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# CLEARWATER

BRIGHT AND BEAUTIFUL BAY TO BEACH

## POTABLE WATER PIPING IMPROVEMENTS PHASES 2, 4 & 5



3507 EAST FRONTAGE ROAD SUITE 180 **TAMPA, FL 33607** TEL: (813) 549-0919 **CERTIFICATE OF AUTHORIZATION #28386** 

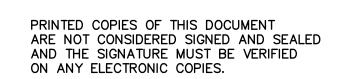
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CHA CONSULTING, INC.

DATE ADJACENT TO THE SEAL.

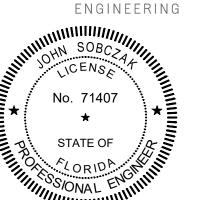


THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH THE PROVISIONS OF SECTION 407.025, F.S., AND RULE 61G15-23, F.A.C.

<u>CIVIL</u> 06-18, 19-36, 42-57

MECHANICAL 38, 41

711 N ORANGE AVE, SUITE A WINTER PARK, FL 32789 P: 321.972.4989 COA Lic. No: 31920 WEKIVA PROJECT #22-184

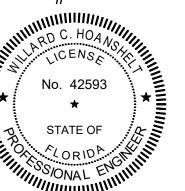


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EMI CONSULTING SPECIALTIES, INC. 5742 River Bed Road Groveland, FL 34736 (352) 460-4035

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WILLARD C. HOANSHELT ON THE DATE ADJACENT TO THE SEAL.

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### CITY OFFICIALS

Brian Aungst Sr. Mark Bunker Kathleen Beckman **David Allbritton** Lina Teixeira Jennifer Poirrier

Mayor Councilmember Councilmember Councilmember Councilmember City Manager

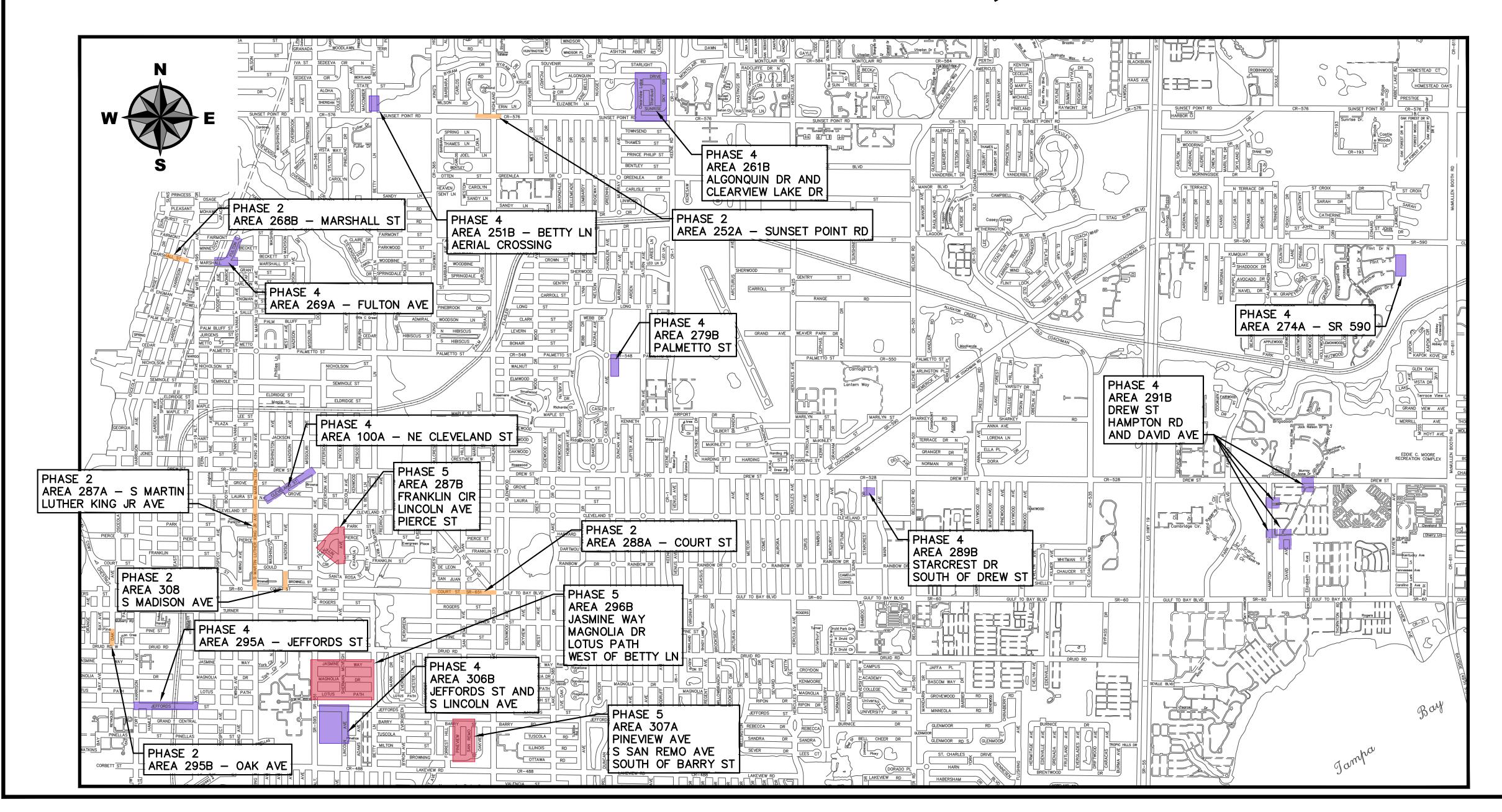
Tara L. Kivett, P.E. City Engineer

**Approved For** Construction

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

**Date Approved** 

ISSUED FOR BID City Project No. 23-0011-UT City Plan Set No. 2020027



2. All workmanship and materials used in the construction of this project shall conform to the latest City of Clearwater standards, contract documents and specifications unless otherwise noted.

3. Specific requirements of the Florida Department of Transportation (FDOT) "Design Standards" and "Standard Specifications for Road and Bridge Construction", most current editions, are incorporated into the contract documents by reference.

4. The Contractor shall obtain all required permits prior to construction.

5. The Contractor shall notify all utility companies at least forty eight (48) hours prior to start of construction, demolition and/or excavation in accordance with Florida Statutes.

6. The Contractor shall call Sunshine 811, previously known as Sunshine State One Call of Florida, at 1-800-432-4770 or 811, a minimum of two (2) days and a maximum of five (5) days prior to start of construction.

7. Locations, elevations and dimensions of existing utilities, structures and other features are shown according to the best information available at the time of the preparation of these plans, but do not purport to be absolutely correct. The Contractor shall verify the location, elevations and dimensions of all existing utilities, structures and other features affecting the work prior to construction.

8. The Contractor shall be responsible to review the site to determine existing conditions. Anything not shown on these plans shall be brought to the attention of the City's Engineering Representative and shall not constitute additional scope of work approved by the Engineer.

9. The Contractor shall contact the City's Engineering Representative immediately concerning any conflicts arising during

All construction activities must conform to the local noise ordinance.

11. Hours of work shall be between 7AM and 6PM Monday - Saturday in accordance with contract documents. Any work outside these hours shall be requested and coordinated with the City. The Contractor shall additionally coordinate with the City any restricted working hours associated with specific areas or neighborhoods.

12. These drawings do not include necessary components for construction safety. The Contractor is solely responsible for construction safety. Special precautions may be required in the vicinity of power lines and other utilities.

13. The Contractor shall furnish, erect and maintain all necessary traffic control and safety devices in accordance with the U.S. Department of Transportation, "Manual on Uniform Traffic Control Devices" and the latest Florida Department of Transportation "Design Standards".

14. The Contractor shall provide, erect and maintain effective barricades, danger signals, signs and pedestrian detours in all areas where required for the protection of the work and the safety of the public.

15. Maintenance of Traffic (MOT): if it becomes necessary for the Contractor to close any street to through traffic within the limits of construction, access for local traffic with destination within the project limits of construction shall be maintained. If during construction, access for local traffic is changed, the property owners affected shall be given at least three (3) days advance notice. The Contractor shall submit to the City's Engineering Representative the Traffic Control Plan for approval prior to

16. A registered Land Surveyor, at the Contractor's expense, shall reset all section corners or property corners dislocated or disturbed by any construction related activities.

17. Any National Geodetic Survey (NGS) Monument within the limits of construction is to be protected. If in danger of damage, contractor shall notify the city's field representative immediately and contact the National Geodetic Survey information center.

18. Unless noted on the plans, final grade is to generally be the same as existing grade. Restore uniformly and for proper yard drainage grade toward roadway.

19. All new utilities shall be installed with the minimum thirty six (36) inches of cover.

20. Where utilities cross the lowest pipe shall be installed first, separation shall be in accordance with 62-555.314 FAC and as detailed in City Standard Detail 402 on drawing CD01.

21. The Contractor shall be responsible for testing of all newly constructed utilities in accordance with current standards of local iurisdiction. The Contractor shall notify the local jurisdiction and the Owner or an authorized representative at least forty eight (48) hours in advance of performing tests.

22. The Contractor shall provide all sheeting, shoring and bracing required to protect adjacent structures or to minimize trench width. Where a separate pay item is not provided, the cost of all sheeting and bracing required shall be included in the contract price for the item of work for which sheeting, shoring and bracing is anticipated to be required in accordance with local, state, or federal regulations for construction.

23. All concrete shall have a minimum compressive strength of 3,000 psi (28-day strength), unless otherwise noted on drawings.

24. No surfacing material is to be applied to any manhole covers, frames, valve boxes, gas drops, etc. All existing and proposed utility and storm sewer structures whose tops will be exposed within any paved area shall be adjusted so that the top surface of covers or frames shall be flush with the pavement surface.

25. Materials interfering with construction shall be disposed of as directed by the City's Engineering Representative, unless otherwise noted on plans.

26. All excess soil resulting from construction activities that is not claimed by the Owner shall become the property of the Contractor and disposed of by the Contractor.

27. All disturbed landscaped and/or grassed areas shall be restored uniformly and be generally at the same elevation as existing

28. All disturbed areas shall be replaced within fifteen (15) days to a condition equal to or better than existing conditions.

29. All voids after placement of sod shall be filled with prepared soil mix. The sod shall be rolled to meet the proposed grades. Sod placed on slopes 3:1 or steeper shall be pegged.

30. Areas of exposed earth resulting from construction shall be sodded in kind as directed by the City's Engineering Representative unless otherwise noted on plans

31. The Contractor shall maintain an accurate set of marked-up drawings (As-Builts) at the construction site. Said drawings shall be made available to City staff (or City's designated representative) upon request. Maintaining As-Built drawings shall be considered a condition precedent to payment.

32. The bottom trench width in an unsupported trench shall be limited to the minimum practicable width allowing working space to place and compact the haunching material. The use of trench boxes and movable sheeting shall be performed in such a manner that removal, backfill and compaction will not disturb compacted haunching material or pipe alignment. Dewatering of the trench bottom shall be accomplished using adequate means to allow preparation of bedding, placement of the haunching material and pipe in the trench without standing water. Dewatering shall continue until sufficient backfill is placed above the pipe to prevent

34. The Contractor shall dispose of all unsuitable materials, construction debris, and other waste materials offsite in accordance with applicable regulatory agency requirements at the Contractor's expense. All backfill shall be free of unsuitable materials.

35. The Contractor shall be responsible for providing a Hurricane Preparation Plan to the City's Engineering Representative for review and approval prior to commencing construction activities.

36. Any damage to city, county, or state roads caused by the Contractor shall be repaired by the Contractor in a timely manner and to the satisfaction of the City's Engineering Representative. Payment shall not be made for this work.

): ISSUED FOR BID

**REVISION** 

37. The Contractor shall protect private property.

**RECORD DRAWINGS** 

flotation or misalignment.

38. Placement of service meter boxes shall be in accordance with City Standard Detail 405 on drawing CD01.

39. The Contractor shall provide the City 60 days notice prior to starting any service line connections.

40. Contractor to confirm location and placement of service meter boxes with City Inspector and/or City's Representative.

41. All lane closures and work affecting traffic shall be scheduled, coordinated, and approved by the City.

42. Contractor shall be responsible for ensuring all existing infrastructure is properly restrained prior to valve closures, installation of line stops, or tie ins.

43. Contractor shall coordinate with the City any activities associated with bringing new mains into service. New mains shall not be incorporated into the distribution system until the main has been pressure tested, bacteriological testing, and cleared for service in accordance with FDEP requirements.

#### **SURVEY NOTES**

1. THIS SURVEY WAS PROVIDED BY ECHO UES, INC.

DATUMS

2.a. HORIZONTAL - FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE (902), NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT (NAD 83/11) RELATIVE TO THE FLORIDA DEPARTMENT OF TRANSPORTATION'S (FDOT) FLORIDA PERMANENT REFERENCE NETWORK (FPRN), A REAL TIME KINEMATIC (RTK) GLOBAL POSITIONING SYSTEM (GPS).

2.b. VERTICAL CONTROL IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

#### TREE PROTECTION

1. The Contractor will be responsible for adhering to all Tree Protection measures required by the City of Clearwater codes, ordinances and Standard Specifications. This will include all tree barricades, root pruning and tree trimming/pruning activities. These requirements will apply within the specified "limits of work" and will also be applicable in all areas where the Contractor and/or his subcontractors stage, store or park vehicles, equipment, materials and debris.

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. Furthermore, all tree work shall conform to the American National Standards Institute (ANSI) 2001, American National Standard for Tree Care Operations - Tree, Shrub and Other Woody Plant Maintenance - Standard Practices (Pruning) ANSI A-300.

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. Where applicable, and specifically approved by the City's Engineering Representative protective barriers may be placed in root prune trenches.

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. The City's Engineering Representative must approve, in writing, any changes to the approved design prior to implementation of said change.

The Contractor will avoid any open excavations, fill or other construction activities whenever possible within the "critical root zone" of any existing tree (i.e., under the drip line/canopy).

6. No vehicles, equipment or materials shall be parked or stored under/within the drip line/protective barrier area of any tree.

7. 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 as approved by the City's Engineering Representative.

Woodchips, mulch or another cushioning surface material approved by the City's Engineering Representative shall be placed to a minimum depth of ten (10) inches over areas where roots are present and construction traffic occurs.

9. All tree protection measures shall remain in place at all times during construction until the City's Engineering Representative authorizes removal.

10. The Contractor will coordinate with the City's Engineering Representative, Catherine Corcoran, at (727) 532-4749, to obtain approval in advance of any and all work within the critical root zone of any existing tree.

#### **SEDIMENT & EROSION CONTROL**

1. It is the responsibility of the Contractor to control and prevent erosion and the transportation of sediment to surface drains and

The Contractor shall prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) in accordance with Florida Department of Environmental Protection (FDEP) Criteria for a National Pollution Discharge Elimination System (NPDES)

3. The Contractor must obtain a FDEP Generic Permit for The Discharge of Produced Ground Water, if dewatering with offsite discharge will be required. The Contractor is responsible for all required preliminary water samples to satisfy the FDEP Generic Permit for the Discharge of Produced Ground Water. Sampling shall occur thirty (30) days prior to the start of dewatering.

Construction operations shall be carried out in such a manner that erosion and pollution shall be minimized. The submitted SWPPP shall be complied with. All applicable federal, state, and local laws shall be complied with at all times. Please note that no hay bales are allowed on City of Clearwater projects.

#### **ROOT PRUNING**

BY DATE

1. Root pruning shall only be performed by or under the direct supervision of an International Society of Arboriculture (ISA) Certified

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.

Root pruning shall be performed as far in advance of other construction activities as is feasible, but at a minimum shall be performed prior to any impacts to the soil. Associated tree protection measures should be implemented upon completion of said

4. If there is a likelihood of excessive wind and/or rain, an exceptional care shall be taken on any root pruning activities.

Root pruning shall be limited to a minimum of twelve inches per one inch trunk diameter from the tree base. Any exception must be approved by the City's Engineering Representative prior to said root pruning.

Roots shall be cut cleanly, as far from the trunk of the tree as possible. Root pruning shall be done to a minimum depth of eighteen (18) inches from existing grade, or to the depth of the disturbance if less than eighteen (18) inches.

Root pruning shall be performed using a root cutting machine designed specifically for this purpose. Alternate equipment or techniques must be approved by the City's Engineering Representative, prior to any work adjacent to trees to be preserved.

Root pruning shall 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. Excavations in an area where root are present shall not cause the tearing or ripping of tree roots. Roots must first be cleanly severed prior to continuing with the excavation, or tunneled around to prevent damage to the root.

10. Tree roots shall not be exposed to drying out. Root ends shall be covered with native soil or burlap and kept moist until final backfill or final grades have been established.

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

#### **ABBREVIATIONS**

	ADANDON/ED)	FI FV	ELEVIRI E	$\cap$ T $\vee$	OLIANTITY
ABAN ABS	ABANDON(ED) ACRYLONITRILE BUTADIENE STYRENE	FLEX FLG	FLEXIBLE FLANGE	QTY	QUANTITY
A/C ACP	AIR CONDITIONER, (ING)	FM	FORCE MAIN	RCP	REINFORCED CONCRETE PIPE
ACP	ASBESTOS CEMENT PIPE	FPM FPS	FEET PER MINUTE FEET PER SECOND	RCW RED	RECLAIM WATER REDUCER, REDUCING
ADJ ALT	ADJUSTABLE, ADJACENT ALTERNATE, (IVE)	FPVC	FUSIBLE POLYVINYL CHLORIDE	REF	REFERENCE
AOD	ANGLE OF DEFLECTION	FRP	FIBERGLASS REINFORCED PLASTIC	REINF	REINFORCING
APPROX	APPROXIMATE, (LY)	FT FWD	FOOT FORWARD	REQD REV	REQUIRED REVISION, REVISED, REVERSED
ARV ARVV	AIR RELEASE VALVE AIR RELEASE AND VACUUM VALVE			RL V RJ	RESTRAINED JOINT (BELL)
ARVV ASSY	ASSEMBLY	G	GAS	RMJ	RESTRAINED MECHANICAL JOINT
AUTO	AUTOMATIC	GAL GALV	GALLON GALVANIZED	RNG ROC	RANGE RADIUS OF CURVATURE
AUX	AUXILIARY	GM	GAS METER	ROC RPM	REVOLUTIONS PER MINUTE
ВС	BEGIN CURVE	GND	GROUND	RPZBP	REDUCED PRESSURE ZONE
BCV	BALL CHECK VALVE	GO GPD	GEAR OPERATED GALLONS PER DAY	RR	BACKFLOW PREVENTER RAILROAD
BF BFP	BLIND FLANGE BACKFLOW PREVENTER	GPH	GALLONS PER HOUR	RT	RIGHT
BFV	BUTTERFLY VALVE	GPM	GALLONS PER MINUTE	R/W	RIGHT OF WAY
BGO	BURIED GEAR OPERATOR	GPS GR	GALLONS PER SECOND GRADE	S	COLITI
BI BIP	BLACK IRON BLACK IRON PIPE	GV	GATE VALVE	SAN	SOUTH SANITARY
BLDG	BUILDING	ш	HOCE DIDD	SCH	SCHEDULE
BM	BENCHMARK	HB HDD	HOSE BIBB HORIZONTAL DIRECTIONAL DRILL	SD SDR	STORM DRAIN
BOC BOF	BACK OF CURB BOTTOM OF FOOTING	HDPE	HIGH-DENSITY POLYETHYLENE	SE SE	STANDARD DIMENSION RATIO SOUTHEAST
BOS	BOTTOM OF SLAB, BOTTOM OF SLOPE	HORIZ	HORIZONTAL	SEC	SECOND
BOT	BOTTOM	HP HR	HORSEPOWER HOUR, HANDRAIL	SECT	SECTION
BRG BSP	BEARING BLACK STEEL PIPE	HSP	HIGH SERVICE PUMP	SF SHT	SQUARE FOOT SHEET
BV	BALL VALVE	HT	HEIGHT	SIM	SIMILAR
BVC	BEGIN VERTICAL CURVE	HWL HWY	HIGH WATER LEVEL HIGHWAY	SPEC(S)	SPECIFICATION(S)
C /C	CENTER TO CENTER	HYD	HYDRAULIC	SQ SS	SQUARE SANITARY SEWER
C/C CATV	CENTER TO CENTER CABLE TELEVISION	10	INCIDE DIAMETED	SST	STAINLESS STEEL
CB	CATCH BASIN	ID IN	INSIDE DIAMETER INCH(ES)	STA	STATION
CF CFM	CUBIC FOOT CUBIC FEET PER MINUTE	INC		STD STL	STANDARD STEEL
CFM CFS	CUBIC FEET PER MINUTE  CUBIC FEET PER SECOND	INCL	INCORPORATED INCLUDING INSTRUMENT, (ATION) INTERIOR, INTERNAL	SVC	SERVICE
C&G	CURB AND GUTTER	INST INT	INSTRUMENT, (ATION) INTERIOR INTERNAL	SW	SOUTHWEST SEWER
CI CIP	CAST IRON, CUBIC INCH CAST IRON PIPE	INV		SWR SY	SEWER SQUARE YARD
CJ	CONSTRUCTION JOINT	IP	IRON PIPE	SYM	SYMBOL
CL	CENTERLINE	IPS	INTERNATIONAL PIPE STANDARD	SYMM	SYMMETRICAL
CMP CMU	CORRUGATED METAL PIPE CONCRETE MASONRY UNIT	LB(S)	POUNDS	SYS	SYSTEM
CMU	CLEAN OUT, COMPANY	LF	LINEAR FEET	TAN	TANGENT
CONC	CONCRETE	LWL	LOW WATER LEVEL	T&B	TOP AND BOTTOM
CONN CONSTR	CONNECTION CONSTRUCT, CONSTRUCTION	MAN	MANUAL	TBM TC	TEMPORARY BENCHMARK TOP OF CURB
CONT	CONTINUOUS(LY), CONTINUATION	MAX	MAXIMUM	TDH	TOTAL DYNAMIC HEAD
COR	CORNER	MES	MITERED END SECTION	TEMP TH	TEMPERATURE, TEMPORARY TEST HOLE
CORR CPVC	CORRIDOR, CORRUGATED CHLORINATED POLYVINYL CHLORIDE	MFR(S) MH	MANUFACTURER(S) MANHOLE	THRD	THREADED
CPVC CTR(S)	CENTER(S)	MIN	MINIMUM, MINUTE	TOB	TOP OF BANK
CTRL	CONTROL	MISC	MISCELLANEOUS	TOC TOE	TOP OF CONCRETE
CV	CHECK VALVE	MJ MPH	MECHANICAL JOINT MILES PER HOUR	TOF TOS	TOP OF FOOTING TOP OF SLAB
CY	CUBIC YARD	MSL	MEAN SEA LEVEL	TV	TELEVISION
DBL	DOUBLE	MTD	MOUNTED	TWP TYP	TOWNSHIP
DEG	DEGREE	MWL	MEAN WATER LEVEL	117	TYPICAL
DEPT DET	DEPARTMENT DETAIL	N	NORTH(ING)	UG	UNDERGROUND
DI	DROP INLET, DUCTILE IRON	N/A	NOT APPLICABLE	UGE USGS	UNDERGROUND ELECTRIC UNITED STATES GEOLOGICAL SURVEY
DIA	DIAMETER	N.C. NE	NORMALLY CLOSED NORTHEAST	UTC	UNDERGROUND TELEPHONE CABLE
DIM DIP	DIMENSION DUCTILE IRON PIPE	N.I.C.	NOT IN CONTRACT	UTIL	UTILITY
DISCH	DISCHARGE	N.O.	NORMALLY OPEN	V	VALVE, VENT
DIV	DIVISION	NO.(S)	NUMBER(S)	V VAC	VACUUM
DJ DMH	DISMANTLING JOINT DROP MANHOLE	NOM NORM	NOMINAL NORMAL	VB	VALVE BOX
DRN	DRAIN	NPT	NATIONAL PIPE TAPER	VCP VERT	VITRIFIED CLAY PIPE VERTICAL
DWG(S)	DRAWING(S)	NPW N.T.S.	NONPOTABLE WATER NOT TO SCALE	VFD	VARIABLE FREQUENCY DRIVE
DWV	DRAIN, WASTE, AND VENT	N. 1. 5. NW	NOT TO SCALE NORTHWEST	\A/	
Е	EAST(ING), ELECTRICAL			W W/	WEST, WIDE, WATER WITH
EA	EACH	OC OD	ON CENTER, ODOR CONTROL OUTSIDE DIAMETER	WM	WATER METER, WATER MAIN
EC ECC	END CURVE ECCENTRIC	O&M	OPERATION AND MAINTENANCE	W/O	WITHOUT
EJ	EXPANSION JOINT	OPP	OPPOSITE	WSP w.t	WELDED STEEL PIPE
EL	ELEVATION	PC	POINT OF CURVE	WT WTF	WEIGHT WATER TREATMENT FACILITY
ELEC ELL	ELECTRIC, (AL) ELBOW — PLUMBING SMALLER THAN 4"	PCC	POINT OF COMPOUND CURVATURE	WTP	WATER TREATMENT PLANT
ELL EMER	EMERGENCY	PE	PLAIN END	WWTF WWTP	WASTEWATER TREATMENT FACILITY WASTEWATER TREATMENT PLANT
ENCL	ENCLOSURE	PI PIVC	POINT OF INTERSECTION POINT OF INTERSECTION	VV VV 1 [	WASILWAILN INLAIMENT FLANT
EOL EOP	END OF LINE EDGE OF PAVEMENT	, , , , ,	ON VERTICAL CURVE	×	BY, TIMES
EQP EQ	EQUAL	P/L	PROPERTY LINE	YD	YARD
EQUIP	EQUIPMENT	POB POI	POINT OF BEGINNING POINT OF INTERSECTION	YD YR	YEAR YEAR
EST EW	ESTIMATE EACH WAY	PPD	POINT OF INTERSECTION POUNDS PER DAY		
EW EXIST	EXISTING	PPM	PARTS PER MILLION	& @	AND AT
EXP	EXPANSION, EXPOSED	PROP PRV	PROPOSED PRESSURE REDUCING VALVE	>	GREATER THAN
EXT	EXTENSION, EXTERIOR, EXTERNAL	PSF	POUNDS PER SQUARE FOOT	<	LESS THAN
FF	FINISH FLOOR	PSI	POUNDS PER SQUARE INCH	# %	NUMBER PERCENT
FH	FIRE HYDRANT	PT PV	POINT, POINT OF TANGENCY PLUG VALVE	/0	LINGLINI
FIG FIN	FIGURE FINISH	PVC	POLYVINYL CHLORIDE		
I IIN	THAISH	PVMT	PAVEMENT		
		PW	POTABLE WATER		

THESE ABBREVIATIONS ARE FOR GENERAL REFERENCE. NOT ALL ABBREVIATIONS MAY BE USED IN THIS DESIGN, NOR IS THIS LIST COMPREHENSIVE. REFER TO INDIVIDUAL DRAWINGS, IF ABBREVIATIONS ARE NOT LISTED.

TEL: (813) 549-0919 CERTIFICATE OF AUTHORIZATION #28380 ECHO UES VERT. AS NOTE

CHA CONSULTING, INC.

TAMPA, FL 33607

CITY OF CLEARWATER

POTABLE WATER PIPING IMPROVEMENTS - PHASE 2&4&5

GENERAL NOTES AND ABBREVIATIONS

06/2023 18-0040-UT VVV/PFH HORIZ. AS NOTE ESW/WTH  ${\sf JRV}$ THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WESTON HAGGEN. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

CITY OF CLEARWATER, FLORIDA **PUBLIC WORKS DEPARTMENT -ENGINEERING** 100 S. MYRTLE AVE. VVV | 06/2023

**CLEARWATER, FL 33756** 

CALL 811 **SUNSHINE STATE** ONE CALL OF FLORIDA (800) 432-4770 MIN. 48 HOURS BEFORE YOU EXCAVATE

→ BM

52 —

 $\times$  92.5

<u>PROPOSED</u>

 $\times$  92.5

**✓→ ✓→** 

SINGLE-LINE PIPE

-X X X X X X X X . · REMOVE EXISTING PIPE

ABANDON AND GROUT FILL EXISTING PIPE

DOUBLE-LINE/3D PIPE

FLOW DIRECTION

FITTINGS

FIRE HYDRANT ASSEMBLY (INCLUDES VALVE)

AIR RELEASE VALVE ASSEMBLY

BENCHMARK

CONTOURS

VALVE

SPOT ELEVATIONS

WATER/SURFACE WATER FLOW

LIMITS OF DISTURBANCE ASSOCIATED WITH UTILITY INSTALLATION AND RESTORATION OF ROADWAY (ROAD BASE, TEMPORARY DRIVING SURFACE, ETC.)

LIMITS OF MILLING AND RESURFACING OF ENTIRE ROADWAY, INCLUDING RESTORATION OF STRIPING, SIGNAGE, REFLECTORS, AND OTHER SURFACE FEATURES

REMOVE AND REPLACE CONCRETE DRIVEWAY

> REMOVE AND REPLACE CONCRETE SIDEWALK

REMOVE AND REPLACE CONCRETE CURB AND GUTTER

MJ PLUG VALVE

FIRE HYDRANT

FITTINGS AND VALVES (DOUBLE-LINE)

AIR RELEASE VALVE FLG FITTINGS MJ BENDS FLG FLOW CONTROL VALVE MJ CAP FLG GATE VALVE MJ GATE VALVE MJ CROSS

MJ PLUG MJ REDUCER

MJ SLEEVES

MJ TEE

SURVEY LEGEND

ASPH. = ASPHALT BE = BURIED ELECTRIC N = NORTH OR NORTHINGNPW = NON-POTABLE WATER BFOC = BURIED FIBER OPTIC CABLE PEDS. = PEDESTRIANS BTV = BURIED TV CABLE PVC = POLYVINYL CHLORIDE RCW = RECLAIMED WATER CONC. = CONC.DIA. = DIAMETER S = SANITARYDIP = DUCTILE IRON PIPE E = EAST OR EASTING ELEC. = ELECTRIC SAN = SANITARYSRVC. = SERVICES/L = STREET LIGHTING SWK. = SIDEWALK ELEV. = ELEVATIONE.P. = EDGE OF PAVEMENT F.O. = FIBER OPTIC T/S = TRAFFIC SIGNALW = WATER G = GASW/ = WITHID. = IDENTIFICATION W.U.P. = WOOD UTILITY POLE INV. = INVERTMKR. = MARKER

UTILITY OWNERS

Attention: Mr. Ted Bingham 700 Carillon Parkway, Suite 6 St. Petersburg, Florida 3716-1123

Frontier Communications, Inc. Attention: Mr. Chris Blauvelt MC: FLCW5033 1280 Cleveland Street Clearwater, Florida 33782 Phone: (727) 562-1130

Phone: (727) 329-2847

Wide Open West (WOW!) FLSP2144 Attention: Mr. James Sandman Construction Project Coordinator 3001 Gandy Boulevard North

Pinellas Park, Florida 33782

Phone: (727) 239-0224 Office

Duke Energy Attention: Mr. Rico Ashley 2166 Palmetto Street, Bldg. F Clearwater, Florida 33765 Phone: (727) 562-5767

Clearwater Gas System Attention: Mr. Robert Jaeger 401 North Myrtle Avenue Clearwater, Florida 33755 Phone: (727) 562-4900 Ext. 7438

City of Clearwater Engineering Department Traffic Division Attention: 100 South Myrtle Avenue, Room 220 Clearwater, Florida 33756-4748

City of Clearwater Engineering Department Survey Division Attention: Mr. Tom Mahony 100 South Myrtle Avenue, Room 220 Clearwater, Florida 33756-4748 Phone: (727) 562-4762

Phone: (727) 562-4794

City of Clearwater **Engineering Department** Construction Management Attention: Mr. Tim Kurtz 100 South Myrtle Avenue, Room 220 Clearwater, Florida 33756 Phone: (727) 562-4737

City of Clearwater Engineering Department - Public Utilities - Potable, Wastewater, and Reclaimed Attention: Fred Hemerick 1650 North Arcturas Avenue Clearwater, Florida 33755 Phone: (727) 562-4960 Ext. 7249

CAUTIONARY SYMBOLS LEGEND

CONTRACTOR SHALL EXERCISE CAUTION IN VICINITY OF EXISTING GAS MAIN

	PHASE 2 QUANTITY TAKEOFF TABL	E	
AREA	ITEM	UNIT	AMOUNT
252A	REMOVE EXISTING 8" PIPE	LF	20
232A	REMOVE AND REPLACE CONCRETE SIDEWALK	SY	8
	REMOVE EXISTING 2" PIPE	LF	228
	GROUT AND ABANDON 2" PIPE	LF	43
268B	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	186
	MILL AND OVERLAY ASPHALT PAVEMENT	SY	104
	REMOVE AND REPLACE CONCRETE SIDEWALK	SY	30
	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	498
	MILL AND OVERLAY ASPHALT PAVEMENT	SY	988
287A	REMOVE AND REPLACE CONCRETE DRIVEWAY	SY	168
	REMOVE AND REPLACE CONC CURB & GUTTER	LF	1002
	REMOVE AND REPLACE CONCRETE SIDEWALK	SY	549
	REMOVE EXISTING 2" PIPE	LF	1267
	GROUT AND ABANDON 2" PIPE	LF	128
288A	REMOVE AND REPLACE CONC CURB & GUTTER	LF	230
	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	132
	REMOVE AND REPLACE CONCRETE SIDEWALK	SY	68
	REMOVE EXISTING 2" PIPE	LF	287
	GROUT AND ABANDON 2" PIPE	LF	96
	REMOVE AND REPLACE CONC CURB & GUTTER	LF	20
295B	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	276
	REMOVE AND REPLACE CONCRETE SIDEWALK	SY	4
	REMOVE AND REPLACE CONCRETE DRIVEWAY	SY	6
	MILL AND OVERLAY ASPHALT PAVEMENT	SY	598
308	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	155

AREA	PHASE 4 QUANTITY TAKEOFF TABL	UNIT	AMOU
ANEA	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	585
_	GROUT AND ABANDON 20" PIPE	LF	870
261B -	REMOVE AND REPLACE CONCRETE DRIVEWAY	SY	30
_	REMOVE AND REPLACE CONC CURB & GUTTER	LF	122
	REMOVE EXISTING 6" PIPE	LF	1273
-	REMOVE AND REPLACE CONC CURB & GUTTER	LF	1123
295A	REMOVE AND REPLACE CONCRETE SIDEWALK	SY	6
-	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	260
-	REMOVE AND REPLACE CONCRETE DRIVEWAY	SY	32
	REMOVE EXISTING 8" PIPE	LF	1170
-	REMOVE EXISTING 4" PIPE	LF	40
_	REMOVE AND REPLACE CONC CURB & GUTTER	LF	67
100A	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	522
-	MILL AND OVERLAY ASPHALT PAVEMENT	SY	2217
-	REMOVE AND REPLACE CONCRETE SIDEWALK	SY	411
-	REMOVE AND REPLACE CONCRETE DRIVEWAY	SY	79
	REMOVE AND REPLACE CONC CURB & GUTTER	LF	8
274A -	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	44
	GROUT AND ABANDON XX" PIPE	LF	391
_	REMOVE AND REPLACE CONCRETE SIDEWALK	SY	25
291B	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	31
	REMOVE AND REPLACE CONCRETE DRIVEWAY	SY	104
	REMOVE AND REPLACE CONC CURB & GUTTER	LF	107
269A	REMOVE EXISTING PIPE	LF	294
	REMOVE 2" EXISTING PIPE	LF	204
289B	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	239
	REMOVE AND REPLACE CONCRETE DRIVEWAY	SY	307

	PHASE 5 QUANTITY TAKEOFF TABL	E	
AREA	ITEM	UNIT	AMOUNT
	GROUT FILL EXISTING 2" PIPE	LF	1096
	REMOVE AND REPLACE CONC CURB & GUTTER	LF	22
287B	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	46
2075	MILL AND OVERLAY ASPHALT PAVEMENT	SY	323
	REMOVE AND REPLACE CONCRETE SIDEWALK	SY	46
	REMOVE AND REPLACE CONCRETE DRIVEWAY	SY	56
	GROUT FILL EXISTING 2" PIPE	LF	4008
	REMOVE AND REPLACE CONC CURB & GUTTER	LF	167
296B -	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	233
2900	MILL AND OVERLAY ASPHALT PAVEMENT	SY	141
	REMOVE AND REPLACE CONCRETE SIDEWALK	SY	148
	REMOVE AND REPLACE CONCRETE DRIVEWAY	SY	612
	GROUT FILL EXISTING 2" PIPE	LF	1533
	REMOVE AND REPLACE CONC CURB & GUTTER	LF	304
307A	REMOVE AND REPLACE ASPHALT PAVEMENT	SY	129
	REMOVE AND REPLACE CONCRETE DRIVEWAY	SY	223
	MILL AND OVERLAY ASPHALT PAVEMENT	SY	263

NOTE: THESE LEGENDS ARE FOR GENERAL REFERENCE. NOT ALL ABBREVIATIONS, SYMBOLS, PROCESSES, MATERIALS, OR FITTINGS MAY BE USED IN THIS DESIGN, NOR IS THIS LEGEND COMPREHENSIVE. REFER TO INDIVIDUAL DRAWING LEGEND(S), IF ABBREVIATIONS ARE NOT LISTED. INDIVIDUAL DISCIPLINE STANDARD LEGENDS SUPERCEDE THIS GENERAL LEGEND, IF PROVIDED.

CHA CONSULTING, INC. TAMPA, FL 33607 TEL: (813) 549-0919

**RECORD DRAWINGS** PROJECT ENGINEER O: ISSUED FOR BID |VVV| 06/2023 BY DATE **REVISION** 

CITY OF CLEARWATER, FLORIDA **PUBLIC WORKS DEPARTMENT -ENGINEERING** 100 S. MYRTLE AVE. **CLEARWATER, FL 33756** 

CALL 811 SUNSHINE STATE ONE CALL OF FLORIDA www.callsunshine.con (800) 432-4770 MIN. 48 HOURS BEFORE YOU EXCAVATE

CITY OF CLEARWATER POTABLE WATER PIPING IMPROVEMENTS - PHASE 2&4&5

LEGENDS AND QUANTITIES

		CERTIFICATE C	OF AUTHORIZATION #28386
DWG NAME:	FIELD BOOK:	SURVEYED BY:	SCALE:
G03	N/A	ECHO UES	vert. AS NOTED
contract no.: 18-0040-UT	06/2023	DRAWN BY:  VVV/PFH	HORIZ. AS NOTED
<b>ЈОВ NO.:</b> 072875	DESIGNED BY: ESW/WTH	CHECKED BY: JRV	SHEET NO.: 03 OF 64
PRINTED COPIES OF 1	EN DIGITALLY SIGNED THIS DOCUMENT ARE N TURE MUST BE VERIFII	NOT CONSIDERED :	SIGNED AND SEALED

					PI	HASE :	2 TEST HO	DLES				
Test Hole	Utility Type	Utility Material	Utility Size Outside Diameter (inches)	Utility Manual Depth (Feet)	Identified By	Surface Type	Surface Thickness (inches)	Apparent Utility Owner	Northing	Easting	Ground Elevation	Utilty Elevation
308-1	WM	CI	12"	2.28'	X	CONC	2"	CITY OF CLEARWATER	1319459.99'	401240.29'	44.71'	42.43'
308-2A	SAN	VCP	4"	1.62'	NL	ASPH	2"	CITY OF CLEARWATER	1319454.53'	401244.99'	45.03'	43.41'
308-2B	WM	CI	4"	3.00'	NL	ASPH	2"	CITY OF CLEARWATER	1319452.79'	401245.12'	45.04'	42.04'
308-3	TS	PVC	2-2"	2.30'	NL	CONC	6"	CITY OF CLEARWATER	1319341.06'	401262.22'	44.35'	42.05'
308-5	FOC	PVC	4"	5.10'	NL	ASPH	6"	MCI	1319333.12'	401265.29'	44.19'	39.09'
308-6	WM	CI	16"	2.70'	IRC	NG	4"	CITY OF CLEARWATER	1319326.08'	401293.11'	44.39'	41.69'
252A-1	WM	CI	16"	2.78'	IRC	NG	N/A	CITY OF CLEARWATER	1329847.09'	405605.70'	29.94'	27.16'
252A-2	WM	CI	16"	2.74'	IRC	NG	N/A	CITY OF CLEARWATER	1329846.21'	405756.85'	31.86'	29.12'
252A-3	UNK	VCP	6"	3.20'	IRC	NG	N/A	UNKNOWN	1329907.20'	405759.33'	31.12'	27.92'
252A-4	BT	DBC	1"	2.56'	IRC	NG	N/A	FRONTIER	1329907.25'	405759.64'	31.09'	28.53'
252A-5	WM	CI	2"	2.82'	IRC	NG	N/A	CITY OF CLEARWATER	1329906.64'	405605.58'	28.07'	25.25'
252A-6	WM	CI	2"	1.36'	NL	ASPH	3"	CITY OF CLEARWATER	1329885.78'	405608.23'	28.91'	27.55'
268B-1	WM	CI	6"	2.04'	NL	ASPH	6"	CITY OF CLEARWATER	1326702.46'	398709.75'	19.68'	17.64'
268B-2	SL	CI	4"	3.26'	NL	ASPH	6"	CITY OF CLEARWATER	1326654.81'	398923.83'	27.22'	23.96'
268B-3	BT	CI	4"	3.12'	NL	ASPH	6"	CITY OF CLEARWATER	1326654.65'	398924.43'	27.23'	24.11'
268B-4	GM	PE	2"	4.90'	NL	ASPH	6"	CITY OF CLEARWATER	1326658.00'	398922.28'	27.04'	22.14'
268B-5	WM	CI	6"	1.50'	NL	ASPH	6"	CITY OF CLEARWATER	1326656.30'	398971.10'	27.30'	25.80'
287A-1	WM	DIP	8"	1.80'	IRC	NG	N/A	CITY OF CLEARWATER	1321899.78'	400602.08'	32.06'	30.26'
287A-2	WM	DIP	12"	2.06'	NL	ASPH	4"	CITY OF CLEARWATER	1321305.58'	400604.98'	34.69'	32.63'
287A-2B	FOC	PE	2"	2.04'	NL	ASPH	4"	MCI	1321305.07'	400604.75'	34.69'	32.65'
287A-3	WM	PVC	8"	4.24'	NL	ASPH	4"	CITY OF CLEARWATER	1321017.01'	400599.92'	33.17'	28.93'
287A-5	WM	CI	16"	2.20'	IRC	NG	4"	CITY OF CLEARWATER	1319339.29'	400645.94'	39.91'	37.71'
288A-1	WM	CI	10"	3.12'	NL	ASPH	4"	CITY OF CLEARWATER	1319209.39'	404592.51'	45.08'	41.96'
288A-2	FOC	PVC	4"	2.90'	IRC	NG	N/A	MCI	1319206.22'	404640.98'	48.31'	45.41'
288A-3	WM	PVC	2"	2.20'	IRC	NG	N/A	CITY OF CLEARWATER	1319207.89'	404640.97'	48.25'	46.05'
288A-4	FOC	PE	1"	2.40'	X	NG	N/A	FRONTIER	1319187.77'	405212.12'	66.20'	63.80'
288A-5	FOC	PE	2-2"	2.60'	IRC	NG	N/A	FRONTIER	1319187.50'	405219.27'	65.91'	63.31'
288A-6	FOC	PE	2"	6.58'	NL	ASPH	4"	FRONTIER	1319189.80'	405226.16'	66.00'	59.42'
288A-7	GS	PE	1"	2.02'	X	CONC	6"	CLEARWATER GAS	1319188.42'	405381.66'	70.18'	68.16'
288A-8	FOC	PVC	3-4"	2.02'	X	CONC	6"	FRONTIER	1319182.14'	405745.58'	73.96'	71.94'
288A-9	TS	PVC	2"	1.80'	IRC	NG	4"	CITY OF CLEARWATER	1319182.63'	405848.65'	74.65'	72.85'
288A-10A	TS	PVC	MULTIPLE 2"	1.58'	X	CONC	6"	CITY OF CLEARWATER	1319180.51'	405858.29'	74.26'	72.68'
288A-10B	TS/FOC	PVC	2"	1.54'	X	CONC	6"	CITY OF CLEARWATER	1319181.19'	405858.97'	74.22'	72.68'
288A-10C	GM	STL	4"	1.90'	X	CONC	6"	CLEARWATER GAS	1319180.59'	405860.07'	74.17'	72.27'
288A-10D	WM	PVC	2"	2.04'	X	CONC	6"	CITY OF CLEARWATER	1319180.31'	405860.22'	74.16'	72.12'
288A-10E	FOC/BT	PVC	MULTIPLE 4"	1.84'	X	CONC	6"	FRONTIER	1319179.82'	405858.11'	74.29'	72.45'
288A-11	FOC	PE	2"	9.96'	NL	ASPH	6"	FPL	1319182.12'	405875.43'	74.20'	64.24'
288A-13A	FOC/BT	PE	MULTIPLE 4"	3.34'	NL	ASPH	4"	FRONTIER	1319178.85'	405892.84'	74.44'	71.10'
288A-13B	GM	STL	4"	2.44'	NL	ASPH	4"	CLEARWATER GAS	1319177.66'	405893.70'	74.45'	72.01'
288A-14	FOC/BT	AC	3-4"	3.14'	NL	ASPH	4"	FRONTIER	1319176.66'	405898.05'	74.54'	71.40'
288A-15	WM	CI	8"	2.50'	NL	ASPH	4"	CITY OF CLEARWATER	1319174.39'	405928.83'	74.47'	71.97'
288A-16	SAN	VCP	8"	3.32'	X	CONC	6"	CITY OF CLEARWATER	1319177.44'	405973.41'	74.67'	71.35'
288A-17	WM	CI	6"	2.92'	X	CONC	6"	CITY OF CLEARWATER	1319174.50'	405973.40'	74.67'	71.75'
295B-1	WM	CI	6"	2.32'	NL	ASPH	3"	CITY OF CLEARWATER	1318411.72'	397365.75'	37.52'	35.20'
295B-2	RCW	PVC	4"	2.38'	NL	ASPH	2"	CITY OF CLEARWATER	1318383.72'	397365.83'	37.55'	35.17'
295B-3	BE	PVC	1"	1.80'	NL	ASPH	3"	CITY OF CLEARWATER	1318039.00'	397362.96'	35.75'	33.95'
295B-4	BT	PVC	4"	3.52'	NL	ASPH	4"	FRONTIER	1318038.77'	397362.98'	35.75'	32.23'
295B-5	WM	CI	6"	1.80'	NL	ASPH	3"	CITY OF CLEARWATER	1318029.61'	397362.81'	35.74'	33.94'

	-				PF	IASE 4	4 TEST	HOLES	-			
Test Hole	Utility Type	Utility Material	Utility Size Outside Diameter (Inches)	Utility Manual Depth feet	Identified By	Surface Type	Surface Thickness Inches	Utility Owner	Northing	Easting	Ground Elevation	Utility Elevation
100A-1	WM	CI	8"	2.64'	X	CONC	4"	CITY OF CLEARWATER	1321299.75'	400881.20'	35.43'	32.79'
100A-2 100A-3	GM FOC/BT	PE	4" 8"	2.92' 1.46'	X NL	CONC ASPH	4" 4"	CLEARWATER GAS FRONTIER	1321300.73' 1321310.10'	400880.92' 400890.60'	35.42' 35.61'	32.50' 34.15'
100A-3	GM	PE	2"	3.30'	NL NL	ASPH	12"	CLEARWATER GAS	1321310.10	400890.00	36.20'	32.90'
100A-5	GM	PE	2"	3.16'	X	CONC	4"	CLEARWATER GAS	1321498.15'	401225.00'	37.57'	34.41'
100A-5A	CATV	PVC	2"	2.24'	X	CONC	4"	SPECTRUM	1321497.94'	401223.50'	37.59'	35.35'
100A-6	GM	STL	2"	1.16'	NL	ASPH	4"	CLEARWATER GAS	1321506.92'	401219.98'	37.51'	36.35'
100A-7	WM	PVC	4"	3.24'	NL	ASPH	6"	CITY OF CLEARWATER	1321523.32'	401247.08'	37.58'	34.34'
100A-8 100A-9	FOC WM	DBC PVC	0.5" 4"	2.10' 3.28'	NL NL	ASPH ASPH	6" 4"	FRONTIER  CITY OF CLEARWATER	1321529.29' 1321850.94'	401252.21' 401758.98'	37.67' 40.80'	35.57' 37.52'
100A-10	FOC/BT	CONC	10"	1.88'	NL	ASPH	4"	FRONTIER	1321896.43'	401843.31'	41.00'	39.12'
100A-11	WM	CI	2"	2.40'	X	CONC	4"	CITY OF CLEARWATER	1321895.16'	401861.37'	41.23'	38.83'
100A-11A	ВТ	DBC	1"	2.66'	X	CONC	4"	FRONTIER	1321895.68'	401861.29'	41.24'	38.58'
100A-12	GM	PE	2"	3.70'	NL	ASPH	6"	CLEARWATER GAS	1321523.75'	401247.73'	37.57'	33.87'
100A-13 261B-1	WS WM	CI	3"	1.40' 3.00'	NL IRC	ASPH NG	6" 4"	CITY OF CLEARWATER CITY OF CLEARWATER	1321524.05' 1329804.46'	401248.32' 409149.09'	37.58' 60.76'	36.18' 57.76'
261B-2	GM	STL	6"	3.38'	NL	ASPH	6"	CLEARWATER GAS	1329861.39'	409149.09	60.40'	57.02'
261B-3	FOC	PE	2-2"	3.26'	NL	ASPH	6"	FRONTIER	1329879.70'	409150.68'	60.21'	56.95'
261B-4	WM	CI	8"	3.40'	NL	ASPH	6"	CITY OF CLEARWATER	1329884.85'	409150.17'	60.13'	56.73'
261B-5	BT	DBC	1"	2.72'	IRC	NG	N/A	FRONTIER	1330080.36'	409190.57'	58.37'	55.65'
261B-6	BT	DBC	1"	4.20'	IRC	NG	4"	FRONTIER	1330622.65'	409179.94'	60.26'	56.06'
261B-7 261B-8	WM CATV	CI PVC	6" 2"	1.58' 4.48'	NL NL	ASPH ASPH	4" 4"	CITY OF CLEARWATER  SPECTRUM	1330751.60' 1330745.01'	409219.90' 409749.18'	59.85'	58.27' 54.23'
261B-8 261B-9	WM	CI	8"	2.12'	NL NL	ASPH	4" 4"	CITY OF CLEARWATER	1330745.01	409749.18'	58.71' 58.66'	54.23'
261B-10	WM	CI	UNK	5.64'	IRC	NG	3"	CITY OF CLEARWATER	1330738.12'	409731.09	59.13'	53.49'
261B-11	BT	PVC	2-4"	3.00'	NL	ASPH	6"	FRONTIER	1329888.35'	409150.32'	60.05'	57.05'
261B-12	BT	PVC	2"	2.90'	IRC	NG	4"	FRONTIER	1330624.27'	409179.84'	60.27'	57.37'
261B-13	WM	CI	20"	3.42'	IRC	NG	N/A	CITY OF CLEARWATER	1329820.07'	409144.90'	60.82'	57.40'
261B-14	CATV	PVC	2"	1.84'	IRC	NG	N/A	SPECTRUM	1330096.07'	409192.67'	58.47'	56.63'
269A-1A	BE BE	PVC PVC	3"	1.32'	NL NL	ASPH ASPH	6" 6"	DUKE ENERGY DUKE ENERGY	1326832.19'	399941.50' 399941.75'	25.93' 25.94'	24.61' 24.62'
269A-1A 269A-2	CATV	PVC	2"	1.36'	NL NL	ASPH	6"	SPECTRUM	1326832.40'	399941.73	25.95'	24.59'
269A-3	WM	GALV	2"	1.68'	NL	ASPH	6"	CITY OF CLEARWATER	1326835.64'	399942.20'	26.01'	24.33'
269A-4	WM	CI	6"	2.25'	IRC	NG	3"	CITY OF CLEARWATER	1326960.02'	400083.41'	23.69'	21.44'
279B-1	WM	CI	20"	3.36'	IRC	NG	3"	CITY OF CLEARWATER	1324179.88'	408596.14'	68.42'	65.06'
279B-2	FOC	PVC	2"	0.20'	IRC	NG	3"	FRONTIER	1324210.23'	408608.04'	67.66'	67.46'
279B-3	WM	CI	20"x16"	1.60'	IRC	NG	3"	CITY OF CLEARWATER	1324197.52'	408644.12'	69.03'	67.43'
279B-4 279B-5	BE FM	PVC PVC	2-4" 12"	1.16' 3.70'	IRC IRC	NG NG	3" N/A	DUKE ENERGY PINELLAS COUNTY	1324335.64' 1324507.14'	408609.87' 408587.46'	65.99' 66.79'	64.83' 63.09'
279B-6	WM	CI	16"	2.70'	IRC	NG	N/A	CITY OF CLEARWATER	1324518.03'	408593.30'	66.52'	63.82'
279B-7	WM	CI	12"	3.24'	IRC	NG	N/A	CITY OF CLEARWATER	1324520.02'	408593.19'	66.43'	63.19'
289B-1	WM	CI	6"	5.65'	X	CONC	4"	CITY OF CLEARWATER	1321457.49'	414228.50'	73.14'	67.49'
289B-2	BE	PVC	4"	2.48'	NL	ASPH	6"	DUKE ENERGY	1321451.90'	414365.35'	74.58'	72.10'
289B-3	GM	PE	2"	4.10'	NL	ASPH	6"	CLEARWATER GAS	1321451.26'	414373.33'	74.65'	70.55'
289B-4 289B-5	BE BE	PVC PVC	4" 4"	2.44' 2.50'	NL NL	ASPH ASPH	6" 6"	DUKE ENERGY DUKE ENERGY	1321451.35' 1321451.97'	414377.44'	74.65' 74.72'	72.21' 72.22'
289B-5 289B-6	WM	CI	6"	2.72'	IRC	NG	3"	CITY OF CLEARWATER	1321451.97	414588.51	73.41'	70.69'
291B-1	FM	HDPE	10"	7.86'	IRC	NG	N/A	PINELLAS COUNTY	1320583.86'	423289.82'	35.31'	27.45'
291B-2-1	FOC/BT	PVC	3-4"	4.38'	NL	ASPH	6"	FRONTIER	1321776.73'	424275.53'	39.63'	35.25'
291B-2-2	WM	CI	12"	2.57'	NL	ASPH	6"	CITY OF CLEARWATER	1321772.15'	424275.56'	39.39'	36.82'
291B-2-3	ļ .		_						INTENTIONALLY			·
291B-2-4	CATV	PVC	2"	1.08'	IRC IRC	NG	3"	SPECTRUM DUKE ENERGY	1321676.97'	424202.91'	38.69'	37.61'
291B-2-5 291B-2-6	BE WM	DBC	6-1"	2.04' 2.54'	IRC X	NG CONC	3" 6"	DUKE ENERGY CITY OF CLEARWATER	1321670.87' 1321211.75'	424202.74' 423235.00'	38.65' 44.61'	36.61' 42.07'
291B-2-7	BE	PVC	4"	0.70'	X	CONC	6"	DUKE ENERGY	1321211.73	423233.00	44.61	43.92'
291B-2-8	BT	DBC	2"	2.56'	NL	ASPH	4"	FRONTIER	1321212.18'	423289.39'	44.52'	41.96'
291B-2-8A	FOC/BT	PVC	4"	2.56'	NL	ASPH	4"	FRONTIER	1321212.25'	423289.79'	44.53'	41.97'
291B-2-9	CATV	PVC	2"	1.32'	NL	ASPH	4"	SPECTRUM	1321212.35'	423299.73'	44.44'	43.12'
291B-2-10	BE	PVC	4-2"	2.40'	NL IDG	ASPH	4"	DUKE ENERGY	1321213.87'	423392.90'	43.13'	40.73'
291B-2-11 291B-2-12	BE WM	DBC PVC	1" 6"	2.52' 2.56'	IRC IRC	NG NG	N/A N/A	DUKE ENERGY CITY OF CLEARWATER	1321223.92'	423430.60' 423435.57'	43.04' 42.89'	40.52' 40.33'
291B-2-12A	BT	DBC	0.5"	1.56'	IRC	NG NG	N/A N/A	FRONTIER	1321224.06	423435.57	42.89'	41.39'
291B-2-12A	WM	PVC	6"	1.96'	IRC	NG	N/A	CITY OF CLEARWATER	1321557.47'	424177.33'	38.69'	36.73'
295A-1	WM	CI	6"	2.88'	IRC	NG	4"	CITY OF CLEARWATER	1316687.84'	398805.22'	37.23'	34.35'
295A-2	WM	RCP	16"	1.86'	IRC	ASPH	4"	CITY OF CLEARWATER	1316689.76'	398769.94'	37.04'	35.18'
295A-3	WM	CI & RCP	6" & 16"	1.96'	IRC	NG	N/A	CITY OF CLEARWATER	1316689.14'	398766.62'	37.16'	35.20'
295A-2-1	GM	PE	2"	3.78'	X	NG	3"	CLEARWATER GAS	1316701.14'	397970.98'	36.16'	32.38'
295A-2-1A 295A-2-2	TS GM	PVC STL	2-2" 4.5"	1.00' 0.72'	X NL	NG ASPH	3" 4"	CITY OF CLEARWATER  CLEARWATER GAS	1316701.15' 1316706.08'	397970.42' 397951.79'	36.18' 35.89'	35.18' 35.17'
295A-2-2A	UNK	STL	4.5"	1.06'	NL NL	ASPH	4" 4"	UNKNOWN	1316706.08	397951.79'	35.89'	34.82'
295A-2-3	WM	CI	8"	2.32'	NL	ASPH	4"	CITY OF CLEARWATER	1316705.74'	397947.49'	35.94'	33.62'
295A-2-4	BE	GALV	2"	2.52'	IRC	NG	4"	DUKE ENERGY	1316688.59'	398765.96'	37.08'	34.56'
295A-2-5	GM	PE	2"	3.10'	NL	ASPH	6"	CLEARWATER GAS	1316690.89'	399221.69'	40.54'	37.44'
295A-2-6	WM	CI	8"	3.58'	NL	ASPH	6"	CITY OF CLEARWATER	1316691.16'	399224.55'	40.59'	37.01'
295A-2-7	TS	PVC	4"	3.96'	NL	ASPH	6"	CITY OF CLEARWATER	1316691.23'	399225.18'	40.59'	36.63'
306B-1 306B-2	GS	STL	2"	1.74'	NL NI	ASPH	4" 4"	CITY OF CLEARWATER	1316598.35' 1316596.97'	402365.09' 402365.77'	53.22' 53.37'	51.48'
	WS	CI	<u> </u>	2.11'	NL	ASPH		CITY OF CLEARWATER	<del> </del>			51.26'
306B-2 306B-3	GM	STL	2"	2.42'	NL	ASPH	6"	CLEARWATER GAS	1316054.59'	402565.86'	57.68'	55.26'

					PHA	SE 5 TI	EST HC	<u>DLES</u>				
Test Hole	Utility Type	Utility Material	Utility Size Outside Diameter (Inches)	Utility Manual Depth feet	Identified By	Surface Type	Surface Thickness Inches	Utility Owner	Northing	Easting	Ground Elevation	Utility Elevation
287B-1	FOC	PE	1.5"	3.42'	IRC	NG	N/A	FRONTIER	1320038.53'	402428.78'	38.13'	34.71'
287B-2	GM	PE	2"	3.02'	IRC	NG	N/A	CLEARWATER GAS	1320037.75'	402428.43'	38.18'	35.16'
287B-3	WM	PVC	6"	2.56'	IRC	NG	N/A	CITY OF CLEARWATER	1320033.22'	402478.49'	36.66'	34.10'
287B-4	GM	PE	1.5"	2.40'	IRC	NG	N/A	CLEARWATER GAS	1320221.06'	402131.00'	47.39'	44.99'
287B-5	WM	CI	6"	4.10'	IRC	NG	N/A	CITY OF CLEARWATER	1320431.60'	402226.99'	47.52'	43.42'
296B-1	FOC	PVC	4"	8.44'	NL	ASPH	4"	MCI	1317645.84'	401953.45'	39.31'	30.87'
296B-2	WM	DIP	10"	3.94'	NL	ASPH	4"	CITY OF	1317645.53'	401955.49'	39.33'	35.39'
	FOC	PE	3-1.5"	4.24'			4"	CLEARWATER				
296B-3 296B-4	FOC	PVC	3-1.5" 4"	4.24	NL NL	ASPH ASPH	4"	AT&T PINELLAS COUNTY	1317645.43' 1317645.17'	401958.36' 401960.41'	39.35' 39.37'	35.11' 35.20'
296B-5		ORY - NO UTILITI			NL	ASPH	4"	N/A	1317645.27'	401962.11'	39.38'	N/A
296B-6	GM	PE	2"	1.90'	IRC	NG	4"	CLEARWATER GAS	1316914.10'	403212.24'	28.48'	26.58'
296B-7	FOC	PE	1.5"	1.94'	IRC	NG	4"	FRONTIER	1316912.92'	403213.23'	28.38'	26.44'
296B-8	FM	DIP	12"	2.90'	X	NG	4"	CITY OF CLEARWATER	1316913.50'	403217.47'	28.25'	25.35'
296B-9	WM	CI	8"	3.35'	NL	ASPH	4"	CITY OF	1317308.67'	401953.05'	42.69'	39.34'
				ļ				CLEARWATER				
296B-10	FOC	PE	2-1.5"	7.20'	NL NI	ASPH	4" 4"	AT&T	1317308.66'	401955.69'	42.71'	35.51'
296B-11 296B-12	FOC FOC	PVC PE	3-1.5"	3.20' 3.80'	NL NL	ASPH ASPH	4" 4"	PINELLAS COUNTY  ZAYO	1317308.45' 1317308.23'	401960.90' 401962.41'	42.69'	39.49' 38.91'
296B-12 296B-13	GM	PE PE	2"	5.26'	NL NL	ASPH	4"	CLEARWATER GAS	1317308.23'	401962.41	42.71	37.44'
296B-14	WM	CI	6"	3.58'	IRC	NG		CITY OF	1316916.72'	403263.18'	28.47'	24.89'
∠70D-14	VV IVI	CI	Ů,		IKC	NO	N/A	CLEARWATER	1310910./2	703203.18	40.47	24.09
296B-15	WM	CI	6"	2.60'	IRC	NG	N/A	CITY OF CLEARWATER	1317288.57'	403262.24'	25.31'	22.71'
296B-16	WM	CI	8"	2.20'	IRC	NG	N/A	CITY OF CLEARWATER	1316968.82'	402554.34'	43.72'	41.52'
20/D 17	3373.4	CI	CII.	2 201	IDC	NC	27/4	CITY OF	1217640.021	402550.051	25.00	22.721
296B-17	WM	CI	6"	2.28'	IRC	NG	N/A	CLEARWATER	1317640.92'	402559.05'	35.00'	32.72'
296B-18	GM	PE	2"	2.76'	IRC	NG	N/A	CLEARWATER GAS	1317634.42'	402455.81'	36.69'	33.93'
296B-19	FOC	PE	4"	5.36'	NL	ASPH	4"	PINELLAS COUNTY  CITY OF	1316931.17'	401957.65'	46.83'	41.47'
296B-20	WM	CI	6"	3.86'	NL	ASPH	4"	CLEARWATER	1316931.37'	401952.04'	46.82'	42.96'
296B-21	WS	CI	2.5"	1.84'	NL	ASPH	4"	CITY OF CLEARWATER	1316932.04'	401953.12'	46.80'	44.96'
296B-22	EXPLORATO	ORY - NO UTILITI	ES FOUND - CLE	EARED TO 10'	NL	ASPH	4"	N/A	1316931.15'	401960.71'	46.83'	N/A
296B-23	GM	PE	2.5"	2.20'	NL	ASPH	4"	CLEARWATER GAS	1316932.23'	401949.64'	46.83'	44.63'
296B-24	WM	PVC	2.5"	1.88'	NL	ASPH	4"	CITY OF CLEARWATER	1316931.67'	401956.55'	46.82'	44.94'
296B-25	FOC	PE	2-1.5"	2.36'	IRC	NG	4"	FRONTIER	1317295.46'	403220.17'	25.55'	23.19'
296B-26	FM	DIP	12"	3.26'	IRC	NG	4"	CITY OF	1317295.41'	403220.50'	25.56'	22.30'
				ļ				CLEARWATER				
296B-27	BT	DBC	1.5"	3.04'	IRC	NG	4"	FRONTIER CITY OF	1317295.35'	403220.79'	25.58'	22.54'
296B-28	RCW	PVC	6"	5.26'	X	CONC	4"	CLEARWATER	1317294.86'	403217.11'	25.61'	20.35'
296B-29	BT	DBC	1"	2.62'	X	CONC	4"	FRONTIER	1317295.54'	403217.84'	25.59'	22.97'
296B-30	GM	PE	2"	2.56'	IRC	NG	4"	CLEARWATER GAS	1317627.08'	403214.44'	23.88'	21.32'
296B-31	RCW	PVC	6"	3.10'	IRC	NG	4"	CITY OF CLEARWATER	1317628.50'	403216.43'	23.65'	20.55'
296B-32	GM	PE	2"	2.50'	X	CONC	6"	CLEARWATER GAS	1317627.81'	402822.67'	30.19'	27.69'
296B-33	BT	DBC	1"	2.85'	X	CONC	6"	FRONTIER	1317628.61'	403218.67'	23.59'	20.74'
296B-34	FM	DIP	12"	3.60'	IRC	NG	4"	CITY OF CLEARWATER	1317627.91'	403221.51'	23.82'	20.22'
296B-35	FOC	PE	2-1.5"	2.40'	IRC	NG	4"	FRONTIER	1317628.01'	403223.54'	23.65'	21.25'
296B-36	WM	CI	6"	2.60'	IRC	NG	4"	CITY OF	1317627.17'	403263.52'	23.69'	21.09'
								CLEARWATER CITY OF				+
296B-37	WM	CI	6"	2.42'	IRC	NG	N/A	CLEARWATER	1317302.61'	402556.90'	41.61'	39.19'
307A-1	FOC	PE	2-1.5"	1.94'	IRC	NG	4"	FRONTIER	1315511.66'	405322.89'	39.67'	37.73'
307A-2	WM	CI	6"	2.44'	HUB	NG	4"	CITY OF CLEARWATER	1315545.01'	405306.77'	38.54'	36.10'
307A-3	WM	CI	6"	2.10'	IRC	NG	4"	CITY OF	1315553.60'	405131.16'	35.89'	33.79'
307A-4	FOC	PE	1.5"	2.72'	IRC	NG	4"	CLEARWATER FRONTIER	1315870.93'	405130.37'	30.60'	27.88'
307A-5	FOC	PE	1.5"	2.38'	IRC	NG	4"	FRONTIER	1316031.50'	405131.38'	28.65'	26.27'
307A-6	FOC	PE	1.5"	2.80'	IRC	NG	4"	FRONTIER	1316166.55'	405124.39'	26.60'	23.80'
307A-7	FOC	PE	1.5"	1.64'	IRC	NG	4"	FRONTIER	1316313.44'	405133.74'	24.67'	23.03'
307A-8	WM	CI	6"	1.48'	IRC	NG	4"	CITY OF	1316316.51'	405133.75'	24.86'	23.38'
							4	CLEARWATER CITY OF				1
307A-9	WM	CI	6"	2.18'	IRC	NG	4"	CLEARWATER	1316307.65'	405330.18'	25.11'	22.93'
307A-10	FOC	DBC	0.25"	0.30'	IRC	NG	1"	FRONTIER	1316267.53'	405327.97'	25.31'	25.01'
307A-11	WM	PVC	2"	2.68'	IRC	NG	4"	CITY OF CLEARWATER	1316220.34'	405334.49'	26.90'	24.22'
307A-12	GS	PE	1"	2.26'	IRC	NG	4"	CLEARWATER GAS	1315844.28'	405330.74'	33.06'	30.80'
307A-13	WM	PVC	2"	1.56'	IRC	NG	4"	CITY OF CLEARWATER	1315625.08'	405338.37'	38.07'	36.51'
307A-14	WM	Ci	2"	1.621	IDC	NG	4"	CITY OF	1315619.95'	105224 721	38.23'	36.61'
	1A/ I\/I	CI	2"	1.62'	IRC	ı NG	4′′	CLEARWATER	1 112019 95'	405334.73'	18 7.5	36.61

	CERTIFICAT
CHA	CHA C 3507 EAST

	RECORD I	DRAWINGS				
SURVEYED BY:		DRAWN BY:				
REVIEWED BY:						
	PROJECT ENGIN	IEER	DATE			
APPROVED BY:				0: ISSUED FOR BID	VVV	06/2023
			DATE	REVISION	BY	DATE

CITY OF CLEARWATER, FLORIDA
PUBLIC WORKS DEPARTMENT ENGINEERING

WWW. Callsunshine.com 100 S. MYRTLE AVE. CLEARWATER, FL 33756

(800) 432-4770 MIN. 48 HOURS BEFORE YOU EXCAVATE

CITY OF CLEARWATER
POTABLE WATER PIPING IMPROVEMENTS — PHASE 2&4&5

	CHA	3507 EAST FR TA TE	NSULTING, INC. ONTAGE ROAD SUITE 180 MPA, FL 33607 L: (813) 549-0919 DF AUTHORIZATION #28386
DWG NAME:	FIELD BOOK:	SURVEYED BY:	SCALE:
G04	N/A	ECHO UES	VERT. AS NOTEI
CONTRACT NO.:	DATE DRAWN:	DRAWN BY:	
18-0040-UT	06/2023	VVV/PFH	HORIZ. AS NOTEI
JOB NO.:	DESIGNED BY:	CHECKED BY:	SHEET NO.:
072875	ESW/WTH	JRV	04 OF 64
THIS ITEM HAS BEE	EN DIGITALLY SIGNED		

TEST HOLE INFORMATION

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION
A156	1320504.67	423397.04	34.55	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A157	1320627.15	423398.50	35.19	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A158	1320498.01	423311.91	35.34	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"
A159	1320628.76	423314.50	36.33	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"
A160	1320604.81	423237.07	35.28	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A161	1320524.72	423295.08	35.17	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A162	1320454.64	423238.23	34.82	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A163	1321196.47	423232.71	44.57	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A164	1321223.52	423299.65	44.31	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A165	1321164.08	423279.69	44.19	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A166	1321555.37	424049.10	36.55	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A167	1321665.81	424051.07	38.29	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"
A168	1321588.33	424207.87	38.22	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A169	1321650.96	424217.44	38.66	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"
A170	1321691.12	423853.68	41.63	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A171	1321733.07	424103.13	40.94	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"
A172	1321733.05	424330.63	40.12	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"

AREA 289B PROJECT CONTROL							
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION			
A140	1321549.02	414382.44	75.47	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A141	1321466.38	414389.53	74.82	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A142	1321447.31	414249.80	73.20	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A143	1321413.35	414224.54	73.09	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			

	AREA 279B PROJECT CONTROL							
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION				
A173	1324563.04	408648.89	67.04	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"				
A174	1324432.07	408680.08	68.05	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"				
A175	1324315.63	408599.04	66.10	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"				
A176	1324185.42	408675.09	69.13	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A177	1324116.68	408676.10	69.34	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"				
A178	1324083.93	408590.19	69.35	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"				

AREA 274A PROJECT CONTROL							
POINT NAME (Y) (X) (Z) NORTHING EASTING ELEVATION DESCRIPTION							
A128	1327090.29	426476.06	52.79	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"			
A129	1327005.71	426398.07	52.97	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A130	1327007.88	426755.30	43.57	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			

			287A	
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION
A012	1320988.04	400545.08	33.34	MAG NAIL & WASHER "ECHO UES TP LB 8184"
A013	1321071.76	400560.32	33.25	MAG NAIL & WASHER "ECHO UES TP LB 8184"
A55	1319339.62	400646.89	39.85	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"
A56	1319464.46	400726.73	40.77	MAG NAIL & WASHER "ECHO UES TP LB 8184"
A57	1319512.93	400611.79	39.98	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"
A58	1319814.40	400571.28	35.05	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"
A59	1320081.28	400605.78	31.43	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"
A60	1320449.16	400601.97	30.00	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"
A61	1320770.51	400564.59	31.18	MAG NAIL & WASHER "ECHO UES TP LB 8184"

AREA 252A PROJECT CONTROL							
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION			
A66	1329855.21	405634.15	30.01	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"			
A67	1329959.92	405614.92	25.60	MAG NAIL & WASHER "ECHO UES TP LB 8184"			
A68	1329853.31	405991.03	33.80	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"			
A69	1329842.92	406320.65	33.98	MAG NAIL & WASHER "ECHO UES TP LB 8184"			
A127	1329931.61	405868.28	31.96	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"			

AREA 288A PROJECT CONTROL						
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION		
A107	1319189.06	404493.69	43.54	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"		
A108	1319140.34	404488.85	43.65	MAG NAIL & WASHER "ECHO UES TP LB 8184"		
A109	1319205.50	404826.26	55.47	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"		
A110	1319200.09	405191.33	65.82	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"		
A111	1319193.06	405591.14	72.89	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"		
A112	1319180.15	405974.22	74.68	5/8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"		
A113	1319159.09	405965.50	75.11	MAG NAIL & WASHER "ECHO UES TP LB 8184"		

AREA 308 PROJECT CONTROL								
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION				
A96	1319348.11	401266.23	44.41	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A97	1319478.83	401263.58	44.74	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A98	1319534.34	401234.17	45.57	MAG NAIL & WASHER "ECHO UES TP LB 8184"				

AREA 295B PROJECT CONTROL						
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION		
A37	1317985.69	397367.67	36.66	5\8-IN IR W/ PLASTIC CAP STAMPED "ECHO UES TP LB 8184"		
A38	1318212.04	397377.58	36.97	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"		
A39	1318411.32	397361.57	37.37	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"		
	-					

AREA 268B PROJECT CONTROL							
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION			
A62	1326690.12	398675.87	19.27	SET MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A64	1326654.13	398864.54	24.99	SET MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A65	1326656.62	398979.39	27.64	FOUND MAG NAIL & WASHER STAMPED "TP RP LB043"			

AREA 268B PROJECT CONTROL							
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION			
A62	1326690.12	398675.87	19.27	SET MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A64	1326654.13	398864.54	24.99	SET MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A65	1326656.62	398979.39	27.64	FOUND MAG NAIL & WASHER STAMPED "TP RP LB043"			

AREA 261B PROJECT CONTROL							
(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION				
1329889.62	409135.00	60.30	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
1330055.57	409227.06	58.01	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
1330319.36	409198.27	58.78	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
1330510.60	409186.43	59.33	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
1330743.91	409182.56	59.82	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
1330747.81	409465.25	59.04	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
1330740.83	409706.95	58.35	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
1330789.46	409717.10	58.42	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
	(Y) NORTHING 1329889.62 1330055.57 1330319.36 1330510.60 1330743.91 1330747.81 1330740.83	(Y) (X) EASTING 1329889.62 409135.00 1330055.57 409227.06 1330319.36 409198.27 1330510.60 409186.43 1330743.91 409182.56 1330747.81 409465.25 1330740.83 409706.95	(Y) (X) (Z) ELEVATION 1329889.62 409135.00 60.30 1330055.57 409227.06 58.01 1330319.36 409198.27 58.78 1330510.60 409186.43 59.33 1330743.91 409182.56 59.82 1330747.81 409465.25 59.04 1330740.83 409706.95 58.35				

AREA 100A PROJECT CONTROL							
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION			
A73	1321366.78	400988.16	36.23	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A74	1321401.00	400946.38	36.32	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A75	1321533.80	401260.92	37.59	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A76	1321717.51	401489.29	39.13	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A77	1321840.29	401683.90	40.02	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"			
A78	1321891.84	401757.33	40.72	CONCRETE MONUMENT			

AREA 306B PROJECT CONTROL								
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	TION DESCRIPTION				
A119	1316606.27	402002.40	51.60	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A120	1316604.52	402140.87	52.47	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A121	1316601.99	402333.67	53.00	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A122	1316579.73	402566.99	52.36	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A123	1316257.81	402567.54	55.72	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A124	1315955.04	402564.29	58.44	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A125	1315931.64	402600.77	58.42	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				

A54 1327170.07 399959.13 24.13 MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"  A70 1326630.78 399962.38 26.74 IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"	AREA 269A PROJECT CONTROL					
A50 1326605.29 399852.23 27.97 MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"  A54 1327170.07 399959.13 24.13 MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"  A70 1326630.78 399962.38 26.74 IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"	POINT NAME (Y) (X) (Z) NORTHING EASTING ELEVATION				DESCRIPTION	
A54 1327170.07 399959.13 24.13 MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"  A70 1326630.78 399962.38 26.74 IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"	A49	1326582.29	399735.16	29.69	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"	
A70 1326630.78 399962.38 26.74 IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"	A50	1326605.29	399852.23	27.97	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"	
	A54	1327170.07	399959.13	24.13	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"	
A71 1326898 81 400067 77 23 67 IRON ROD & CAP STAMPED "ECHO LIES TP. LB. 8184"	A70	1326630.78	399962.38	26.74	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"	
TO T	A71	1326898.81	400067.77	23.67	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"	
A72 1327147.42 400144.76 22.14 MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"	A72	1327147.42	400144.76	22.14	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"	

AREA 269A ADDITIONAL PROJECT CONTROL						
POINT NAME (Y) (X) (Z) NORTHING EASTING ELEVATION		DESCRIPTION				
A51	1326755.32	399879.19	26.60	IRON ROD & CAP STAMPED "ECHO UES TP LB 8184"		
A52	1326844.69	399955.05	25.47	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"		
WW1	1326977.88	399987.95	27.19	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"		

AREA 296B2 PROJECT CONTROL								
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION				
A200	1316969.45	401964.52	46.53	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A201	1316937.49	402119.34	45.97	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A202	1316961.34	402352.04	44.81	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A203	1316933.99	402529.44	43.52	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A204	1316956.20	402812.74	36.97	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A205	1316925.73	403141.48	28.89	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A206	1316918.56	403226.60	27.89	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A207	1316956.70	403227.05	27.40	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A208	1317281.23	403256.79	24.87	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A209	1317284.28	403128.26	27.62	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A210	1317263.49	402760.95	37.30	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A211	1317264.18	402518.13	42.06	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A212	1317296.24	402254.83	46.38	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A213	1317272.57	402105.62	45.26	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A214	1317304.50	401965.25	42.83	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A215	1317640.90	401965.45	39.53	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A216	1317607.44	402122.98	41.56	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A217	1317629.99	402327.89	39.12	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A218	1317597.27	402518.30	34.97	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A219	1317625.07	402677.14	32.23	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A220	1317596.07	402938.64	27.52	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A221	1317619.50	403070.16	25.20	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A222	1317589.49	403227.69	23.43	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A223	1317623.53	403230.07	23.14	MAG NAIL & WASHER "ECHO UES TP LB 8184"				

AREAS 287B & 287B-1 PROJECT CONTROL								
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION				
A114	1319995.02	402533.38	35.54	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A115	1320488.26	402485.89	42.89	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A116	1320420.17	402260.32	46.93	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A117	1320201.52	402171.22	46.60	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A118	1320047.80	402409.72	38.57	MAG NAIL & WASHER "ECHO UES TP LB 8184"				
A126	1320007.97	402399.70	38.57	MAG NAIL & WASHER "ECHO UES TP LB 8184"				

AREA 307A PROJECT CONTROL								
POINT NAME	(Y) NORTHING	(X) EASTING	(Z) ELEVATION	DESCRIPTION				
A149	1316302.84	405095.53	23.88	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A150	1316025.88	405094.74	28.20	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A151	1315761.48	405119.69	31.16	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A152	1315543.46	405122.58	35.03	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A153	1315515.94	404864.91	30.76	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A154	1315875.18	404846.78	26.64	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
A155	1316305.49	404868.30	23.47	MAG NAIL & WASHER STAMPED "ECHO UES TP LB 8184"				
	·		·					

CHA CONSULTING, INC.
3507 EAST FRONTAGE ROAD SUITE 180
TAMPA, FL 33607
TEL: (813) 549-0919
CERTIFICATE OF AUTHORIZATION #28386

**RECORD DRAWINGS** 0: ISSUED FOR BID | VVV | 06/2023 BY DATE **REVISION** 

CITY OF CLEARWATER, FLORIDA CALL 811 **PUBLIC WORKS DEPARTMENT -ENGINEERING** 100 S. MYRTLE AVE.

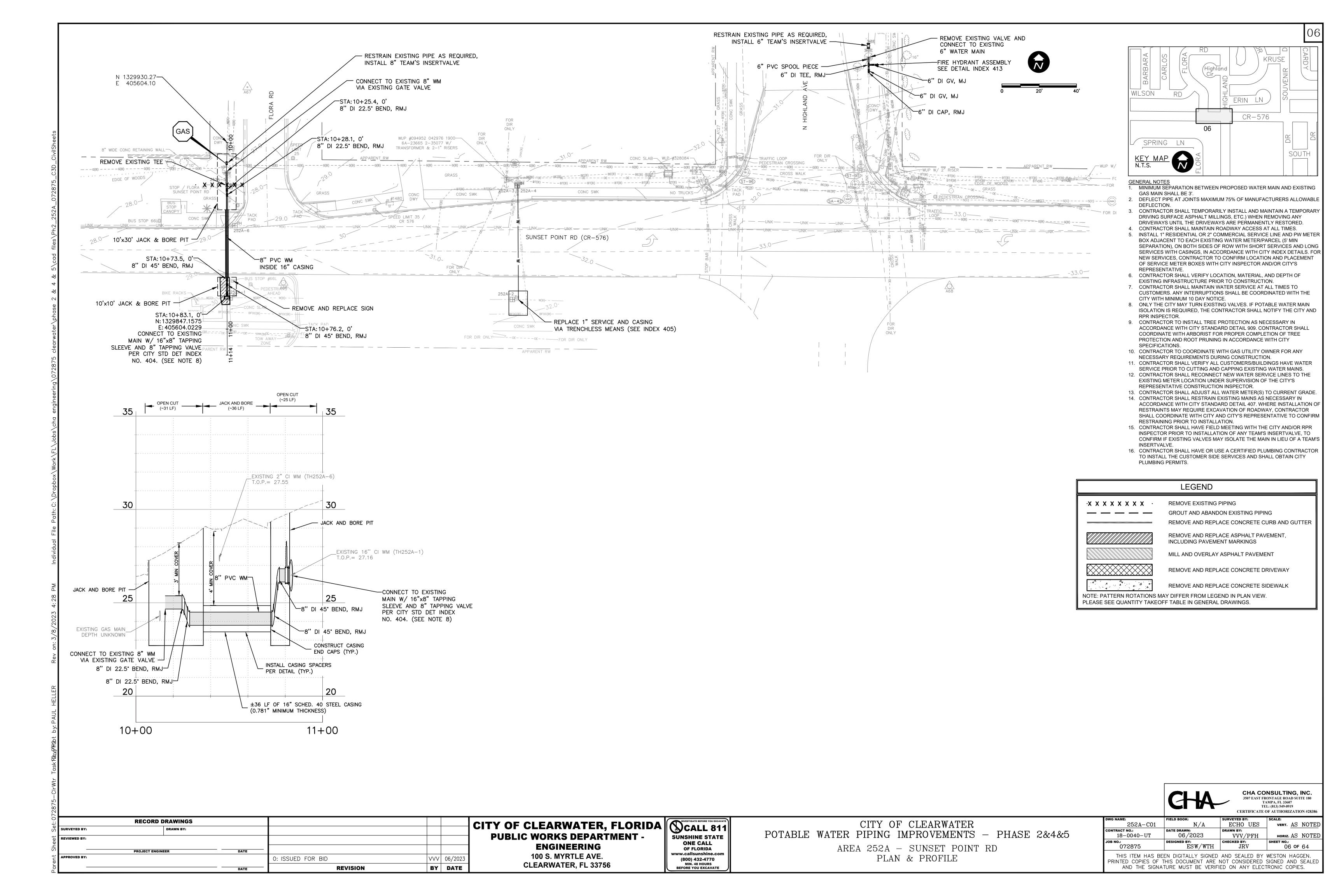
**CLEARWATER, FL 33756** 

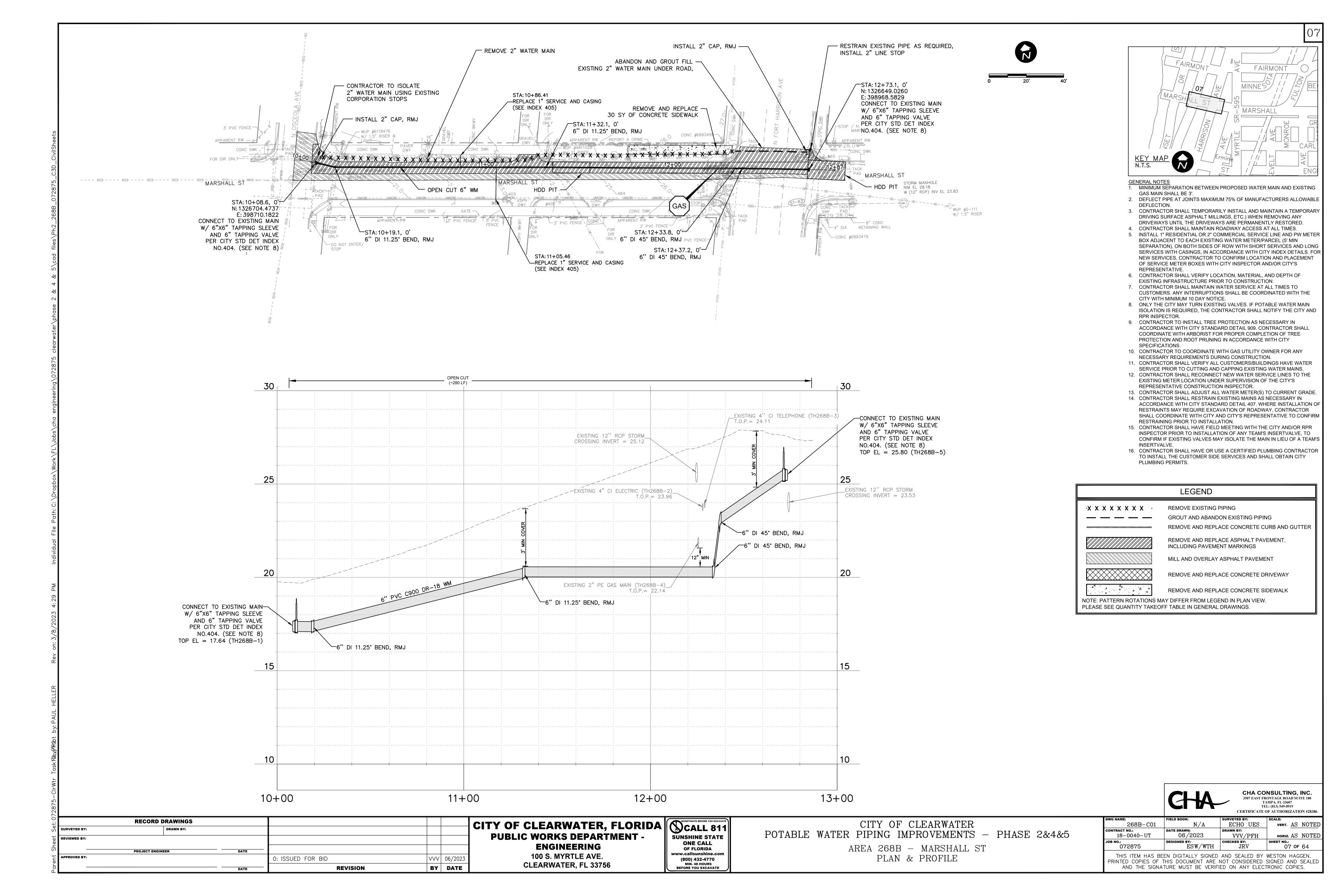
SUNSHINE STATE ONE CALL OF FLORIDA (800) 432-4770 MIN. 48 HOURS BEFORE YOU EXCAVATE

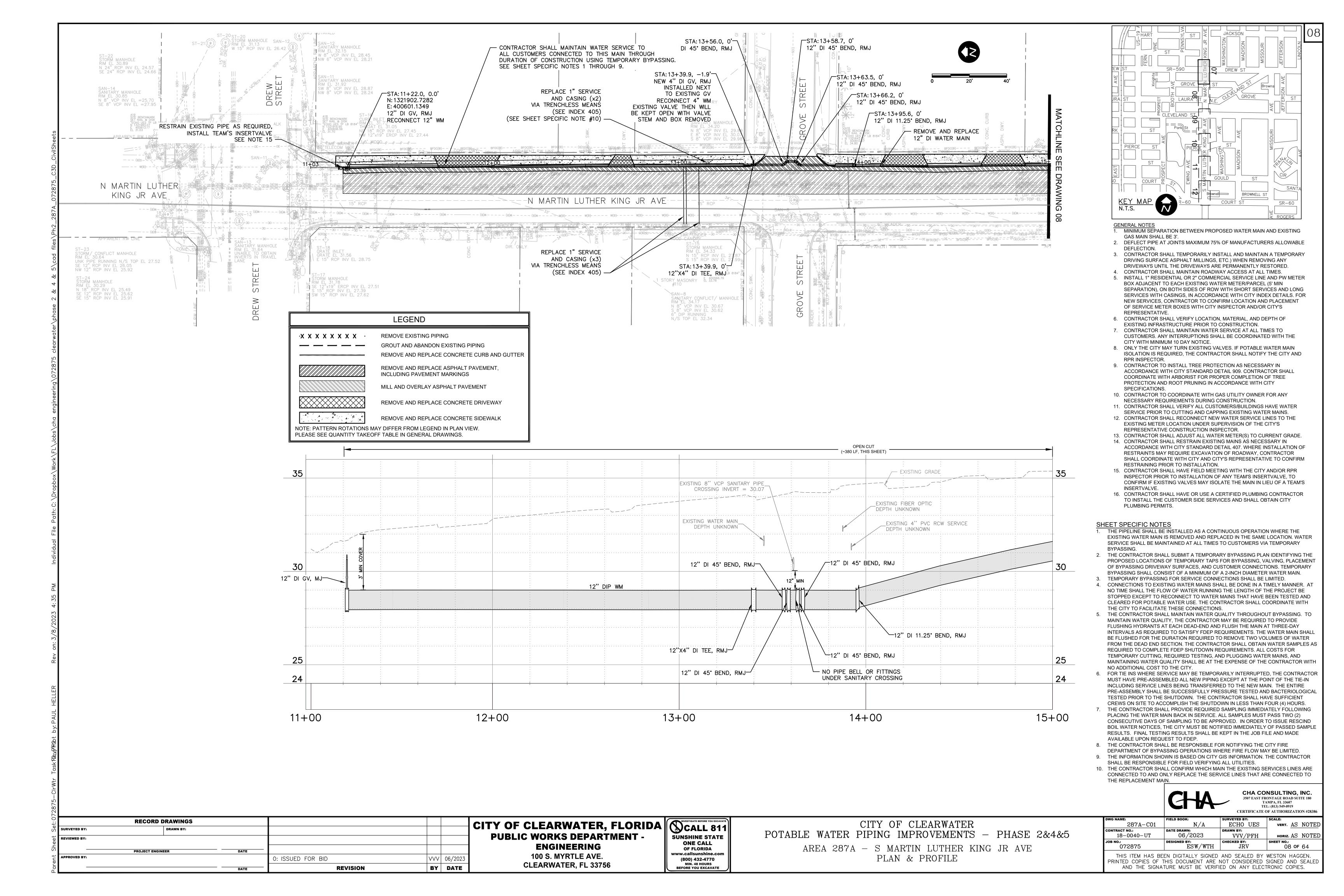
CITY OF CLEARWATER POTABLE WATER PIPING IMPROVEMENTS - PHASE 2&4&5

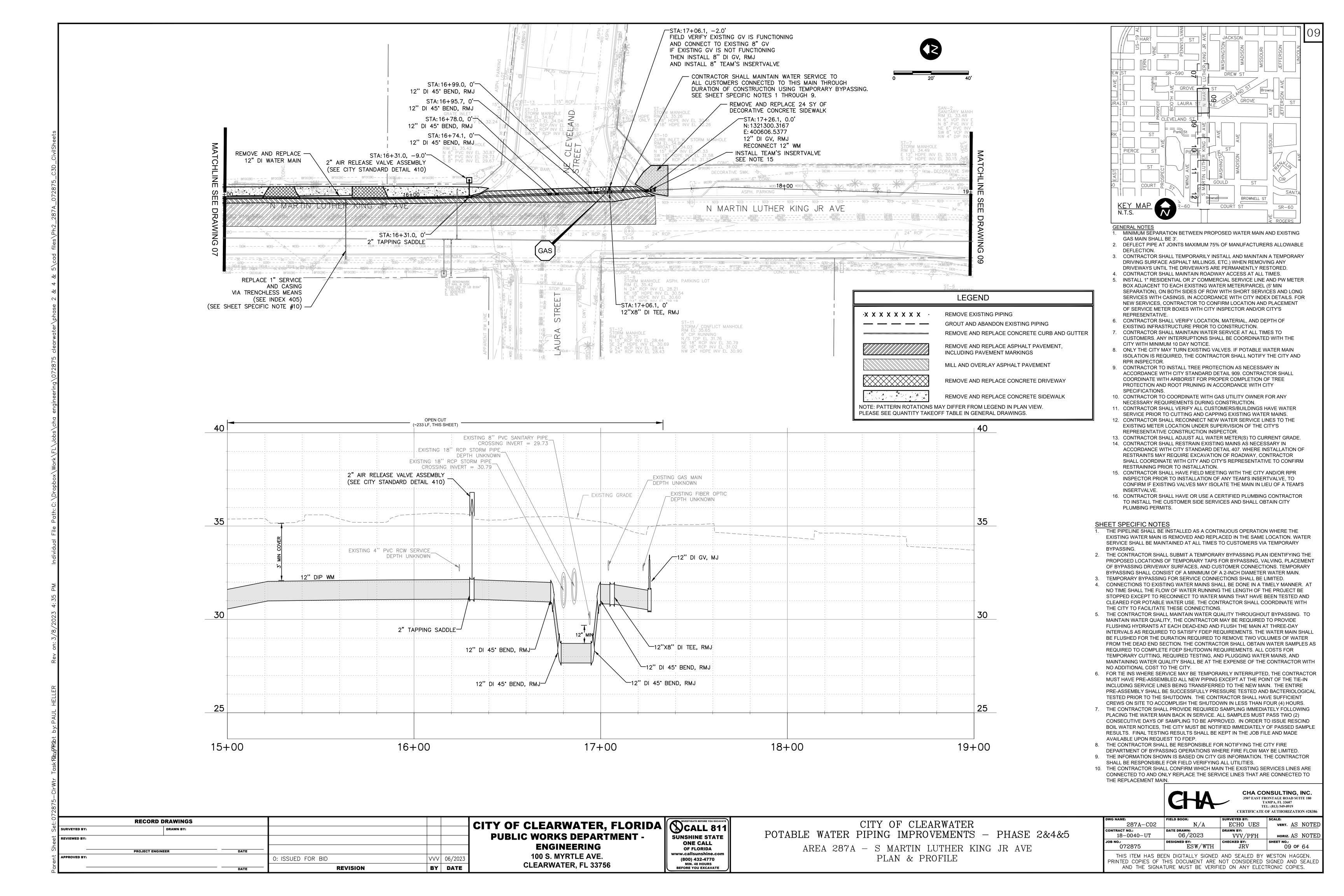
PROJECT CONTROL POINTS

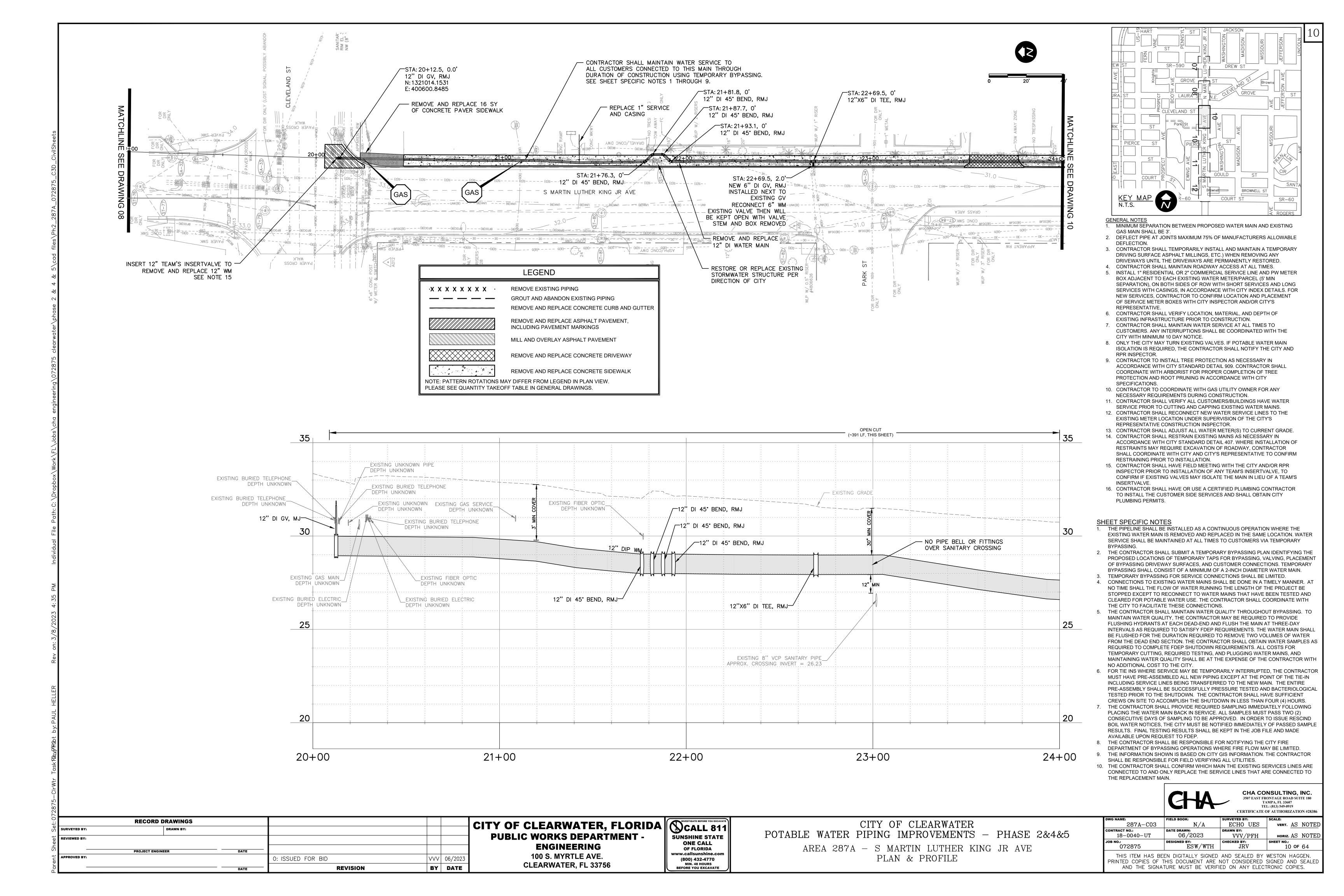
DWG NAME:	FIELD BOOK:	SURVEYED BY:	SCALE:			
G05	N/A	ECHO UES	vert. AS NOTED			
CONTRACT NO.:	DATE DRAWN:	DRAWN BY:				
18-0040-UT	06/2023	VVV/PFH   HORIZ. AS NO				
JOB NO.:	DESIGNED BY:	CHECKED BY:	SHEET NO.:			
072875   ESW/WTH   JRV   05 OF 64						
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WESTON HAGGEN. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALI AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.						

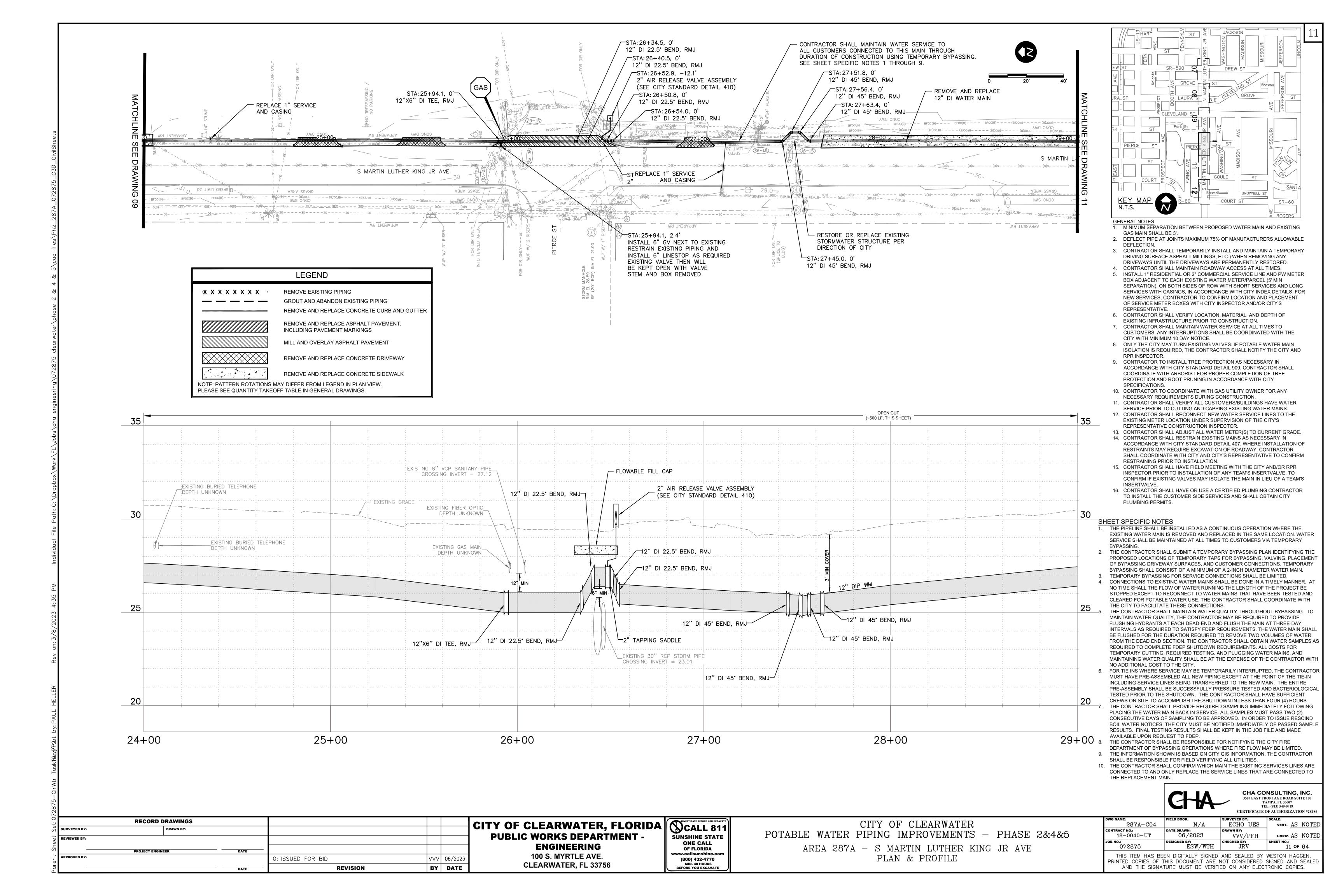


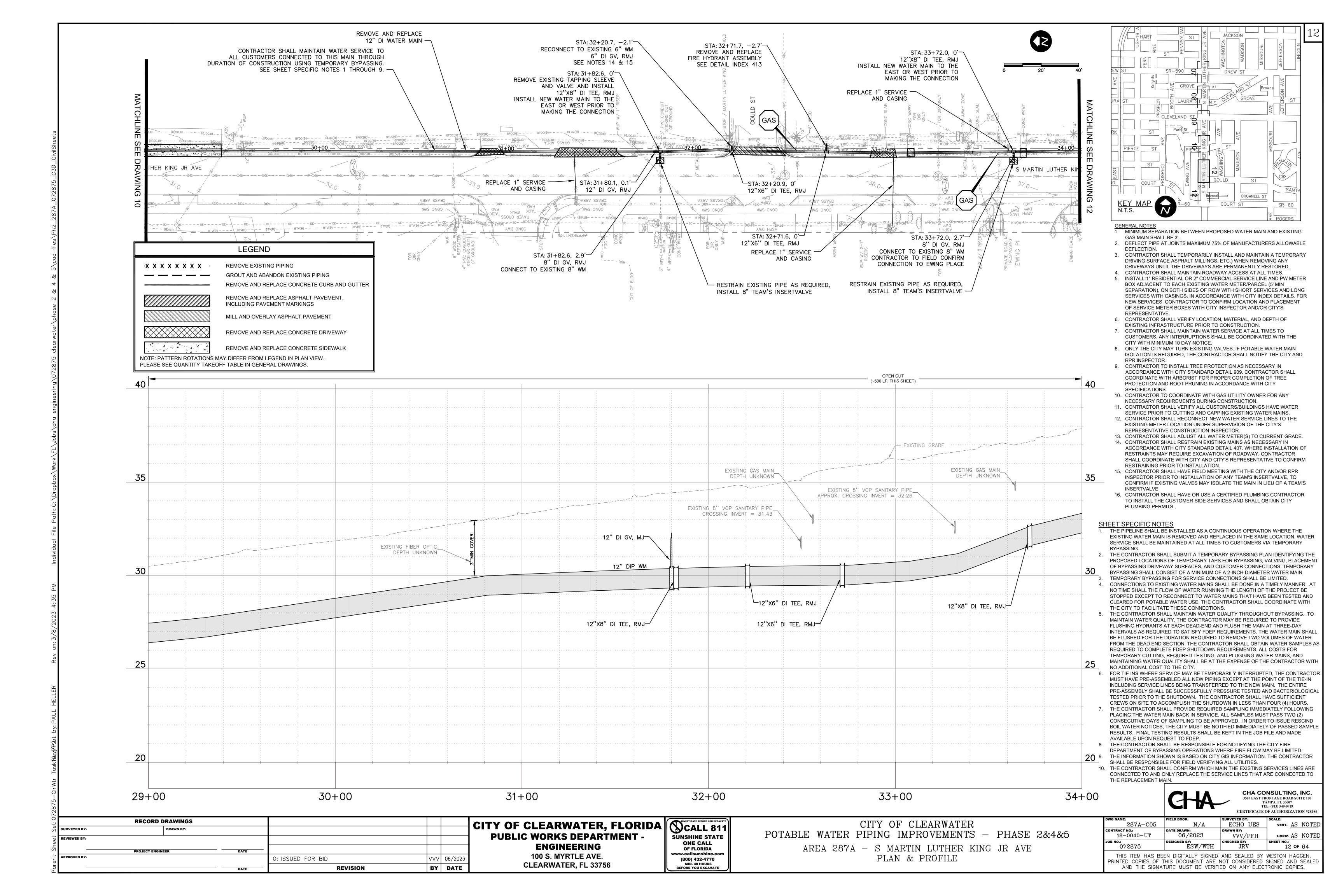


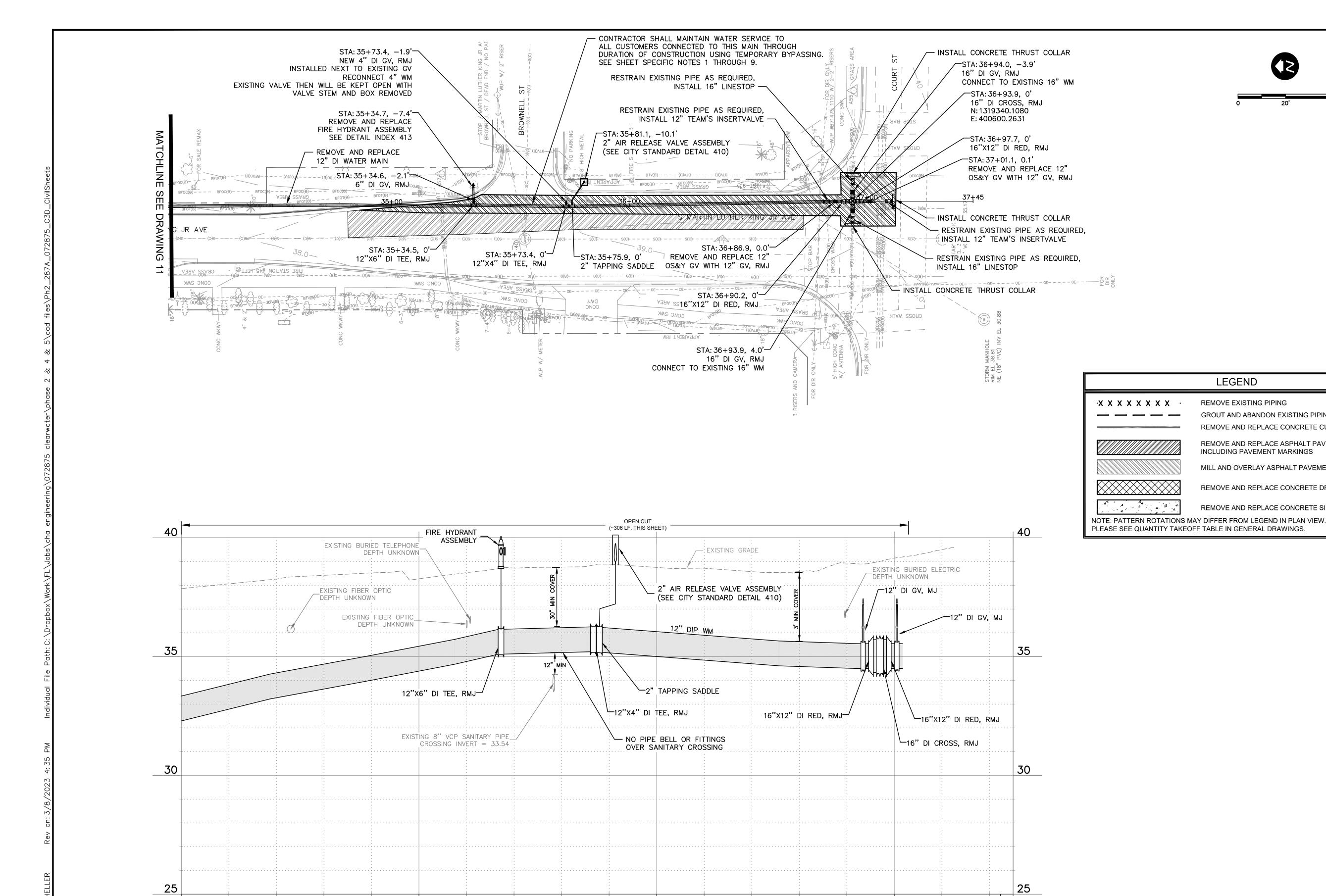




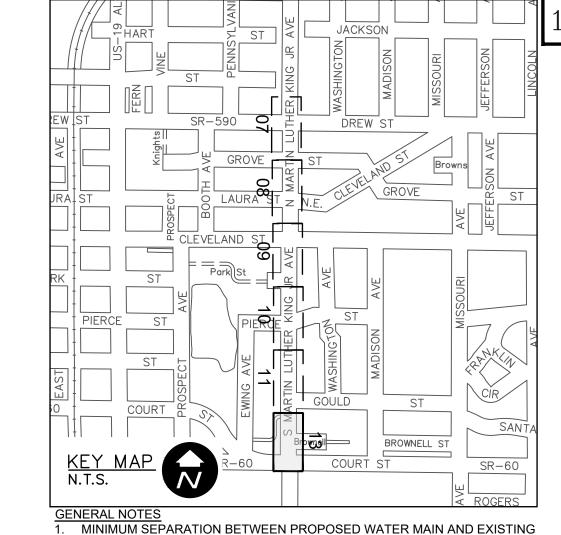








36+00



LEGEND

REMOVE EXISTING PIPING

GROUT AND ABANDON EXISTING PIPING

MILL AND OVERLAY ASPHALT PAVEMENT

INCLUDING PAVEMENT MARKINGS

REMOVE AND REPLACE ASPHALT PAVEMENT,

REMOVE AND REPLACE CONCRETE DRIVEWAY

REMOVE AND REPLACE CONCRETE SIDEWALK

REMOVE AND REPLACE CONCRETE CURB AND GUTTER

GAS MAIN SHALL BE 3'.

- 2. DEFLECT PIPE AT JOINTS MAXIMUM 75% OF MANUFACTURERS ALLOWABLE DEFLECTION.
- 3. CONTRACTOR SHALL TEMPORARILY INSTALL AND MAINTAIN A TEMPORARY DRIVING SURFACE ASPHALT MILLINGS, ETC.) WHEN REMOVING ANY DRIVEWAYS UNTIL THE DRIVEWAYS ARE PERMANENTLY RESTORED.
- 5. INSTALL 1" RESIDENTIAL OR 2" COMMERCIAL SERVICE LINE AND PW METER BOX ADJACENT TO EACH EXISTING WATER METER/PARCEL (5' MIN SEPARATION), ON BOTH SIDES OF ROW WITH SHORT SERVICES AND LONG SERVICES WITH CASINGS, IN ACCORDANCE WITH CITY INDEX DETAILS. FOR NEW SERVICES, CONTRACTOR TO CONFIRM LOCATION AND PLACEMENT OF SERVICE METER BOXES WITH CITY INSPECTOR AND/OR CITY'S
- REPRESENTATIVE. CONTRACTOR SHALL VERIFY LOCATION, MATERIAL, AND DEPTH OF EXISTING INFRASTRUCTURE PRIOR TO CONSTRUCTION.

4. CONTRACTOR SHALL MAINTAIN ROADWAY ACCESS AT ALL TIMES.

- CONTRACTOR SHALL MAINTAIN WATER SERVICE AT ALL TIMES TO CUSTOMERS. ANY INTERRUPTIONS SHALL BE COORDINATED WITH THE CITY WITH MINIMUM 10 DAY NOTICE. 8. ONLY THE CITY MAY TURN EXISTING VALVES. IF POTABLE WATER MAIN
- ISOLATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE CITY AND RPR INSPECTOR. CONTRACTOR TO INSTALL TREE PROTECTION AS NECESSARY IN
- ACCORDANCE WITH CITY STANDARD DETAIL 909. CONTRACTOR SHALL COORDINATE WITH ARBORIST FOR PROPER COMPLETION OF TREE PROTECTION AND ROOT PRUNING IN ACCORDANCE WITH CITY SPECIFICATIONS.
- 10. CONTRACTOR TO COORDINATE WITH GAS UTILITY OWNER FOR ANY NECESSARY REQUIREMENTS DURING CONSTRUCTION.
- 11. CONTRACTOR SHALL VERIFY ALL CUSTOMERS/BUILDINGS HAVE WATER SERVICE PRIOR TO CUTTING AND CAPPING EXISTING WATER MAINS. 12. CONTRACTOR SHALL RECONNECT NEW WATER SERVICE LINES TO THE EXISTING METER LOCATION UNDER SUPERVISION OF THE CITY'S
- REPRESENTATIVE CONSTRUCTION INSPECTOR. CONTRACTOR SHALL ADJUST ALL WATER METER(S) TO CURRENT GRADE. 14. CONTRACTOR SHALL RESTRAIN EXISTING MAINS AS NECESSARY IN ACCORDANCE WITH CITY STANDARD DETAIL 407. WHERE INSTALLATION OF
- RESTRAINTS MAY REQUIRE EXCAVATION OF ROADWAY, CONTRACTOR SHALL COORDINATE WITH CITY AND CITY'S REPRESENTATIVE TO CONFIRM RESTRAINING PRIOR TO INSTALLATION. 15. CONTRACTOR SHALL HAVE FIELD MEETING WITH THE CITY AND/OR RPR INSPECTOR PRIOR TO INSTALLATION OF ANY TEAM'S INSERTVALVE, TO
- CONFIRM IF EXISTING VALVES MAY ISOLATE THE MAIN IN LIEU OF A TEAM'S INSERTVALVE. 16. CONTRACTOR SHALL HAVE OR USE A CERTIFIED PLUMBING CONTRACTOR
- TO INSTALL THE CUSTOMER SIDE SERVICES AND SHALL OBTAIN CITY PLUMBING PERMITS.

#### SHEET SPECIFIC NOTES

THE PIPELINE SHALL BE INSTALLED AS A CONTINUOUS OPERATION WHERE THE EXISTING WATER MAIN IS REMOVED AND REPLACED IN THE SAME LOCATION. WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES TO CUSTOMERS VIA TEMPORARY

- 2. THE CONTRACTOR SHALL SUBMIT A TEMPORARY BYPASSING PLAN IDENTIFYING THE PROPOSED LOCATIONS OF TEMPORARY TAPS FOR BYPASSING, VALVING, PLACEMENT OF BYPASSING DRIVEWAY SURFACES, AND CUSTOMER CONNECTIONS. TEMPORARY BYPASSING SHALL CONSIST OF A MINIMUM OF A 2-INCH DIAMETER WATER MAIN. 3. TEMPORARY BYPASSING FOR SERVICE CONNECTIONS SHALL BE LIMITED.
- 4. CONNECTIONS TO EXISTING WATER MAINS SHALL BE DONE IN A TIMELY MANNER. AT NO TIME SHALL THE FLOW OF WATER RUNNING THE LENGTH OF THE PROJECT BE STOPPED EXCEPT TO RECONNECT TO WATER MAINS THAT HAVE BEEN TESTED AND CLEARED FOR POTABLE WATER USE. THE CONTRACTOR SHALL COORDINATE WITH THE CITY TO FACILITATE THESE CONNECTIONS.
- 5. THE CONTRACTOR SHALL MAINTAIN WATER QUALITY THROUGHOUT BYPASSING. TO MAINTAIN WATER QUALITY, THE CONTRACTOR MAY BE REQUIRED TO PROVIDE FLUSHING HYDRANTS AT EACH DEAD-END AND FLUSH THE MAIN AT THREE-DAY INTERVALS AS REQUIRED TO SATISFY FDEP REQUIREMENTS. THE WATER MAIN SHALI BE FLUSHED FOR THE DURATION REQUIRED TO REMOVE TWO VOLUMES OF WATER FROM THE DEAD END SECTION. THE CONTRACTOR SHALL OBTAIN WATER SAMPLES AS REQUIRED TO COMPLETE FDEP SHUTDOWN REQUIREMENTS. ALL COSTS FOR TEMPORARY CUTTING, REQUIRED TESTING, AND PLUGGING WATER MAINS, AND MAINTAINING WATER QUALITY SHALL BE AT THE EXPENSE OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE CITY.
- 6. FOR TIE INS WHERE SERVICE MAY BE TEMPORARILY INTERRUPTED, THE CONTRACTOR MUST HAVE PRE-ASSEMBLED ALL NEW PIPING EXCEPT AT THE POINT OF THE TIE-IN INCLUDING SERVICE LINES BEING TRANSFERRED TO THE NEW MAIN. THE ENTIRE PRE-ASSEMBLY SHALL BE SUCCESSFULLY PRESSURE TESTED AND BACTERIOLOGICAL TESTED PRIOR TO THE SHUTDOWN. THE CONTRACTOR SHALL HAVE SUFFICIENT CREWS ON SITE TO ACCOMPLISH THE SHUTDOWN IN LESS THAN FOUR (4) HOURS.
- THE CONTRACTOR SHALL PROVIDE REQUIRED SAMPLING IMMEDIATELY FOLLOWING PLACING THE WATER MAIN BACK IN SERVICE. ALL SAMPLES MUST PASS TWO (2) CONSECUTIVE DAYS OF SAMPLING TO BE APPROVED. IN ORDER TO ISSUE RESCIND BOIL WATER NOTICES, THE CITY MUST BE NOTIFIED IMMEDIATELY OF PASSED SAMPLE RESULTS. FINAL TESTING RESULTS SHALL BE KEPT IN THE JOB FILE AND MADE AVAILABLE UPON REQUEST TO FDEP.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE CITY FIRE
- DEPARTMENT OF BYPASSING OPERATIONS WHERE FIRE FLOW MAY BE LIMITED. 9. THE INFORMATION SHOWN IS BASED ON CITY GIS INFORMATION. THE CONTRACTOR
- SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL UTILITIES. 10. THE CONTRACTOR SHALL CONFIRM WHICH MAIN THE EXISTING SERVICES LINES ARE

CONNECTED TO AND ONLY REPLACE THE SERVICE LINES THAT ARE CONNECTED TO THE REPLACEMENT MAIN.



TAMPA, FL 33607 TEL: (813) 549-0919 **CERTIFICATE OF AUTHORIZATION #28386** VERT. AS NOTE

CHA CONSULTING, INC.

**RECORD DRAWINGS** CITY OF CLEARWATER, FLORIDA **PUBLIC WORKS DEPARTMENT -ENGINEERING** 100 S. MYRTLE AVE. D: ISSUED FOR BID |VVV| 06/2023 **CLEARWATER. FL 33756** 

BY DATE

35+00

**REVISION** 

34+00

CALL 811 SUNSHINE STATE ONE CALL OF FLORIDA (800) 432-4770 MIN. 48 HOURS BEFORE YOU EXCAVATE

37+00

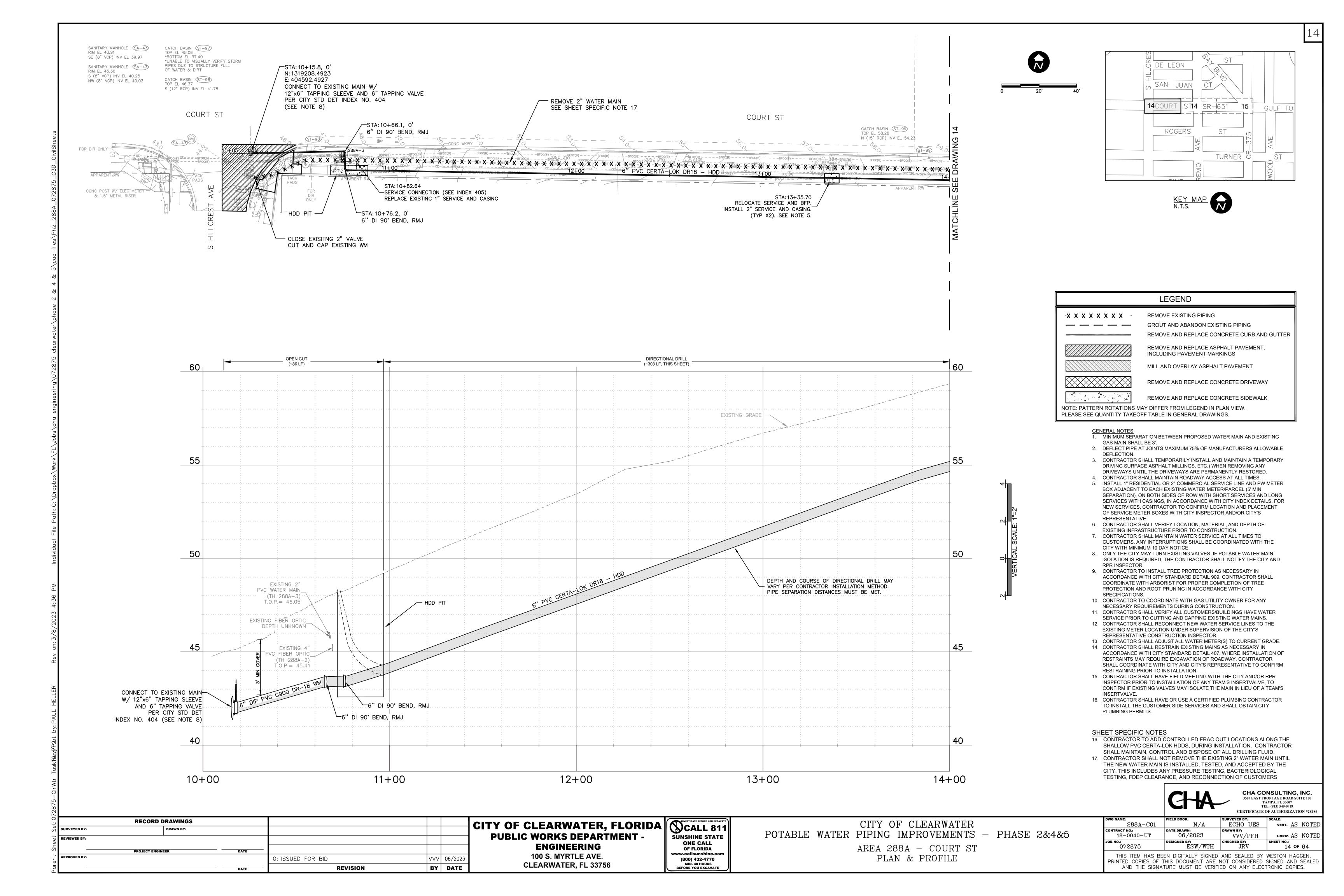
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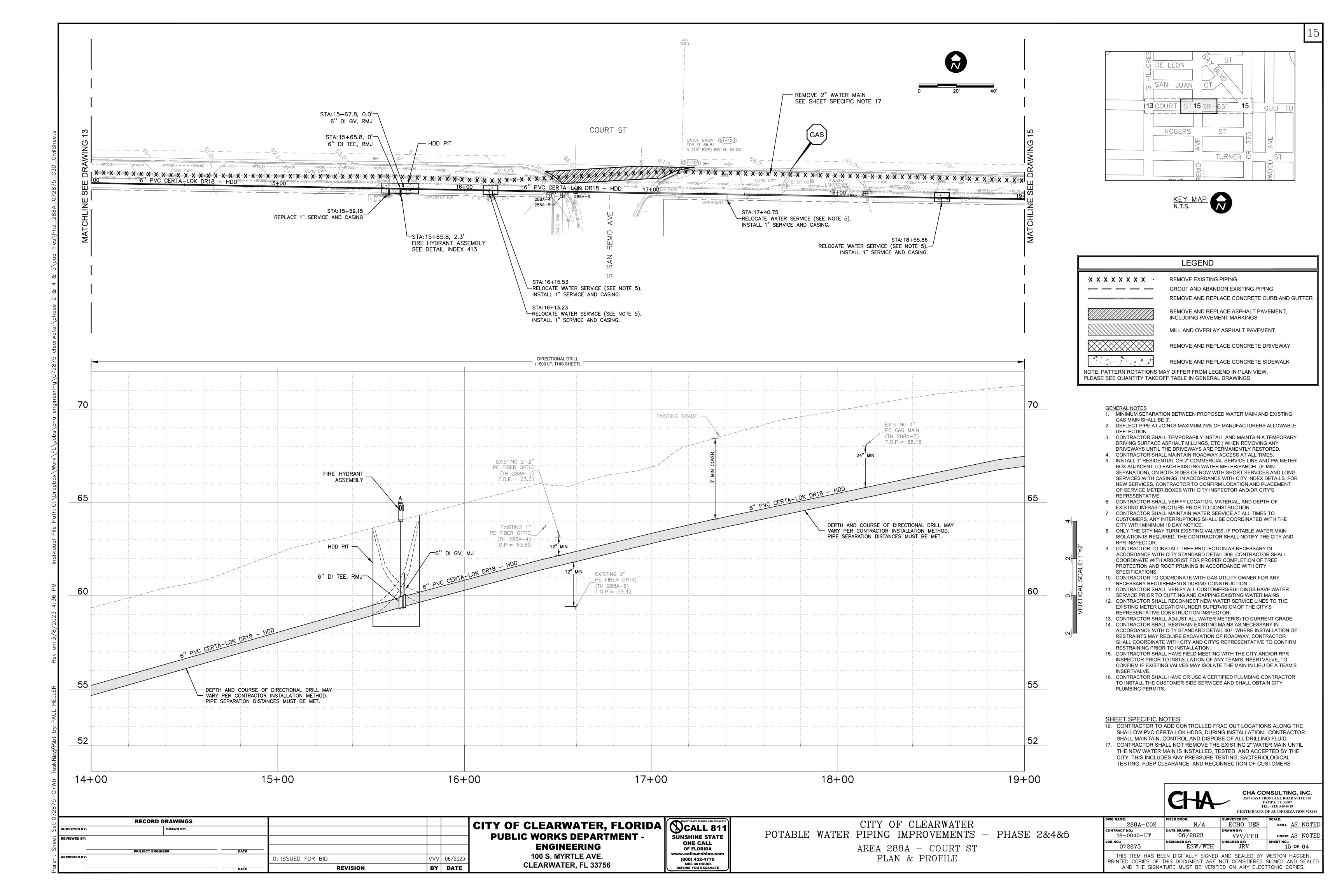
CITY OF CLEARWATER POTABLE WATER PIPING IMPROVEMENTS - PHASE 2&4&5 AREA 287A - S MARTIN LUTHER KING JR AVE PLAN & PROFILE

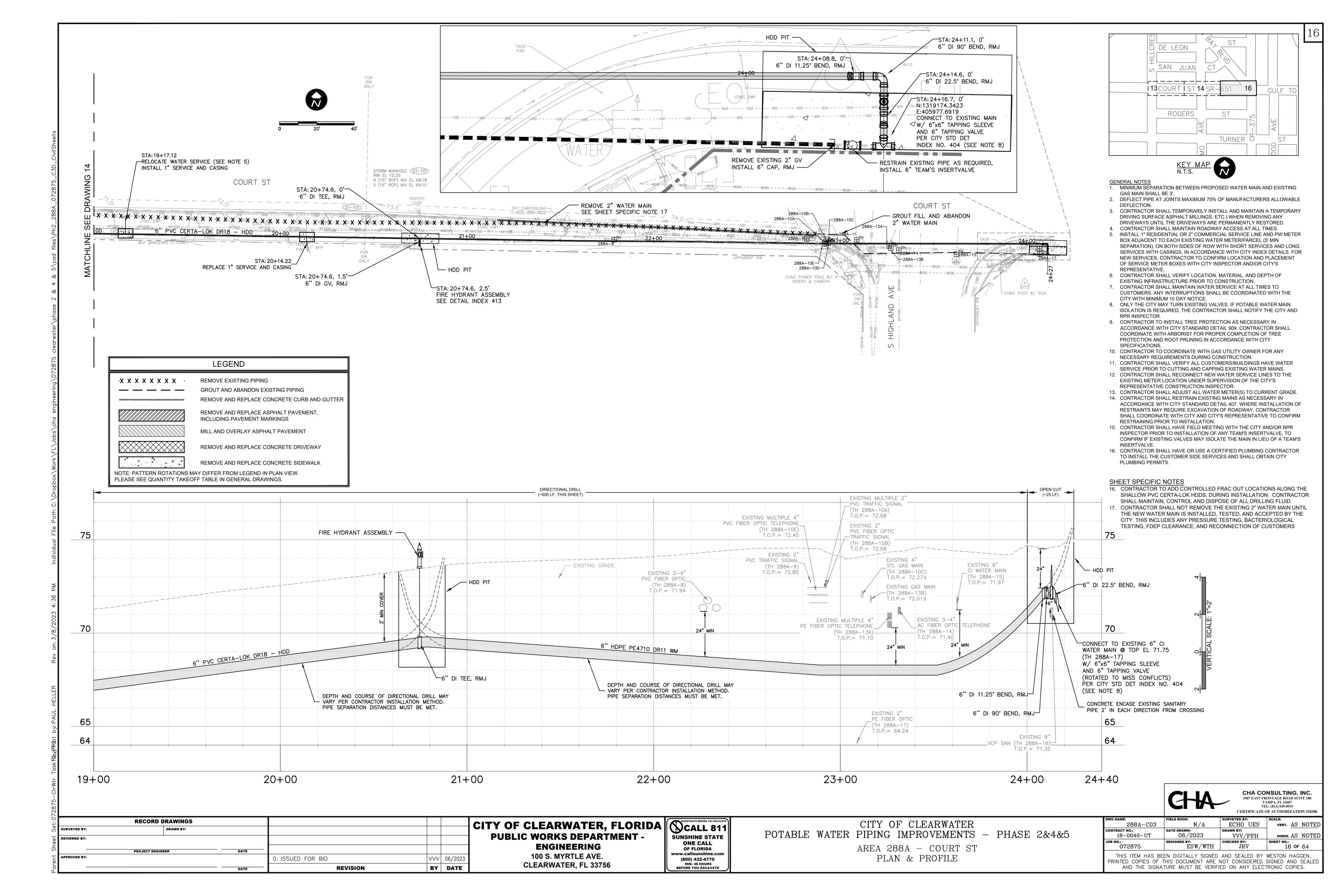
287A-C06 ECHO UES 06/2023 18-0040-UT VVV/PFH HORIZ. AS NOTE ESW/WTH JRV THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WESTON HAGGEN.

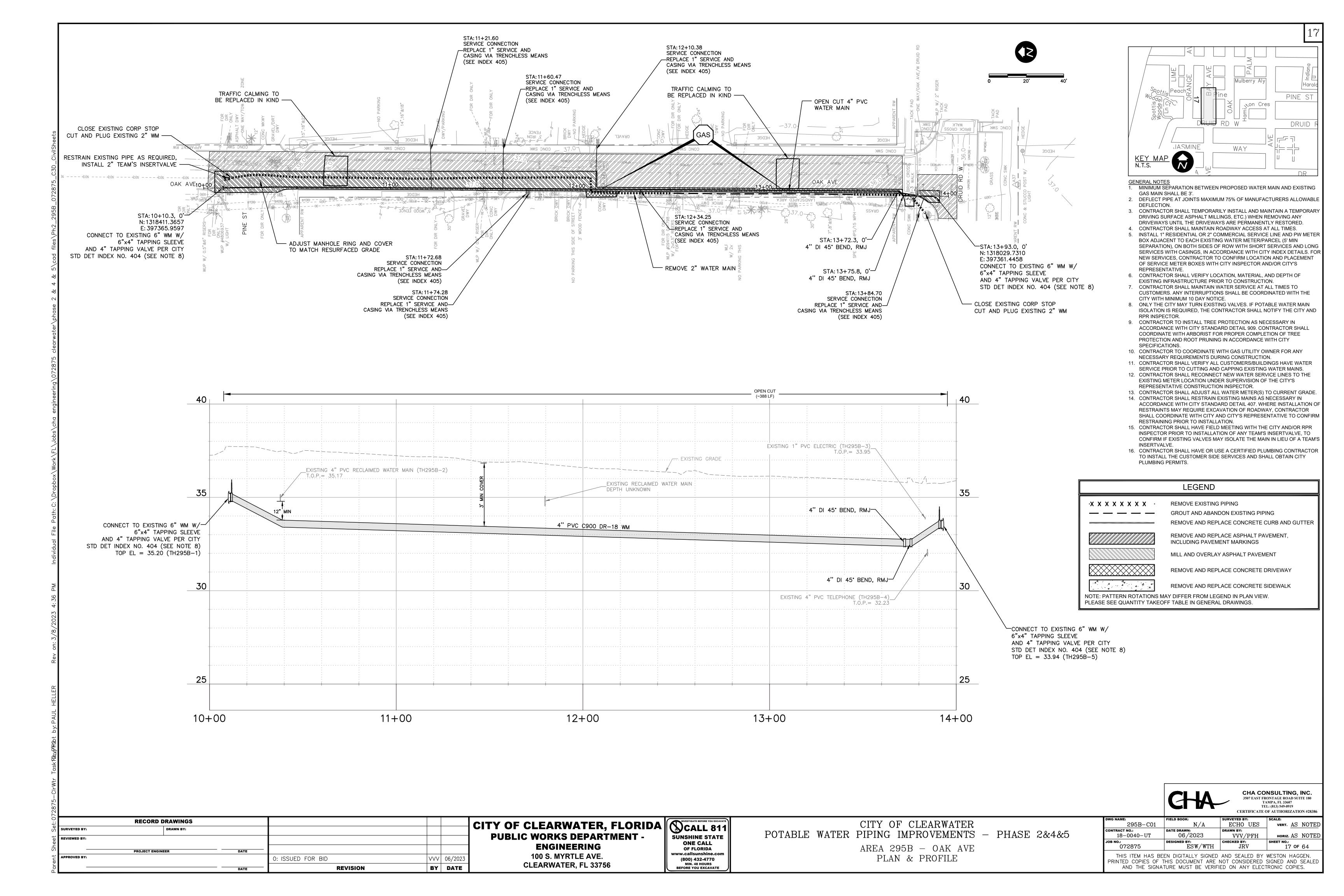
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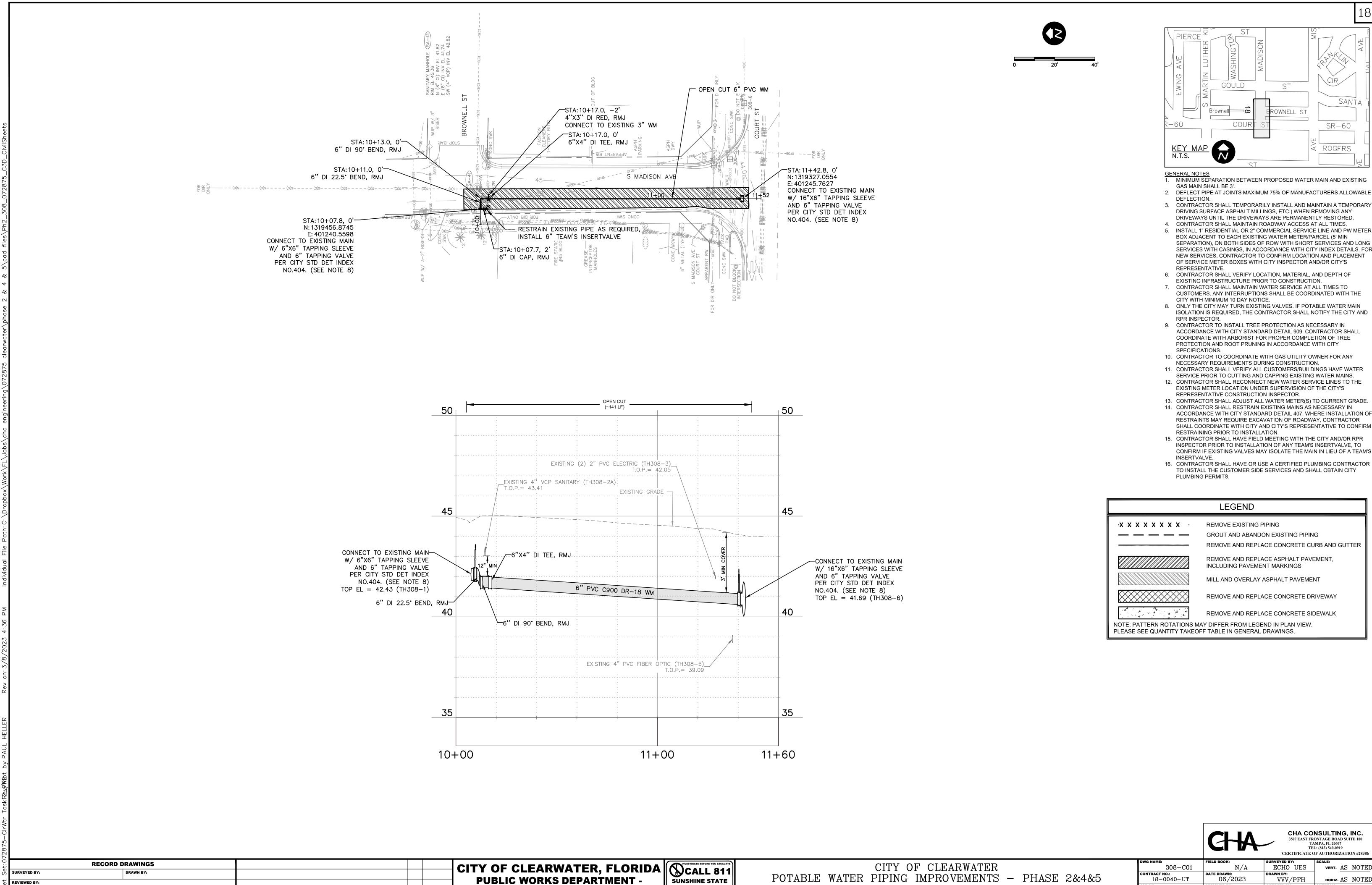
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**ENGINEERING** 

100 S. MYRTLE AVE.

**CLEARWATER, FL 33756** 

|VVV| 06/2023

BY DATE

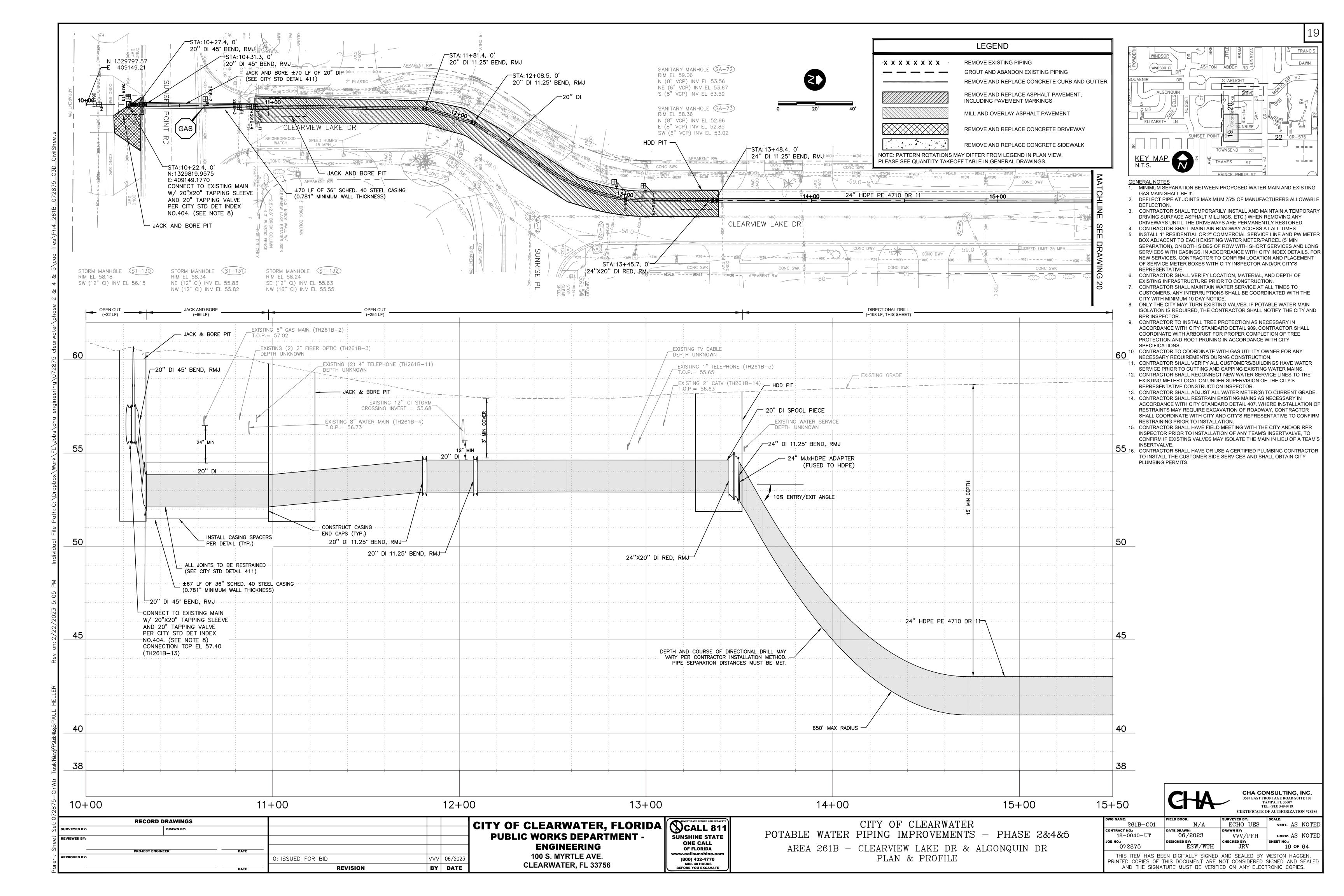
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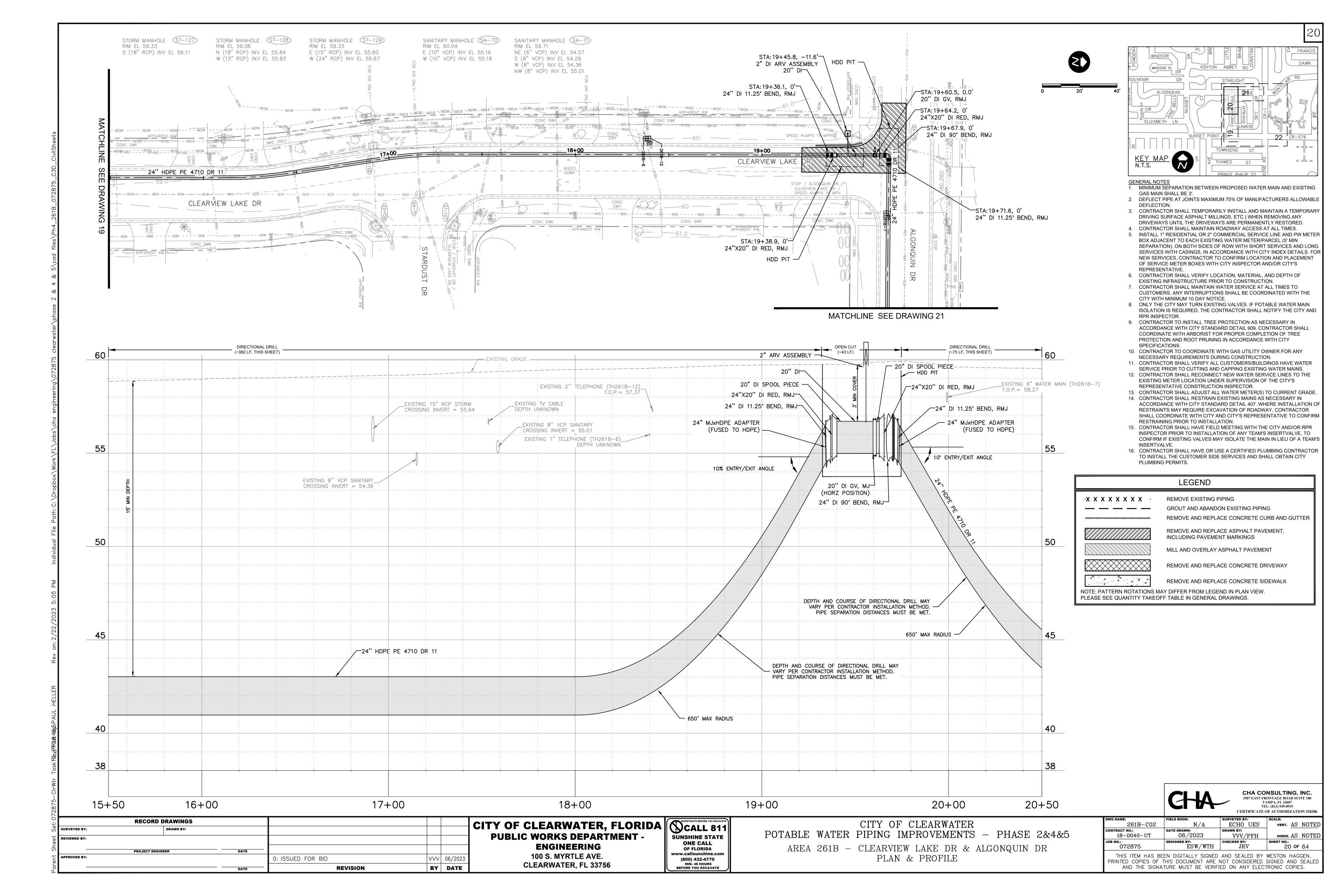
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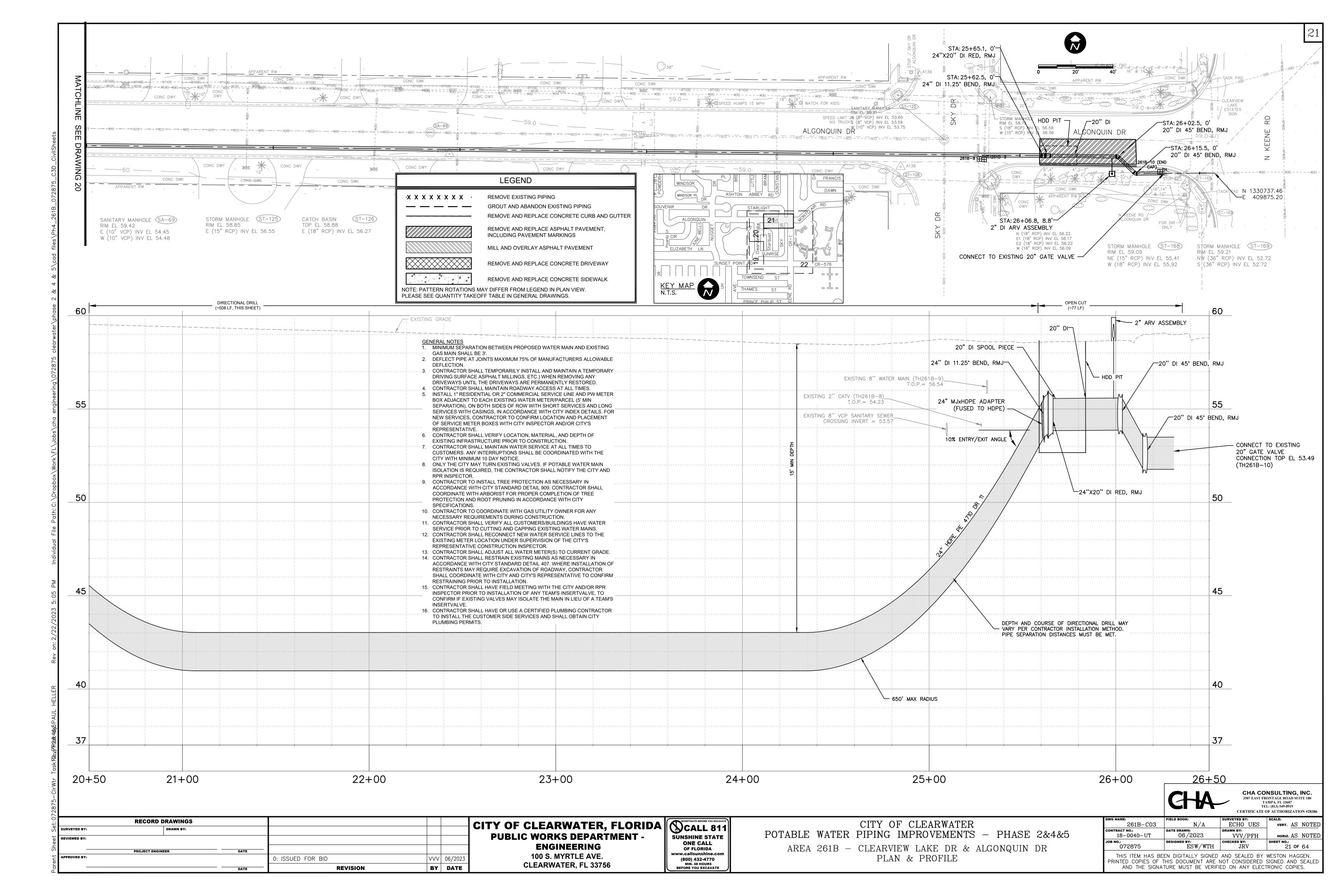
06/2023 18-0040-UT VVV/PFH HORIZ. AS NOTE DESIGNED BY:
ESW/WTH CHECKED BY: JRV THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WESTON HAGGEN. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED

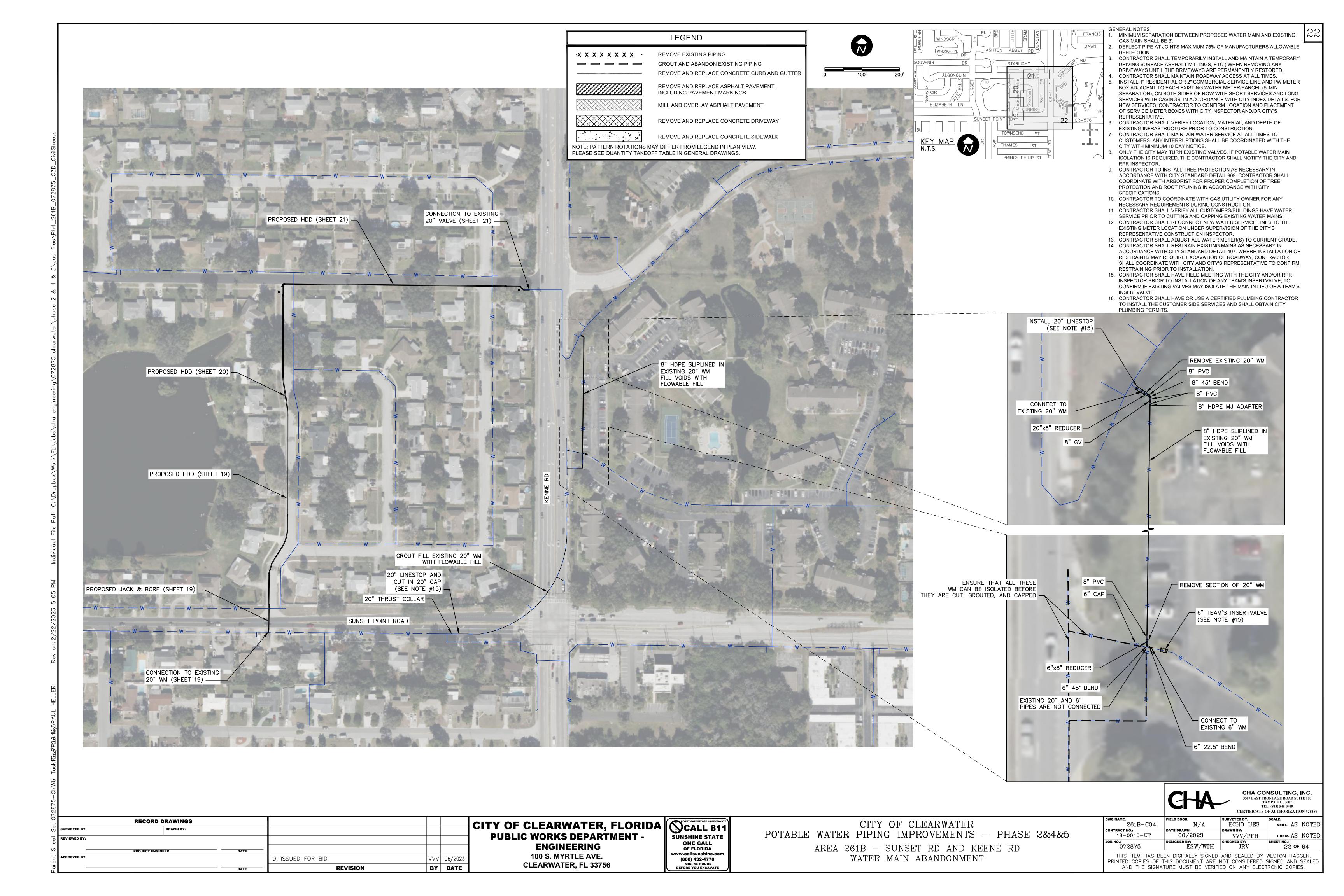
AREA 308 - S MADISON AVE PLAN & PROFILE

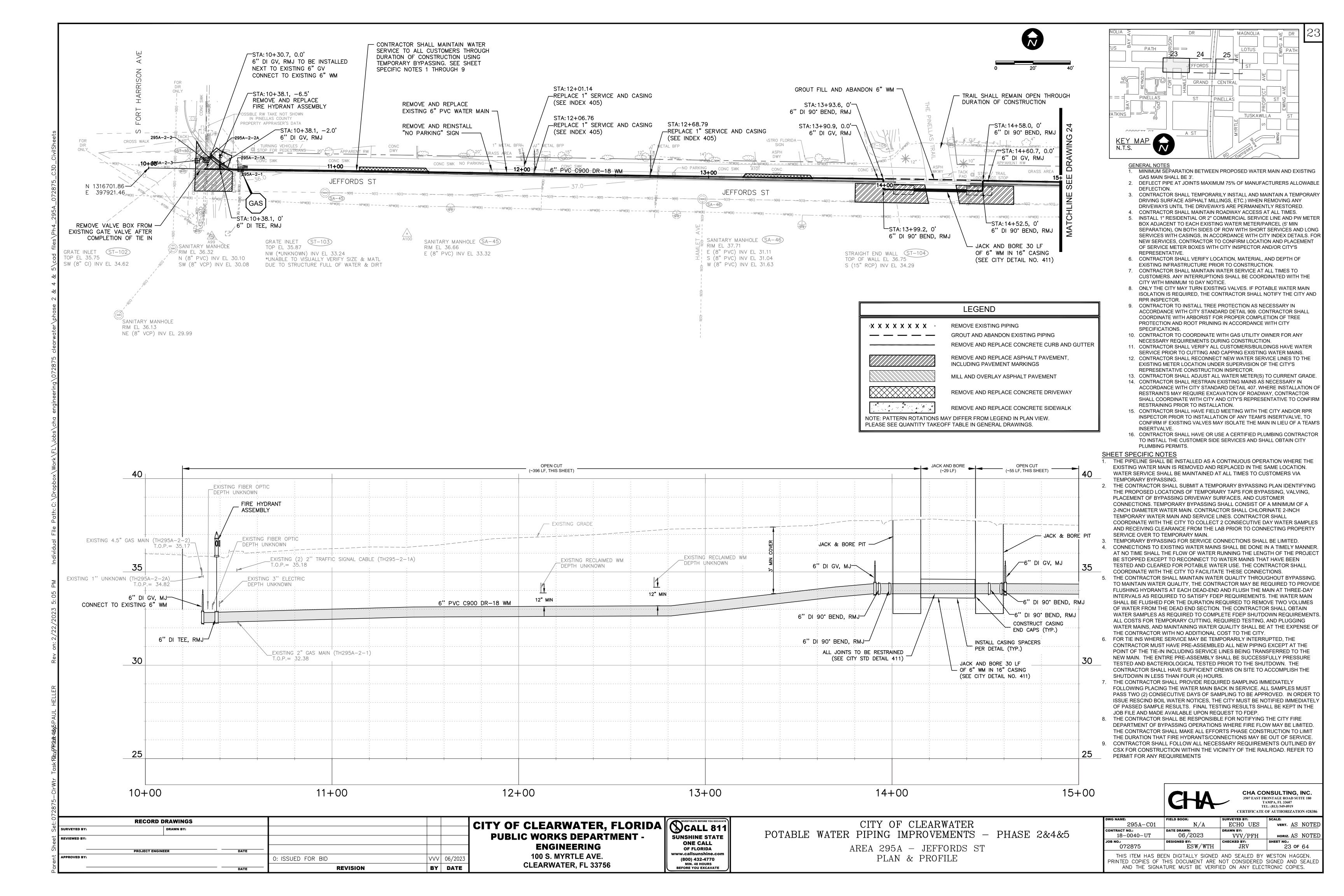
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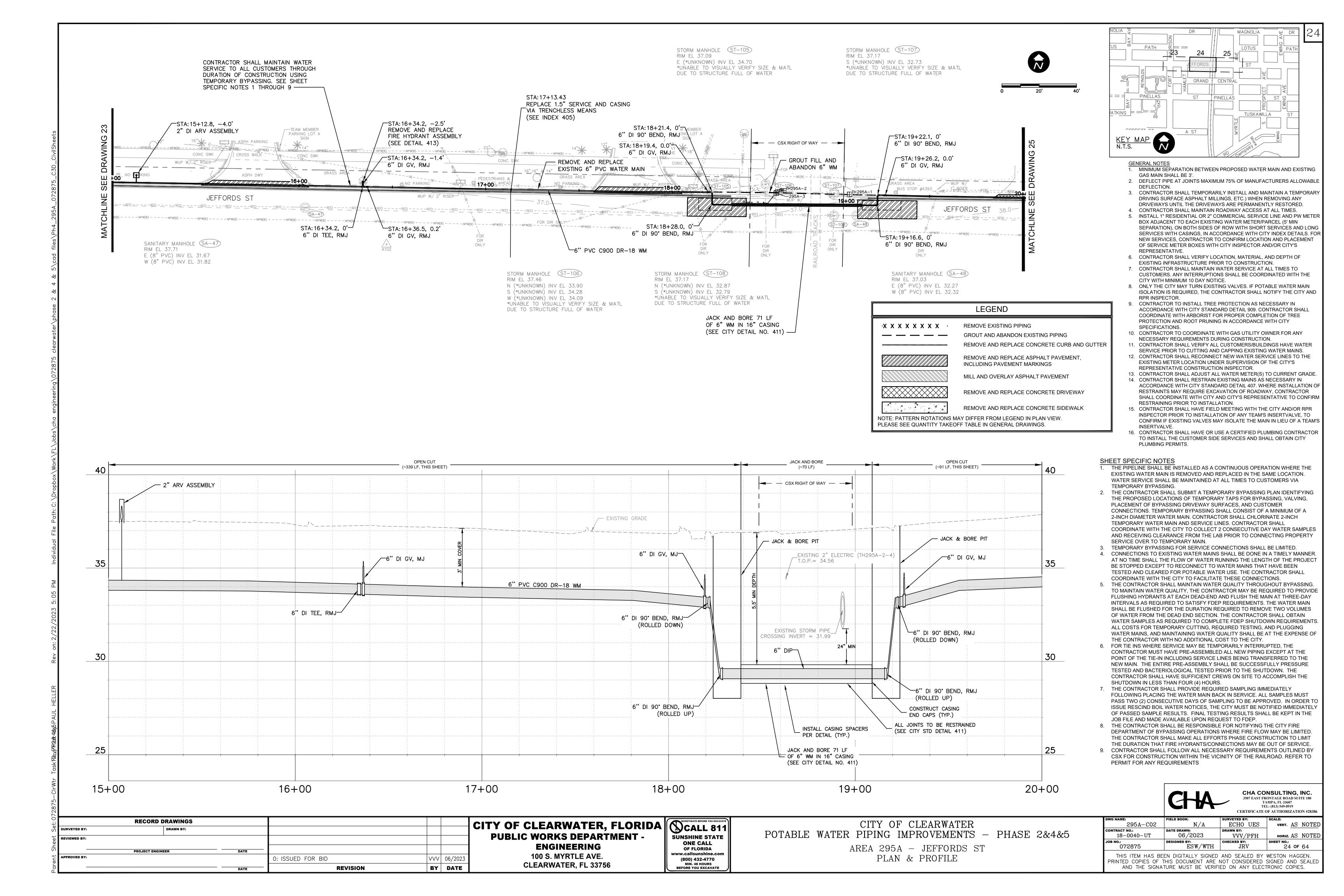


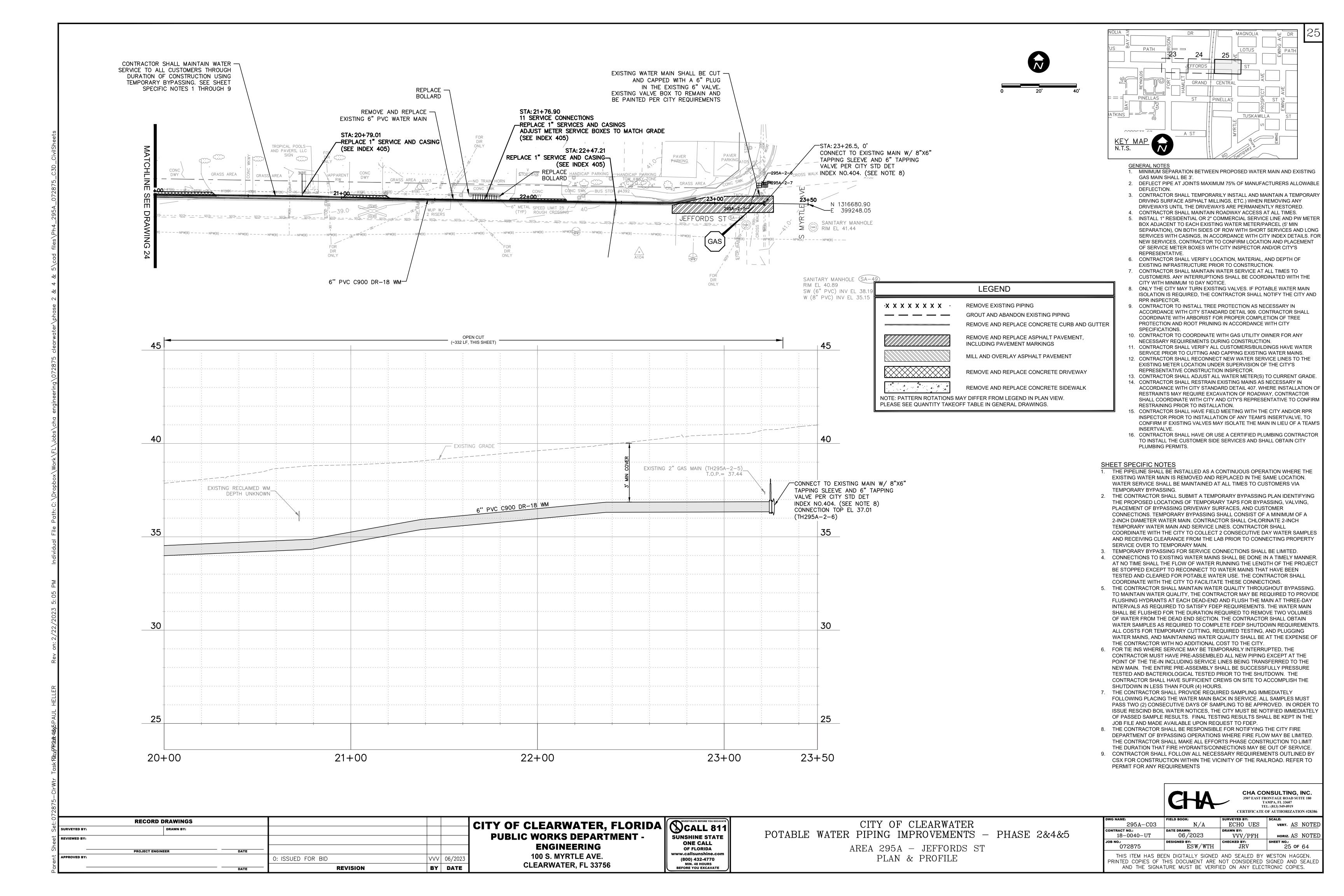


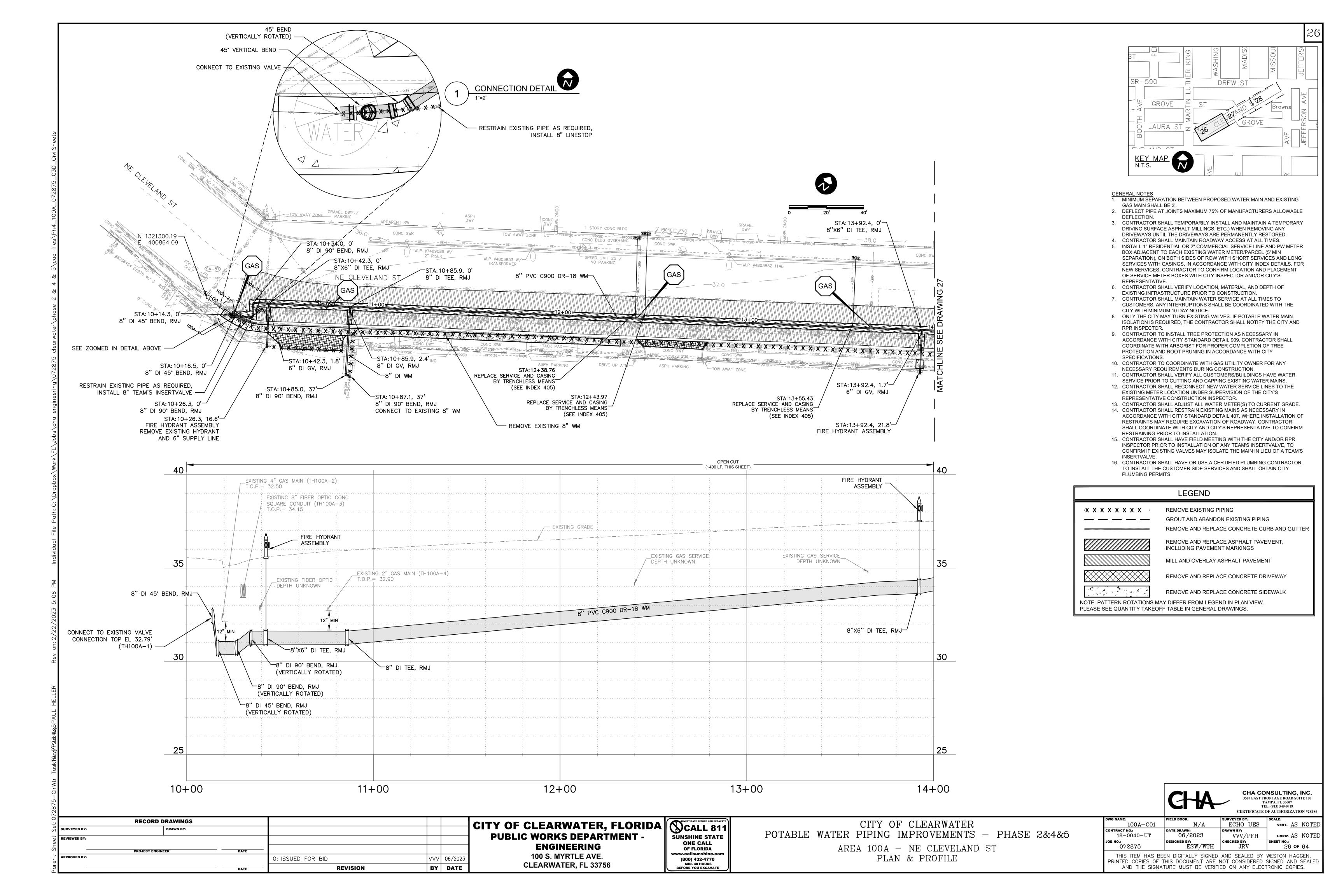


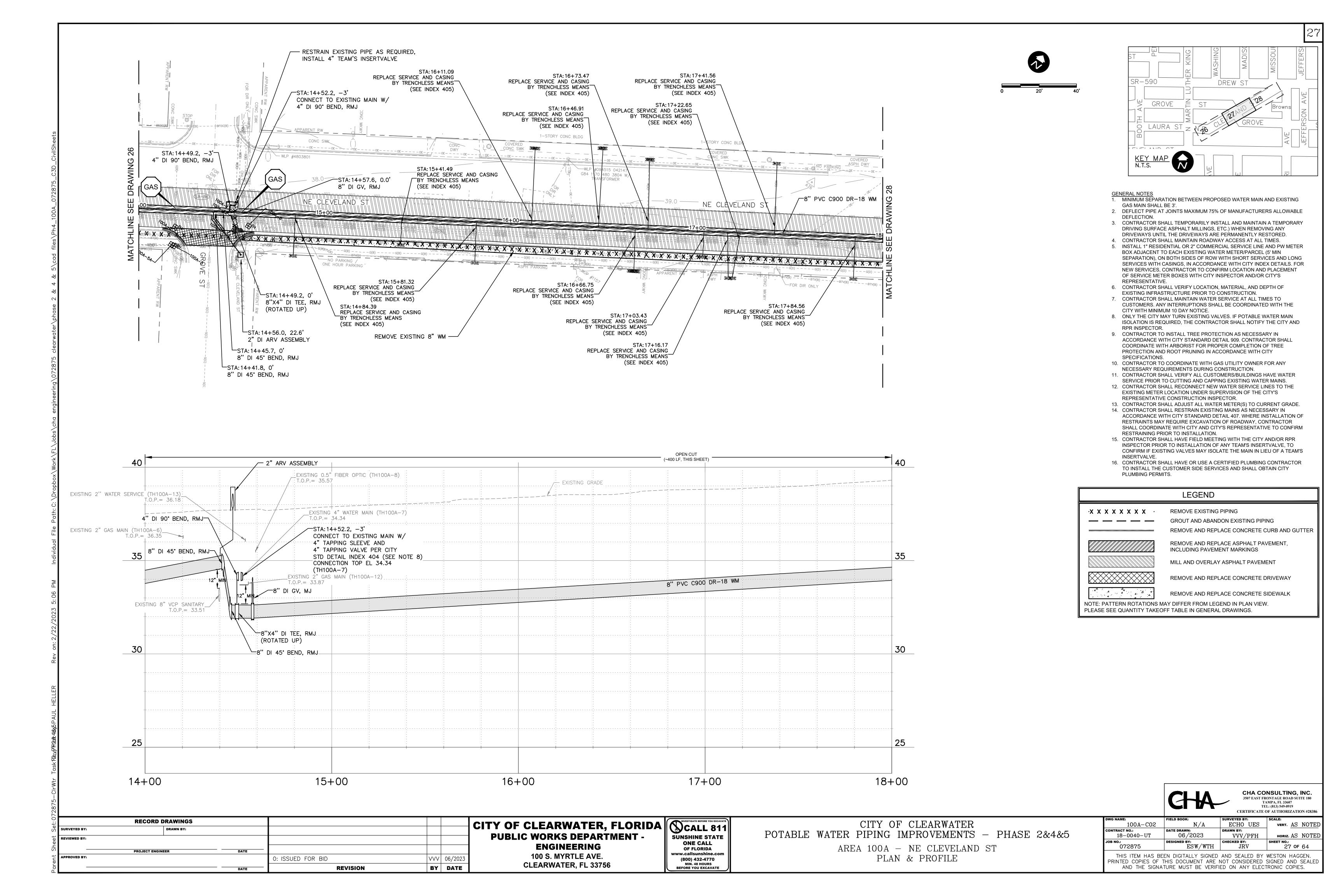


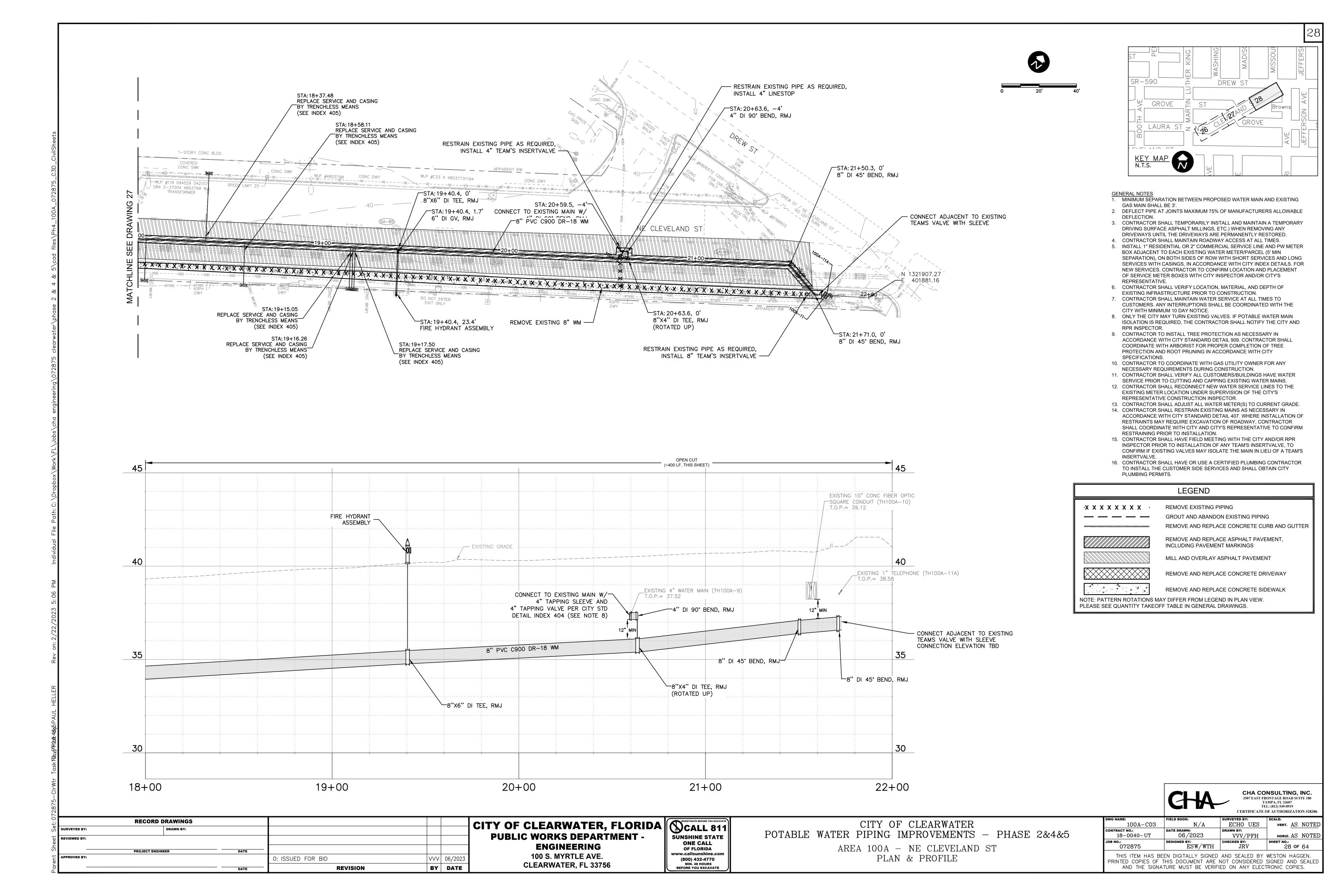


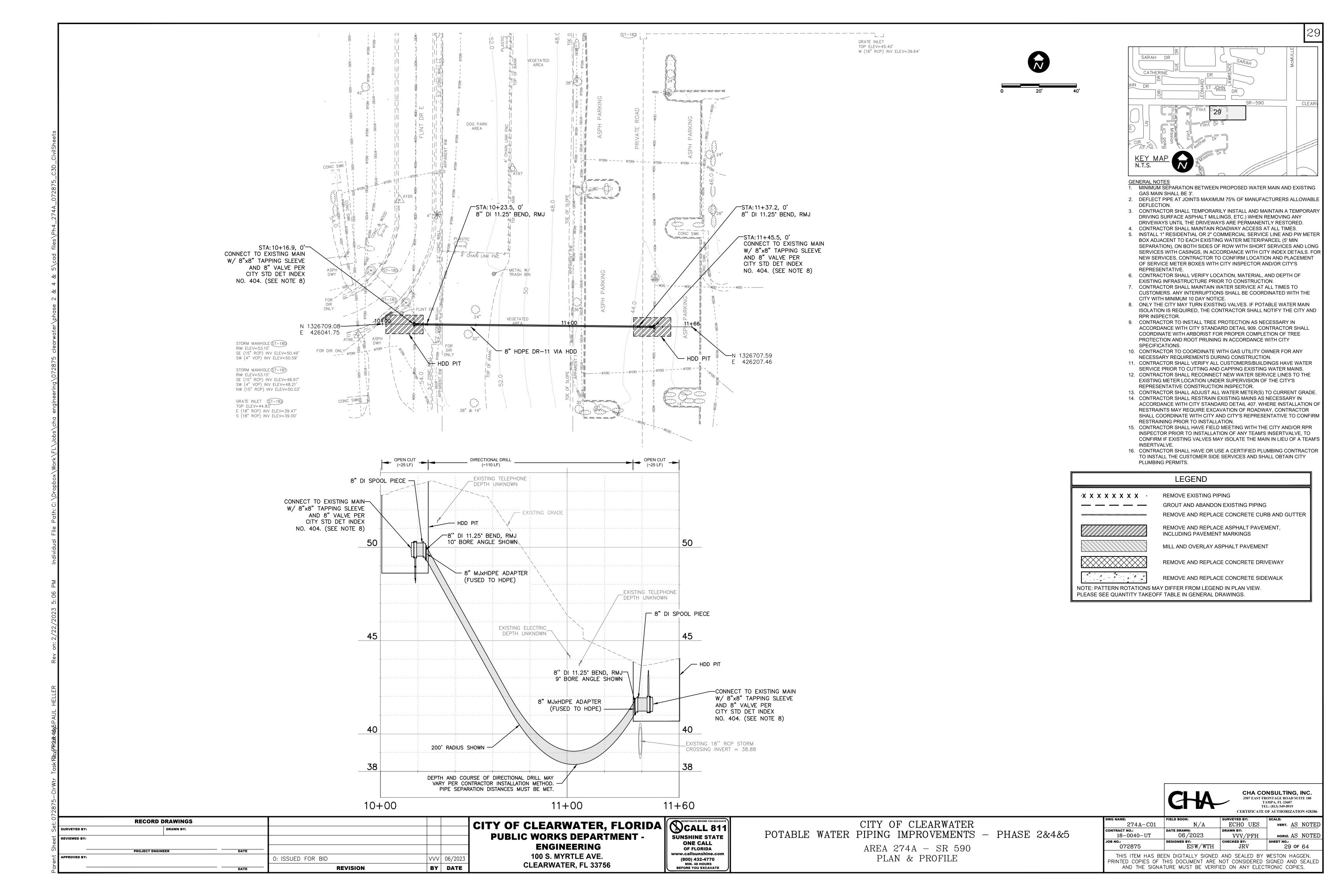


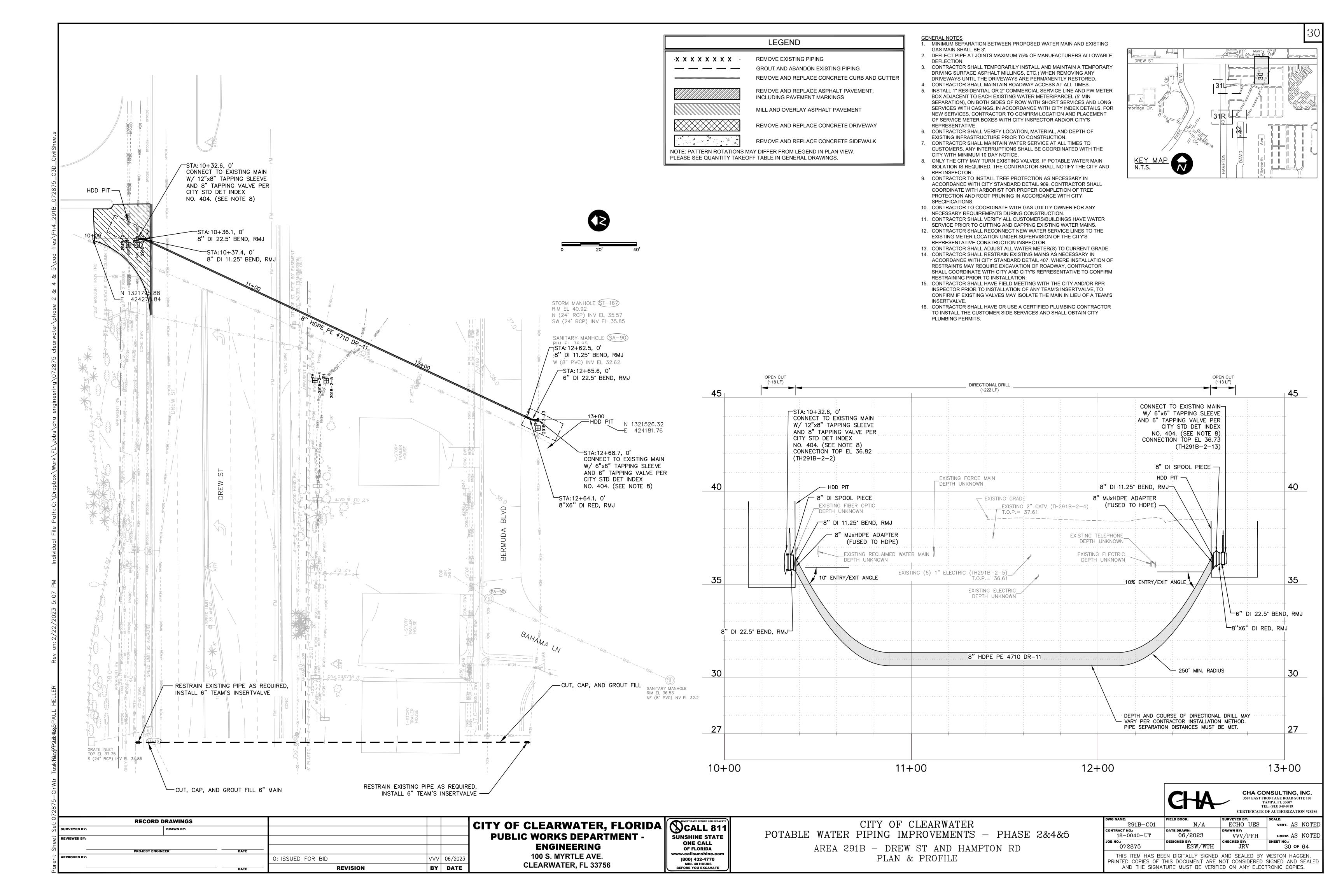


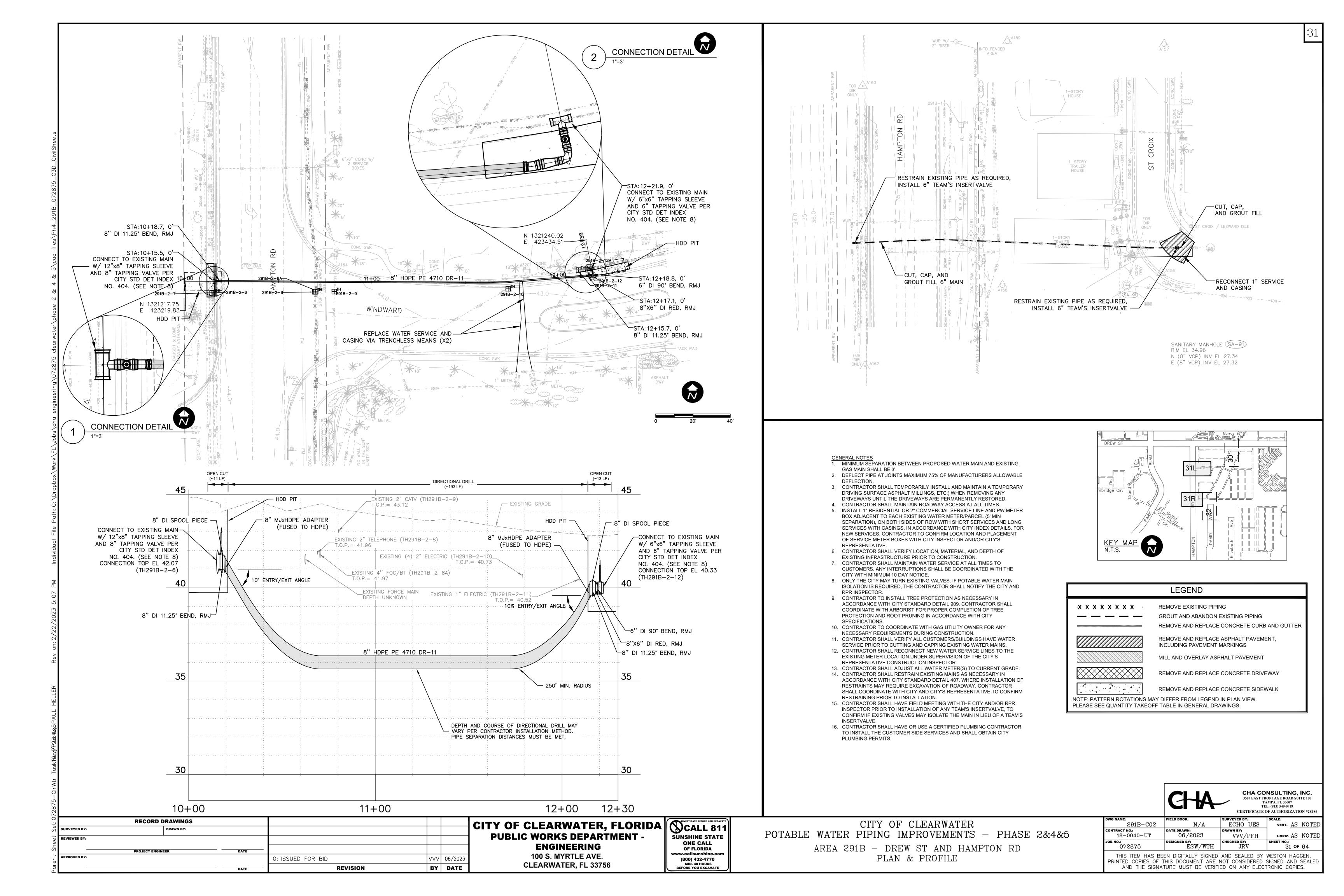


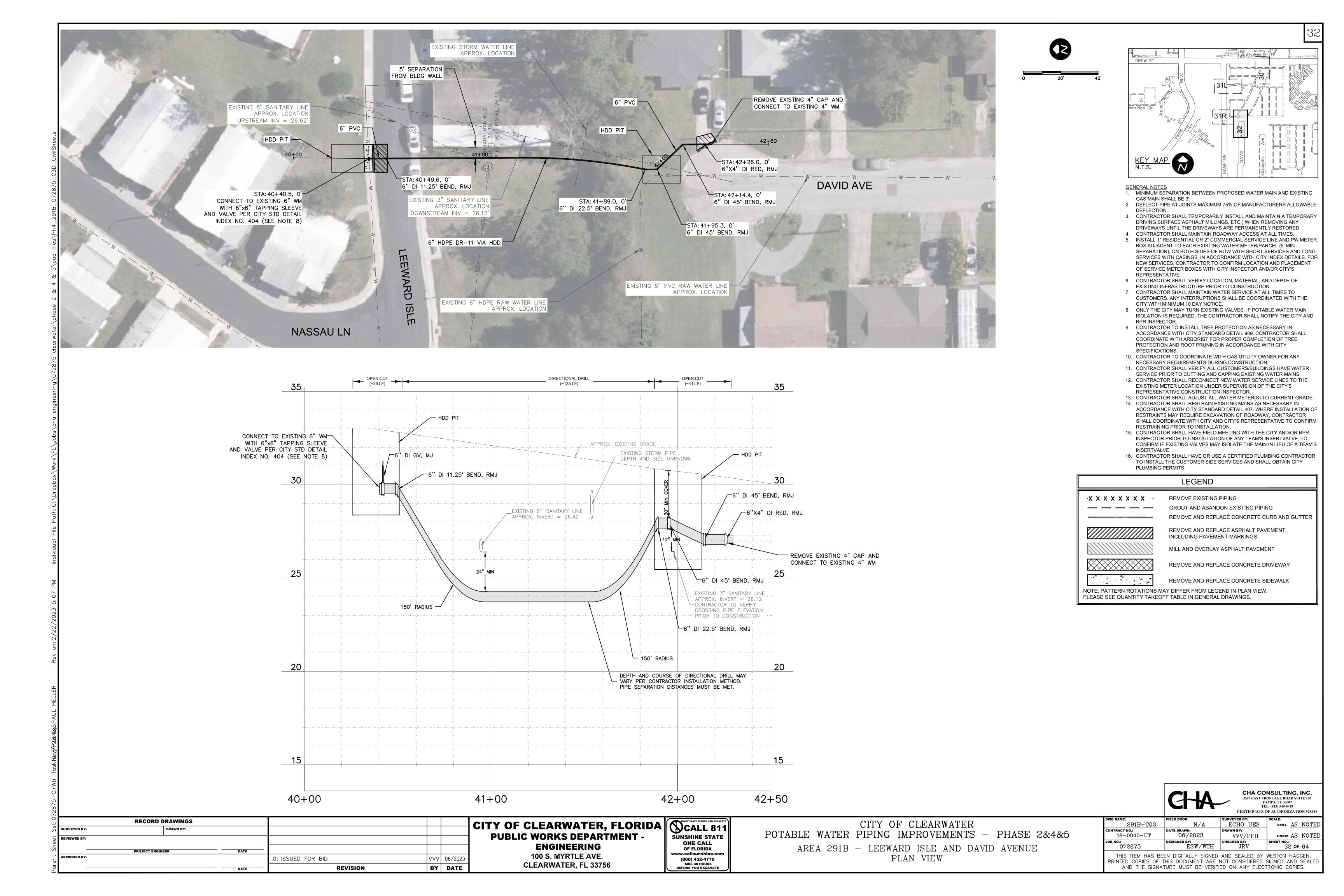


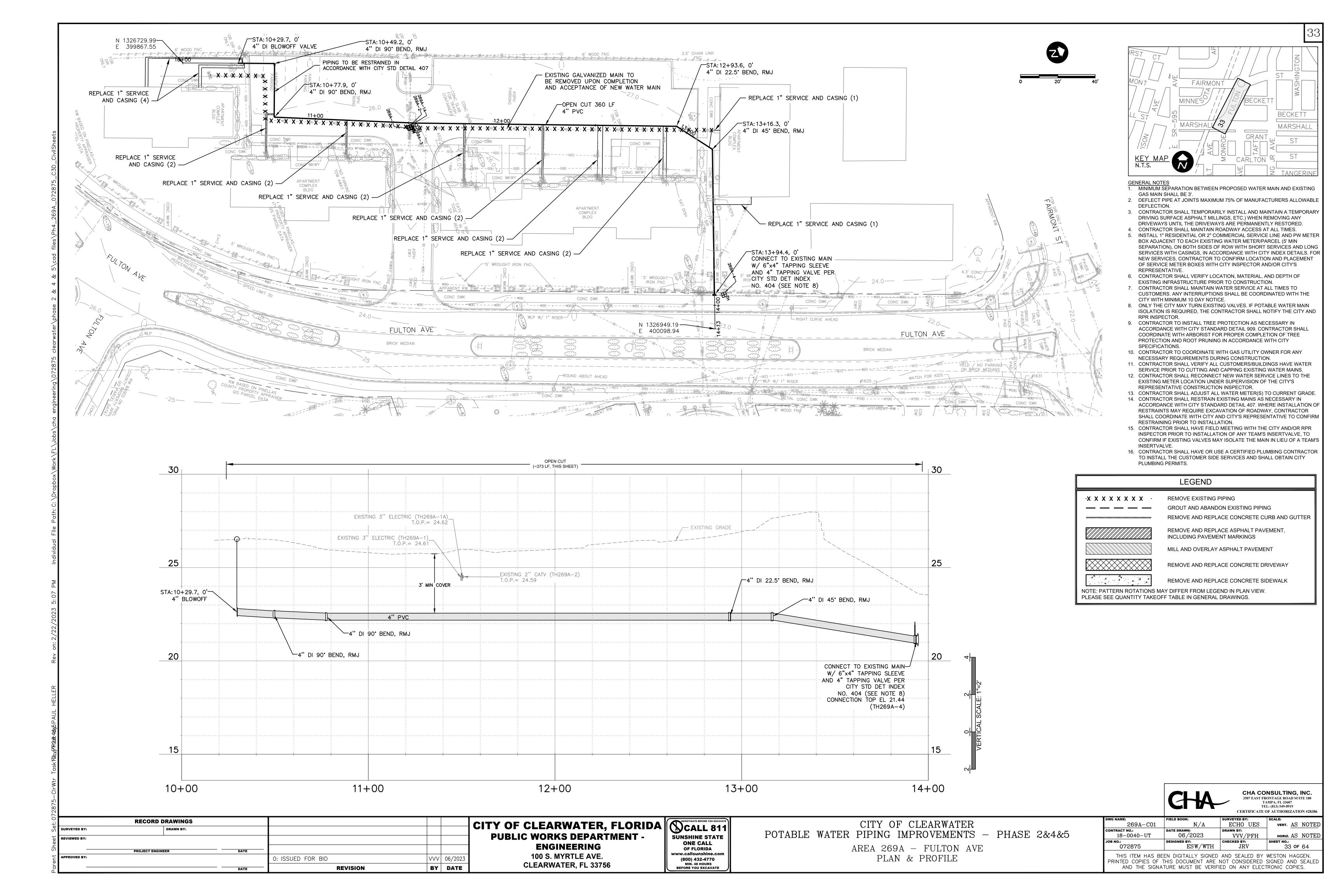


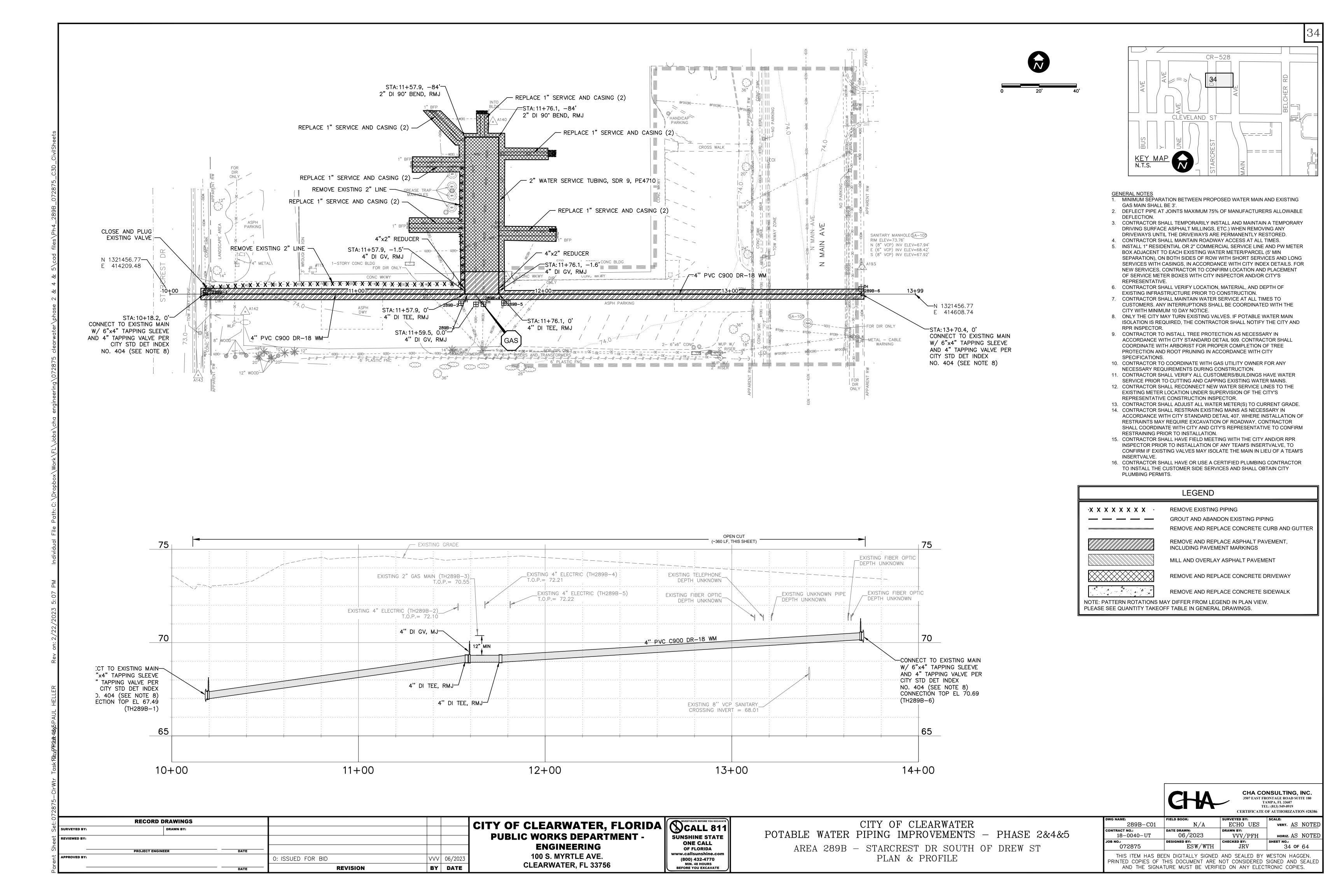


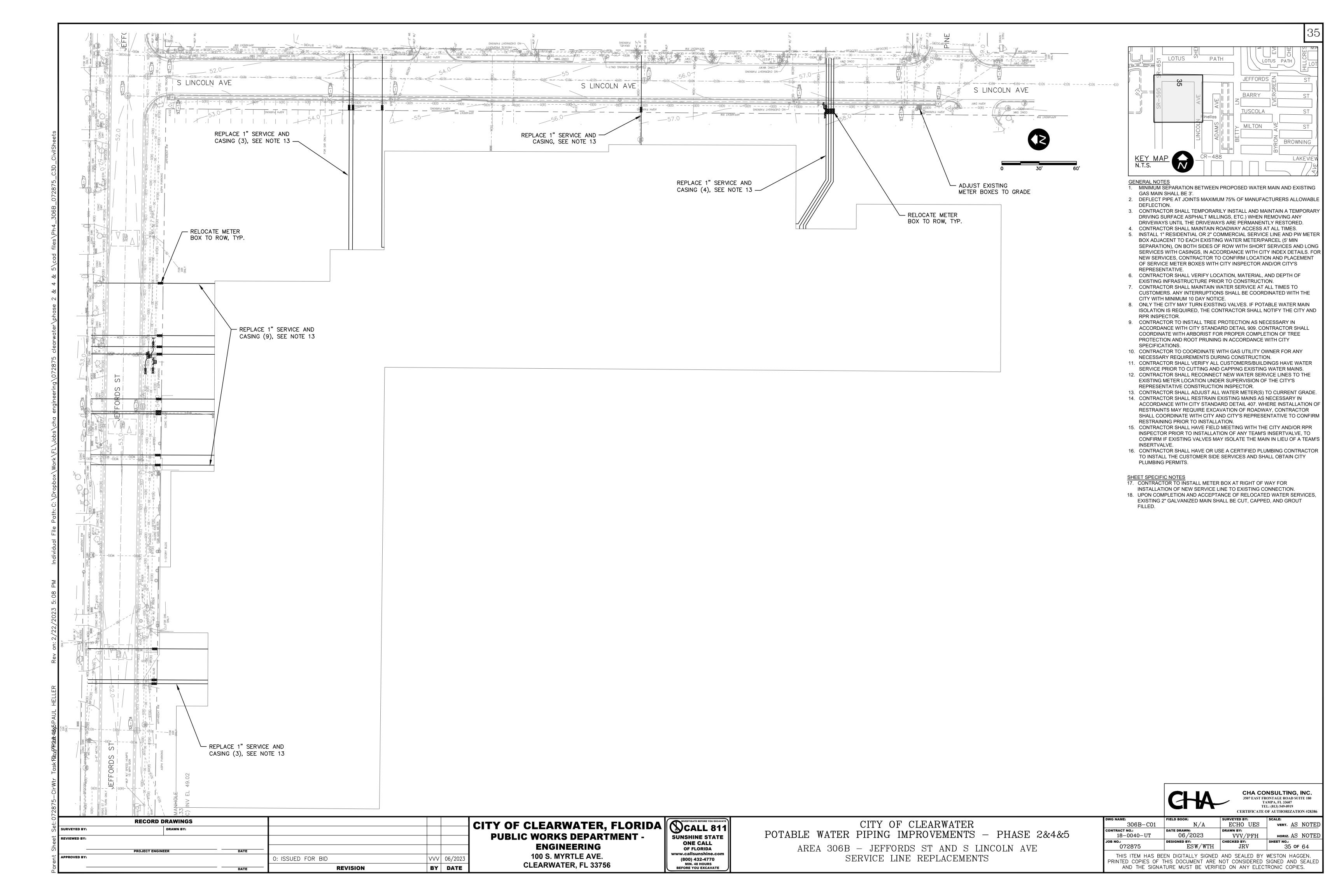


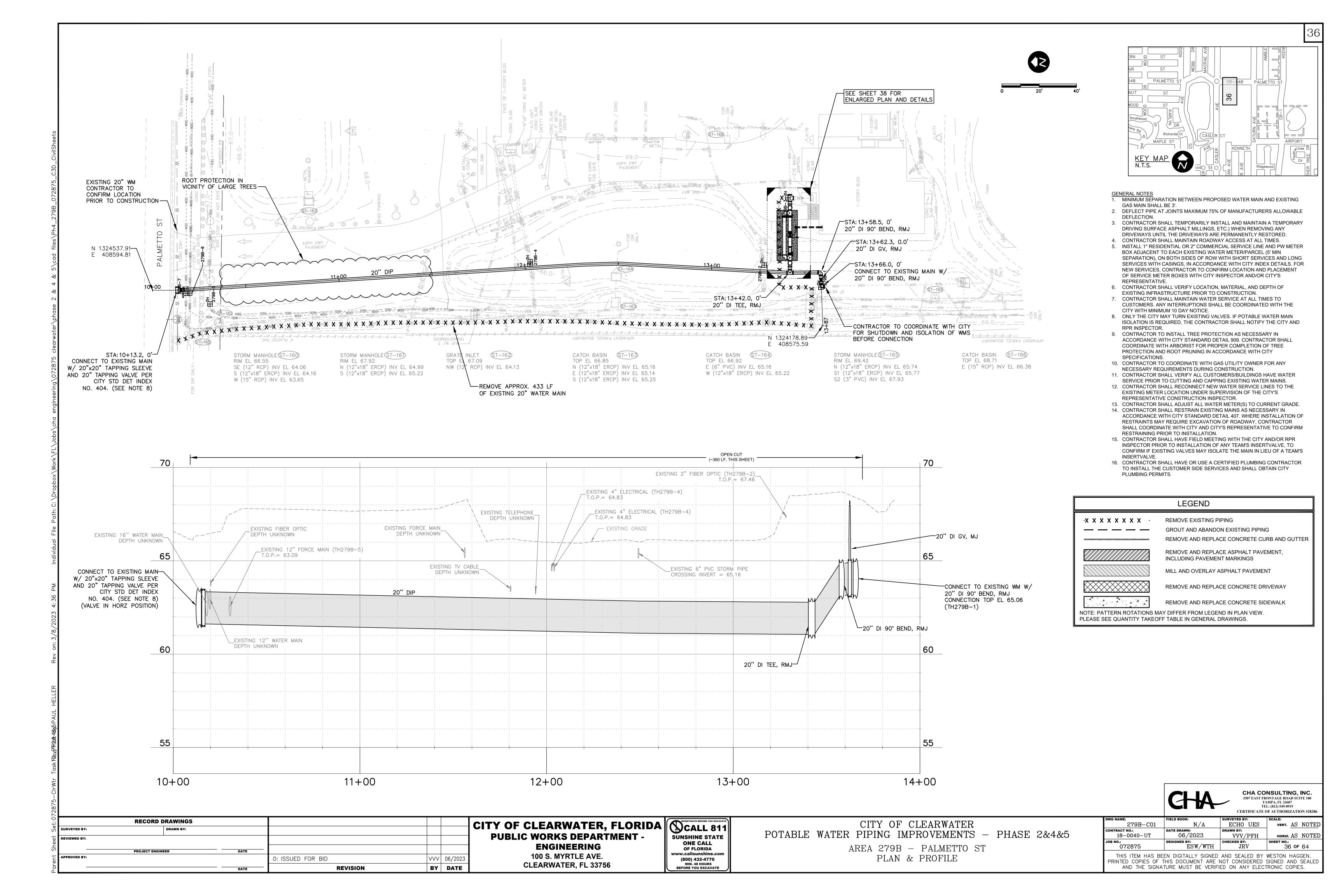












2. THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE WORK DEPICTED ON THE DRAWINGS. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.

3. FOR ALL ITEMS EMBEDDED IN OR PASSING THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL, HVAC, AND PLUMBING DRAWINGS FOR TYPE, SIZE, LOCATION, AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.

4. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES WHILE PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATIONS, AND OTHERS.

5. SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.

6. ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURE.

7. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

#### DESIGN CRITERIA

**BUILDING CODES AND REFERENCES:** 

1. FLORIDA BUILDING CODE, SEVENTH EDITION (2020)

2. REINFORCED CONCRETE:

ALL STRUCTURES: ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL

3. STRUCTURAL STEEL: AISC MANUAL OF STEEL CONSTRUCTION, 15TH EDITION

4. ALUMINUM: ADM1-2015, ALUMINUM DESIGN MANUAL

LIVE LOADS:

**SLABS ON GRADE** 

EXPOSURE CATEGORY

6. WIND DESIGN CRITERIA:

RISK CATEGORY ULTIMATE DESIGN WIND SPEED, VIJIT

NOMINAL DESIGN WIND SPEED, V<sub>ASD</sub>

145 MPH 112 MPH

300 PSF

#### **FOUNDATIONS**

1. ALLOWABLE SOIL BEARING PRESSURE USE FOR DESIGN IS LIMITED TO 2,000 PSF. CLASS 3 FOUNDATION MATERIAL PER FBC TABLE 1806.2 HAS ASSUMED FOR DESIGN.

### CONCRETE (CAST-IN-PLACE)

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS.

ALL CONCRETE SHALL BE AIR-ENTRAINED WITH A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS UNLESS OTHERWISE NOTED.

3. WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494

4. ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING METHOD AS SOON AS FINISHING IS COMPLETED OR FORMS ARE REMOVED.

ALL EXPOSED CORNERS SHALL HAVE A MINIMUM CHAMFER OF 3/4" UNLESS OTHERWISE NOTED.

6. THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATIONS OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWINGS.

### REINFORCING STEEL

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064 REQUIREMENTS. ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

2. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

a. CONCRETE CAST AGAINST EARTH

b. FORMED SURFACE IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER

3. LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL.

4. THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

### STRUCTURAL STEEL

1. DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS AND THE DESIGN DRAWINGS.

2. STEEL MATERIAL:

a. W-SHAPED SECTIONS : ASTM A992, GRADE 50

HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE B

c. ALL OTHER STRUCTURAL STEEL: ASTM A36

d. ALL PIPE: ASTM A53, GRADE B

3. WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS STRUCTURAL WELDING CODE REQUIREMENTS. ELECTRODES SHALL BE E-70XX.

4. BOLTED CONNECTIONS:

a. MAIN CONNECTIONS: 3/4" DIA, ASTM A325 BOLTS. HOLES: 13/16" DIA CONNECTION SHALL BE "BEARING" TYPE WITH THREADS EXCLUDED FROM THE SHEAR PLANE.

b. SECONDARY CONNECTION: 3/4" DIA, ASTM A307 GRADE A BOLTS.

c. ALL CONNECTION SHALL HAVE A MINIMUM OF TWO BOLTS. GUSSET PLATES SHALL BE A MINIMUM OF 3/8" THICK.

d. ALL COLUMNS AND POSTS SHALL HAVE MILLED ENDS FOR FULL BEARING AT BASE PLATES.

#### **ALUMINUM**

 ALUMINUM DESIGN, DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF THE ALUMINUM DESIGN MANUAL.

2. ALUMINUM IN CONTACT WITH OR EMBEDDED IN CONCRETE OR MASONRY SURFACES SHALL BE COATED WITH A HEAVY COATING OF ALKALI RESISTANT BITUMINOUS PAINT.

3. ALL BOLTS USED IN CONNECTIONS WITH ALUMINUM MEMBERS SHALL BE STAINLESS STEEL TYPE 316, UNLESS NOTED OTHERWISE.

4. ALL WELDING OF ALUMINUM STRUCTURES SHALL CONFORM TO "STRUCTURAL WELDING CODE -ALUMINUM", AWS D1.2, LATEST EDITION.

#### STAINLESS STEEL

1. STAINLESS STEEL MATERIALS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

EXTERIOR AND SUBMERGED USE: TYPE 316

TYPE 316L (WHERE WELDED)

**ELEC** 

EQ

EW

**EMBED** 

ELECTRICAL

**EACH WAY** 

**EQUAL** 

**EMBEDMENT** 

a. INTERIOR AND ARCHITECTURAL USE: TYPE 304

TYPE 304L (WHERE WELDED)

2. ALL WELDING OF STRUCTURAL STAINLESS STEEL SHALL CONFORM TO "STRUCTURAL WELDING CODE - STAINLESS STEEL", AWS D1.6, LATEST EDITION. ELECTRODES SHALL BE E-318 316L

3. STAINLESS STEEL PLATES, SHEETS AND WASHERS SHALL BE IN ACCORDANCE TO ASTM A240.

4. STAINLESS STEEL W SHAPES, CHANNELS AND ANGLES SHALL BE IN ACCORDANCE TO ASTM

5. ALL BUILT-UP ASSEMBLIES SHALL BE FUSED BY LASER IN ACCORDANCE WITH ASTM A1069 FOR NON TUBULAR SHAPES OR WELDED IN ACCORDANCE WITH ASTM A554 FOR TUBULAR SHAPES.

6. STAINLESS STEEL BOLTS AND THREADED RODS SHALL BE TYPE 316 IN ACCORDANCE TO ASTM F593 UNLESS NOTED OTHERWISE.

7. STAINLESS STEEL NUTS SHALL BE TYPE 316 IN ACCORDANCE TO ASTM F594 UNLESS NOTED

# STRUCTURAL ABBREVIATIONS

&	AND	EXIST	EXISTING		METAL BUILDING
@	AT	EXP	EXPANSION	PERP	PERPENDICULAR
#	NUMBER	FE	FIRE EXTINGUISHER	PL	PLATE
ADDTL	ADDITIONAL	FF	FAR FACE, FINISHED	PLF	POUND PER LINEAR
AFF	ABOVE FINISHED		FLOOR		FOOT
	FLOOR	FG	FINISHED GRADE	PT	PRESSURE TREATED
ALUM	ALUMINUM	FRP	FIBER REINFORCED	PROJ	PROJECTION
AEWS	AUTOMATIC END		PLASTIC	PSF	POUNDS PER SQUARE
	WELDED STUD(S)	FT	FOOT		FOOT
ALT	ALTERNATE	FTG	FOOTING	PSI	POUNDS PER SQUARE
APROX	APPROXIMATE(LY)	FV	FIELD VERIFY		INCH
BLD	BUILDING	GA	GAGE	PVC	POLYVINYL CHLORIDE
BM	BEAM	GALV	GALVANIZED	R	RADIUS
BOT	BOTTOM	HK	HOOK	REINF	REINFORCING
CJ	CONTROL JOINT	HORIZ	HORIZONTAL	REQD	REQUIRED
CL	CENTER LINE	HSS	HOLLOW STRUCTURAL	RO	ROUGH OPENING
CLR	CLEAR		SECTION	SCHED	SCHEDULE(D)
CMU	CONCRETE MASONRY	HP	HIGH POINT	SIM	SIMILAR
	UNIT	ID	INSIDE DIAMETER	SJ	SAWCUT JOINT
COL	COLUMN	JT	JOINT	SMS	SHEET METAL SCREW
CONC	CONCRETE	LB(S)	POUND(S)	SPECS	SPECIFICATIONS
CONN	CONNECTION	LONG	LONGITUDINAL	SQ	SQUARE
CONST JT	CONSTRUCTION JOINT	LP	LOW POINT	SS	STAINLESS STEEL
CONT	CONTINUOUS	MANUF	MANUFACTURER	STD	STANDARD
CTR	CENTER	MATL	MATERIAL	STL	STEEL
DIA	DIAMETER	MAX	MAXIMUM	T/	TOP OF
DIM	DIMENSION	MECH	MECHANICAL	TB	TIE BEAM
DEG	DEGREE(S)	MFR	MANUFACTURER	T&B	TOP AND BOTTOM
DO	DITTO	MIN	MINIMUM	THK	THICK
DWG	DRAWING	MISC	MISCELLANEOUS	THRU	THROUGH
DWL	DOWEL(S)	MO	MASONRY OPENING	TOC	TOP OF CONCRETE
(E)	EXISTING	MTL	METAL	TOS	TOP OF STEEL
EA	EACH	NO	NUMBER	TYP	TYPICAL
EF	EACH FACE	NTS	NOT TO SCALE	UNO	UNLESS NOTED
EJ	EXPANSION JOINT	OC	ON CENTER		OTHERWISE
EL	ELEVATION	OD	OUTSIDE DIAMETER	VERT	VERTICAL
		<b>~</b> · · ·			

OPPOSITE HAND

PRE-ENGINEERED

OPENING

**PIECES** 

WT

WWF

WEIGHT

WELDED WIRE FABRIC

OH

OPNG

PCS

PEMB

**LEGEND** 

STRUCTURAL LEGEND APPLIES TO "S" SHEETS ONLY

**EARTH FILL** 

**GRATING** 

UNDISTURBED EARTH

COMPACTED GRANULAR FILL

GROUT OR SAND (AS NOTED)

STEEL PRECAST CONCRETE

CONCRETE

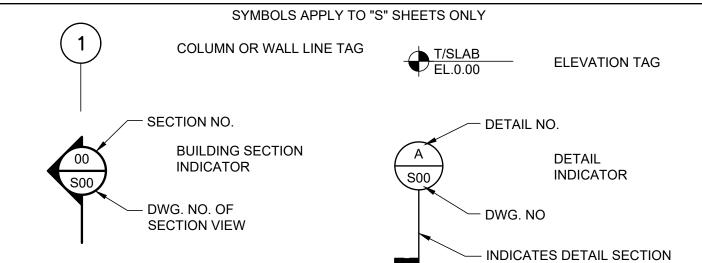
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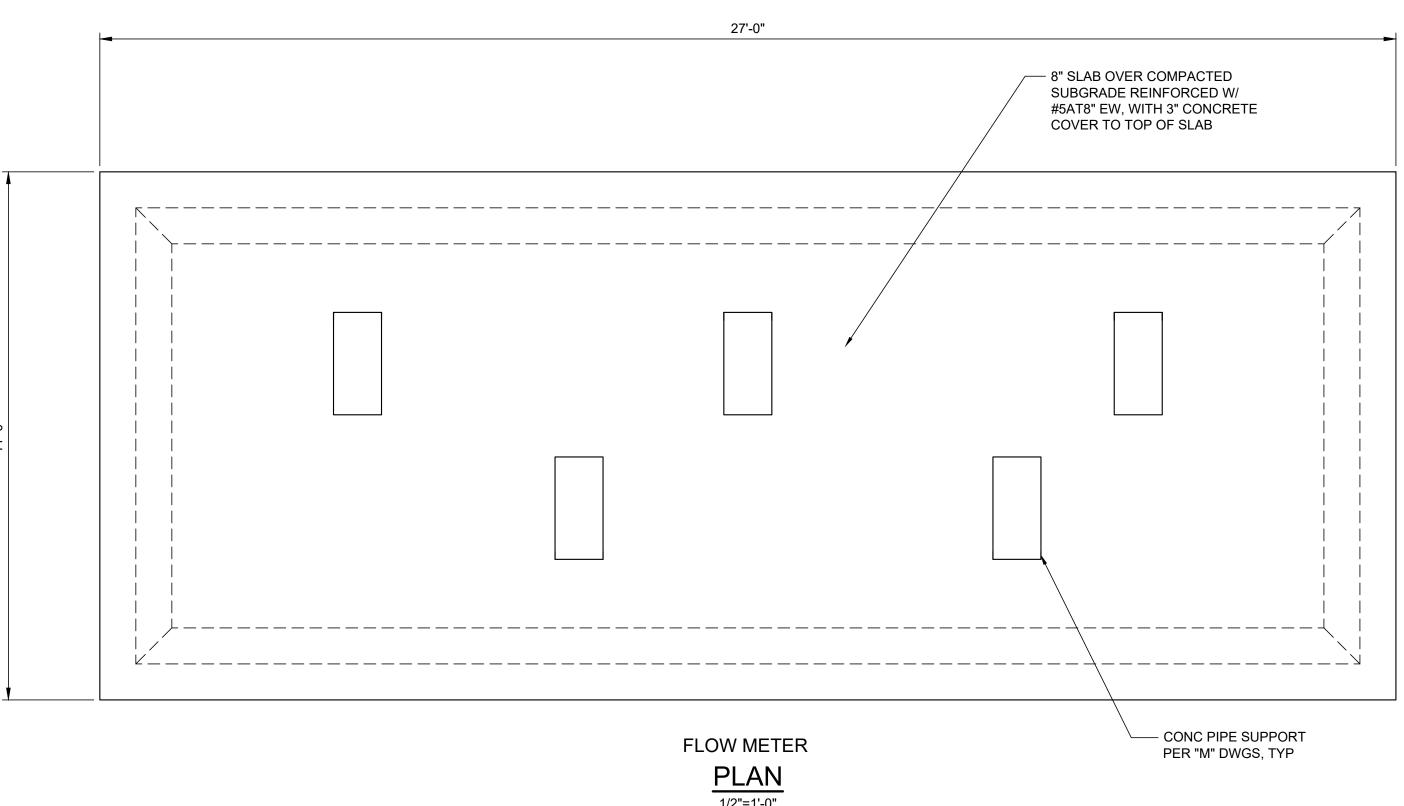
CONCRETE

DEMOLITION

CUT (WHERE SHOWN)

## **SYMBOLS**





1. REFER TO "M" DRAWINGS FOR LOCATION, ELEVATION AND ORIENTATION OF SLABS. ALL SLABS SHALL BE SLOPED TO PREVENT PONDING OF

2. REFER TO "M" DRAWINGS FOR ALL PIPE AND EQUIPMENT LOCATIONS. 3. ALL CONCRETE SLABS SHALL BE CAST OVER COMPACTED SUBGRADE IN

ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

P: 321.972.4989 COA Lic. No: 31920 ENGINEERING WEKIVA PROJECT #22-184

RECORD DRAWINGS					C
SURVEYED BY: DRAWN BY:					6
REVIEWED BY:					
PROJECT ENGINEER	DATE				
APPROVED BY:		0: ISSUED FOR BID	JVS	06/2023	
	DATE	REVISION	ВҮ	DATE	l

CITY OF CLEARWATER, FLORIDA ∥ **PUBLIC WORKS DEPARTMENT -ENGINEERING** 100 S. MYRTLE AVE.

**CLEARWATER, FL 33756** 

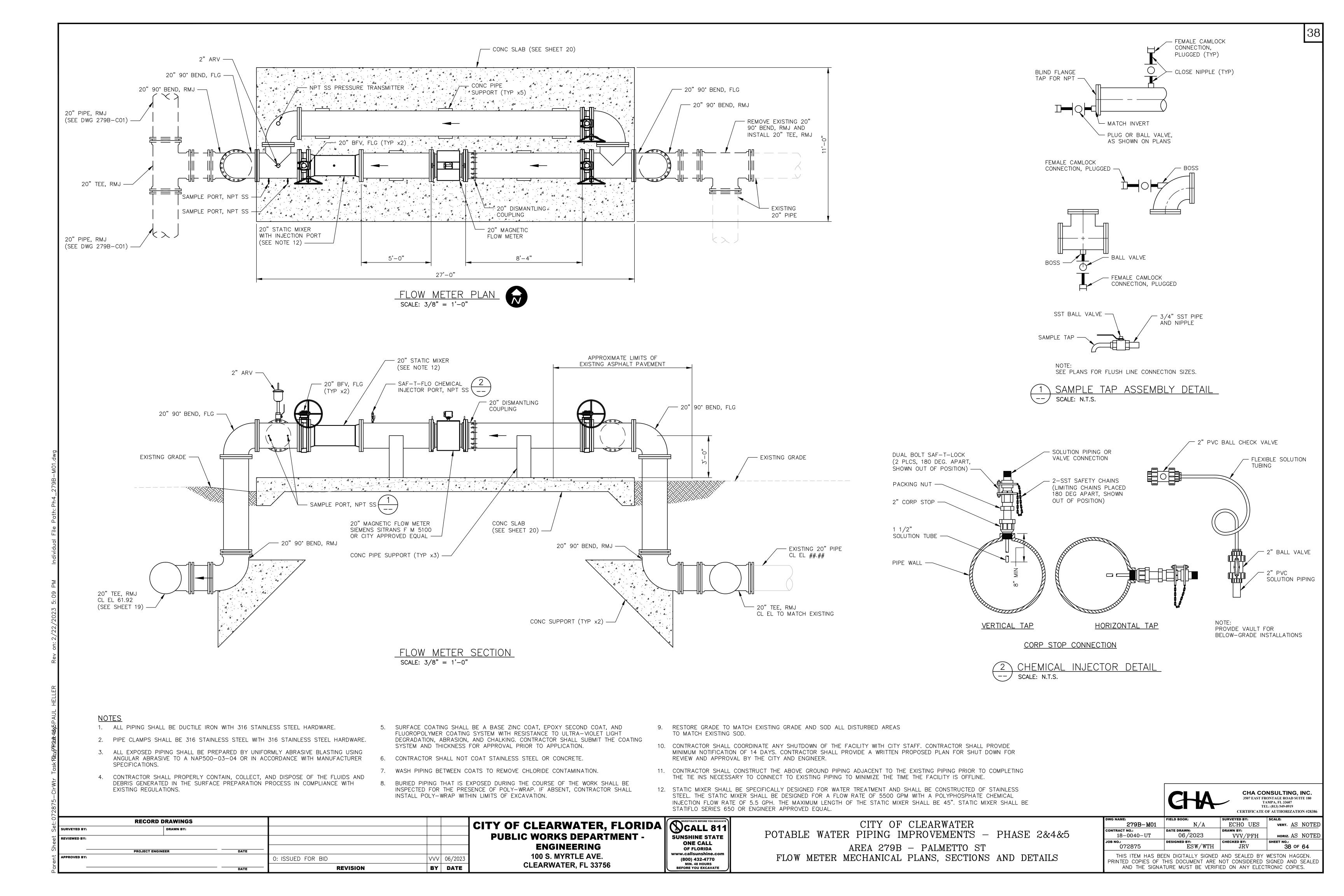
CALL 811 SUNSHINE STATE ONE CALL OF FLORIDA (800) 432-4770 MIN. 48 HOURS

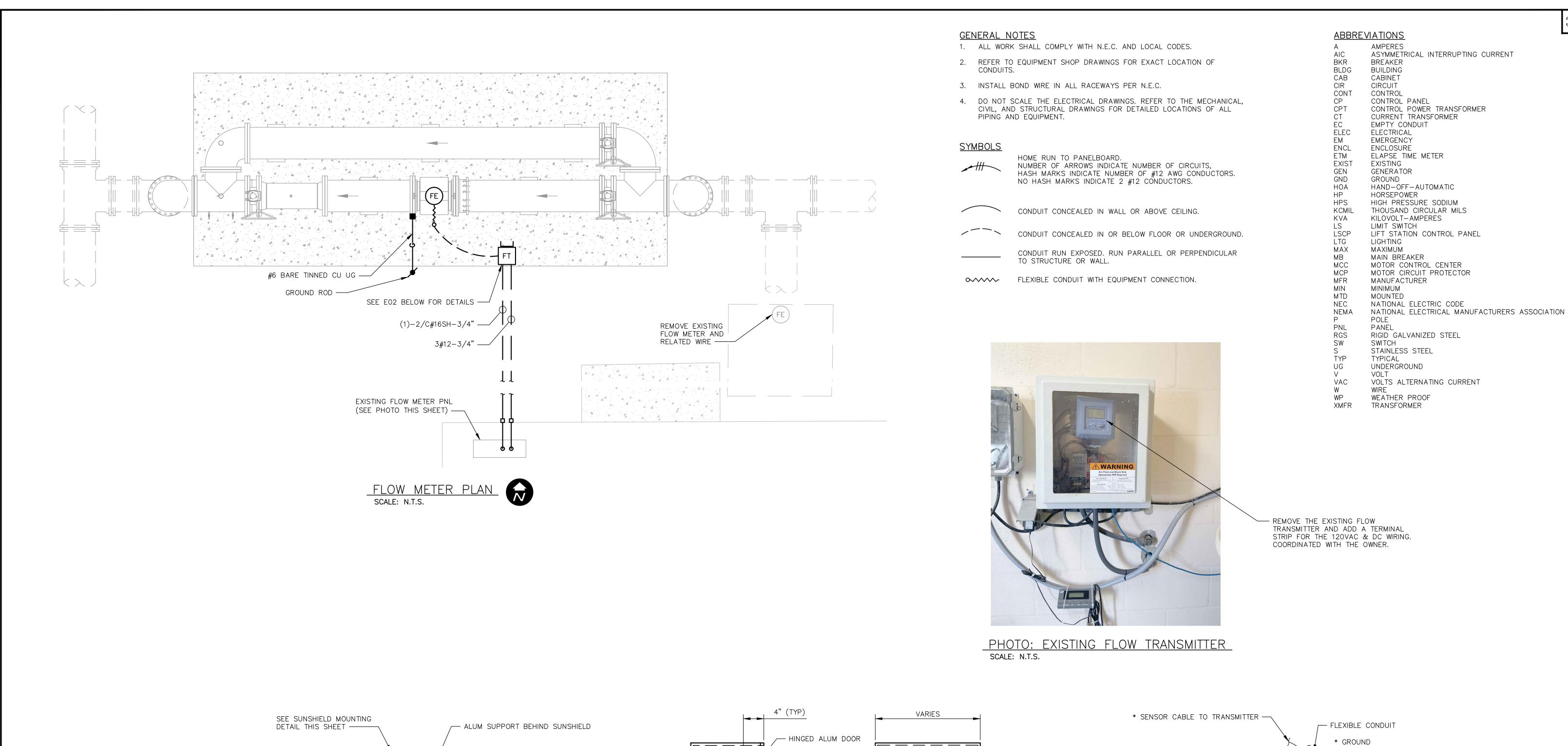
CITY OF CLEARWATER POTABLE WATER PIPING IMPROVEMENTS - PHASE 2&4&5 AREA 279B - PALMETTO ST

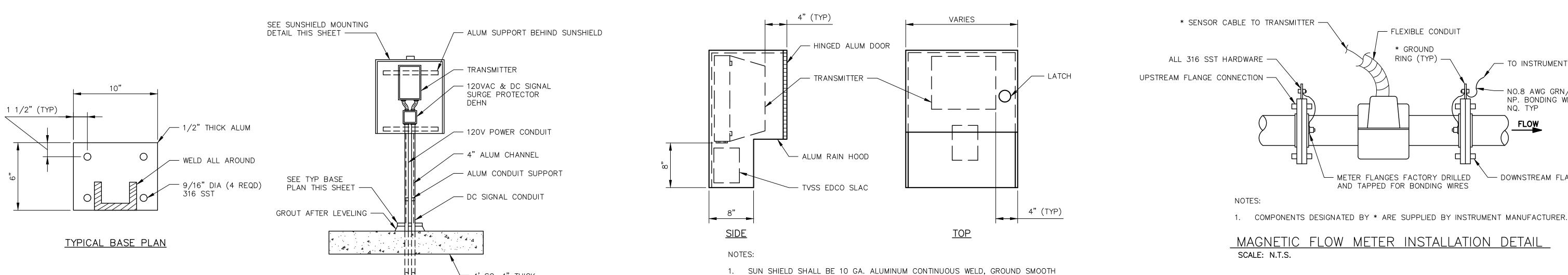
FLOW METER PAD STRUCTURAL PLANS, SECTIONS AND DETAILS

06/2023 18-0040-UT HORIZ. AS NOTE WTHTHIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JOHN SOBCZAK. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED

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— 4' SQ, 4" THICK

MOUNTING DETAIL  SCALE: N.T.S.			TYPICAL SUNSHIELD MOUNTING DETAIL  scale: N.T.S.		EMI CONSULTING SPECIALTIES, INC. 5742 River Bed Road Groveland, FL 34736 (352) 460-4035					
RECOR SURVEYED BY:  REVIEWED BY:  PROJECT EN  APPROVED BY:	RD DRAWINGS  DRAWN BY:  ENGINEER  DATE  DATE	O: ISSUED FOR BID  REVISION	CH 06/2023 Y DATE	PUBLIC WORKS DEPARTMENT - ENGINEERING	CALL 811 SUNSHINE STATE ONE CALL OF FLORIDA www.callsunshine.com (800) 432-4770 MIN. 48 HOURS BEFORE YOU EXCAVATE	CITY OF CLEARWATER POTABLE WATER PIPING IMPROVEMENTS — PHASE 2&4&5  AREA 279B — PALMETTO ST FLOW METER ELECTRICAL PLANS, SECTIONS AND DETAILS			NOT CONSIDERED	SIGNED AND SEALED

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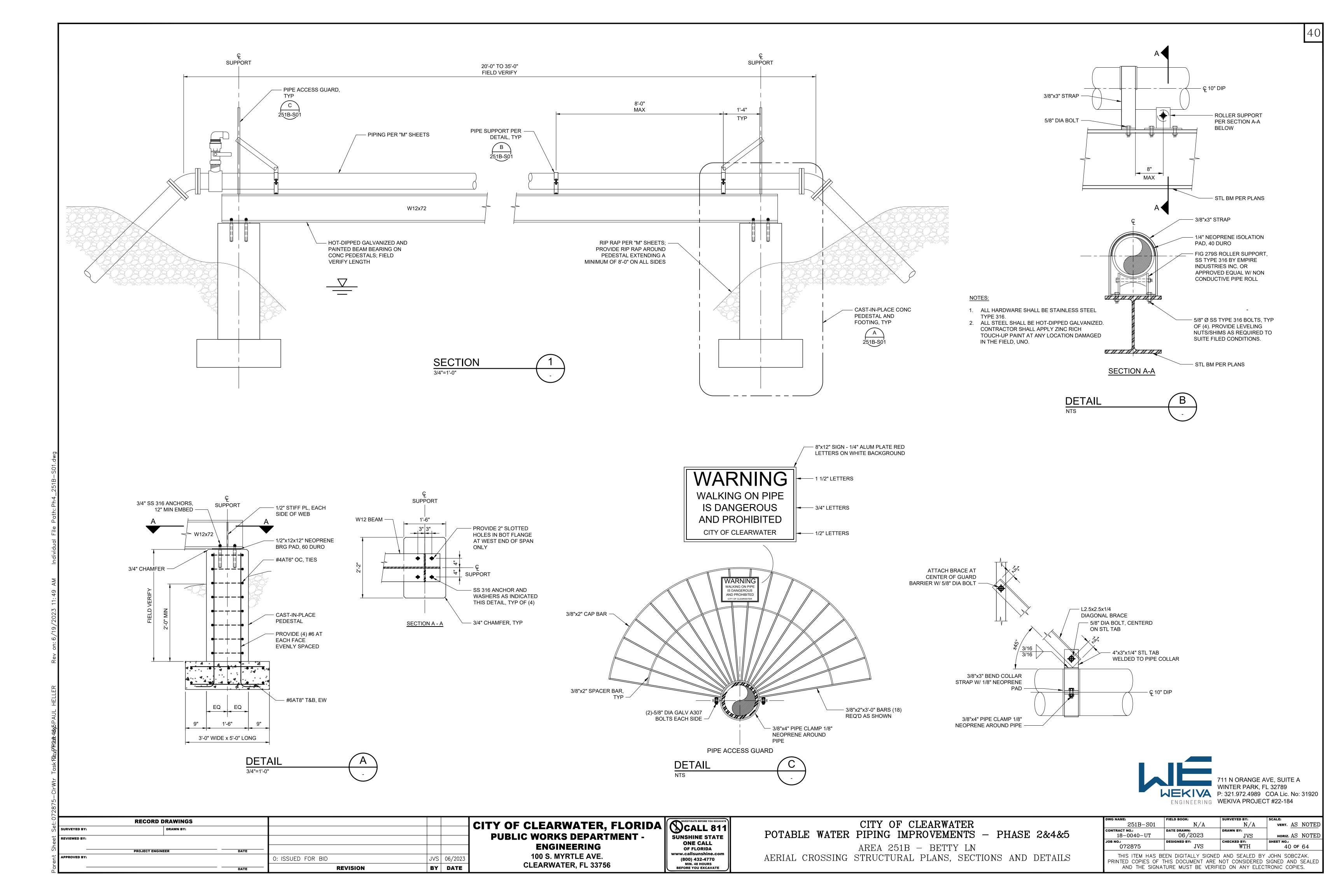
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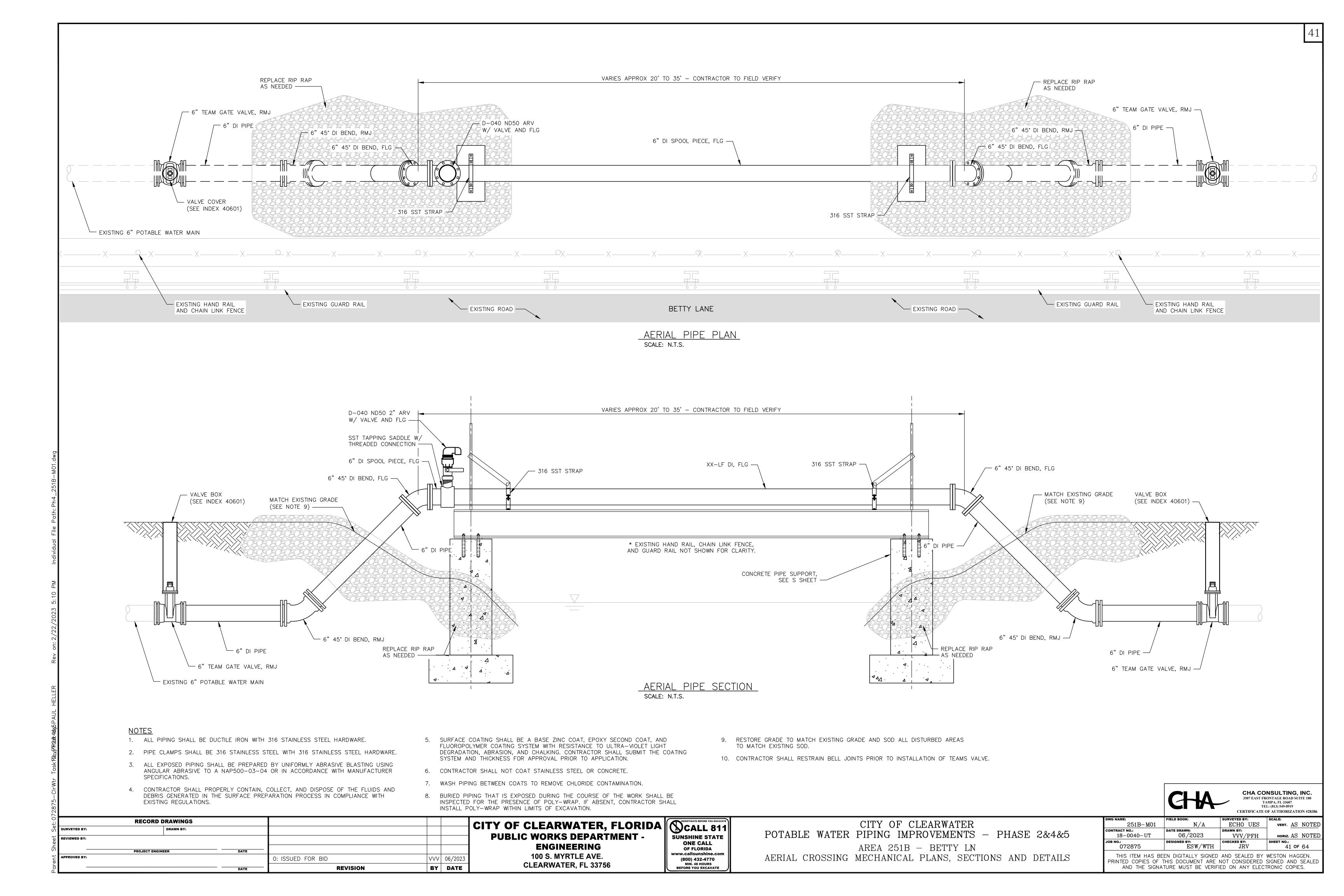
- NO.8 AWG GRN/YEL

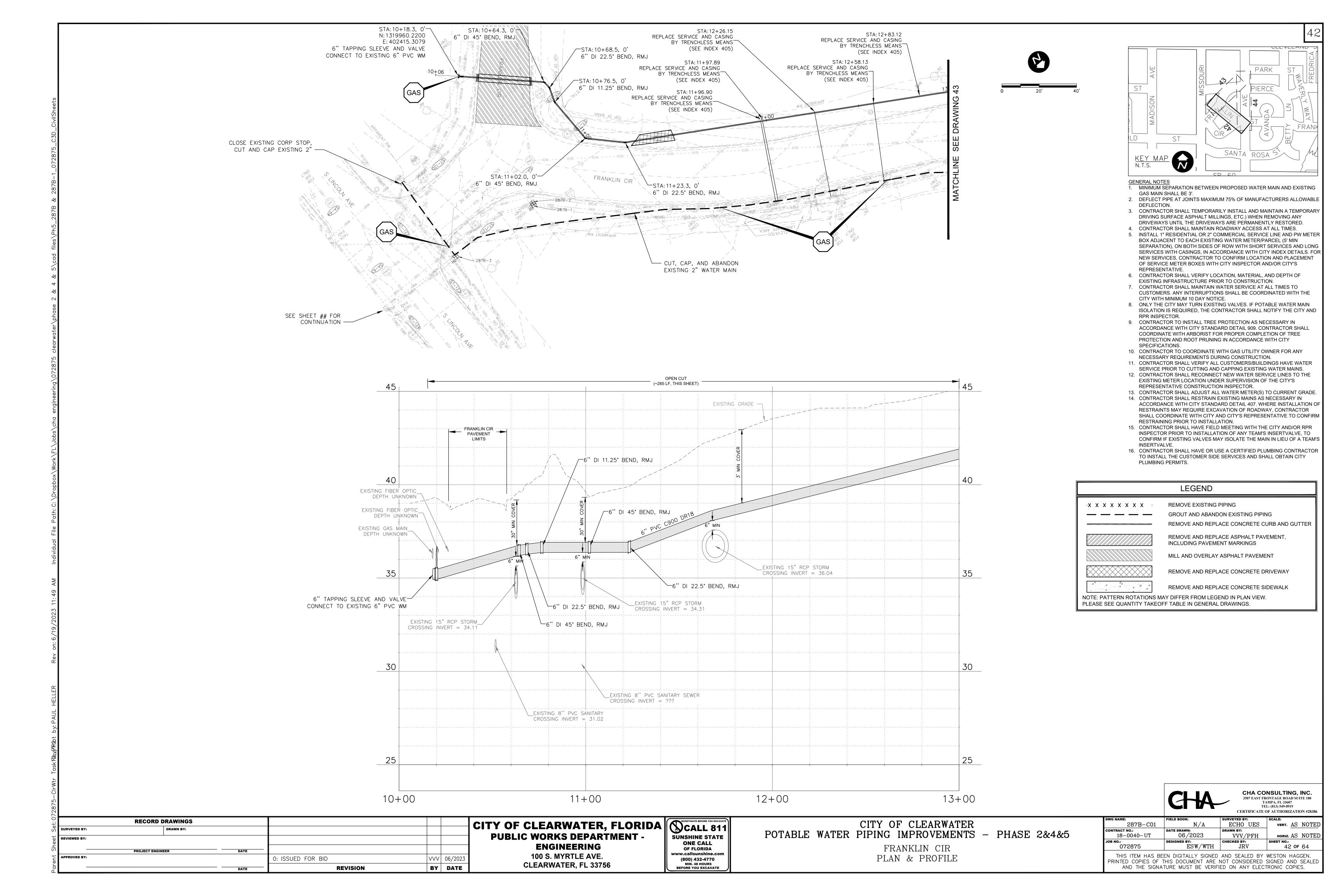
NP. BONDING WIRE,

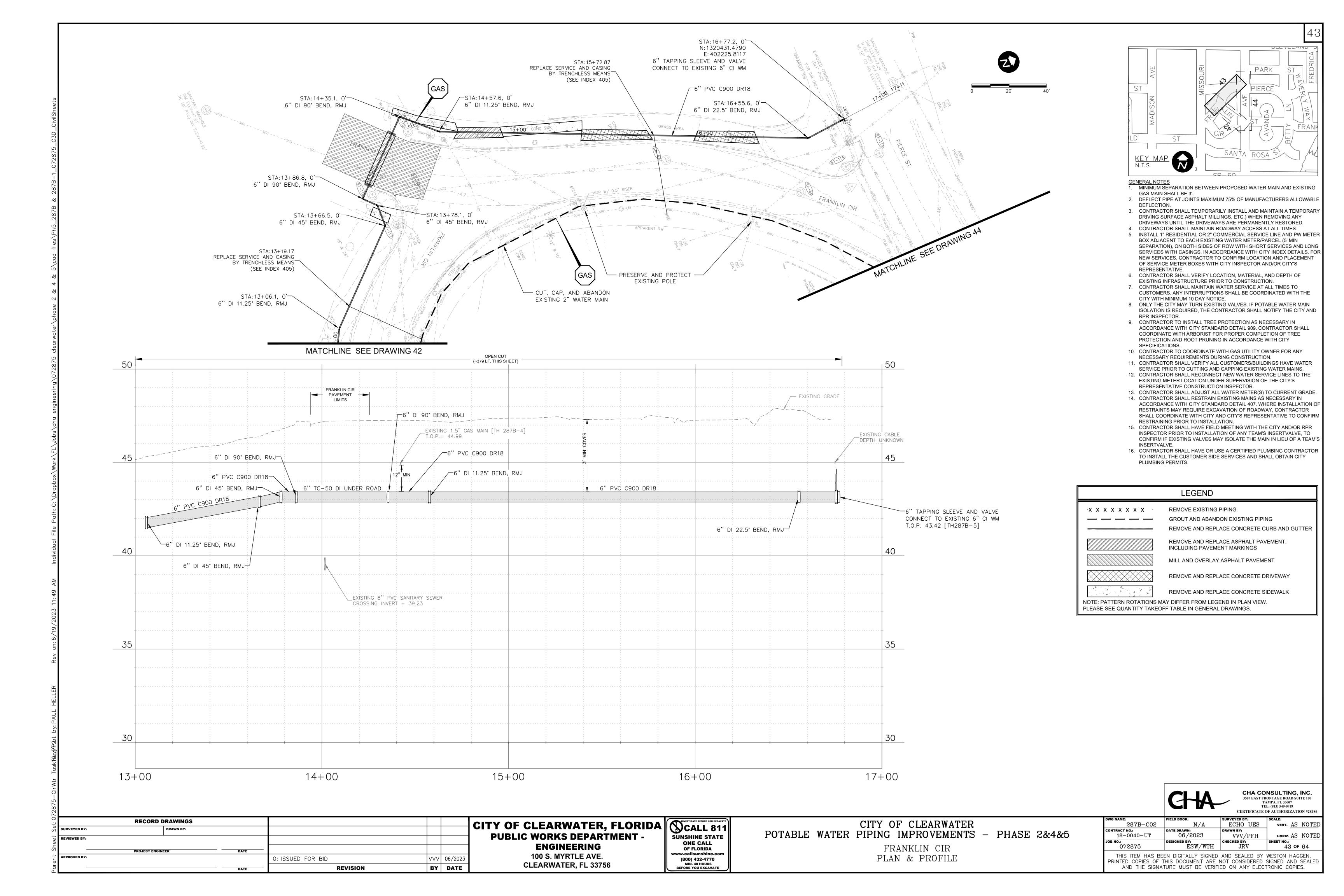
─ DOWNSTREAM FLANGE CONNECTION

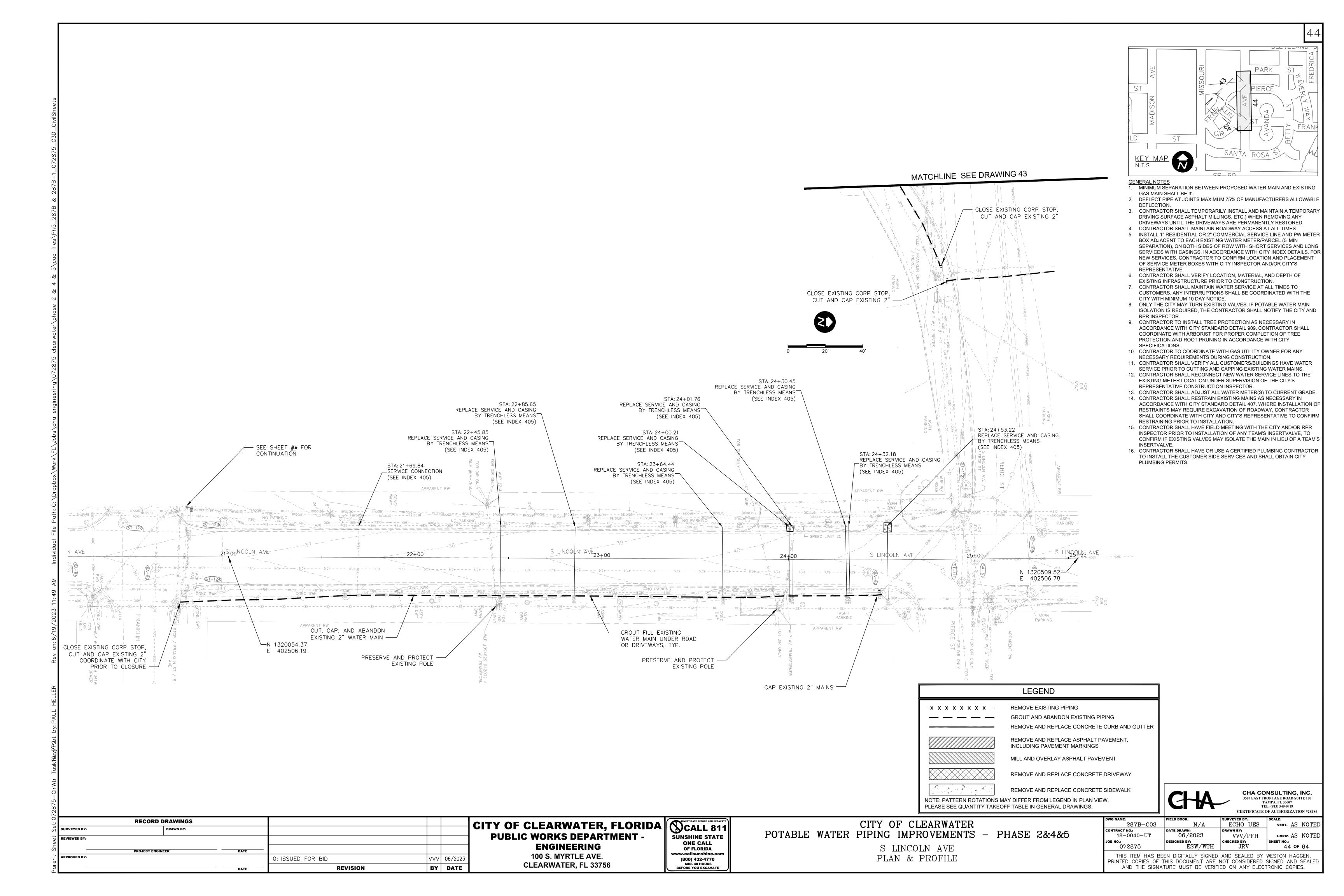
NQ. TYP

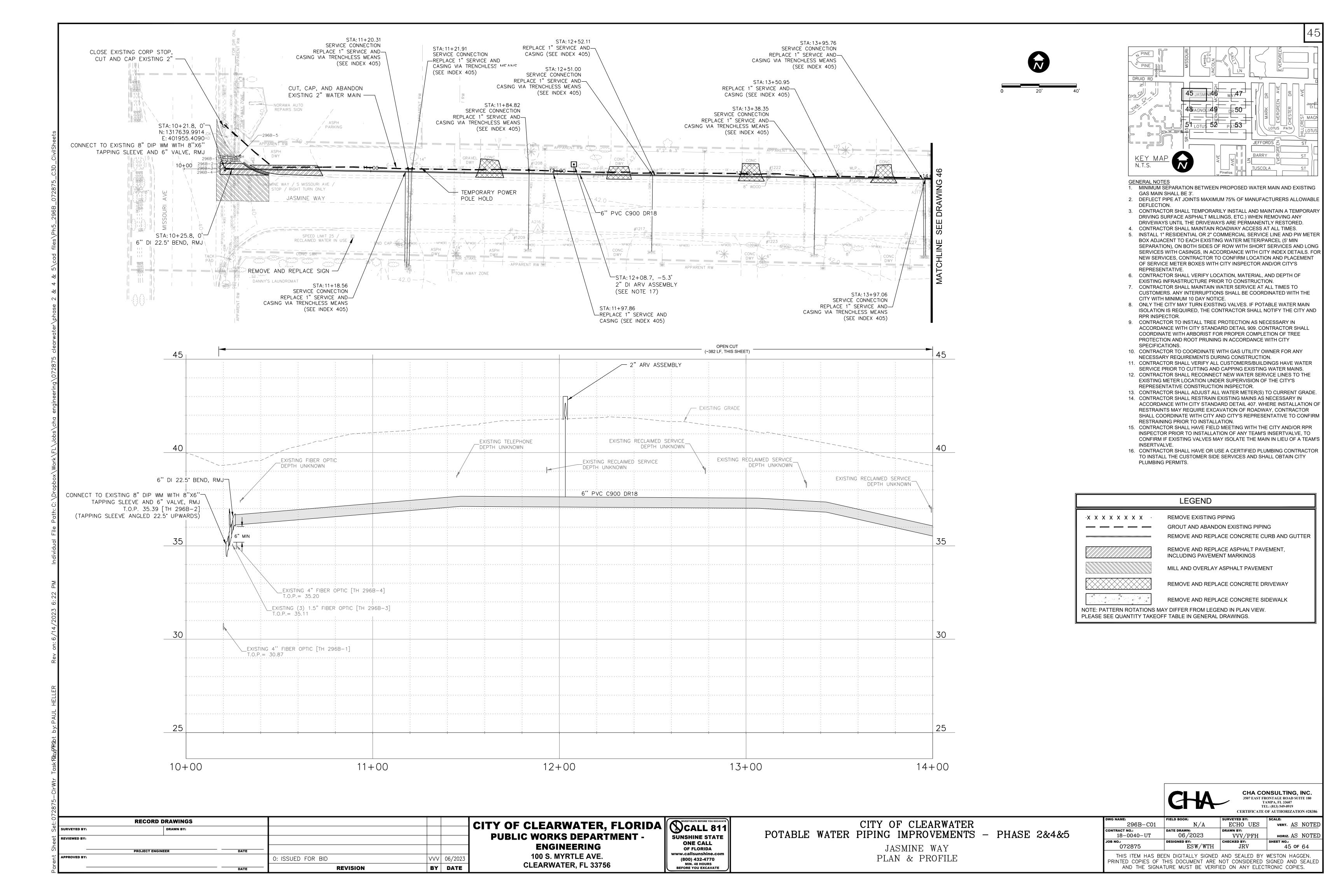


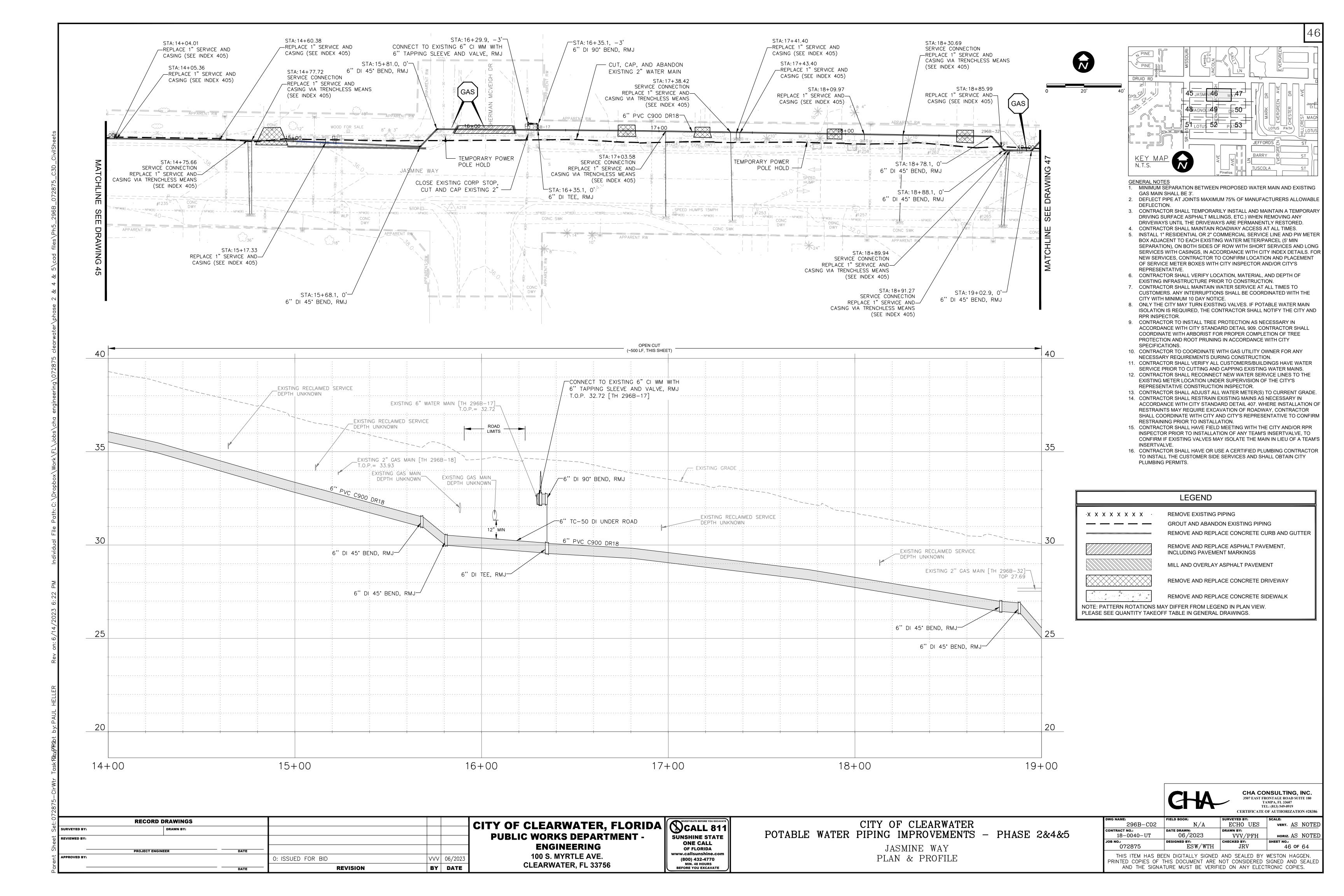


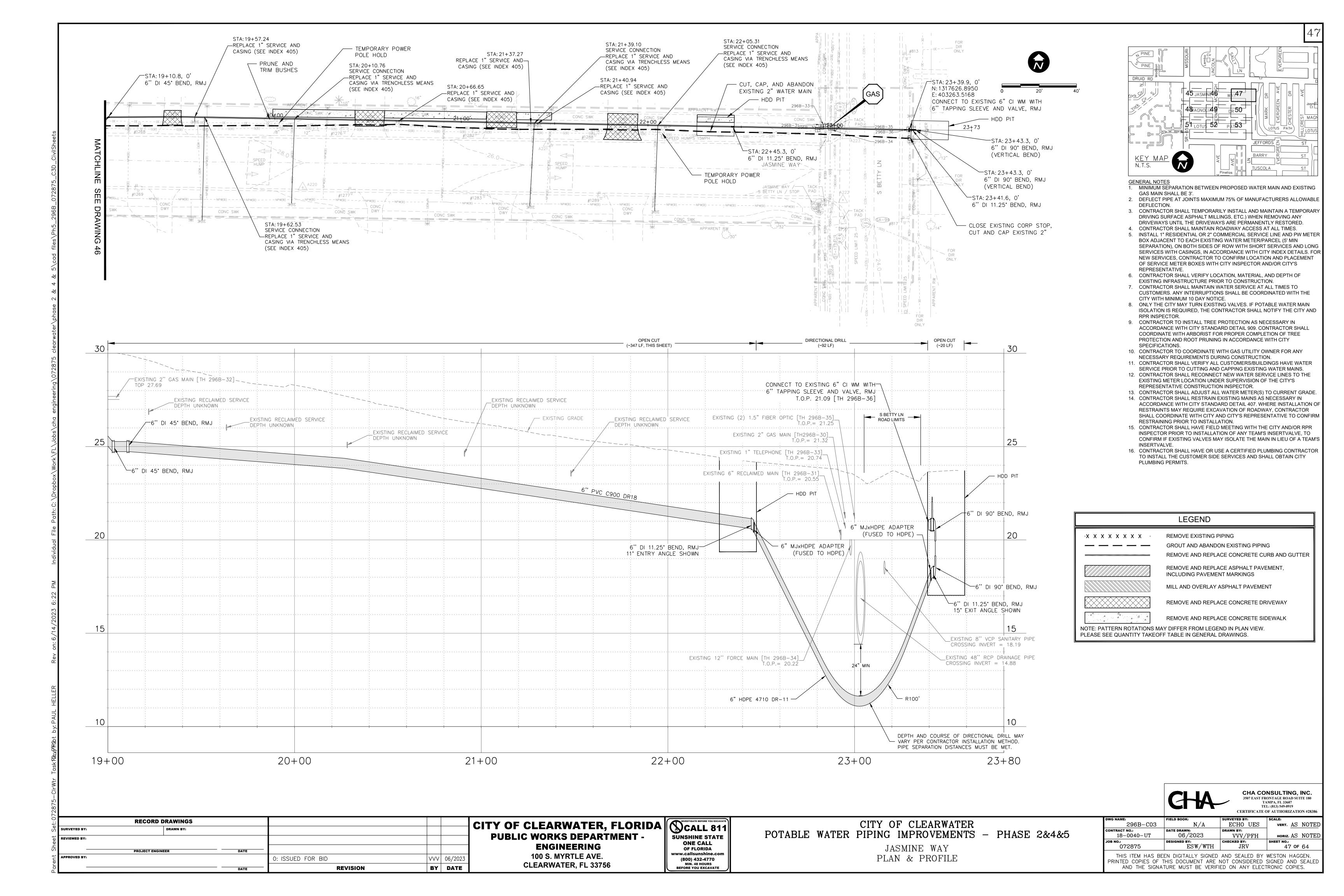


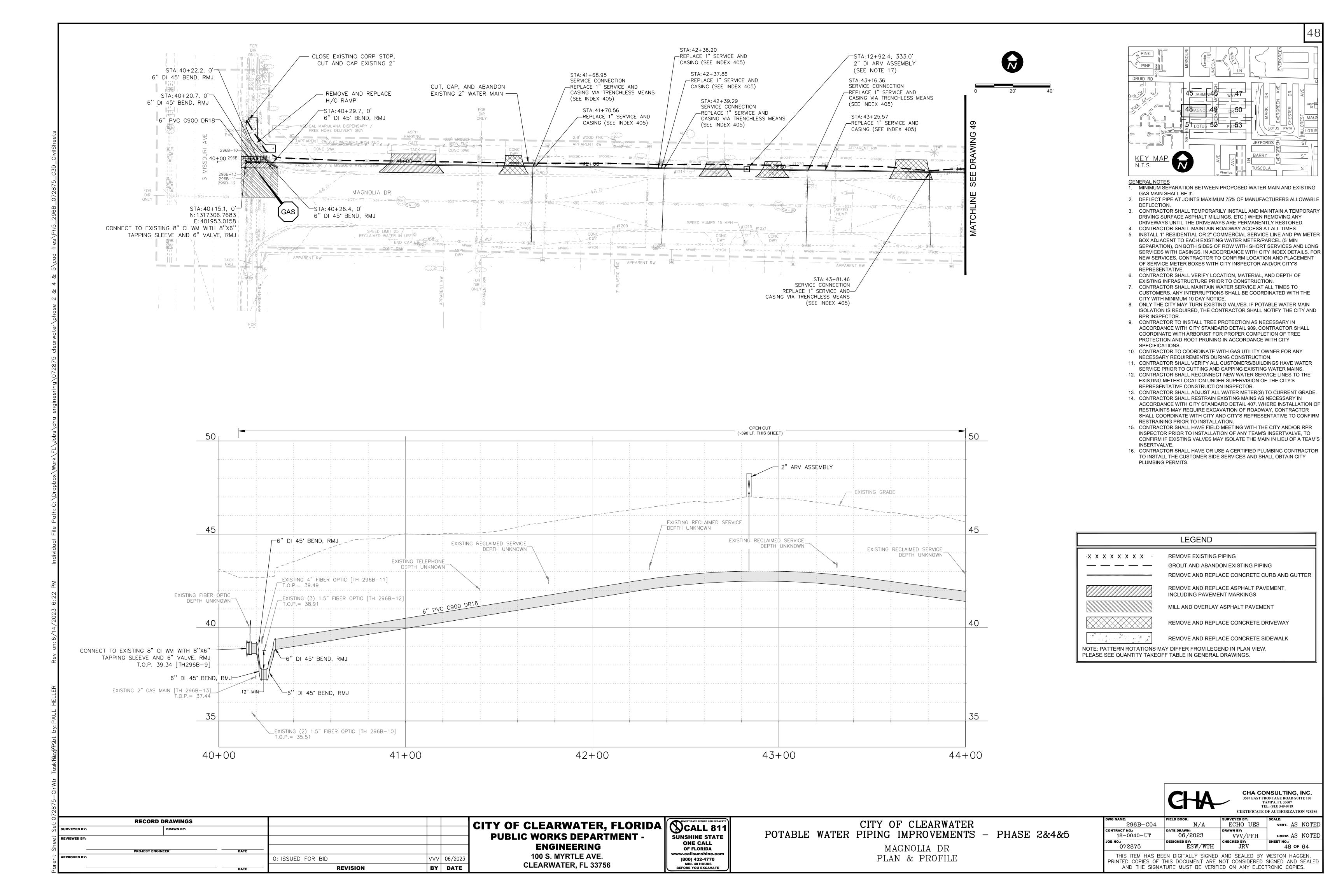


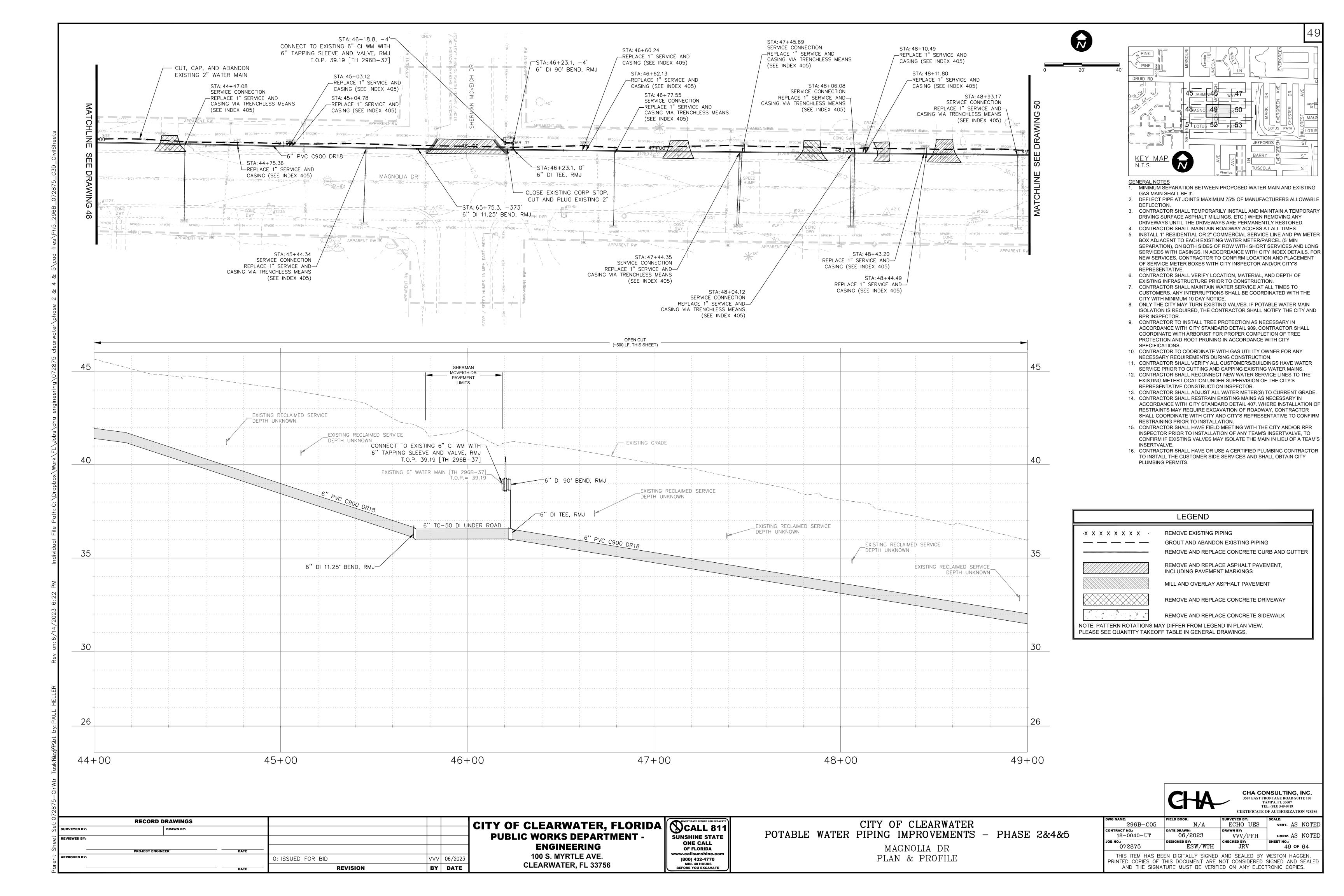


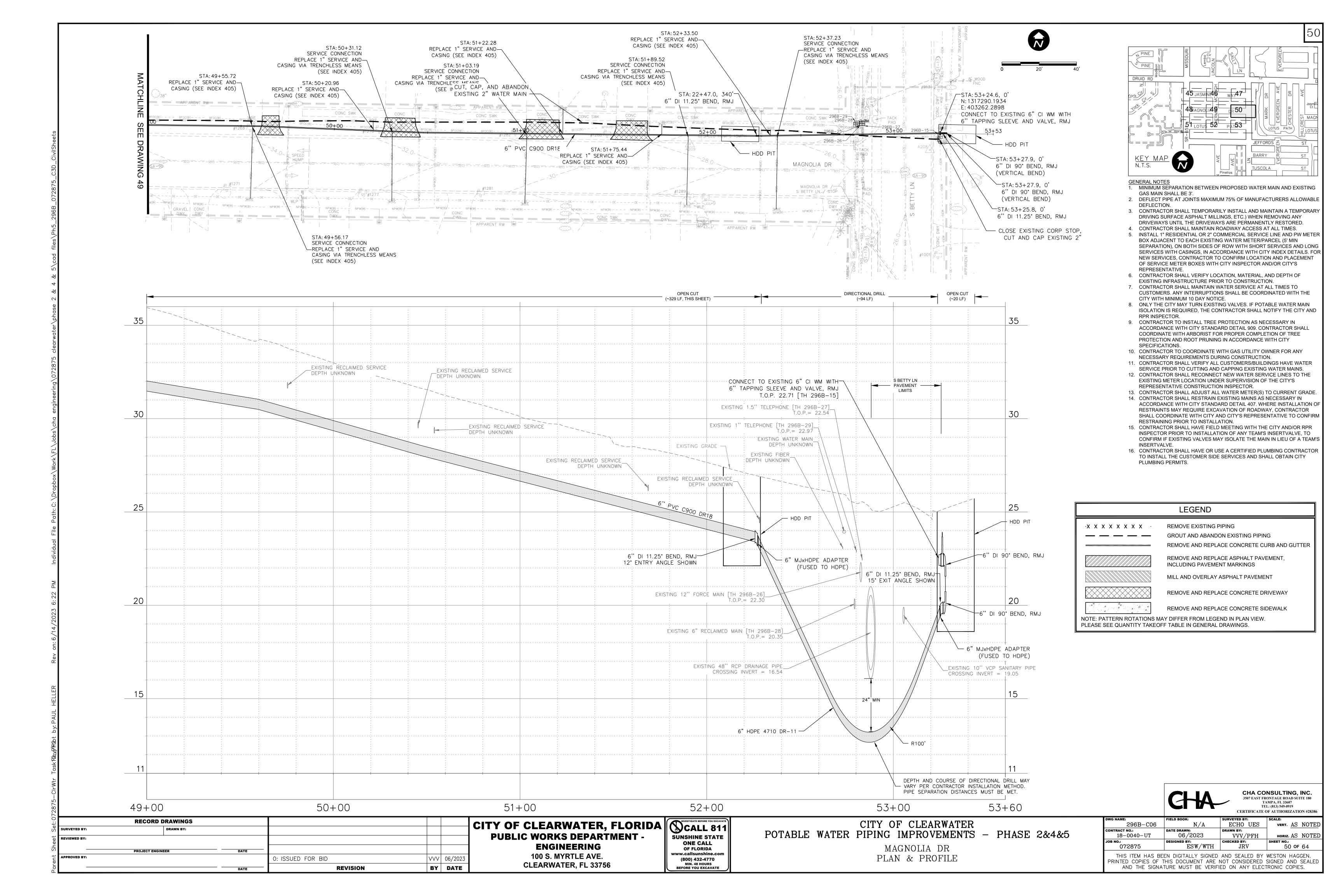


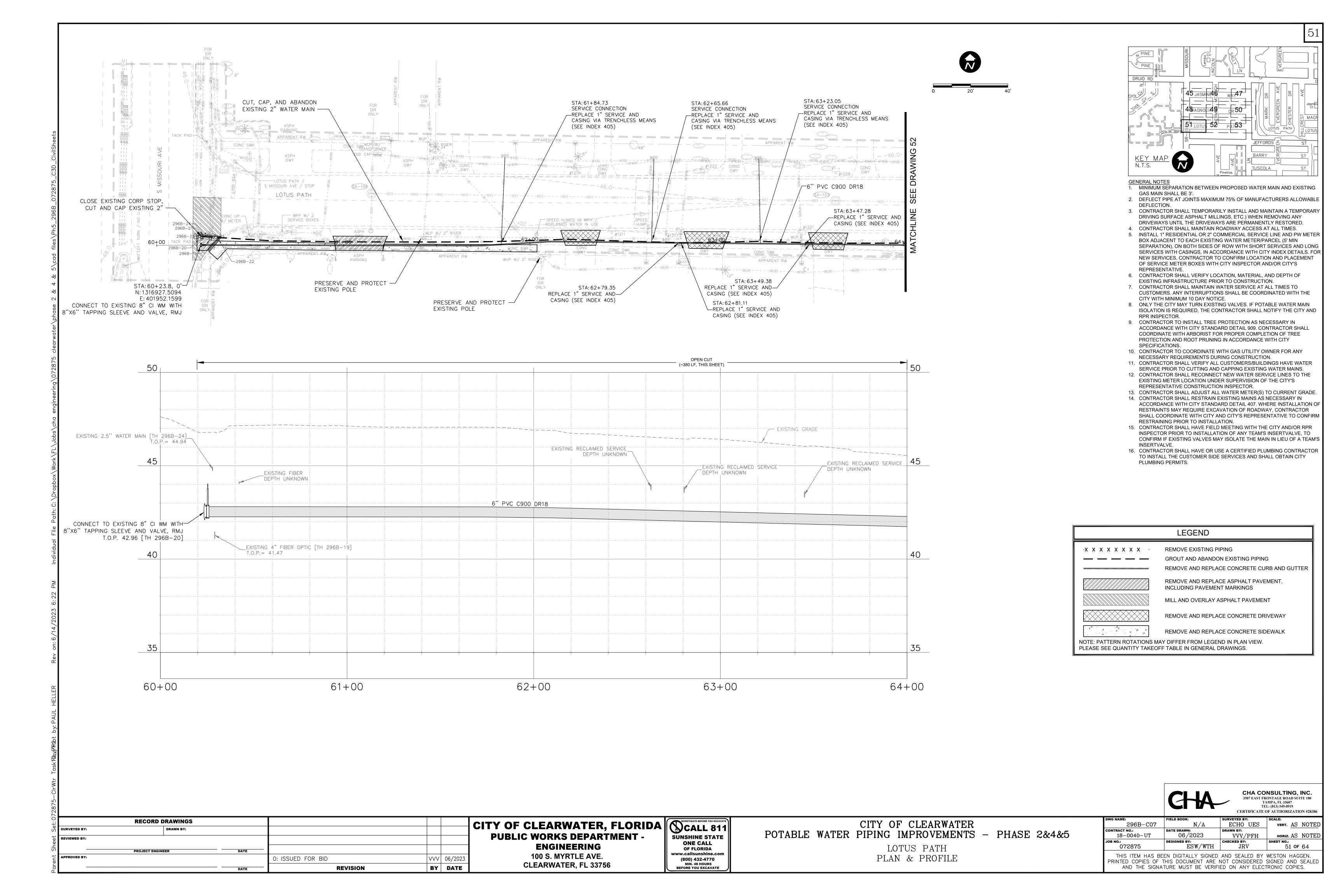


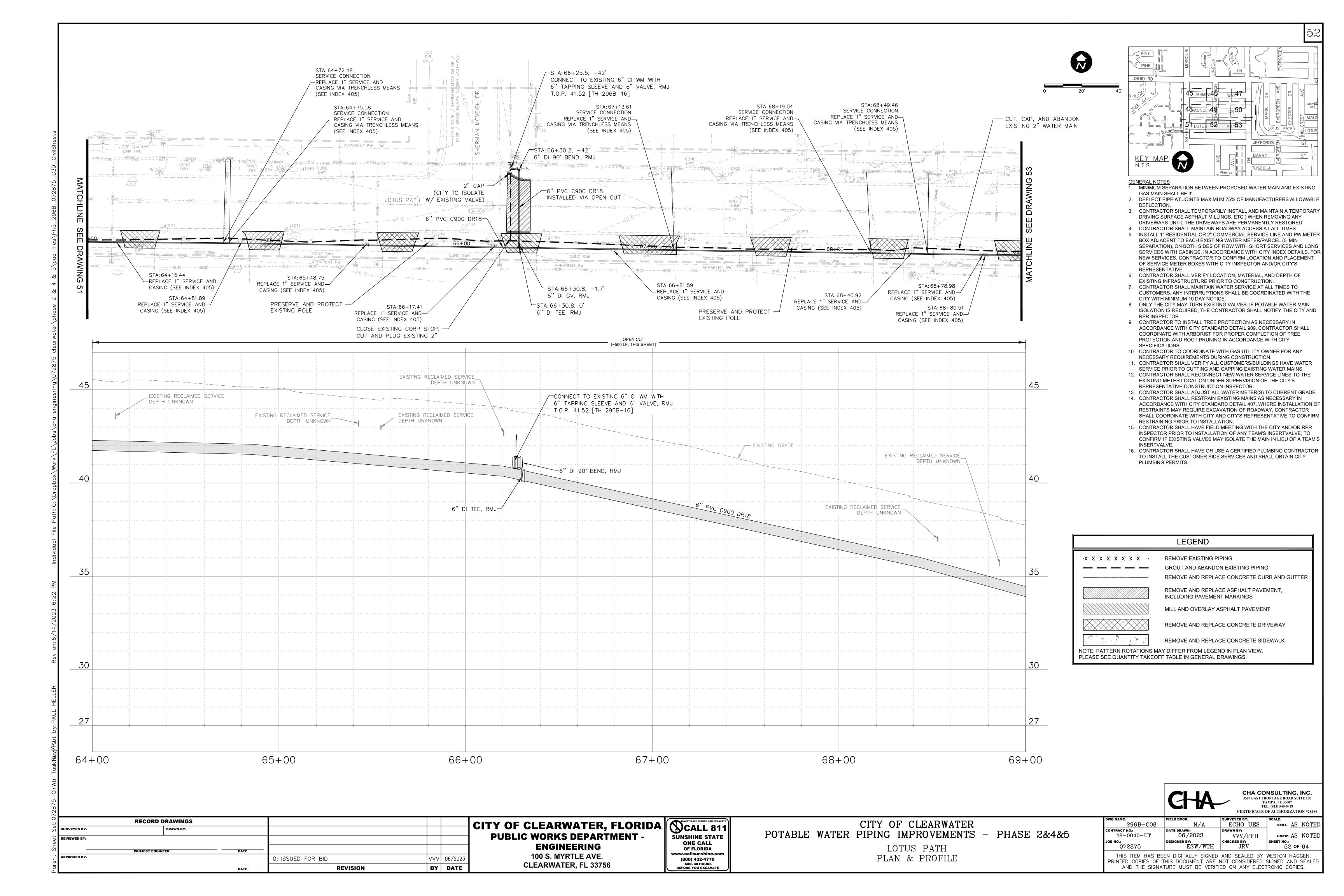


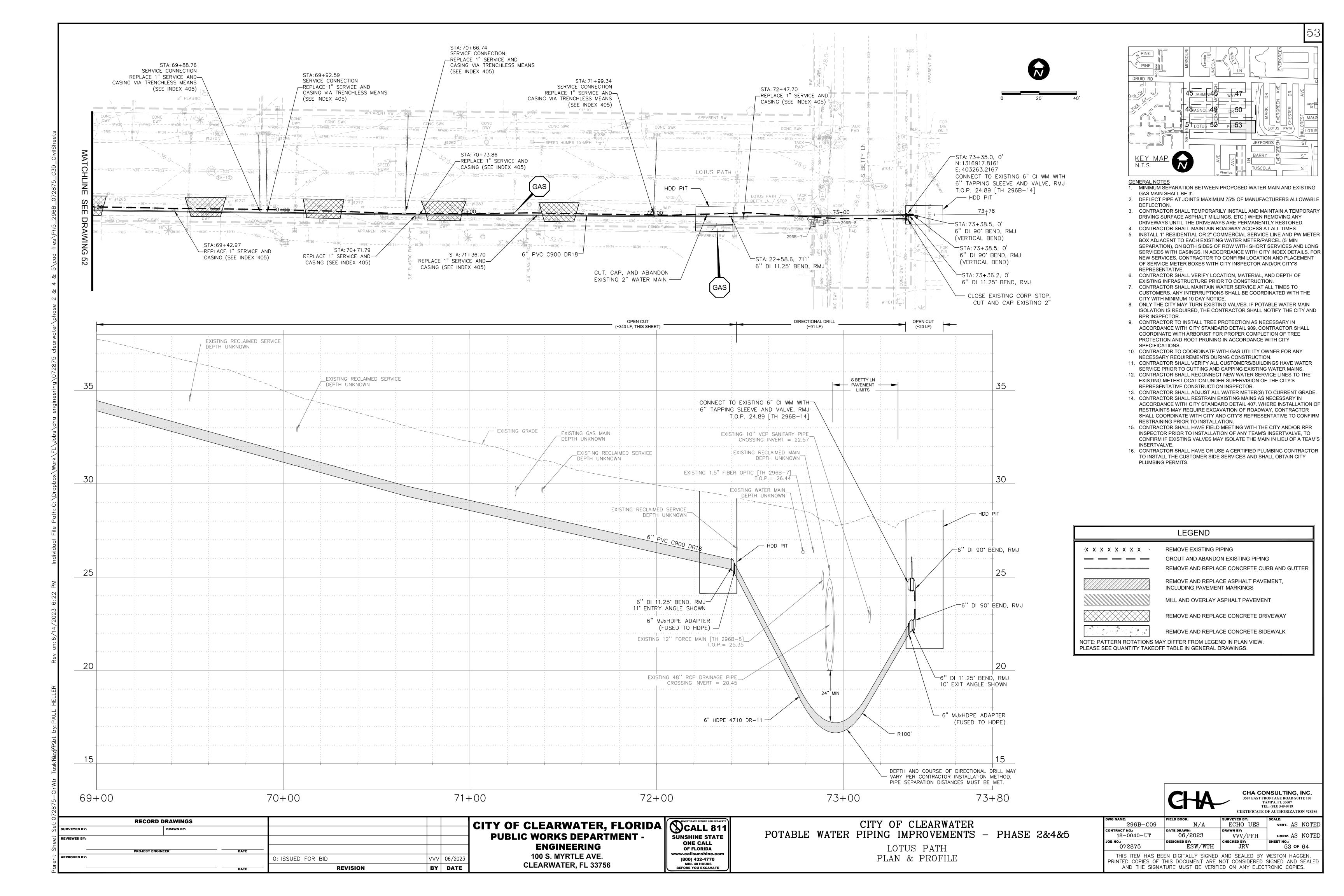


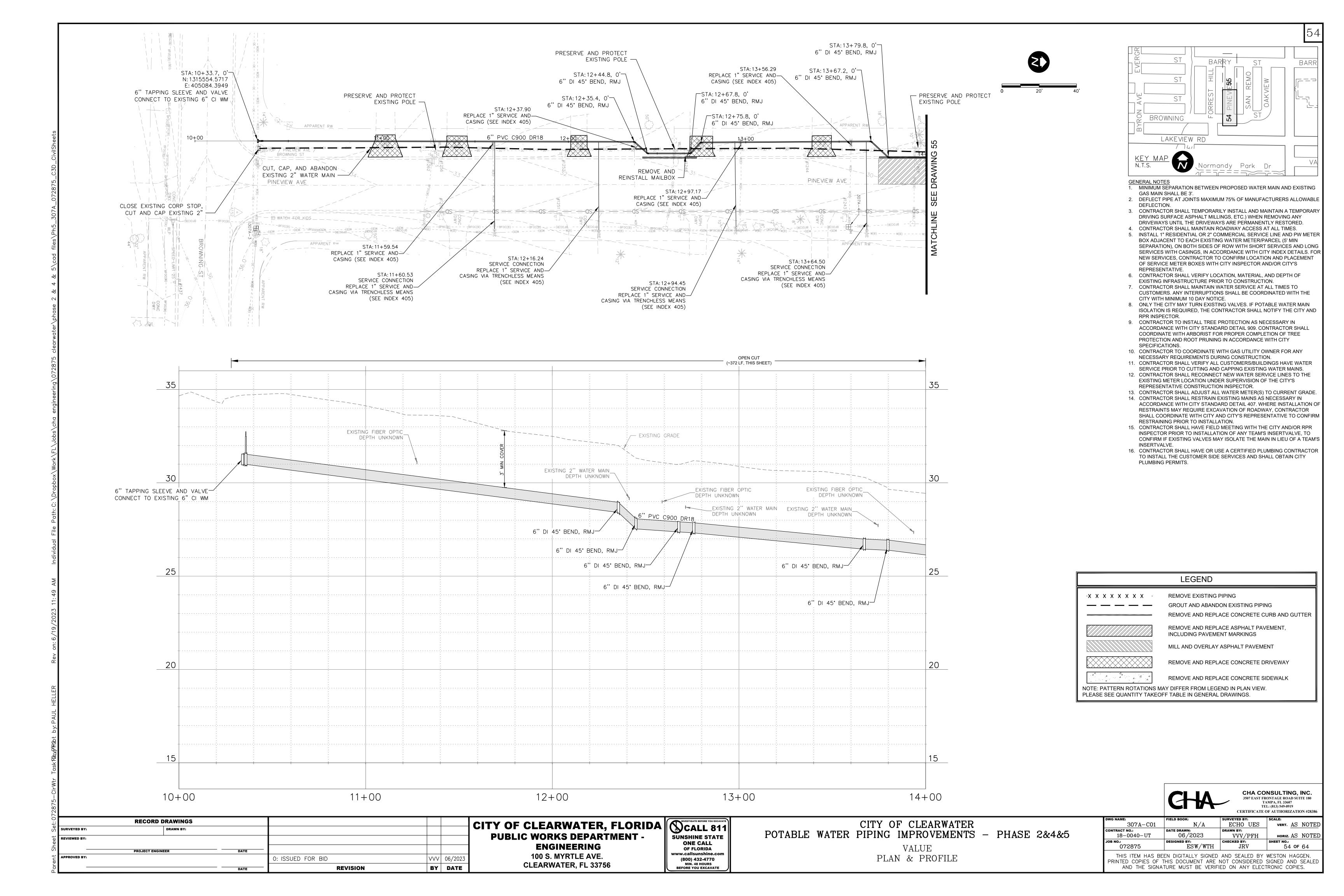


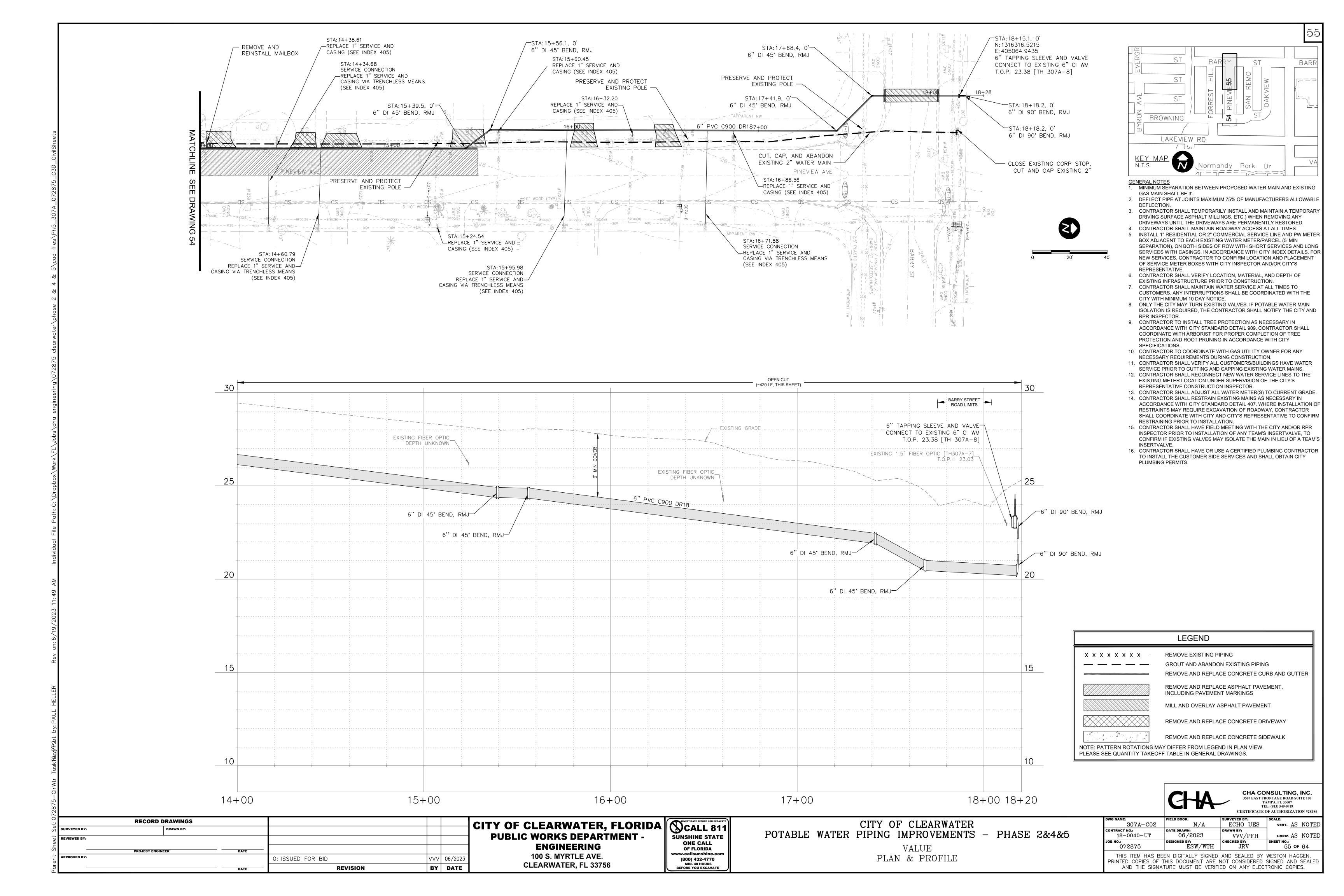


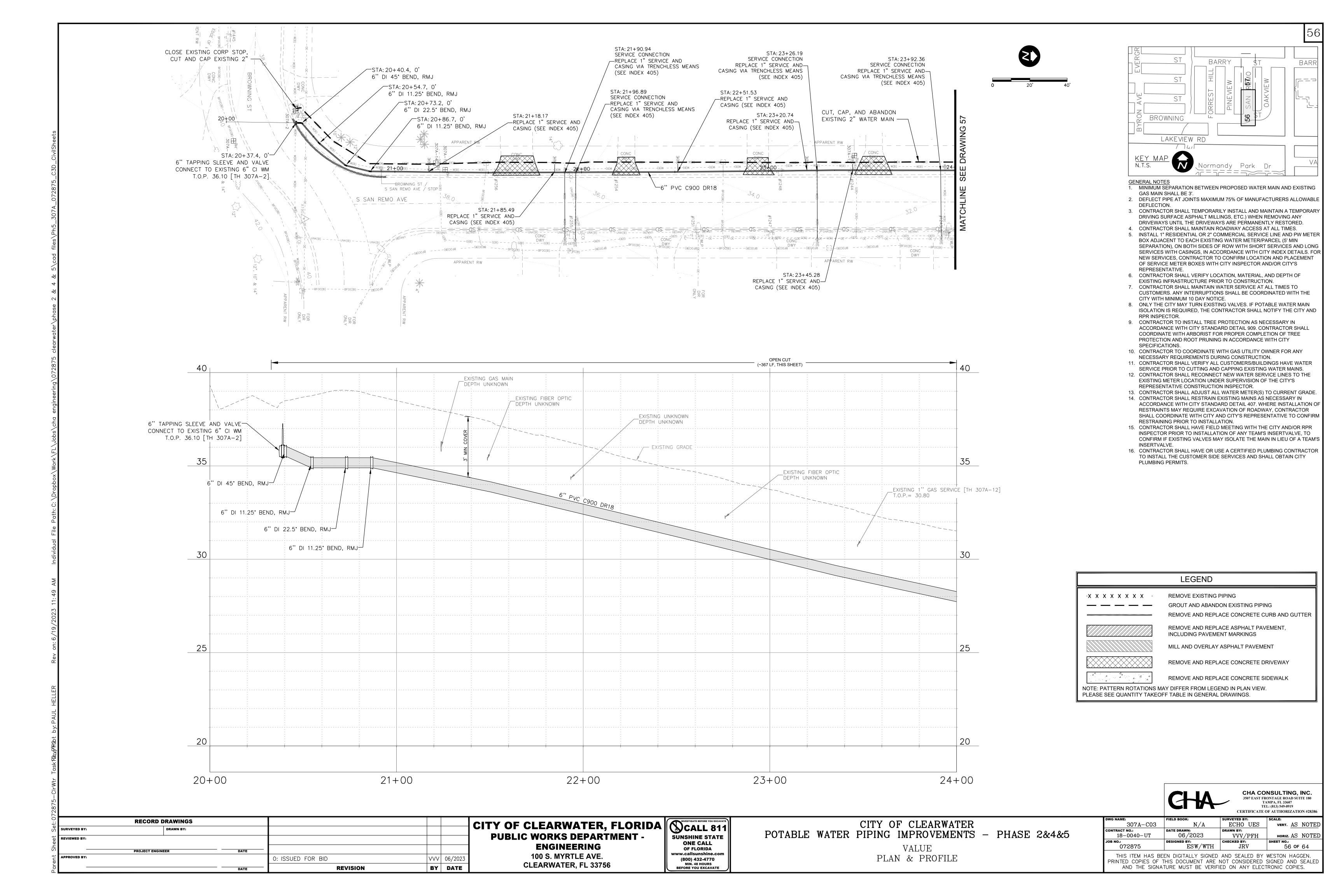


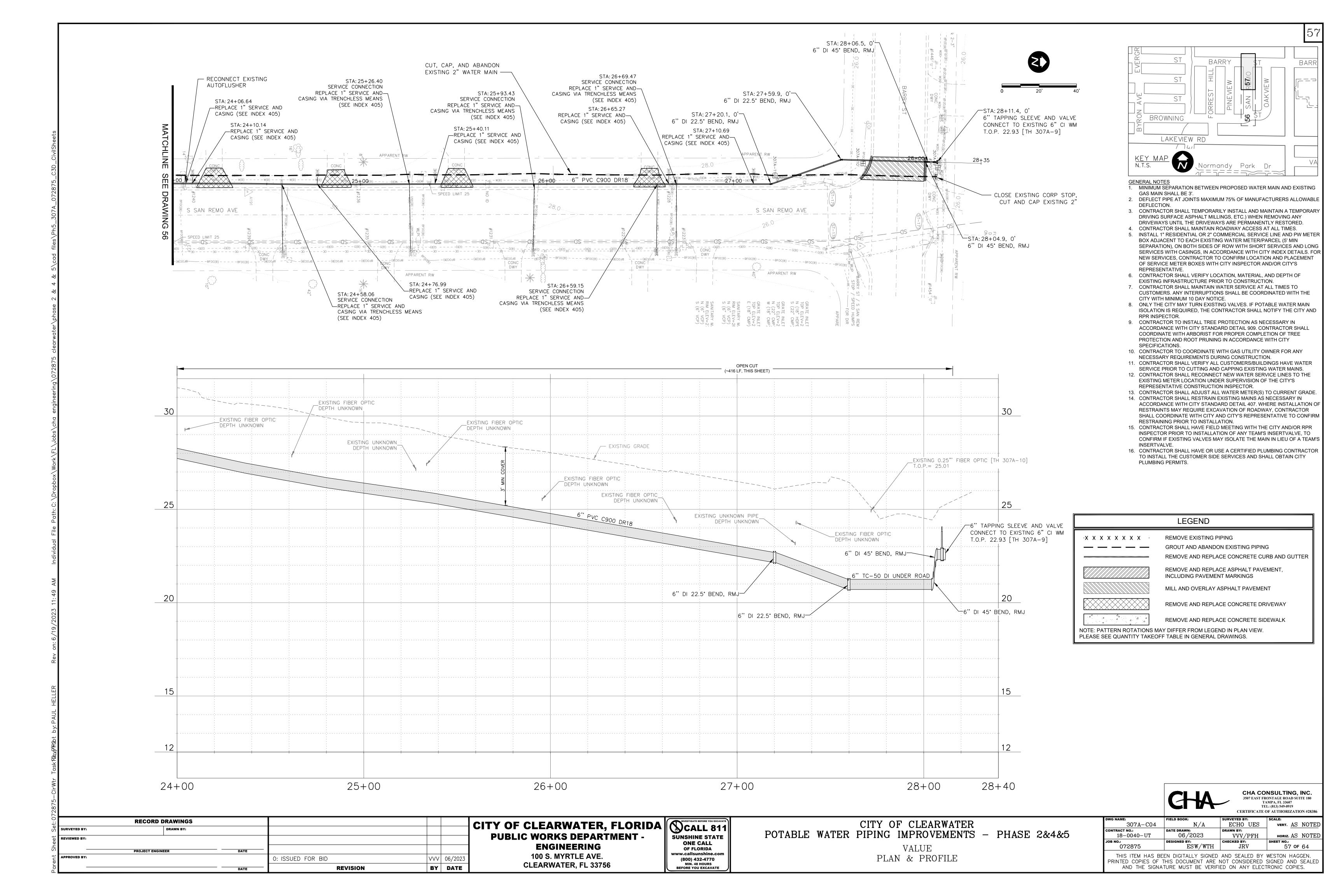


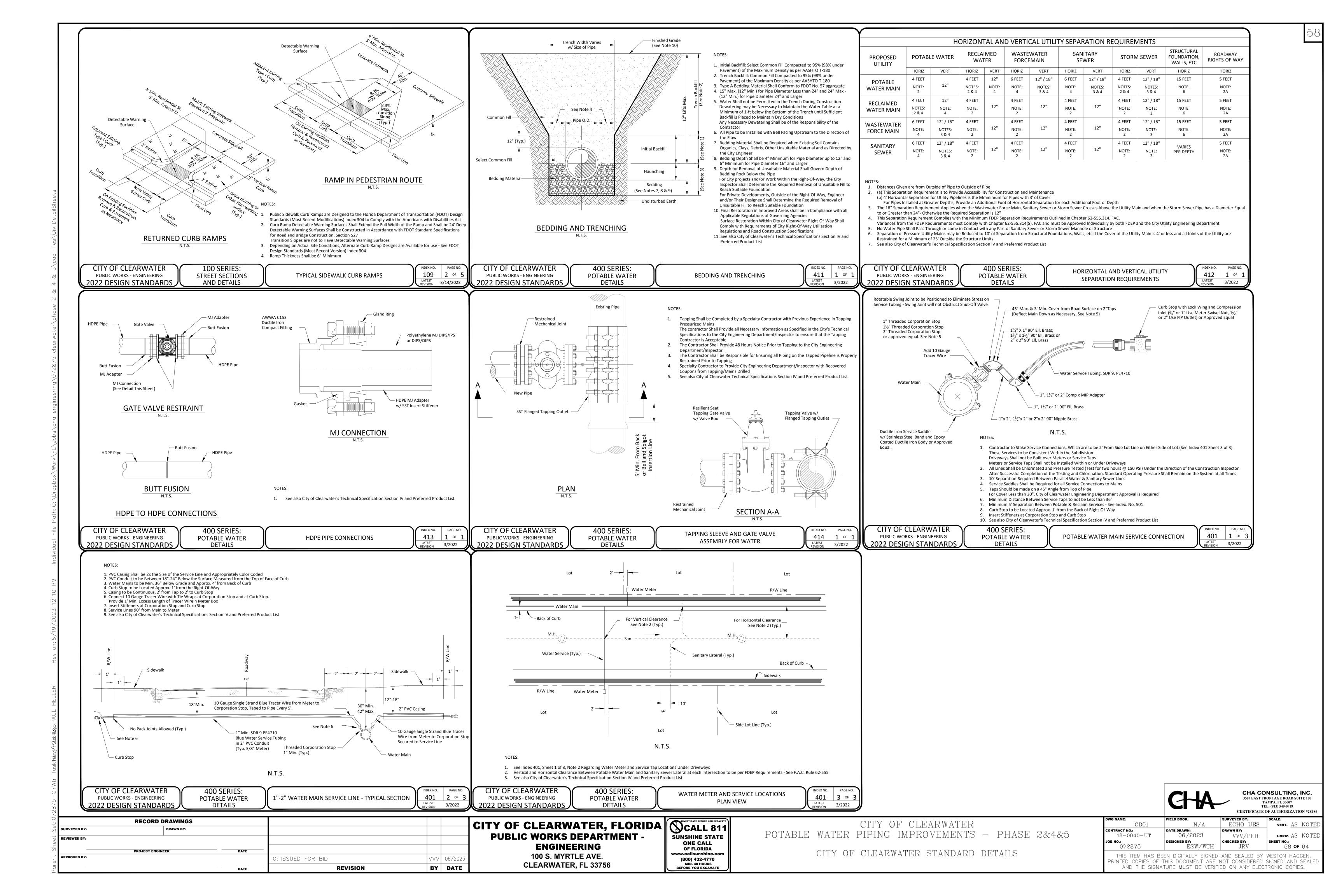


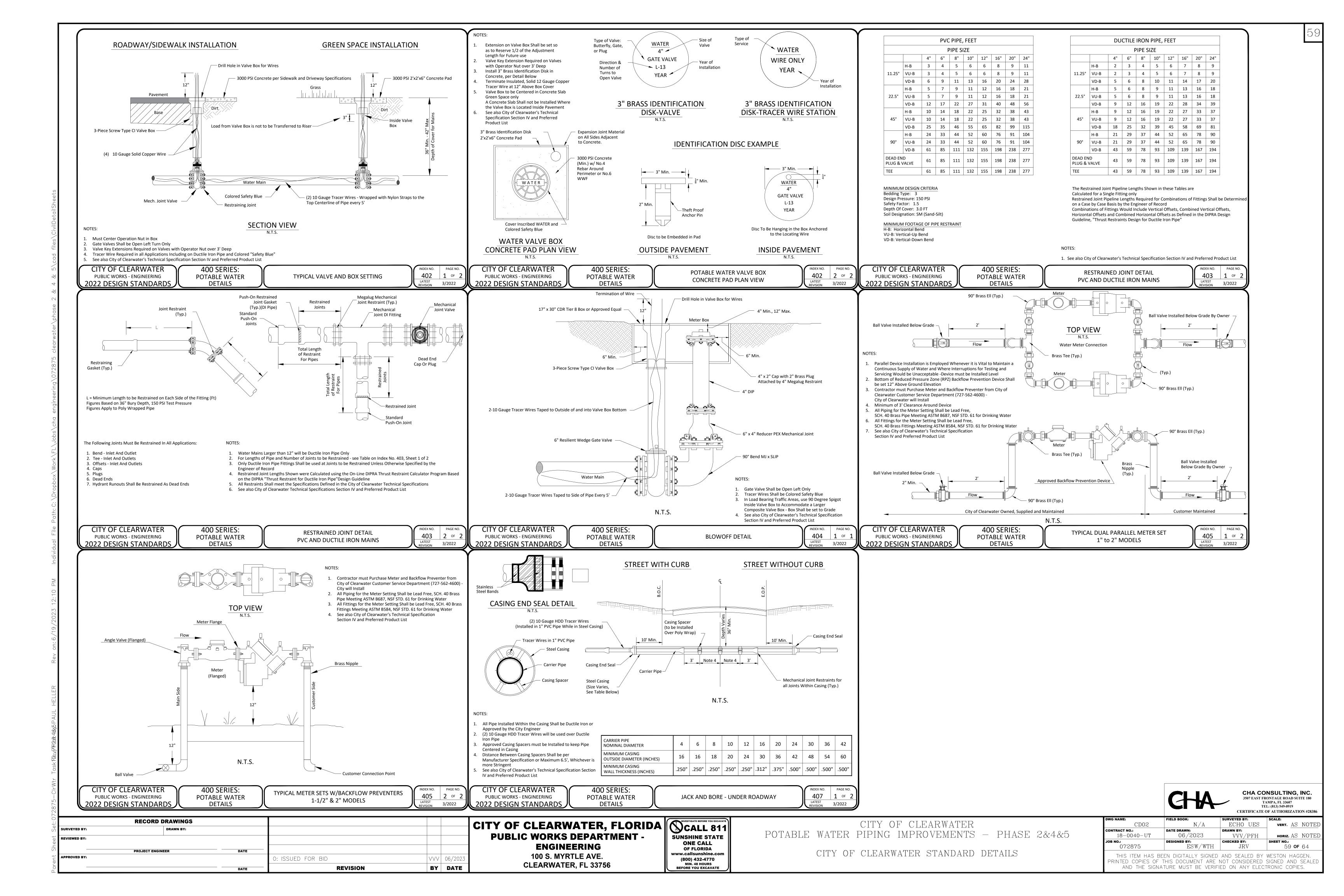


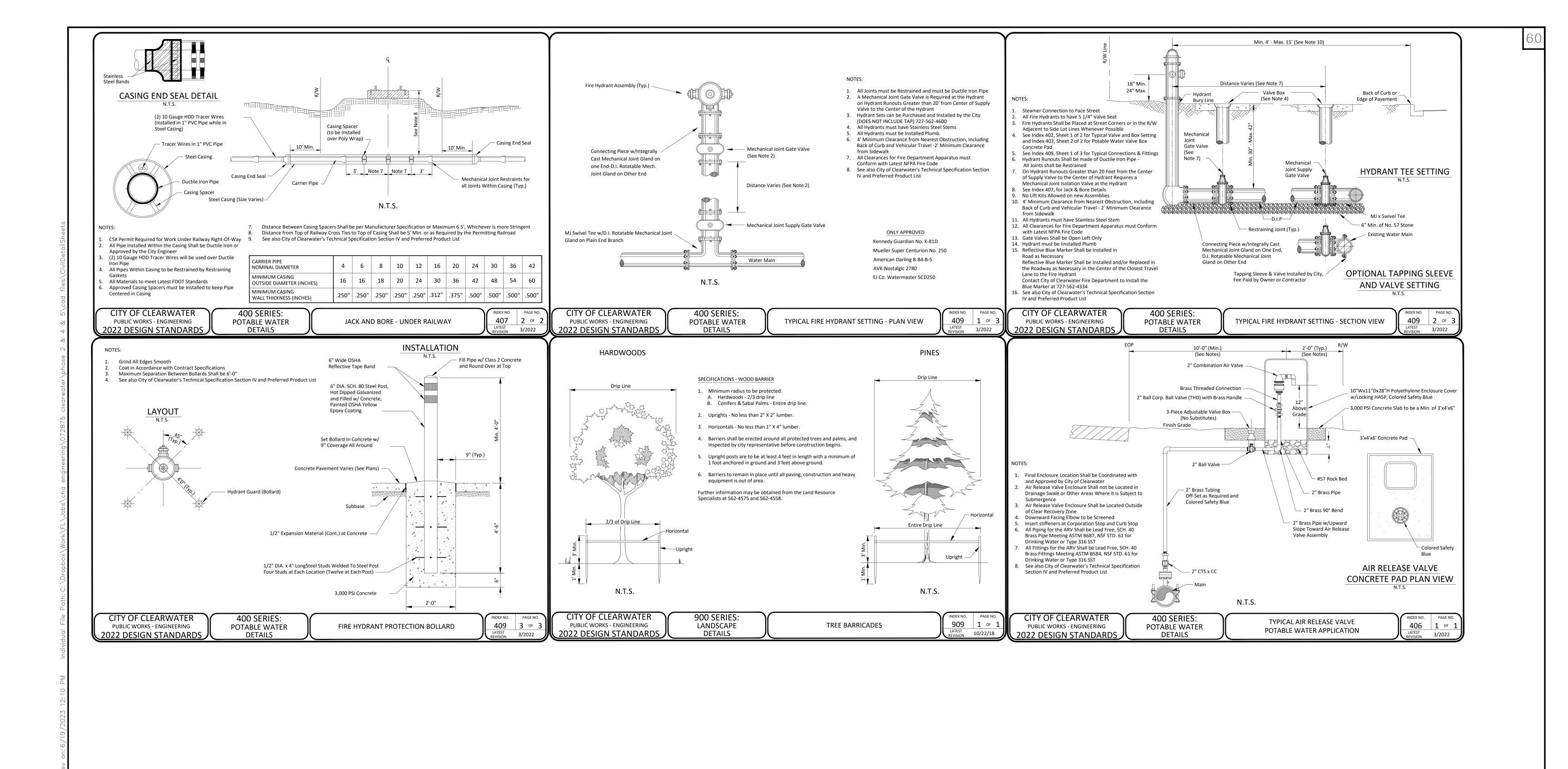












CHA

TAMPA, FL 33607
TEL: (813) 549-0919
CERTIFICATE OF AUTHORIZATION #28386
FED BY:
SCALE:

CHA CONSULTING, INC.

RECORD DRAWINGS

JRVEYED BY:

PROJECT ENGINEER

DATE

O: ISSUED FOR BID

REVISION

BY DATE

CITY OF
PUBLICATION

OF THE PROJECT ENGINEER

DATE

DATE

REVISION

BY DATE

CITY OF CLEARWATER, FLORIDA
PUBLIC WORKS DEPARTMENT ENGINEERING
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CLEARWATER, FL 33756

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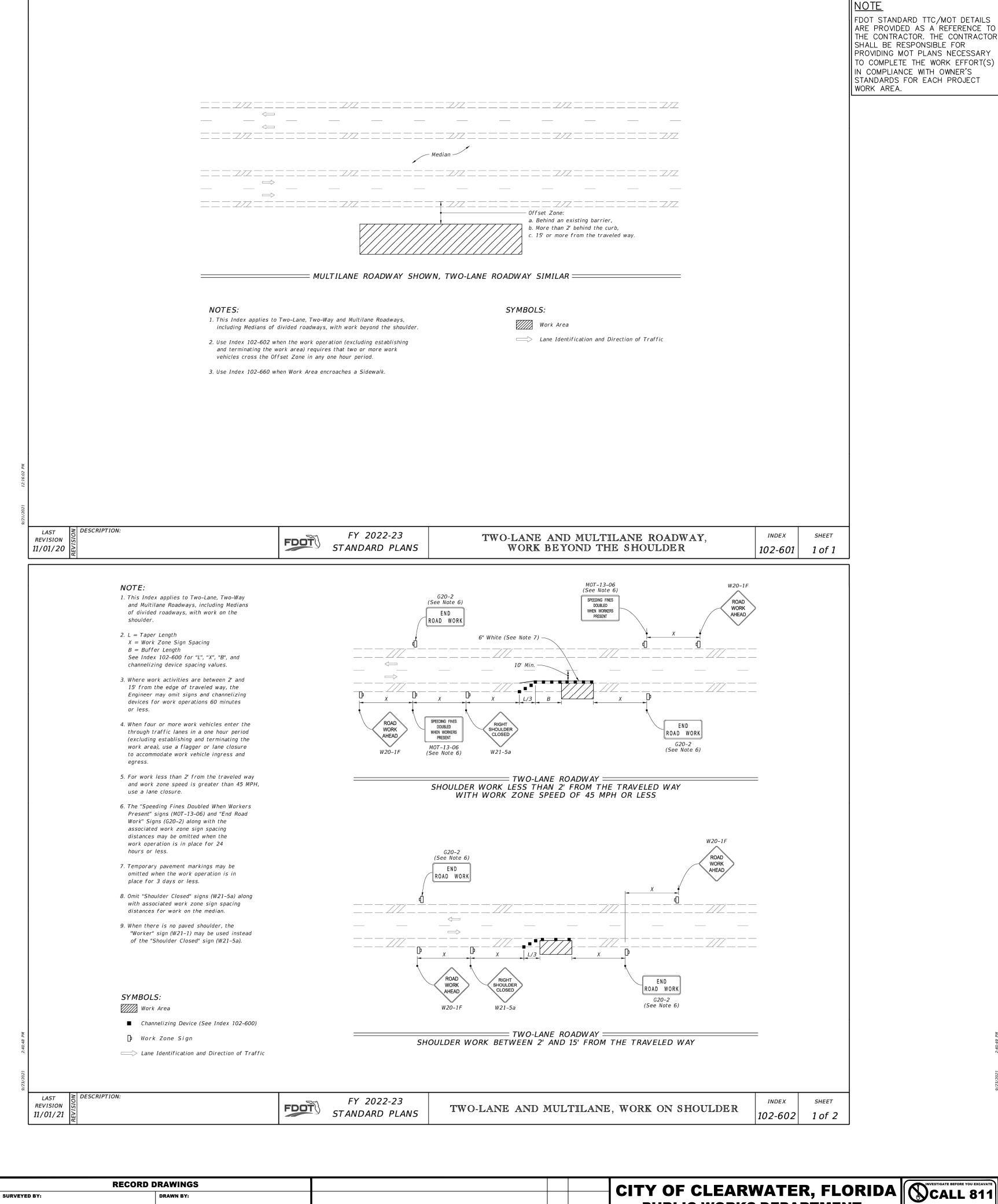
MIN. 48 HOURS

BEFORE YOU EXCAVATE

CITY OF CLEARWATER
POTABLE WATER PIPING IMPROVEMENTS — PHASE 2&4&5

CITY OF CLEARWATER STANDARD DETAILS

CD03	N/A	ECHO UES	VERT. AS NOTED
CONTRACT NO.:	DATE DRAWN:	DRAWN BY:	
18-0040-UT	06/2023	VVV/PFH	HORIZ. AS NOTED
JOB NO.:	DESIGNED BY:	CHECKED BY:	SHEET NO.:
072875	ESW/WTH	JRV	60 <b>OF</b> 64
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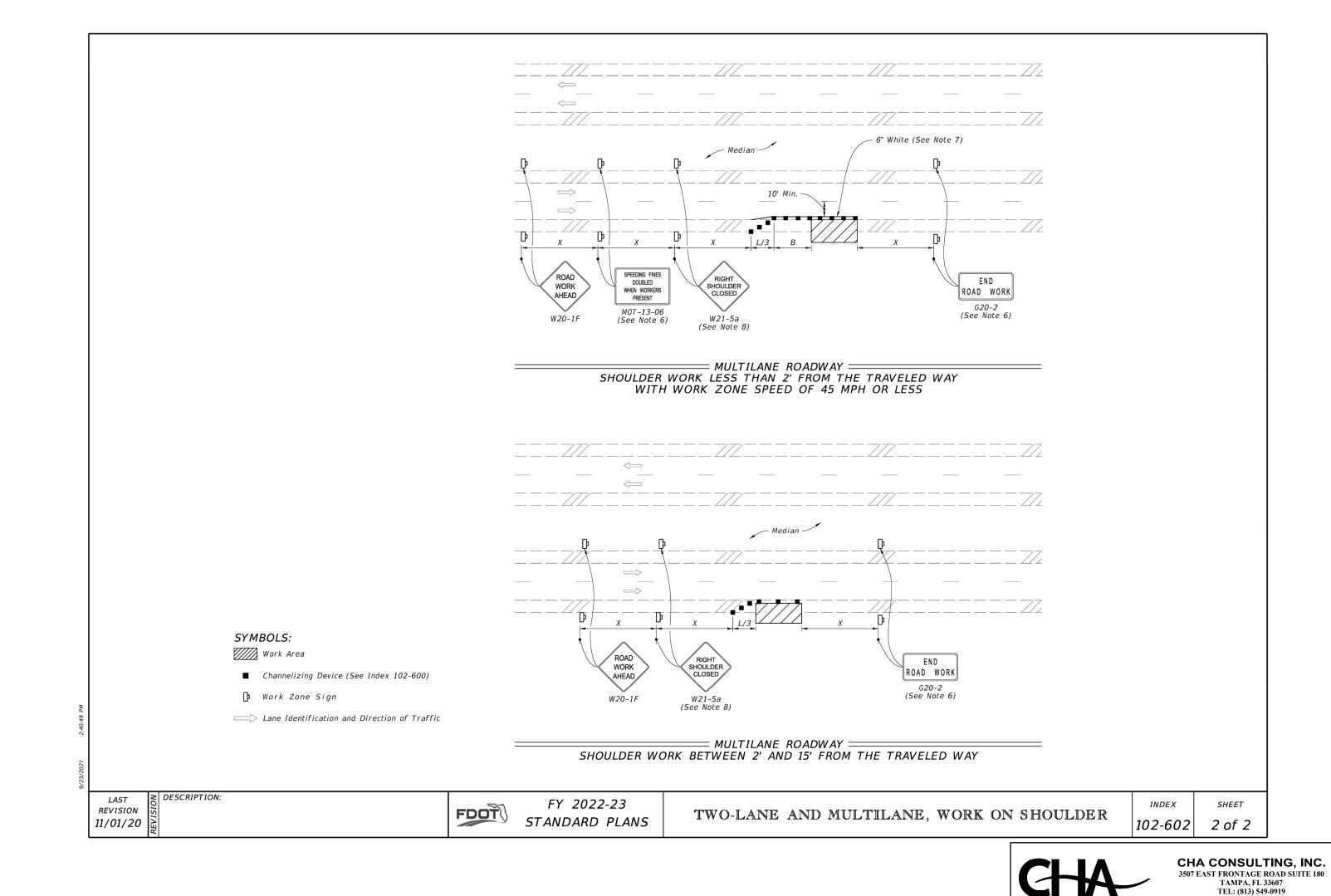


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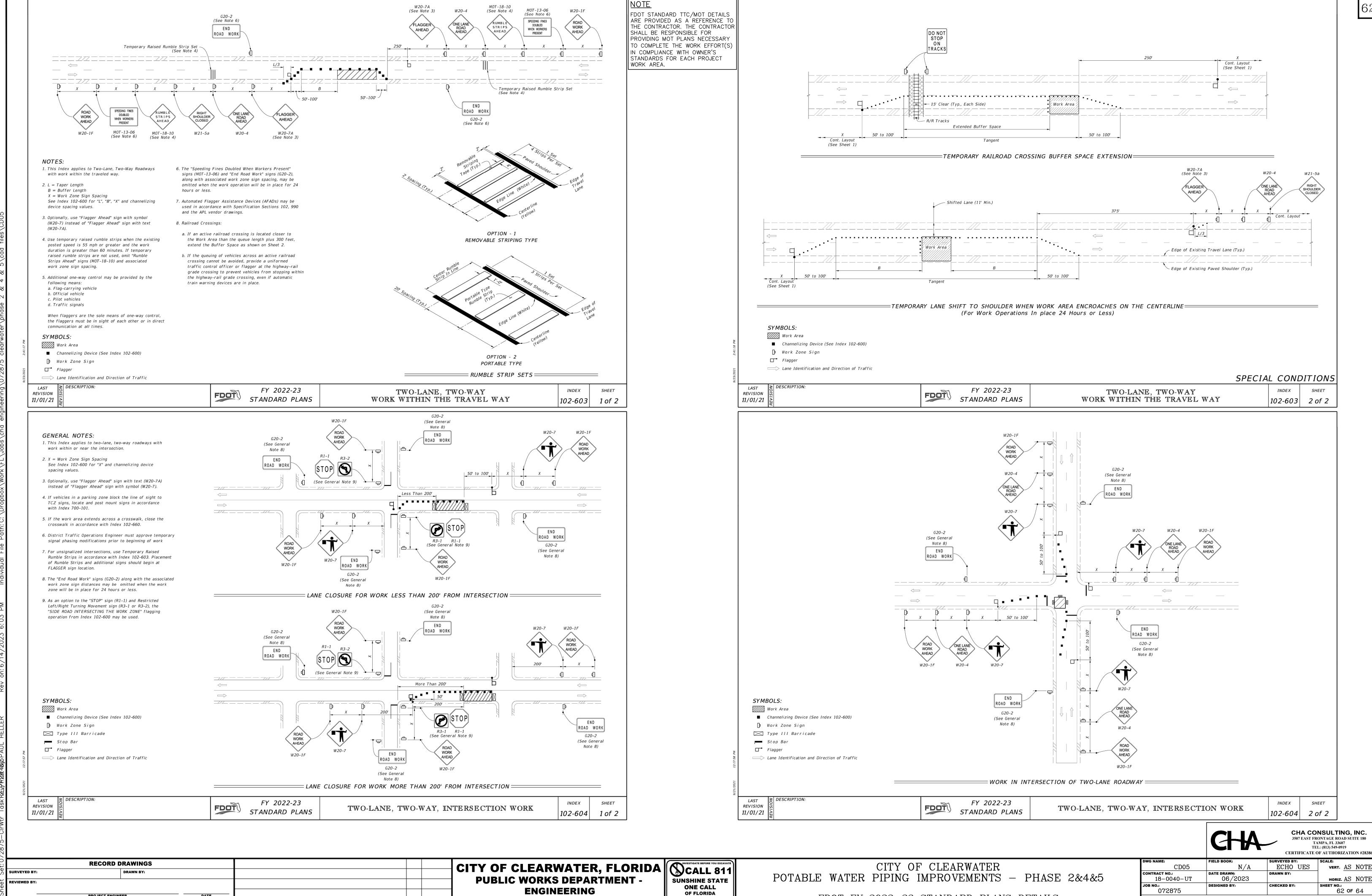
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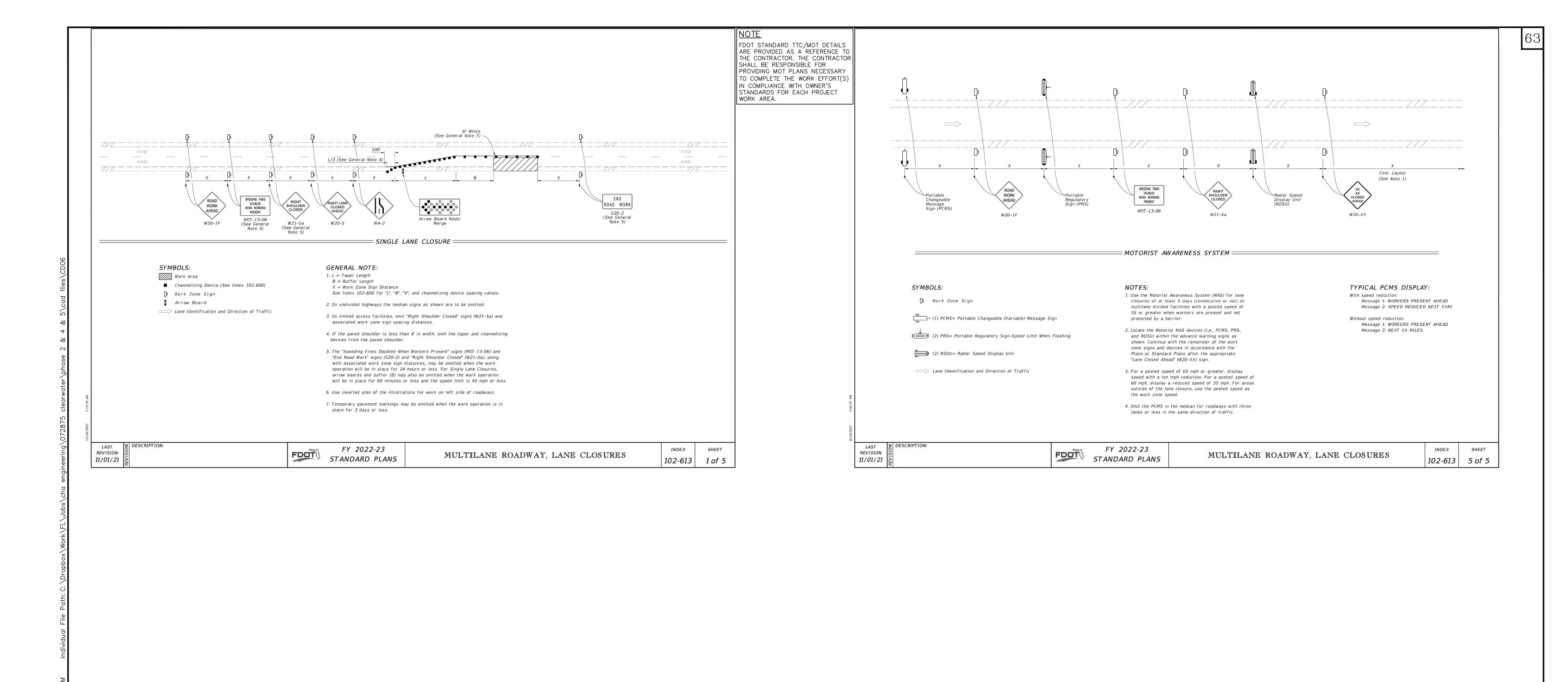
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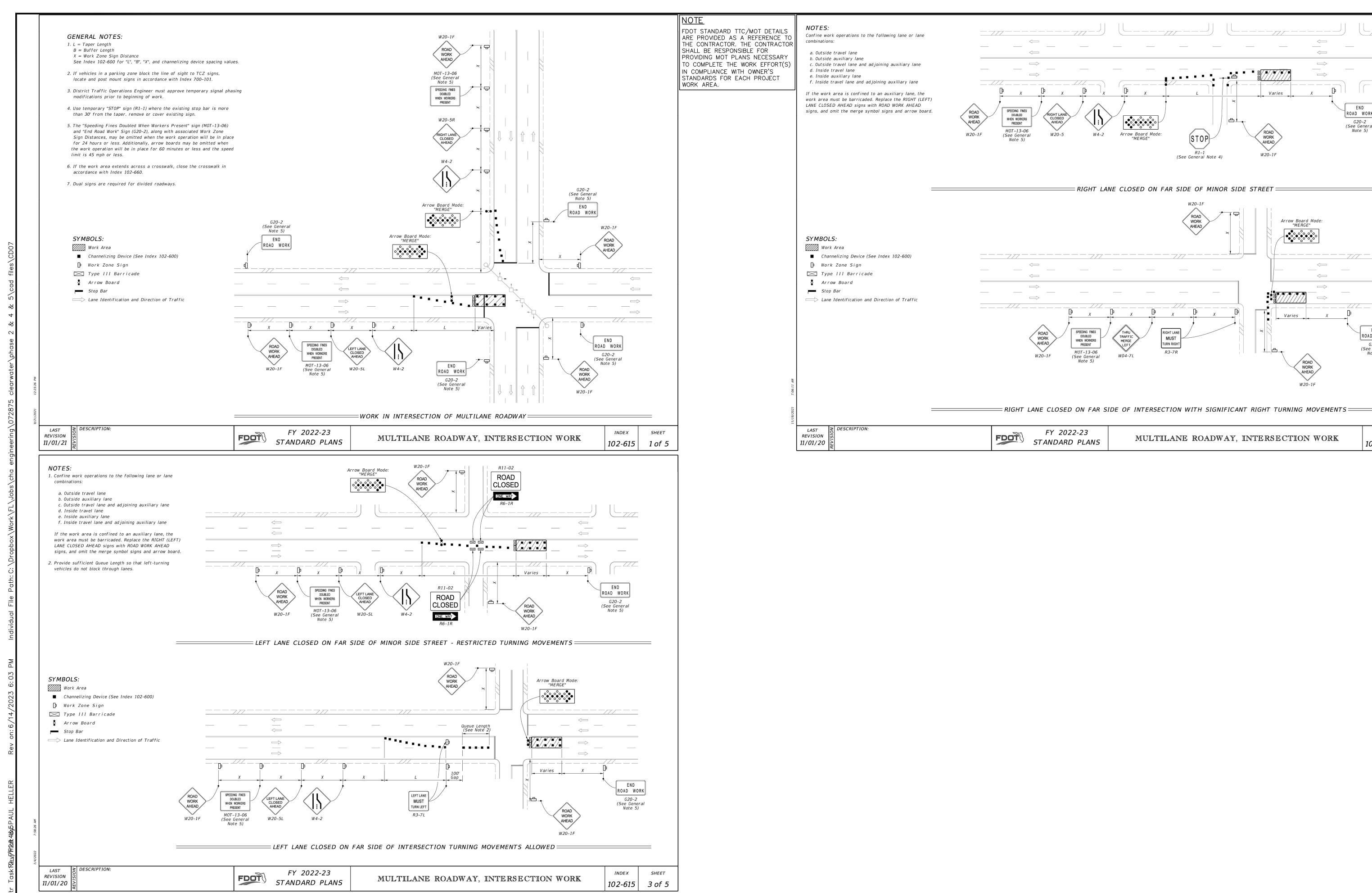
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