Expenditures:	$	696,905

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MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ARTHUR AVENUE IMPROVEMENTS
PROJECT 15-22

Rev 2 - 2024
Rev 1 - 2020
Original 2015

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PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

HALLMARK / DEKOVEN TANKS STRUCTURAL EVALUATIONS

PROJECT BACKGROUND

The Hallmark Tanks, located in Zone 8 at the highest point off Hallmark Drive were constructed in the late 1960's. They are the largest tanks in the District (140 ft diameter x 25 ft height) with a capacity of 2.5 MG each. They are a critical element for the entire upper portion of the District providing water to Zone 8 and primary flow down to tanks in Zones 3, 4, and 7 in addition to as-needed flow down capabilities to Zones 1, 2, 5 and 6.

The Dekoven Tanks, constructed in 1952, are a critical element of the Zone 3 water distribution system. The existing tanks are 52 and 60 feet in diameter, approximately 48 feet tall and have capacities of 720,000 gallons and 1,000,000 gallons respectively.

The structural and seismic evaluation will be an independent analysis of the site using AWWA D100 as the acceptance for essential service facilities.

PROPOSED IMPROVEMENTS

Comprehensive structural analysis to ensure the Hallmark and Dekoven tanks are capable of withstanding a 975 year earthquake.

PROJECT BENEFITS

The Hallmark and Dekoven tanks will remain operational after a 975 year earthquake.

PROJECT BUDGET (2015)

Hallmark Structural Analysis/Report	$	50,000
Dekoven Structural Analysis/Report	$	50,000
Contingency (±10%)	$	10,000
Project Budget	**$**	**110,000**

PROJECT COMPLETED

Completion Date:		2016
Actual Expenditures		
Planning, Design, & Construction Support:	$	88,748
Construction:	$	N/A
Total Expenditures:	$	88,748

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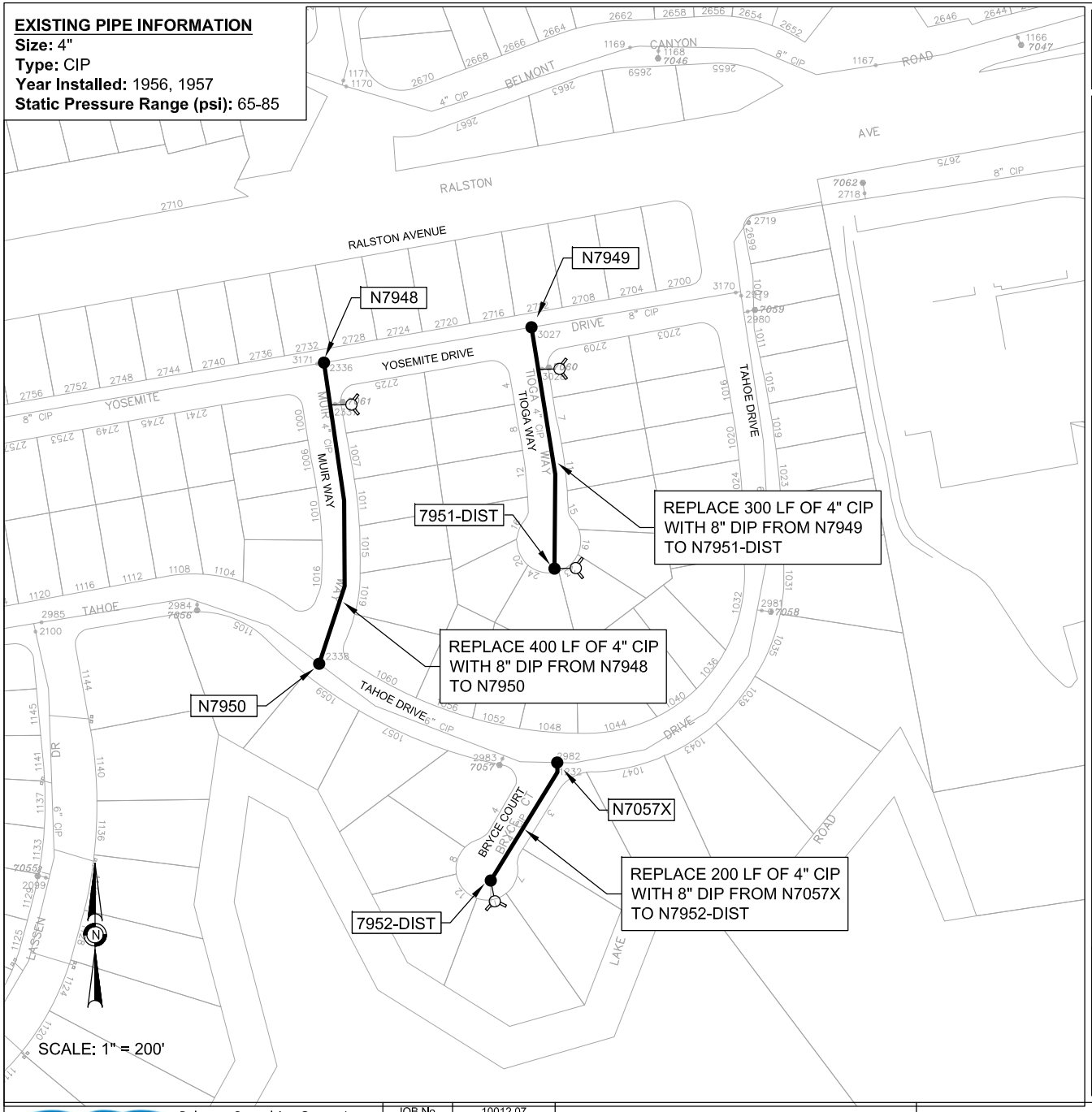
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
HALLMARK / DEKOVEN STRUCTURAL EVALUATIONS
PROJECT 15-23

Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1956, 1957
Static Pressure Range (psi): 65-85



TAHOE DRIVE AREA IMPROVEMENTS

PROJECT BACKGROUND

Water is currently provided to Tioga Way, Bryce Court and Muir Way through 300 LF, 400 LF and 200 LF 4" cast iron pipes (CIP) respectively. Fire flows along each of these streets are below the recommended minimum of 1,500 gpm at 20 psi. In addition, Tioga Way and Bryce Court have dead ends with blowoffs. This project replaces the aging and undersized water mains with new 8" ductile iron pipe (DIP). Two hydrants and 28 service connections will be replaced in conjunction with replacing the blowoffs with new hydrants. An analysis on water age indicates minimal effects with the increase in pipe size. Hydraulic analysis indicates as much as a 130% increase in available fire flows upon completion of this project. Combining this project with the West Belmont Tank Water Main Improvements Project (15-26) increases fire flows as much as 238%. Distribution System Analysis No. 030

PROPOSED IMPROVEMENTS

Replace 900 LF of 4" CIP with 8" DIP
Replace 2 fire hydrant assemblies
Replace 2 blowoffs with new fire hydrant assemblies
Replace 28 Service Connections

PROJECT BENEFITS

The Tahoe Drive Area Improvements increases fire flows as much as 130%. When combined with the West Belmont Tank Water Main Improvements, fire flow increase is as much as 238%. Old and aging infrastructure is also replaced.

PROJECT BUDGET (2015*)

8" DIP - 900 LF @ $ 250/LF	$	225,000
Fire Hydrants - 4 @ $15,000/EA	$	60,000
Service Connections - 28 @ $3,000/EA	$	84,000
Subtotal Construction	$	369,000
Planning, Design & Construction Support	$	94,000
Contingency (±10%)	$	47,000
Project Budget	**$**	**510,000**

PROJECT COMPLETED

Completion Date:		2020
Actual Expenditures		
Planning, Design, & Construction Support:	$	160,174
Construction:	$	707,558
Total Expenditures:	$	867,732

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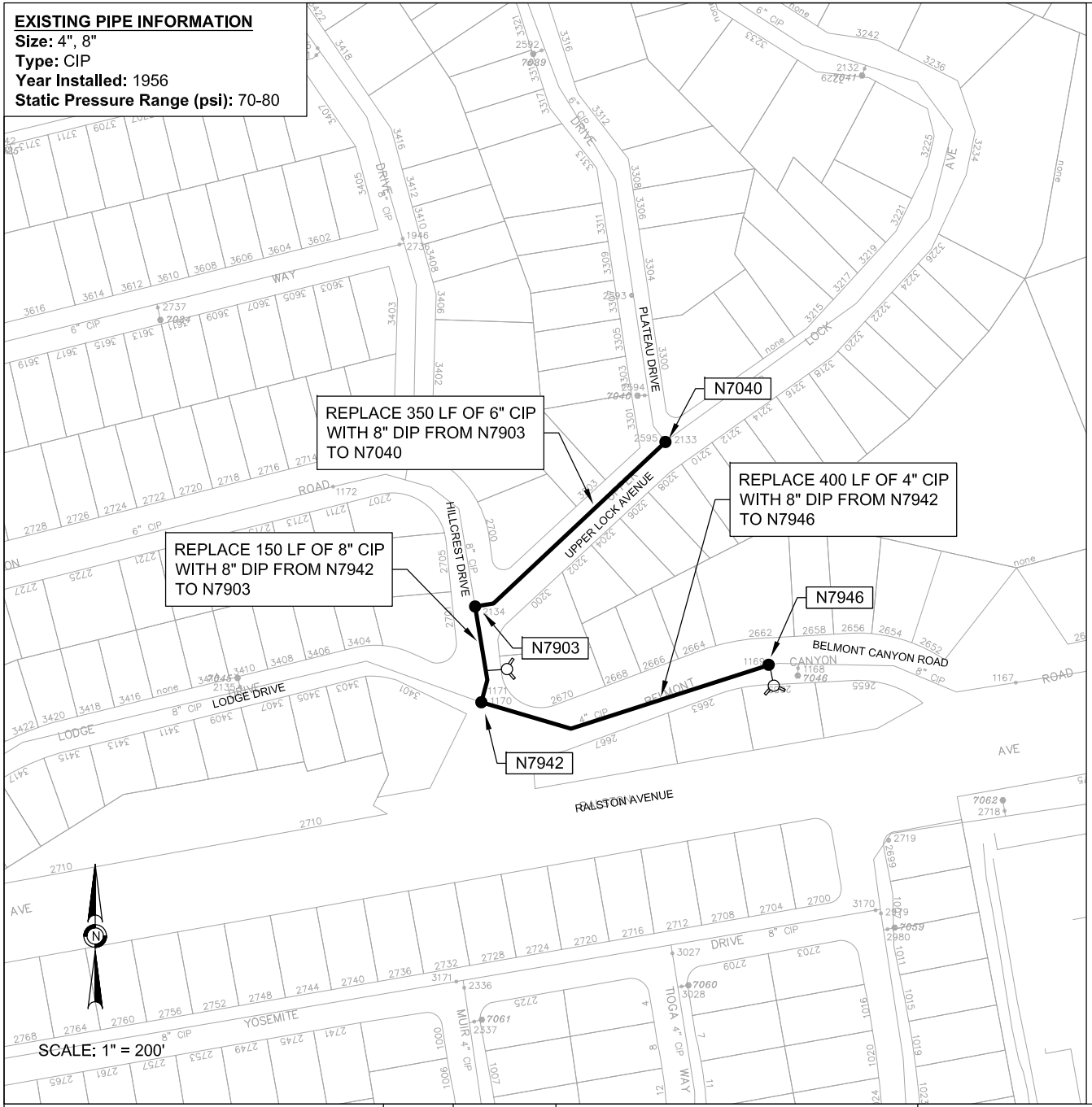
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
TAHOE DRIVE AREA IMPROVEMENTS
PROJECT 15-28

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4", 8"
Type: CIP
Year Installed: 1956
Static Pressure Range (psi): 70-80



BELMONT CANYON ROAD IMPROVEMENTS

PROJECT BACKGROUND

The majority of the water mains along Belmont Canyon Road are 8" cast iron pipes (CIP) except a 400 LF 4" CIP section between Hillcrest Drive and 2662 Belmont Canyon Road. The 4" CIP creates a bottle neck along Belmont Canyon Road reducing flows as much as 24%. This project replaces the 4" CIP with a new 8" ductile iron pipe (DIP). Although the fire flows within the area are essentially near the minimum recommendation of 1,500 gpm at 20 psi with the current configuration, replacing this pipe eliminates the bottleneck, replaces an old and aging infrastructure, and increases flows as much as 24%. Combining this project with the West Belmont Tank Water Main Improvements Project further increases flows along Belmont Canyon Road as much as 70% to above 2,500 gpm. Also included as part of this project is the replacement of approximately 500 LF of various 6" and 8" CIP with 8" DIP along Hillcrest Drive and Upper Lock Avenue. District maintenance personnel identified this area as being prone to leaks and recommend replacement. In addition one hydrant will be added to improve hydrant spacing. Distribution System Analysis No. 031

PROPOSED IMPROVEMENTS

Replace 400 LF of 4" CIP, 350 LF of 6" CIP and 150 LF of 8" CIP with 900 LF 8" DIP
Install 1 new fire hydrant
Replace 1 fire hydrant
Replace 17 service connections

PROJECT BENEFITS

The Belmont Canyon Road Improvements eliminates a bottleneck, replaces old and aging infrastructure, and increases fire flows as much as 24%. When combined with the West Belmont Tank Water Main Improvements, fire flow increases as much as 70%.

PROJECT BUDGET (2020)

8" DIP - 900 LF @ $ 450/LF	$	405,000
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 17 @ $4,500/EA	$	76,500
Subtotal Construction	$	511,500
Planning, Design & Construction Support	$	105,000
Construction Inspection	$	50,000
Contingency (±10%)	$	68,500
Project Budget	**$**	**735,000**

PROJECT COMPLETED

Completion Date:		2023
Actual Expenditures		
Planning, Design, & Construction Support:	$	84,313
Construction:	$	575,187
Total Expenditures:	$	659,500

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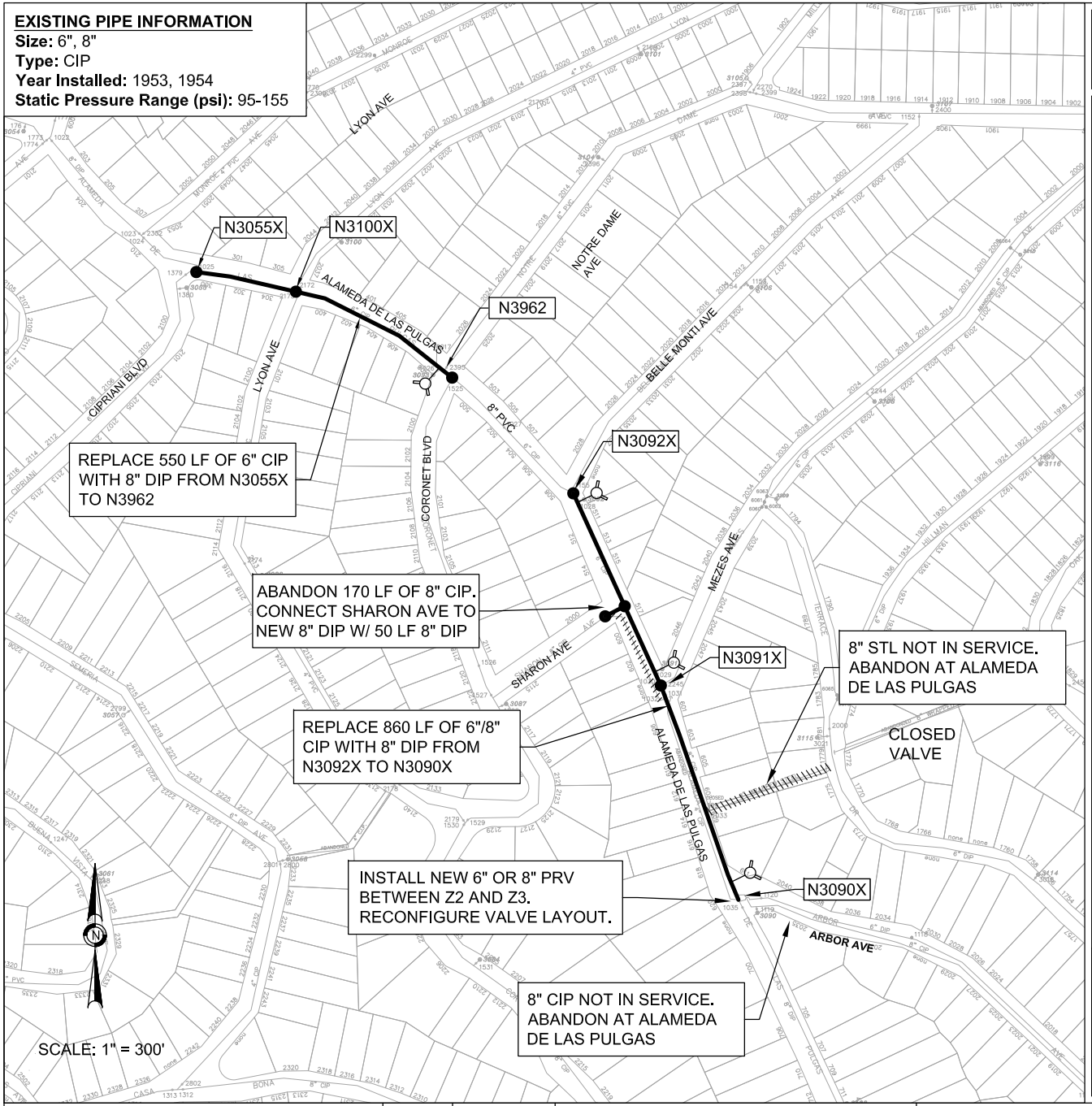
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
BELMONT CANYON ROAD IMPROVEMENTS
PROJECT 15-29

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6", 8"
Type: CIP
Year Installed: 1953, 1954
Static Pressure Range (psi): 95-155



ALAMEDA DE LAS PULGAS IMPROVEMENTS

PROJECT BACKGROUND

The existing 6" and 8" cast iron pipe (CIP) water mains along Alameda De Las Pulgas between Cipriani Boulevard and Arbor Avenue, installed in the mid-1950s, have experienced several water main breaks over past years. During the past 10 years, the District replaced a 320 LF section with new 8" polyvinyl chloride pipe (PVC) between Coronet Boulevard and Belle Monti Avenue. This project will replace the sections of pipe on Alameda De Las Pulgas between Cipriani Boulevard and Arbor Avenue with new 8" ductile iron pipe (DIP) eliminating all Zone 3 6" pipe along this road. Other improvements include reconfiguring intersection valves, a PRV connection between Zones 2 and 3, installing a direct connection from Sharon Avenue to eliminate parallel mains, and abandonment of the "not in service" water mains. A hydraulic analysis shows there are no adverse affects of increasing the pipe size and fire flows in the area remain the same with a small increase of residual pressure. Distribution System Analysis No. 032

PROPOSED IMPROVEMENTS

Replace 1,455 LF of 6"/8" CIP with 8" DIP
Two abandonments
6" PRV between Zones 2 and 3
Replace 4 fire hydrant assemblies
Replace 32 service connections

PROJECT BENEFITS

The Alameda De Las Pulgas Improvements eliminates a bottlenecks, replaces old and aging infrastructure prone to main breaks, and reconfigures the existing layout.

PROJECT BUDGET (2015)

1,460 LF - 8" DIP @ $ 250/LF	$	365,000
Two Abandonments @ $10,000/EA	$	20,000
6" PRV Connection	$	50,000
4 Fire Hydrants @ $15,000/EA	$	60,000
32 Service Connections @ $3,000/EA	$	96,000
Subtotal Construction	$	591,000
Planning, Design & Construction Support	$	118,000
Contingency (±10%)	$	71,000
Project Budget	**$**	**780,000**

PROJECT COMPLETED

Completion Date:		2016
Actual Expenditures		
Planning, Design, & Construction Support:	$	-
Construction:	$	655,765
Total Expenditures:	$	655,765

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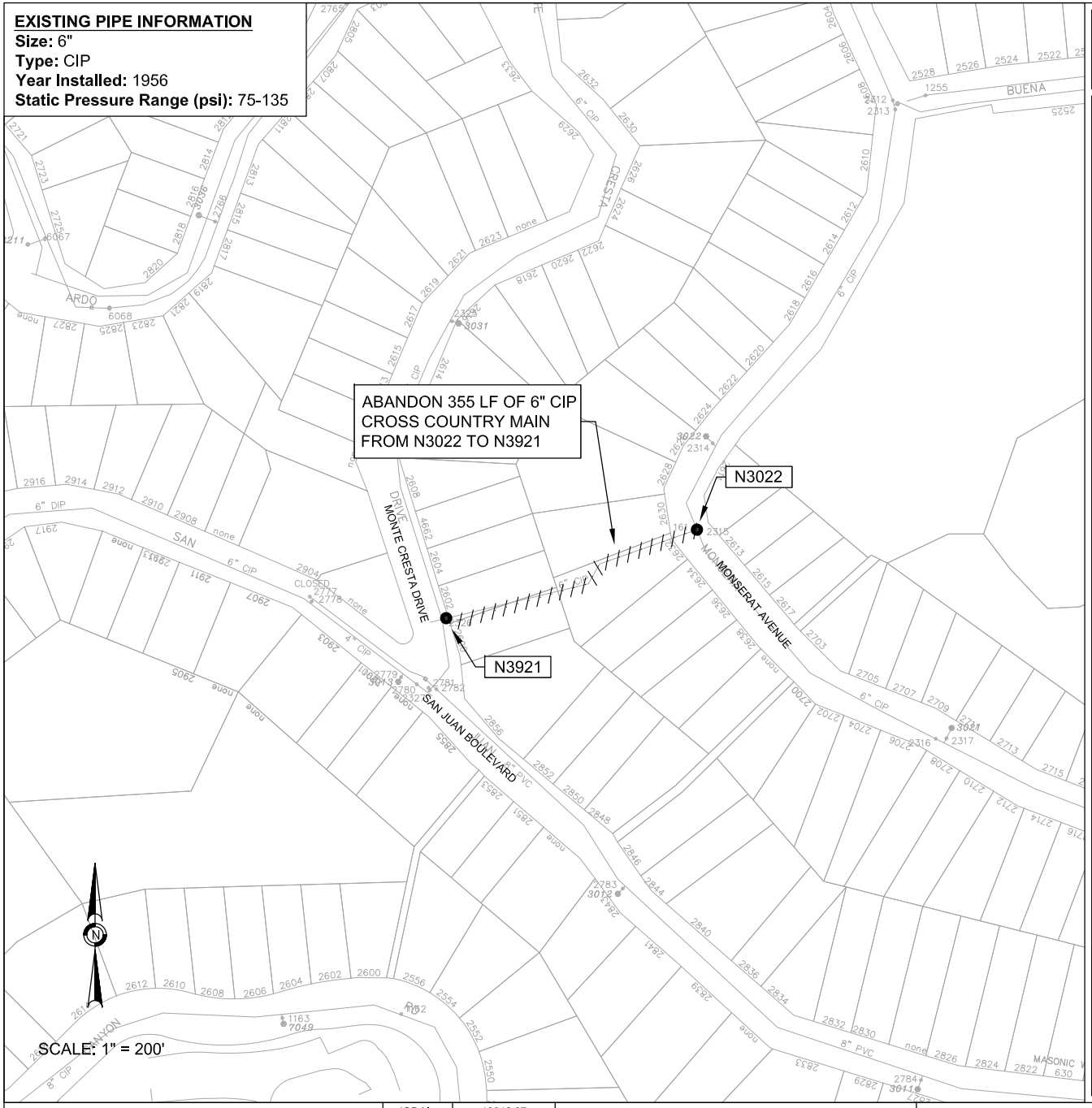
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ALAMEDA DE LAS PULGAS IMPROVEMENTS
PROJECT 15-30

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: CIP
Year Installed: 1956
Static Pressure Range (psi): 75-135



MONSERAT AVENUE
CROSS COUNTRY ABANDONMENT

PROJECT BACKGROUND

A cross country 6" cast iron pipe (CIP) water main exists between Monserat Avenue and Monte Cresta Drive just north of San Juan Boulevard. This water main runs between 2630 and 2632 Monserat Avenue at the top (elev. 432 ft) and extends downhill to between 2602 and 2600 Monte Cresta Drive at the bottom (elev. 299 ft). Should a break occur on this section of water main, there is significant risk of water damage to the homes on Monte Cresta Drive. A hydraulic analysis shows the abandonment of this water main has no adverse affects on fire flows within the area. Distribution System Analysis No. 033

PROPOSED IMPROVEMENTS

Abandon 355 LF 6" CIP

PROJECT BENEFITS

The Monserat Avenue Cross Country Abandonment eliminates a cross country 6" CIP without adversely affecting fire flows within the area.

PROJECT BUDGET (2015)

Abandonments at each end @ $10,000/ea	$	20,000
Subtotal Construction	$	20,000
Planning, Design & Construction Support	$	7,000
Contingency (±10%)	$	3,000
Project Budget	**$**	**30,000**

PROJECT COMPLETED

Completion Date:		2017
Actual Expenditures		
Planning, Design, & Construction Support:	$	-
Construction:	$	10,000
Total Expenditures:	$	10,000

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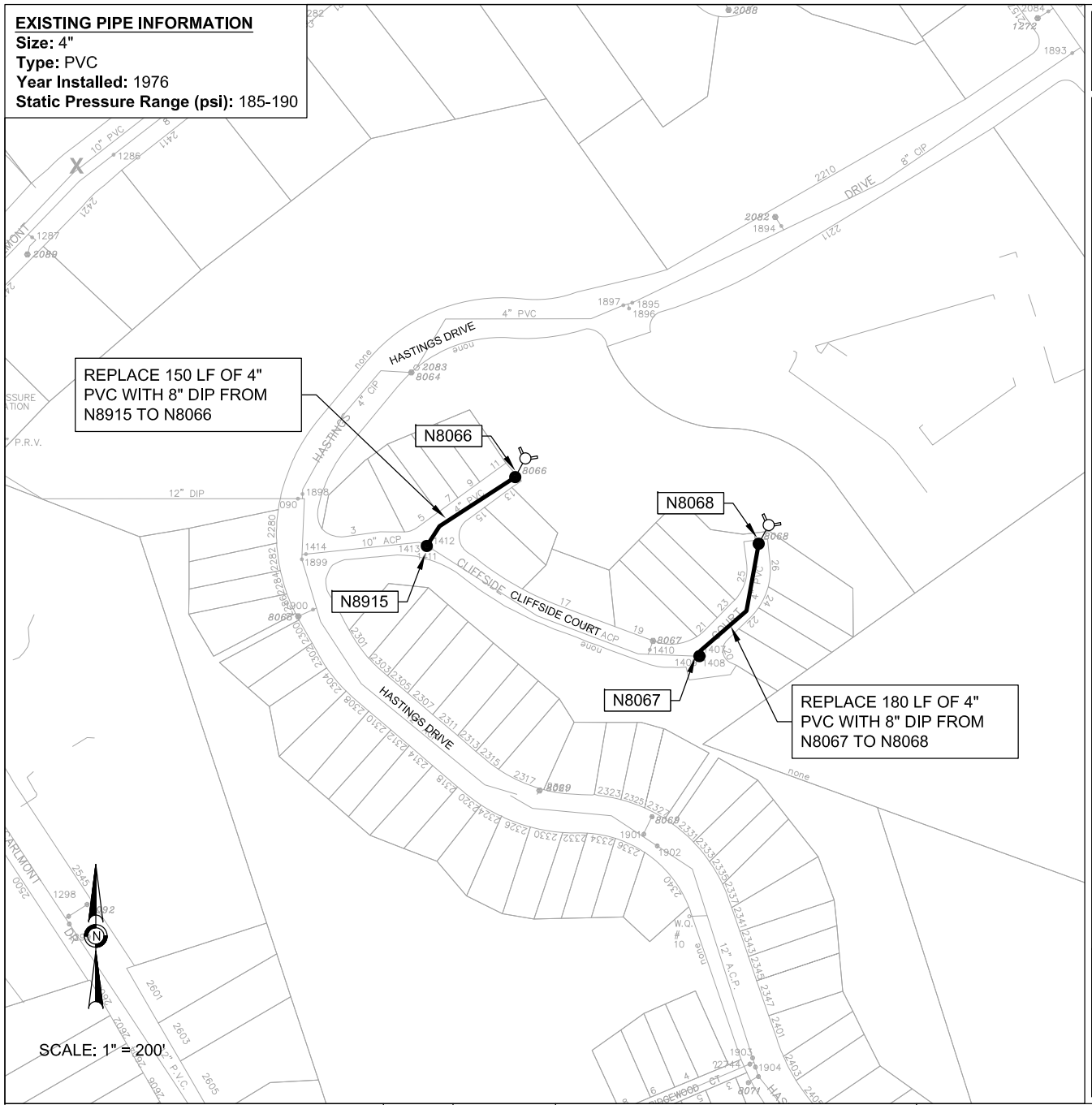
JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN:	BY BL
	CKD JP

MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
MONSERAT AVENUE CROSS COUNTRY ABANDONMENT
PROJECT 15-31

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie



CLIFFSIDE COURT IMPROVEMENTS

As part of the Notre Dame Ave, Cliffside Ct, Tahoe Dr Area Water Main Improvements constructed in 2019, this CIP was modified to only include 16 service connection replacements. No water main or hydrants were replaced.

PROJECT BACKGROUND

Water is currently provided to 14 residences on Cliffside Court through 330 LF 4" polyvinyl chloride pipe (PVC) originally installed in 1976. The existing available fire flows (588 gpm) on Cliffside Court are significantly below the recommended 1,500 gpm at 20 psi residual. This project replaces the existing 4" PVC with new 8" ductile iron pipe (DIP), replaces the existing fire hydrants, and replaces all 14 services. Hydraulic analysis indicates a 300% increase in available fire flow to 2,350 gpm to Cliffside Court upon completion of this project. An analysis on water age indicates minimal effects with the increase in pipe size. Distribution System Analysis No. 040

PROPOSED IMPROVEMENTS

Replace 330 LF of 4" PVC with 8" DIP
Replace 2 fire hydrants
Replace 14 service connections

PROJECT BENEFITS

The Cliffside Court Improvements replaces undersized 4" PVC water mains with new 8" DIP increasing fire flow by approximately 300% in the area.

PROJECT BUDGET (2015*)

8" DIP - 330 LF @ $250/LF	$	82,500
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 14 @ $3,000/EA	$	42,000
Subtotal Construction	$	154,500
Planning, Design & Construction Support	$	46,500
Contingency (±10%)	$	19,000
Project Budget	**$**	**220,000**

PROJECT COMPLETED

Completion Date:		2020
Actual Expenditures		
Planning, Design, & Construction Support:	$	28,315
Construction:	$	125,077
Total Expenditures:	$	153,392

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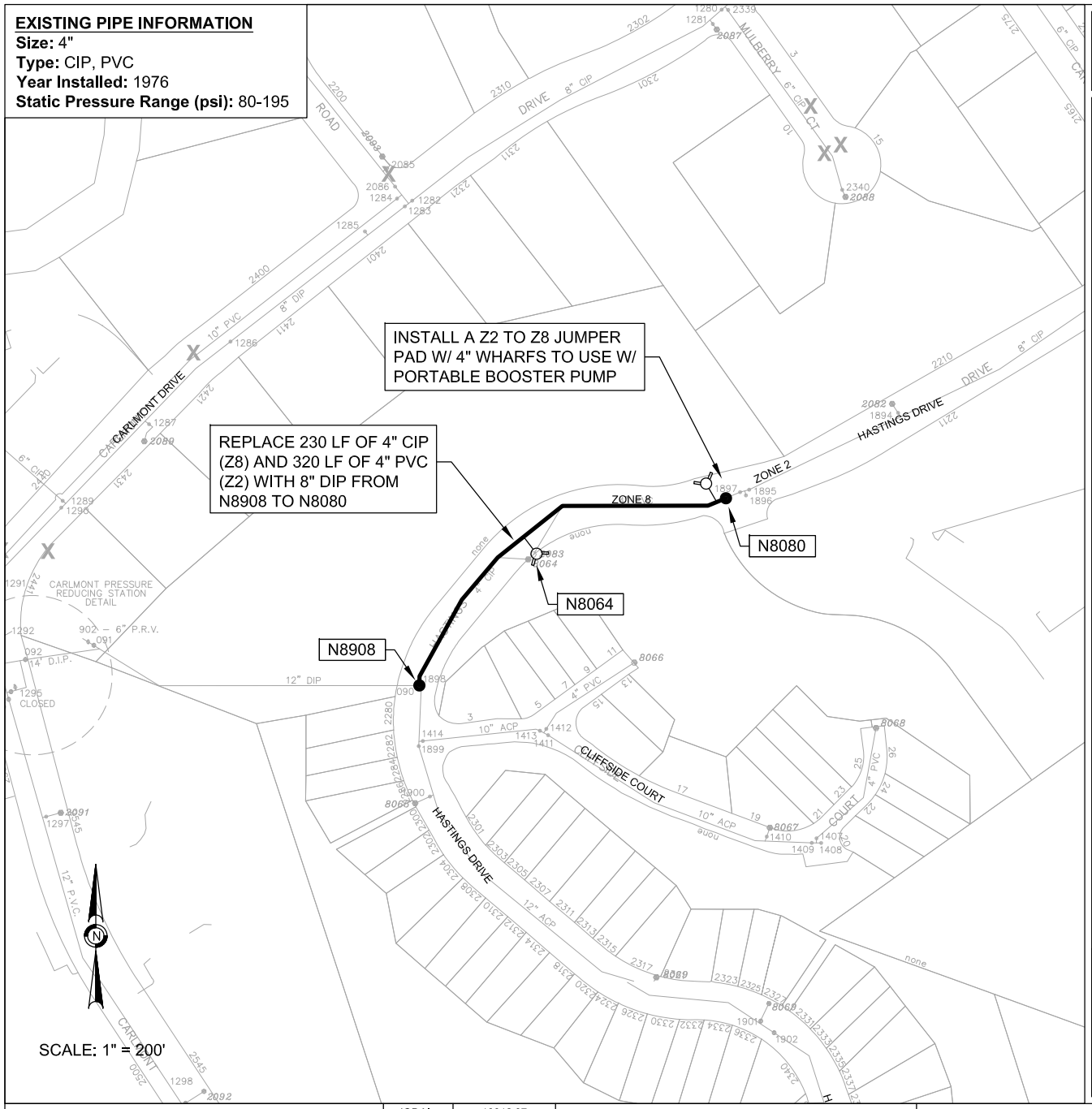
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
CLIFFSIDE COURT IMPROVEMENTS
PROJECT 15-38

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP, PVC
Year Installed: 1976
Static Pressure Range (psi): 80-195



HASTINGS DRIVE IMPROVEMENTS

As part of the Hastings Dr, Vine St, Belmont Canyon Rd Water Main Improvements constructed in 2022, this CIP was modified to abandon the existing 4" CIP between N8908 and N8080. No new water main or jumpers were installed.

PROJECT BACKGROUND

Two dead end water mains currently exist on Hastings Drive approximately 320 LF uphill of the Carlmont Heights entrance with a Zone 8 230 LF 4" cast iron pipe (CIP) and a Zone 2 320 LF 4" polyvinyl chloride (PVC). The Zone 8 dead end has a fire hydrant at N8064 whereas the Zone 2 dead end is capped below ground and valved off at the Carlmont Heights valve cluster. This project eliminates the Zone 2 dead end by replacing the existing Zone 8 CIP with a new 8-inch ductile iron pipe (DIP) while extending it to the Carlmont Heights entrance. To facilitate an emergency connection between Zone 2 and Zone 8 with the District's portable booster pump, a jumper pad will be built with a 4" wharf on each Zone. This pad will also serve as a flushing location for each Zone. As an additional benefit with the larger 8" Zone 8 DIP, Zone 8 fire flows downhill of Cliffside Drive increase 300% from 588 gpm to 2,350 gpm. Distribution System Analysis No. 041

PROPOSED IMPROVEMENTS

Replace 230 LF of 4" CIP and 320 LF of 4" PVC with 8" DIP
Install 1 new fire hydrant, Replace 1 fire hydrant
Install Z2 to Z8 jumper pad w/ 4" wharfs

PROJECT BENEFITS

The Hastings Drive Improvements eliminates a dead end, replaces undersized 4" water mains with new 8" DIP, provides an emergency connection point between Zone 2 and Zone 8 and increases Zone 8 fire flow by approximately 300% in the area.

PROJECT BUDGET (2020)

8" DIP - 550 LF @ $ 450/LF	$	247,500
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Z2 to Z8 Jumper Pad	$	50,000
Subtotal Construction	$	327,500
Planning, Design & Construction Support	$	80,000
Construction Inspection	$	35,000
Contingency (±10%)	$	42,500
Project Budget	**$**	**485,000**

PROJECT COMPLETED

Completion Date:		2023
Actual Expenditures		
Planning, Design, & Construction Support:	$	43,871
Construction:	$	11,149
Total Expenditures:	$	55,020

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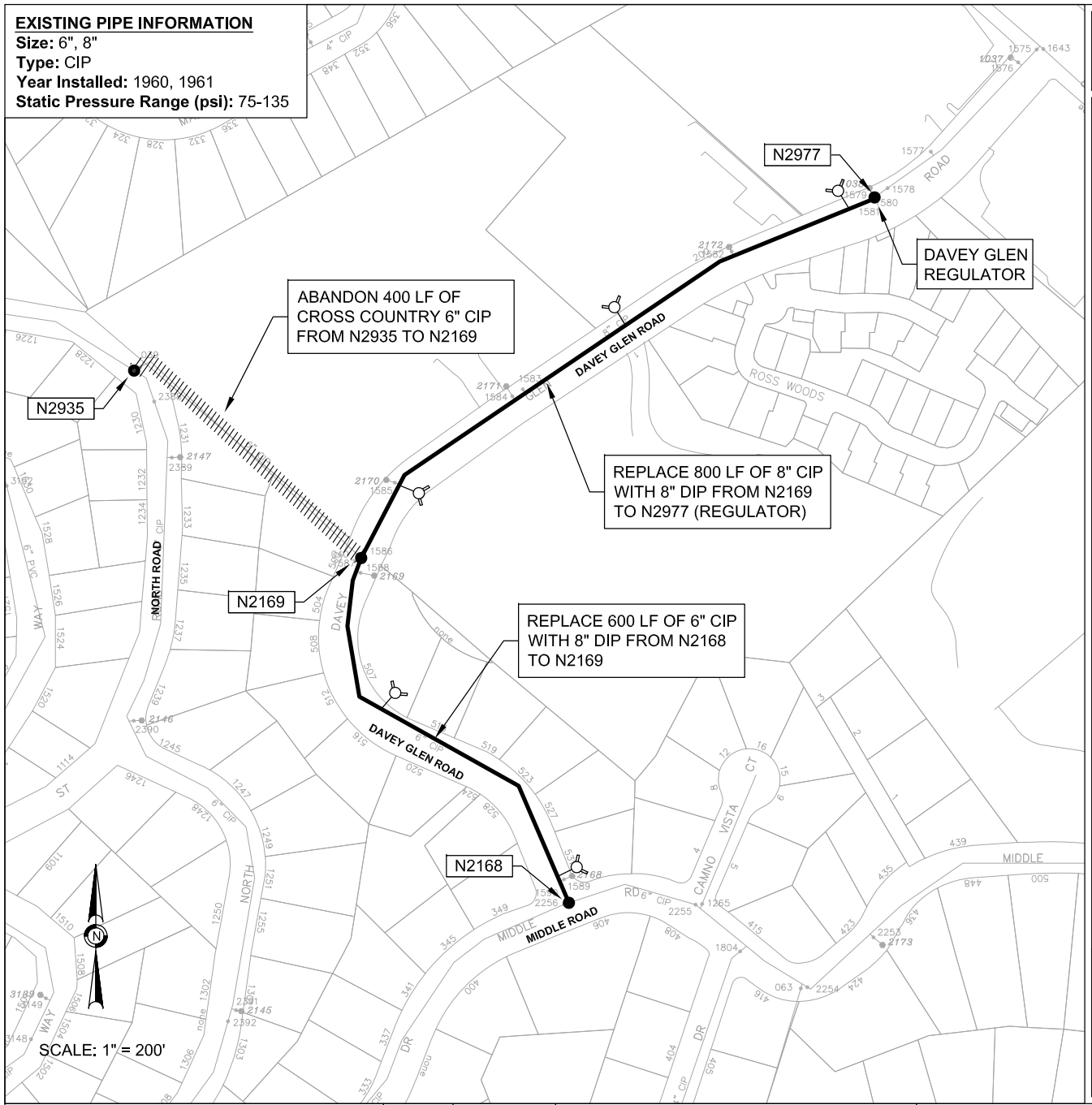
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
HASTINGS DRIVE IMPROVEMENTS
PROJECT 15-40

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6", 8"
Type: CIP
Year Installed: 1960, 1961
Static Pressure Range (psi): 75-135



NORTH ROAD CROSS COUNTRY / DAVEY GLEN ROAD IMPROVEMENTS

PROJECT BACKGROUND

The water mains along Davey Glen Road comprise of 600 LF of 6" cast iron pipe (CIP) and 800 LF of 8" CIP. Water is supplied to Davey Glen from Middle Road and a 6" CIP cross country (CC) water main extending down from North Road to where the 6" CIP on Davey Glen transitions to the 8" CIP. The CC water main runs beneath a 4 FT wide sidewalk along a dedicated easement. Beyond the edge of walk the terrain drops fairly steeply where at its base is an apartment complex pool and common area. Any breaks along this alignment could result in significant damage to both the hillside and the apartment complex below. This project abandons the CC water main and replaces 1,400 LF of CIP water main along Davey Glen Road with 8" DIP to correct fire flow deficiencies upon the CC abandonment. Hydraulic analysis indicates a fire flow decrease of up to 38% from approximately 2,400 gpm to 1,500 gpm with these improvements. However, combining this project with the South Road Improvements (DSA 045) brings the majority of the fire flows to above 2,000 gpm with a select few around 1,800 gpm. Distribution System Analysis No. 044.

PROPOSED IMPROVEMENTS

Abandon 400 LF of 6" CC CIP
Replace 1,400 LF of 6" & 8" CIP w/ 8" DIP
Replace 5 fire hydrants
Replace 17 service connections

PROJECT BENEFITS

The North Road Cross Country / Davey Glen Road Improvements abandons a CC water main, reduces District maintenance, and replaces an aging water main along Davey Glen Road.

PROJECT BUDGET (2015)

Pipe Abandonment - 2 @ $10,000/End	$ 20,000
8" DIP - 1,400 LF @ $250/LF	$ 350,000
Fire Hydrants - 5 @ $15,000/EA	$ 75,000
Service Connections - 17 @ $3,000/EA	$ 51,000
Subtotal Construction	$ 496,000
Planning, Design & Construction Support	$ 124,000
Contingency (±10%)	$ 60,000
Project Budget	**$ 680,000**

PROJECT COMPLETED

Completion Date:	2018
Actual Expenditures	
Planning, Design, & Construction Support:	$ 336,238
Construction:	$ 702,426
Total Expenditures:	$ 1,038,664

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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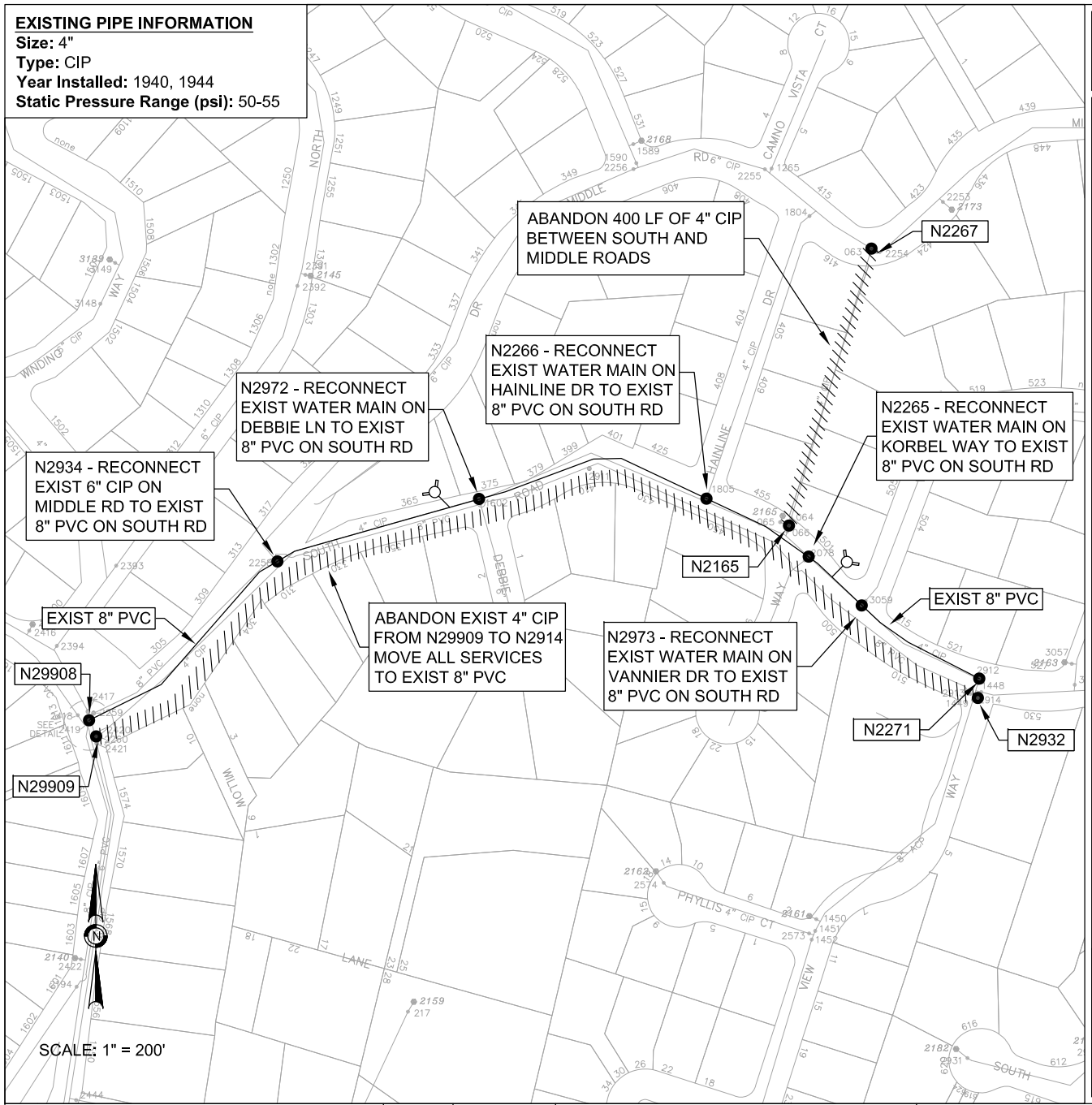
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
NORTH ROAD CROSS COUNTRY / DAVEY GLEN ROAD IMPROVEMENTS PROJECT 15-43

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1940, 1944
Static Pressure Range (psi): 50-55



SOUTH ROAD ABANDONMENT

PROJECT BACKGROUND

South Road between Notre Dame Avenue and College View Way has 1,325 LF of parallel 4" cast iron (CIP) and 8" polyvinyl chloride (PVC) water mains. According to the District GIS and hydraulic model, all branches off South Road including Middle Road, Debbie Lane, Hainline Drive, Korbel Way, Vannier Drive, and College View Way, are connected to the 4" CIP thereby restricting water flow and reducing fire flows to those areas. Fire flows in the immediate area, under existing conditions, are below minimum recommendations of 1,500 gpm at 20 psi. This project abandons the 4" CIP and reconnects all branches on this stretch of water main to the 8" PVC. Three new fire hydrants will also be added to the alignment to improve hydrant spacing in the area. Hydraulic analysis indicates an increase in fire flows as high as 175% (2,400 gpm) with an average increase of over 57%. Approximately 19 service connections would also be transferred from the 4" CIP to the 8" PVC. This project also provides additional fire flow benefits when combined with other DSA's within the area. Distribution System Analysis No. 045

PROPOSED IMPROVEMENTS

Abandon 1,325 LF of 4" CIP
Reconnect 6 branches to the existing 8" PVC
Install 3 new fire hydrants
Replace 19 service connections

PROJECT BENEFITS

The South Road Abandonment abandons an old and aging water main, reduces District maintenance, and increases fire flows in the area as much as 175% by moving all branches to an existing 8" PVC.

PROJECT BUDGET (2015)

Pipe Reconnects - 6 @ $30,000/EA	$	180,000
Pipe Abandonments - 2 @ $10,000/End	$	20,000
Fire Hydrants - 3 @ $15,000/EA	$	45,000
Service Connections - 19 @ $3,000/EA	$	57,000
Subtotal Construction	$	302,000
Planning, Design & Construction Support	$	75,000
Contingency (±10%)	$	38,000
Project Budget	**$**	**415,000**

PROJECT COMPLETED

Completion Date: 2018

Actual Expenditures

Planning, Design, & Construction Support:	$	97,549
Construction:	$	368,307
Total Expenditures:	$	465,856

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JOB No.	10012.07
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SCALE	AS NOTED
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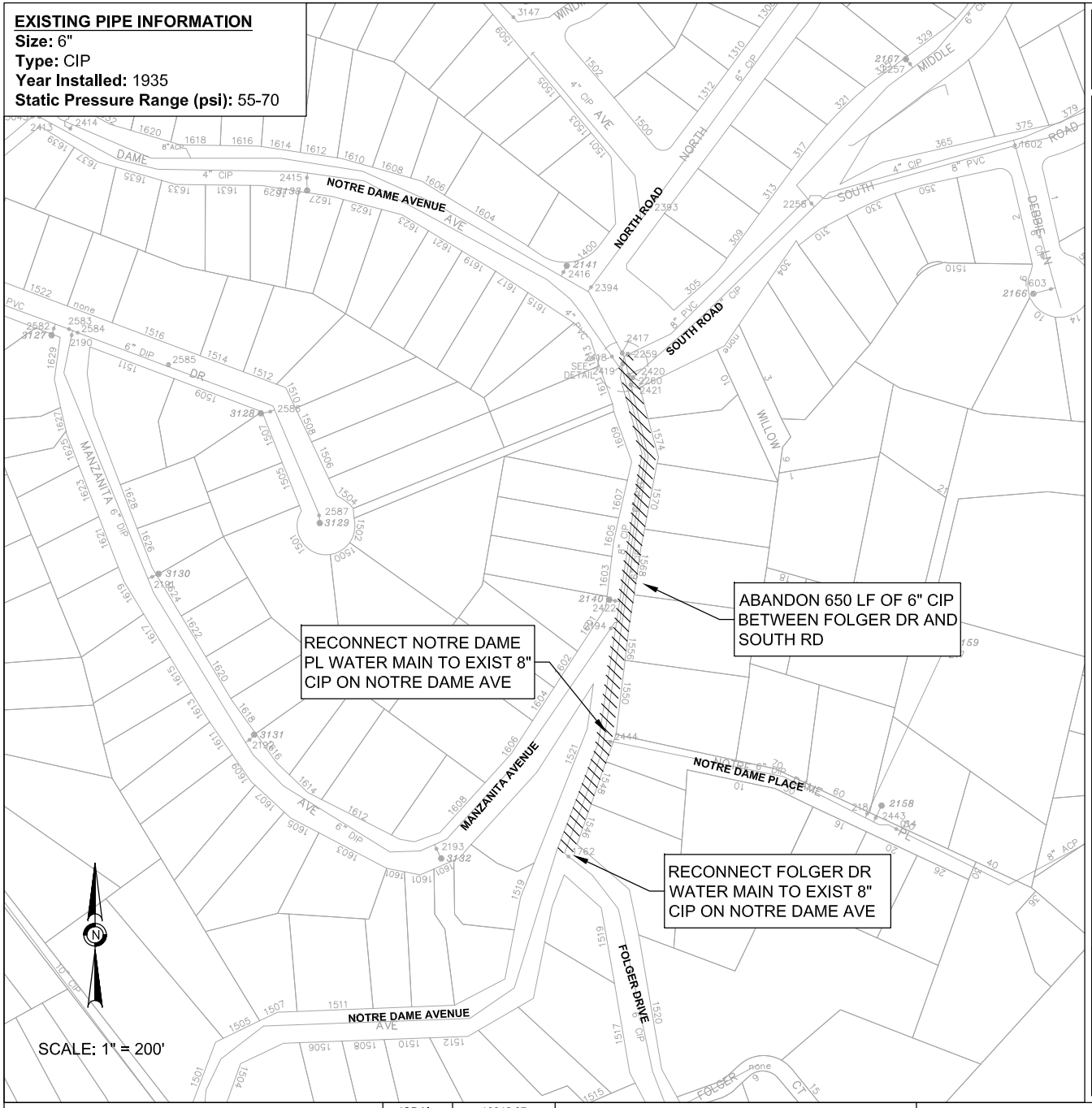
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SOUTH ROAD ABANDONMENT
PROJECT 15-44

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: CIP
Year Installed: 1935
Static Pressure Range (psi): 55-70



MID-NOTRE DAME AVENUE ABANDONMENT

PROJECT BACKGROUND

Notre Dame Avenue between Folger Drive and South Road has two parallel Zone 2 water mains: an 8" cast iron pipe (CIP) and a 6" CIP. Fire flows under existing conditions are very strong in the area with flows well above the minimum recommendation of 1,500 gpm at 20 psi. This project abandons the existing 6" CIP and reconnects all branch connections and service connections to the existing 8" CIP. Hydraulic analysis indicates there is no adverse affect in abandoning the 6" CIP and fire flows remain nearly identical. Although the existing 8" CIP is also an aging water main, potential replacement of this water main will be on another distribution analysis involving all of the 8" water main on Notre Dame Avenue from Folger Drive to Hersom Tank. Distribution System Analysis No. 053

PROPOSED IMPROVEMENTS

Abandon 650 LF of 6" CIP
Replace 10 service connections

PROJECT BENEFITS

The Mid-Notre Dame Avenue Abandonment abandons a redundant, aging water main between Folger Drive and South Road reducing District maintenance.

PROJECT BUDGET (2015*)

Pipe Abandonments - 2 @ $10,000/End	$	20,000
Pipe Reconnects - 2 @ $30,000/EA	$	60,000
Service Connections - 10 @ $3,000/EA	$	30,000
Subtotal Construction	$	110,000
Planning, Design & Construction Support	$	33,000
Contingency (±10%)	$	17,000
Project Budget	**$**	**160,000**

PROJECT COMPLETED

Completion Date:		2020
Actual Expenditures		
Planning, Design, & Construction Support:	$	274,363
Construction:	$	67,568
Total Expenditures:	$	341,931

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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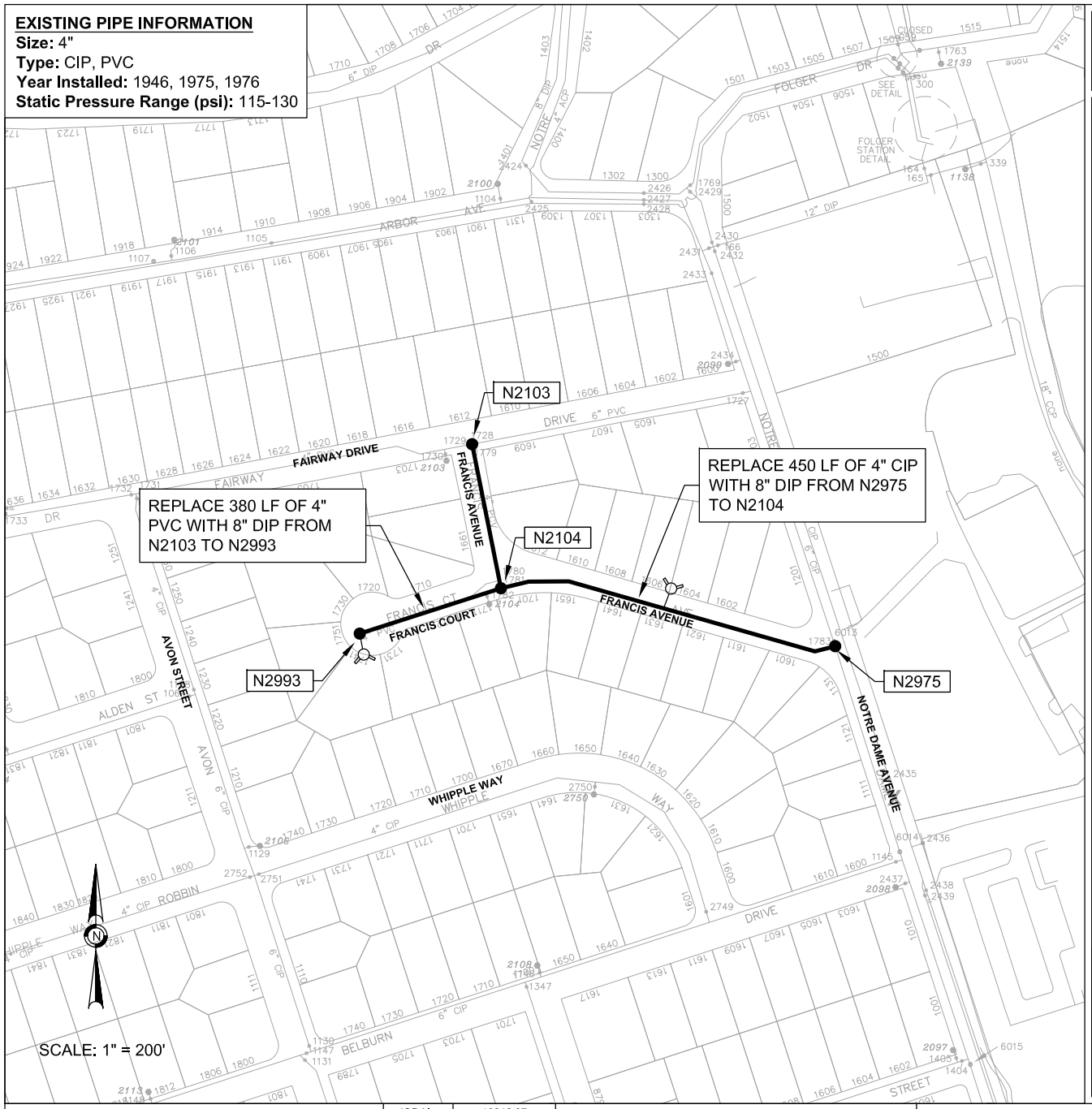
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
MID-NOTRE DAME AVENUE ABANDONMENT
PROJECT 15-49

Rev 2 - 12/23
Rev 1 - 02/20
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP, PVC
Year Installed: 1946, 1975, 1976
Static Pressure Range (psi): 115-130



FRANCIS AVENUE / COURT IMPROVEMENTS

PROJECT BACKGROUND

Francis Avenue is located between Fairway Drive and Notre Dame Avenue and has 450 LF of 4" cast iron pipe (CIP) and 190 LF of polyvinyl chloride (PVC) water mains. Francis Court is located directly off Francis Avenue and also has 190 LF of 4" PVC. Fire flows along these streets are well below the recommended 1,500 gpm at 20 psi with flows as low as 925 gpm and 590 gpm on Francis Avenue and Francis Court respectively. In addition, no hydrant currently exists at the end of Francis Court. This project replaces the 4" PVC and CIP with 8" ductile iron pipe (DIP) and adds an additional hydrant in the area. Hydraulic analysis indicates fire flow increases as much as 300% to over 2,350 gpm upon completion of this project. Distribution System Analysis No. 055

PROPOSED IMPROVEMENTS

Replace 830 LF of 4" PVC/CIP with 8" DIP
Install 1 new fire hydrant
Replace 1 fire hydrant
Replace 23 service connections

PROJECT BENEFITS

The Francis Avenue/Court Improvements replaces undersized 4" PVC/CIP water mains with 8" DIP, improves fire protection with the addition of a hydrant, and improves fire flows in the area as much as 300%.

PROJECT BUDGET (2015)

830 LF - 8" DIP @ $250/LF	$	207,500
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 23 @ $3,000/EA	$	69,000
Subtotal Construction	$	306,500
Planning, Design & Construction Support	$	78,000
Contingency (±10%)	$	40,500
Project Budget	**$**	**425,000**

PROJECT COMPLETED

Completion Date: 2018

Actual Expenditures

Planning, Design, & Construction Support:	$	166,334
Construction:	$	347,483
Total Expenditures:	$	513,817

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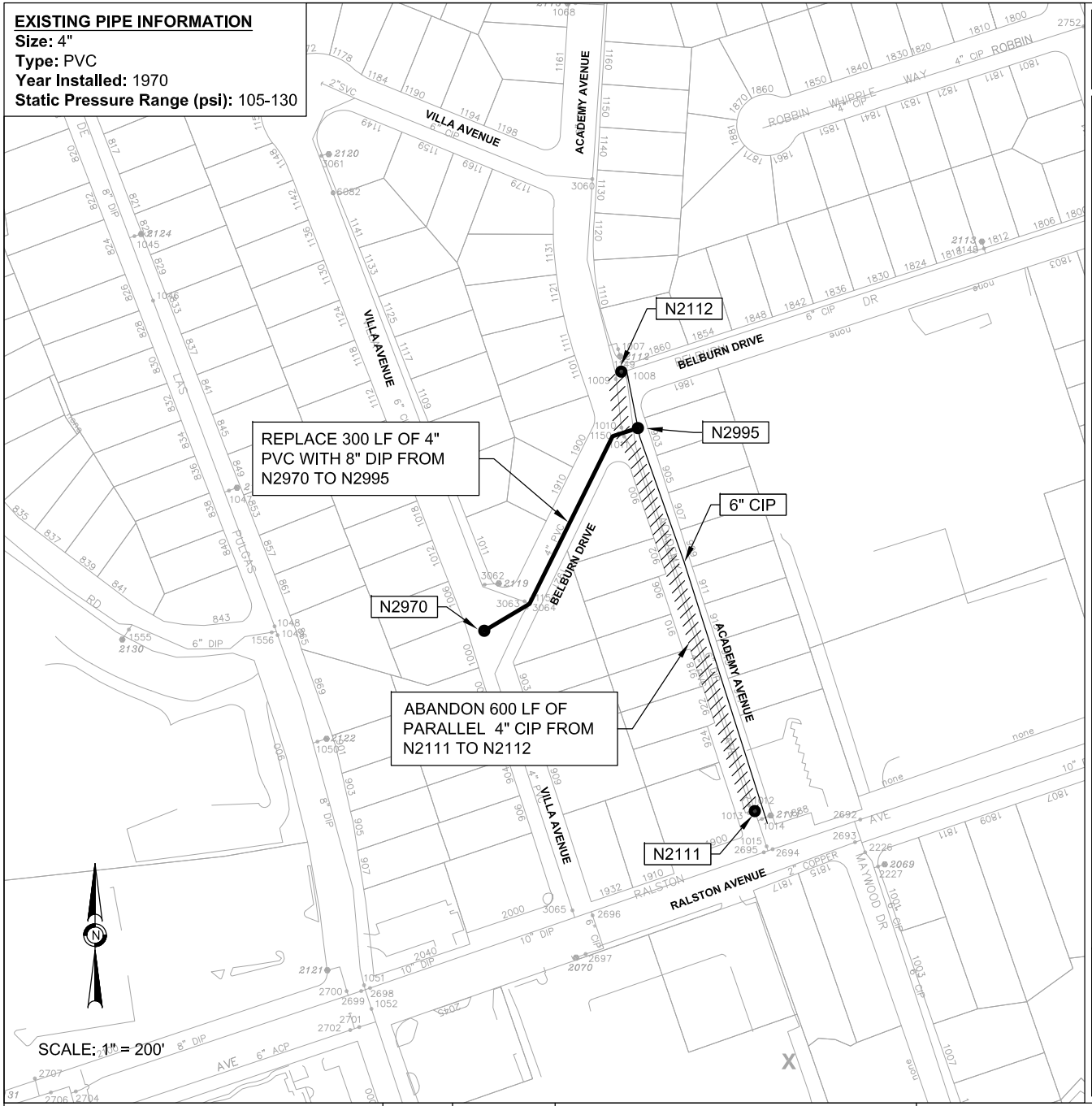
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
FRANCIS AVENUE / COURT IMPROVEMENTS
PROJECT 15-51

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: PVC
Year Installed: 1970
Static Pressure Range (psi): 105-130



ACADEMY AVENUE / BELBURN DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Academy Avenue between Ralston Avenue and Belburn Drive has two parallel water mains: a 600 LF 4" polyvinyl chloride (PVC) water main and a 6" cast iron (CIP) water main installed in 1977. Hydraulic analysis indicates the existing 4" PVC provides little hydraulic benefit to the system. It is assumed the existing services are located on the 4" PVC. In addition, Belburn Drive between Academy Avenue and Villa Avenue also has a 300 LF 4" PVC water main incapable of achieving the minimum recommended fire flow of 1,500 gpm at 20 psi with fire flows at 1,080 gpm. The two 4" PVC water mains aforementioned connect to each other at Academy Avenue. This project abandons the existing 4" PVC on Academy Avenue, relocates 22 service connections to the existing 6" CIP, and replaces 150 LF of PVC on Belburn Drive with 8" ductile iron pipe (DIP) connecting it to the existing 6" CIP on Academy Avenue. Hydraulic analysis indicates a 132% increase in fire flows on Belburn Drive to 2,500 gpm. Distribution System Analysis Nos. 057 and 058

PROPOSED IMPROVEMENTS

Abandon 600 LF of 4" PVC
Replace 300 LF of 4" PVC with 8" DIP
Replace 25 service connections (22 on Academy, 3 on Belburn)

PROJECT BENEFITS

The Academy Avenue / Belburn Drive Improvements abandons a 4" PVC water main providing little benefit to the system, replaces old and aging 4" PVC with new 8" DIP, reduces District maintenance, and improves fire flows in the area as much as 132%.

PROJECT BUDGET (2015)

Pipe Reconnection - 1 @ $20,000/EA	$	20,000
Pipe Abandonments - 2 @ $10,000/EA	$	20,000
8" DIP - 300 LF @ $250/LF	$	75,000
Service Connections - 25 @ $3,000/EA	$	75,000
Subtotal Construction	$	190,000
Planning, Design & Construction Support	$	57,000
Contingency (±10%)	$	23,000
Project Budget	**$**	**270,000**

PROJECT COMPLETED

Completion Date: 2018

Actual Expenditures

Planning, Design, & Construction Support:	$	105,454
Construction:	$	220,300
Total Expenditures:	$	325,754

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SCALE	AS NOTED
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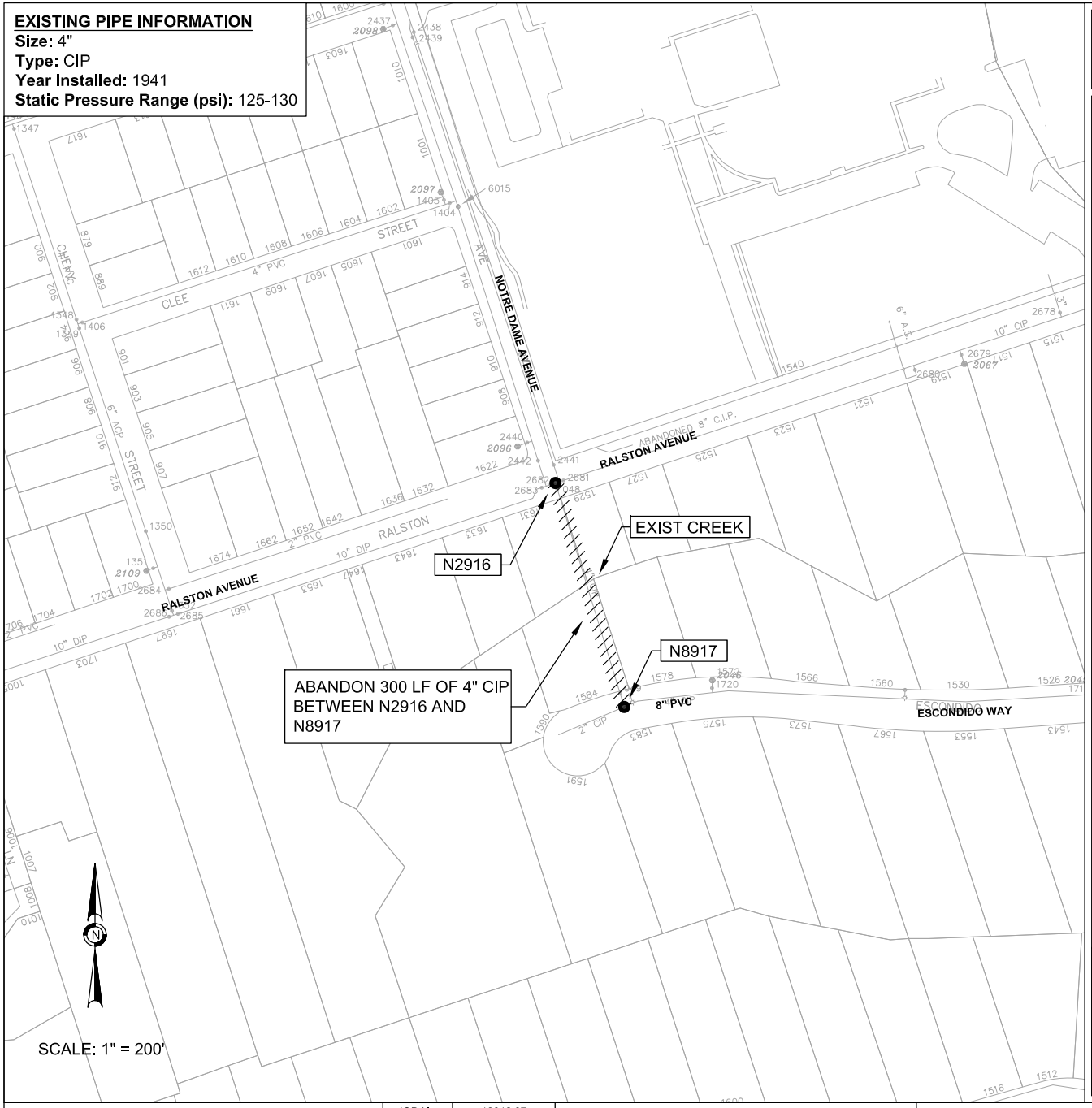
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ACADEMY AVENUE / BELBURN DRIVE IMPROVEMENTS
PROJECT 15-53

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 4"
Type: CIP
Year Installed: 1941
Static Pressure Range (psi): 125-130



ESCONDIDO WAY CROSS COUNTRY ABANDONMENT

PROJECT BACKGROUND

Escondido Way runs parallel with Ralston Avenue off Chula Vista Drive. It has a 1,600 LF 8" polyvinyl chloride (PVC) water main that transitions to a 300 LF 4" cast iron (CIP) water main which runs cross country (CC) and connects to the water main on Ralston Avenue. The 4" CC CIP runs between 1529 and 1631 Ralston Avenue to the north and 1584 and 1578 Escondido Way to the south through a dedicated easement which crosses a creek. Both the District GIS and aerial imagery indicate the water main may also physically be under or very close to the home at 1584 Escondido Way. The 4" CC CIP is essentially unserviceable given these parameters and could cause significant damage to homes in the event of a main break. This project abandons the 4" CC CIP while at the same time creating a long dead end on Escondido Way. A water age analysis indicates water turn over is sufficient with the 28 residences on Escondido Way. Hydraulic analysis also indicates there is a 7% decrease in fire flows however flows still remain above 2,300 gpm. Distribution System Analysis No. 065

PROPOSED IMPROVEMENTS

Abandon 300 LF of 4" CIP

PROJECT BENEFITS

The Escondido Way Cross Country Abandonment abandons an aging and undersized water main that could cause significant damage upon main breaks.

PROJECT BUDGET (2024)

Abandonment at Each End @ $25,000/EA	$	50,000
Subtotal Construction	$	50,000
Planning, Design & Construction Support	$	15,000
Construction Inspection	$	5,000
Contingency (±10%)	$	10,000
Project Budget	**$**	**80,000**

PROJECT COMPLETED

Completion Date:		2021
Actual Expenditures		
Planning, Design, & Construction Support:	$	-
Construction:	$	6,500
Total Expenditures:	$	6,500

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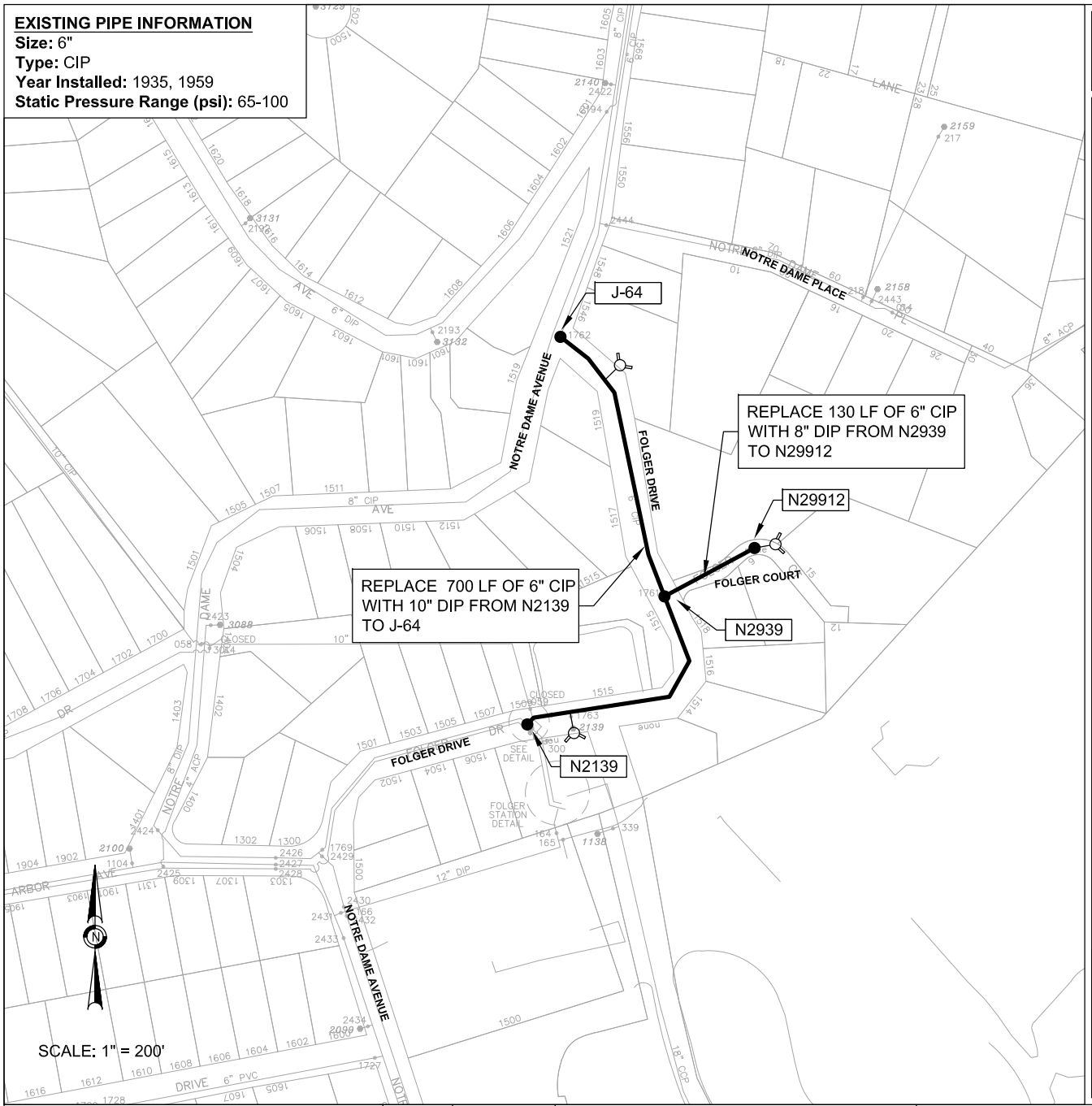
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
ESCONDIDO WAY CROSS COUNTRY ABANDONMENT
IMPROVEMENT PROJECT 15-60

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: CIP
Year Installed: 1935, 1959
Static Pressure Range (psi): 65-100



FOLGER DRIVE IMPROVEMENTS

PROJECT BACKGROUND

The water mains along Folger Drive are comprised of 350 LF of 10" polyvinyl chloride (PVC) and 700 LF of 6" CIP. Due to age, the District has reported several leaks on the 6" CIP. This project replaces the 6" CIP with a new 10" DIP further extending the 10" up to Notre Dame Avenue. Upon completion of the parallel water main replacement along Notre Dame Avenue between Folger Drive and Ralston with a new 10" DIP, 10" pipe will extend further beyond the Hannibal Pump Station. This project also replaces 130 LF of 6" CIP on Folger Court with an 8" DIP. A total of 3 fire hydrants and 12 services would be replaced along Folger Drive and Folger Court.

PROPOSED IMPROVEMENTS

Replace 700 LF of 6" CIP with 10" DIP
Replace 130 LF of 6" CIP with 8" DIP
Replace 3 fire hydrants
Replace 12 service connections

PROJECT BENEFITS

The Folger Drive Improvements replaces old and aging 6" CIP water mains that have experienced significant leaks with a new 8" or 10" DIP. This also extends the 10" water main from Hannibal Pump Station further up towards Hersom Tank.

PROJECT BUDGET (2015)

10" DIP - 700 LF @ $275/LF	$	192,500
8" DIP - 130 LF @ $250/LF	$	32,500
Fire Hydrants - 3 @ $15,000/EA	$	45,000
Service Connections - 12 @ $3,000/EA	$	36,000
Subtotal Construction	$	306,000
Planning, Design & Construction Support	$	77,000
Contingency (±10%)	$	37,000
Project Budget	**$**	**420,000**

PROJECT COMPLETED

Completion Date:		2018
Actual Expenditures		
Planning, Design, & Construction Support:	$	109,301
Construction:	$	496,464
Total Expenditures:	$	605,765

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JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
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CKD	JP

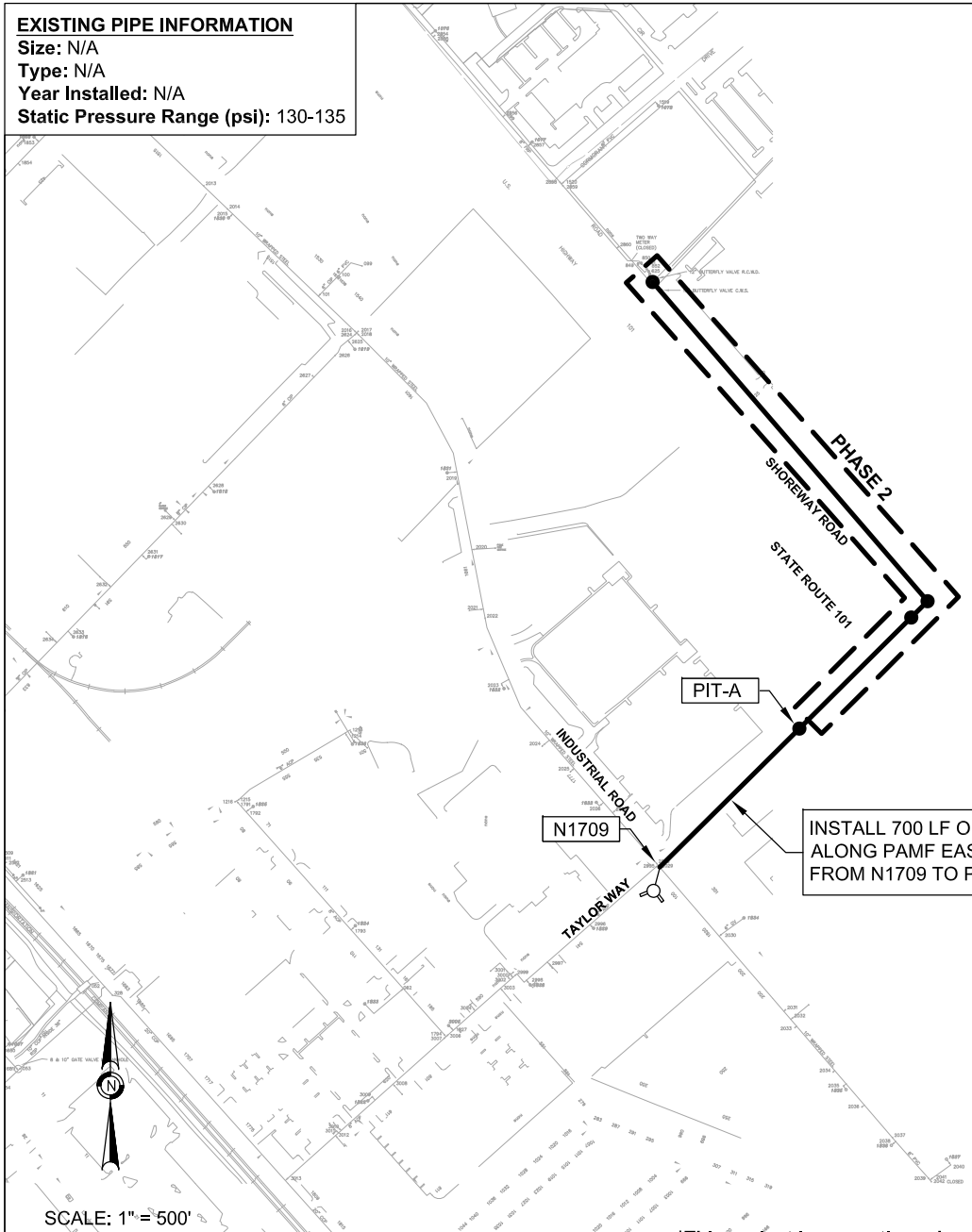
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
FOLGER DRIVE IMPROVEMENTS
PROJECT 15-65

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): 130-135



*This project is currently under design. Construction costs are updated to reflect 2020 costs based on recent bid tabulations.

SR 101 CROSSING AT PAMF IMPROVEMENTS - PHASE 1

PROJECT BACKGROUND

Two State Route 101 (SR 101) water main crossings exist in Zone 1 including a 500 LF 12" asbestos cement (AC) crossing between Karen Road and Sem Lane and another 12" polyvinyl chloride (PVC) crossing a half mile to the north. The 12" AC was installed in 1963 in a 36" steel casing. As part of the PAMF development agreement at the south end of Zone 1, the District obtained a 15 ft easement along the northeast side of the PAMF property in addition to a 40 ft x 40 ft area in the northeast corner to serve as a staging area for an alternate SR 101 crossing. This project abandons the aging 12" AC crossing and relocates it to the PAMF easement with a new 1,100 LF 12" PVC water main. To loop the water main back to the existing water main on Shoreway Road requires the installation of an additional 1,200 LF 8" PVC. Hydraulic analysis indicates increased fire flows along Shoreway Road of approximately 200 gpm. This project will require extensive Caltrans coordination. Distribution System Analysis No. 077

PROPOSED IMPROVEMENTS - PHASE 1

Install 700 LF 12" PVC
Install 1 fire hydrant assembly
Cathodic protection of all metallic fittings/materials

PROJECT BENEFITS

The SR 101 Crossing at PAMF Improvements replaces an old and aging water main capable of causing major disruptions on SR 101 in the event of a main break, eliminates a dead end, creates a looped system, improves fire flows, and constructs a serviceable underground inter-tie utility vault.

PROJECT BUDGET (2020)

12" PVC - 700 LF @ $550/LF	$	385,000
Fire Hydrants - 1 @ $15,000/EA	$	15,000
Subtotal Construction	$	400,000
Planning, Design, & Construction Support	$	100,000
Construction Inspection	$	40,000
Contingency (±10%)	$	55,000
Project Budget	**$**	**595,000**

PROJECT COMPLETED

Completion Date:		2021
Actual Expenditures		
Planning, Design, & Construction Support:	$	542,525
Construction:	$	303,477
Total Expenditures:	$	846,002

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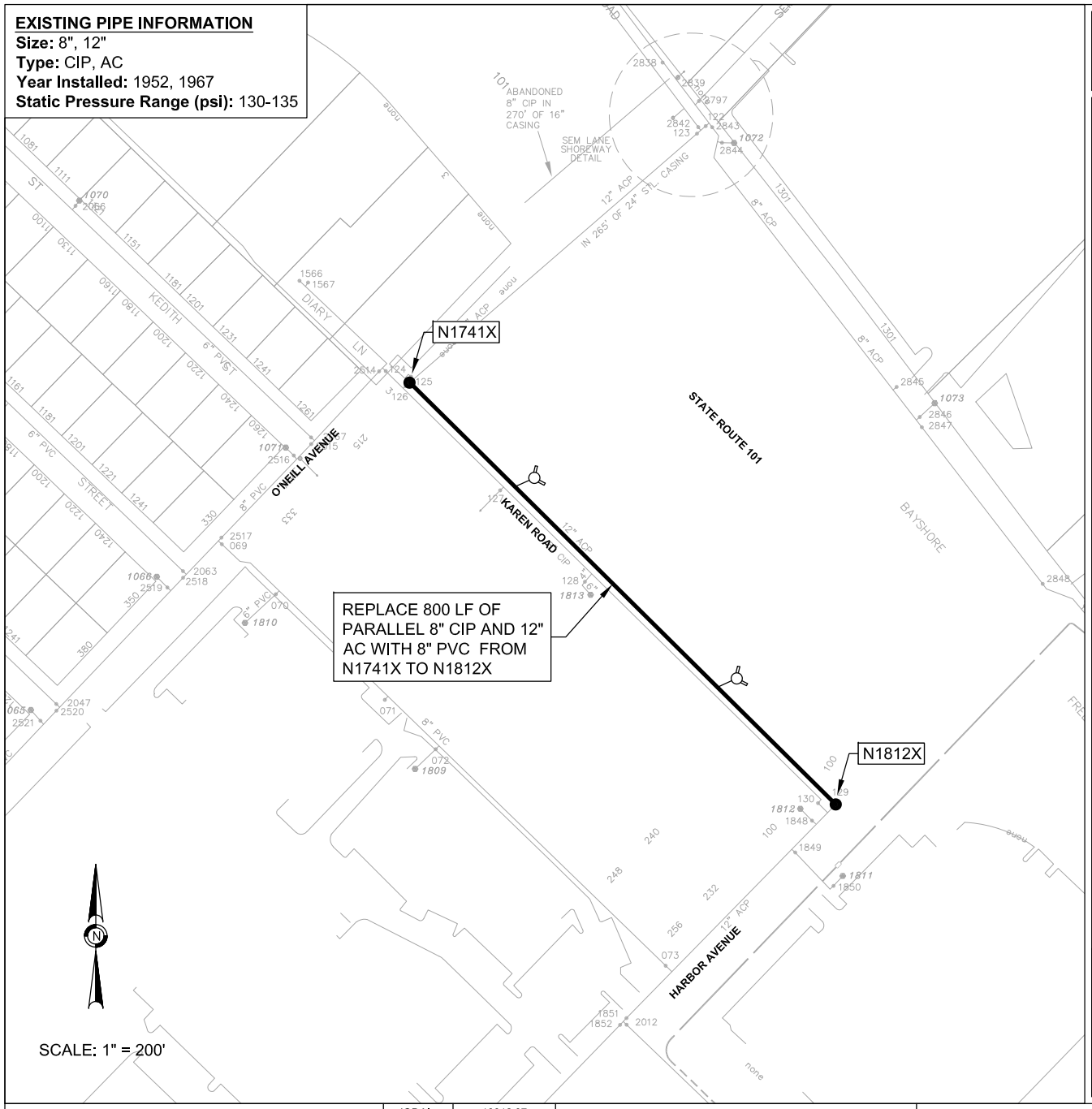
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SR 101 CROSSING AT PAMF IMPROVEMENTS - PHASE 1
PROJECT 15-72A

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 8", 12"
Type: CIP, AC
Year Installed: 1952, 1967
Static Pressure Range (psi): 130-135



KAREN ROAD IMPROVEMENTS

PROJECT BACKGROUND

Karen Road is located immediately parallel to SR 101 between Harbor Boulevard and O'Neill Avenue and has two parallel water mains: an 800 LF 8" cast iron (CIP) and an 800 LF 12" asbestos cement (AC). The 12" AC is part of a continuous 12" transmission main serving Zone 1 on the eastern side of SR 101 whereas the 8" CIP is primarily used for the hydrants and service connections. The District has reported several leaks and subsequent repairs along the 8" CIP. Hydraulic analysis indicates the parallel water mains can be reduced to a single 8" water main with no affects on fire flows. In addition, with the likelihood of the 12" AC SR 101 crossing being relocated to the PAMF easement (CIP 15-72), there is no need for an additional 12" along Karen Road. Distribution System Analysis No. 078

PROPOSED IMPROVEMENTS

Replace 800 LF of parallel 12" AC and 8" CIP with a new single 8" PVC
Replace 2 fire hydrants
Replace 9 service connections
Cathodic protection of all metallic fittings/materials

PROJECT BENEFITS

The Karen Road Improvements replaces two old and aging water mains prone to leaks and service repairs, and minimizes maintenance.

PROJECT BUDGET (2015)

Abandon 12" AC @ $20,000/LS	$	20,000
Abandon 8" CIP @ $20,000/LS	$	20,000
8" PVC - 800 LF @ $250/LF	$	200,000
Fire Hydrants - 2 @ $15,000/EA	$	30,000
Service Connections - 9 @ $3,000/EA	$	27,000
Caltrans Coordination @ $10,000/LS	$	10,000
Subtotal Construction	$	307,000
Planning, Design, & Construction Support	$	80,000
Contingency (±10%)	$	38,000
Project Budget	**$**	**425,000**

PROJECT COMPLETED

Completion Date:		2018
Actual Expenditures		
Planning, Design, & Construction Support:	$	104,696
Construction:	$	450,536
Total Expenditures:	$	555,232

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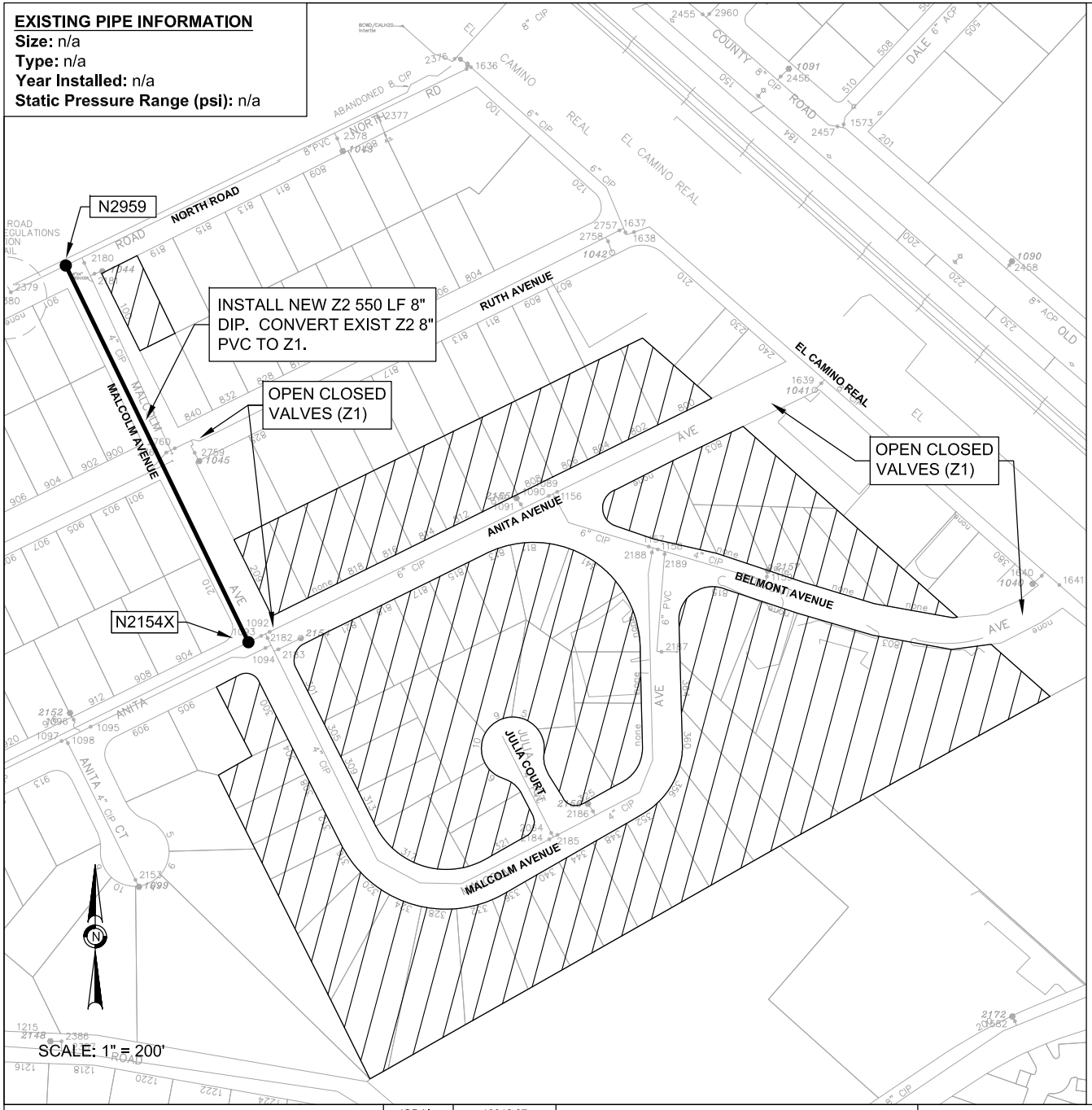
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
KAREN ROAD IMPROVEMENTS
PROJECT 15-73

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: n/a
Type: n/a
Year Installed: n/a
Static Pressure Range (psi): n/a



MALCOLM AVENUE AREA IMPROVEMENTS

PROJECT BACKGROUND

The neighborhood along Malcolm Avenue, Anita Avenue, Julia Court, and Belmont Avenue is currently served by Zone 2 and consists of 55 residences and 5 fire hydrants. Streets to the immediate north of Malcolm Avenue and those on Ruth Avenue and North Road are all served by Zone 1. The zones are connected at the North Road Regulating Station in addition to four other connections via closed valves creating 5 dead ends within the area. This project eliminates all the dead ends except the one associated with the North Road Regulator by installing a new parallel 550 LF ductile iron pipe (DIP) water main along the existing Zone 2 water main on Malcolm Avenue. The existing Zone 2 water main would become part of Zone 1 and the new water main would become part of Zone 2. Hydraulic analysis indicates a static pressure loss of approximately 40 psi to an average 98 psi with the Zone 2 to Zone 1 switch. Fire flows are minimally affected with differences around 100 gpm on average however the majority of the flows are above 2,000 gpm. Distribution System Analysis No. 079

PROPOSED IMPROVEMENTS

Install 550 LF of 8" DIP along Malcolm Avenue
Reconfigure Zone 1 and 2 boundaries
Replace 2 service connections

PROJECT BENEFITS

The Malcolm Avenue Area Improvements include reduced static pressures, elimination of 4 dead ends, creating a completely looped system in both Zones 1 and 2, increased fire protection for a few select nodes.

PROJECT BUDGET (2015)

8" DIP - 550 LF @ $250/LF	$	137,500
Tie-Ins - 4 @ $10,000/EA	$	40,000
Service Connections - 2 @ $3,000/EA	$	6,000
Subtotal Construction	$	183,500
Planning, Design, & Construction Support	$	57,000
Contingency (±10%)	$	24,500
Project Budget	**$**	**265,000**

PROJECT COMPLETED

Completion Date:		2019
Actual Expenditures		
Planning, Design, & Construction Support:	$	-
Construction:	$	195,027
Total Expenditures:	$	195,027

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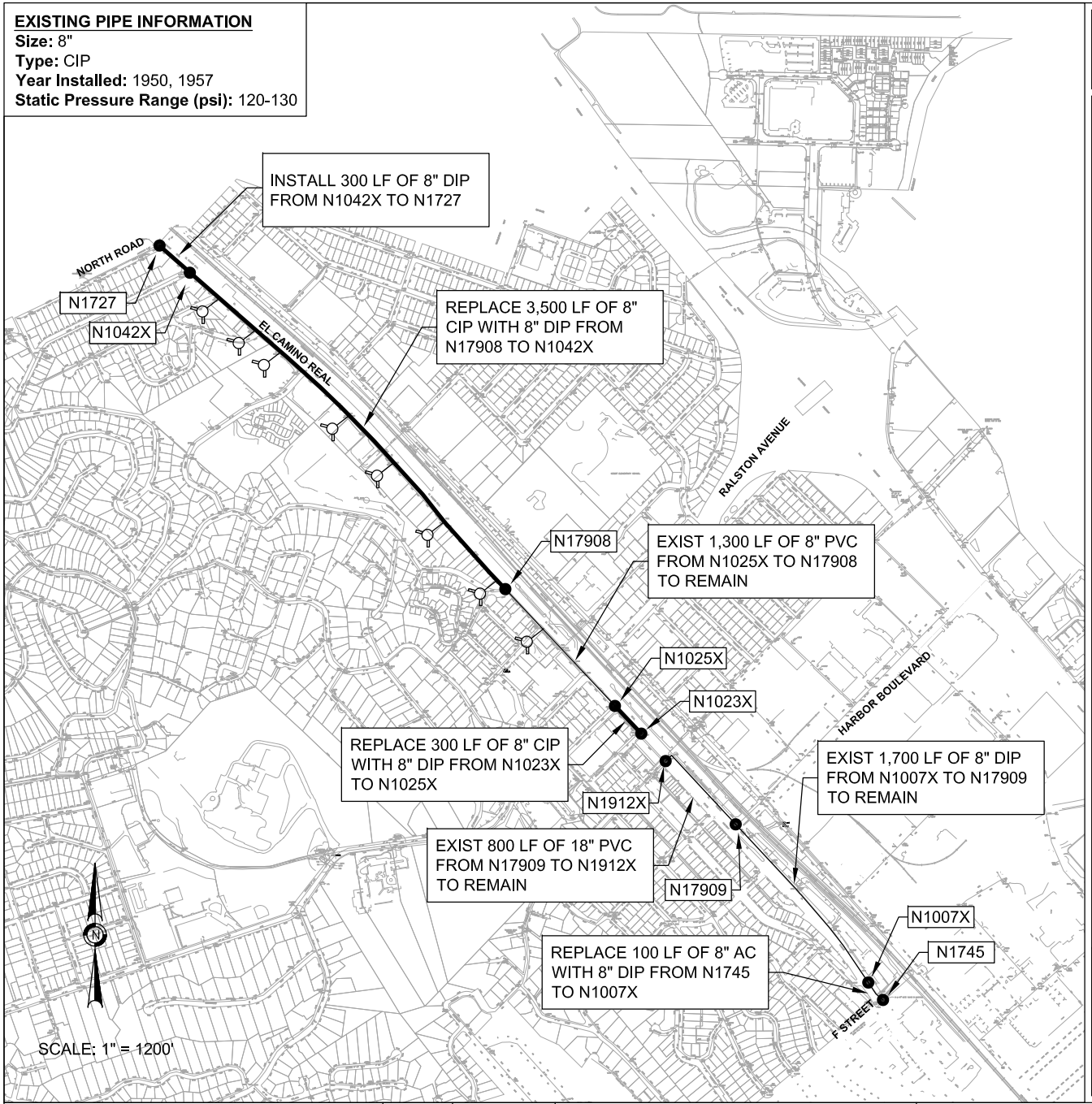
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
MALCOLM AVENUE AREA IMPROVEMENTS
PROJECT 15-74

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 8"
Type: CIP
Year Installed: 1950, 1957
Static Pressure Range (psi): 120-130



EL CAMINO REAL IMPROVEMENTS

PROJECT BACKGROUND

El Camino Real is located in the western portion of Zone 1 and spans the entire length of the Zone for approximately 8,400 LF. The existing water mains along the road consist of 100 LF of 8" asbestos cement (AC), 1,700 LF of 8" ductile iron pipe (DIP), 3,800 LF of cast iron pipe (CIP), and 1,300 LF of polyvinyl chloride (PVC) for a total 6,900 LF as shown. The District has reported several leaks along the alignment primarily along the CIPs which where installed in 1950 compared to all other pipe on the road installed in the 1990's. This project replaces the 3,800 LF of 8" CIP with 8" DIP, in addition to the installation of 300 LF of new 8" DIP. There are also 8 fire hydrants, 4 fire services, and 23 service connections that will be replaced. Hydraulic analysis indicates an 8" water main along El Camino Real is sufficient to provide fire flows well above the minimum 1,500 gpm at 20 psi. Distribution System Analysis No. 081

PROPOSED IMPROVEMENTS

Replace 3,800 LF of 8" CIP with 8" DIP
Install 300 LF of new 8" DIP
Replace 8 fire hydrants
Replace 4 fire services
Replace 23 service connections

PROJECT BENEFITS

The El Camino Real Improvements replaces old and aging water main, reduces maintenance, and improves fire flows at various locations along Old County Road to as much as 2,500 gpm.

PROJECT BUDGET (2020)

Pipe Abandonment	$ 20,000
8" DIP - 4,100 LF @ $550/LF	$ 2,255,000
Fire Hydrants - 8 @ $15,000/EA	$ 120,000
Fire Services - 4 @ $6,000/EA	$ 24,000
Service Connections - 23 @ $4,500/EA	$ 103,500
Subtotal Construction	$ 2,522,500
Planning, Design, & Construction Support	$ 380,000
Construction Inspection	$ 250,000
Caltrans Coordination	$ 50,000
Contingency (±20%)	$ 317,500
Project Budget	**$ 3,520,000**

PROJECT COMPLETED

Completion Date:	2023
Actual Expenditures	
Planning, Design, & Construction Support:	$ 1,017,502
Construction:	$ 2,381,497
Total Expenditures:	$ 3,398,999

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MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
EL CAMINO REAL IMPROVEMENTS
PROJECT 15-76

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: I:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A

EXISTING MAINTENANCE BUILDING

EXISTING FOLGER PUMP STATION

INTERIOR OF FOLGER PUMP STATION

EXISTING PARKING LOT

FOLGER PUMP STATION DEMOLITION

PROJECT BACKGROUND

The District owns two opposing parcels of land along Folger Drive where the original District office / shop facilities used to be located. The Folger Pump Station which used to be the primary Zone 2 pump station shared the southern parcel with the District facilities. After construction of the Hannibal Pump Station along Ralston Avenue, now the District's Zone 2 pump station, the Folger Pump Station was abandoned. In addition, the District moved their office / shop facilities to the current location on Dairy Lane. Due to deteriorating conditions and foundation failures, the existing pump station requires demolition. A pre-demolition study was performed detailing the type of materials to dispose of in addition to any hazardous materials that may be encountered. This project demolishes the existing pump station.

PROPOSED IMPROVEMENTS

Demolish the existing pump station.

PROJECT BENEFITS

Will remove a hazardous building and prevent a potential catastrophic collapse of the pump station.

PROJECT BUDGET (2020)

Demolition @ $250,000/LS	$	250,000
Subtotal Construction	$	250,000
Planning, Design, & Construction Support	$	50,000
Contingency (±10%)	$	30,000
Project Budget	**$**	**330,000**

PROJECT COMPLETED

Completion Date:		2022
Actual Expenditures		
Planning, Design, & Construction Support:	$	-
Construction:	$	160,265
Total Expenditures:	$	160,265

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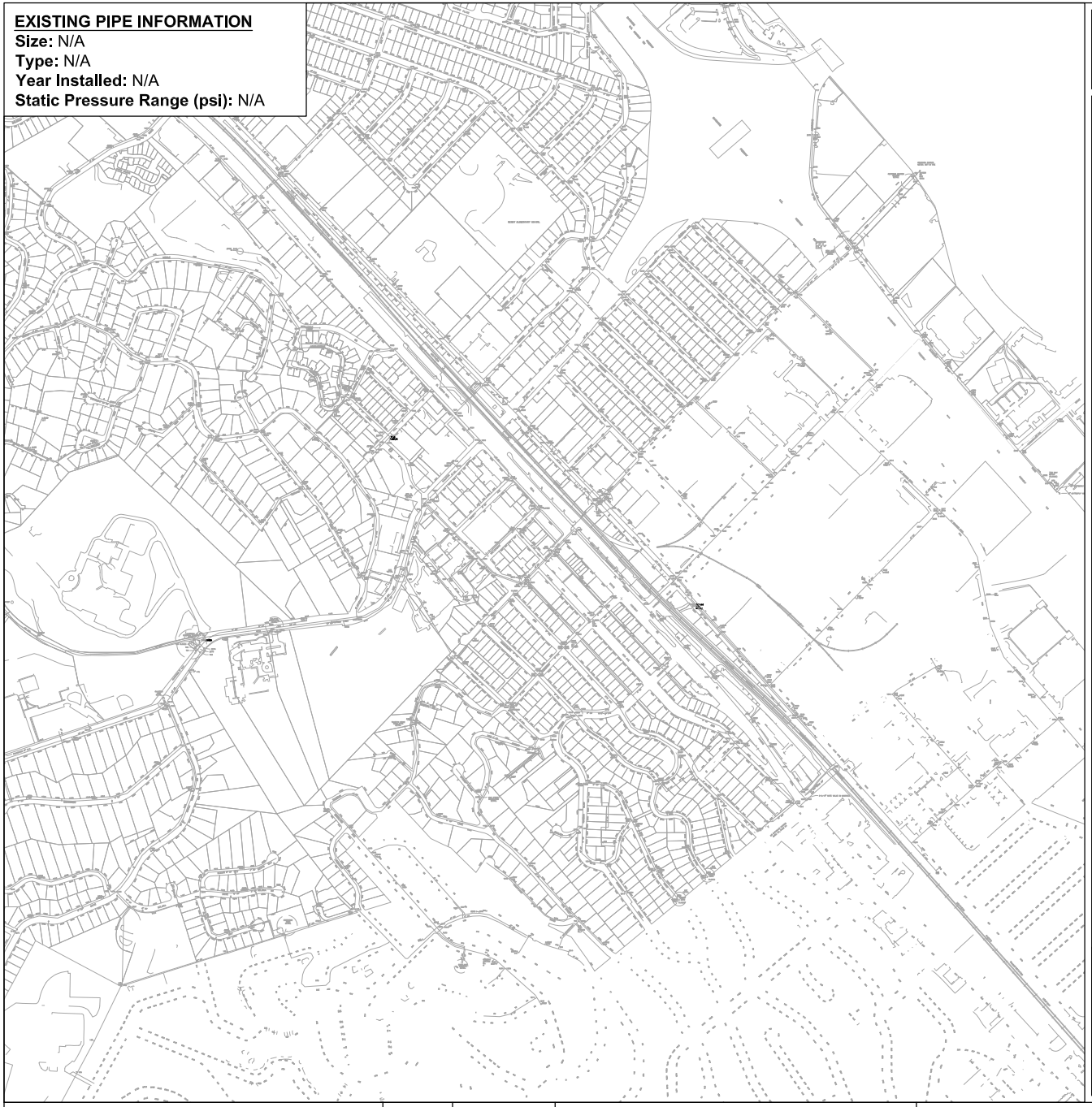
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
FOLGER PUMP STATION DEMOLITION
PROJECT 15-86

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A



HILLCREST CONNECTION
PRESSURE REGULATING STATION

PROJECT BACKGROUND

The District's water is supplied from the SFPUC at two main inlets: the Tunnels Pump Station, located on Canada Road near the Crystal Springs Reservoir, and Hillcrest Meters, located in Redwood City. The Tunnels Pump Station sends water into Zone 8 (the highest zone in the District) and the Hillcrest Meters sends water into Zone 1 (the lowest zone in the District). The Hillcrest Meters connection is a simple connection with a flow meter and has no pressure regulating capabilities. The District has reported multiple pressure fluctuations in Zone 1 due to SFPUC oscillating pressures upstream of the meter. Because of the incapability of regulating pressures downstream of the SFPUC connection, the District has run into operational issues. This project installs a pressure regulating station consisting of multiple pressure reducing valves (PRV) to operate under specific Zone 1 operating conditions. A new vault will be constructed downstream of the Hillcrest Meters and will house up to 3 PRV's, two 6" and one 8". Each PRV will operate under conditions such as low flows, high demands, and under Hannibal Pump Station operation.

PROPOSED IMPROVEMENTS

Install a pressure regulating station at the Hillcrest Meters

PROJECT BENEFITS

The Hillcrest Connection Pressure Regulating Station allows the District to maintain a more constant pressure in Zone 1 and eliminates pressure fluctuations caused by the SFPUC system.

PROJECT BUDGET (2015)

Pressure Regulating Station	$	250,000
Subtotal Construction	$	250,000
Planning, Design, & Construction Support	$	65,000
Contingency (±10%)	$	30,000
Project Budget	**$**	**345,000**

PROJECT COMPLETED

Completion Date:		2019
Actual Expenditures		
Planning, Design, & Construction Support:	$	222,803
Construction:	$	630,520
Total Expenditures:	$	853,323

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SCALE	AS NOTED
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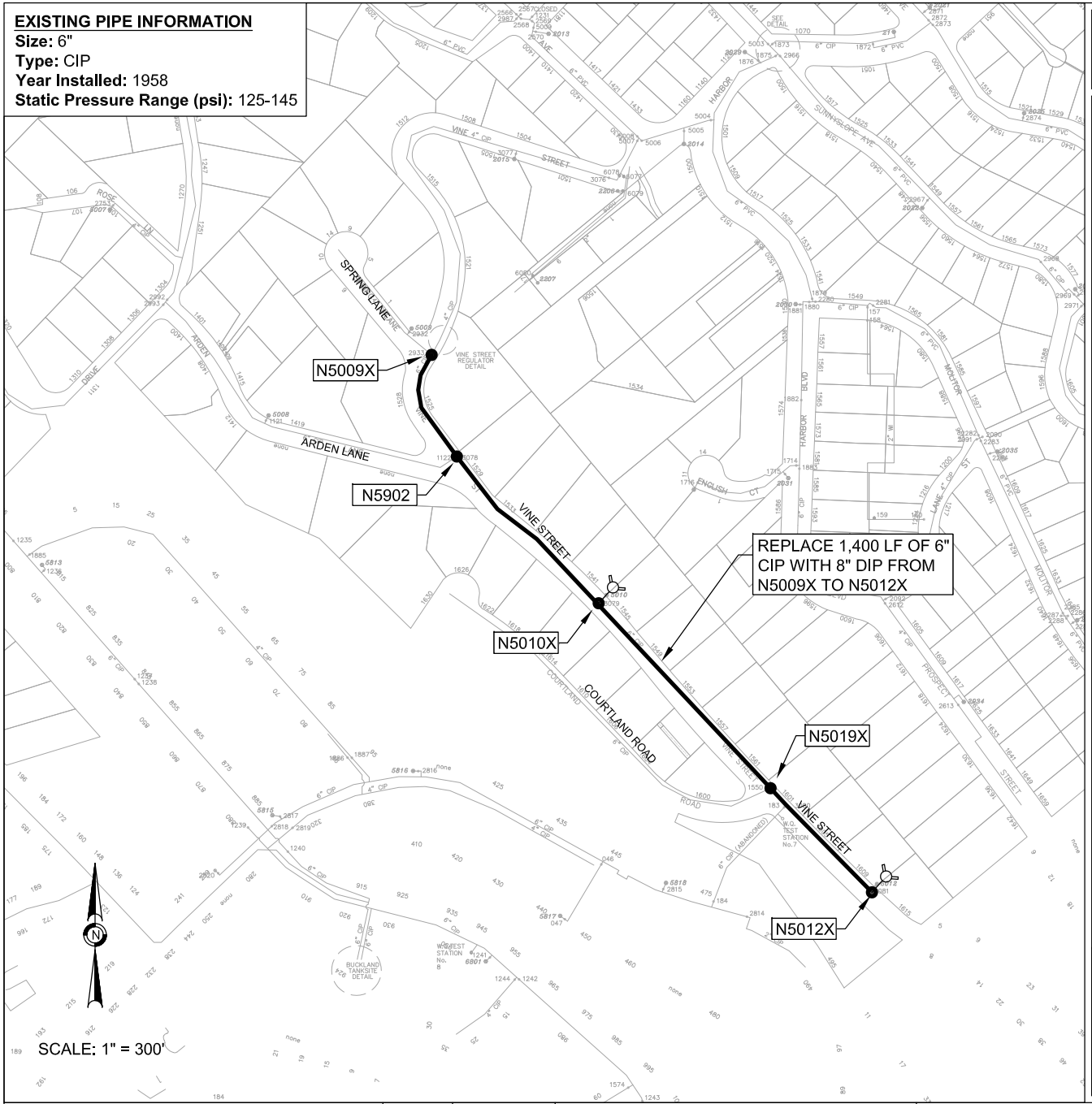
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
HILLCREST REGULATING STATION
PROJECT 15-87

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 6"
Type: CIP
Year Installed: 1958
Static Pressure Range (psi): 125-145



VINE STREET (ZONE 5) IMPROVEMENTS

PROJECT BACKGROUND

The water mains along Vine Street are comprised of 1,400 LF of 6" cast iron pipe (CIP). Due to age, the District has reported several leaks on the 6" CIP and maintenance personnel recommend replacement. This project replaces the 6" CIP with a new 8" DIP in addition to replacing 15 services and 3 fire hydrants. Distribution System Analysis No. 098

PROPOSED IMPROVEMENTS

Replace 1,400 LF of 6" CIP with 8" DIP
Replace 3 fire hydrants
Replace 15 service connections

PROJECT BENEFITS

The Vine Street (Zone 5) Improvements replaces old and aging 6" CIP water mains that have experienced significant leaks with a new 8" DIP.

PROJECT BUDGET (2020)

8" DIP - 1,400 LF @ $450/LF	$ 630,000
Fire Hydrants - 3 @ $15,000/EA	$ 45,000
Service Connections - 15 @ $4,500/EA	$ 67,500
Subtotal Construction	$ 742,500
Planning, Design & Construction Support	$ 150,000
Construction Inspection	$ 75,000
Contingency (±10%)	$ 97,500
Project Budget	**$ 1,065,000**

PROJECT COMPLETED

Completion Date:	2023
Actual Expenditures	
Planning, Design, & Construction Support:	$ 192,325
Construction:	$ 841,427
Total Expenditures:	$ 1,033,752

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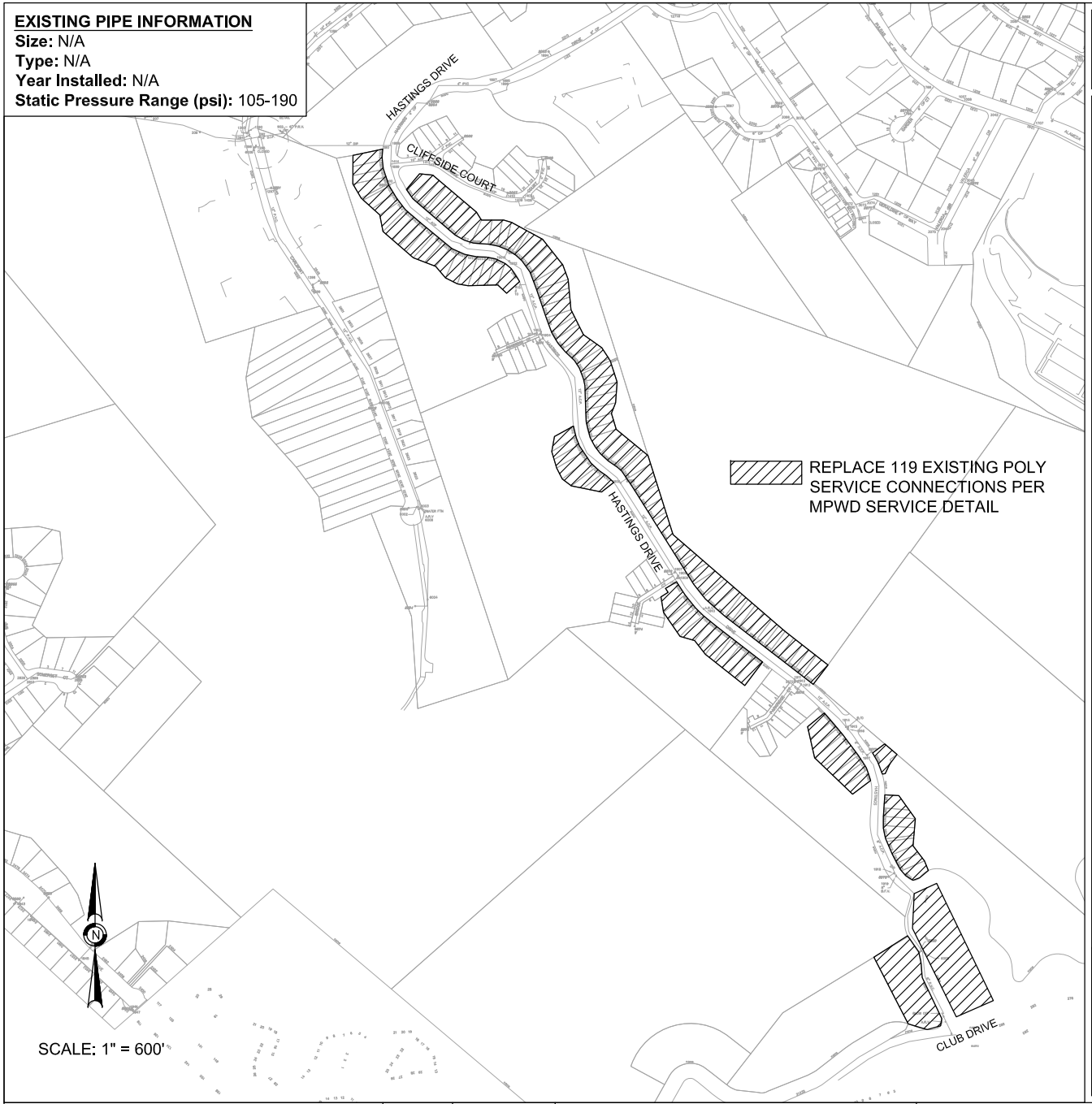
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
VINE STREET (ZONE 5) IMPROVEMENTS
PROJECT 15-88

Rev 2 - 2024
Rev 1 - 2020
Original 2015

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): 105-190



HASTINGS DRIVE SERVICE CONNECTION REPLACEMENTS

PROJECT BACKGROUND

The District serves approximately 119 customers along Hastings Drive where the District has had several leaks on the existing polybutylene service connections serving residents. Some have undermined asphalt and there are many asphalt patches on Hastings from previous leaks/repairs where concerns may begin on behalf of both the residents and City of Belmont. This project would replace all of the existing polybutylene service connections along Hastings Drive with new copper service connections per the District's standard detail.

PROPOSED IMPROVEMENTS

Replace 119 service connections

PROJECT BENEFITS

The Hastings Drive Service Connection Replacements improves system reliability and updates the existing service connection materials to current standards.

PROJECT BUDGET (2020)

Service Connections - 119 @ $4,500/EA	$	535,500
Road Restoration (Slurry Seal/Striping)	$	100,000
Subtotal Construction	$	635,500
Planning, Design, Construction Support	$	125,000
Construction Inspection	$	65,000
Contingency (±10%)	$	84,500
Project Budget	$	910,000

PROJECT COMPLETED

Completion Date:		2023
Actual Expenditures		
Planning, Design, & Construction Support:	$	-
Construction:	$	778,486
Total Expenditures:	$	778,486

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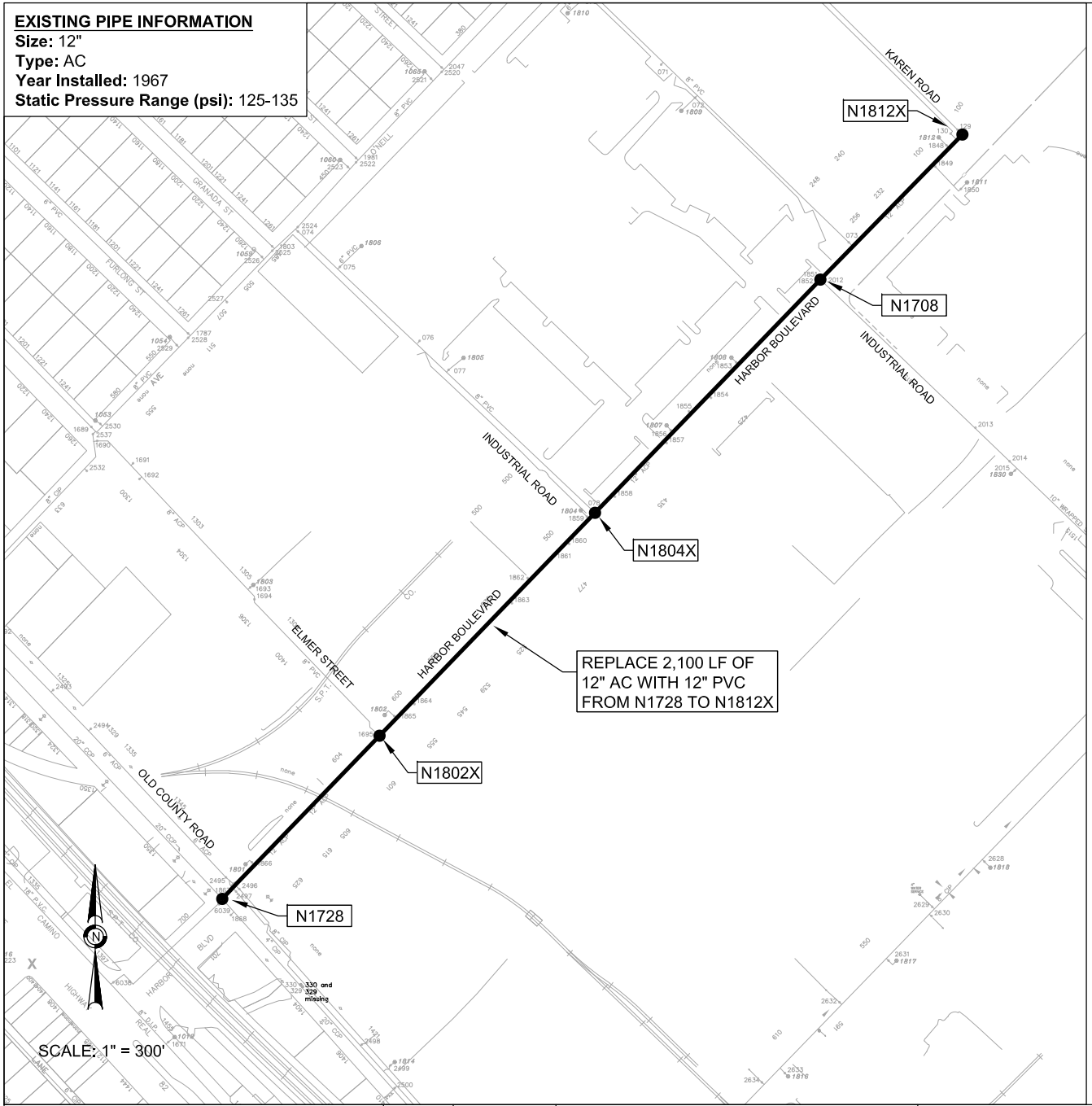
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
HASTINGS DRIVE SERVICE CONNECTION REPLACEMENTS
PROJECT 20-01

Rev 1 - 2024
Original 2020

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: 12"
Type: AC
Year Installed: 1967
Static Pressure Range (psi): 125-135



HARBOR BOULEVARD IMPROVEMENTS

PROJECT BACKGROUND

The District has experienced several leaks on the existing 12" asbestos cement (AC) water main located along Harbor Boulevard. Harbor is a highly traveled roadway serving local businesses in addition to on/off ramps to Highway 101 and leaks along this particular stretch of roadway are not ideal. This project replaces the existing water main with a new 12" polyvinyl chloride (PVC).

PROPOSED IMPROVEMENTS

Replace 2,100 LF of 12" AC w/ 12" PVC
Replace 7 fire hydrants
Replace 30 service connections

PROJECT BENEFITS

The Harbor Boulevard Improvements replaces old infrastructure, with a history of extensive leaks, with a new water main.

PROJECT BUDGET (2020)

12" PVC - 2,100 LF @ $750/LF	$ 1,575,000
Service Connections - 30 @ $4,500/EA	$ 135,000
Fire Hydrants - 7 @ $15,000/EA	$ 105,000
Reconnects - 15 @ $20,000/EA	$ 300,000
Subtotal Construction	$ 2,115,000
Planning, Design & Construction Support	$ 315,000
Construction Inspection	$ 210,000
Contingency (±10%)	$ 260,000
Project Budget	$ 2,900,000

PROJECT COMPLETED

Completion Date:	2024
Actual Expenditures	
Planning, Design, & Construction Support:	$ 502,702
Construction:	$ 2,079,315
Total Expenditures:	$ 2,582,017

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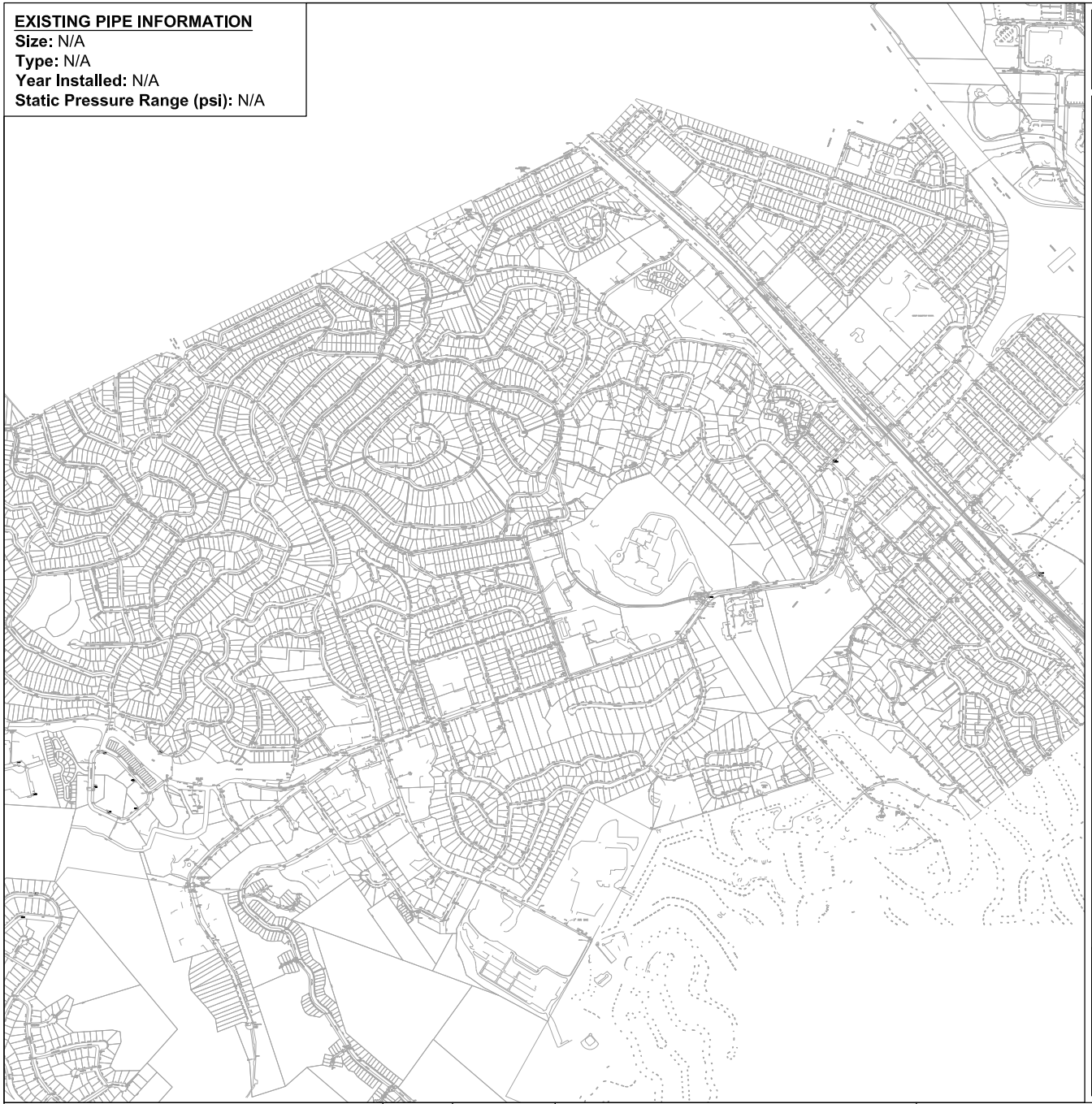
MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
HARBOR BOULEVARD IMPROVEMENTS
PROJECT 20-07

Rev 1 - 2024
Original 2020

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

EXISTING PIPE INFORMATION
Size: N/A
Type: N/A
Year Installed: N/A
Static Pressure Range (psi): N/A



SCADA IMPROVEMENTS

PROJECT BACKGROUND

Replace the aged SCADA system with modern, cloud based monitoring and control system from XiO, Inc. This SCADA system provides a secure website where water operations can be viewed and equipment status displayed; system provides a secured site for authorized operators to monitor and alter water system operation via set points; and the system provides an advanced alarm system that notifies District personnel via text or email when user-defined system operations are not met. This will expand and complete the update to the District's entire water system SCADA for the remaining six pump stations, 12 regulator sites, one tank site, at the Corporation Yard and for one pressure monitoring station at the end of a water line in the Treasure Island area.

PROPOSED IMPROVEMENTS

Replace the old SCADA system with a modern, cloud based system.

PROJECT BENEFITS

Expands the existing SCADA system to capture the remaining pump stations, regulator sites, among other District elements.

PROJECT BUDGET (2020)

SCADA Design & Implementation	$	300,000
Planning, Design & Construction Support	$	75,000
Contingency (±10%)	$	45,000
Project Budget	$	420,000

PROJECT COMPLETED

Completion Date:		2023
Actual Expenditures		
Planning, Design, & Construction Support:	$	-
Construction:	$	240,030
Total Expenditures:	$	240,030

Pakpour Consulting Group, Inc.
6601 Owens Drive, Suite 230
Pleasanton, CA 94588
P: 925.224.7717
www.pcgengr.com

JOB No.	10012.07
DATE	08/21/24
SCALE	AS NOTED
DRAWN: BY	BL
CKD	JP

MID-PENINSULA WATER DISTRICT

CAPITAL IMPROVEMENT PROGRAM
SCADA IMPROVEMENTS
PROJECT 20-08

Rev 1 - 2024
Original 2020

DRAWING NAME: J:\CADD\10012.07\CIP 2024.dwg
PLOT DATE: 08-22-24 PLOTTED BY: BLaurie

APPENDIX D

Water Main Ranking Criteria

1. **Hydraulic Capacity** – Fire flow is usually the most stringent hydraulic test of a water main since all other flows are normally of a lesser magnitude.

Capacity	
Deficient by 2 or more pipe sizes	5
Deficient by 1 pipe size	3
Appropriate pipe size	0

2. **Number of Hydrants Affected** – Higher priority is given for the number of hydrants improved or added by the proposed project.

Number of Flow Hydrants Affected	
Over 6	5
5-6	4
3-4	3
1-2	2
0	0

3. **Distribution System Benefits** – A higher priority is given to proposed projects with one or more of the following criteria: (i) Improves transmission capability within the distribution system; (ii) Can or is serving as backbone infrastructure within the distribution system; (iii) Serves to intertie or eliminate pressure zones, (iv) eliminates dead ends.

Distribution System Benefits	
Meets all criteria	5
Meets 3 out of 4 criteria	4
Meets 2 out of 4 criteria	3
Meets 1 out of 4 criteria	2
Meets none	0

4. **Water Main location** – Off pavement water mains tend to create more damage when a leak occurs

Water Main Location	
Off Pavement – Main Not Accessible	5
Off Pavement – Main Accessible	3
On Paved Street	0

5. **Water Main Age –** Typically, but not always, older water mains tend to have higher rates of failure. In addition, the older the water main, the more likely there will be failures on its appurtenances, such as service saddles, etc. Newer water mains also tend to be more seismically robust.

Age of Main Constructed Between	
1930 – 1939 (95 years – 86 years)	5
1940 – 1949 (85 years – 76 years)	4
1950 – 1959 (75 years – 66 years)	3
1960 – 1969 (65 years – 56 years)	2
1970 and newer (55 years)	1
No water main currently exists	0

6. **Water Main Material** – Water main material assumes all water mains constructed before 2000 and are unrestrained and not cathodically protected. Asbestos cement pipe is an indication of age where saddle failures are common and full circle cracks develop due to ground movement during seasonal changes. Also, these types of pipe materials when unrestrained perform very poorly during seismic events. PVC and DI generally will rank lower simply due to more resilient material.

Water Main Material	
Asbestos Cement	10
Cast Iron / Concrete Cylinder Pipe	8
Steel	6
PVC / DI	4
Restrained PVC / DI	0

7. **Number of Repairs** – Number of repairs in the past 10 years. Note this information is still under analysis with the District's new GIS system and not included as part of this report.

Number of Repairs	
5 or more	5
2-5	3
0-1	1

8. **Static Pressure** – Typically the higher the static pressure, the more damage caused by the water main upon rupture. In addition, higher pressure increases long term stress on the pipe causing failures when combined with corrosion.

Static Pressure (PSI	
Over 150	5
126 – 150	4
101 – 125	3
75 – 100	2
Less than 75	1

9. **Number of Service Connections** – Higher priority was given to water mains with multiple services.

Number of Service Connections	
Over 30	5
21-30	4
11-20	3
1-10	2
0	0

APPENDIX E

Asset Management Analysis

Water Mains

Mid-Peninsula Water District
Asset Management Analysis - Water Mains

	ACP	CIP	DIP	PVC	STL
Life Expectancy of Pipe (Years)	75	100	100	100	75
	8"	**10"**	**12"**	**18"**	**24"**
Replacement Cost DIP (per LF)	$450	$450	$500	$550	$600
Current Year	2023				

Summary

Material	Percentage of Total System	Linear Feet	Avg Installed Date	Avg Age (Y)	Avg Life Remaining (Y)	Annual Repl Length (ft)	Annual Replacement Cost
ACP	**18.5%**	91,445	1965	58	17	5,710	$2,921,900
CIP	**35.8%**	176,541	1955	68	32	5,470	$2,465,100
DIP	**12.4%**	61,445	1983	40	60	1,030	$493,100
PVC	**28.6%**	141,267	1989	34	66	2,170	$986,100
STL	**0.7%**	3,583	1957	66	9	410	$182,500
Unknown	**3.9%**	19,456					
	Total (ft):	**493,738**	**1971**	**52**	**43**	**14,790**	**$7,000,000**
	Total (miles):	**94**				**3**	**miles**

Detail

Material	Percentage of Total System	Linear Feet	Avg Installed Date	Avg Age (Y)	Avg Life Remaining (Y)	Annual Repl Length (ft)	Annual Replacement Cost
2"& 4" ACP	**0.1%**	300	1965	58	17	20	$7,900
2"& 4" CIP	**3.7%**	18,210	1953	70	30	600	$271,000
2"& 4" DIP	**0.2%**	1,033	1981	42	58	20	$8,000
2"& 4" PVC	**3.7%**	18,070	1974	49	51	350	$158,600
2"& 4" STL	**0.0%**	0	0	0	0	0	$0
Total 2" & 4"	**7.6%**	**37,612**	**1964**	**59**	**41**	**990**	**$445,500**
6" ACP	**5.4%**	26,738	1966	57	18	1,510	$681,700
6" CIP	**20.2%**	99,550	1955	68	32	3,100	$1,392,900
6" DIP	**5.0%**	24,585	1979	44	56	440	$199,300
6" PVC	**7.8%**	38,330	1984	39	61	630	$281,300
6" STL	**0.0%**	83	1953	70	5	20	$7,500
Total 6"	**38.3%**	**189,285**	**1966**	**57**	**39**	**5,700**	**$2,562,700**

Material	Percentage of Total System	Linear Feet	Avg Installed Date	Avg Age (Y)	Avg Life Remaining (Y)	Annual Repl Length (ft)	Annual Replacement Cost
8" ACP	**4.8%**	23,462	1967	56	19	1,220	$548,400
8" CIP	**9.1%**	45,170	1957	66	34	1,340	$603,900
8" DIP	**4.2%**	20,739	1992	31	69	300	$134,700
8" PVC	**12.8%**	63,051	1995	28	72	880	$395,000
8" STL	**0.0%**	0	0	0	0	0	$0
Total 8"	**30.9%**	**152,421**	**1979**	**44**	**52**	**3,740**	**$1,682,000**
10" ACP	**0.2%**	866	1972	51	24	40	$16,500
10" CIP	**1.9%**	9,207	1952	71	29	320	$144,500
10" DIP	**0.8%**	4,073	1987	36	64	60	$28,600
10" PVC	**1.1%**	5,284	1993	30	70	80	$34,000
10" STL	**0.7%**	3,500	1957	66	9	390	$175,000
Total 10"	**4.6%**	**22,931**	**1969**	**54**	**41**	**890**	**$398,600**
12" ACP	**2.7%**	13,098	1969	54	21	630	$317,500
12" CIP	**0.8%**	4,041	1965	58	42	100	$48,300
12" DIP	**0.3%**	1,496	2007	16	84	20	$8,900
12" PVC	**3.1%**	15,416	1994	29	71	220	$108,600
12" STL	**0.0%**	0	0	0	0	0	$0
Total 12"	**6.9%**	**34,050**	**1981**	**42**	**49**	**970**	**$483,300**
14" & 18" ACP *	**1.5%**	7,510	1962	61	14	520	$287,900
14" & 18" CIP	**0.1%**	363	1967	56	44	10	$4,500
14" & 18" DIP	**0.7%**	3,619	1973	50	50	70	$39,900
14" & 18" PVC	**0.2%**	1,036	1995	28	72	10	$7,900
14" & 18" STL	**0.0%**	0	0	0	0	0	$0
Total 14" & 18"	**2.5%**	**12,529**	**1968**	**55**	**30**	**610**	**$340,200**
20" & 24" ACP *	**3.9%**	19,471	1959	64	11	1,770	$1,062,000
20" & 24" CIP	**0.0%**	0	0	0	0	0	$0
20" & 24" DIP	**1.2%**	5,900	1971	52	48	120	$73,700
20" & 24" PVC	**0.0%**	81	1989	34	66	0	$700
20" & 24" STL	**0.0%**	0	0	0	0	0	$0
Total 20" & 24"	**5.2%**	**25,452**	**1962**	**61**	**20**	**1,890**	**$1,136,400**
Unknown Pipe Size and/or Type (ft)		**19,456**	**3.9%**				
Total (ft):		**493,738**				**14,790**	**$7,000,000**
Total (miles):		**94**				**3**	

* Includes Concrete Cylinder Pipe (CCP)

APPENDIX F

CIP Resolutions

RESOLUTION NO. 2024-15

APPROVING MID-PENINSULA WATER DISTRICT'S CAPITAL IMPROVEMENT PROGRAM SUMMARY FY 2024-2025 UPDATE

* * *

MID-PENINSULA WATER DISTRICT

WHEREAS, the Mid-Peninsula Water District ("MPWD") completed a comprehensive water hydraulic model of the entire MPWD system over the time period July 1, 2014 and December 1, 2015 yielding almost 90 capital improvement projects; and

WHEREAS, on May 15, 2016 the Board took several actions to adopt a prioritized capital improvement program to be funded through no more than $20,000,000 in Certificates of Participation and annual capital appropriations; and

WHEREAS, an update to the capital improvement program was adopted in April 2020 removing reference to eleven (11) completed or substantially completed capital projects, and added ten (10) new capital projects identified as 20-01 through 20-10, and updated the construction estimate to reflect 2020 dollars; and

WHEREAS, as of June 30, 2024 thirty-one (31) capital projects identified in the original capital improvement program dated May 15, 2016 and updated and adopted on April 23, 2020 have been completed or substantially completed; and

WHEREAS, beginning shortly after January 1, 2024, District staff initiated a review of the capital program to review priorities, determine if new projects had developed, and to update the estimated cost of construction in 2024 dollars; and

WHEREAS, an update to the capital improvement program was completed, removing reference to the thirty-one (31) completed or substantially completed capital projects, and added ten (10) new capital projects identified as 24-01 through 24-10, and updated the construction estimate to reflect 2024 dollars; and

WHEREAS, the MPWD 5-Year CIP for Fiscal Years 2024-2025 through 2029-2030 was developed, and reviewed and discussed with the Board Finance Committee and Board during a Board Finance Committee meeting held on May 16, 2024, and with the Board at a special meeting on June 6, 2024 and at the Board's regular meeting on June 27, 2024; and

WHEREAS, the Board asked staff to provide information on the criticality of the projects identified in the 5-year capital improvement program and to continue to analyze potential customer rate scenarios; and

WHEREAS, the Board Finance Committee supported the CIP and source of funding plan and concurred with staff to move forward with the capital program for the Board's consideration.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Mid-Peninsula Water District hereby approves the FY 2024-2025 Update of the MPWD Comprehensive System Analysis and CIP Summary, including 78 capital projects that total $94,475,000.

REGULARLY PASSED AND ADOPTED this 25th day of July 2024, by the following vote:

AYES: Schmidt, Vella, Wheeler, Jordan
NOES: None
ABSTENTIONS: None
ABSENCES: President Zucca

Signed by:
Catherine M. Jordan
CE8ECB4299144D0...
President

ATTEST:

Signed by:
Alison Bell
5558314A921146D...
Board Secretary

RESOLUTION NO. 2020-08

APPROVING MID-PENINSULA WATER DISTRICT COMPREHENSIVE SYSTEM ANALYSIS AND CAPITAL IMPROVEMENT PROGRAM SUMMARY FY 2019-2020 UPDATE, AND AUTHORIZING MPWD 5-YEAR CIP FOR FISCAL YEARS 2019-2020 THROUGH 2023-2024

* * *

MID-PENINSULA WATER DISTRICT

WHEREAS, the Mid-Peninsula Water District ("MPWD") completed a comprehensive water hydraulic model of the entire MPWD system over the time period July 1, 2014 and December 1, 2015 yielding almost 90 capital improvement projects; and

WHEREAS, on May 15, 2016 the Board took several actions to adopt a prioritized capital improvement program to be funded through no more than $20,000,000 in Certificates of Participation and annual capital appropriations; and

WHEREAS, as of March 31, 2020 fourteen (14) of the 24 capital projects have been completed or substantially completed; and

WHEREAS, shortly after July 1, 2019, District staff initiated a review of the capital program to review priorities, determine if new projects had developed, and to update the estimated cost of construction in 2020 dollars; and

WHEREAS, an update to the capital improvement program has been completed, which has removed reference to the eleven (11) completed or substantially completed capital projects, added ten (10) new capital projects identified as 20-01 through 20-10, and updated the construction estimate to reflect 2020 dollars; and

WHEREAS, a new MPWD 5-Year CIP for Fiscal Years 2019-2020 through 2023-2024 was developed, and reviewed and discussed with the Board Finance Committee during meetings held on February 3, 2020 and April 9, 2020; and

WHEREAS, the Board Finance Committee requested and staff developed a source of funding plan for the pay-go capital projects, which plan was shared during the meeting held on April 9, 2020; and

WHEREAS, the Board Finance Committee supported the CIP and source of funding plan and concurred with staff to move forward with the capital program for the Board's consideration.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Mid-Peninsula Water District hereby:

1. Approves the FY 2019-2020 Update of the MPWD Comprehensive System Analysis and CIP Summary, including 84 capital projects that total $78,215,000; and
2. Authorizes the attached MPWD 5-Year CIP for Fiscal Years 2019-2020 through 2023-2024 totaling $27,425,000.

REGULARLY PASSED AND ADOPTED this 23rd day of April 2020, by the following vote:

AYES: Director Vella, Warden, Schmidt, Wheeler, Zucca
NOES: ~~0~~
ABSTENTIONS: ~~0~~
ABSENCES: ~~0~~

Matthew Zucca
President

ATTEST:

Candace R Pina
Board Secretary

RESOLUTION NO. 2016-06

ADOPTING MPWD COMPREHENSIVE SYSTEM ANALYSIS AND CAPITAL IMPROVEMENT PROGRAM FY 2016-2017 UPDATE, AND AUTHORIZING MPWD 5-YEAR CAPITAL IMPROVEMENT PROGRAM FOR FISCAL YEARS 2016/2017 THROUGH 2020/2021

* * *

MID-PENINSULA WATER DISTRICT

WHEREAS, the Mid-Peninsula Water District ("MPWD") completed a comprehensive water hydraulic model of the entire MPWD system over the course of the past 18 months; and

WHEREAS, almost 90 capital improvement projects were identified for completion as a result of the water hydraulic modeling, and a list of six scoring criteria was developed in order to rank and prioritize each of the 90 capital projects; and

WHEREAS, an updated FY 2016/2017 Comprehensive System Analysis and Capital Improvement Program report was developed by the District Engineer and MPWD staff, and presented to the Board of Directors at its May 26, 2016, regular meeting; and

WHEREAS, a preliminary draft 5-year capital improvement program was introduced to the Board of Directors on November 16, 2015, totaling $12 million, and the Board provided direction to staff to revise it to expand beyond what the MPWD is currently funding on a pay-go basis and develop financing options; and

WHEREAS, a revised 5-year capital improvement program was developed totaling $25 million and presented to the Board on December 16, 2015, and was accepted in principle but not approved until financing options were reviewed and considered; and

WHEREAS, on April 28, 2016, updated cash flow projections for FY 2016/2017 were presented by MPWD's rate consultant Bartle Wells Associates, and financing alternatives for potential capital improvements were created by the MPWD's Municipal Finance Advisors based upon the updated cash flow projections and presented to the Board at that same meeting; and

WHEREAS, as a result of the updated financial information for FY 2016/2017, staff

modified the MPWD's 5-year capital planning and presented the Board with three (3) program alternatives on May 26, 2016, and recommended Alternative One totaling $20,000,000.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Mid-Peninsula Water District hereby:

1. Adopts the MPWD Comprehensive System Analysis and Capital Improvement Program FY 2016/2017 Update Report; and
2. Authorizes the 5-Year Capital Improvement Program for Fiscal Years 2016/2017 through 2020/2021 totaling $20,000,000 (attached as Exhibit "A").

BE IT FURTHER RESOLVED that the Board directs staff to commence coordination with the MPWD's Municipal Finance Advisor on developing the appropriate financing options for the 5-Year Capital Improvement Program, that are most advantageous for the Mid-Peninsula Water District, for presentation to the Board at an upcoming regular meeting.

REGULARLY PASSED AND ADOPTED this 26th day of May 2016, by the following vote:

AYES: Linvill, Stuebing, Vella, and Zucca
NOES: ~~0~~
ABSENT: Warden

President, Board of Directors
Mid-Peninsula Water District

ATTEST:

District Secretary

MID-PENINSULA
WATER DISTRICT

5-YEAR CAPITAL IMPROVEMENT PROGRAM
FY 2016/2017 THROUGH FY 2020/2021

PROJECT NUMBER	*PROJECT NAME*	*PROJECTED COST (2015)*
15-14	Mezes Avenue Improvements	$ 175,000
15-76	El Camino Real Improvements	2,100,000
15-65	Folger Drive Improvements	420,000
15-73	Karen Road Improvements	425,000
15-10	Notre Dame Avenue Loop Closure	910,000
15-44	South Road Abandonment	415,000
15-22	Arthur Avenue Improvements	475,000
15-16	Williams Avenue, Ridge Road, Hillman Avenue Improvements	1,100,000
15-43	North Road Cross Country/Davey Glen Road Improvements	680,000
15-06	Zone 5 Fire Hydrant Upgrades	150,000
15-78	Civic Lane Improvements	800,000
15-17	Monte Cresta Drive/Alhambra Drive Improvements	1,075,000
15-87	Hillcrest Pressure Regulating Station	345,000
15-09	Dekoven Tank Utilization Project	1,035,000
15-28	Tahoe Drive Area Improvements	510,000
15-29	Belmont Canyon Road Improvements	420,000
15-38	Cliffside Court Improvements	220,000
15-42	North Road Improvements	220,000
15-75	Old County Road Improvements	3,400,000
15-72	SR 101 Crossing at PAMF Hospital	1,670,000
15-89	Dekoven Tanks Replacement	3,500,000
	TOTAL	**$20,045,000**

Project No. 15-92: AMI Completion Project ($2.5 million) is also a priority project that could be substituted for the projects highlighted in gray.