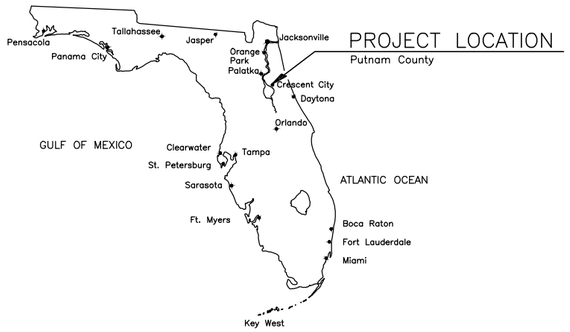
MAIN ST. WATER MAIN REPLACEMENT - PHASE 2

FOR

CITY OF CRESCENT CITY, FLORIDA

M & A Project No. 9318-65-1



VICINITY MAP

MICHELE MYERS
MAYOR

H. HARRY BANKS
VICE MAYOR

LISA KANE DeVITTO
COMMISSIONER

WILLIAM "B.J." LAURIE
COMMISSIONER

CYNTHIA BURTON
COMMISSIONER

CHARLES RUDD
CITY MANAGER

ROBERT PICKENS
CITY ATTORNEY

DRAWING INDEX

MITTAUER & ASSOCIATES, INC.
CONSULTING ENGINEERS
580-1 WELLS ROAD, ORANGE PARK, FLORIDA 32073
TEL. (904) 278-0030 FAX. (904) 278-0840 FLORIDA RY No. 6569

CONSTRUCTION SET

05/06/24

GENERAL NOTES

A. GENERAL CONSTRUCTION NOTES

1. Existing underground utilities have been shown from the best available information. The Contractor shall notify the proper Utility Representative prior to commencing excavation near the utility. The Contractor is responsible for locating all utilities in the path of construction. Contractor shall field determine the location, size, and depth of all existing piping. The Contractor shall call the Sunshine State One center (1-800-432-4770).

2. It shall be the sole responsibility of the Contractor to locate and avoid all utilities, structures, and obstructions both above and below the ground surface. All damages resulting from the Contractor's failure to comply with this requirement shall be repaired at the Contractor's expense.

3. Contractor is responsible for supporting/protecting & maintaining all existing improvements (i.e., utilities, utility poles, structures, pavement, sidewalks, monitoring wells, foundations, etc.) which may be damaged/undermined or interrupted as a result of his operations. The Contractor shall immediately notify the Engineer of any such occurrences. The Contractor may be required to shore, sheet, brace, or support work to protect existing improvements. The Contractor shall maintain a minimum of 5 feet of undisturbed soil around all power poles. Where edge of utility trench would be closer than 5 feet from poles, Contractor shall be required to sheet around pole to maintain 5 feet of undisturbed soil. Where 5 feet of undisturbed soil cannot be maintained, Contractor shall make arrangements with power company to have poles held/braced. All costs associated with supporting/protecting existing improvements shall be borne by the Contractor.

4. All existing facilities (e.g., pipes, roadways, sidewalks, landscaping, structure, etc.) not indicated to be disturbed/restored which are disturbed/damaged as a result of the Contractor's operations shall be restored to a condition equal to or better than that which existed prior to construction, at Contractor's expense.

5. Horizontal and vertical controls are subject to adjustments in the field if necessary to avoid utility conflicts upon approval of the Engineer or his representative. Contractor shall not adjust location of pipe or other facilities (either vertically or horizontally) without approval of the Engineer or his representative.

6. Contractor shall provide constant slope between indicated pipe invert elevations, unless otherwise directed by Engineer.

7. The Contractor shall at all times conduct his operations so as to interfere as little as possible with the existing facilities. The Contractor shall develop a program in cooperation with the Owner's operating staff which shall provide for the construction of an putting into service the proposed work in the most orderly manner possible. All work of connection with, cutting into and reconstruction of existing facilities shall be planned so as not to interfere with the existing facility.

8. Contractor shall apply for and obtain FDEP Generic Permit for Large and Small Construction Activities (CGP). The Contractor shall act as the Operator of all temporary construction phase pollution prevention improvements and be responsible for their design, selection, and implementation. Schematic erosion control measures are provided in these documents and shall be the basis of the Contractor's design.

9. During any construction activity, including stabilization and revegetation of disturbed surfaces, the Contractor is responsible for the design, selection, permitting, implementation, and operation of all temporary construction phase erosion and sediment control measures required to retain on-site sediment and prevent violations of the State of Florida water quality standards. The Contractor shall use appropriate best management practices described in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual, July 2013, with revisions. All turbidity/silt barriers must be in place downgradient from the construction zone prior to the start of any construction activity in general accordance with the plans and details provided in these documents. The barriers shall remain in place until all the disturbed areas have been properly stabilized.

10. Unsuitable materials exposed during construction under utility pipes or structures shall be removed and replaced with selected backfill, properly compacted, in accordance with specifications.

11. Where existing culverts must be removed to construct the project, the Contractor shall reinstall the culverts as soon as practical. If the culverts are not suitable for reuse, the Contractor shall, at his expense, extend/replace the culverts as required with similar materials to accommodate the work while maintaining existing invert elevations for all extended/replaced culverts. Provide all required excavation and fill necessary to extend/replace the culvert. The Contractor shall ensure, at his expense, temporary measures are provided to maintain existing drainage patterns.

12. The Contractor shall temporally relocate the postal mail boxes and clusters as required for the construction of the project and reinstall them in their original locations upon completion of the construction. All work associated with the mail boxes or clusters shall be in accordance with the requirements of the U.S. Post Masters Office.

13. Only that excavation that can be backfilled by the end of the work day will be excavated. No open trench will be allowed to remain after work ends for the day, unless approved by Engineer or governing authority.

14. All areas disturbed by construction shall be regraded and sodded.

15. Until final acceptance of the work by the Owner, it shall be under the charge and custody of the Contractor and he shall take every precaution against injury or damage to the work by the action of the elements or from any other cause whatsoever, arising either from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore and make good without any additional compensation, all injury or damage to any portion of the work occasioned by any of the above causes before its completion and acceptance.

16. The Contractor shall employ the services of a Florida licensed surveyor who shall be responsible for laying out the work and for establishing the following: project temporary benchmarks; elevation lines and grades; and right-of-way and easement limits for construction. Contractor shall also employ the services of a Florida licensed surveyor to obtain the required record drawing information.

17. The Contractor shall employ a land surveyor, registered in the State of Florida, to reference property and restore property corners and land markers which may be disturbed as a result of Contractor's operations.

18. Project Benchmark: Project Benchmark: All elevations on these plans are relative to the North American Vertical Datum of 1988 (NAVD 88) based on National Geodetic Survey Benchmark PID AI6986 having an elevation of 2.99 feet. See Sheet No. 3 for location and description of Benchmark.

19. Topographic information based on a survey by Mittauer & Associates, Inc., performed on 09/12/22, job no. 9318-61-1.

20. Horizontal control for features on the plans are relative to the NAD83 Florida State Planes, East Zone, US Foot coordinate system.

B. GENERAL WATER SYSTEM NOTES

1. All water line work shall be in accordance with FAC 62-555, Permitting and Construction of Public Water Systems. All materials that come in contact with drinking water shall be in conformance with ANSI/NSF International Standard 61 and shall be installed in accordance with applicable AWWA Standards and/or the manufacturer's recommendations.

2. The Contractor shall coordinate the construction of the water facilities with all other construction. The Contractor shall verify the location and elevation of the proposed water main connection(s) prior to commencing work. It shall be the Contractor's responsibility to notify the Owner and the Engineer of any discrepancies.

3. Water lines are designed to finished grade and shall be protected until finished work is complete.

4. All workmanship and materials associated with water mains shall conform to the latest standards and specifications of the local utility company.

5. Refer to specifications and FDEP rules for separation requirements between potable water mains and other utilities.

6. All existing water main valves which are made inactive as the result of this project shall have their valve boxes removed and the disturbed roadway or grassed area restored. Valve boxes which are in paved areas shall have the cover removed and the section shall be filled with asphalt or flowable fill with the surface painted to match the surrounding pavement.

7. The location of water services on the plans are approximate. Actual location of services shall be determined in the field by location of existing water lines and as directed by the Engineer and the Owner.

8. No connection to the existing potable water system shall be allowed until all proposed water lines have been pressure tested, disinfected and cleared for service. Pressure testing shall be in accordance with AWWA C600 for DI mains or AWWA C605 for PVC mains. All water lines shall be disinfected in accordance with AWWA C651 and DEP requirements. As a minimum, successful bacteriological test shall be performed on two consecutive days at the point of tie-in, at junctions, along the water line route at 1,200' spacing, and at the terminal end of the line extension.

9. Existing water services and water meters will be abandoned. The contractor shall coordinate with the customer to schedule the switchover. The existing meter and meter box shall be removed and disposed of by the Contractor. The replacement water service will include all new components (service saddle, valves, coupling, water meter, meter box, etc.) to the point of connection with the customer's existing plumbing. The Contractor is responsible for locating and connecting all existing water services to the new main with replacement services.

C. PAVEMENT STRIPING AND SIGNAGE NOTES

1. Unless otherwise noted on the drawings, all existing signs removed by the construction activity, shall be restored to their original position prior to completion of the project. Any signs damaged during construction shall be replaced at the Contractor's expense.

2. All signs and pavement markings shall conform to the Manual on Uniform Traffic Control Devices (MUTCD) and the Florida Department of Transportation Roadway and Traffic Design Standards, latest editions.

3. Sign assembly locations, shown on the plans, which are in conflict with lighting, utilities etc. may be adjusted slightly as directed by the Engineer.

4. Existing signs to be permanently removed shall become the property of the Contractor and disposed of at his expense unless claimed by Owner or governing authority.

5. All pavement striping within Right-of-Way or easements, as well as all stop bars, crosswalks, messages and directional arrows (regardless of location) shall be lead free, thermoplastic pavement markings (FDOT spec. section 711). All other striping shall be reflective paint (FDOT spec. section 710) unless noted otherwise on the drawings or in the project specifications.

6. The aluminum column (post) & connection design shall adhere to FDOT Index 700-010 and the following criteria:
   a. mounting height = 8' maximum
   b. sign(s) area = 25 sq. ft. maximum
   c. sign(s) width: single = 36" maximum
      dual = 48" maximum
   d. driven post only

7. All posts shall be installed plumb.

8. All hardware shall be stainless steel (ASTM F593, ASTM F594, Alloy Group 2, Condition A, CW2 or SH4).

9. All signs furnished under this contract shall be permanently affixed with the date they were fabricated.

D. MAINTENANCE OF TRAFFIC NOTES

1. Contractor shall provide all Maintenance of Traffic (MOT) plans and/or schematics as required per the MUTCD, FDOT, and/or local jurisdiction to obtain R/W permit(s). Standard Index Drawings are provided for reference purposes only. Final MOT plans are the Contractor's responsibility per their construction approval and shall be implemented at their expense.

2. Contractor shall maintain vehicular access to all residences at the end of each workday. No roadway/driveway shall be blocked to vehicular traffic for more than a two (2) hour period.

3. Contractor shall maintain single lane access, at a minimum, at all times. Contractor shall provide detours and/or temporary roadway as necessary. Contractor shall provide all necessary flagging.

4. Contractor shall confine his active work area to no more than 100 feet at a time.

5. The roadway shall be restored to at least a limerock surface before it is reopened to traffic, and before the Contractor moves on to the next construction zone.

6. Dust control measures shall be implemented on all unpaved surfaces until paved.

E. TREE PROTECTION

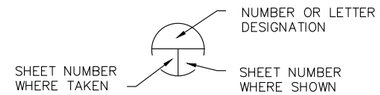
1. The design intent is to preserve all existing trees within the project corridor. See Technical Specifications 02115 for requirements. No tree shall be removed or trimmed without the City Manager's approval.

LEGEND

PROPOSED	EXISTING	
	--8"SAN--	SANITARY SEWER
	--4"FM--	SANITARY FORCE MAIN
	MH	MANHOLE
		VALVE
	--6"W--	WATER MAIN (CONSTRUCTED)
	--6"W--	WATER MAIN (DIRECTIONAL DRILL)
		FIRE HYDRANT
	WM	WATER SERVICE (BASE)
		WATER SERVICE (ADDITIVE ALTERNATE)
		TEMPORARY SAMPLE POINT
	TP	TELEPHONE PEDESTAL
	MB	MAIL BOX
18"RCP	18"RCP	STORM DRAIN PIPE
OR		STORM DRAIN STRUCTURE
84.0	84	GRADE CONTOURS
63.00	63.0	SPOT ELEVATIONS
	PP	POWER POLE/ W/ANCHOR
	UP	UTILITY POLE, LIGHT POLE
	--BT--	BURIED TELEPHONE
	--FO--	FIBER OPTIC CABLE
	CTV	CABLE TELEVISION
	--OHE--	OVERHEAD ELECTRIC
	GAS	GAS LINE
	SWALE	SWALE
		RIGHT-OF-WAY
	-X-X-	FENCING
		ASPHALT PAVEMENT OR IMPROVEMENT
		CONCRETE PAVEMENT OR SIDEWALK
		LIMITS OF MILLING AND OVERLAY
		STABILIZED ROADWAY OR DRIVEWAY
		LIMITS OF REMOVAL
		OVERLAND FLOW DIRECTION
		TEMPORARY SILT FENCE
		LIMITS OF WOODS
		TREE
		TREE TO BE REMOVED
	-X-	TEMPORARY TREE BARRICADE

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
ABS	ACRYLONITRILE BUTADIENE STYRENE
ABV	ABOVE
ACP	ASBESTOS CEMENT PIPE
AFF	ABOVE FINISH FLOOR (REF. ELEV.)
AFG	ABOVE FINISH GRADE (REF. ELEV.)
ALUM	ALUMINUM
ALT	ALTERNATE
APRX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
ARV	AIR RELEASE VALVE
ASPH	ASPHALT
ASSY	ASSEMBLY
BE	BURIED ELECTRIC
BF	BOTTOM FACE
BFO	BURIED FIBER OPTIC
BFV	BUTTERFLY VALVE
BITUM	BITUMINOUS OR BITUMASTIC
B	BASELINE
BLDG	BUILDING
BLK	BLOCK
BOT	BOTTOM
BT	BURIED TELEPHONE-CABLE
BV	BALL VALVE
C, CND	CONDUIT
CATV	CABLE TELEVISION
CI	CAST IRON
CIP	CAST IRON PIPE, CAST-IN-PLACE
CL	CENTERLINE
CLF	CHAIN LINK FENCE
CLR	CLEAR OR CLEARANCE
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CNR	CORNER
CONC	CONCRETE
CONT	CONTINUOUS
COORD	COORDINATE
CPLG	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE
CUL	CULVERT
CV	CHECK VALVE
CY	CUBIC YARD
C/C	CENTER TO CENTER
DBL	DOUBLE
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DOT	DEPARTMENT OF TRANSPORTATION
DWG	DRAWING
E	EAST
EA	EACH
EF	EACH FACE
EL, ELEV	ELEVATION
ELEC	ELECTRIC(AL)
EP	EDGE OF PAVEMENT
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
ESMT	EASEMENT
EW	EACH WAY
EXP	EXPANSION
EX, EXIST	EXISTING
EXT	EXTERIOR
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH(ED)
FIN GR	FINISH GRADE
FJ	FLANGED JOINT
FL	FLANGE(D)
FM	FORCE MAIN
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT OR FEET
F/F	FACE TO FACE
G	GAS MAIN
GAL	GALLON(S)
GALV	GALVANIZED
GIP	GALVANIZED IRON PIPE
GR	GRADE
GS	GALVANIZED STEEL
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
HB	HOSE BIBB
HDPE	HIGH-DENSITY POLYETHYLENE
HGT	HEIGHT
HORIZ	HORIZONTAL
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH(ES)
INF	INFLUENT
INT	INTERSECTION
INV	INVERT
IP	IRON PIPE
IPS	INTERNATIONAL PIPE STANDARD; IRON PIPE SIZE
LF	LINEAR FEET
LP	LIGHT POLE
LR	LONG RADIUS
LWL	LOW WATER LEVEL
MAINT	MAINTAIN OR MAINTENANCE
MAN	MANUAL(LY)
MAX	MAXIMUM
MES	MITERED END SECTION
MECH	MECHANICAL
MFR	MANUFACTURE
MG	MILLION GALLON(S)
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM; MINUTE(S)
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MON	MONUMENT
MPH	MILES PER HOUR
MPT	MALE PIPE THREAD
MTD	MOUNTED
N	NORTH
NE	NORTHEAST
NIC	NOT IN CONTRACT; NOT INCLUDED
NOM	NOMINAL
No	NUMBER
NPT	NATIONAL PIPE THREAD
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE
NW	NORTHWEST
N/A	NOT APPLICABLE
OA	OVERALL DIMENSION
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OVER HEAD
OHE	OVER HEAD ELECTRIC
PAVT, PVMT	PAVEMENT
PC	POINT OF CURVE
PI	POINT OF INTERSECTION
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
POB	POINT OF BEGINNING
PP	POWER POLE
PPM	PARTS PER MILLION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PW	POTABLE WATER LINE
QTY	QUANTITY
R, RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RED	REDUCER
REBAR	REINFORCING STEEL BARS
REF	REFERENCE
REINF	REINFORCE(D)(ING)(MENT)
REQD	REQUIRED
RR	RAILROAD
RT	RIGHT
R/W	RIGHT-OF-WAY
S	SEWER; SOUTH
SAN	SANITARY SEWER
SCHED	SCHEDULE
SE	SOUTHEAST
SF	SQUARE FOOT OR FEET
SHT	SHEET(ED)(ING)
SQ	SQUARE
SR	STATE ROAD
SS	SANITARY SEWER, STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SW	SOUTHWEST
S/W	SIDEWALK
TBM	TEMPORARY BENCH MARK
TC, TOC	TOP OF CONCRETE
TEL, TELE	TELEPHONE
TEMP	TEMPORARY
TF	TOP FACE
THD	THREAD(ED)
THK	THICK(NESS)
TOB	TOP OF BANK
TOE	TOE OF SLOPE
TOS	TOE OF SLOPE; TOP OF STEEL
TP	TELEPHONE POLE, TOP OF PAVEMENT
TYP	TYPICAL
T&B	TOP AND BOTTOM
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VOL	VOLUME
W	WATER, WEST
WM	WATER MAIN
WS	WATER SURFACE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
W/	WITH
W/O	WITHOUT
YD	YARD(S)



DETAIL/SECTION KEY

PROJECT CONTACTS

TYPE	ORGANIZATION	ADDRESS	TELEPHONE	CONTACT PERSON
LINE LOCATIONS	SUNSHINE STATE ONE-CALL OF FLORIDA, INC.	7797 N. UNIVERSITY DR., SUITE 204 FT. LAUDERDALE, FL. 33321	(800) 432-4770	CALL 48 HRS BEFORE DIGGING
TELEPHONE	WINDSTREAM FLORIDA, INC.	206 WHITE AVENUE S.E. ALACHUA, FL 32064	(386) 462-6530	GARY CARY
ELECTRIC	FPL	2900 CATHERINE ST. PALATKA, FL 32177	(800) 868-9554	TRACY STERN
INTERNET/TELEPHONE	WINDSTREAM FLORIDA, INC.	206 WHITE AVE. S.E. ALACHUA, FL 32064	(386) 462-6530	GARY CARY
CABLE T.V.	COMCAST	5934 RICHARD ST JACKSONVILLE, FL 32216	(904) 380-7574	LARRY WINBURN
GAS	CITY OF CRESCENT CITY	3 NORTH SUMMIT STREET CRESCENT CITY, FL 32112	(386) 698-2525 EXT. 223	JOHN TURNEY OPERATIONS/DISTRIBUTION
WATER & SEWER	CITY OF CRESCENT CITY	3 NORTH SUMMIT STREET CRESCENT CITY, FL 32112	(386) 698-2525	KEITH HARRIS PUBLIC WORKS DIRECTOR
OWNER	CITY OF CRESCENT CITY	3 NORTH SUMMIT STREET CRESCENT CITY, FL 32112	(386) 698-2525	CHARLES RUDD CITY MANAGER
DESIGN ENGINEER	MITTAUER & ASSOCIATES, INC.	580-1 WELLS ROAD ORANGE PARK, FL 32073	(904) 278-0030	JASON R. SHEPLER, P.E.

NO	DATE	REVISION DESCRIPTION
1	05/15/24	MAL CONFORMED PER ADDENDA

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MITTAUER & ASSOCIATES, INC.
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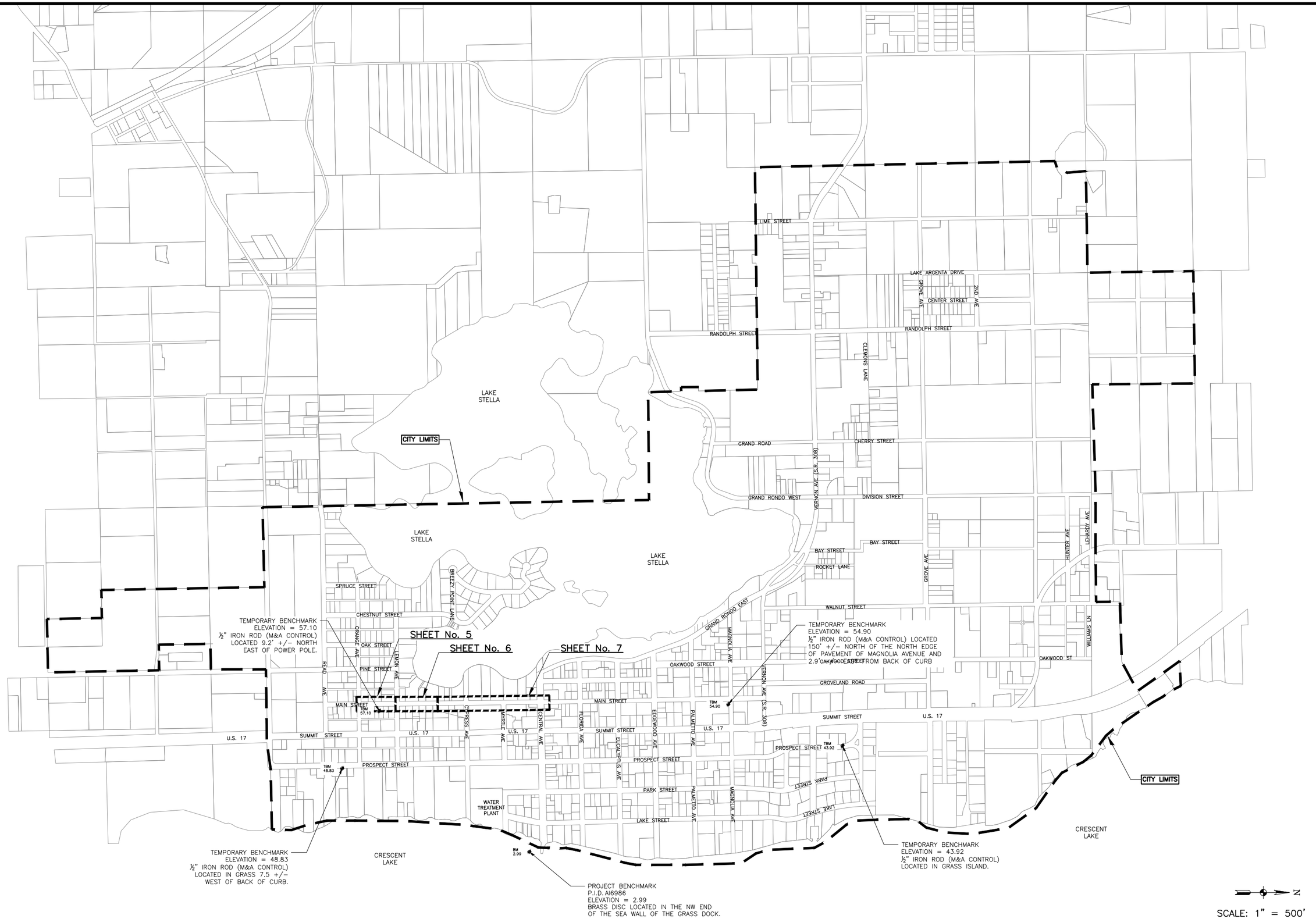
TEL: (904) 278-0030 FAX: (904) 278-0840
FLORIDA RY NO. 6569

CITY OF CRESCENT CITY
Main St. Water Main Replacement - Phase 2
General Notes, Abbreviations and Legend
Putnam County, Florida

JOB NO. 9318-65-1
SHEET NO. 2



SCALE: 1" = 500'

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DATE 05/06/24
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MITTAUER & ASSOCIATES, INC.
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580-1 WELLS ROAD, ORANGE PARK, FLORIDA 32073
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FLORIDA RY No. 6569

CITY OF CRESCENT CITY
Main St. Water Main Replacement – Phase 2
Key Map
Putnam County, Florida

JOB NO. 9318-65-1
SHEET NO. 3

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NOTES:

1. ALL EXISTING WATER MAINS TO BE ABANDONED SHALL BE CUT AND PLAUGGED ONCE DISCONNECTED FROM SYSTEM. GROUT FILLING NOT REQUIRED.

CONFIRM LOCATION & STATUS OF VALVE CONDITION W/ CITY PERSONNEL

6" INSERTVALVE

6" INSERTVALVE

EXISTING WM TO BE ABANDONED

6" INSERTVALVE

8" ISOLATION VALVE LOCATED AT MAIN STREET AND READ AVENUE INTERSECTION

PROPOSED 8" WM

SP 65-1

SP 65-2

SP 65-3

SP 65-4

PINE STREET

ORANGE LANE

MAIN STREET

SUMMIT STREET

LAKE STELLA

U.S. 17

LEMON AVE

ORANGE AVE

MYRTLE AVE

CYPRESS AVE

CENTRAL AVE

FLORIDA AVE

PROSPECT STREET

WATER TREATMENT PLANT

CRESCENT LAKE

CITY LIMITS

LEGEND

TEMPORARY SAMPLE TAP

EXISTING VALVE

PROPOSED VALVE

FIRE HYDRANT ASSEMBLY

SCALE: 1" = 100'

NO	DATE	BY	REVISION DESCRIPTION

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PROJ. MGR. JRS
DATE 05/06/24
1 INCH

MITTAUER & ASSOCIATES, INC.
CONSULTING ENGINEERS
580-1 WELLS ROAD, ORANGE PARK, FLORIDA 32073
TEL. (904) 278-0030 FAX. (904) 278-0840
FLORIDA RY NO. 6569

CITY OF CRESCENT CITY
Main St. Water Main Replacement – Phase 2
Water System Improvement Map
Putnam County, Florida

JOB NO. 9318-65-1
SHEET NO. 4

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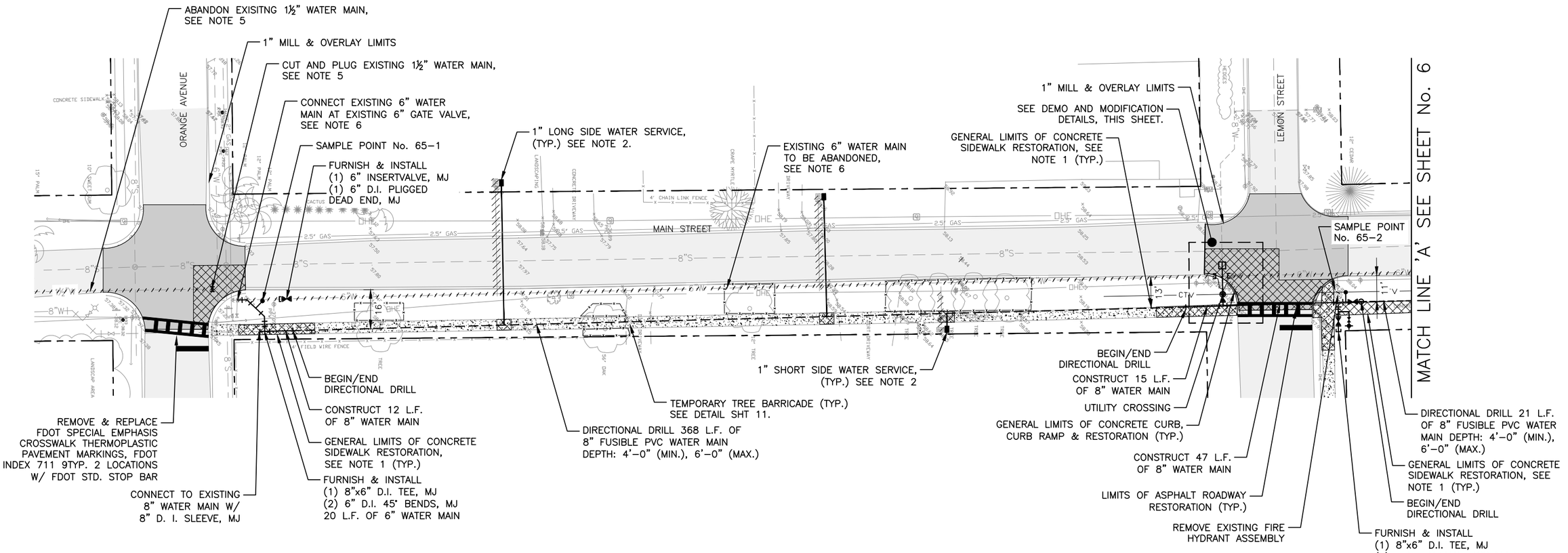
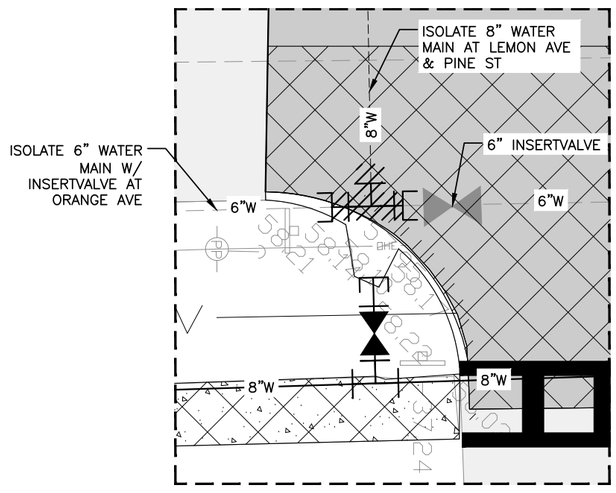
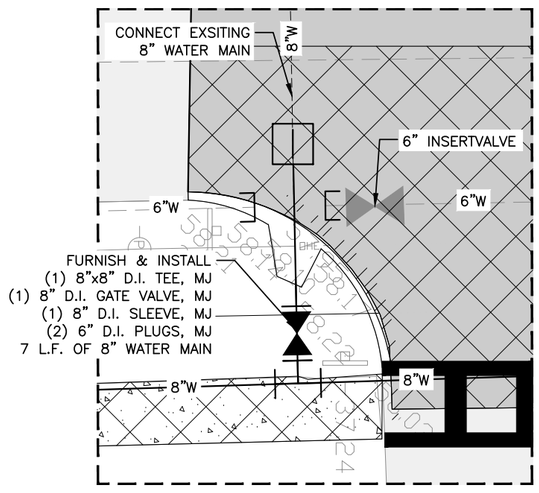




DEMO DETAIL
1" = 5'



MODIFICATION DETAIL
1" = 5'

NOTES:

1. EXTEND ALL SIDEWALK REMOVAL & REPLACEMENT FROM NEAREST EXISTING JOINTS. ADA DETECTABLE MATS W/ ADA COMPLIANT CURB RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS.
2. REMOVE/CAP OLD WATER SERVICE. CONNECT TO EXISTING SERVICE PIPING AT R.O.W. LINE. SEE DETAILS ON SHEET No. 9.
3. PROTECT EXISTING MONITORING WELLS DURING ALL PHASES OF CONSTRUCTION.
4. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING METER AND LOCATE PROPOSED METER BOX NEARBY.
5. EXISTING SMALL DIAMETER WATER MAIN MAY BE IN SERVICE. ADDITIVE ALTERNATE No. 1 INCLUDES QUANTITIES TO ADDRESS ABANDONMENT SERVICES. SHOULD ADDITIONAL WATER MAIN ABANDONMENT BE REQUIRED.
6. CONTRACTOR SHALL COORDINATE & SEQUENCE WORK TO ALLOW EXISTING MAIN TO BE PLACED OUT OF SERVICE TO ALLOW CUT-IN CONNECTION TO EXISTING WATER MAIN.
7. CUSTOMERS SHALL BE RESERVICED TO CLEARED REPLACEMENT WATER MAIN PRIOR TO MAIN LINE CONNECTIONS TO EXISTING WATER MAINS.

NO	DATE	BY	REVISION DESCRIPTION
1	05/15/24	MAL	CONFORMED PER ADDENDA

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DATE 05/06/24
1 INCH

MITTAUER & ASSOCIATES, INC.
CONSULTING ENGINEERS
580-1 WELLS ROAD, ORANGE PARK, FLORIDA 32073
TEL. (904) 278-0030 FAX. (904) 278-0840
FLORIDA RY No. 6569

CITY OF CRESCENT CITY
Main St. Water Main Replacement - Phase 2
Orange Ave to Lemon Ave - Plan
Putnam County, Florida

JOB NO. 9318-65-1
SHEET NO. 5

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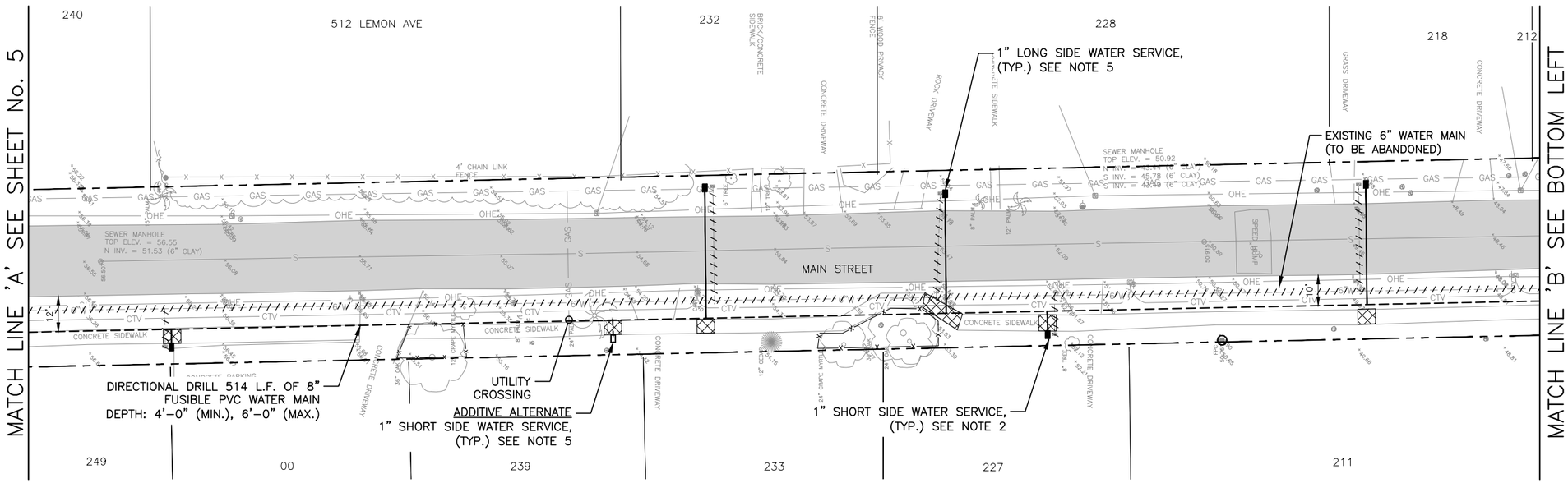

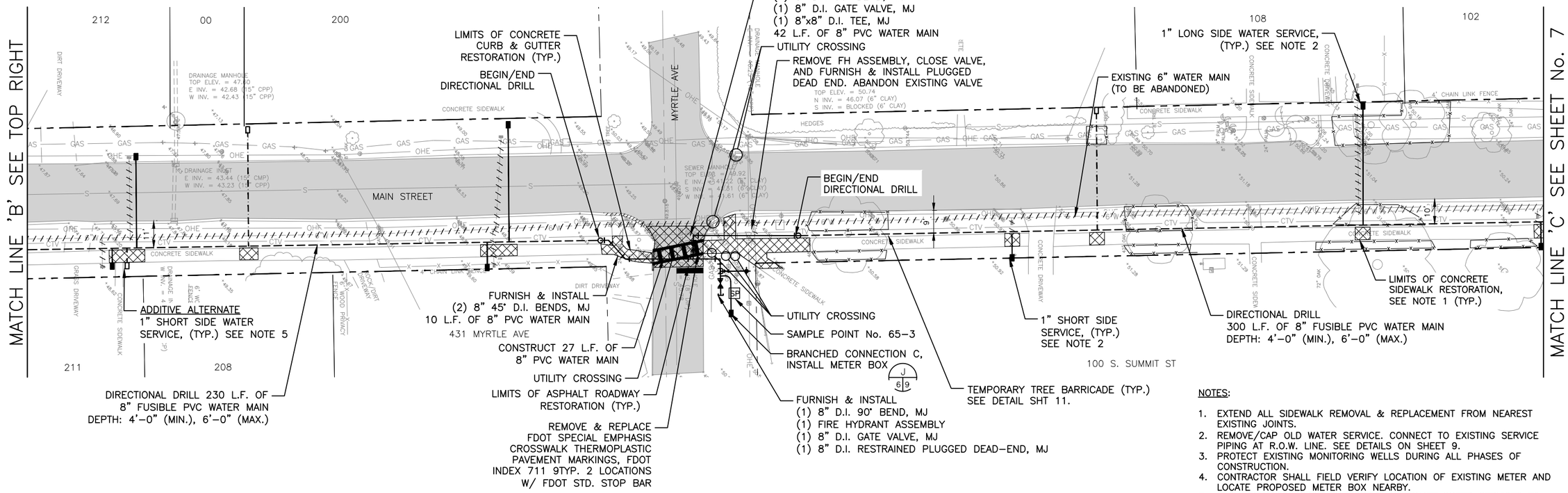

NOTES:

1. EXTEND ALL SIDEWALK REMOVAL & REPLACEMENT FROM NEAREST EXISTING JOINTS.
2. REMOVE/CAP OLD WATER SERVICE. CONNECT TO EXISTING SERVICE PIPING AT R.O.W. LINE. SEE DETAILS ON SHEET 9.
3. PROTECT EXISTING MONITORING WELLS DURING ALL PHASES OF CONSTRUCTION.
4. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING METER AND LOCATE PROPOSED METER BOX NEARBY.
5. THE CONTRACT INCLUDES ADDITIVE ALTERNATE WATER SERVICES TO EXTEND WATER TO VACANT PARCELS FOR FUTURE CONNECTION/USE. THE OWNER WILL DIRECT WHICH SERVICES TO COMPLETE.

NO	DATE	BY	REVISION DESCRIPTION
1	05/15/24	MAL	CONFORMED PER ADDENDA

DESG MAR
DRWN DHS
PROJ. MGR. JRS
DATE 05/06/24
1 INCH

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CITY OF CRESCENT CITY
Main St. Water Main Replacement – Phase 2
Lemon Ave to Cypress Ave – Plan
Putnam County, Florida

JOB NO. 9318-65-1
SHEET NO. 6

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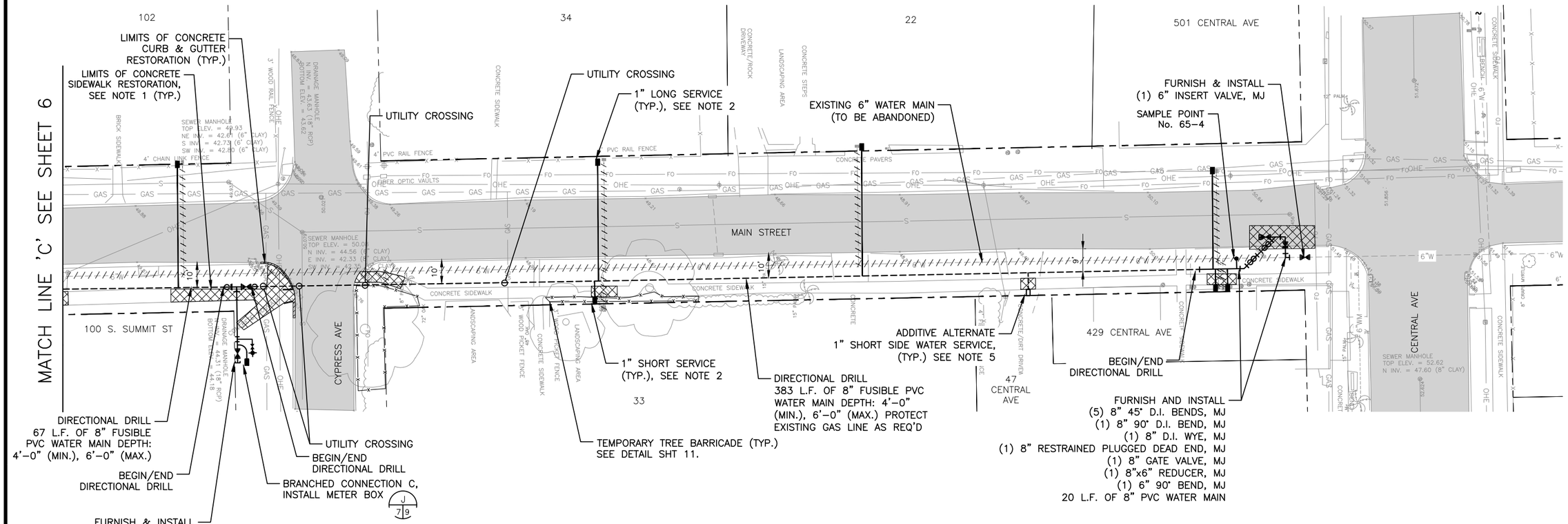

NOTES:

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DESG JRS
DRWN DHS
PROJ. MGR. JRS
DATE 05/06/24
1 INCH

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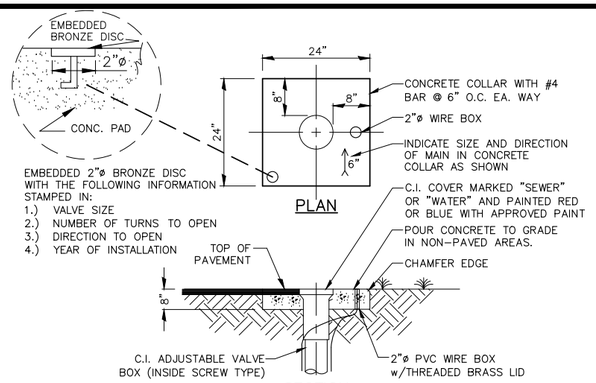
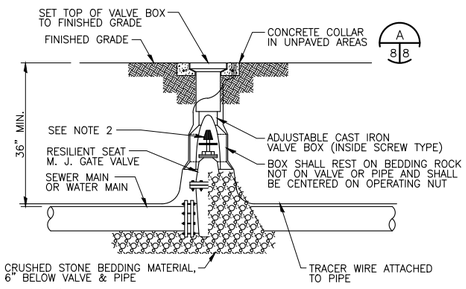
CITY OF CRESCENT CITY
Main St. Water Main Replacement - Phase 2
Cypress Ave to Central Ave - Plan
Putnam County, Florida

JOB NO. 9318-65-1
SHEET NO. 7



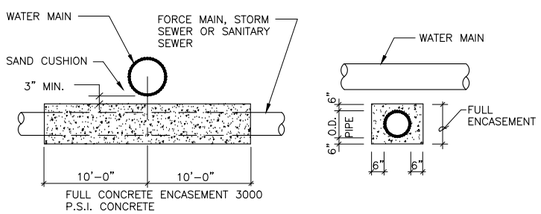
NOTES:
1. CONCRETE COLLAR IS NOT REQUIRED IN PAVED AREAS IF PAVEMENT SURFACE IS FINISHED PRIOR TO CONDITIONAL FINAL INSPECTION.

A 8|8 VALVE COLLAR DETAIL – 2" THRU 12" NTS

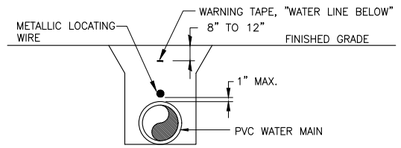


NOTES:
1. PVC EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO A MAXIMUM OF 4 FEET BELOW FINISHED GRADE.

B 5–7|8 GATE VALVE AND BOX DETAIL NTS

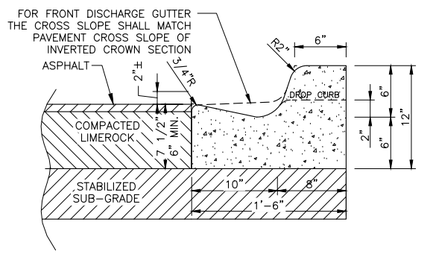


C –8 TYPICAL CONCRETE ENCASEMENT NTS

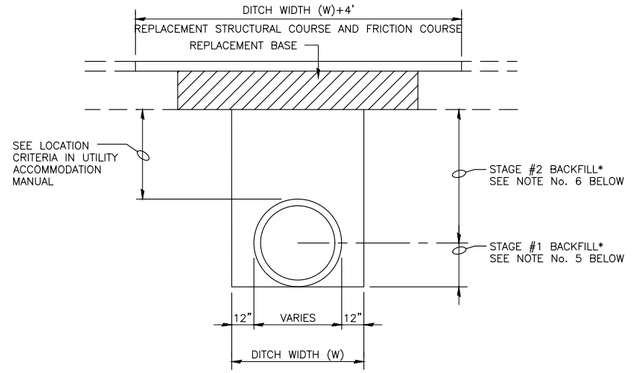


NOTES:
1. ALL PVC PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (12 GAUGE COPPER/UF INSULATION) CAPABLE OF DETECTION BY A CABLE LOCATOR
2. WIRE SHALL BE ATTACHED TO THE TOP OF PIPE WITH DUCT TAPE, AT LEAST FIVE TIMES PER JOINT. LOCATING WIRE SHALL TERMINATE AT THE TOP OF EACH VALVE BOX

E –8 LOCATING WIRE NTS



F 5–7|8 TYPICAL CURB RESTORATION DETAIL NTS

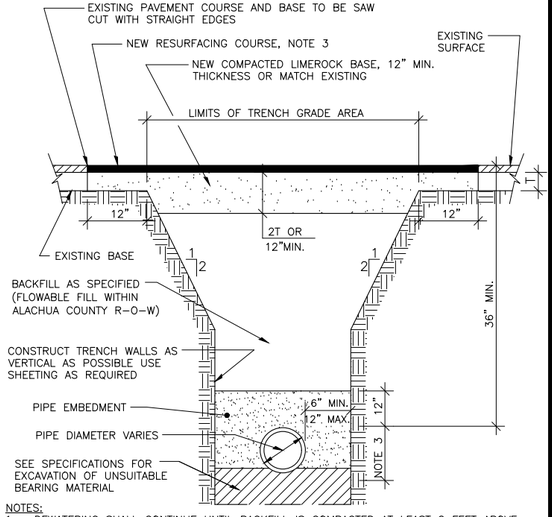


FLEXIBLE PAVEMENT RESTORATION NOTES

1. PAVEMENT SHALL BE MECHANICALLY SAWED.
2. THE REPLACEMENT ASPHALT SHALL MATCH THE EXISTING STRUCTURAL AND FRICTION COURSES FOR TYPE AND THICKNESS.
3. FLOWABLE FILL IS TO BE PLACED IN ACCORDANCE WITH SECTION 121 OF THE FDOT SPECIFICATIONS, AS APPROVED BY THE ENGINEER.
4. DO NOT ALLOW THE UTILITY BEING INSTALLED TO FLOAT. IF A METHOD IS PROVIDED TO PREVENT FLOTATION FROM OCCURRING, STAGES #1 AND #2 CAN BE COMBINED IF APPROVED BY THE ENGINEER.
5. IN STAGE #1, PLACE FLOWABLE FILL MIDWAY UP ON BOTH SIDES OF THE UTILITY. ALLOW TO HARDEN BEFORE PLACING STAGE 2.
6. IN STAGE #2, PLACE FLOWABLE FILL TO THE BOTTOM OF THE EXISTING BASE COURSE.

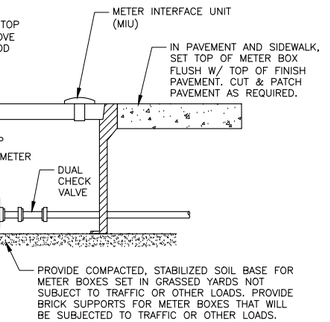
FLOWABLE FILL

I –8 TRENCH DETAIL & PAVEMENT REPLACEMENT
OPTIONAL TRENCH REPAIR DETAIL NTS



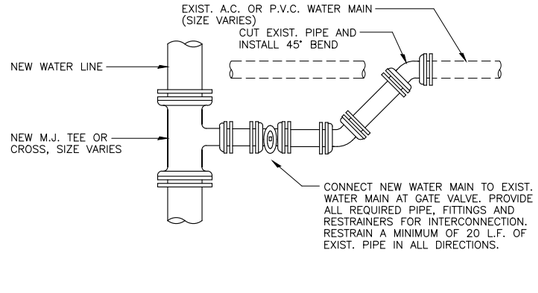
NOTES:
1. DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE WATER TABLE.
2. SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED AND FEATHERED.
3. PROVIDE 2 INCHES OF TYPE FC 12.5 MIX (NO RAP) ASPHALT.

L 5|8 TRENCH DETAIL & PAVEMENT REPLACEMENT
FOR ROADS IN CITY RIGHT-OF-WAY NTS



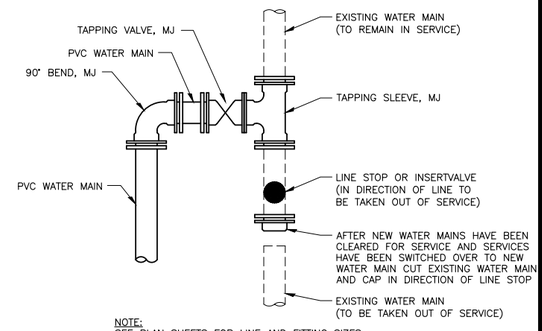
NOTES:
1. METER BOX SHALL BE COMPATIBLE WITH FUTURE AMI METER REPLACEMENT PROGRAM.

G 6|8 TYPICAL METER BOX INSTALLATION NTS



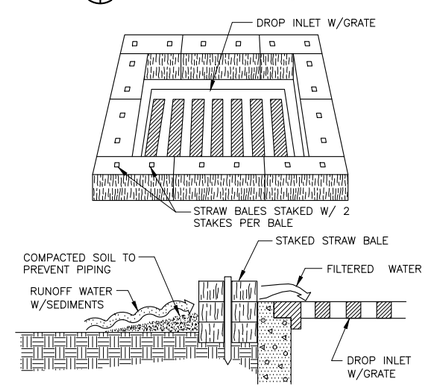
NOTE:
ALL PIPE, VALVES AND FITTINGS SHALL BE RESTRAINED IN ACCORDANCE WITH SPECIFICATIONS

J 6|8 TYPICAL EXIST. WATER MAIN RECONNECTION NTS



NOTE:
SEE PLAN SHEETS FOR LINE AND FITTING SIZES

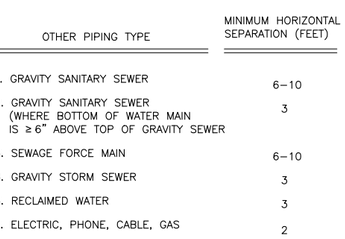
M 5|8 WET TAP DETAIL NTS



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5%) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 CFS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

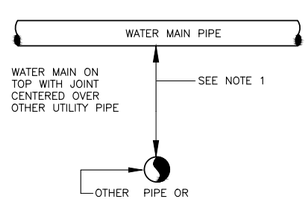
N 5|8 STRAW BALE DROP INLET SEDIMENT FILTER NTS



PLAN VIEW

	OTHER PIPING TYPE	MINIMUM HORIZONTAL SEPARATION (FEET)
1.	GRAVITY SANITARY SEWER	6–10
2.	GRAVITY SANITARY SEWER (WHERE BOTTOM OF WATER MAIN IS ≥ 6" ABOVE TOP OF GRAVITY SEWER	3
3.	SEWAGE FORCE MAIN	6–10
4.	GRAVITY STORM SEWER	3
5.	RECLAIMED WATER	3
6.	ELECTRIC, PHONE, CABLE, GAS	2

D –8 MINIMUM HORIZONTAL SEPARATION REQUIREMENTS NTS



SECTION VIEW

	OTHER PIPING TYPE	MINIMUM VERTICAL SEPARATION (INCHES)
1.	GRAVITY SANITARY SEWER	6
2.	SEWAGE FORCE MAIN	12
3.	GRAVITY STORM SEWER	6–12
4.	RECLAIMED WATER	12
5.	ELECTRIC, PHONE, CABLE, GAS	6

NOTE:
1. IF THE WATER MAIN IS BELOW THE SANITARY SEWER, RECLAIMED WATER MAIN OR STORM SEWER PIPE, THEN A MINIMUM OF 12" VERTICAL SEPARATION IS REQUIRED.

H –8 MINIMUM VERTICAL SEPARATION REQUIREMENTS NTS

NO	DATE	BY	REVISION DESCRIPTION

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DATE 05/06/24
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Main St. Water Main Replacement – Phase 2
Typical Details
Putnam County, Florida

JOB NO. 9318-65-1
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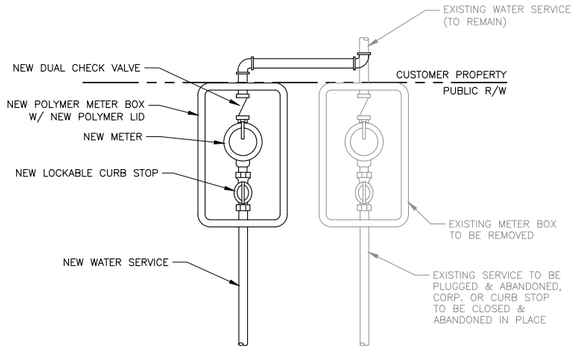
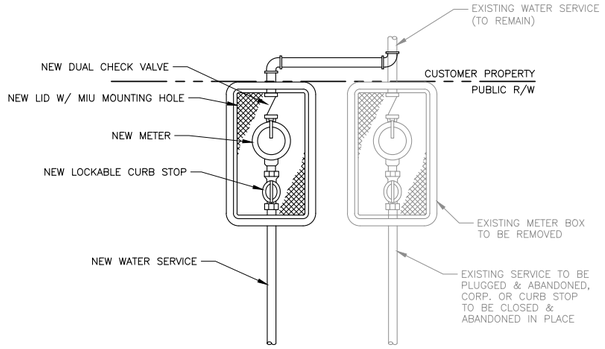
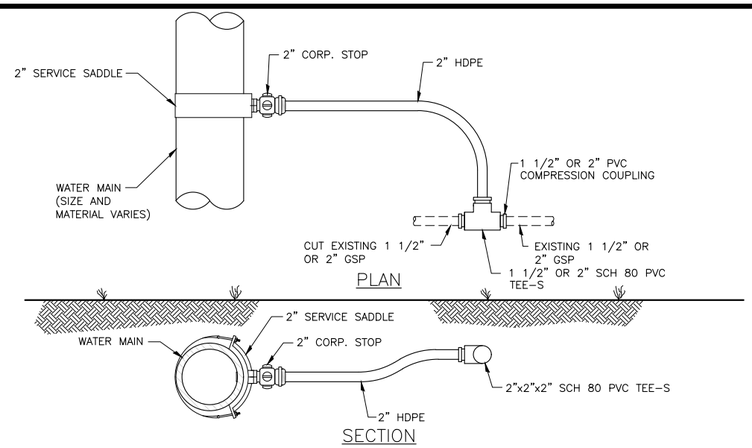


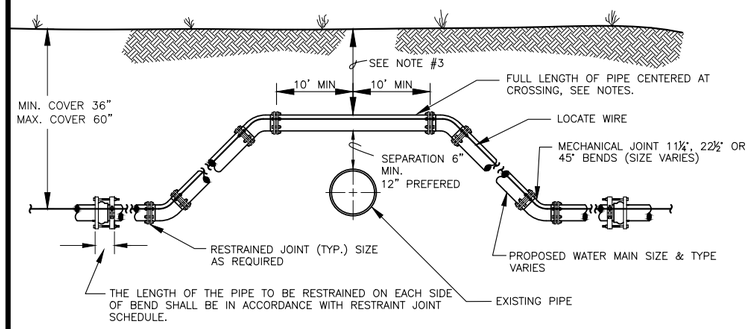
A 5 9 WATER METER REPLACEMENT DETAIL
5/8" METERS | NON-TRAFFIC
NTS



D 9 WATER METER REPLACEMENT DETAIL
5/8" METERS | TRAFFIC AREAS
NTS

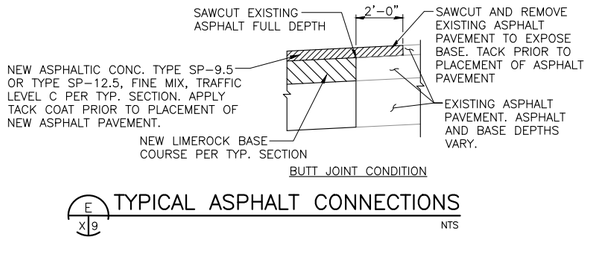


H 5 6 9 BRANCH CONNECTION DETAIL A
NTS

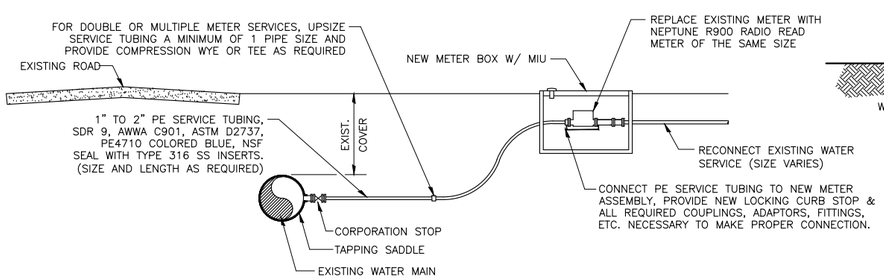


NOTES:
1. THE SOILS BETWEEN THE NEW MAIN AND THE EXISTING PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
2. MINIMUM VERTICAL SEPARATION REQUIREMENTS MUST BE ACHIEVED.
3. IF UTILITY CONFLICT IS LOCATED IN A NON-TRAFFIC AREA (NO TRAFFIC LOADS) AND THE NEW PIPE IS D.I.P., THEN THE MINIMUM COVER MAY BE REDUCED TO 24 INCHES (ONLY IN THE AREA OF THE CONFLICT).

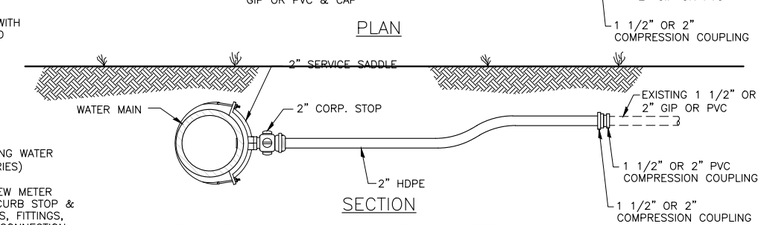
B 9 TYPE "A" CROSSING
NTS



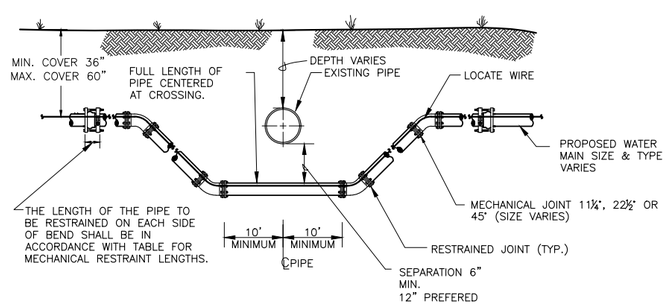
E X 9 TYPICAL ASPHALT CONNECTIONS
NTS



F 5-7 9 WATER SERVICE REPLACEMENT DETAIL – SHORT SIDE OF ROAD
NTS



I 9 BRANCH CONNECTION DETAIL B
NTS



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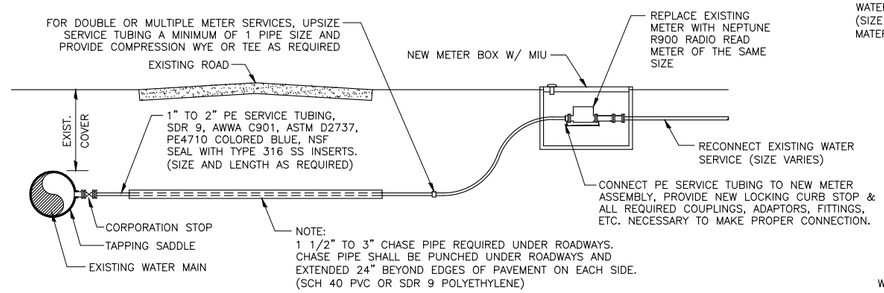
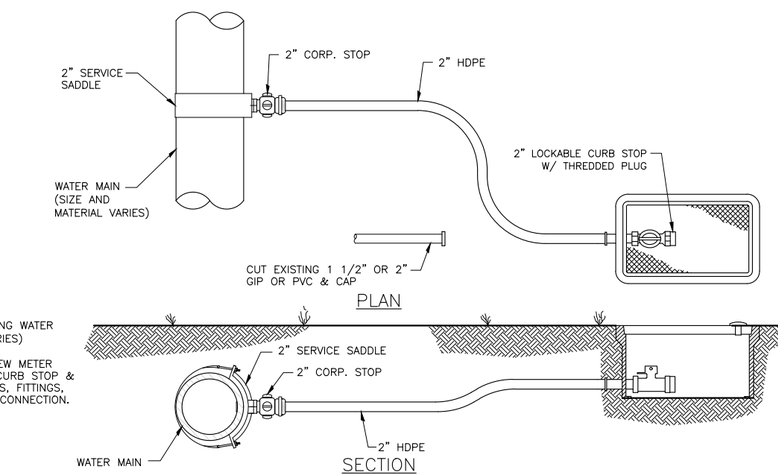
2. MINIMUM VERTICAL SEPARATION REQUIREMENTS MUST BE ACHIEVED.

C 9 TYPE "B" CROSSING
NTS



G 5-7 9 WATER SERVICE REPLACEMENT DETAIL – LONG SIDE OF ROAD
NTS



J 6 7 13 BRANCH CONNECTION DETAIL C
NTS

NO	DATE	BY	REVISION DESCRIPTION
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SHEET NO. 9

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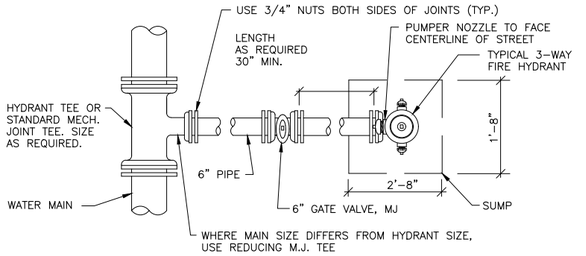
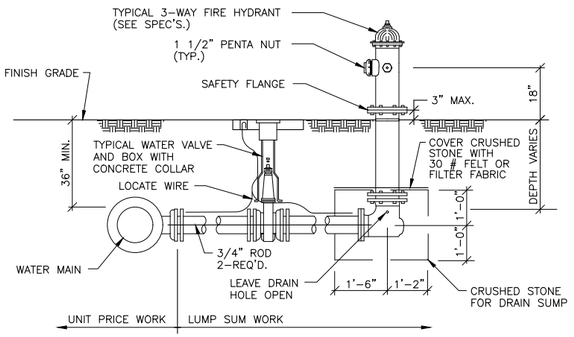


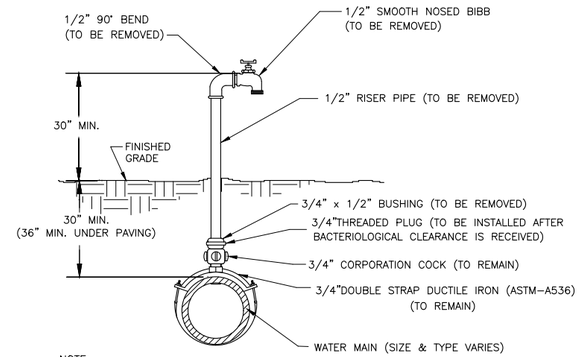


NOTES:

1. TIE RODS, NUTS, WASHERS AND OTHER FASTENERS SHALL BE ASTM A 246 CORROSION RESISTANT STEEL, OR TYPE 316 STAINLESS STEEL.
2. ALL PIPE, VALVES AND FITTINGS OF HYDRANT SHALL BE RESTRAINED.
3. CONTRACTOR SHALL NOT PRE-ORDER THE FIRE HYDRANTS ASSEMBLIES WITH THE SAME LENGTH BARREL. THEY SHALL BE ORDERED AFTER THE CONTRACTOR HAS PREPARED AN INVENTORY OF LENGTHS REQUIRED TO ENSURE PROPER BURY DEPTH TO MEET ACTUAL FIELD CONDITIONS.
4. COLOR OF HYDRANT SHALL BE MANUFACTURER'S STANDARD INDUSTRIAL FINISH. OWNER SHALL CHANGE COLOR AND PROVIDE BLUE REFLECTIVE MARKER IF DESIRED.

A 6|10 TYPICAL FIRE HYDRANT INSTALLATION

NTS

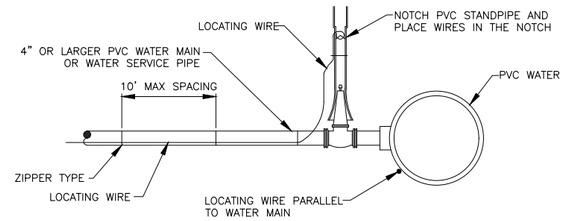


NOTE:

1) LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROADWAY SHOULDERS (NON-TRAFFIC AREAS) OF THE ROAD (WHERE APPLICABLE)
2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL PIPING & FITTINGS NOTED AFTER BACTERIOLOGICAL CLEARANCE FROM THE HEALTH DEPARTMENT.

D X|10 1/2" TEMPORARY SAMPLE TAP

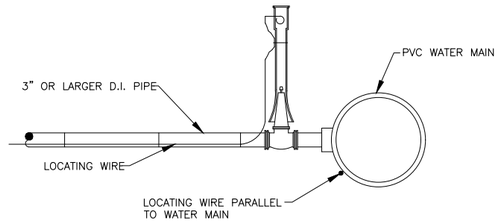
NTS



CONNECTION TO PVC MAINS

4" OR LARGER PVC WATER MAIN

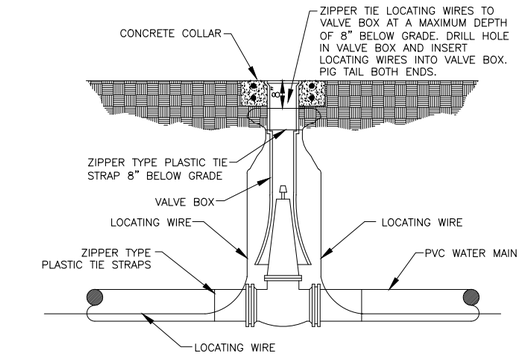
DETAIL – A



CONNECTION TO PVC MAINS

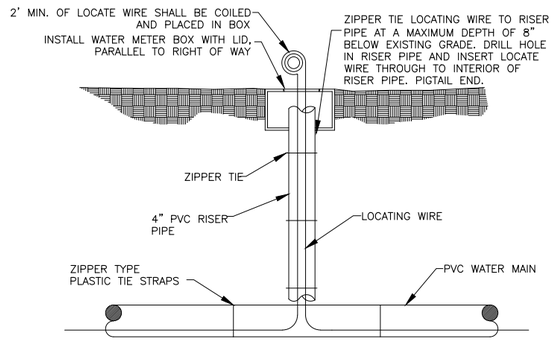
w/3" OR LARGER D.I. WATER MAIN

DETAIL – B



IN LINE LOCATING STATION– PVC PIPE

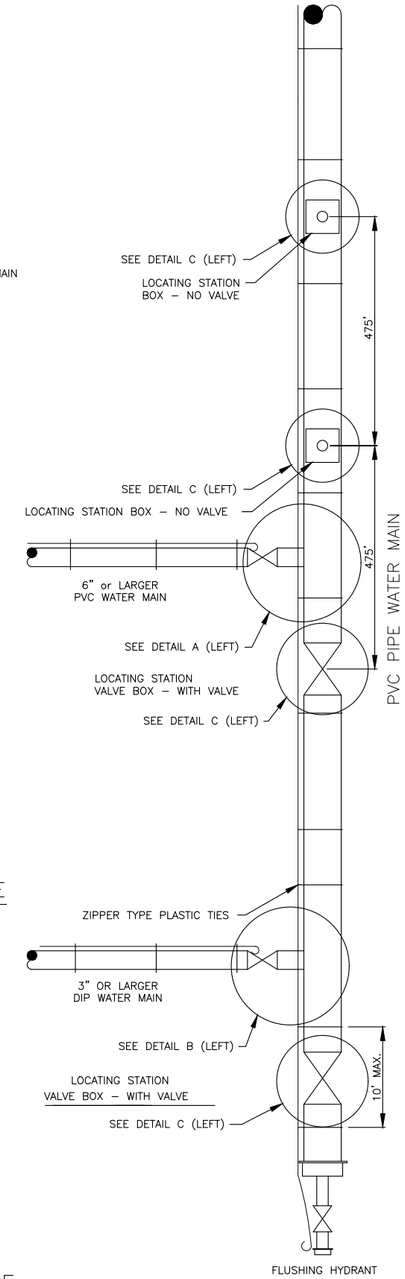
VALVE BOX WITH VALVE



IN LINE LOCATING STATION – PVC PIPE

METER BOX

DETAIL – C

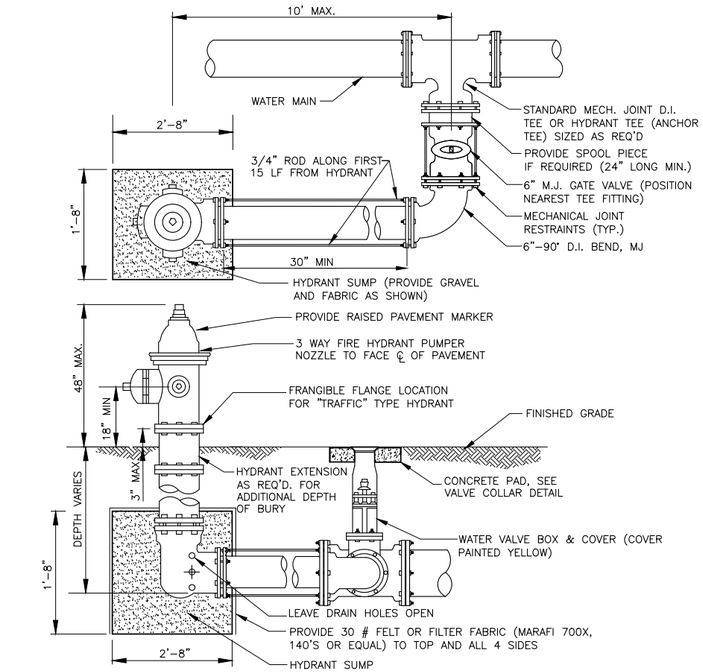


PLAN VIEW

NOTES:

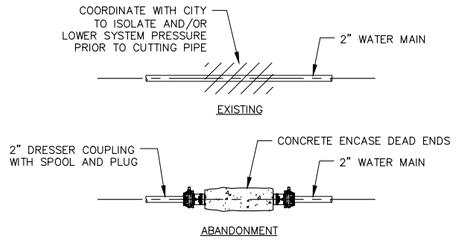
1. LOCATING WIRE, SEE SPECIFICATION 02513 FOR REQUIREMENTS.
2. BOXES SHALL NOT BE LOCATED IN SIDEWALKS OR DRIVEWAYS. LOCATE BOXES SPACING SHALL NOT EXCEED 500 FEET.
3. WHERE IT IS NOT POSSIBLE TO LOCATE THE BOX OUTSIDE OF A PAVED STREET OR PARKING LOT THE LOCATE WIRE SHALL BE PLACED IN A VALVE BOX INSTEAD OF A ROME BOX. VALVE BOX LID SHALL BE MARKED ACCORDING TO THE TYPE OF PIPE SERVED.

F X|10 TYPICAL LOCATOR WIRING INSTALLATION DETAILS



B 7|10 TYPICAL FIRE HYDRANT LIMITED SPACE INSTALLATION

NTS



E X|10 WATER SYSTEM ABANDONMENT DETAIL (2" OR LESS)

NTS

MITTAUER & ASSOCIATES, INC.
CONSULTING ENGINEERS
580-1 WELLS ROAD, ORANGE PARK, FLORIDA 32073
TEL. (904) 278-0030 FAX. (904) 278-0840
FLORIDA RY NO. 6569

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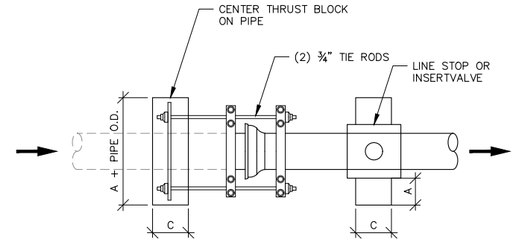
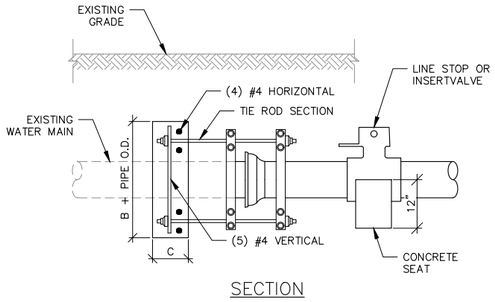
DESG JRS
DRWN DHS
PROJ. MGR. JRS
DATE 05/06/24
1 INCH

CITY OF CRESCENT CITY
Main St. Water Main Replacement – Phase 2
Typical Details
Putnam County, Florida

JOB NO. 9318-65-1
SHEET NO. 10

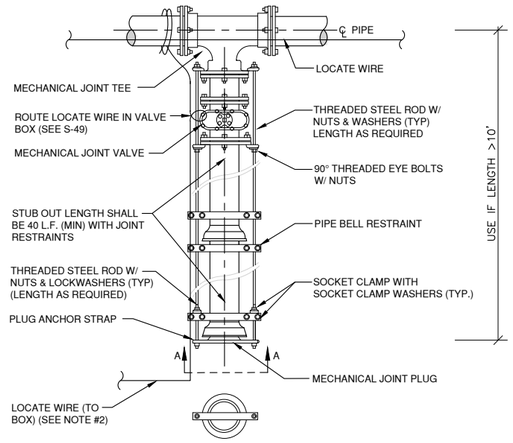


PLAN



SECTION

PVC O.D. (SCH 40)
6" – 6.625"
8" – 8.625"

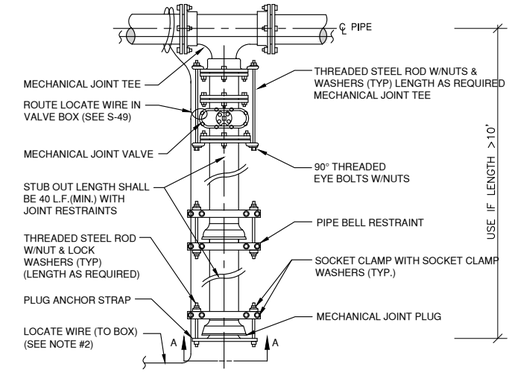


SECTION "A-A"

NOTES:
1. IN LIEU OF BELL/ROD RESTRAINTS, MECHANICAL JOINT RESTRAINTS MAY BE USED.
2. LOCATING WIRE REQUIRED, UTILIZING A LOCATE WIRE BOX INSTALLED AT PLUG LOCATION.
3. NUMBER OF TIE RODS REQUIRED IS AS FOLLOWS:

3" – 8"	DIAMETER MAIN – 2 TIE RODS REQUIRED PER JOINT (3/4" ROD)
10" – 12"	DIAMETER MAIN – 4 TIE RODS REQUIRED PER JOINT (3/4" ROD)
14" – 16"	DIAMETER MAIN – 6 TIE RODS REQUIRED PER JOINT (3/4" ROD)
18" – 20"	DIAMETER MAIN – 8 TIE RODS REQUIRED PER JOINT (3/4" ROD)
24"	DIAMETER MAIN –12 TIE RODS REQUIRED PER JOINT (3/4" ROD)
30" – 36"	DIAMETER MAIN –14 TIE RODS REQUIRED PER JOINT (1" ROD)
42" – 48"	DIAMETER MAIN –16 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
54"	DIAMETER MAIN –18 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)

4. THE LOCATION OF THE DEAD END PLUG SHALL NOT BE UNDER PAVEMENT, IF POSSIBLE. THE STUB OUT SHALL EXTEND BEYOND THE INTERSECTION AREAS OR ROAD CROSSING BY 10 FEET (MIN.) WHERE POSSIBLE.



PLAN

SECTION "A-A"

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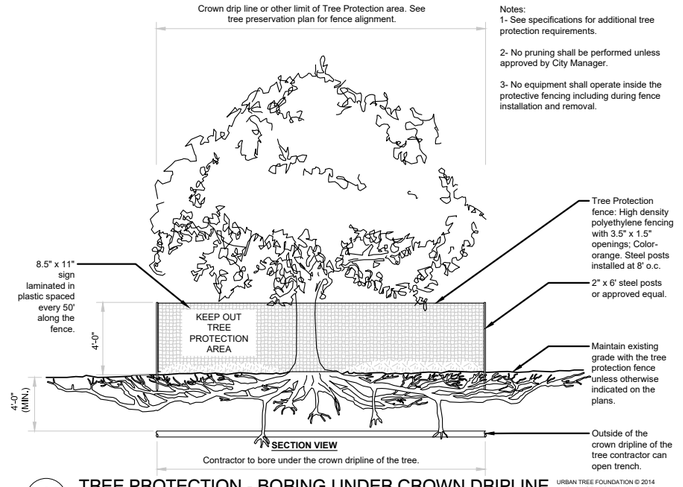
A/X11 LINE STOP & INSERTVALVE DETAIL
NTS

B/X11 PLUGGED DEAD END USING TIE RODS
NTS

C/X11 PLUGGED DEAD END USING MECHANICAL RESTRAINTS
NTS



S-X TREE PROTECTION - BORING UNDER CROWN DRIPLINE
NTS
L_tree protection_boring

NO	DATE	BY	REVISION DESCRIPTION

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DATE 05/06/24
1 INCH

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CITY OF CRESCENT CITY
Main St. Water Main Replacement – Phase 2
Typical Details
Putnam County, Florida

JOB NO. 9318-65-1
SHEET NO. 11

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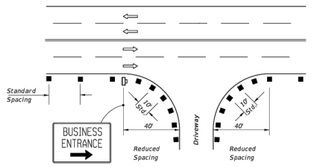
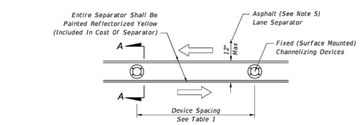
TRAFFIC CONTROL GENERAL NOTES

1. THE EXISTING POSTED SPEED SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION. WORK ZONE SPEED SHALL NOT BE LESS THAN POSTED SPEED.
2. ARROWS DENOTE DIRECTION OF TRAFFIC ONLY AND DO NOT REFLECT PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR IS TO MAINTAIN AND KEEP STREET NAME IDENTIFICATION SIGNS VISIBLE DURING CONSTRUCTION OPERATIONS TO FACILITATE EMERGENCY VEHICLE TRAFFIC.
4. PLACE BUSINESS ENTRANCE SIGNS IN ACCORDANCE WITH FDOT INDEX 102–600, SHEET 9.
5. EXISTING GUIDE SIGNS AND APPLICABLE WARNING SIGNS ARE TO BE RELOCATED DURING CONSTRUCTION TO ALIGN WITH ALL PHASE TRAFFIC PATTERNS.
6. THE CONTRACTOR SHALL CONTACT TRANSIT AND SCHOOL AUTHORITIES FOR THEIR BUS STOP LOCATIONS AND SCHEDULES TO MAINTAIN SAFE ACCESS TO THE RIDERS AT ALL TIMES.
7. ALL LANE CLOSURES SHALL BE COORDINATED WITH LOCAL EMERGENCY SERVICES. A MINIMUM OF 24 HOURS NOTICE SHALL BE PROVIDED FOR ANY SCHEDULED WORK REQUIRING LANE CLOSURES OR DETOURS.



1. For single business entrances, place one 24" x 36" business sign for each driveway entrance affected. Signs shall show specific business names. Logos may be provided by business owners. Standard BUSINESS ENTRANCE sign in Index 700-102 may be used when approved by the Engineer.
2. When several businesses share a common driveway entrance, place one 24" x 36" standard BUSINESS ENTRANCE sign in accordance with Index 700-102 at the common driveway entrance.
3. Channelizing devices shall be placed at a reduced spacing on each side of the driveway entrance, but shall not restrict sight distance for the driveway users.
4. Business entrance signs are intended to guide motorist to business entrances moved/modified or disturbed during construction projects. Business entrance signs are not required where there is minimal disruption to business driveways which is often the case with resurfacing type projects.

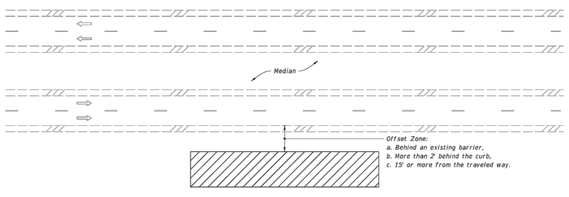
PLACEMENT OF BUSINESS ENTRANCE SIGNS AND CHANNELIZING DEVICES AT BUSINESS ENTRANCE



1. Temporary lane separators shall be supplemented with any of the following approved fixed (surface mounted) channelizing devices: temporary tubular markers, vertical panels, or opposing traffic lane divider panels. Opposing traffic lane divider panels (W6-4) shall only be used as center lane dividers to separate opposing vehicular traffic on a two-lane, two-way operation. Temporary Tubular Markers, Vertical Panels and Opposing Traffic Lane Divider panels shall not be intermixed within the limits where the temporary lane separator is used. The connection between the channelizing device and the temporary lane separator curb shall hold the channelizing device in a vertical position.
2. Reflectorized materials shall have a smooth sealed outer surface which will display the same approximate color day and night. Furnish channelizing devices having retroreflective sheeting meeting the requirements of Section 990.
3. 12" openings for drainage shall be constructed in the asphalt and portable temporary lane separator at a maximum spacing of 25' in areas with grades of 1% or less or 50' in areas with grades over 1% as directed by the Engineer.
4. Tapered ends shall be used at the beginning and end of each run of the temporary lane separator to form a gradual increase in height from the pavement level to the top of the temporary lane separator.
5. The Contractor has the option of using portable temporary lane separators containing fixed channelizing devices in lieu of the temporary asphalt separator and channelizing devices detailed on this sheet. The portable temporary lane separator shall come in portable sections that can be connected to maintain continuous alignment between the separate curb sections. Each temporary lane separator section shall be 36 inches to 48 inches in total length. Portable temporary lane separators shall duplicate the color of the pavement marking. Portable temporary lane separators shall be one of those listed on the Approved Products List.

TEMPORARY LANE SEPARATOR

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX	SHEET
11/01/20					102-600	9 of 11



MULTILANE ROADWAY SHOWN, TWO-LANE ROADWAY SIMILAR

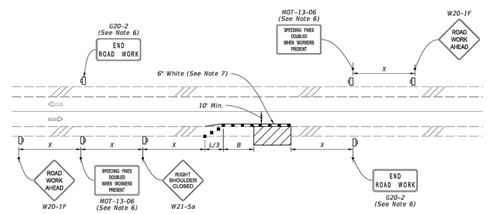
NOTES:
1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work beyond the shoulder.
2. Use Index 102-602 when the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the Offset Zone in any one hour period.
3. Use Index 102-660 when Work Area encroaches a Sidewalk.

SYMBOLS:
- Work Area
- Lane Identification and Direction of Traffic

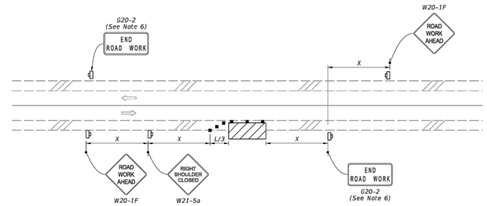
LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND THE SHOULDER	INDEX	SHEET
11/01/20					102-601	1 of 1

NOTE:
1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work on the shoulder.
2. L = Taper Length
   X = Work Zone Sign Spacing
   B = Buffer Length
   See Index 102-600 for "L", "X", "B", and channelizing device spacing values.
3. Where work activities are between 2' and 15' from the edge of traveled way, the Engineer may omit signs and channelizing devices for work operations 60 minutes or less.
4. When four or more work vehicles enter the through traffic lanes in a one hour period (excluding establishing and terminating the work area), use a flagger or lane closure to accommodate work vehicle ingress and egress.
5. For work less than 2' from the traveled way and work zone speed is greater than 45 MPH, use a lane closure.
6. The "Speeding Fines Doubled When Workers Present" signs (M0T-13-06) and "End Road Work" Signs (G20-2) along with the associated work zone sign spacing distances may be omitted when the work operation is in place for 24 hours or less.
7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.
8. Omit "Shoulder Closed" signs (W21-5a) along with associated work zone sign spacing distances for work on the median.
9. When there is no paved shoulder, the "Worker" sign (W21-1) may be used instead of the "Shoulder Closed" sign (W21-5a).

SYMBOLS:
- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic

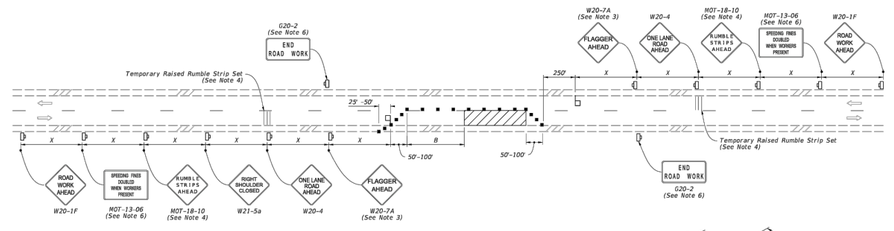


TWO-LANE ROADWAY
SHOULDER WORK LESS THAN 2' FROM THE TRAVELED WAY WITH WORK ZONE SPEED OF 45 MPH OR LESS



TWO-LANE ROADWAY
SHOULDER WORK BETWEEN 2' AND 15' FROM THE TRAVELED WAY

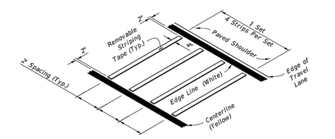
LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	TWO-LANE AND MULTILANE, WORK ON SHOULDER	INDEX	SHEET
11/01/21					102-602	1 of 2



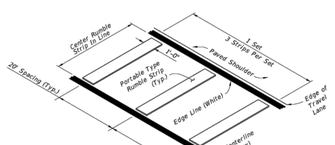
NOTES:
1. This Index applies to Two-Lane, Two-Way Roadways with work within the traveled way.
2. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Spacing
   See Index 102-600 for "L", "B", "X" and channelizing device spacing values.
3. Optionally, use "Flagger Ahead" sign with symbol (W20-7) instead of "Flagger Ahead" sign with text (W20-7A).
4. Use temporary raised rumble strips when the existing posted speed is 55 mph or greater and the work duration is greater than 60 minutes. If temporary raised rumble strips are not used, omit "Rumble Strips Ahead" signs (M0T-18-10) and associated work zone sign spacing.
5. Additional one-way control may be provided by the following means:
   a. Flag-carrying vehicle
   b. Official vehicle
   c. Pilot vehicles
   d. Traffic signals

   When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.
6. The "Speeding Fines Doubled When Workers Present" signs (M0T-13-06) and "End Road Work" signs (G20-2), along with associated work zone sign spacing, may be omitted when the work operation will be in place for 24 hours or less.
7. Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specification Sections 102, 990 and the APL vendor drawings.
8. Railroad Crossings:
   a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 2.
   b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.

SYMBOLS:
- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification and Direction of Traffic



OPTION - 1
REMOVABLE STRIPING TYPE



OPTION - 2
PORTABLE TYPE

RUMBLE STRIP SETS

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	TWO-LANE, TWO-WAY WORK WITHIN THE TRAVEL WAY	INDEX	SHEET
11/01/21					102-603	1 of 2

NO	DATE	BY	REVISION DESCRIPTION

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DATE 05/06/24
1 INCH

MITTAUER & ASSOCIATES, INC.
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Main St. Water Main Replacement – Phase 2
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JOB NO. 9318-65-1
SHEET NO. 12