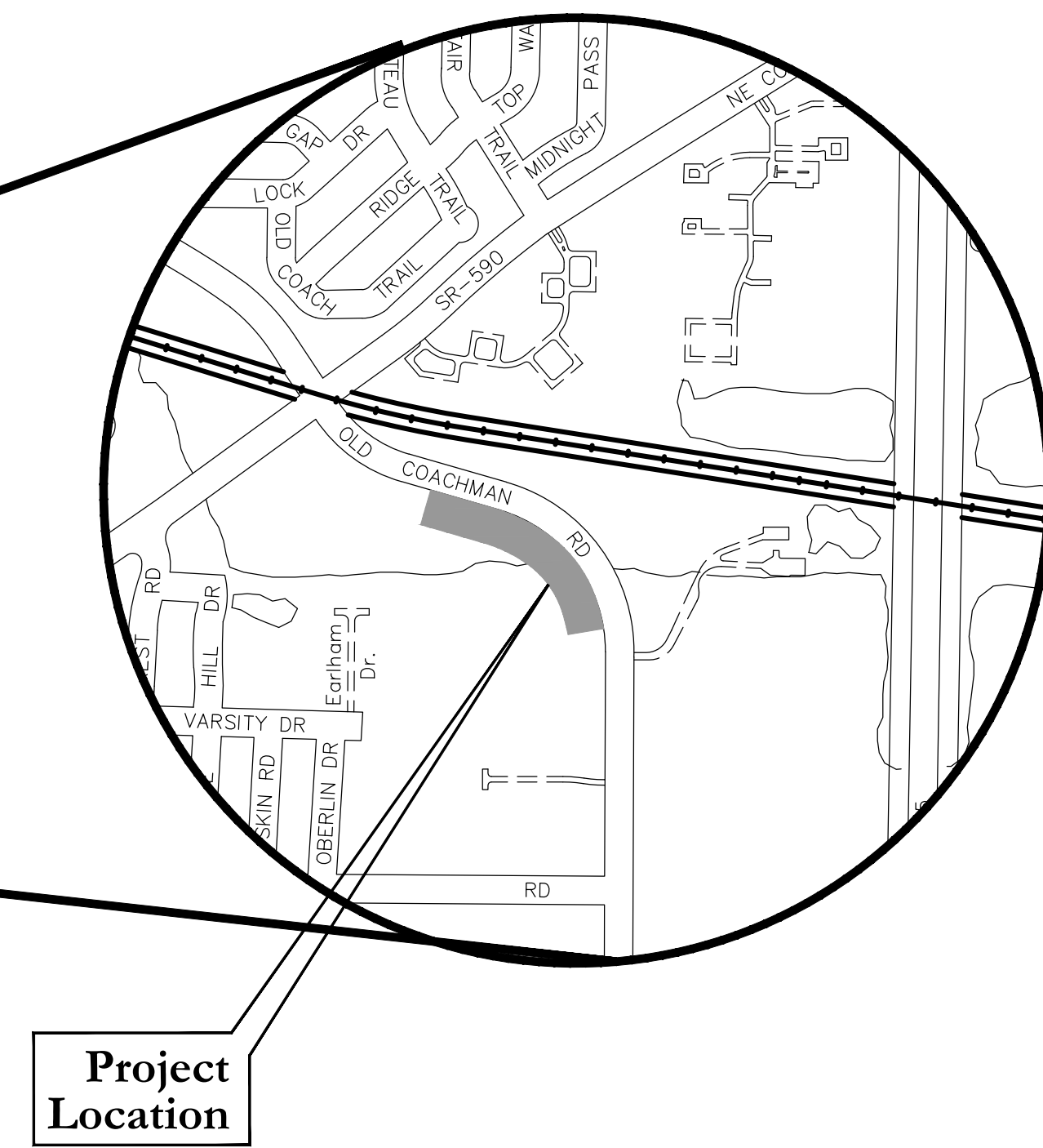
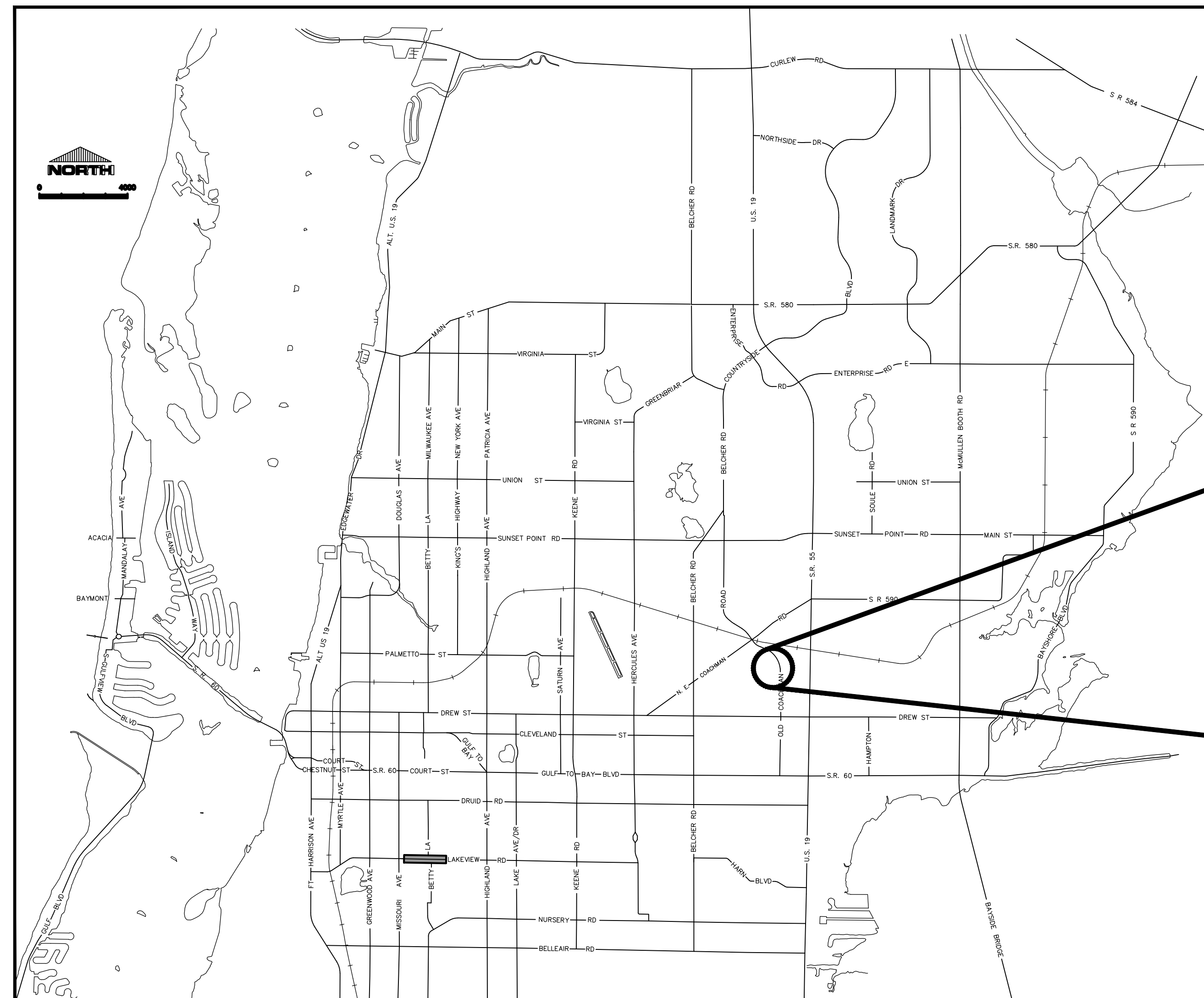


SHEET INDEX

SHEET #	SHEET DESCRIPTION
1	Cover Sheet
2	General Notes
3	Legend & Abbreviations
4	Plan (1)
5	Plan (2)
6	Profile
7	Bridge Profile & Section
8	Details (1)
9	Details (2)



OLD COACHMAN / SPECTRUM FIELD RCW PIPE REPAIR



CITY OFFICIALS

George N. Cretekos	Mayor
Jay Polglaze	Councilmember
Dr. Bob Cundiff	Councilmember
David Allbritton	Councilmember
Hoyt Hamilton	Councilmember
William B. Horne II	City Manager

Tara L. Kivett, P.E.
City Engineer

Approved For
Construction

CITY ENGINEER Tara L. Kivett, P.E. #86611

Date Approved

100% SUBMITTAL 03/25/2020

City Project No. 17-0056-UT
City Plan Set No.

AS-BUILT DRAWINGS NOTES

1. AS-BUILT DRAWINGS

THE CONTRACTOR SHALL KEEP AND MAINTAIN ONE SET OF BLUEPRINTS, AS-BUILT DRAWINGS, IN GOOD ORDER AND LEGIBLE CONDITION TO BE CONTINUOUSLY MARKED-UP AT THE JOB SITE.

THE AS-BUILT DRAWINGS SHALL BE AVAILABLE FOR INSPECTION BY THE ENGINEER, ENGINEER'S CONSULTANT, AND THE OWNER'S REPRESENTATIVE AT ALL TIMES DURING THE PROGRESS OF THE PROJECT.

THE AS-BUILT DRAWINGS SHALL BE REVIEWED BY THE OWNER'S REPRESENTATIVE, OR HIS DESIGNEE, FOR ACCURACY AND COMPLIANCE WITH THE REQUIREMENTS OF "AS-BUILT DRAWINGS" PRIOR TO SUBMITTAL OF THE MONTHLY PAY REQUESTS.

PRIOR TO PLACING NEW POTABLE WATER MAINS IN SERVICE, THE CONTRACTOR SHALL PROVIDE THE ENGINEER INTERSECTION DRAWINGS, AS SPECIFIED FOR THE WATER MAINS.

THE OWNER'S ACCEPTANCE OF THE "AS-BUILT DRAWINGS" DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF THE AS-BUILT DRAWINGS.

1.1. GENERAL

THE CONTRACTOR SHALL PREPARE AN "AS-BUILT SURVEY" PER CHAPTER 5J-17.052, FLORIDA ADMINISTRATIVE CODE (SEE DEFINITION BELOW), SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR.

5J-17.050 DEFINITION: (10)(A) AS-BUILT SURVEY: A SURVEY PERFORMED TO OBTAIN HORIZONTAL AND/OR VERTICAL DIMENSIONAL DATA SO THAT CONSTRUCTED IMPROVEMENTS MAY BE LOCATED AND DELINEATED; ALSO KNOWN AS RECORD SURVEY.

THIS SURVEY SHALL BE CLEARLY TITLED "AS-BUILT SURVEY" AND SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR.

1.2. SANITARY AND STORM SEWER PIPING SYSTEMS

MANHOLES AND INLETS SHALL BE LOCATED BY SURVEY COORDINATES (NORTHING, EASTING AND ELEVATION) BASED ON THE APPROVED HORIZONTAL AND VERTICAL DATUM OR UTILIZE THE STATIONING SUPPLIED ON THE CONSTRUCTION PLANS.

1.3. PRESSURE PIPE CONSTRUCTION (WATER, RECLAIMED WATER, FORCEMAIN)

ALL PIPES SHALL BE LOCATED BY SURVEY COORDINATES (NORTHING, EASTING AND ELEVATION) BASED ON THE APPROVED HORIZONTAL AND VERTICAL DATUM OR UTILIZE THE STATIONING SUPPLIED ON THE CONSTRUCTION PLANS.

1.4. HORIZONTAL AND VERTICAL CONTROL

THE AS-BUILT SURVEY SHALL BE BASED ON THE ORIGINAL DATUM USED FOR THE CONSTRUCTION DESIGN PLANS OR IF REQUIRED BY THE OWNER THE DATUM SHALL BE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983/90 (HORIZONTAL) AND THE NORTH AMERICAN VERTICAL DATUM OF 1988.

1.5. STANDARDS

THE AS-BUILT SURVEY SHALL MEET THE MINIMUM TECHNICAL STANDARDS PER CHAPTER 5J-17 AND THE CLEARWATER CAD STANDARDS SET FORTH BELOW.

1.6. OTHER

THE AS-BUILT DRAWINGS SHALL REFLECT ANY DIFFERENCES FROM THE ORIGINAL CONTRACT PLANS, IN THE SAME LEVEL OF DETAIL AND UNITS OF DIMENSIONS AS THE PLANS.

2. CAD STANDARDS

2.1. LAYER NAMING

2.1.1. PREFIXES AND SUFFIXES

Table with 2 columns: Prefix/Suffix and Description. Includes DI (Digitized/Scanned), EP (Existing Points), EX (Existing Entities), PR (Proposed Entities), FU (Future Entities), TX (Text).

2.1.2. LAYER NAMING DEFINITIONS:

Table mapping layer names to descriptions: GAS (Gas Lines), ELEC (Power Lines), PHONE (Telephone Lines), CABLE (Cable TV Lines), BOC (Curbs), WALK (Sidewalk), WATER (Water Lines), STORM (Storm Lines), TREES (Trees, Bushes), SANITARY (Sanitary Lines), FENCE (All Fences), BLDG (Buildings), DRIVE (Driveways), EOP (Edge of Pavement), TRAFFIC (Signal Poles), TOPBANK (Top of Bank), TOESLOPE (Toe of Slope), TOPBERM (Top of Berm), TOEBERM (Toe of Berm), SEAWALL (Seawall), CONCSLAB (Concrete Slabs), WALL (Walls), SHORE (Shoreline), CL (Centerline of Road), CLD (Centerline of Ditch), CLS (Centerline of Swale), CORNER (Property Corners), BENCH (Benchmark).

OTHER LAYERS MAY BE CREATED AS REQUIRED, USING ABOVE FORMAT.

2.2. LAYER PROPERTIES

ALL LAYERS WILL USE STANDARD AUTOCAD LINETYPES, BYLAYER.

ALL LAYERS WILL USE STANDARD AUTOCAD COLORS, BYLAYER.

ALL TEXT WILL USE STANDARD AUTOCAD FONTS.

2.3. TEXT STYLES

TEXT STYLE FOR EX LAYERS WILL USE THE SIMPLEX FONT, OBLIQUE ANGLE OF 0°, AND A TEXT HEIGHT OF .008 TIMES THE PLOT SCALE.

TEXT STYLE FOR PR AND FU LAYERS WILL USE THE SIMPLEX FONT, OBLIQUE ANGLE OF 22.5°, AND A TEXT HEIGHT OF .010 TIMES THE PLOT SCALE.

2.4. DELIVERABLES

THE AS-BUILT SURVEY SHALL BE PRODUCED ON BOND MATERIAL, 24" X 36" AT A SCALE OF 1"=20' UNLESS APPROVED OTHERWISE.

PLEASE ADDRESS ANY QUESTIONS REGARDING FORMAT TO MR. TOM MAHONY, AT (727) 562-4762 OR E-MAIL ADDRESS THOMAS.MAHONY@MYCLEARWATER.COM.

TREE PROTECTION SCOPE:

WHERE PROPOSED SITE IMPROVEMENTS INVOLVE ANY CONSTRUCTION ACTIVITIES ADJACENT TO ANY PROTECTED TREES, PARTICULARLY BENEATH THE DRIPLINE/CANOPY OF AN EXISTING TREE, THE CONTRACTOR WILL BE REQUIRED TO INSTALL THE CITY'S APPROVED TREE BARRICADES.

TREE PROTECTION NOTES:

- 1. THE CONTRACTOR WILL BE RESPONSIBLE FOR ADHERING TO ALL TREE PROTECTION MEASURES REQUIRED BY THE CITY OF CLEARWATER'S CODES, ORDINANCES AND STANDARD SPECIFICATIONS. THIS WILL INCLUDE ALL TREE BARRICADES, ROOT PRUNING AND TREE TRIMMING/PRUNING ACTIVITIES.
2. ALL TREE PRUNING AND/OR ROOT PRUNING ON EXISTING TREES TO BE PRESERVED WILL ONLY BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF AN INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST.
3. WHERE CALLED FOR ON THE PLANS, INSTALL TREE BARRICADES, EROSION CONTROL/SILT FENCING OR OTHER APPROVED PROTECTIVE BARRIERS AROUND ALL TREES TO BE PRESERVED, PER CITY STANDARD DETAIL.
4. PRIOR TO ANY FIELD CHANGES TAKING PLACE, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE POTENTIAL IMPACTS TO EXISTING TREES WITH HIS CERTIFIED ARBORIST, AND INCLUDE ANY AND ALL RECOMMENDED TREE PROTECTION MEASURES IN HIS PROPOSAL TO MODIFY THE APPROVED DESIGN.
5. THE CONTRACTOR WILL AVOID ANY OPEN EXCAVATIONS, FILL OR OTHER CONSTRUCTION ACTIVITIES WHENEVER POSSIBLE WITHIN THE "CRITICAL ROOT ZONE" OF ANY EXISTING TREE.
6. WHERE CONSTRUCTION ACTIVITIES ARE ANTICIPATED TO LAST FOR AN EXTENDED PERIOD OF TIME NEAR EXISTING TREES, THE CONTRACTOR SHALL INSTALL AND MAINTAIN CITY APPROVED TREE BARRICADES AS SHOWN IN THE STANDARD DETAILS AND APPROVED BY THE CITY'S ENGINEERING REPRESENTATIVE.
7. WOODCHIPS, MULCH OR ANOTHER CUSHIONING SURFACE MATERIAL APPROVED BY THE CITY'S ENGINEERING REPRESENTATIVE SHALL BE PLACED TO A MINIMUM DEPTH OF 10" OVER AREAS WHERE ROOTS ARE PRESENT AND CONSTRUCTION TRAFFIC OCCURS.
8. ALL TREE PROTECTION MEASURES SHALL REMAIN IN PLACE AT ALL TIMES DURING CONSTRUCTION UNTIL THE CITY'S ENGINEERING REPRESENTATIVE AUTHORIZES REMOVAL.
9. THE CONTRACTOR WILL COORDINATE WITH THE CITY'S ENGINEERING REPRESENTATIVE, TIM KURTZ @ (727) 562-4737, TO OBTAIN APPROVAL IN ADVANCE OF ANY AND ALL WORK WITHIN THE CRITICAL ROOT ZONE OF ANY EXISTING TREE.

TREE LOCATION:

- 1. ALL TREE PRUNING AND/OR ROOT PRUNING ON EXISTING TREES TO REMAIN SHALL ONLY BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF AN INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST.
2. WHERE REQUIRED, INSTALL TREE BARRICADES, EROSION CONTROL/SILT FENCING OR OTHER APPROVED PROTECTIVE BARRIERS AROUND ALL TREES TO BE PRESERVED, PER CITY STANDARD DETAIL.
3. CONSTRUCTION MATERIALS, VEHICLES, EQUIPMENT, SOILS, DEBRIS AND SUPPLIES SHALL NOT BE STORED WITHIN THE DRIP LINE/PROTECTIVE BARRIER AREA UNDER ANY TREE TO REMAIN.
4. VEHICLES UNDER ANY TREE SHALL NOT BE PARKED WITHIN THE DRIP LINE/PROTECTIVE BARRIER AREA OF THE TREE INCLUDING STAGING AREAS.
5. WOODCHIPS, MULCH OR ANOTHER CUSHIONING SURFACE MATERIAL APPROVED BY THE CITY'S REPRESENTATIVE SHALL BE PLACED TO A MINIMUM DEPTH OF 10 INCHES OVER AREAS WHERE ROOTS ARE PRESENT AND CONSTRUCTION TRAFFIC OCCURS.
6. ALL TREE PROTECTION MEASURES SHALL REMAIN IN PLACE AT ALL TIMES DURING CONSTRUCTION UNTIL THE CITY'S REPRESENTATIVE AUTHORIZES REMOVAL.

ROOT PRUNING SCOPE:

WHERE PROPOSED CONSTRUCTION IMPROVEMENTS INVOLVE EXCAVATION AND/OR IMPACTS TO THE CRITICAL ROOT ZONE OF PROTECTED TREES, THE CONTRACTOR SHALL BE REQUIRED TO HAVE AN INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST PERFORM, OR DIRECTLY SUPERVISE ROOT PRUNING TO REDUCE THE IMPACTS OF CONSTRUCTION.

ROOT PRUNING NOTES:

- 1. ROOT PRUNING CAN ONLY BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF AN INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST.
2. ANY PROPOSED ROOT PRUNING TRENCHES SHALL BE IDENTIFIED (I.E. STAKED OR PAINTED) ON SITE, INSPECTED AND APPROVED BY THE CITY'S ENGINEERING REPRESENTATIVE PRIOR TO ACTUAL ROOT PRUNING.
3. ROOT PRUNING WILL BE PERFORMED AS FAR IN ADVANCE OF OTHER CONSTRUCTION ACTIVITIES AS IS FEASIBLE, BUT AT A MINIMUM WILL BE PERFORMED PRIOR TO ANY IMPACTS TO THE SOIL.
4. IF THERE IS A LIKELIHOOD OF EXCESSIVE WIND AND/OR RAIN EXCEPTIONAL CARE WILL BE TAKEN ON ANY ROOT PRUNING ACTIVITIES.
5. ROOT PRUNING WILL BE LIMITED TO A MINIMUM OF TWELVE INCHES PER ONE INCH OF THE TRUNK DIAMETER FROM THE TREE BASE.
6. ROOTS WILL BE CUT CLEANLY, AS FAR FROM THE TRUNK OF THE TREE AS POSSIBLE.
7. ROOT PRUNING WILL BE PERFORMED USING A DOSCOIL ROOT CUTTING MACHINE OR EQUIVALENT.
8. ROOT PRUNING WILL BE COMPLETED, INSPECTED AND ACCEPTED PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION OR OTHER IMPACTS TO THE CRITICAL ROOT ZONES OF TREES TO BE PROTECTED.
9. EXCAVATIONS IN AN AREA WHERE ROOT ARE PRESENT WILL NOT CAUSE THE TEARING OR RIPPING OF TREE ROOTS.
10. TREE ROOTS WILL NOT BE EXPOSED TO DRYING OUT.
11. WHEN DEEMED APPROPRIATE (E.G., DURING PERIODS OF DROUGHT) THE CITY REPRESENTATIVE MAY REQUIRE A TEMPORARY IRRIGATION SYSTEM BE UTILIZED IN THE REMAINING CRITICAL ROOT ZONES OF ROOT PRUNED TREES.

NOTE:

THE ABOVE INFORMATION IS INTENDED FOR USE ON PROJECTS WHERE CONSTRUCTION IMPACTS TO EXISTING TREES ARE LIKELY OR EVEN UNAVOIDABLE. WHILE THIS INFORMATION COVERS A VARIETY OF SITUATIONS, IT CANNOT ADDRESS EVERY ONE.

EROSION AND SEDIMENT CONTROL:

- 1. CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY STREETS, STORM SEWERS, AND WATERWAYS.
2. THE CONTRACTOR SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL RETENTION AND DETENTION FACILITIES AND ALL LANDSCAPE BUFFERS, THROUGH THE DURATION OF THE PROJECT, AND UNTIL THE WORK IS ACCEPTED BY THE OWNER.

DEWATERING:

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING, TESTING AND OBTAINING ANY PERMITS ASSOCIATED WITH DEWATERING ACTIVITIES AS OUTLINED IN THE CONTRACT DOCUMENTS, INCLUDING FEES FOR SUCH.
2. DURING CONSTRUCTION, NO DIRECT DISCHARGE OF WATER TO DOWNSTREAM RECEIVING WATERS WILL BE ALLOWED.
4. IF DEWATERING WILL BE NECESSARY FOR EXCAVATION OR UTILITY INSTALLATION, THE CONTRACTOR SHALL OBTAIN A STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUNDWATER FROM ANY UNCONTAMINATED SITE ACTIVITY.
5. FOR MORE DETAILS ON CITY DEWATERING REQUIREMENTS, REFER TO PARAGRAPH 12 OF SECTION IV - TECHNICAL SPECIFICATIONS FROM THE CONTRACT DOCUMENTS.

Emergency contact information for various utility providers including Clearwater Public Utilities, Verizon, Pinellas County Utilities, BrightHouse Networks, Florida Department of Transportation, Southwest Florida Water Management District, Clearwater Gas, FPL, and Progress Energy. Includes a 'CALL LOCAL PUBLIC UTILITY NOTIFICATION CENTER' warning.

100% SUBMITTAL 03/25/2020

IN THESE NOTES, ALL REFERENCES TO "AS-BUILT DRAWINGS" SHALL BE INTERPRETED TO MEAN "AS-BUILT SURVEY" UNLESS OTHERWISE SPECIFIED.

RECORD DRAWINGS table with columns for SURVEYED BY, DRAWN BY, REVIEWED BY, PROJECT ENGINEER, DATE, APPROVED BY, CITY ENGINEER, REVISION, BY, DATE.

CITY OF CLEARWATER, FLORIDA
ENGINEERING DEPARTMENT
100 S. MYRTLE AVE.
CLEARWATER, FL 33756

AECOM logo and contact information: 7650 West Courtney Campbell Causeway, Suite 700, Tampa, Florida 33607. Phone: (813) 286-1711. Fax: (813) 286-6587. Florida Engineering Number: 000002.

OLD COACHMAN / SPECTRUM FIELD
RCW PIPE REPAIR
GENERAL NOTES

Table with project details: DWG NAME (2 GENERAL NOTES.DWG), FIELD BOOK (N/A), SURVEYED BY (N/A), SCALE (VERT. SEE ABOVE), CONTRACT NO. (17-0056-UT), DATE DRAWN (3/16/20), DRAWN BY (J. SCHEUERMAN), JOB NO. (60620148), DESIGNED BY (B. HANDJIEV), CHECKED BY (D. WILCOX), SHEET NO. (2 OF 9).

SYMBOLS, STRUCTURES & FEATURES

ABBREVIATIONS

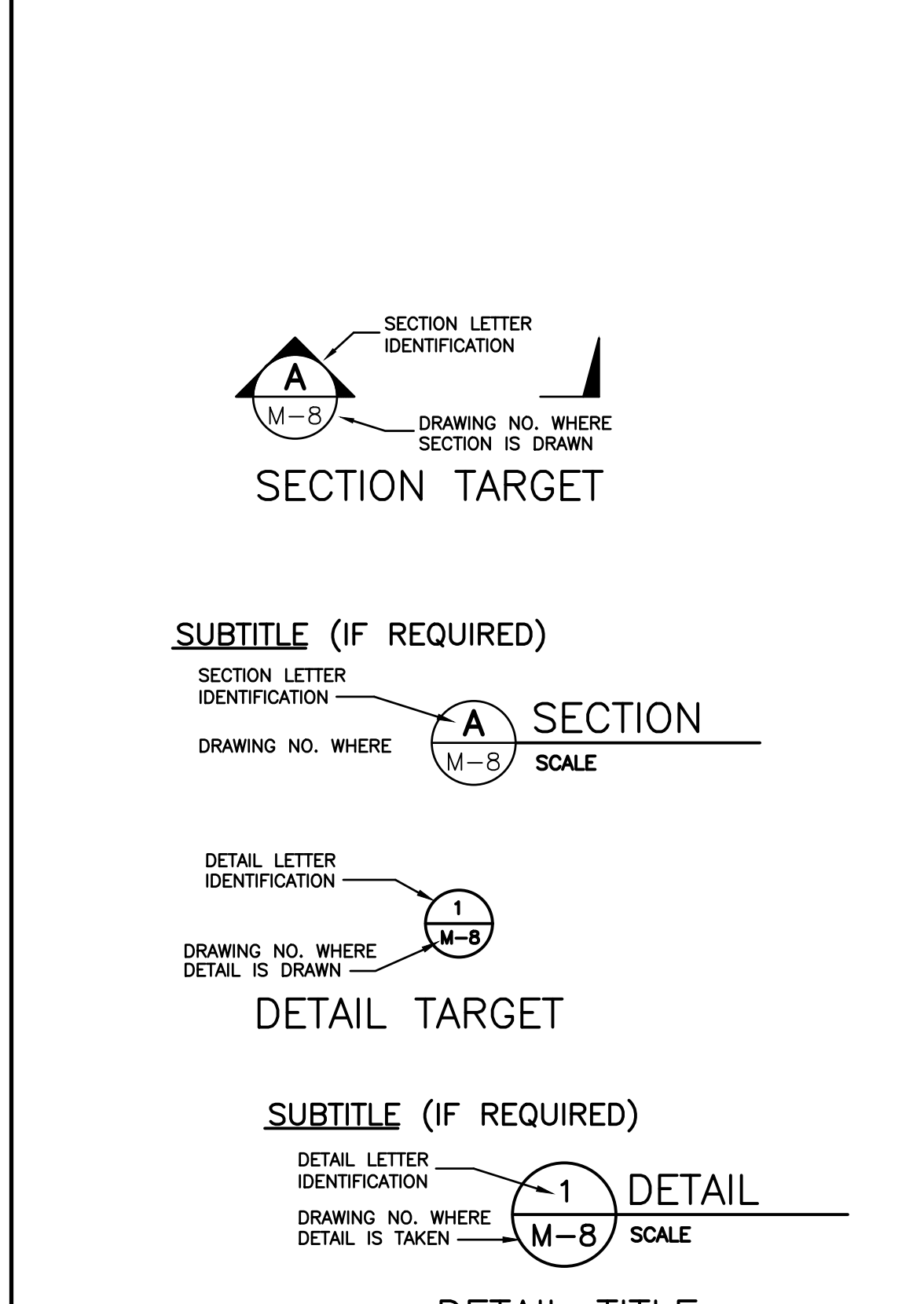
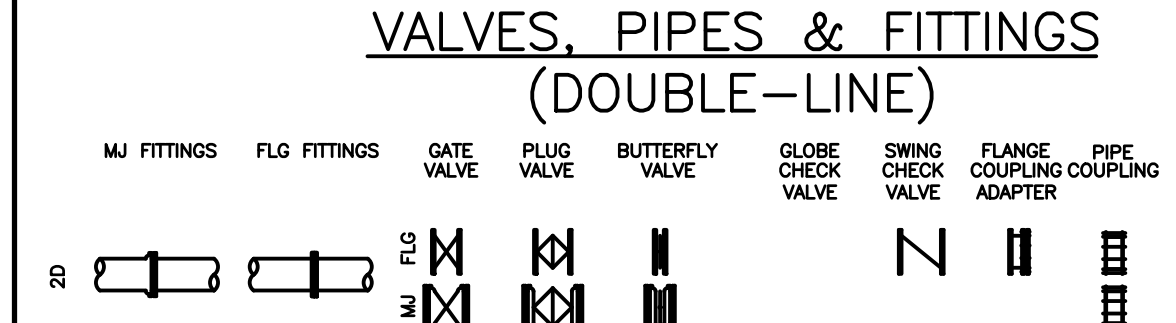
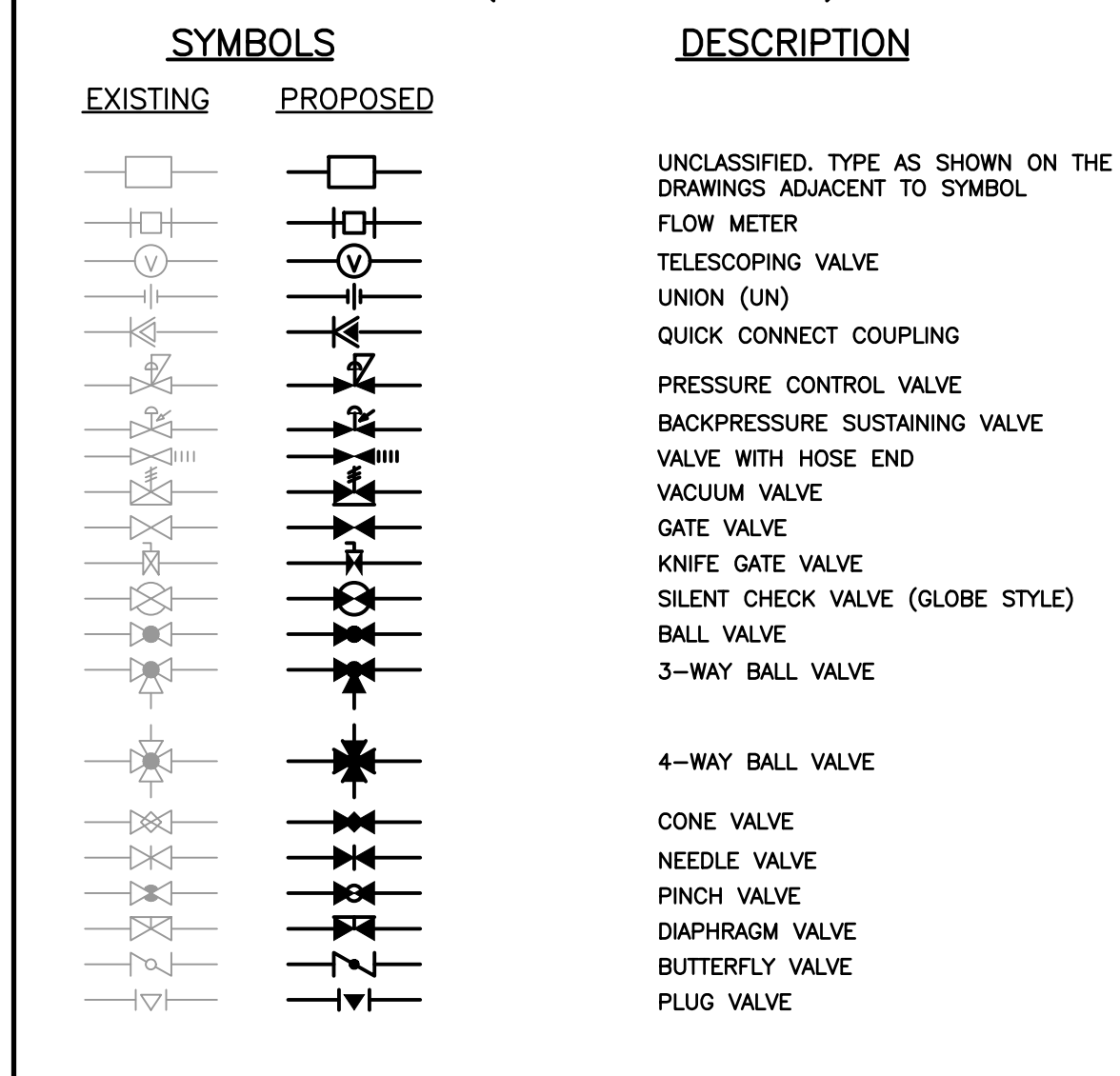
VALVES, PIPES & FITTINGS (SINGLE-LINE)

3

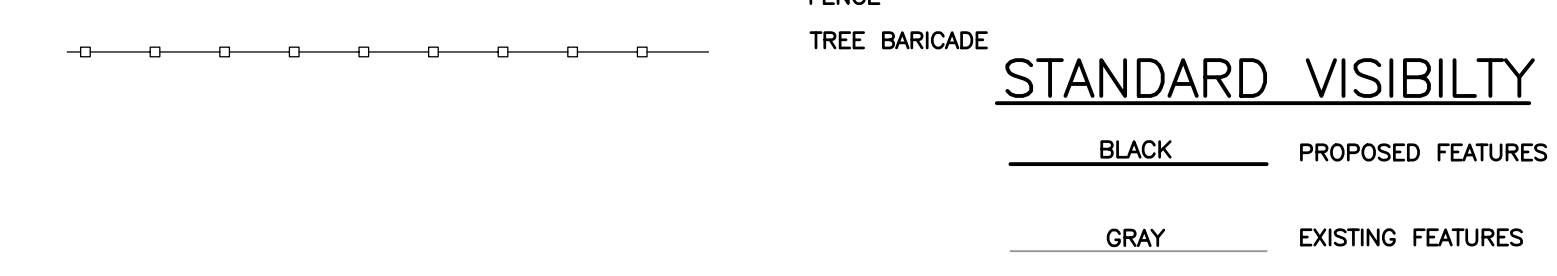
EXISTING PROPOSED DESCRIPTION TYPICAL PIPE IDENTIFICATION SINGLE-LINE PIPE DOUBLE-LINE PIPE MANHOLE, WATER TIGHT FIRE HYDRANT ASSEMBLY (INCLUDES VALVE) SINGLE-LINE PIPING, VALVES, AND FITTINGS AIR RELEASE VALVE HOSE BIBB / CONNECTION, SIZE VALVE VAULT WATER METER ELECTRIC MANHOLE/VAULT TELEPHONE CABLE, MANHOLE/VAULT & BOX BENCHMARK TEST BORING LIMITED ACCESS RIGHT OF WAY (LA R/W) RIGHT OF WAY (R/W) PROPERTY LINE (RL) PROPERTY CORNERS : IRON PIPE IRON ROD CONCRETE MONUMENT FENCE, SIZE & TYPE BUILDING/STRUCTURE PAVEMENT, SIZE & TYPE CATCH BASIN CULVERT OR BRIDGE CROSSING A ROAD RAILROAD TRACKS (R/R) SIGNS POLE, POWER POLE & COMBINATION POLE SOIL PENETRATIONS SLOPE CONTOURS SPOT ELEVATIONS STORM WATER FLOW STREAM (SMALL)/DITCH, SWALE SHORE LINE STORM DRAINAGE PIPE STORM DRAINAGE MANHOLE/INLET RAW WATER RECLAIMED WATER POTABLE WATER GAS MAIN FORCE MAIN SANITARY SEWER GRAVITY PIPE FIBER OPTIC OVER HEAD ELECTRIC BURRIED TELEPHONE STORM DRAINAGE PIPE CABLE TV CHAIN LINK FENCE TREE BARICADE

Table with columns: GENERAL, SYMBOLS, PIPE / JOINTS, SYMBOLS, PROCESS NOMENCLATURE. Lists various pipe materials like BLACK IRON PIPE, POLYETHYLENE PIPE, and equipment like BUTTERFLY VALVE, AIR RELEASE VALVE.

Table with columns: SYMBOLES, DESCRIPTION. Lists symbols for valves like GATE VALVE, BUTTERFLY VALVE, and fittings like BALL CHECK VALVE, CHECK VALVE.



TREE LEGEND table listing symbols for various tree species: BAY TREE, BOTTLE BRUSH TREE, CAMPHOR TREE, CEDAR, CHINABERRY TREE, CITRUS TREE, ELM TREE, EUCALYPTUS TREE, MAGNOLIA TREE, MAPLE TREE, MULBERRY TREE, OAK TREE, OTHER SPECIES, PALM TREE, PECAN TREE, PERSIMMON TREE, PINE TREE, SYCAMORE TREE, WAX MYRTLE TREE, WILLOW TREE.



NOTE: THIS GENERAL LEGEND IS FOR GENERAL REFERENCE. NOT ALL ABBREVIATIONS, SYMBOLS, MATERIALS, OR FITTINGS, ETC. ARE NECESSARILY USED IN THIS DESIGN. INDIVIDUAL DISCIPLINE STANDARD LEGENDS MAY SUPERCEDE THIS GENERAL LEGEND.

100% SUBMITTAL 03/25/2020

VERTICAL: March 26, 2020 2:38 AM PLOTTED BY: SCHEUERMANN, JAMES S:\PROJECTS\1400\WATER\LEGEND.CITY OF CLEARWATER\NEW PIPE REPAIR - OLD COACHMAN AND SPECTRUM FIELD\000-CAD_GIS\DESIGN2_02_GENERAL_NOTES.DWG

RECORD DRAWINGS table with columns: SURVEYED BY, DRAWN BY, REVIEWED BY, PROJECT ENGINEER, DATE, APPROVED BY, CITY ENGINEER MICHAEL D. QUILLIN, P.E. # 33721, REVISION, BY, DATE.

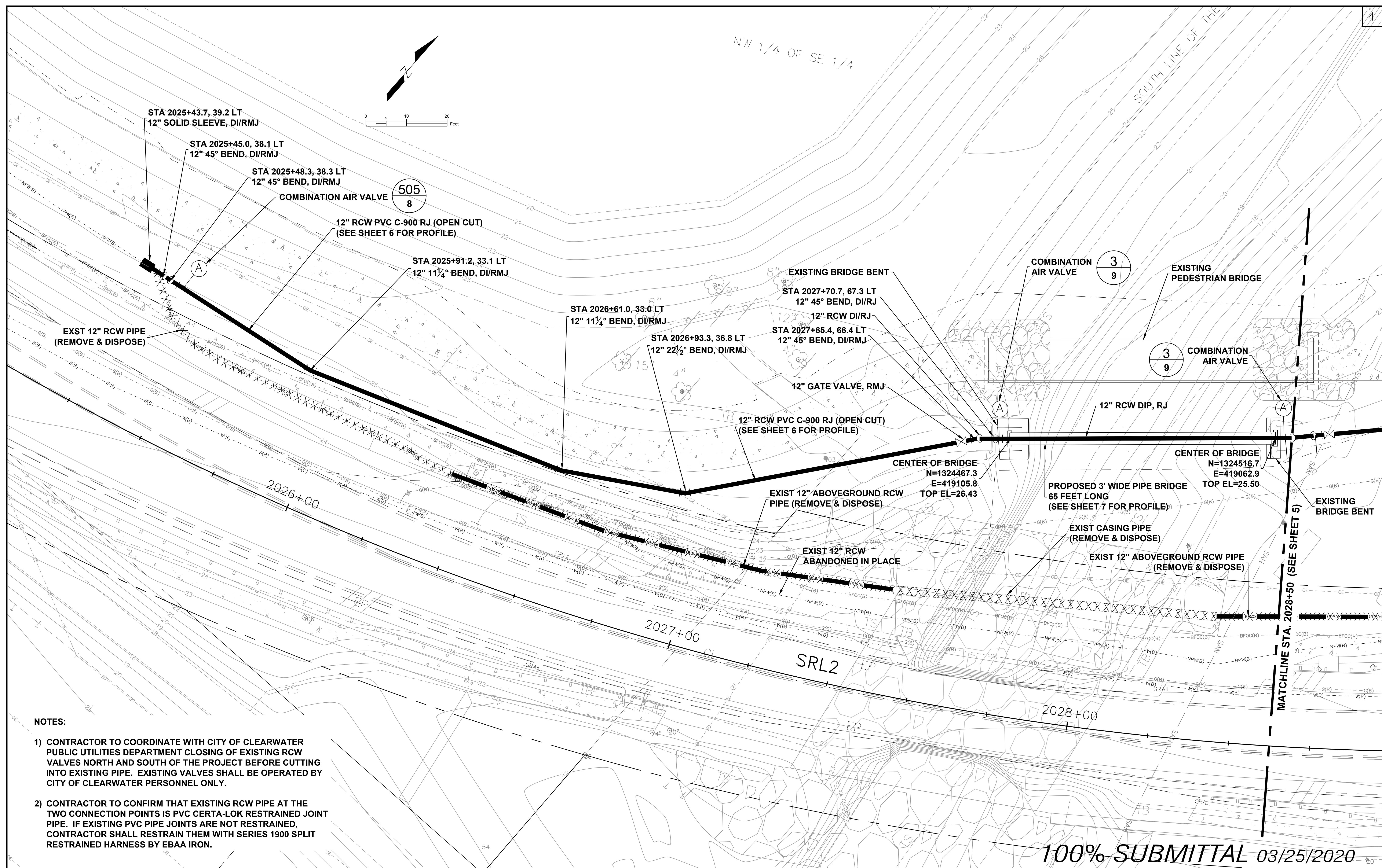
CITY OF CLEARWATER, FLORIDA ENGINEERING DEPARTMENT 100 S. MYRTLE AVE. CLEARWATER, FL 33756

CALL 811 SUNSHINE STATE ONE CALL OF FLORIDA logo and AECOM logo with contact information: 7650 West Courtney Campbell Causeway Suite 700 Tampa, Florida 33607 Ph: (813) 286-1711 Fax: (813) 286-6587 Florida Engineering Number: 000002

OLD COACHMAN / SPECTRUM FIELD RCW PIPE REPAIR LEGEND & ABBREVIATIONS

Table with columns: DWG NAME, FIELD BOOK, SURVEYED BY, SCALE, CONTRACT NO., DATE DRAWN, DRAWN BY, SEE ABOVE, JOB NO., DESIGNED BY, CHECKED BY, SHEET NO., OF 9, APPROVED FOR CONSTRUCTION.

S:\Projects\H2O\waterwaste\city of clearwater\rcw pipe repair - old coachman and spectrum field\900-cod_gis\DESIGN\3 UTILITY PIPELINE.dwg, Mar 26, 2020 - 7:39am



NOTES:

- 1) CONTRACTOR TO COORDINATE WITH CITY OF CLEARWATER PUBLIC UTILITIES DEPARTMENT CLOSING OF EXISTING RCW VALVES NORTH AND SOUTH OF THE PROJECT BEFORE CUTTING INTO EXISTING PIPE. EXISTING VALVES SHALL BE OPERATED BY CITY OF CLEARWATER PERSONNEL ONLY.
- 2) CONTRACTOR TO CONFIRM THAT EXISTING RCW PIPE AT THE TWO CONNECTION POINTS IS PVC CERTA-LOK RESTRAINED JOINT PIPE. IF EXISTING PVC PIPE JOINTS ARE NOT RESTRAINED, CONTRACTOR SHALL RESTRAIN THEM WITH SERIES 1900 SPLIT RESTRAINED HARNESS BY EBAA IRON.

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RECORD DRAWINGS		REVISION	
SURVEYED BY:	DRAWN BY:	BY	DATE
REVIEWED BY:	PROJECT ENGINEER	DATE	
APPROVED BY:	CITY ENGINEER MICHAEL D. QUILLEN, P.E. # 33721	DATE	

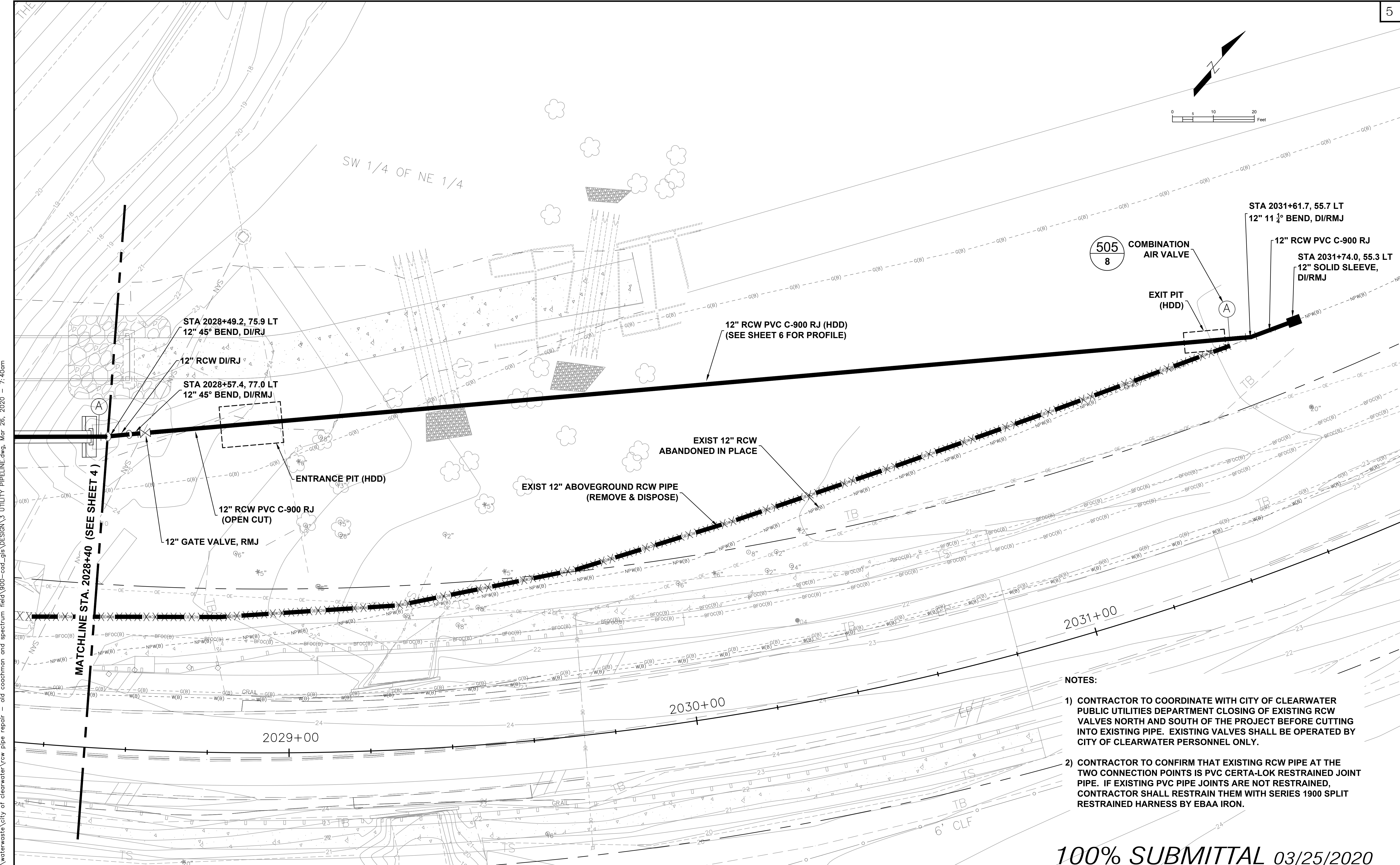
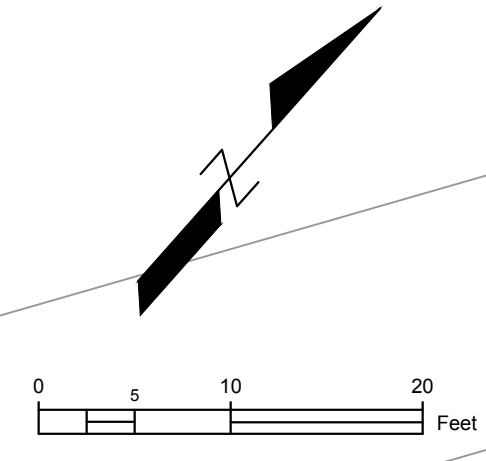
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 Suite 700
 Tampa, Florida 33607
 Ph: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

OLD COACHMAN / SPECTRUM FIELD
 RCW PIPE REPAIR
 PLAN VIEW (1)

DWG NAME: 3 UTILITY CONTRACTING	FIELD BOOK: N/A	SURVEYED BY: N/A	SCALE: VERT. SEE ABOVE
DATE DRAWN: 3/26/20	DESIGNED BY: B. HANDJIEV	DRAWN BY: J. SCHEUERMAN	CHECKED BY: D. WILCOX
JOB NO.: 60620148	APPROVED FOR CONSTRUCTION:	SHEET NO.: 4	OF 9



- NOTES:**
- 1) CONTRACTOR TO COORDINATE WITH CITY OF CLEARWATER PUBLIC UTILITIES DEPARTMENT CLOSING OF EXISTING RCW VALVES NORTH AND SOUTH OF THE PROJECT BEFORE CUTTING INTO EXISTING PIPE. EXISTING VALVES SHALL BE OPERATED BY CITY OF CLEARWATER PERSONNEL ONLY.
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100% SUBMITTAL 03/25/2020

S:\Projects\H2O\waterwaste\city of clearwater\rcw pipe repair - old coachman and spectrum field\900-cod_gis\DESIGN\3 UTILITY PIPELINE.dwg, Mar 26, 2020 - 7:40am

RECORD DRAWINGS		REVISION	
SURVEYED BY:	DRAWN BY:	BY	DATE
REVIEWED BY:	PROJECT ENGINEER		
APPROVED BY:	CITY ENGINEER MICHAEL D. QUILLEN, P.E. # 33721		

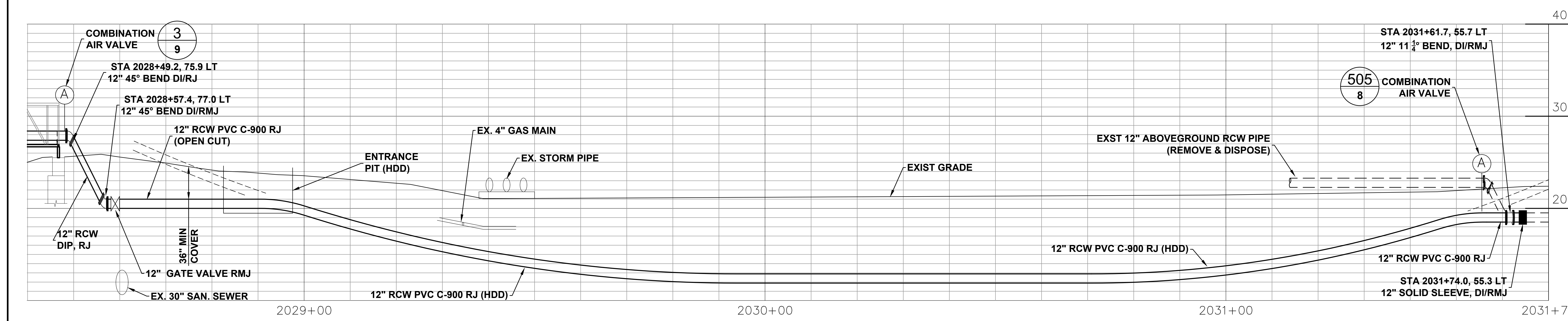
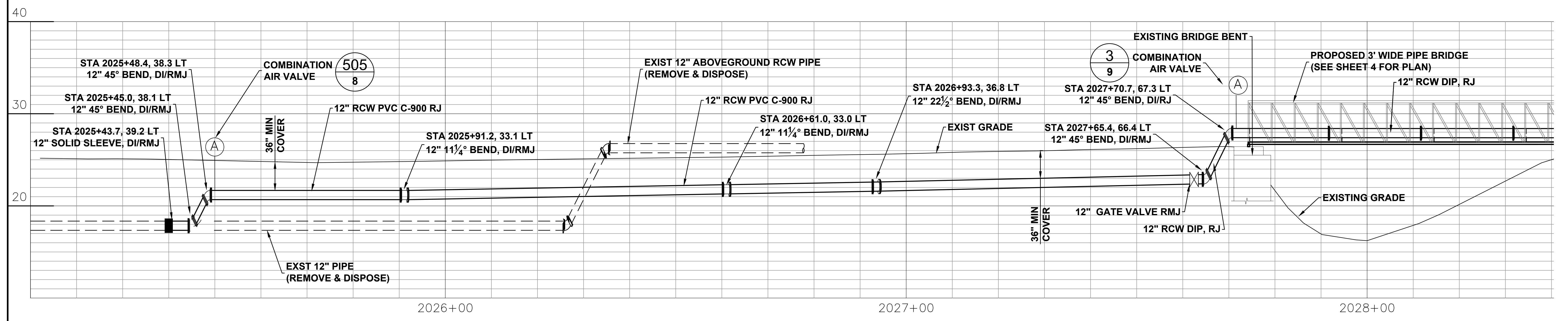
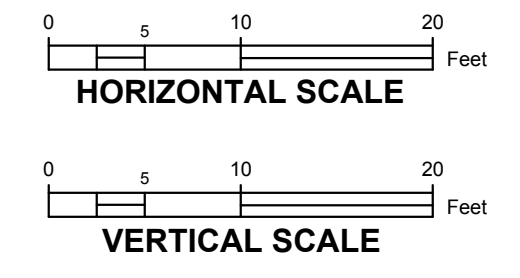
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 Florida Engineering Number: 000002

OLD COACHMAN / SPECTRUM FIELD
 RCW PIPE REPAIR
 PLAN VIEW (2)

DWG NAME: 3 UTILITY	FIELD BOOK: N/A	SURVEYED BY: N/A	SCALE: VERT. SEE ABOVE
CONTRACT NO: 17-0056-UT	DATE DRAWN: 3/26/20	DRAWN BY: J. SCHEUERMAN	HORIZ. SEE ABOVE
JOB NO.: 60620148	DESIGNED BY: B. HANDJIEV	CHECKED BY: D. WILCOX	SHEET NO.: 5 OF 9
APPROVED FOR CONSTRUCTION			



100% SUBMITTAL 03/25/2020

RECORD DRAWINGS	
SURVEYED BY:	DRAWN BY:
REVIEWED BY:	DATE:
APPROVED BY:	DATE:
CITY ENGINEER MICHAEL D. QUILLLEN, P.E. # 33721	

CITY OF CLEARWATER, FLORIDA
 ENGINEERING DEPARTMENT
 100 S. MYRTLE AVE.
 CLEARWATER, FL 33756

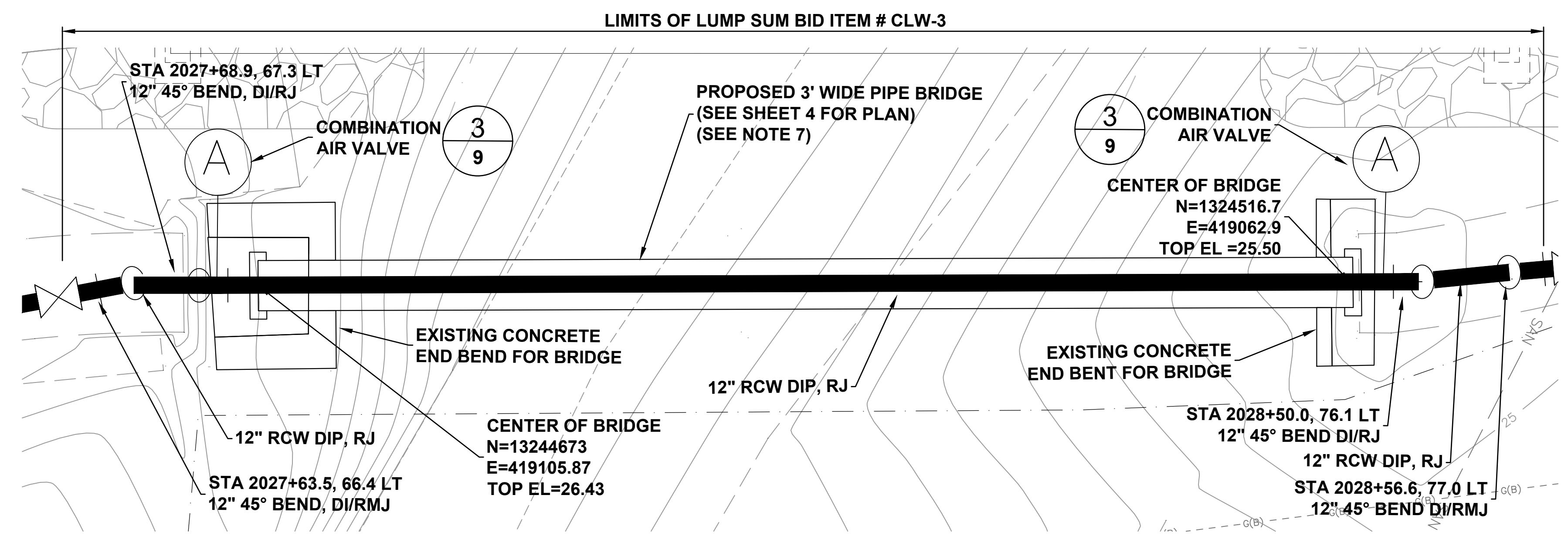
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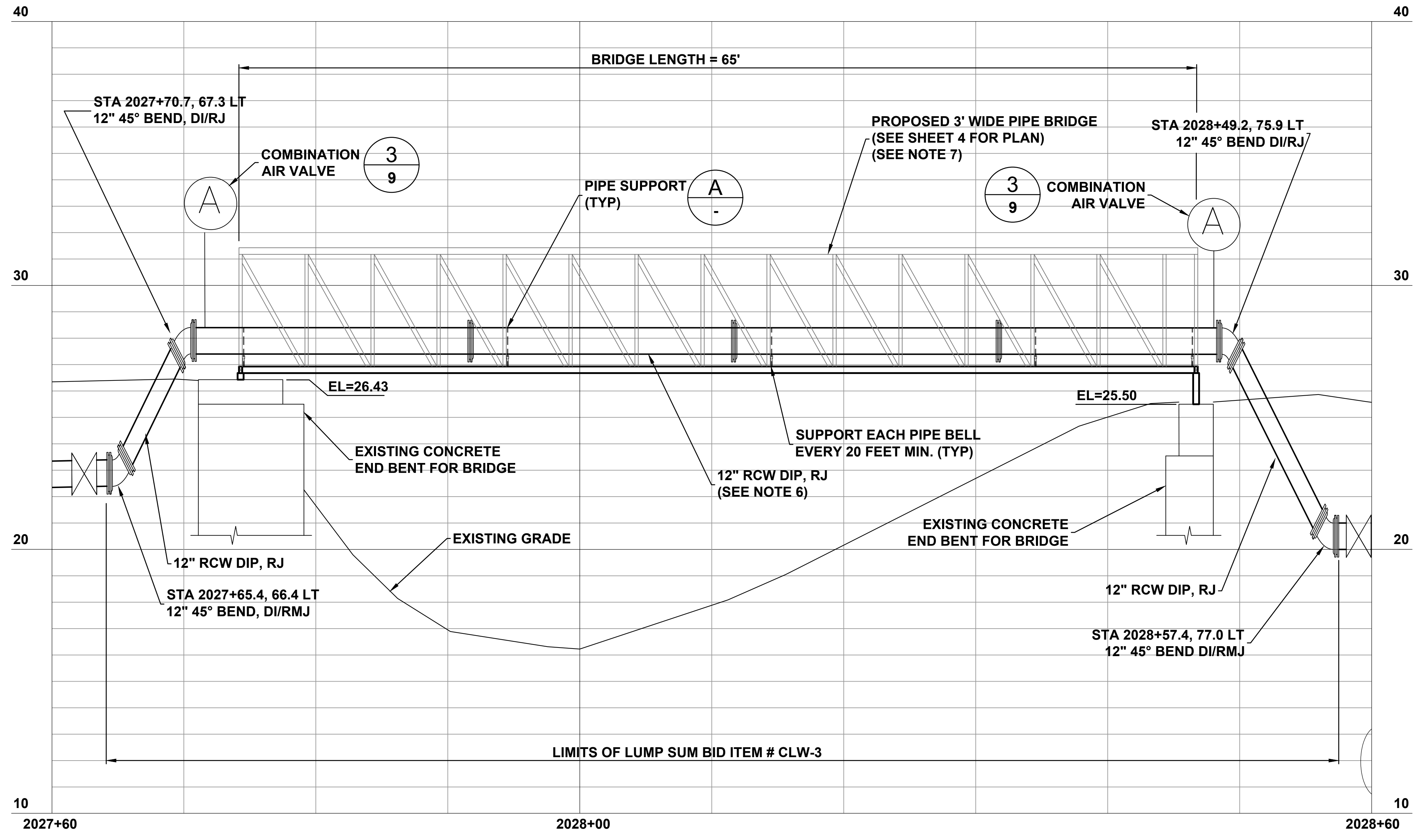
OLD COACHMAN / SPECTRUM FIELD
 RCW PIPE REPAIR
 PROFILE

DWG NAME: 3 UTILITY	FIELD BOOK: N/A	SURVEYED BY: N/A	SCALE: VERT. SEE ABOVE
CONTRACT NO: 17-0056-UT	DATE DRAWN: 3/26/20	DRAWN BY: J. SCHEUERMAN	HORIZ. SEE ABOVE
JOB NO.: 60620148	DESIGNED BY: B. HANDJIEV	CHECKED BY: D. WILCOX	SHEET NO.: 6 OF 9
APPROVED FOR CONSTRUCTION			

S:\Projects\H2O\waterwaste\city of clearwater\rcw pipe repair - old coachman and spectrum field\900-cod_gis\DESIGN\3 UTILITY PIPELINE.dwg, Mar 26, 2020 - 7:40am



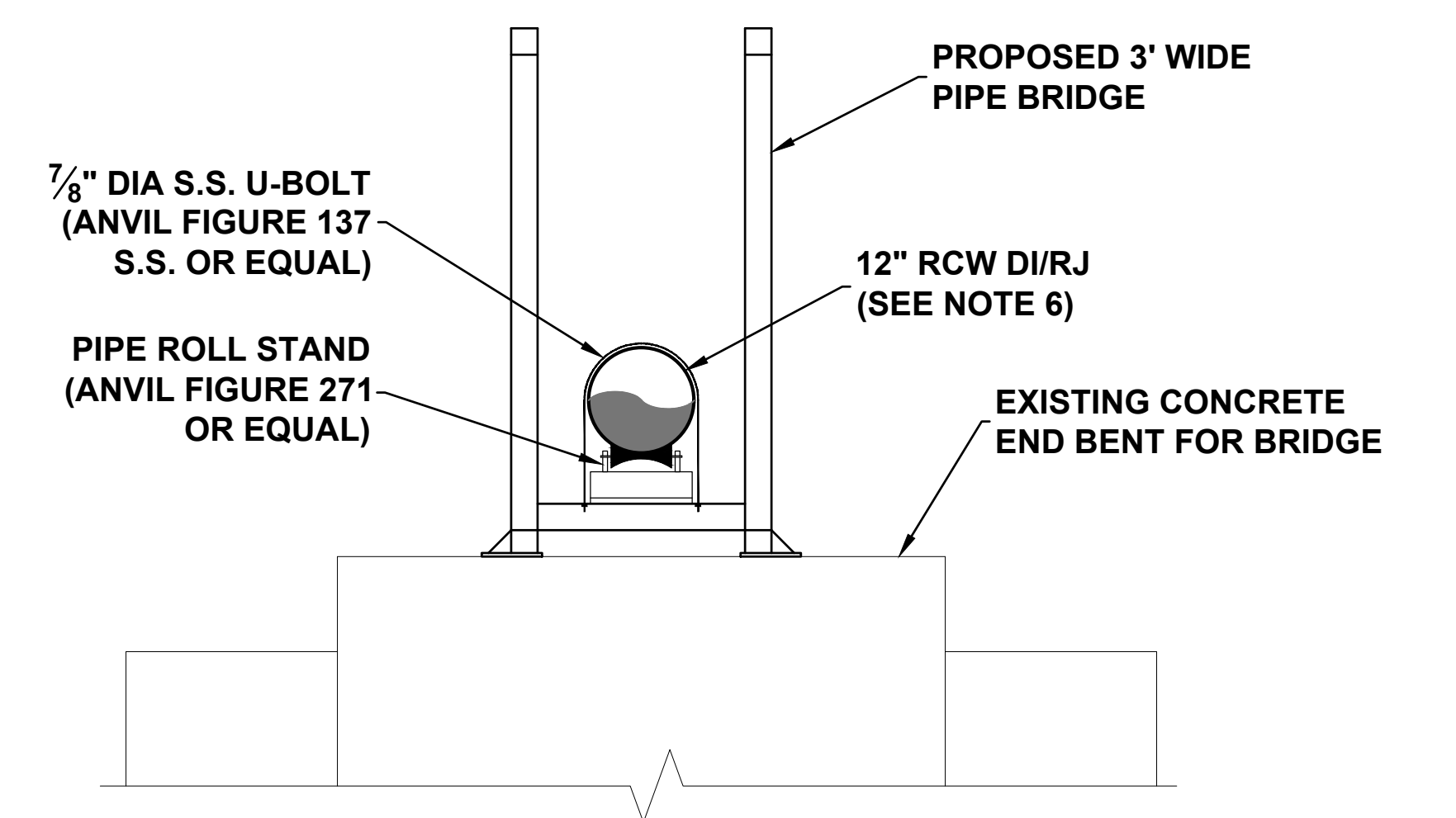
PROPOSED PIPE BRIDGE PLAN



PROPOSED PIPE BRIDGE PROFILE

NOTES:

- 1) FOR PLAN VIEW SEE SHEET 4.
- 2) DUCTILE IRON PIPE & FITTINGS ALONG BRIDGE SHALL BE RESTRAINED TR-FLEX PIPE BY US PIPE OR APPROVED EQUAL.
- 3) DURING INSTALLATION EACH TR-FLEX JOINT (OR EQUAL) SHALL BE FULLY EXTENDED TO REMOVE SLACK & ENGAGE RESTRAINT TO PREVENT JOINT DEFLECTION UPON PRESSURIZATION.
- 4) PRESSURIZATION SHALL BE PERFORMED SLOWLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION TO MINIMIZE JOINT DEFLECTION.
- 5) REFER TO TECHNICAL SPECIAL PROVISIONS FOR PIPE COATING REQUIREMENTS.
- 6) LOCATE 12" RCW ALONG CENTERLINE OF BRIDGE.
- 7) REFER TO TECHNICAL SPECIAL PROVISIONS FOR REQUIREMENTS OF THE PROPOSED BRIDGE.
- 8) PROVIDE MINIMUM 5 FT TALL LOCKABLE GATE AT EACH END OF BRIDGE TO PREVENT UNAUTHORIZED ACCESS.



DETAIL A
PROPOSED PIPE BRIDGE SECTION
SCALE: NTS

100% SUBMITTAL 03/25/2020

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RECORD DRAWINGS	
SURVEYED BY:	DRAWN BY:
REVIEWED BY:	DATE:
PROJECT ENGINEER:	DATE:
APPROVED BY:	DATE:
CITY ENGINEER MICHAEL D. QUILLIN, P.E. # 33721	DATE:

CITY OF CLEARWATER, FLORIDA
ENGINEERING DEPARTMENT
100 S. MYRTLE AVE.
CLEARWATER, FL 33756

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OLD COACHMAN / SPECTRUM FIELD
RCW PIPE REPAIR
PIPE BRIDGE PROFILE & SECTION

DWG NAME: 3 UTILITY	FIELD BOOK: N/A	SURVEYED BY: N/A	SCALE: VERT. SEE ABOVE
CONTRACT NO: 17-0056-UT	DATE DRAWN: 3/26/20	DRAWN BY: J. SCHEUERMAN	HORIZ. SEE ABOVE
JOB NO.: 60620148	DESIGNED BY: B. HANDJIEV	CHECKED BY: D. WILCOX	SHEET NO.: 7 OF 9
APPROVED FOR CONSTRUCTION			

Roadway/Sidewalk Installation

Green Space Installation

NOTES:

- Must center operation nut in box
- C900 Riser to be one continuous section and color coded Pantone 522c.
- Gate Valves shall be open left only.
- Valve key extensions required on valves with operator nut over 3' deep.
- Tracer Wire required in all applications including on D.I.P. and colored Pantone 522c.
- See also City of Clearwater's Technical Specification Section IV.

SECTION VIEW
N.T.S.

DATE	REVISION DESCRIPTION	APP	CITY OF CLEARWATER ENGINEERING DEPARTMENT RECLAIMED WATER DETAILS	RECLAIMED WATER TYPICAL VALVE & BOX SETTINGS	INDEX NO. 502	PAGE NO. 1 of 3	LATEST REVISION 10/21/2019
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NOTES:

- Extension on Valve Box shall be set so as to reserve 1/2 of the adjustment length for future use.
- Valve key extension required on valves with operator nut over 3' deep.
- Install 3" Brass Identification Disk in concrete, per detail below.
- Terminate insulated, solid 12 gauge copper tracer wire at top w/ a minimum 12" of extra wire.
- Reclaimed Water Valve Box lid openings are to be 9" x 9" square.
- Tracer Wire Station - Installed where new construction tie-in to existing pipe. Wire brought up into valve pad on top of pipe.
- Valve Box to be centered in concrete slab in green space only.
- See also City of Clearwater's Technical Specification Section IV.

3" BRASS IDENTIFICATION DISK
N.T.S.

3" BRASS IDENTIFICATION DISK
N.T.S.

DATE	REVISION DESCRIPTION	APP	CITY OF CLEARWATER ENGINEERING DEPARTMENT RECLAIMED WATER DETAILS	RECLAIMED WATER VALVE BOX CONCRETE PAD PLAN VIEW GREEN SPACE ONLY	INDEX NO. 502	PAGE NO. 2 of 3	LATEST REVISION 10/21/2019
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NOTES:

- Extension on Valve Box shall be set so as to reserve 1/2 of the adjustment length for future use.
- Install 3" Brass Identification Disk in concrete per detail below.
- Terminate insulated, solid 12 gauge copper tracer wire at top with 12" of extra wire.
- Reclaimed Water Valve Box lid openings are to be 9" x 9" square.
- Tracing wire Station - Installed where new construction tie-in to existing pipe. Wire brought up into valve pad on top of pipe.
- Valve Box to be centered in concrete slab in green space only.
- See also City of Clearwater's Technical Specification Section IV.

3" BRASS IDENTIFICATION DISK
N.T.S.

3" BRASS IDENTIFICATION DISK
N.T.S.

DATE	REVISION DESCRIPTION	APP	CITY OF CLEARWATER ENGINEERING DEPARTMENT RECLAIMED WATER DETAILS	RECLAIMED WATER TRACING WIRE STATION CONCRETE PAD PLAN VIEW GREEN SPACE ONLY	INDEX NO. 502	PAGE NO. 3 of 3	LATEST REVISION 10/21/2019
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DO NOT USE FOR VERTICAL OFFSETS

L = Minimum length to be restrained on each side of fitting (ft.)
Figures based on 30" bury depth, 150 PSI test pressure
Figures apply to poly wrapped pipe

NOM. PIPE SIZE	ELBOWS (deg.)				VALVES TEES		DEAD END
	11.25	22.50	45	90			
4"	22	22	22	42	50	50	
6"	22	22	25	50	67	67	
8"	22	22	35	60	85	85	
12"	22	22	42	100	125	125	
16"	22	30	55	130	150	150	
20"	22	33	65	150	160	160	

RESTRAINED JOINT DETAIL (PVC & DIP)
N.T.S.

The following joints must be restrained in all applications:

- Bend - Inlet and outlet
- Tee - Inlet and outlet
- Offsets - Inlet and outlet
- Caps
- Plugs
- Dead ends
- Hydrant runouts shall be restrained as dead ends

NOTES:

- Water mains larger than 8" will be ductile iron pipe only.
- Thrust restraint on slip joint ductile iron pipe shall be U.S. Pipe Field Lock Gaskets for Tyton Joint Pipe or American Fast-Grip Gaskets for American Fastite Pipe, witnessed by Construction Inspector.
- Thrust restraints on slip joint PVC pipe shall be EBBA Iron 1500 Series restrainers, or approved equal.
- Thrust restraint on Ductile Iron Fittings shall be provided by the use of Megalug Retainers and mechanical joint fittings.
- No thrust blocks allowed.
- See also City of Clearwater's Technical Specification Section IV.

DATE	REVISION DESCRIPTION	APP	CITY OF CLEARWATER ENGINEERING DEPARTMENT POTABLE WATER DETAILS	RESTRAINED JOINT DETAIL (PVC & DIP)	INDEX NO. 403	PAGE NO. 1 of 1	LATEST REVISION 10/21/2019
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AIR RELEASE VALVE CONCRETE PAD PLAN VIEW
N.T.S.

TYPICAL AIR RELEASE VALVE RECLAIMED WATER APPLICATION
N.T.S.

DATE	REVISION DESCRIPTION	APP	CITY OF CLEARWATER ENGINEERING DEPARTMENT RECLAIMED WATER DETAILS	TYPICAL AIR RELEASE VALVE RECLAIMED WATER APPLICATION	INDEX NO. 505	PAGE NO. 1 of 1	LATEST REVISION 10/21/2019
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SPECIFICATIONS - WOOD BARRIER

- Minimum radius to be protected:
 - Hardwoods - 2/3 drip line
 - Conifers & Sabal Palms - Entire drip line.
- Uprights - No less than 2" X 2" lumber.
- Horizontals - No less than 1" X 4" lumber.
- Barriers shall be erected around all protected trees and palms, and inspected by city representative before construction begins.
- Upright posts are to be at least 4 feet in length with a minimum of 1 foot anchored in ground and 3 feet above ground.
- Barriers to remain in place until all paving, construction and heavy equipment is out of area.

Further information may be obtained from the Land Resource Specialists at 562-4575 and 562-4558.

TREE BARRICADES
N.T.S.

10/22/18	PHONE NUMBERS	JS	CITY OF CLEARWATER ENGINEERING DEPARTMENT LANDSCAPE DETAILS	TREE BARRICADES	INDEX NO. 909	PAGE NO. 1 of 1	LATEST REVISION 10/22/18
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PLOTTED March 26, 2020 7:42 AM PLOTTED BY: SCHEUERMAN, JAMES S:\PROJECTS\1008\WATERWASTE\CITY OF CLEARWATER\RCW PIPE REPAIR - OLD COACHMAN AND SPECTRUM FIELD\08-CAD\05\DESIGN\8 DETAILS.DWG

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SURVEYED BY:	DRAWN BY:		
REVIEWED BY:	PROJECT ENGINEER	DATE	
APPROVED BY:	CITY ENGINEER MICHAEL D. QUILLEN, P.E. # 33721	DATE	

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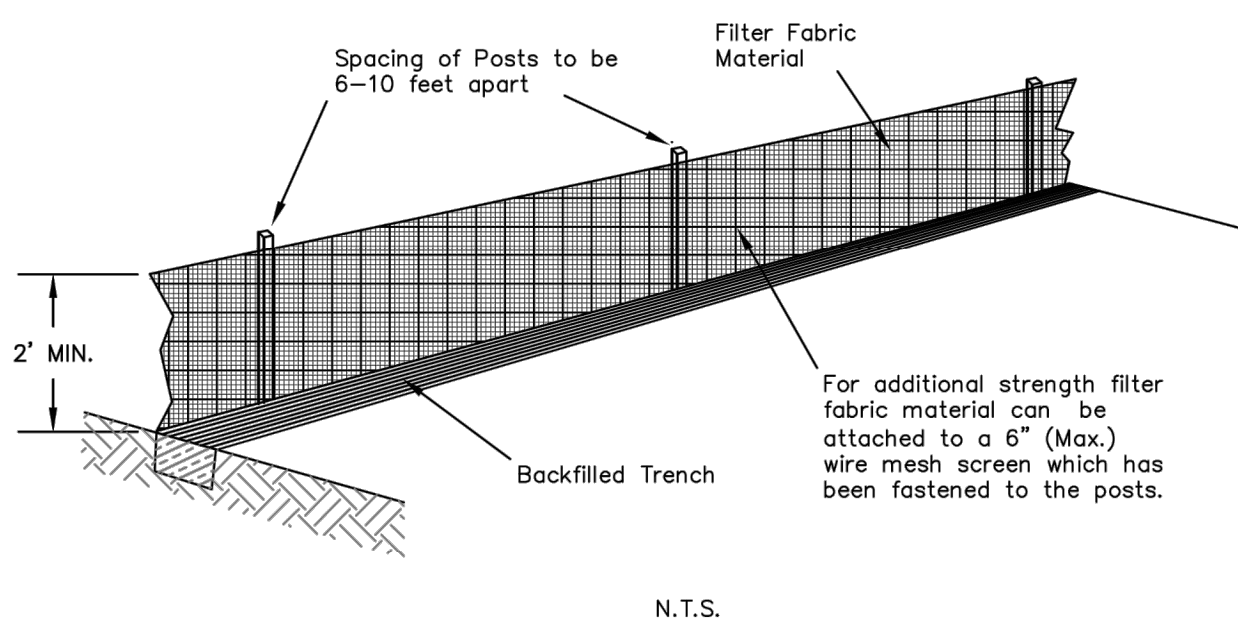
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OLD COACHMAN / SPECTRUM FIELD
RCW PIPE REPAIR
DETAILS (1)

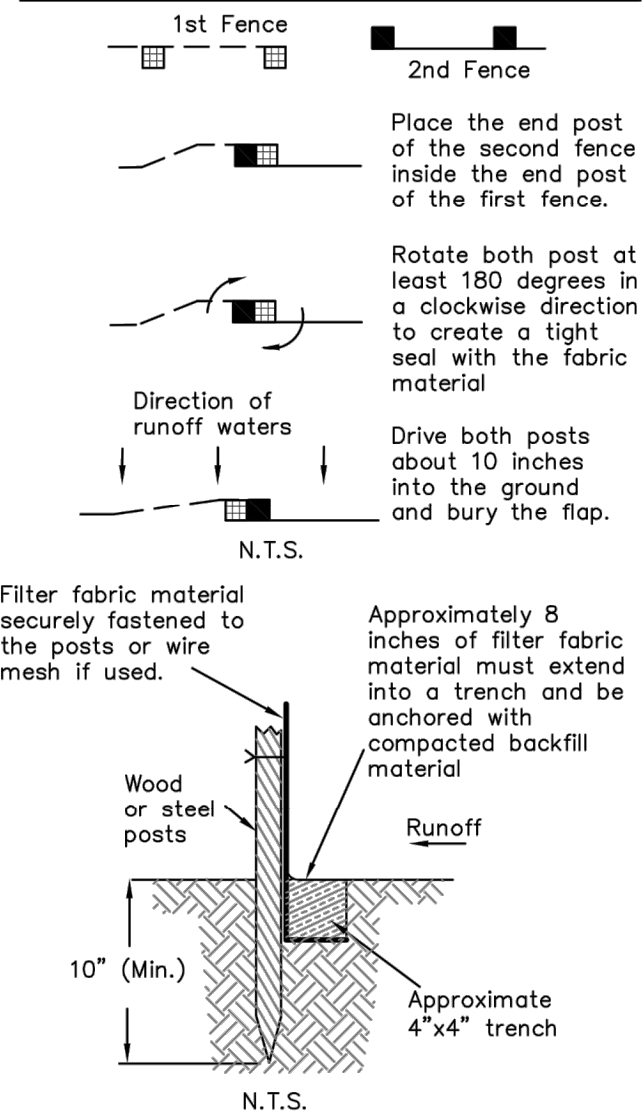
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CONTRACT NO.: 17-0056-UT	DATE DRAWN: 3/25/20	DRAWN BY: J. SCHEUERMAN	HORIZ. SEE ABOVE
JOB NO.: 60620148	DESIGNED BY: B. HANDJIEV	CHECKED BY: D. WILCOX	SHEET NO.: 8 OF 9

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CONTRACTOR'S RESPONSIBILITY:
Erosion and Sedimentation controls are performance based criteria. If the BMPs provided do not prevent soils from leaving a construction site, then the Contractor is required to employ additional procedures to provide clean runoff from a site.



ATTACHING TWO SILT FENCES

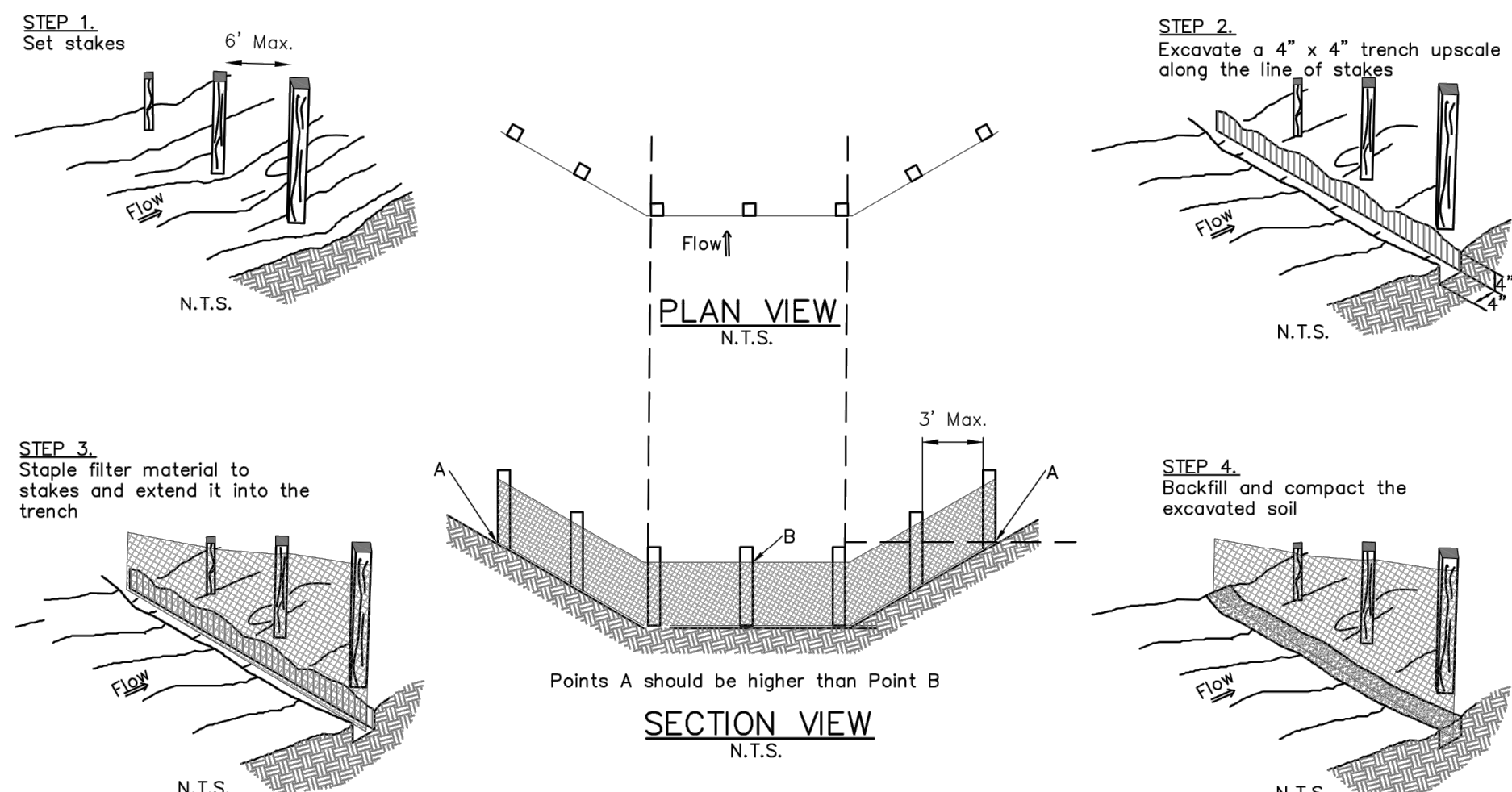


5/18/15	CONTRACTOR NOTE ADDED	S.R.	CITY OF CLEARWATER ENGINEERING DEPARTMENT
DATE	REVISION DESCRIPTION	APP	EROSION AND SILTATION CONTROL POLICY

INSTALLING A
FILTER FABRIC SILT FENCE

INDEX NO.	PAGE NO.
607	1 OF 3
LATEST REVISION	2/22/2016

CONTRACTOR'S RESPONSIBILITY:
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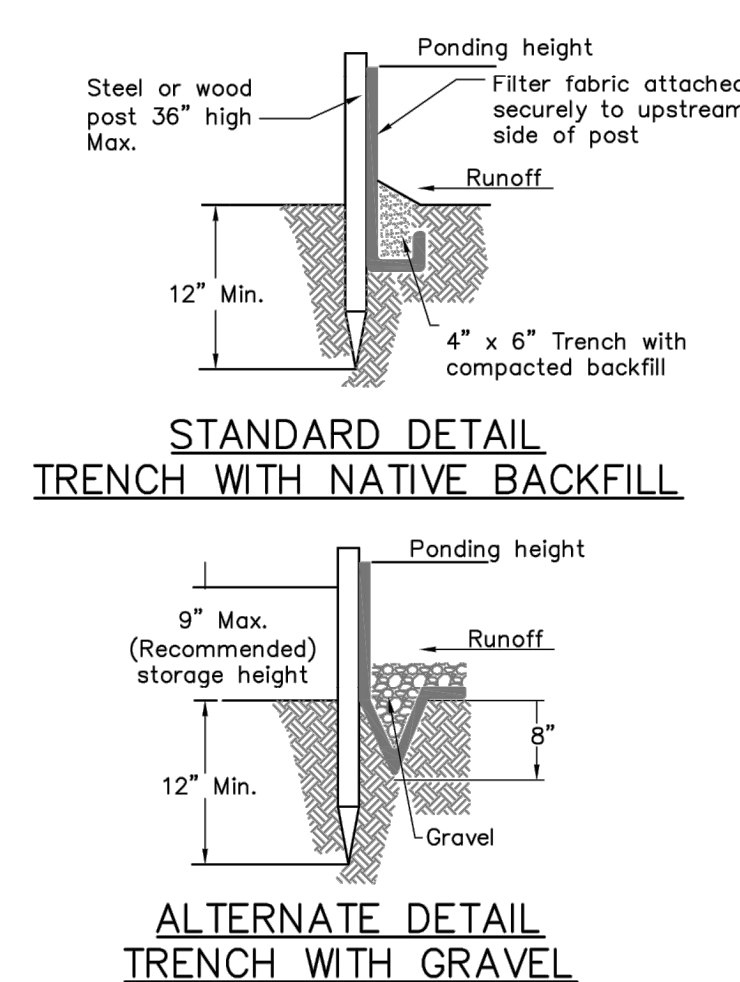


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DATE	REVISION DESCRIPTION	APP	EROSION AND SILTATION CONTROL POLICY

INSTALLING A
FILTER FABRIC SILT FENCE

INDEX NO.	PAGE NO.
607	2 OF 3
LATEST REVISION	2/22/2016

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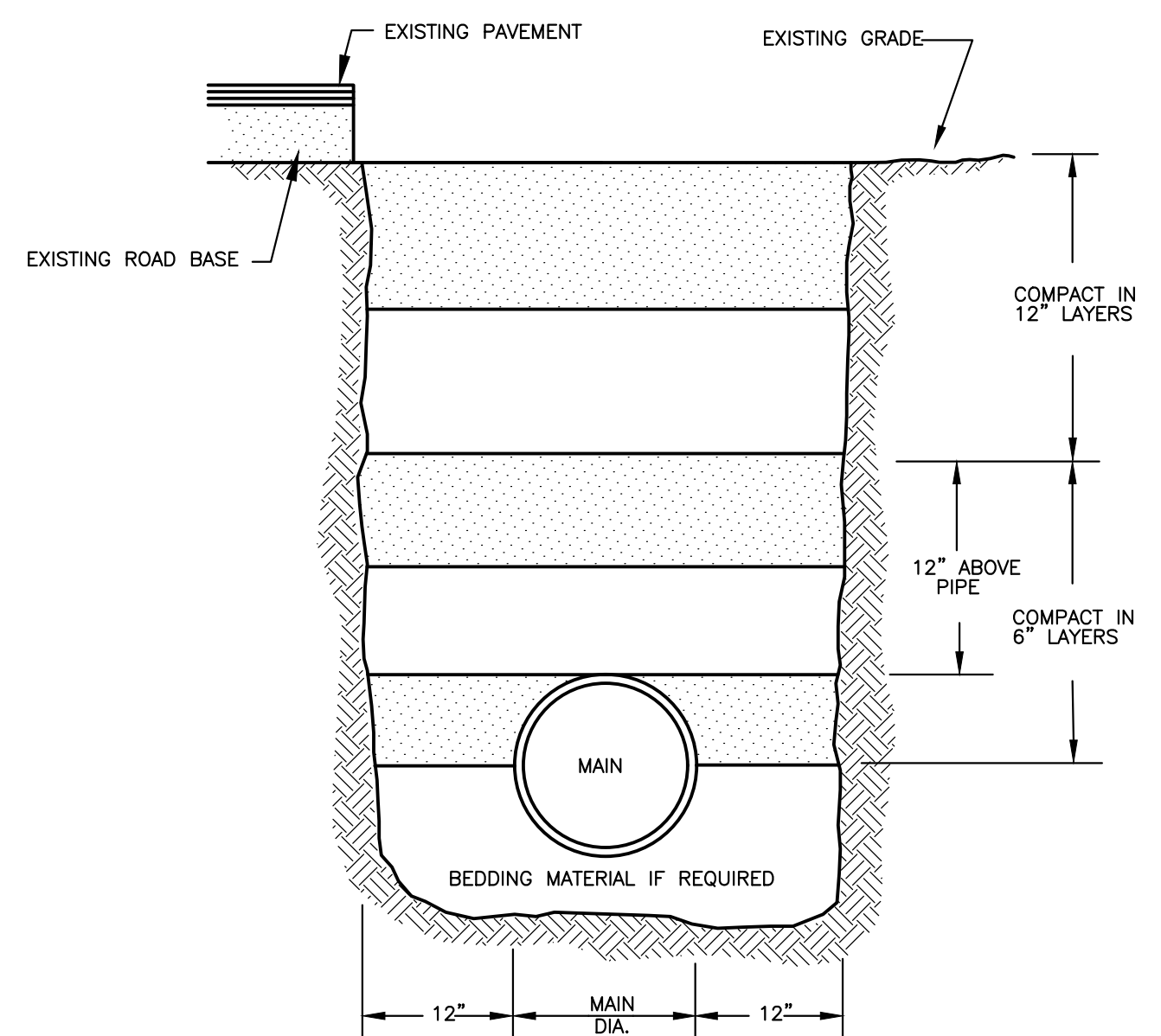
5/18/15	CONTRACTOR NOTE ADDED	S.R.	CITY OF CLEARWATER ENGINEERING DEPARTMENT
DATE	REVISION DESCRIPTION	APP	EROSION AND SILTATION CONTROL POLICY

INSTALLING A
FILTER FABRIC SILT FENCE

INDEX NO.	PAGE NO.
607	3 OF 3
LATEST REVISION	2/22/2016

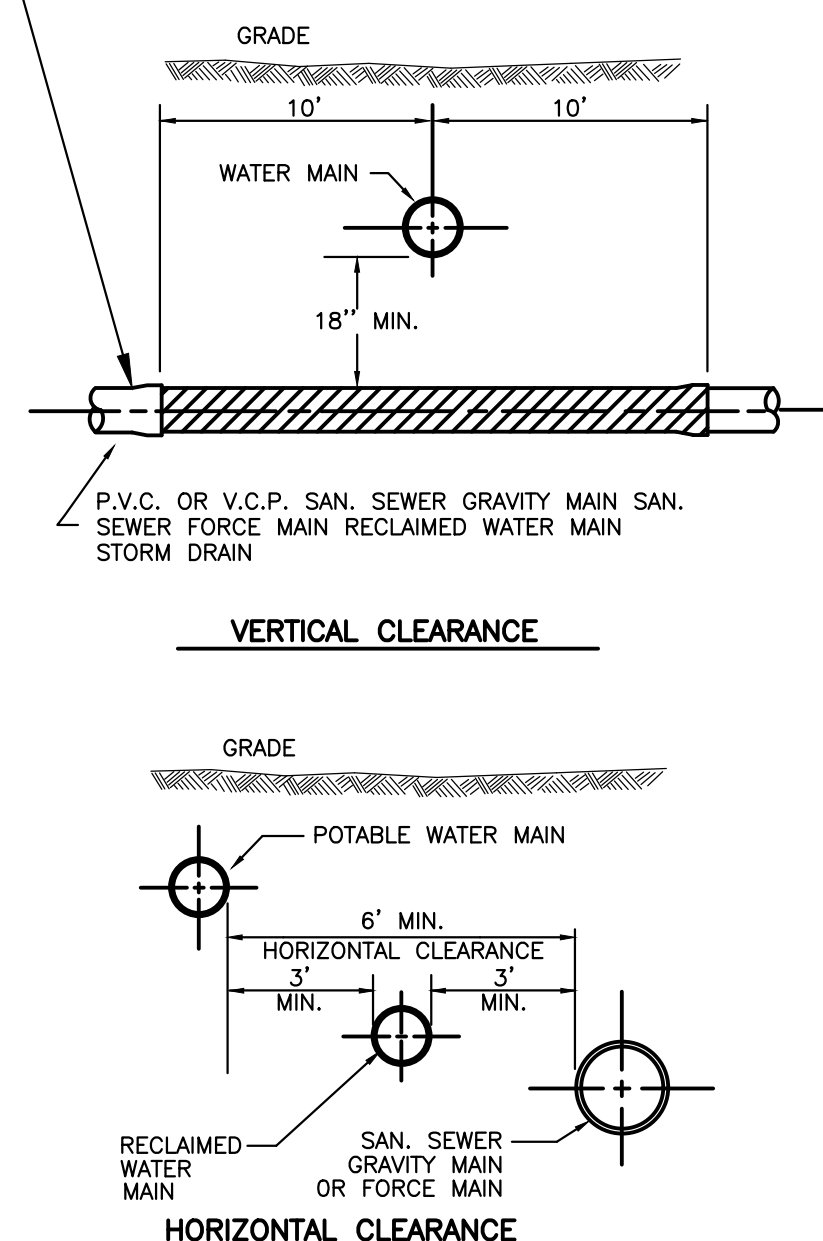
NOTE:

- TRENCHES LOCATED UNDER PAVEMENT OR INSIDE THE 2" HORIZONTAL TO 1" VERTICAL SLOPE, DOWNWARD FROM ROADWAY SHOULDER OR THE BACK OF CURB AND, FROM SPRING LINE TO BOTTOM OF SUB-GRADE OR THE FINISHED SURFACE OF THE EMBANKMENT, AS APPROPRIATE, SHALL BE COMPACTED TO A DENSITY OF 100% AS DETERMINED BY AASHTO T-99 METHOD C.
- TRENCHES LOCATED OUTSIDE OF THE 2" HORIZONTAL TO 1" VERTICAL SLOPE DOWNWARD FROM ROADWAY SHOULDER OR THE BACK OF CURB AND WHERE NO VEHICULAR TRAFFIC WILL PASS OVER THE TRENCHES, BACK FILL SHALL BE COMPACTED TO A DENSITY APPROXIMATELY EQUAL TO THAT SOIL ADJACENT TO THE TRENCH BUT NOT LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99 METHOD-C.
- REPLACEMENT OF THE PAVED SURFACES SHALL BE MADE IN ACCORDANCE TO APPLICABLE LOCAL REGULATIONS.

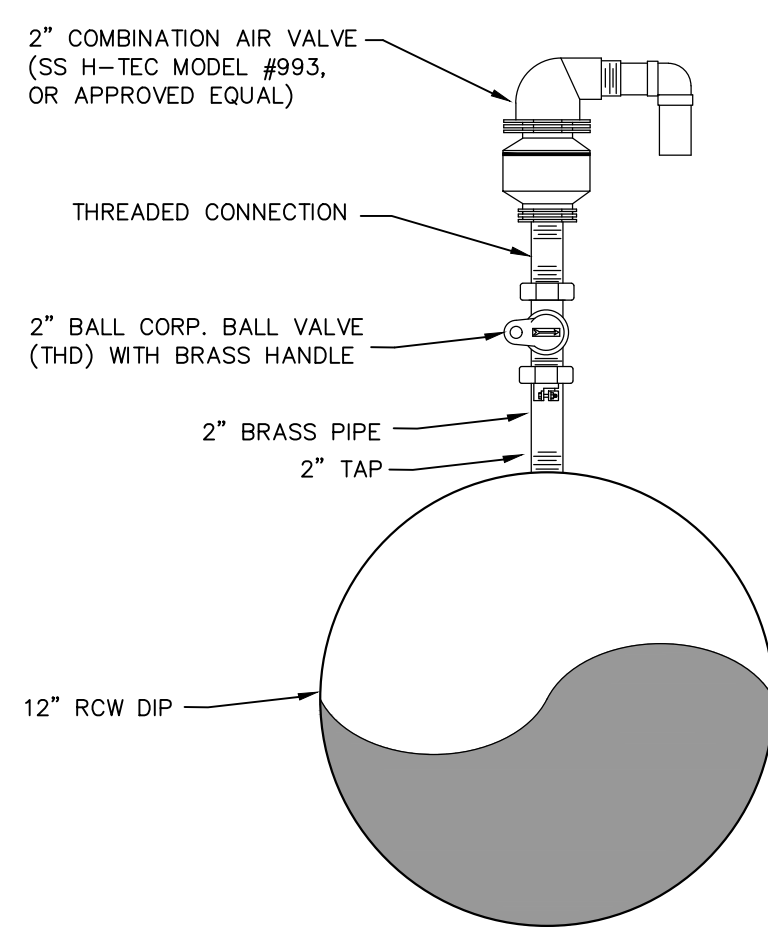


1
TRENCH BACKFILL DETAIL

D.I.P. IS TO BE USED IN PLACE OF P.V.C. OR V.C.P. FOR A MIN. OF 10' EACH WAY FROM C. OF WATER MAIN WHEN THE VERTICAL CLEARANCE BETWEEN WATER/SEWER/FORCE MAINS/RECLAIMED AND STORM MAINS IS 18" OR LESS.



2
STANDARD DETAIL MAIN & CLEARANCES



3
COMBINATION AIR VALVE

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REVIEWED BY:	PROJECT ENGINEER
APPROVED BY:	DATE
CITY ENGINEER MICHAEL D. QUILLEN, P.E. # 33721	DATE

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RCW PIPE REPAIR
DETAILS (2)

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8 DETAILS.DWG	N/A	N/A	VERT. SEE ABOVE
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