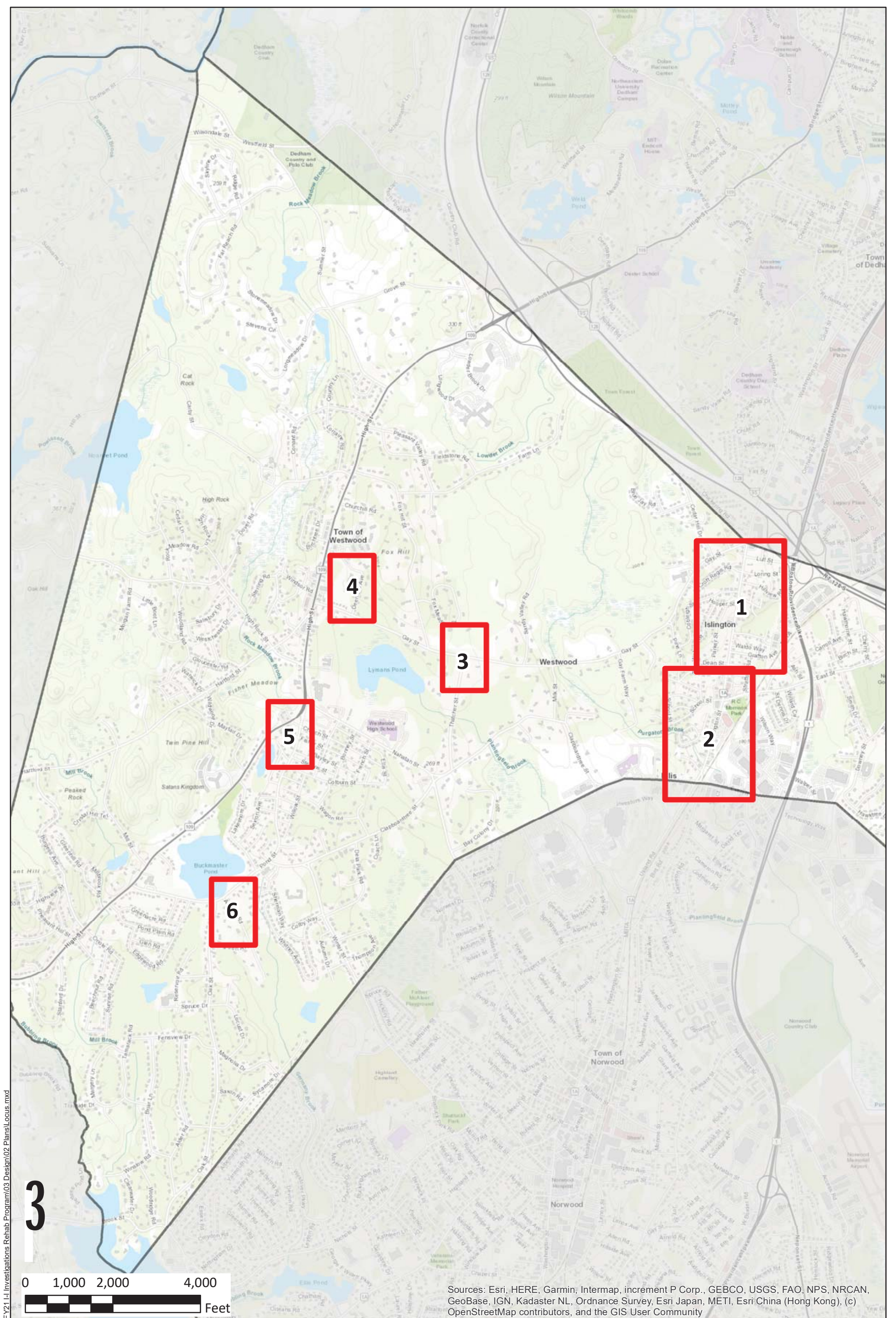


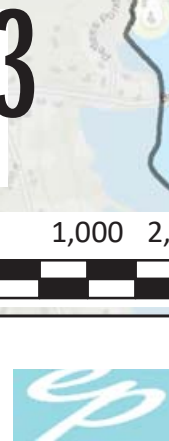
APPENDIX A

FY22 Sewer System Rehabilitation Figures



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

I:\Westwood_309\309-2007 FY21 I- Investigations Rehab Program\03 Design\02 Plans\Locus.mxd



1 in = 2,000 feet
 December 2021
 Job #: 309-2007

FY21 INFILTRATION REHABILITATION PROGRAM
WESTWOOD, MA
LOCUS MAP

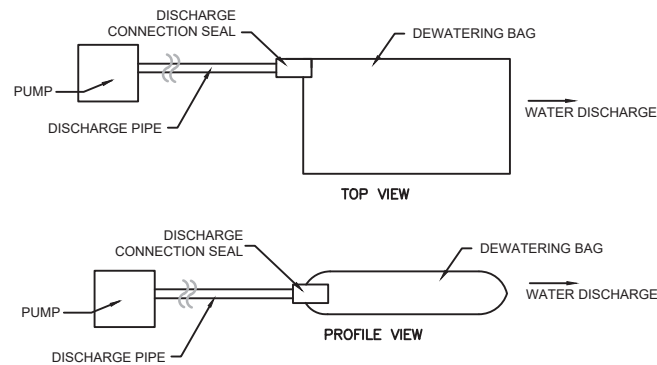
LOCUS

GENERAL NOTES:

- ALL EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES INCLUDING WATER, GAS, DRAIN, AND TELECOM NOT SHOWN. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS IN ADVANCE, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO ANY EXCAVATION.
- DO NOT SCALE DRAWINGS UNLESS OTHERWISE NOTED. WRITTEN DIMENSIONS AND STATIONING SHALL PREVAIL. REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. REFER TO CCTV INSPECTION RECORDS IN APPENDIX C FOR ADDITIONAL INFORMATION.
- THE CONTRACTOR SHALL RESTORE ALL PUBLIC AND PRIVATE PROPERTY TO ITS PRE-CONSTRUCTION CONDITION AT NO ADDITIONAL COST TO THE OWNER UNLESS NOTED TO BE ALTERED.
- ALL EXISTING STORM DRAIN, SEWER, AND WATER MAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED. THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER SHALL REPAIR ANY EXISTING SEWERS, STORM DRAIN LINES, WATER LINES OR CULVERTS DAMAGED DURING CONSTRUCTION.
- IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE UTILITY COMPANY TO OBTAIN REQUIRED SERVICE. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES OR FOR ANY RELATED DELAYS.
- ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO THE TRENCH EXCAVATION SHALL BE PROTECTED AND SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURE CAUSED BY, OR RESULTING FROM, THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. ALL UTILITIES REQUIRING REPAIR, RELOCATION, OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED BY THE CONTRACTOR, THROUGH THE RESPECTIVE UTILITY AND THE OWNER.
- THE CONTRACTOR SHALL TAKE SPECIAL CARE NOT TO DAMAGE TREES, BUSHES, PLANTS, PARKING METERS, FLOWERS, STONEWALLS, FENCES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS THEY ARE NOTED TO BE REMOVED. CONTRACTOR SHALL REPLACE ALL DAMAGED ITEMS AT NO ADDITIONAL COST TO OWNER.
- THE CONTRACTOR SHALL REMOVE AND REPLACE NEW, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY HIS CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, AND TO THE SATISFACTION OF THE OWNER AND ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL DEVICES AS DESCRIBED IN THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. ONE LANE TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. THE MASSDOT STANDARD TRAFFIC MANAGEMENT PLANS SHALL BE USED, AS SHOWN IN APPENDIX B.
- THE CONTRACTOR SHALL BE REQUIRED TO FURNISH AND MAINTAIN A TELEPHONE NUMBER WHERE THE CONTRACTOR CAN BE REACHED 24 HOURS A DAY, 7 DAYS A WEEK.
- THE LOCATION AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO THE TOWN AND THE ENGINEER. THE CONTRACTOR SHALL LIMIT HIS ACTIVITIES TO THESE AREAS. NO MATERIAL SHALL BE STORED ON THE PROJECT SITE.
- THE CONTRACTOR SHALL IDENTIFY AND OBTAIN ALL NECESSARY PERMITS FOR WORK IN ROADWAYS AND TRENCHES. THE CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL PERMITS AS AN INTEGRAL PART OF HIS WORK.
- THE CONTRACTOR SHALL SAW CUT ALL PAVEMENT TO ITS FULL DEPTH IN THE PROCESS OF INSTALLING NEW UTILITIES IN ALL PAVED AREAS INCLUDING STREETS, DRIVEWAYS, AND SIDEWALKS.
- TEST PITS MAY BE ORDERED BY THE ENGINEER TO DETERMINE THE LOCATION OF EXISTING UTILITIES. THE CONTRACTOR MAY REQUEST TEST PITS TO VERIFY EXISTING UTILITIES AT NO ADDITIONAL COSTS TO THE OWNER.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- CONCRETE WASHOUT AREAS SHALL BE OUTSIDE THE BUFFER ZONES OF ALL WETLAND RESOURCE AREAS.
- NO UNAUTHORIZED DISCHARGE TO WETLANDS IS PERMITTED.
- ALL EXCAVATION SHALL BE COMPLETELY CLOSED BY THE END OF EACH WORKING DAY BY BACKFILLING OR COVERING WITH STEEL PLATES WITH RAMPED COLD PATCH.
- TRENCHES SHALL BE DEWATERED TO 2' BELOW THE BOTTOM OF EXCAVATION. DEWATERING PUMPS SHALL DISCHARGE TO THE DEWATERING BAG.
- WORK HOURS ON THATCHER STREET, GAY STREET, AND DEERFIELD AVENUE SHALL BE LIMITED TO BETWEEN 9 AM AND 2 PM. WORK HOURS IN ALL OTHER AREAS SHALL BE 7AM TO 4PM.

SEWER REHABILITATION NOTES:

- NO DISPOSAL SITE WILL BE PROVIDED FOR DEBRIS REMOVED FROM DRAIN OR SEWER SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRANSPORTATION AND DISPOSAL OF ALL DEBRIS. DISPOSAL OF ALL DEBRIS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
- CIPP LINERS SHALL BE CUT FLUSH WITH THE MANHOLE INSIDE WALL, AND THE ANNULAR SPACE BETWEEN THE HOST PIPE AND THE CIPP SHALL BE SEALED WITH PATCHING MIX AT THE MANHOLE INSIDE WALL. WHEN THE CIPP LINE IS INSTALLED THROUGH A MANHOLE FOR CONSECUTIVE PIPE SECTIONS, THE TOP HALF OF THE CIPP LINER SHALL BE CUT OUT OF THE INTERMEDIATE MANHOLE. THE CUT SHALL BE FLUSH WITH THE MANHOLE BENCH AND MANHOLE INSIDE WALL, WITH ALL GAPS SEALED WITH PATCHING MIX.
- NO WATER USED FOR LINING ACTIVITIES SHALL BE DISCHARGED INTO THE DRAINAGE SYSTEM.
- CONTRACTOR SHALL LIMIT WORKING CREWS TO TWO (2) AT ANY TIME. ADDITIONAL CREWS SHALL ONLY BE AUTHORIZED IN WRITING BY THE ENGINEER.
- ABBREVIATIONS: AC=ASBESTOS CEMENT; CIPP=CURED-IN-PLACE PIPE; PVC=POLYVINYL CHLORIDE; VC=VITRIFIED CLAY; RCP=REINFORCED CONCRETE PIPE; LCR=LATERAL CONNECTION REPAIR.

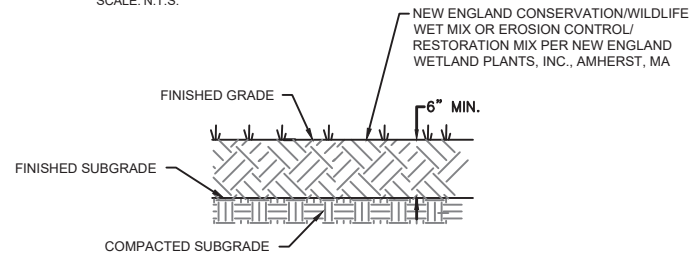


NOTES:

- DEWATERING BAG SIZE AND QUANTITY SHALL BE AS NEEDED TO ADEQUATELY FILTER ALL PUMP EFFLUENT FROM DEWATERING ACTIVITIES. CONTRACTOR SHALL PROVIDE A REDUNDANT BAG ON SITE AT ALL TIMES.
- EACH BAG SHALL HANDLE A 2", 3", OR 4" DISCHARGE HOSE.
- DISCHARGE HOSES CAN BE PLACED ALONG ANY EDGE BY MAKING A SMALL INCISION INTO THE FABRIC, INSERTING THE HOSE, AND THEN CLAMPING THE FABRIC TO THE HOSE VIA WIRE, TIES, CLAMP, ROPE OR SIMILAR TO CREATE A GOOD SEAL.
- CONTRACTOR SHALL AVOID DISCHARGING MULTIPLE PIPES INTO ONE BAG.

DEWATERING BAGS

SCALE: N.T.S.

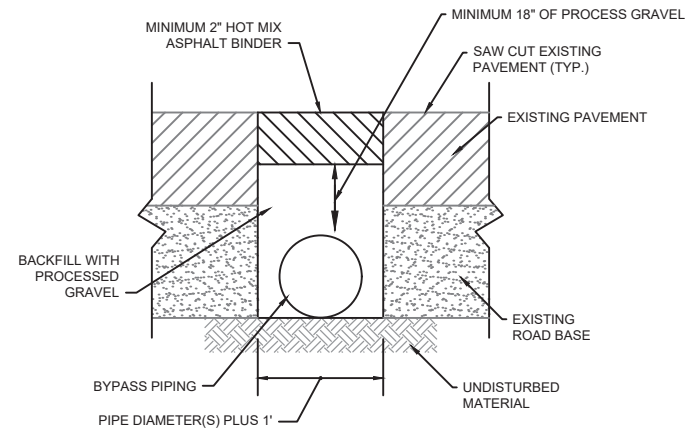


NOTES:

- INSTALL CURLEX CL EROSION CONTROL BLANKET AS MANUFACTURED BY AMERICAN EXCELSIOR COMPANY (OR APPROVED EQUAL) ON ALL LOAM AND SEEDED SLOPES 1V:3H OR STEEPER.

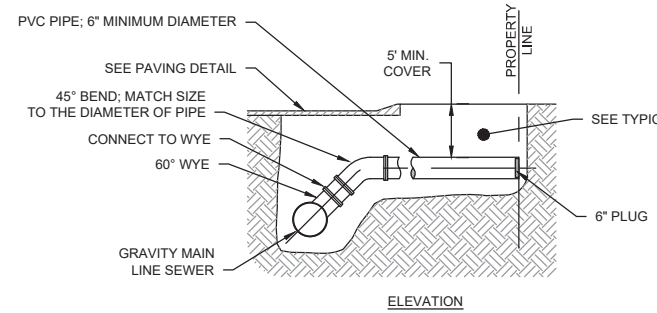
LOAM AND SEED (DISTURBED AREAS)

SCALE: N.T.S.



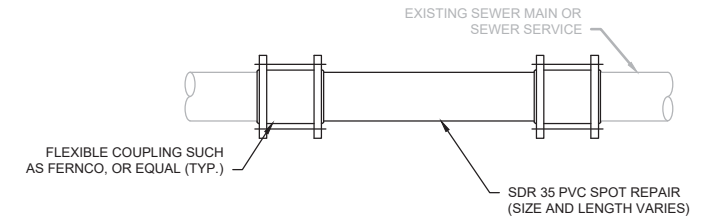
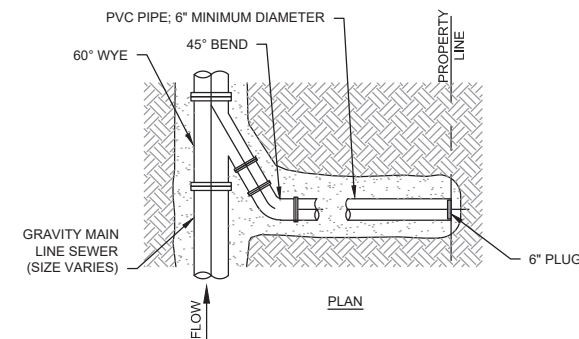
TYPICAL BYPASS PIPING TRENCH ACROSS PAVED AREAS

SCALE: N.T.S.



TYPICAL SEWER SERVICE CONNECTION

SCALE: N.T.S.

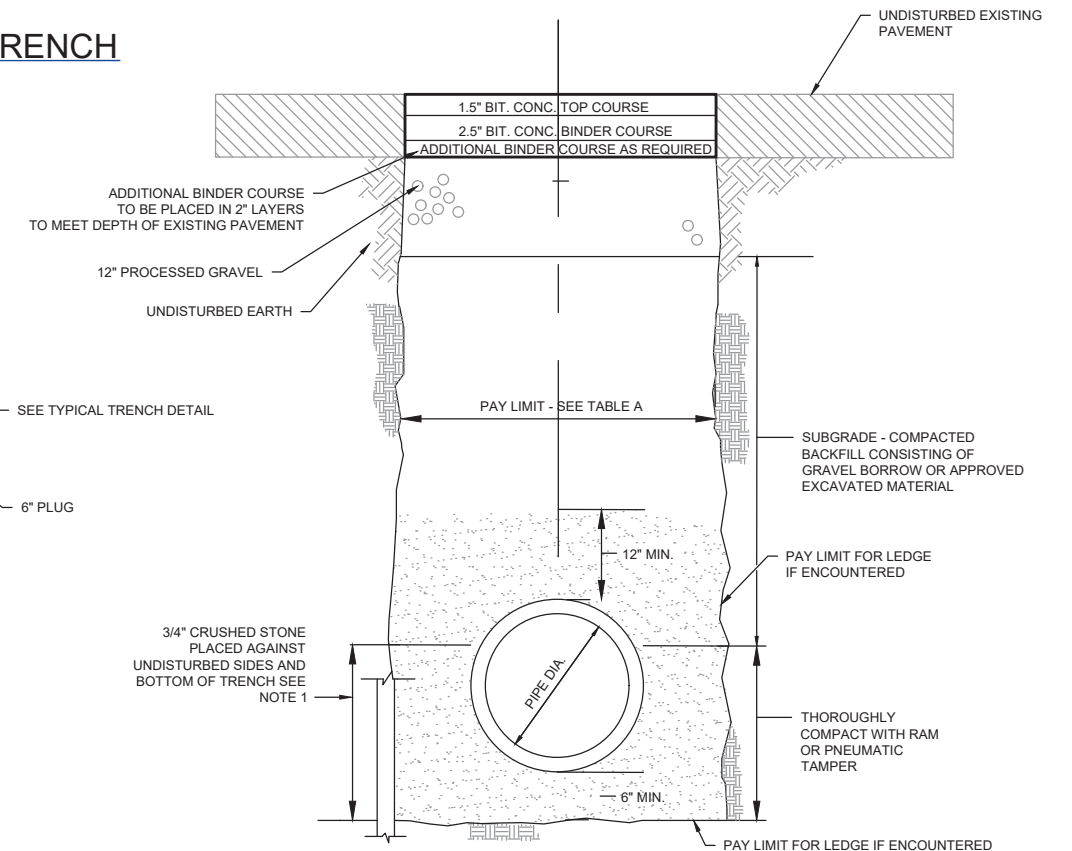


NOTES:

- REFER TO TYPICAL TRENCH DETAIL FOR SEWER PIPE, THIS PAGE, FOR BACKFILL REQUIREMENTS.

SPOT REPAIR DETAIL

SCALE: N.T.S.



NOTES:

- FOR PIPES OTHER THAN P.V.C., SELECTED COMMON FILL MAY BE USED FROM MID-DIAMETER OF PIPE TO 12" ABOVE TOP OF PIPE.
- TRENCHES LOCATED ON THE ROAD SHOULDER SHALL BE TREATED THE SAME AS STREET EXCEPT FOR PAVING.

TABLE A				
DEPTH TO INVERT	DIAMETER OF PIPE (DP)	MAXIMUM TRENCH WIDTH PAY LIMIT (SHEETED OR UNSHEETED) (W)	MINIMUM CLEARANCE (S)	TRENCH PAVEMENT WIDTH PAY LIMIT (TP)
0 - 12'	TO 18"	5'-0"	0'-6"	6'-6"
0 - 12'	21 - 24"	5'-0"	0'-7 1/2"	6'-6"
OVER 12'	TO 18"	7'-0"	0'-6"	9'-6"
OVER 12'	21" - 24"	7'-0"	0'-7 1/2"	9'-6"

TYPICAL TRENCH DETAIL FOR SEWER PIPE

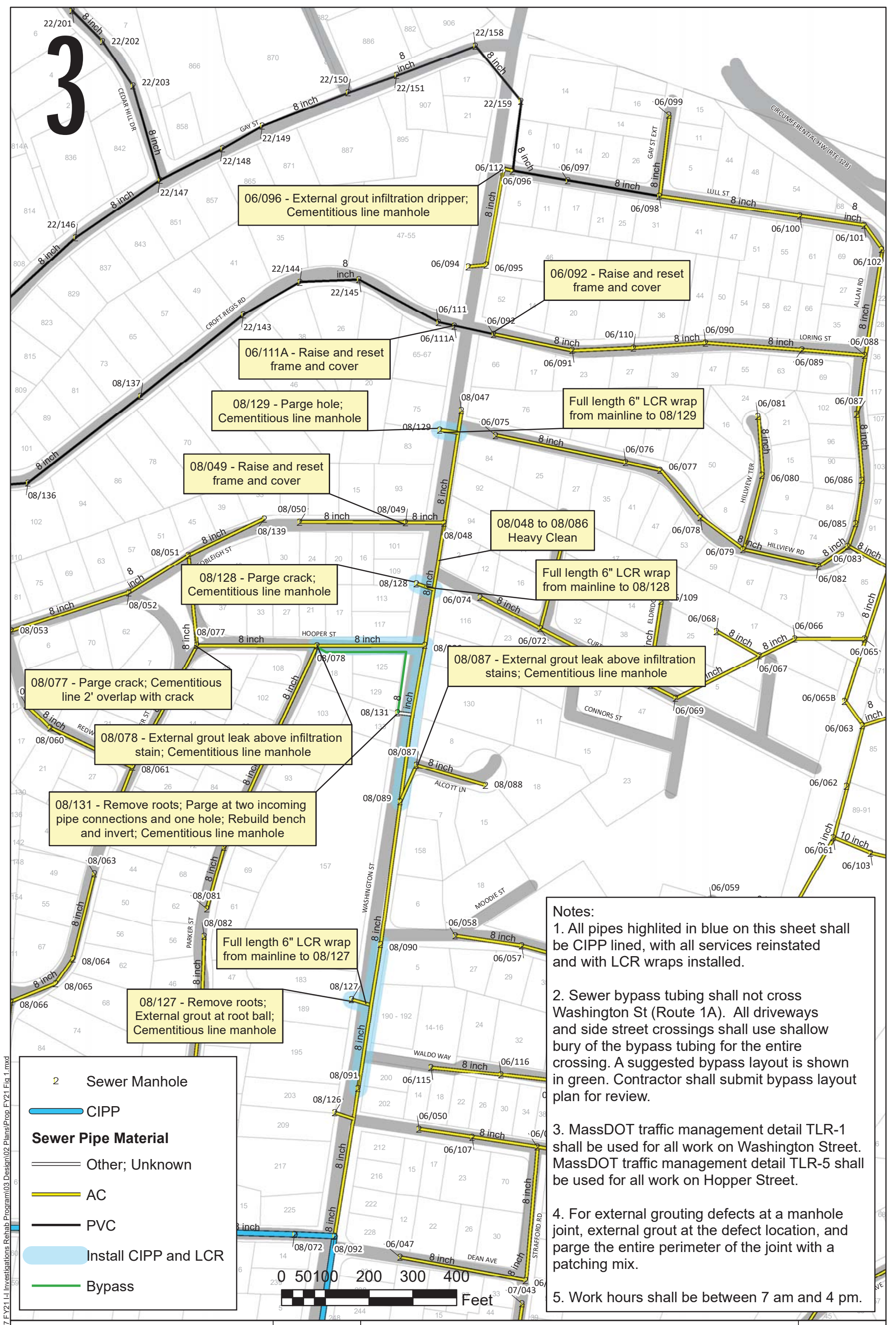
SCALE: N.T.S.



DECEMBER 2021
309-2007
SCALE: AS NOTED

**FY21 INFILTRATION REHABILITATION PROGRAM
WESTWOOD, MA**

GENERAL NOTES AND SEWER DETAILS



J:\Westwood_309\309-2007\FY21 I- Investigations Rehab Program\03 Design\02 Plans\Prop FY21 Fig 1.mxd

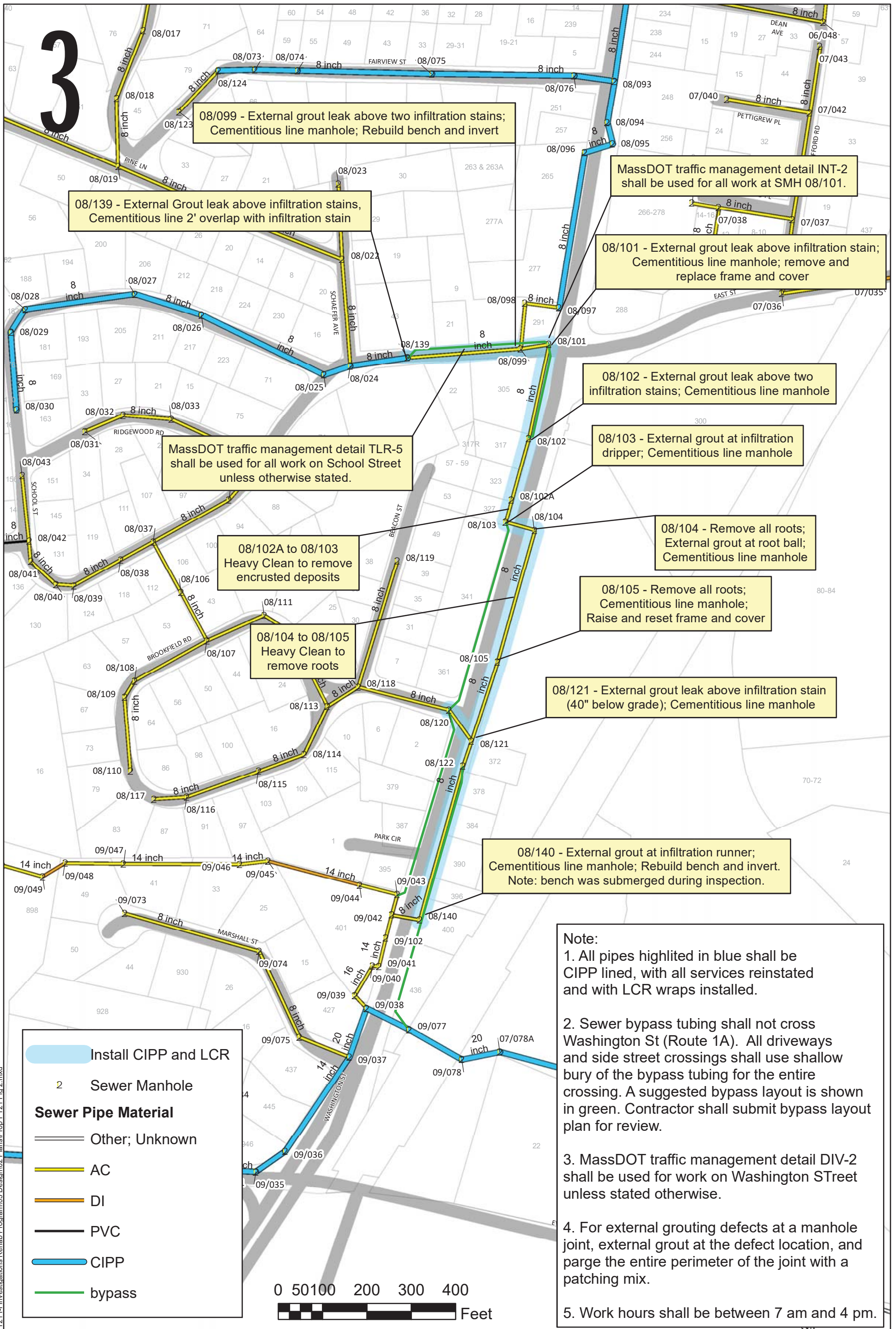
- Notes:**
1. All pipes highlighted in blue on this sheet shall be CIPP lined, with all services reinstated and with LCR wraps installed.
 2. Sewer bypass tubing shall not cross Washington St (Route 1A). All driveways and side street crossings shall use shallow bury of the bypass tubing for the entire crossing. A suggested bypass layout is shown in green. Contractor shall submit bypass layout plan for review.
 3. MassDOT traffic management detail TLR-1 shall be used for all work on Washington Street. MassDOT traffic management detail TLR-5 shall be used for all work on Hopper Street.
 4. For external grouting defects at a manhole joint, external grout at the defect location, and parge the entire perimeter of the joint with a patching mix.
 5. Work hours shall be between 7 am and 4 pm.



1 in = 200 ft
 December 2021
 Job #: 309-2007

**FY21 SEWER SYSTEM REHABILITATION
 WESTWOOD, MA
 Route 1A North**

**FIGURE
 1**



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1 in = 200 ft
 December 2021
 Job #: 309-2007

**FY21 SEWER SYSTEM REHABILITATION
 WESTWOOD, MA
 Route 1A South**

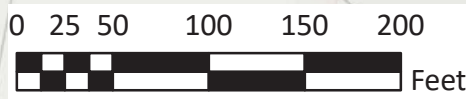
**FIGURE
 2**



10/047 - Remove and Replace Frame and Cover

Notes:
 1. MassDOT traffic management detail INT-2 shall be used for the work shown on this page.
 2. Work hours here are limited to between 9 am and 2 pm

2	Sewer Manhole
	CIPP
Sewer Pipe Material	
	AC
	PVC



3

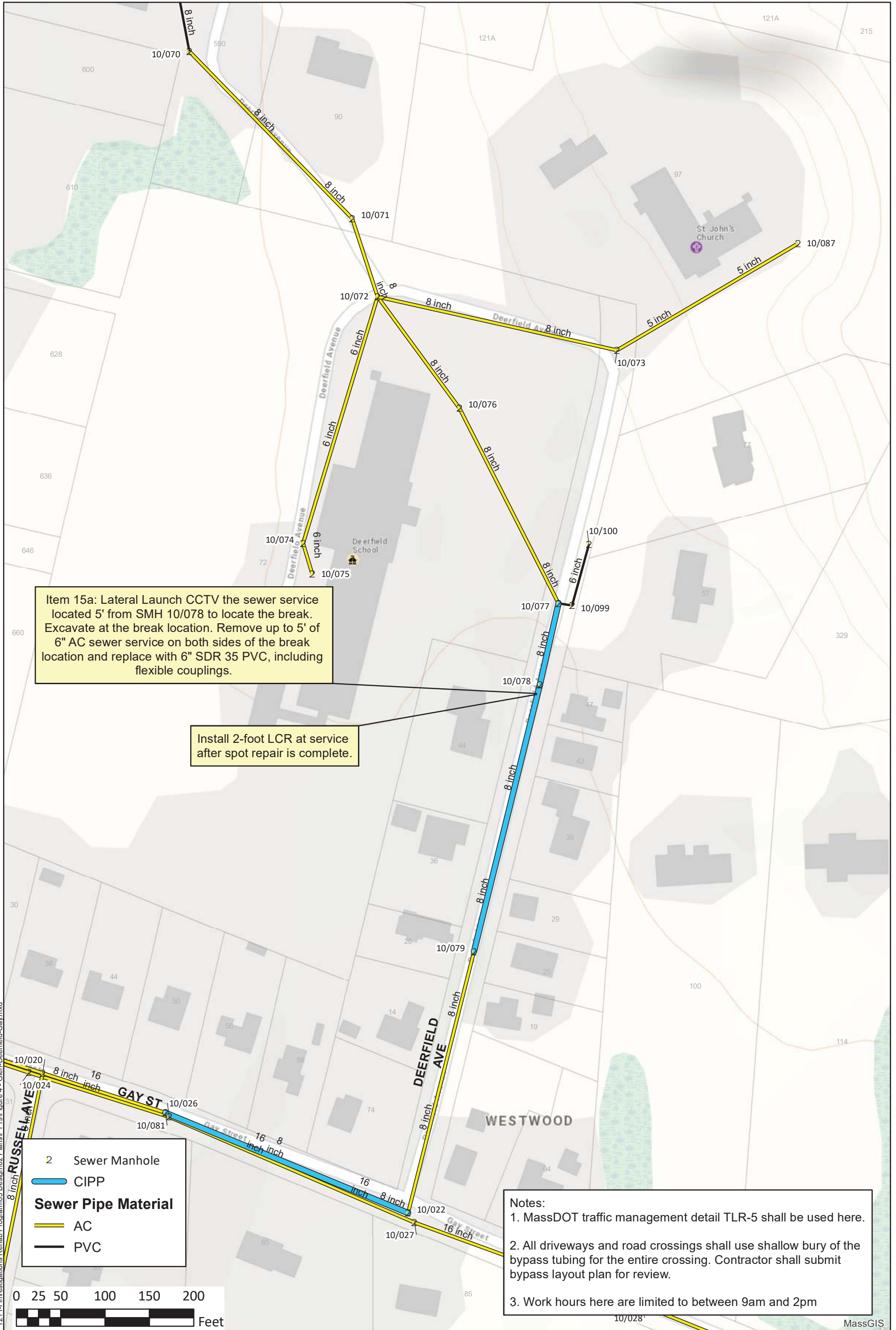
I:\Westwood_309\309-2007 FY21 I-1 Investigations Rehab Program\03 Design\02 Plans\FY19\Figure 3 - Thatcher St.mxd



1 in = 100 feet
 December 2021
 Job #: 309-2007

**FY21 SEWER SYSTEM REHABILITATION
 WESTWOOD, MA
 THATCHER ST**

**FIGURE
 3**



Item 15a: Lateral Launch CCTV the sewer service located 5' from SMH 10/078 to locate the break. Excavate at the break location. Remove up to 5' of 6" AC sewer service on both sides of the break location and replace with 6" SDR 35 PVC, including flexible couplings.

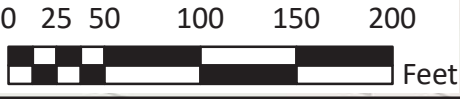
Install 2-foot LCR at service after spot repair is complete.

Sewer Pipe Material

- 2 Sewer Manhole
- CIPP
- AC
- PVC

Notes:

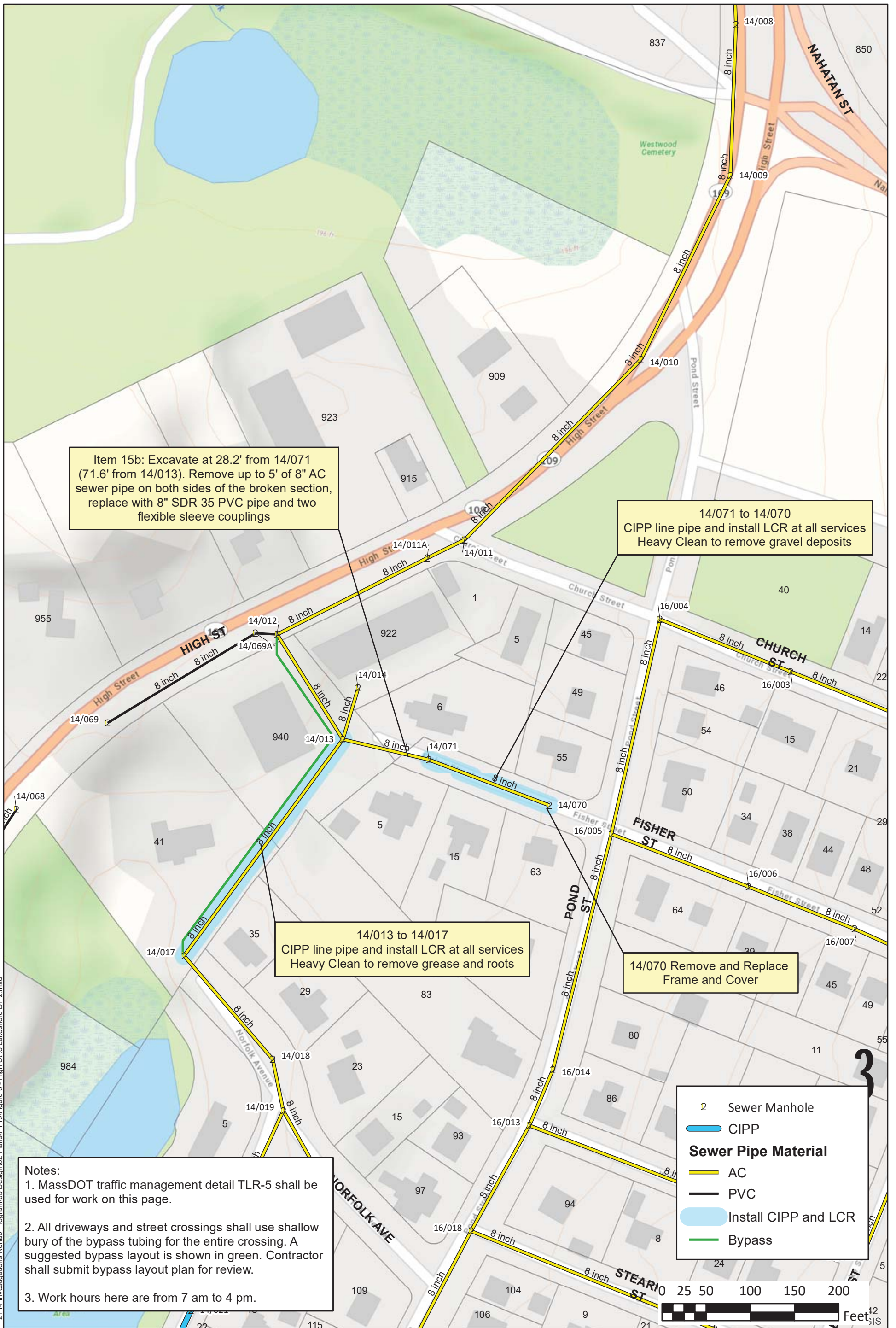
1. MassDOT traffic management detail TLR-5 shall be used here.
2. All driveways and road crossings shall use shallow bury of the bypass tubing for the entire crossing. Contractor shall submit bypass layout plan for review.
3. Work hours here are limited to between 9am and 2pm



I:\Westwood_309\309-2007 FY21 I- Investigations Rehab Program\03 Design\02 Plans\FY19\Figure 4 - Glen-Deerfield-Gay.mxd

MassGIS

	1 in = 100 feet	FY21 SEWER SYSTEM REHABILITATION WESTWOOD, MA	FIGURE 4
	December 2021		
	Job #: 309-2007	WESTWOOD GLEN, DEERFIELD, GAY	



Item 15b: Excavate at 28.2' from 14/071 (71.6' from 14/013). Remove up to 5' of 8" AC sewer pipe on both sides of the broken section, replace with 8" SDR 35 PVC pipe and two flexible sleeve couplings

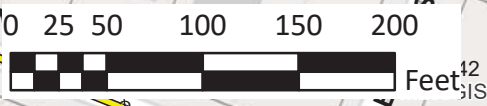
14/071 to 14/070
CIPP line pipe and install LCR at all services
Heavy Clean to remove gravel deposits

14/013 to 14/017
CIPP line pipe and install LCR at all services
Heavy Clean to remove grease and roots

14/070 Remove and Replace
Frame and Cover

Notes:
1. MassDOT traffic management detail TLR-5 shall be used for work on this page.
2. All driveways and street crossings shall use shallow bury of the bypass tubing for the entire crossing. A suggested bypass layout is shown in green. Contractor shall submit bypass layout plan for review.
3. Work hours here are from 7 am to 4 pm.

	Sewer Manhole
	CIPP
Sewer Pipe Material	
	AC
	PVC
	Install CIPP and LCR
	Bypass

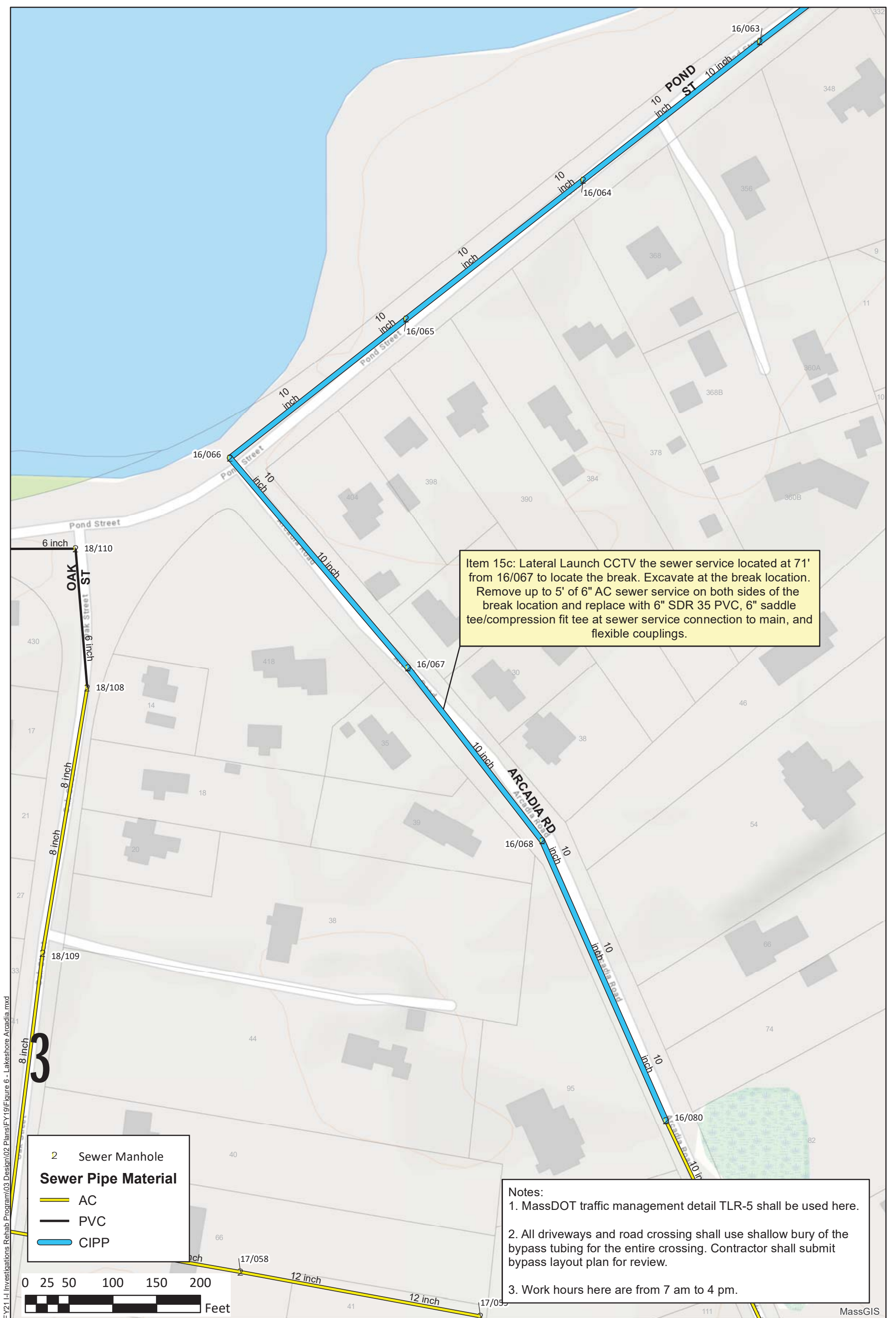


1 in = 100 feet
December 2021
Job #: 309-2007

**FY21 SEWER SYSTEM REHABILITATION
WESTWOOD, MA
HIGH ST TO LAKESHORE DR**

**FIGURE
5**





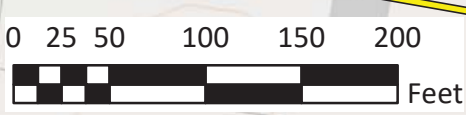
Item 15c: Lateral Launch CCTV the sewer service located at 71' from 16/067 to locate the break. Excavate at the break location. Remove up to 5' of 6" AC sewer service on both sides of the break location and replace with 6" SDR 35 PVC, 6" saddle tee/compression fit tee at sewer service connection to main, and flexible couplings.

Notes:
 1. MassDOT traffic management detail TLR-5 shall be used here.
 2. All driveways and road crossing shall use shallow bury of the bypass tubing for the entire crossing. Contractor shall submit bypass layout plan for review.
 3. Work hours here are from 7 am to 4 pm.

2 Sewer Manhole

Sewer Pipe Material

- AC
- PVC
- CIPP



I:\Westwood_309\309-2007 FY21 I- Investigations Rehab Program\03 Design\02 Plans\FY19\Figure 6 - Lakeshore Arcadia.mxd



1 in = 100 feet
 December 2021
 Job #: 309-2007

**FY21 SEWER SYSTEM REHABILITATION
 WESTWOOD, MA
 LAKESHORE, POND, ARCADIA, EVERGREEN**

**FIGURE
 6**

MassGIS