

UXBRIDGE PUBLIC WORKS DEPARTMENT

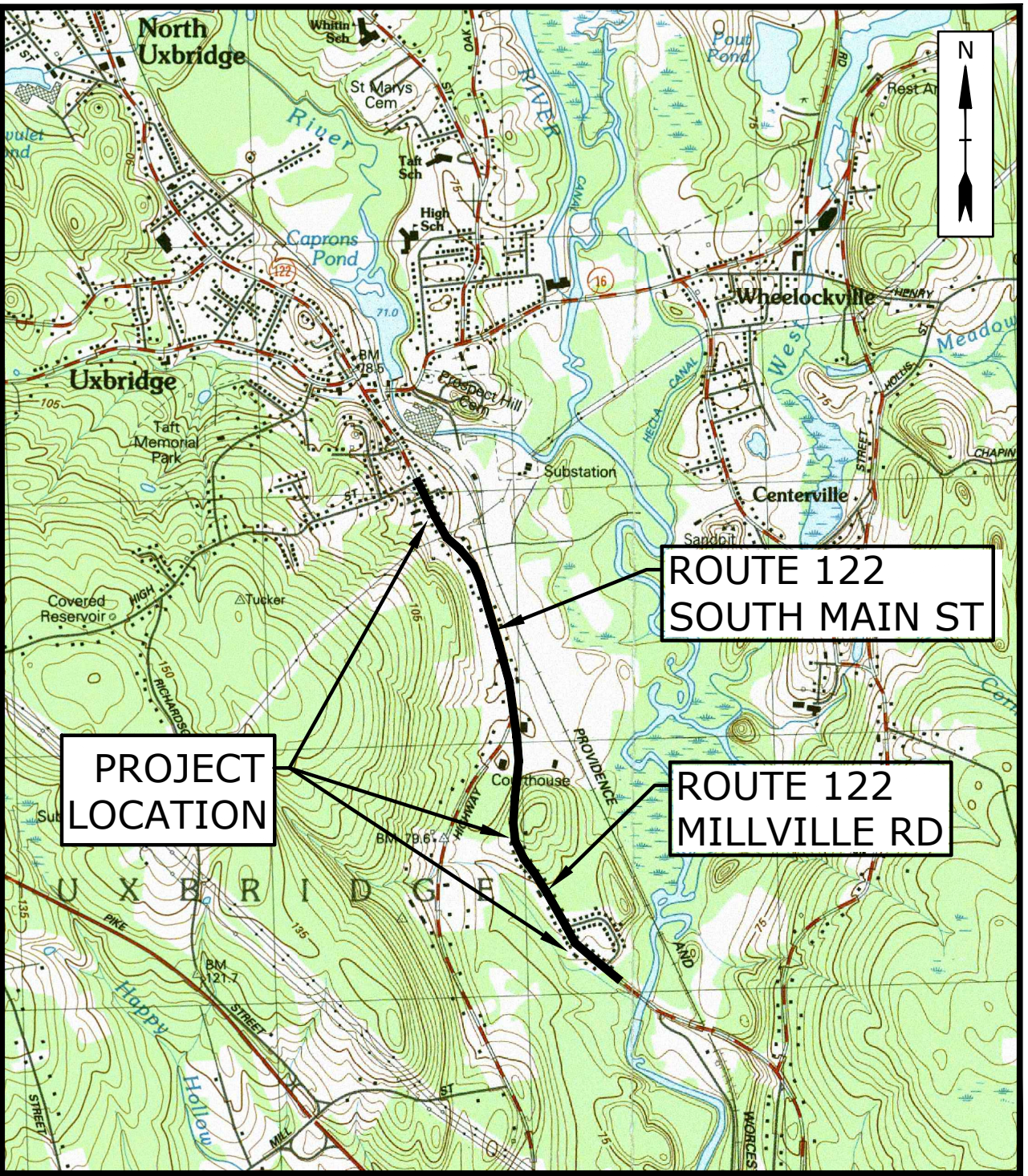
ROUTE 122

WATER MAIN IMPROVEMENTS PROJECT

CONTRACT 2023-17

JANUARY 2023

LIST OF DRAWINGS		
SHEET NO.	DRAWING NO.	DRAWING TITLE
1	G-001	COVER SHEET AND LIST OF DRAWINGS
2	G-002	GENERAL NOTES
3	G-003	LEGEND AND ABBREVIATIONS
4	G-004	OVERALL SITE PLAN AND SHEET LAYOUT
5	C-101	WATER MAIN PLAN - STA 120 TO STA 130
6	C-102	WATER MAIN PLAN - STA 130 TO STA 140+50
7	C-103	WATER MAIN PLAN - STA 140+50 TO STA 151
8	C-104	WATER MAIN PLAN - STA 151 TO STA 161
9	C-105	WATER MAIN PLAN - STA 161 TO STA 171
10	C-106	WATER MAIN PLAN - STA 171 TO STA 182
11	C-107	WATER MAIN PLAN - STA 182 TO STA 187
12	C-108	WATER MAIN PLAN - STA 187 TO STA 192+61
13	C-109	MISCELLANEOUS DETAILS - 1
14	C-110	MISCELLANEOUS DETAILS - 2
15	C-111	MISCELLANEOUS DETAILS - 3
16	C-112	MISCELLANEOUS DETAILS - 4
17	C-113	MISCELLANEOUS DETAILS - 5
18	C-114	TRAFFIC MANAGEMENT PLAN

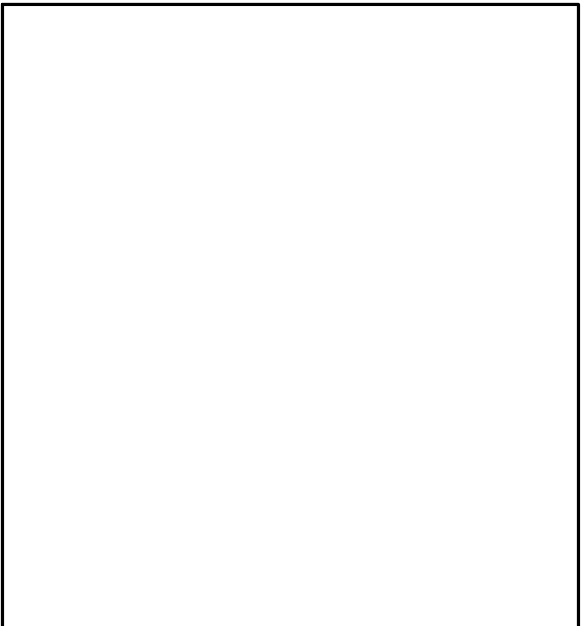


LOCATION MAP
SCALE: 1" = 2000'

PREPARED BY:
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IAN W. MEAD, PE



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PREPARED FOR:
TOWN OF UXBRIDGE
STEVEN SETTE - TOWN MANAGER

DEPARTMENT OF PUBLIC WORKS
BENN S. SHERMAN, PE - DIRECTOR

COMPLETE SET 18 SHEETS

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BASE PLAN NOTES

- THE DRAWINGS ARE BASED ON THE MASSACHUSETT STATE PLANE COORDINATE SYSTEM: HORIZONTAL-NAD83 ; VERTICAL-NAVD1988
- THE EXISTING CONDITIONS SHOWN ON THESE PLANS CONSIST OF MOBILE LIDAR PERFORMED BY TREK DESIGN GROUP, LLC IN SEPTEMBER 2020 AND AN ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY NITSCH ENGINEERING ON JULY, AUGUST, SEPTEMBER, OCTOBER AND DECEMBER OF 2020, FIELD BOOK 27672, 41682, 76272 AND NITSCH FIELD BOOK 671, 777.
- COORDINATES SHOWN HEREON ARE RESULTANT FROM CONVENTIONAL TOTAL STATION TRAVERSING AND DIFFERENTIAL LEVELING AND ARE RELATED TO THE NORTH AMERICAN DATUM OF 1983 – NAD 83(2011), SPC 83 – MASSACHUSETTS (MAINLAND ZONE) EPOCH 2010.00 AND THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND ARE BASED ON CONTROL PROVIDED BY MASSDOT IN FILE 3414 ExBase.dwg.
- DIVISIONS OF PRIVATE OWNERSHIPS ARE COMPILED FROM DEEDS, RECORD PLANS AND ASSESSOR'S MAPS.
- SANITARY AND COMBINED GRAVITY SYSTEMS FLOW LINE MEASURE DOWNS NOT MEASURED DUE TO HEALTH AND SAFETY REASONS RELATED TO COVID-19 PANDEMIC.
- WETLAND BOUNDARIES WERE FLAGGED BY OTHERS.
- PROPERTY LINES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE BASED UPON RECORD DEEDS, PLANS AND ASSESSORS INFORMATION.
- SUBSURFACE UTILITY LINES, AS SHOWN HEREON, ARE APPROXIMATE. BEFORE DESIGNING FUTURE CONNECTIONS, THE APPROPRIATE UTILITIES MUST BE CONSULTED. BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED (SEE MASSACHUSETTS GENERAL LAWS, CHAPTER 82 SECTION 40.) CALL "DIG SAFE" 1 (888) 344-7233.

WATER SYSTEM IMPROVEMENTS NOTES

- PROPOSED WATER MAINS SHALL BE PROVIDED IN ACCORDANCE WITH THE OWNER'S STANDARDS, 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.
- CONTRACTOR WILL PROVIDE PUBLIC NOTIFICATION 48 HOURS IN ADVANCE OF SHUTDOWNS TO WATER SYSTEM CUSTOMERS AND COORDINATE WITH THE TOWN OF UXBRIDGE ON SCHEDULING SUCH NOTIFICATIONS.
- HORIZONTAL AND VERTICAL LOCATION OF WATER MAINS MAY BE MODIFIED TO FIT EXISTING FIELD CONDITIONS, UPON APPROVAL OF THE ENGINEER.
- WORKING PRESSURE OF WATER MAIN IN PROJECT AREA IS 120 PSI.
- 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. IN ADDITION, PROVIDE CONCRETE THRUST BLOCKS AT ALL TEES, BENDS, HYDRANTS, CAPS, AND PLUGS.
- 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.
- IN SITUATIONS WHEN A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO 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, IN ACCORDANCE WITH SUBMITTED SEQUENCE OF CONSTRUCTION.
- NOTIFY WATER SYSTEM CUSTOMERS REGARDING INTERRUPTIONS IN SERVICE AT LEAST 48 HOURS IN ADVANCE. COORDINATE WITH OWNER REGARDING SCHEDULING SUCH NOTIFICATIONS. AN EXISTING WATER MAIN SHALL NOT BE SHUT OFF FOR MORE THAN 6 HOURS.
- 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.
- 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.

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.
- COMPACT, STABILIZE, AND LOAM AND SEED SIDE SLOPES, SHOULDER AREAS AND DISTURBED VEGETATED AREAS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS REQUIRED BY PERMITS. GRADE SIDE SLOPES, SHOULDER AREAS AND DISTURBED VEGETATED AREAS TO A MAXIMUM SLOPE OF 3 HORIZONTAL TO 1 VERTICAL (3H:1V), WHERE POSSIBLE. PROVIDE BIODEGRADABLE, NETLESS EROSION CONTROL BLANKETS TO PREVENT EROSION WHERE SLOPES ARE STEEPER THAN 3H:1V.
- SETTLE OR FILTER ALL SILT-LADEN WATER FROM DEWATERING ACTIVITIES IN A SEDIMENTATION OR FILTER BAG,SO TO REMOVE SEDIMENTS PRIOR TO THEIR 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.
- LOAM AND SEED ALL DISTURBED VEGETATED AREAS TO ESTABLISH COVER AND STABILIZATION AS SOON AS POSSIBLE FOLLOWING DISTURBANCE.
- 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.

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 DAY'S WORK.
- NO OPEN TRENCHES WILL BE ALLOWED OVER NIGHT. 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.
- TEMPORARY WATER BYPASS CONCEPT PLAN IS FOR INFORMATIONAL PURPOSES ONLY.
- CONTRACTOR SHALL DEVELOP AND SUBMIT A DETAILED TEMPORARY WATER BYPASS PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE VALVE OPENING AND CLOSING WITH THE CITY OF LEOMINSTER DEPARTMENT OF PUBLIC WORKS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL SUBMIT BID OF TEMPORARY BYPASS BASED ON THE PLAN FOR BYPASS SUBJECT TO APPROVAL.
- CONTRACTOR SHALL TAKE SPECIAL CONSIDERATION FOR TEMPORARY SERVICE CONNECTIONS TO THE LYDIA TAFT HOUSE, US POSTAL OFFICE, AND THE UXBRIDGE DISTRICT COURT.
- DUG CONNECTIONS OR TAPPING HOLES MAY BE REQUIRED FOR PROVIDING TEMPORARY BYPASS TO FIRE SERVICES AFFECTED BY THE WATER MAIN SHUTDOWN.

SURFACE RESTORATION NOTES

- ALL PAVEMENT DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 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.
- REPAIR DISTURBED PAVED SURFACES IN STATE ROADWAYS DAILY, UNLESS OTHERWISE APPROVED/REQUIRED BY THE OWNER.
- PLACE PERMANENT BITUMINOUS CONCRETE PAVEMENT AT DISTURBED DRIVEWAYS AT THE END OF EACH WORK WEEK, UNLESS OTHERWISE APPROVED/REQUIRED BY THE OWNER.
- TRANSFER ALL TEMPORARY BENCHMARKS, AS NECESSARY.
- 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.

Route 122
Water Main
Improvements
Project

Uxbridge Public
Works
Department

Uxbridge,
Massachusetts

0	1/26/2023	Issued For Bidding
MARK	DATE	DESCRIPTION
PROJECT NO:		U5004-012B
DATE:		1/10/2023
FILE:		U5004-012B G-002 & G-003.dwg
DRAWN BY:		CFY
CHECKED BY:		RG
APPROVED BY:		IWM

GENERAL NOTES

SCALE: NO SCALE

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LEGEND			
EXISTING DRAIN MANHOLE		PROPOSED CAP, CONCRETE PLUG OR CRIMP (SMALL DIA WS)	
EXISTING CATCH BASIN		PROPOSED WATER COUPLING/SOLID SLEEVE	
EXISTING HEADWALL		PROPOSED WATER REDUCER	
EXISTING STORM DRAIN LINE		PROPOSED WATER GATE	
EXISTING GAS VALVE		PROPOSED HYDRANT	
EXISTING GAS LINE		PROPOSED WATER LINE	
EXISTING WATER GATE		TEMPORARY WATER MAIN	
EXISTING HYDRANT		WATER SHUTOFF (CURB STOP & BOX)	
EXISTING WATER LINE		TEST PIT REQUIRED	
EXISTING ELECTRIC MANHOLE		PROPOSED EROSION CONTROL BARRIER	
EXISTING ELECTRIC TRANSFORMER			
EXISTING UTILITY POLE			
EXISTING UTILITY POLE WITH GUY			
EXISTING STREET LIGHT			
EXISTING OVERHEAD ELECTRIC			
EXISTING ELECTRICAL LINE			
EXISTING TELECOMM MANHOLE			
EXISTING TELEPHONE LINE			
EXISTING TV MANHOLE			
EXISTING CABLE TELEVISION LINE			
EXISTING PIPE PREVIOUSLY ABANDONED IN PLACE			
EXISTING PIPE/STRUCTURE/UTILITY TO BE DEMOLISHED			
EXISTING PIPE TO BE ABANDONED IN PLACE			
EXISTING EDGE OF PAVEMENT			
EXISTING EDGE OF GRAVEL ROAD			
EXISTING CONCRETE, GRANITE OR BITUMINOUS CURBING			
EXISTING MAILBOX			
EXISTING LIGHT			
EXISTING TRAFFIC STRUCTURES			
EXISTING STREET SIGN			
EXISTING WIRE OR CHAIN LINK FENCE			
EXISTING STONE WALL			
EXISTING RETAINING WALL			
EXISTING RAILROAD TRACKS			
EXISTING DECIDUOUS TREE			
EXISTING CONIFEROUS TREE			
EXISTING TREELINE / EDGE OF WOODED AREA			
EXISTING HEDGES			
EXISTING SPOT ELEVATION			
EXISTING 1' CONTOUR			
EXISTING 5' CONTOUR			
EXISTING BUILDING			
EXISTING BORING LOCATION			
EXISTING PAVEMENT CORE LOCATION			
EXISTING SURVEY MONUMENT/ MAG NAIL			
EXISTING STREET BOUND			
CONCRETE BOUND FOUND			
REBAR FOUND			
IRON PIN FOUND			
PROPERTY LINE			
EASEMENT LINE			
MASSDOT CENTERLINE STATIONING			
BORDERING VEGETATED WETLANDS (BVW)			
TOP OF BANK			
MEAN ANNUAL HIGH WATER (MAHW)			
BORDERING LAND SUBJECT TO FLOODING			
50-FOOT NO DISTURB ZONE			
75-FOOT NO BUILD ZONE			
100-FOOT BUFFER ZONE			
200-FOOT RIVERFRONT AREA			

ABBREVIATIONS

APPROXIMATE	APPROX
ASBESTOS CEMENT	AC
BITUMINOUS CONCRETE	BC
BITUMINOUS CONCRETE SIDEWALK	BCW
BITUMINOUS CURB	BCC
BORDERING VEGETATED WETLANDS	BVW
CATCH BASIN	CB
CAST IRON	CI
CONCRETE	CONC
CONCRETE CURB	CC
CORPORATION	CORP
CORRUGATED METAL PIPE	CMP
CUBIC FEET	CF
DIAMETER	DIA
DUCTILE IRON	DI
ELEVATION	EL
EXTENSION	EXT
FOOT	FT
GRANITE CURB	GC
HIGH DENSITY POLYETHYLENE	HDPE
HYDRANT	HYD
INVERT	INV
LINEAR FEET	LF
LIGHT POLE	LP
LAND UNDER WATERBODIES & WATERWAYS	LUWW
MAILBOX	MB
MANUFACTURER	MFR
MASSACHUSETTS ELECTRIC COMPANY	MECO
MEAN ANNUAL HIGH WATER LINE	MAHW
MECHANICAL JOINT	MJ
MANHOLE	MH
MAXIMUM	MAX
MINIMUM	MIN
NATIONAL GRID	NG
NEW ENGLAND TELEPHONE	NET
NOW/FORMERLY	N/F
NO CURB	NC
OVERHEAD ELECTRIC	OE
POLYETHYLENE	PE
POUNDS PER SQUARE FOOT	PSF
POUNDS PER SQUARE INCH	PSI
PUBLIC WATER	PW
POLYVINYL CHLORIDE	PVC
REINFORCED CONCRETE PIPE	RCP
REQUIRED	REQD
STATION	STA
TOP OF BENCHMARK	TBM
TYPICAL	TYP
UNKNOWN	UNK
UTILITY POLE	UP
WETLAND FLAG	WF

ALIGNMENT/DIRECTION

EAST	E
LENGTH	L
NORTH	N
NORTHEAST	NE
NORTHWEST	NW
ON CENTER	OC
SOUTH	S
SOUTHEAST	SE
SOUTHWEST	SW
WEST	W

UTILITY CONTACTS

CABLE	CHARTER COMMUNICATIONS
TELEPHONE	VERIZON
ELECTRIC	NATIONAL GRID
GAS	EVERSOURCE GAS
WATER AND SEWER	UXBRIDGE DPW

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Route 122 Water Main Improvements Project

Uxbridge Public
Works
Department

Uxbridge,
Massachusetts

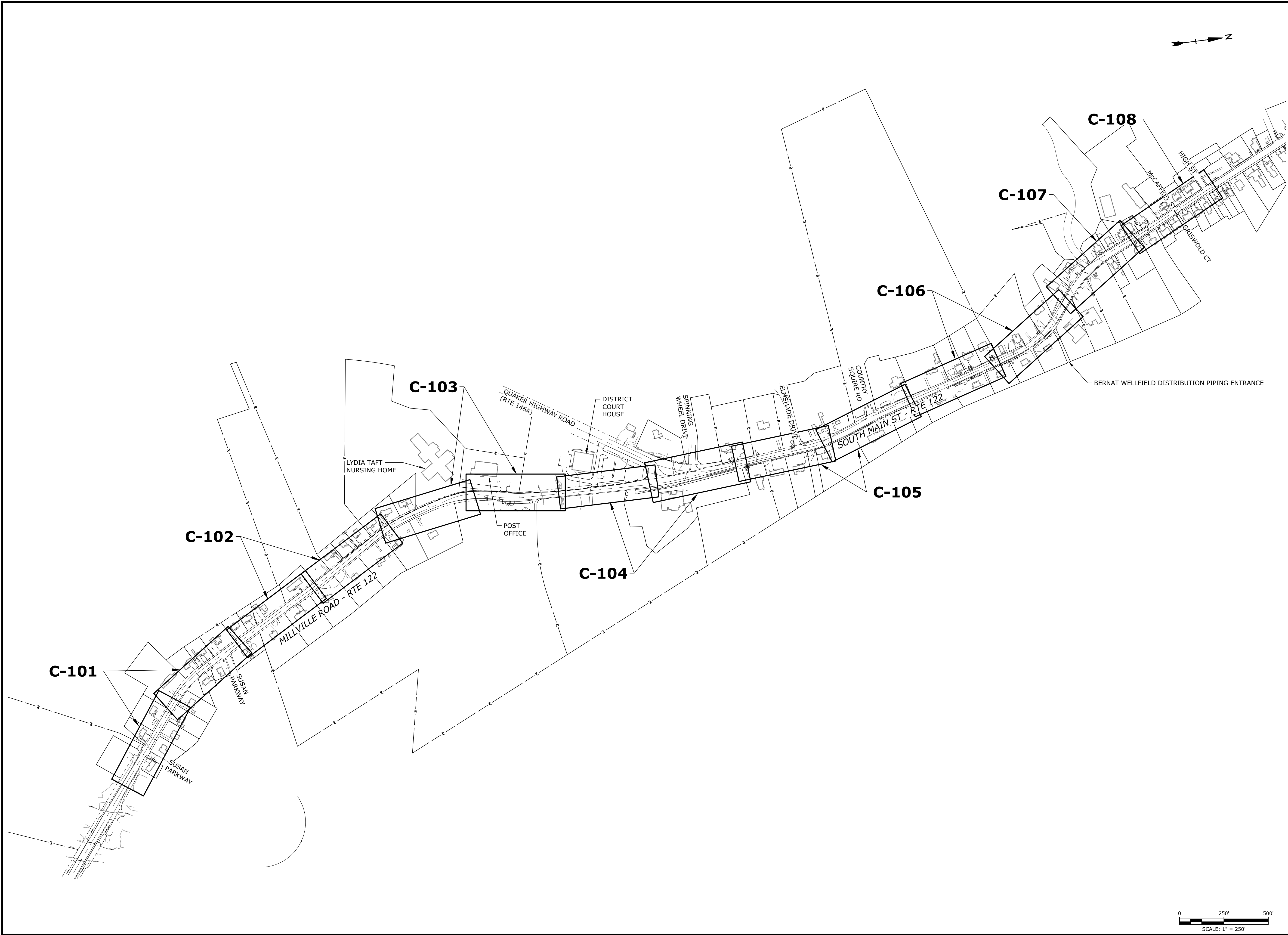
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DATE: 1/10/2023		
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DRAWN BY: CFY		
CHECKED BY: RG		
APPROVED BY: IWM		

LEGEND AND ABBREVIATIONS

SCALE: NO SCALE

G-003

Last Saved: 1/16/2023 11:16:20am By: CFY
Plotted On: Jan 23, 2023 10:02am By: CFY
Tighe & Bond \\bayresnet.com\data\user\Projects\U\U5004_Uxbridge\012_2022_Water_Mains\Drawings_Figures\AutoCAD_12B_Route_122_Sheet\U5004-012B_G-004.dwg



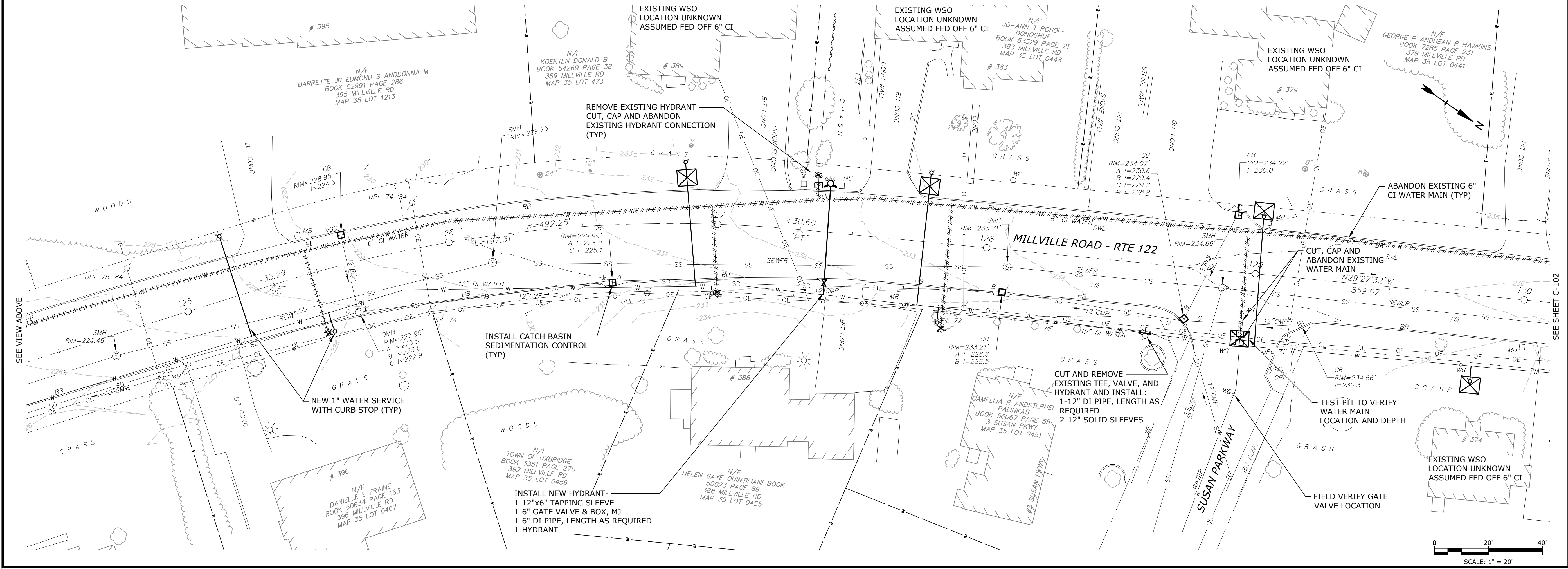
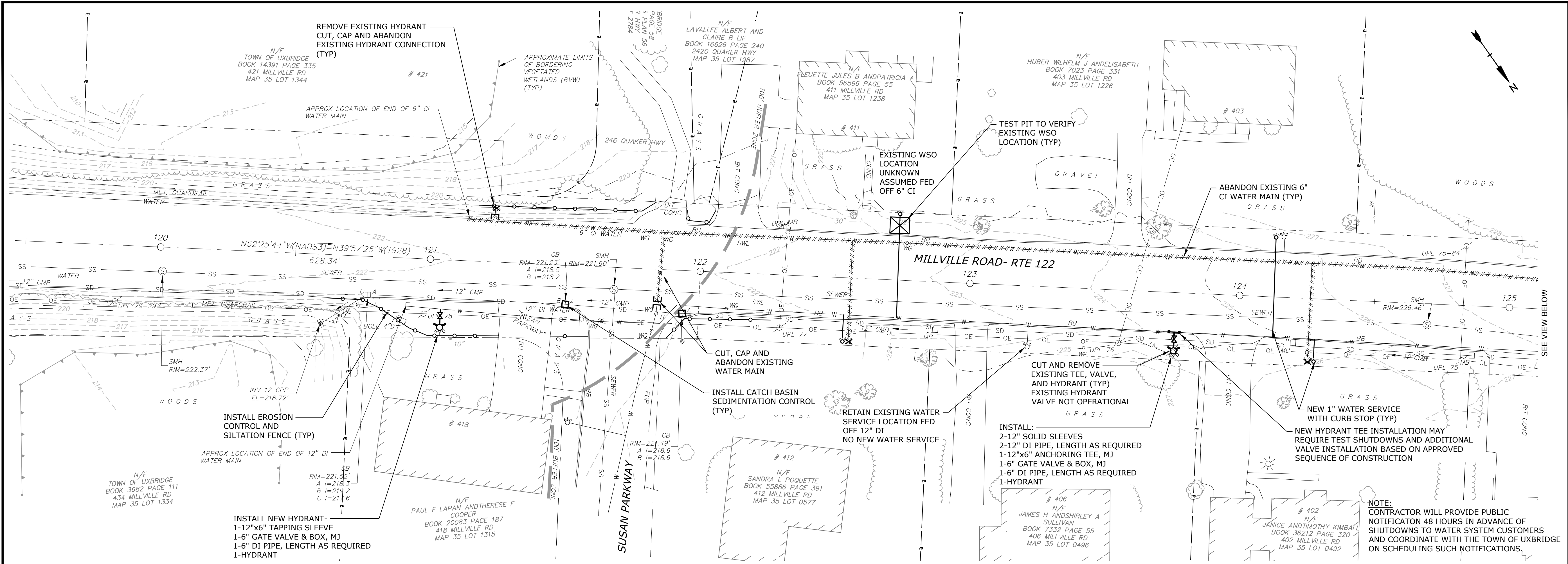
Tighe&Bond

Route 122 Water Main Improvements Project

Uxbridge Public Works Department

Uxbridge, Massachusetts

0	1/26/2023	Issued For Bidding
MARK	DATE	DESCRIPTION
PROJECT NO: U5004-012B		
DATE: 1/10/2023		
FILE: U5004-012B G-004.dwg		
DRAWN BY: CFY		
CHECKED BY: RG		
APPROVED BY: IWM		
OVERALL SITE PLAN AND SHEET LAYOUT		
SCALE:		1"=250'
G-004		



Route 122
Water Main
Improvements
Project

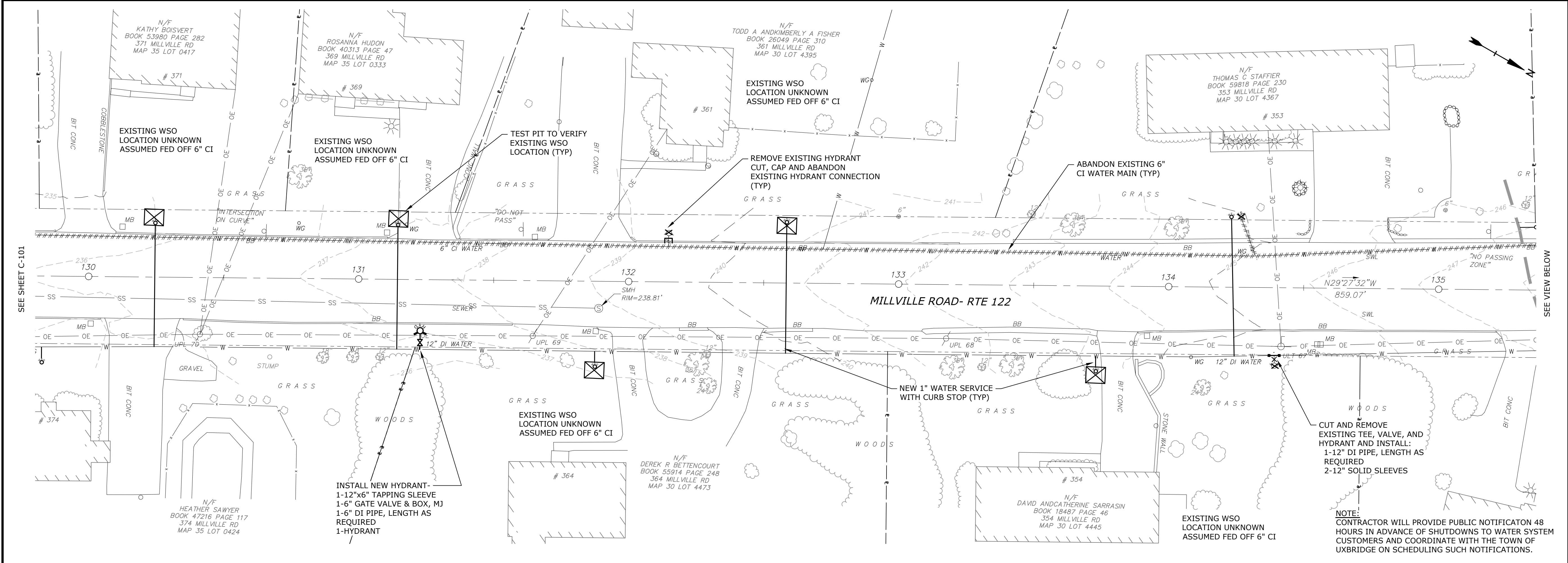
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Massachusetts

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DATE:	1/10/2023	
FILE:	U5004-012B WatPlnsB.dwg	
DRAWN BY:	CFY	
CHECKED BY:	RG	
APPROVED BY:	IWM	

WATER MAIN PLAN
STA 120 TO STA 130

SCALE: 1"=20'



Route 122 Water Main Improvements Project

Uxbridge Public
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PROJECT NO: U5004-0128		
DATE: 1/10/2023		
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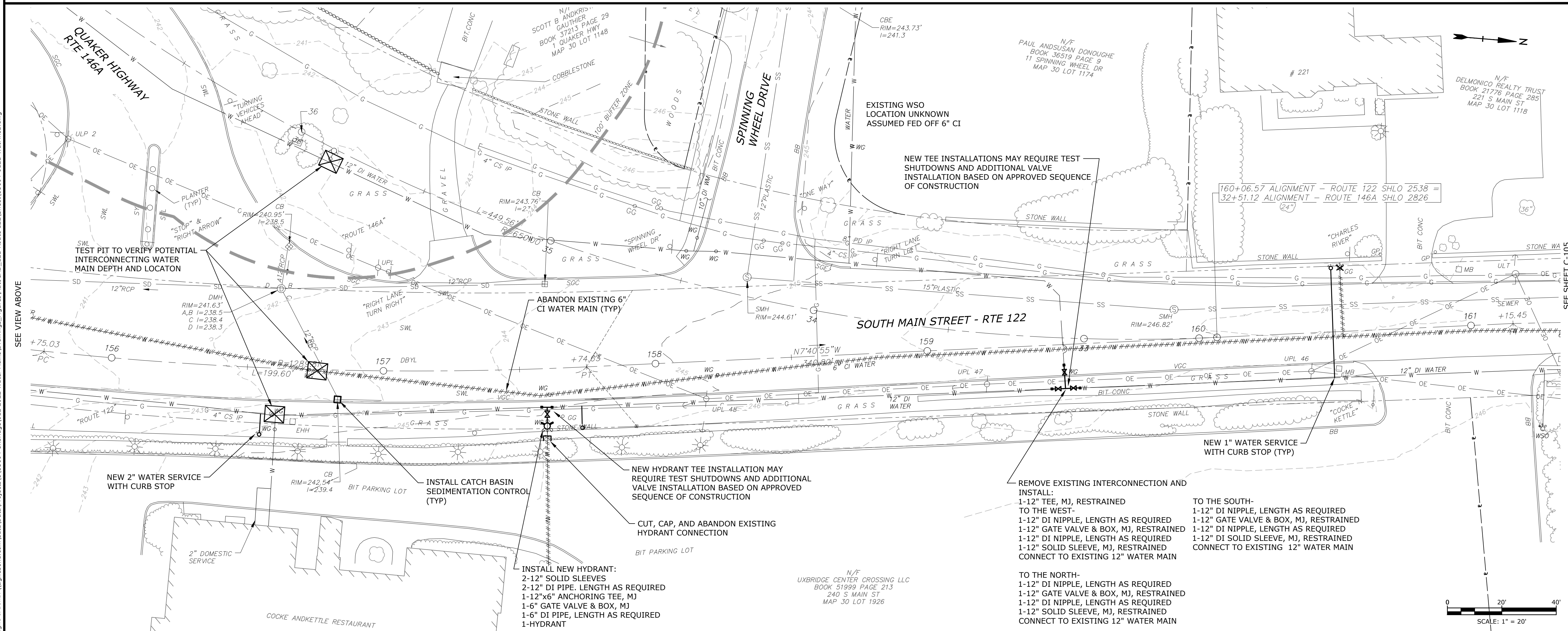
WATER MAIN PLAN
STA 130 TO STA 140+50

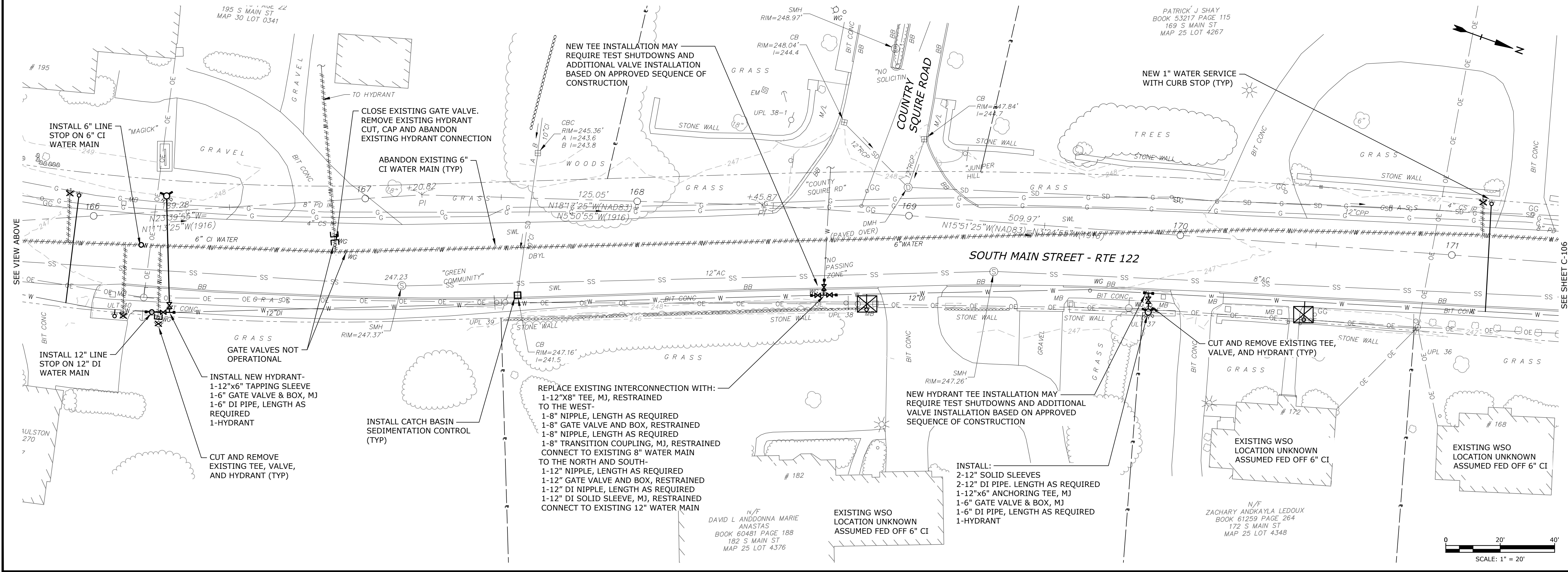
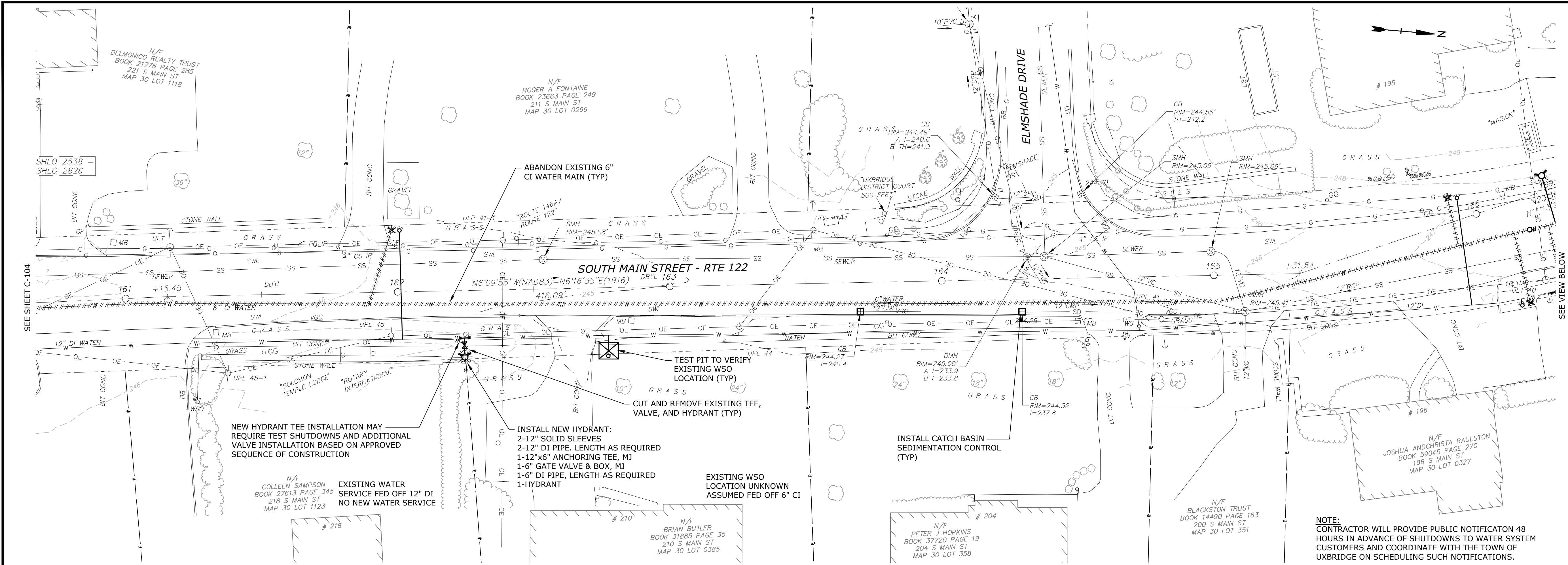
SCALE: 1"=20'

C-103

WATER MAIN PLAN
STA 151 TO STA 161

C-104





Route 122 Water Main Improvements Project

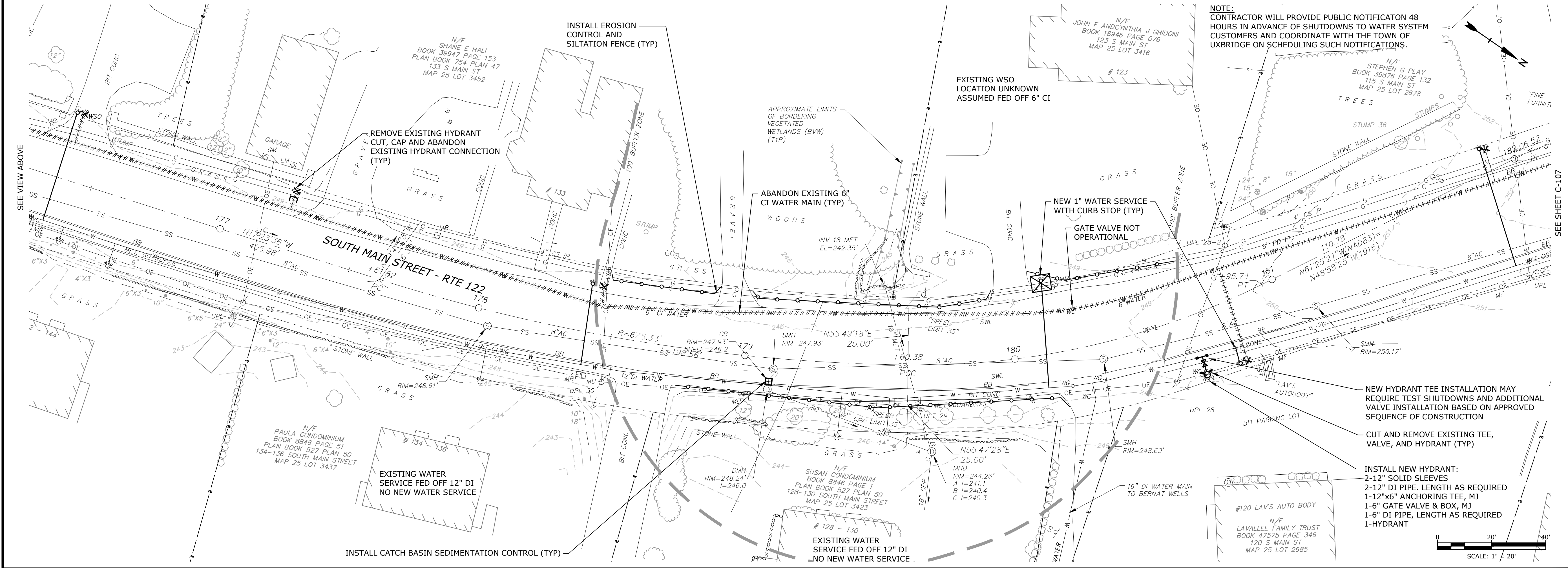
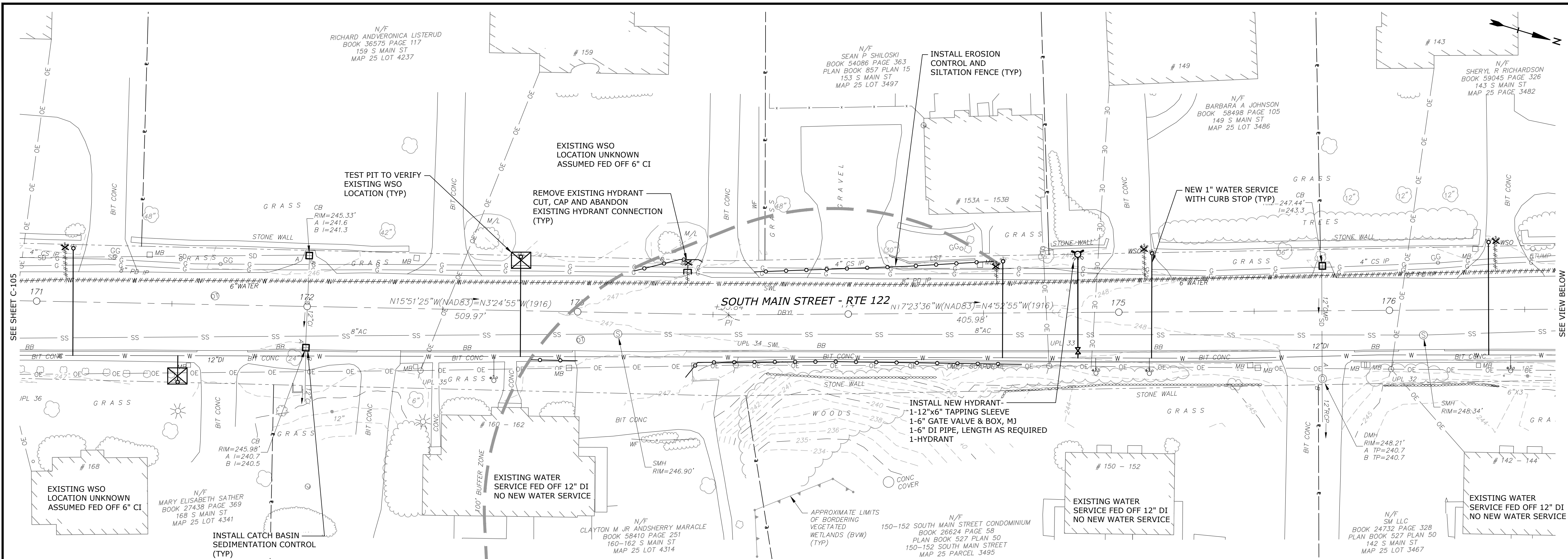
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Works
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Massachusetts

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WATER MAIN PLAN
STA 161 TO STA 171

SCALE: 1" = 20'



Route 122
Water Main
Improvements
Project

Uxbridge Public
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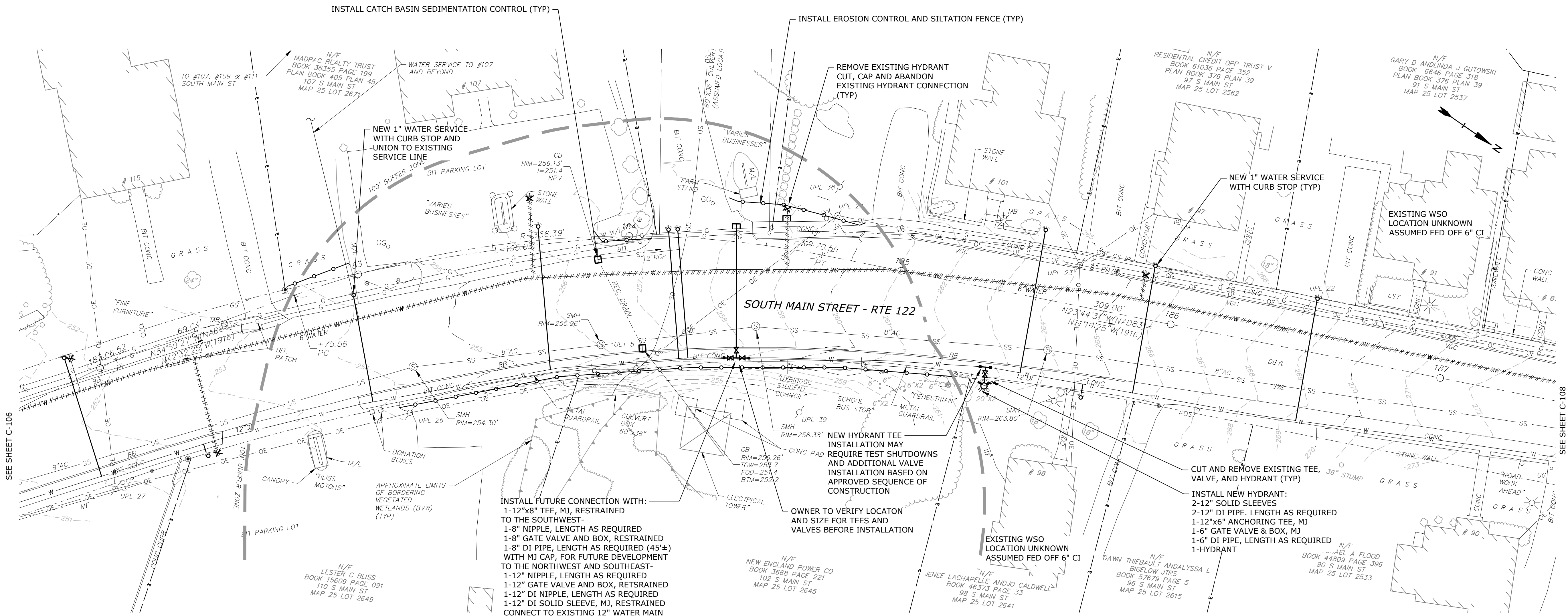
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DATE:	1/10/2023	
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CHECKED BY:	RG	
APPROVED BY:	IWM	

WATER MAIN PLAN
STA 171 TO STA 182

SCALE: 1"=20'

C-106

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- NOTES:
- CONTRACTOR WILL PROVIDE PUBLIC NOTIFICATION 48 HOURS IN ADVANCE OF SHUTDOWNS TO WATER SYSTEM CUSTOMERS AND COORDINATE WITH THE TOWN OF UXBRIDGE ON SCHEDULING SUCH NOTIFICATIONS.
 - REPAIR DISTURBED CEMENT CONCRETE SIDEWALK WITH WELDED WIRE MESH PER CEMENT CONCRETE SIDEWALK SECTION DETAIL

Route 122
Water Main
Improvements
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Uxbridge Public
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MARK	DATE	DESCRIPTION
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DATE:		1/10/2023
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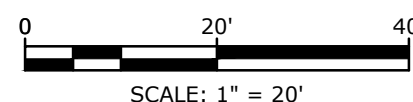
WATER MAIN PLAN
STA 182 TO STA 187

SCALE: 1" = 20'

Uxbridge Public
Works
Department

WATER MAIN PLAN
STA 187 TO STA 192+61.16

C-108

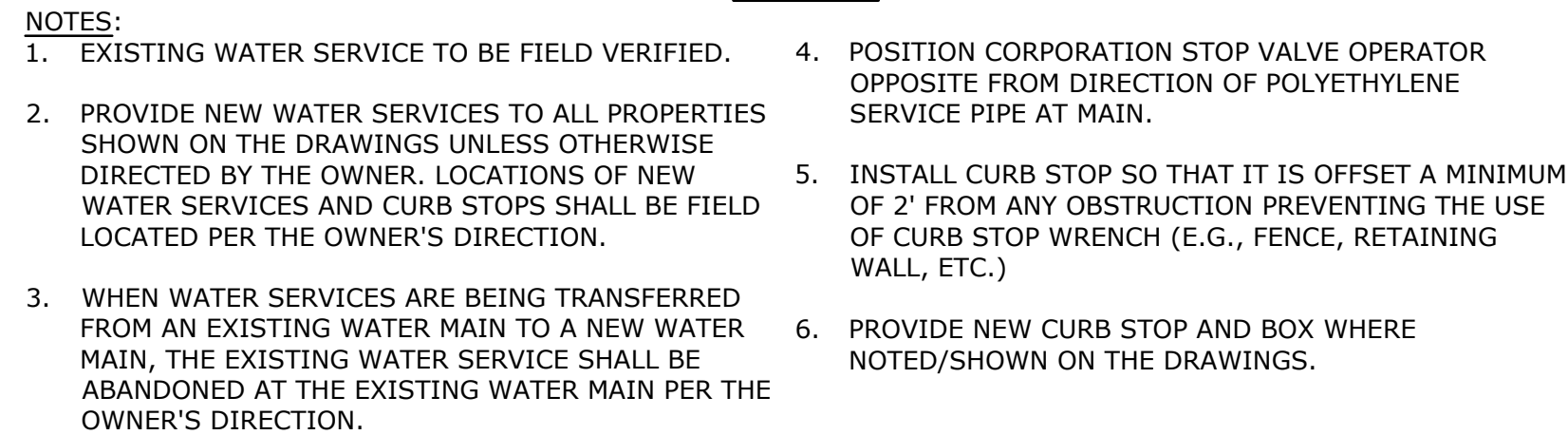


TO THE WEST FROM 12"x8" TEE:
1-8" DI NIPPLE, LENGTH AS REQUIRED
1-8" GATE VALVE & BOX, RESTRAINED
1-8" DI NIPPLE, LENGTH AS REQUIRED
1-8" 45° BEND, MJ, RESTRAINED
1-8" DI NIPPLE, LENGTH AS REQUIRED
1-8" 45° BEND, MJ, RESTRAINED
1-8" DI NIPPLE, LENGTH AS REQUIRED
1-8" DI SOLID SLEEVE, MJ, RESTRAINED
CONNECT TO EXISTING 8" WATER MAIN

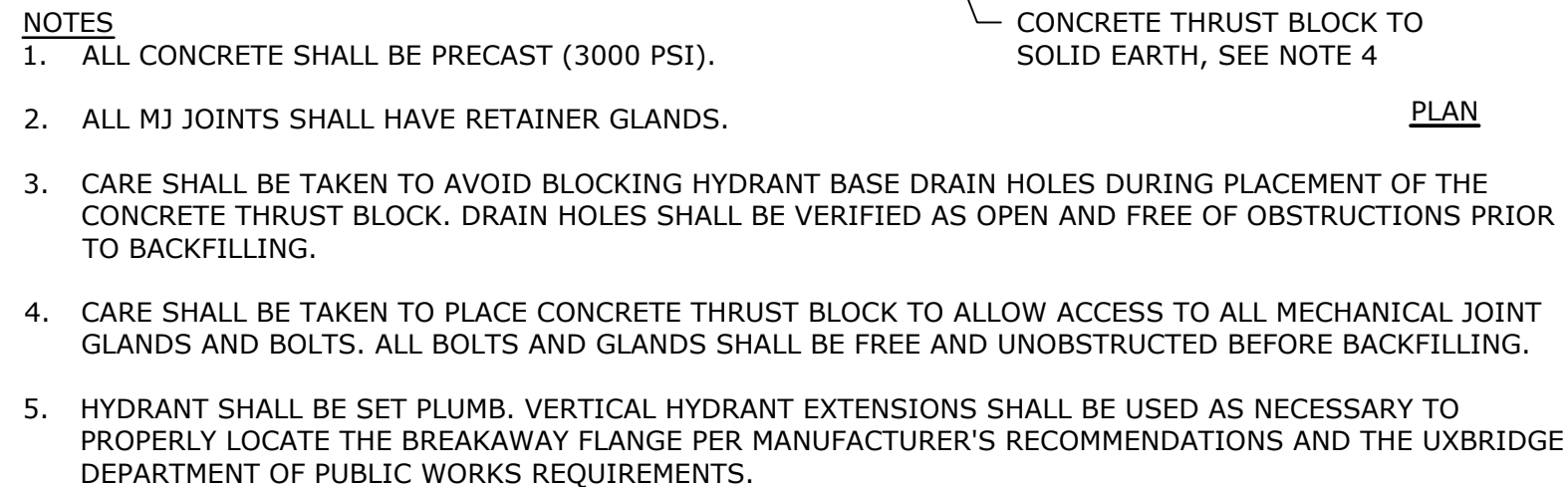
TO THE NORTH FROM 12"x6" TEE:
1-12" DI NIPPLE, LENGTH AS REQUIRED
1-12" GATE VALVE & BOX, RESTRAINED
1-12" DI NIPPLE, LENGTH AS REQUIRED
1-12" DI SOLID SLEEVE, MJ, RESTRAINED
CONNECT TO EXISTING 12" WATER MAIN

TO THE EAST FROM 12"x6" TEE:
1-6" DI NIPPLE, LENGTH AS REQUIRED
1-6" GATE VALVE & BOX, RESTRAINED
1-6" DI NIPPLE, LENGTH AS REQUIRED
1-6" DI CAP. MJ. RESTRAINED

1. CONTRACTOR WILL PROVIDE PUBLIC NOTIFICATION 48 HOURS IN ADVANCE OF SHUTDOWNS TO WATER SYSTEM CUSTOMERS AND COORDINATE WITH THE TOWN OF UXBRIDGE ON SCHEDULING SUCH NOTIFICATIONS.
2. REPAIR DISTURBED CEMENT CONCRETE SIDEWALK WITH WELDED WIRE MESH PER CEMENT CONCRETE SIDEWALK SECTION DETAIL



NO SCALE



NO SCALE



NO SCALE

FOR MAKING 4-INCH TO 12-INCH TAP ON WATER MAIN

- NOTES:**
1. TAPPING SLEEVE & TAPPING GATE VALVE TO BE INSTALLED ON WATER MAIN BY THE CONTRACTOR. THE TOWN WILL TEST INSTALLATION PRIOR TO MAKING TAP. NO TAP WILL BE MADE IF THERE IS NO TEST PLUG.
 2. TAPPING GATE VALVE TO HAVE HAND OF OPERATION AS DIRECTED BY THE TOWN. IF VALVE HAND OF OPERATION IS NOT CORRECT, NO TAP WILL BE MADE.
 3. TRENCH TO BE DEWATERED AND IN COMPLIANCE WITH OSHA REQUIREMENTS FOR TRENCH EXCAVATION.

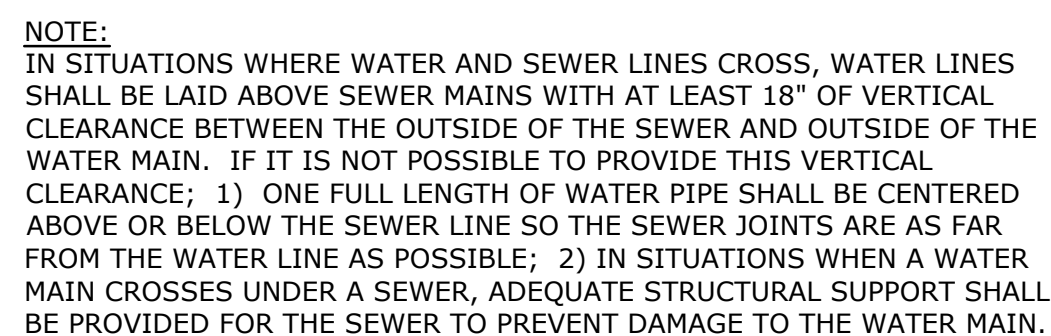


NOT TO SCALE



1. POLYETHYLENE SERVICE LINE SHALL BE CONTINUOUS FROM THE CORPORATION TO THE CURB STOP.

NO SCALE



NO SCALE

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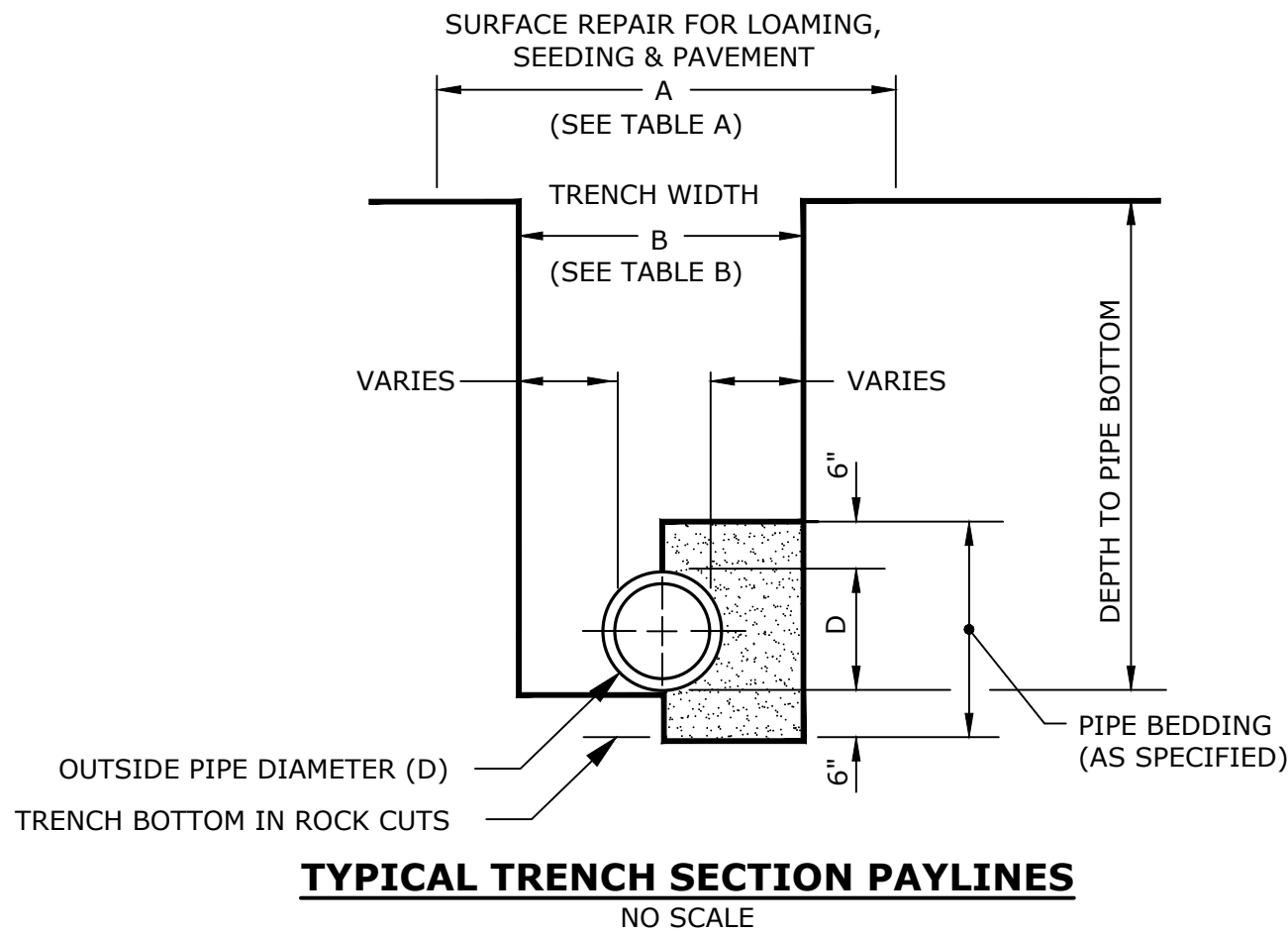
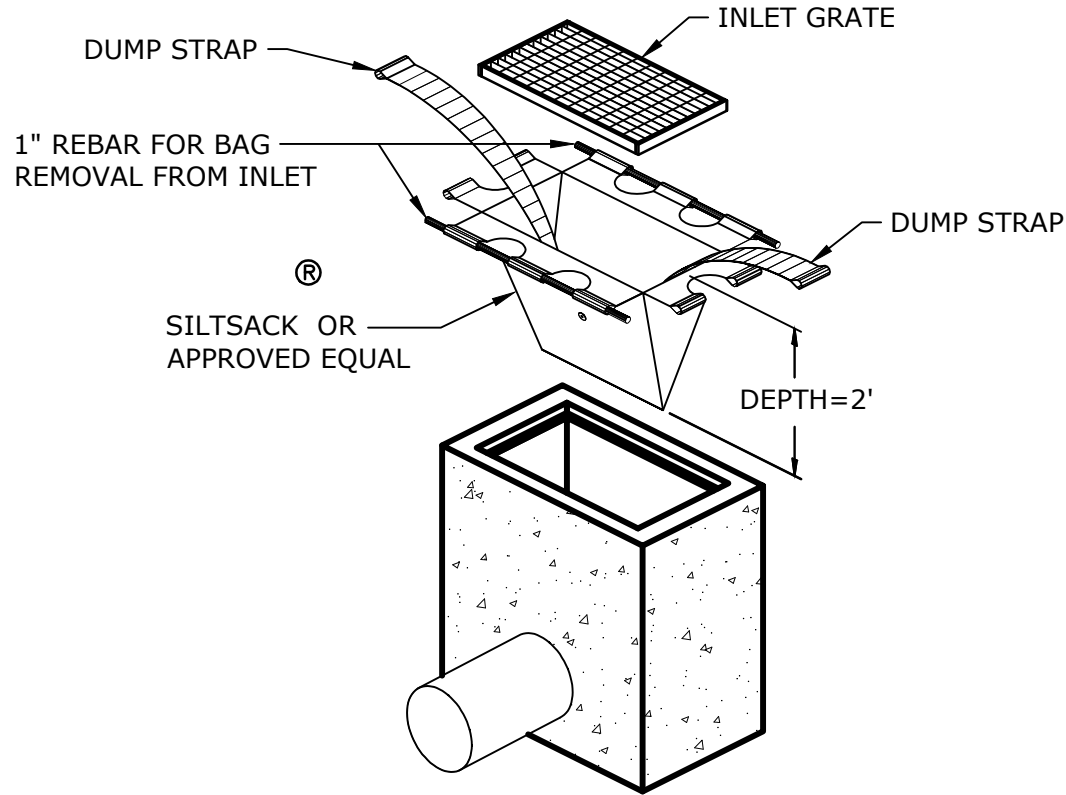
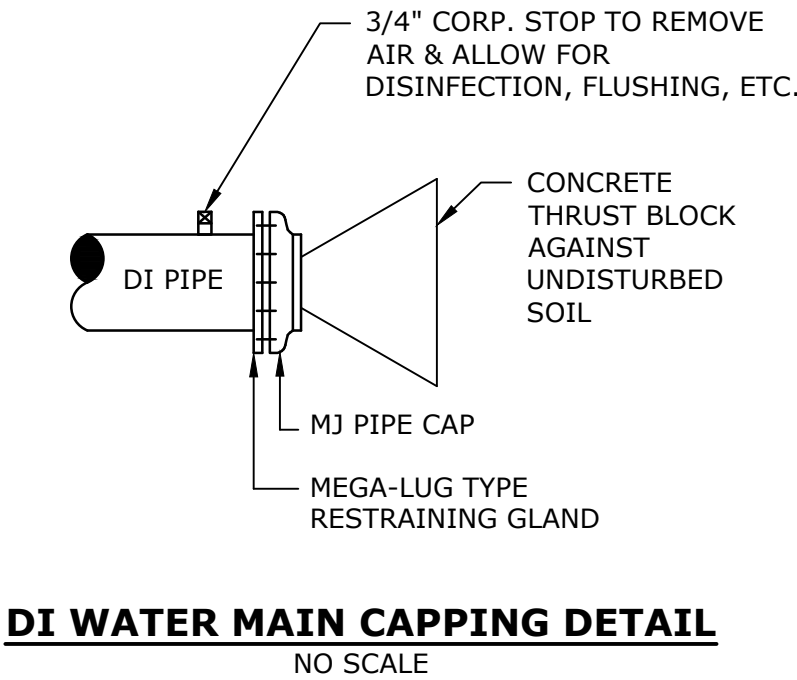
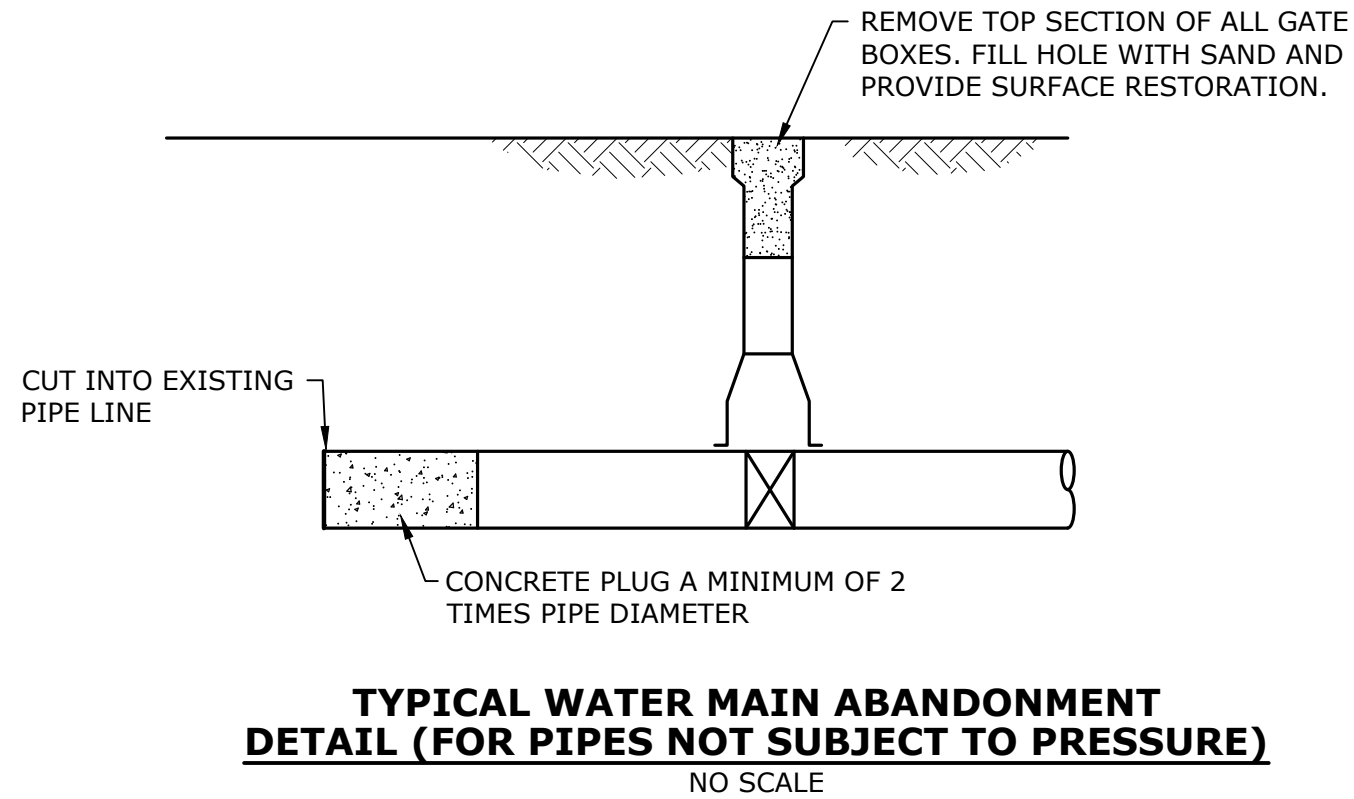


TABLE A - MAXIMUM SURFACE REPAIR PAY WIDTHS (SEE NOTE)	
NOMINAL PIPE DIAMETER 0 - 24"	
PAVEMENT	LOAMING & SEEDING
TEMPORARY 6'-6" MAX.	8'-6" MAX.
PERMANENT 8'-6" MAX.	
TABLE B - MAXIMUM TRENCH EXCAVATION PAY WIDTHS (SEE NOTE)	
NOMINAL PIPE DIAMETER 0 - 24"	
5'-0"	

NOTES:

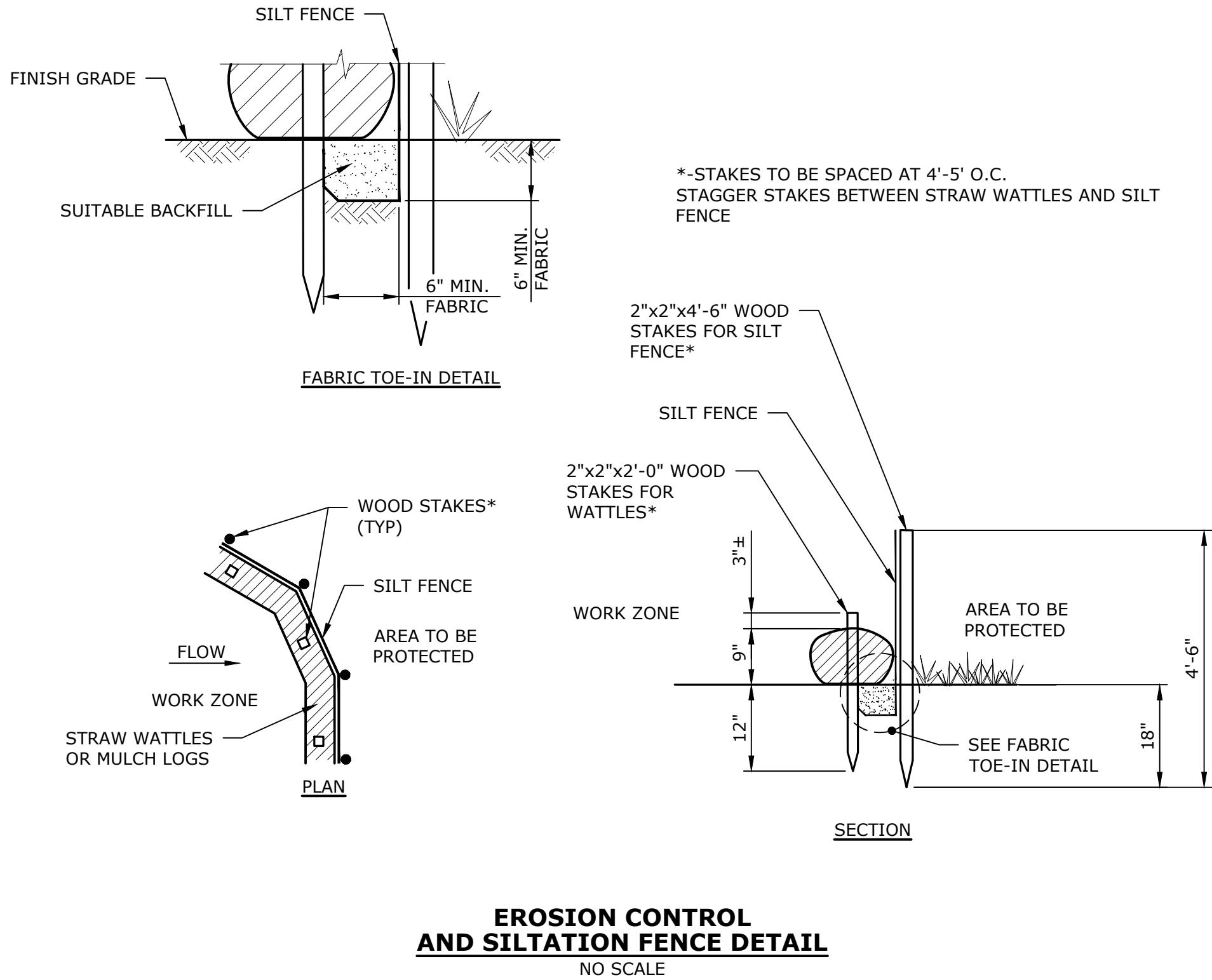
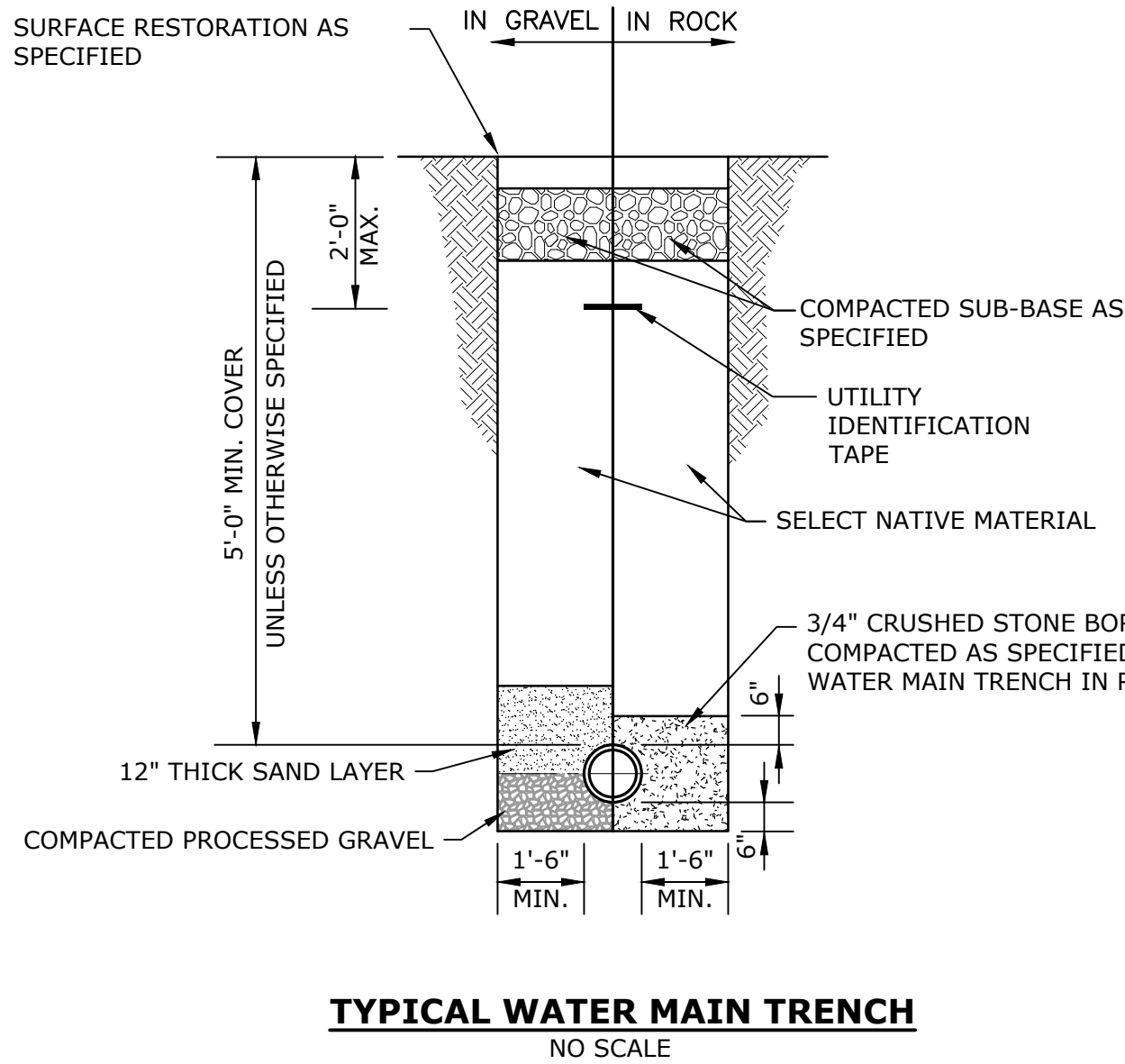
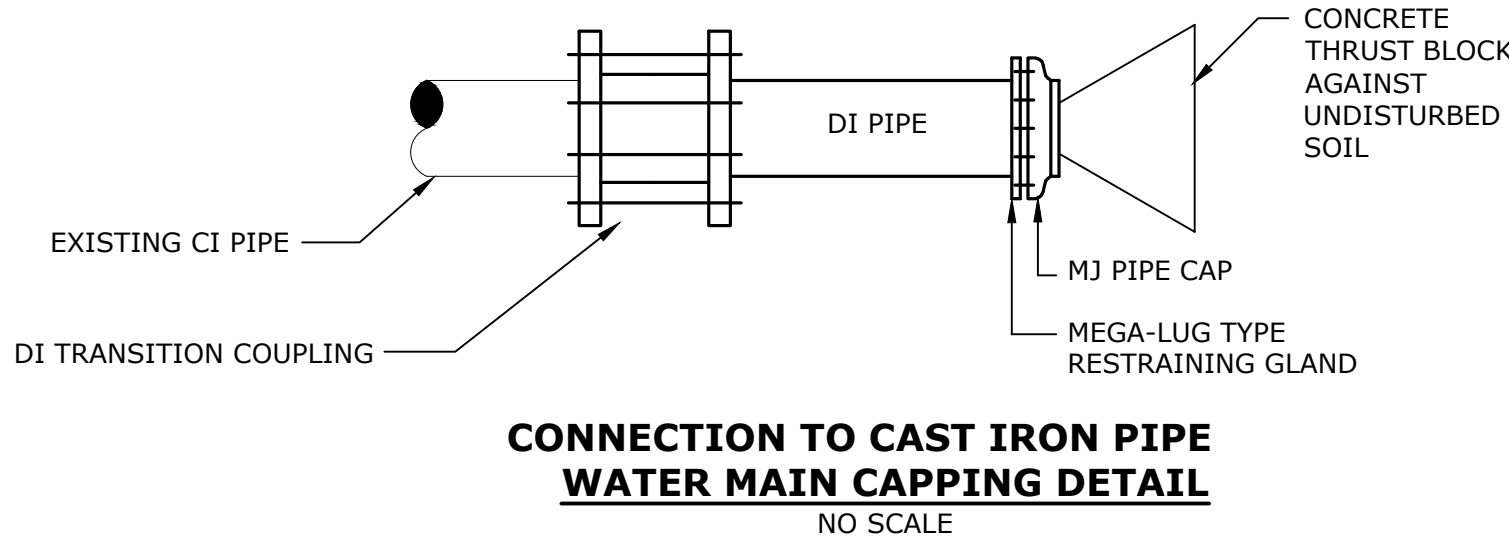
1. THE PAYLINE DIMENSIONS SHOWN REPRESENT THE MAXIMUM PAYLINE LIMITS TO BE PAID. WHEN THE ACTUAL SURFACE REPAIR OR TRENCH WIDTH IS LESS, THE ACTUAL WIDTH SHALL BE PAID FOR AT THE APPLICABLE UNIT PRICE.

TRENCH PAYLINES
NO SCALE



NOTES:

1. SILTSACKS MANUFACTURED BY ATLANTIC CONSTRUCTION FABRICS, INC. OR EQUAL.
2. SILTSACKS FOR TRENCH GRATE WILL MATCH OPENING LENGTH AS REQUIRED.
3. SILTSACKS SHALL BE CLEANED OUT AND MAINTAINED IN GOOD WORKING ORDER PER MFR RECOMMENDATIONS.



Route 122 Water Main Improvements Project

Uxbridge Public Works Department

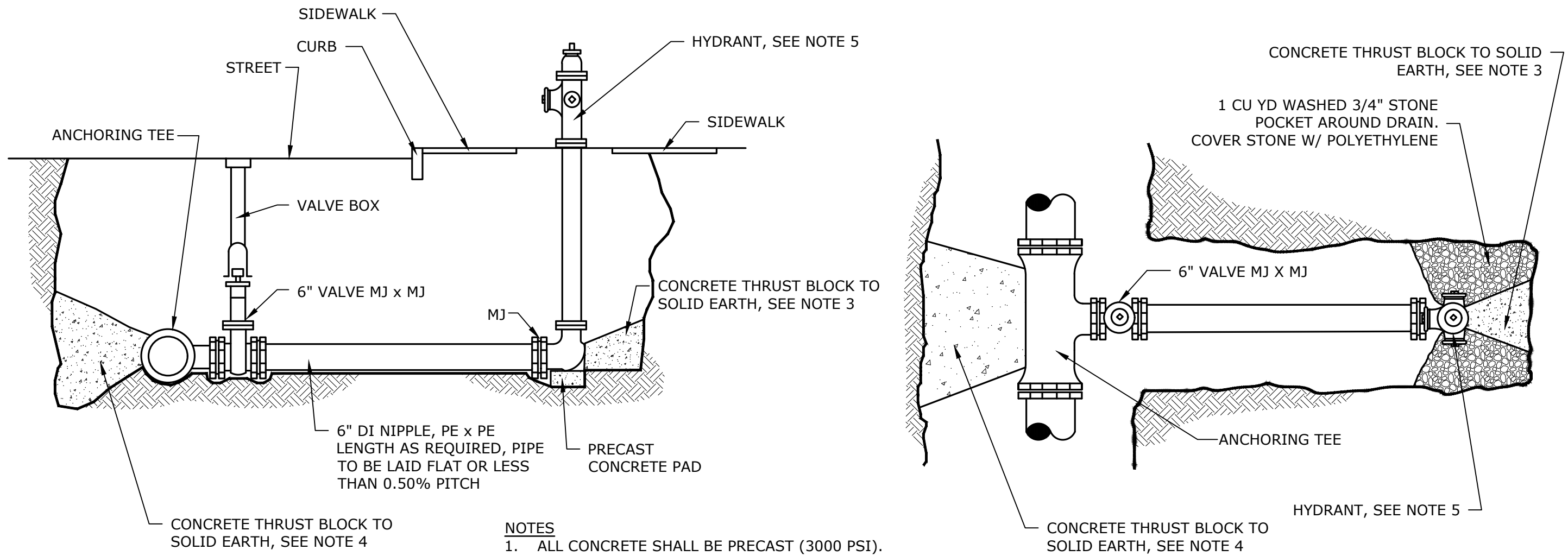
Uxbridge, Massachusetts

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CHECKED BY:		RG
APPROVED BY:		IWM

MISCELLANEOUS DETAILS - 2

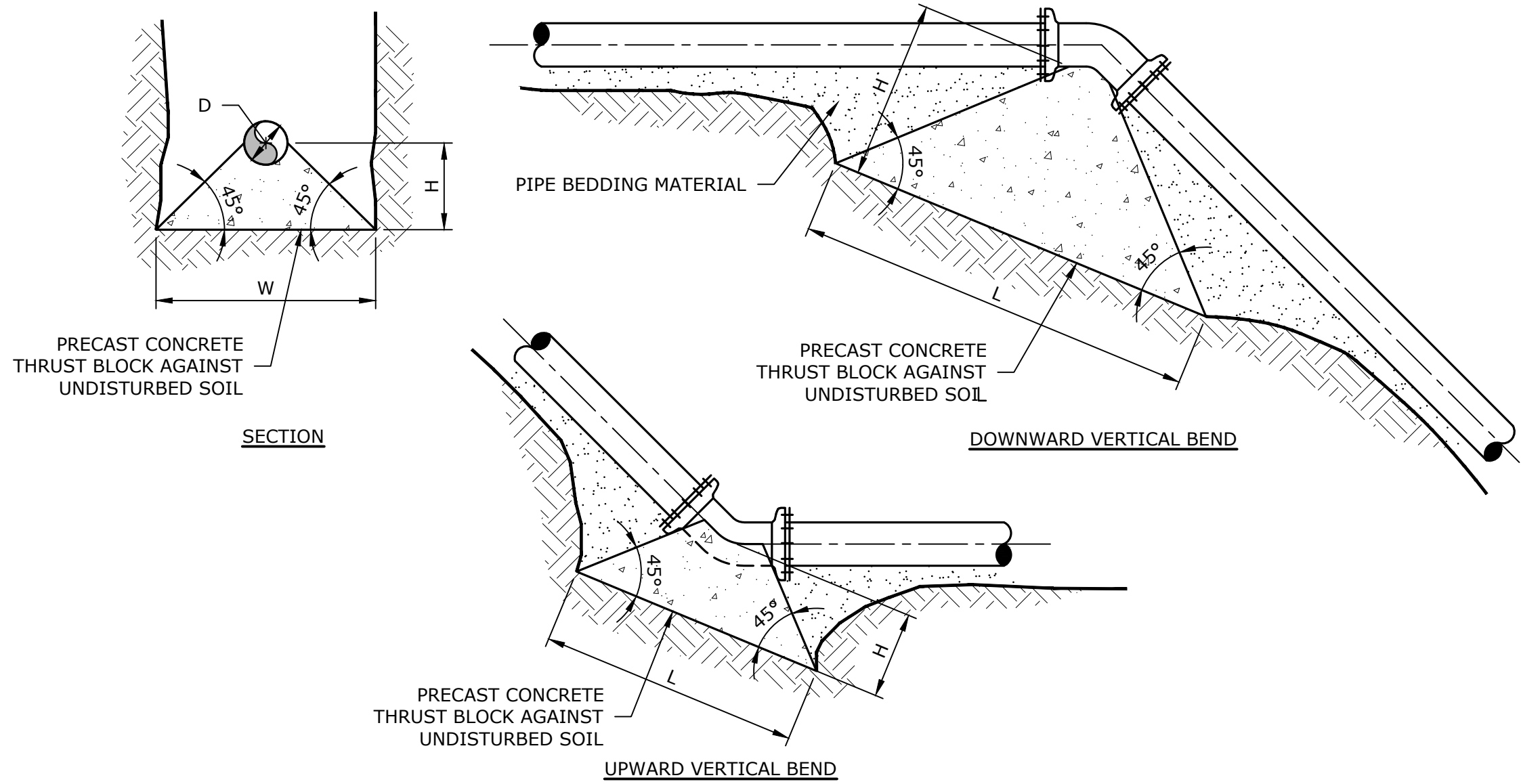
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- NOTES**
1. ALL CONCRETE SHALL BE PRECAST (3000 PSI).
 2. ALL MJ JOINTS SHALL HAVE RETAINER GLANDS.
 3. CARE SHALL BE TAKEN TO AVOID BLOCKING HYDRANT BASE DRAIN HOLES DURING PLACEMENT OF THE CONCRETE THRUST BLOCK. DRAIN HOLES SHALL BE VERIFIED AS OPEN AND FREE OF OBSTRUCTIONS PRIOR TO BACKFILLING.
 4. CARE SHALL BE TAKEN TO PLACE CONCRETE THRUST BLOCK TO ALLOW ACCESS TO ALL MECHANICAL JOINT GLANDS AND BOLTS. ALL BOLTS AND GLANDS SHALL BE FREE AND UNOBSTRUCTED BEFORE BACKFILLING.
 5. HYDRANT SHALL BE SET PLUMB. VERTICAL HYDRANT EXTENSIONS SHALL BE USED AS NECESSARY TO PROPERLY LOCATE THE BREAKAWAY FLANGE PER MANUFACTURER'S RECOMMENDATIONS AND THE UXBRIDGE DEPARTMENT OF PUBLIC WORKS REQUIREMENTS.

HYDRANT INSTALLATION
NO SCALE



CONCRETE THRUST BLOCK										
UPWARD VERTICAL BENDS					DOWNWARD VERTICAL BENDS					
D	BEARING AREA (SF)	"L"	"H"	"W"	VOLUME (CF)	BEARING AREA (SF)	"L"	"H"	"W"*	VOLUME (CF)
6	2.9	0.7	1.4	2.0	2.0	23.0	4.6	2.3	5.0	52.9
8	4.9	0.9	1.8	2.7	4.4	30.0	6.0	3.0	5.0	90.0
12	10.5	2.0	2.6	4.0	20.8	44.0	8.8	4.4	5.0	193.6
16	18.2	1.8	3.5	5.2	31.9	58.0	11.6	5.8	5.0	336.3

* THE WIDTH OF THE BLOCK (W) IS ASSUMED TO BE THE WIDTH OF THE TRENCH.

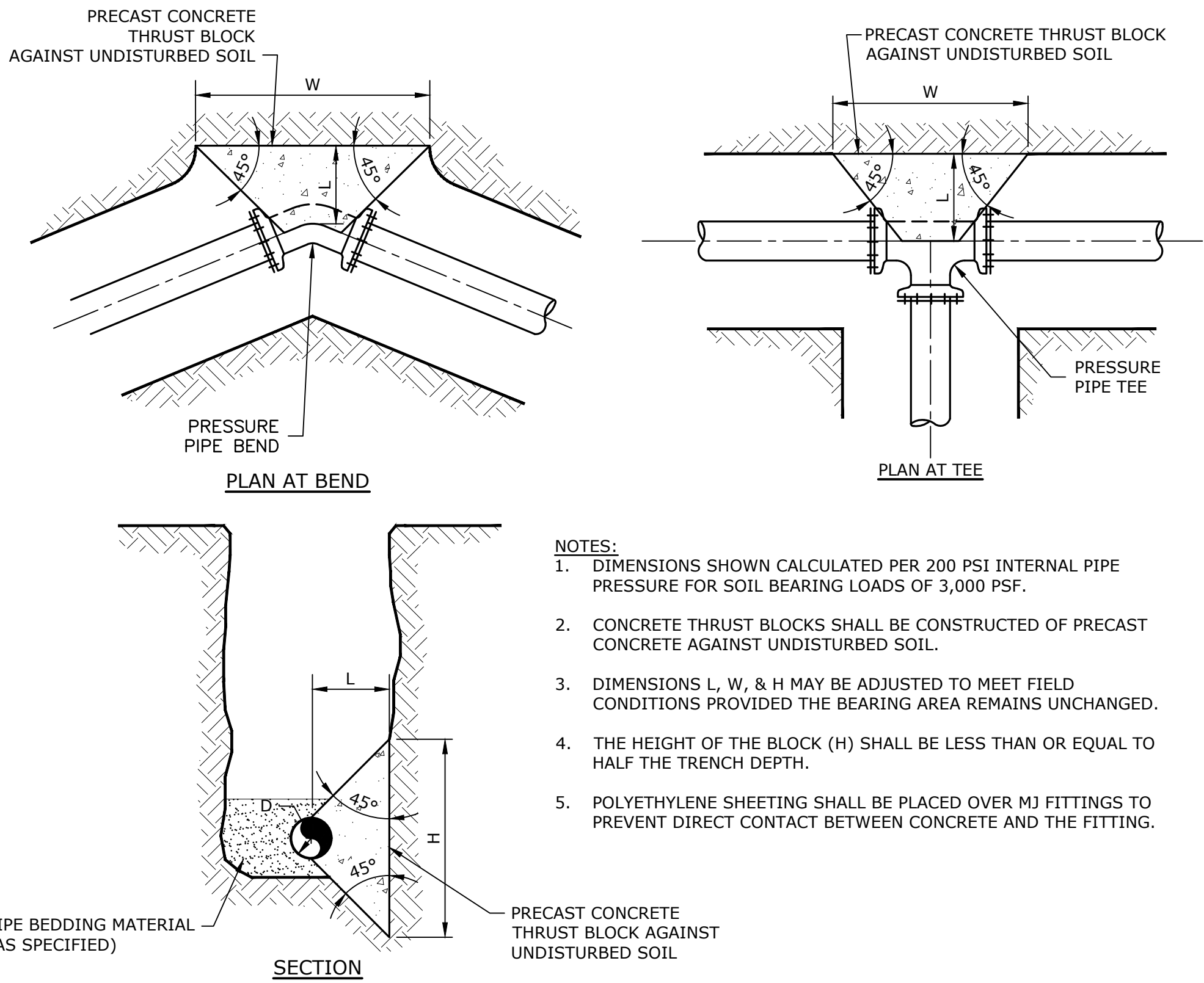
- NOTES:**
1. DIMENSIONS SHOWN WERE CALCULATED BASED ON A 200 PSI INTERNAL PIPE PRESSURE, SOIL BEARING LOADS OF 3,000 PSF, AND A 45° BEND.
 2. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED OF PRECAST CONCRETE MATERIAL PLACED AGAINST UNDISTURBED SOIL.
 3. DIMENSIONS L, W, & H MAY BE ADJUSTED TO MEET FIELD CONDITIONS, PROVIDED THE BEARING AREA AND VOLUME REMAIN UNCHANGED.

CONCRETE THRUST BLOCK FOR VERTICAL BENDS
NO SCALE

SIZE (IN.)	FITTING	MINIMUM RESTRAINED LENGTH, FT.
6"	90° BEND	20
6"	45° BEND	8
6"	22 1/2° BEND	4
6"	11 1/4° BEND	2
6"	DEAD END	50
6"	45° VERTICAL UP BEND	8
6"	45° VERTICAL DOWN BEND	21
6"	TEE	19
8"	90° BEND	26
8"	45° BEND	11
8"	22 1/2° BEND	6
8"	11 1/4° BEND	3
8"	DEAD END	65
8"	45° VERTICAL UP BEND	11
8"	45° VERTICAL DOWN BEND	27
8"	TEE	34
8"	8"x6" REDUCER	28
8"	8"x6" TEE	9
12"	90° BEND	26
12"	45° BEND	11
12"	22 1/2° BEND	6
12"	11 1/4° BEND	3
12"	DEAD END	69
12"	45° VERTICAL UP BEND	8
12"	45° VERTICAL DOWN BEND	23
12"	TEE	34
12"x8"	REDUCER	27
12"x6"	TEE	2

MINIMUM RESTRAINED LENGTHS FOR DI PIPE

- NOTES:**
1. MINIMUM RESTRAINED LENGTH BASED ON DIPRA, RESTRAINED LENGTH CALCULATOR, LATEST EDITION.
 2. THE FOLLOWING CONDITIONS APPLY:
SOIL TYPE: SAND SILT
MAX. PRESSURE: 200psi
TRENCH TYPE 4
BURIED DEPTH: 5'
 3. TABLE SUBJECT TO RECALCULATIONS BASED ON OBSERVED FIELD CONDITIONS.



CONCRETE THRUST BLOCK																				
11 1/4° BEND						22 1/2° BEND					45° BEND					TEE/DEAD END				
D	VOLUME (CF)	"L" (FT)	"H" (FT)	"W" (FT)	BEARING AREA (SF)	VOLUME (CF)	"L" (FT)	"H" (FT)	"W" (FT)	BEARING AREA (SF)	VOLUME (CF)	"L" (FT)	"H" (FT)	"W" (FT)	BEARING AREA (SF)	VOLUME (CF)	"L" (FT)	"H" (FT)	"W" (FT)	BEARING AREA (SF)
6"	0.3	2.2	0.7	1.0	0.7	0.8	0.5	1.0	1.5	1.5	2.0	0.7	1.4	2.0	2.9	2.9	0.8	1.6	2.3	3.7
8"	0.6	0.5	0.9	1.4	1.3	1.7	0.7	1.3	1.9	2.5	4.4	0.9	1.8	2.7	4.9	7.2	1.1	2.1	3.1	6.4
12"	5.5	2.0	1.3	2.1	2.7	10.6	2.0	1.9	2.8	5.3	20.8	2.0	2.6	4.0	10.5	38.9	2.0	3.6	5.4	19.3
16"	4.2	0.9	1.8	2.6	4.7	11.6	1.3	2.5	3.7	9.3	31.9	1.8	3.5	5.2	18.2	47.6	2.0	4.0	5.9	23.8

CONCRETE THRUST BLOCK FOR HORIZONTAL BENDS AND TEES
NO SCALE

Route 122 Water Main Improvements Project

Uxbridge Public Works Department

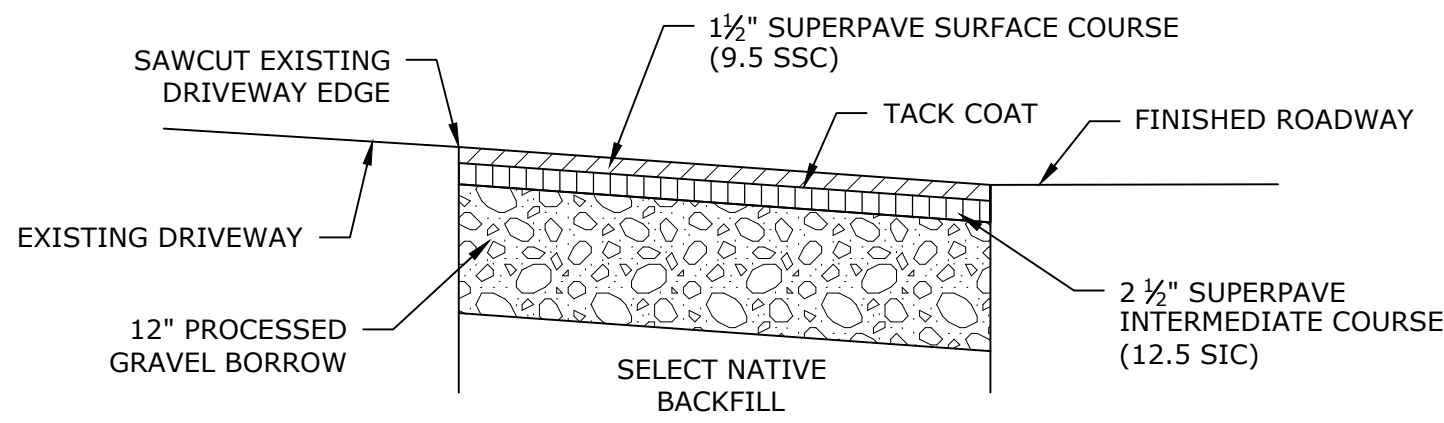
Uxbridge, Massachusetts

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APPROVED BY: IWM		

MISCELLANEOUS DETAILS - 3

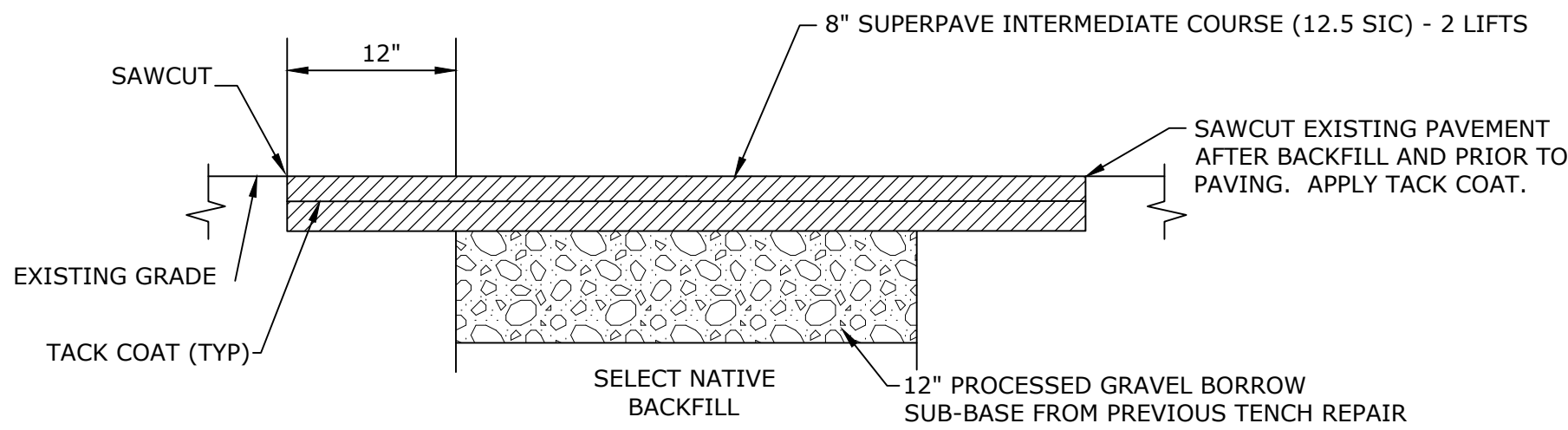
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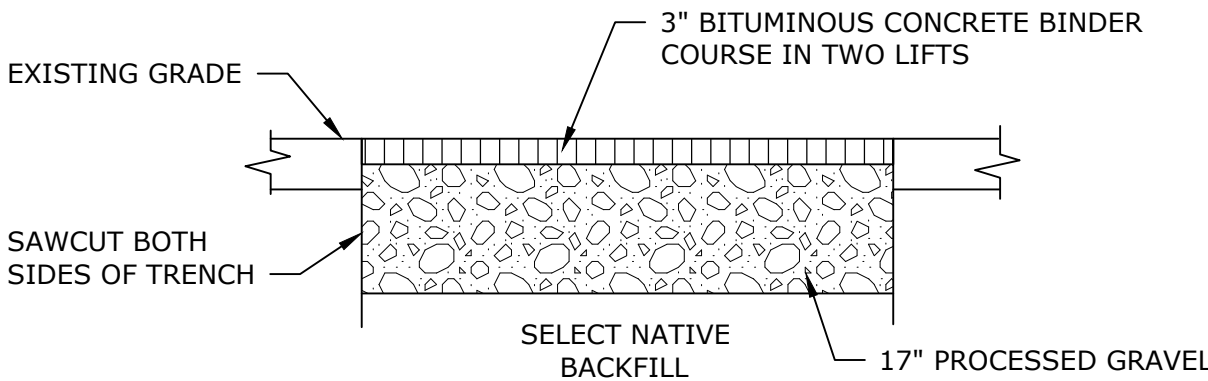
DRIVEWAY APRON PERMANENT REPAIR
NO SCALE

- NOTE:
1. COMPLETE PERMANENT REPAIR AS PART OF PERMANENT ROAD WAY TRENCH REPAIR.



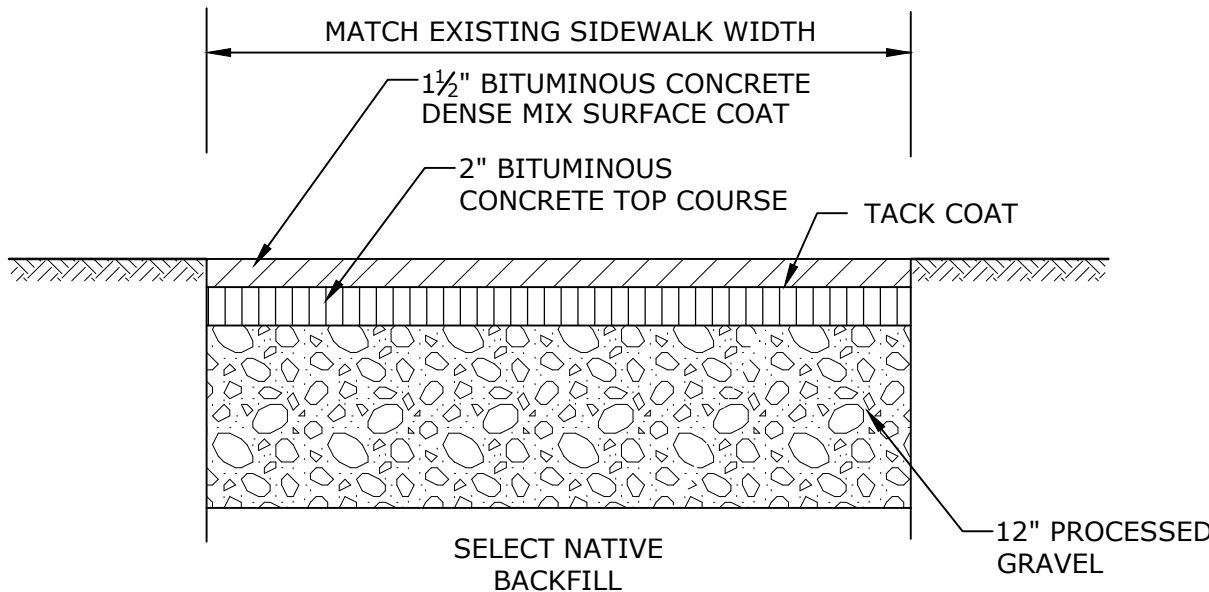
**PERMANENT TRENCH REPAIR
STATE ROADS**
NO SCALE

- NOTE:
1. MEET THICKNESS SPECIFIED HEREIN OR MATCH EXISTING PAVEMENT DEPTH IF EXISTING PAVEMENT IS THICKER.
 2. REFER TO SPECIFICATION SECTION 02740 FOR COMPLETE PAVEMENT REPAIR REQUIREMENTS.
 3. COMPLETE PERMANENT REPAIR AFTER MINIMUM 90 DAY SETTLEMENT PERIOD.



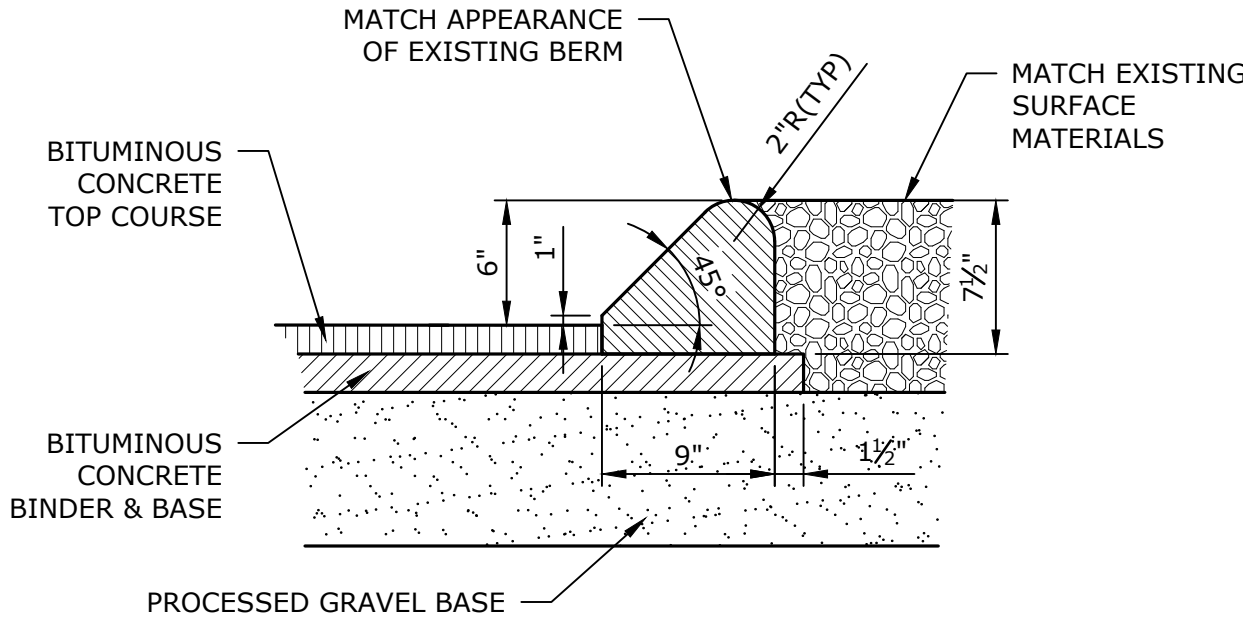
- NOTE:
1. PLACE DAILY ON STATE ROADWAYS.

**TEMPORARY TRENCH REPAIR
(STATE ROAD)**
NO SCALE

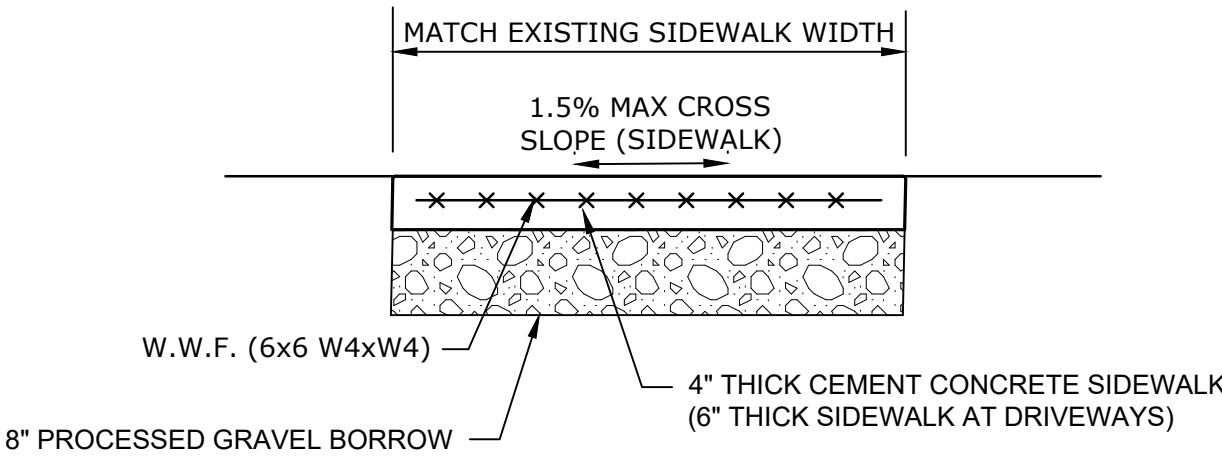


- NOTE:
1. COMPLETE PERMANENT REPAIR AFTER 90 DAY SETTLEMENT PERIOD.

**BITUMINOUS CONCRETE SIDEWALK
PERMANENT REPAIR**
NO SCALE

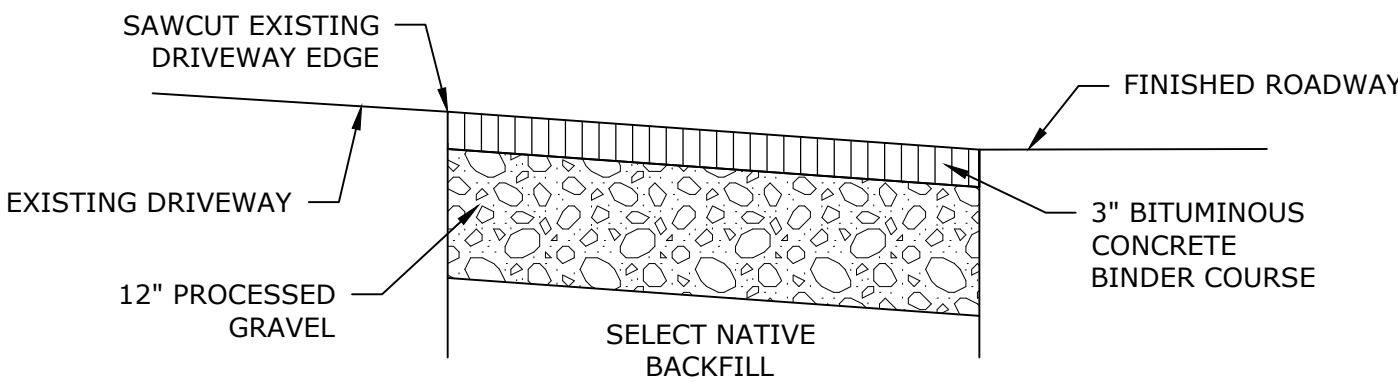


**BITUMINOUS CONCRETE
BERM REPAIR - TYPE 2**
NO SCALE



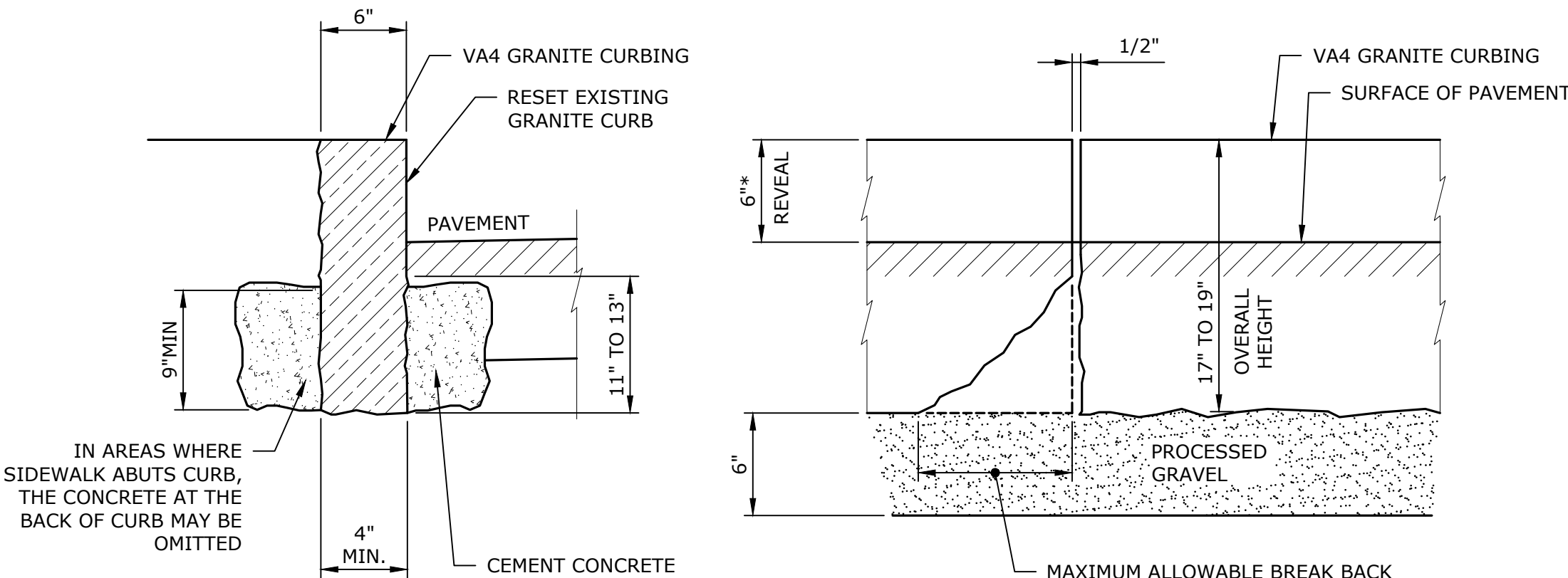
- PARTIAL EXCAVATED SECTIONS SHALL BE REMOVED TO NEXT JOINT. NEW SECTIONS SHALL MEET EXISTING SIDEWALK AT A JOINT.

CEMENT CONCRETE SIDEWALK SECTION
NO SCALE



- NOTE:
1. PLACE A MINIMUM OF WEEKLY PRIOR TO THE START OF THE WEEKEND.

DRIVEWAY APRON TEMPORARY REPAIR
NO SCALE

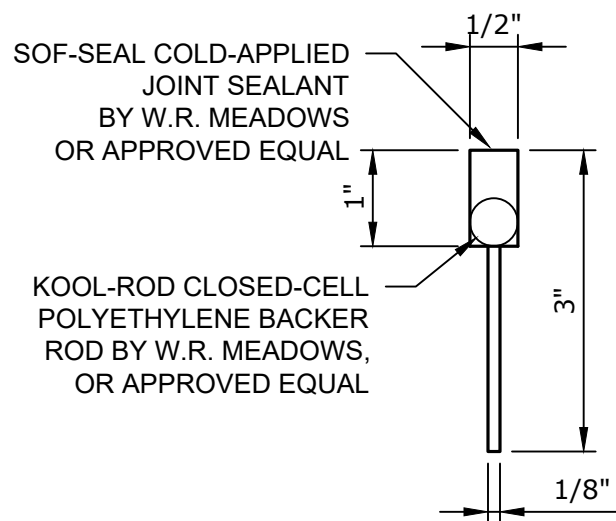


SECTION

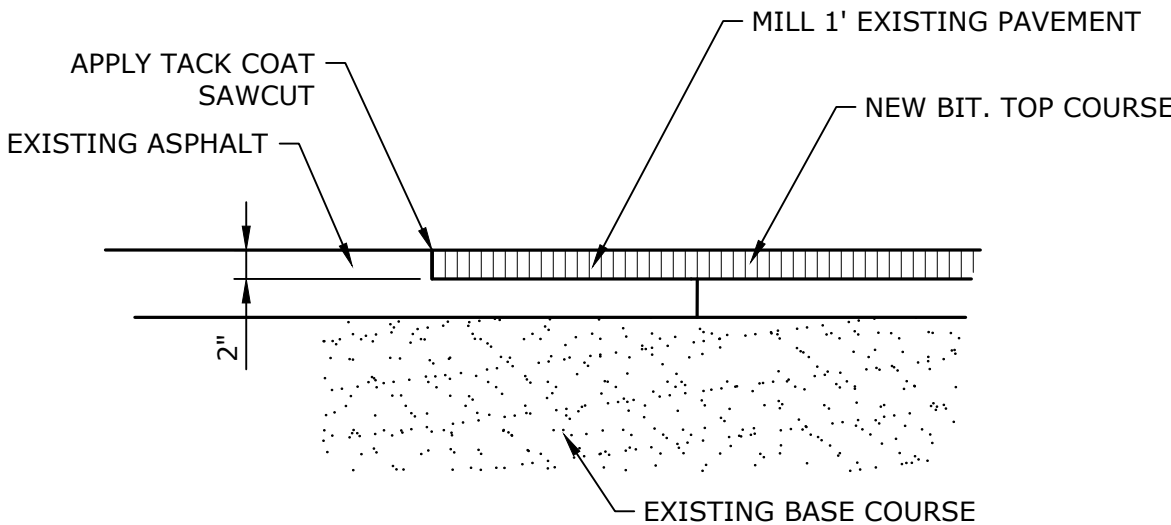
ELEVATION

- NOTES:
1. CURB SHALL BE ANCHORED IN PLACE WITH CONCRETE ON BOTH FRONT AND BACK FACES.
 2. IN AREAS WHERE CURB IS SET AFTER PLACEMENT OF THE ROAD SUB BASE OR IN AREAS PAVED PRIOR TO INSTALLATION OF THE CURBING, USE HIGH EARLY STRENGTH CONCRETE TO BACKFILL 4 INCHES WIDE ALONG THE FRONT FACE TO WITHIN 2 INCHES OF FINAL GRADE.

GRANITE CURB - TYPE VA4
NO SCALE



**CONTRACTION JOINT DETAIL
FOR CEMENT CONCRETE SIDEWALKS**
NO SCALE



**TYPICAL BUTT JOINT
TO EXISTING PAVEMENT**
NO SCALE

Route 122 Water Main Improvements Project

Uxbridge Public
Works
Department

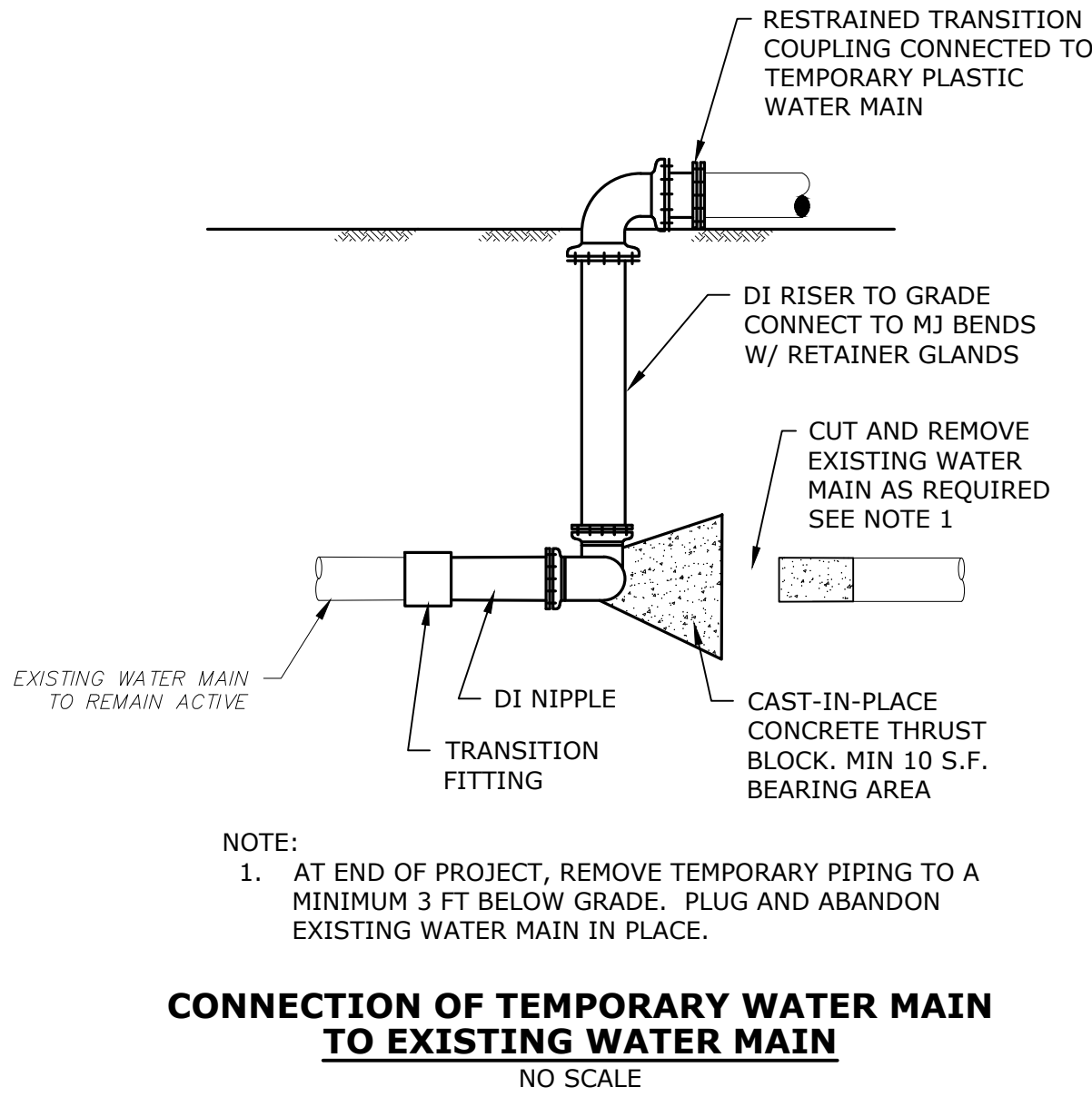
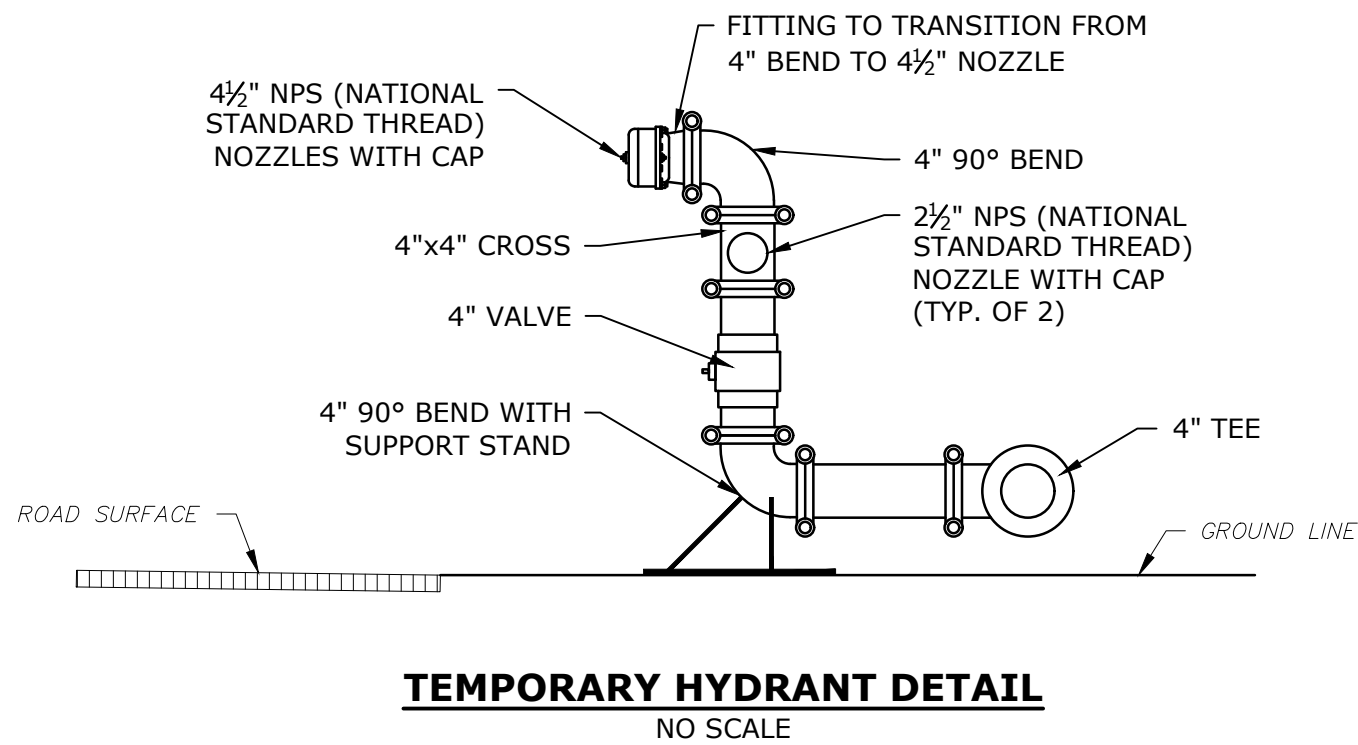
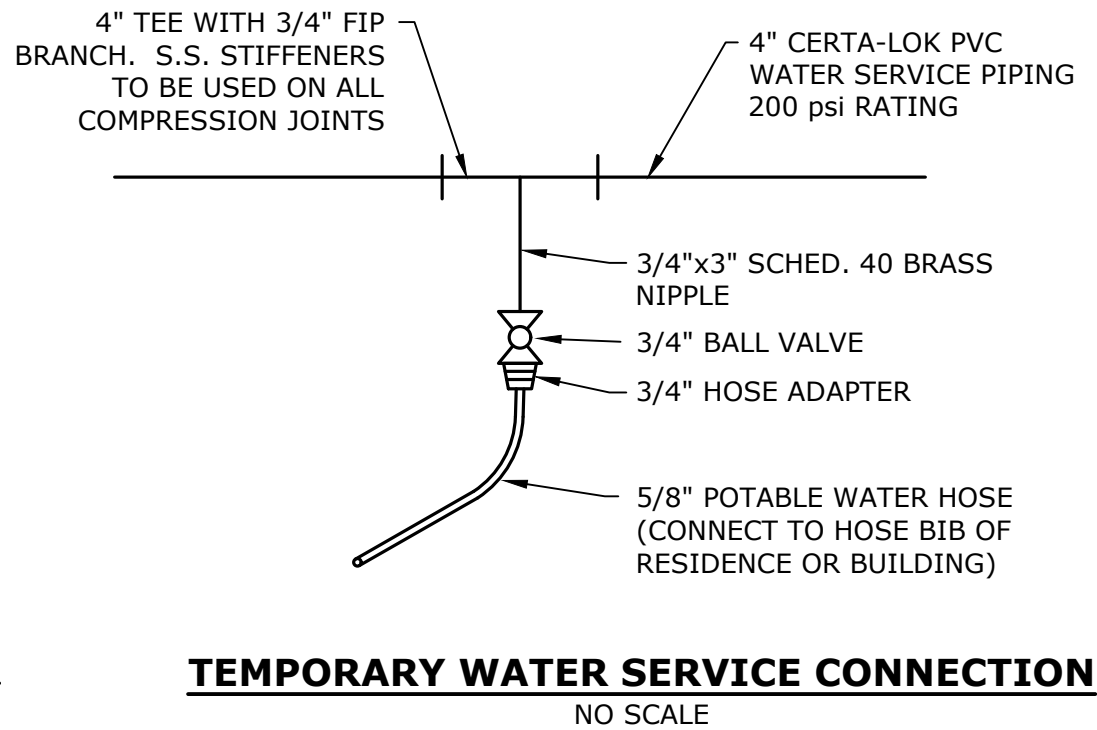
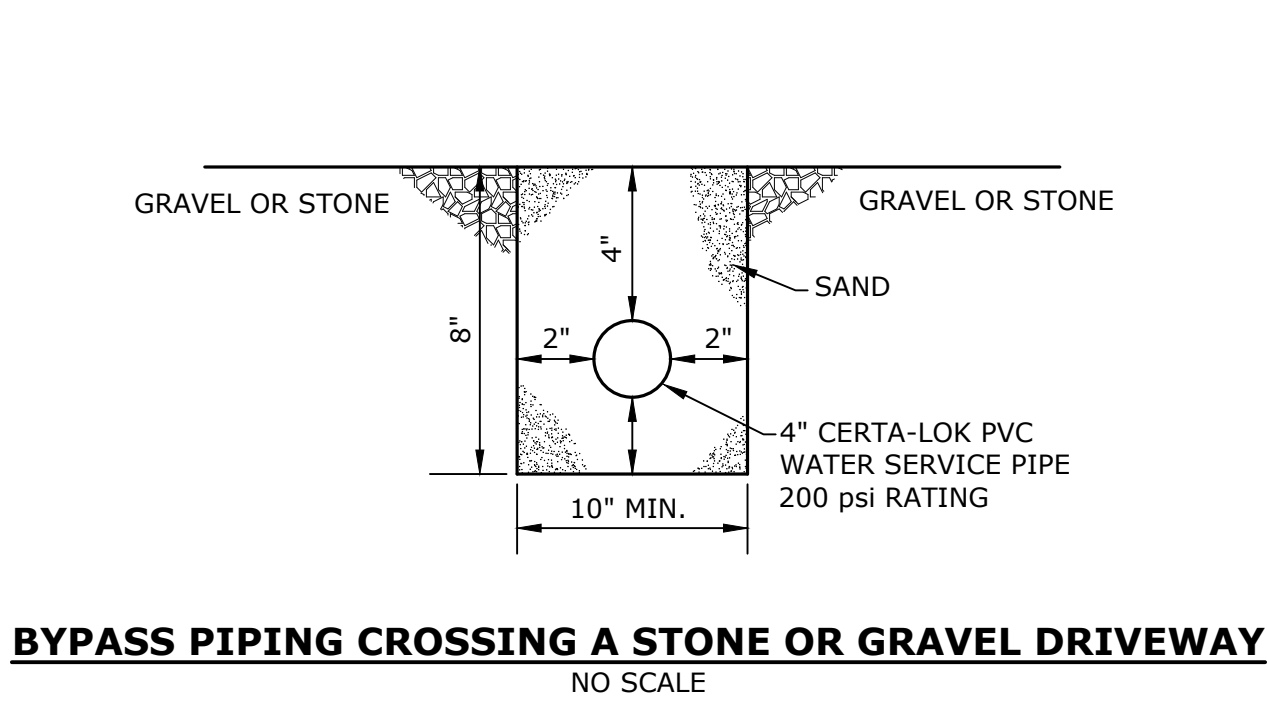
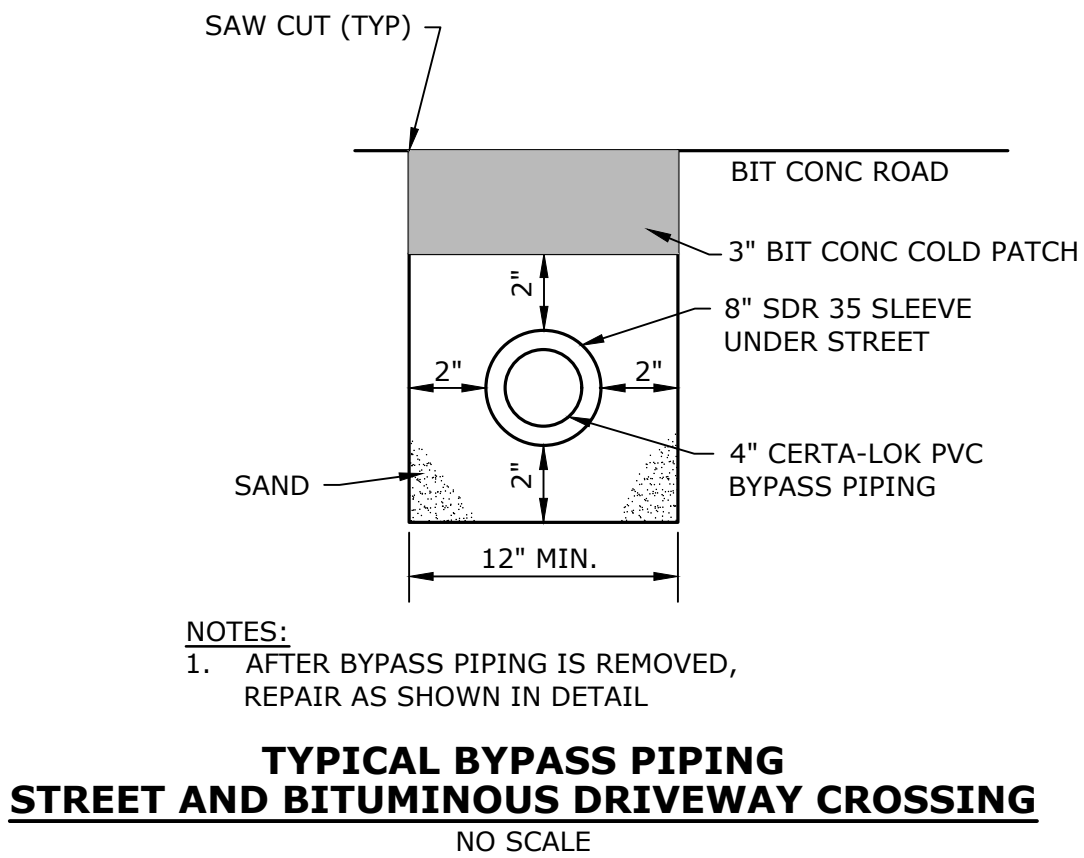
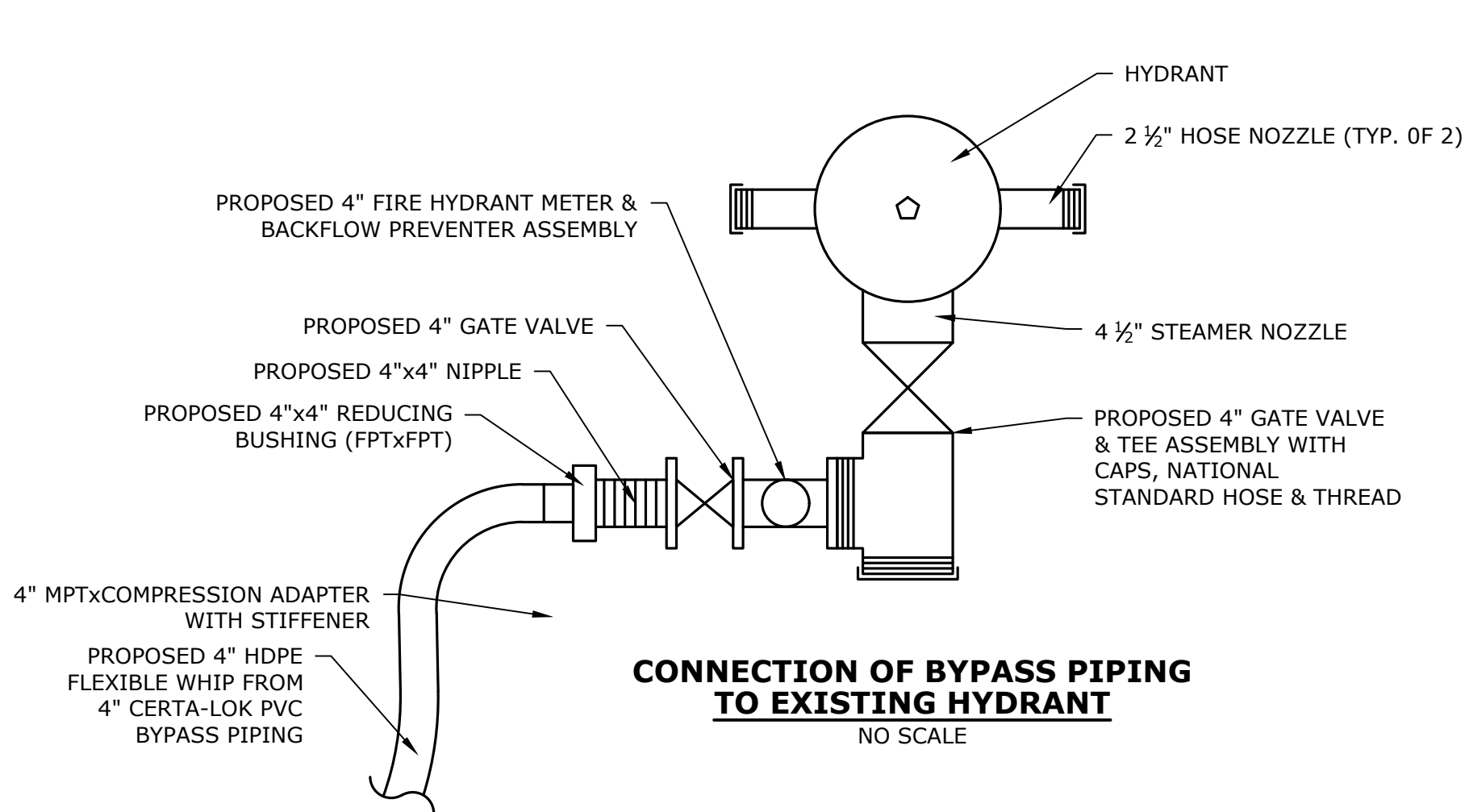
Uxbridge,
Massachusetts

0	1/26/2023	Issued For Bidding
MARK	DATE	DESCRIPTION
PROJECT NO: U5004-012B		
DATE: 1/10/2023		
FILE: U5004-012B Details.dwg		
DRAWN BY: CFY		
CHECKED BY: RG		
APPROVED BY: IWM		

MISCELLANEOUS
DETAILS - 4

SCALE: AS SHOWN

Last Saved: 1/23/2023 10:06am By: CFY
Printed On: Jan 23, 2023 10:06am
Title & Content: U:\Projects\U5004_Uxbridge\012_2022_Water_Mains\Drawings_Figures\AutoCAD_12B_Route_122_Sheet\U5004-012B_Details.dwg



Route 122
Water Main
Improvements
Project

Uxbridge Public
Works
Department

Uxbridge,
Massachusetts

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APPROVED BY:		IWM

MISCELLANEOUS
DETAILS - 5

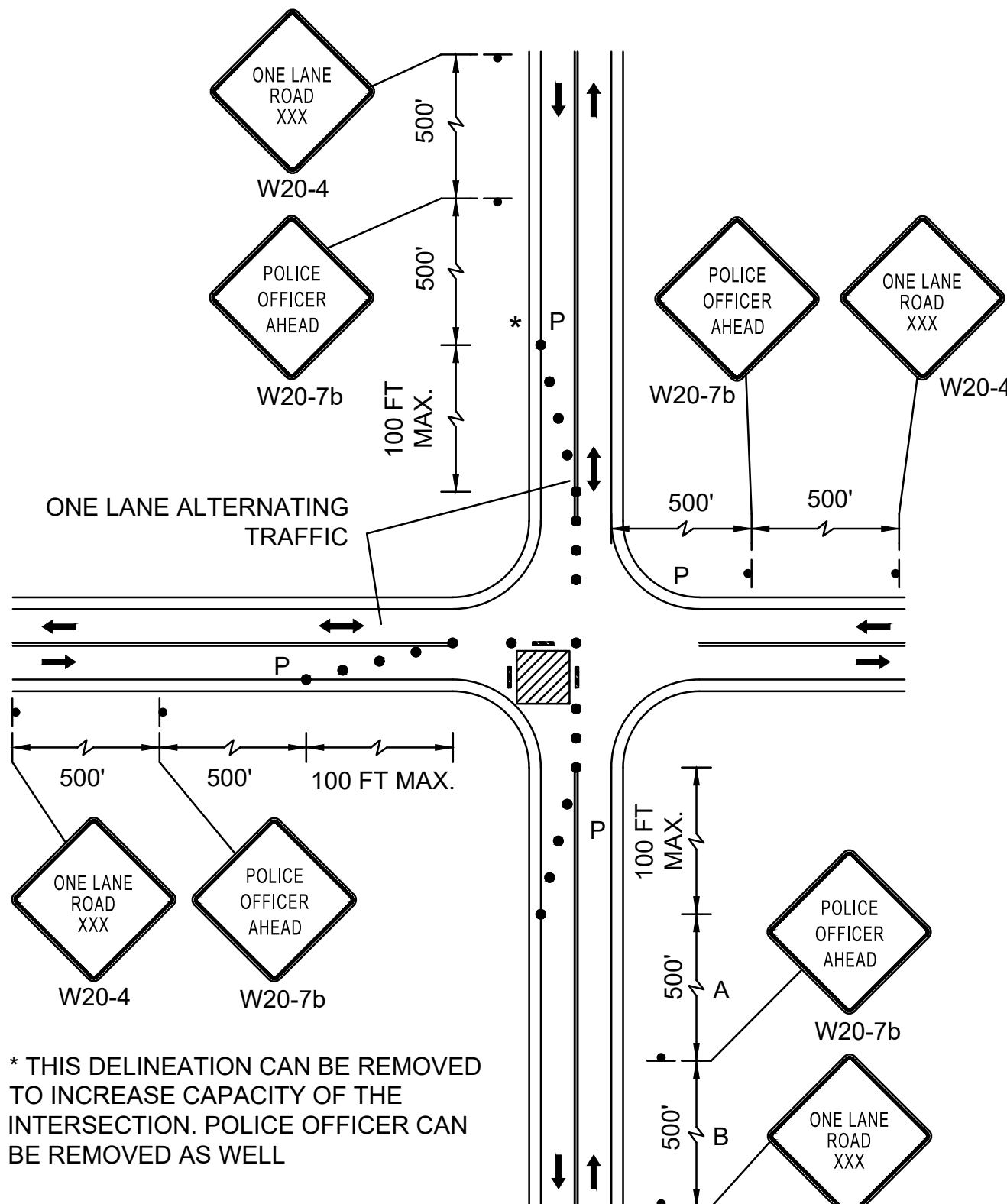
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GENERAL NOTES:

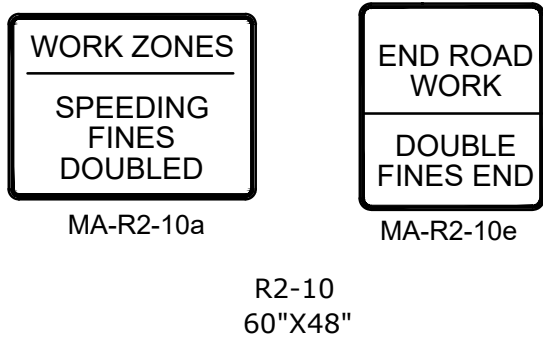
- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
- THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 10 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- SIGN MA-R2-10a AND MA-R2-10e SHALL BE LOCATED AT THE PROJECT LIMITS FOR THE DURATION OF THE WORK.

LEGEND

- REFLECTORIZED PLASTIC DRUM OR 36" CONE
- P/F POLICE/FLAGGER DETAIL
- TYPE III BARRICADE
- CHANGEABLE MESSAGE SIGN
- ARROW BOARD
- WORK ZONE
- DIRECTION OF TRAFFIC
- IMPACT ATTENUATOR
- MEDIAN BARRIER
- MEDIAN BARRIER WITH WARNING LIGHTS
- WORK VEHICLE
- TRUCK MOUNTED ATTENUATOR
- TRAFFIC OR PEDESTRIAN SIGNAL
- SIGN



SINGLE LANE APPROACH
ONE QUADRANT CLOSURE



WORK ZONE LIMIT SIGNS
SEE NOTE 12

SPEED LIMIT (S)	TAPER LENGTH (L) FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

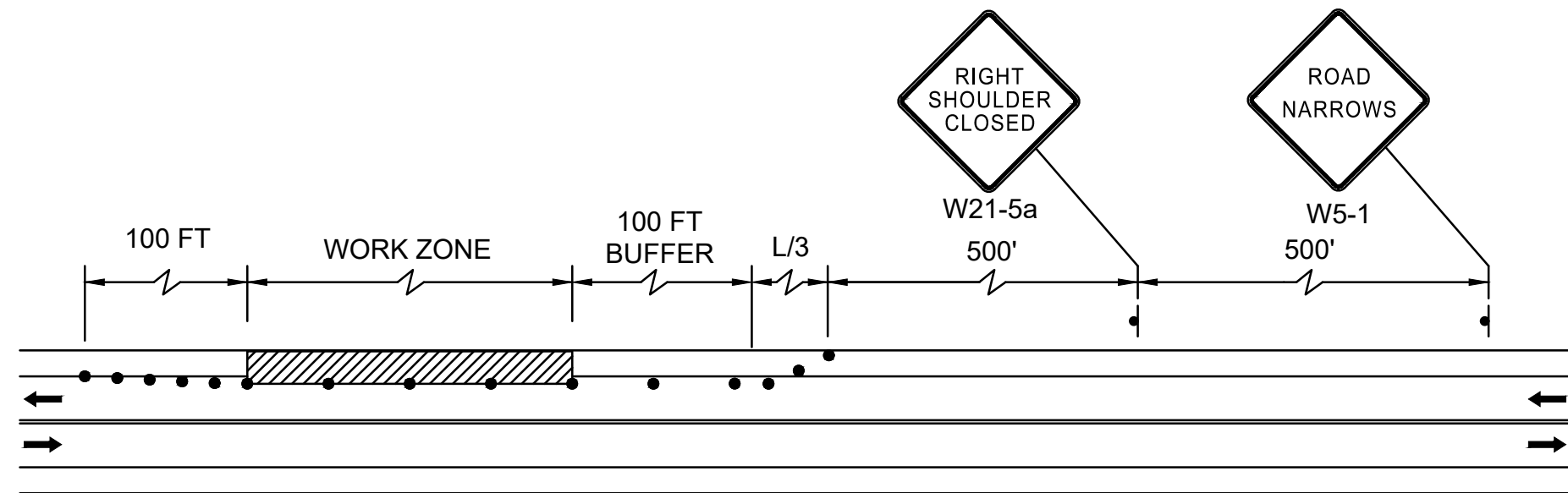
FORMULAS FOR DETERMINING
TAPER LENGTHS

WHERE:

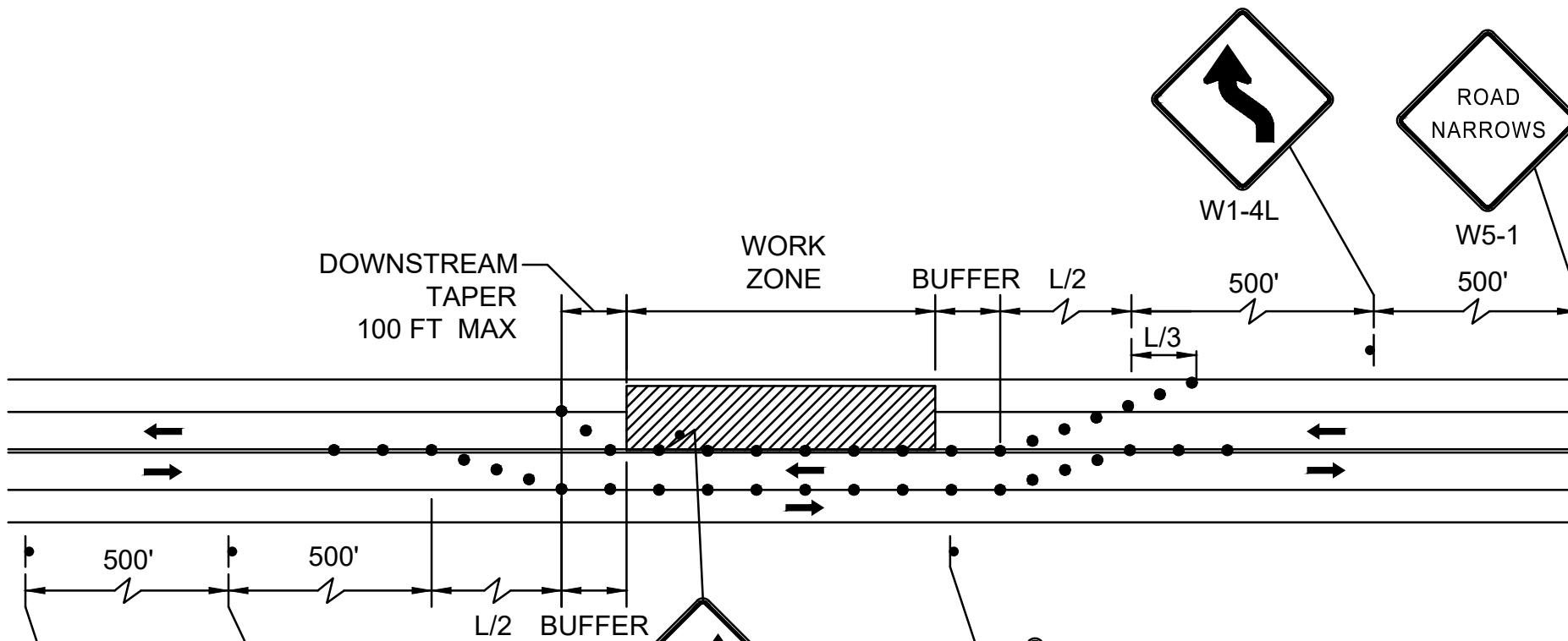
L = TAPER LENGTH IN FEET

W = WIDTH OF OFFSET IN FEET

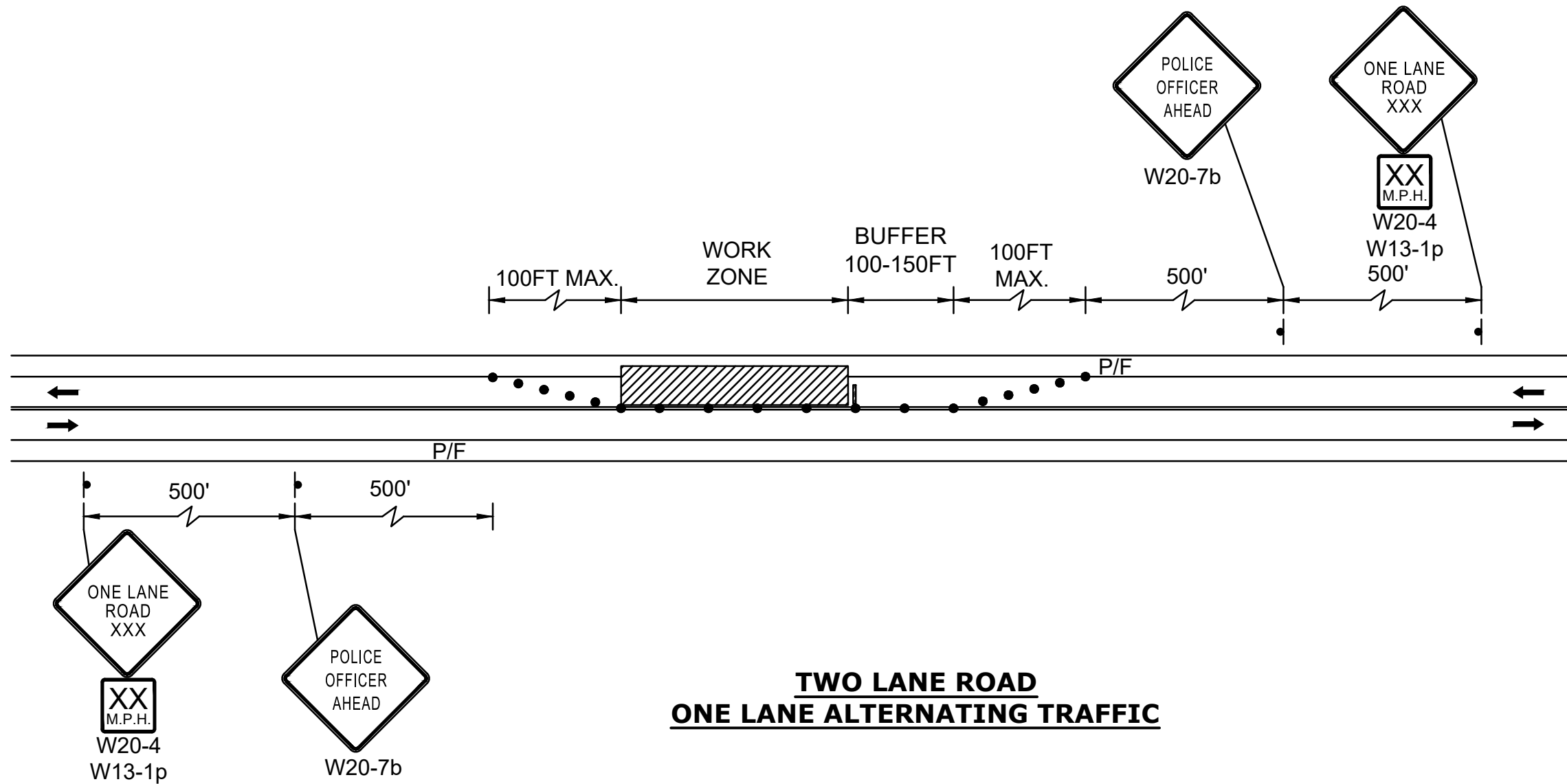
S = POSTED SPEED LIMIT, OR
OFF-PEAK 85TH-PERCENTILE
SPEED PRIOR TO WORK STARTING,
OR THE ANTICIPATED OPERATING
SPEED IN MPH



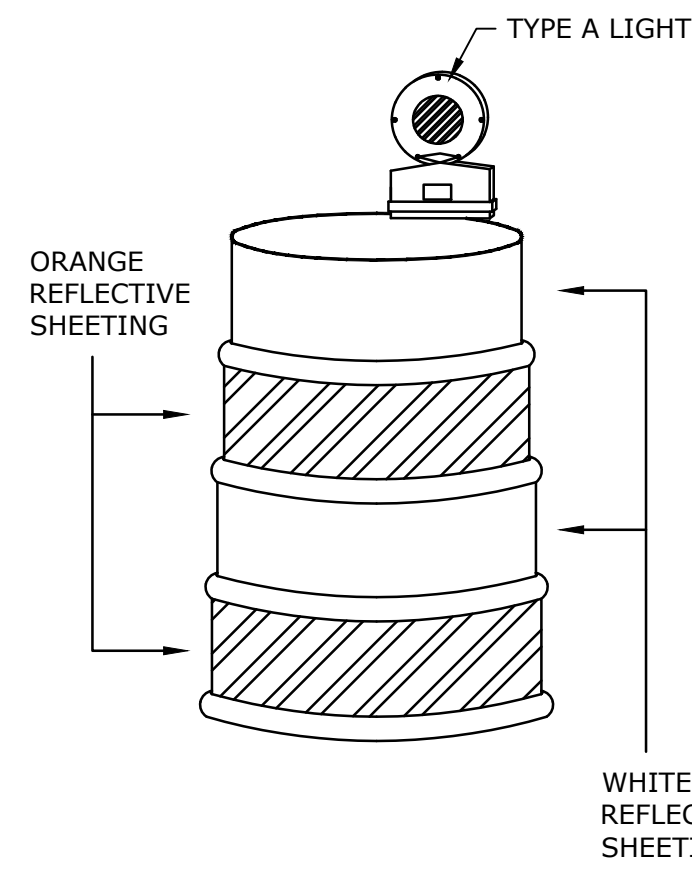
TWO LANE ROAD
SHOULDER CLOSED



TWO LANE ROAD
SHOULDER AND TRAVEL LANE CLOSED

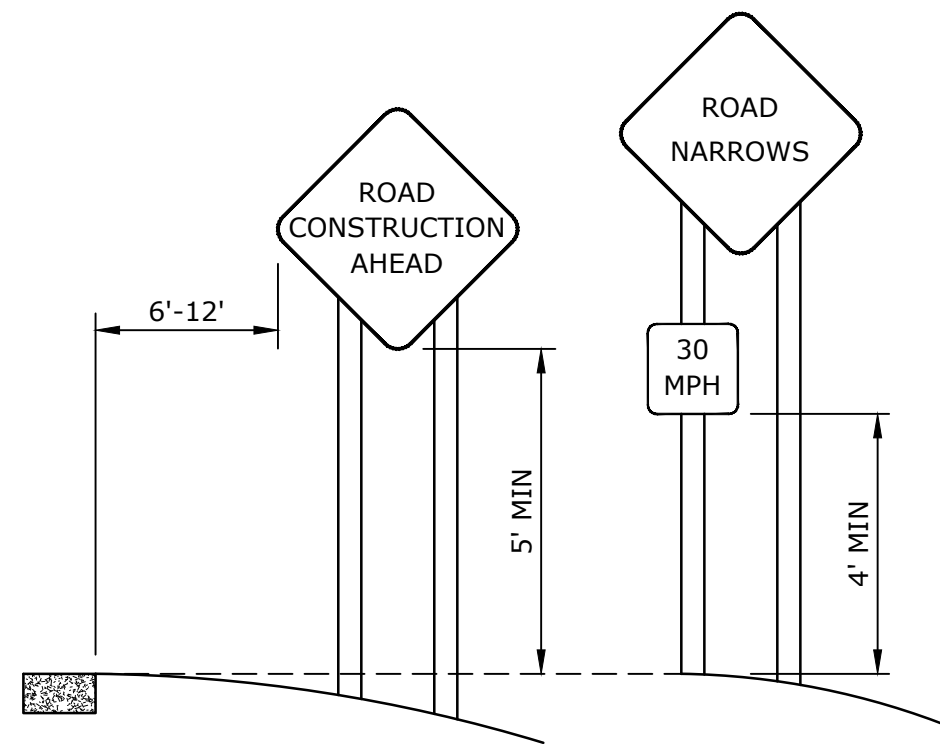


TWO LANE ROAD
ONE LANE ALTERNATING TRAFFIC

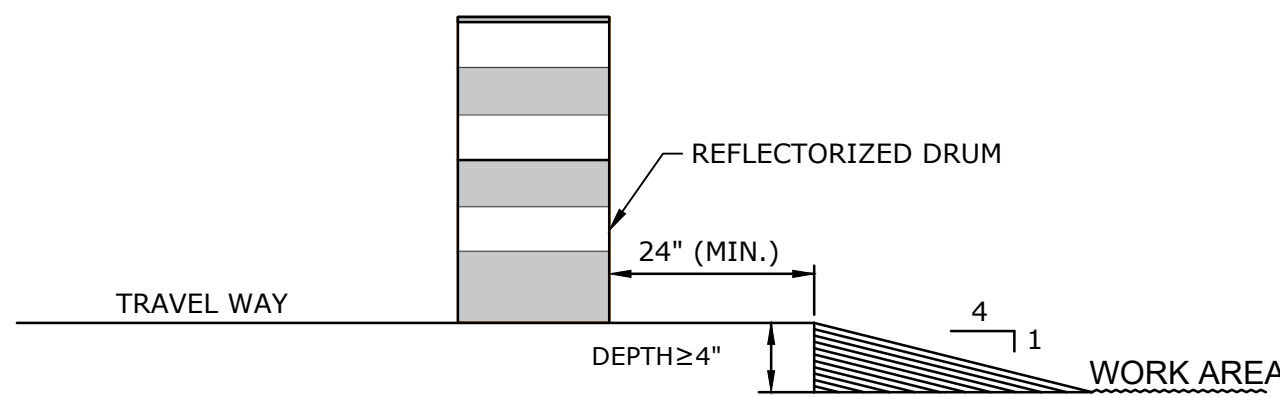


NOTES:

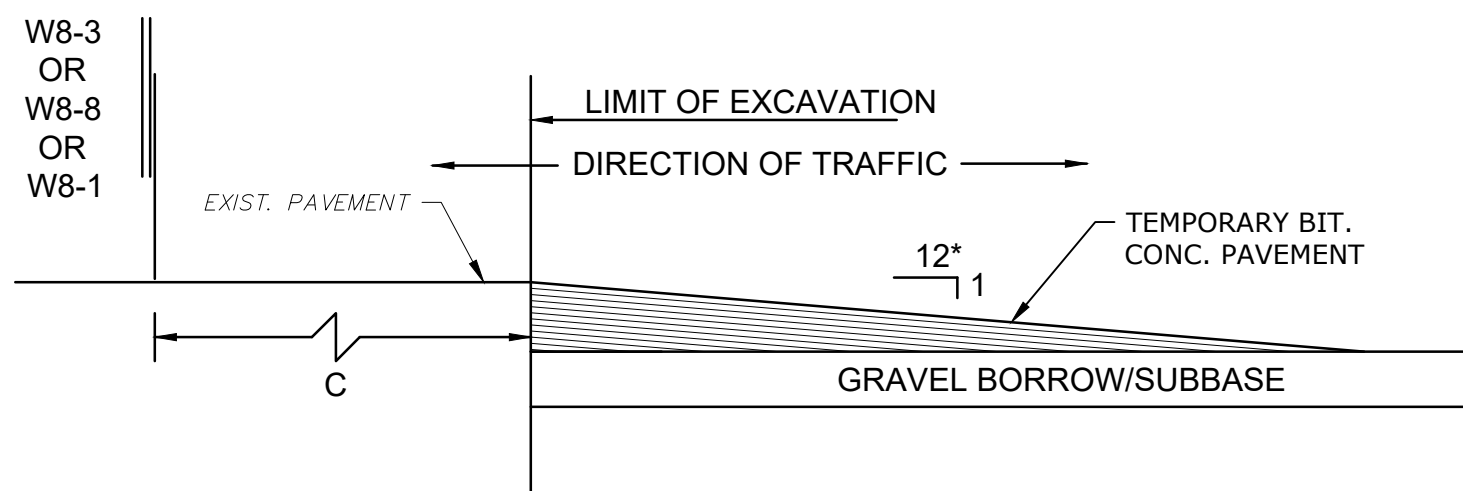
- DRUM DESIGN AND APPLICATION SHALL BE AS PER THE CURRENT EDITION OF THE MUTCD.
- DRUMS SHALL BE APPROXIMATELY 36" IN HEIGHT, HAVING A MINIMUM WALL THICKNESS OF 3/32" AND A MINIMUM DIAMETER OF 18" REGARDLESS OF ORIENTATION.
- DRUM MATERIAL MUST BE APPROVED UV RESISTANT, LOW DENSITY, IMPACT RESISTANT, LINEAR POLYETHYLENE (OR APPROVED EQUIVALENT).
- 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.
- STORE UNUSED DRUMS IN ONE LOCATION, AWAY FROM ALL TRAFFIC, OR REMOVE FROM SITE ENTIRELY.



TYPICAL INSTALLATION
OF PROJECT SIGNS



LATERAL DROP-OFF DETAIL
NO SCALE



LONGITUDINAL DROP-OFF DETAIL
NO SCALE

* - INCREASE SLOPE RATIO
FOR HIGHER SPEEDS

Route 122
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TRAFFIC MANAGEMENT PLAN

SCALE: AS SHOWN