

City of Tampa Florida

Water Department

PLANS FOR:

FAIR OAKS WATER MAIN REPLACEMENT

TAMPA WATER DEPARTMENT

WORK ORDER NO. :

WTR-18-0002

INDEX

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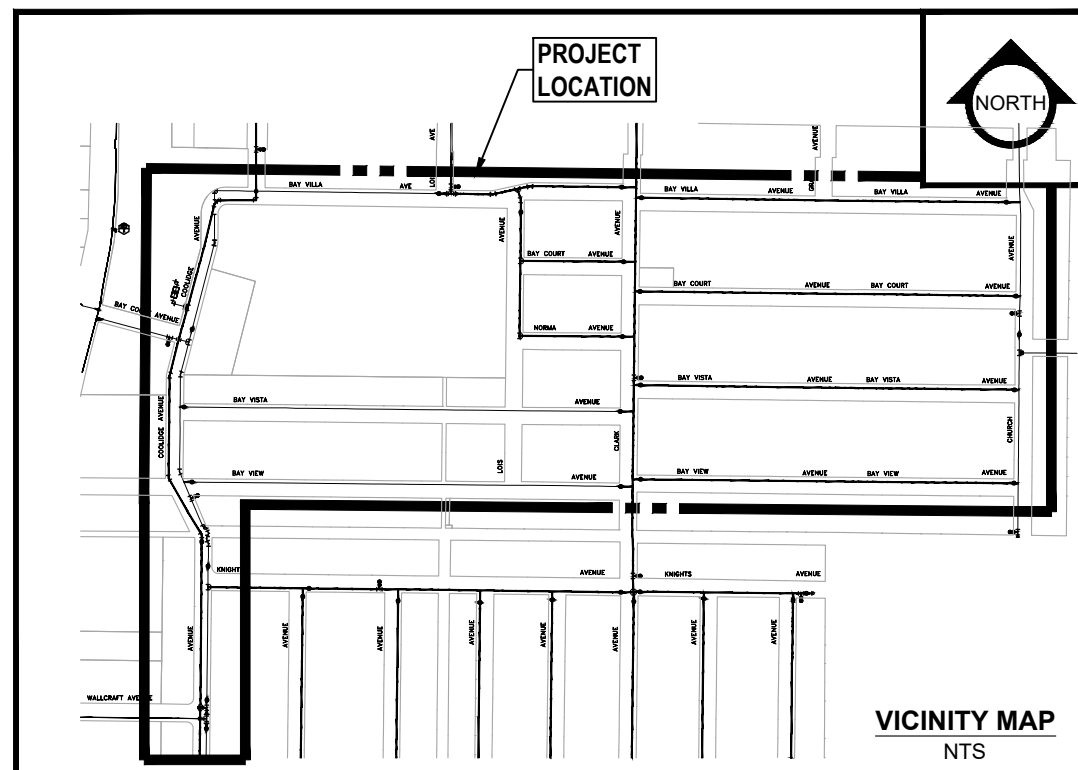
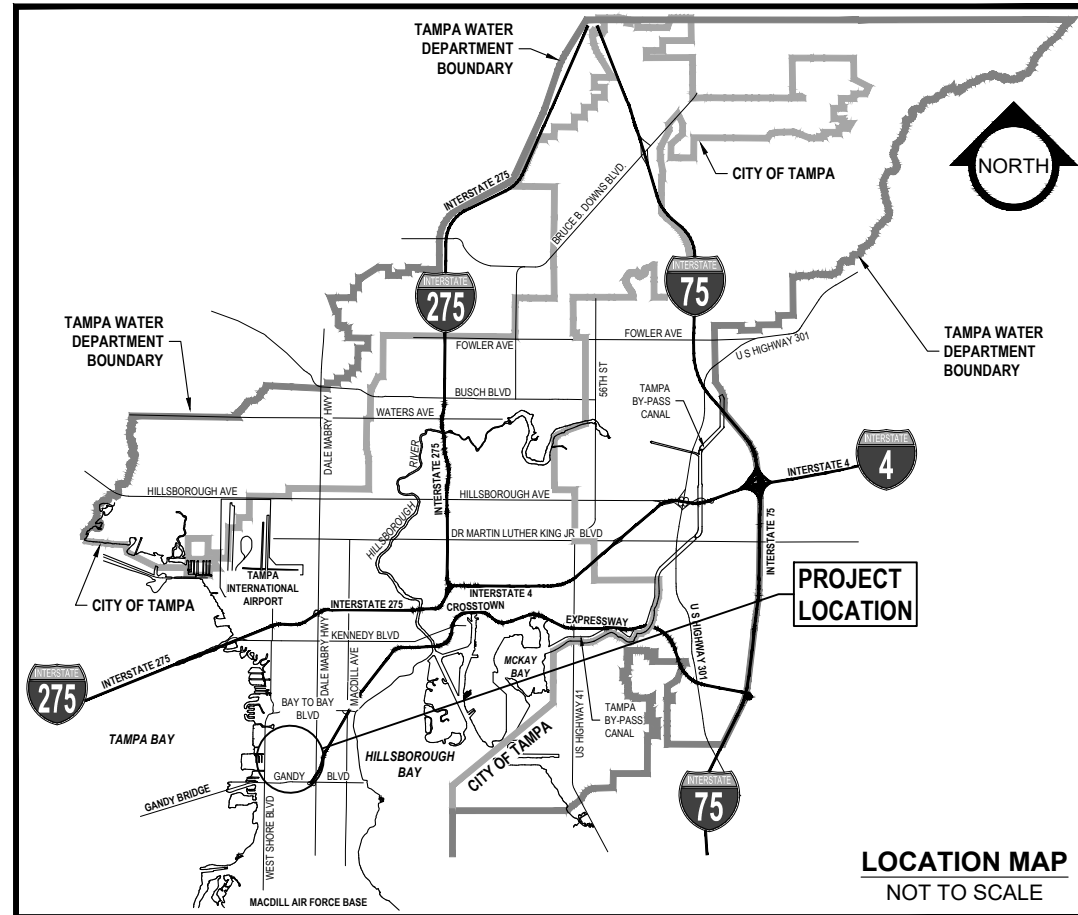
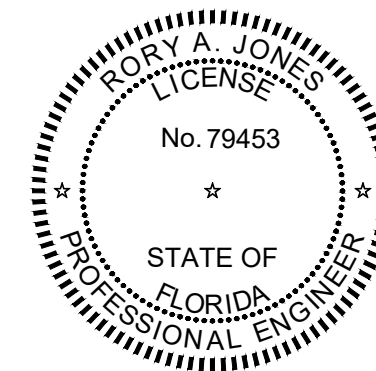
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CITY OF TAMPA WATER DEPT.
306 E. JACKSON ST., 5E
TAMPA, FLA. 33602
P.E. #79453

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FAIR OAKS WATER MAIN REPLACEMENT

COVER



100% PLANS

WORK ORDER NO. WTR-18-0002

RECORD DRAWING NO. ----

ATLAS PAGE L-09 SHEET 1 OF 39

CITY OF TAMPA NOTES

GENERAL

- ALL WATER WORK FOR THE CITY OF TAMPA (CITY) SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT'S SPECIFICATIONS, CONSTRUCTION DETAILS, AND THE TAMPA WATER DEPARTMENT TECHNICAL MANUAL (LATEST EDITION). IN THE EVENT OF A DISCREPANCY, THE MOST STRINGENT CRITERIA SHALL APPLY.
- THE CONTRACTOR SHALL NOT TAP ANY WATER MAIN WITHOUT A CITY INSPECTOR PRESENT. THE CONTRACTOR SHALL PROVIDE NOTICE TO THE CITY INSPECTOR AT A MINIMUM OF 5 WORKING DAYS PRIOR TO NECESSARY WORK AND COORDINATE PERFORMANCE OF TAP WITH THE CITY INSPECTOR.
- NORMAL WORKING HOURS SHALL BE WEEKDAYS FROM 7:30 AM TO 4:00 PM UNLESS OTHERWISE APPROVED BY THE ENGINEER/INSPECTOR.
- ELEVATION INFORMATION SHOWN ON THESE PLANS IS REFERENCED TO N.A.V.D. 1988 UNLESS OTHERWISE STATED.
- CONSTRUCTION OF WATER FACILITIES SHALL BE COORDINATED WITH THE WATER DEPARTMENT PRIOR TO THE START OF THE CONSTRUCTION. CONTRACTOR TO CONTACT CITY OF TAMPA CONTRACT ADMINISTRATION DEPARTMENT @ 813-635-3432 TO COORDINATE/SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE CITY FOR REVIEW OF INSTALLATION TECHNIQUES AND PROCEDURES A MINIMUM OF 10 WORKING DAYS PRIOR TO THE PLANNED CONSTRUCTION.
- EXISTING UTILITIES, BUILDINGS, GROUND ELEVATIONS, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE. ALL CONDITIONS, DIMENSIONS, AND QUANTITIES AFFECTING REQUIRED WORK SHALL BE VERIFIED BY CONTRACTOR BEFORE BEGINNING WORK OR ORDERING MATERIALS.
- VALVES ON EXISTING PUBLIC WATER MAINS TO BE OPERATED BY CITY PERSONNEL ONLY.
- ALL PROPOSED WATER LINES SHALL BE MANUFACTURED, INSTALLED, AND TESTED PER THE STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA) AND BY F.A.C.-62-555.
- SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED BY THE CITY FOR ALL PROPOSED ITEMS. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE HIGH QUALITY PDF DOCUMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR RESTRAINING ALL EXISTING PIPE NECESSARY TO MAINTAIN A SAFE CONSTRUCTION AREA AND PERFORM THE WORK SHOWN IN THE PLANS. EXISTING PIPE REQUIRING RESTRAINTS SHALL UTILIZE EXTERIOR BELL RESTRAINTS.
- THE CONTRACTOR SHALL DEWATER ANY EXCAVATION OR TRENCH TO MAINTAIN A SAFE WORK ENVIRONMENT AND TO ABIDE BY AWWA INSTALLATION STANDARDS. DEWATERING IS AT THE EXPENSE OF THE CONTRACTOR.
- REMOVAL AND RELOCATION OF ALL STREET OR TRAFFIC SIGNS SHALL BE APPROVED THROUGH THE TRAFFIC ENGINEERING DIVISION, DEPARTMENT OF PUBLIC WORKS, CITY OF TAMPA, AND HILLSBOROUGH COUNTY TRAFFIC, FLORIDA DEPARTMENT OF TRANSPORTATION, CITY OF TEMPLE TERRACE OR OTHER APPLICABLE PERMITTING AGENCY.

PERMITS

- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHT-OF-WAY PERMITS AND ROADWAY CLOSURES ASSOCIATED WITH THE WORK SHOWN IN THE PLANS.
- IN ORDER TO OBTAIN ROADWAY CLOSURES OR RIGHT-OF-WAY PERMITS, AT MINIMUM, THE CONTRACTOR MUST SUBMIT DETAILED MAINTENANCE OF TRAFFIC (MOT) PLANS ALONG WITH APPLICATIONS TO THE APPROPRIATE AGENCY. THE MOT(S) SHALL CONFORM TO APPLICABLE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) DRAWINGS (MOST CURRENT EDITION). THE GOVERNING AGENCIES MAY REQUIRE ADDITIONAL INFORMATION AND DICTATE SPECIFIC WORK TIME DURING NON-PEAK TRAFFIC HOURS.

PROJECT SPECIFIC NOTES

- ALL PROPOSED DIP WATER MAIN PIPES SHALL BE OPEN CUT INSTALLATION.
- ALL ASPHALT OPEN CUTS WITHIN CITY RIGHT-OF-WAY SHALL BE FULLY MILLED AND OVERLAYED (FROM EDGE OF PAYMENT TO EDGE OF PAVEMENT) PER TYPICAL PAVING SECTION SHOWN ON SHEET 3.

PIPE CLEARANCES

- ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES AND SHALL MAINTAIN A MINIMUM OF THREE (3) FEET HORIZONTAL SEPARATION FROM OTHER UTILITIES, EXCEPT STORM, SANITARY, AND GAS, WHICH SHALL MAINTAIN TEN (10) FEET HORIZONTAL SEPARATION, UNLESS OTHERWISE NOTED.
- WATER MAIN SHALL CROSS ABOVE OTHER PIPES. WHEN WATER MUST BE BELOW, PROVIDE 12" MINIMUM VERTICAL SEPARATION UNLESS OTHERWISE NOTED.
- CENTER ONE FULL JOINT OF PIPE UNDER/OVER ALL SANITARY, STORM, OR RECLAIMED PIPE CROSSINGS.

MATERIAL

- ALL VALVES SHALL BE RIGHT HAND OPEN.
- POLYWRAP ALL DUCTILE IRON PIPE (D.I.P) FITTINGS AND APPURTENANCES.
- ALL HARDWARE SHALL BE 304 STAINLESS STEEL, UNLESS OTHERWISE NOTED.
- ALL BELOW GROUND BENDS SHALL BE MECHANICAL JOINT (MJ).
- RESTRAIN ALL JOINTS AND FITTINGS PER CONSTRUCTION PLANS AND DETAILS.
- CONCRETE THRUST BLOCKS SHALL NOT BE USED TO PROVIDE THRUST RESTRAINT. RESTRAINT OF PUSH-ON DIP (OTHER THAN FOR FITTINGS & VALVES) SHALL BE WITH APPROVED PUSH-ON "GRIPPER-TYPE" RESTRAINTS. FITTINGS AND VALVES SHALL BE CONNECTED TO PIPE WITH MEGALUGS, OR APPROVED EQUAL.
- ALL POTABLE WATER SERVICE LATERAL, AIR RELEASE VALVES, AND TEMPORARY SAMPLE POINTS SHALL BE CONSTRUCTED OF BLUE SDR-9 HIGH DENSITY POLYETHYLENE (HDPE) TUBING. ALL HDPE TUBING SHALL BE INSTALLED WITHIN A CASING AS DEFINED IN THE SPECIFICATIONS AND DETAILS.

TESTING

- ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL BE PROPERLY PRESSURE TESTED, WITNESSED AND ACCEPTED BY THE CITY. PRESSURE TESTS TO BE PERFORMED IN ACCORDANCE WITH WATER DEPARTMENT SPECIFICATIONS. CONTRACTOR TO NOTIFY THE ASSIGNED CITY INSPECTOR A MINIMUM OF THREE (3) WORKING DAYS IN ADVANCE OF PERFORMING TESTS. CONTRACTOR SHALL PRESSURE TEST WATER MAINS AT A MINIMUM OF 150 PSI FOR A PERIOD OF 2 HOURS IN ACCORDANCE WITH AWWA C600-87 STANDARDS. THE CONTRACTOR SHALL MAKE ALL NECESSARY APPLICATIONS AND ARRANGEMENTS.
- ALL SAMPLE, PRESSURE TEST, AND CHLORINATION POINT PIPING SHALL BE COMPLETELY REMOVED PRIOR TO FINAL ACCEPTANCE. THE CORPORATION STOP SHALL BE CLOSED AND PLUGGED AT THE MAIN.
- CONTRACTOR SHALL PERFORM CHLORINATION AND HIRE INDEPENDENT FIRMS TO CONDUCT BACTERIOLOGICAL TESTING AS DEFINED IN F.A.C. 62-555.340. CONTRACTOR TO SUPPLY THE CITY WITH AS-BUILTS AND SAMPLE RESULTS NECESSARY TO OBTAIN DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) CLEARANCES BEFORE PLACING METERS OR PIPELINES IN SERVICE.

RESTORATION

- ROADWAY RESTORATION SHALL BE IN CONFORMANCE WITH CORRESPONDING JURISDICTION'S LATEST STANDARDS.
- DISTURBANCE TO ANY PROPERTY, PUBLIC OR PRIVATE, SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
- THE CONTRACTOR SHALL RECONSTRUCT PAVEMENT ADJACENT TO THE GUTTERS AND AT STREET INTERSECTIONS TO OBTAIN SATISFACTORY DRAINAGE TO THE INLETS FROM THE INTERSECTING STREETS. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL DETERMINE THE FLOW OF WATER ALONG A STREET, DOCUMENT WHERE STANDING WATER IS PRESENT.

LEGEND

| EXISTING | | PROPOSED |
|----------|---|----------|
| | ASPHALT PAVEMENT | |
| | CONCRETE PAVEMENT | |
| | PAVERS | |
| 10 | BASE LINE (SURVEY LINE) | 10 |
| | CENTER LINE | |
| | R/W LINE | |
| | PROPERTY LINE | |
| | ADJACENT PROPERTY LINE | |
| | BENCHMARK & NUMBER | |
| | TEMPORARY BENCHMARK & NUMBER | |
| | EASEMENT LINE | |
| | GAS MAIN | |
| | STORM SEWER | |
| | SANITARY SEWER | |
| | SANITARY FORCE MAIN | |
| | ELECTRIC CABLE | |
| | TELEPHONE CABLE | |
| | TELEVISION CABLE | |
| | WATER MAIN | |
| | RECLAIMED WATER MAIN | |
| | FIRE HYDRANT ASSEMBLY (INCL. VALVE & TEE) | |
| | WATER VALVE | |
| | DETECTOR CHECK VALVE | |
| | DOUBLE DETECTOR CHECK VALVE - IN VAULT | |
| | DOUBLE DETECTOR CHECK VALVE - ABOVE GROUND | |
| | VAULT | |
| | CASING PIPE (JACK & BORE) | |
| | WATER METER | |
| | RECLAIMED WATER METER | |
| | METER TO BE TRANSFERRED | |
| | BACK FLOW PREVENTER | |
| | WET TAP | |
| | SLEEVE, BEND, TEE, CROSS, PLUG, REDUCER, BLOW-OFF | |
| | SAMPLE TAP LOCATION | |
| | CHLORINE INJECTION POINT | |
| | ELECTRIC MANHOLE OR PULL BOX, POLE | |
| | TELEPHONE MANHOLE OR UTILITY BOX, POLE | |
| | MANHOLE - SANITARY, STORM | |
| | VALVE | |
| | SANITARY LATERAL WITH DEPTH AT R/W LINE | |
| | STORM GRATE, CURB INLET | |
| | STORM PIPE CULVERT WITH HEADWALL, MITERED END SECTION | |
| | GUY POLE, GUY POLE AND WIRE | |
| | COMBINATION POLE, LIGHT POLE | |
| | MAILBOX | |
| | SIGN | |
| | PINE, TREE, PALM, OAK | |
| | ROOT PRUNE | |
| | SHRUB, HEDGE | |
| | WOODS/HEAVY BRUSH | |
| | SPOT ELEVATIONS | |

| | | | | | | |
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FAIR OAKS WATER MAIN REPLACEMENT

GENERAL NOTES LEDGEN



100% PLANS

WORK ORDER NO. WTR-18-0002

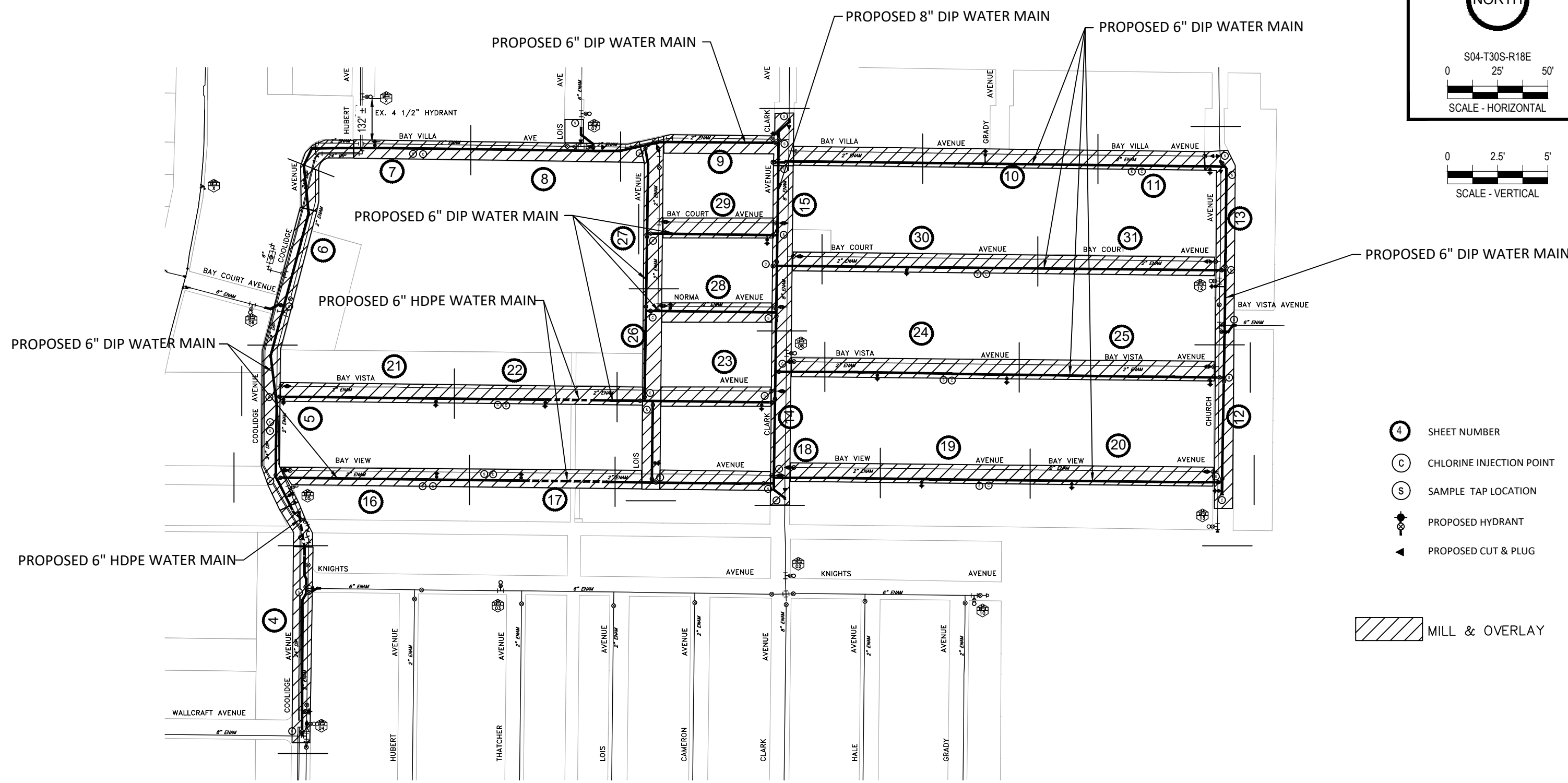
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ATLAS PAGE L-09 SHEET 2 OF 39



S04-T30S-R18E
 0 25' 50'
 SCALE - HORIZONTAL

0 2.5' 5'
 SCALE - VERTICAL



- ④ SHEET NUMBER
- Ⓒ CHLORINE INJECTION POINT
- Ⓔ SAMPLE TAP LOCATION
- ⦿ PROPOSED HYDRANT
- ◀ PROPOSED CUT & PLUG

MILL & OVERLAY

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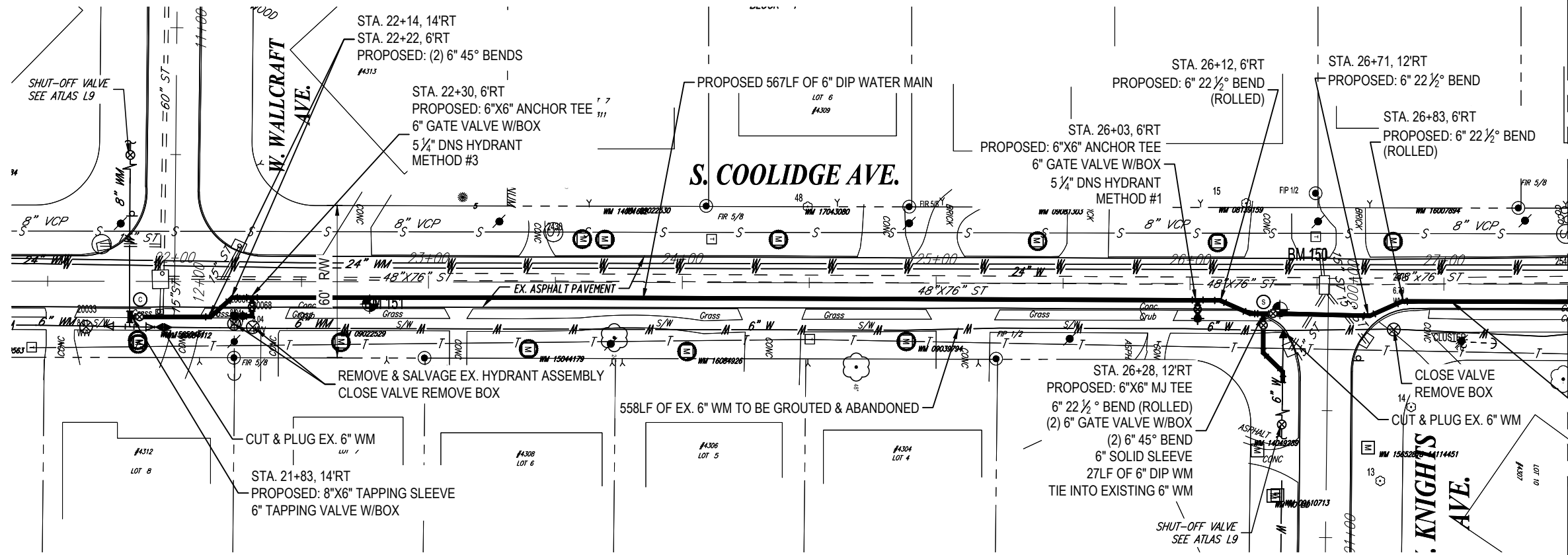
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KEY SHEET

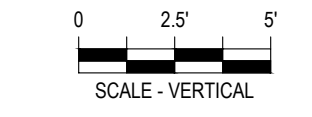
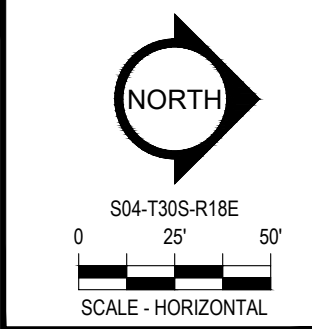


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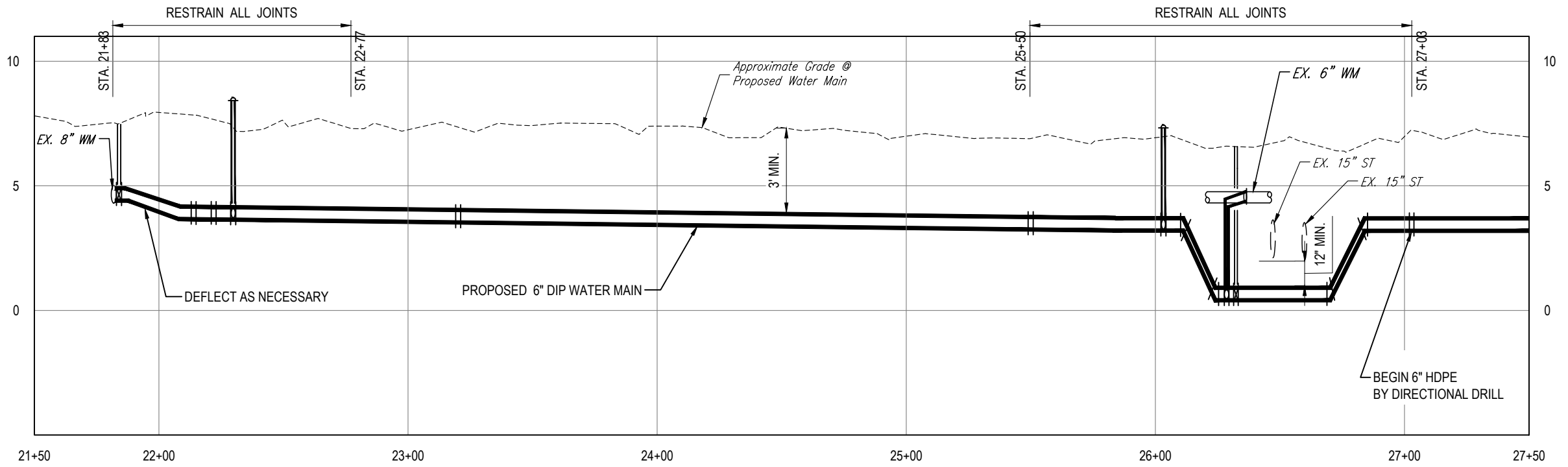


MATCHLINE - SEE SHEET 5



STA. 27+03, 6'RT
BEGIN 6" HDPE WATER MAIN
BY DIRECTIONAL DRILL
SEE DETAIL 8.03, SHEET 39

NOTE:
MANUFACTURED STAINLESS
STEEL IS TO BE INSERTED IN
HDPE FOR CONNECTION.



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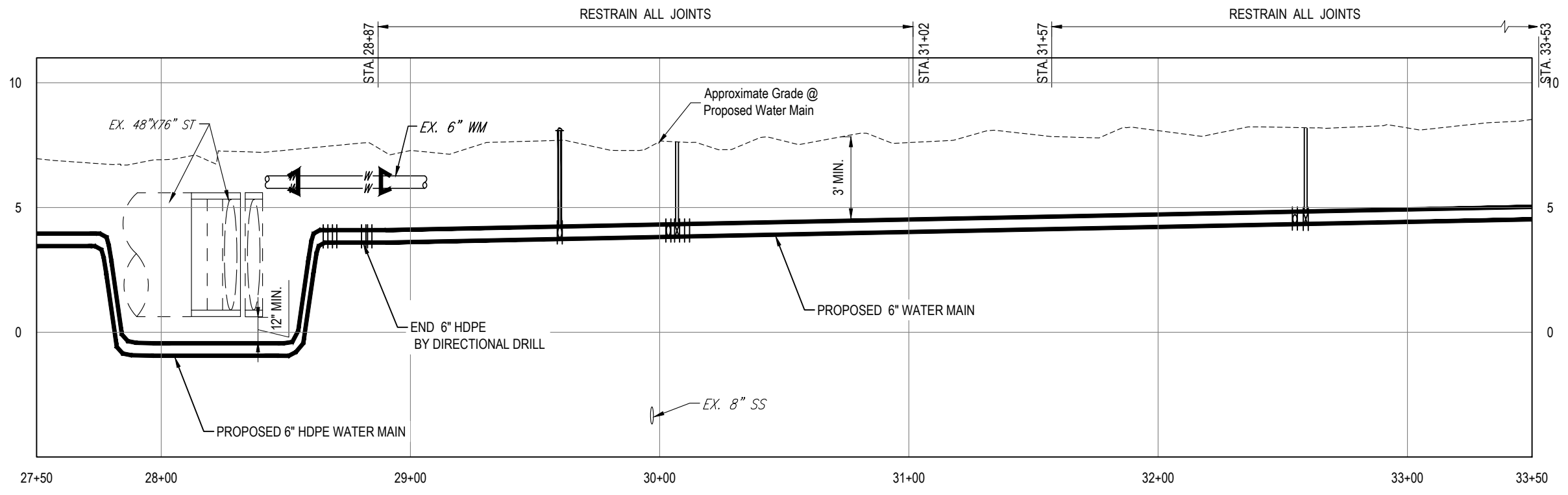
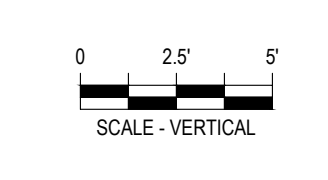
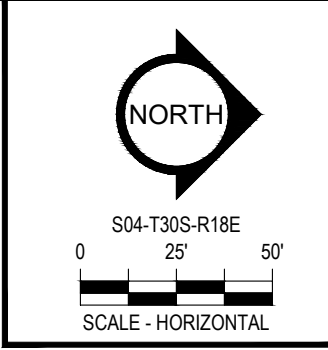
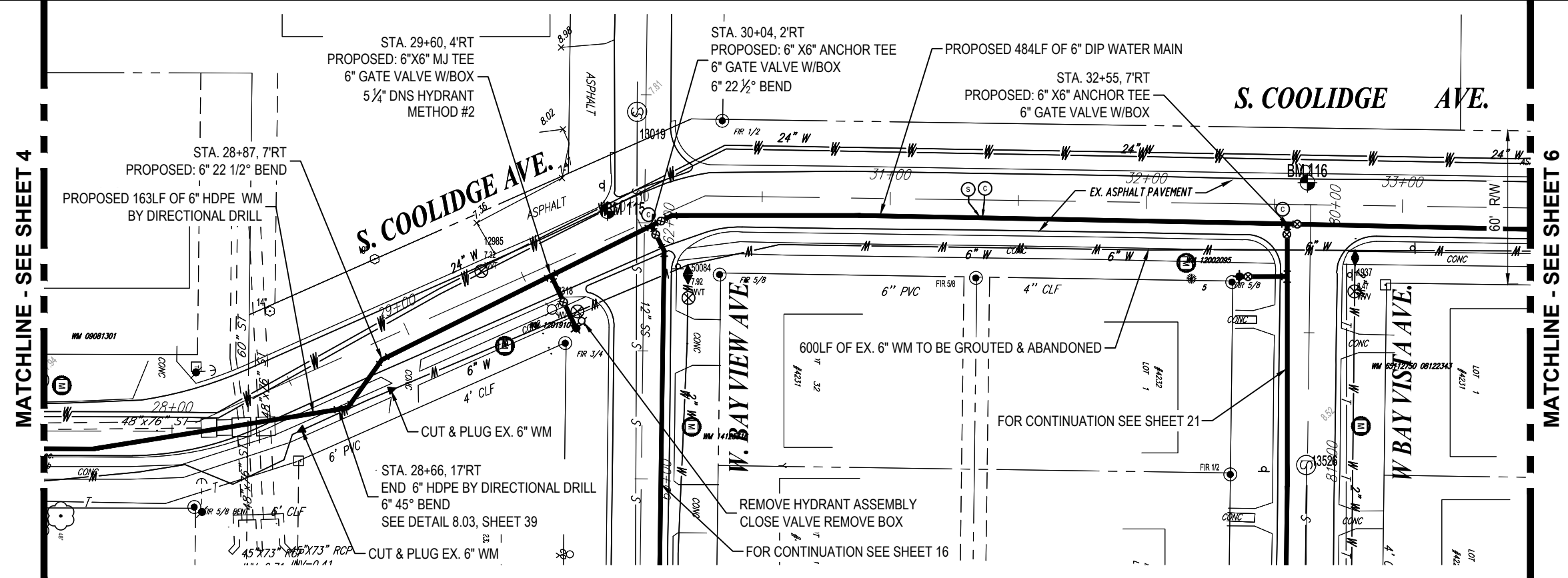
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PLAN & PROFILE



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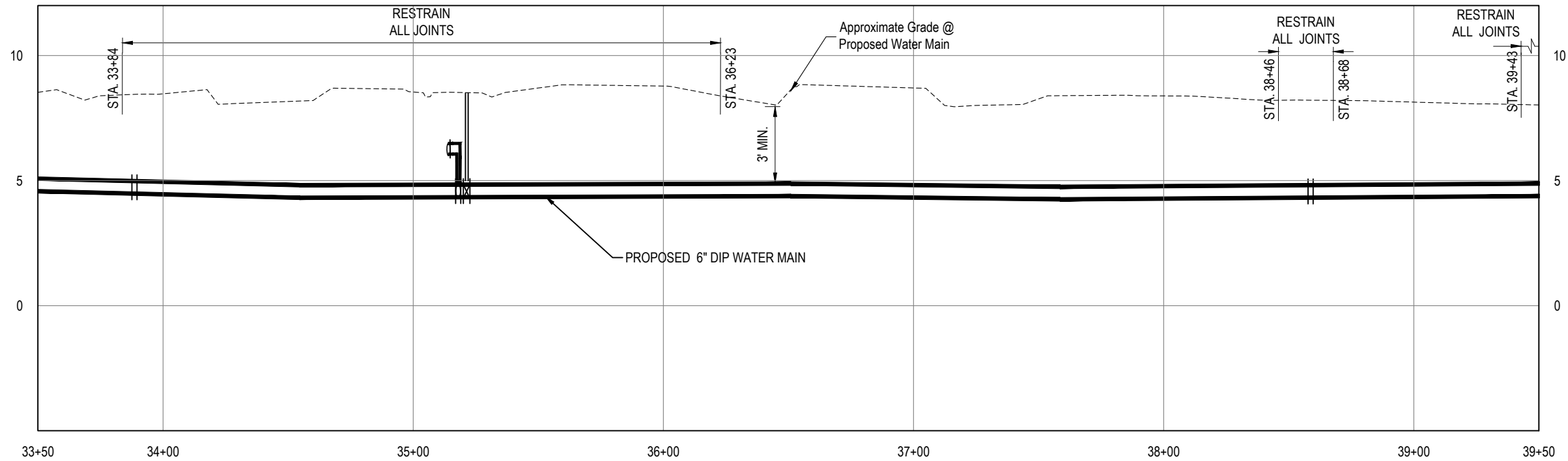
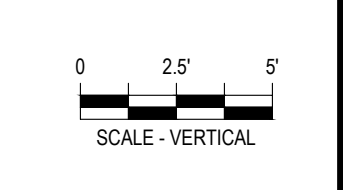
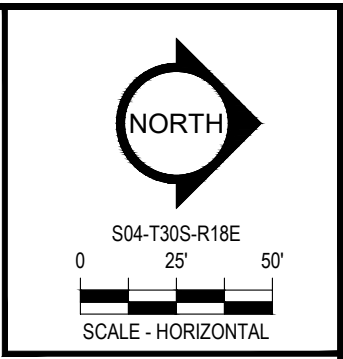
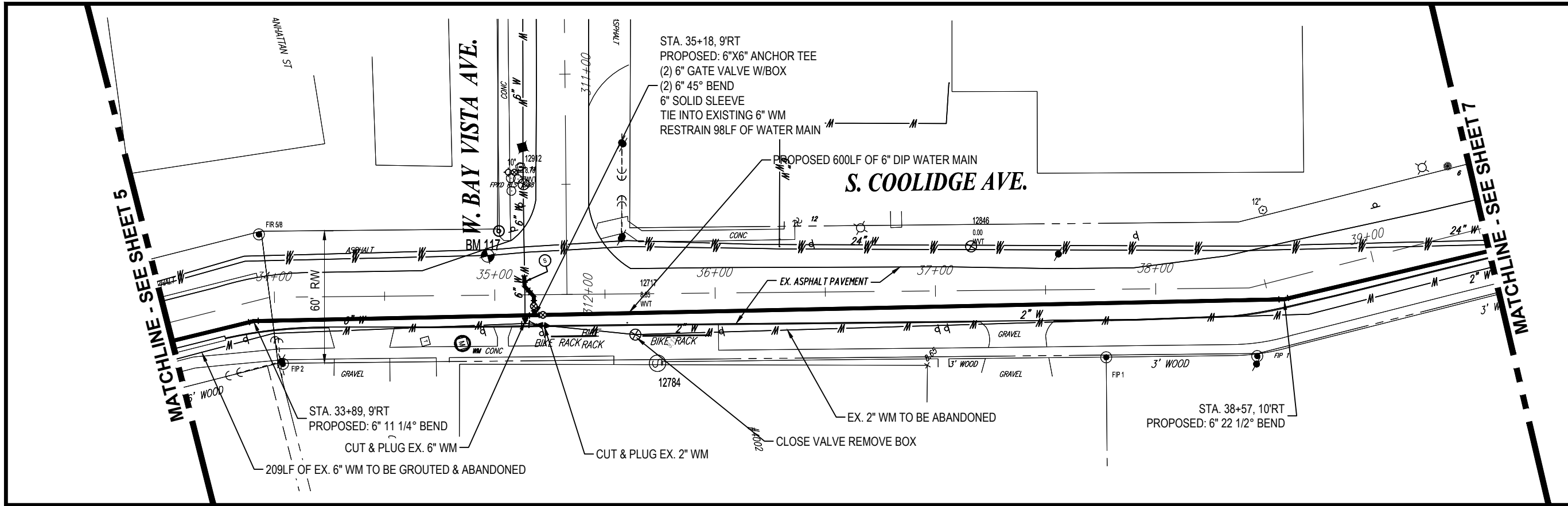
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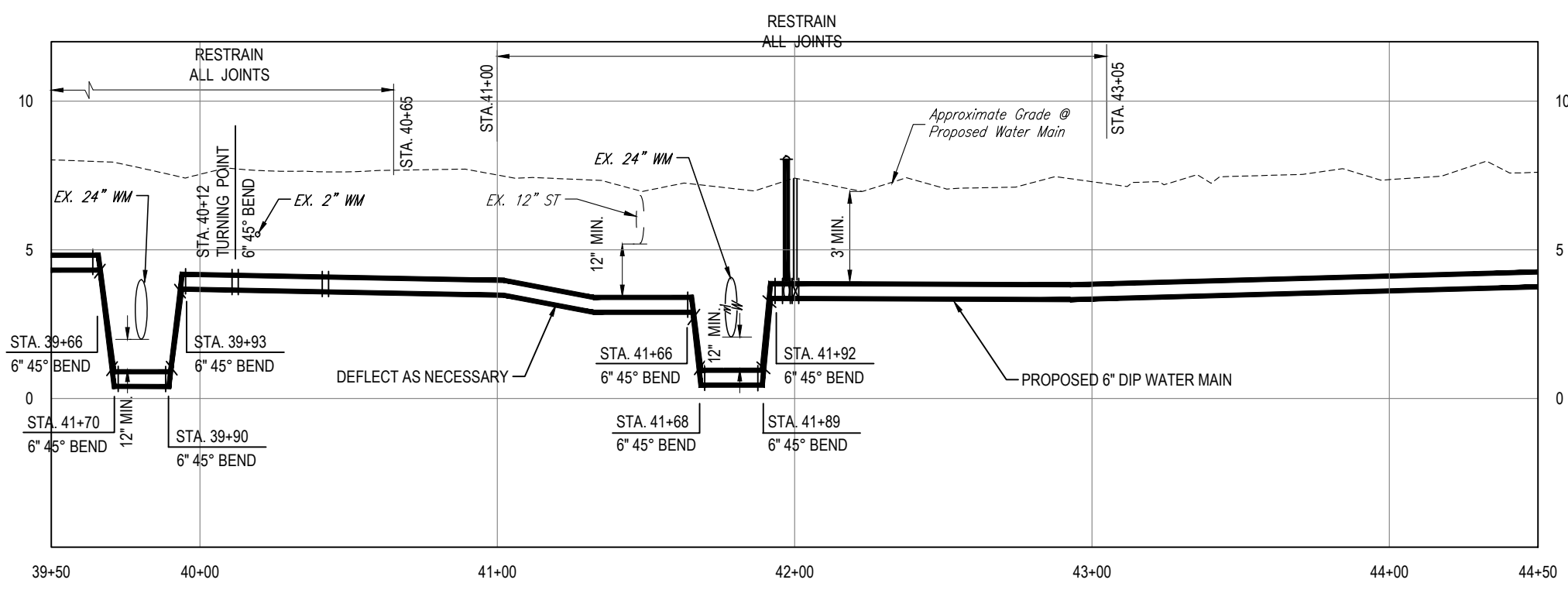
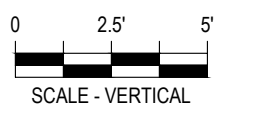
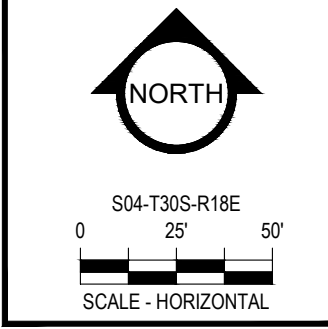
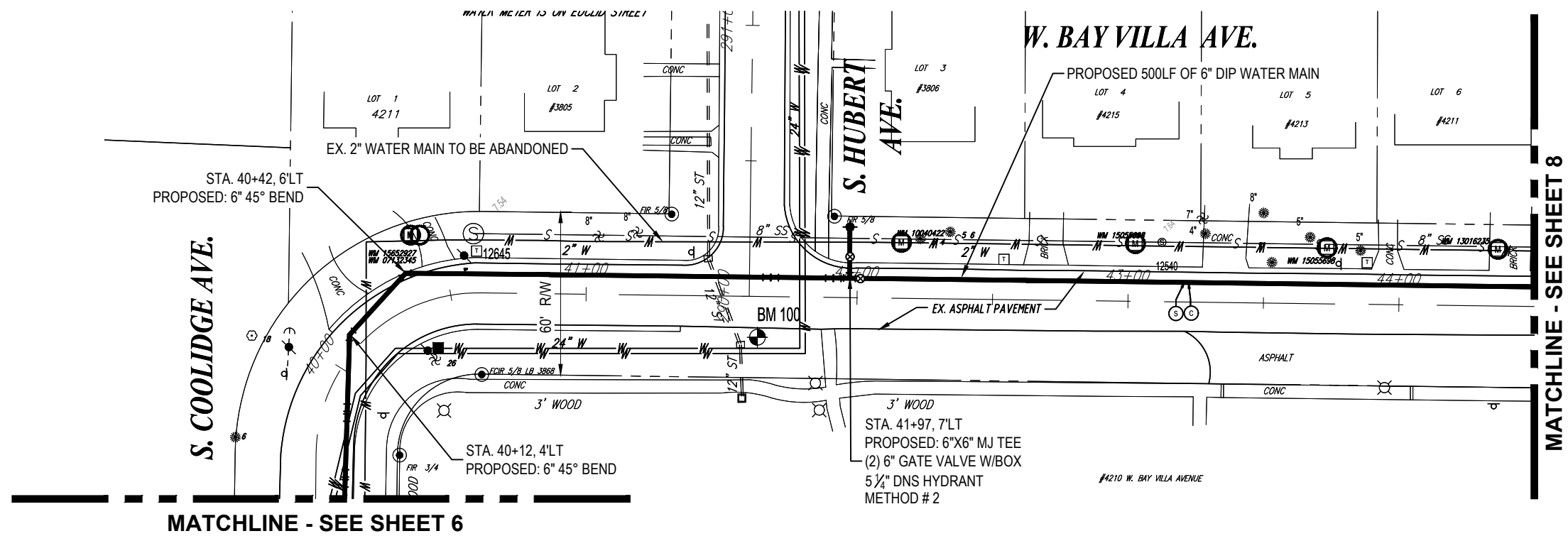


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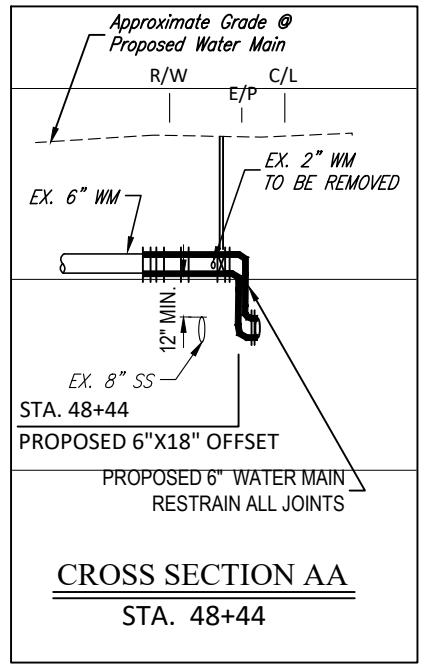
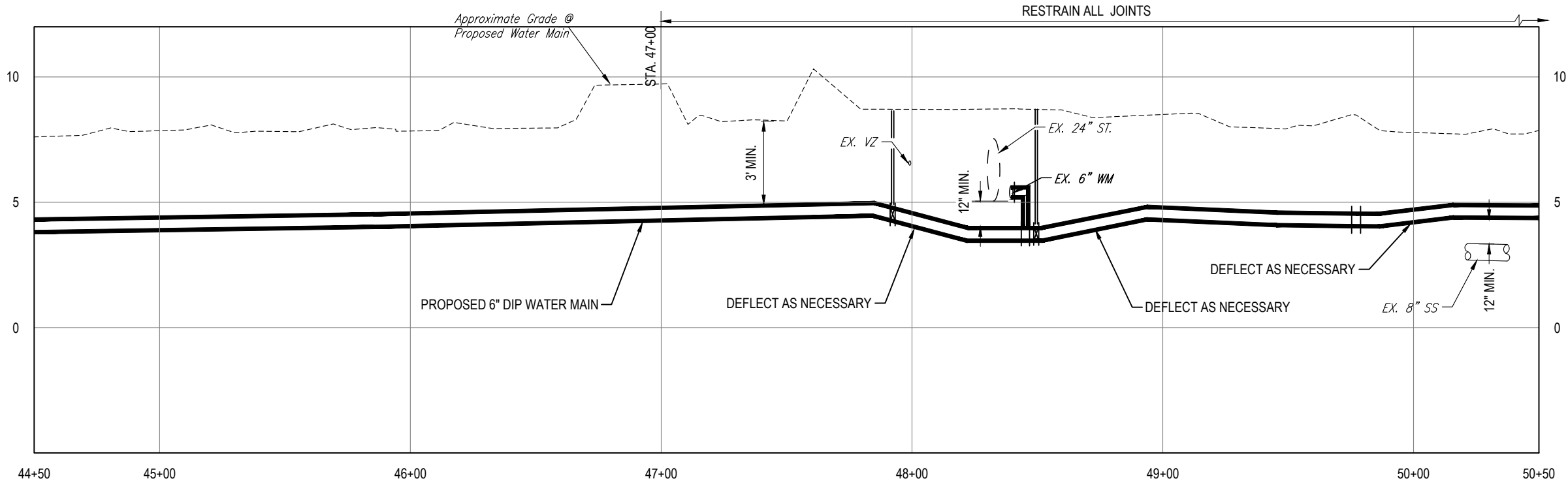
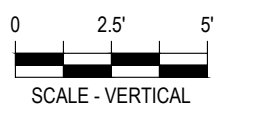
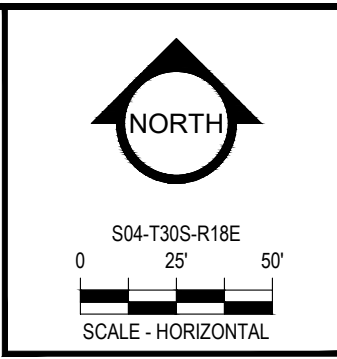
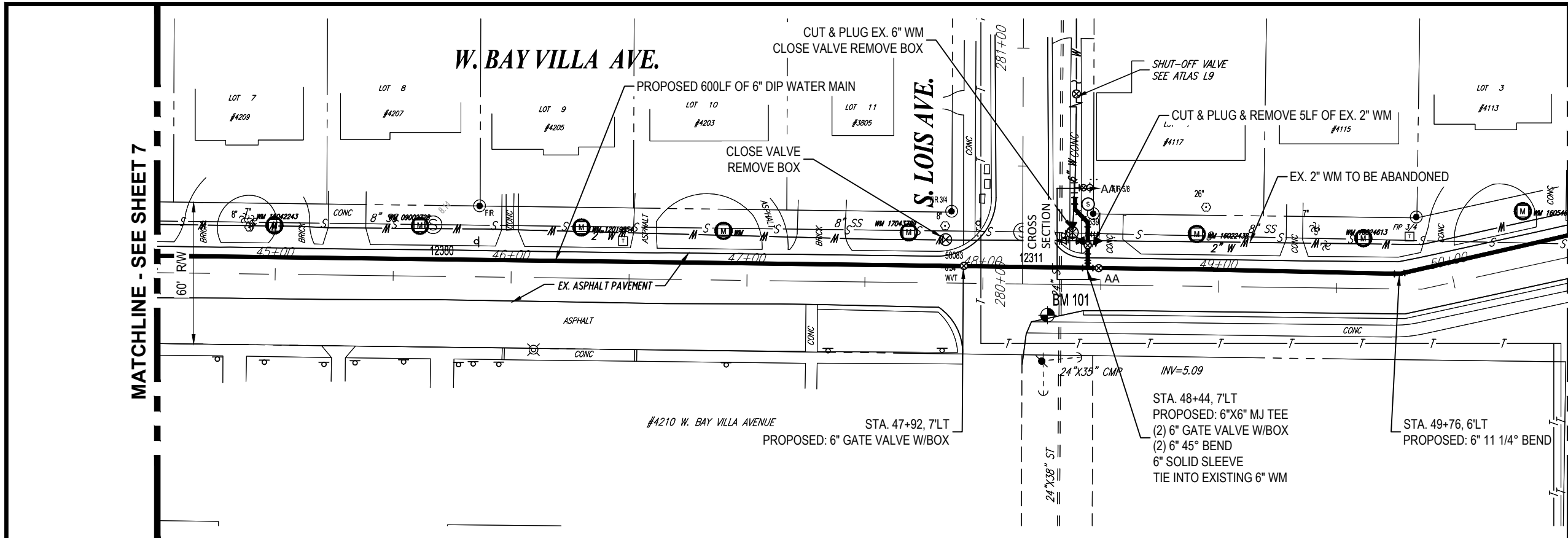
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FAIR OAKS WATER MAIN REPLACEMENT
PLAN & PROFILE



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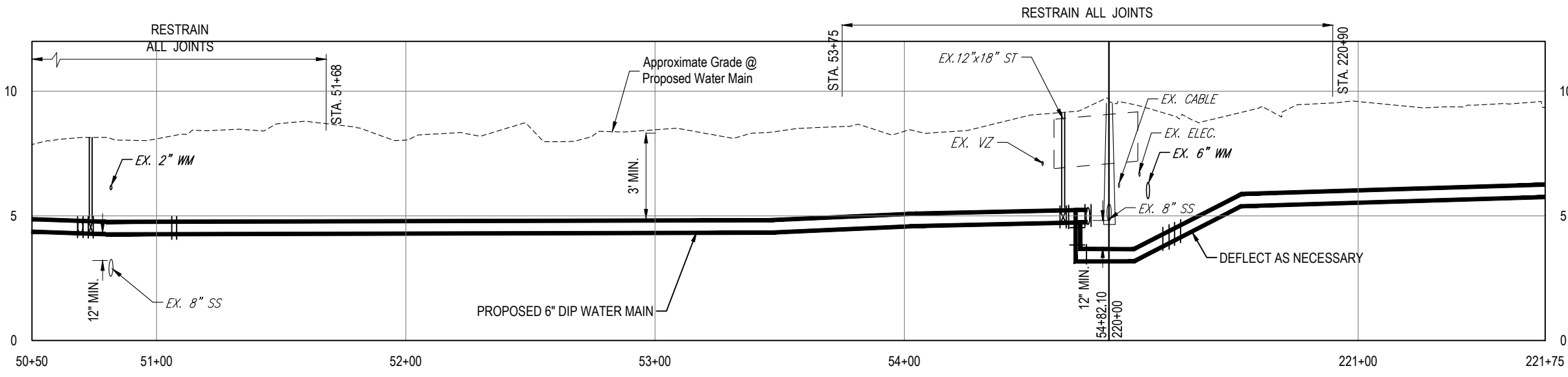
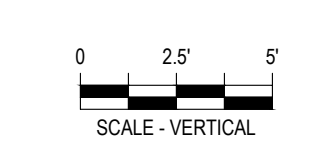
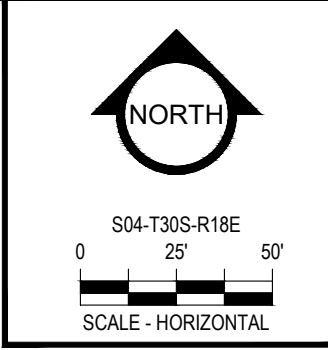
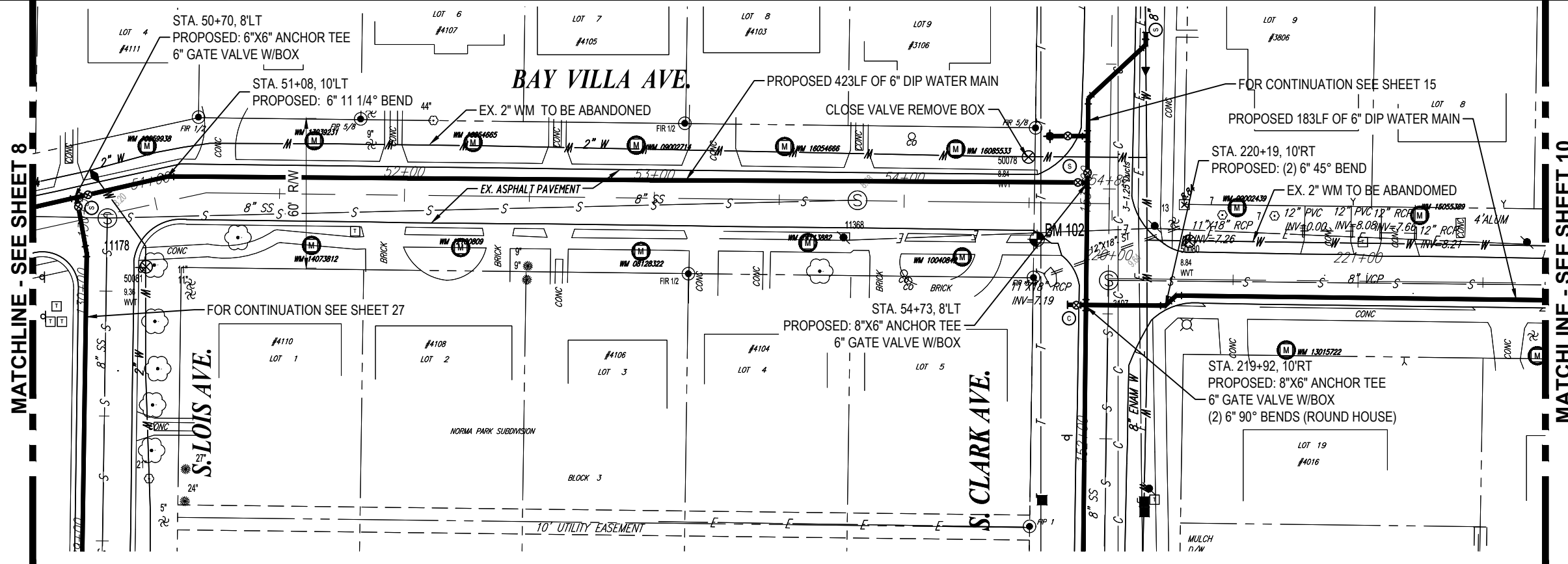
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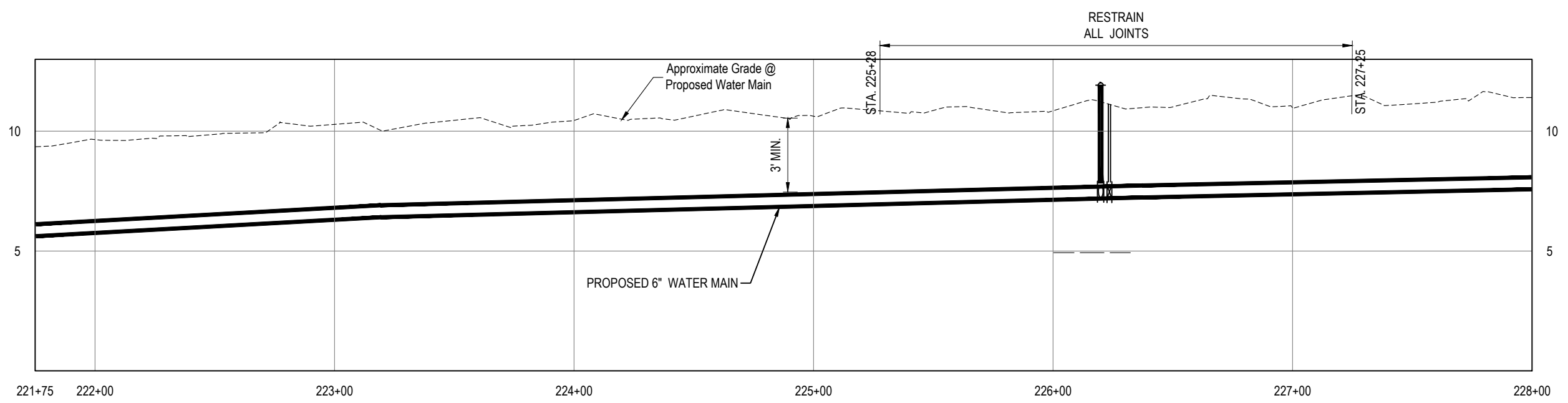
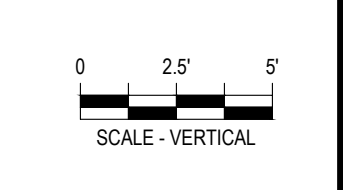
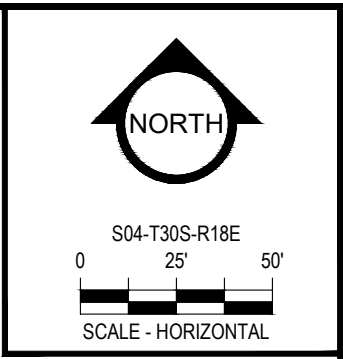
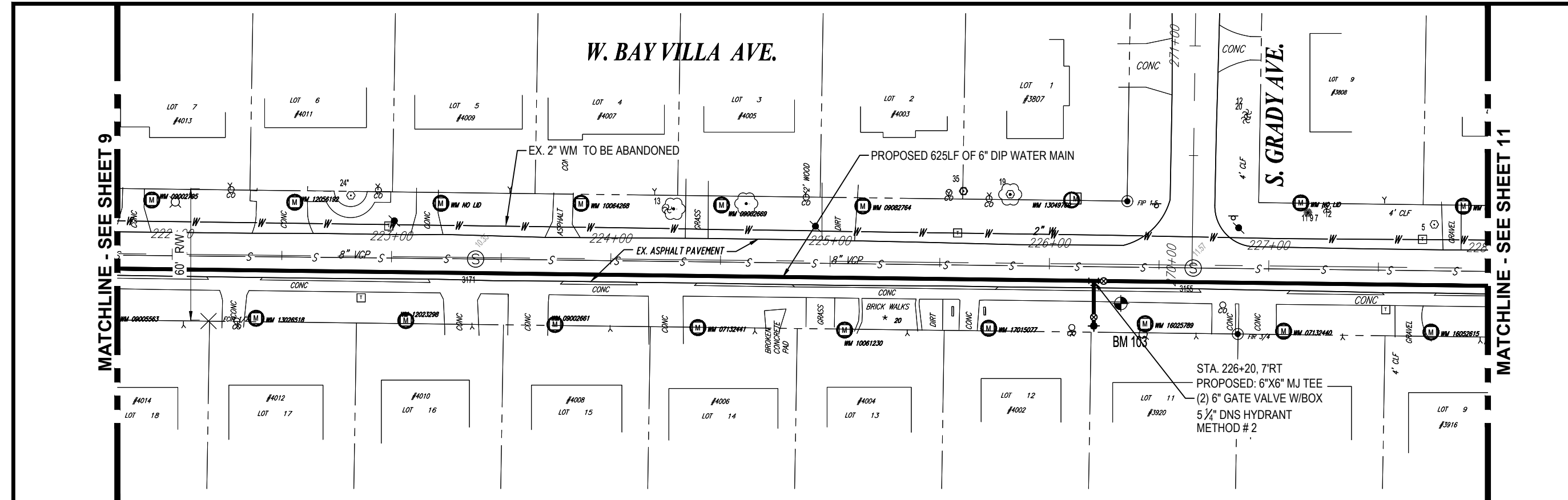
FAIR OAKS WATER MAIN REPLACEMENT

PLAN & PROFILE



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| WORK ORDER NO. | WTR-18-0002 |
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| ATLAS PAGE | L-09 |
| SHEET | 9 OF 39 |



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CITY OF TAMPA WATER DEPT.
306 E. JACKSON ST., 5E
TAMPA, FLA. 33602
P.E. #79453

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FAIR OAKS WATER MAIN REPLACEMENT

PLAN & PROFILE



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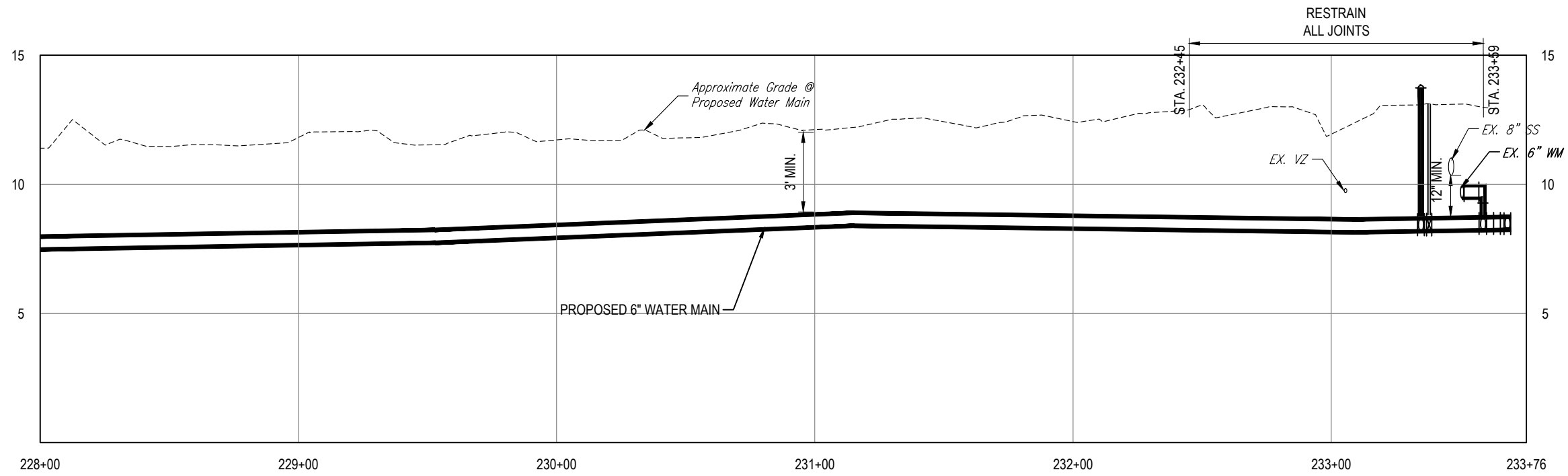
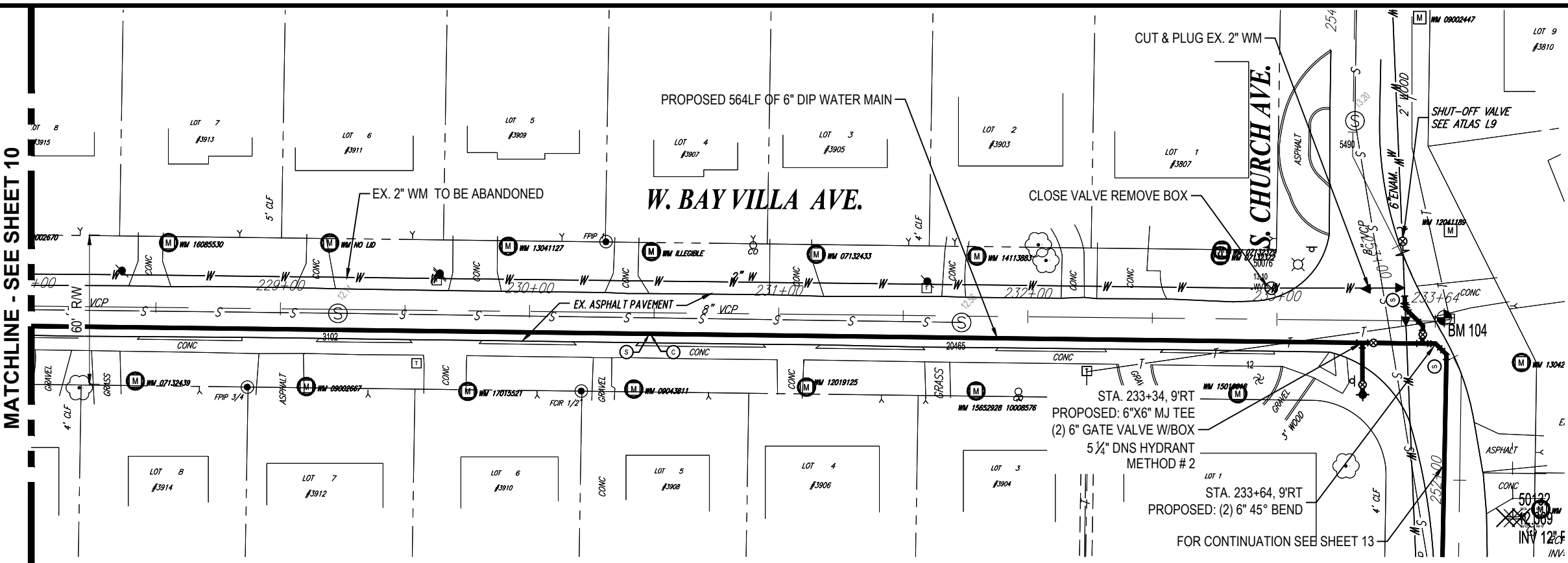
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| WORK ORDER NO. | WTR-18-0002 |
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| SHEET | 10 OF 39 |



S04-T30S-R18E
0 25' 50'
SCALE - HORIZONTAL

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SCALE - VERTICAL

MATCHLINE - SEE SHEET 10



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TAMPA, FLA. 33602
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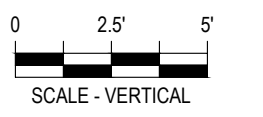
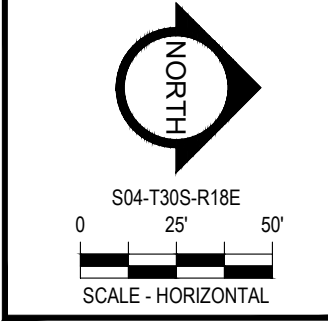
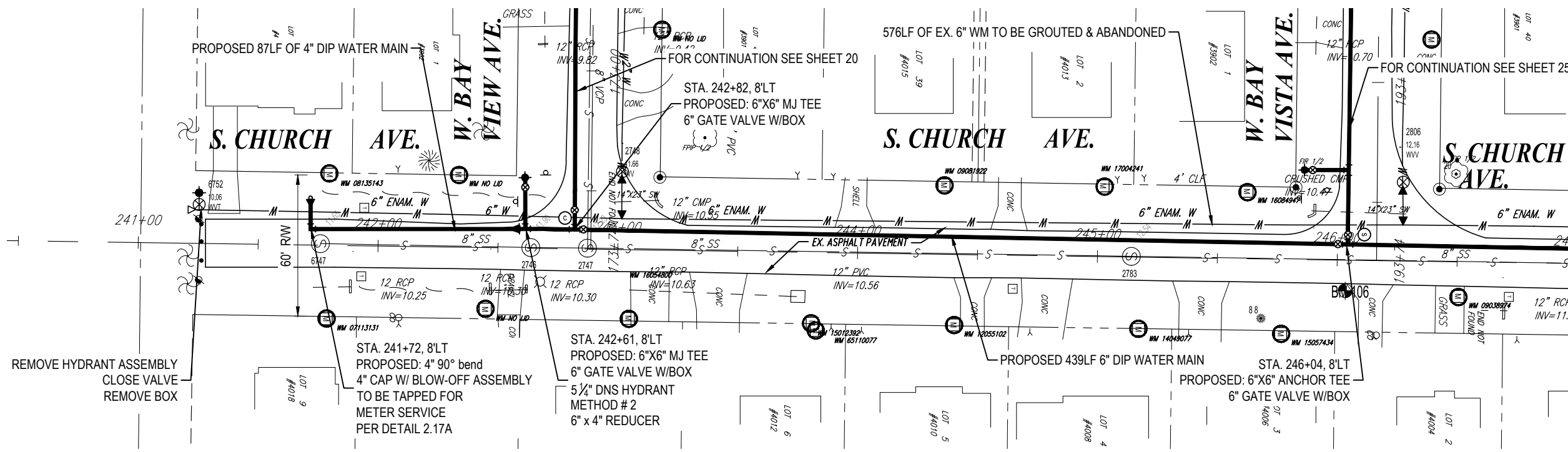
FAIR OAKS WATER MAIN REPLACEMENT

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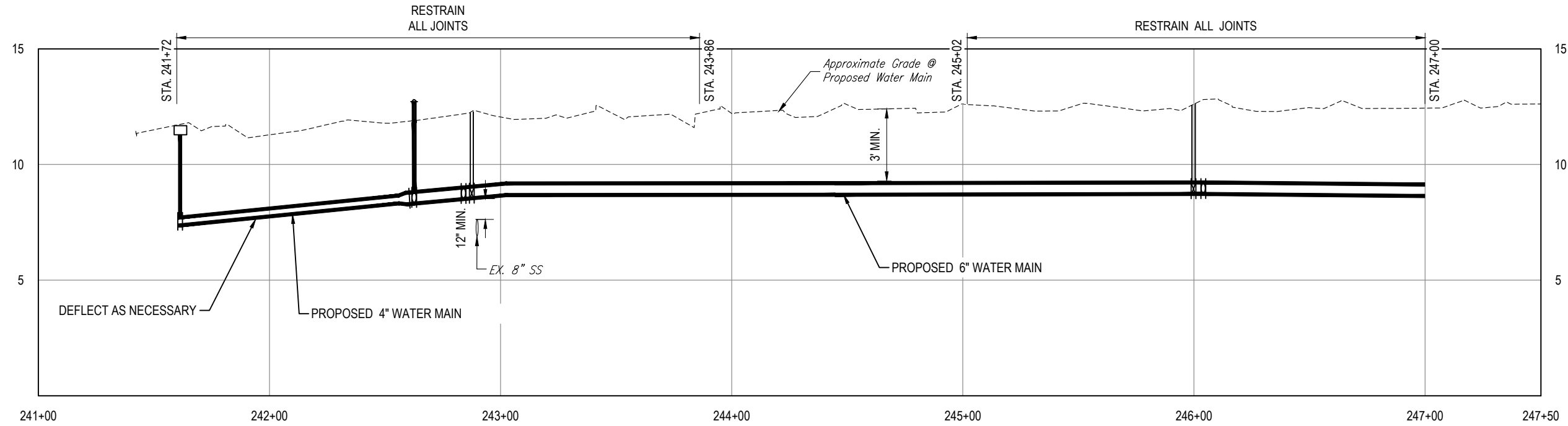


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MATCHLINE - SEE SHEET 13



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TAMPA, FLA. 33602
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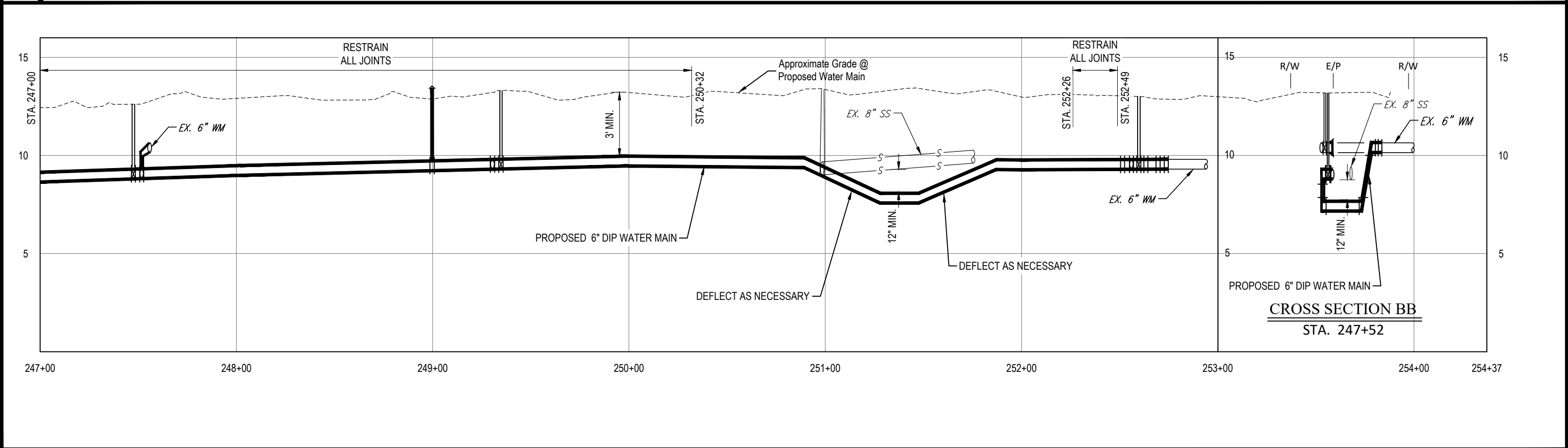
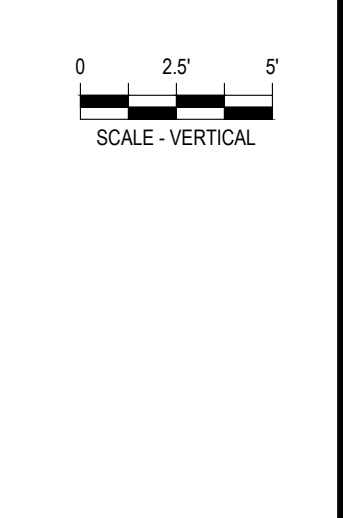
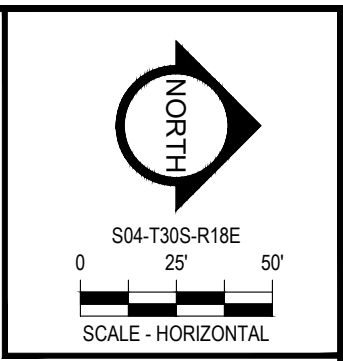
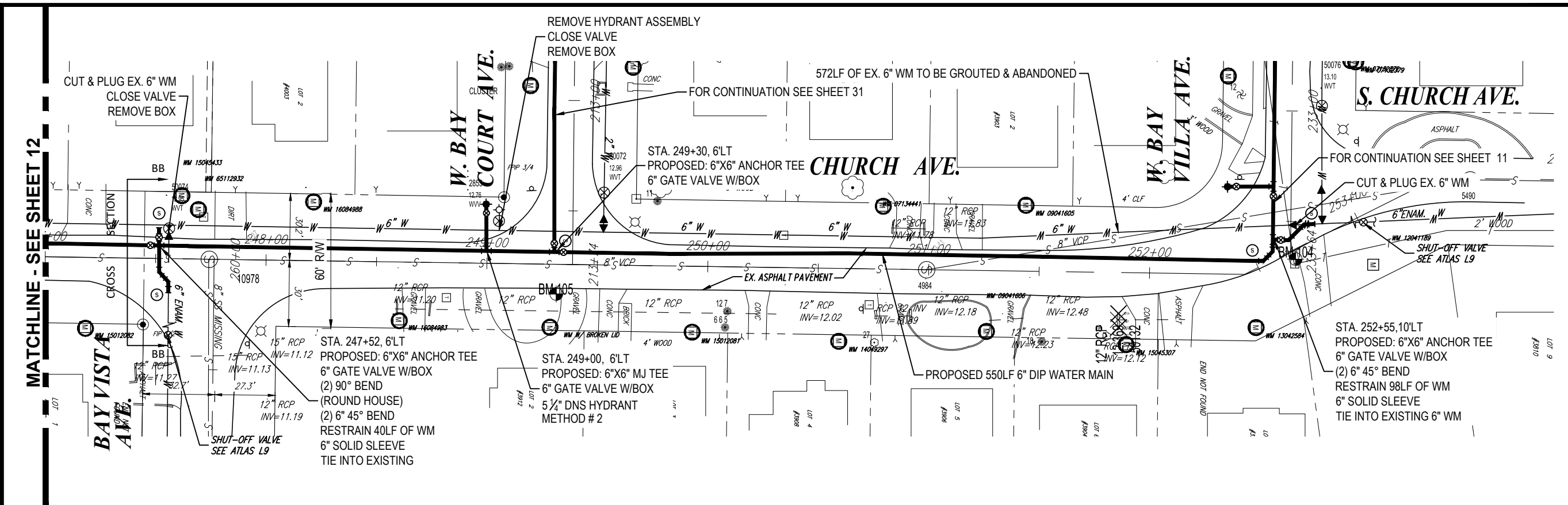
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CITY OF TAMPA WATER DEPT.
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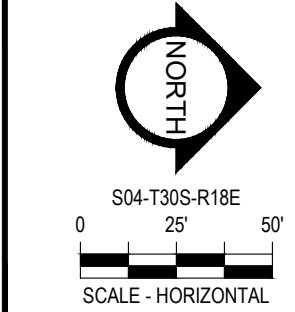
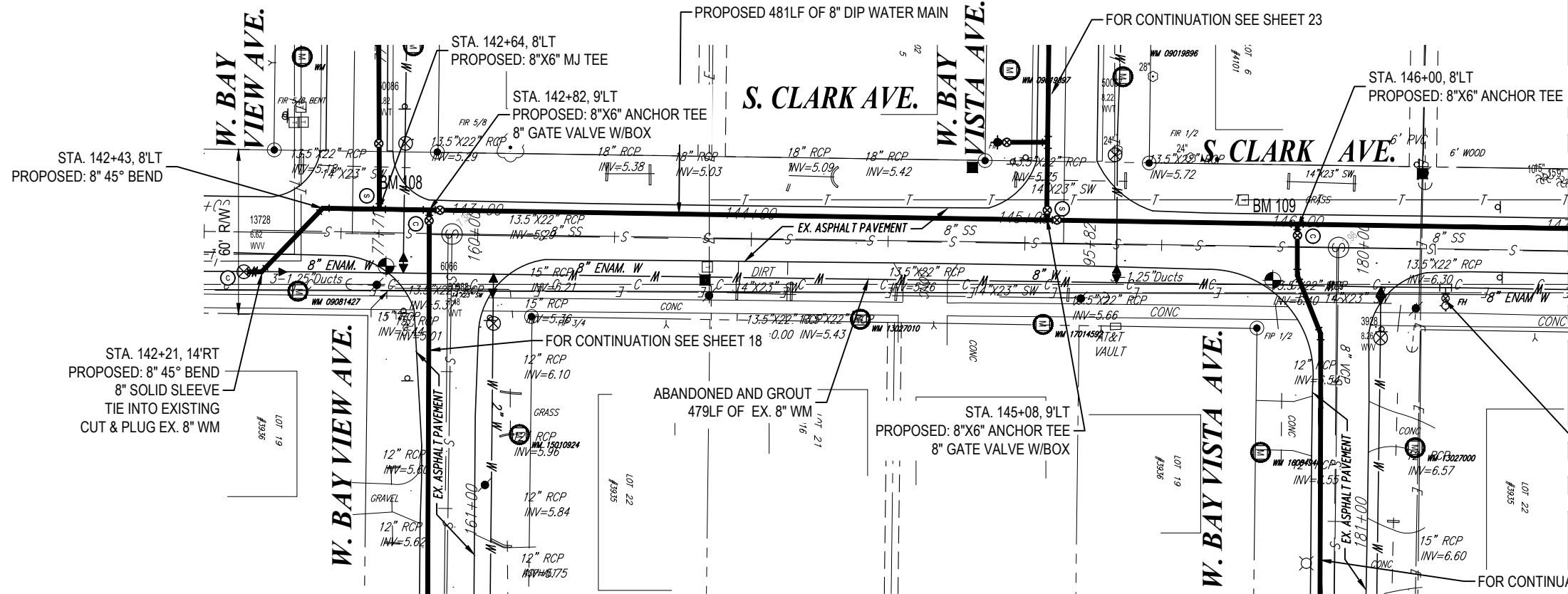
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| SHEET | 13 OF 39 |

FAIR OAKS WATER MAIN REPLACEMENT

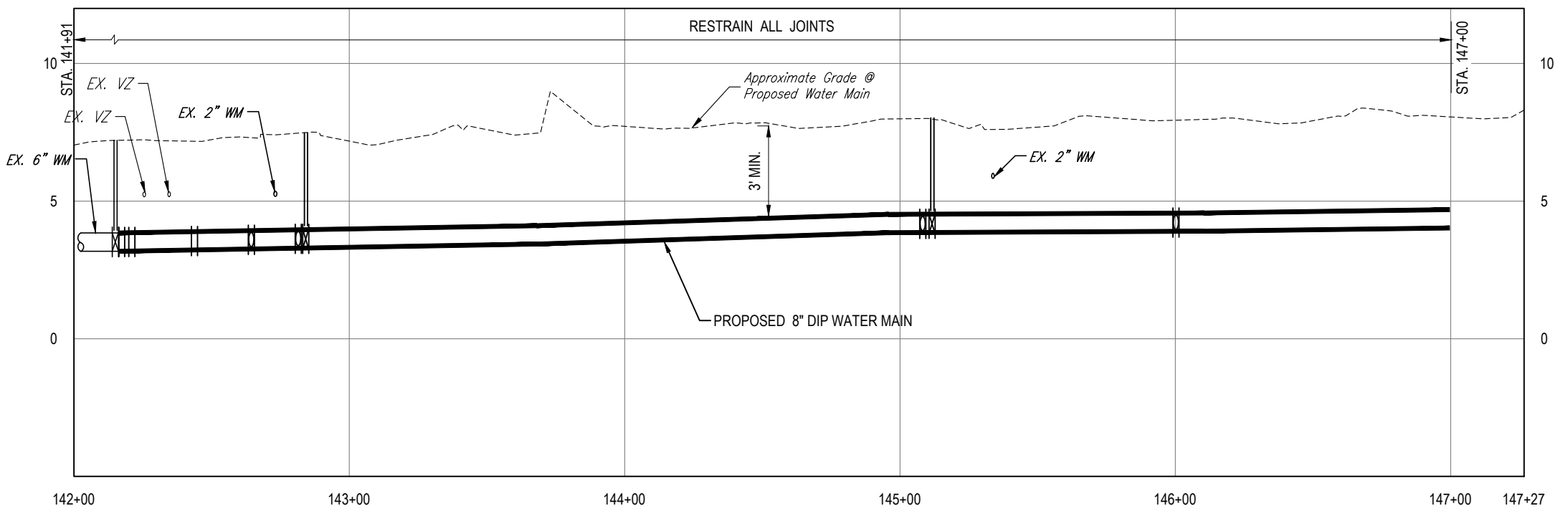
PLAN & PROFILE



MATCHLINE - SEE SHEET 15

REMOVE HYDRANT ASSEMBLY
CLOSE VALVE REMOVE BOX

FOR CONTINUATION SEE SHEET 23



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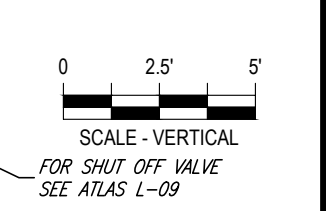
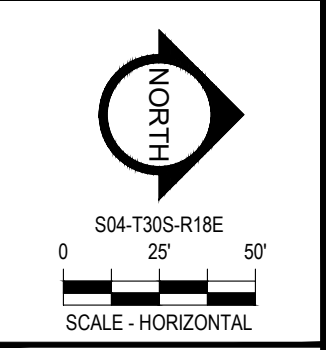
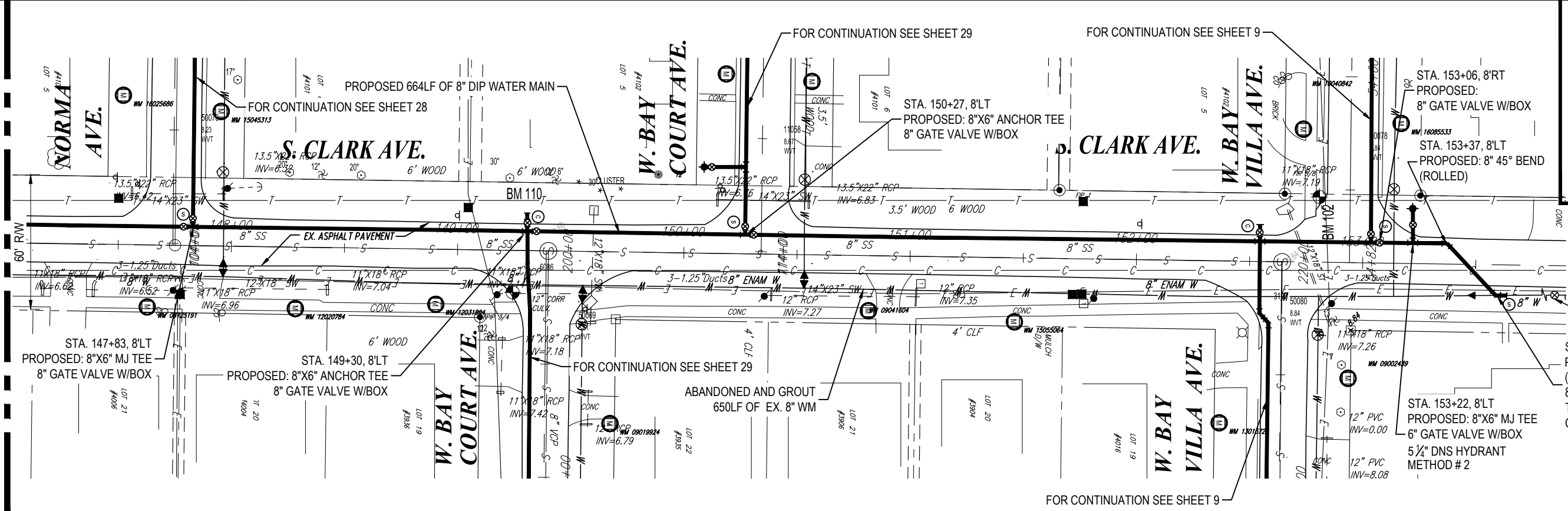
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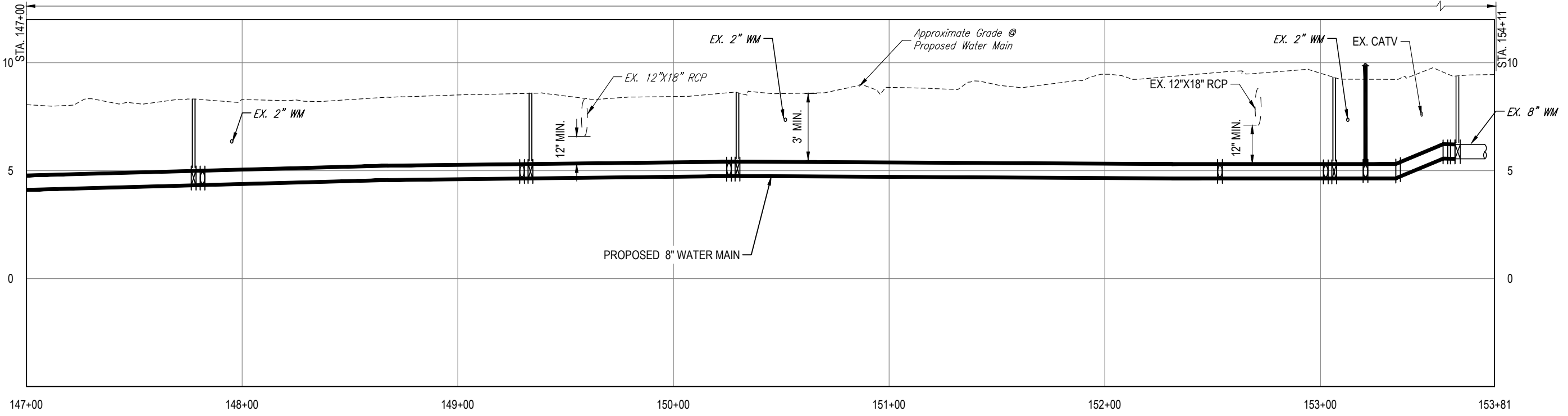
ATLAS PAGE L-09 SHEET 14 OF 39

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MATCHLINE - SEE SHEET 14



RESTRAIN ALL JOINTS



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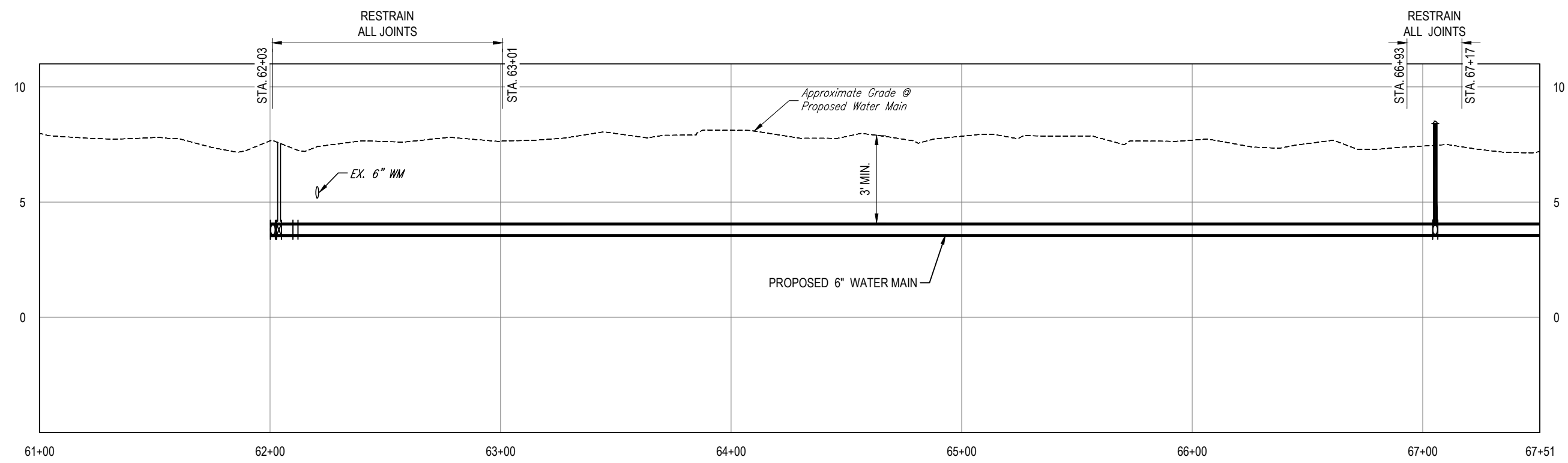
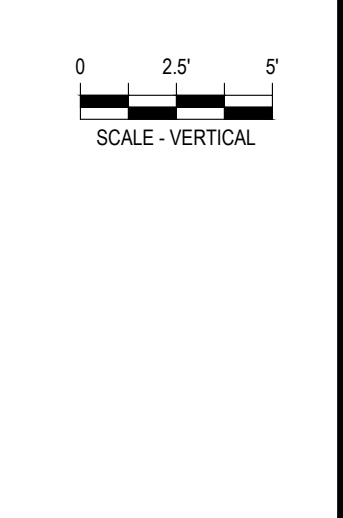
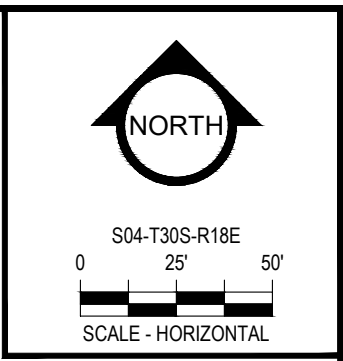
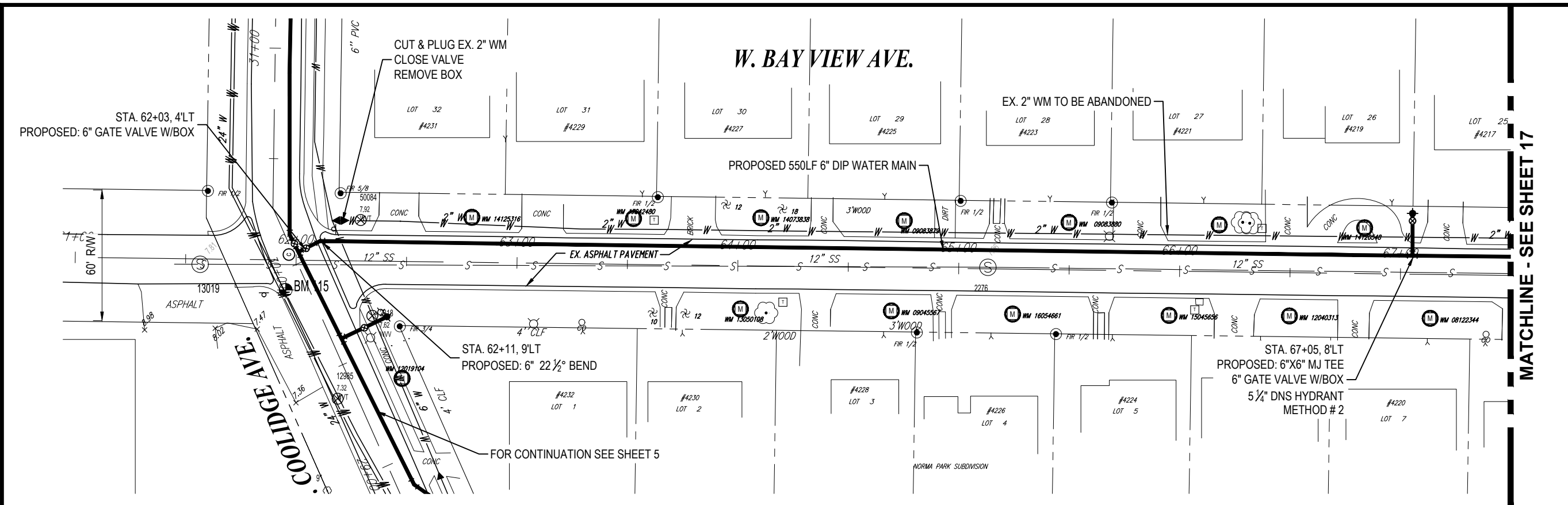
FAIR OAKS WATER MAIN REPLACEMENT

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FAIR OAKS WATER MAIN REPLACEMENT

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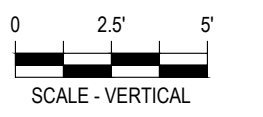
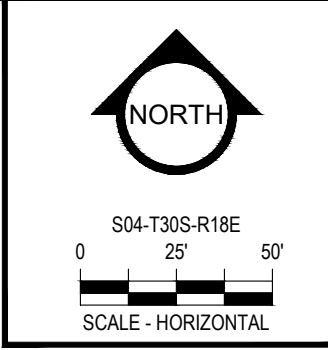
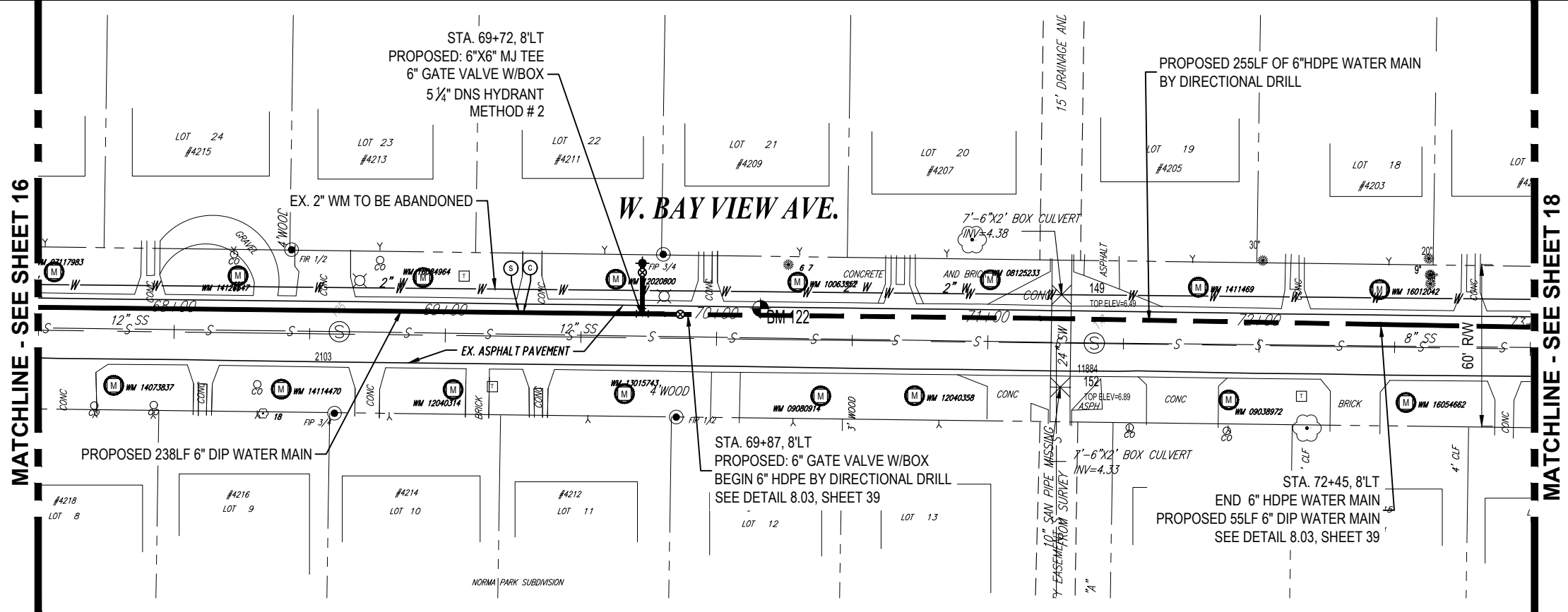


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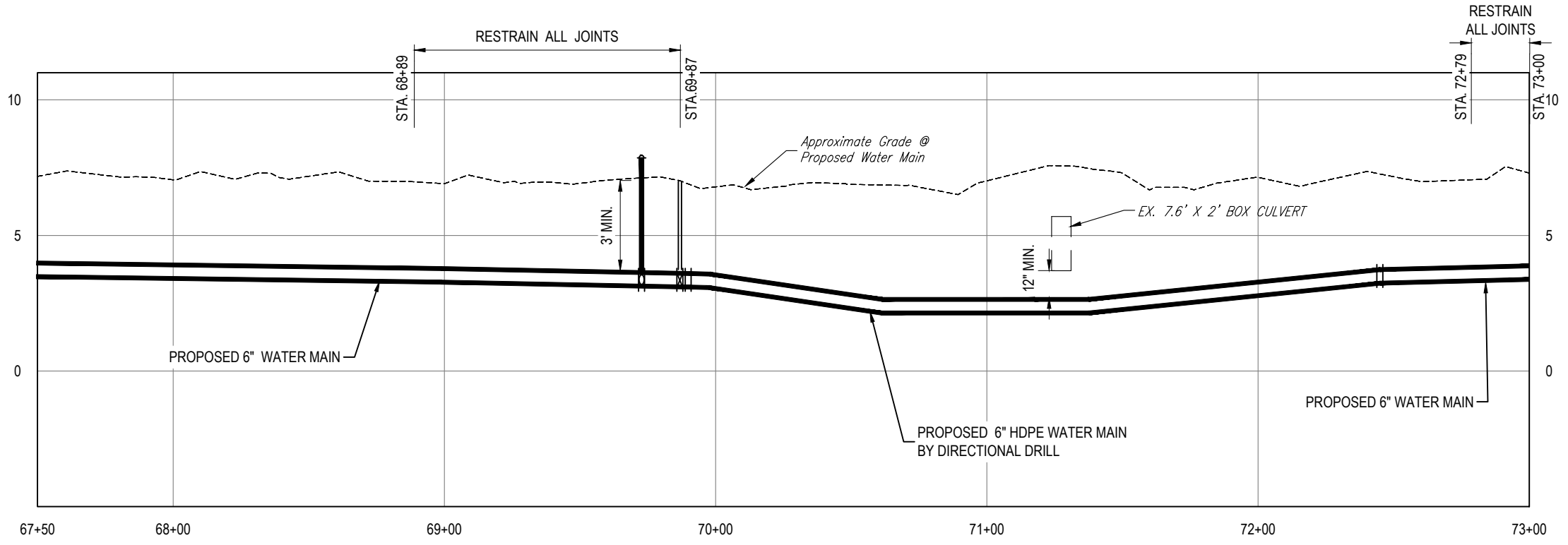
WORK ORDER NO. WTR-18-0002

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NOTE: MANUFACTURED STAINLESS STEEL IS TO BE INSERTED IN HDPE FOR CONNECTION.



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 306 E. JACKSON ST., 5E
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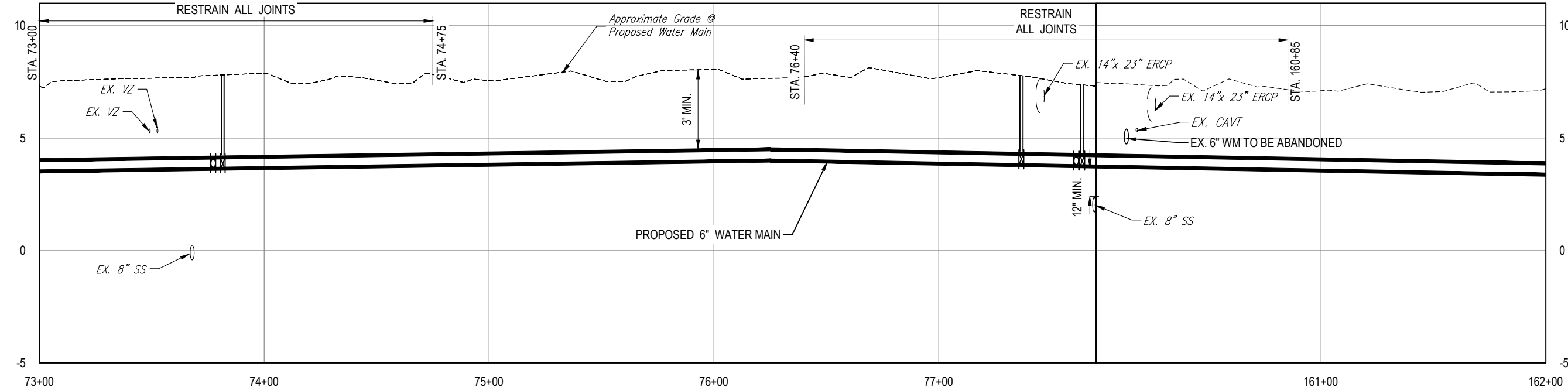
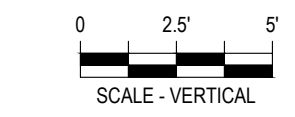
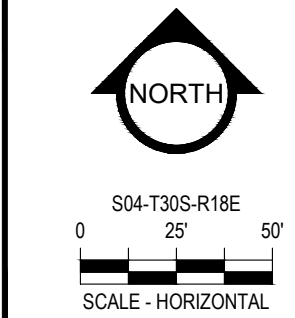
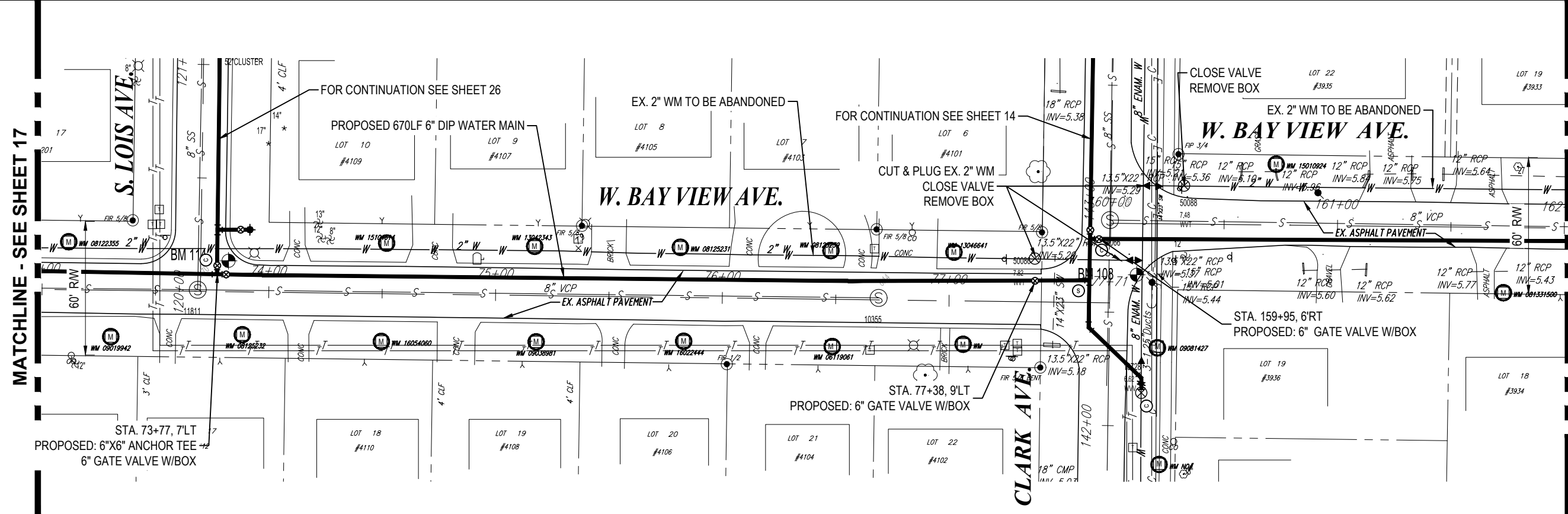


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MATCHLINE - SEE SHEET 17

MATCHLINE - SEE SHEET 19



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 P.E. #79453

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ATLAS PAGE L-09 SHEET 18 OF 39

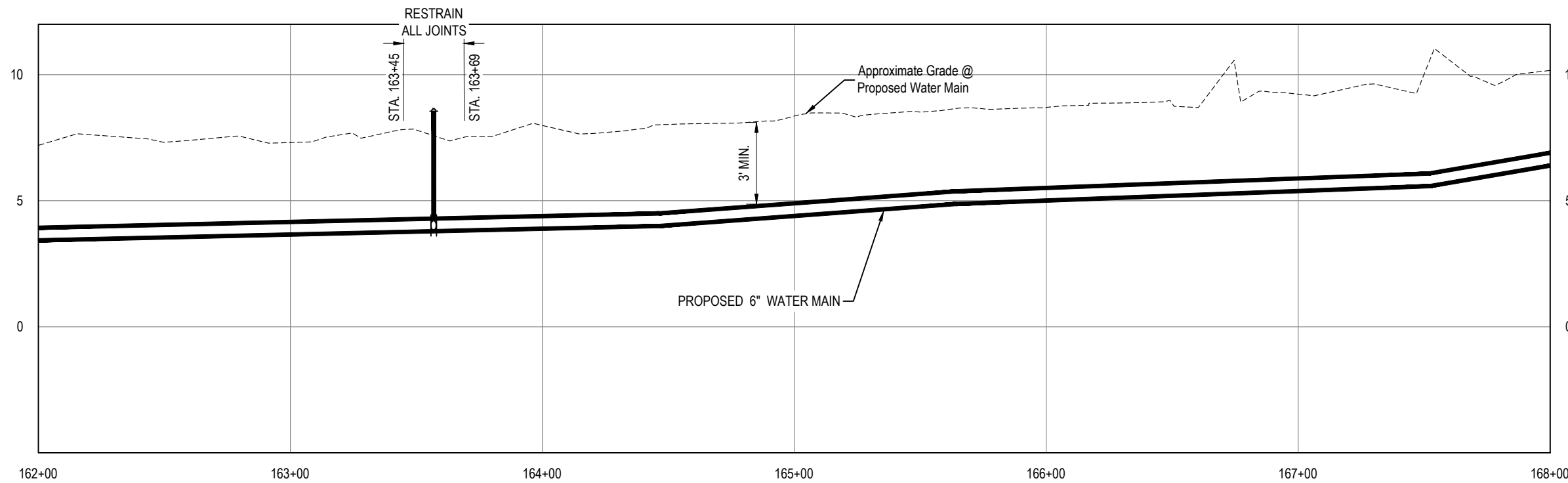
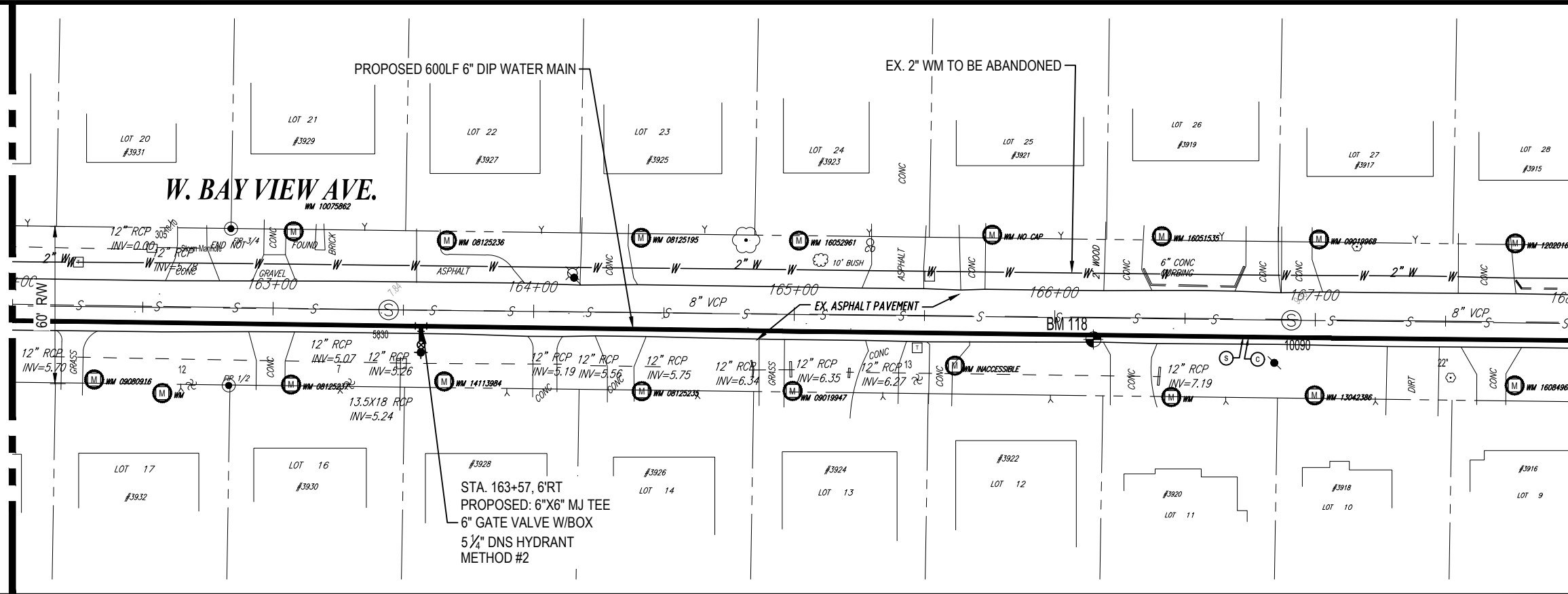


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 0 25' 50'
 SCALE - HORIZONTAL

0 2.5' 5'
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MATCHLINE - SEE SHEET 18

MATCHLINE - SEE SHEET 20



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FAIR OAKS WATER MAIN REPLACEMENT

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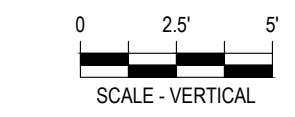
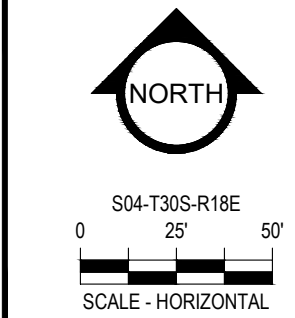
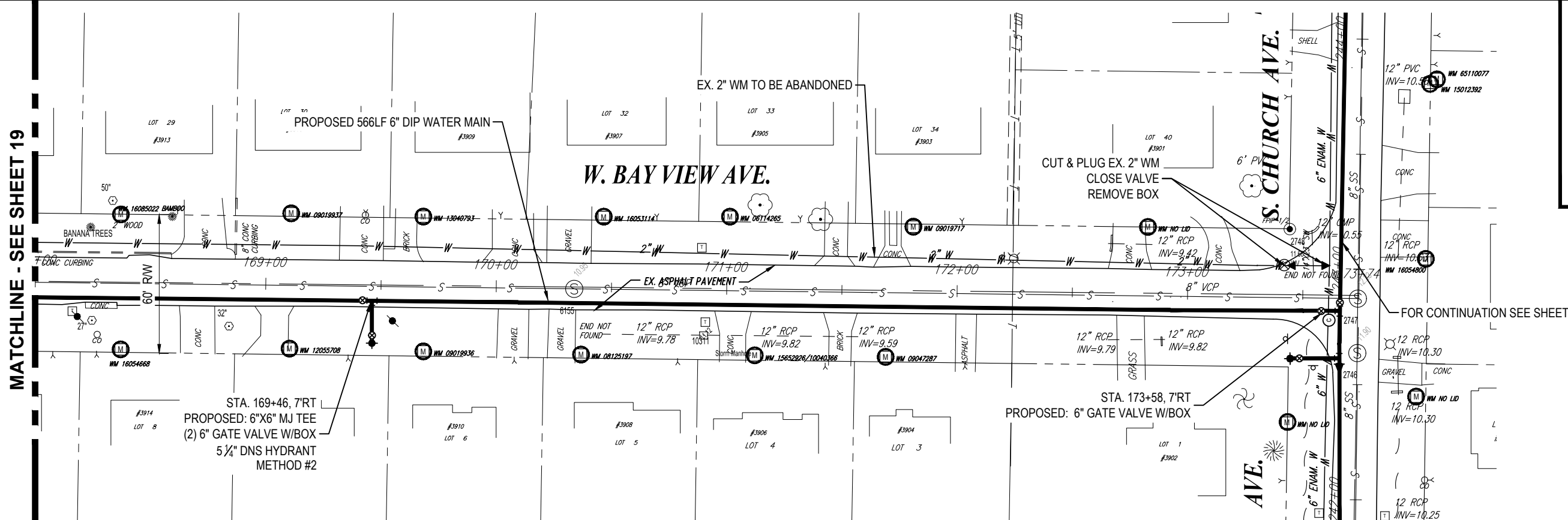
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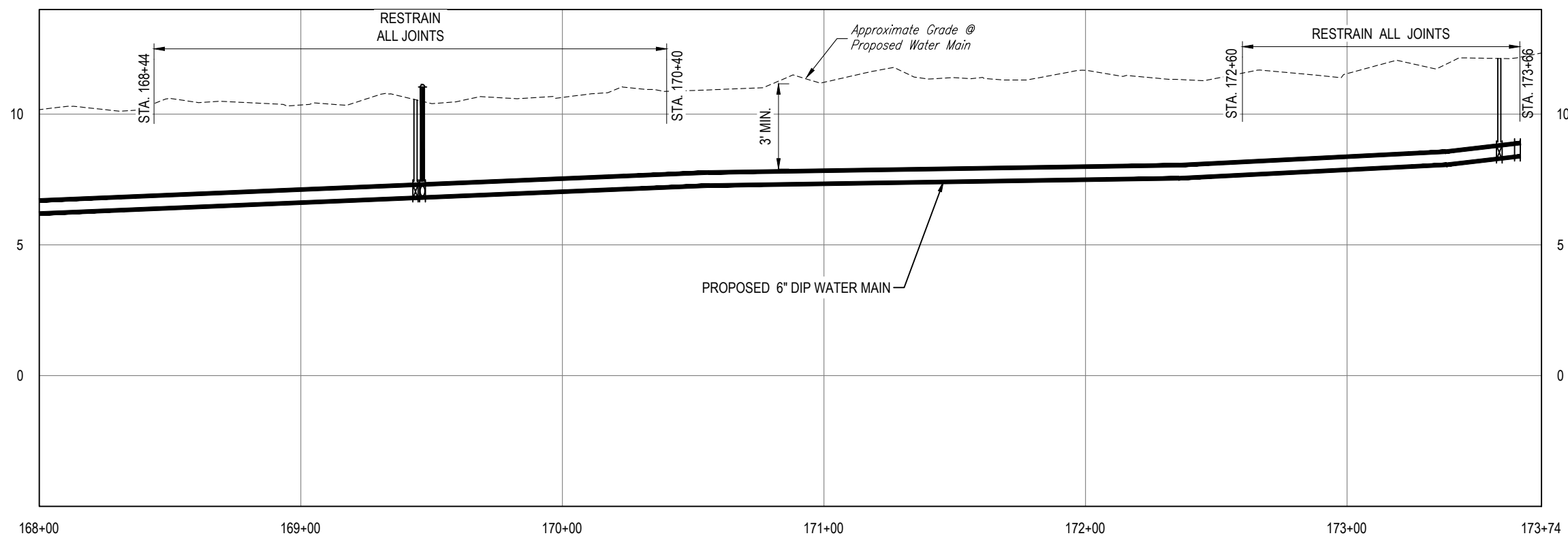
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ATLAS PAGE L-09 SHEET 19 OF 39

MATCHLINE - SEE SHEET 19



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CITY OF TAMPA WATER DEPT.
306 E. JACKSON ST., 5E
TAMPA, FLA. 33602
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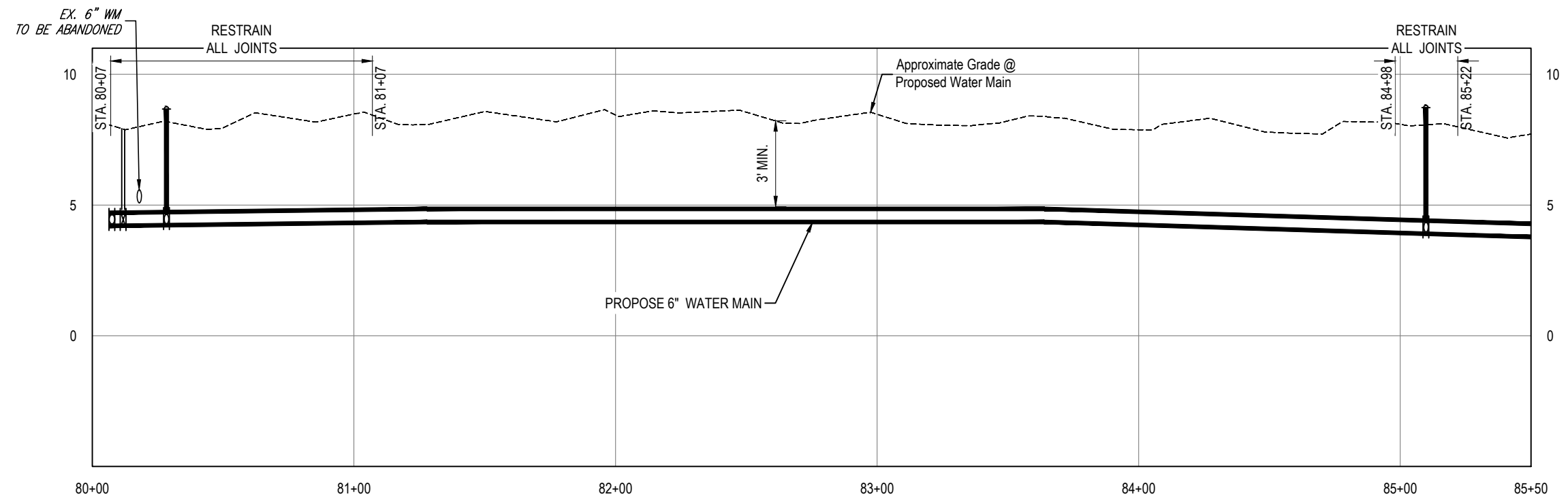
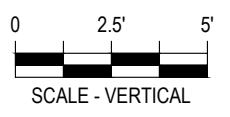
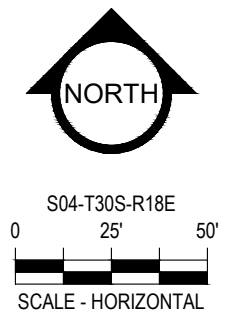
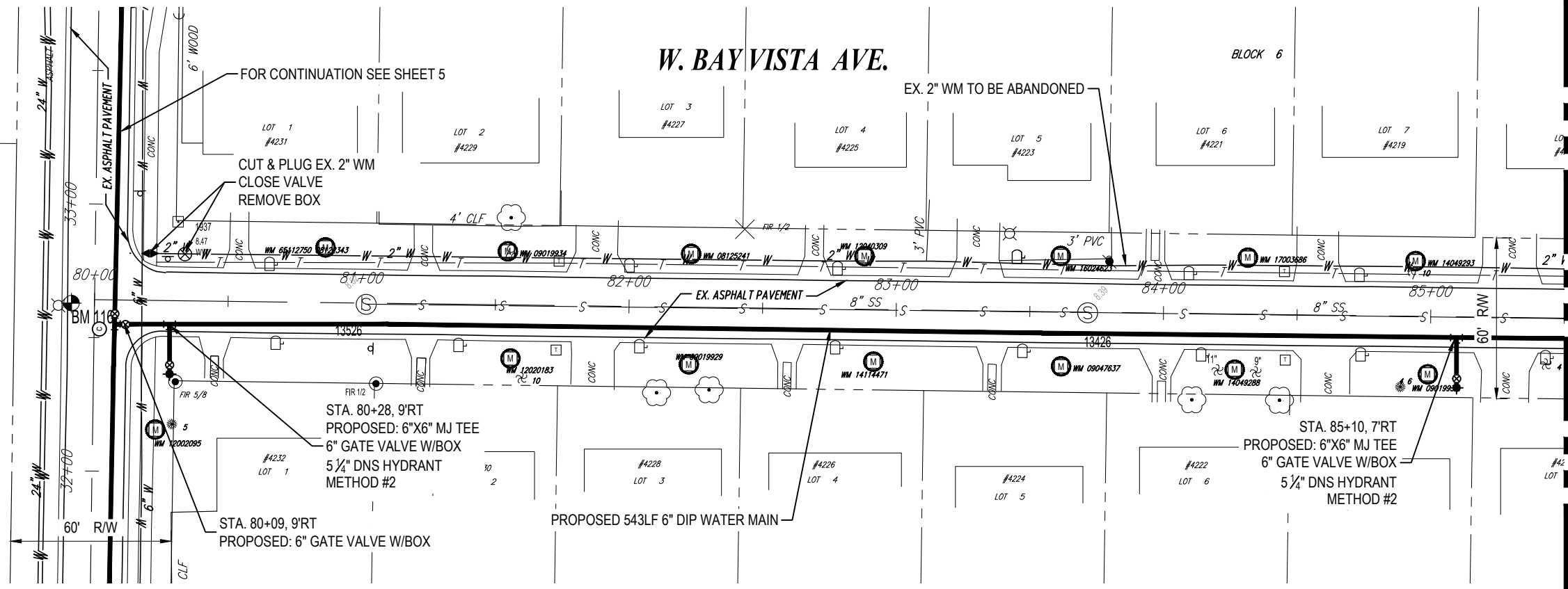
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S. COOLIDGE AVE.

W. BAY VISTA AVE.

BLOCK 6

MATCHLINE - SEE SHEET 22



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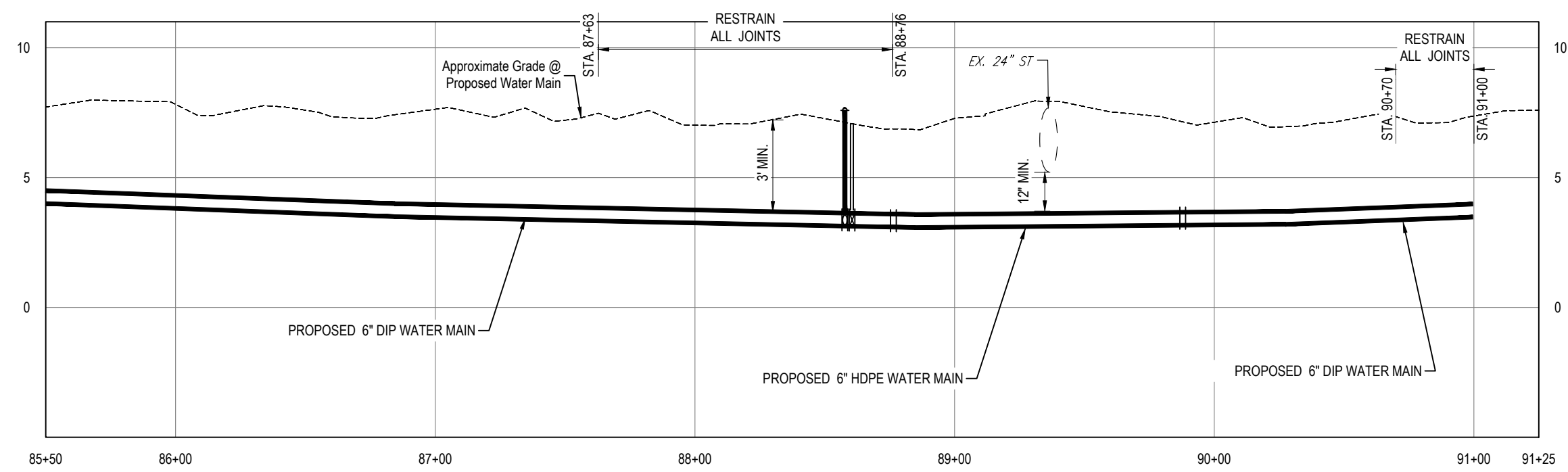
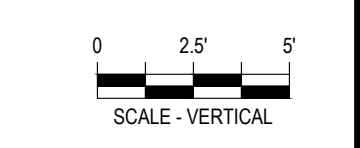
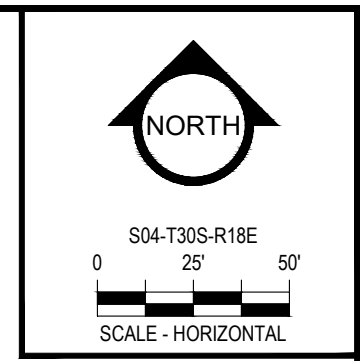
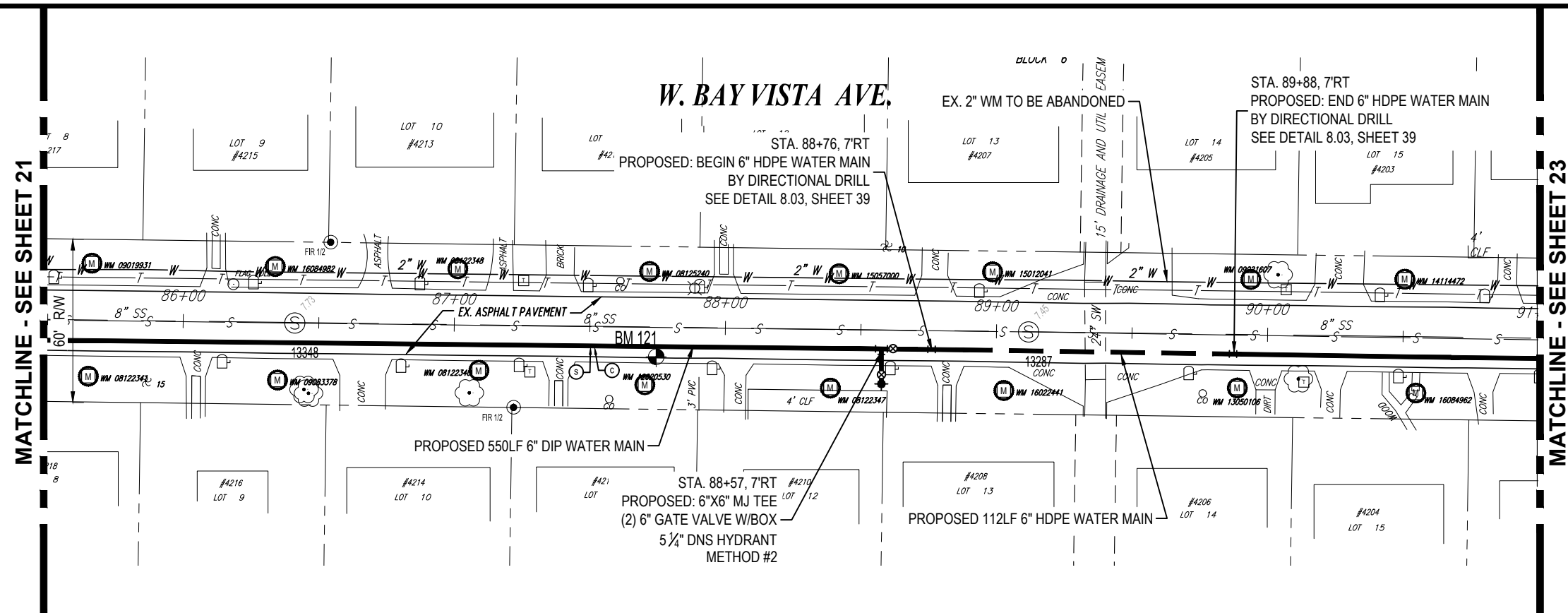
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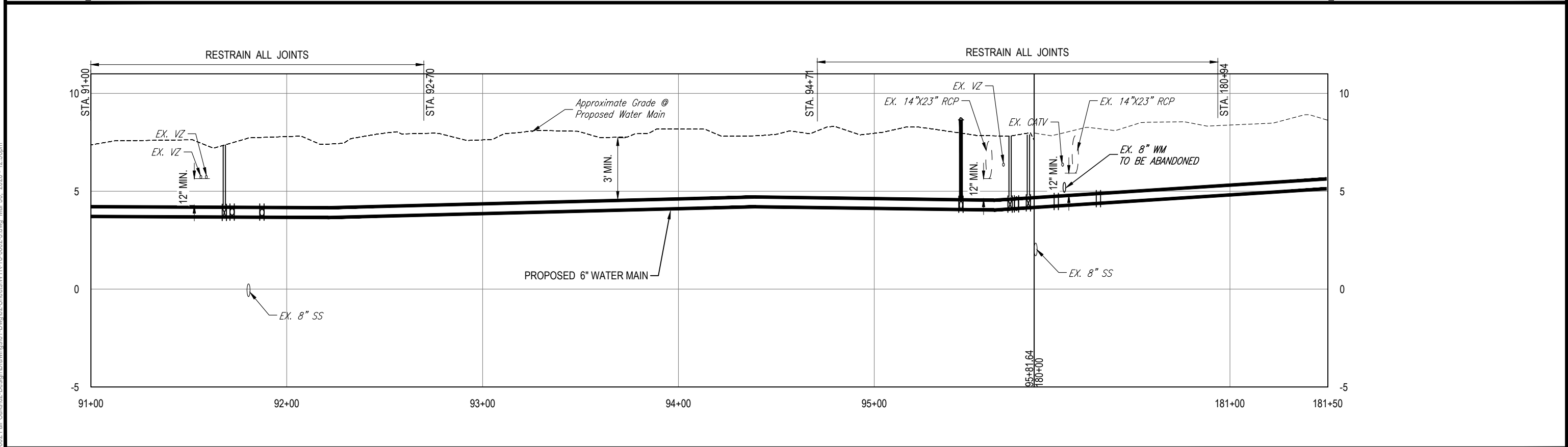
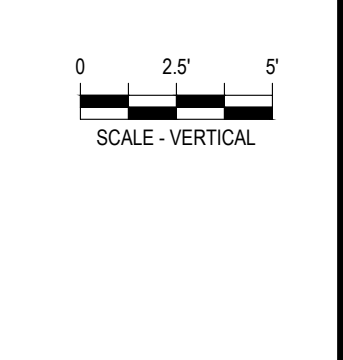
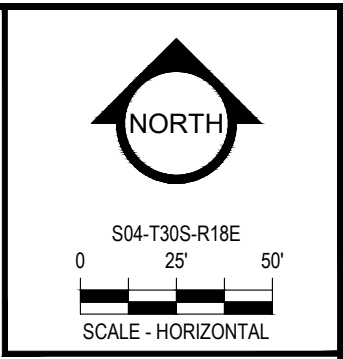
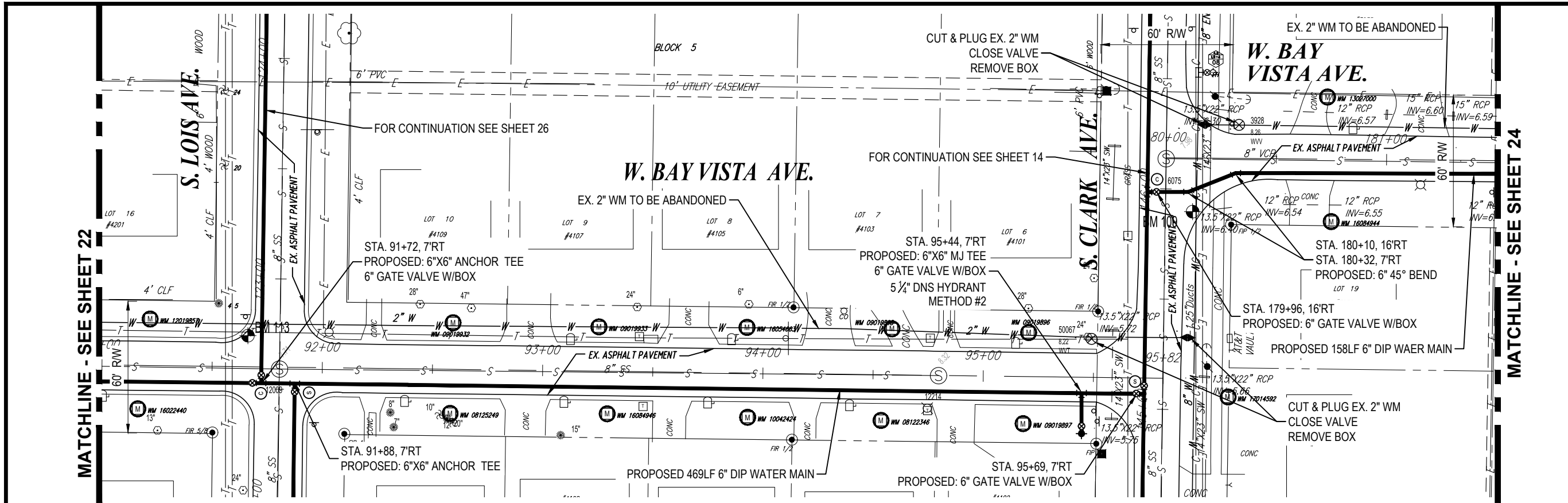
DATE 05/07/2018

FAIR OAKS WATER MAIN REPLACEMENT

PLAN & PROFILE



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| WORK ORDER NO. | WTR-18-0002 |
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 CITY OF TAMPA WATER DEPT.
 306 E. JACKSON ST., 5E
 TAMPA, FLA. 33602
 P.E. #79453

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 DRAWN JDM
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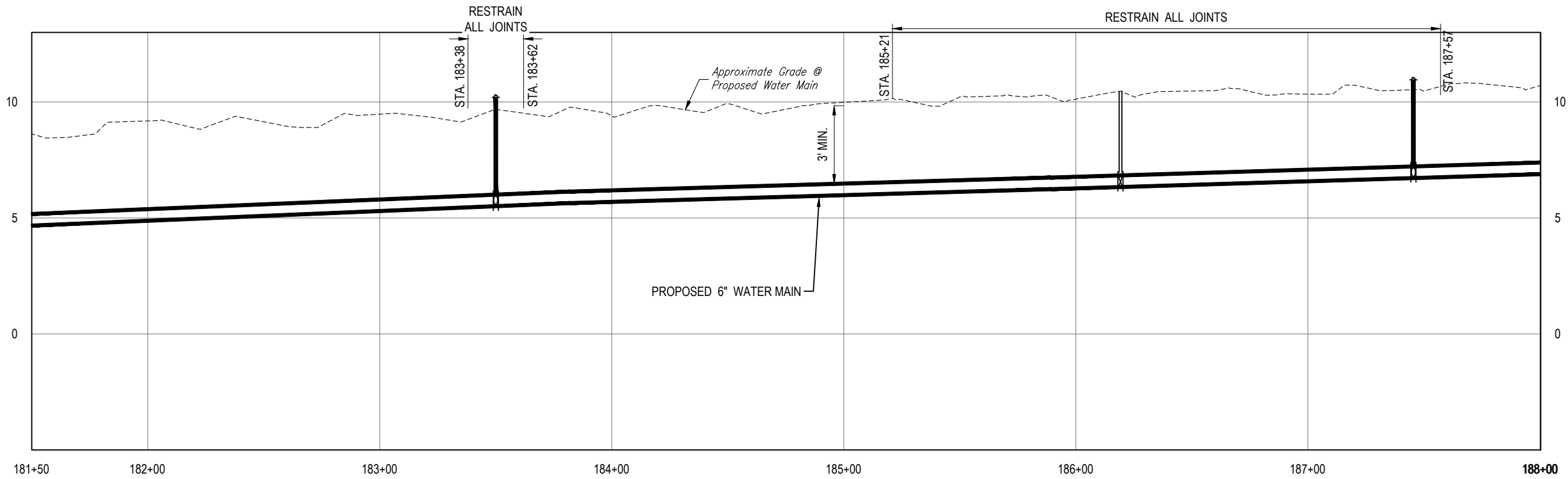
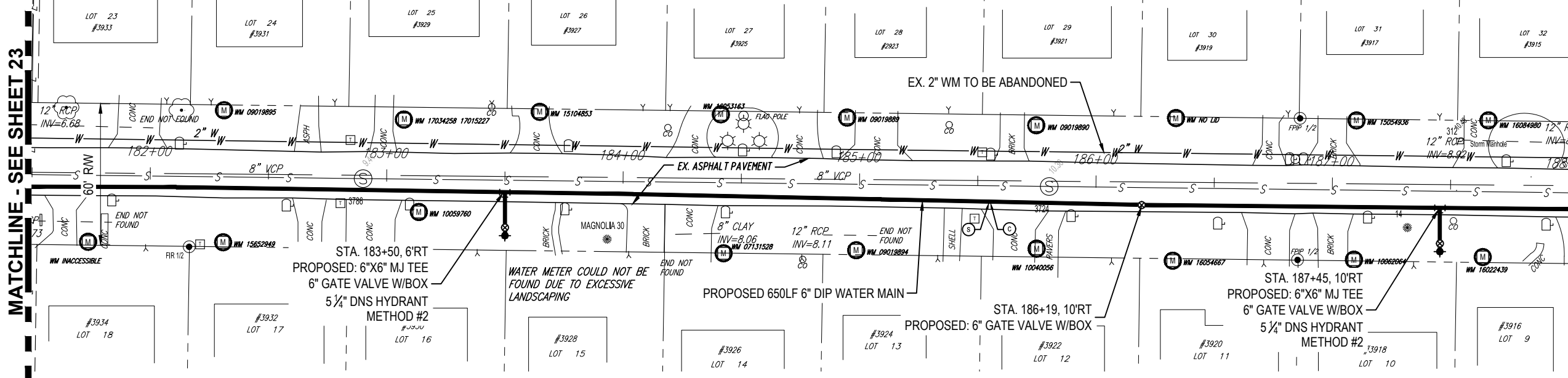
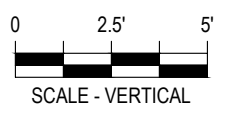
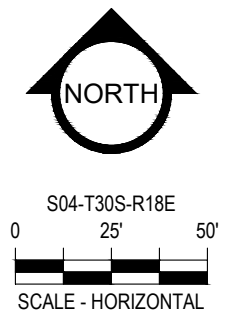
ATLAS PAGE L-09 SHEET 23 OF 39

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W. BAY VISTA AVE.

MATCHLINE - SEE SHEET 23

MATCHLINE - SEE SHEET 25



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306 E. JACKSON ST., 5E
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DATE 05/07/2018

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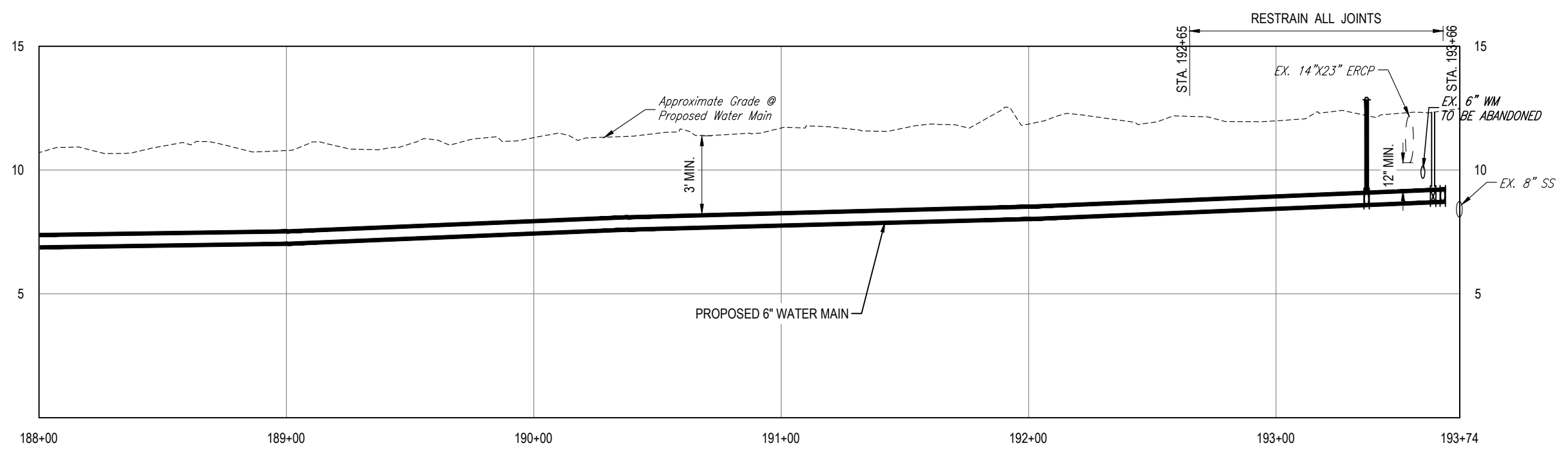
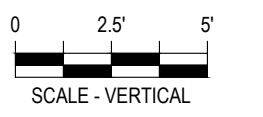
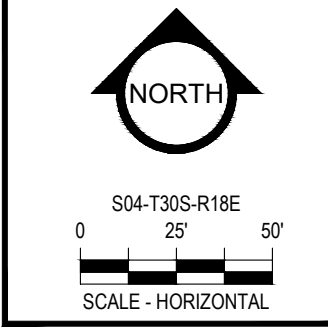
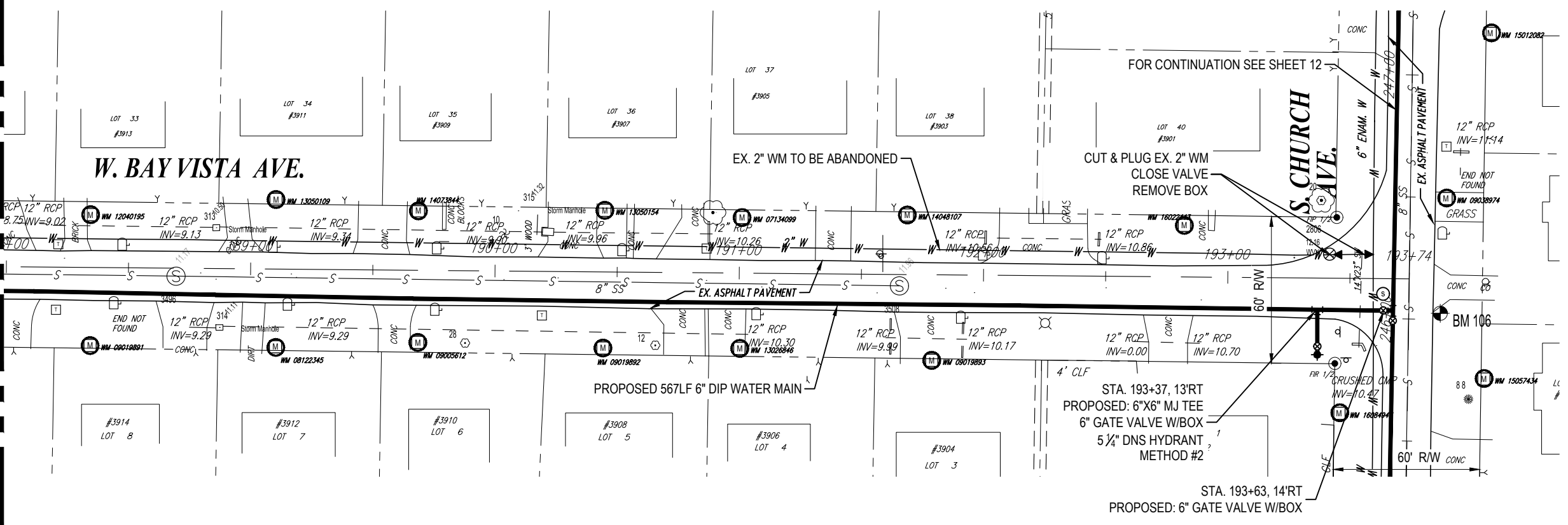
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MATCHLINE - SEE SHEET 24



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FAIR OAKS WATER MAIN REPLACEMENT

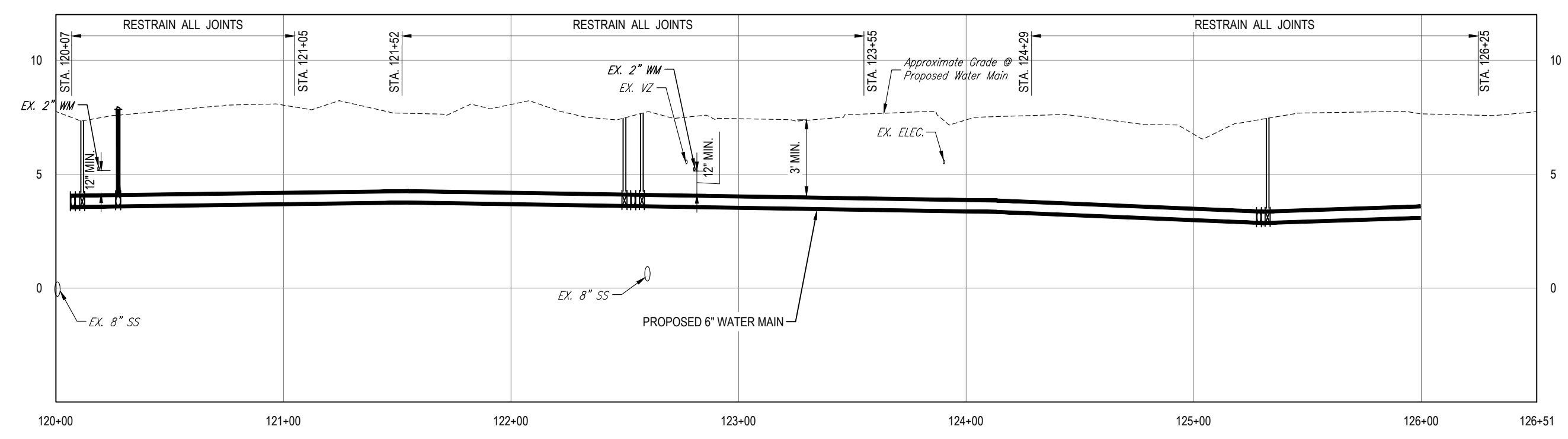
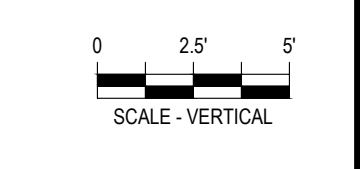
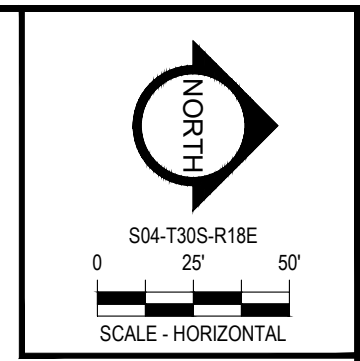
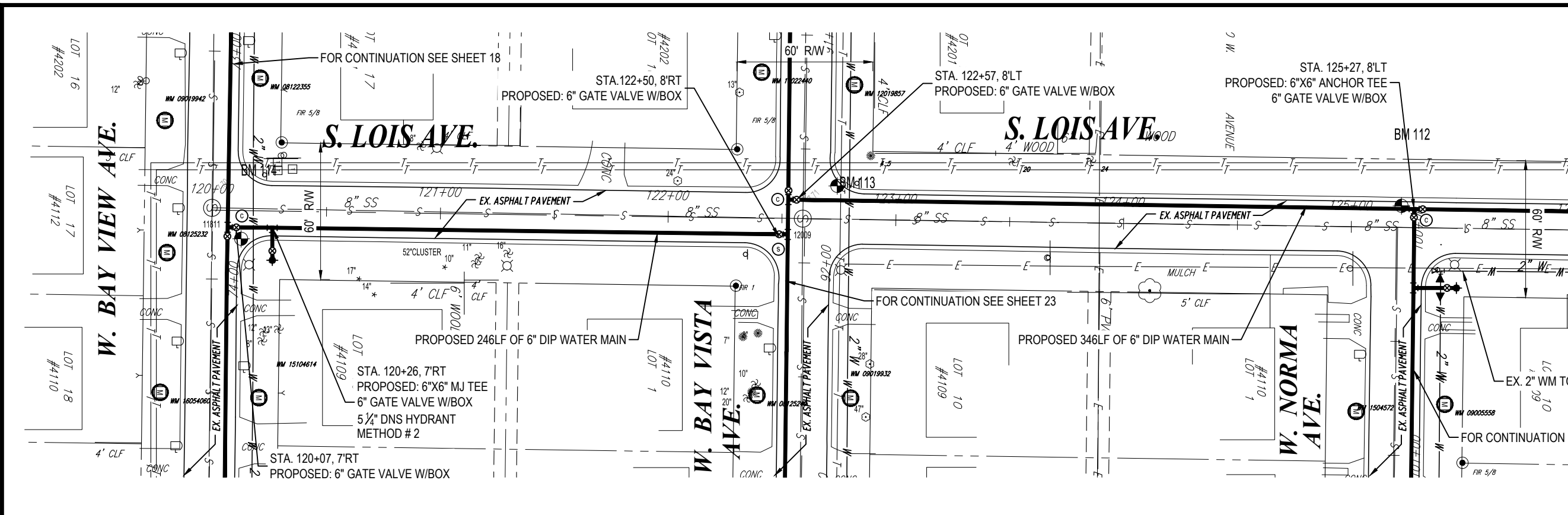
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DATE 05/07/2018



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 306 E. JACKSON ST., 5E
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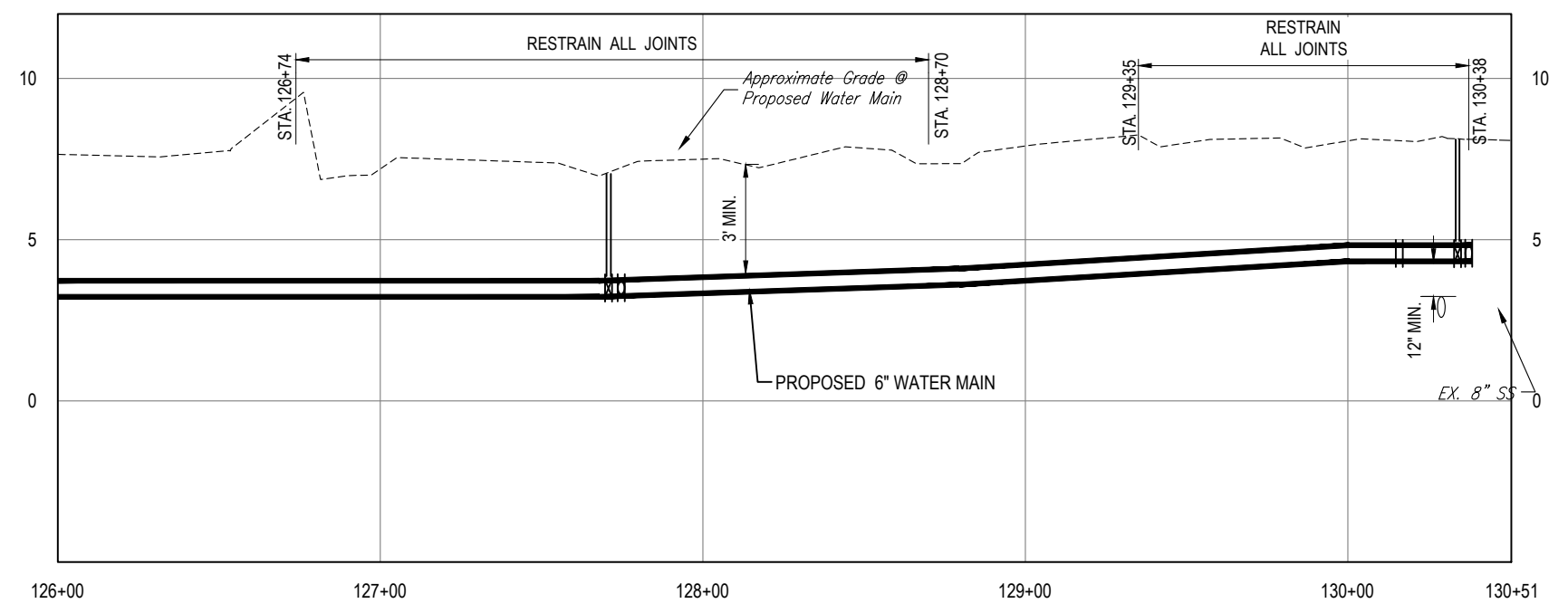
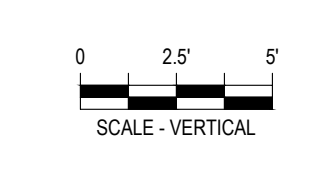
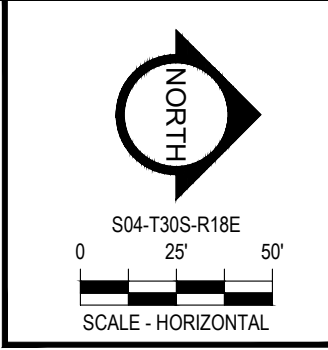
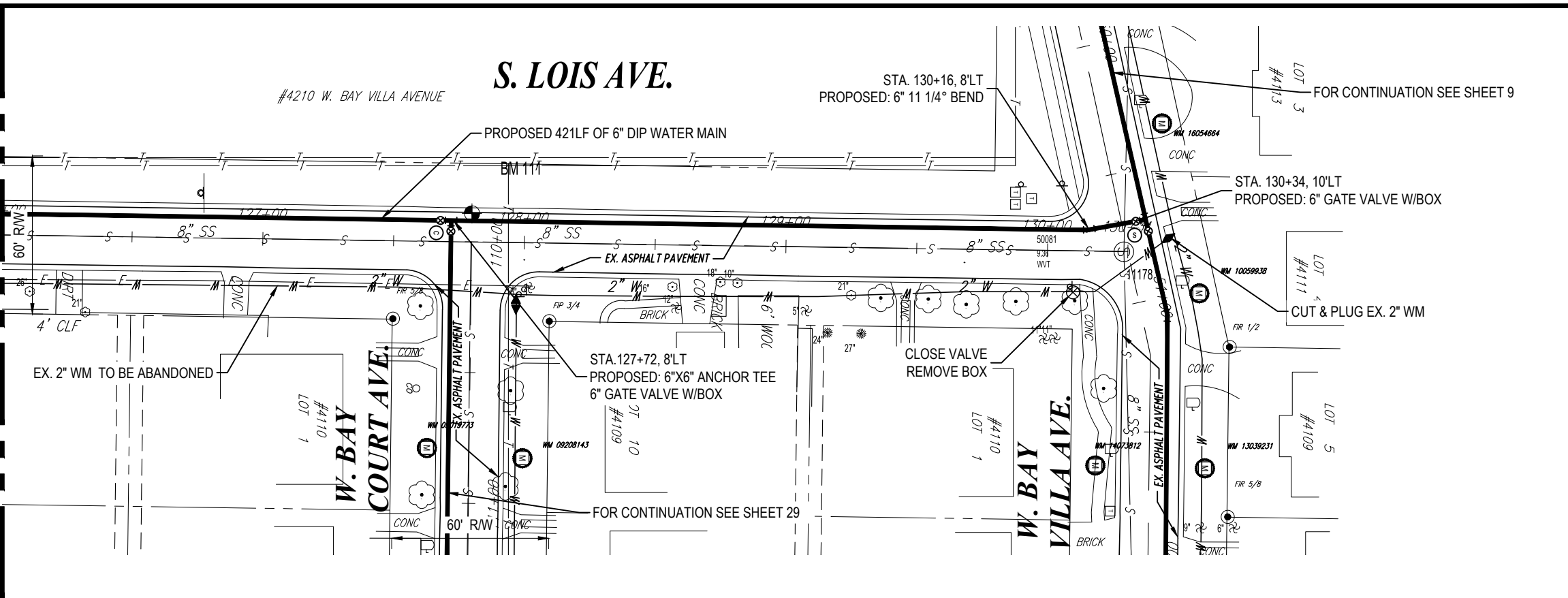
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MATCHLINE - SEE SHEET 26



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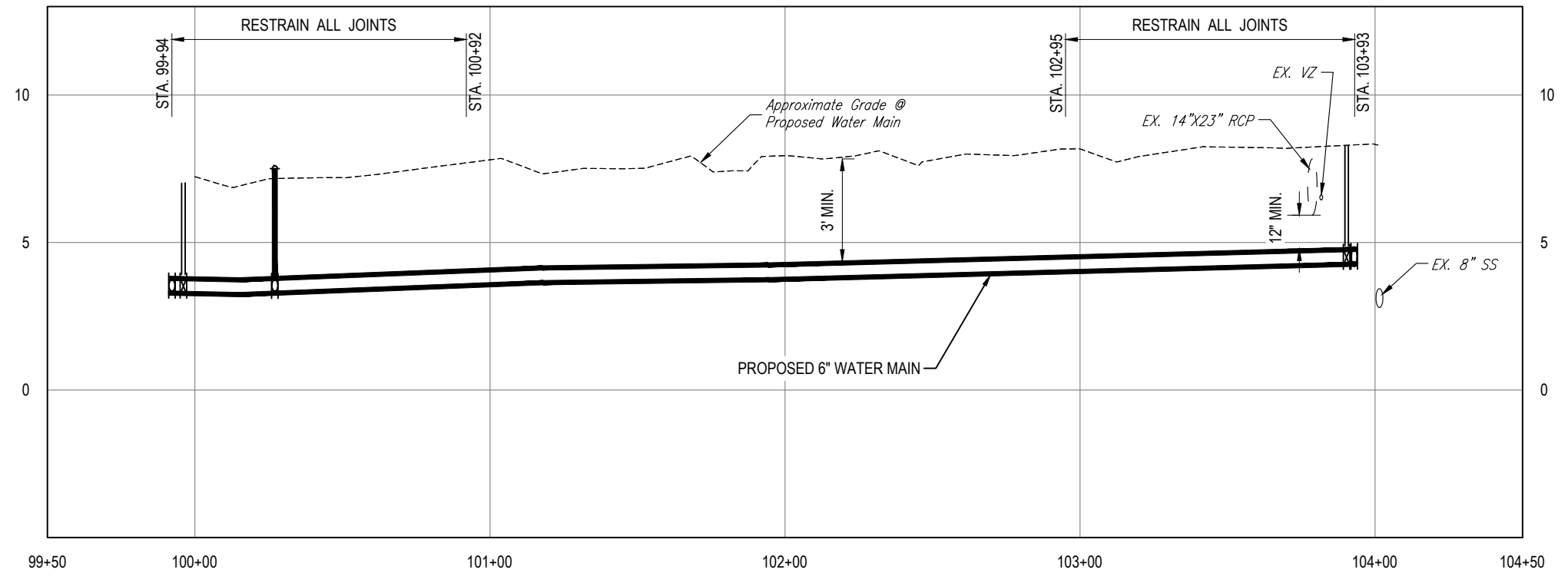
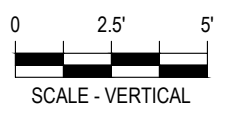
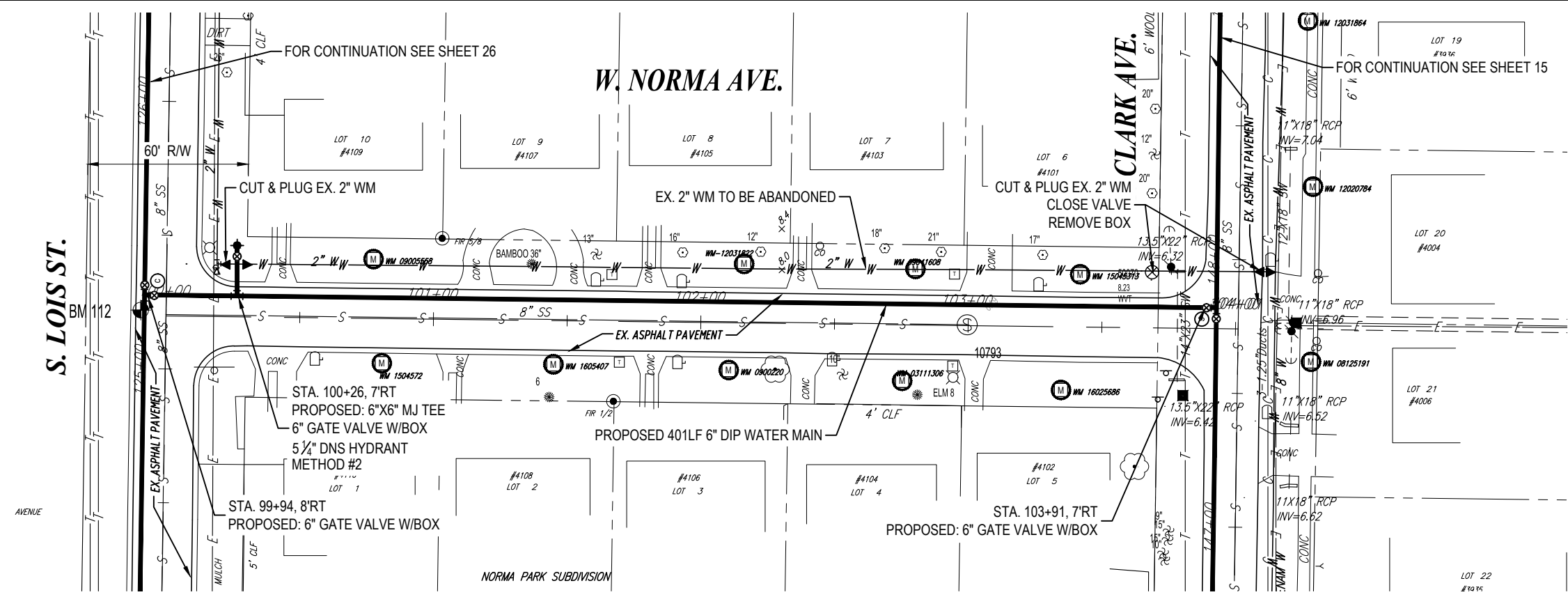
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FAIR OAKS WATER MAIN REPLACEMENT

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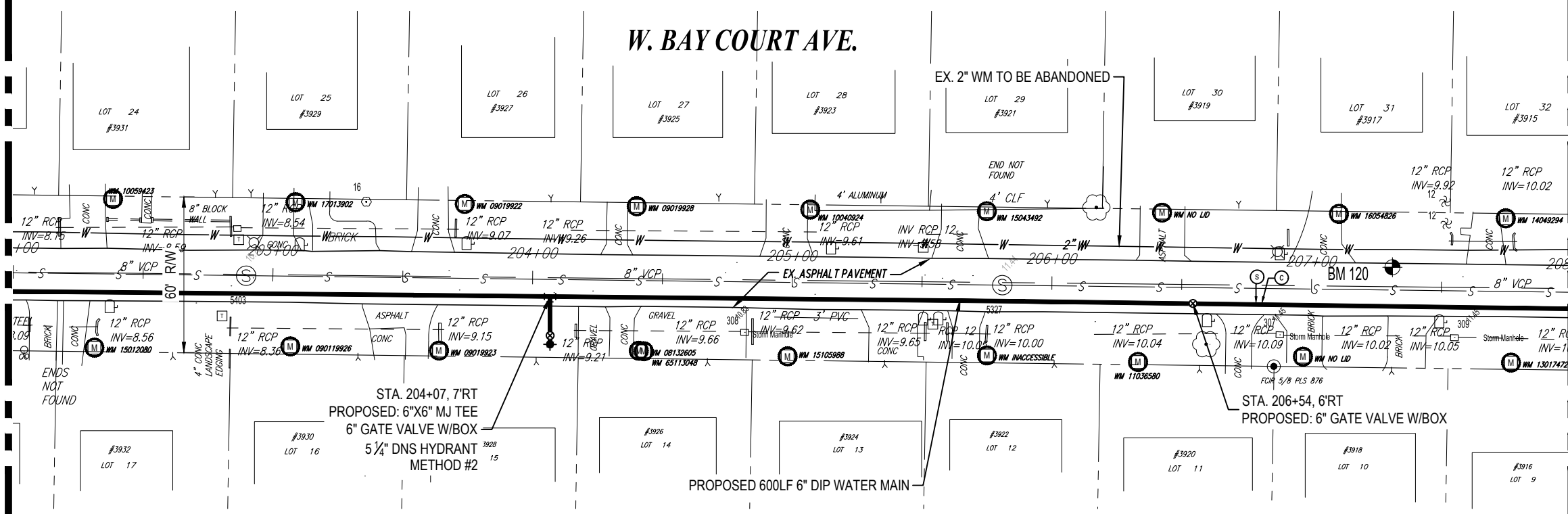
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W. BAY COURT AVE.

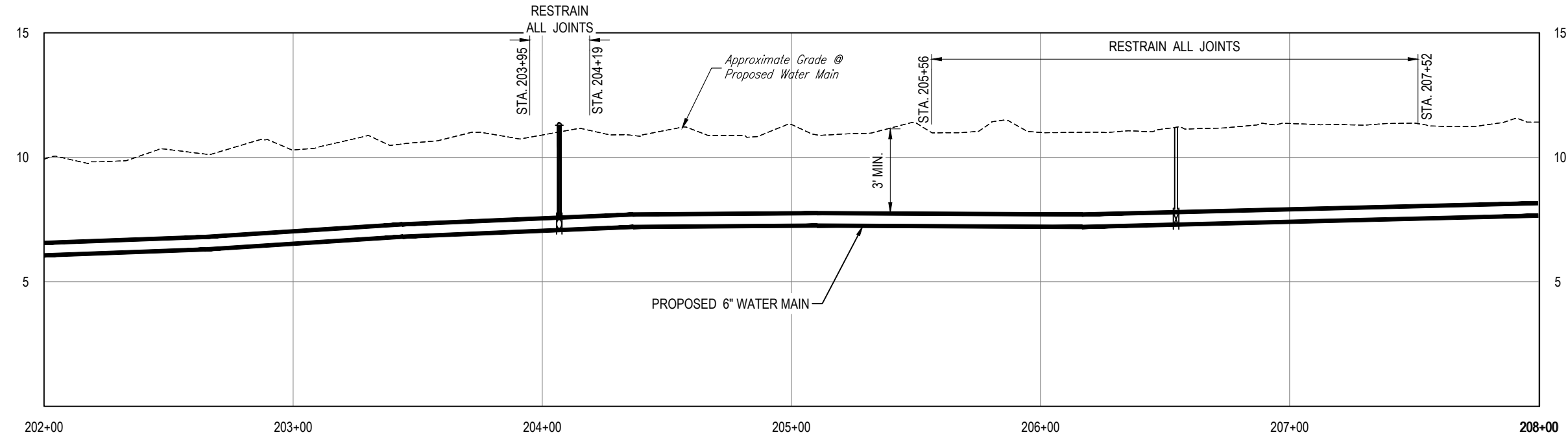
MATCHLINE - SEE SHEET 29

MATCHLINE - SEE SHEET 31



S04-T30S-R18E
0 25' 50'
SCALE - HORIZONTAL

0 2.5' 5'
SCALE - VERTICAL



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FAIR OAKS WATER MAIN REPLACEMENT

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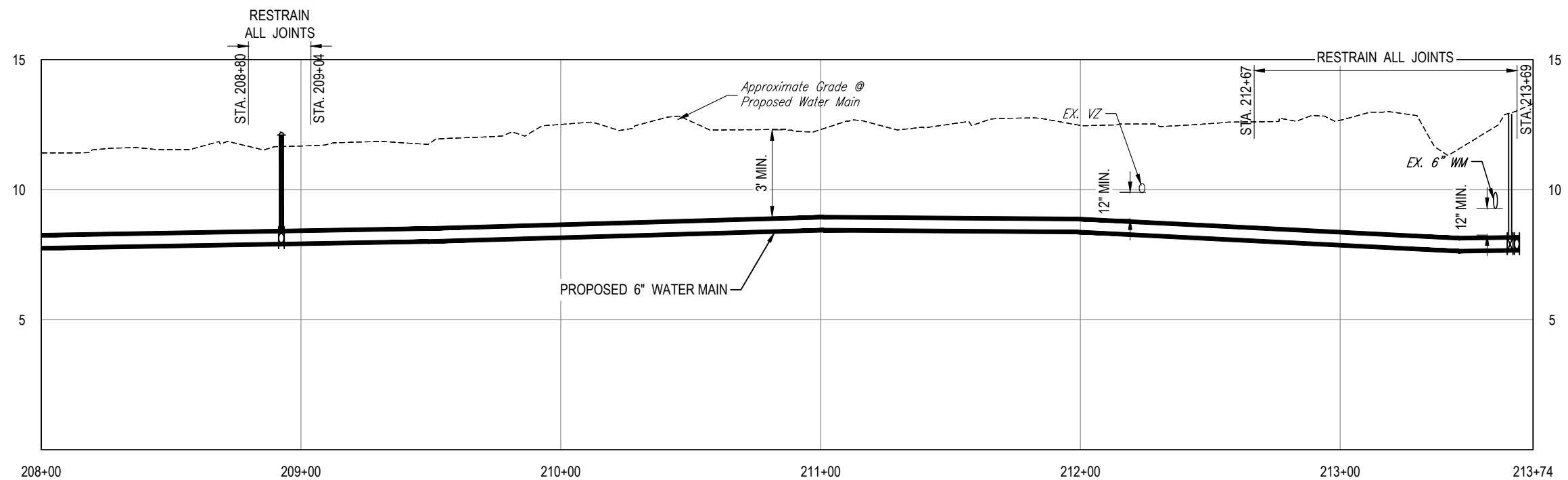
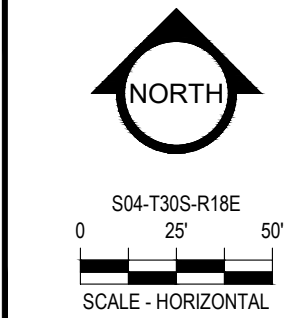
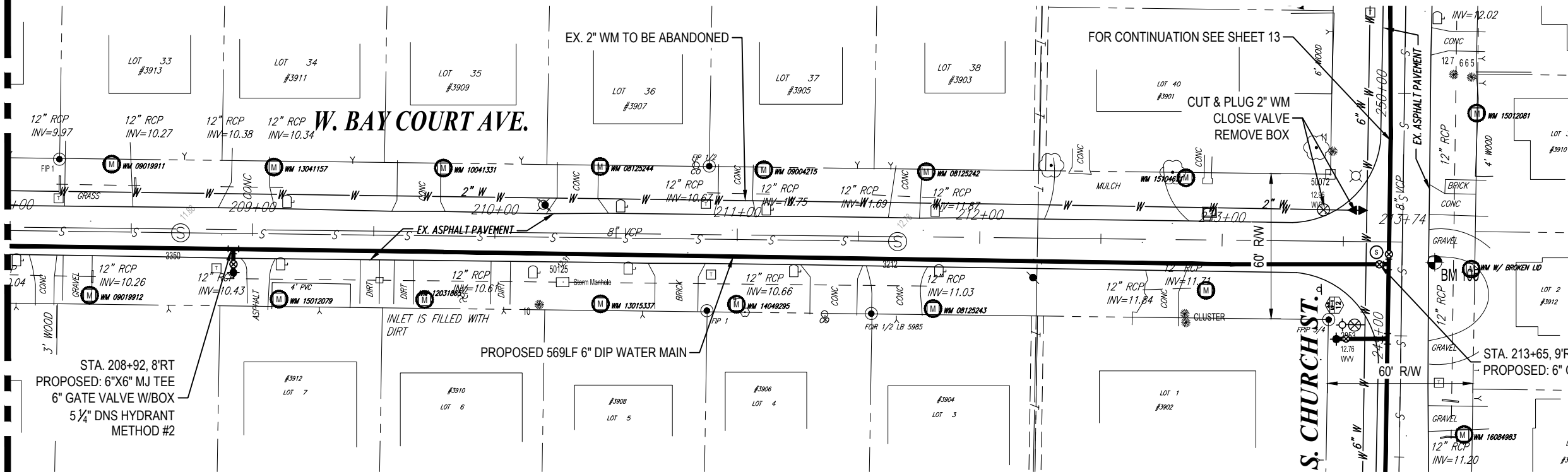
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| WORK ORDER NO. | WTR-18-0002 |
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MATCHLINE - SEE SHEET 30



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CHECKED: RAJ
DATE: 05/07/2018

FAIR OAKS WATER MAIN REPLACEMENT

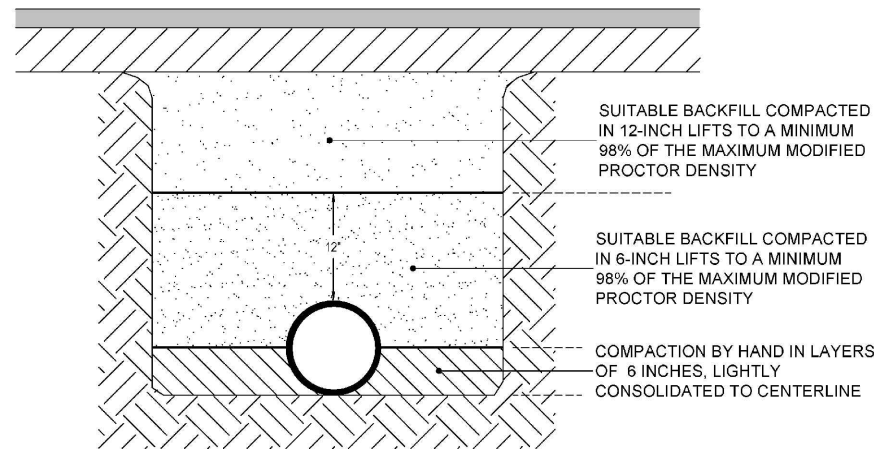
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| WORK ORDER NO. | WTR-18-0002 |
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| ATLAS PAGE | L-09 |
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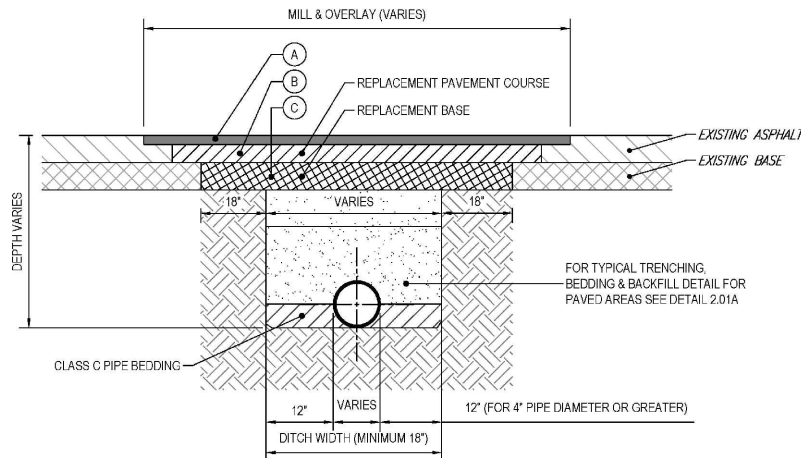
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NOTES:

- TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
- THIS STANDARD SHALL BE UTILIZED IN THE ABSENCE OF SPECIFIC STANDARDS. THE STANDARD OF THE AGENCY CONTROLLING THE RIGHT-OF-WAY SHALL GOVERN UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
- SUITABLE BACKFILL SHALL BE DEFINED AS MATERIAL FREE FROM CINDERS, ASHES, REFUSE, CLAY, ORGANIC MATTER, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL THAT IN THE OPINION OF THE CITY ENGINEER IS UNSUITABLE.
- NON-PERVIOUS AREAS SHALL MEAN ANY CONCRETE OR ASPHALT CURB, SIDEWALK, TRAIL, DRIVEWAY, OR ROADWAY.

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| | LAST REVISION | | |
| | NOV 2019 | TRENCHING, BEDDING AND BACKFILL DETAIL FOR NON-PERVIOUS (PAVED) AREAS | 2.01A |



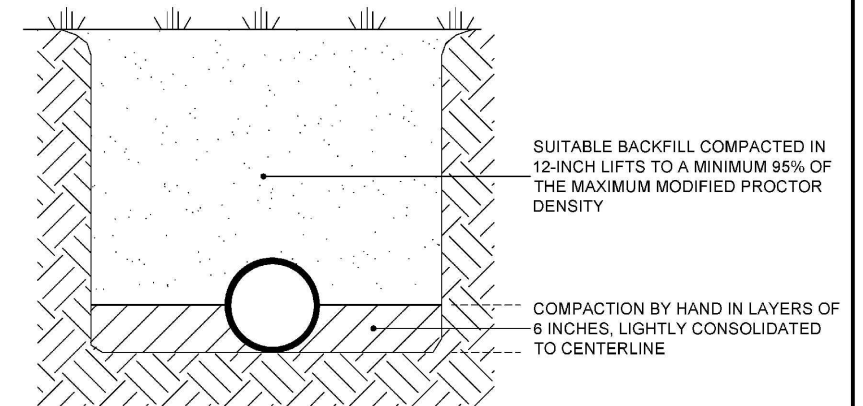
PAVEMENT LAYERS (SEE SPECIFICATIONS)

- A. TYPE SP 9.5 ASPHALT (1") MILL & OVERLAY
- B. TYPE SP 9.5 OR SP 12.5 ASPHALT (1" FOR CLASS I, 2" FOR CLASS II)
- C. CRUSHED CONCRETE BASE (8" FOR CLASS I, 12" FOR CLASS II)

NOTES:

- PAVEMENT SHALL BE MECHANICALLY SAWS.
- CLASS I = RESIDENTIAL ROAD AND CLASS II = COLLECTOR/ARTERIAL ROAD.
- THE MILL AND OVERLAY COURSE (A) SHALL BE 1" THICK AND FDOT TYPE SP 9.5 ASPHALT SHALL BE USED. LIFT TO BE 3/4" MIN. AND 1 1/2" MAX. FOR CLASS I AND CLASS II ROADS.
 WHEN TRENCH IS PERPENDICULAR TO THE ROAD: THE WIDTH OF THE REPLACEMENT BASE LIMIT ± 10' ON EACH SIDE
 WHEN TRENCH IS PARALLEL TO THE ROAD: THE FULL WIDTH OF THE ROAD (CURB TO CURB)
- THE REPLACEMENT PAVEMENT COURSE (B) SHALL EXTEND ± 12' ON EACH SIDE OF THE REPLACEMENT BASE LIMIT AND BE FDOT TYPE SP 9.5 OR SP 12.5 WITH A THICKNESS EQUAL TO THE EXISTING OR AS INDICATED, WHICHEVER IS GREATER. LIFT TO BE 3/4" MIN. AND 1 1/2" MAX. FOR SP 9.5 AND 1 1/2" MIN. TO 3" MAX. FOR SP 12.5.
- THE REPLACEMENT BASE (C) MATERIALS SHALL BE EITHER OF THE SAME TYPE AND COMPOSITION AS THE MATERIALS REMOVED OR OF EQUAL OR GREATER STRUCTURAL ADEQUACY. BASE SHALL BE INSTALLED TO A THICKNESS OF THE EXISTING BASE OR AS INDICATED, WHICHEVER IS GREATER. BASE SHALL EXTEND 18" IN EACH SIDE OF THE TRENCH LIMIT. CRUSHED CONCRETE BASE SHALL FOLLOW FDOT STANDARD SPECIFICATIONS FOR RECYCLED CONCRETE AGGREGATES, LATEST EDITION. LAYER COEFFICIENT (SN) SHALL BE 0.18 WITH LIMEROCK BEARING RATIO (LBR) 150 OR GREATER. GRADATION AND SIZE REQUIREMENTS SHALL CONFORM TO FDOT LATEST SPECIFICATIONS.

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| | LAST REVISION | | |
| | JAN 2020 | STANDARD DETAIL FOR RESTORATION WITHIN COT ROADWAY - FLEXIBLE PAVEMENT | 2.01B |



NOTES:

- TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
- THIS STANDARD SHALL BE UTILIZED IN THE ABSENCE OF SPECIFIC STANDARDS. THE STANDARD OF THE AGENCY CONTROLLING THE RIGHT-OF-WAY SHALL GOVERN UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
- SUITABLE BACKFILL SHALL BE DEFINED AS MATERIAL FREE FROM CINDERS, ASHES, REFUSE, CLAY, ORGANIC MATTER, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL THAT IN THE OPINION OF THE CITY ENGINEER IS UNSUITABLE.
- NON-PAVED AREA IS A PERVIOUS AREA. IF ANY PART OF THE TRENCH IS WITHIN A CONCRETE OR ASPHALT CURB, SIDEWALK, DRIVEWAY, OR ROADWAY, THEN STANDARD DETAIL 2.01 APPLIES.

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| | LAST REVISION | | |
| | NOV 2019 | TRENCHING, BEDDING, AND BACKFILL DETAIL FOR PERVIOUS (NON-PAVED) AREAS | 2.02 |

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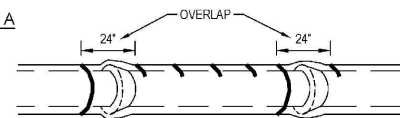
**FAIR OAKS WATER MAIN
 REPLACEMENT**

DETAILS

100% PLANS

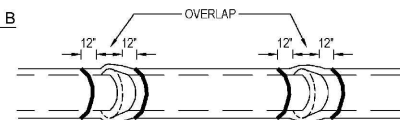
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| WORK ORDER NO. | WTR-18-0002 |
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| ATLAS PAGE L-09 | SHEET 32 OF 39 |

METHOD A



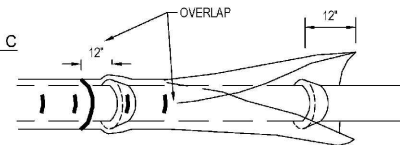
POLYETHYLENE TUBE IS CUT INTO LENGTHS APPROXIMATELY TWO FEET LONGER THAN THE PIPE SECTION AND PLACED AROUND IT. AFTER THE PIPE JOINT IS ASSEMBLED, THE POLYETHYLENE TUBE IS MADE TO OVERLAP THE JOINT AND THE OVERLAP SECURED IN PLACE. SINCE THE TUBE IS CONSIDERABLY LARGER THAN THE BARREL OF PIPE, IT IS MADE TO FIT SNUGLY BY FOLDING OVER AT THE TOP AND SECURING WITH TAPE EVERY 24" ALONG THE PIPE SECTION.

METHOD B



POLYETHYLENE TUBE IS CUT ONE FOOT SHORTER THAN THE LENGTH OF THE PIPE SECTION. AFTER PLACEMENT OF THE PIPE, IT IS FOLDED AND SECURED SNUGLY OVERALL. A THREE FOOT LENGTH OF POLYETHYLENE TUBE PLACED OVER THE END OF THE PRECEDING SECTION IS THEN PULLED IN PLACE OVER THE JOINT AFTER ASSEMBLY AND SECURED.

METHOD C

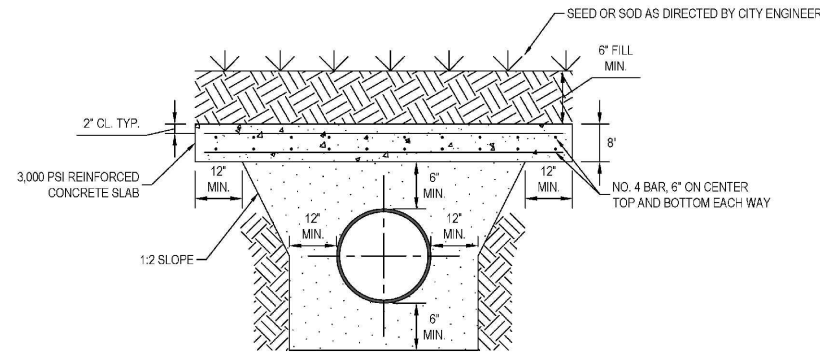


POLYETHYLENE SHEET IS CUT TO A LENGTH TWO FEET LONGER THAN THE PIPE SECTION. THE SHEET IS WRAPPED AROUND THE PIPE SO THAT IT OVERLAPS CIRCUMFERENTIALLY OVER THE TOP QUADRANT OF THE PIPE, THEN SECURED. AFTER JOINT ASSEMBLY, THE SURPLUS LENGTH OF POLYETHYLENE FILM IS SECURED AROUND THE JOINT, PROVIDING AN OVERLAP OF EACH JOINT. TAPE AT EACH JOINT AND AT 3' INTERVALS IN BETWEEN.

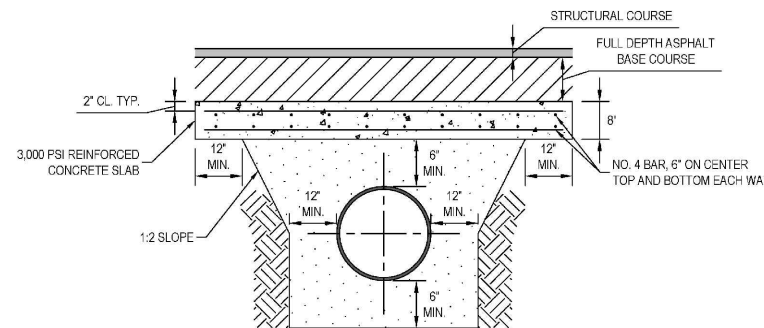
NOTES:

1. USE BLUE POLYETHYLENE FILM AND TAPE ONLY.
2. POLYETHYLENE FILM SHALL BE A MINIMUM OF 8 MIL. THICKNESS.
3. SPIRAL WRAP NOT REQUIRED WITH POLYWRAP.

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| | LAST REVISION | POLYETHYLENE ENCASEMENT INSTALLATION DETAIL | 2.05 |
| | JUL 2018 | | |



GRASSED SECTION

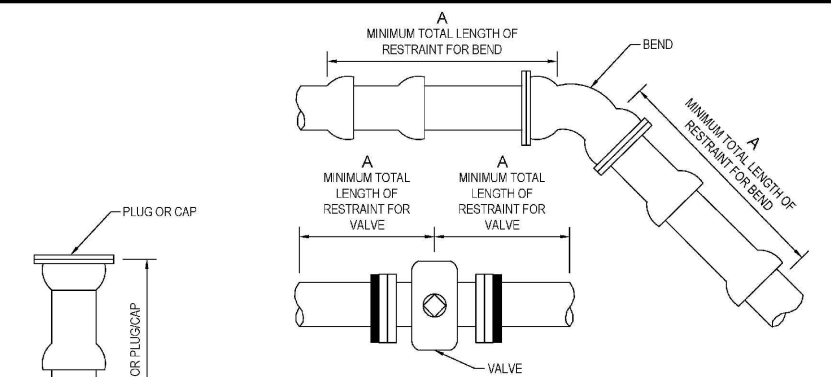


ROADWAY SECTION

NOTES:

1. STRUCTURAL COURSE AND BASE COURSE REQUIREMENT SHALL BE ESTABLISHED BY THE AGENCY HAVING JURISDICTION.
2. SHOCK PADS FOR MAINS TOO SHALLOW FOR THE ABOVE CONFIGURATION SHALL BE DESIGNED ON A CASE-BY-CASE BASIS.

| | | | |
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| | LAST REVISION | REINFORCED CONCRETE SHOCK PAD (FOR COVER LESS THAN 2.5') | 2.06 |
| | JUL 2018 | | |



| FITTING / PIPE | RESTRAIN "A" (LF) | | | | | | | | | |
|-----------------|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 4' | 6' | 8' | 10' | 12' | 16' | 20' | 24' | 30' | 36' |
| 11-1/4" | 4 | 5 | 8 | 10 | 11 | 13 | 15 | 19 | 21 | |
| 22-1/2" | 8 | 11 | 15 | 20 | 21 | 26 | 31 | 38 | 44 | |
| 45° OFFSET | 16 | 23 | 30 | 43 | 45 | 55 | 65 | 78 | 91 | |
| 90° | 39 | 55 | 73 | 103 | 109 | 133 | 156 | 189 | 220 | |
| PLUG/CAP/VALVE* | 69 | 98 | 128 | 179 | 179 | 218 | 255 | 306 | 356 | |

A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED
 * = FOR IN-LINE VALVE, RESTRAIN LENGTH "A" REQUIRED BOTH WAYS FROM VALVE

NOTES:

1. THIS TABLE IS BASED ON:
 - a. MAXIMUM TEST PRESSURE OF 190 PSI
 - b. LAYING CONDITION TYPE 2 (SEE DETAILS 2.01 AND 2.02)
 - c. POOR SOIL CONDITIONS
 - d. USING D.I.P.
 - e. 3 FEET OF COVER FOR 12" AND SMALLER MAINS; 4 FEET OF COVER FOR 16" AND LARGER MAINS
 - f. HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
2. "RESTRAINED" PIPE SHALL BE MANUFACTURED RESTRAINED JOINT PIPE, PUSH-ON JOINT PIPE RESTRAINED W/GASKET-TYPE "GRIPPER RESTRAINTS", OR MECHANICAL JOINT PIPE RESTRAINED BY MEGALUG (OR APPROVED EQUIVALENT).
3. ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.

| | | | |
|--|---------------|--|------|
| | LAST REVISION | RESTRAINED JOINT STANDARD FOR BENDS, PLUGS, CAPS, AND VALVES | 2.11 |
| | JUL 2018 | | |

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 TAMPA, FLA. 33602
 P.E. #79453

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| . | . | . | . | DRAWN | JDM |
| . | . | . | . | CHECKED | RAJ |
| . | . | . | . | DATE | 05/07/2018 |

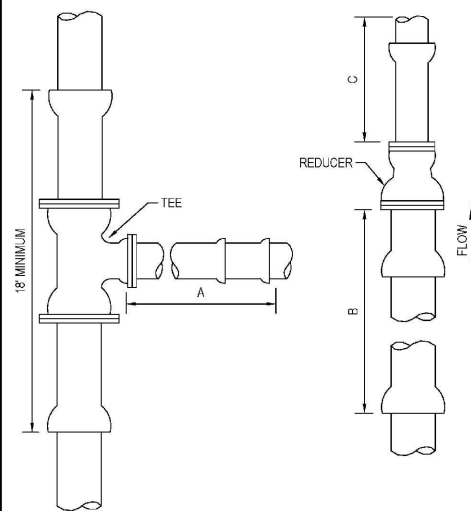
FAIR OAKS WATER MAIN REPLACEMENT

DETAILS



100% PLANS

| | |
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| WORK ORDER NO. | WTR-18-0002 |
| RECORD DRAWING NO. | ---- |
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| SHEET | 33 OF 39 |

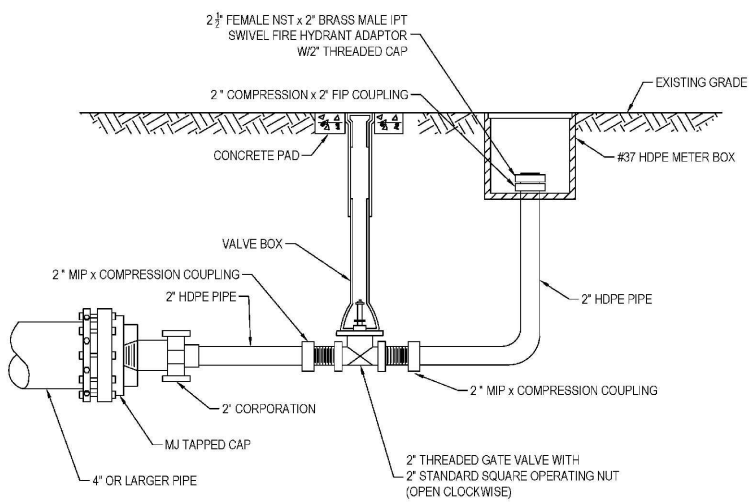


| FITTING SIZE | RESTRAIN (LF) | | UNRESTRAINED STRAIGHT RUN (LF) |
|--------------|---------------|-------------|--------------------------------|
| | TEE "A" | REDUCER "B" | REDUCER "C" |
| 4x4 | 31 | * | * |
| 6x4 | 14 | 50 | 74 |
| 6x6 | 60 | * | * |
| 8x4 | A.T. | 91 | 178 |
| 8x6 | 48 | 54 | 70 |
| 8x8 | 90 | * | * |
| 12x4 | A.T. | 155 | 455 |
| 12x6 | 24 | 130 | 260 |
| 12x8 | 71 | 95 | 144 |
| 12x12 | 143 | * | * |
| 16x6 | A.T. | 151 | 401 |
| 16x8 | 34 | 130 | 285 |
| 16x12 | 96 | 76 | 103 |
| 16x16 | 148 | * | * |
| 20x6 | A.T. | 195 | 659 |
| 20x8 | 18 | 180 | 461 |
| 20x12 | 85 | 136 | 233 |
| 20x16 | 139 | 76 | 96 |
| 20x20 | 186 | * | * |
| 24x6 | A.T. | 236 | 971 |
| 24x8 | A.T. | 224 | 700 |
| 24x12 | 74 | 188 | 391 |
| 24x16 | 130 | 139 | 216 |
| 24x20 | 180 | 76 | 93 |
| 24x24 | 224 | * | * |
| 30x6 | A.T. | 293 | 1534 |
| 30x8 | A.T. | 283 | 1130 |
| 30x12 | 56 | 255 | 678 |
| 30x16 | 118 | 216 | 426 |
| 30x20 | 169 | 168 | 260 |
| 30x24 | 215 | 108 | 138 |
| 30x30 | 275 | * | * |
| 36x6 | A.T. | 345 | 2230 |
| 36x8 | A.T. | 336 | 1660 |
| 36x12 | 38 | 314 | 1030 |
| 36x16 | 104 | 283 | 689 |
| 36x20 | 159 | 244 | 466 |
| 36x24 | 206 | 195 | 306 |
| 36x30 | 269 | 108 | 133 |
| 36x36 | 326 | * | * |

A.T. = RESTRAINT REQUIRED AT TEE ONLY. * = NOT APPLICABLE

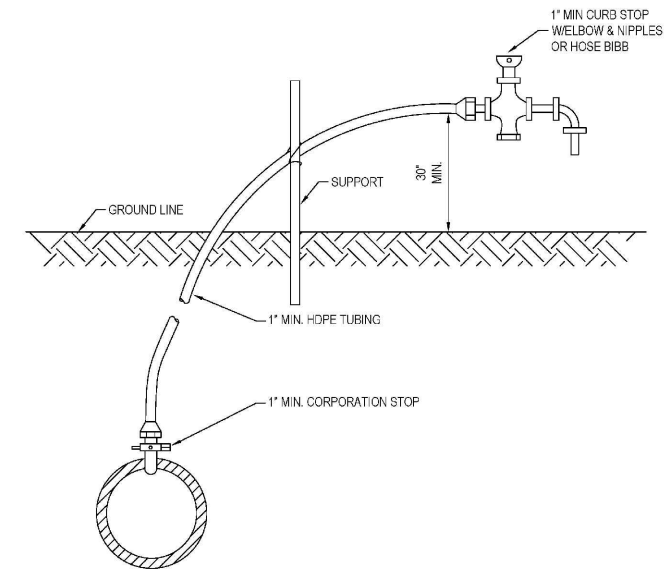
- NOTES:
- THIS TABLE IS BASED ON:
 - MAXIMUM TEST PRESSURE OF 190 PSI
 - LAYING CONDITION TYPE 2 (SEE DETAILS 2.01 AND 2.02)
 - POOR SOIL CONDITIONS
 - USING D.I.P.
 - 3 FEET OF COVER FOR 12" AND SMALLER MAINS, 4 FEET OF COVER FOR 16" AND LARGER MAINS
 - HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
 - RESTRAINT FOR REDUCERS: IF "C" STRAIGHT RUN OF PIPE DOWNSTREAM OF REDUCER NOT AVAILABLE, THE RESTRAIN "B" UPSTREAM OF REDUCER.
 - "RESTRAINED" PIPE SHALL BE MANUFACTURED RESTRAINED JOINT PIPE, PUSH-ON JOINT PIPE RESTRAINED W/GASKET-TYPE "GRIPPER RESTRAINTS", OR MECHANICAL JOINT PIPE RESTRAINED BY MEGALUG (OR APPROVED EQUIVALENT).
 - ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.

| | | | |
|--|---------------|---|-------|
| | LAST REVISION | RESTRAINED JOINT STANDARD FOR TEES AND REDUCERS | 2.12A |
| | JUL 2018 | | |



BLOW-OFF FOR ≥ 4" MAINS
 NO GALVANIZED PIPES OR FITTINGS ALLOWED.
 SCHEDULE 80 PVC ALLOWED.

| | | | |
|--|---------------|---|-------|
| | LAST REVISION | BLOW-OFF VALVE ASSEMBLY FOR ≥ 4" MAINS W/DI, CI OR PVC PIPE | 2.17A |
| | JUL 2018 | | |



- NOTES:
- WATER OUTLET SHALL BE HELD UP OFF THE GROUND SO AS NOT TO INTERFERE WITH THE SAMPLING PROCESS.
 - CORPORATION STOP TO BE REMOVED AND BRASS PLUG INSTALLED IN TAPPED MAIN AFTER OPERATION.

| | | | |
|--|---------------|---|-------|
| | LAST REVISION | TEMPORARY SAMPLE TAP INSTALLATION W/DI, CI, OR PVC PIPE | 2.18A |
| | JUL 2018 | | |

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 CITY OF TAMPA WATER DEPT.
 306 E. JACKSON ST., 5E
 TAMPA, FLA. 33602
 P.E. #79453

| REV. NO. | DATE | DESCRIPTION | BY | DESIGNED | CL |
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| . | . | . | . | CHECKED | RAJ |
| . | . | . | . | DATE | 05/07/2018 |

FAIR OAKS WATER MAIN REPLACEMENT

DETAILS



100% PLANS

| | |
|--------------------|-------------|
| WORK ORDER NO. | WTR-18-0002 |
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TO PROTECT VALVE BOX LOCATION DURING CLEARING & GRUBBING

TO ADJUST HEIGHT OF VALVE BOX FOR CHANGED GRADE

NOTES:

- MATERIALS FOR & INSTALLATION OF VALVE BOXES & PADS SHALL CONFORM TO TAMPA WATER DEPT. SPECIFICATIONS & STD. CONSTRUCTION DETAILS (DETAILS 3.01 & 3.03)

| | | | |
|--|---------------------------|---|------|
| | LAST REVISION NOV 2019 | VALVE BOX (V. BOX) ADJUSTMENTS FOR GRADE CHANGE | 3.05 |
|--|---------------------------|---|------|

NOTES:

- FIRE HYDRANT BARREL ABOVE THE GROUND LINE SHALL BE PAINTED WITH A HIGH-GRADE ENAMEL PAINT, FEDERAL SAFETY YELLOW (OSHA APPROVED), AND THE HYDRANT BONNET SHALL BE PAINTED OSHA GREEN.
- CONCRETE SLAB MAY BE ELIMINATED IN AREAS WHERE HYDRANT IS SET IN SIDEWALK AND SIDEWALK HAS BEEN INSTALLED PRIOR TO FINAL ACCEPTANCE OF THE HYDRANT.
- THRUST RESTRAINT FOR HYDRANT:
 - HYDRANT SHALL BE FIRMLY SUPPORTED UNDER ELBOW IN ALL METHODS BY SUPPORT BLOCK
 - ALL BACKFILL SHALL BE THOROUGHLY COMPACTED UNDER SUPPORT BLOCK AND UNDER THRUST COLLAR
 - ALL HYDRANT LEADS SHALL BE RESTRAINED BY MEGALUGS OR EQUIVALENT MECHANICAL RESTRAINTS
- PROTECTION POSTS ARE REQUIRED WHEN HYDRANT IS LESS THAN 6 FEET FROM EDGE OF PAVEMENT, OR AS DIRECTED BY THE ENGINEER.
- FOR PVC MAINS, INSTALL CONCRETE SUPPORT BLOCK UNDER ALL HYDRANT TEES.

| | | | |
|--|---------------------------|---------------------------|------|
| | LAST REVISION JUL 2018 | FIRE HYDRANT INSTALLATION | 4.01 |
|--|---------------------------|---------------------------|------|

NOTES:

- VALVE SHALL BE SET IN ACCORDANCE WITH DETAIL 3.01. FOR HYDRANT SET, SEE DETAIL 4.01.
- ALL VALVES SHALL BE ANCHORED TO BRANCH OF TEE ON ALL HYDRANT INSTALLATIONS.
- ALL HYDRANT LEADS SHALL BE RESTRAINED BY MEGALUGS OR EQUIVALENT.
- FOR PVC MAINS, INSTALL CONCRETE SUPPORT BLOCK UNDER HYDRANT TEES.

| | | | |
|--|---------------------------|--------------------------------------|------|
| | LAST REVISION JUL 2018 | FIRE HYDRANT METHODS OF INSTALLATION | 4.02 |
|--|---------------------------|--------------------------------------|------|

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DATE **05/07/2018**

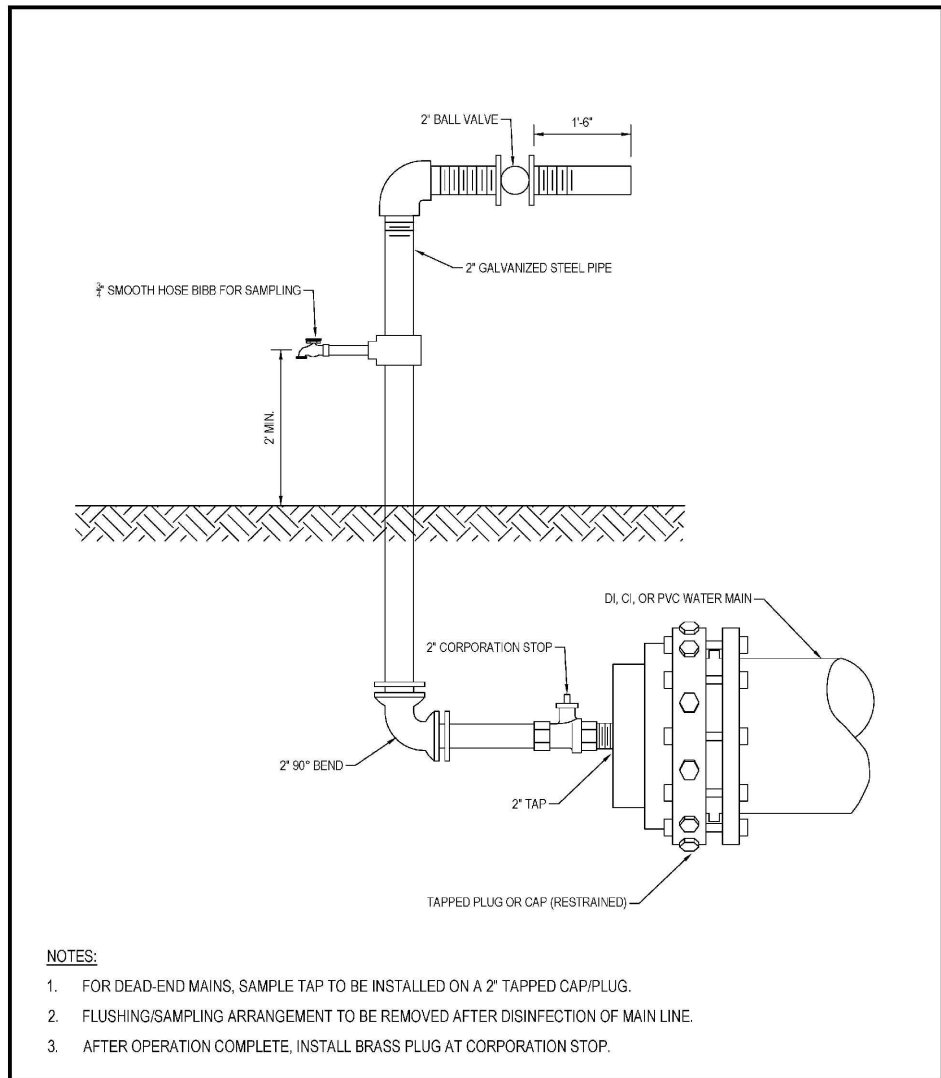
FAIR OAKS WATER MAIN REPLACEMENT

DETAILS

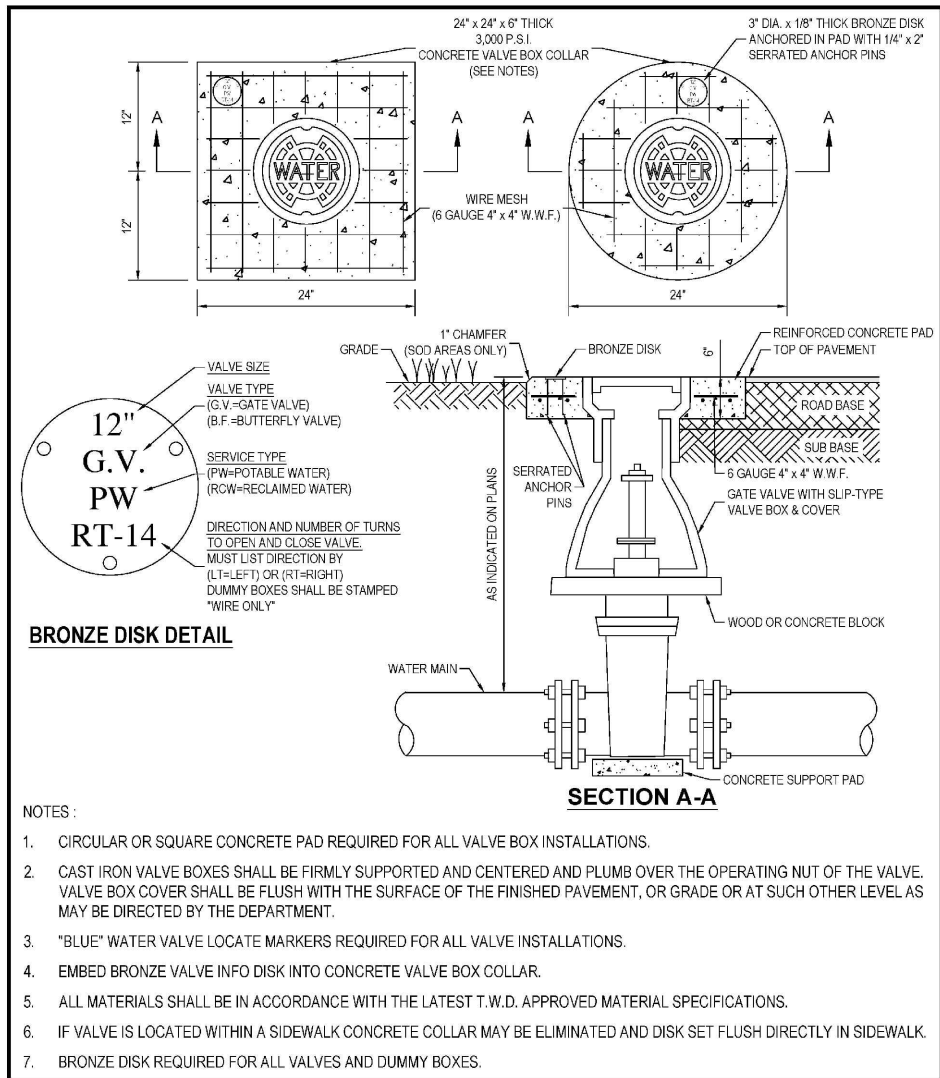
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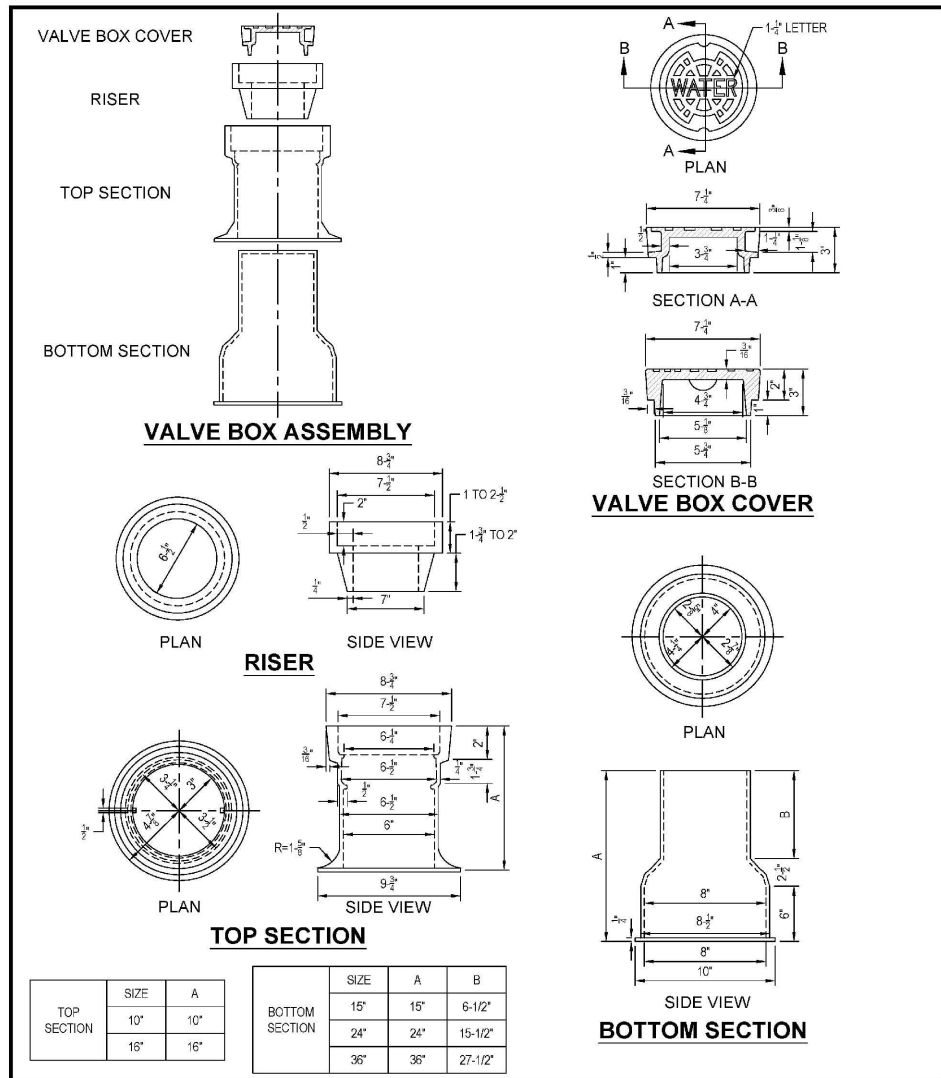
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| | | | |
|--|---------------|---|-------|
| | LAST REVISION | TEMPORARY SAMPLE TAP INSTALLATION FOR END OF LINE W/DI, CI, OR PVC PIPE | 2.19A |
| | JUL 2018 | | |



| | | | |
|--|---------------|--|------|
| | LAST REVISION | VALVE INSTALLATION W/VALVE BOX & PAD FOR DI OR CI PIPE | 3.01 |
| | JUL 2018 | | |



| | | | |
|--|---------------|----------------------|------|
| | LAST REVISION | VALVE BOX, SLIP TYPE | 3.04 |
| | JUL 2018 | | |

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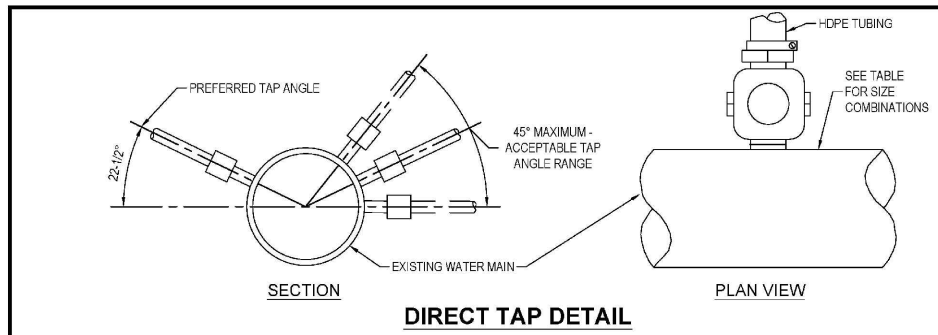
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| . | . | . | . | CHECKED | RAJ |
| . | . | . | . | DATE | 05/07/2018 |

**FAIR OAKS WATER MAIN
REPLACEMENT**

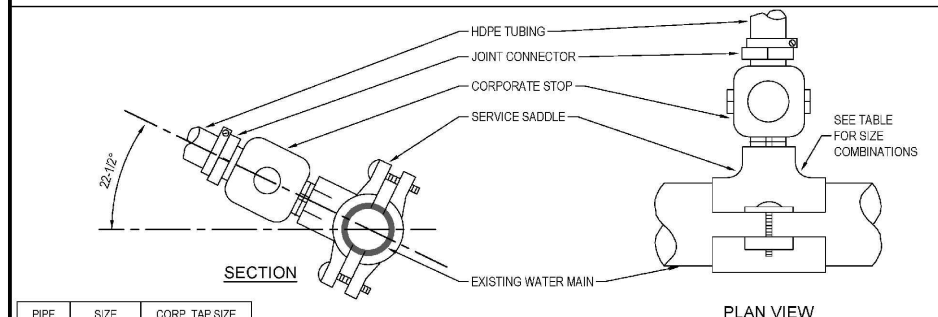
DETAIL

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DIRECT TAP DETAIL

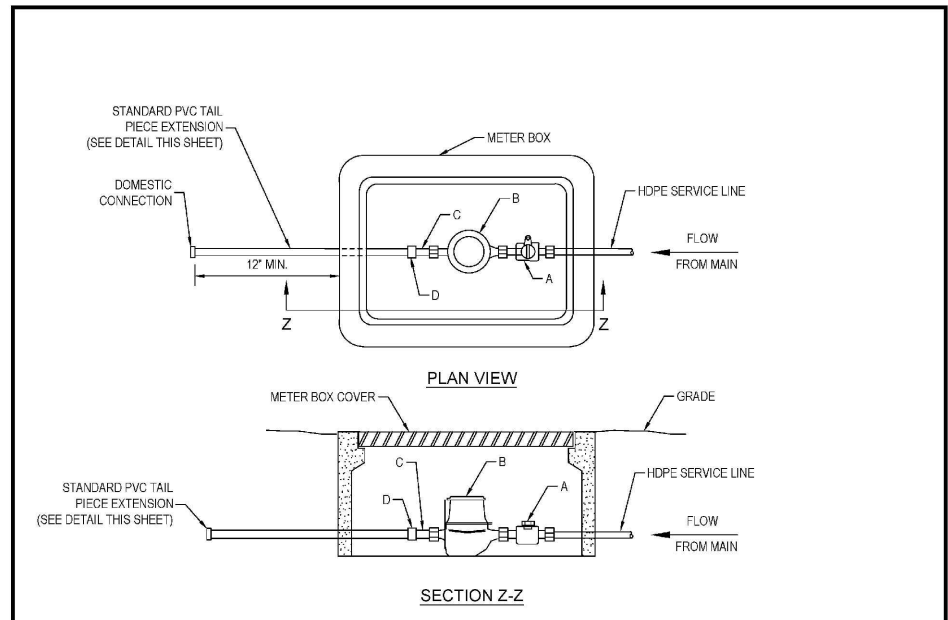


SADDLE TAP DETAIL

| PIPE | SIZE | CORP. TAP SIZE | |
|------------|------------|----------------|----|
| | | 1" | 2" |
| DICI | 12" | DT | DT |
| | 8" | DT | SS |
| | 6" | DT | SS |
| PVC | 4" | SS | SS |
| | 2", 2-1/2" | SS | NA |
| | 8", C-900 | SS | SS |
| | 6", C-900 | SS | SS |
| OTHER* | 2"-SDR21 | SS | NA |
| | 12" | SS | SS |
| OTHER* | 10" | SS | SS |
| | 8" | SS | SS |
| | 6" | SS | SS |
| | 4" | SS | NA |
| | 3" | SS | NA |
| 2", 2-1/2" | SS | NA | |

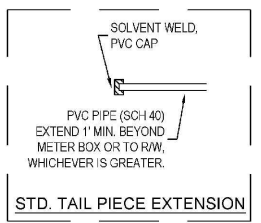
LEGEND
 DT- DIRECT TAP CAN BE ALLOWED SS- SERVICE SADDLE IS REQUIRED NA- NOT ALLOWED
 *ASBESTOS CEMENT, STEEL, GALVANIZED IRON PIPE, NON STD PVC, ETC.

LAST REVISION: JUL 2018
TAPPING DETAIL FOR 3/4", 1", 1-1/2" & 2" W/DI, CI, OR PVC PIPE
 5.01A



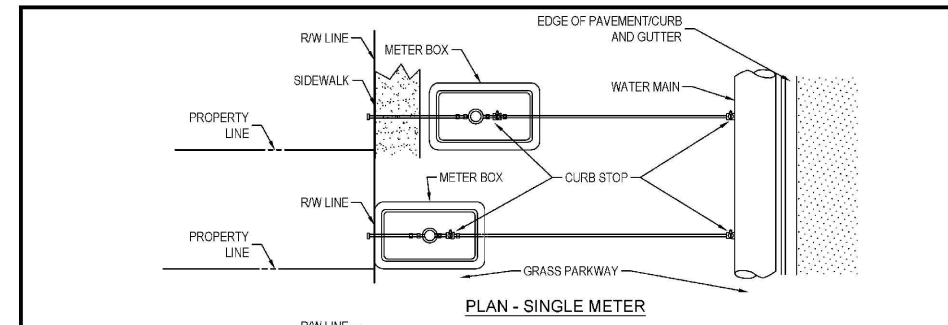
METER INSTALLATION PARTS LIST

| ITEM | DESCRIPTION |
|------|---|
| A | HDPE C.I. X METER, SWIVEL NUT (CURB STOP) |
| B | METER |
| C | BRASS METER COUPLING |
| D | *PVC FIP X WELD COUPLING |

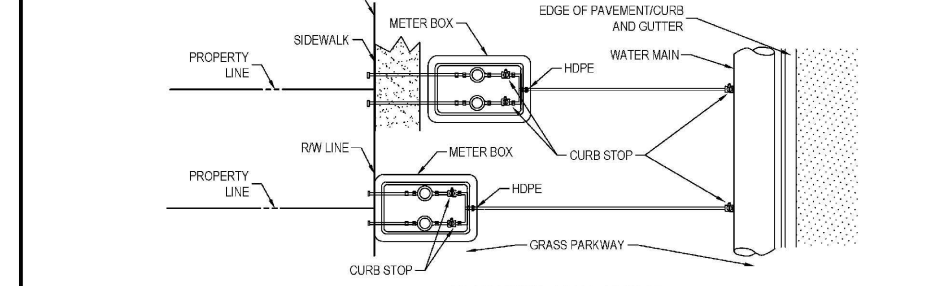


* ALL PVC PIPE AND FITTINGS SHALL BE SCH 80 EXCEPT FOR STANDARD TAIL PIECE SECTION WHICH WILL BE SCH 40.
 NOTE: PARTS LIST IS FOR STANDARD INSTALLATION; ACTUAL PARTS REQUIRED MAY VARY AS DIRECTED BY THE ENGINEER.

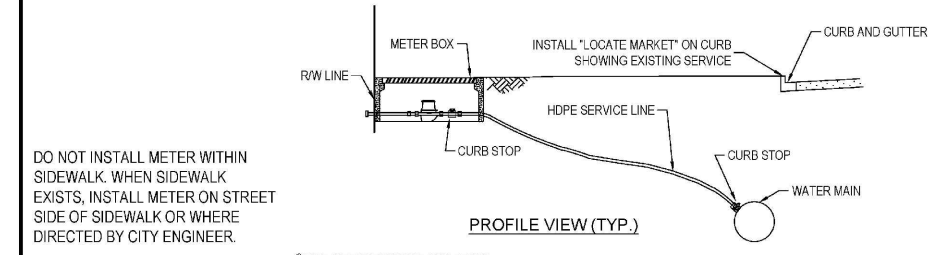
LAST REVISION: JUL 2018
SINGLE METER SET DETAIL
 3/4", 1", 1-1/2", 2"
 5.02



PLAN - SINGLE METER



PLAN VIEW - DUAL METER



PROFILE VIEW (TYP.)

DO NOT INSTALL METER WITHIN SIDEWALK. WHEN SIDEWALK EXISTS, INSTALL METER ON STREET SIDE OF SIDEWALK OR WHERE DIRECTED BY CITY ENGINEER.

* LINE SIZE APPLICABLE FOR DDCVA

| SINGLE METER SIZE (INCHES) | SERVICE LINE SIZE (INCHES) (0-15') | DUAL METER SIZE (INCHES) | SERVICE LINE SIZE (INCHES) (0-15') |
|----------------------------|------------------------------------|--------------------------|------------------------------------|
| 3/4 | 1 | 3/4 | 2 |
| 1 | 1 | 1 | 2 |
| 1 1/2 | 2 | 1 1/2 | N/A |
| 2" | 2 | 2" | N/A |

(FEET REFER TO DISTANCE FROM WATER MAIN TO METER)

LAST REVISION: JUL 2018
SINGLE & DUAL METERED SERVICE - SHORT SIDE
 3/4", 1", 1-1/2" & 2"
 5.04A

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 CITY OF TAMPA WATER DEPT.
 306 E. JACKSON ST., 5E
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 P.E. #79453

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 CHECKED: RAJ
 DATE: 05/07/2018

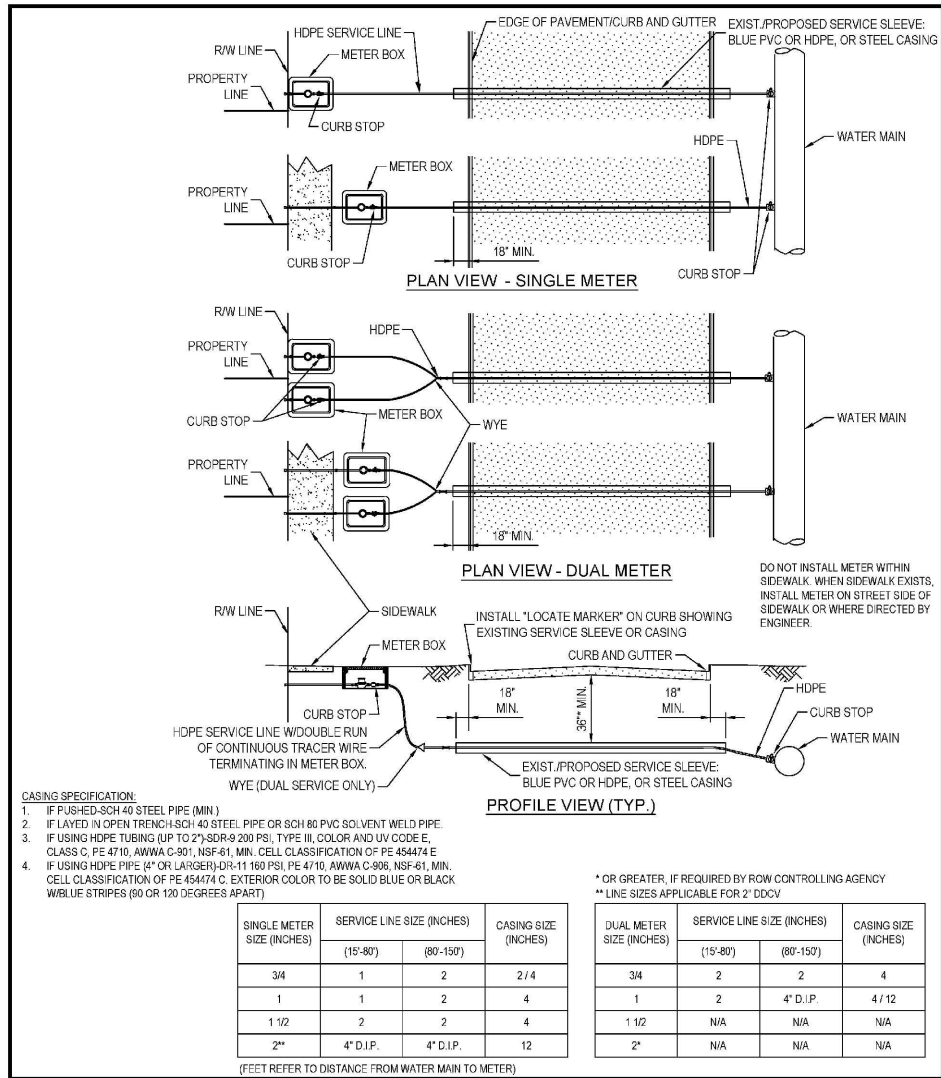
FAIR OAKS WATER MAIN REPLACEMENT

DETAILS

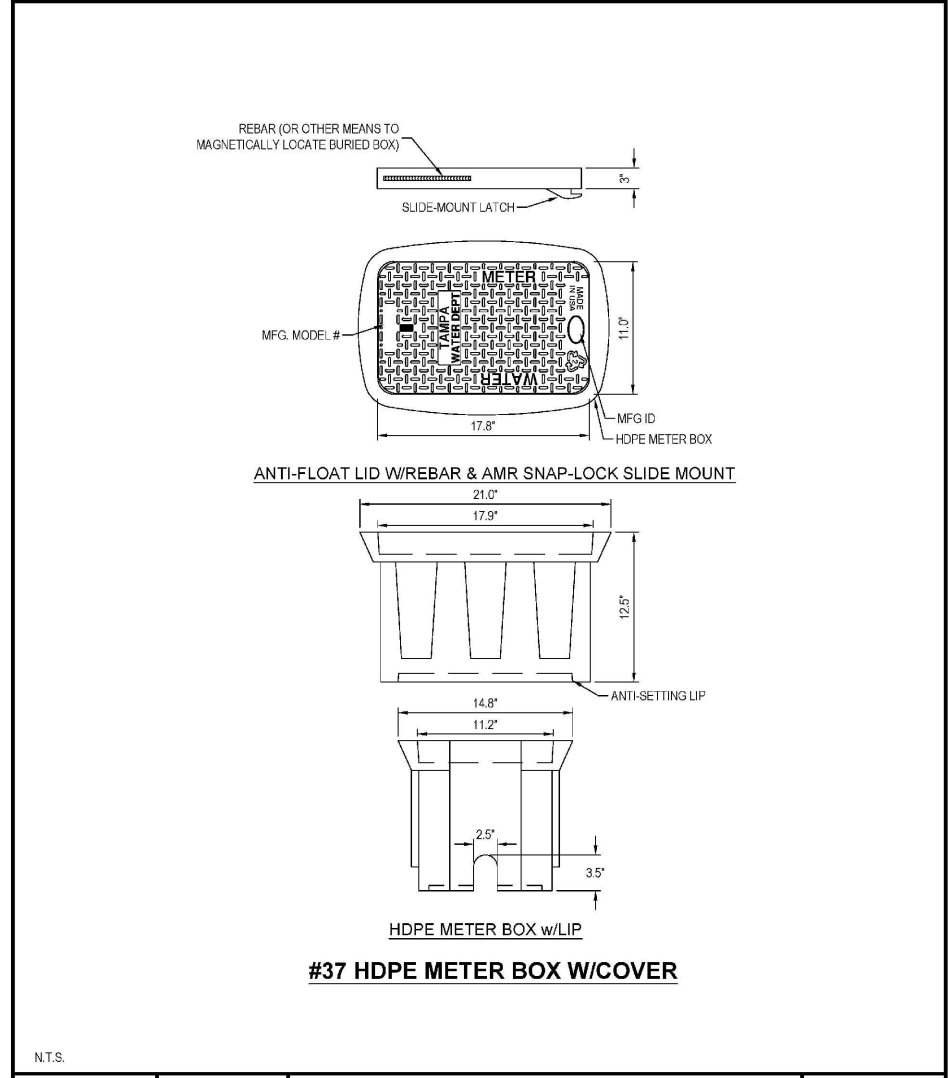
100% PLANS

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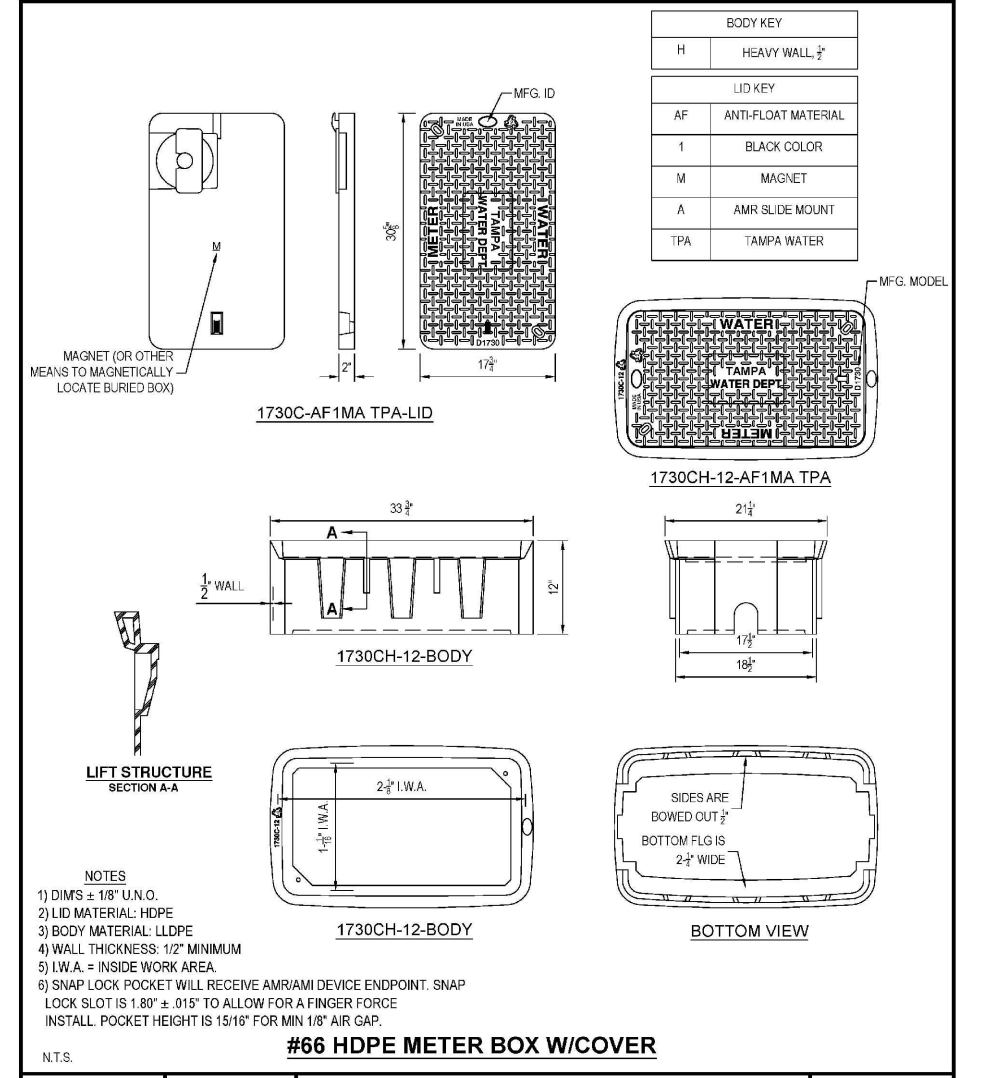
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| | | | |
|--|---------------|---|-------|
| | LAST REVISION | SINGLE & DUAL METERED SERVICE - LONG SIDE 3/4", 1", 1-1/2" & 2" | 5.05A |
| | SEP 2019 | | |



| | | | |
|--|---------------|--|------|
| | LAST REVISION | 3/4" OR 1" SINGLE SERVICE HDPE METER BOX | 5.10 |
| | JUL 2018 | | |



| | | | |
|--|---------------|---|------|
| | LAST REVISION | 1-1/2" & 2" SINGLE SERVICE HDPE METER BOX | 5.12 |
| | JUL 2018 | | |

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 CITY OF TAMPA WATER DEPT.
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DATE **05/07/2018**

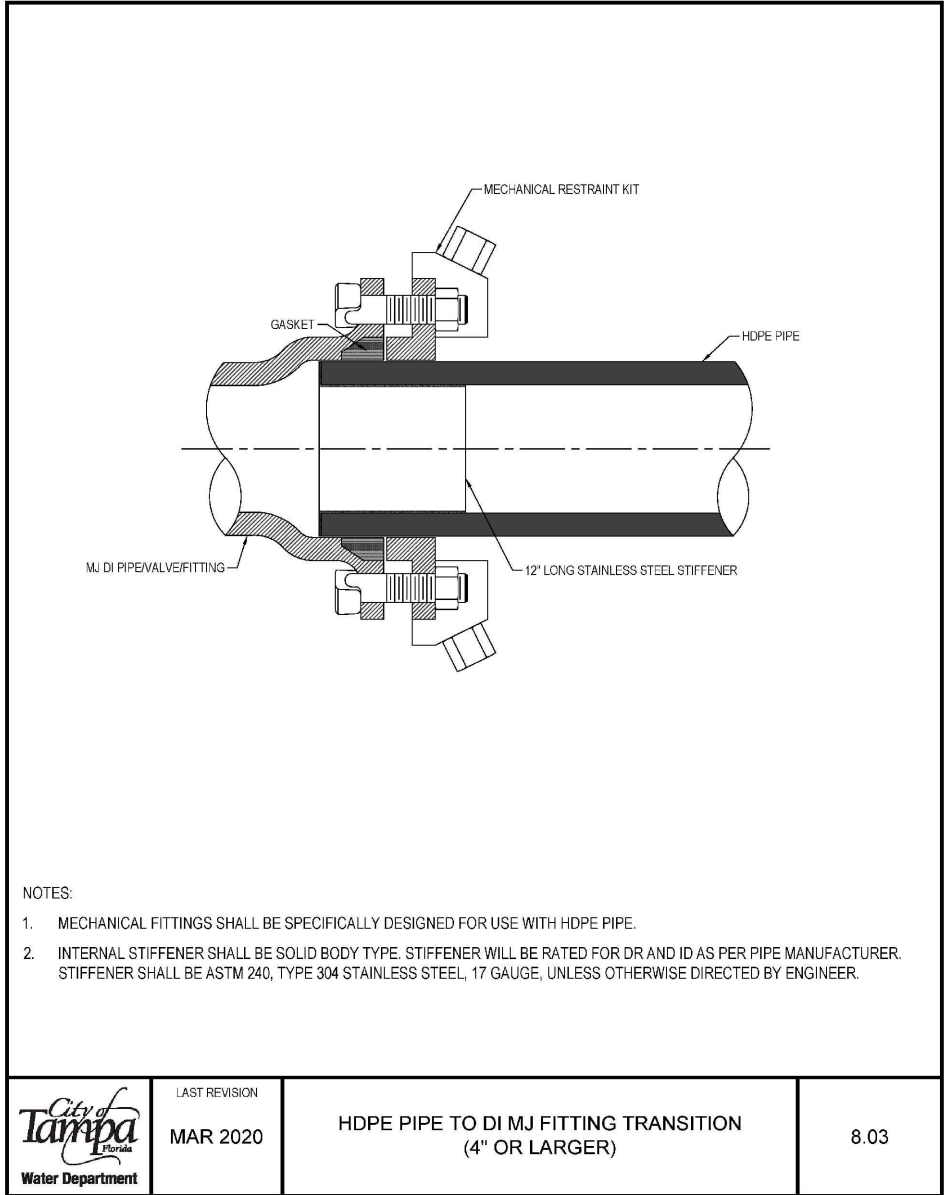
FAIR OAKS WATER MAIN REPLACEMENT

DETAILS



100% PLANS

| | |
|--------------------|-------------|
| WORK ORDER NO. | WTR-18-0002 |
| RECORD DRAWING NO. | ---- |
| ATLAS PAGE | L-09 |
| SHEET | 38 OF 39 |



NOTES:

1. MECHANICAL FITTINGS SHALL BE SPECIFICALLY DESIGNED FOR USE WITH HDPE PIPE.
2. INTERNAL STIFFENER SHALL BE SOLID BODY TYPE. STIFFENER WILL BE RATED FOR DR AND ID AS PER PIPE MANUFACTURER. STIFFENER SHALL BE ASTM 240, TYPE 304 STAINLESS STEEL, 17 GAUGE, UNLESS OTHERWISE DIRECTED BY ENGINEER.

| | | | |
|---|---------------|---|------|
|  | LAST REVISION | | |
| | MAR 2020 | HDPE PIPE TO DI MJ FITTING TRANSITION (4" OR LARGER) | 8.03 |

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 CITY OF TAMPA WATER DEPT.
 306 E. JACKSON ST., 5E
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| . | . | . | . | CHECKED | RAJ |
| . | . | . | . | DATE | 05/07/2018 |

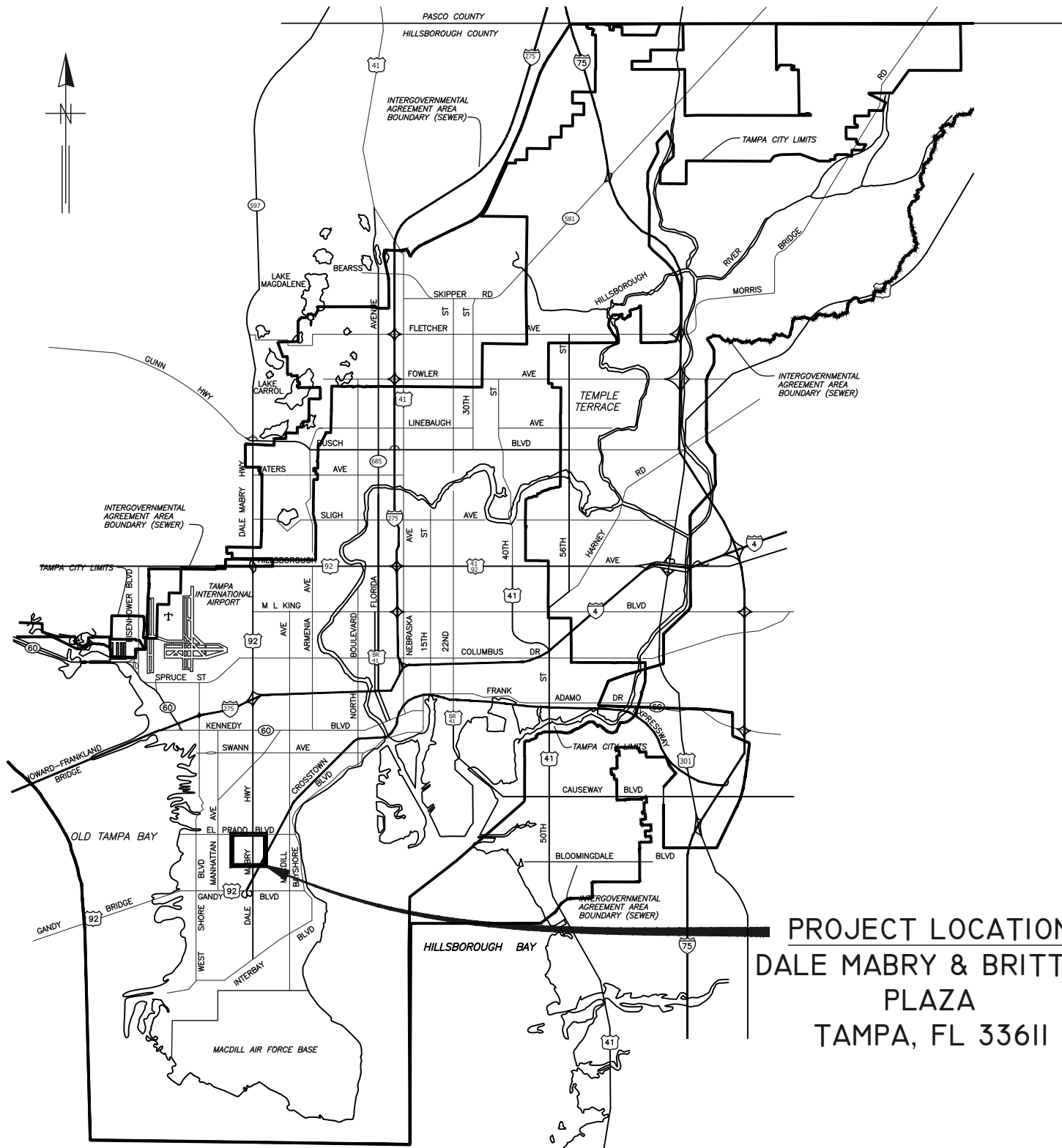
**FAIR OAKS WATER MAIN
REPLACEMENT**

DETAIL

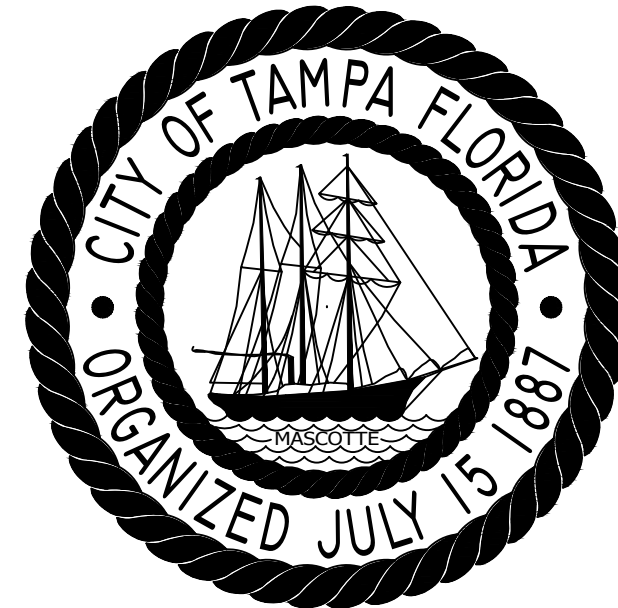


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| 100% PLANS | |
| WORK ORDER NO. | WTR-18-0002 |
| RECORD DRAWING NO. | ---- |
| ATLAS PAGE L-09 | SHEET 39 OF 39 |

LOCATION MAP



CITY of TAMPA



WASTEWATER DEPARTMENT ENGINEERING DIVISION

PLANS FOR FAIR OAKS GRAVITY SEWER REHABILITATION BY CIPP

CONTRACT No. ----
% SUBMITTAL

PROJECT LOCATION
DALE MABRY & BRITTON
PLAZA
TAMPA, FL 33611

NOTE:
ATTENTION IS DIRECTED TO THE FACT THAT
THESE PLANS MAY HAVE BEEN REDUCED IN
SIZE BY REPRODUCTION. THIS MUST BE
CONSIDERED WHEN OBTAINING SCALED DATA.

| No. | DATE | REVISIONS |
|-----|------|-----------|
| 1 | | |
| 2 | | |
| 3 | | |

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

DES: CB
DRN: KLT
CKD: ----
DATE: Apr-2020

CITY of TAMPA
WASTEWATER DEPARTMENT

FAIR OAKS GRAVITY SEWER
REHABILITATION BY CIPP
COVER SHEET

SHEET

1

GENERAL NOTES

1. THE SCOPE OF THIS PROJECT SHALL CONSIST OF REHABILITATION OF 8" DIA WASTEWATER PIPELINE BY INSTALLATION OF CURED IN PLACE PIPE LINER AND ALL APPURTENANCE ASSOCIATED WITH COMPLETION OF THE PROJECT.
2. ELEVATION INFORMATION SHOWN ON THESE PLANS IS REFERENCED TO N.G.V.D. 1929 UNLESS OTHERWISE STATED AND ARE BASED ON RECORD DRAWINGS.
3. SHEETS 9-16 ARE THE EXISTING AS-BUILTS OF THE SEWER PIPE TO BE REHABILITATED.
4. DURING THE MOT, CONTRACTOR MUST MAINTAIN ACCESS TO ALL DRIVEWAYS FOR THE DURATION OF THE PROJECT.
5. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OBTAINING THE NECESSARY ROAD CLOSURE AND RIGHT-OF-WAY PERMITS FROM THE APPROPRIATE GOVERNMENT AGENCIES HAVING JURISDICTION OVER THE SPECIFIC ROADWAYS. A CITY OF TAMPA RIGHT OF WAY ACCELA PERMIT SHALL BE SUBMITTED FOR EACH ROADWAY AT THE FOLLOWING WEBSITE
HTTP://ACA.TAMPAGOV.NET/
6. IN ORDER TO OBTAIN ROADWAY CLOSURE OR RIGHT-OF WAY PERMITS, AT MINIMUM, THE CONTRACTOR MUST SUBMIT DETAILED MAINTENANCE OF TRAFFIC (MOT) PLANS ALONG WITH APPLICATIONS TO THE APPROPRIATE AGENCY. THE MOT(S) SHALL CONFORM TO APPLICABLE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) INDEX DRAWINGS (MOST CURRENT EDITION). THE GOVERNING AGENCIES MAY REQUIRE ADDITIONAL INFORMATION AND DICTATE SPECIFIC WORK TIMES DURING NON-PEAK TRAFFIC HOURS. REFER TO SPECIFIC PROVISIONS FOR SPECIFIC TRAFFIC CONTROL REQUIREMENTS.
7. CONTINUOUS SEWER SERVICE MUST BE MAINTAINED AT ALL TIMES. WORK DURING LOW FLOW PERIODS OR NIGHT WORK MAY BE REQUIRED. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PRIVATE AND CITY PUMPING STATIONS AND SEWER SERVICE VIA VACUUM TRUCKS. CONTRACTOR IS RESPONSIBLE FOR DEWATERING, COLLECTING AND DISPOSING OF ALL WATER AND SLUDGE FROM EXISTING FACILITIES AS NECESSARY TO MAINTAIN SERVICE. COST FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS AND NO ADDITIONAL PAYMENT WILL BE MADE.
8. BYPASS PUMPS SHALL BE CAPABLE OF DELIVERING 300 GPM FOR 8". THE BYPASS PUMPS SHALL BE OF THE SELF PRIMING QUIET FLOW TYPE PUMP. BYPASS PUMP NOISE SHALL STRICTLY COMPLY TO ALL LOCAL REGULATIONS AND ORDINANCES COVERING NOISE CONTROL. THIS MAY REQUIRE CONSTRUCTING SOUND ATTENUATING ENCLOSURE AROUND PUMPS. BYPASS METHOD SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER.
9. THE PROPOSED LINER THICKNESS FOR THE 8" SEWER SHALL BE 6.0 MM THICKNESS.
10. CONTRACTOR SHALL RESTORE ALL LANDSCAPING, SODDING, SPRINKLER SYSTEM PIPING AND PAVEMENT THAT MAY HAVE BEEN DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER.
11. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH WASTEWATER PERSONNEL AND PUMPING STATION OPERATIONS.
12. OSHA STANDARD EQUIPMENT SUCH AS SAFETY HARNESES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.
13. THIS PROJECT INCLUDES REHABILITATION OF MANHOLES BY APPLICATION OF A STRUCTURAL COATING SYSTEM AND ALL APPURTENANCES ASSOCIATED WITH THE PROJECT.
14. DURING THE MANHOLE'S INTERIOR CLEANING OPERATION, THE CONTRACTOR MUST PROVIDE A MEANS OF CAPTURING AND DISPOSING OF THE REMOVED DEBRIS. THIS METHOD SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
15. ALL EXPOSED STEEL REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ANY DETERIORATION/RUST AND COATED WITH THE PROPOSED COATING SYSTEM.

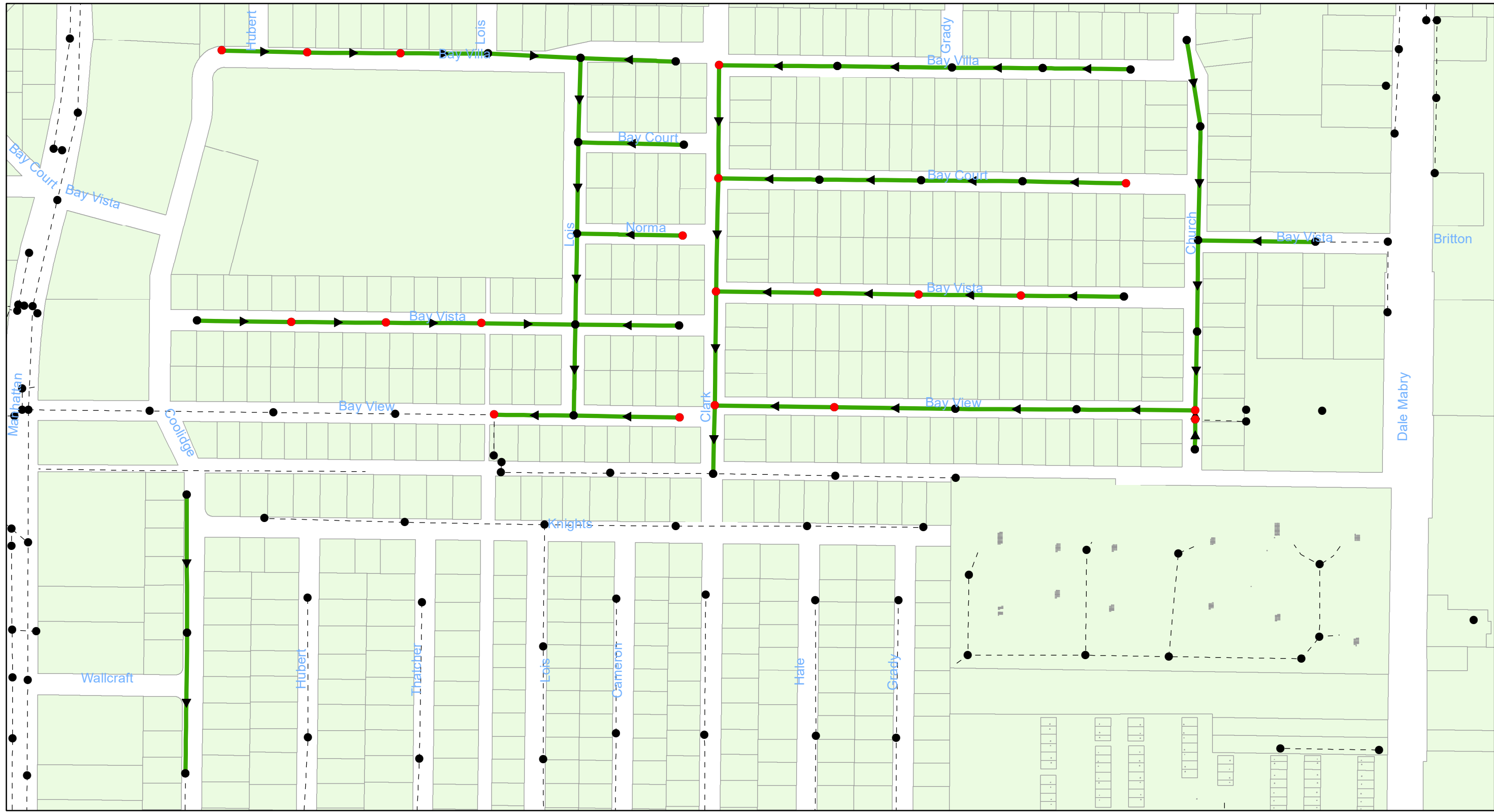
| PROPOSED MANHOLE COATING SYSTEM THICKNESS | |
|---|----------------|
| Location | Coating System |
| Manhole Barrel | 250 MILS (MIN) |
| Manhole Benches | 250 MILS (MIN) |

| INDEX | |
|----------|---|
| SHT. NO. | DESCRIPTION |
| 1 | COVER SHEET |
| 2 | NOTE AND INDEX |
| 3 | OVERALL PROJECT LOCATION MAP |
| 4 | AREA MAP - FAIR OAKS |
| 5 | AREA MAP - FAIR OAKS |
| 6 | AREA MAP - FAIR OAKS |
| 7 | MANHOLE REHABILITATION DETAIL |
| 8 | MANHOLE DETAIL |
| 9-16 | WASTEWATER RECORD DRAWINGS FOR REFERENCE ** |

** RECORD DRAWINGS ARE BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT INTENDED TO SHOW ADDITIONAL WORK FOR THIS CONTRACT. THE CITY DOES NOT GUARANTEE THE ACCURACY OF THE RECORD DRAWINGS.

\\sewer\sewer\Share\WasteWater\Projects\Fair Oaks Water Main Replacement Project and Wastewater CIPP Lining\Drafting\DWG\Fair Oaks Water Main Replacement and CIPP Lining.dwg

| | | | | | | | | |
|---|-----|------|-----------|--|--|---|---------------|------------|
| JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT | No. | DATE | REVISIONS | DES: CB DRN: KLT CKD: ---- DATE: Apr-2020 | CITY of TAMPA WASTEWATER DEPARTMENT | FAIR OAKS GRAVITY SEWER REHABILITATION BY CIPP | NOTES & INDEX | SHEET 2 |
| | 1 | | | | | | | |
| | 2 | | | | | | | |



Fair Oaks
City of Tampa Wastewater Department

Legend

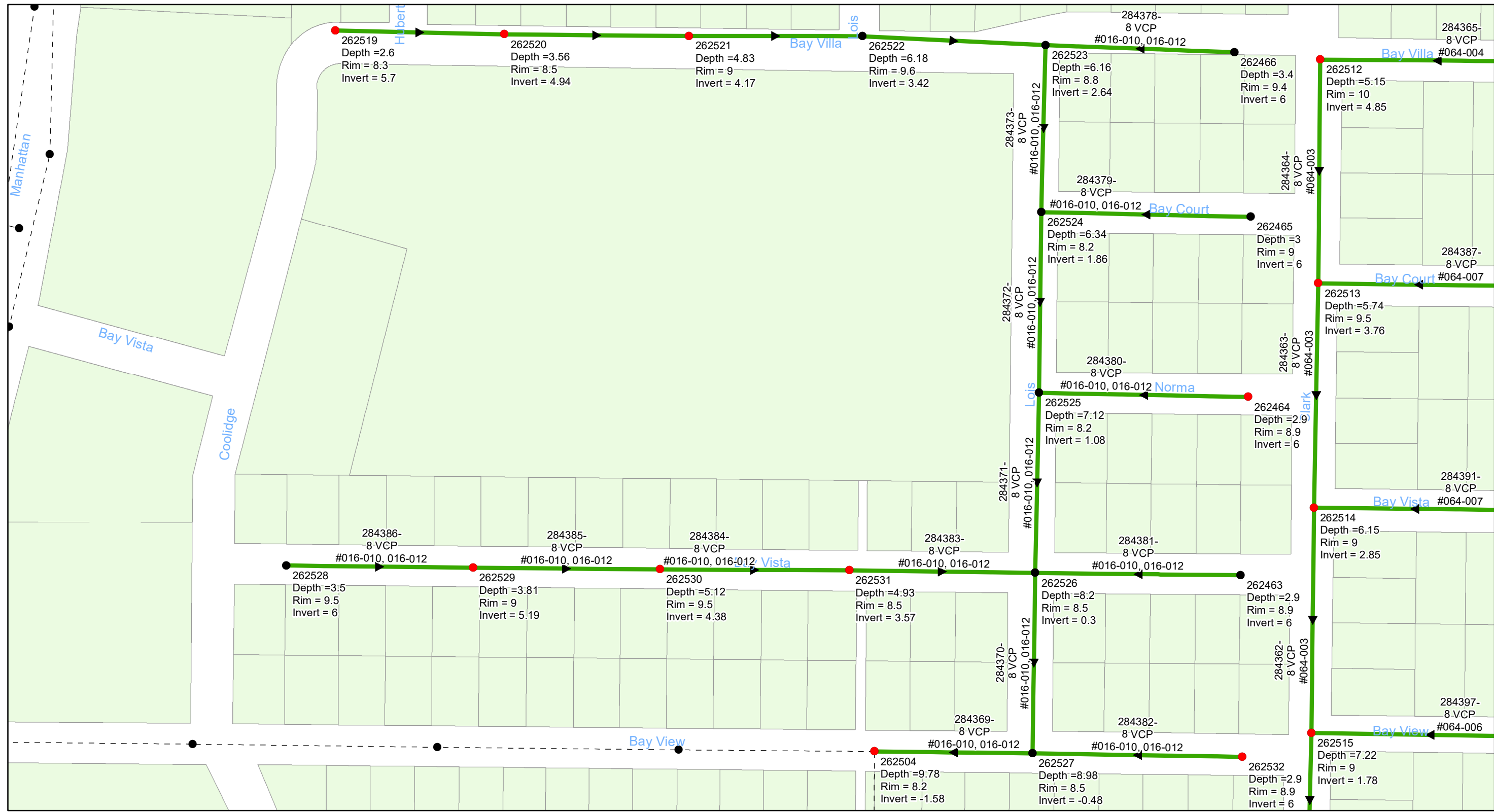
- Proposed Manhole Rehab
- Manholes (no rehabilitation required)
- ➔ Lining Area
- - - - - Ex Wastewater (no rehabilitation required)



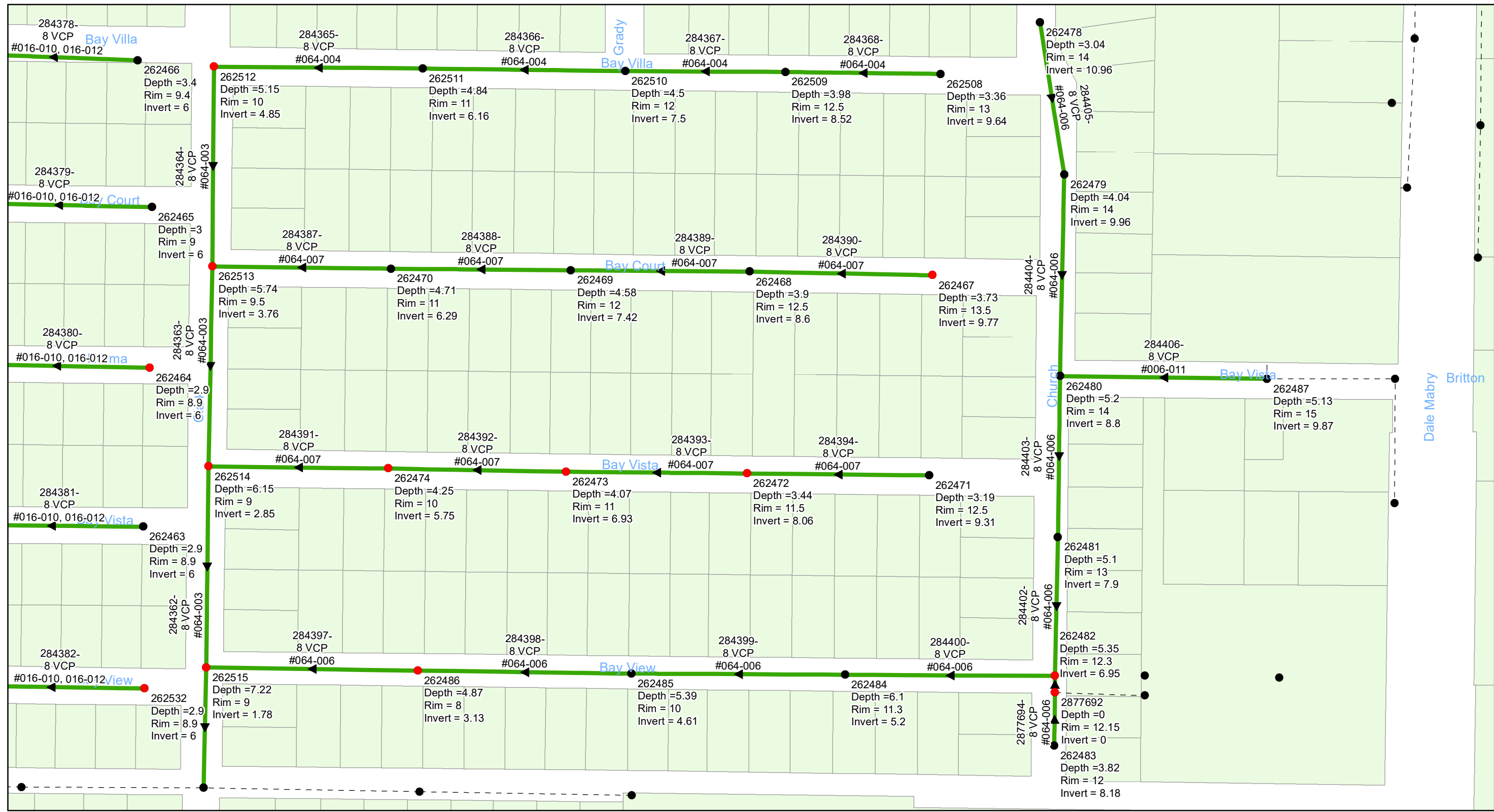
Sheet No.

3





0 0.0225 0.045 0.09 Miles



0 0.025 0.05 0.1 Miles

Fair Oaks

City of Tampa Wastewater Department

Legend

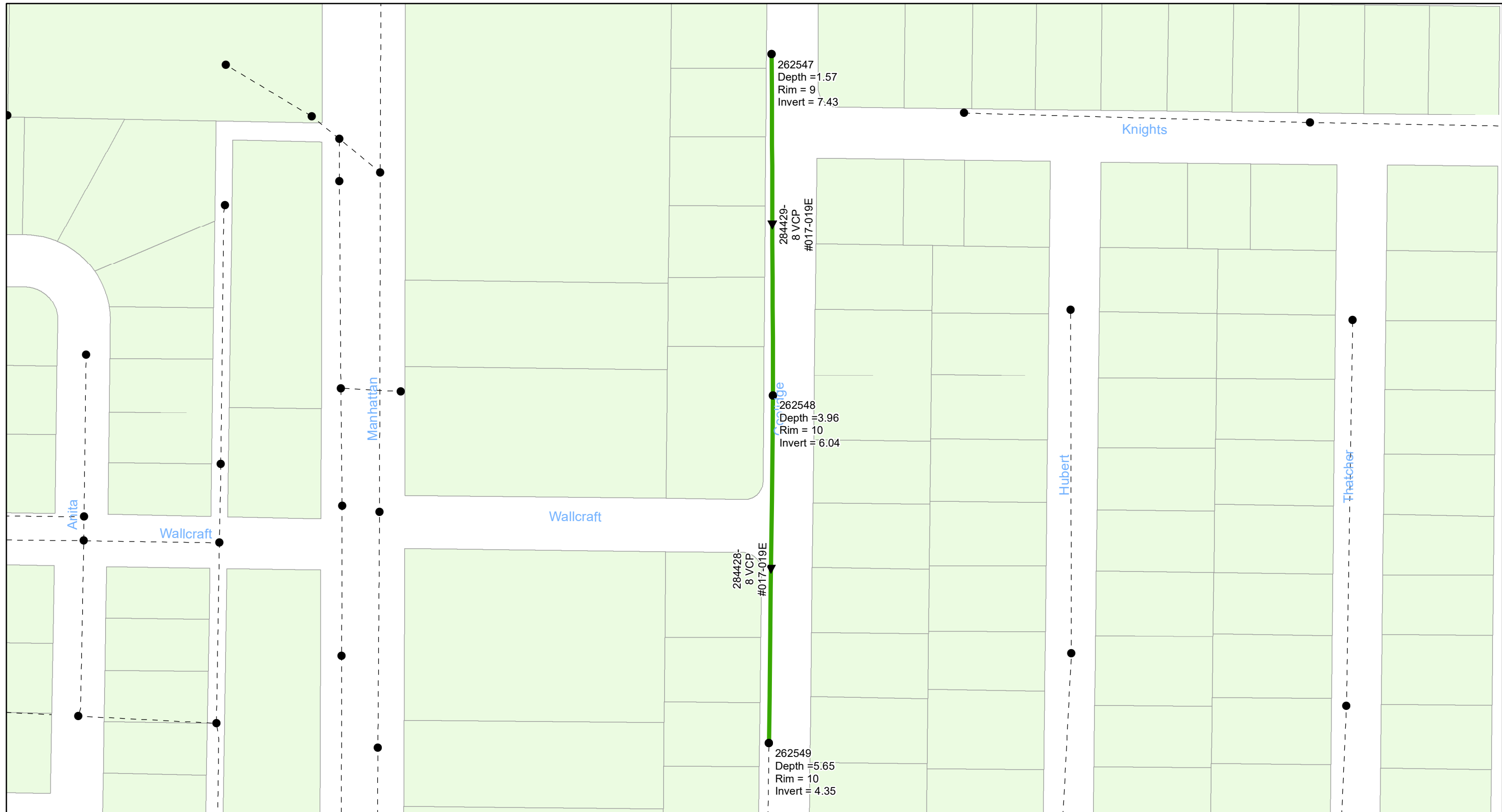
- Proposed Manhole Rehab
- Manholes (no rehabilitation required)
- Lining Area
- - - - - Ex Wastewater (no rehabilitation required)



Sheet No.

5





0 0.0175 0.035 0.07 Miles

Fair Oaks
City of Tampa Wastewater Department

Legend

- Proposed Manhole Rehab
- Manholes (no rehabilitation required)
- ▶ Lining Area
- - - - - Ex Wastewater (no rehabilitation required)

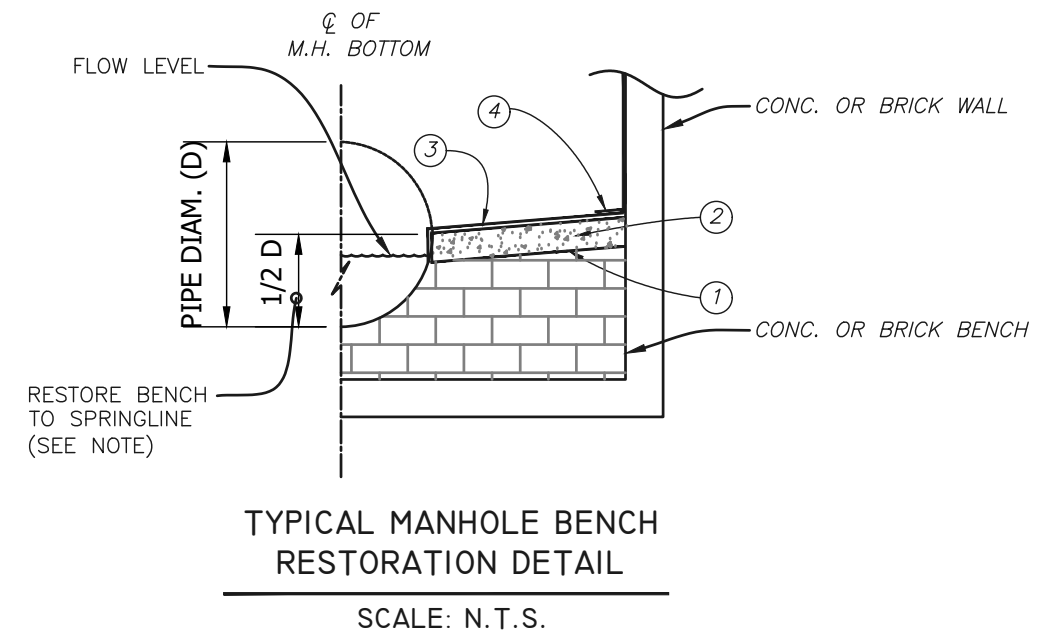
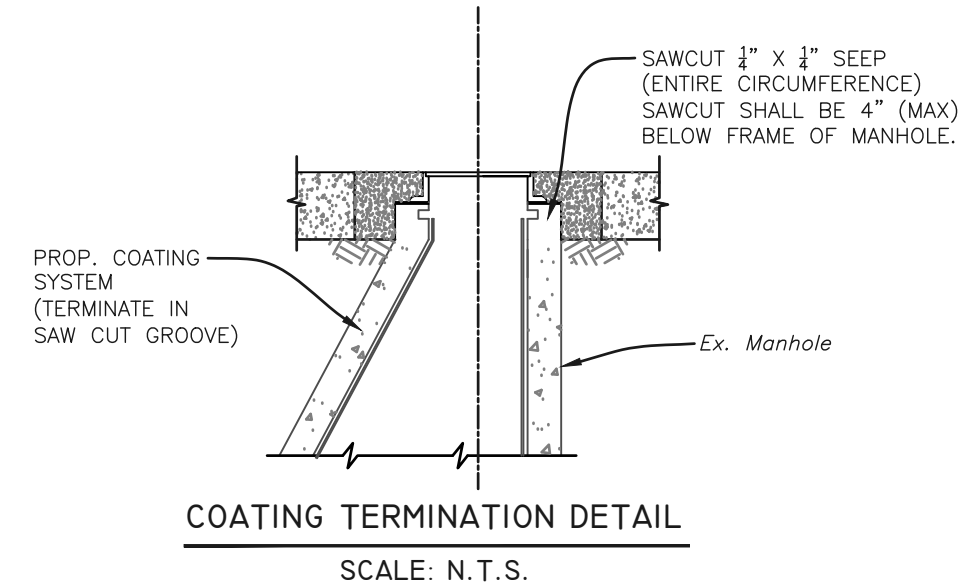
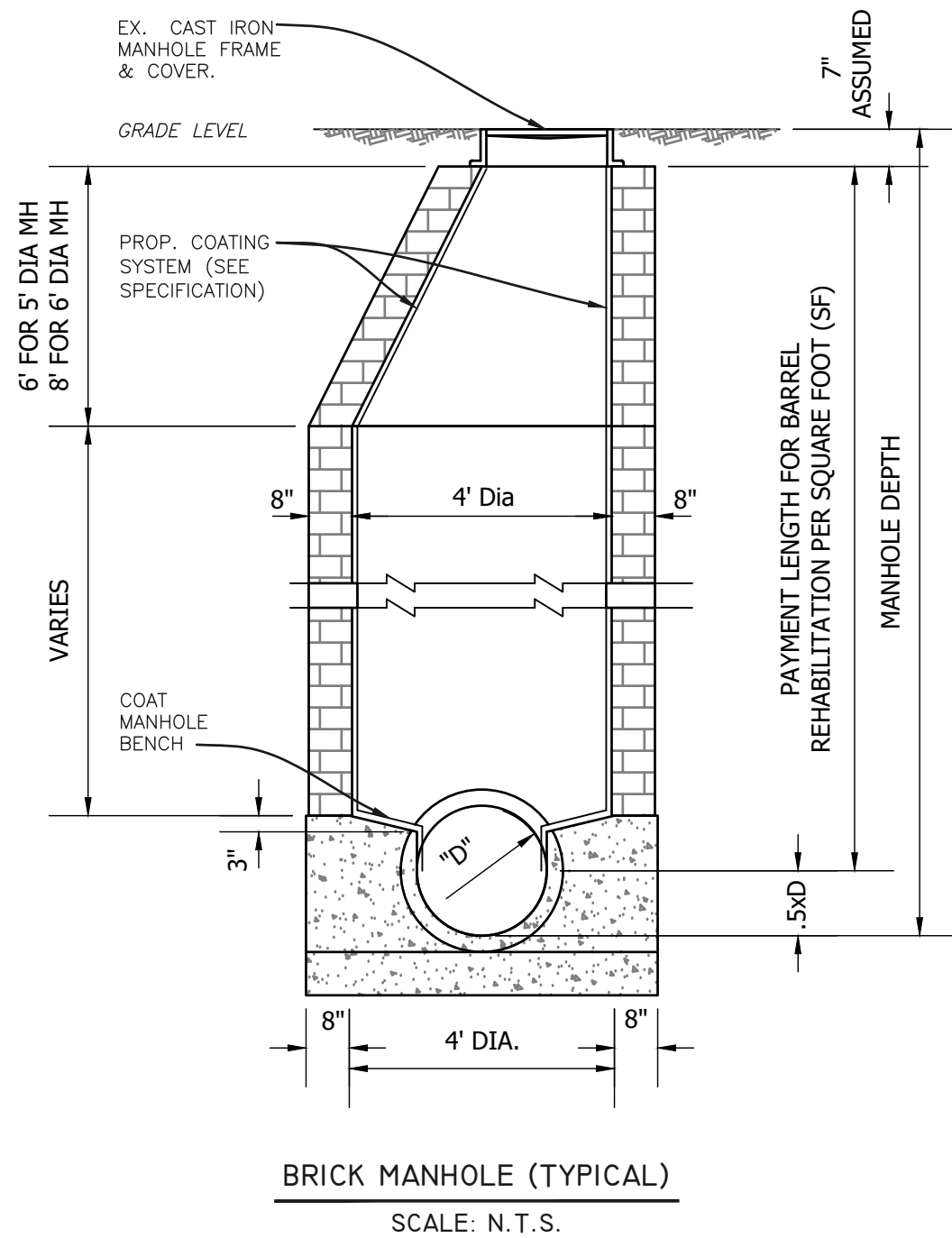


Sheet No.
6



NOTES

1. REMOVE ALL DEBRIS AND LOOSE BRICKS FROM THE TOP OF THE BENCH.
2. INSTALL A MINIMUM 1" THICK CLASS "D" CONCRETE OVER EXISTING BENCH. ALLOW CONCRETE TO CURE (MIN. 24 HRS. UNLESS OTHERWISE APPROVED BY THE ENGINEER).
3. OVERLAY BENCHES WITH PROPOSED COATING SYSTEM.
4. PROVIDE 6" COATING THICKNESS TRANSITION. PAYMENT FOR THIS ITEM IS INCLUDED IN THE BENCH RESTORATION.



\\server\sewer\share\Water\Main Replacement\Projects\Fair Oaks\Water Main Replacement\CIPP Lining.dwg

| |
|---|
| JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT |
|---|

| No. | DATE | REVISIONS |
|-----|------|-----------|
| 1 | | |
| 2 | | |
| 3 | | |

DES: CB
DRN: KLT
CKD: ----
DATE: Apr-2020

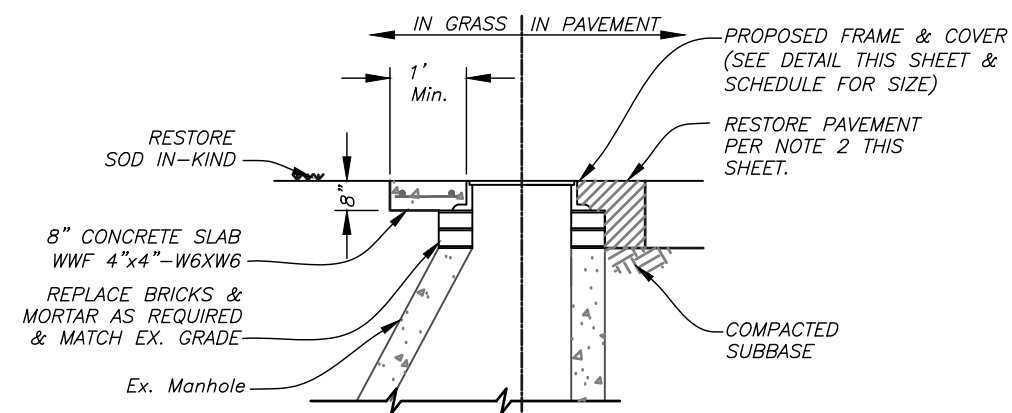
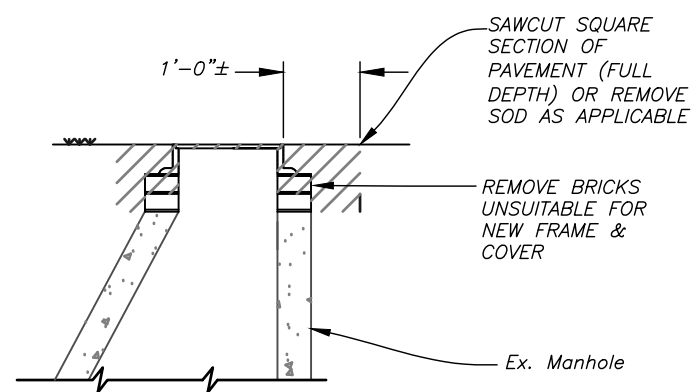
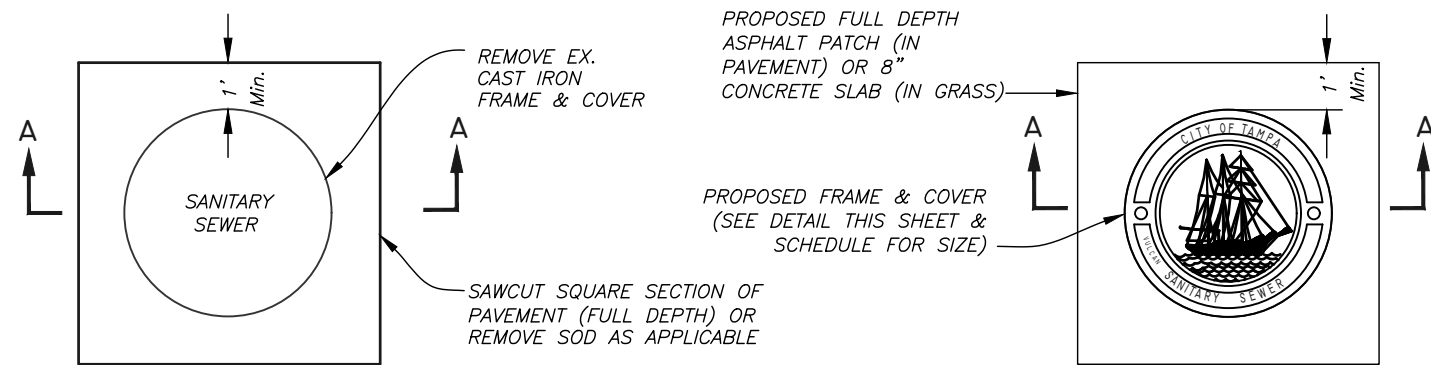
CITY of TAMPA
WASTEWATER DEPARTMENT

FAIR OAKS GRAVITY SEWER
REHABILITATION BY CIPP
MANHOLE REHABILITATION DETAIL

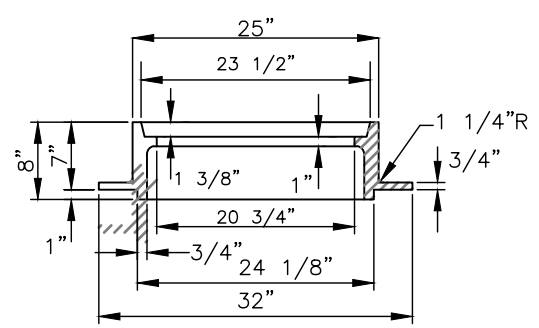
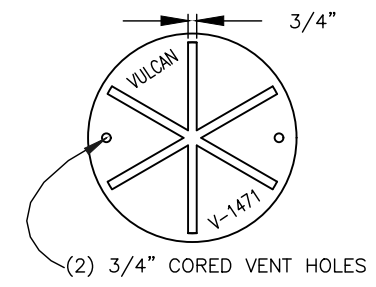
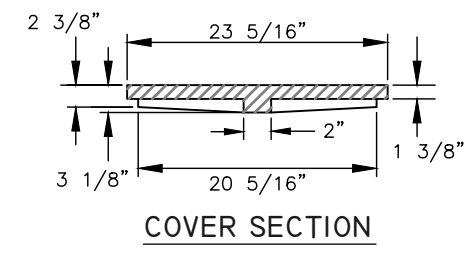
SHEET
7

NOTES

- FOR MANHOLE COVER SIZES AND WHETHER THE COVERS ARE LOCATED IN GRASS OR PAVEMENT, WILL BE PROVIDED ON EACH INDIVIDUAL WORK ORDER ISSUED UNDER THIS CONTRACT.
- PAVEMENT RESTORATION SHALL CONSIST OF 8" PERMANENT BASE (CRUSHED CONCRETE OR CRUSHED LIMEROCK BASE) AND PERMANENT ASPHALT SUPERPAVE PAVEMENT, UNLESS OTHERWISE NOTED. IF LOCATED IN D.O.T. ROW, AN ADDITIONAL 1 1/2" SUPER PAVE ASPHALT IS REQUIRED.

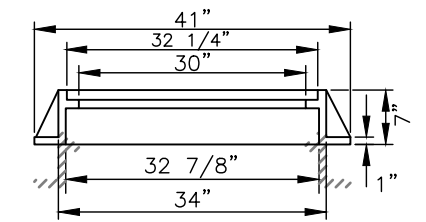
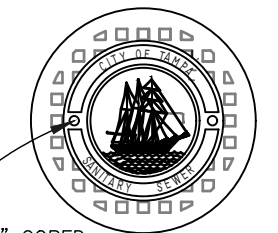
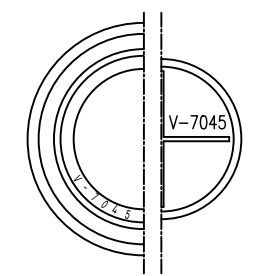
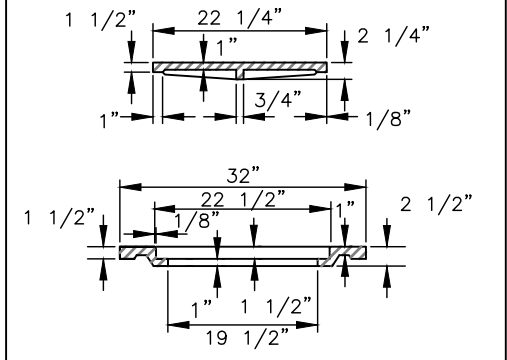


SMALL COVER DETAIL



FOR MH'S OF SEWERS 24" OR LESS IN DIAMETER:
VULCAN FOUNDRY NO. V-1471,
U.S. FOUNDRY NO. 575-AT, OR EQUAL

LARGE COVER DETAIL



FOR MH'S OF SEWERS 27" OR GREATER IN DIAMETER:
VULCAN FOUNDRY NO. V-7045,
U.S. FOUNDRY NO. 230-AB-M, OR EQUAL

HEAVY DUTY CAST IRON MANHOLE FRAME & COVER DETAILS

\\server\sewer\Share\Water\Projects\Fair Oaks Water Main Replacement\CIP\Linings\DWG\Fair Oaks Water Main Replacement and CIPP Lining.dwg

| |
|---|
| JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT |
|---|

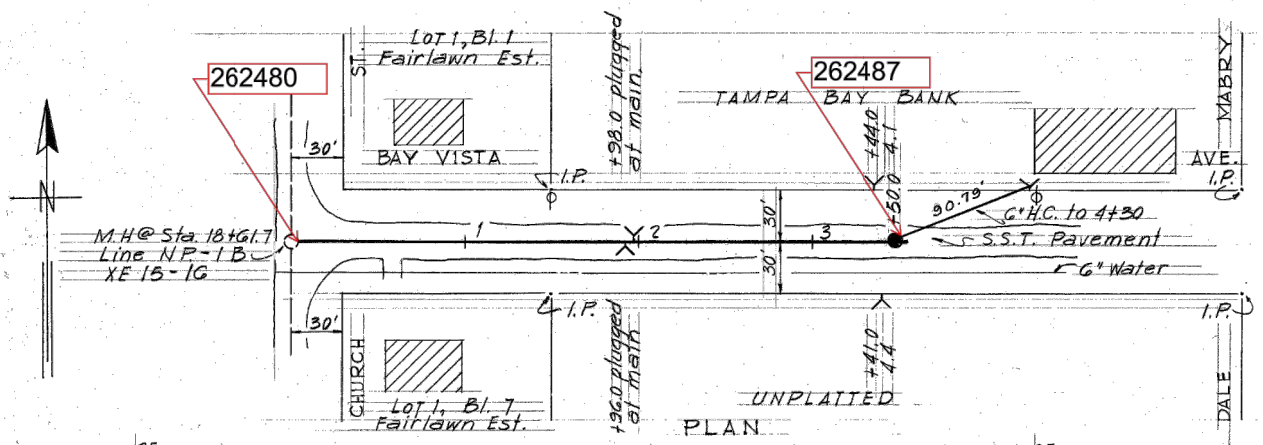
| No. | DATE | REVISIONS |
|-----|------|-----------|
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| 2 | | |
| 3 | | |

DES: CB
DRN: KLT
CKD: ----
DATE: Apr-2020

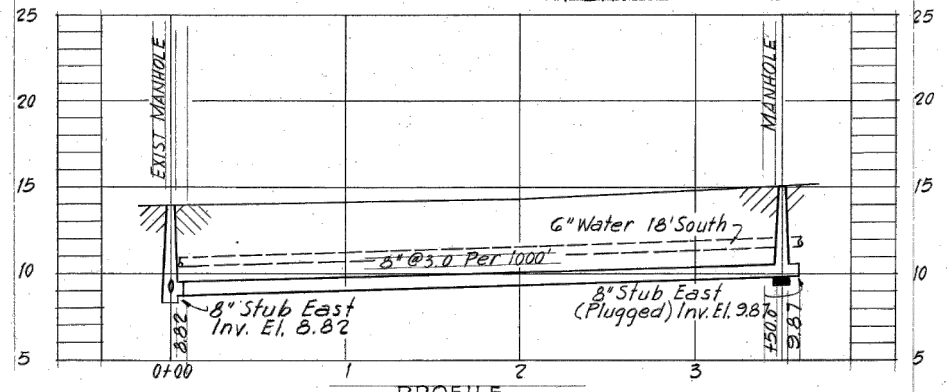
CITY of TAMPA
WASTEWATER DEPARTMENT

FAIR OAKS GRAVITY SEWER
REHABILITATION BY CIPP
MANHOLE DETAIL

SHEET
8



AS-BUILT PLAN
 Correct according to construction records and field check, started and completed in March, 1959



SEWER LINE LOCATION

SEC. MAP NO. LINE NO.

L-9-13

CITY OF TAMPA, FLORIDA
 SEWER EXTENSION FUND
 SEWER IMPROVEMENTS IN AREA 15

NP-1B-2

W.A. FORCE ACCOUNT NO. X-6.

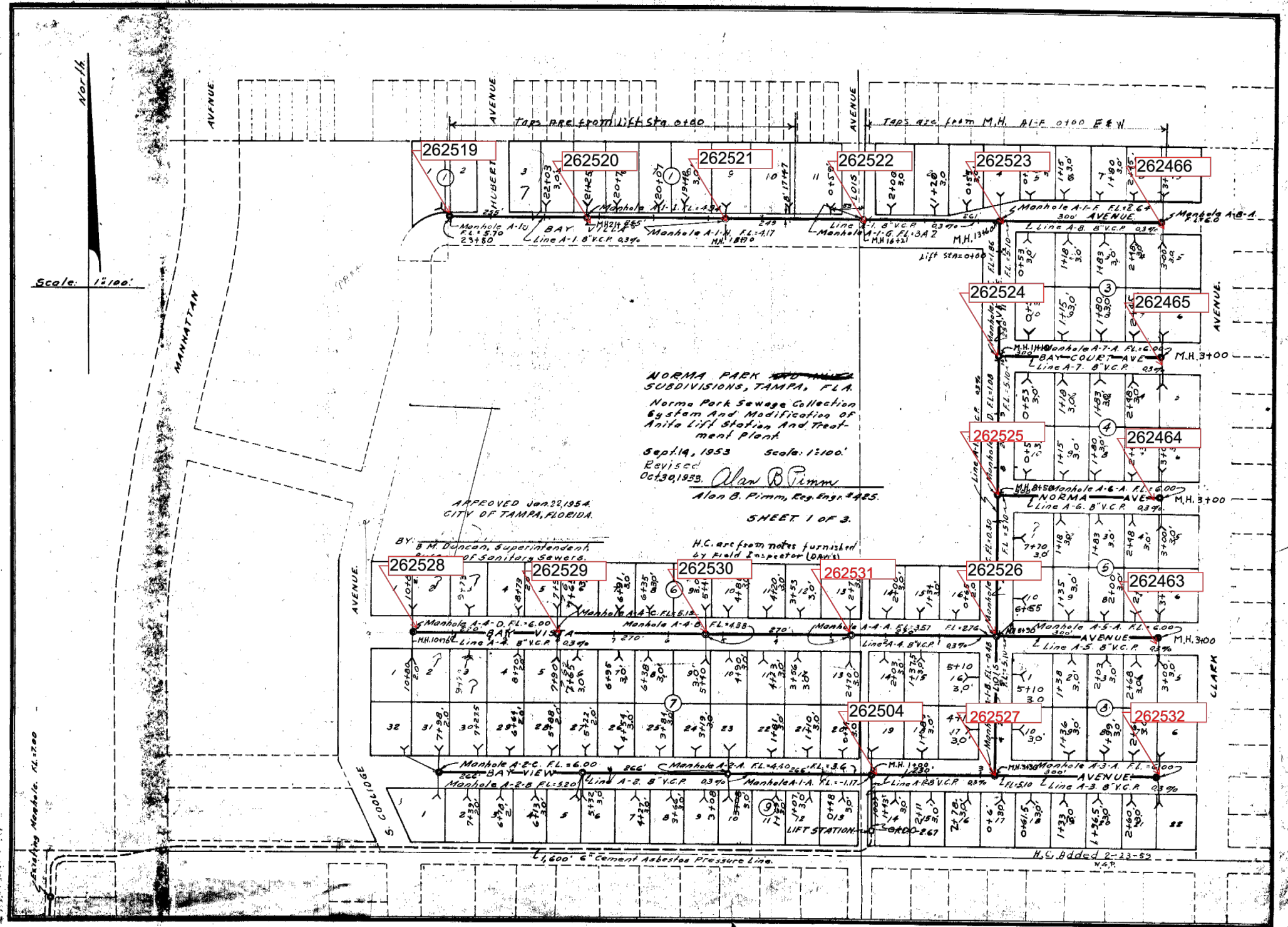
SUBMITTED: *S. M. Hansen*
 BUREAU OF SANITARY SEWERS

APPROVED: *Richard E. Ford*
 GREELEY AND HANSEN, ENGINEERS

DES: ECA
 DR: ECA
 CKD: REF
 DATE: MAR., 1959

SCALE
 50 0 50 100
 1" = 50'

SHEET
 5
 OF 5



North

Scale: 1/100'

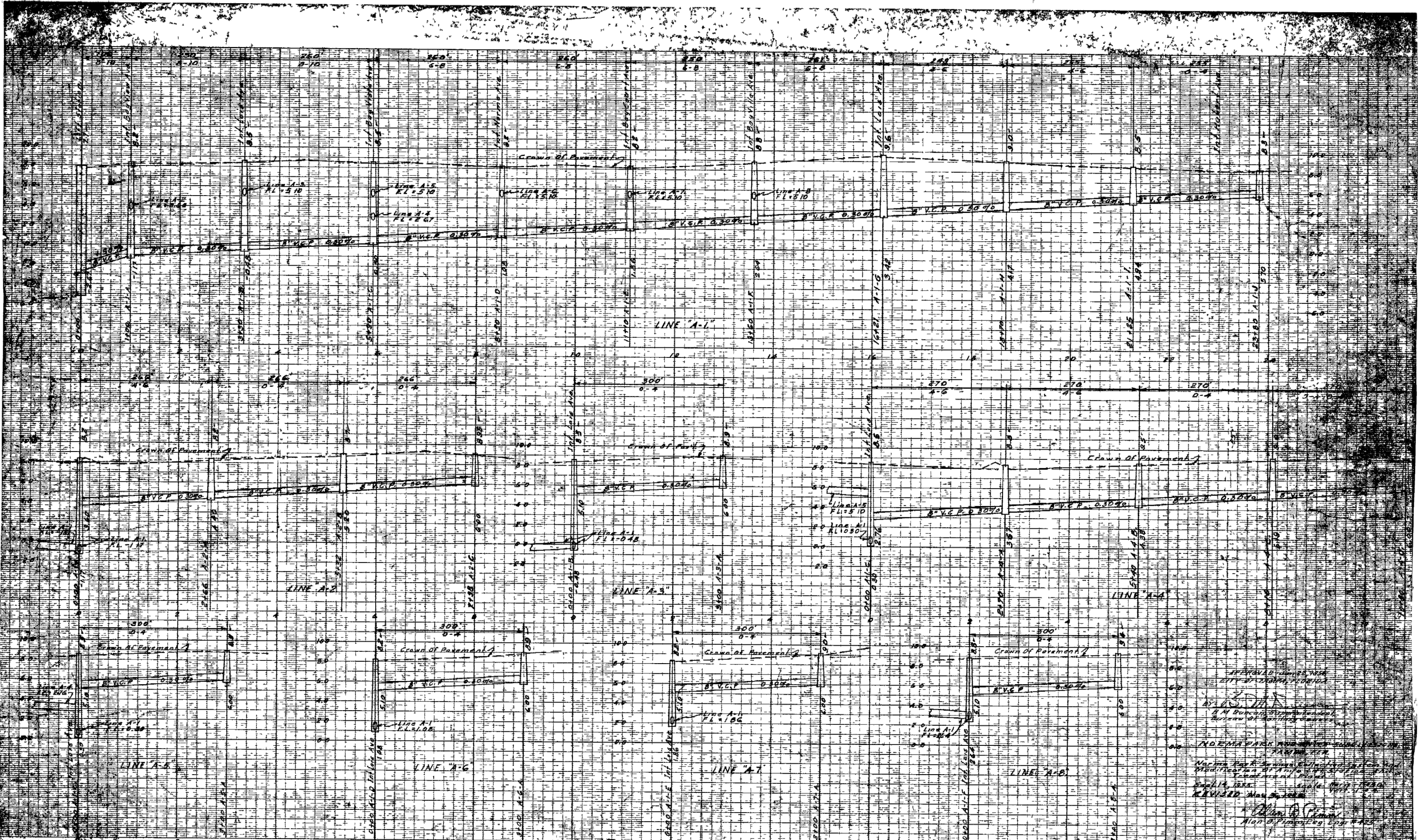
NORMA PARK SUBDIVISIONS, TAMPA, FLA.
 Norma Park Sewage Collection System And Modification of Anita Lift Station And Treatment Plant.
 Sept. 14, 1953 Scale: 1/100'
 Revised Oct. 30, 1953. Alan B. Pimm
 Alan B. Pimm, Reg. Engr. #485.

APPROVED Jan 22, 1954
 CITY OF TAMPA, FLORIDA.

BY: B.M. Duncan, Superintendent
 of Sanitary Sewers.

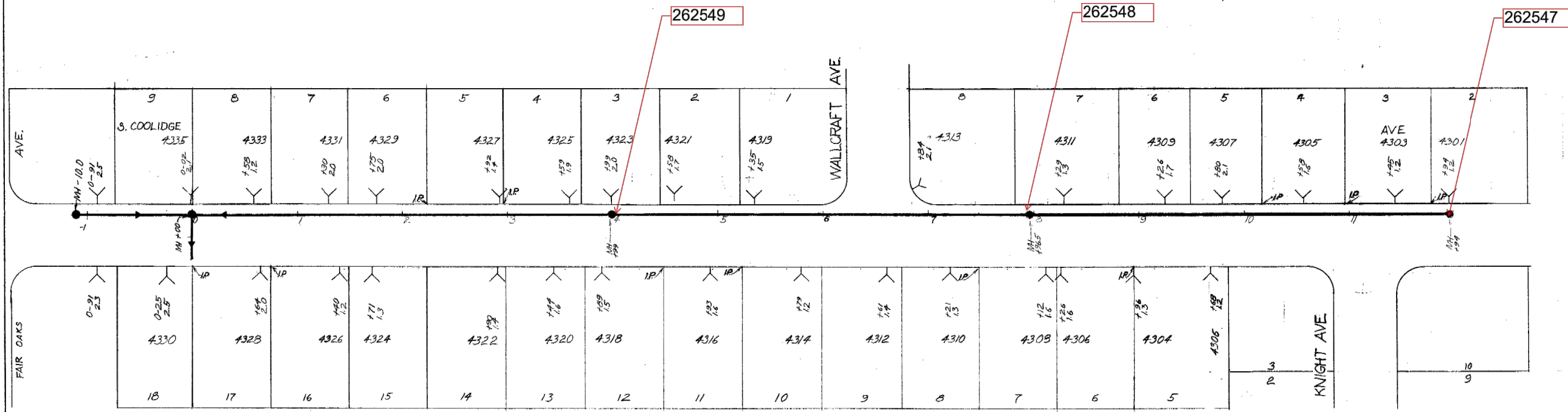
H.C. are from notes furnished
 by Field Inspector (D.M.)

SHEET 1 OF 3.



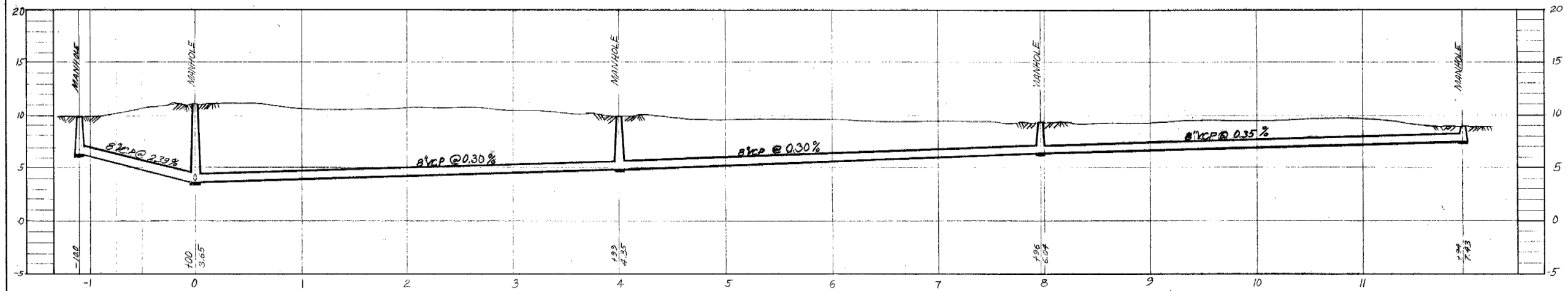
APPROVED: JAMES H. NEER
 CITY OF DALLAS, TEXAS
 H. M. BANCROFT, SUPERVISOR
 BUREAU OF SANITARY ENGINEERING
 INDEPENDENT ENGINEERS ASSOCIATION
 DALLAS, TEXAS
 Prepared by: *[Signature]*
 EUGENE DIETZGEN, INC.
 Dallas, Texas

MANHATTAN MANOR REVISED



PLAN

B.M. on S.W. Cor. of Corp. SW on S.E. Cor. of FAIROAKS & MANHATTAN AVE. EL. 9.77

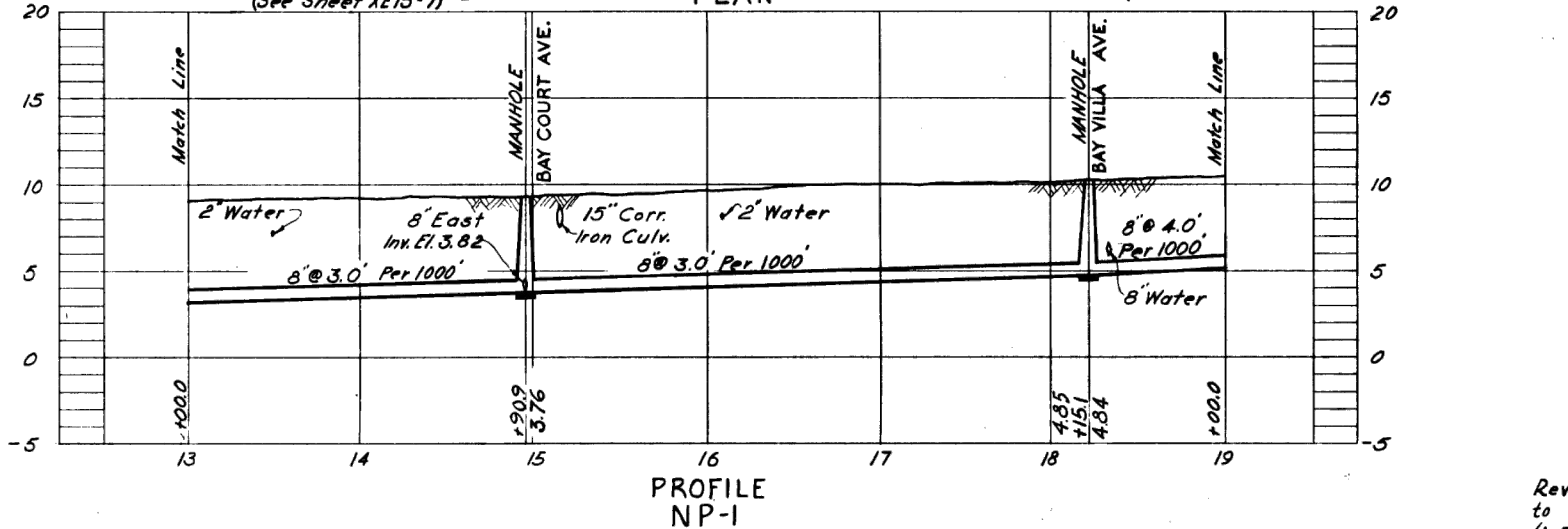
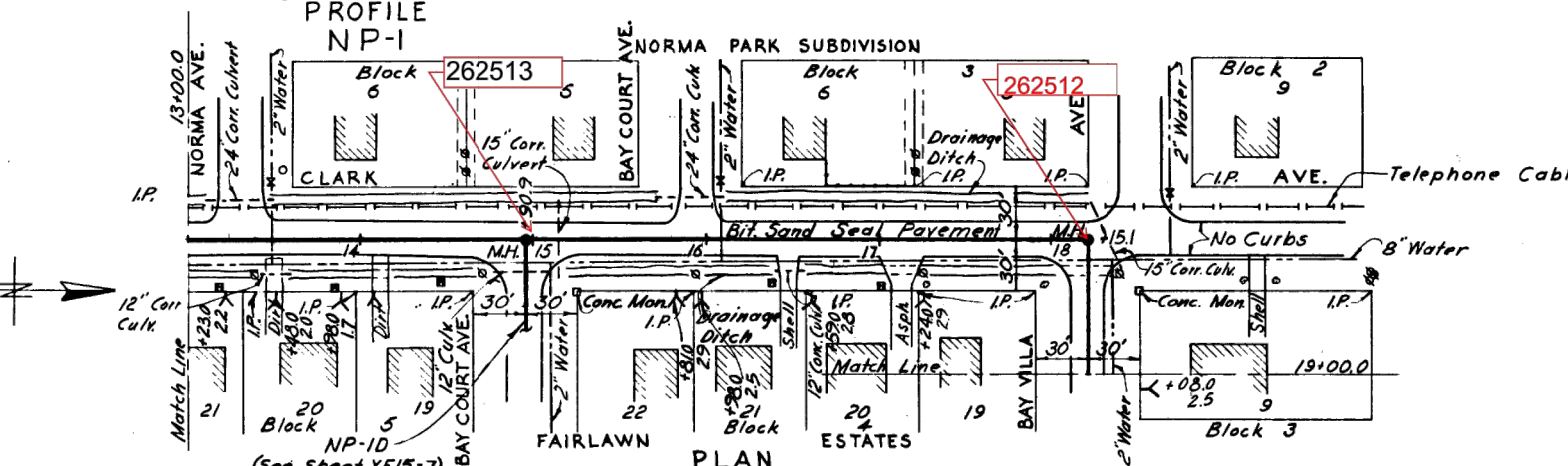
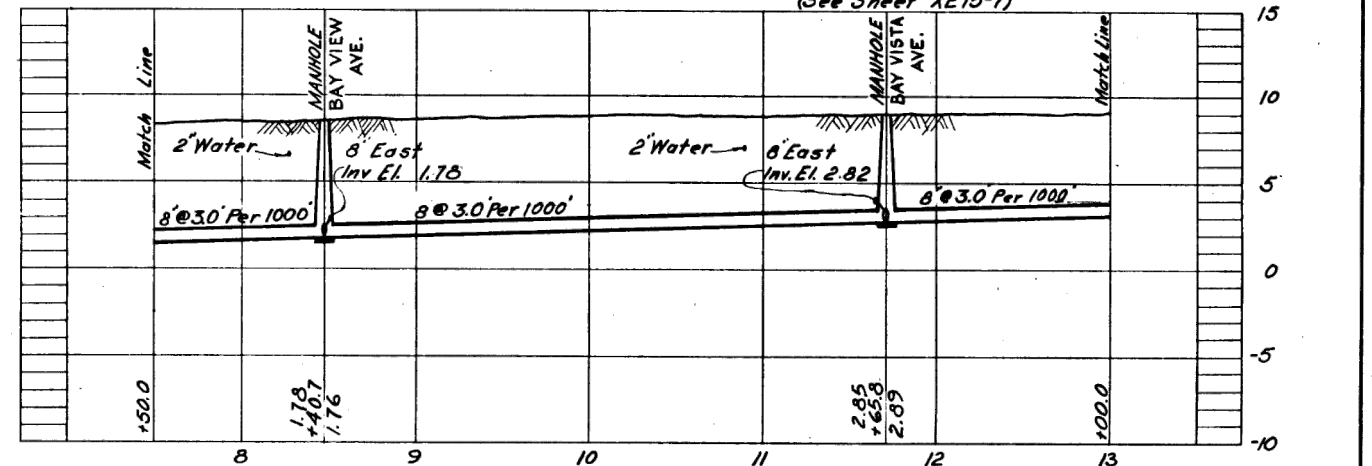
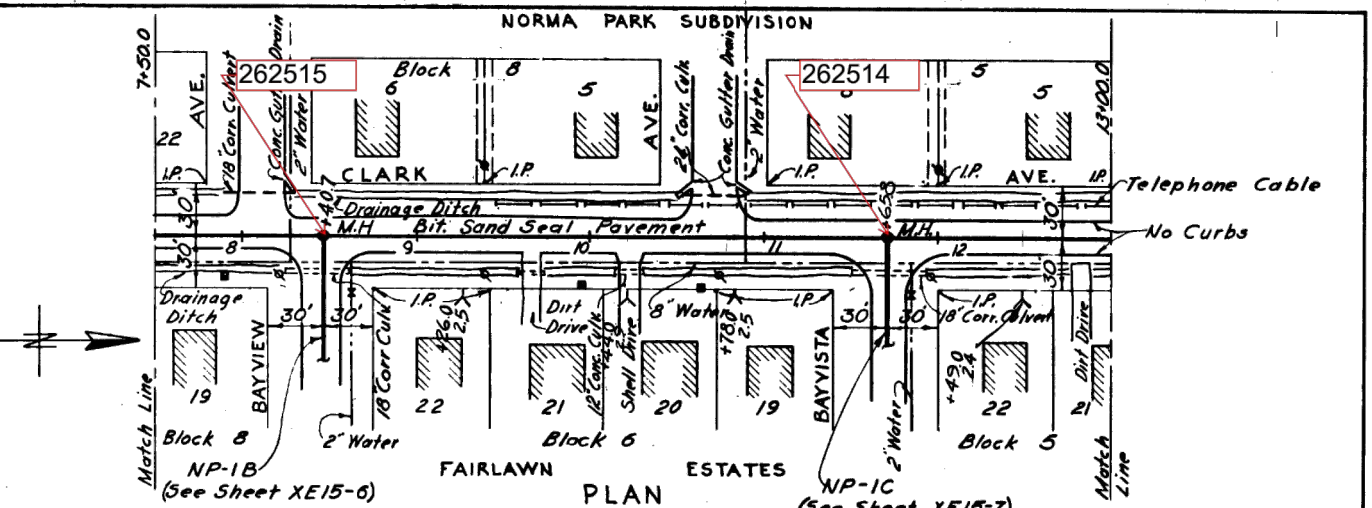
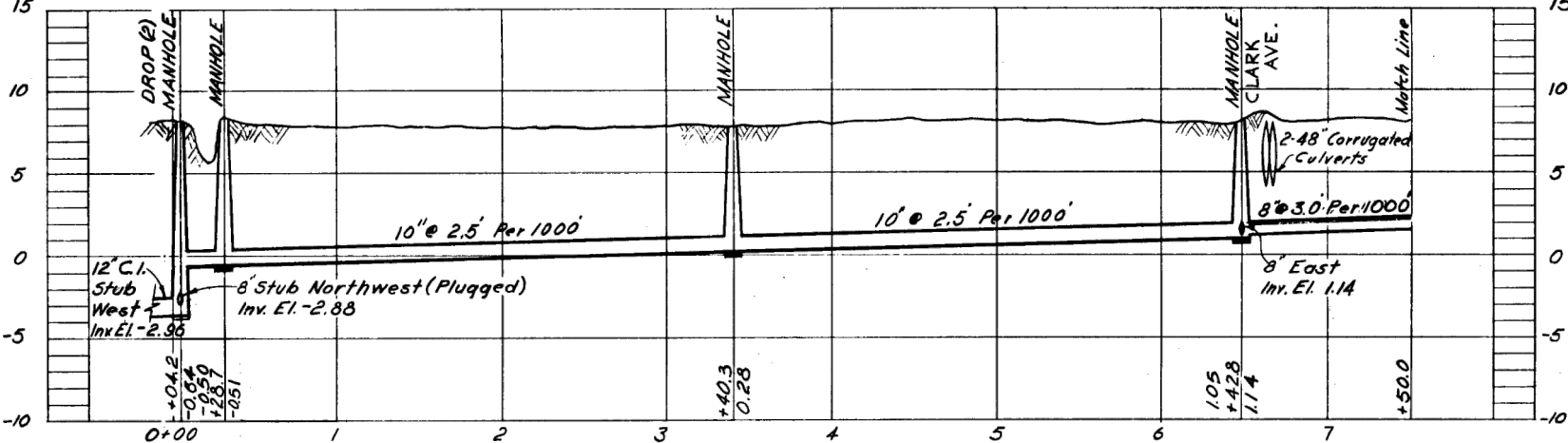
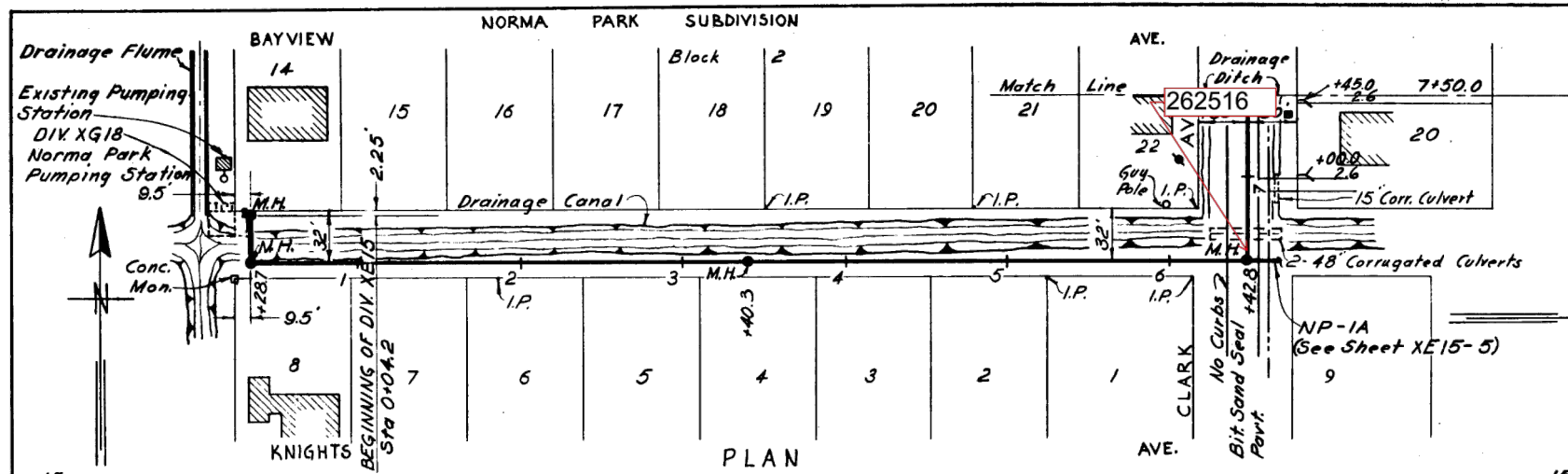


PROFILE
W.O. 2461

DEPARTMENT of SANITARY SEWERS
CITY of TAMPA, FLORIDA
RENEWAL & REPLACEMENT
SEWER IMPROVEMENTS

COOLIDGE AVE. : 100 ± N. of Fair Oaks Ave.
to Knight Ave.

| | | |
|----------|-------------|-------|
| DES: LRB | SCALE | SHEET |
| CKD: | 50 0 50 100 | 5 |
| DATE | 1" = 50' | OF 15 |
| OCT 1974 | | |

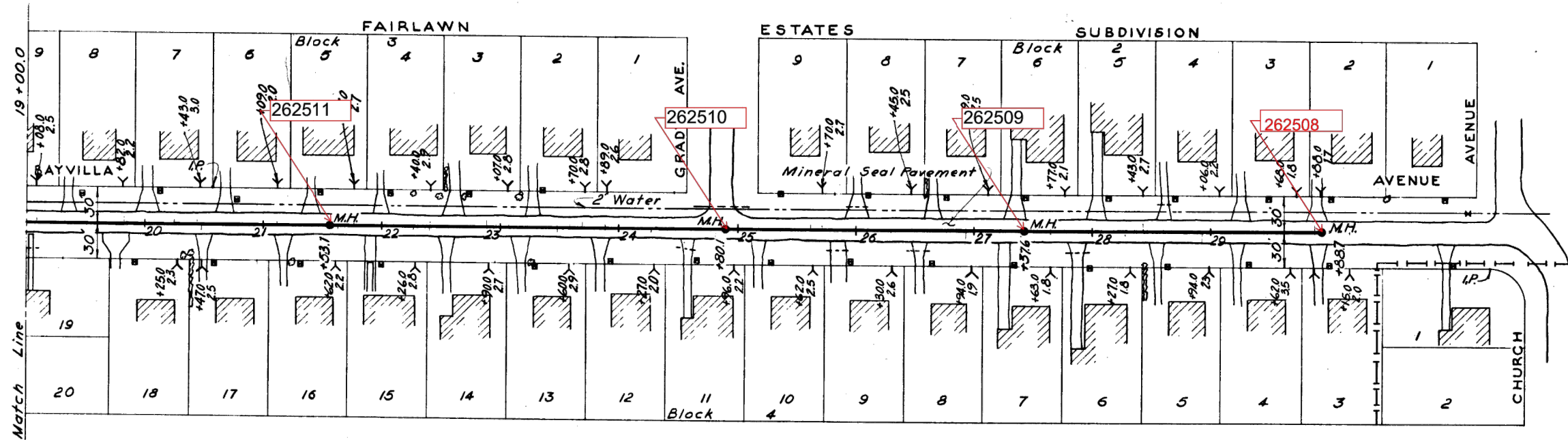


NOTE:
 1. All buildings shown on this sheet are of concrete block construction.
 2. Clark Ave - Bayvilla to Knights Ave. replaced with Shell Base Single Surface Treatment.

| | | |
|---|----------------------------------|---------------------------------|
| CITY OF TAMPA, FLORIDA | | |
| SEWER IMPROVEMENTS | | |
| DIVISION XE15 | | |
| NP-1 | | |
| STA. 0+04.2 TO STA. 19+00 | | |
| DES. R.E.F. DR. W.M. CKD. 127 DATE: NOV. 1954 | SCALE 50 0 50 100 1" = 50' | SHEET XE15-3 OF 30 |

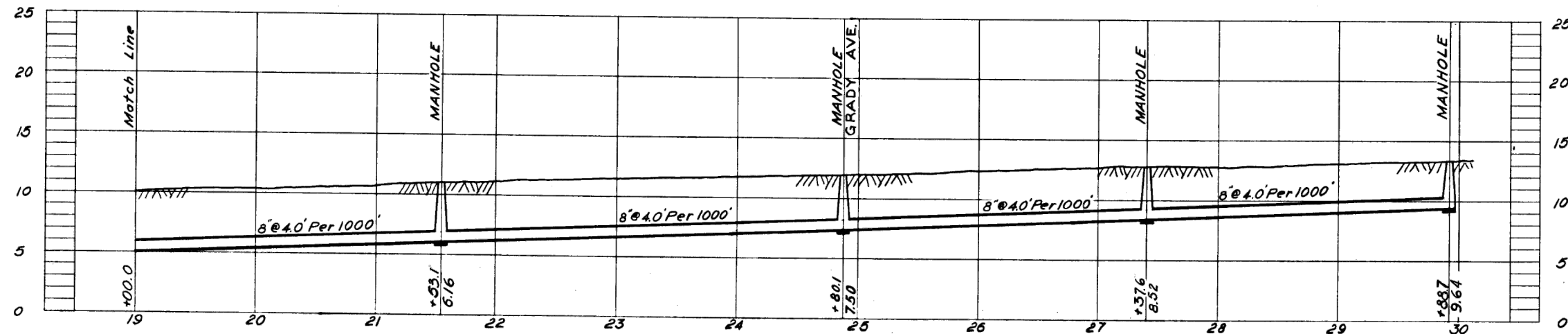
-AS-BUILT PLAN-
 Revised to show actual conditions according to construction record as of (A.F.L. 7-12-56)

GREELY AND HANSEN
 ENGINEERS
 CHICAGO, ILL.



PLAN

Note:
 Bayvilla Avenue - Clark Ave. to Sta. 29+88.7
 replaced with Shell Base Single Surface Treatment.



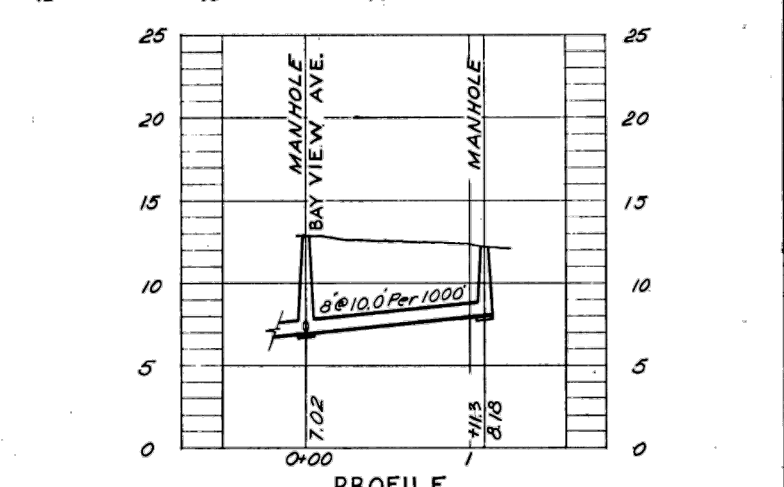
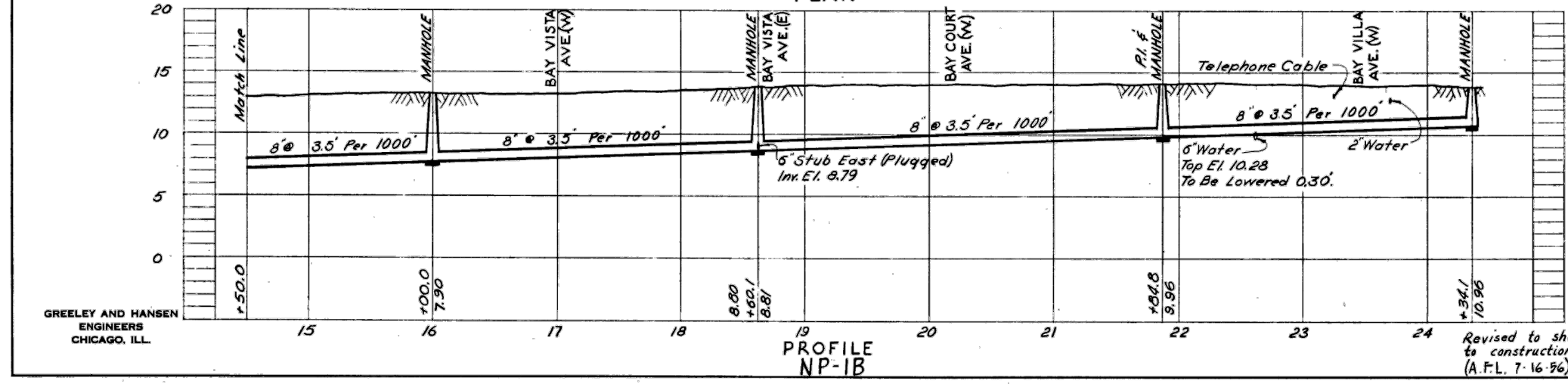
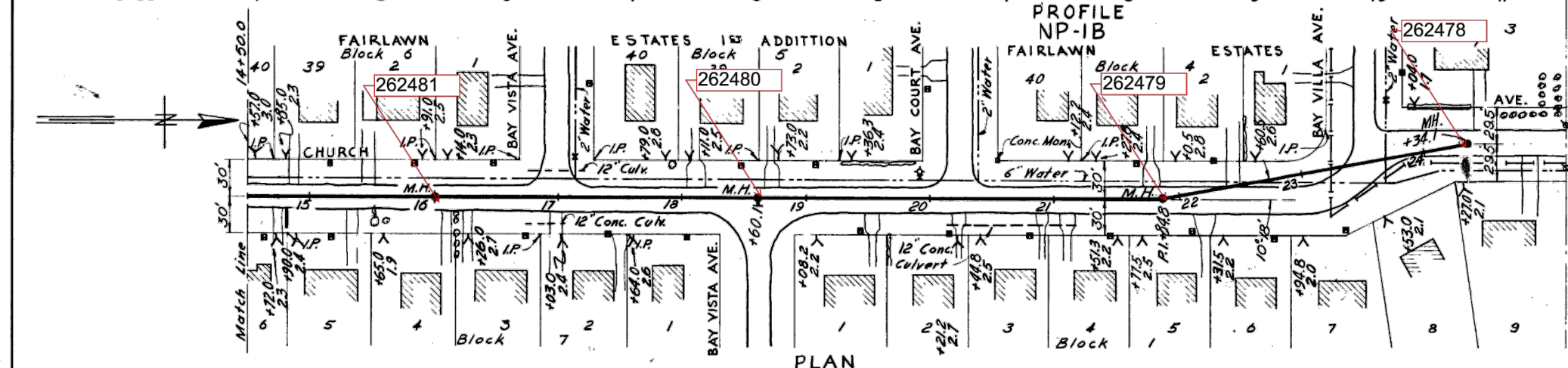
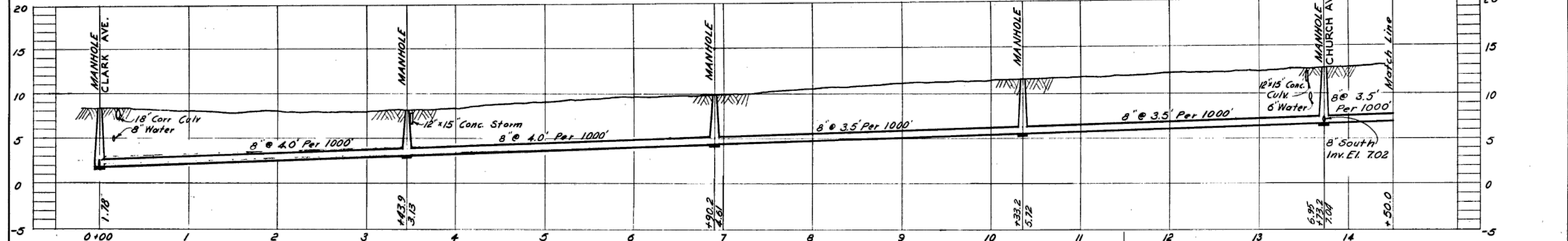
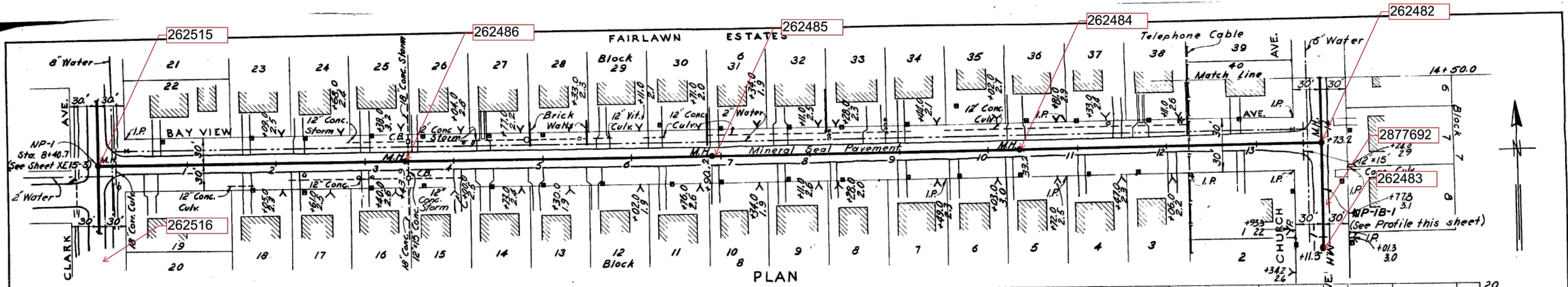
PROFILE
 NP-1

NOTES:
 1. All houses shown on this sheet are of concrete block construction.

| | |
|--|--------------------------------|
| CITY OF TAMPA, FLORIDA SEWER IMPROVEMENTS | |
| DIVISION XE15 | |
| NP-1 STA. 19+00 TO STA. 29+88.7 | |
| DES. R.E.F. DR. W.M. CKD. Z.E.Z. DATE: NOV. 1954 | SCALE 50 0 50 100 1"=50' |
| SHEET XE15-4 OF 30 | |

GREELEY AND HANSEN
 ENGINEERS
 CHICAGO, ILL.

- AS-BUILT PLAN -
 Revised to show actual conditions according
 to construction record as of
 (A.P.L. 7-13-56)



NOTES:
 1. All houses shown on this sheet are of concrete block construction.
 2. Single Surface Treated pavement on Bay View Avenue and on Church Avenue with no curbs or gutters.

CITY OF TAMPA, FLORIDA
 SEWER IMPROVEMENTS
 DIVISION XE15

NP-IB & NP-IB-1

AS-BUILT PLAN

DES. R.E. DR. W.M. CKD. Z.E. DATE: NOV. 1954

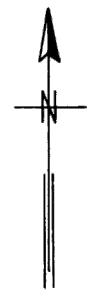
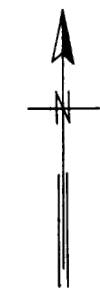
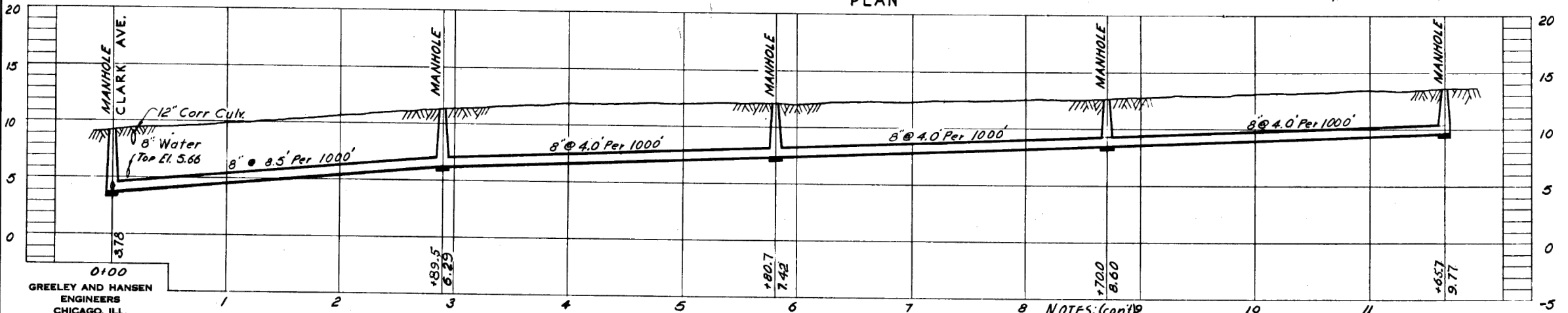
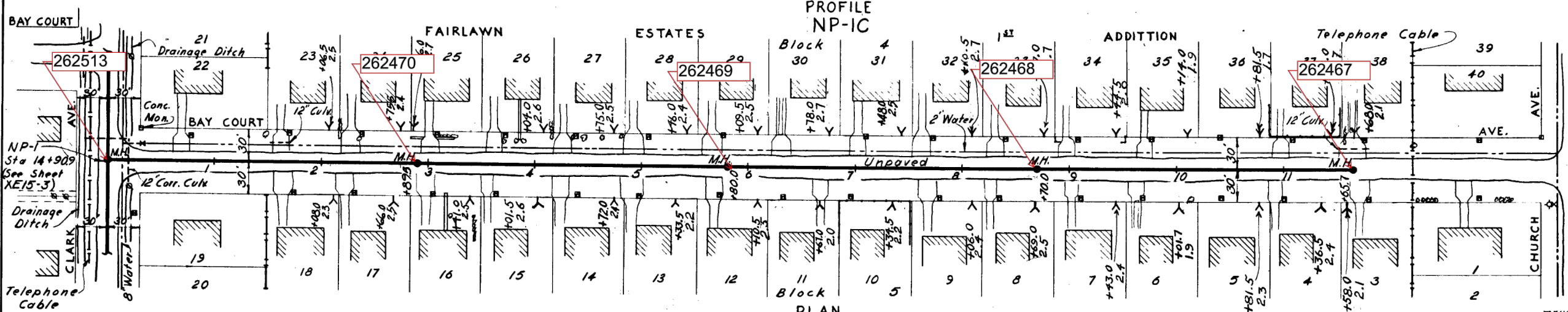
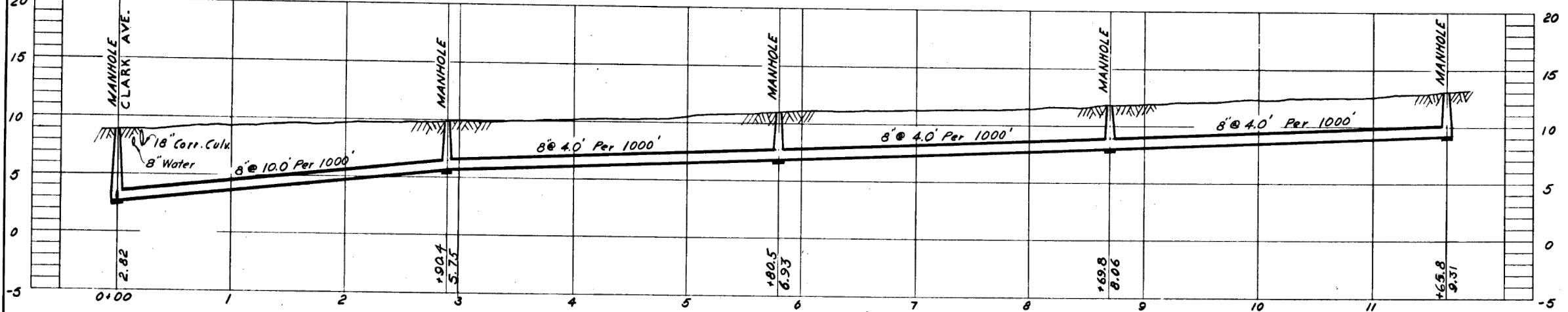
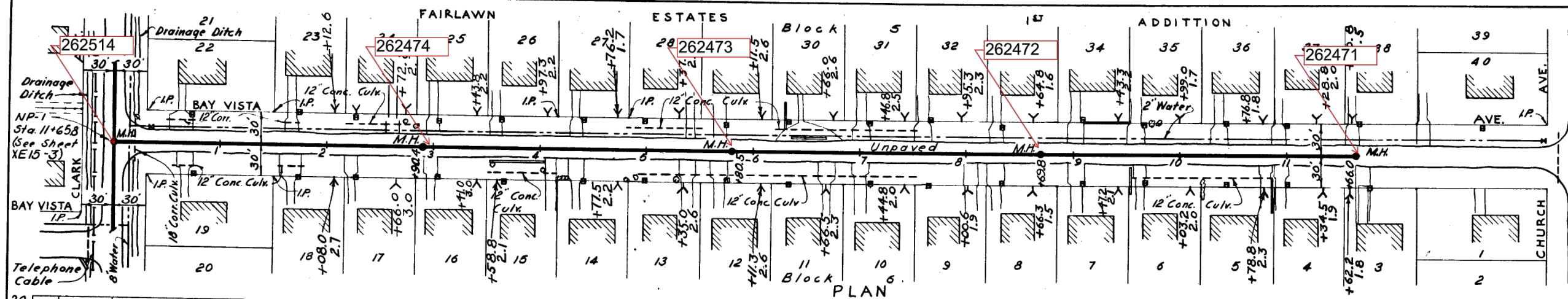
SCALE 1"=50'

SHEET XE15-6 OF 30

GREELY AND HANSEN
 ENGINEERS
 CHICAGO, ILL.

Revised to show actual conditions according to construction record as of (A.F.L. 7-16-56)

64-6



AS-BUILT PLAN
 REVISED TO SHOW ACTUAL CONDITIONS ACCORDING
 TO CONSTRUCTION RECORD AS OF
 R.E.S. (7-6-56)

NOTES:
 1. All houses shown on this drawing are
 of concrete block construction.
 2. Bay Vista Ave.-Clark to Sta. 11+660 replaced with
 Single Surface Treatment Pavement.

| | | |
|-------------------------------|--|--|
| CITY OF TAMPA, FLORIDA | | |
| SEWER IMPROVEMENTS | | |
| DIVISION XE15 | | |
| NP-1C & NP-1D | | |

| | | |
|--|-------------------------------|---------------------------------|
| DES. R.E.F. DR. W.M. CKD. R.E.F. | SCALE 0 50 100 1" = 50' | SHEET XE15-7 OF 30 |
| DATE: NOV. 1954 | | 69-7 |

NOTES (cont'd)
 3. Bay Court Ave.-Clark Ave. to Sta. 11+660 replaced
 with Single Surface Treatment Pavement.

GREELEY AND HANSEN
 ENGINEERS
 CHICAGO, ILL.