

# CITY OF EAST PROVIDENCE, RHODE ISLAND

# WARREN AVENUE & HIGHLAND AVENUE

# WATER LINE REPLACEMENT

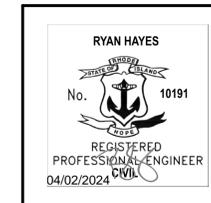
# APRIL 2024

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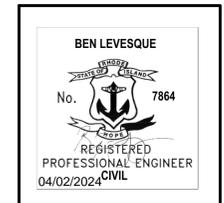


LOCATION MAP  
SCALE: 1" = 2000'

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JAMES MARVEL

**COMPLETE SET 11 SHEETS**

**ABBREVIATIONS**

AC	ASBESTOS CEMENT PIPE	(M)	MARKED
BB	BITUMINOUS BERM	MAG	MAGNETIC NAIL
BCC	BITUMINOUS CONCRETE CURB	MB	MAILBOX
BCW	BITUMINOUS CONCRETE WALK	MH	MANHOLE
BIT	BITUMINOUS	MAX	MAXIMUM
BK	BOOK	M, MAP	MAPLE TREE
BND	BOUND	MIN.	MINIMUM
CB	CATCH BASIN	MJ	MECHANICAL JOINT
CC	CONCRETE CURB	MRW	MASONRY RETAINING WALL
CI	CAST IRON PIPE	PB	PLAN BOOK
CL	CLASS	PCCP	PRE-STRESSED CONCRETE CYLINDER PIPE
CLF	CHAIN LINK FENCE	PG	PAGE
CONC	CONCRETE	PK	PARKER KAYLON
CMP	CORRUGATED METAL PIPE	PROP	PROPOSED
CPP	CORRUGATED PLASTIC PIPE	PVC	POLYVINYLCHLORIDE PIPE
CRW	CONCRETE RETAINING WALL	PW	PUBLIC WATER
CSE	COBBLESTONE EDGING	RCP	REINFORCED CONCRETE PIPE
CSW	CONCRETE SIDEWALK	REINF.	REINFORCED
DH	DRILL HOLE	REQ'D	REQUIRED
DI	DUCTILE IRON PIPE	RET	RETAINING
DIA	DIAMETER	RT	RIGHT
DMH	DRAIN MANHOLE	SAN	SANITARY
EL, ELEV.	ELEVATION	SB	STONE BOUND
EOP	EDGE OF PAVEMENT	SCH	SCHEDULE
EST.	ESTIMATED	SMH	SEWER MANHOLE
FND	FOUND	SS	STAINLESS STEEL
FG	FINISHED GRADE	STK	STOCKADE FENCE
FT	FOOT	TMB	TEMPORARY BENCH MARK
GC	GRANITE CURB	TOB	TOP OF BELL
GG	GAS GATE	TOW	TOP OF WATER
GALV	GALVANIZED	TSP	TRAFFIC SIGNAL POLE
HDPE	HIGH DENSITY POLYETHYLENE	TYP	TYPICAL
HH	HANDHOLE	UG	UNDERGROUND
HSE	HOUSE	UP	UTILITY POLE
HYD	HYDRANT	UTIL	UTILITY
INV	INVERT	VC	VITRIFIED CLAY PIPE
IP	IRON PIN	W	WATER SERVICE
LF	LINEAR FEET	WG	WATER GATE
LP	LIGHT POLE	WGM	WATER GATE MANHOLE
LST	LANDSCAPE TIMBER	WMH	WATER MANHOLE
LT	LEFT	WP	WOODEN POST

**LEGEND**

EXISTING SANITARY SEWER	
EXISTING SANITARY SEWER FORCE MAIN	
EXISTING STORM DRAIN	
EXISTING WATER MAIN	
PROPOSED WATER MAIN	
EXISTING GAS MAIN	
EXISTING UNDERGROUND TELEPHONE	
EXISTING UNDERGROUND ELECTRIC	
EXISTING OVERHEAD UTILITY LINES	
EXISTING UNDERGROUND CABLE	
EXISTING WOOD FENCE	
EXISTING CHAIN LINK FENCE	
PROPERTY LINE	
EDGE OF PAVEMENT	
TREE/BRUSH LINE	
EXISTING STONE WALL	
PROPOSED STRAW WATTLES SEWER MANHOLE	
STORM DRAIN MANHOLE	
CATCH BASIN	
ELECTRIC MANHOLE	
TELEPHONE MANHOLE	
EXISTING HYDRANT	
EXISTING WATER METER/GATE VALVE	
EXISTING GAS GATE VALVE	
PROPOSED HYDRANT	
PROPOSED COUPLING	
PROPOSED GATE VALVE	
PROPOSED BEND	
PROPOSED REDUCER	
WATER MAIN CAP OR PLUG	
PROPOSED THRUST BLOCK	
PROPOSED WATER SERVICE	
SIGN	
UTILITY POLE/LIGHT POLE	
GUY WIRE	
TRAFFIC STRUCTURE	
TRAFFIC INDUCTANCE LOOP HANDHOLE	
MAILBOX	
CONIFEROUS TREE (TYPE/SIZE AS NOTED)	
DECIDUOUS TREE (TYPE/SIZE AS NOTED)	
TEST PIT REQUIRED	
100-FT BUFFER ZONE	
100-FT RIVERFRONT AREA	
200-FT RIVERFRONT AREA	
BORDERING VEGETATIVE WETLAND (BVW)	

**BASE PLAN NOTES**

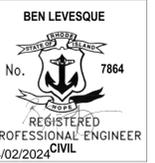
- THE FIELD SURVEY FOR THIS PROJECT WAS COMPLETED BY THE EAST PROVIDENCE DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION ON MAY 26, 2022. CONDITIONS SHOWN ON THIS PLAN REFLECT CONDITIONS AT THE TIME OF THE SURVEY.
- UTILITY LOCATIONS SHOWN WERE PLOTTED FROM INFORMATION SUPPLIED BY RESPECTIVE UTILITY COMPANIES AND DATA OBTAINED FROM AS BUILT DRAWINGS. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION SHOWN ON THESE DRAWINGS IS NOT GUARANTEED. DETERMINE THE LOCATIONS AND ELEVATIONS OF ALL UTILITIES WHICH MAY AFFECT CONSTRUCTION OPERATIONS.
- HORIZONTAL DATUM = RHODE ISLAND STATE PLANE COORDINATE (RISPC-NAD83)
- VERTICAL DATUM = NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
- THE EXISTING CONDITIONS SHOWN ARE APPROXIMATE. FIELD VERIFY EXISTING CONDITIONS.
- THE PROPERTY LINES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND ARE NOT BASED ON DEED OR PLAN RESEARCH.

**GENERAL NOTES**

- NOTIFY (DIGSAFE AT 1-888-344-7233) AND OTHER UTILITY OWNERS IN THE AREA NOT ON THE (DIGSAFE) LIST AT LEAST 72 HOURS PRIOR TO ANY DIGGING, TRENCHING, ROCK REMOVAL, DEMOLITION, BORING, BACKFILLING, GRADING, LANDSCAPING, OR ANY OTHER EARTH MOVING OPERATIONS.
- LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. IN ADDITION, SOME UTILITIES MAY NOT BE SHOWN. DETERMINE THE EXACT LOCATION OF UTILITIES BY TEST PIT OR OTHER METHODS, AS NECESSARY TO PREVENT DAMAGE TO UTILITIES AND/OR INTERRUPTIONS IN UTILITY SERVICE. PERFORM TEST PIT EXCAVATIONS AND OTHER INVESTIGATIONS TO LOCATE UTILITIES, AND PROVIDE THIS INFORMATION TO THE ENGINEER, PRIOR TO CONSTRUCTING THE PROPOSED IMPROVEMENTS. LOCATE ALL EXISTING UTILITIES TO BE CROSSED BY HAND EXCAVATION.
- NOT ALL OF THE UTILITY SERVICES TO BUILDINGS ARE SHOWN. THE CONTRACTOR SHALL ANTICIPATE THAT EACH PROPERTY HAS SERVICE CONNECTIONS FOR THE VARIOUS UTILITIES.
- BOLD TEXT AND LINES INDICATE PROPOSED WORK. LIGHT TEXT AND LINES INDICATE APPROXIMATE EXISTING CONDITIONS.
- TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND.
- EXCAVATE ADDITIONAL TEST PITS TO LOCATE EXISTING UTILITIES AS DIRECTED OR APPROVED BY THE ENGINEER.
- NOTIFY THE ENGINEER OF ANY UTILITIES IDENTIFIED DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE DRAWINGS OR THAT DIFFER IN SIZE OR MATERIAL.
- THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY; COORDINATION WITH THE OWNER, ALL SUBCONTRACTORS, AND WITH OTHER CONTRACTORS WORKING WITHIN THE LIMITS OF WORK, THE MEANS AND METHODS OF CONSTRUCTING THE PROPOSED WORK.
- OBTAIN, PAY FOR AND COMPLY WITH PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK. ARRANGE AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE JURISDICTIONAL AUTHORITIES.
- SHORE UTILITY TRENCHES WHERE FIELD CONDITIONS DICTATE AND/OR WHERE REQUIRED BY LOCAL, STATE AND FEDERAL HEALTH AND SAFETY CODES.
- FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. IF FIELD CONDITIONS ARE OBSERVED THAT VARY SIGNIFICANTLY FROM THOSE SHOWN ON THE DRAWINGS, IMMEDIATELY NOTIFY THE ENGINEER IN WRITING FOR RESOLUTION OF THE CONFLICTING INFORMATION.
- PROTECT AND MAINTAIN ALL UTILITIES IN THE AREAS UNDER CONSTRUCTION DURING THE WORK. LEAVE ALL PIPES AND STRUCTURES WITHIN THE LIMITS OF THE CONTRACT IN A CLEAN AND OPERABLE CONDITION AT THE COMPLETION OF THE WORK. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SAND AND SILT FROM DISTURBED AREAS FROM ENTERING THE DRAINAGE SYSTEM.
- NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR SUPPORT OF EXISTING UTILITIES AND REPAIR OR REPLACEMENT COSTS OF UTILITIES DAMAGED DURING CONSTRUCTION, WHETHER ABOVE OR BELOW GRADE. REPLACE DAMAGED UTILITIES IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER AND AT NO COST TO THE PROPERTY OWNER.
- TAKE NECESSARY MEASURES AND PROVIDE CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE, AND STRENGTH TO PREVENT ACCESS TO ALL WORK AND STAGING AREAS AT THE COMPLETION OF EACH DAYS WORK.
- NO OPEN TRENCHES WILL BE ALLOWED OUTSIDE OF WORK HOURS. THE USE OF ROAD PLATES TO PROTECT THE EXCAVATION WILL BE CONSIDERED UPON REQUEST, BUT BACKFILLING IS PREFERRED.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY TRAFFIC CONTROL/SAFETY DEVICES TO ENSURE SAFE VEHICULAR AND PEDESTRIAN ACCESS THROUGH THE WORK AREA, OR FOR SAFELY IMPLEMENTING DETOURS AROUND THE WORK AREA. PERFORM TRAFFIC CONTROL IN ACCORDANCE WITH THE CONTRACTOR'S APPROVED TRAFFIC CONTROL PLAN.
- MAINTAIN EMERGENCY ACCESS TO ALL PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES DURING CONSTRUCTION.
- WHEN WORKING IN THE ROAD, PROVIDE THE OWNER AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES A DETAILED PLAN OF APPROACH INDICATING METHODS OF PROPOSED TRAFFIC ROUTING ON A DAILY BASIS. PROVIDE COORDINATION TO ENSURE COMMUNICATION AND COORDINATION BETWEEN THE OWNER, CONTRACTOR AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES THROUGHOUT THE CONSTRUCTION PERIOD.
- REMOVE AND DISPOSE OF ALL CONSTRUCTION-RELATED WASTE MATERIALS AND DEBRIS IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS.
- THE TERM "DEMOLISH" USED ON THE DRAWINGS MEANS TO REMOVE AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- THE TERM "ABANDON" USED ON THE DRAWINGS MEANS TO LEAVE IN PLACE AND TAKE APPROPRIATE MEASURES TO DECOMMISSION AS SPECIFIED OR NOTED ON THE DRAWINGS.
- ALL PROPOSED WORK MAY BE ADJUSTED IN THE FIELD BY THE OWNER'S PROJECT REPRESENTATIVE TO MEET EXISTING CONDITIONS.
- CONTACT FIRE DEPARTMENT ABOUT HYDRANT REMOVAL AND REPLACEMENT.

**EROSION CONTROL AND RESOURCE AREA PROTECTION NOTES**

- PROVIDE ALL EROSION CONTROL MEASURES SHOWN, SPECIFIED, REQUIRED BY PERMIT, AND/OR REQUIRED BY THE ENGINEER PRIOR TO ANY CONSTRUCTION OR IMMEDIATELY UPON REQUEST. MAINTAIN SUCH CONTROL MEASURES UNTIL FINAL SURFACE TREATMENTS ARE IN PLACE AND/OR UNTIL PERMANENT VEGETATION IS ESTABLISHED. INSPECT AFTER EACH RAINSTORM AND DURING MAJOR STORM EVENTS TO CONFIRM THAT ALL SEDIMENTATION AND EROSION CONTROL MEASURES REQUIRED ARE IN PLACE AND EFFECTIVE.
- INSTALL SILT SACKS OR OTHER APPROVED SEDIMENTATION BARRIERS IN/AT ALL CATCH BASINS IN THE PROJECT AREA.
- SETTLE OR FILTER ALL SILT-LADEN WATER FROM DEWATERING ACTIVITIES IN A SEDIMENTATION OR FILTER BAG TO REMOVE SEDIMENTS PRIOR TO RELEASE USING A SEDIMENTATION OR FILTER BAG LOCATED DOWN-GRADIENT OF THE DEWATERED AREA.
- REMOVE AND PROPERLY DISPOSE OF SILT TRAPPED AT BARRIERS IN UPLAND AREAS OUTSIDE BUFFER ZONES. REMOVE MATERIALS DEPOSITED IN ANY TEMPORARY SETTLING BASINS AT THE COMPLETION OF THE PROJECT. RESTORE ALL DISTURBED AREAS TO THEIR PRECONSTRUCTION CONDITION.
- SWEEP, COLLECT, REMOVE AND DISPOSE OF ANY SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS AT THE END OF EACH DAY.
- MAINTAIN AN ADDITIONAL SUPPLY OF EROSION CONTROL MEASURES ON-SITE FOR EMERGENCY REPAIRS.
- STORE FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS IN A SECONDARY CONTAINER AND REMOVE TO A SECURE LOCKED AND COVERED AREA DURING NON-WORK HOURS.
- PROVIDE A SUPPLY OF ABSORBENT SPILL RESPONSE MATERIALS SUCH AS BOOMS, BLANKETS, AND OIL ABSORBENT MATERIALS AT THE CONSTRUCTION SITE AT ALL TIMES TO CLEAN UP POTENTIAL SPILLS OF HAZARDOUS MATERIALS. IMMEDIATELY REPORT SPILLS OF HAZARDOUS MATERIALS TO THE STATE ENVIRONMENTAL AGENCY AND THE MUNICIPALITY WHERE THE WORK IS OCCURRING.



**BID SET**

**WARREN AVENUE & HIGHLAND AVENUE WATER LINE REPLACEMENT**

Department of Public Works

East Providence, RI

MARK	DATE	DESCRIPTION
PROJECT NO:	E0764-10	
DATE:	APRIL 2024	
FILE:	G-002 GENERAL NOTES AND LEGEND.dwg	
DRAWN BY:	LMK	
CHECKED:	RH	
APPROVED:	BRL	

**GENERAL NOTES, ABBREVIATIONS AND LEGEND**

SCALE: NO SCALE

**G-002**

**WATER SYSTEM IMPROVEMENTS NOTES**

- PROPOSED WATER MAINS SHALL BE PROVIDED IN ACCORDANCE WITH THE OWNER'S STANDARDS AS FOUND ON TOWN'S WEBSITE, AS SPECIFIED, AND AS SHOWN ON THE DRAWINGS. WHERE THERE IS A CONFLICT BETWEEN THE OWNER'S STANDARDS AND THE DRAWINGS AND SPECIFICATIONS, THE OWNER'S STANDARDS SHALL GOVERN.
- HORIZONTAL AND VERTICAL LOCATION OF WATER MAINS MAY BE MODIFIED TO FIT EXISTING FIELD CONDITIONS, UPON APPROVAL OF THE ENGINEER.
- MINIMUM DEPTH OF COVER OVER PROPOSED WATER MAIN SHALL BE 5 FEET, UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
- ALL BELOW GRADE VALVES AND FITTINGS SHALL HAVE MECHANICAL JOINT (MJ) ENDS. RESTRAIN ALL VALVE AND FITTING JOINTS WITH RETAINER GLANDS AND CONCRETE THRUST BLOCKS.
- WHERE A COUPLING IS CALLED FOR ON THE DRAWINGS TO CONNECT A PROPOSED WATER MAIN TO AN EXISTING WATER MAIN PROVIDE A SOLID SLEEVE, IF POSSIBLE. RESTRAIN SOLID SLEEVE TO PIPES WITH RETAINER GLANDS. IF OUTSIDE DIAMETER OF EXISTING WATER MAIN DOES NOT ALLOW INSTALLATION OF SOLID SLEEVE, PROVIDE RESTRAINING TYPE TRANSITION COUPLING.
- SLEEVES, NIPPLES, AND ACCESSORIES NECESSARY FOR CONNECTION BETWEEN EXISTING AND PROPOSED PIPES MAY NOT BE SHOWN ON THE DRAWINGS. PROVIDE ITEMS NECESSARY FOR CONNECTING TO EXISTING MAINS AND MAKE CONNECTIONS AS INDICATED IN THE CONTRACT DOCUMENTS.
- RESTRAIN PIPE JOINTS IN ACCORDANCE WITH "MINIMUM RESTRAINED LENGTHS FOR DI PIPE" TABLE ON THE DRAWINGS.
- MAINTAIN A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN THE PROPOSED WATER MAIN AND ANY EXISTING OR PROPOSED SANITARY SEWER OR STORM DRAIN. WHEN CONDITIONS PREVENT THIS, A LESSER DISTANCE WILL BE ALLOWED IF: A.) THE WATER MAIN IS IN A SEPARATE TRENCH OR B.) THE PROPOSED WATER MAIN IS LOCATED IN THE SAME TRENCH TO ONE SIDE ON A BENCH OF UNDISTURBED EARTH WITH AT LEAST 12 INCHES, AND PREFERABLY 18 INCHES, HORIZONTAL SEPARATION BETWEEN THE EDGES OF THE SEWER/DRAIN PIPE AND THE WATER MAIN. IN EITHER CASE, THE BOTTOM OF THE WATER MAIN SHALL BE 18 INCHES ABOVE THE CROWN OF THE SEWER/DRAIN PIPE.
- WATER MAINS CROSSING SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. IT IS PREFERRED THAT THE WATER MAIN CROSS ABOVE THE SEWER. AT CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
- WHERE THE PROPOSED WATER MAIN IS TO BE INSTALLED BELOW A DRAIN PIPE, MAINTAIN A MINIMUM OF 18 INCHES BETWEEN THE BOTTOM OF THE STORM DRAIN AND THE CROWN OF THE WATER MAIN.
- OPERATION OF EXISTING VALVES SHALL BE BY THE WATER DISTRIBUTION SYSTEM OWNER, UNLESS OTHERWISE AUTHORIZED. COORDINATE OPERATION OF VALVES WITH THE WATER DISTRIBUTION SYSTEM OWNER.
- THE WATER DISTRIBUTION SYSTEM OWNER DOES NOT GUARANTEE A TIGHT SHUTDOWN OF ITS EXISTING VALVES. THE CONTRACTOR IS RESPONSIBLE FOR CONTROL OF LEAKAGE AND DISPOSAL OF WATER UP TO 100 GALLONS PER MINUTE.
- COORDINATE THE ACTIVATION AND DEACTIVATION OF WATER MAINS WITH THE WATER DISTRIBUTION SYSTEM OWNER.
- WHERE WATER MAINS ARE BEING REPLACED, RECONNECT ALL EXISTING WATER SERVICES TO THE PROPOSED WATER MAINS, UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING UNINTERRUPTED WATER SERVICE TO ALL CUSTOMERS IN THE PROJECT AREA DURING CONSTRUCTION, UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER.
- FOR EACH PROPOSED WATER SERVICE, PROVIDE NEW CORPORATION AT THE MAIN, NEW WATER SERVICE PIPING, AND NEW CURB STOP AND BOX. PROPOSED WATER SERVICES SHALL BE INSTALLED FROM THE PROPOSED WATER MAIN TO THE PROPERTY LINE FOR EACH PROPERTY IDENTIFIED AS REQUIRING A WATER SERVICE ON THE DRAWINGS. CONNECT PROPOSED WATER SERVICE TO EXISTING WATER SERVICE PIPING AT PROPERTY LINE. PROVIDE ALL COMPONENTS NECESSARY TO CONNECT PROPOSED WATER SERVICE TO EXISTING WATER SERVICE. EXISTING SERVICE PIPING TO BE ABANDONED SHALL BE CAPPED/CRIMPED ONCE SERVICE HAS BEEN TRANSFERRED TO THE NEW WATER MAIN.
- THE SIZE OF THE PROPOSED WATER SERVICE TO A PROPERTY FROM THE PROPOSED WATER MAIN SHALL MATCH THE SIZE OF THE EXISTING WATER SERVICE FROM THE BUILDING ON THAT PROPERTY, UNLESS NOTED OTHERWISE.
- WHERE A PROPOSED UTILITY CROSSES BELOW AN EXISTING ASBESTOS CEMENT (AC) WATER MAIN, IF ENCOUNTERED, REPLACE THE AC WATER MAIN ABOVE THE CROSSING AND 10 FEET ON EACH SIDE OF THE CROSSING WITH NEW DI PIPE. HANDLE, REMOVE, TRANSPORT AND DISPOSE OF AC PIPE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- REMOVE AND DISPOSE OF VALVE BOXES ON WATER MAIN TO BE ABANDONED, UNLESS DIRECTED OTHERWISE.
- COVER EACH FIRE HYDRANT TAKEN OUT OF SERVICE WITH A NON-DEGRADABLE BAG SECURELY TIED. IMMEDIATELY NOTIFY FIRE DEPARTMENT WHEN HYDRANTS ARE TAKEN OUT OF SERVICE.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING SERVICES TO BUILDINGS ALONG THE PROJECT ROUTE. DAMAGED SERVICES SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
- NEW WATER MAIN CROSSINGS OF EXISTING UTILITIES ALONG PROJECT ROUTE MUST BE COMPLETED IN A MANNER THAT WILL NOT INTERRUPT UTILITY SERVICE. ENGINEER AND UTILITY OWNER APPROVAL MUST BE OBTAINED TO TEMPORARILY SHUT DOWN UTILITY.
- FOR NEW SERVICES, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CORPORATION, COPPER TUBING, AND CURB STOP AND BOX AT LOCATION DESIGNATED BY ENGINEER. IN GENERAL, NEW SERVICES SHALL BE INSTALLED TO THE PROPERTY LINE AND CONNECTED TO THE EXISTING SERVICE. EXISTING SERVICE PIPING SHALL BE CAPPED ONCE SERVICE IS TRANSFERRED TO NEW WATER MAIN.
- ALL ABANDONED WATER MAIN OPEN ENDS SHALL BE CAPPED WITH A CAST IRON CAP OR PLUG.
- HORIZONTAL AND VERTICAL LOCATION OF WATER MAIN MAY BE MODIFIED TO FIT EXISTING FIELD CONDITIONS UPON APPROVAL OF THE ENGINEER OR OWNER.
- SECURELY SUPPORT AND MAINTAIN EXISTING CATCH BASIN AND STORM DRAINAGE LINES DURING CONSTRUCTION. IF REMOVAL OR RESTORATION OF ANY PART OF THE STORM DRAINAGE SYSTEM IS NECESSARY, IT SHALL BE DONE ONLY WITH THE APPROVAL OF THE TOWN OF EASTON, AND SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF EASTON STANDARDS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND COST OF THIS WORK SHALL BE INCLUDED UNDER THE PRICES BID FOR VARIOUS ITEMS OF WORK.
- ACCOMPLISH ALL EXCAVATION SO THAT UNDERGROUND UTILITIES OR STRUCTURES ARE NOT DAMAGED. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE INCURRED DURING EXCAVATION OPERATIONS. REPAIR ANY EXISTING PIPE OR UTILITY DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
- CONTRACTOR SHALL BE AWARE OF OVERHEAD UTILITIES AND MAKE THE NECESSARY ARRANGEMENTS TO PERFORM ANY WORK NEAR THE OVERHEAD UTILITIES, PRIOR TO THE START OF CONSTRUCTION.
- EXISTING UTILITY POLES IN CLOSE PROXIMITY TO CONSTRUCTION MAY REQUIRE TEMPORARY SUPPORT BY THE UTILITY COMPANY. INCLUDE COST UNDER THE PRICES BID FOR VARIOUS ITEMS OF WORK.
- SHEET UTILITY TRENCHES WHERE FIELD CONDITIONS DICTATE AND/OR WHERE REQUIRED BY LOCAL, STATE, AND FEDERAL HEALTH AND SAFETY CODES.
- SLEEVES, NIPPLES, AND ACCESSORIES NECESSARY FOR CONNECTIONS BETWEEN EXISTING AND NEW PIPES MAY NOT BE SHOWN IN THE DETAILS. FURNISH AND INSTALL ITEMS NECESSARY FOR CONNECTING TO EXISTING MAINS AND AS INDICATED IN THE CONTRACT DOCUMENTS.
- PROVIDE ALL DUCTILE IRON FITTINGS WITH MECHANICAL JOINTS AND MEGA-LUG TYPE RESTRAINING GLANDS. PROVIDE ALL BENDS, TEES, HYDRANTS, END CAPS, AND PLUGS WITH CONCRETE THRUST BLOCKS IN ADDITION TO MEGA-LUG TYPE RESTRAINING GLANDS AND ADEQUATE RESTRAINED JOINT PIPE PER THE DRAWING DETAIL OR AS DIRECTED BY THE ENGINEER.
- REMOVE AND REPLACE FENCES, STONE WALLS, MAILBOXES, CURBING, ETC. AS NECESSARY. CONDITION OF REPLACED ITEMS SHALL BE EQUAL TO OR BETTER THAN ORIGINAL CONDITION PRIOR TO REMOVAL. INCLUDE COST UNDER THE PRICES BID FOR VARIOUS ITEMS OF WORK.
- ALL TRENCHES SHALL BE BACKFILLED OR COVERED WITH STEEL PLATES OF SUFFICIENT SIZE TO PREVENT ACCESS TO ALL OPEN TRENCHES AT THE COMPLETION OF EACH DAY'S WORK. STEEL PLATES SHALL BE PINNED, OR SECURED BY OTHER MEANS, WITH ASPHALT RAMPING UP TO AND OVERLAPPING THE PLATES.
- PROVIDE TO THE OWNER AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES A DETAILED PLAN OF APPROACH INDICATING METHODS OF PROPOSED TRAFFIC ROUTING ON A DAILY BASIS WHEN WORKING IN THE ROAD. PROVIDE COORDINATION TO ENSURE COMMUNICATION AND COORDINATION BETWEEN OWNER, CONTRACTOR AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. REFER TO TRAFFIC MANAGEMENT PLAN AND SECTION 01550.
- IMMEDIATELY REPORT SPILLS OF OIL AND/OR HAZARDOUS MATERIALS (OHM) TO THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.
- NOTIFY THE OWNER AND THE ENGINEER OF ANY STORM, SANITARY, OR OTHER PIPE DISCOVERED DURING CONSTRUCTION THAT IS NOT SHOWN ON THE DRAWINGS.

**WATER SYSTEM IMPROVEMENTS NOTES CONT'D**

- PROPOSED WATER MAIN SHALL CROSS UNDER EXISTING WATER MAIN, OVER EXISTING SEWER, AND UNDER EXISTING DRAIN UNLESS OTHERWISE NOTED IN THE DRAWINGS OR APPROVED BY THE OWNER.
- CONTRACTOR SHALL NOT OPERATE EXISTING WATER VALVES. ONLY OWNER SHALL OPERATE OWNER VALVES.
- ANY WORK COMPLETED BEYOND THE PAY LIMITS IS AT THE COST OF THE CONTRACTOR.
- ABANDON EXISTING WATER MAINS ONLY ONCE PROPOSED PERMANENT OR TEMPORARY WATER MAINS ARE INSTALLED, TESTED, AND ONLINE.
- NEW HYDRANT LATERALS SHALL BE INSTALLED UNDER EXISTING WATER MAIN UNLESS APPROVED BY THE OWNER.
- TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, GUARD RAIL, LANDSCAPING, AND SIDEWALKS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THE ROADS, PUBLIC RIGHT OF WAYS, AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO PREVENT SEDIMENT AND TRACKED MUD/DIRT ONTO THE PUBLIC RIGHT OF WAY, ROAD OR ACROSS PRIVATE DRIVEWAYS. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY CURB, FENCING OR OTHER ITEMS NEEDED TO BE REMOVED TO PERFORM THE WORK AND RETIRE TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
- UTILITIES THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.

**SURFACE RESTORATION NOTES**

- ALL PAVEMENT DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE FEBRUARY 2024 RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE CONTRACT DOCUMENTS. EXISTING PAVEMENT AND CONCRETE ROADBASE THICKNESS SHALL BE MATCHED TO THE EXISTING PAVEMENT DEPTH.
  - PROVIDE SITE GRADING AT HANDICAPPED RAMPS, SIDEWALKS, AND BUILDING ENTRANCES THAT IS CONSISTENT WITH THE RELEVANT ACCESS REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT (ABA), THE AMERICANS WITH DISABILITIES ACT (ADA), AND RIDOT STANDARD SPECIFICATIONS. SMALL CHANGES IN GRADE OVER RELATIVELY SHORT DISTANCES (E.G. AT PARKING SPACES, ACCESSIBLE ROUTES, AND RAMPS) MIGHT NOT BE CLEARLY DEPICTED WITHIN THE CONTOUR INTERVAL SHOWN. COMPLY WITH THE CRITERIA IN THESE STANDARDS. SELECT MAXIMUM SLOPE CRITERIA ARE REPRODUCED BELOW:
    - ACCESSIBLE PARKING STALL AND PASSENGER LOADING ZONE (ANY DIRECTION) SLOPE < 2.0%
    - LONGITUDINAL SLOPE ALONG ACCESSIBLE ROUTES < 5.0%
    - CROSS SLOPE ALONG ACCESSIBLE ROUTES < 2.0%
- PROTECT PROJECT FEATURES (E.G., WALLS, FENCES, MAIL BOXES, SIGNS, SIDEWALKS, CURBING, STAIRS, WALKWAYS, TREES, ETC.) FROM DAMAGE DURING CONSTRUCTION, INCLUDING PROVIDING TEMPORARY SUPPORTS, WHEN APPROPRIATE.
- IF REMOVAL OF PROJECT FEATURES IS REQUIRED IN ORDER TO PERFORM THE PROPOSED WORK, REMOVE THOSE SITE FEATURES ONLY UPON APPROVAL OF ENGINEER. REPLACE ALL REMOVED PROJECT FEATURES; NEW ITEMS SHALL BE EQUAL OR BETTER IN QUALITY AND CONDITION TO THE ITEMS REMOVED.
- EXISTING SURVEY MONUMENTS DISTURBED BY THE CONTRACTOR SHALL BE REPLACED BY A LAND SURVEYOR LICENSED IN THE STATE IN WHICH THE WORK IS PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
- COORDINATE THE ADJUSTMENT OF EXISTING UTILITY STRUCTURES WITH EACH RESPONSIBLE UTILITY OWNER PRIOR TO RECONSTRUCTION AND/OR PAVING OPERATIONS. RAISE ALL STRUCTURES TO FINISHED GRADES PRIOR TO THE END OF THE CONSTRUCTION SEASON AND PRIOR TO FINISHED PAVING..
- PLACE TEMPORARY BITUMINOUS CONCRETE PAVEMENT AT DISTURBED PORTLAND CEMENT CONCRETE SIDEWALKS AND DRIVEWAYS AT THE END OF EACH WORK WEEK, UNLESS OTHERWISE APPROVED/REQUIRED BY THE OWNER.
- TRANSFER ALL TEMPORARY BENCHMARKS, AS NECESSARY.
- ACCOMMODATE PEDESTRIAN TRAFFIC WHERE A SIDEWALK IS TO BE CLOSED FOR SAFETY. "SIDEWALK CLOSED HERE" SIGNS SHALL BE USED AT THE NEAREST SAFE INTERSECTION. SEE TRAFFIC CONTROL DETAILS FOR SIGN INFORMATION.
- RESTORE ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE PAYLINE LIMITS TO ORIGINAL CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
- REGRADE ALL UNPAVED AREAS DISTURBED BY THE WORK AS REQUIRED. REPAIR/REPLACE PAVED SURFACES DISTURBED BY THE WORK IN-KIND, UNLESS OTHERWISE NOTED. RESTORE SURFACES TO EXISTING OR PROPOSED CONDITIONS AS INDICATED ON THE DRAWINGS.
- PROVIDE A SMOOTH, FLUSH TRANSITION BETWEEN ALL NEW AND EXISTING PAVEMENTS AND WALKING SURFACES.

**TEMPORARY PAVEMENT RESTORATION NOTES**

- ALL ROADWAY RESTORATION SHALL CONFORM TO FEBRUARY 2024 RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR ROADWAY RESTORATION SPECIFICATIONS
- PRIOR TO TRENCHING, PAVEMENT SHALL BE SAW-CUT TO FULL DEPTH OF PAVEMENT AND CONCRETE BASE IN STRAIGHT PARALLEL LINES AND RECTANGULAR IN SHAPE WITH AN ABRASIVE WHEEL POWER SAW, UNLESS OTHERWISE SPECIFIED.
- TRENCHES SHALL BE BACKFILLED IN MAXIMUM ONE (1) FOOT LIFTS AND PLACE AT MINIMUM TWELVE (24) INCHES OF GRAVEL BASE COMPACTED TO RIDOT STANDARD SPECIFICATIONS.
- RESTORATION OF ANY ALTERED ROADWAY SHALL TAKE PLACE AT THE END OF EACH WORK DAY AND SHALL INCLUDE A MINIMUM OF TWO (2) INCHES OF BITUMINOUS ASPHALT CONCRETE USING CLASS 4.75 OR CLASS 9.5 HOT MIX ASPHALT AND CONFORMING TO SECTION 410.03.2 OF RIDOT STANDARD SPECIFICATIONS TO KEEP THE ROADWAY SMOOTH AND BUMP FREE UNTIL PERMANENT RESTORATION CAN BE COMPLETED.
- IN THE INSTANCE THAT INDUCTANCE TRAFFIC SIGNAL LOOP DETECTORS ARE DAMAGED BY OPERATIONS AND RENDERED NON-FUNCTIONAL, THE CONTRACTOR SHALL RESTORE PROPERLY OPERATING DETECTION WITHIN SEVENTY-TWO (72) HOURS IN ACCORDANCE TO RIDOT STANDARD SPECIFICATIONS AND STANDARD DETAILS.
- WORK AREA SHALL BE SWEEPED AND IN CLEAN ORDER AT THE END OF EVERY WORK SHIFT.

**FINAL PAVEMENT RESTORATION NOTES**

- ALL ROADWAY RESTORATION SHALL CONFORM TO FEBRUARY 2024 RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR ROADWAY RESTORATION SPECIFICATIONS.
- FINAL BITUMINOUS CONCRETE TRENCH REPAIR SHALL INCLUDE FULL DEPTH SAW CUTTING AT ONE (1) FOOT CUTBACKS FROM ALL VERTICAL EDGES OF THE INITIAL WORK TRENCHES PRIOR TO INSTALLING PERMANENT PAVEMENT.
- ENSURE ALL SURFACES ARE DRY AND CLEAN OF DEBRIS AND APPLY ASPHALT EMULSION TACK COAT TO ALL VERTICAL AND HORIZONTAL PAVEMENT SURFACES PRIOR TO PERMANENT PAVEMENT TRENCH RESTORATION CONFORMING TO SECTION 403.03.2 OF RIDOT STANDARD SPECIFICATIONS.
- IF CONCRETE BASE IS PRESENT IN ROADWAY, THEN RESTORATION SHALL INCLUDE A MINIMUM OF EIGHT (8) INCHES OF CLASS XX CONCRETE SUBBASE DOWELS IN ACCORDANCE TO RIDOT STANDARD SPECIFICATIONS SECTION 819.
- FULL DEPTH FINAL PAVEMENT STRUCTURE TRENCH SHALL BE IN PLACE FOR A MINIMUM OF THIRTY (30) CALENDAR DAYS, AND A MAXIMUM OF ONE (1) YEAR PRIOR TO FINAL PAVEMENT RESTORATION.
- PERMANENT PAVEMENT RESTORATION SHALL INCLUDE:
  - TWO (2) INCHES OF MICROMILLING AND RESURFACING ALL IMPACTED TRAVEL LANES WHERE AND/OR SHOULDERS IMPACTED BY WORK TRENCHES TO THEIR FULL WIDTH USING CLASS 9.5 OR 12.5 HOT MIX ASPHALT.
  - PERMANENT PAVEMENT RESTORATION OF TRAVEL LANES AND/OR SHOULDER SHALL PROCEED WHEN TRENCHES ARE LESS THAN OR EQUAL TO ONE HUNDRED (100) FEET LONGITUDINAL FROM ONE ANOTHER, INCLUDING SECTIONS BETWEEN TRENCHES, SO THAT NO SECTION OF ROADWAY PAVEMENT LESS THAN OR EQUAL TO ONE HUNDRED (10) FEET SHALL REMAIN UNPAVED TO PROVIDE CONTINUOUS FINAL PAVEMENT BETWEEN WORK TRENCHES.
  - ASPHALT EMULSION TACK COAT SHALL BE APPLIED TO CLEAN AND DRY VERTICAL AND HORIZONTAL PAVEMENT PRIOR TO FINAL RESURFACING.
  - AFTER FINAL PAVING, AND BEFORE PERMANENT PAVEMENT, TEMPORARY WATERBORNE REFLECTORIZED PAVEMENT PARKINGS SHALL BE PLACED IN THE SAME LOCATIONS AS ORIGINAL MARKINGS ON ANY ROADWAYS OPENED TO TRAFFIC AT THE COMPLETION OF ANY DAY'S PAVING OPERATION.
  - PERMANENT EPOXY RESIN PAVEMENT MARKINGS SHALL BE PLACED NO LONGER THAN TWO (2) WEEKS BUT NO LATER THAN FOUR (4) WEEKS FROM COMPLETION OF THE PAVING OPERATION.



**BID SET**

**WARREN AVENUE & HIGHLAND AVENUE WATER LINE REPLACEMENT**

Department of Public Works

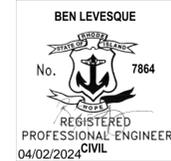
East Providence, RI

MARK	DATE	DESCRIPTION
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DATE:	APRIL 2024	
FILE:	G-002 GENERAL NOTES AND LEGEND.dwg	
DRAWN BY:	LMK	
CHECKED:	RH	
APPROVED:	BRL	

WATER SYSTEM, SURFACE, AND PAVEMENT RESTORATION NOTES

SCALE: NO SCALE

**G-003**



**BID SET**

**WARREN AVENUE & HIGHLAND AVENUE WATER LINE REPLACEMENT**

Department of Public Works

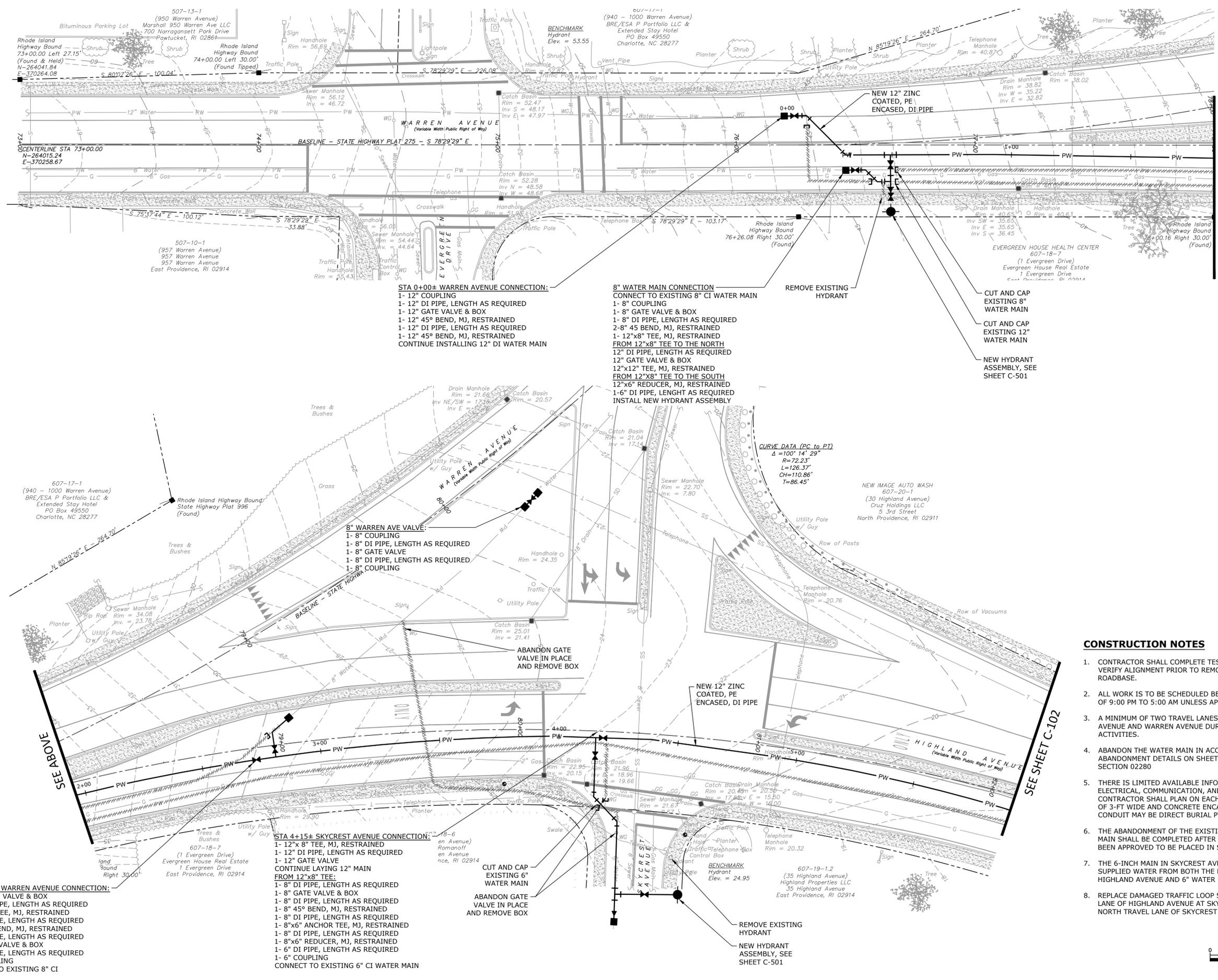
East Providence, RI

MARK	DATE	DESCRIPTION
PROJECT NO:	E0764-10	
DATE:	APRIL 2024	
FILE:	E0764-010_PLAN SHEETS.dwg	
DRAWN BY:	LMK	
CHECKED:	RH	
APPROVED:	BRL	

PLAN SHEET  
STA 0+00 TO STA 5+85

SCALE: AS SHOWN

**C-101**

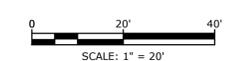


SEE BELOW

SEE SHEET C-102

**CONSTRUCTION NOTES**

- CONTRACTOR SHALL COMPLETE TEST PITS EVERY 500-FT TO VERIFY ALIGNMENT PRIOR TO REMOVING EXISTING CONCRETE ROADBASE.
- ALL WORK IS TO BE SCHEDULED BETWEEN THE WORKING HOURS OF 9:00 PM TO 5:00 AM UNLESS APPROVED BY THE RIDOT.
- A MINIMUM OF TWO TRAVEL LANES ARE TO BE OPEN IN HIGHLAND AVENUE AND WARREN AVENUE DURING CONSTRUCTION ACTIVITIES.
- ABANDON THE WATER MAIN IN ACCORDANCE WITH PIPE ABANDONMENT DETAILS ON SHEET C-502 AND SPECIFICATION SECTION 02280
- THERE IS LIMITED AVAILABLE INFORMATION ON THE EXISTING ELECTRICAL, COMMUNICATION, AND TRAFFIC SIGNAL DUCTBANKS. CONTRACTOR SHALL PLAN ON EACH DUCTBANK BEING A MINIMUM OF 3-FT WIDE AND CONCRETE ENCASED; HOWEVER, SOME CONDUIT MAY BE DIRECT BURIAL PVC.
- THE ABANDONMENT OF THE EXISTING 8" AND OR THE 12" WATER MAIN SHALL BE COMPLETED AFTER THE NEW WATER MAIN HAS BEEN APPROVED TO BE PLACED IN SERVICE.
- THE 6-INCH MAIN IN SKYCREST AVENUE IS NOT BACKFEED. IT IS SUPPLIED WATER FROM BOTH THE EXISTING 12" WATER MAIN IN HIGHLAND AVENUE AND 6" WATER MAIN FROM WARREN AVENUE.
- REPLACE DAMAGED TRAFFIC LOOP SENSOR IN THE EASTBOUND LANE OF HIGHLAND AVENUE AT SKYCREST AVENUE AND THE NORTH TRAVEL LANE OF SKYCREST AVENUE AT HIGHLAND AVENUE.



Last Saved: 4/2/2024 11:54am By: R. Hayes  
Plotted On: Apr 02, 2024 11:54am  
Tighe & Bond - E:\E0764-10 - Warren Avenue Water Line Replacement Drawings - Figures\AutoCAD\Sheet\0764-010 - PLAN SHEETS.dwg

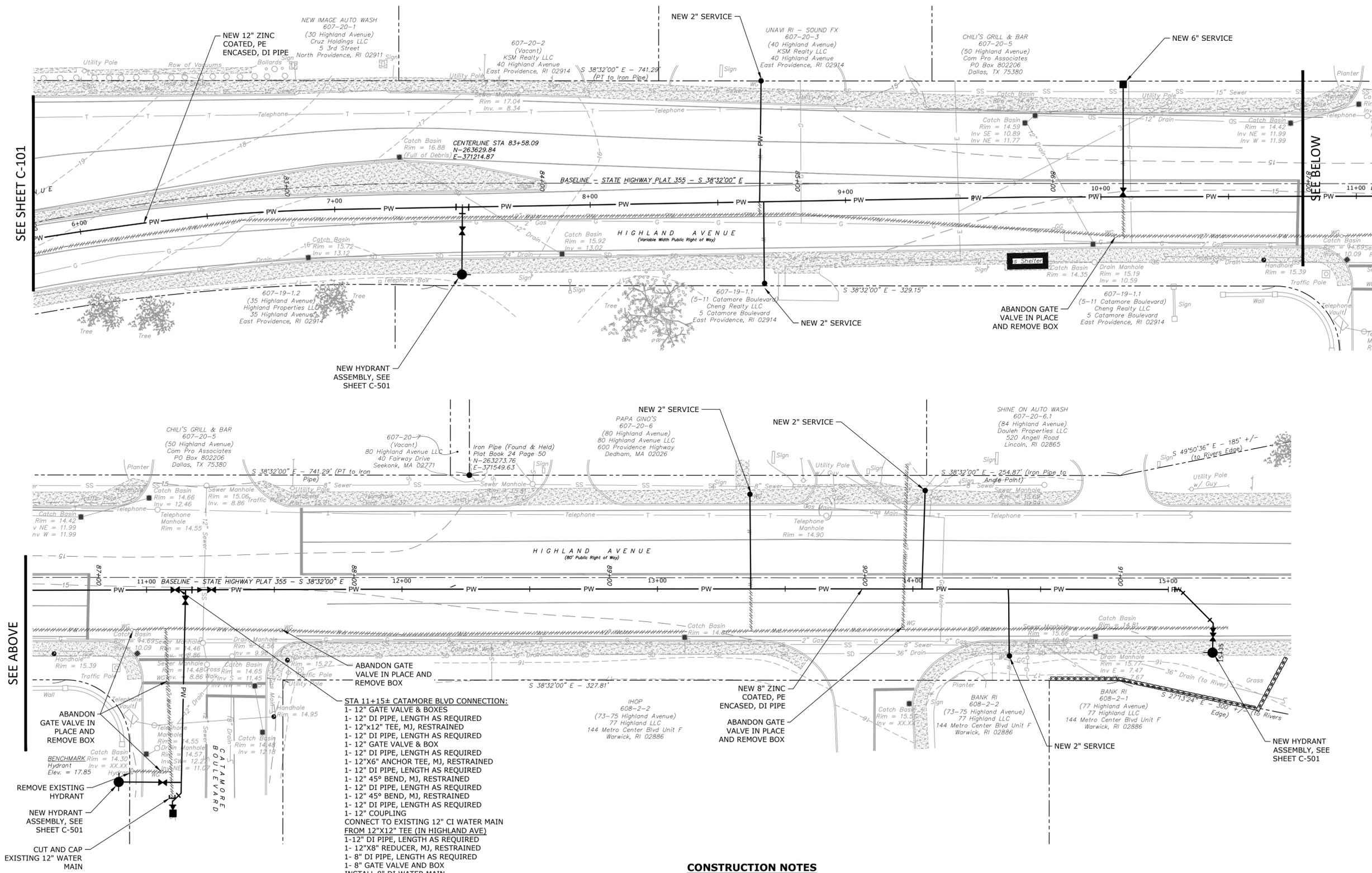


**BID SET**

**WARREN AVENUE & HIGHLAND AVENUE WATER LINE REPLACEMENT**

Department of Public Works

East Providence, RI



MARK	DATE	DESCRIPTION
PROJECT NO:	E0764-10	
DATE:	APRIL 2024	
FILE:	E0764-010_PLAN SHEETS.dwg	
DRAWN BY:	LMK	
CHECKED:	RH	
APPROVED:	BRL	

PLAN SHEET  
STA 5+85 TO STA 15+35

SCALE: AS SHOWN

**C-102**

Last Saved: 4/2/2024 11:49am By: Ryan Hayes  
Plotted On: Apr 02, 2024 11:49am  
Tighe & Bond - E:\E0764 - East Providence\010 - Warren Avenue Water Line Replacement\Drawings - Figures\AutoCAD\Sheet\0764-010 - PLAN SHEETS.dwg



DIGITAL SIGNATURE

**BEN LEVESQUE**  
No. 7864  
REGISTERED PROFESSIONAL ENGINEER  
04/02/2024 CIVIL

DIGITAL SIGNATURE

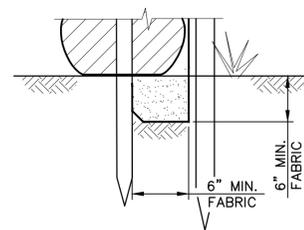
**RYAN HAYES**  
No. 10191  
REGISTERED PROFESSIONAL ENGINEER  
04/02/2024 CIVIL

**BID SET**

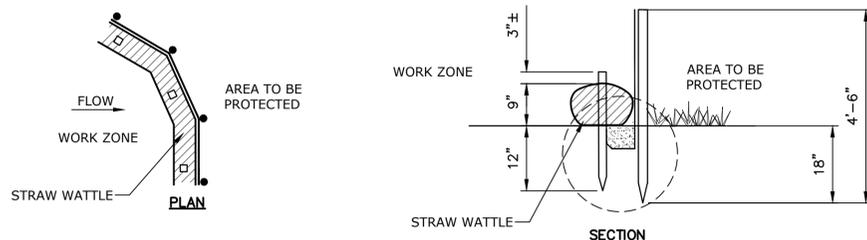
**WARREN AVENUE & HIGHLAND AVENUE WATER LINE REPLACEMENT**

Department of Public Works

East Providence, RI

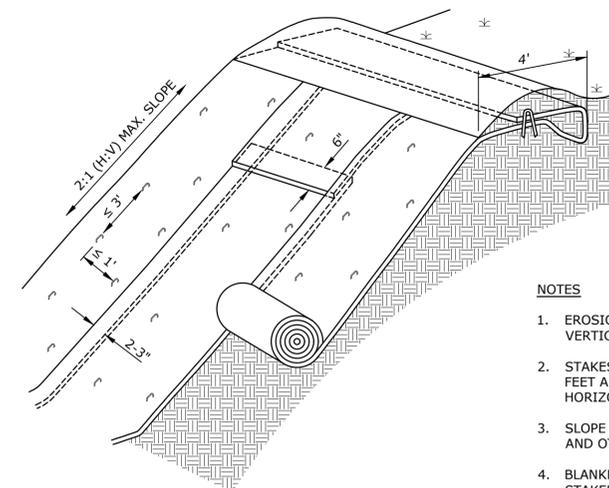


**FABRIC TOE-IN DETAIL**



**TEMPORARY EROSION CONTROL BARRIER**  
NO SCALE

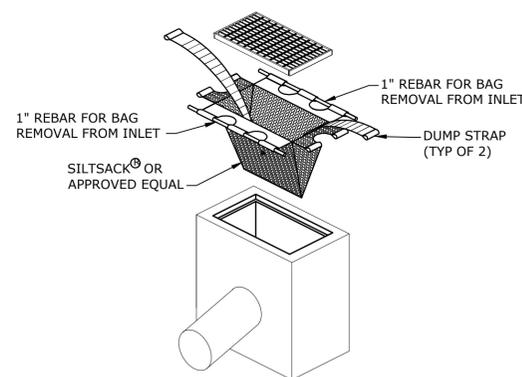
\*-STAKES WERE SPACED AT 4'-5' O.C.  
STAKES WERE STAGGERED BETWEEN STRAW WATTLE AND SILT FENCE



**EROSION CONTROL BLANKET**  
NO SCALE

**NOTES**

1. EROSION CONTROL BLANKET WAS INSTALLED VERTICALLY DOWNSLOPE.
2. STAKES/STAPLES WERE PLACED NO MORE THAN 3 FEET APART VERTICALLY, AND 1 FEET APART HORIZONTALLY.
3. SLOPE SURFACE WAS FREE OF STICKS, ROCKS, AND OTHER OBSTRUCTIONS.
4. BLANKETS WERE ROLLED OUT LOOSELY AND STAKED/STAPLED TO MAINTAIN DIRECT SOIL CONTACT. BLANKETS WERE NOT STRETCHED.

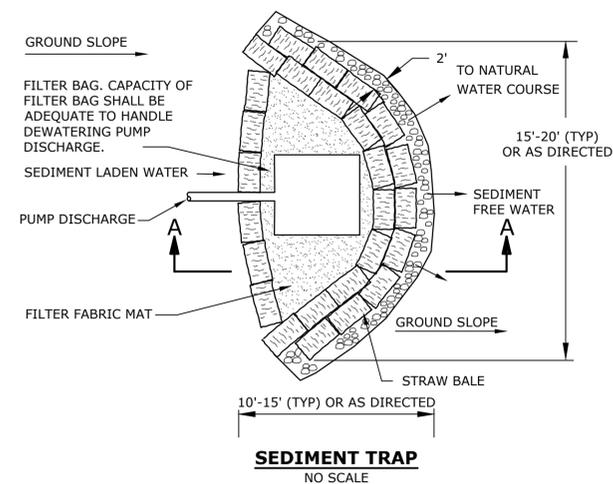
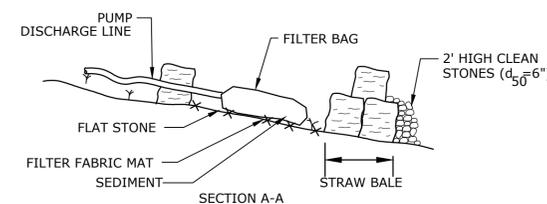


**CATCH BASIN PROTECTION SILTSACK® EROSION CONTROL**  
NO SCALE

SILTSACK MANUFACTURED BY:  
ATLANTIC CONSTRUCTION FABRICS, INC.  
1801-A WILLIS ROAD  
RICHMOND, VIRGINIA 23237

**NOTES:**

1. "SILT SACKS", "DANDY BAG II," "BLOCKSON & CO. NATURAL FIBER INLET FILTER MAT" OR OTHER SIMILAR SILT RETENTION DEVICE SHALL BE INSTALLED IN LIEU OF STRAW WATTLES FOR CATCH BASINS LOCATED IN EXISTING PAVED AREAS.



**SEDIMENT TRAP**  
NO SCALE

MARK	DATE	DESCRIPTION

PROJECT NO: E0764-10  
DATE: APRIL 2024  
FILE: E0764-10\_Details1.dwg  
DRAWN BY: LMK  
CHECKED: RH  
APPROVED: BRL

**EROSION AND SEDIMENT CONTROL DETAILS**

SCALE: NO SCALE

**C-502**

DIGITAL SIGNATURE

**BEN LEVESQUE**  
No. 7864  
REGISTERED PROFESSIONAL ENGINEER  
04/02/2024 CIVIL

DIGITAL SIGNATURE

**RYAN HAYES**  
No. 10191  
REGISTERED PROFESSIONAL ENGINEER  
04/02/2024 CIVIL

**BID SET**

**WARREN AVENUE & HIGHLAND AVENUE WATER LINE REPLACEMENT**

Department of Public Works

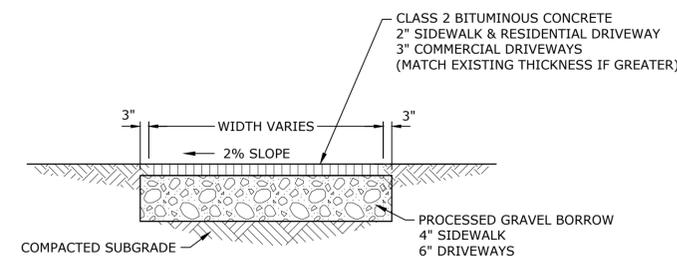
East Providence, RI

MARK	DATE	DESCRIPTION

ROADWAY RESTORATION DETAILS - 1

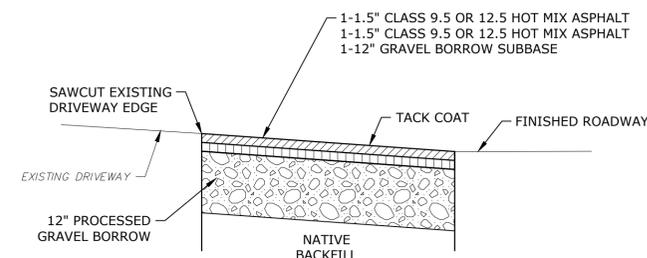
SCALE: NO SCALE

C-503



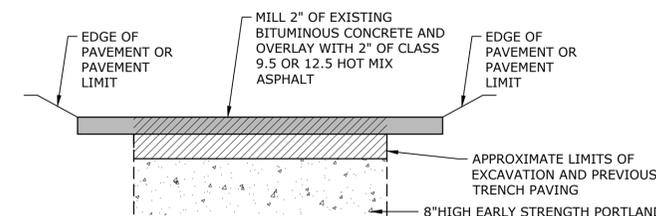
**TEMPORARY BITUMINOUS CONCRETE SIDEWALK AND DRIVEWAY DETAIL**

NO SCALE



**DRIVEWAY APRON PERMANENT REPAIR**

NO SCALE

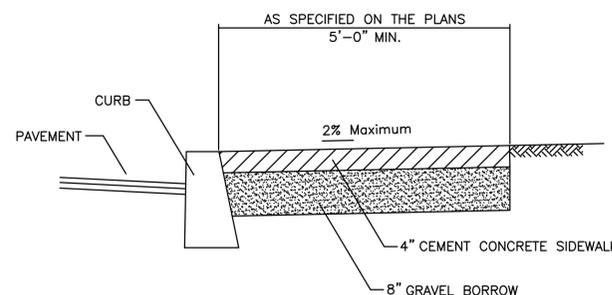


**ROADWAY MILL AND OVERLAY**

NO SCALE

FINAL AND PERMANENT TRENCH REPAIR NOTES

1. ALL ROADWAY RESTORATION SHALL CONFORM TO FEBRUARY 2024 RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR ROADWAY RESTORATION SPECIFICATIONS
2. FINAL BITUMINOUS CONCRETE TRENCH REPAIR SHALL INCLUDE FULL DEPTH SAW CUTTING AT ONE (1) FOOT CUTBACKS FROM ALL VERTICAL EDGES OF THE INITIAL WORK TRENCHES PRIOR TO INSTALLING PERMANENT PAVEMENT.



**CONCRETE SIDEWALK**

NO SCALE

REVISIONS

NO.	BY	DATE
1	MLP	3/1/05
2	MLP	06/01/10

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**CEMENT CONCRETE SIDEWALK**

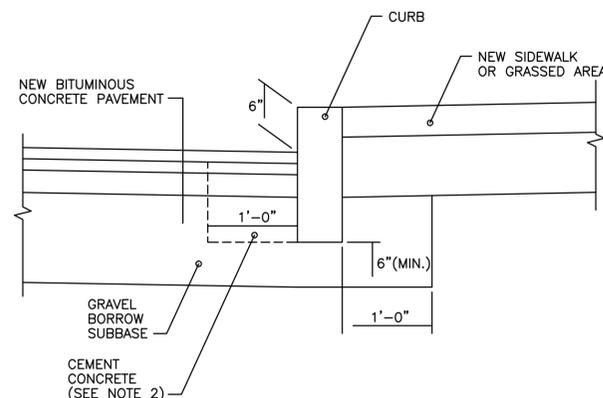
R.I. STANDARD 43.1.0

JUNE 15, 1998  
ISSUE DATE

CHIEF ENGINEER TRANSPORTATION  
CHIEF DESIGN ENGINEER TRANSPORTATION

NOTES

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.



RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**CURB SETTING DETAIL**

R.I. STANDARD 7.6.0

JUNE 15, 1998  
ISSUE DATE

CHIEF ENGINEER TRANSPORTATION  
CHIEF DESIGN ENGINEER TRANSPORTATION

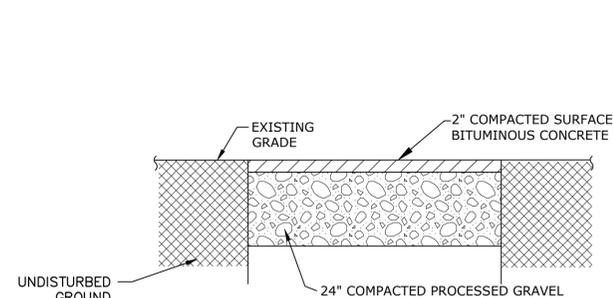
**CURB SETTING**

NO SCALE

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. CEMENT CONCRETE SHALL BE USED ONLY WHEN THE CURB IS SET AFTER THE BASE AND/OR BINDER COURSES ARE IN PLACE, OTHERWISE THE CEMENT CONCRETE WILL BE ELIMINATED AND THE GRAVEL BROUGHT UP TO BOTTOM OF THE BASE COURSE.

NO.	BY	DATE
1	MLP	Mar 05

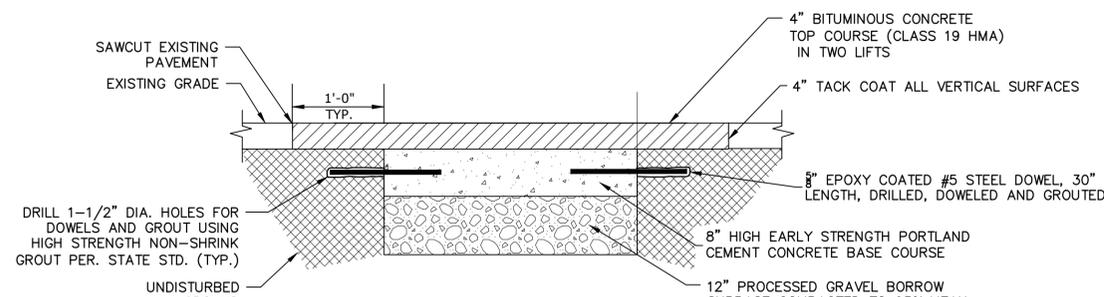


**TEMPORARY BITUMINOUS CONCRETE TRENCH REPAIR**

NO SCALE

TEMPORARY BITUMINOUS CONCRETE TRENCH REPAIR NOTES:

1. ALL ROADWAY RESTORATION SHALL CONFORM TO FEBRUARY 2024 RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR ROADWAY RESTORATION SPECIFICATIONS



**PERMANENT BITUMINOUS CONCRETE TRENCH REPAIR (ROUTE 6)**

NO SCALE

FINAL AND PERMANENT TRENCH REPAIR NOTES

1. ALL ROADWAY RESTORATION SHALL CONFORM TO FEBRUARY 2024 RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR ROADWAY RESTORATION SPECIFICATIONS.
2. DOWEL SHALL BE INSTALLED 4" FROM SURFACE OF CONCRETE ROADBASE, AND THE EXISTING CONCRETE ROAD BASE SHALL BE DRILLED 10" INTO EXISTING CONCRETE AND GROUTED EVERY 18" ON CENTER TO RECEIVE THE EPOXY COATED STEEL DOWEL.
3. FINAL BITUMINOUS CONCRETE TRENCH REPAIR SHALL INCLUDE FULL DEPTH SAW CUTTING AT ONE (1) FOOT CUTBACKS FROM ALL VERTICAL EDGES OF THE INITIAL WORK TRENCHES PRIOR TO INSTALLING PERMANENT PAVEMENT.

**BEN LEVESQUE**  
No. 7864  
REGISTERED PROFESSIONAL ENGINEER  
04/02/2024 CIVIL

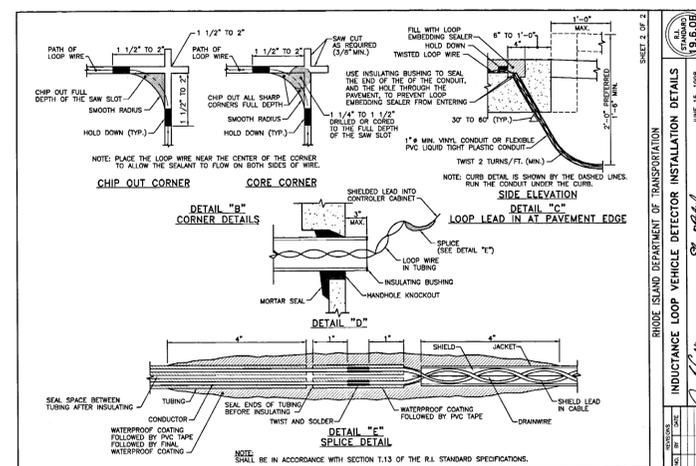
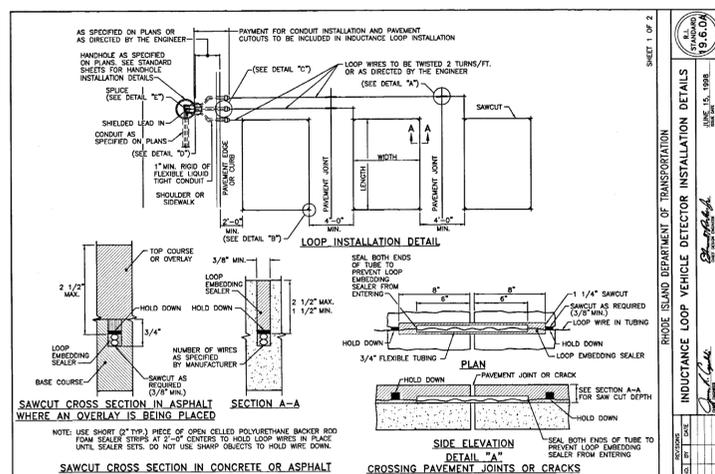
**RYAN HAYES**  
No. 10191  
REGISTERED PROFESSIONAL ENGINEER  
04/02/2024 CIVIL

**BID SET**

**WARREN AVENUE & HIGHLAND AVENUE WATER LINE REPLACEMENT**

Department of Public Works

East Providence, RI



**INDUCTANCE LOOP INSTALLATION**

NO SCALE

**GENERAL NOTES:**

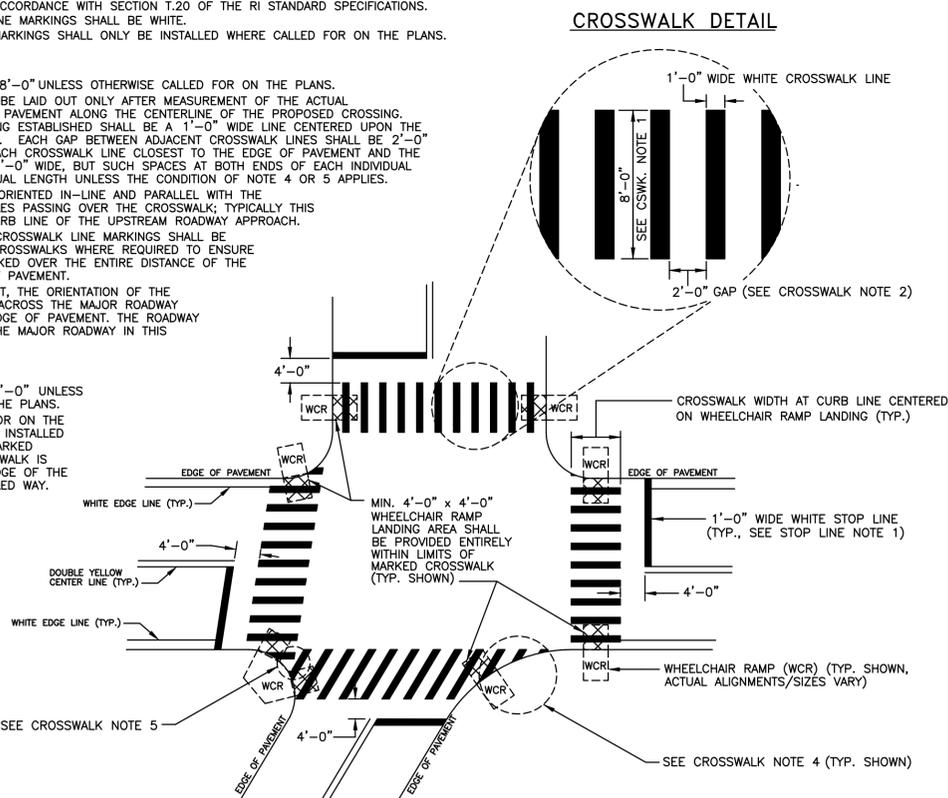
1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE RI STANDARD SPECIFICATIONS.
2. ALL CROSSWALK AND STOP LINE MARKINGS SHALL BE WHITE.
3. CROSSWALK AND STOP LINE MARKINGS SHALL ONLY BE INSTALLED WHERE CALLED FOR ON THE PLANS.

**CROSSWALK NOTES:**

1. CROSSWALK WIDTH SHALL BE 8'-0" UNLESS OTHERWISE CALLED FOR ON THE PLANS.
2. CROSSWALK MARKINGS SHALL BE LAID OUT ONLY AFTER MEASUREMENT OF THE ACTUAL DISTANCE BETWEEN EDGES OF PAVEMENT ALONG THE CENTERLINE OF THE PROPOSED CROSSING. THE FIRST CROSSWALK MARKING ESTABLISHED SHALL BE A 1'-0" WIDE LINE CENTERED UPON THE MIDPOINT OF THIS CENTERLINE. EACH GAP BETWEEN ADJACENT CROSSWALK LINES SHALL BE 2'-0" WIDE. THE SPACE BETWEEN EACH CROSSWALK LINE CLOSEST TO THE EDGE OF PAVEMENT AND THE LATTER MAY BE LESS THAN 2'-0" WIDE, BUT SUCH SPACES AT BOTH ENDS OF EACH INDIVIDUAL CROSSWALK SHALL BE OF EQUAL LENGTH UNLESS THE CONDITION OF NOTE 4 OR 5 APPLIES.
3. CROSSWALK LINES SHALL BE ORIENTED IN-LINE AND PARALLEL WITH THE PREDOMINANT PATH OF VEHICLES PASSING OVER THE CROSSWALK; TYPICALLY THIS WILL BE PARALLEL TO THE CURB LINE OF THE UPSTREAM ROADWAY APPROACH.
4. SHORTER SEGMENTS OF THE CROSSWALK LINE MARKINGS SHALL BE INSTALLED AT THE ENDS OF CROSSWALKS WHERE REQUIRED TO ENSURE THAT THE CROSSWALK IS MARKED OVER THE ENTIRE DISTANCE OF THE CROSSING BETWEEN EDGES OF PAVEMENT.
5. WHERE TWO CROSSWALKS MEET, THE ORIENTATION OF THE CROSSWALK LINES INSTALLED ACROSS THE MAJOR ROADWAY SHALL BE CARRIED TO THE EDGE OF PAVEMENT. THE ROADWAY RUNNING LEFT TO RIGHT IS THE MAJOR ROADWAY IN THIS DETAIL.

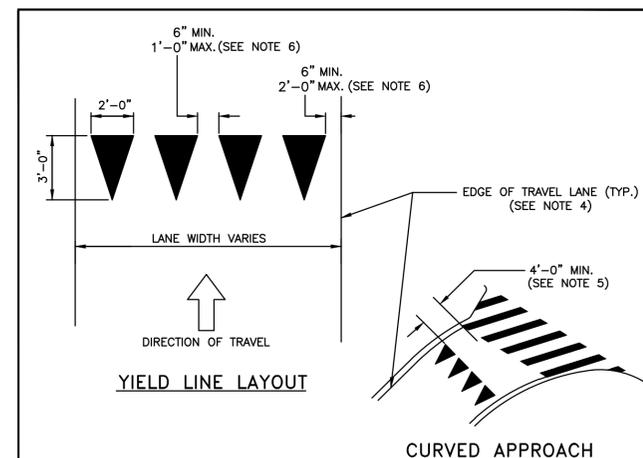
**STOP LINE NOTES:**

1. STOP LINE WIDTH SHALL BE 1'-0" UNLESS OTHERWISE CALLED FOR ON THE PLANS.
2. UNLESS OTHERWISE CALLED FOR ON THE PLANS, STOP LINES SHALL BE INSTALLED PARALLEL TO THE NEAREST MARKED CROSSWALK OR, IF NO CROSSWALK IS MARKED, PARALLEL TO THE EDGE OF THE NEAREST INTERSECTING TRAVELED WAY.



**ROAD MARKING RESTORATION**

NO SCALE



- NOTES:**
1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE RI STANDARD SPECIFICATIONS.
  2. ALL YIELD LINE MARKINGS SHALL BE WHITE.
  3. YIELD LINE MARKINGS SHALL ONLY BE INSTALLED WHERE CALLED FOR ON THE PLANS.
  4. THE EDGE OF TRAVEL LANE IS THE EDGE OR LANE LINE PAVEMENT MARKING OR, WHERE NO SUCH MARKING IS PRESENT, THE EDGE OF THE PAVEMENT.
  5. THE INDIVIDUAL TRIANGLES OF EACH YIELD LINE SHALL ALL POINT TOWARD APPROACHING VEHICLES IN THE SAME DIRECTION AND ORIENTATION. WHERE THE DOWNSTREAM CROSSWALK (OR IF NONE IS PRESENT, THE EDGE OF THE NEAREST INTERSECTING TRAVEL LANE) IS NOT PERPENDICULAR TO THE APPROACH, THE POINT OF THE TRIANGLE'S BASE THAT IS CLOSEST TO THE CROSSWALK (OR EDGE OF THE NEAREST INTERSECTING TRAVEL LANE) SHALL CONFORM TO THE MINIMUM DISTANCES DESCRIBED IN NOTE 7.
  6. THE SPACES BETWEEN THE BASES OF ADJACENT YIELD LINE TRIANGLES SHALL BE IDENTICAL ACROSS THE ENTIRE WIDTH OF THE TRAVEL LANE. THE SPACE BETWEEN THE EDGE OF THE YIELD LINE TRIANGLES CLOSEST TO THE EDGE OF THE TRAVEL LANE AND THE LATTER MAY VARY SUBJECT TO THE DIMENSIONS SHOWN ON THE DETAIL.
  7. UNLESS OTHERWISE CALLED FOR ON THE PLANS:
    - A. WHERE A MARKED CROSSWALK IS ABSENT FROM A YIELD-CONTROLLED APPROACH, THE YIELD LINE SHOULD BE PLACED AT THE LOCATION OF THE YIELD SIGN(S), BUT SHALL NOT BE PLACED MORE THAN 30'-0" NOR LESS THAN 4'-0" FROM THE NEAREST EDGE OF THE INTERSECTING TRAVEL LANE.
    - B. WHERE A MARKED CROSSWALK IS PRESENT ON THE YIELD-CONTROLLED APPROACH, THE YIELD LINE SHOULD BE PLACED AT THE LOCATION OF THE YIELD SIGN(S), BUT SHALL NOT BE PLACED MORE THAN 30'-0" FROM THE NEAREST EDGE OF THE INTERSECTING TRAVEL LANE NOR LESS THAN 4'-0" IN ADVANCE OF THE NEAREST CROSSWALK LINE (OR THE NEAREST EDGE OF THE INTERSECTING TRAVEL LANE).
  8. FOR YIELD LINES ON DESIGNATED BICYCLE FACILITIES, REFER TO THE PLANS FOR REDUCED-SIZE YIELD LINE TRIANGLES AND ALTERNATE LAYOUT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKINGS - YIELD LINE**

R.I. STANDARD 20.4.0

FEBRUARY 27, 2018

ADMINISTRATOR, PROJECT MANAGEMENT  
CHIEF ENGINEER OF INFRASTRUCTURE  
TRANSPORTATION

Last Saved: 4/1/2024 4:09pm By: K/Vining  
Plotted On: Apr 01, 2024 5:03pm  
Tighe & Bond: E:\E\ED764 - Warren Avenue Water Line Replacement\Drawings - Figures\AutoCAD\Sheet\ED764-10\_Details1.dwg

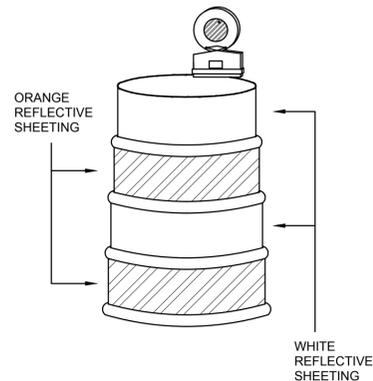
**GENERAL NOTES**

- NOTES**
- TRAFFIC CONTROL DEVICES AND PROCEDURES SHALL CONFORM TO FEBRUARY 2024 RIDOT STANDARD SPECIFICATIONS FOR BRIDGE AND ROADWAY CONSTRUCTION AND STANDARD DETAILS.
  - FLAGS SHALL BE AT LEAST 16" X 16".
  - DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN FIELD BY CONTRACTOR.
  - MAXIMUM SPACING OF CHANNELIZING DEVICES IS EQUAL IN FEET TO SPEED LIMIT.
  - NO TRAFFIC CONTROL DEVICES SHALL REMAIN ON THE ROADWAY AT THE END OF EACH WORK DAY.
  - SIGNS MUST BE COVERED OR REMOVED AT THE END OF EACH WORK DAY, OR WHENEVER BOTH LANES ARE OPEN TO TRAFFIC.
  - ALL WARNING SIGNS SHALL BE BLACK LEGEND ON A REFLECTIVE ORANGE BACKGROUND. ALL W AND G SERIES SIGNS SHALL BE BLACK LEGEND ON A REFLECTIVE ORANGE BACKGROUND. R2-10a SIGN SHALL BE BLACK LEGEND ON A REFLECTIVE WHITE/ORANGE BACKGROUND. FLAGS SHALL BE ATTACHED TO ALL ADVANCED WARNING SIGNS.
  - ADVISORY SPEED PLATES (W13-1) TO BE USED WHERE APPROPRIATE.
  - ALL TRAFFIC CONTROL DEVICES USED SHALL CONFORM TO THE LATEST EDITION OF THE "FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD) IN BOTH SPECIFICATION AND APPLICATION.
  - TYPICAL LAYOUTS:  
TYPICAL LAYOUT "A" SHALL BE USED WHEN THE TRAVEL WIDTH FROM THE CHANNELIZING DEVICES TO THE EDGE OF PAVEMENT IS GREATER THAN 22 FEET.  
TYPICAL LAYOUT "B" SHALL BE USED WHEN THE TRAVEL WIDTH FROM THE CHANNELIZING DEVICES TO THE EDGE OF PAVEMENT IS LESS THAN 22 FEET.  
TYPICAL LAYOUT "C" SHALL BE USED FOR ALL INTERSECTIONS, WHETHER OR NOT THE PROPOSED WORK CROSSES THE INTERSECTION.
  - FOR TYPICAL LAYOUT B & C THE CONTRACTOR SHALL MAINTAIN ONE OPEN TRAVEL LANE OF NOT LESS THAN 12 FEET AT ALL TIMES.
  - R-10a SIGNS SHALL BE PLACED BETWEEN W20-4 (THIRD SIGN) AND THE SECOND SIGN AS SHOWN IN THE TYPICAL LAYOUTS.
  - THE WORK ZONE AS SHOWN ON THESE PLANS IS REPRESENTATIVE ONLY AND MAY VARY IN BOTH LENGTH AND LOCATION AS CONSTRUCTION PROGRESSES. REGARDLESS OF THESE VARIATIONS, THE OFFSET DISTANCES TO THE TRAFFIC CONTROL DEVICES SHOWN SHALL BE MAINTAINED.
  - NO CONSTRUCTION EQUIPMENT OR MATERIALS (EXCEPT THOSE IN USE) SHALL BE STORED CLOSER THAN 8 FEET TO THE EDGE OF TRAVELED LANES.
  - ALL OPERATIONS SHALL BE CONDUCTED SO AS NOT TO INTERFERE WITH, INTERRUPT, OR ENDANGER THE GENERAL PUBLIC OR THE TRAFFIC FLOW.
  - THE NUMBER AND LOCATION OF ALL SIGNS AND DEVICES SHALL BE AS DEEMED NECESSARY BY THE DRILLING CONTRACTOR FOR THE SAFE AND EFFICIENT PERFORMANCE OF THE WORK AND THE SAFETY OF THE TRAVELING PUBLIC. ALL WARNING DEVICES SHALL BE SUBJECT TO REMOVAL, REPLACEMENT AND/OR REPOSITIONING BY THE CONTRACTOR AS OFTEN AS DEEMED NECESSARY BY THE ENGINEER.
  - ALL PERSONNEL WHO ARE WORKING ON THE TRAVELED WAY OR BREAKDOWN LANES AND WHO ARE NOT PROTECTED BY TRAFFIC CONES OR SIMILAR PROTECTIVE DEVICES SHALL WEAR SAFETY VESTS.
  - NO TRENCH SHALL BE LEFT OPEN AFTER WORKING HOURS. IF IT BECOMES NECESSARY FOR SAID TRENCH TO BE LEFT AFTER WORKING HOURS, THEN IT SHALL BE COVERED WITH STEEL PLATES, PINNED, AND A SMOOTH TRANSITION BETWEEN THE PLATE AND THE ROAD SURFACE SHALL BE PROVIDED IN ACCORDANCE TO FEBRUARY 2024 RHODE ISLAND DOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
  - TAPER FORMULA:  
 $L = S \times W$  FOR SPEED > 45  
 $L = (S \times S \times W)/60$  FOR SPEED < 40
  - ALL SIGNS AND SUPPORTS SHALL BE INSTALLED IN ACCORDANCE WITH FEBRUARY 2024 RIDOT STANDARD SPECIFICATIONS FOR BRIDGE AND ROADWAY CONSTRUCTION AND STANDARD DETAILS.
  - TRAFFIC SIGNS USED DURING WORK HOUR SETUPS SHALL REMAIN IN PLACE ONLY DURING WORK HOURS. TRIPOD MOUNTING IS ACCEPTABLE.
  - REFLECTORIZED DRUMS SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES AND/OR WHEN A ROADSIDE HAZARD EXISTS. ANY REFLECTORIZED DRUMS REQUIRED TO REMAIN IN PLACE DURING DARKNESS SHALL BE EQUIPPED WITH STEADY BURN (TYPE C) PER MUTCD.
  - ALL DISTANCES SHOWN ARE MINIMUM AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS, WITH APPROVAL OF THE ENGINEER.
  - WORK ZONE SIGNAGE SHALL BE COVERED OR REMOVED AT THE END OF EACH WORK DAY.
  - DURING ALL CONSTRUCTION ACTIVITIES ON THE ROADWAYS INCLUDING EARTHWORK AND GRADING, A MINIMUM OF ONE LANE ALTERNATING TRAFFIC FLOW SHALL BE MAINTAINED.
  - FULL ROADWAY WIDTH MUST BE RETURNED AT THE END OF EACH WORK DAY.
  - THE NUMBER OF POLICE OFFICERS AT ANY LOCATION IS TO BE DETERMINED BY THE CONTRACTOR.
  - ONE LANE TRAFFIC FLOW SHALL BE REQUIRED DURING ALL OPERATIONS WHICH REDUCE DRIVE LANE(S) LESS THAN 12'.
  - HALF WIDTH CONSTRUCTION METHODS SHALL BE UTILIZED FOR ROAD RECLAMATION, BASE PREPARATION, AND PAVING OPERATIONS.
  - AS CONSTRUCTION OPERATIONS CHANGE, SO SHALL WARNING SIGNS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND ARRANGING SIGNS AS CONSTRUCTION VARIES AND PROCEEDS.
  - ALL WORK REQUIRING LANE CLOSURES OR THE SETTING UP AND TAKING DOWN OF WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE DONE ON ROADWAYS ONLY DURING APPROVED WORKING HOURS.

**PLASTIC DRUMS**

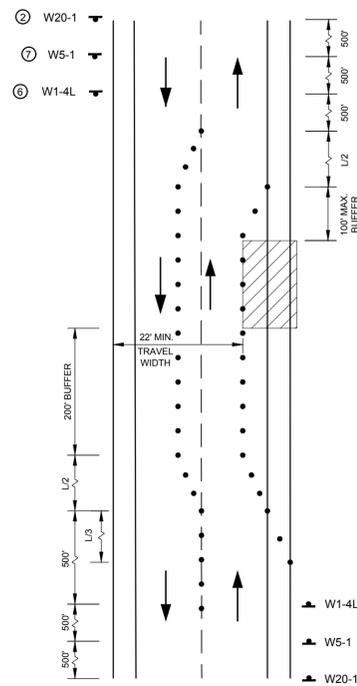
**NOTES**

- DRUM DESIGN AND APPLICATION SHALL BE AS PER THE CURRENT EDITION OF THE MUTCD.
- DRUMS SHALL BE APPROXIMATELY 36" IN HEIGHT, HAVING A MINIMUM WALL THICKNESS OF 3/32" AND A MINIMUM DIAMETER OF 18" REGARDLESS OF ORIENTATION.
- DRUM MATERIAL MUST BE APPROVED U.V. RESISTANT, LOW DENSITY, IMPACT RESISTANT, LINEAR POLYETHYLENE (OR APPROVED EQUIVALENT). METAL DRUMS ARE PROHIBITED FROM USE ON ALL STATE HIGHWAY PROJECTS.
- SHEETING SHALL BE APPROVED ORANGE AND WHITE TYPE IV REFLECTORIZED SHEETING CONFORMING TO M.9.30.0.
- ALL DRUMS SHALL BE WELL MAINTAINED INCLUDING REMOVAL OF DUST OR ROAD FILM, SO AS NOT TO REDUCE REFLECTIVE EFFICIENCY. WHEN A DRUM LOSES TARGET VALUE IT SHALL BE REPLACED.
- WHEN A DRUM IS NO LONGER NEEDED IT SHALL BE STORED IN A DRUM STORAGE AREA, UNLESS IT IS REQUIRED FOR FUTURE USE WITHIN A FIVE DAY PERIOD, IN WHICH CASE IT MAY BE STORED ON LOCATION.



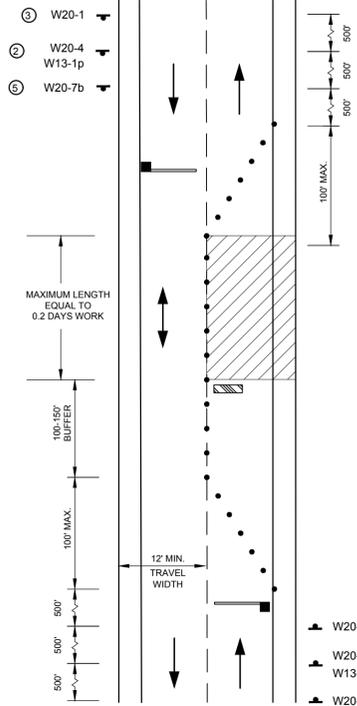
**TYPICAL LAYOUT "A"**

TWO OPERATING LANES  
(PASSABLE PAVEMENT WIDTH  
GREATER THAN 22 FEET)



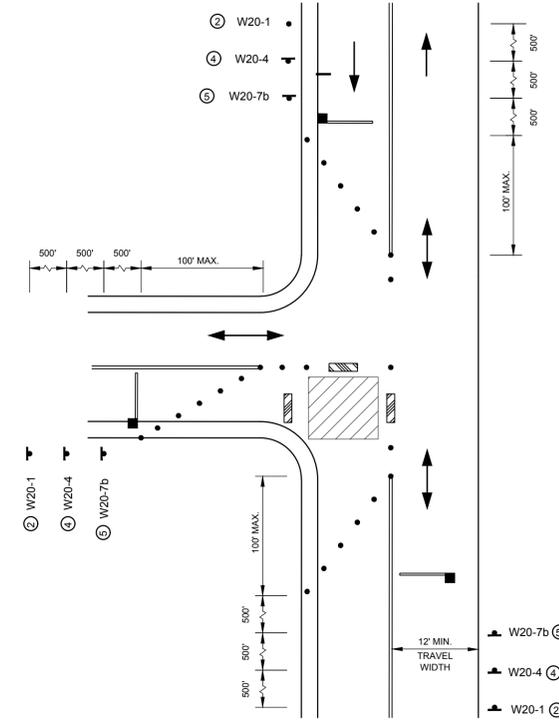
**TYPICAL LAYOUT "B"**

ONE OPERATING LANE  
(PASSABLE PAVEMENT WIDTH  
LESS THAN 22 FEET)



**TYPICAL LAYOUT "C"**

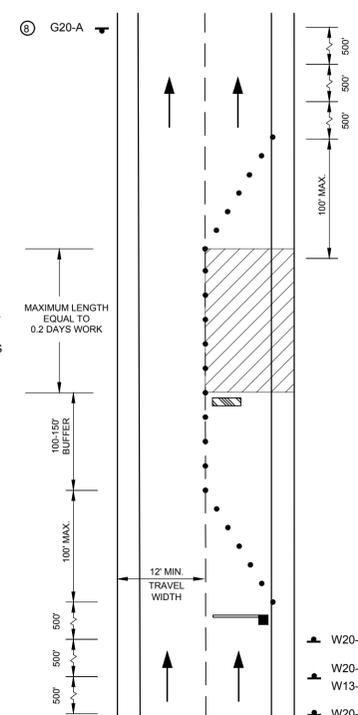
INTERSECTION LANE CLOSURE  
WHEN WORKING AT A CORNER  
WITHIN AN INTERSECTION



**WORK AREA SIGNS**

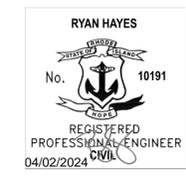
**TYPICAL LAYOUT "D"**

TWO LANE ROADWAY  
(PASSABLE PAVEMENT WIDTH  
LESS THAN 22 FEET)



- LEGEND**
- • • • TRAFFIC CONES/DRUMS (CHANNELIZING DEVICE)
  - TRAFFIC OFFICER
  - ▨ BARRICADE
  - ▲ TEMPORARY CONSTRUCTION SIGN
  - ▨ WORK AREA
  - ↔ TWO WAY TRAFFIC FLOW - SINGLE LANE WITH TRAFFIC CONTROL
  - ↔ TWO WAY TRAFFIC FLOW - TWO LANES

- ROAD WORK 1/2 MILE**  
W20-1 48" x 48" 36" x 36" 30" x 30"
- ROAD WORK 500 FT**  
W20-1 48" x 48" 36" x 36" 30" x 30"  
W13-1 24" x 24" (SPEED DETERMINED BY DISTRICT TRAFFIC ENGINEER)
- ROAD WORK AHEAD**  
W20-1 48" x 48" 36" x 36" 30" x 30"
- ONE LANE ROAD AHEAD**  
W20-4 48" x 48" 36" x 36" 30" x 30"
- POLICE OFFICER AHEAD**  
W20-7b 48" x 48" 36" x 36" 30" x 30"
- ROAD NARROWS**  
W5-1 36" x 36" 30" x 30"
- END ROAD WORK**  
G20-2A 48" x 24" 36" x 18"
- WORK ZONES**  
SPEEDING FINES DOUBLED  
R2-10a 48" x 36" 60" x 48"



**BID SET**

**WARREN AVENUE & HIGHLAND AVENUE WATER LINE REPLACEMENT**

Department of Public Works

East Providence, RI

MARK	DATE	DESCRIPTION
PROJECT NO:	E0764-10	
DATE:	APRIL 2024	
FILE:	E0764-001-T-001-TRAFFIC_recover.dwg	
DRAWN BY:	LMK	
CHECKED:	RH	
APPROVED:	BRL	

**TEMPORARY TRAFFIC CONTROL DETAILS - 1**

SCALE:

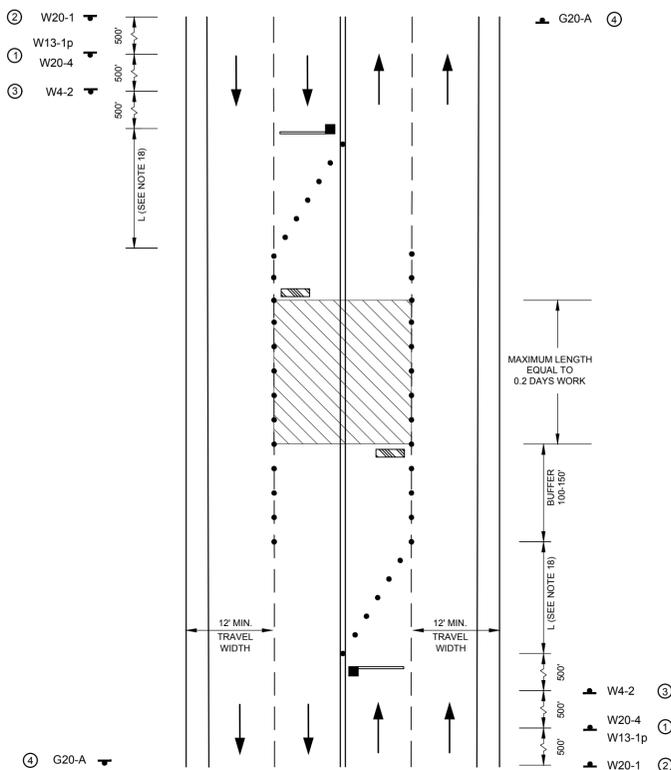
Last Saved: 4/1/2024 4:37pm By: K\mking Plotted On: Apr 01, 2024 4:37pm File: E:\Projects\2024\Warren Avenue Water Line Replacement\Drawings - Figures\AutoCAD\Sheet\E0764-001-T-001-TRAFFIC\_recover.dwg Tighe & Bond\ENGINEER East Providence, RI

**GENERAL NOTES**

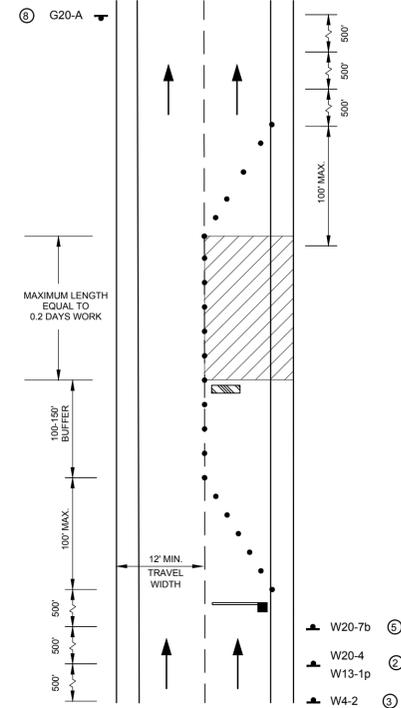
**NOTES**

1. FLAGS SHALL BE AT LEAST 16" X 16".
2. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN FIELD BY CONTRACTOR.
3. MAXIMUM SPACING OF CHANNELIZING DEVICES IS EQUAL IN FEET TO SPEED LIMIT.
4. NO TRAFFIC CONTROL DEVICES SHALL REMAIN ON THE ROADWAY AT THE END OF EACH WORK DAY.
5. SIGNS MUST BE COVERED OR REMOVED AT THE END OF EACH WORK DAY, OR WHENEVER BOTH LANES ARE OPEN TO TRAFFIC.
7. ALL WARNING SIGNS SHALL BE BLACK LEGEND ON A REFLECTIVE ORANGE BACKGROUND. ALL W AND G SERIES SIGNS SHALL BE BLACK LEGEND ON A REFLECTIVE ORANGE BACKGROUND. R2-10A SIGN SHALL BE BLACK LEGEND ON A REFLECTIVE WHITE/ORANGE BACKGROUND. FLAGS SHALL BE ATTACHED TO ALL ADVANCED WARNING SIGNS.
8. ADVISORY SPEED PLATES (W13-1) TO BE USED WHERE APPROPRIATE.
9. ALL TRAFFIC CONTROL DEVICES USED SHALL CONFORM TO THE LATEST EDITION OF THE "FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD) IN BOTH SPECIFICATION AND APPLICATION.
10. TYPICAL LAYOUT "A" SHALL BE USED FOR WORK WITH THE INTERIOR LANE CLOSURE ON MULTILANE STREET. TYPICAL LAYOUT "B" SHALL BE USED WHEN THE TRAVEL WIDTH FROM THE CHANNELING DEVICES TO THE EDGE OF PAVEMENT IS LESS THAN 22 FEET.
11. THE CONTRACTOR SHALL MAINTAIN ONE OPEN TRAVEL LANE OF NOT LESS THAN 12 FEET AT ALL TIMES.
12. THE WORK ZONE AS SHOWN ON THESE PLANS IS REPRESENTATIVE ONLY AND MAY VARY IN BOTH LENGTH AND LOCATION AS CONSTRUCTION PROGRESSES. REGARDLESS OF THESE VARIATIONS, THE OFFSET DISTANCES TO THE TRAFFIC CONTROL DEVICES SHOWN SHALL BE MAINTAINED.
13. NO CONSTRUCTION EQUIPMENT OR MATERIALS (EXCEPT THOSE IN USE) SHALL BE STORED CLOSER THAN 8 FEET TO THE EDGE OF TRAVELED LANES.
14. ALL OPERATIONS SHALL BE CONDUCTED SO AS NOT TO INTERFERE WITH, INTERRUPT, OR ENDANGER THE GENERAL PUBLIC OR THE TRAFFIC FLOW.
15. THE NUMBER AND LOCATION OF ALL SIGNS AND DEVICES SHALL BE AS DEEMED NECESSARY BY THE DRILLING CONTRACTOR FOR THE SAFE AND EFFICIENT PERFORMANCE OF THE WORK AND THE SAFETY OF THE TRAVELING PUBLIC. ALL WARNING DEVICES SHALL BE SUBJECT TO REMOVAL, REPLACEMENT AND/OR REPOSITIONING BY THE CONTRACTOR AS OFTEN AS DEEMED NECESSARY BY THE ENGINEER.
16. ALL PERSONNEL WHO ARE WORKING ON THE TRAVELED WAY OR BREAKDOWN LANES AND WHO ARE NOT PROTECTED BY TRAFFIC CONES OR SIMILAR PROTECTIVE DEVICES SHALL WEAR SAFETY VESTS.
17. NO TRENCH SHALL BE LEFT OPEN AFTER WORKING HOURS. IF IT BECOMES NECESSARY FOR SAID TRENCH TO BE LEFT AFTER WORKING HOURS, THEN IT SHALL BE COVERED WITH STEEL PLATES ACCORDANCE TO FEBRUARY 2024 RHODE ISLAND DOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
18. TAPER FORMULA:  
 $L = S \times W$  FOR SPEED > 45  
 $L = (S \times S \times W)/60$  FOR SPEED < 40
19. ALL SIGNS AND SUPPORTS SHALL BE INSTALLED IN ACCORDANCE WITH RIDOT DEPARTMENT STANDARDS.
20. TRAFFIC SIGNS USED DURING WORK HOUR SETUPS SHALL REMAIN IN PLACE ONLY DURING WORK HOURS. TRIPOD MOUNTING IS ACCEPTABLE.
21. REFLECTORIZED DRUMS SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES AND/OR WHEN A ROADSIDE HAZARD EXISTS. ANY REFLECTORIZED DRUMS REQUIRED TO REMAIN IN PLACE DURING DARKNESS SHALL BE EQUIPPED WITH STEADY BURN (TYPE C) PER MUTCD.
22. ALL DISTANCES SHOWN ARE MINIMUM AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS, WITH APPROVAL OF THE ENGINEER.
23. WORK ZONE SIGNAGE SHALL BE COVERED OR REMOVED AT THE END OF EACH WORK DAY.
24. DURING ALL CONSTRUCTION ACTIVITIES ON THE ROADWAYS INCLUDING EARTHWORK AND GRADING, A MINIMUM OF ONE LANE ALTERNATING TRAFFIC FLOW SHALL BE MAINTAINED.
25. FULL ROADWAY WIDTH MUST BE RETURNED AT THE END OF EACH WORK DAY.
26. THE NUMBER OF POLICE OFFICERS AT ANY LOCATION IS TO BE DETERMINED BY CONTRACTOR.
27. ONE LANE TRAFFIC FLOW SHALL BE REQUIRED DURING ALL OPERATIONS WHICH REDUCE DRIVE LANE(S) LESS THAN 12'.
28. HALF WIDTH CONSTRUCTION METHODS SHALL BE UTILIZED FOR ROAD RECLAMATION, BASE PREPARATION, AND PAVING OPERATIONS.
29. AS CONSTRUCTION OPERATIONS CHANGE, SO SHALL WARNING SIGNS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND ARRANGING SIGNS AS CONSTRUCTION VARIES AND PROCEEDS.
30. ALL WORK REQUIRING LANE CLOSURES OR THE SETTING UP AND TAKING DOWN OF WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE DONE ON ROADWAYS ONLY DURING APPROVED WORKING HOURS.

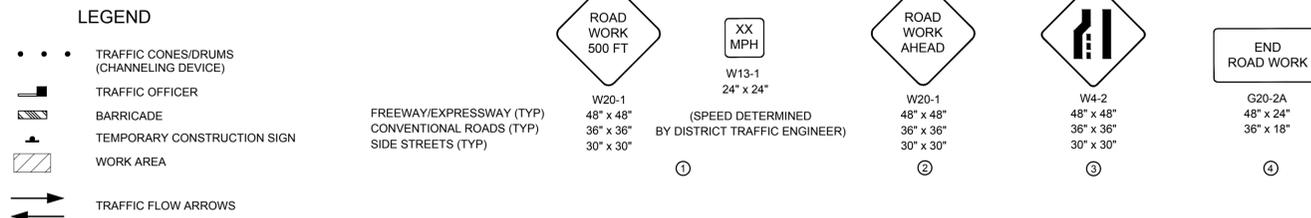
**TYPICAL LAYOUT "A"**  
 INTERIOR LANE CLOSURE ON MULTI-LANE STREET



**TYPICAL LAYOUT "B"**  
 TWO LANE ROADWAY  
 (PASSABLE PAVEMENT WIDTH  
 LESS THAN 22 FEET)



**WORK AREA SIGNS**



**BID SET**

**WARREN AVENUE & HIGHLAND AVENUE WATER LINE REPLACEMENT**

Department of Public Works

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APPROVED:	BRL	

**TEMPORARY TRAFFIC CONTROL DETAILS - 2**

SCALE:

**T-102**