



TOWN OF SALEM, NEW HAMPSHIRE

NORTH MAIN STREET WATER SERVICES CHANGEOVER PROJECT

CATHY A. STACEY – CHAIRMAN

JAMES S. KELLER – VICE-CHAIRMAN

KEITH STRAMAGLIA – SECRETARY

ROBERT F. BRYANT – SELECTMAN

JOSEPH SWEENEY – SELECTMAN

CHRISTOPHER A. DILLON – TOWN MANAGER

ROY E. SORENSEN – DIRECTOR OF MUNICIPAL SERVICES

JOHN P. KLIPFEL, P.E. – DIRECTOR OF ENGINEERING

TODD WELCH, P.E. – PROJECT ENGINEER

FRED WALLACE – DIRECTOR OF UTILITIES

DRAWING INDEX

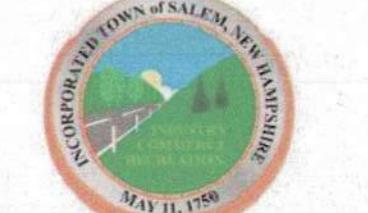
SHEET	TITLE
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**CONTRACT 2023-1
BID # 2023 - 020
MAY 2023**

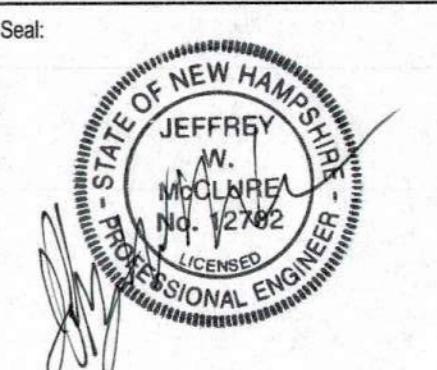


Weston & SampsonSM

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No.	Date	Description



BID DOCUMENT

Scale: NO SCALE

Date: 04/27/2023
 Drawn By: BDR
 Reviewed By: SHK
 Approved By: JWM
 W&S Project No.: ENG23-0089
 W&S File No.:
 Drawing Title:

ABBREVIATIONS,
NOTES, AND LEGEND

LEGEND

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER	—S—	—S—
FORCE MAIN	—FM—	—FM—
WATER MAIN	—W—	—W—
TEMPORARY WATER	—TW—	—TW—
STORM DRAIN	—D—	—D—
GAS	—G—	—G—
ELECTRIC	—E—	—E—
OVERHEAD WIRE	—OHW—	—OHW—
TELEPHONE	—T—	—T—
CABLE TELEVISION	CATV	CATV
GRINDER PUMP	○	● GP
SANITARY SEWER MANHOLE	⑤	● SMH
STORM DRAIN MANHOLE	⑥	● DMH
ELECTRICAL MANHOLE	⑦	● EMH
TELEPHONE MANHOLE	⑧	● TMH
AIR RELEASE VALVE MANHOLE	○	● ARMH
FORCE MAIN CLEANOUT MANHOLE	○	● FMCO
CLEANOUT	○	● CO
CATCH BASIN	□	■ CB
CATCH BASIN (CURB INLET)	■	
HYDRANT	●	◆
TEMPORARY HYDRANT	⑨	
GATE VALVE	■	■
CHECK VALVE	■	■
CURB STOP	■	■
BUTTERFLY VALVE	■	■
BALL VALVE	■	■
REDUCER	△	△
CAP OR PLUG	□	□
GAS GATE VALVE	■	
UTILITY POLE	□	●
GUY POLE	●	
LIGHT POST	●	
EDGE OF PAVEMENT		
EDGE OF UNPAVED ROAD	— — — — —	— — — — —
CURB		
SIDEWALK		
RAILROAD		
STONE WALL	○○○○○	○○○○○
RETAINING WALL	RET WALL	RET WALL
FENCE	—x—x—	—x—x—
INDIVIDUAL DECIDUOUS TREE	○	○
INDIVIDUAL EVERGREEN TREE	*	*
TREE LINE	~~~~~	~~~~~
SURVEY MARKER	□	
PROPERTY LINE	—P—	
EASEMENT LINE	— — — — —	— — — — —
LIMIT OF WORK	— · · · · —	
APPROX. LIMIT OF REFUSE	— — — — —	
SPOT ELEVATIONS	x100.5	x100.5
CONTOUR LINES	—56—	—56—
DEPRESSION CONTOUR LINES		
HOUSE NUMBER	#35	
FLOOR ELEVATION	FL=56.7	
SILL ELEVATION	S=56.7	
WETLAND	↓↓↓↓↓	
WETLAND FLAGS	WF-7 WF-8	
RIP RAP	○○○○○	○○○○○
DRAINAGE DITCH / SWALE	— · · · —	— · · · —
STATE HIGHWAY STATION	10	
GUARD POST	△	▲
BOLLARD	○B	●B
SIGN	○	
BENCH MARK	○	
PERCOLATION TEST	○ 1	● PT-1
TEST PIT	TP 1	TP-1
BORING	○ B-1	● B-1
PROBE	○ P-1	● P-1
GROUNDWATER MONITORING WELL	⊕ WS-1	⊕ WS-1
GAS MONITORING WELL	● GMW-1	● GMW-1
GAS VENT	○ GV	● GV
HAY BALES		□□□□
ROCK OUTCROP	○○○○	

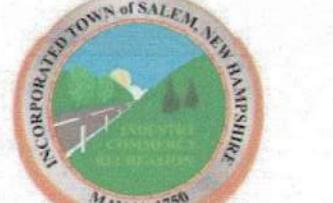
NOTE: ITEMS SHOWN IN THE LEGEND MAY NOT BE PRESENT IN THESE PLANS

ABBREVIATIONS

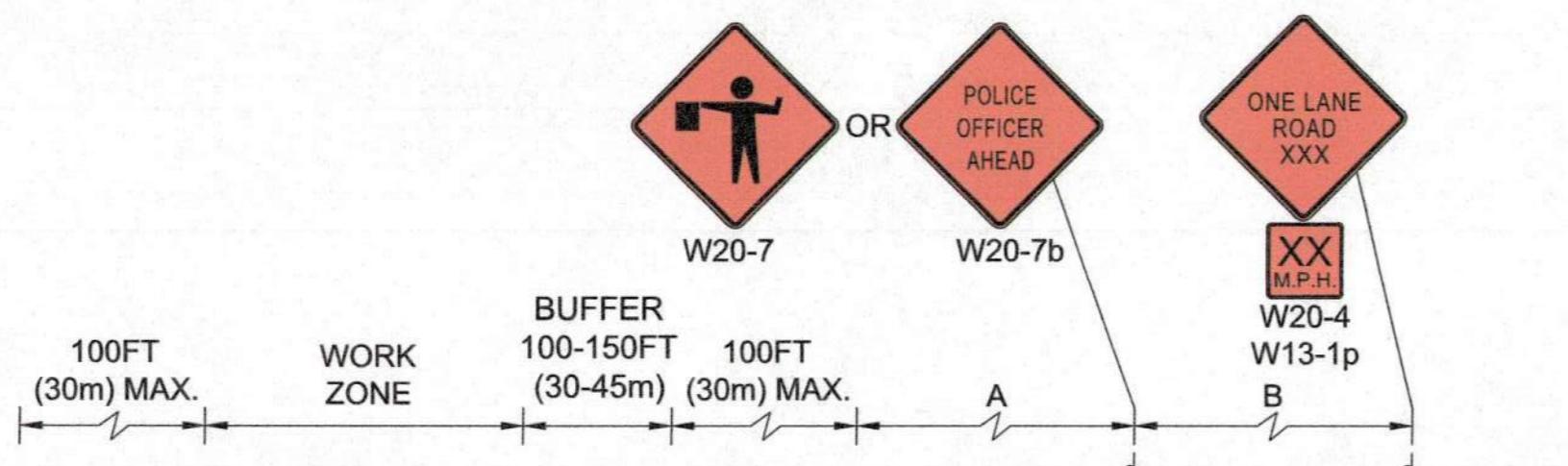
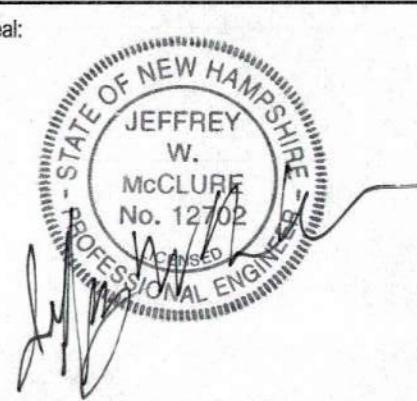
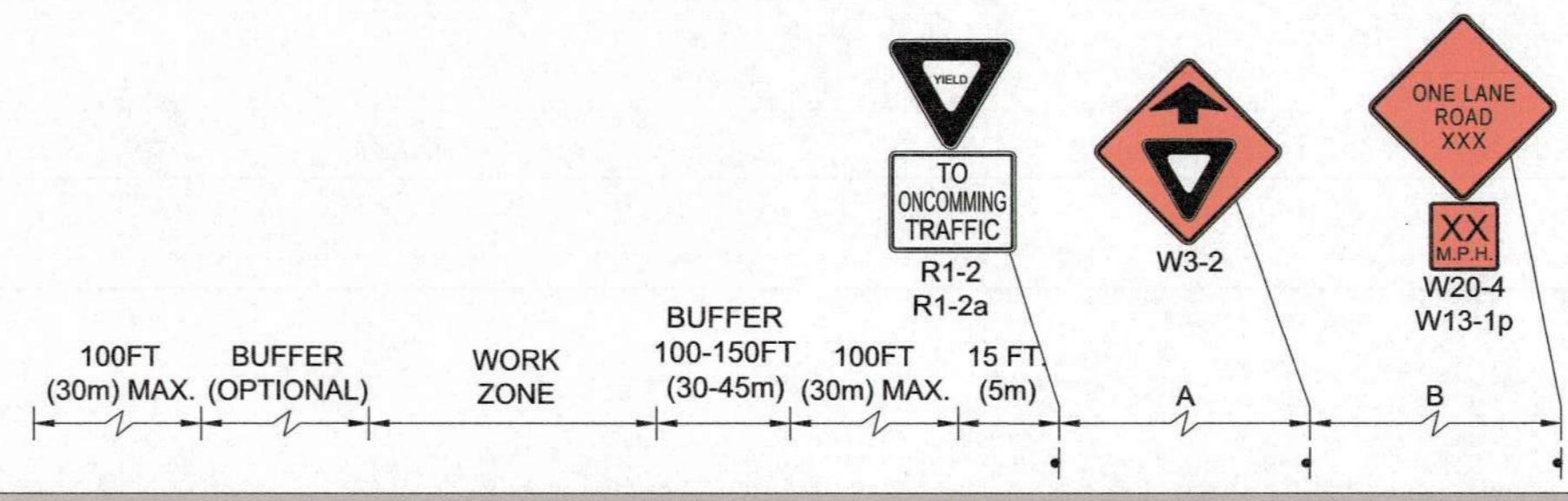
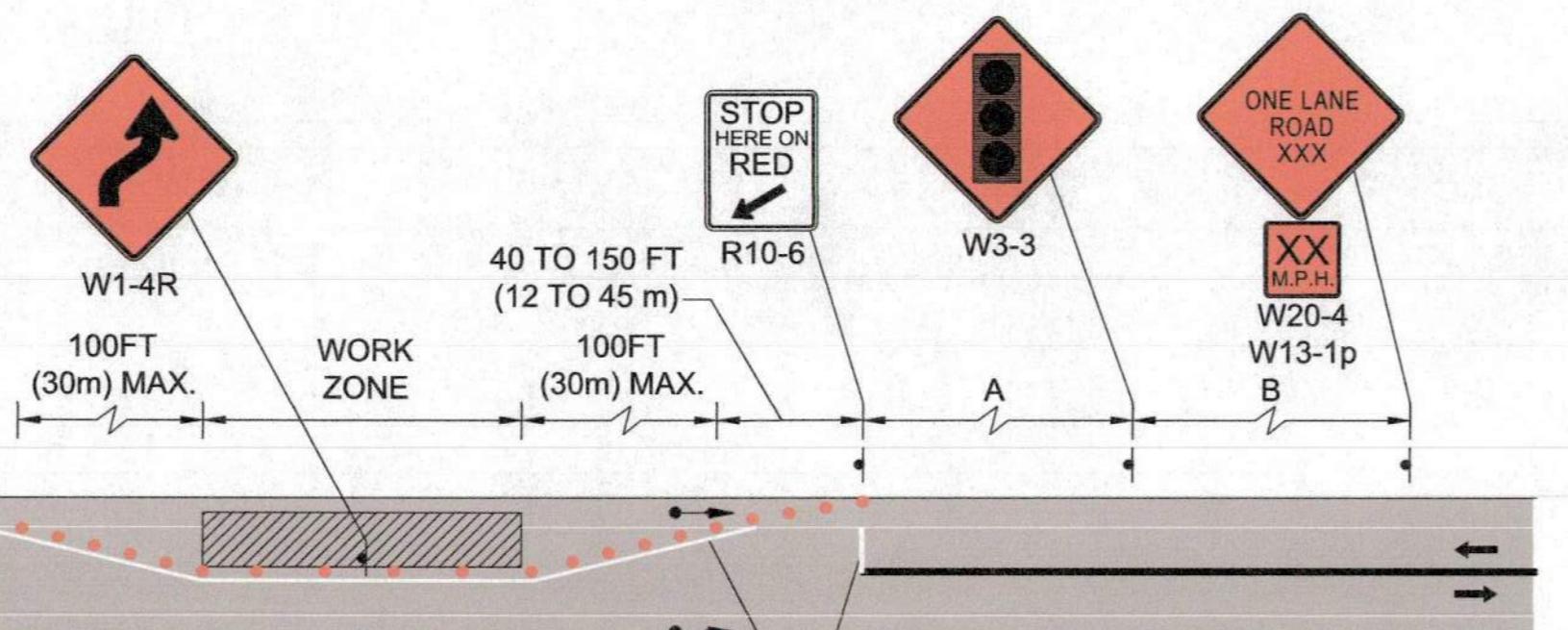
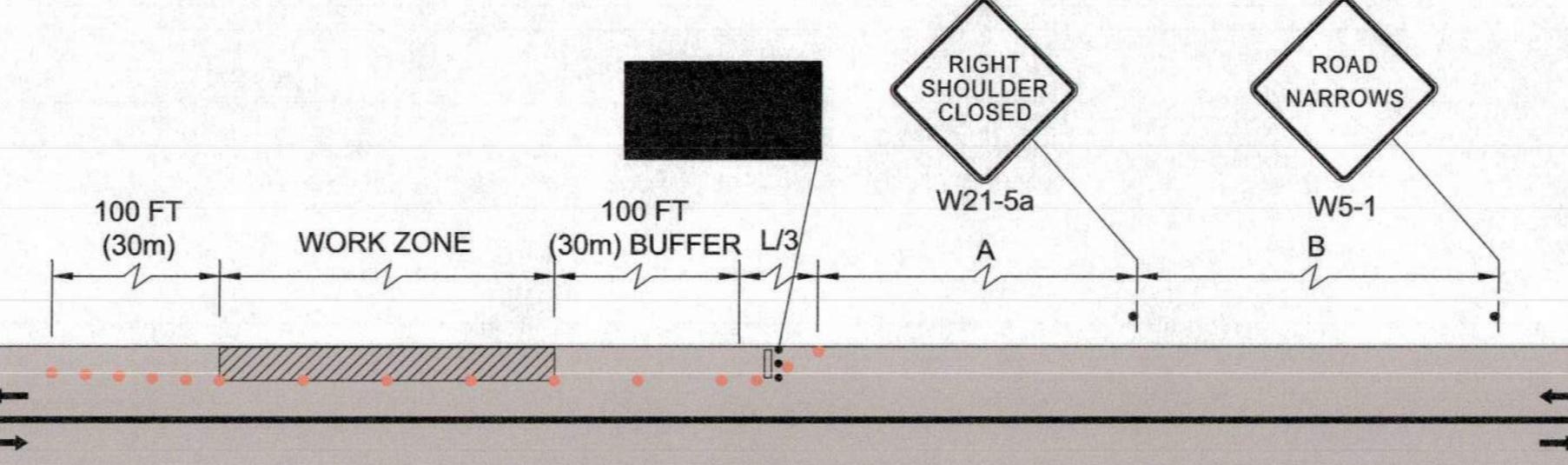
AC	ASBESTOS CEMENT PIPE
ACMP	ASPHALT COATED CORRUGATED METAL PIPE
ARV	AIR RELEASE VALVE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BC	BITUMINOUS CONCRETE
BIT	BITUMINOUS
BLDG	BUILDING
BM	BENCH MARK
BO	BLOW OFF
BV	BUTTERFLY VALVE
CATV	CABLE TELEVISION
CB	CATCH BASIN
CC	CONCRETE CURB
CI	CAST IRON
CL	CENTERLINE
CMP	CEMENT LINED
CONC	CORRUGATED METAL PIPE
CU FT	CONCRETE
CY	CUBIC FEET
D	CUBIC YARD
DI	STORM DRAIN, DEPTH FROM RIM TO INVERT
DIA	DIA
DMH	DRAIN MANHOLE
DWG	DRAWING
E	EAST, ELECTRIC
EA	EACH
EF	EACH FACE
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EW	EACH WAY
EXIST	EXISTING
FLG	FLANGE
FT	FEET, FOOT
G	NATURAL GAS
GALV	GALVANIZED
GC	GRANITE CURB
GR	GRANITE
HC	HOUSE CONNECTION
HORIZ	HORIZONTAL
HP	HIGH PRESSURE
HYD	FIRE HYDRANT
I	INVERT
INV	INVERT
ID	INSIDE DIAMETER
IP	IRON PIPE
LB	POUND
LF	LINEAR FEET
LS	LUMP SUM
MAX	MAXIMUM
MB	MAIL BOX
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
N	NORTH
NE	NORTH EAST
NHDES	NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
NHDOT	NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
NW	NORTH WEST
NF	NOT FOUND
NO OR #	NUMBER
OD	OUTSIDE DIAMETER
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PE	PLAIN END, POLYETHYLENE
PL	PROPERTY LINE
PVC	PLATE
PVCO	POLYVINYL CHLORIDE
PVMT	MOLECULARLY ORIENTED POLYVINYL CHLORIDE
RCP	PAVEMENT
ROW	REINFORCED CONCRETE PIPE
RQD	RIGHT-OF-WAY
ROCK	ROCK QUALITY
S	SEWER, SOUTH
SE	SOUTH EAST
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SPEC	SPECIFICATIONS
SQ FT	SQUARE FEET
SS	SEWER SERVICE, STAINLESS STEEL
STA	STATION
STL	STEEL
SW	SIDEWALK, SOUTH WEST
T	HYDROSTATIC THRUST, TELEPHONE
TBM	TEMPORARY BENCH MARK
THK	THICK (NESS)
TYP	TYPICAL
UP	UTILITY POLE
VC	VITRIFIED CLAY
VERT	VERTICAL
W	WATER, WEST
W/	WITH
W/O	WITHOUT

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL CALL DIGSAFE AT 1-888-344-7233 AND CITY/TOWN DEPARTMENTS AS APPROPRIATE AT LEAST 72 HOURS, SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIGSAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION.
2. LOCATIONS OF EXISTING PIPES, CONDUITS, UTILITIES, FOUNDATIONS AND OTHER UNDERGROUND OBJECTS ARE NOT WARRANTED TO BE CORRECT AND THE CONTRACTOR SHALL HAVE NO CLAIM ON THAT ACCOUNT SHOULD THEY BE OTHER THAN SHOWN.
3. TEST PITS TO LOCATE EXISTING UTILITIES MAY BE ORDERED BY THE ENGINEER TO DETERMINE WHETHER TO RAISE OR LOWER THE PROPOSED WATER MAIN TO CLEAR EXISTING UTILITIES OR VERIFY EXISTING UTILITY LOCATION, SIZE AND TYPE.
4. STONE WALLS, FENCES, MAIL BOXES, SIGNS, CURBS, LIGHT POLES, ETC. SHALL BE REMOVED AS NECESSARY TO PERFORM THE WORK AND REPLACED TO A CONDITION AT LEAST EQUAL TO THAT BEFORE CONSTRUCTION BEGAN. UNLESS OTHERWISE INDICATED, ALL SUCH WORK SHALL BE INCIDENTAL TO CONSTRUCTION OF THE PROJECT.
5. ALL PAVEMENT DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS.
6. ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND PAYMENT LIMITS SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER.
7. UNLESS OTHERWISE INDICATED, CONCRETE USED FOR THRUST BLOCKS, PIPE ANCHOR BLOCKS, BACKING, PIPE CRADLES, ARCHES, AND FILL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
8. APPROVED JOINT RESTRAINT METHODS SHALL BE PROVIDED FOR WATER MAINS WHERE ANY BENDS, TEES, PLUGS, OR WYES ARE INSTALLED. CONCRETE THRUST BLOCKS, ANCHOR BLOCKS AND TIE RODS MAY BE USED FOR 6-INCH AND 8-INCH PIPE WHERE JOINT RESTRAINT IS NOT FEASIBLE UPON APPROVAL OF THE ENGINEER. SEE RESTRAINED JOINT TABLE DETAIL ON SHEET C501 FOR REQUIRED RESTRAINT LENGTHS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
9. THE CONTRACTOR SHALL NOT STORE ANY APPARATUS, MATERIALS, SUPPLIES, OR EQUIPMENT ON DRAINAGE STRUCTURES OR WITHIN 100 FEET OF WETLANDS.
10. NEW WATER MAINS AND SERVICES SHALL BE INSTALLED AT THE MINIMUM DEPTH FROM FINISH GRADE TO TOP OF PIPE AS SHOWN ON THE DRAWINGS, WHERE NECESSARY, NEW WATER MAINS SHALL BE INSTALLED AT A GREATER DEPTH TO CLEAR OBSTACLES SHOWN ON THE DRAWINGS AT NO ADDITIONAL COST TO THE OWNER. MINIMUM CLEARANCES TO UTILITIES, AS SHOWN ON THE DRAWINGS SHALL BE MAINTAINED.
11. EXISTING WATER MAINS OR SERVICES SHALL NOT BE ABANDONED WITHOUT THE APPROVAL OF THE OWNER. WATER SERVICE SHALL NOT BE INTERRUPTED MORE THAN 4 HOURS WITHOUT PRIOR APPROVAL OF THE OWNER.
12. ALL HYDRANTS REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR. SURFACE RESTORATION SHALL BE IN KIND UNLESS OTHERWISE NOTED.
13. ANY HYDRANT WHICH IS NOT IN SERVICE SHALL BE COVERED WITH A SECURELY FASTENED AND APPROVED BAG.
14. VALVE BOXES ON MAINS TO BE ABANDONED SHALL BE REMOVED BY THE CONTRACTOR AND DELIVERED TO A LOCATION TO BE DETERMINED BY THE OWNER. SURFACE RESTORATION SHALL BE IN KIND UNLESS OTHERWISE NOTED.
15. THE LOCATION OF PIPES, CAPS, REDUCERS, BENDS, AND OTHER FITTINGS AT POINTS OF CONNECTIONS TO EXISTING MAINS IS APPROXIMATE, WHERE DIRECTED BY OWNER AND ENGINEER, CONTRACTOR SHALL DIG A TEST PIT AT EACH LOCATION TO DETERMINE THE DIAMETER AND MATERIAL OF THE EXISTING PIPE AND THE LOCATION OF THE TIE-IN POINT.
16. ALL CATCH BASINS WITHIN PROJECT LIMITS SHALL BE PROTECTED AS SHOWN ON DETAIL SHEET. CONTRACTOR SHALL INSTALL AND MAINTAIN SEDIMENT CONTROL SACK UNDER THE GRATES OF ALL CATCH BASINS AS SHOWN ON PLANS. CONTRACTOR SHALL ALSO MAINTAIN ALL OTHER ENVIRONMENTAL CONTROLS AS NECESSARY FOR THE DURATION OF THE PROJECT. SEDIMENT SACKS AND ENVIRONMENTAL CONTROLS SHALL BE REMOVED AT PROJECT COMPLETION.
17. ALL STREET EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY COMPLETING TEMPORARY TRENCH PAVING.
18. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES WHICH HOLD WATER IN THE SYSTEM. THE OWNER WILL, ON 72 HOURS NOTICE FROM THE CONTRACTOR, OPEN AND/OR CLOSE ANY VALVES REQUIRED FOR DRAINING OR ADMITTING WATER TO THE VARIOUS SECTIONS OF THE WATER MAINS. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY IN WRITING 48 HOURS IN ADVANCE, ANY OCCUPANT THAT WILL BE WITHOUT WATER DUE TO A SHUTDOWN.
19. SOME WATER SERVICE CONNECTIONS MAY NOT BE SHOWN ON THE DRAWINGS. THE OWNER WILL MARK THE LOCATION OF SUCH CONNECTIONS, PROVIDED THE CONTRACTOR GIVES THE OWNER AT LEAST 72 HOURS ADVANCE NOTICE.
20. THE CONTRACTOR SHALL REPLACE ALL NON-COPPER (INCLUDING PLASTIC) WATER SERVICES FROM THE WATER MAIN THROUGH THE EXISTING CURB STOP WITH NEW COPPER PIPE, CORPORATION STOP, AND CURB STOP, IN ACCORDANCE WITH SPECIFICATION SECTION 02515. COORDINATE THIS WORK WITH THE WATER DEPARTMENT. THE CONTRACTOR IS REQUIRED TO RESTORE ALL PROPERTY, INCLUDING PRIVATE PROPERTY WHERE IMPACTED, TO PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
21. ALL NEW WATER SERVICES SHALL BE THE SAME SIZE AS THE EXISTING WATER SERVICE, EXCEPT THAT NO SERVICE SHALL BE LESS THAN 1" DIAMETER.
22. IF NECESSARY FOR ANY PORTION OF PROJECT WORK, TEMPORARY WATER SERVICE PIPE WILL BE REQUIRED FOR ALL RESIDENTS WITHIN THE CONTRACT LIMITS WHERE THEY WILL BE WITHOUT WATER FOR A PERIOD OF 4 HOURS OR MORE AND ALSO WHERE REQUIRED BY THE ENGINEER. TEMPORARY GATE VALVES AND FIRE HYDRANTS ARE TO BE PROVIDED, AS REQUIRED.
23. CONTRACTOR SHALL NOT DAMAGE EXISTING ROCK-WALLS LOCATED IN AREAS ADJACENT TO WATER MAIN OR SERVICE INSTALLATION. CONTRACTOR SHALL CONTACT OWNER AND ENGINEER IF ROCK-WALLS MAY INHIBIT THE WORK PROPOSED, OR IF ROCK-WALLS ARE DAMAGED IN ANY WAY.
24. EXISTING UTILITY INFORMATION, TOPOGRAPHIC INFORMATION, EDGE OF PAVEMENT, UTILITY POLE LOCATIONS, AND LOCATIONS OF EXISTING ABOVE GROUND STRUCTURES WERE DRAWN FROM A COMBINATION OF TOWN OF SALEM GIS, GOOGLE EARTH, GOOGLE STREET VIEW, AND RECORD PLANS.
25. ASSESSORS INFORMATION REPRESENTED ON THESE DRAWINGS IS TAKEN FROM THE CITY/TOWN ASSESSOR'S PARCEL MAPS AND IS INCLUDED FOR ILLUSTRATIVE PURPOSES ONLY. ASSESSORS INFORMATION IS NOT INTENDED TO BE AN AUTHORITATIVE RECORD OF PROPERTY BOUNDARIES OR A SOURCE OF INFORMATION FOR AN ACTUAL SURVEY OR LEGAL DESCRIPTION OF THE PROPERTY. NO WORK HAS BEEN PERFORMED TO DETERMINE THE DEPICTED PROPERTY LINES AND THEREFORE, THESE DRAWINGS ARE NOT INTENDED TO BE USED TO DELINEATE ANY EXISTING OR PROPOSED STRUCTURES, FEATURES OR BOUNDARIES RELATIVE TO PROPERTY LINES. AUTHORITATIVE RECORDS OF PROPERTY LINES MAY BE LOCATED AT THE STATE OR MUNICIPAL AGENCY RESPONSIBLE FOR MAINTAINING PUBLIC RECORDS IN WHICH THE PARCEL IS LOCATED. LEGALLY AUTHORITATIVE MAPS OF PROPERTY LINES MAY ONLY BE PRODUCED BY A PROFESSIONAL LAND SURVEYOR.
26. ALL CONSTRUCTION SHALL CONFORM TO AWWA STANDARDS AND NH CODE OF ADMINISTRATIVE RULES ENV-DW 4004 DESIGN STANDARDS FOR



No.	Date	Description

TWO LANE ROAD ONE LANE
ALTERATING TRAFFICTWO LANE ROAD ONE LANE
ALTERATING TRAFFIC WITH YIELDTWO LANE ROAD ONE LANE ALTERNATING
TRAFFIC WITH TEMPORARY SIGNALTWO LANE ROAD
SHOULDER CLOSED

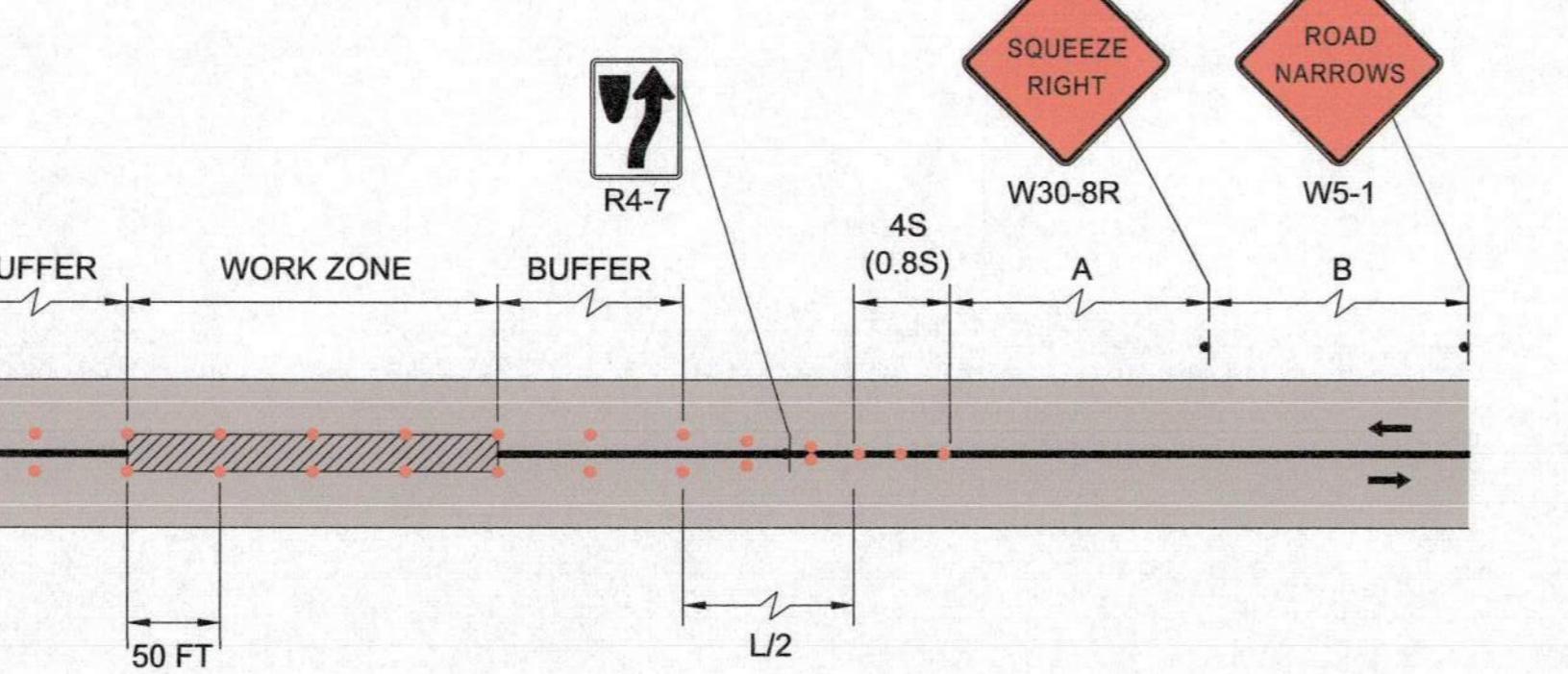
TEMPORARY TRAFFIC SIGN SUMMARY			
MUTCD CODE	SIZE OF SIGN		SIGN
	WIDTH	HEIGHT	
W1-4L	30"	30"	
W1-4R	30"	30"	
W20-1	36"	36"	
W20-4	36"	36"	
W20-8	36"	36"	
G20-2	36"	18"	
R7-2a	18"	12"	
CZ-1	-	-	
R11-3a	36"	18"	

NOTE:

1. FOR THE LATEST SPECIFICATION ON TEXT DIMENSIONS AND COLOR, CONTRACTOR SHALL REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION).

LEGEND:

- REFLECTORIZED DRUM
- ← TRAFFIC FLOW DURING CONSTRUCTION
- NORMAL TRAFFIC FLOW
- ◎ POLICE DETAIL OFFICER
- CONSTRUCTION SIGN
- WORK AREA

TWO LANE ROAD CENTER
OF ROAD CLOSURE

