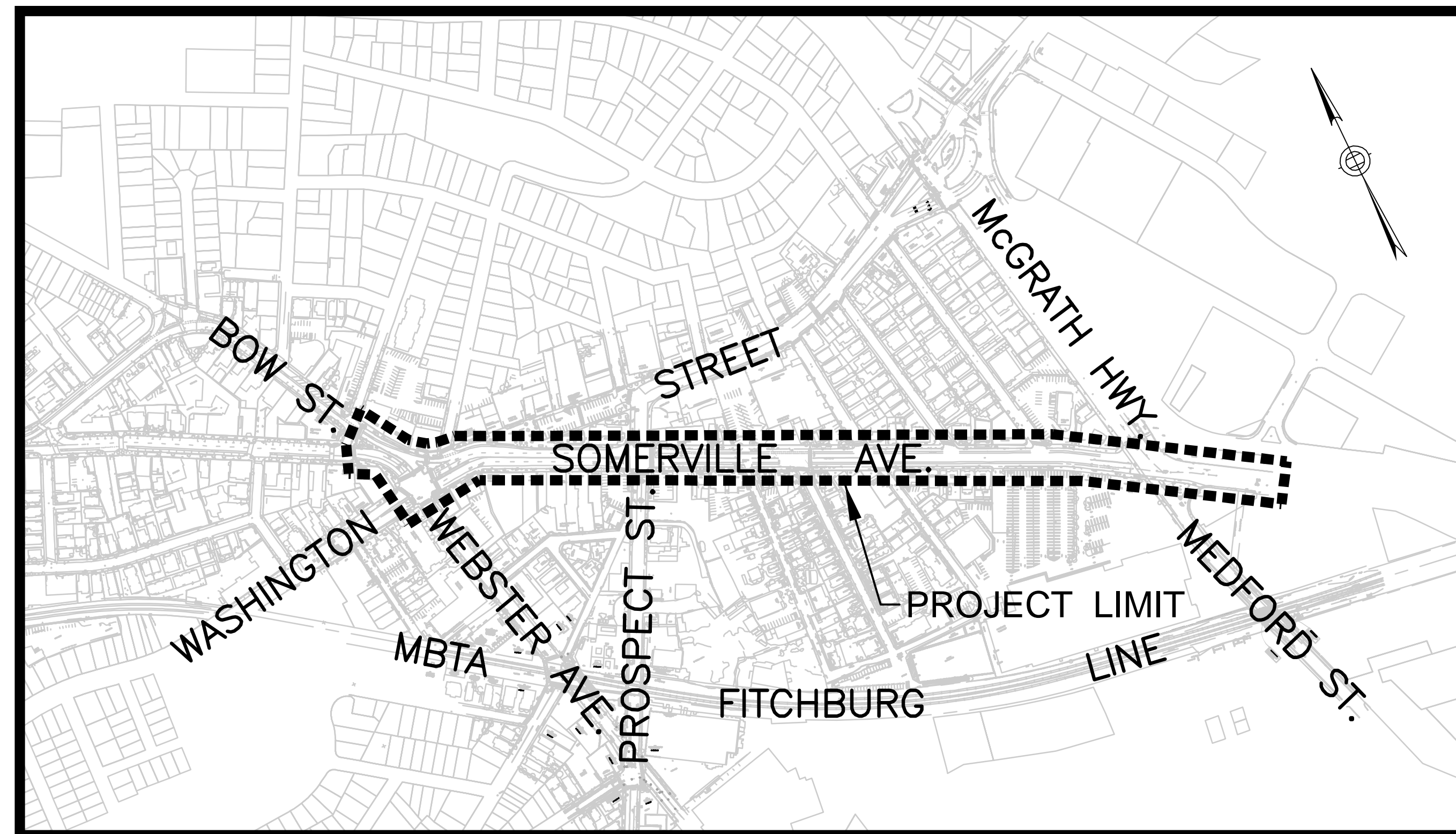


CITY OF SOMERVILLE
 UNION SQUARE UTILITY AND TRANSPORTATION IMPROVEMENTS
 CONSTRUCTION PACKAGES 2 & 3
 SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
 IFB #18-24
 SOMERVILLE, MASSACHUSETTS



LOCUS MAP

SCALE: 1"=300'



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VOLUME 3 OF 3
 DATE: Dec. 11, 2017

VOLUME 3 OF 3

TRAFFIC MANAGEMENT

TM-1	TRAFFIC MANAGEMENT - KEY PLAN
TM-2	TRAFFIC MANAGEMENT - GENERAL NOTES AND LEGEND
TM-3	TRAFFIC MANAGEMENT PLANS - TYPICAL DETAILS AND SECTIONS - SHEET 1 OF 3
TM-4	TRAFFIC MANAGEMENT PLANS - TYPICAL DETAILS AND SECTIONS - SHEET 2 OF 3
TM-5	TRAFFIC MANAGEMENT PLANS - TYPICAL DETAILS AND SECTIONS - SHEET 3 OF 3
TM-6 to TM-10	NOT USED
TM-9	ADVANCE WARNING VMS AND SIGNS LOCATION PLAN
TM-10	ADVANCE WARNING SIGN LOCATION PLAN
TM-11	TRAFFIC MANAGEMENT PLANS - EXISTING CONDITIONS - SHEET 1 OF 6
TM-12	TRAFFIC MANAGEMENT PLANS - EXISTING CONDITIONS - SHEET 2 OF 6
TM-13	TRAFFIC MANAGEMENT PLANS - EXISTING CONDITIONS - SHEET 3 OF 6
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TM-17 to TM-31	NOT USED
TM-32	TRAFFIC SIGN SUMMARY - SHEET 1 OF 5
TM-33	TRAFFIC SIGN SUMMARY - SHEET 2 OF 5
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TM-36	TRAFFIC SIGN SUMMARY - SHEET 5 OF 5
TM-37 to TM-46	NOT USED
TM-47	WATER MAIN REPLACEMENT TMP SEGMENT 1 SHEET 1 OF 3
TM-48	WATER MAIN REPLACEMENT TMP SEGMENT 1 SHEET 2 OF 3
TM-49	WATER MAIN REPLACEMENT TMP SEGMENT 1 SHEET 3 OF 3
TM-50	WATER MAIN REPLACEMENT TMP SEGMENT 2-1 SHEET 1 OF 3
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TM-52	WATER MAIN REPLACEMENT TMP SEGMENT 2-1 SHEET 3 OF 3
TM-53	WATER MAIN REPLACEMENT TMP SEGMENT 2-2 SHEET 1 OF 1
TM-54	WATER MAIN REPLACEMENT TMP SEGMENT 2-3 SHEET 1 OF 1
TM-55	WATER MAIN REPLACEMENT TMP SEGMENT 2-4 SHEET 1 OF 1
TM-56	WATER MAIN REPLACEMENT TMP SEGMENT 3-1 SHEET 1 OF 3
TM-57	WATER MAIN REPLACEMENT TMP SEGMENT 3-1 SHEET 2 OF 3
TM-58	WATER MAIN REPLACEMENT TMP SEGMENT 3-1 SHEET 3 OF 3
TM-59	WATER MAIN REPLACEMENT TMP SEGMENT 3-2 SHEET 1 OF 3
TM-60	WATER MAIN REPLACEMENT TMP SEGMENT 3-2 SHEET 2 OF 3
TM-61	NOT USED
TM-62	WATER MAIN REPLACEMENT TMP SEGMENT 3-2 SHEET 3 OF 3
TM-63	WATER MAIN REPLACEMENT TMP SEGMENT 3-3 SHEET 1 OF 1
TM-64	WATER MAIN REPLACEMENT TMP SEGMENT 4-1 SHEET 1 OF 3
TM-65	WATER MAIN REPLACEMENT TMP SEGMENT 4-1 SHEET 2 OF 3
TM-66	WATER MAIN REPLACEMENT TMP SEGMENT 4-1 SHEET 3 OF 3
TM-67	WATER MAIN REPLACEMENT TMP SEGMENT 4-2 SHEET 1 OF 1
TM-68	WATER MAIN REPLACEMENT TMP SEGMENT 4-3 SHEET 1 OF 2
TM-69	WATER MAIN REPLACEMENT TMP SEGMENT 4-3 SHEET 2 OF 2
TM-70	WATER MAIN REPLACEMENT TMP SEGMENT 4-4 SHEET 1 OF 2
TM-71	WATER MAIN REPLACEMENT TMP SEGMENT 4-4 SHEET 2 OF 2
TM-72	WATER MAIN REPLACEMENT TMP SEGMENT 4-5 SHEET 1 OF 1
TM-73	WATER MAIN REPLACEMENT TMP SEGMENT 4-6 SHEET 1 OF 1
TM-74	WATER MAIN REPLACEMENT TMP SEGMENT 5-1 SHEET 1 OF 3
TM-75	WATER MAIN REPLACEMENT TMP SEGMENT 5-1 SHEET 2 OF 3
TM-76	WATER MAIN REPLACEMENT TMP SEGMENT 5-1 SHEET 3 OF 3
TM-77	WATER MAIN REPLACEMENT TMP SEGMENT 5-2 SHEET 1 OF 1
TM-78	WATER MAIN REPLACEMENT TMP SEGMENT 5-3 SHEET 1 OF 2
TM-79	WATER MAIN REPLACEMENT TMP SEGMENT 5-3 SHEET 2 OF 2
TM-80	WATER MAIN REPLACEMENT TMP SEGMENT 5-4 SHEET 1 OF 1
TM-81	WATER MAIN REPLACEMENT TMP SEGMENT 5-5 SHEET 1 OF 1
TM-82	WATER MAIN REPLACEMENT TMP SEGMENT 5-6 SHEET 1 OF 2
TM-83	WATER MAIN REPLACEMENT TMP SEGMENT 5-6 SHEET 2 OF 2
TM-84	WATER MAIN REPLACEMENT TMP SEGMENT 5-7 SHEET 1 OF 3
TM-85	WATER MAIN REPLACEMENT TMP SEGMENT 5-7 SHEET 2 OF 3
TM-86	WATER MAIN REPLACEMENT TMP SEGMENT 5-7 SHEET 3 OF 3
TM-87	WATER MAIN REPLACEMENT TMP SEGMENT 5-8 SHEET 1 OF 1
TM-88	WATER MAIN REPLACEMENT TMP SEGMENT 5-9 SHEET 1 OF 1
TM-89	WATER MAIN REPLACEMENT TMP SEGMENT 5-10 SHEET 1 OF 1
TM-90	WATER MAIN REPLACEMENT TMP SEGMENT 5-11 SHEET 1 OF 1
TM-91 to TM-110	NOT USED
TM-111	TRAFFIC MANAGEMENT PLAN - STAGE 1A - SHEET 1 OF 2
TM-112	TRAFFIC MANAGEMENT PLAN - STAGE 1A - SHEET 2 OF 2
TM-113	TRAFFIC MANAGEMENT - STAGE 1A - DETOUR PLAN
TM-114	UPSTREAM SEWER RELOCATION- STAGE 1A-2
TM-115	UPSTREAM SEWER RELOCATION- STAGE 1A-3
TM-116 to TM-120	NOT USED
TM-121	TRAFFIC MANAGEMENT PLAN - STAGE 1B
TM-122 to TM-124	NOT USED
TM-125	TRAFFIC MANAGEMENT - STAGE 1B - DETOUR PLAN

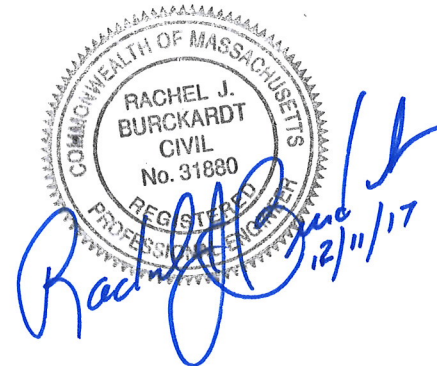
TRAFFIC MANAGEMENT (CONTINUED)

TM-126 to TM-130	NOT USED
TM-131	TRAFFIC MANAGEMENT PLAN - STAGE 1C - SHEET 1 OF 2
TM-132	TRAFFIC MANAGEMENT PLAN - STAGE 1C - SHEET 2 OF 2
TM-133 to TM-134	NOT USED
TM-135	TRAFFIC MANAGEMENT PLAN- STAGE 1D-1- SHEET 1 OF 2
TM-136	TRAFFIC MANAGEMENT PLAN- STAGE 1D-1- SHEET 2 OF 2
TM-137	TRAFFIC MANAGEMENT - STAGE 1D-1- DETOUR PLAN
TM-138	TRAFFIC MANAGEMENT PLAN- STAGE 1D-2
TM-139	TRAFFIC MANAGEMENT- STAGE 1D-2- DETOUR PLAN
TM-140	TRAFFIC MANAGEMENT PLAN- STAGE 1D-3
TM-141	NOT USED
TM-142	TRAFFIC MANAGEMENT PLAN- STAGE 1D-4- SHEET 1 OF 2
TM-143	TRAFFIC MANAGEMENT PLAN- STAGE 1D-4- SHEET 2 OF 2
TM-144	TRAFFIC MANAGEMENT- STAGE 1D-4- DETOUR PLAN
TM-145	TRAFFIC MANAGEMENT PLAN - STAGE 1D-5
TM-146 to TM-150	NOT USED
TM-151	TRAFFIC MANAGEMENT PLAN - STAGE 1E-1 - SHEET 1 OF 2
TM-152	TRAFFIC MANAGEMENT PLAN - STAGE 1E-1 - SHEET 2 OF 2
TM-153	TRAFFIC MANAGEMENT - STAGE 1E-1 - DETOUR PLAN - SHEET 1 OF 2
TM-154	TRAFFIC MANAGEMENT - STAGE 1E-1 - DETOUR PLAN - SHEET 2 OF 2
TM-155	TRAFFIC MANAGEMENT PLAN - STAGE 1E-2
TM-156	TRAFFIC MANAGEMENT - STAGE 1E-2 - DETOUR PLAN
TM-157 to TM-160	NOT USED
TM-161	TRAFFIC MANAGEMENT PLAN - STAGE 1F
TM-162 to TM-164	NOT USED
TM-165	TRAFFIC MANAGEMENT - STAGE 1F - DETOUR PLAN
TM-166 to TM-200	NOT USED
TM-201	TRAFFIC MANAGEMENT PLAN - STAGE 2A
TM-202 to TM-204	NOT USED
TM-205	TRAFFIC MANAGEMENT - STAGE 2A - DETOUR PLAN
TM-206 to TM-210	NOT USED
TM-211	TRAFFIC MANAGEMENT PLAN - STAGE 2B - SHEET 1 OF 2
TM-212	TRAFFIC MANAGEMENT PLAN - STAGE 2B - SHEET 2 OF 2
TM-213 to TM-214	NOT USED
TM-215	TRAFFIC MANAGEMENT - STAGE 2B - DETOUR PLAN
TM-216 to TM-220	NOT USED
TM-221	TRAFFIC MANAGEMENT PLAN - STAGE 2C - SHEET 1 OF 2
TM-222	TRAFFIC MANAGEMENT PLAN - STAGE 2C - SHEET 2 OF 2
TM-223 to TM-224	NOT USED
TM-225	TRAFFIC MANAGEMENT - STAGE 2C - DETOUR PLAN
TM-226 to TM-230	NOT USED
TM-231	TRAFFIC MANAGEMENT PLAN - STAGE 2D - SHEET 1 OF 2
TM-232	TRAFFIC MANAGEMENT PLAN - STAGE 2D - SHEET 2 OF 2
TM-233 to TM-234	NOT USED
TM-235	TRAFFIC MANAGEMENT - STAGE 2D - DETOUR PLAN
TM-236 to TM-240	NOT USED
TM-241	TRAFFIC MANAGEMENT PLAN - STAGE 2E - SHEET 1 OF 2
TM-242	TRAFFIC MANAGEMENT PLAN - STAGE 2E - SHEET 2 OF 2
TM-243 to TM-244	NOT USED
TM-245	TRAFFIC MANAGEMENT - STAGE 2E - DETOUR PLAN
TM-246 to TM-250	NOT USED
TM-251	TRAFFIC MANAGEMENT PLAN - STAGE 2F
TM-252 to TM-254	NOT USED
TM-255	TRAFFIC MANAGEMENT - STAGE 2F - DETOUR PLAN
TM-256 to TM-260	NOT USED
TM-261	TRAFFIC MANAGEMENT PLAN - STAGE 2G
TM-262 to TM-264	NOT USED
TM-265	TRAFFIC MANAGEMENT - STAGE 2G - DETOUR PLAN
TM-266 to TM-270	NOT USED
TM-271	TRAFFIC MANAGEMENT PLAN - STAGE 2H - SHEET 1 OF 2
TM-272	TRAFFIC MANAGEMENT PLAN - STAGE 2H - SHEET 2 OF 2
TM-273 to TM-274	NOT USED
TM-275	TRAFFIC MANAGEMENT - STAGE 2H - DETOUR PLAN
TM-276 to TM-280	NOT USED
TM-281	TRAFFIC MANAGEMENT PLAN - STAGE 2I
TM-282 to TM-284	NOT USED
TM-285	TRAFFIC MANAGEMENT - STAGE 2I - DETOUR PLAN
TM-286 to TM-290	NOT USED
TM-291	TRAFFIC MANAGEMENT PLAN - STAGE 2J-1
TM-292	TRAFFIC MANAGEMENT PLAN - STAGE 2J-2
TM-293 to TM-294	NOT USED
TM-295	TRAFFIC MANAGEMENT - STAGE 2J - DETOUR PLAN
TM-296 to TM-300	NOT USED
TM-301	TRAFFIC MANAGEMENT PLAN - STAGE 2K-1

TRAFFIC MANAGEMENT (CONTINUED)

TM-302	TRAFFIC MANAGEMENT PLAN - STAGE 2K-2
TM-303 to TM-310	NOT USED
TM-311	TRAFFIC MANAGEMENT PLAN - STAGE 2L
TM-312 to TM-339	NOT USED
TM-340	DOWNSTREAM SEWER RELOCATION - TYPICAL SETUP 'A'
TM-341	DOWNSTREAM SEWER RELOCATION - TYPICAL SETUP 'B'
TM-342	DOWNSTREAM SEWER RELOCATION - TYPICAL SETUP 'C'
TM-343	DOWNSTREAM SEWER RELOCATION - TYPICAL SETUP 'D'
TM-344	DOWNSTREAM SEWER RELOCATION - TYPICAL SETUP 'E'
TM-345 to TM-410	NOT USED
TM-411	TRAFFIC SIGNAL CHANGES- STAGE 1A - SHEET 1 OF 2
TM-412	TRAFFIC SIGNAL CHANGES- STAGE 1A - SHEET 2 OF 2
TM-413 to TM-420	NOT USED
TM-421	TRAFFIC SIGNAL CHANGES- STAGE 1B - SHEET 1 OF 2
TM-422	TRAFFIC SIGNAL CHANGES- STAGE 1B - SHEET 2 OF 2
TM-423 to TM-424	NOT USED
TM-425	TRAFFIC SIGNAL CHANGES- STAGE 1C- SHEET 1 OF 2
TM-426	TRAFFIC SIGNAL CHANGES- STAGE 1C- SHEET 2 OF 2
TM-427 to TM-430	NOT USED
TM-431	TRAFFIC SIGNAL CHANGES- STAGE 1 D-1 - SHEET 1 OF 2
TM-432	TRAFFIC SIGNAL CHANGES- STAGE 1 D-1 - SHEET 2 OF 2
TM-433 to TM-440	NOT USED
TM-441	TRAFFIC SIGNAL CHANGES- STAGE 1E-1- SHEET 1 OF 2
TM-442	TRAFFIC SIGNAL CHANGES- STAGE 1E-1 - SHEET 2 OF 2
TM-443	TRAFFIC SIGNAL CHANGES- STAGE 1E-2 - SHEET 1 OF 2
TM-444	TRAFFIC SIGNAL CHANGES- STAGE 1E-2 - SHEET 2 OF 2
TM-445 to TM-450	NOT USED
TM-451	TRAFFIC SIGNAL CHANGES- STAGE 1F - SHEET 1 OF 2
TM-452	TRAFFIC SIGNAL CHANGES- STAGE 1F - SHEET 2 OF 2
TM-453 to TM-460	NOT USED
TM-461	TRAFFIC SIGNAL CHANGES- STAGE 2A - SHEET 1 OF 2
TM-462	TRAFFIC SIGNAL CHANGES- STAGE 2A - SHEET 2 OF 2
TM-463 to TM-470	NOT USED
TM-471	TRAFFIC SIGNAL CHANGES- STAGE 2B - SHEET 1 OF 3
TM-472	TRAFFIC SIGNAL CHANGES- STAGE 2B - SHEET 2 OF 3
TM-473	TRAFFIC SIGNAL CHANGES- STAGE 2B - SHEET 3 OF 3
TM-474	NOT USED
TM-475	TRAFFIC SIGNAL CHANGES- STAGE 2C
TM-476 to TM-480	NOT USED
TM-481	TRAFFIC SIGNAL CHANGES- STAGE 2I - SHEET 1 OF 2
TM-482	TRAFFIC SIGNAL CHANGES- STAGE 2I - SHEET 2 OF 2
TM-483 to TM-490	NOT USED
TM-491	TRAFFIC SIGNAL CHANGES- STAGES 2J-1 AND 2J-2 - SHEET 1 OF 2
TM-492	TRAFFIC SIGNAL CHANGES- STAGES 2J-1 AND 2J-2- SHEET 2 OF 2
TM-493 to TM-510	NOT USED
TM-511	TRAFFIC SIGNAL CHANGES- STAGE 2K-1 - SHEET 1 OF 2
TM-512	TRAFFIC SIGNAL CHANGES- STAGE 2K-1 - SHEET 2 OF 2
TM-513	TRAFFIC SIGNAL CHANGES- STAGE 2K-2 - SHEET 1 OF 2
TM-514	TRAFFIC SIGNAL CHANGES- STAGE 2K-2 - SHEET 2 OF 2
TM-515 to TM-520	NOT USED
TM-521	TRAFFIC SIGNAL CHANGES- STAGE 2L - SHEET 1 OF 2
TM-522	TRAFFIC SIGNAL CHANGES- STAGE 2L - SHEET 2 OF 2
TM-523 to TM-559	NOT USED
TM-560	STREETSCAPE EAST OF PROSPECT TYPICAL TMP PLANS AND SECTION
TM-561 to TM-599	NOT USED
TM-600	EXISTING BUS ROUTES PLAN
TM-601	BUS ROUTE 87 DETOUR PLAN
TM-602	NOT USED
TM-603	BUS ROUTE 87 INBOUND DETOUR PLAN
TM-604	NOT USED
TM-605	BUS ROUTES 86 OB & 91 OB DETOUR PLAN
TM-606	NOT USED
TM-607	BUS ROUTE 85 OB DETOUR PLAN
TM-608 to TM-699	NOT USED
TM-700	BICYCLE DETOUR PLAN

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SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS

CONTRACT CP-2/CP-3 SEWER SEPARATION AND WATER REPLACEMENT INDEX OF DRAWINGS SHEET 2 OF 2

DESIGNED: N/A
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CHECKED: RJB

 Parsons Brinckerhoff, Inc.
75 Arlington St. Boston, MA 02116
PH. (617)426-7330 FAX (617)482-8487

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ACC.		DATE: DEC 2017

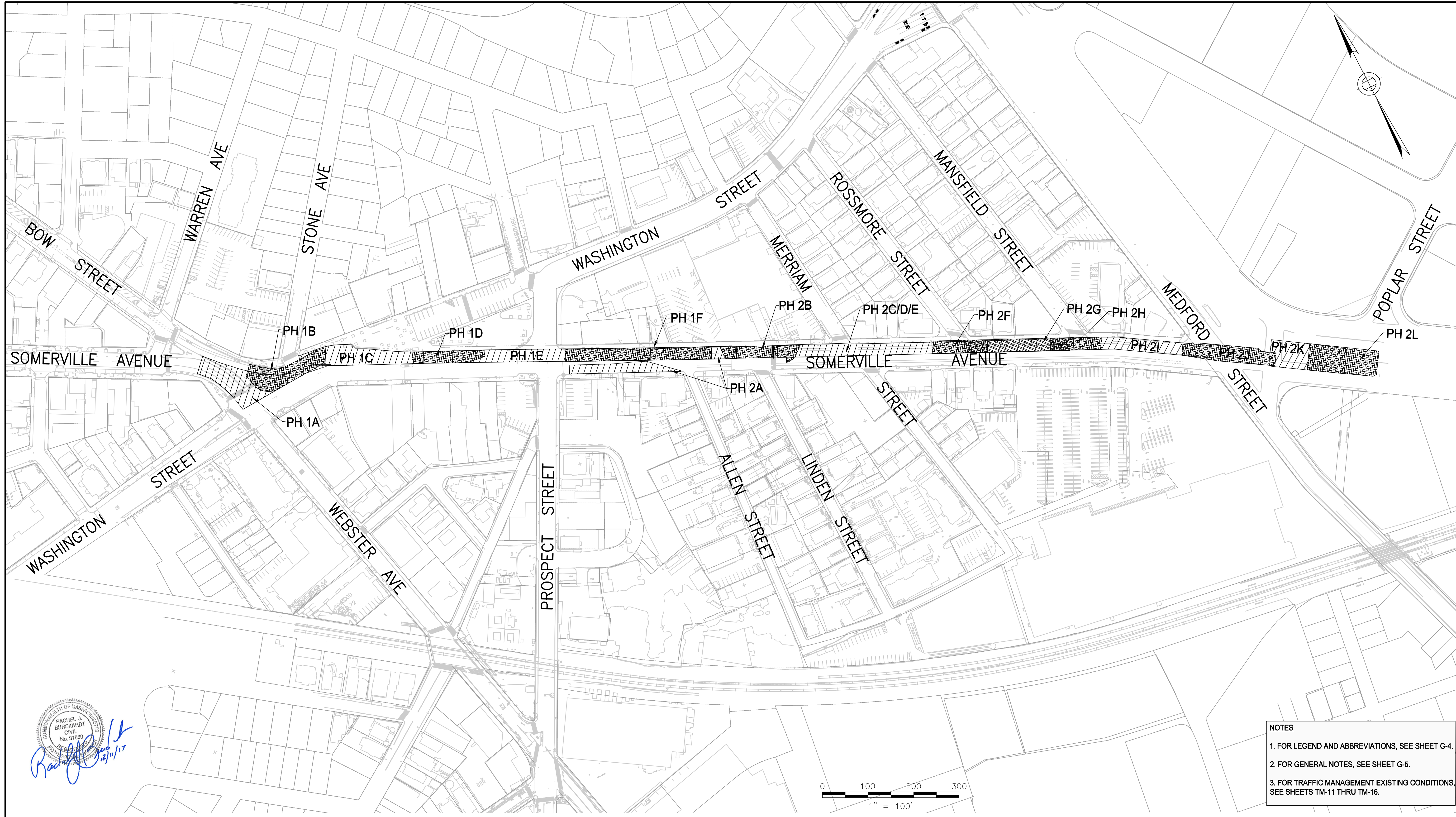
SHEET

G-3

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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Rachel J. Burckardt

 12/11/17

- NOTES**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THRU TM-16.

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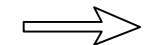












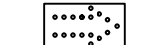






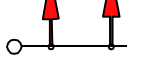




SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
KEY PLAN

DESIGNED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
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DRAWN: LAC	REF. _____	CONT. _____
CHECKED: RJB	ACC. _____	SCALE: 1"=100' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

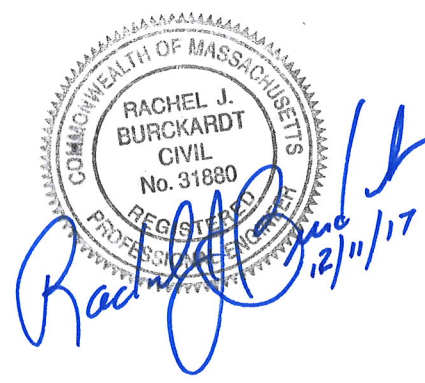
GENERAL NOTES:

- FOR ALLOWABLE HOURS OF WORK, REFER TO SPECIFICATION SECTION 01015.
- PAVEMENT MARKING AND TRAFFIC SIGNS SHALL CONFORM TO CITY OF SOMERVILLE STANDARDS. TRAFFIC SIGNS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
- FINAL LOCATION OF PROPOSED SIGNS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- ADDITIONAL SIGNS SHALL BE ADDED IF DEEMED NECESSARY BY THE ENGINEER.
- ADVISORY SPEED LIMIT SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- FOR DAILY SET UP WORK ZONES, ALL CONSTRUCTION SIGNS SHALL BE COVERED WHEN WORK IS NOT IN PROGRESS. FOR WORK ZONES THAT REMAIN IN PLACE 24/7, MAINTAIN ASSOCIATED TRAFFIC SIGNAGE 24/7.
- WHERE NO NEW PAVEMENT MARKING IS SHOWN, RETAIN PAVEMENT MARKING FROM PREVIOUS STEP.
- ADJUST ALL UTILITY FRAMES, GRATES & COVERS WITHIN CONSTRUCTION AREA WHEN THE GRADE IS MODIFIED DURING THE TRAFFIC MANAGEMENT PHASES.
- PAVEMENT MARKINGS REMOVED DURING CONSTRUCTION SHALL BE RE-APPLIED UPON COMPLETION OF PAVEMENT PATCHING OR REPAVING.
- NEW HANDICAPPED ACCESS RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ADA AND MAAB REGULATIONS. THIS APPLIES TO ALL RAMPS, PERMANENT OR TEMPORARY.
- ALL INTERIM, TEMPORARY & PERMANENT SIDEWALKS, CROSSWALKS, ACCESS RAMPS OR OTHER WALK SURFACES SHALL CONFORM TO A.D.A. & M.A.A.B. REGULATIONS.
- ALL CROSSWALKS SHALL BE A MINIMUM OF 10' WIDE.
- ALL SIDEWALKS & OTHER WALKWAYS (INTERIM, TEMPORARY & PERMANENT) SHALL BE PAVED AND SHALL BE A MINIMUM OF 6' WIDE WITH AN 8' MINIMUM VERTICAL CLEARANCE.
- ALL LANE CLOSURES ON CITY STREETS ARE SUBJECT TO THE APPROVAL OF THE CITY TRAFFIC ENGINEER.
- ANY RESTRICTIONS TO THE EXIST. TRAVEL WIDTHS OF MCGRATH HIGHWAY ARE SUBJECT TO MASSDOT APPROVAL.
- WHEN CONCRETE BARRIERS AND/OR CURBING ARE USED FOR TRAFFIC CONTROL, MAINTAIN A MINIMUM OF 12' CLEAR FOR EMERGENCY VEHICLE ACCESS ON ALL PUBLIC STREETS AT ALL TIMES. THE ONLY EXCEPTION SHALL BE AT A PINCH POINT ON BOW STREET WHERE THE MIN. WIDTH SHALL BE 11.5 FT. AS INDICATED ON SHEET TM-111. WHEN LANE LINES ARE DELINEATED WITH CONES OR BARRELS, A MINIMUM OF 10' CLEAR SHALL APPLY.
- FOR 24/7 WORK ZONES WITHIN CITY STREETS: INSTALL & MAINTAIN 8' C.L.F. AROUND ALL WORK ZONES WITHIN CITY STREETS TO PREVENT PEDESTRIAN ACCESS. KEEP ACCESS GATES CLOSED AND LOCKED DURING NON-WORK HOURS.
- ALL TRAFFIC DETOURS (VEHICULAR AND PEDESTRIAN) SHALL BE COORDINATED WITH THE CITY OF SOMERVILLE AND MASSDOT.
- ALL TRAFFIC DETOURS AND TEMPORARY RELOCATIONS OF BUS STOPS SHALL BE COORDINATED WITH THE CITY AND THE MBTA. SEE SHEETS TM-601 THROUGH TM-607. SEE ALSO SPEC. SECTIONS 01012 AND 01200.
- SEE STAGING CONSTRAINTS IN SECTION 01015.
- REFLECTORIZED BARREL SPACING SHALL BE 5' APART ON CENTER.
- ALL R5-1 "DO NOT ENTER" AND R5a "WRONG WAY" SIGNS SHALL INCLUDE PERIMETER FLASHING LEDS, SOLAR POWERED.
- FOR SUMMARY OF TEMPORARY SIGNS, SEE SHEETS TM-32 TO TM-36.
- FOR STRIPING DETAILS, SEE SHEET L-125.
- FOR TRAFFIC STRIPING ABBREVIATIONS, SEE SHEET L-125.
- AFTER EACH STAGE OF CONSTRUCTION, RESTORE ALL PAVEMENT MARKINGS.
- MAINTAIN STOP & GO TRAFFIC LIGHTS AT ALL SIGNALIZED INTERSECTIONS. FOR TEMP. MODIFICATIONS TO SIGNAL EQUIPMENT & TIMING, SEE SHEETS TM-411 THROUGH TM-522.

LEGEND FOR TRAFFIC MANAGEMENT PLANS:

-  VEHICLE TRAFFIC
-  BICYCLE TRAFFIC
-  CONSTRUCTION VEHICLE TRAFFIC
-  EMERGENCY VEHICLE
-  PEDESTRIAN TRAFFIC
-  CONCRETE BARRIER
-  APPROX. LOCATION OF PROP. BOX CULVERT
-  SUPPORT OF EXCAVATION
-  TEMPORARY ATTENUATOR
-  GREEN PAINT BIKE LANE 18
TM-5
-  TEMPORARY SIGN
-  TYPE 2 BARRICADE WITH LIGHT 16
TM-5
-  REFLECTORIZED BARREL WITH FLASHER (NOTE 21) 12
TM-5
-  FLASHING ARROW PANEL
-  VARIABLE MESSAGE SIGN
-  ACTIVE WORK ZONE
-  ADDITIONAL WORK SPACE
-  POLICE
-  CHANNELIZING CONES
-  CHANNELIZING CONES WITH BARS 14
TM-5
-  TEMP. MAST ARM SIGNAL
-  EXISTING FLEX POST
-  REMOVAL DELINEATORS 2
TM-3
-  BUS STOP
-  ARROWS TO BE PAINTED - SEE SHEET L-125 FOR DETAILS


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ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

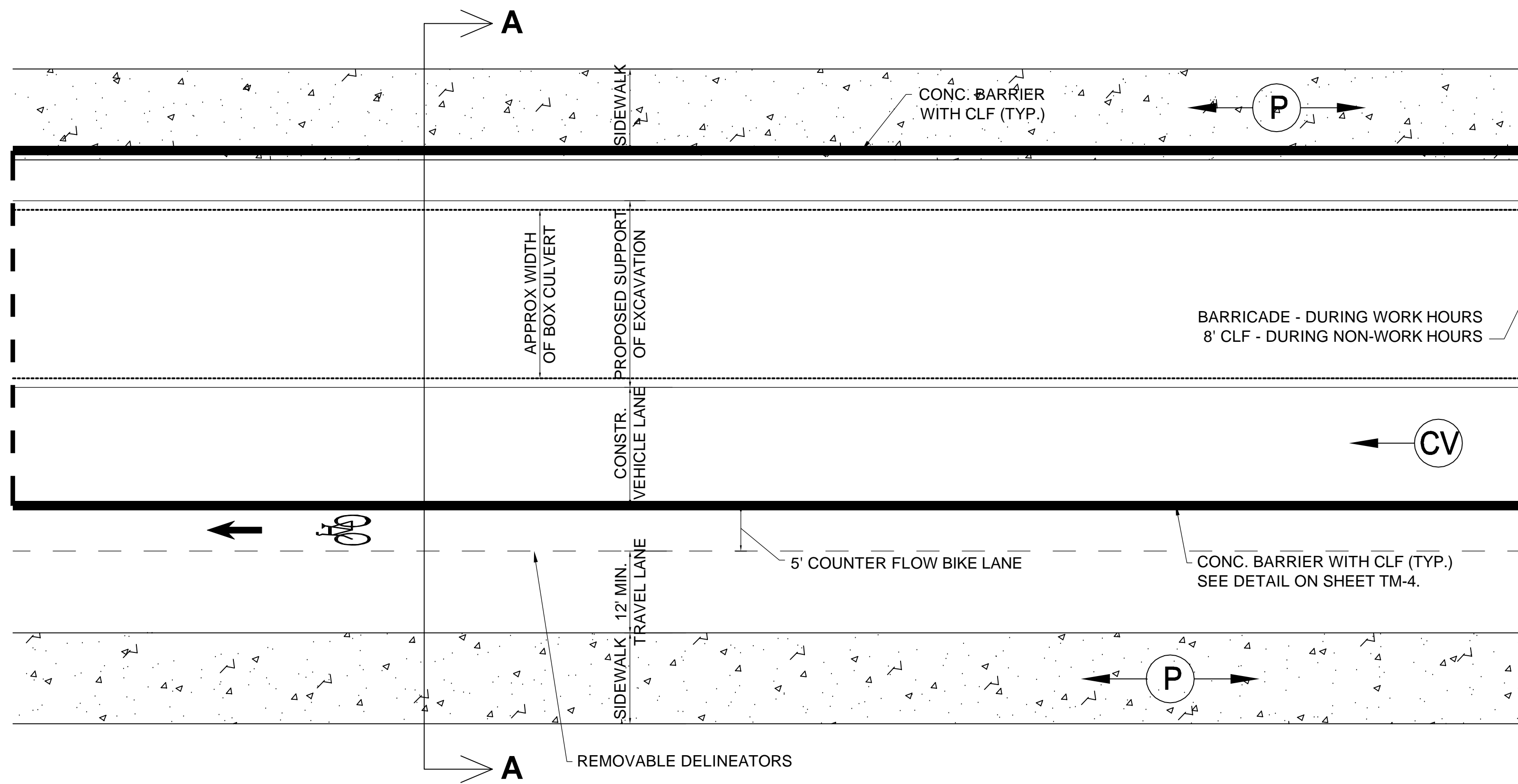
CONTRACT CP-2/CP-3 SEWER SEPARATION AND WATER REPLACEMENT TRAFFIC MANAGEMENT GENERAL NOTES AND LEGEND

DESIGNED: LAC		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-2
CHECKED: RJB		REF.	CONT.	
DRAWN: LAC		ACC.	DATE: DEC 2017	
CHECKED: RJB				

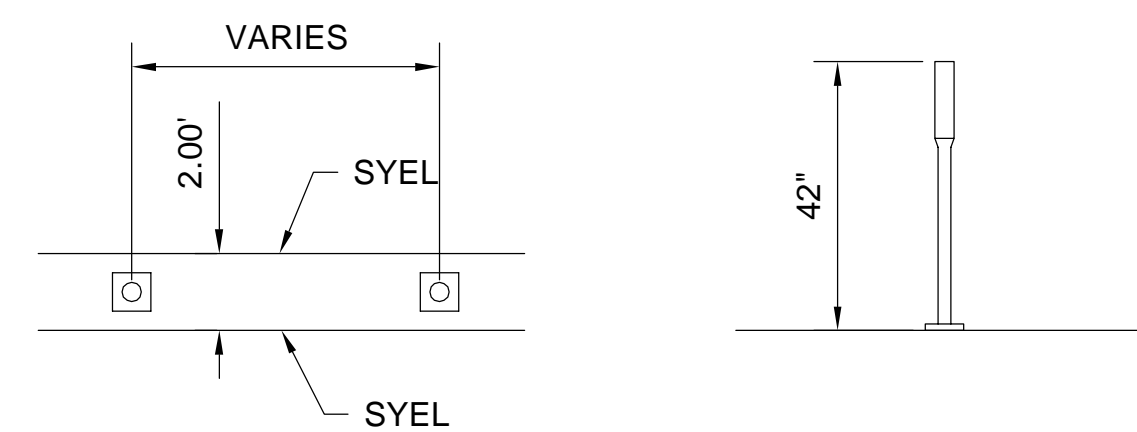
CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

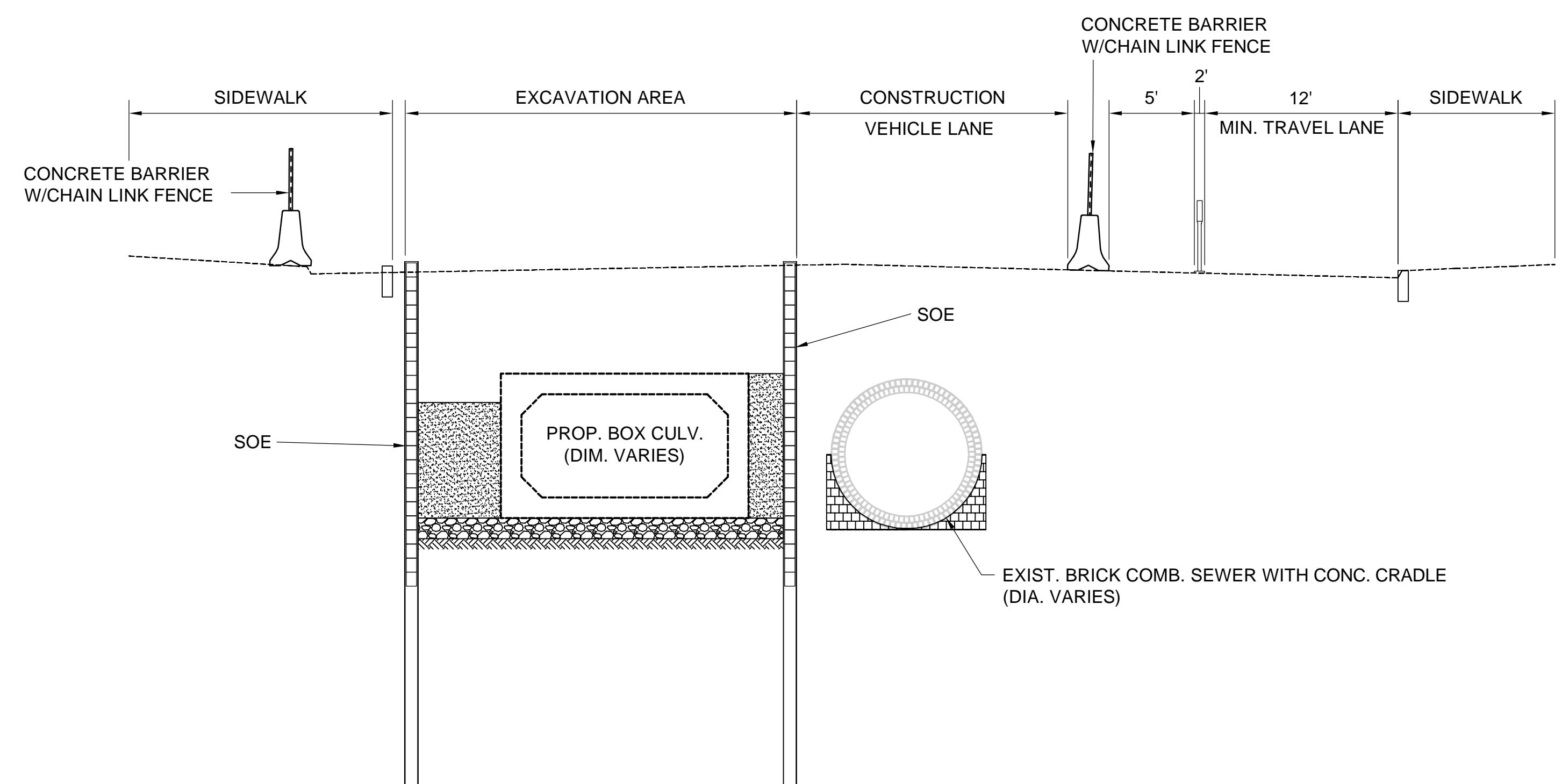
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1 WORK ZONE TYPICAL PLAN
SCALE: NTS



2 REMOVABLE DELINEATOR
SCALE: NTS



WORK ZONE TYPICAL SECTION A-A
SCALE: NTS

NOTES:

1. DURING NON-WORK HOURS, SECURE WORK ZONE WITH 8' CLF. LOCK ALL GATES.
2. THIS DETAIL GENERALLY PERTAINS TO STAGES 1E THRU 2J.

Rachel J. Burckhardt
 Civil No. 81880
 12/11/17

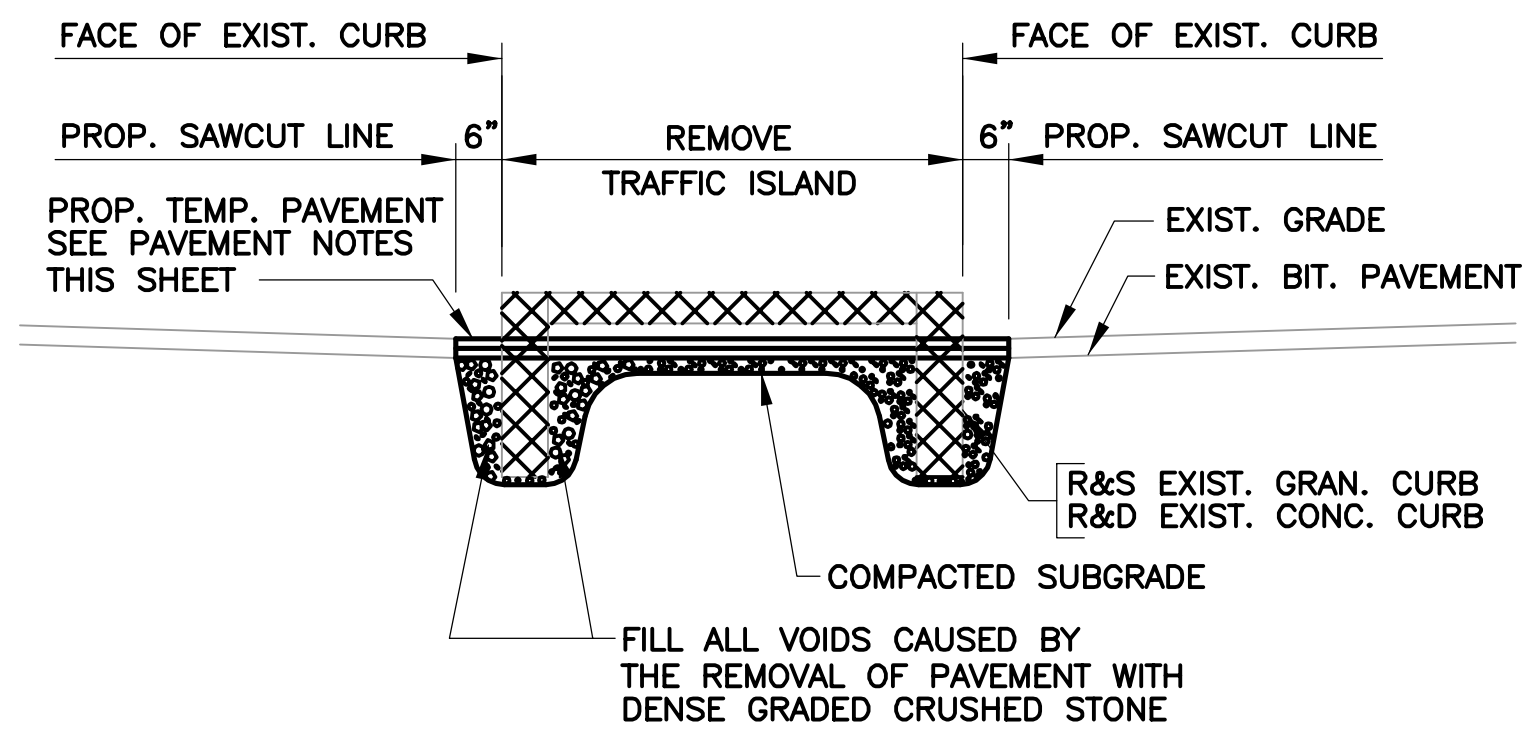
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLANS
TYPICAL DETAILS AND SECTIONS

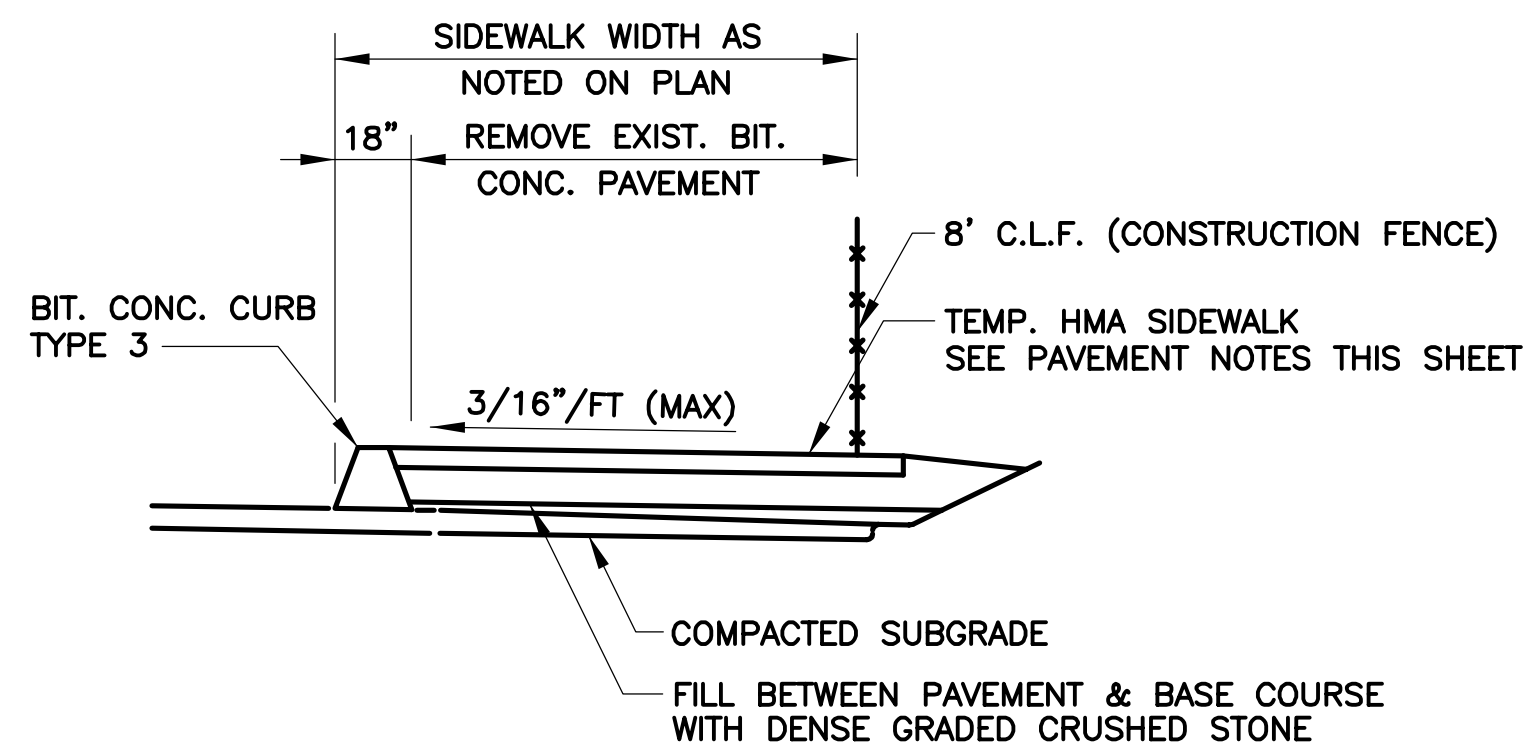
DESIGNED: JD	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-3
CHECKED: RJB		
DRAWN: JLM	REF.	CONT.
CHECKED: RJB	ACC.	DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY



3 TYPICAL SECTION FOR TRAFFIC ISLAND REMOVAL
SCALE: NTS



6 TEMP. HMA SIDEWALK
SCALE: NTS

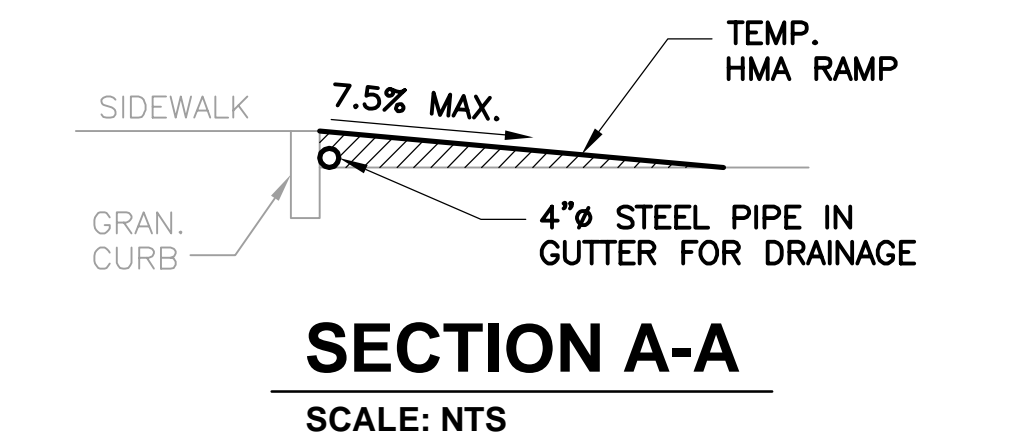
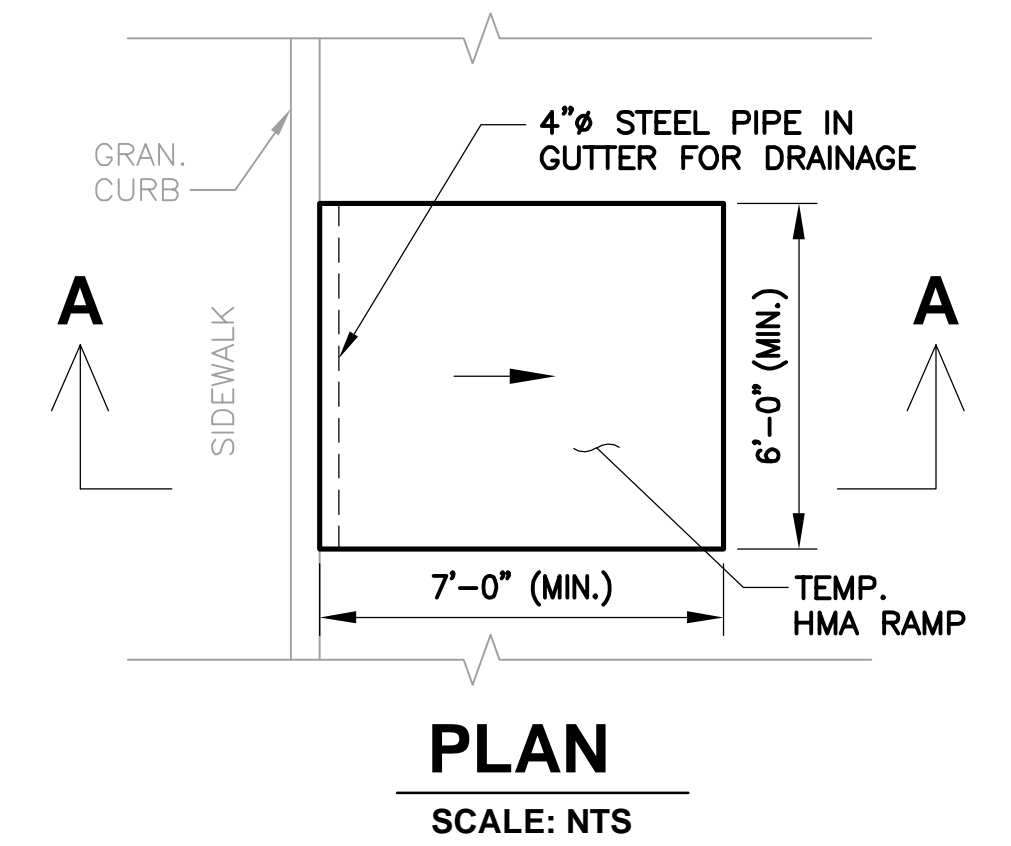
ROADWAY PAVING AFTER ISLAND OR SIDEWALK REMOVAL

SURFACE COURSE: 3" PAVEMENT TYPE 1-1 PLACED IN TWO LAYERS 1 1/2" OF TOP COURSE MATERIAL OVER 1 1/2" BINDER COURSE MATERIAL.
BASE COURSE: DENSE GRADED CRUSHED STONE (MIN 3" UNLESS OTHERWISE NOTED) OR AS NEEDED TO MEET PROPOSED TEMPORARY FINISHED GRADE.

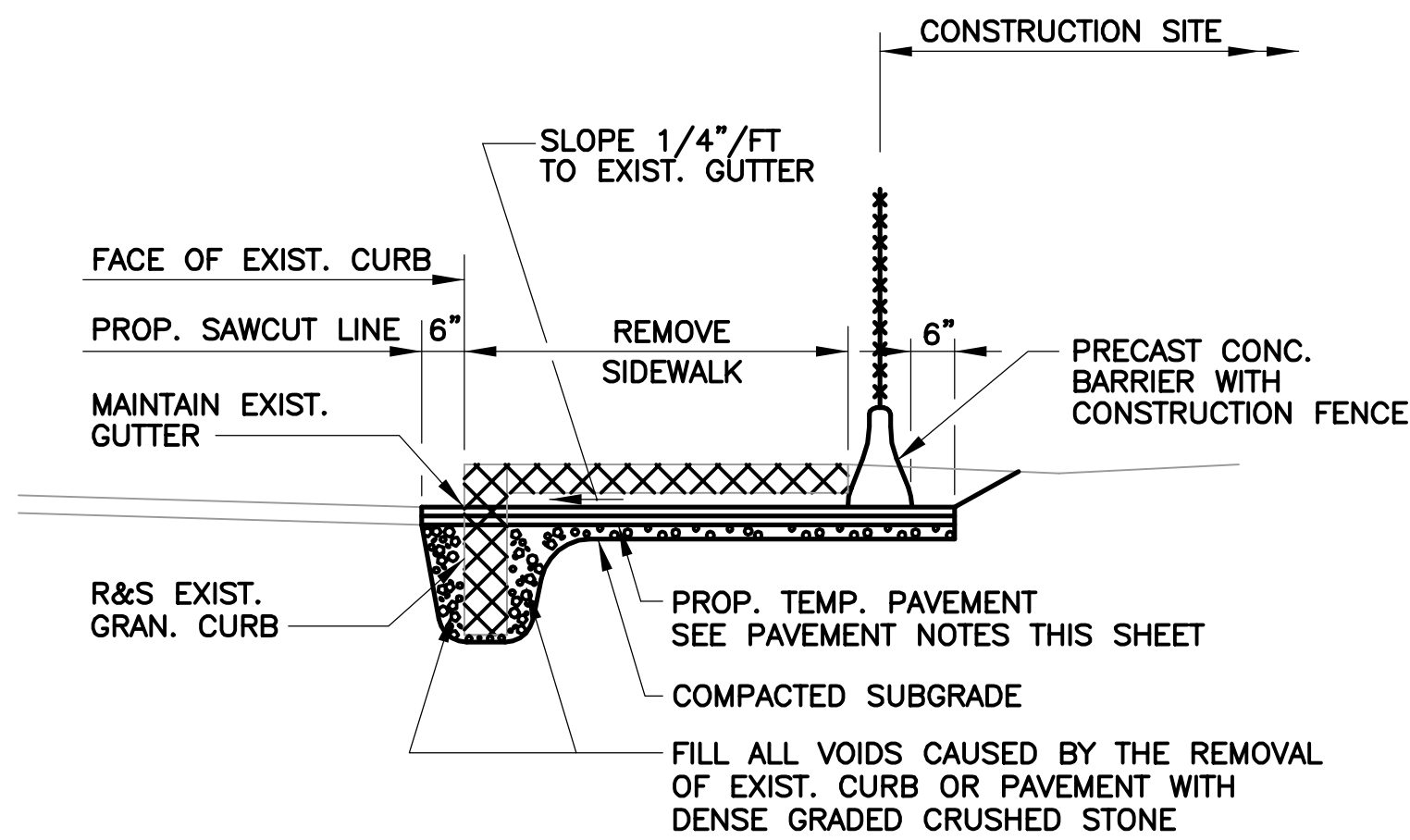
INTERIM SIDEWALKS AND ISLANDS

HMA: 2 1/2" CLASS 1 HMA PAVEMENT TYPE 1-1 PLACED IN TWO (2) 1 1/4" LAYERS OVER 8" (MIN.) GRAVEL BORROW SUBBASE.

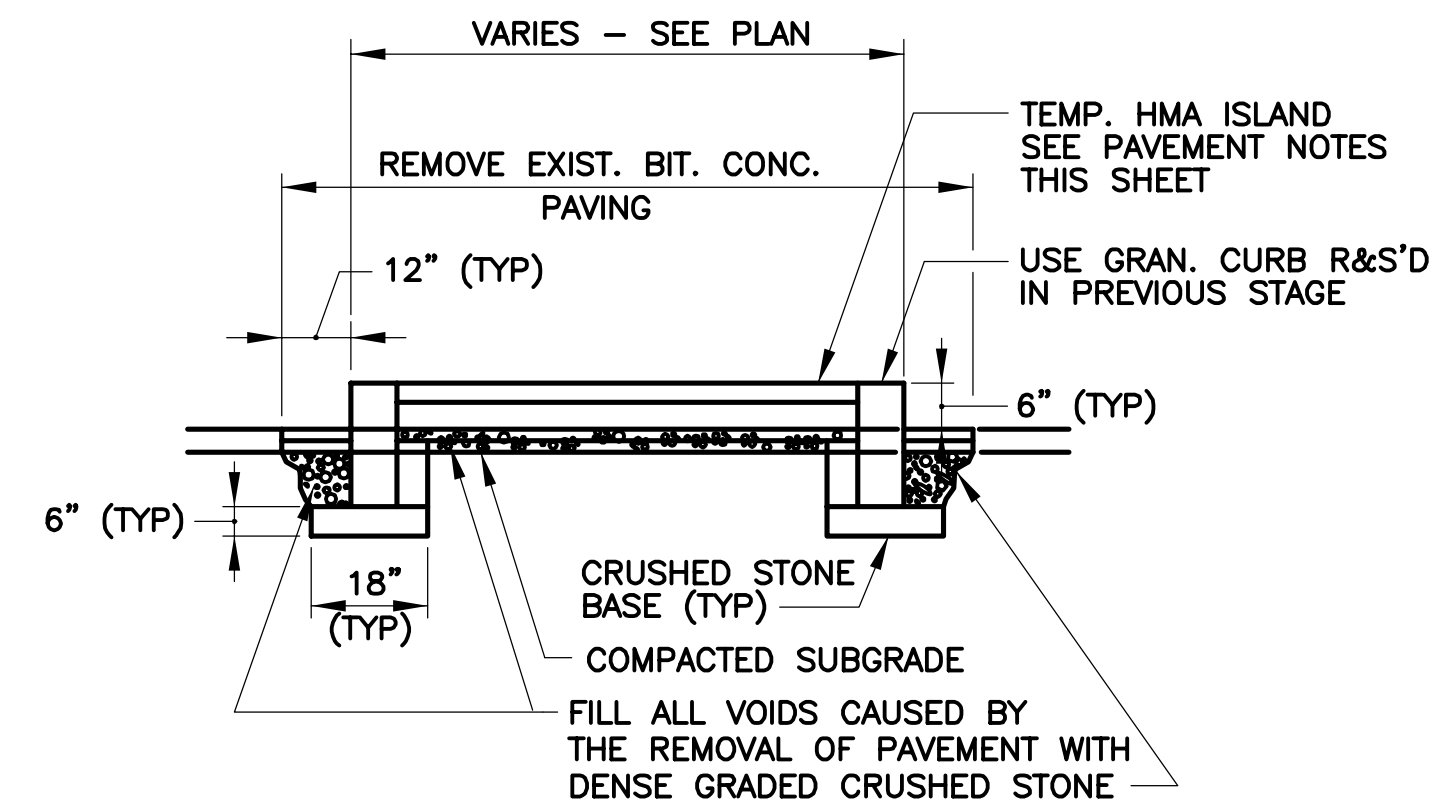
9 PAVEMENT NOTES



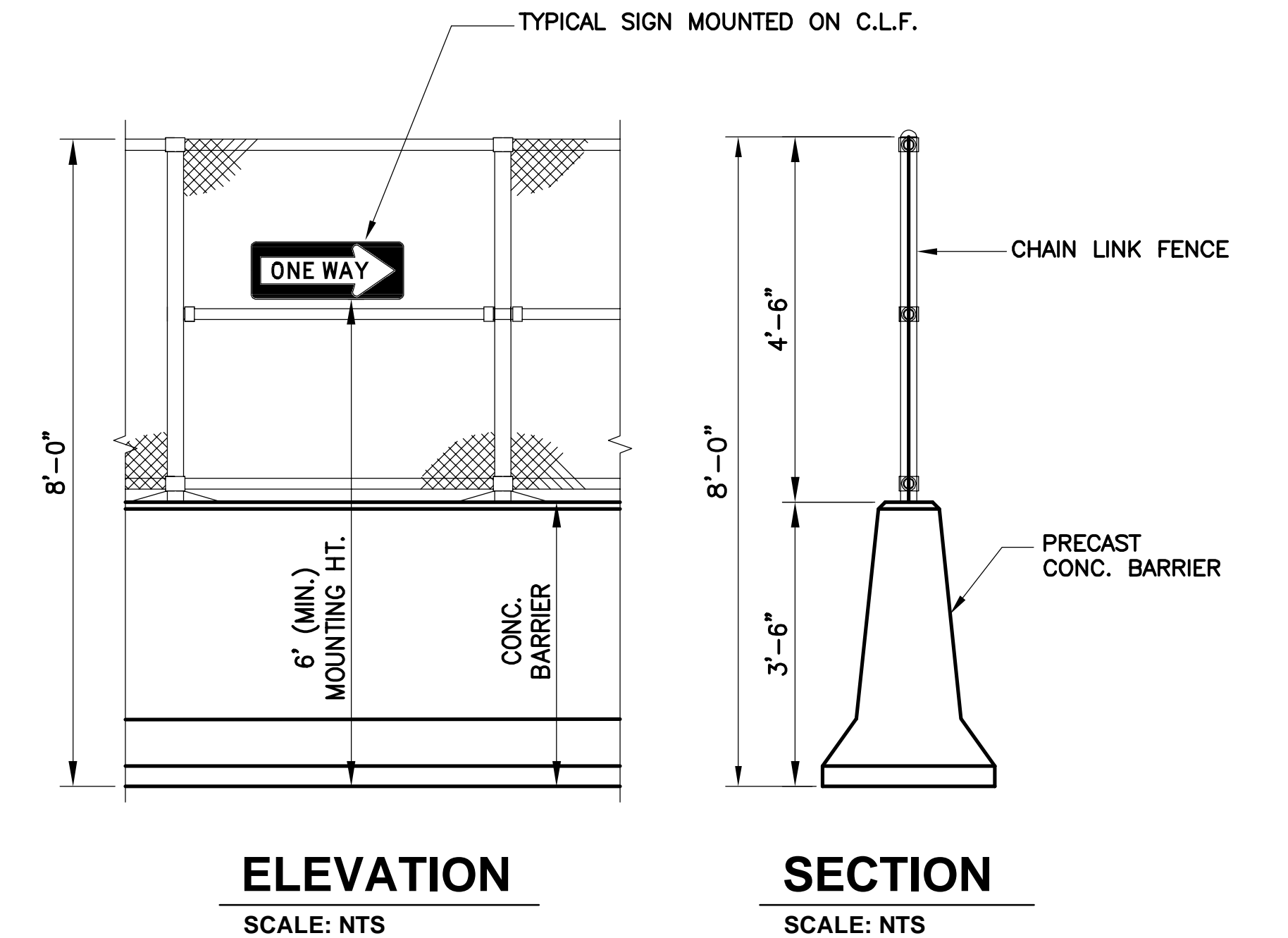
10 TEMP. HMA RAMP
SCALE: NTS



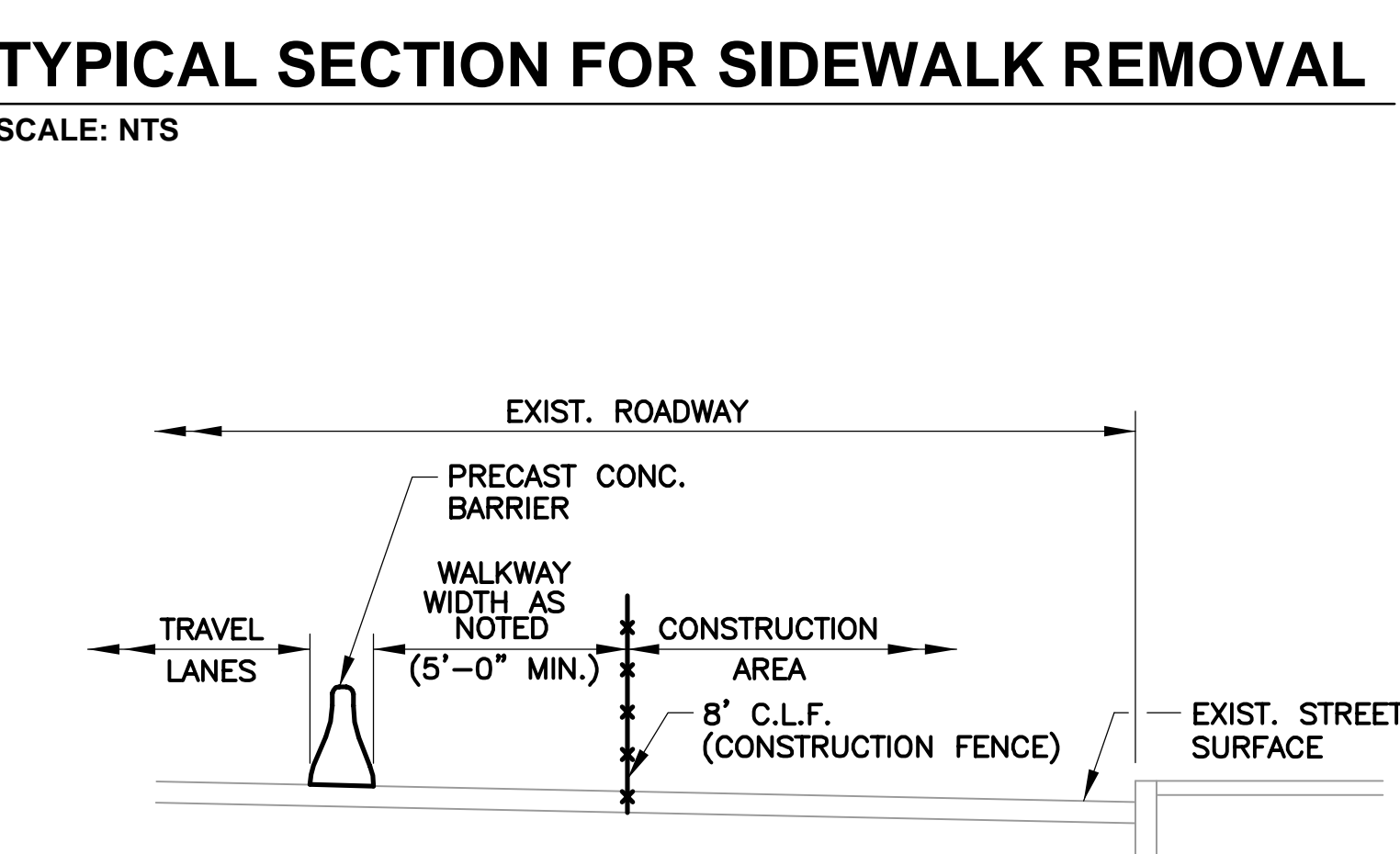
4 TYPICAL SECTION FOR SIDEWALK REMOVAL
SCALE: NTS



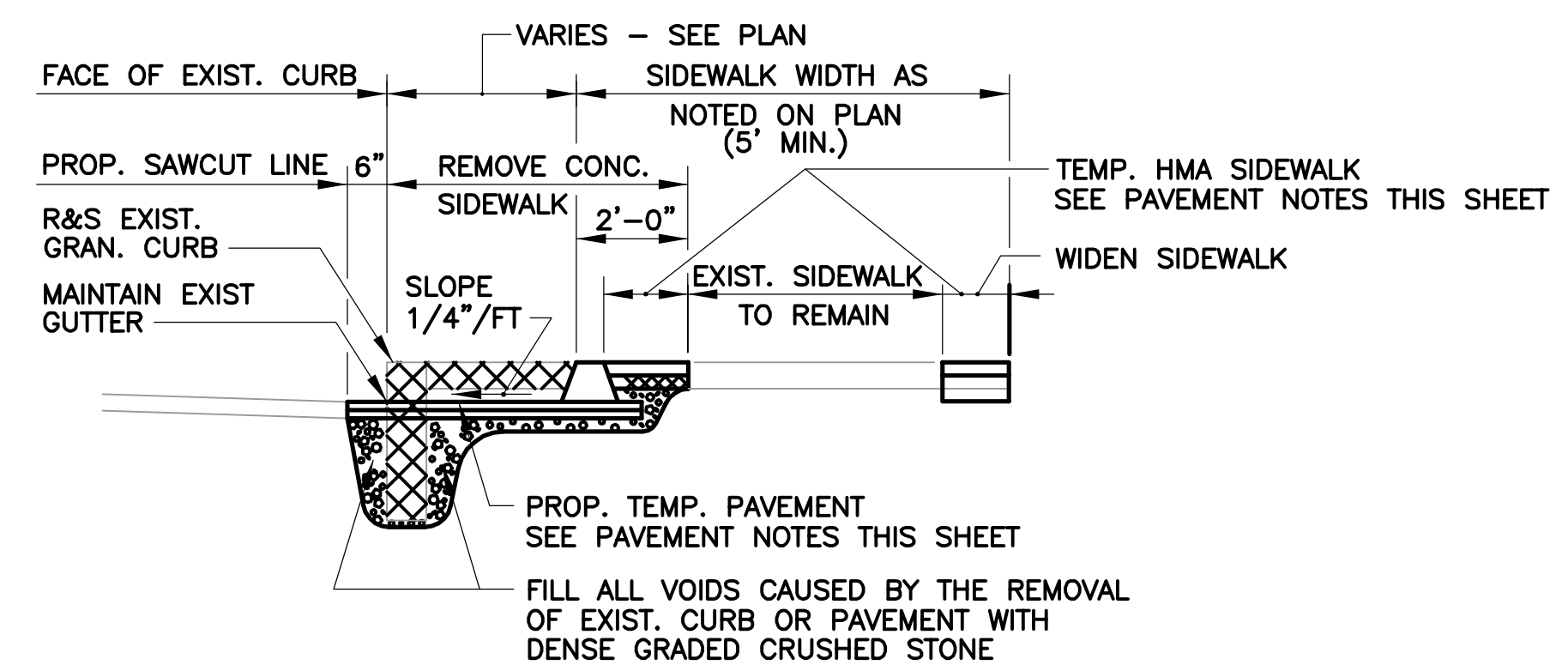
7 TEMP. HMA ISLAND WITH GRANITE CURBING
SCALE: NTS



11 BARRIER W/ CLF
SCALE: NTS



5 TEMP. WALKWAY - TYPE "A"
SCALE: NTS



8 TYPICAL SECTION FOR PARTIAL SIDEWALK REMOVAL
SCALE: NTS

2017-08-30 3:58 PM T:\52647LS Union Square Study and Design\SH\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-4.dwg

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLANS
TYPICAL DETAILS AND SECTIONS

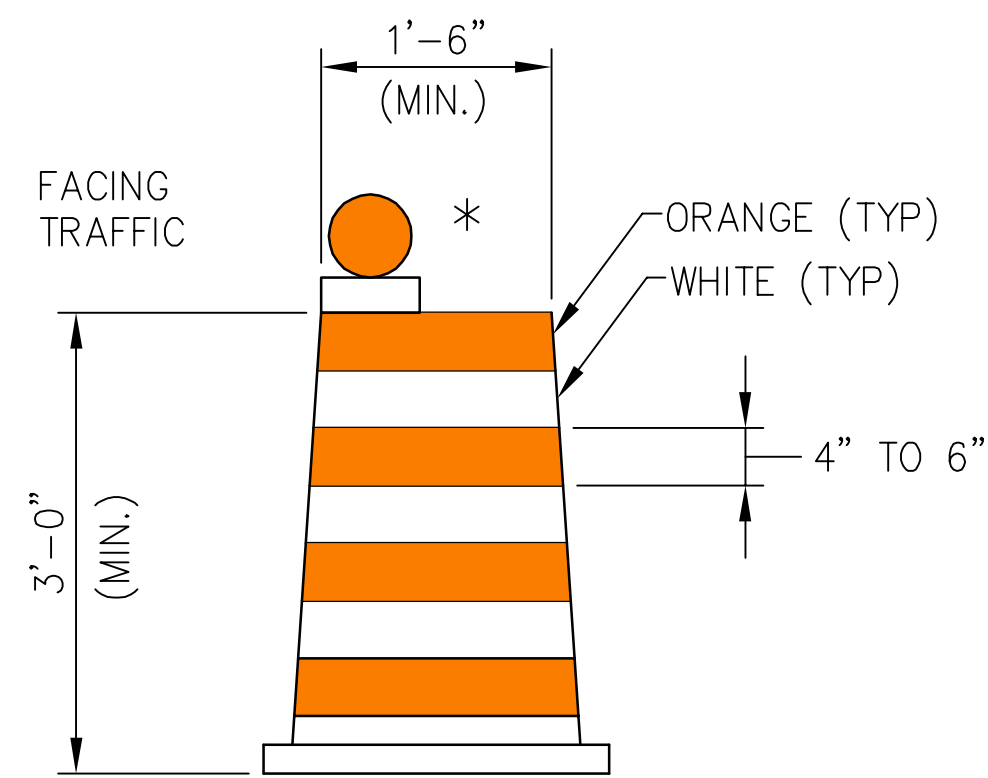
DESIGNED: RJB		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-4
CHECKED: LAC		REF.	CONT.	
DRAWN: JLM		ACC.		
CHECKED: RJB				

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

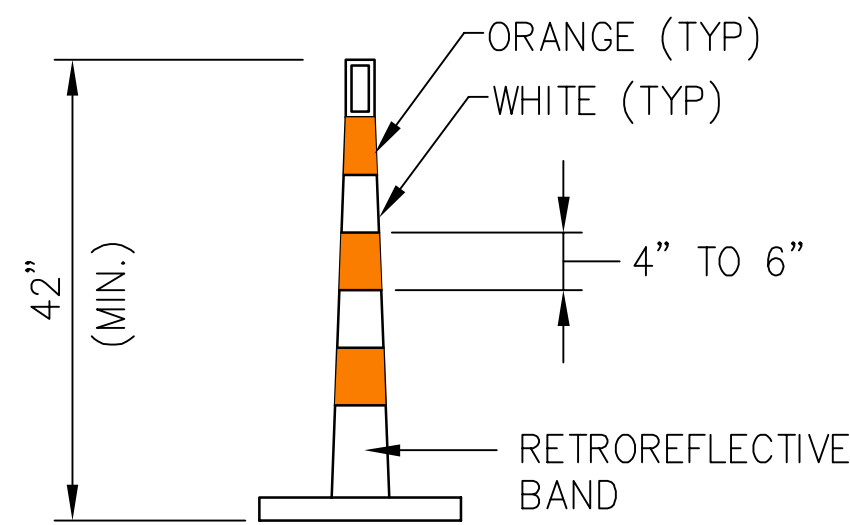
NO.	DATE	REVISIONS	BY



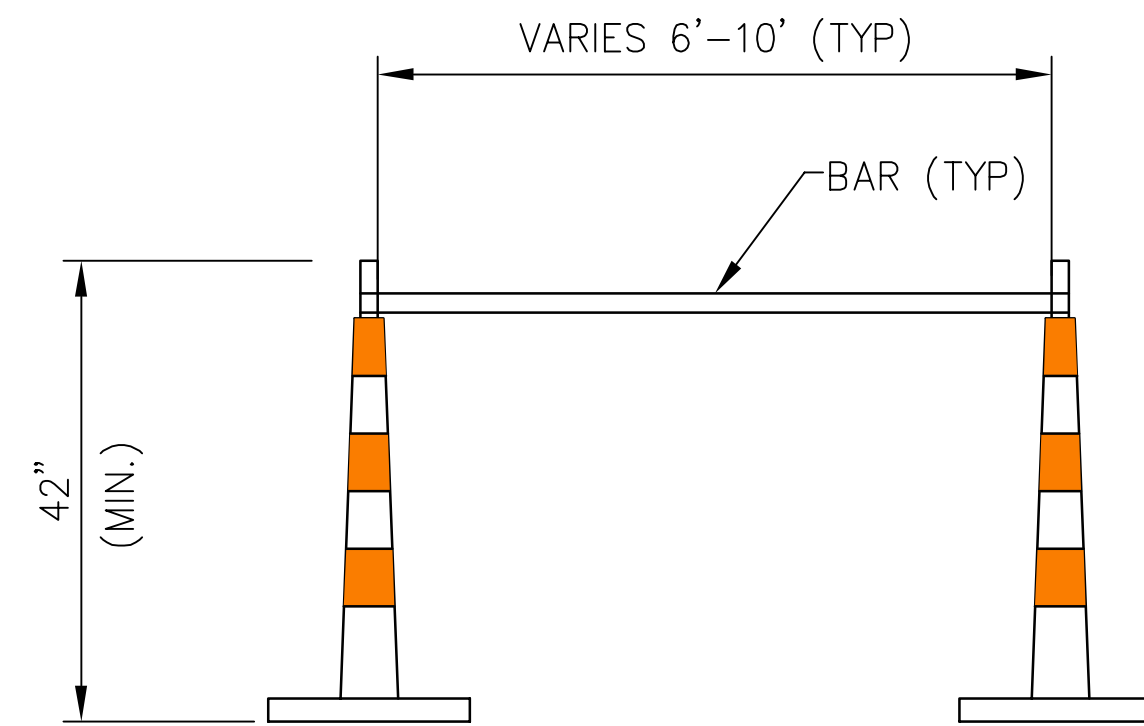
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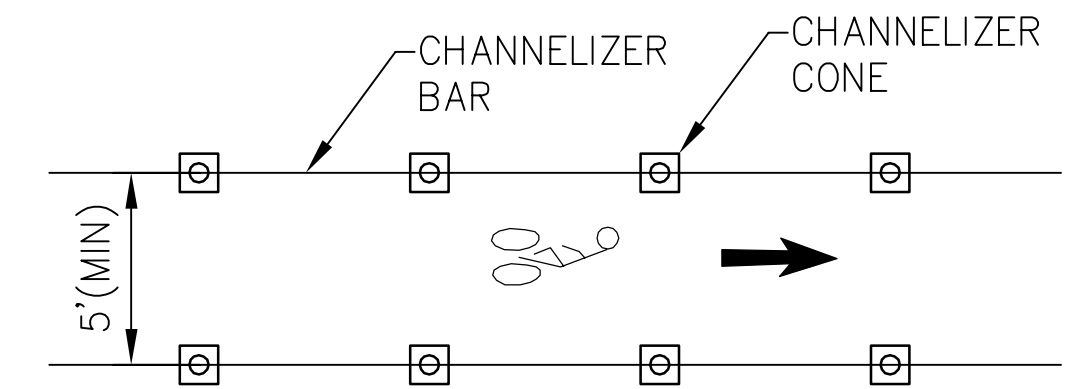
12 REFLECTORIZED DRUM
SCALE: NTS



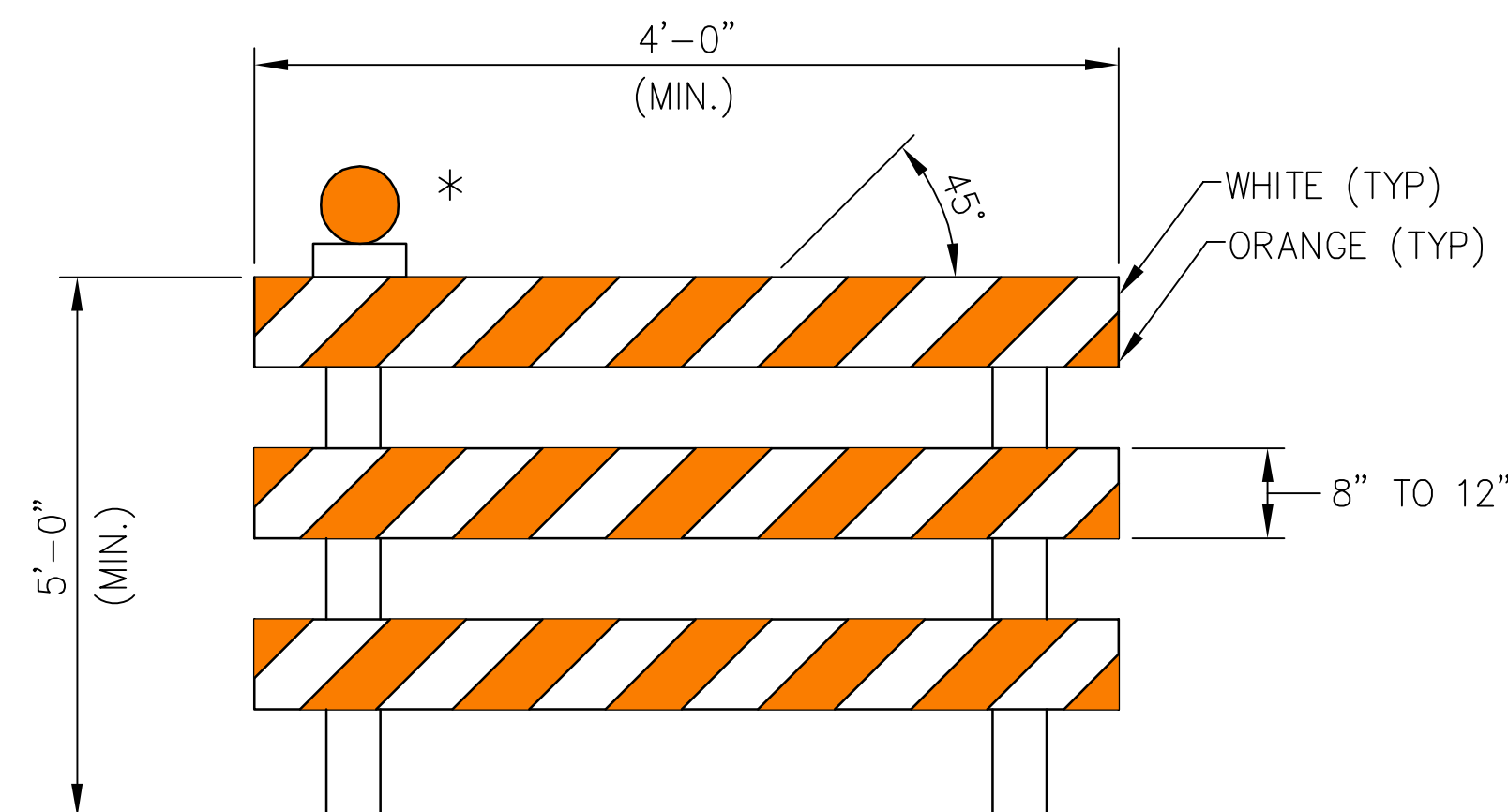
13 CHANNELIZER CONES - 42" TALL
SCALE: NTS



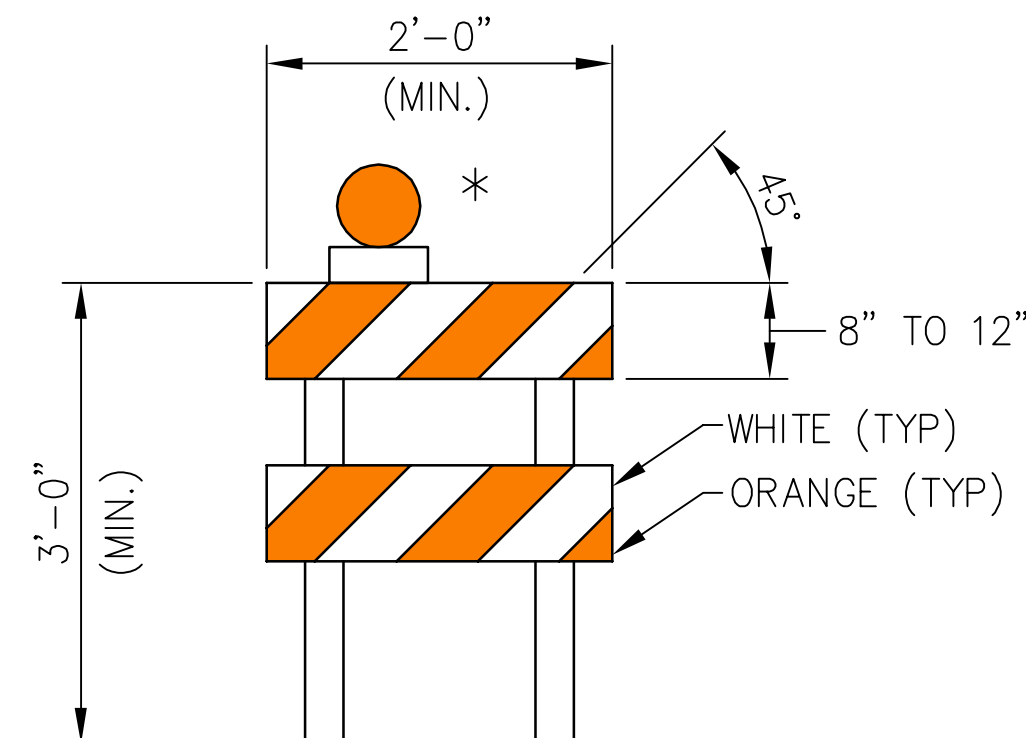
14 CHANNELIZER CONES W/ BARS
SCALE: NTS



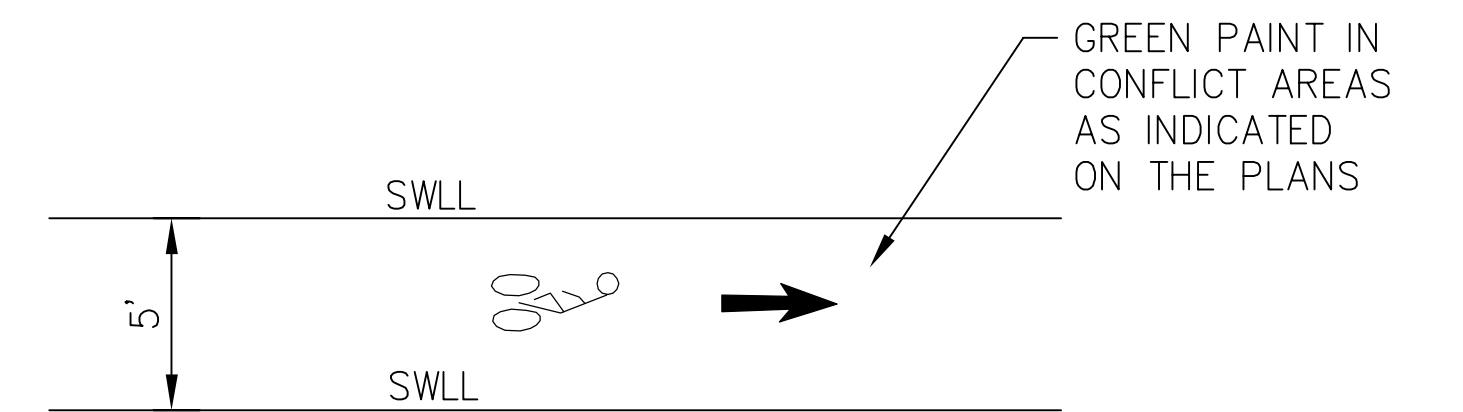
15 CHANNELIZED BIKE LANE
SCALE: NTS



16 TYPE 2 BARRICADE FOR ROADWAY **
SCALE: NTS



17 TYPE 2 BARRICADE FOR SIDEWALK **
SCALE: NTS



18 TYPICAL BIKE LANE STRIPING
SCALE: NTS

* WARNING LIGHTS
** RAIL STRIPE WIDTHS SHALL BE 6 INCHES EXCEPT THAT 4-INCH WIDE STRIPES MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES. THE SIDES OF THE BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES.

Rachel J. Burckardt
RACHEL J. BURCKARDT
CIVIL
No. 31880
12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

**CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLANS
TYPICAL DETAILS AND SECTIONS**

DESIGNED: RJB
CHECKED: LAC
DRAWN: JLM
CHECKED: LAC

WSP | **PARSONS BRINCKERHOFF**
Parsons Brinckerhoff, Inc.
75 Arlington St. Boston, MA 02116
PH. (617)426-7330 FAX (617)482-8487

REF. CONT.
ACC.

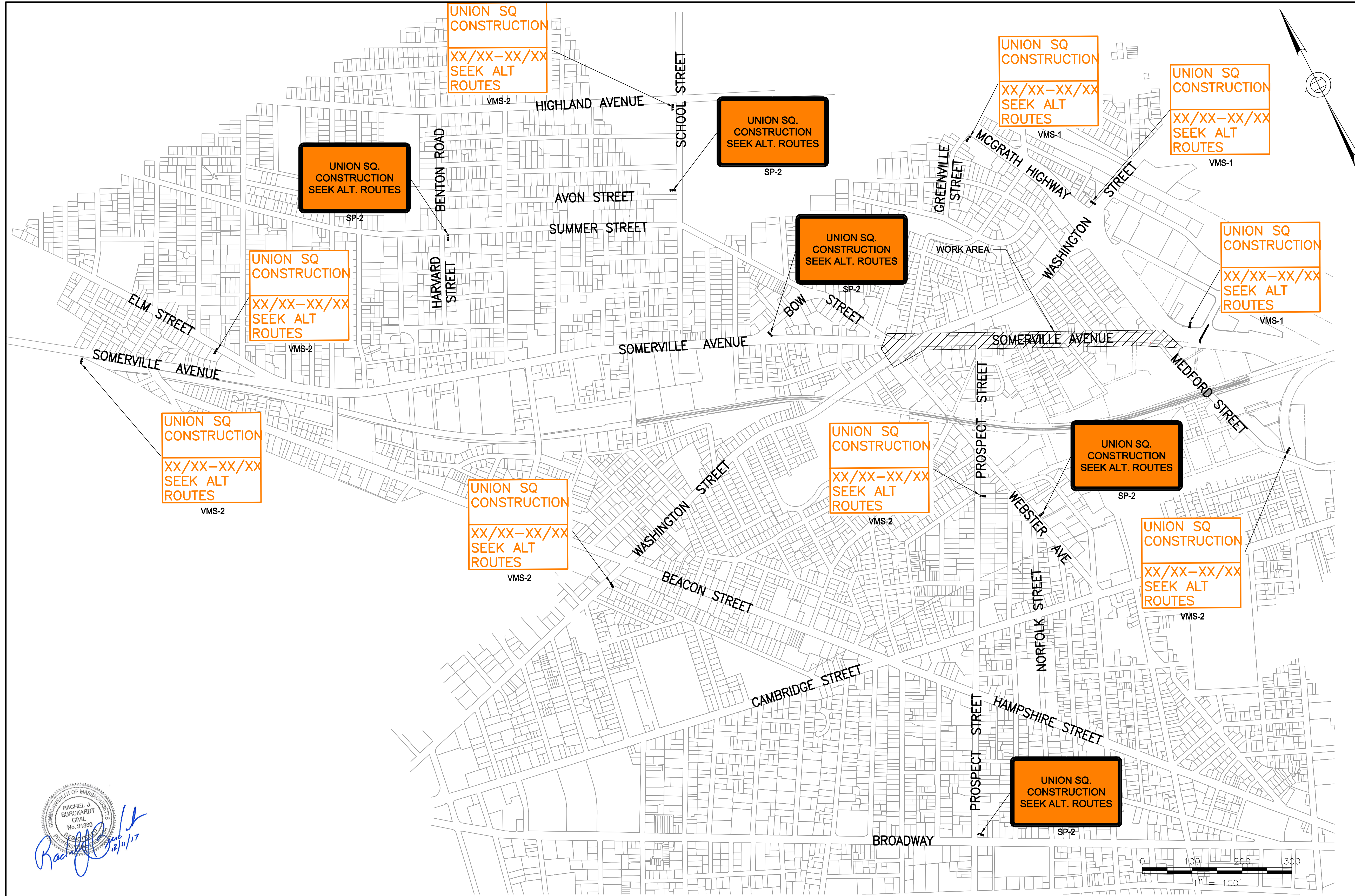
SCALE: AS NOTED
DATE: DEC 2017

SHEET
TM-5

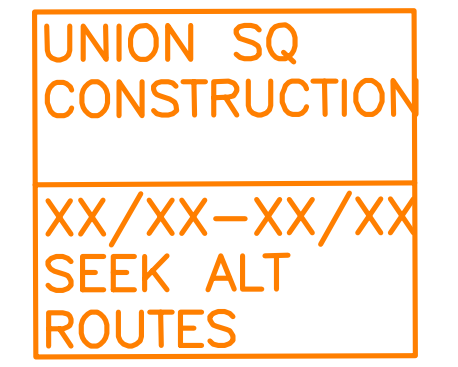
CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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VARIABLE MESSAGE SIGN



MESSAGE FOR USQ WORK



SP-2

LEGEND

- VMS-1 HIGHWAY SIZE PORTABLE VMS UNIT
- VMS-2 NEIGHBORHOOD SIZE PORTABLE VMS UNIT

NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-36.
3. EXACT LOCATIONS OF UNITS AND SIGNS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

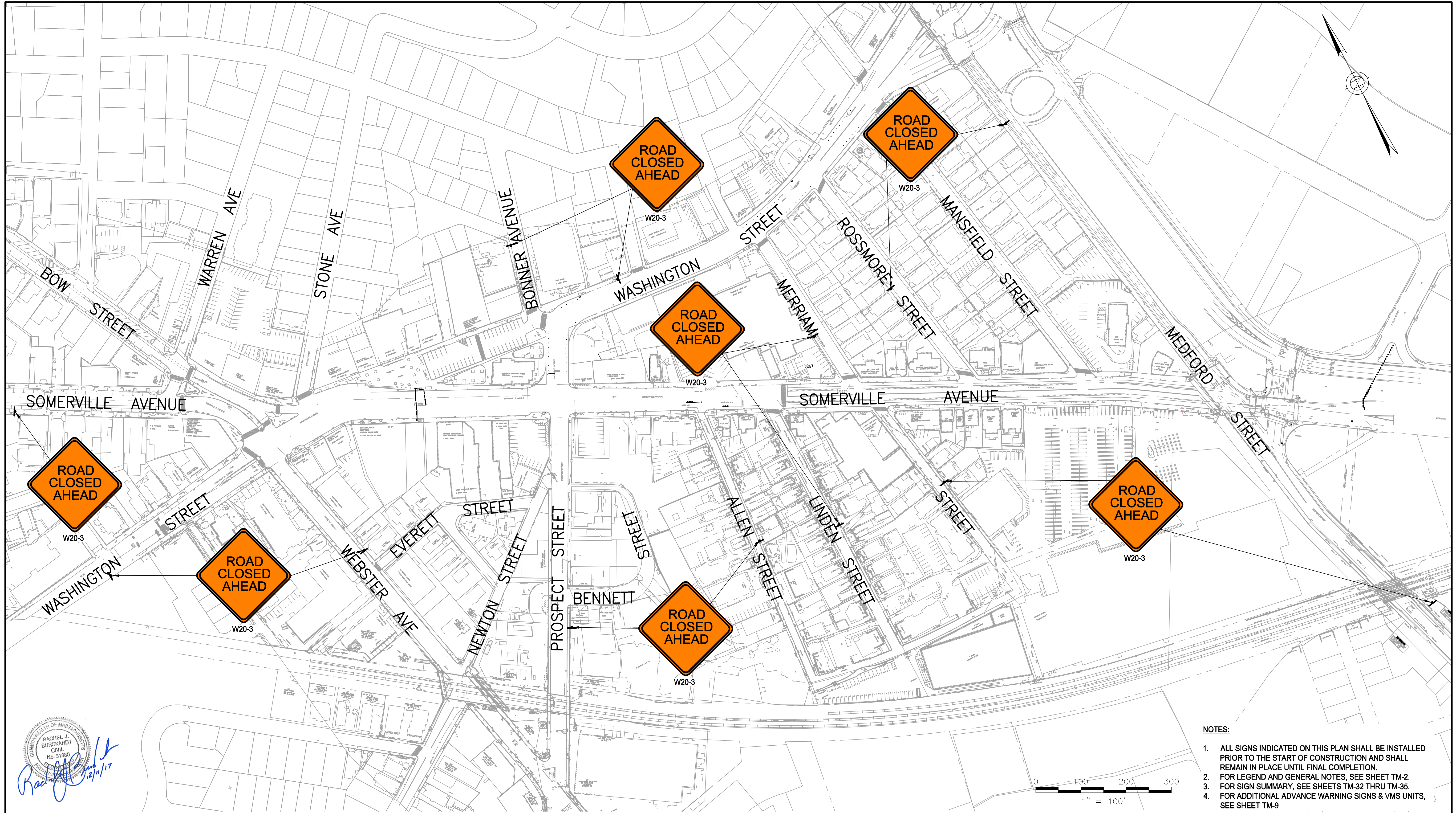
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
ADVANCE WARNING VMS AND SIGNS
LOCATION PLAN

DESIGNED: DY		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-9
CHECKED: JC		REF.	CONT.	
DRAWN: DY		ACC.		DATE: DEC 2017
CHECKED: JC				

NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

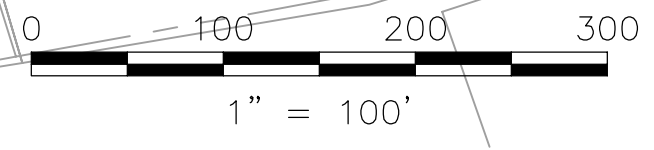
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Rachel J. Burkhardt

 12/11/17

- NOTES:**
1. ALL SIGNS INDICATED ON THIS PLAN SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL FINAL COMPLETION.
 2. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR ADDITIONAL ADVANCE WARNING SIGNS & VMS UNITS, SEE SHEET TM-9



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

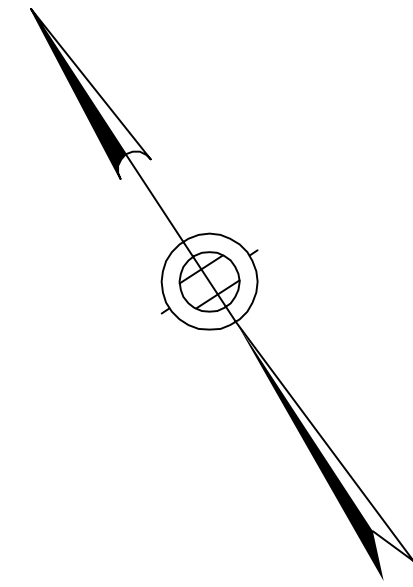
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
ADVANCE WARNING SIGN
LOCATION PLAN

DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-10
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=100' DATE: DEC 2017

NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

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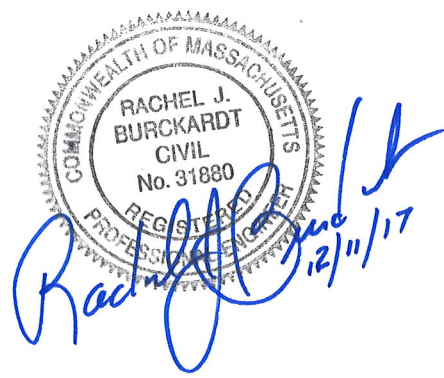


SEE SHEET TM-11

SEE SHEET TM-13

FOR CONTINUATION

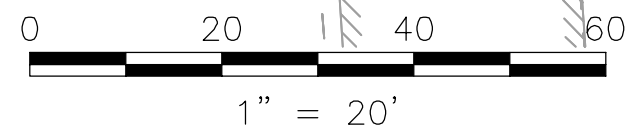
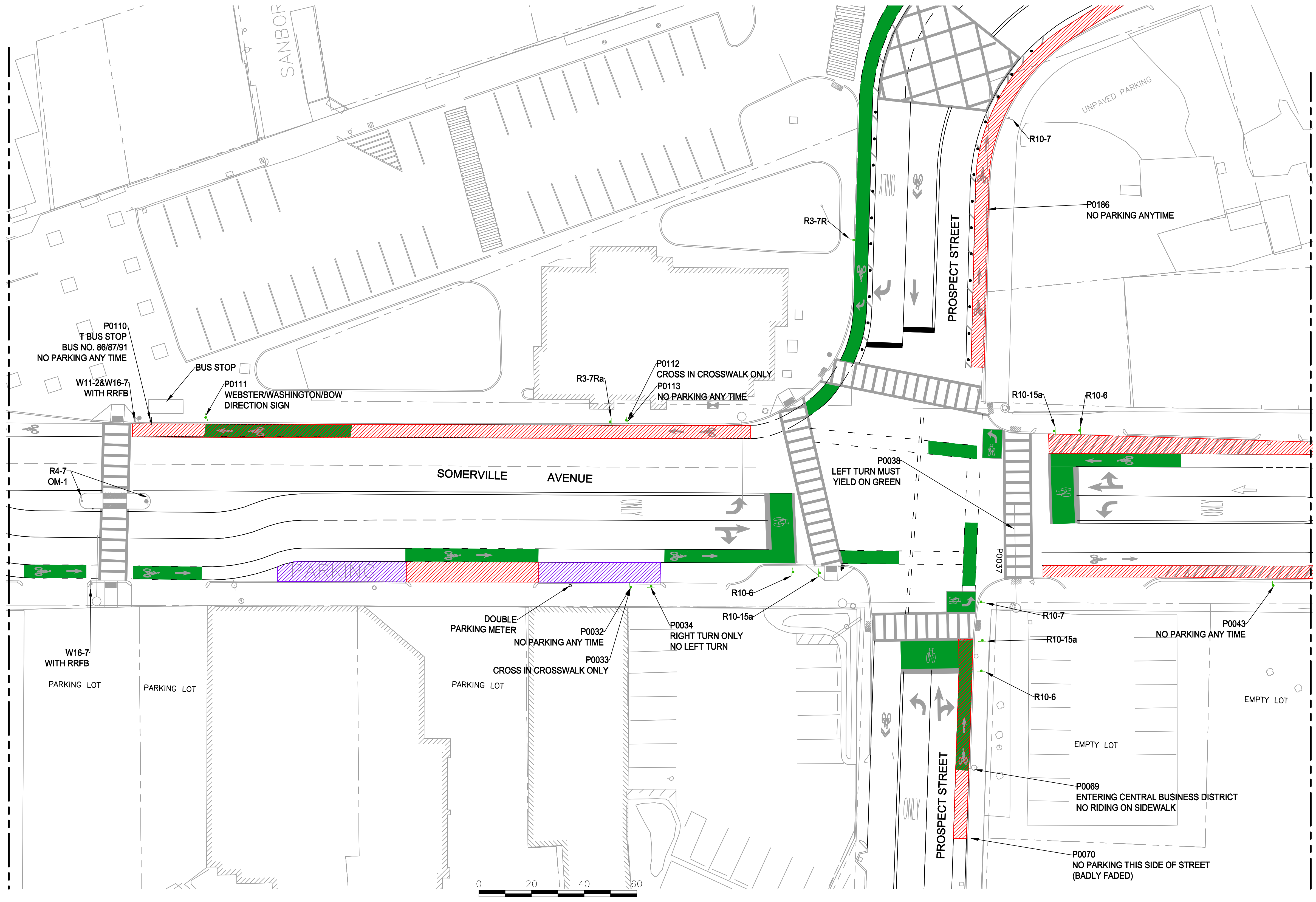
FOR CONTINUATION



- NOTES**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEET G-5 AND TM-2.

LEGEND

	BIKE LANE
	NO PARKING
	LOADING ZONE
	METERED PARKING
	RESIDENTIAL PARKING (EXCEPT SUNDAY)
	HANDICAP PARKING
	STREET SWEEPING
	STREET SWEEPING NOT SPECIFIED



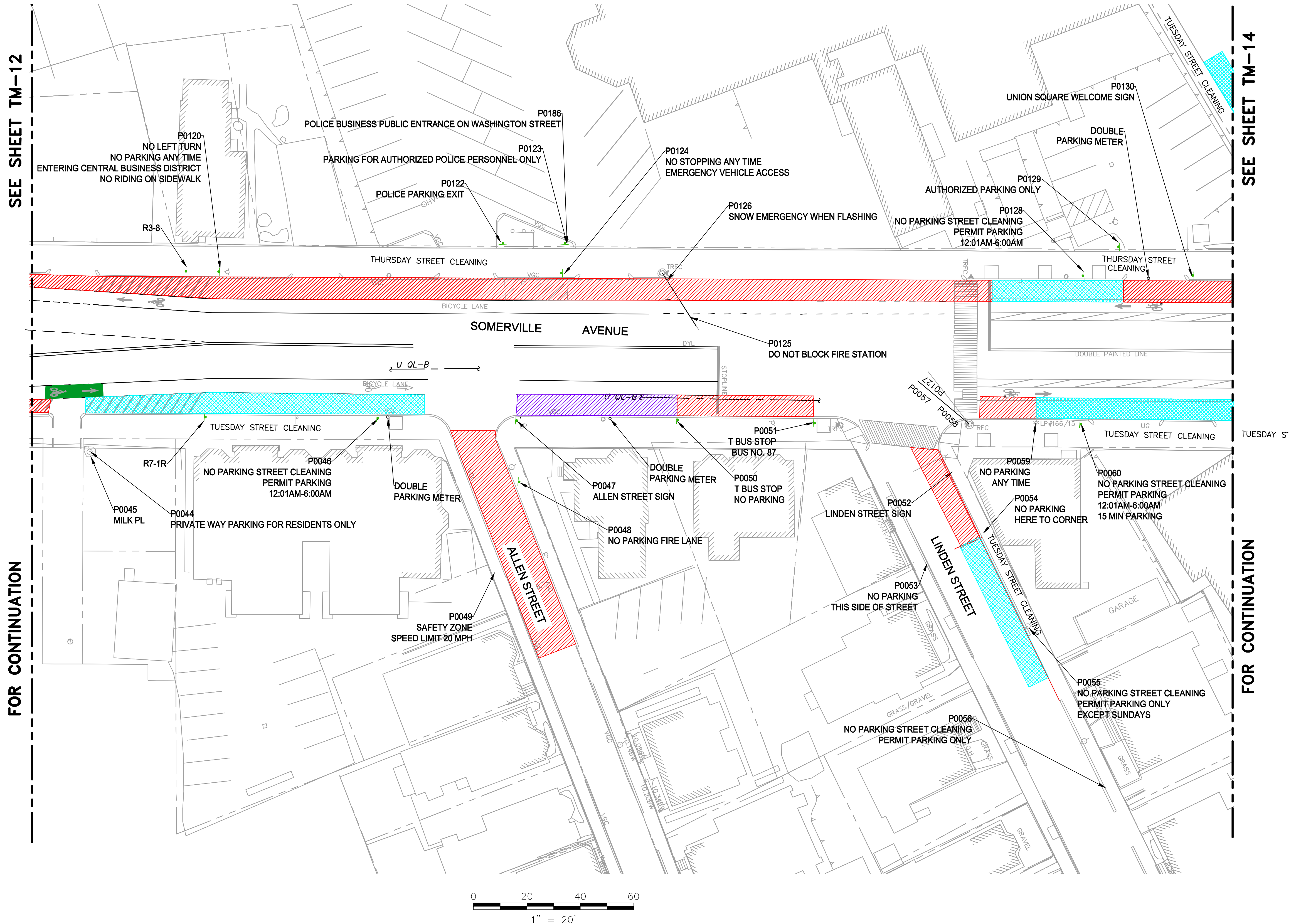
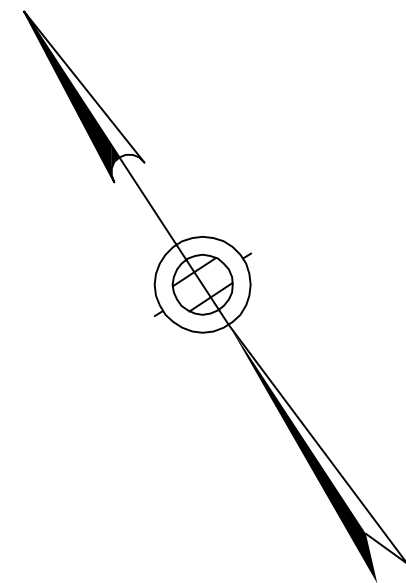
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLANS
EXISTING CONDITIONS SHEET 2 OF 6

DESIGNED: N/A		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-12
CHECKED: LAC		REF.	CONT.	
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CHECKED: RJB	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143			

NO.	DATE	REVISIONS	BY

2017-10-25 4:20 PM T:\52647LS Union Square Study and Design\SH Traffic Management\Traffic Management\TM11-TM15_Existing Conditions.dwg



SEE SHEET TM-12

SEE SHEET TM-14

FOR CONTINUATION

FOR CONTINUATION

NOTES
 1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEET G-5 AND TM-2.

LEGEND

	BIKE LANE
	NO PARKING
	LOADING ZONE
	METERED PARKING
	RESIDENTIAL PARKING (EXCEPT SUNDAY)
	HANDICAP PARKING
	STREET SWEEPING
	STREET SWEEPING NOT SPECIFIED



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

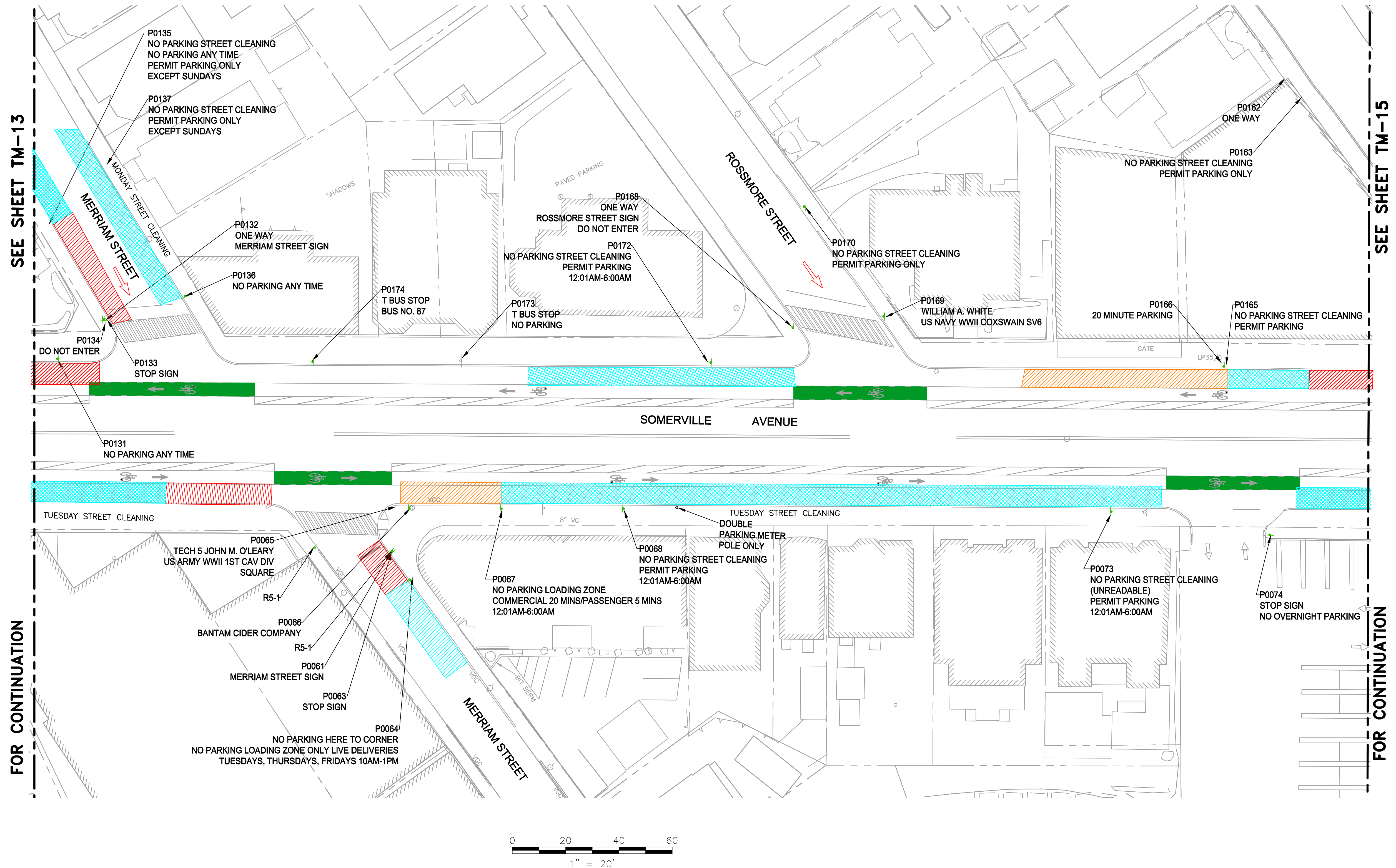
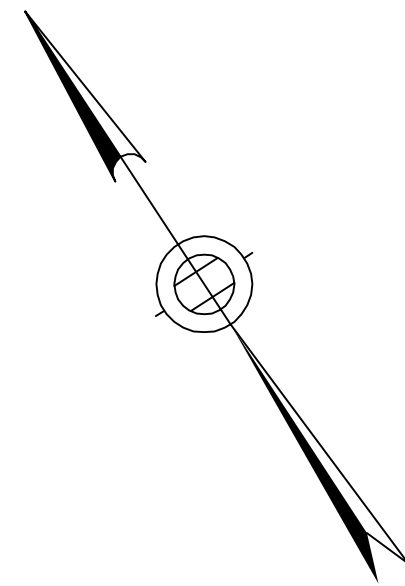
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLANS
EXISTING CONDITIONS SHEET 3 OF 6

DESIGNED: N/A		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-13
CHECKED: LAC		REF.	CONT.	
DRAWN: DY		ACC.		
CHECKED: RJB				

NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

2017-10-25 4:20 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM11-TM15_Existing Conditions.dwg



NOTES
 1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEET G-5 AND TM-2.

LEGEND

	BIKE LANE
	NO PARKING
	LOADING ZONE
	METERED PARKING
	RESIDENTIAL PARKING (EXCEPT SUNDAY)
	HANDICAP PARKING
	STREET SWEEPING
	STREET SWEEPING NOT SPECIFIED

Rachel J. Burckhardt
 CIVIL
 No. 31580
 12/11/17

FOR CONTINUATION

FOR CONTINUATION

SEE SHEET TM-13

SEE SHEET TM-15

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

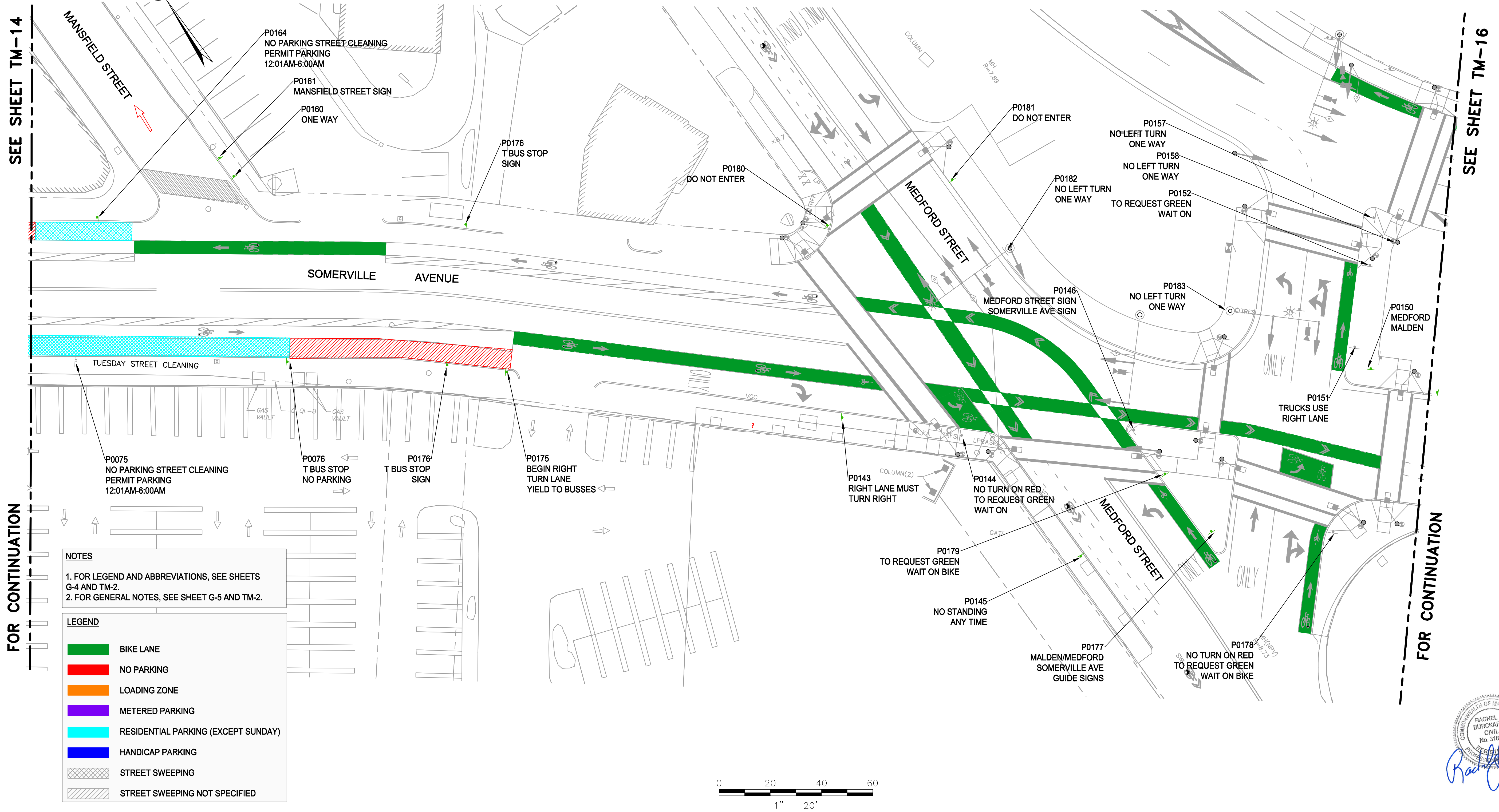
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLANS
EXISTING CONDITIONS SHEET 4 OF 6

DESIGNED: N/A		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-14
CHECKED: LAC		REF.	CONT.	
DRAWN: DY		ACC.		
CHECKED: RJB				

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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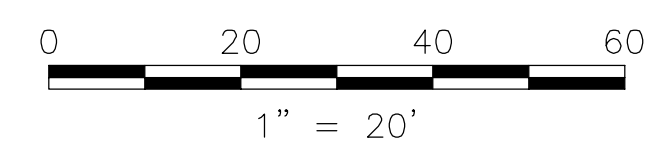


NOTES

- FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
- FOR GENERAL NOTES, SEE SHEET G-5 AND TM-2.

LEGEND

- BIKE LANE
- NO PARKING
- LOADING ZONE
- METERED PARKING
- RESIDENTIAL PARKING (EXCEPT SUNDAY)
- HANDICAP PARKING
- STREET SWEEPING
- STREET SWEEPING NOT SPECIFIED



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC MANAGEMENT PLANS

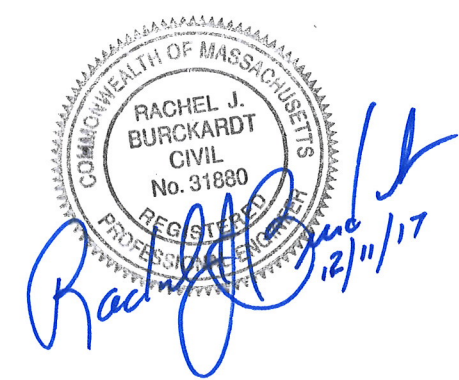
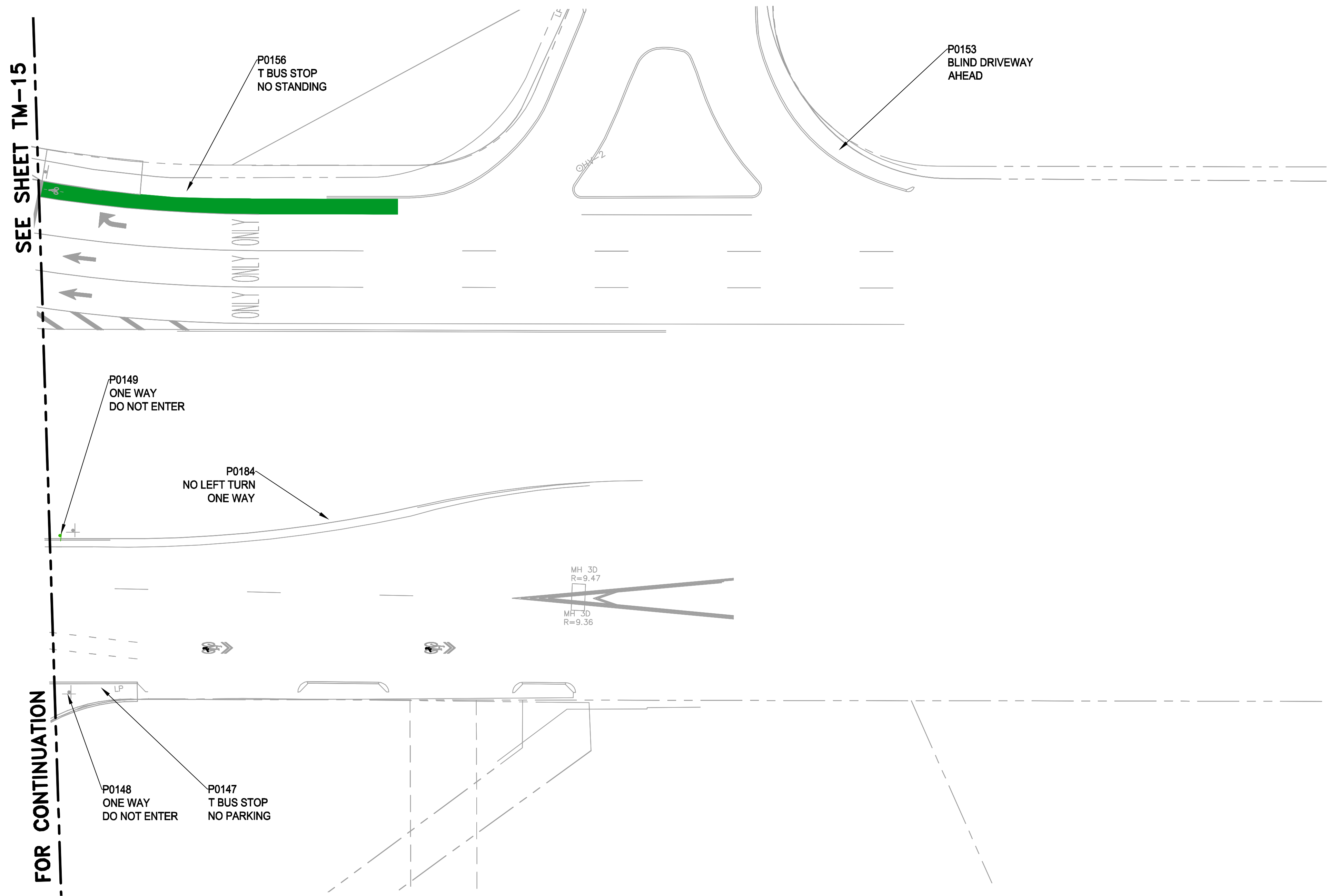
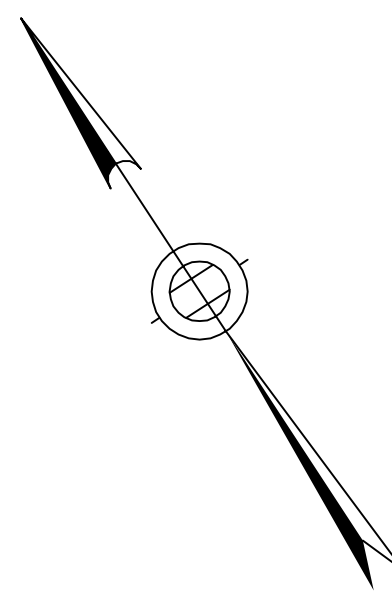
EXISTING CONDITIONS SHEET 5 OF 6

DESIGNED: N/A	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET
CHECKED: LAC			TM-15
DRAWN: DY	REF.	CONT.	
CHECKED: RJB	ACC.	SCALE: 1"=20'	
			DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143			

NO.	DATE	REVISIONS	BY

Rachel J. Burckhardt
 CIVIL
 No. 31880
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF MASSACHUSETTS
 12/11/17

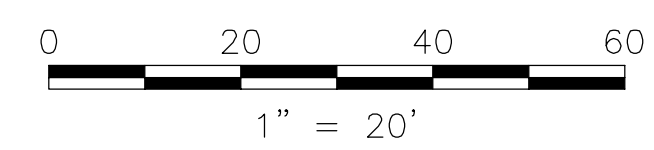
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NOTES
 1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEET G-5 AND TM-2.

LEGEND

	BIKE LANE
	NO PARKING
	LOADING ZONE
	METERED PARKING
	RESIDENTIAL PARKING (EXCEPT SUNDAY)
	HANDICAP PARKING
	STREET SWEEPING
	STREET SWEEPING NOT SPECIFIED



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLANS
EXISTING CONDITIONS SHEET 6 OF 6

DESIGNED: N/A		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET
CHECKED: LAC		TM-16		
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CHECKED: RJB	ACC.		DATE: DEC 2017	

NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

2017-09-14 12:47 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-32 (TRAFFIC SIGN SUMMARY-1).dwg

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
R1-1	30"	30"		SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			RED	WHITE	WHITE
R1-2	30"x30"x30"						RED/WHITE	RED	WHITE
R3-1	24"	24"					WHITE	RED	BLACK
R3-2	24"	24"					WHITE	RED	BLACK
R3-7R	30"	30"					WHITE	BLACK	BLACK
R3-7bP	24"	12"					WHITE	BLACK	BLACK
R3-7L	30"	30"					WHITE	BLACK	BLACK
R3-8c	48"	30"					WHITE	BLACK	BLACK
R3-8d	30"	30"					WHITE	BLACK	BLACK
R3-17	30"	24"					WHITE	BLACK	WHITE
R3-17b	30"	12"					WHITE	BLACK	WHITE
R4-7	24"	30"	SEE NOTE 1				WHITE	BLACK	WHITE
R4-8	24"	30"	SEE NOTE 1				WHITE	BLACK	WHITE
R4-11	30"	30"					WHITE	BLACK	WHITE
R5-1	30"	30"	SEE NOTE 22 ON SHEET TM-2.				RED/WHITE	WHITE	WHITE
R5-1a	36"	24"	SEE NOTE 22 ON SHEET TM-2.				RED	WHITE	WHITE

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
R6-1L	36"	12"		SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			BLACK	BLACK	WHITE
R6-1R	36"	12"					BLACK	BLACK	WHITE
R7-1L	12"	18"					WHITE	RED	RED
R7-1R	12"	18"					WHITE	RED	RED
R7-1B	12"	18"					WHITE	RED	RED
R9-9	24"	12"					WHITE	BLACK	BLACK
R9-9a	24"	12"					WHITE	BLACK	BLACK
R9-9b	24"	12"					WHITE	BLACK	BLACK
R10-7	24"	30"					WHITE	BLACK	BLACK
R11-2a	48"	30"					WHITE	BLACK	BLACK
R11-2c	48"	30"					WHITE	BLACK	BLACK
R11-4	60"	30"					WHITE	BLACK	WHITE
R3-8	30"	30"					WHITE	BLACK	WHITE

Rachel J. Burckardt
 RACHEL J. BURCKARDT
 CIVIL
 No. 31980
 REGISTERED PROFESSIONAL ENGINEER
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 12/11/17

NOTES:
 1. R4-7 AND R4-8 MAY BE 18"x24" FOR MOUNTING ON BARRELS.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGN SUMMARY
SHEET 1 OF 5

DESIGNED: KTC
 CHECKED: RJB
 DRAWN: JLM
 CHECKED: RJB

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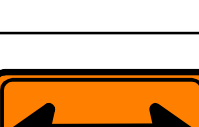





SHEET
TM-32












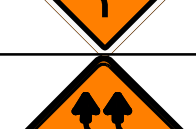
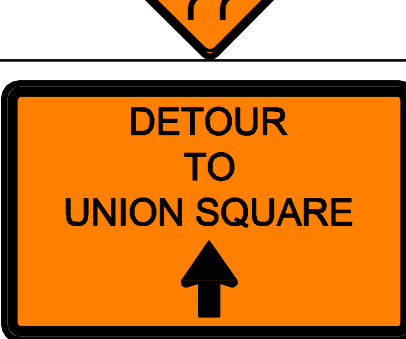
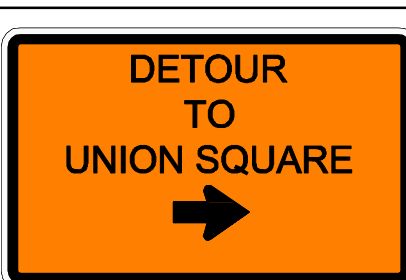
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 ACC. DATE: DEC 2017

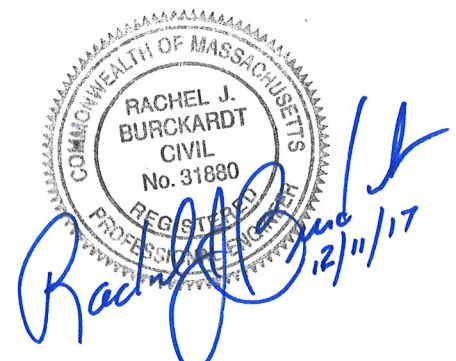
CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-09-14 12:47 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-33 (TRAFFIC SIGN SUMMARY-2).dwg

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
R9-6	30"	30"		SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			WHITE	BLACK	WHITE
W1-1R	30"	30"					ORANGE	BLACK	BLACK
W1-3R	30"	30"					ORANGE	BLACK	BLACK
W1-3L	30"	30"					ORANGE	BLACK	BLACK
W1-4bL	30"	30"					ORANGE	BLACK	BLACK
W1-4L	30"	30"					ORANGE	BLACK	BLACK
W1-4R	30"	30"					ORANGE	BLACK	BLACK
W1-6L	30"	18"					ORANGE	BLACK	BLACK
W1-6R	30"	18"					ORANGE	BLACK	BLACK
W1-7	30"	18"					ORANGE	BLACK	BLACK
W1-8L	18"	24"					ORANGE	BLACK	BLACK
W4-2R	30"	30"					ORANGE	BLACK	BLACK
W4-2L	30"	30"					ORANGE	BLACK	BLACK
W6-3	30"	30"					ORANGE	BLACK	BLACK
W11-1	30"	30"					ORANGE	BLACK	BLACK

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
W11-2	30"	30"		SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			ORANGE	BLACK	BLACK
W12-1	30"	30"					ORANGE	BLACK	BLACK
W13-1P	18"	18"					ORANGE	BLACK	BLACK
W16-7pL	24"	12"					ORANGE	BLACK	BLACK
W16-9P	24"	12"					ORANGE	BLACK	BLACK
W20-1a	36"	36"					ORANGE	BLACK	BLACK
W20-2	36"	36"					ORANGE	BLACK	BLACK
W20-3	36"	36"					ORANGE	BLACK	BLACK
W20-5L	36"	36"					ORANGE	BLACK	BLACK
W20-5R	36"	36"					ORANGE	BLACK	BLACK
W24-1L	36"	36"					ORANGE	BLACK	BLACK
W24-1aR	36"	36"					ORANGE	BLACK	BLACK
M4-1H	30"	30"					ORANGE	BLACK	BLACK
M4-1R	30"	30"					ORANGE	BLACK	BLACK


 RACHEL J. BURCKARDT
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ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGN SUMMARY
SHEET 2 OF 5

DESIGNED: KTC
 CHECKED: RJB
 DRAWN: JLM
 CHECKED: RJB



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REF. _____ CONT. _____
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SCALE: _____
 DATE: DEC 2017

SHEET

TM-33

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-10-25 1:36 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-34 (TRAFFIC SIGN SUMMARY-3).dwg

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
M4-1LH	30"	30"		SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			ORANGE	BLACK	BLACK
M4-1RH	30"	30"					ORANGE	BLACK	BLACK
M4-1RHL	30"	30"					ORANGE	BLACK	BLACK
M4-2H	30"	30"					ORANGE	BLACK	BLACK
M4-2LH	30"	30"					ORANGE	BLACK	BLACK
M4-2RH	30"	30"					ORANGE	BLACK	BLACK
M4-2RHL	30"	30"					ORANGE	BLACK	BLACK
M4-4	18"	12"					ORANGE	BLACK	BLACK
M4-8a	24"	18"					ORANGE	BLACK	BLACK
M4-9L	30"	24"					ORANGE	BLACK	BLACK
M4-9R	30"	24"					ORANGE	BLACK	BLACK

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
M4-9H	30"	24"		SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			ORANGE	BLACK	BLACK
M4-9LH	30"	24"					ORANGE	BLACK	BLACK
M4-9RH	30"	24"					ORANGE	BLACK	BLACK
M4-9bL	30"	24"					ORANGE	BLACK	BLACK
M4-9bR	30"	24"					ORANGE	BLACK	BLACK
M4-9bB	30"	24"					ORANGE	BLACK	BLACK
M4-9cL	30"	24"					ORANGE	BLACK	BLACK
M4-9cR	30"	24"					ORANGE	BLACK	BLACK
SP-1	36"	30"					ORANGE	BLACK	BLACK
SP-2	30"	24"					ORANGE	BLACK	BLACK
SP-3	36"	12"					ORANGE	BLACK	BLACK
SP-4	36"	18"					ORANGE	BLACK	BLACK
SP-5	36"	18"					ORANGE	BLACK	BLACK
SP-6	36"	12"					ORANGE	BLACK	BLACK

RACHEL J. BURCKARDT
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 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGN SUMMARY
SHEET 3 OF 5

DESIGNED: KTC
 CHECKED: RJB
 DRAWN: JLM
 CHECKED: RJB

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 75 Arlington St. Boston, MA 02116
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SCALE: _____
 DATE: DEC 2017

SHEET
TM-34

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-10-25 3:44 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-35 (TRAFFIC SIGN SUMMARY-4).dwg

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
SP-7	36"	12"	MANSFIELD ST.				ORANGE	BLACK	BLACK
SP-9	30"	24"	SOMERVILLE AVE EB CLOSED DETOUR AHEAD				ORANGE	BLACK	BLACK
SP-10	30"	42"	SOMERVILLE AVE UNDER CONSTRUCTION FOLLOW DETOUR TO UNION SQUARE				ORANGE	BLACK	BLACK
SP-11	30"	30"	SOMERVILLE AVE EASTBOUND CLOSED AT WARREN STREET				ORANGE	BLACK	BLACK
SP-12	36"	24"	STONE AVE CLOSED FOLLOW DETOUR				ORANGE	BLACK	BLACK
SP-13	36"	24"	McGRATH HWY ↑				ORANGE	BLACK	BLACK
SP-14	36"	24"	McGRATH HWY →				ORANGE	BLACK	BLACK
SP-15	30"	24"	SOMERVILLE AVE ↑				ORANGE	BLACK	BLACK
SP-16	30"	24"	SOMERVILLE AVE →				ORANGE	BLACK	BLACK
SP-17	30"	12"	PROSPECT ST.				ORANGE	BLACK	BLACK
SP-18	30"	24"	PROSPECT ST. SB CLOSED				ORANGE	BLACK	BLACK

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
SP-19	30"	30"	PROSPECT ST SB CLOSED FOLLOW DETOUR				ORANGE	BLACK	BLACK
SP-20	30"	30"	TWO-WAY TRAFFIC ALLOWED				ORANGE	BLACK	BLACK
SP-21	42"	48"	SOMERVILLE AVE CLOSED AT MANSFIELD ST. FOLLOW DETOUR TO UNION SQUARE				ORANGE	BLACK	BLACK
SP-22	48"	24"	ROAD CLOSED OPEN TO ABUTTERS ONLY				WHITE	BLACK	BLACK
SP-23	48"	30"	OPEN TO LOCAL BUSINESSES ONLY				WHITE	BLACK	BLACK
SP-24	30"	24"	SOMERVILLE AVE CROSSWALK CLOSED				WHITE	BLACK	BLACK
SP-25	42"	30"	NO TRUCK ACCESS TO WASHINGTON ST. USE SOMERVILLE AVE.				ORANGE	BLACK	BLACK
SP-26	42"	30"	NO ACCESS TO PROSPECT ST. USE SOMERVILLE AVE.				ORANGE	BLACK	BLACK
SP-27	42"	30"	NO ACCESS TO SOMERVILLE AVE EB FOLLOW DETOUR				ORANGE	BLACK	BLACK

Rachel J. Burckardt
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGN SUMMARY
SHEET 4 OF 5

DESIGNED: KTC
 CHECKED: RJB
 DRAWN: JLM
 CHECKED: RJB

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 75 Arlington St. Boston, MA 02116
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SHEET
TM-35






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 DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-10-25 3:43 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-36 (TRAFFIC SIGN SUMMARY-5).dwg

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER
SP-28	42"	30"	NO ACCESS TO SOMERVILLE AVE WB FOLLOW DETOUR					ORANGE	BLACK	BLACK
SP-29	42"	42"	SOMERVILLE AVE WESTBOUND CLOSED TO TRUCKS AT UNION SQUARE					ORANGE	BLACK	BLACK
SP-30	30"	24"	LINDEN STREET CLOSED FOLLOW DETOUR					ORANGE	BLACK	BLACK
SP-31	30"	12"	LINDEN STREET					ORANGE	BLACK	BLACK
SP-32	30"	24"	ALLEN STREET CLOSED FOLLOW DETOUR					ORANGE	BLACK	BLACK
SP-33	30"	12"	ALLEN STREET					ORANGE	BLACK	BLACK
SP-34	30"	24"	MERRIAM STREET CLOSED FOLLOW DETOUR					ORANGE	BLACK	BLACK
SP-35	30"	12"	MERRIAM STREET					ORANGE	BLACK	BLACK
SP-36	30"	18"	PROSPECT ST. SOUTHBOUND					ORANGE	BLACK	BLACK
SP-37	30"	18"	WASHINGTON ST. EASTBOUND					ORANGE	BLACK	BLACK


IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER
SP-38	30"	30"	LEFT TURNS AT PROSPECT STREET CLOSED TO TRUCKS					ORANGE	BLACK	BLACK
SP-39	30"	30"	DETOUR VIA WEBSTER TO PROSPECT ST. 					ORANGE	BLACK	BLACK
SP-40	30"	30"	DETOUR TO SOMERVILLE AVE AND MANSFIELD ST. 					ORANGE	BLACK	BLACK
SP-41	24"	24"	LOCAL TRAFFIC ONLY					WHITE	BLACK	BLACK
SP-42	24"	12"	TRUCKS					WHITE	BLACK	BLACK
SP-43	12"	18"	 BIKE LANE OPEN 					WHITE	BLACK	BLACK
SP-44	12"	18"	BOW ST. 					ORANGE	BLACK	BLACK
SP-45	36"	30"	OPEN TO LOCAL BUSINESSES & MANSFIELD ST. ONLY					WHITE	BLACK	BLACK
SP-46	30"	18"	SOMERVILLE AVE. CLOSED AHEAD					ORANGE	BLACK	BLACK


 Rachel J. Burckardt
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGN SUMMARY
SHEET 5 OF 5

DESIGNED: KTC
 CHECKED: RJB
 DRAWN: JLM
 CHECKED: RJB

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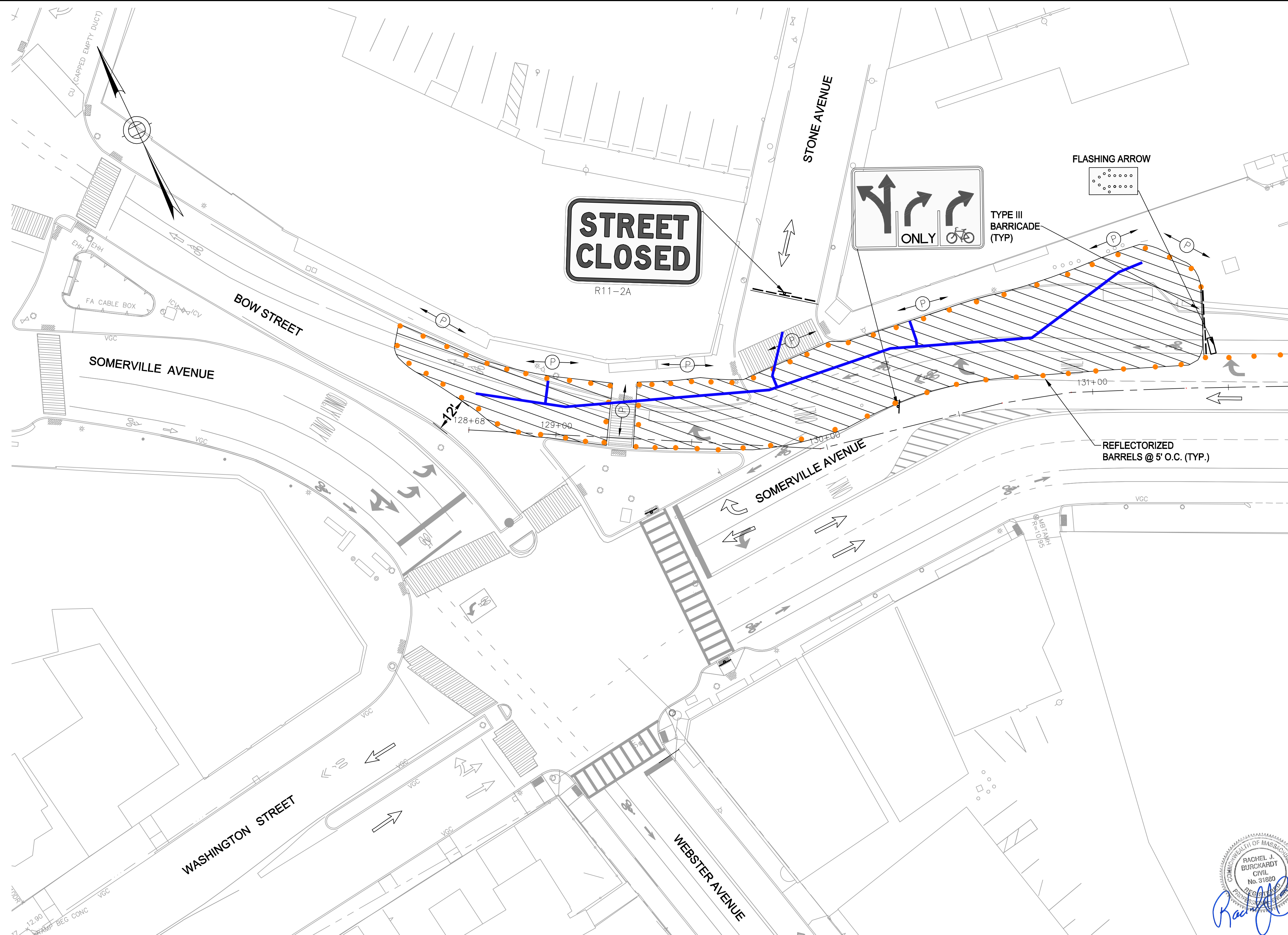
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SHEET
TM-36

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-11-15 9:46 AM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-47 WaterMainReplacement Segment 1-2.dwg

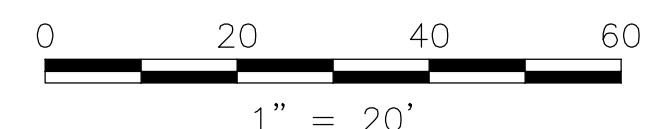


SEE SHEET TM-48

MATCHLINE

- NOTES:**
- FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 - FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 - FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 - FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-1 THROUGH W-6.
 - FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 - BARREL SPACING SHALL BE 5' APART ON CENTER.
 - TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 - MAINTAIN PEDESTRIAN CONNECTION THROUGH WORK ZONE.
 - FOR DETOUR AND ADVANCE SIGNS SEE SHEET TM-49.
 - TO INSTALL WATER MAIN BRANCH UP STONE AVENUE, PROVIDE TEMPORARY PEDESTRIAN CROSSING OUTSIDE OF WORK ZONE.

Rachel J. Burckardt
 RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 REGISTERED PROFESSIONAL ENGINEER
 DEC 11/17



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

WATER MAIN REPLACEMENT TMP PLAN

SEGMENT 1 SHEET 1 OF 3

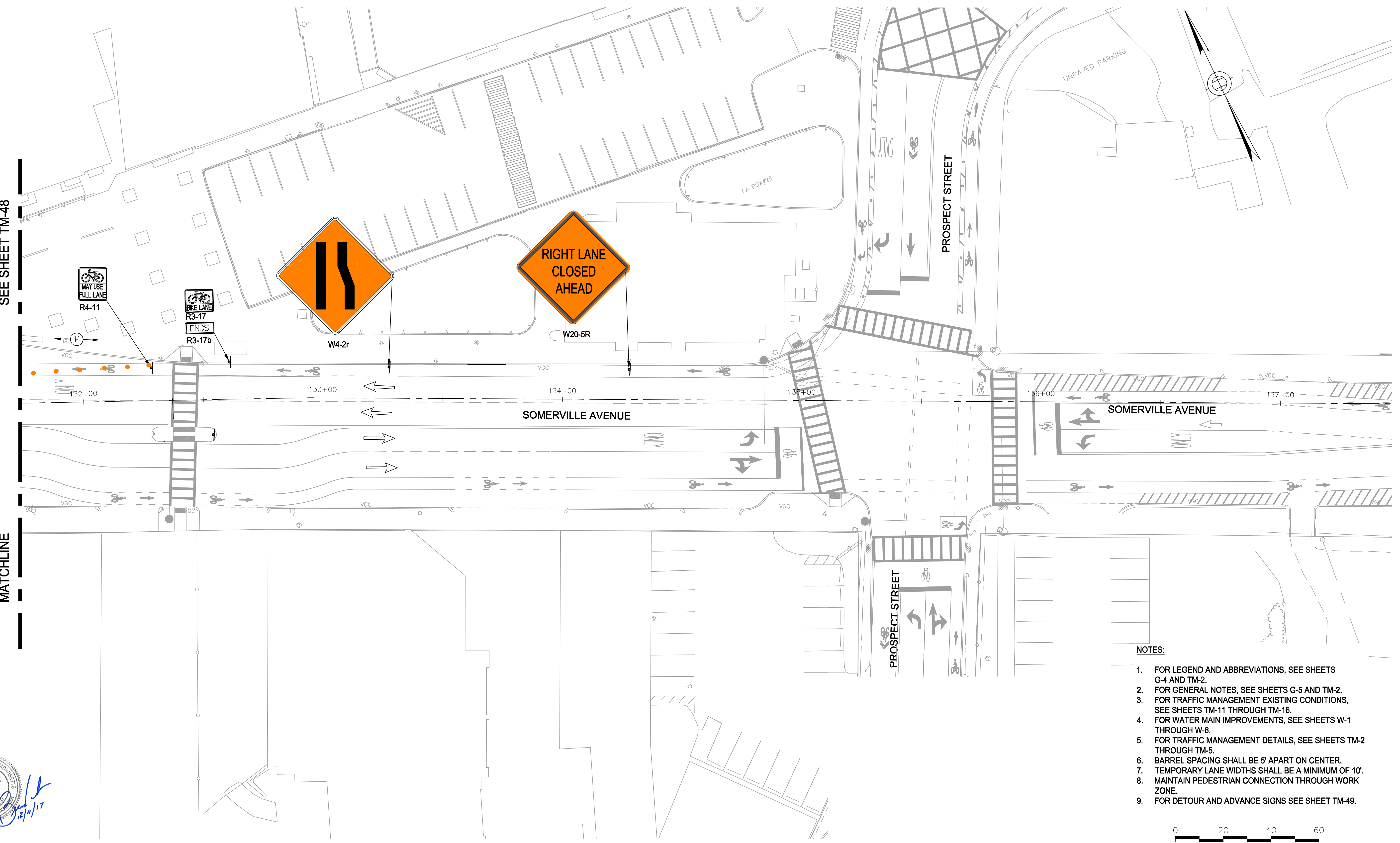
DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
CHECKED: JC			<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> <td>SCALE: 1"=20'</td> </tr> <tr> <td>ACC.</td> <td> </td> <td>DATE: DEC 2017</td> </tr> </table>	REF.	CONT.	SCALE: 1"=20'	ACC.
REF.	CONT.	SCALE: 1"=20'					
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DRAWN: DY	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143	TM-47					
CHECKED: JC							

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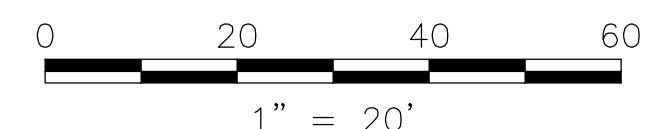
SEE SHEET TM-48

MATCHLINE



NOTES:

1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-1 THROUGH W-6.
5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
6. BARREL SPACING SHALL BE 5' APART ON CENTER.
7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
8. MAINTAIN PEDESTRIAN CONNECTION THROUGH WORK ZONE.
9. FOR DETOUR AND ADVANCE SIGNS SEE SHEET TM-49.



Rachel J. Burschardt
 CIVIL
 No. 31989
 State of Massachusetts
 12/11/17

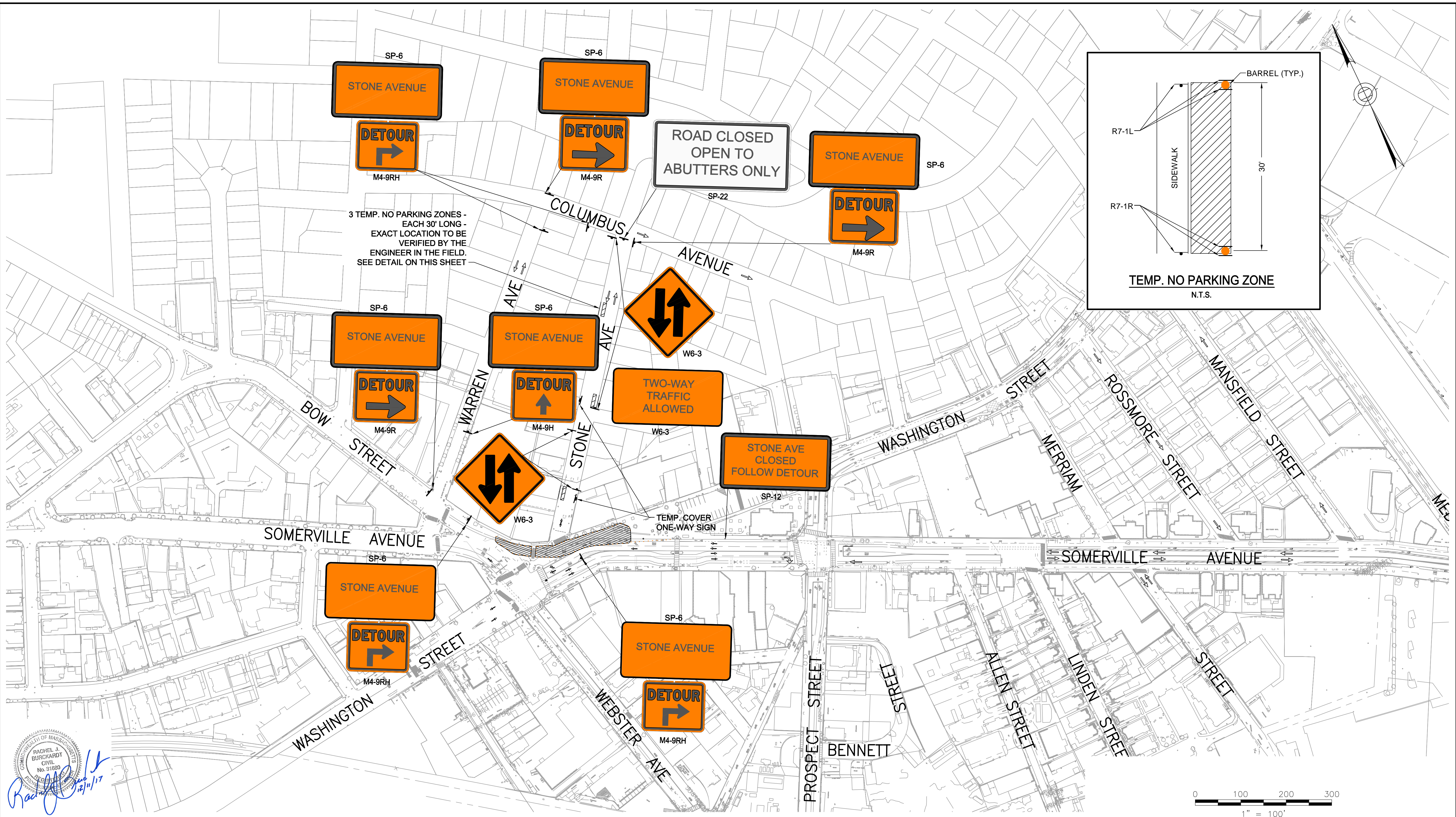
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 1 SHEET 2 OF 3

DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
CHECKED: JC		TM-48
DRAWN: DY	REF. _____	SCALE: 1"=20'
CHECKED: JC	CONT. _____	DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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RACHEL J. BURCKARDT
 CIVIL
 No. 31689
 STATE OF MASSACHUSETTS
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

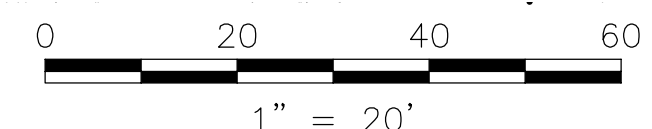
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT DETOUR PLAN
SEGMENT 1 SHEET 3 OF 3

DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-49
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=100' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



Rachel J. Burckhardt
 12/11/17

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS SEE SHEET W-1.
 5. FOR TRAFFIC MANAGEMENT DETAILS SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. CONTRACTOR SHALL COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOP.

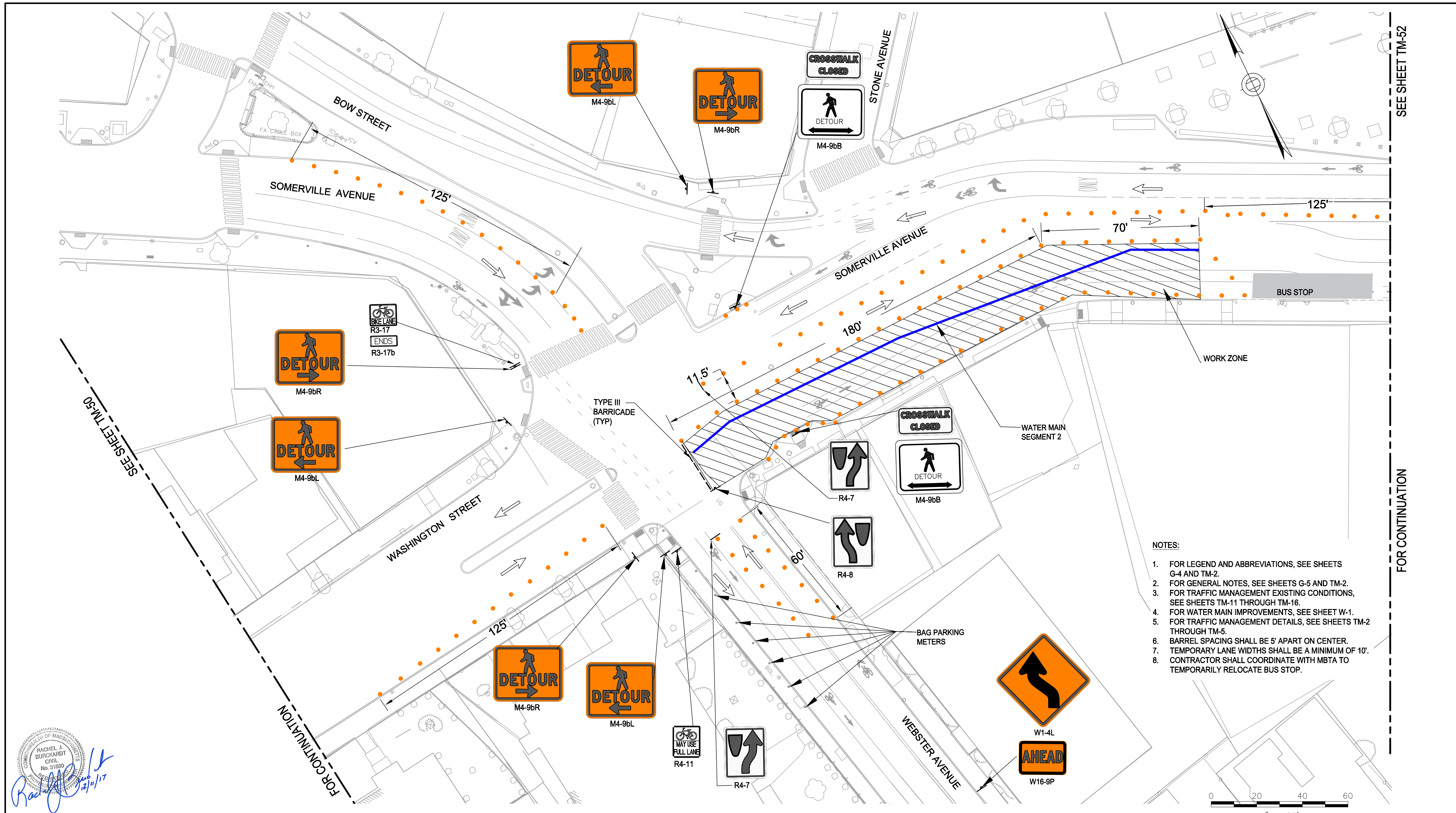


ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 2-1 SHEET 1 OF 3

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-50
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-1.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. CONTRACTOR SHALL COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOP.

Rachel J. Burckhardt

 CIVIL

 No. 91690

 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

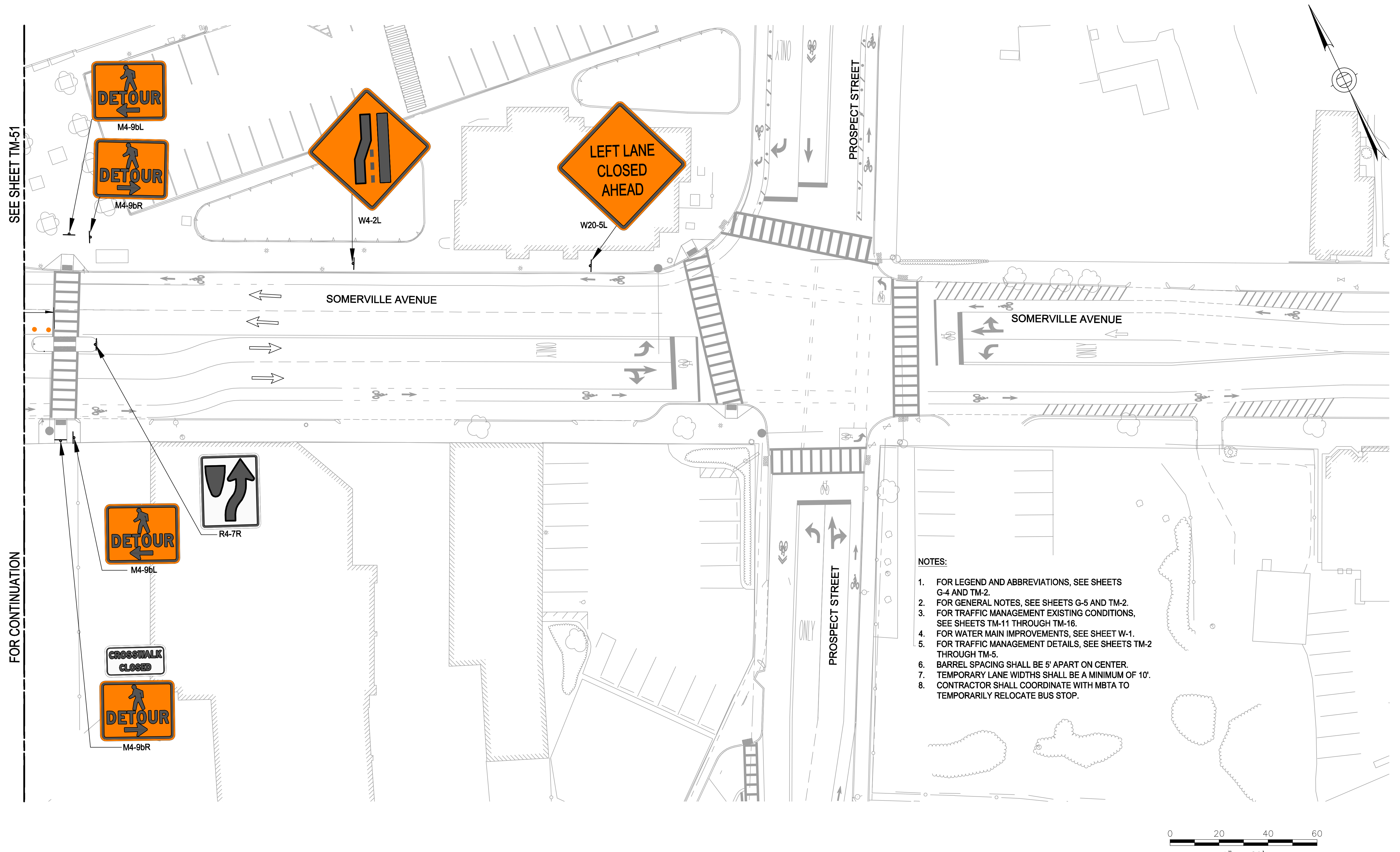
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN SEGMENT 2 TMP PLAN
SEGMENT 2-1 SHEET 2 OF 3

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-51
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

SEE SHEET TM-52

FOR CONTINUATION



SEE SHEET TM-51

FOR CONTINUATION

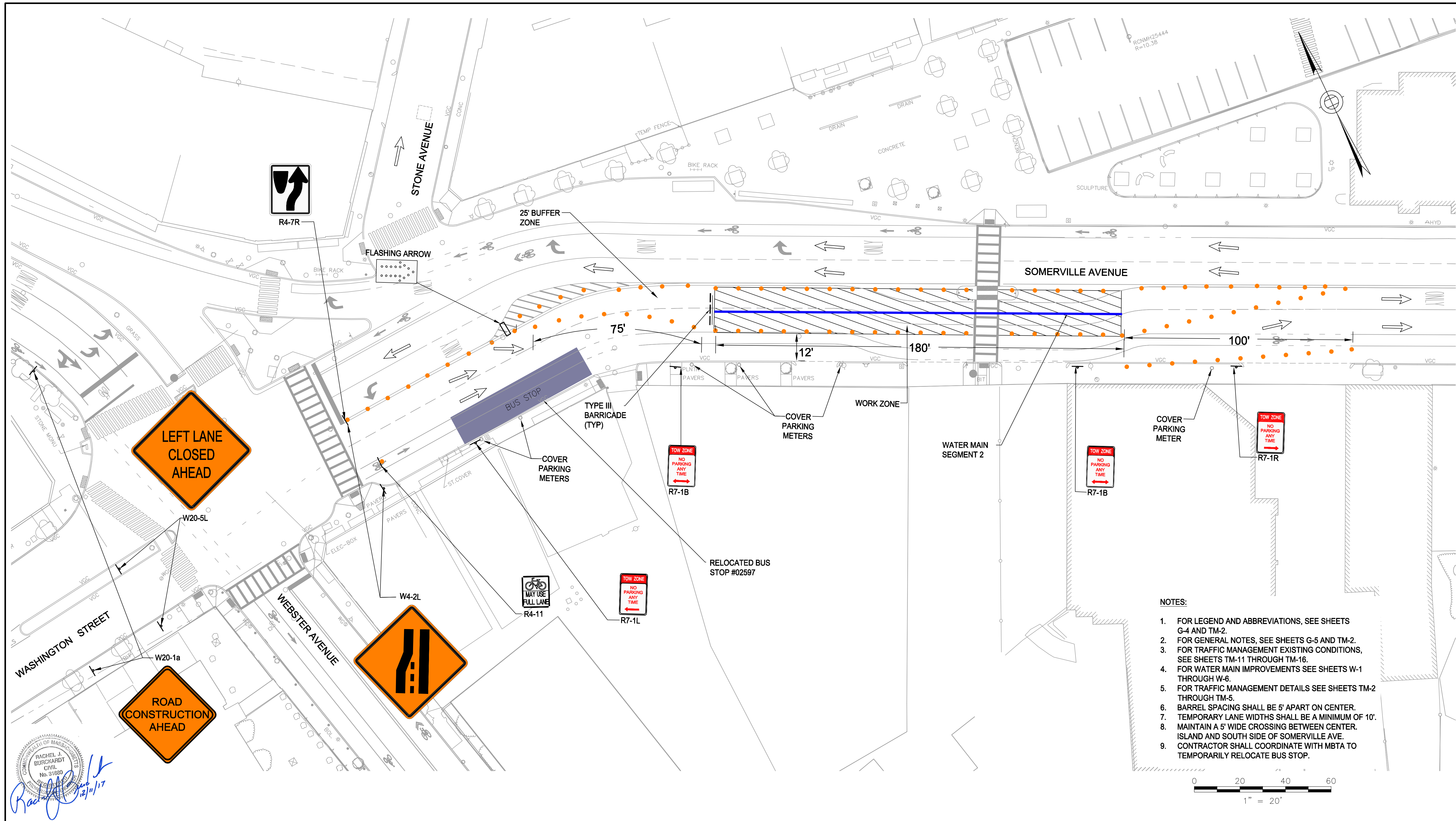
Rachel J. Burckardt
 Civil Engineer
 No. 31820
 State of Massachusetts
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 2-1 SHEET 3 OF 3

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-52
REF. _____ ACC. _____	CONT. _____ DATE: DEC 2017	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS SEE SHEETS W-1 THROUGH W-6.
 5. FOR TRAFFIC MANAGEMENT DETAILS SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. MAINTAIN A 5' WIDE CROSSING BETWEEN CENTER ISLAND AND SOUTH SIDE OF SOMERVILLE AVE.
 9. CONTRACTOR SHALL COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOP.

Rachel J. Burckhardt

 12/11/17

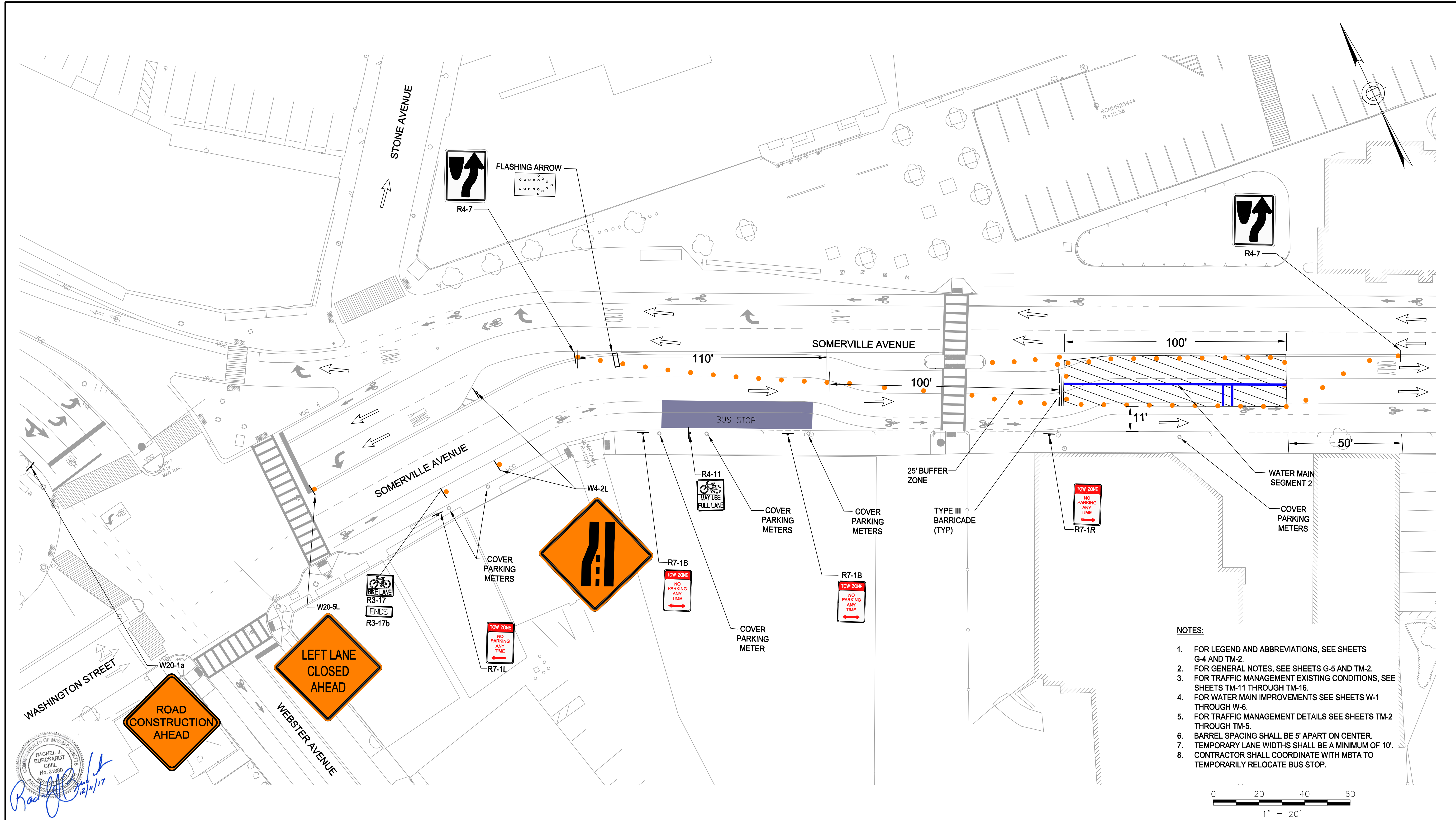
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 2-2 SHEET 1 OF 1

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-53
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

T:\52647LS Union Square Study and Design\SHIT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-54 WaterMainReplacement SEGMENT 2-3.dwg



- NOTES:**
- FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 - FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 - FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 - FOR WATER MAIN IMPROVEMENTS SEE SHEETS W-1 THROUGH W-6.
 - FOR TRAFFIC MANAGEMENT DETAILS SEE SHEETS TM-2 THROUGH TM-5.
 - BARREL SPACING SHALL BE 5' APART ON CENTER.
 - TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 - CONTRACTOR SHALL COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOP.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 2-3 SHEET 1 OF 1

DESIGNED: DY
 CHECKED: JC
 DRAWN: DY
 CHECKED: JC



Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

REF. CONT.
 ACC.

SCALE: 1"=20'
 DATE: DEC 2017

SHEET
TM-54

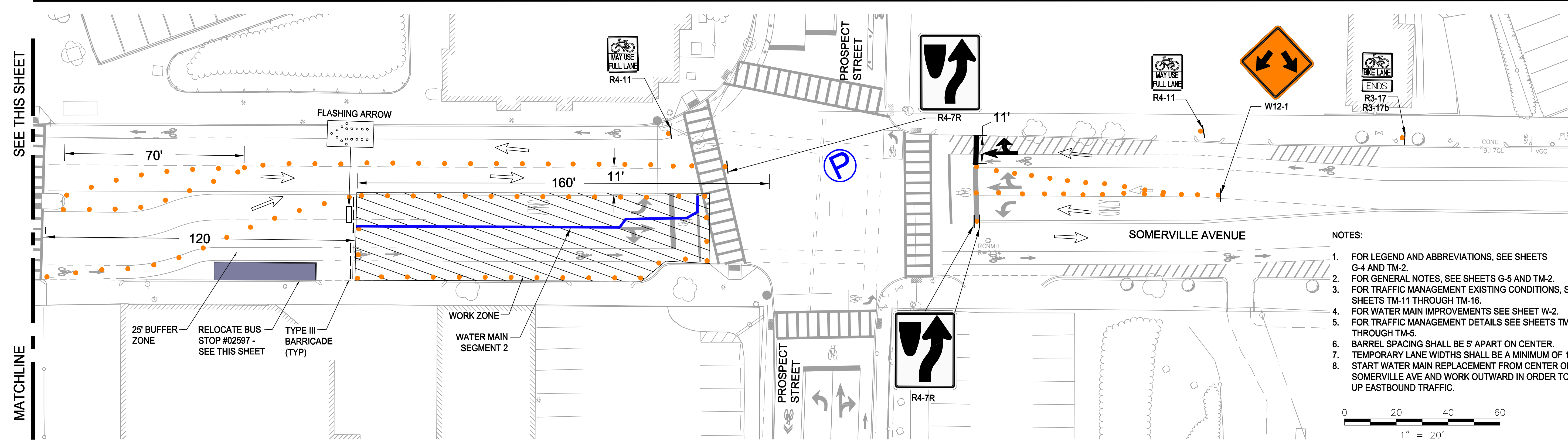
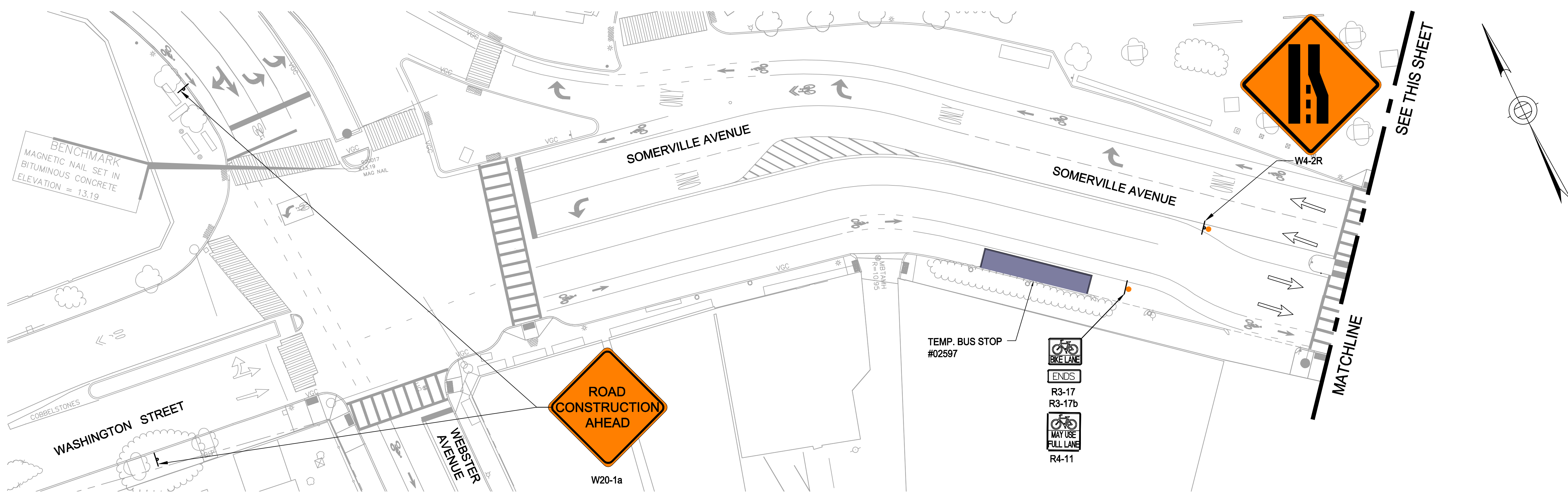
CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

Professional Engineer Seal for Rachel J. Burckhardt, No. 31880, dated 12/11/17.

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-55 WaterMainReplacement Segment 2-4.dwg 2017-11-15 9:25 AM

COMMISSION OF PUBLIC WORKS
 RACHEL J. BURKARDT
 CIVIL
 No. 31880
 REGISTERED PROFESSIONAL ENGINEER
 11/17



- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS SEE SHEET W-2.
 5. FOR TRAFFIC MANAGEMENT DETAILS SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. START WATER MAIN REPLACEMENT FROM CENTER OF SOMERVILLE AVE AND WORK OUTWARD IN ORDER TO OPEN UP EASTBOUND TRAFFIC.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 2-4 SHEET 1 OF 1

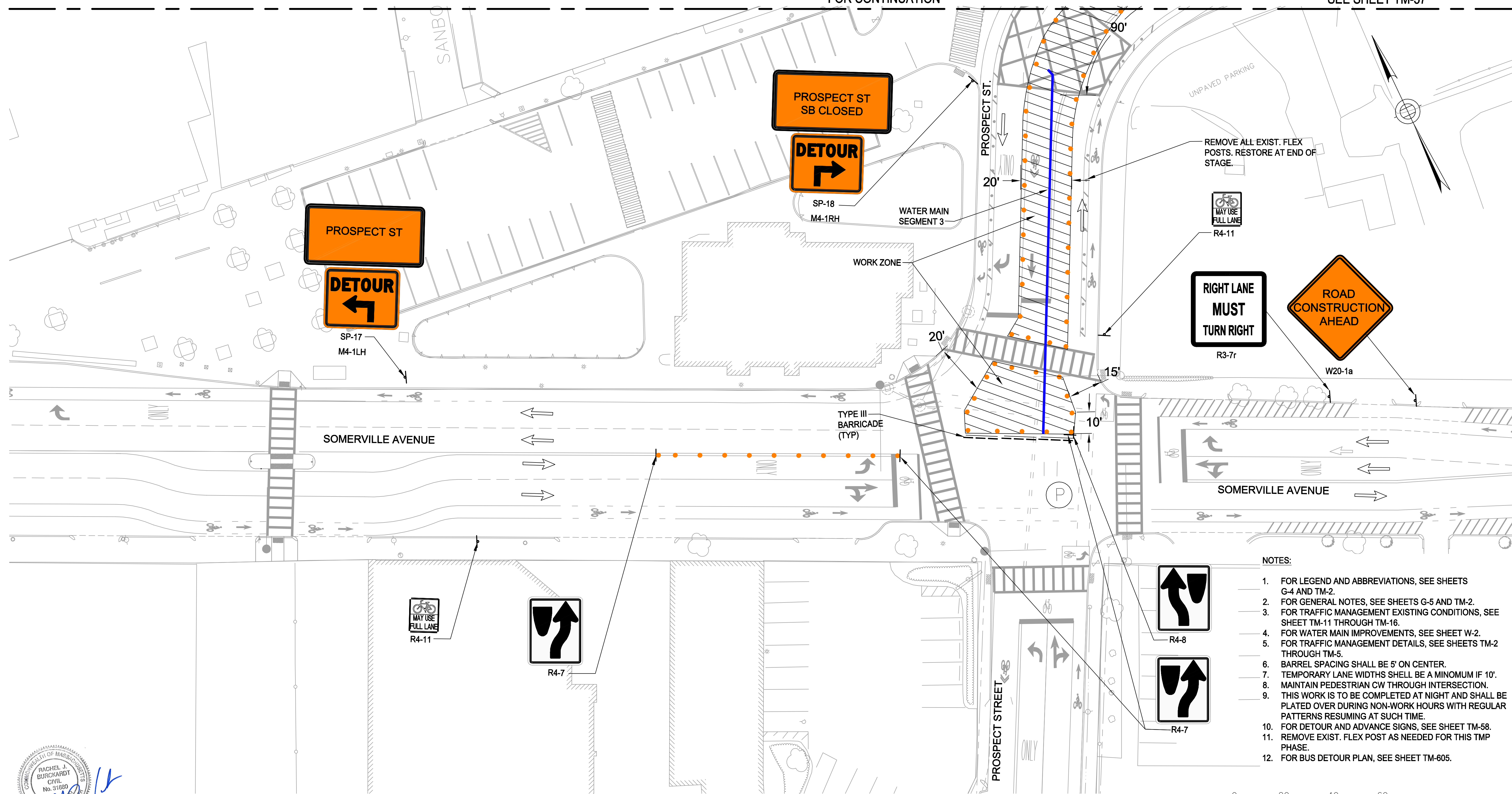
DESIGNED: DY		Parsons Brinckerhoff, Inc.		SHEET
CHECKED: JC		75 Arlington St. Boston, MA 02116		
DRAWN: DY	REF.	CONT.	SCALE: 1"=20'	TM-55
CHECKED: JC	ACC.		DATE: DEC 2017	

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

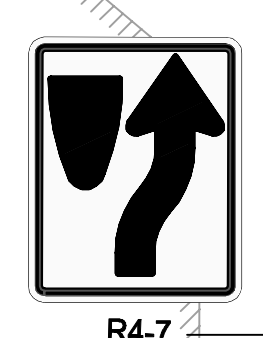
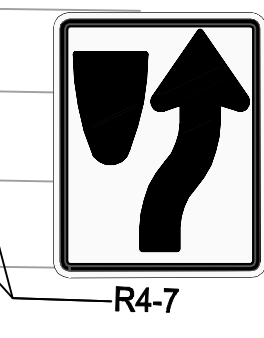
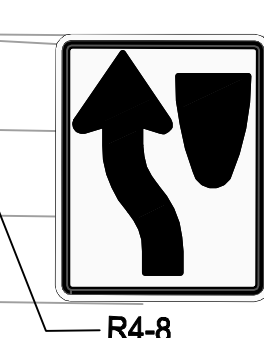
NO.	DATE	REVISIONS	BY

FOR CONTINUATION

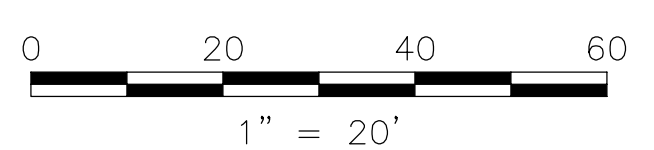
SEE SHEET TM-57



REMOVE ALL EXIST. FLEX POSTS. RESTORE AT END OF STAGE.



- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEET TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-2.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM IF 10'.
 8. MAINTAIN PEDESTRIAN CW THROUGH INTERSECTION.
 9. THIS WORK IS TO BE COMPLETED AT NIGHT AND SHALL BE PLATED OVER DURING NON-WORK HOURS WITH REGULAR PATTERNS RESUMING AT SUCH TIME.
 10. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-58.
 11. REMOVE EXIST. FLEX POST AS NEEDED FOR THIS TMP PHASE.
 12. FOR BUS DETOUR PLAN, SEE SHEET TM-605.



Rachel J. Burckardt

 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 3-1 SHEET 1 OF 3

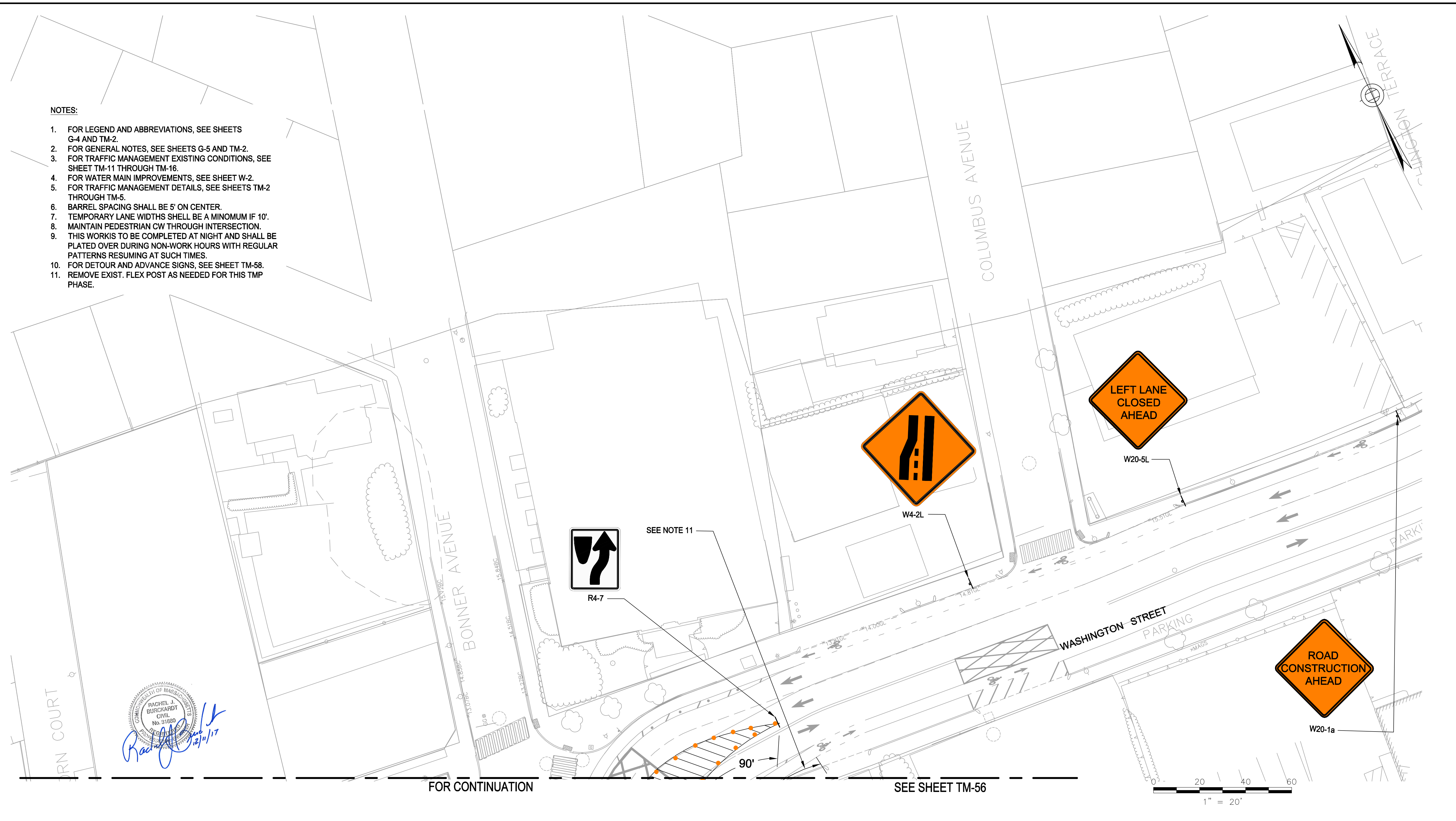
DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
CHECKED: JC			<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> <td>SCALE: 1"=20'</td> </tr> <tr> <td>ACC.</td> <td></td> <td>DATE: DEC 2017</td> </tr> </table>	REF.	CONT.	SCALE: 1"=20'	ACC.
REF.	CONT.	SCALE: 1"=20'					
ACC.		DATE: DEC 2017					
DRAWN: DY		TM-56					
CHECKED: JC							

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

NOTES:

1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEET TM-11 THROUGH TM-16.
4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-2.
5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
6. BARREL SPACING SHALL BE 5' ON CENTER.
7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
8. MAINTAIN PEDESTRIAN CW THROUGH INTERSECTION.
9. THIS WORK IS TO BE COMPLETED AT NIGHT AND SHALL BE PLATED OVER DURING NON-WORK HOURS WITH REGULAR PATTERNS RESUMING AT SUCH TIMES.
10. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-58.
11. REMOVE EXIST. FLEX POST AS NEEDED FOR THIS TMP PHASE.



Rachel J. Burckhardt
 Civil Engineer
 No. 31889
 State of Massachusetts
 12/11/17

FOR CONTINUATION

SEE SHEET TM-56

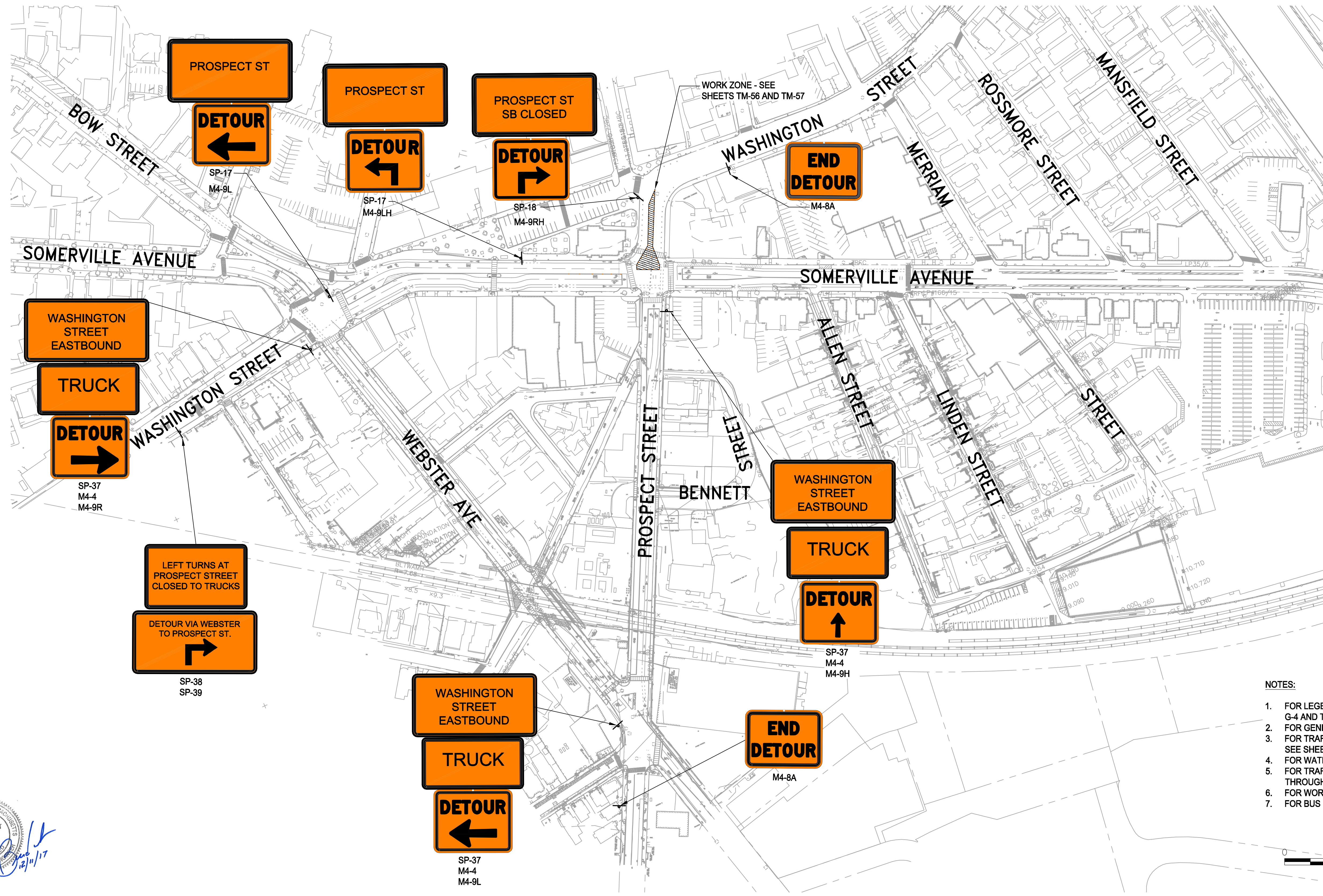
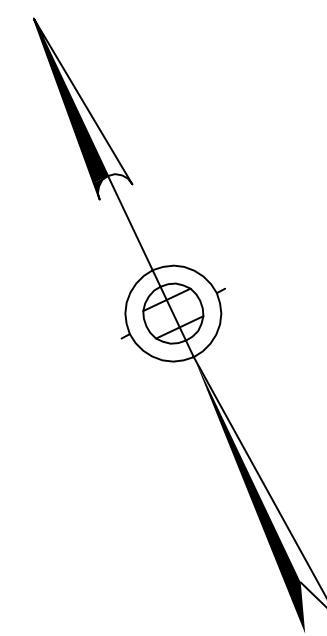
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 3-1 SHEET 2 OF 3

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-57
REF. _____ ACC. _____	CONT. _____ SCALE: 1"=20' DATE: DEC 2017	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143

T:\52647LS Union Square Study and Design\SHIT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-58 WaterMainReplacement Segment 3-1 DETOUR.dwg
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- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-2.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. FOR WORK ZONE PLAN, SEE SHEETS TM-56 AND TM-57.
 7. FOR BUS DETOUR PLAN, SEE SHEET TM-605.

RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 STATE OF MASSACHUSETTS
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

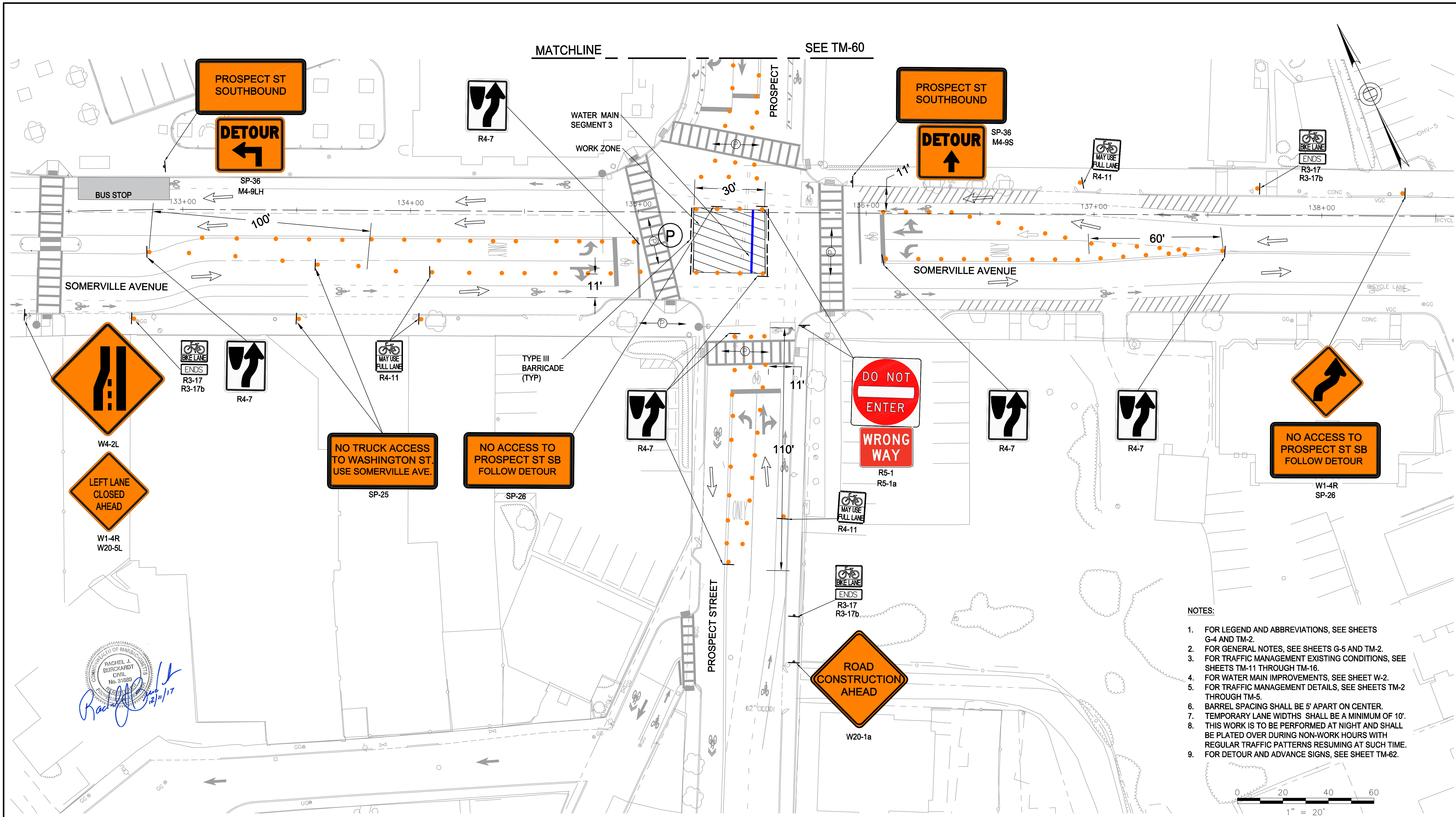
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT DETOUR PLAN
SEGMENT 3-1 SHEET 3 OF 3

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
CHECKED: JC			<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> <td>SCALE: 1"=100'</td> </tr> <tr> <td>ACC.</td> <td></td> <td>DATE: DEC 2017</td> </tr> </table>	REF.	CONT.	SCALE: 1"=100'	ACC.
REF.	CONT.	SCALE: 1"=100'					
ACC.		DATE: DEC 2017					
DRAWN: DY		TM-58					
CHECKED: JC							

NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

T:\52647LS Union Square Study and Design\SHIT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-59 WaterMainReplacement SEGMENT 3-2.dwg



- NOTES:**
- FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 - FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 - FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 - FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-2.
 - FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 - BARREL SPACING SHALL BE 5' APART ON CENTER.
 - TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 - THIS WORK IS TO BE PERFORMED AT NIGHT AND SHALL BE PLATED OVER DURING NON-WORK HOURS WITH REGULAR TRAFFIC PATTERNS RESUMING AT SUCH TIME.
 - FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-62.

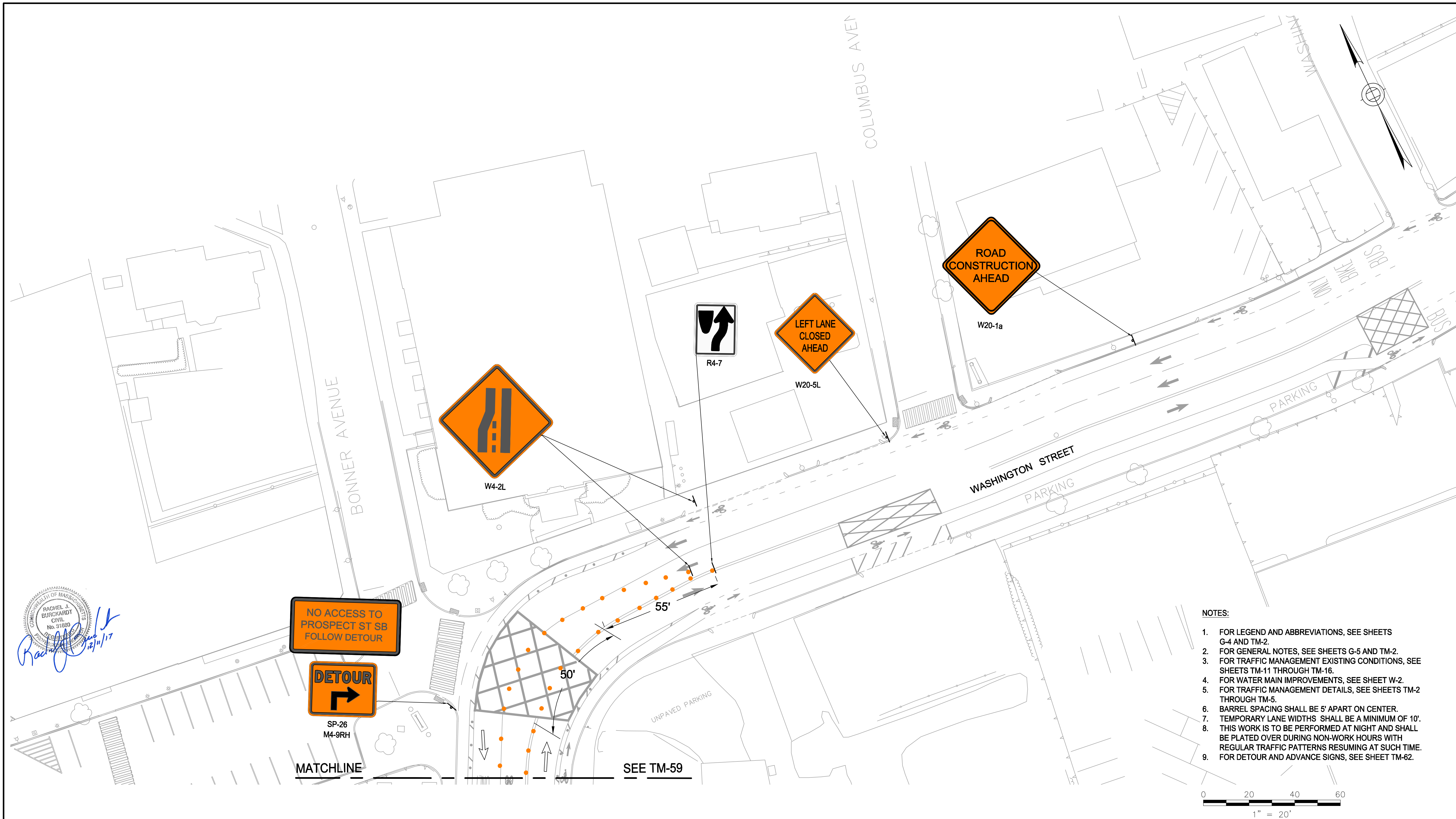
RACHEL J. BURCKARDT
 CIVIL
 No. 31689
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 3-2 SHEET 1 OF 3

DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
CHECKED: JC			<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> <td>SCALE: 1"=20'</td> </tr> <tr> <td>ACC.</td> <td></td> <td>DATE: DEC 2017</td> </tr> </table>	REF.	CONT.	SCALE: 1"=20'	ACC.
REF.	CONT.	SCALE: 1"=20'					
ACC.		DATE: DEC 2017					
DRAWN: DY		TM-59					
CHECKED: JC							
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143							

NO.	DATE	REVISIONS	BY



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-2.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. THIS WORK IS TO BE PERFORMED AT NIGHT AND SHALL BE PLATED OVER DURING NON-WORK HOURS WITH REGULAR TRAFFIC PATTERNS RESUMING AT SUCH TIME.
 9. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-62.

Rachel J. Burckardt

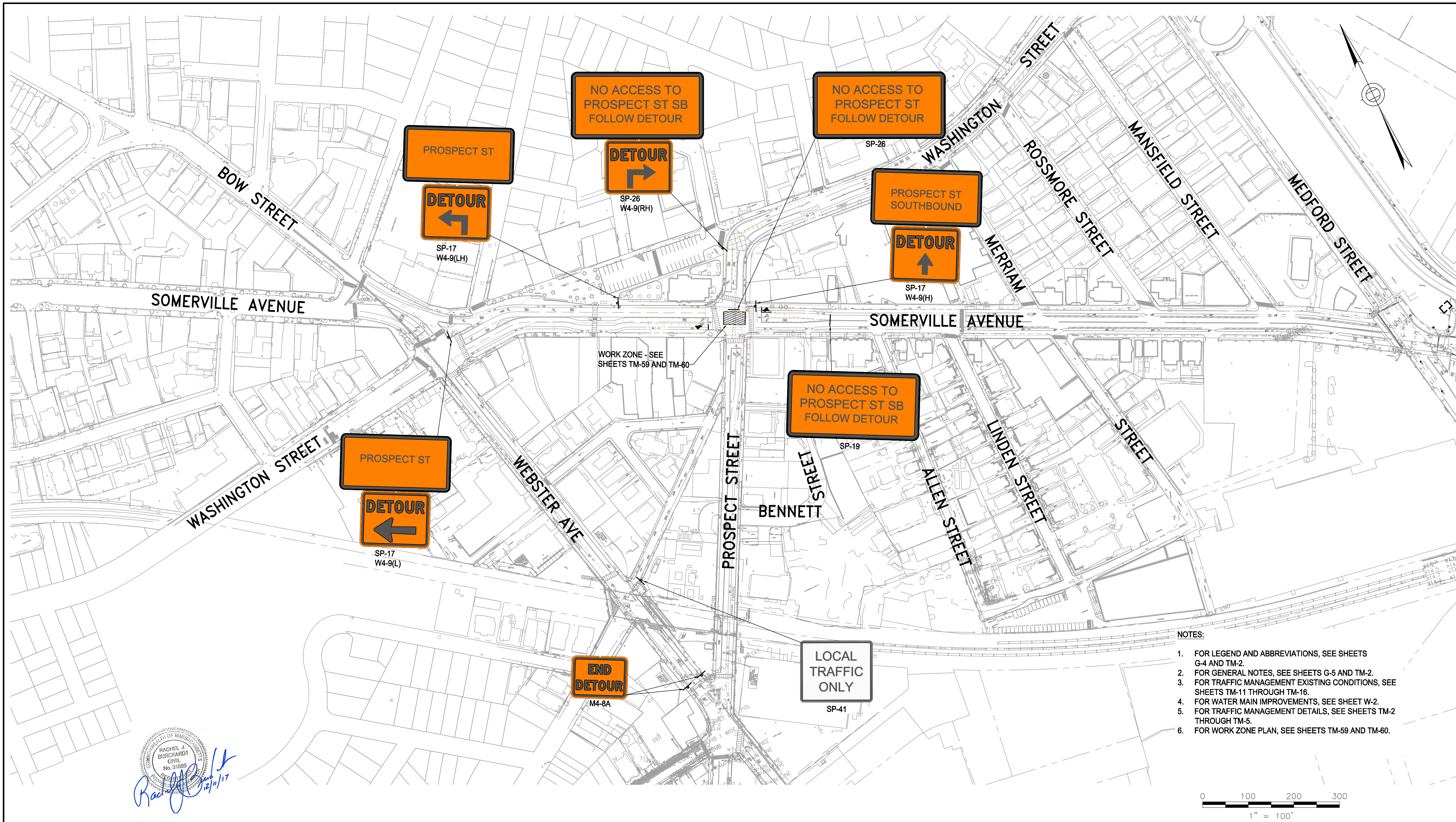
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 3-2 SHEET 2 OF 3

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-60
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-2.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. FOR WORK ZONE PLAN, SEE SHEETS TM-59 AND TM-60.

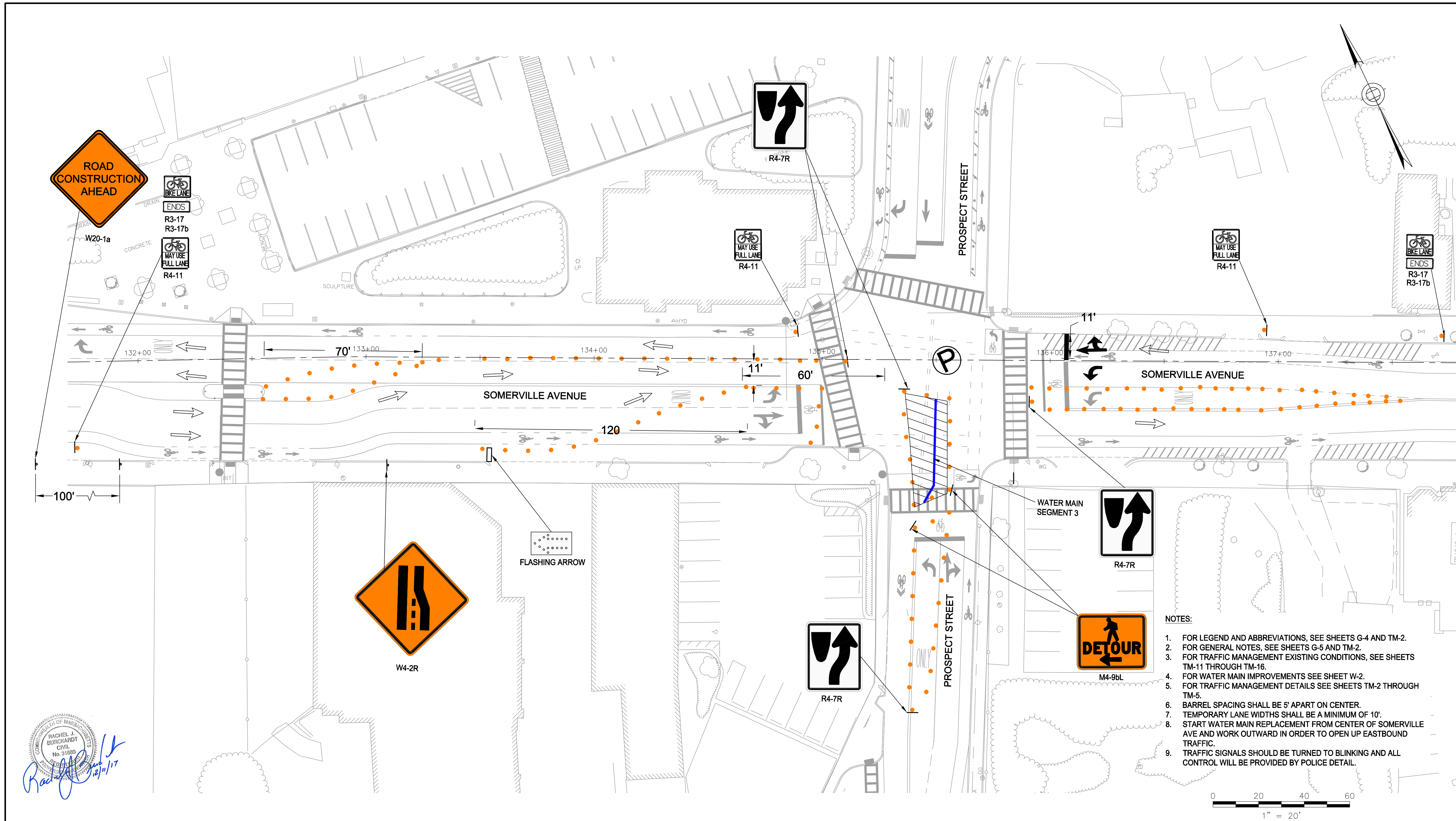
RACHEL J. BURCKHARDT
 CIVIL
 No. 31880
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT DETOUR PLAN
SEGMENT 3-2 SHEET 3 OF 3

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-62
REF. ACC.	CONT.	SCALE: 1"=100' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS SEE SHEET W-2.
 5. FOR TRAFFIC MANAGEMENT DETAILS SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. START WATER MAIN REPLACEMENT FROM CENTER OF SOMERVILLE AVE AND WORK OUTWARD IN ORDER TO OPEN UP EASTBOUND TRAFFIC.
 9. TRAFFIC SIGNALS SHOULD BE TURNED TO BLINKING AND ALL CONTROL WILL BE PROVIDED BY POLICE DETAIL.

Rachel J. Burckardt

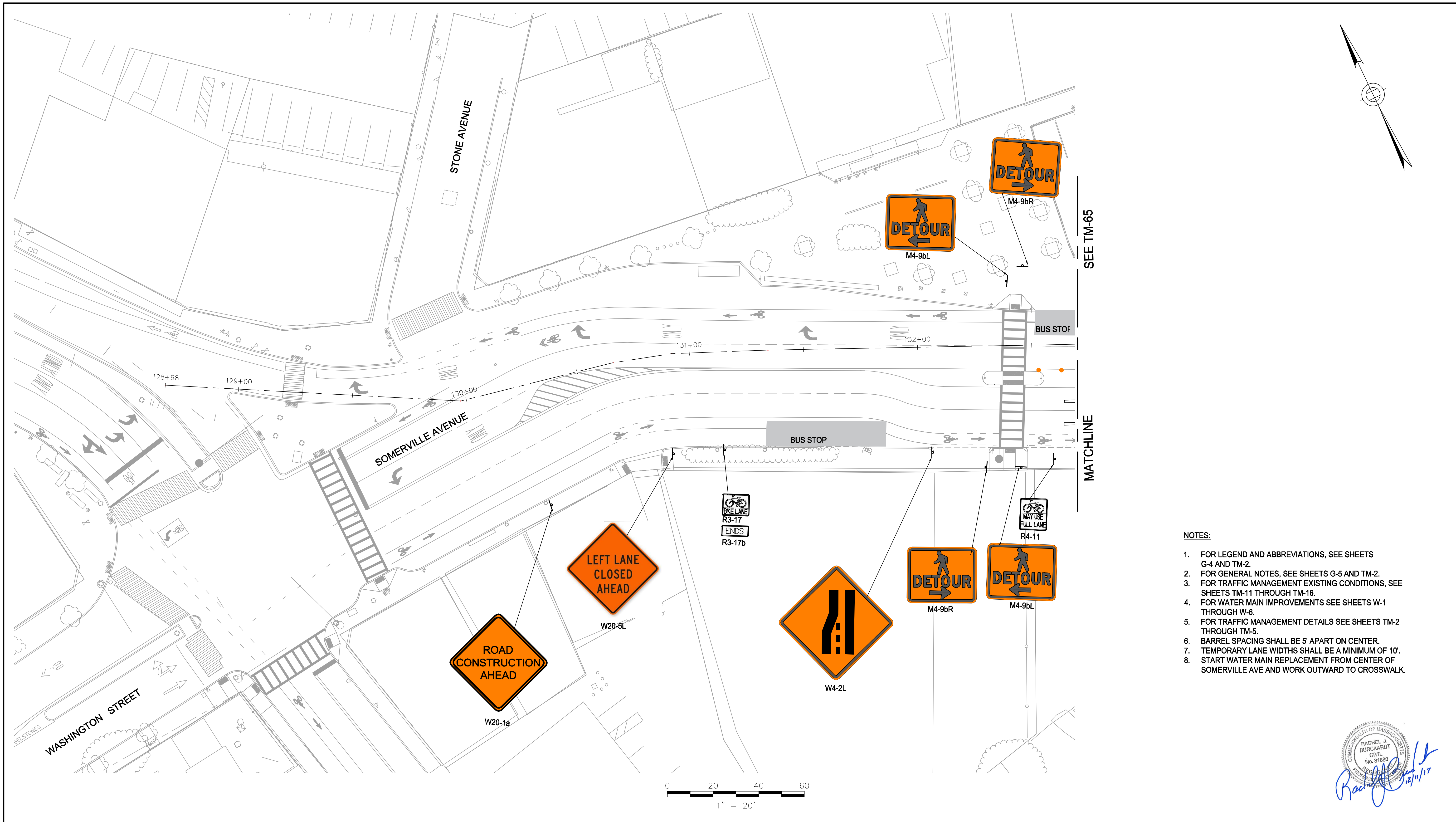
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 3-3 SHEET 1 OF 1

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-63
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS SEE SHEETS W-1 THROUGH W-6.
 5. FOR TRAFFIC MANAGEMENT DETAILS SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. START WATER MAIN REPLACEMENT FROM CENTER OF SOMERVILLE AVE AND WORK OUTWARD TO CROSSWALK.

Rachel J. Burckardt

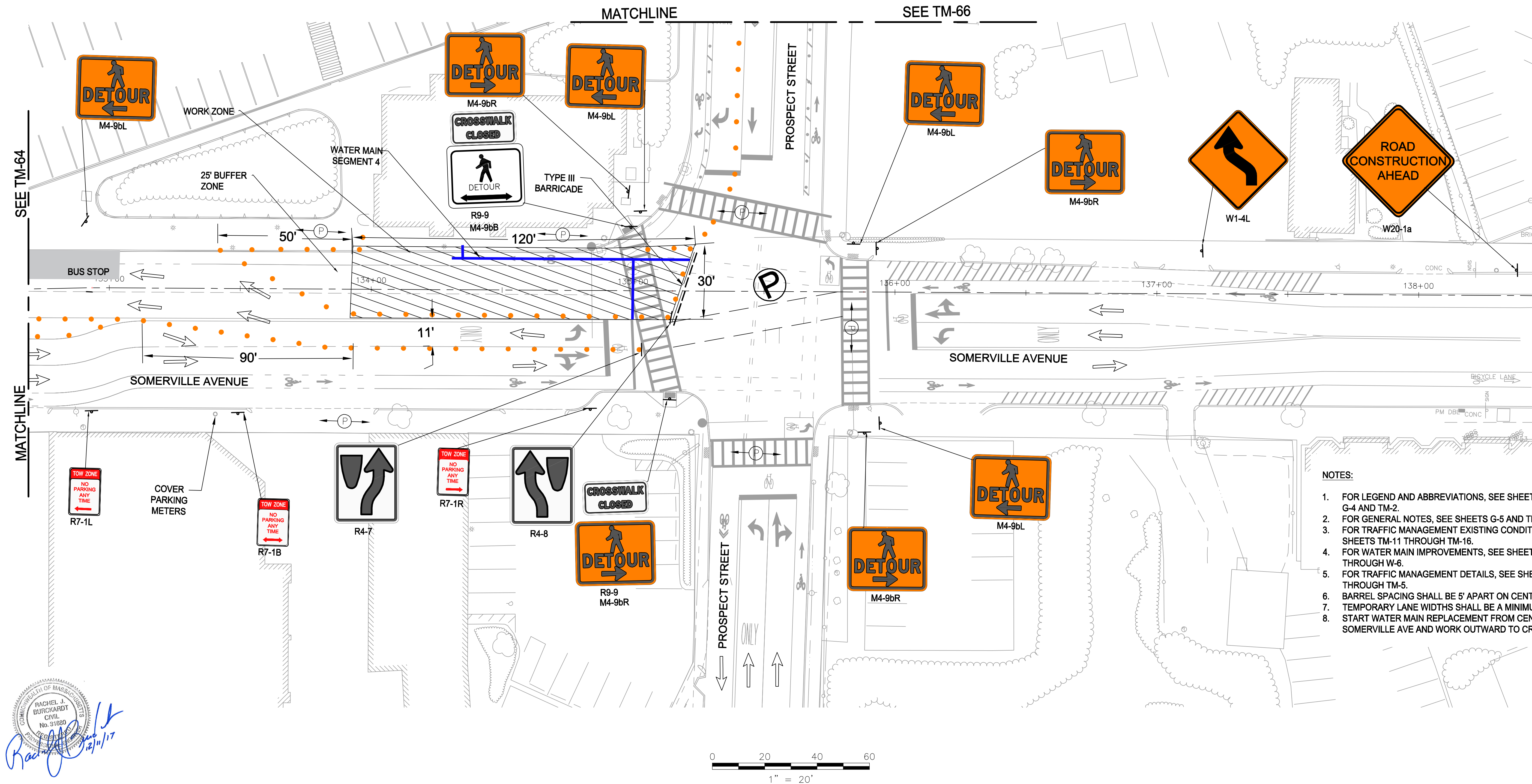
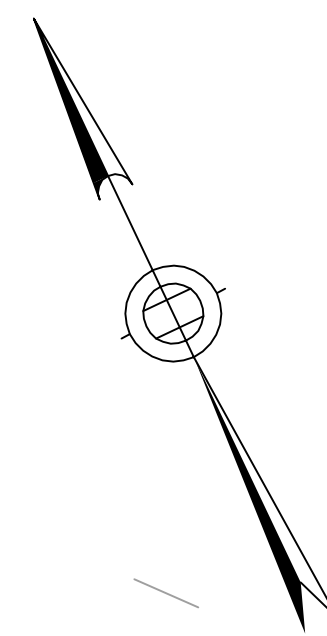
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 4-1 SHEET 1 OF 3

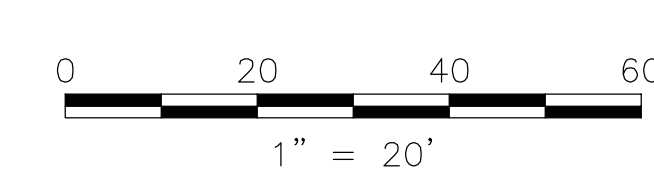
DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-64
REF. _____ ACC. _____	CONT. _____ DATE: DEC 2017	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-1 THROUGH W-6.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. START WATER MAIN REPLACEMENT FROM CENTER OF SOMERVILLE AVE AND WORK OUTWARD TO CROSSWALK.

Rachel J. Burckardt

 12/11/17

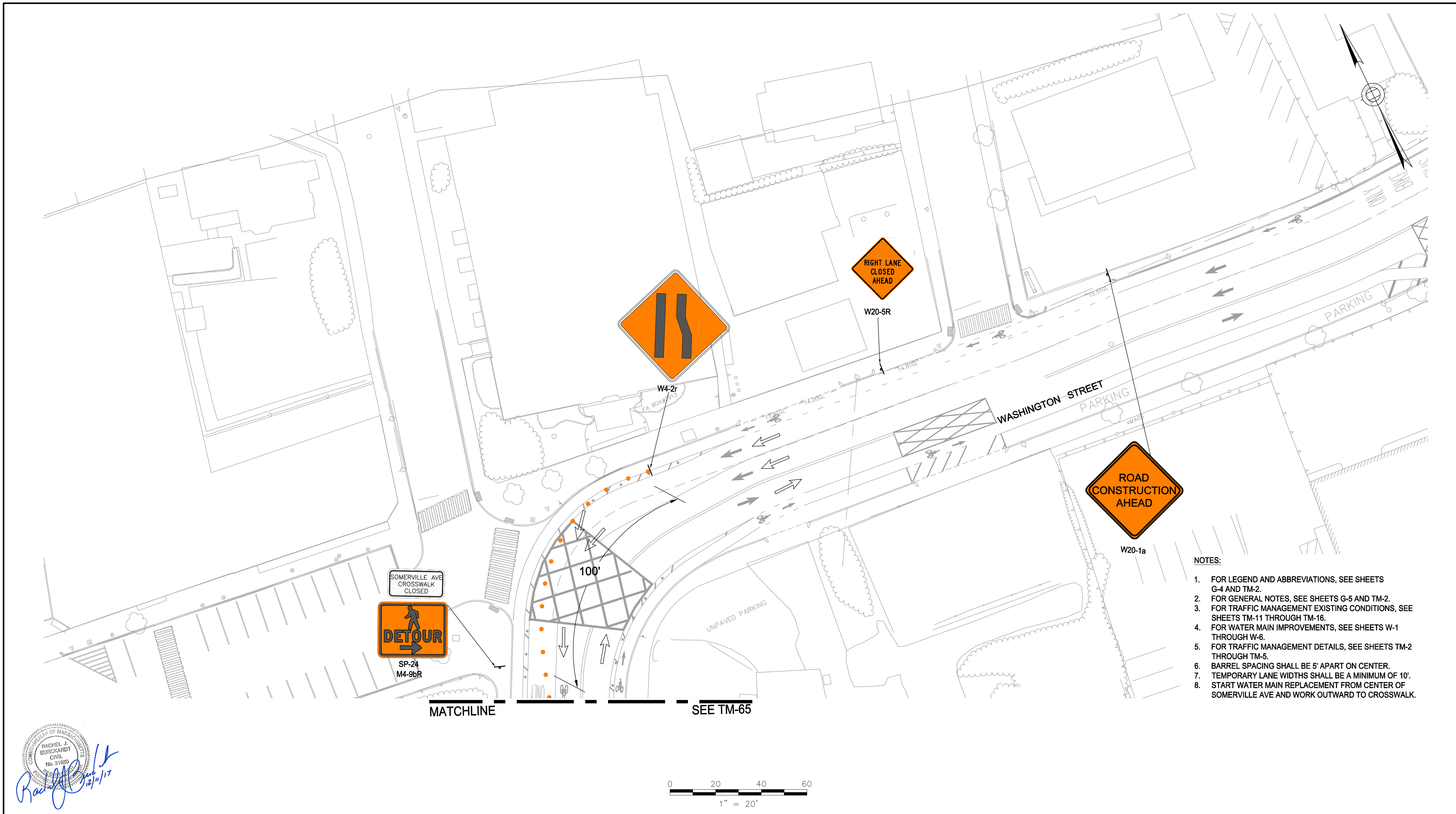


ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 4-1 SHEET 2 OF 3

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-65
REF. _____ ACC. _____	CONT. _____ DATE: DEC 2017	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



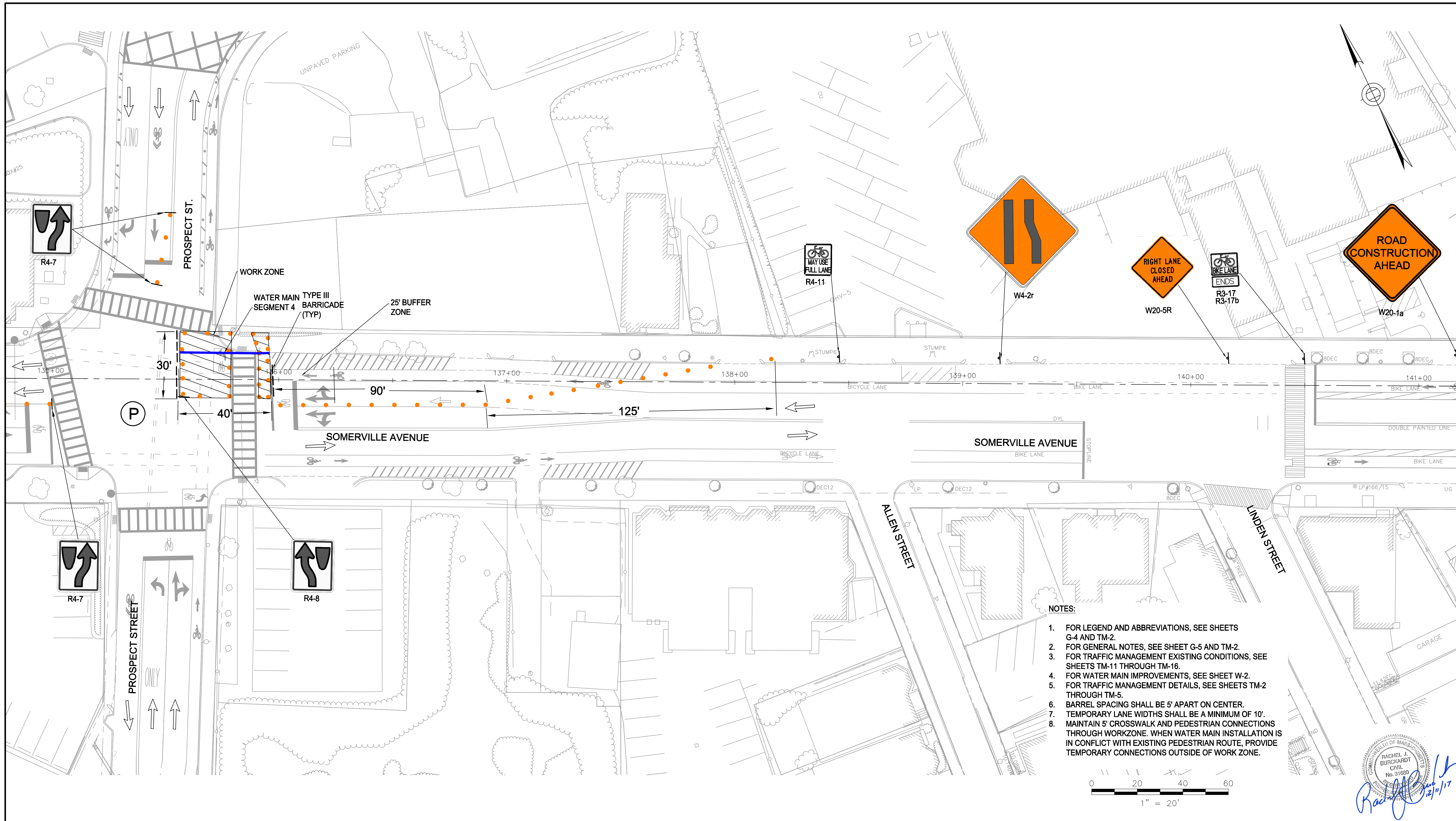
- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-1 THROUGH W-6.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. START WATER MAIN REPLACEMENT FROM CENTER OF SOMERVILLE AVE AND WORK OUTWARD TO CROSSWALK.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

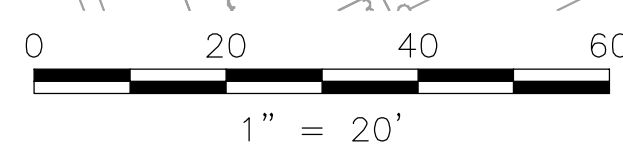
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 4-1 SHEET 3 OF 3

DESIGNED: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-66
DRAWN: DY CHECKED: JC		
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEET G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-2.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. MAINTAIN 5' CROSSWALK AND PEDESTRIAN CONNECTIONS THROUGH WORKZONE. WHEN WATER MAIN INSTALLATION IS IN CONFLICT WITH EXISTING PEDESTRIAN ROUTE, PROVIDE TEMPORARY CONNECTIONS OUTSIDE OF WORK ZONE.



Rachel J. Burckhardt

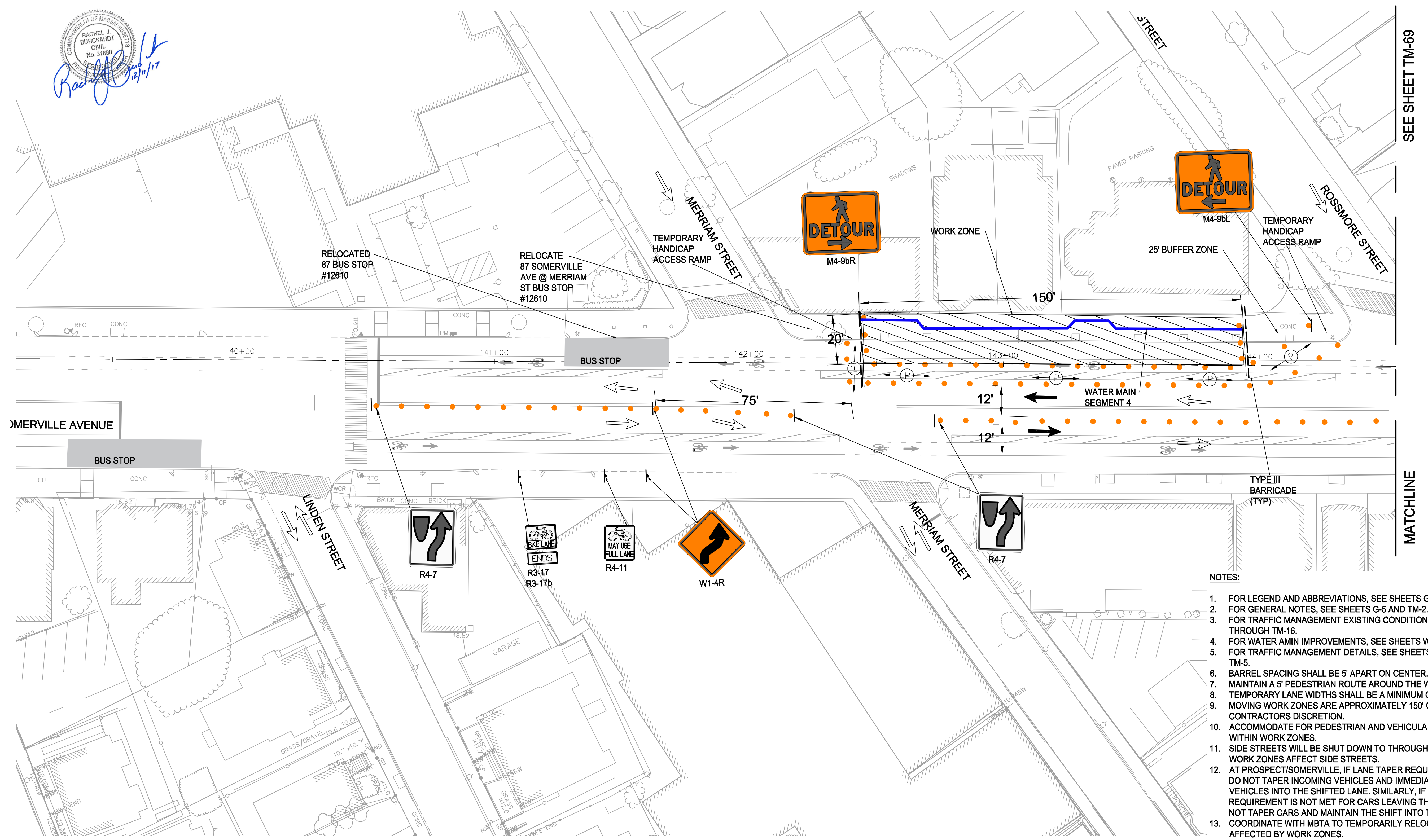
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 4-2 SHEET 1 OF 1

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-67
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 STATE OF MASSACHUSETTS
 12/11/17

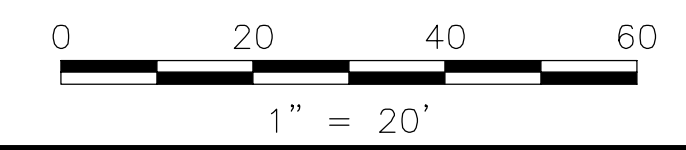


SEE SHEET TM-69

MATCHLINE

- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEET TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-2 THROUGH W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. MAINTAIN A 5' PEDESTRIAN ROUTE AROUND THE WORK ZONE.
 8. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 9. MOVING WORK ZONES ARE APPROXIMATELY 150' OR UP TO THE CONTRACTORS DISCRETION.
 10. ACCOMMODATE FOR PEDESTRIAN AND VEHICULAR ACCESS TO BUSINESSES WITHIN WORK ZONES.
 11. SIDE STREETS WILL BE SHUT DOWN TO THROUGH TRAFFIC WHEN WORK ZONES AFFECT SIDE STREETS.
 12. AT PROSPECT/SOMERVILLE, IF LANE TAPER REQUIREMENT IS NOT MET, DO NOT TAPER INCOMING VEHICLES AND IMMEDIATELY DIRECT VEHICLES INTO THE SHIFTED LANE. SIMILARLY, IF LANE TAPER REQUIREMENT IS NOT MET FOR CARS LEAVING THE WORK ZONE, DO NOT TAPER CARS AND MAINTAIN THE SHIFT INTO THE INTERSECTION.
 13. COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS WHEN AFFECTED BY WORK ZONES.

TYPICAL NORTH SIDE WORK ZONE LIMITS STA 135+80± TO 147+00±



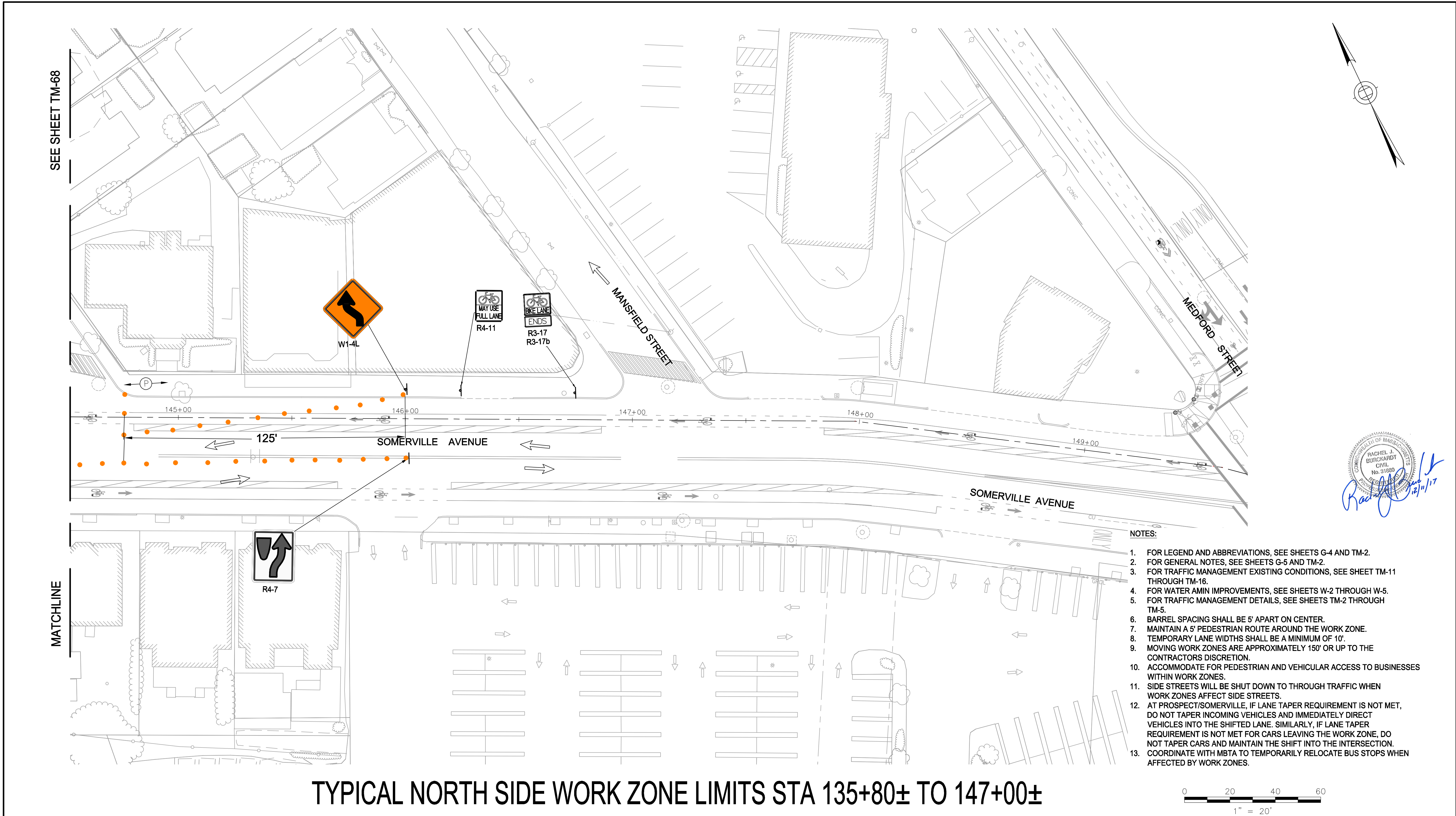
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 4-3 SHEET 1 OF 2

DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET	
CHECKED: JC			TM-68
DRAWN: DY	REF.	CONT.	
CHECKED: JC	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY



RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 12/11/17

- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEET TM-11 THROUGH TM-16.
 4. FOR WATER AMIN IMPROVEMENTS, SEE SHEETS W-2 THROUGH W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. MAINTAIN A 5' PEDESTRIAN ROUTE AROUND THE WORK ZONE.
 8. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 9. MOVING WORK ZONES ARE APPROXIMATELY 150' OR UP TO THE CONTRACTORS DISCRETION.
 10. ACCOMMODATE FOR PEDESTRIAN AND VEHICULAR ACCESS TO BUSINESSES WITHIN WORK ZONES.
 11. SIDE STREETS WILL BE SHUT DOWN TO THROUGH TRAFFIC WHEN WORK ZONES AFFECT SIDE STREETS.
 12. AT PROSPECT/SOMERVILLE, IF LANE TAPER REQUIREMENT IS NOT MET, DO NOT TAPER INCOMING VEHICLES AND IMMEDIATELY DIRECT VEHICLES INTO THE SHIFTED LANE. SIMILARLY, IF LANE TAPER REQUIREMENT IS NOT MET FOR CARS LEAVING THE WORK ZONE, DO NOT TAPER CARS AND MAINTAIN THE SHIFT INTO THE INTERSECTION.
 13. COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS WHEN AFFECTED BY WORK ZONES.

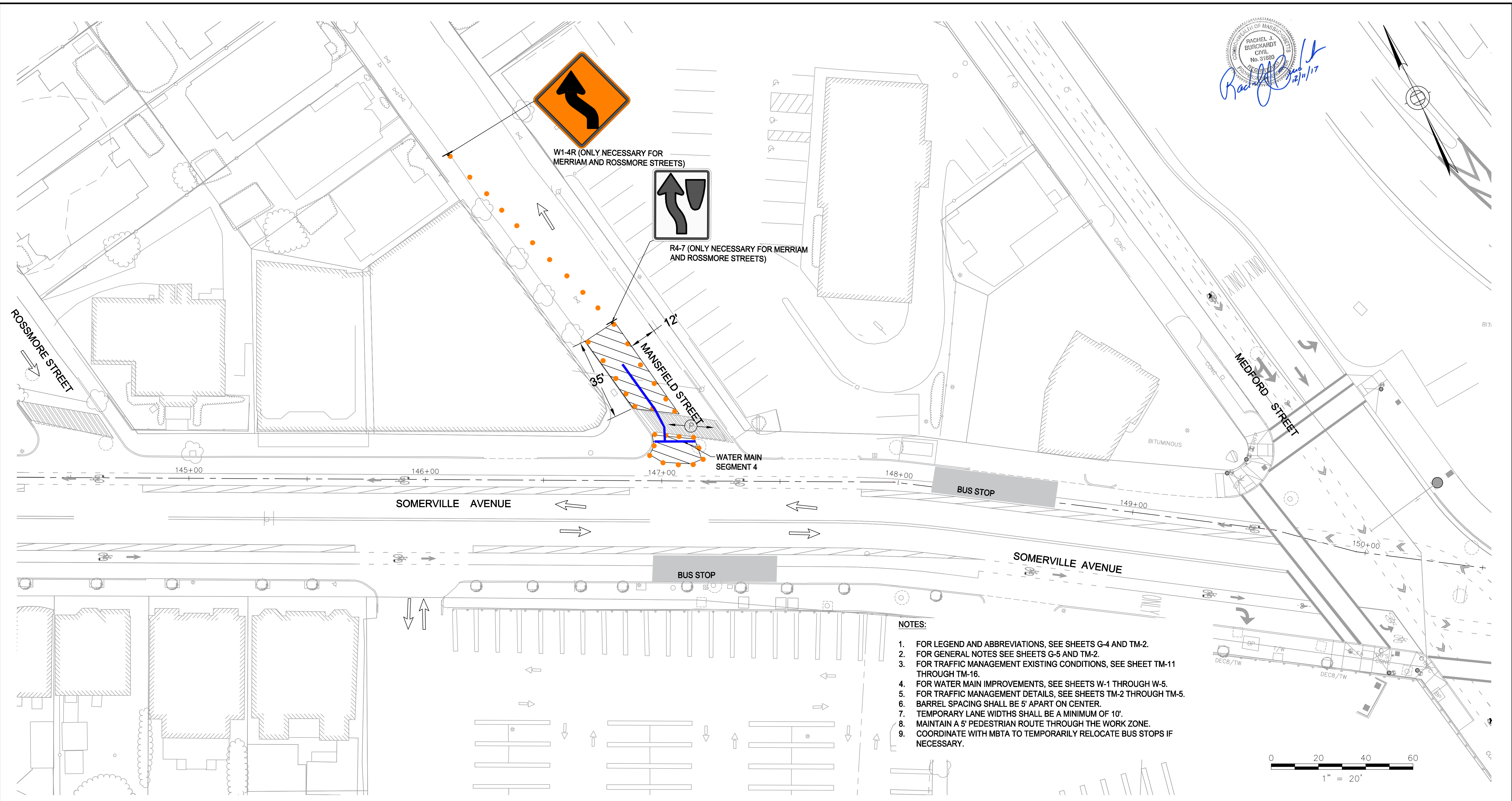
TYPICAL NORTH SIDE WORK ZONE LIMITS STA 135+80± TO 147+00±

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 4-3 SHEET 2 OF 2

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-69
REF. CONT. ACC.	SCALE: 1"=20' DATE: DEC 2017	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143



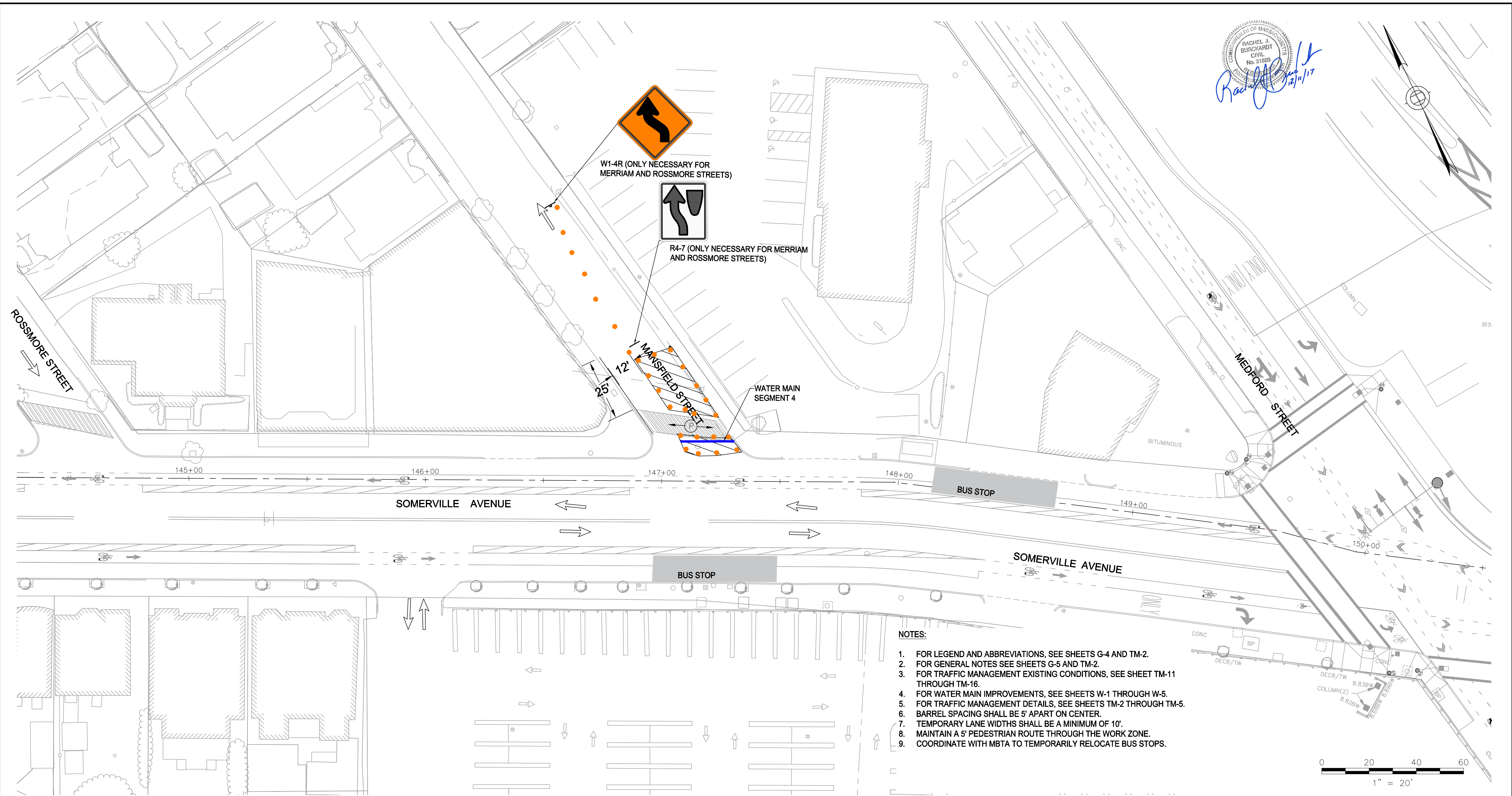
Rachel J. Burckardt

 12/11/17

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEET TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-1 THROUGH W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. MAINTAIN A 5' PEDESTRIAN ROUTE THROUGH THE WORK ZONE.
 9. COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS IF NECESSARY.

TYPICAL NORTH SIDE SIDE STREET WORK ZONE LIMITS STA 141+70± TO 142+00± AND STA 144+20± TO 144+65± AND STA 146+75± TO 147+20±

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM				SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS				DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET	
				CONTRACT CP-2/CP-3								TM-70	
				SEWER SEPARATION AND WATER REPLACEMENT									
				WATER MAIN REPLACEMENT TMP PLAN						REF. _____ CONT. _____ ACC. _____		SCALE: 1"=20' DATE: DEC 2017	
				SEGMENT 4-4 SHEET 1 OF 2						CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143			
NO.	DATE	REVISIONS	BY										



Rachel J. Burckardt

 12/11/17

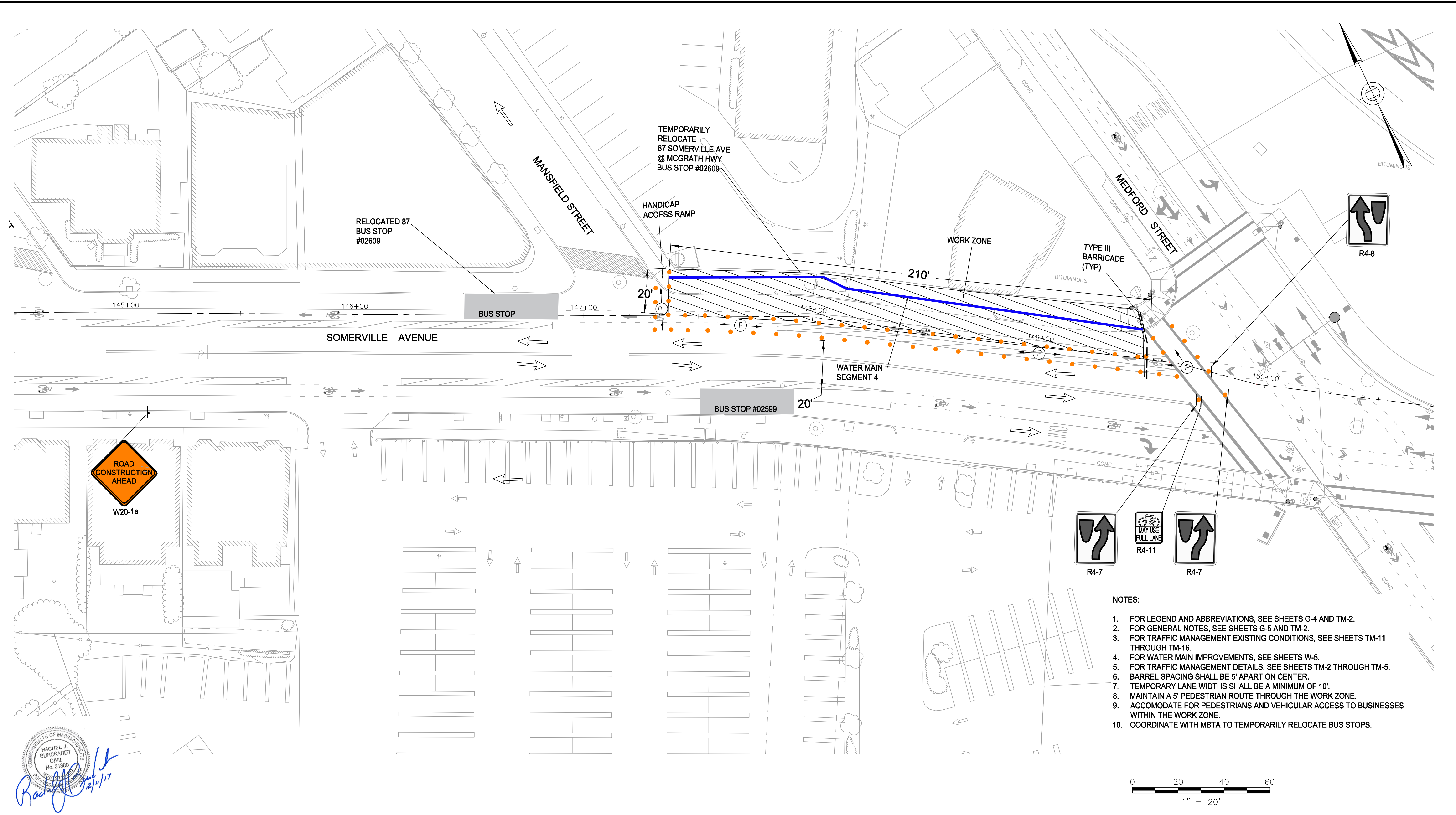
W1-4R (ONLY NECESSARY FOR MERRIAM AND ROSSMORE STREETS)

R4-7 (ONLY NECESSARY FOR MERRIAM AND ROSSMORE STREETS)

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEET TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-1 THROUGH W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. MAINTAIN A 5' PEDESTRIAN ROUTE THROUGH THE WORK ZONE.
 9. COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS.

TYPICAL NORTH SIDE SIDE STREET WORK ZONE LIMITS STA 141+70± TO 142+15± AND 144+20± TO 144+75± AND STA 146+85± TO 147+35±

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM				SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS				DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET	
				CONTRACT CP-2/CP-3								TM-71	
				SEWER SEPARATION AND WATER REPLACEMENT									
				WATER MAIN REPLACEMENT TMP PLAN									
				SEGMENT 4-4 SHEET 2 OF 2								CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143	
NO.	DATE	REVISIONS	BY										



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. MAINTAIN A 5' PEDESTRIAN ROUTE THROUGH THE WORK ZONE.
 9. ACCOMMODATE FOR PEDESTRIANS AND VEHICULAR ACCESS TO BUSINESSES WITHIN THE WORK ZONE.
 10. COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS.

Rachel J. Burkhardt

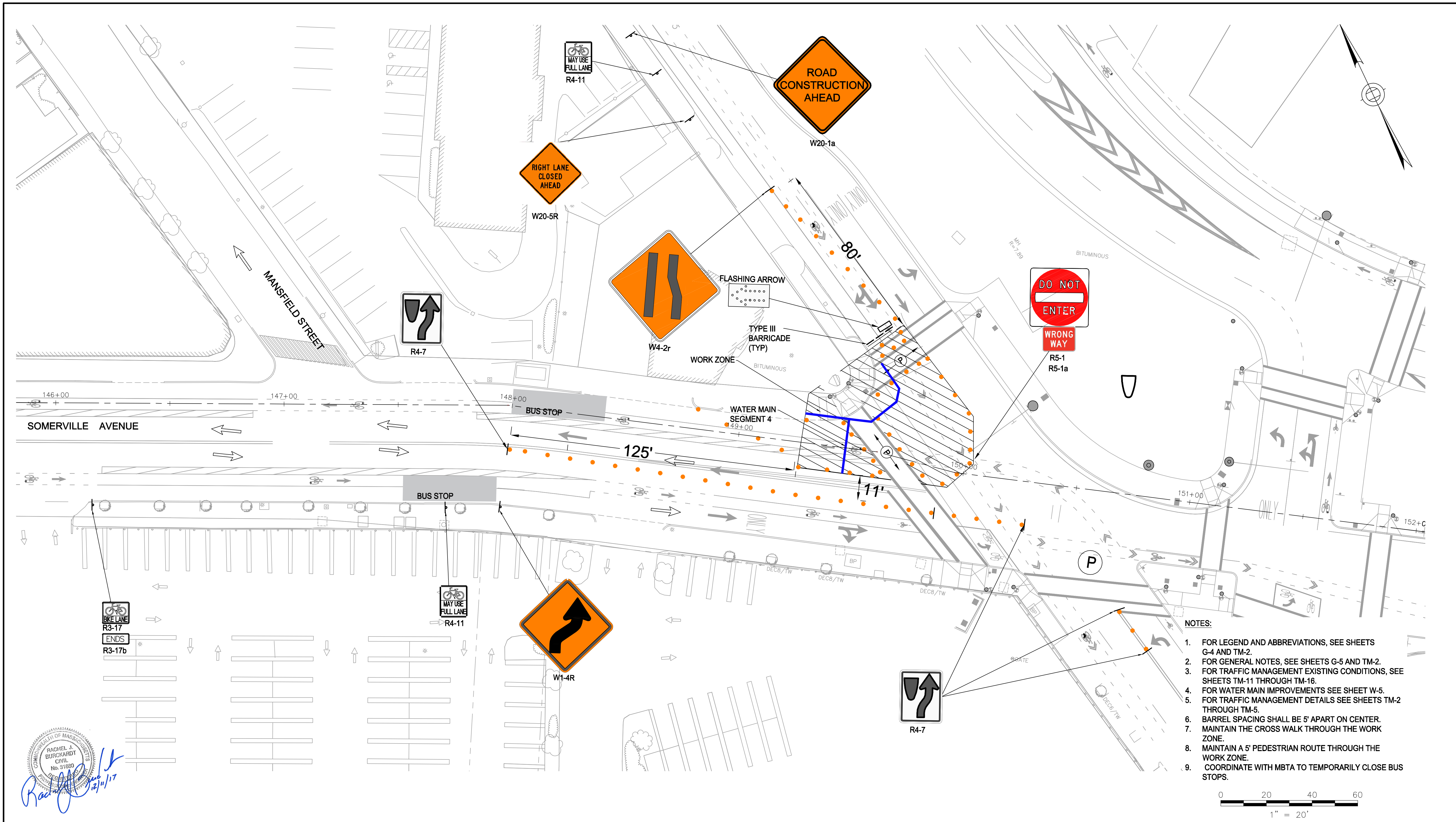
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 4-5 SHEET 1 OF 1

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-72
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



Rachel J. Burckhardt

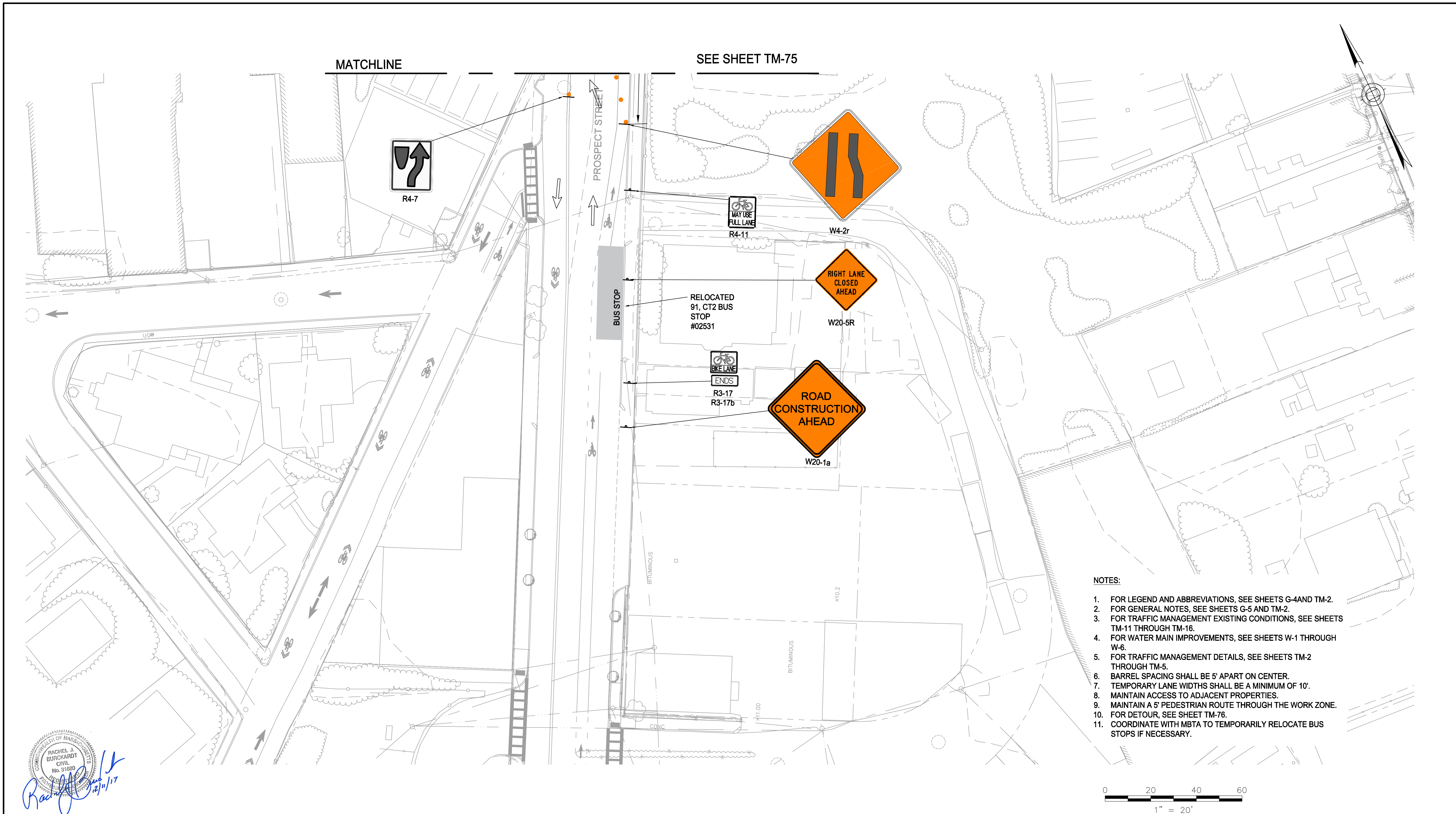
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 4-6 SHEET 1 OF 1

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-73
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



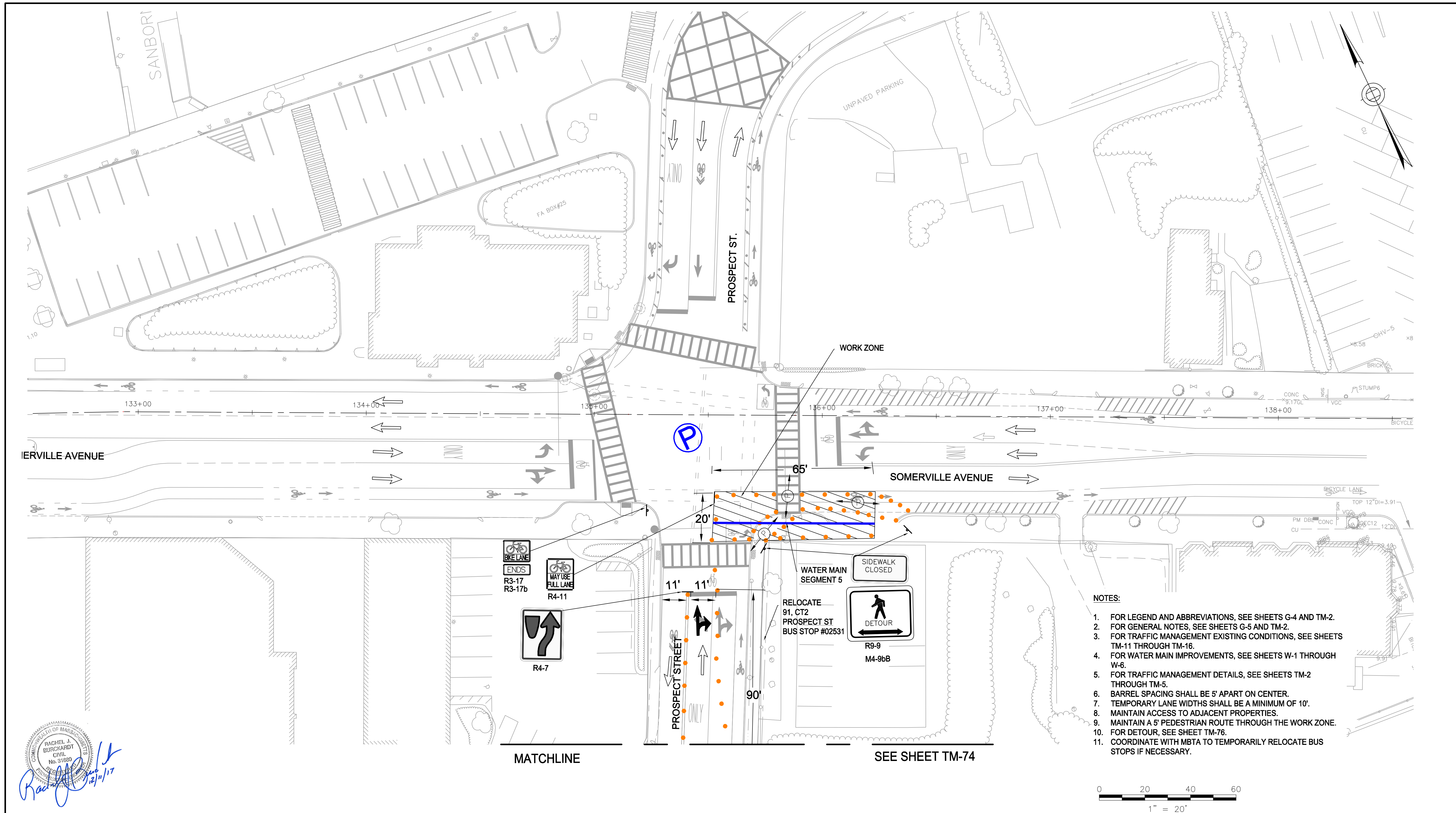
Rachel J. Burckardt
 Civil Engineer
 No. 31890
 State of Massachusetts
 12/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-1 SHEET 1 OF 3

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-74
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-1 THROUGH W-6.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. MAINTAIN ACCESS TO ADJACENT PROPERTIES.
 9. MAINTAIN A 5' PEDESTRIAN ROUTE THROUGH THE WORK ZONE.
 10. FOR DETOUR, SEE SHEET TM-76.
 11. COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS IF NECESSARY.

Rachel J. Burckardt

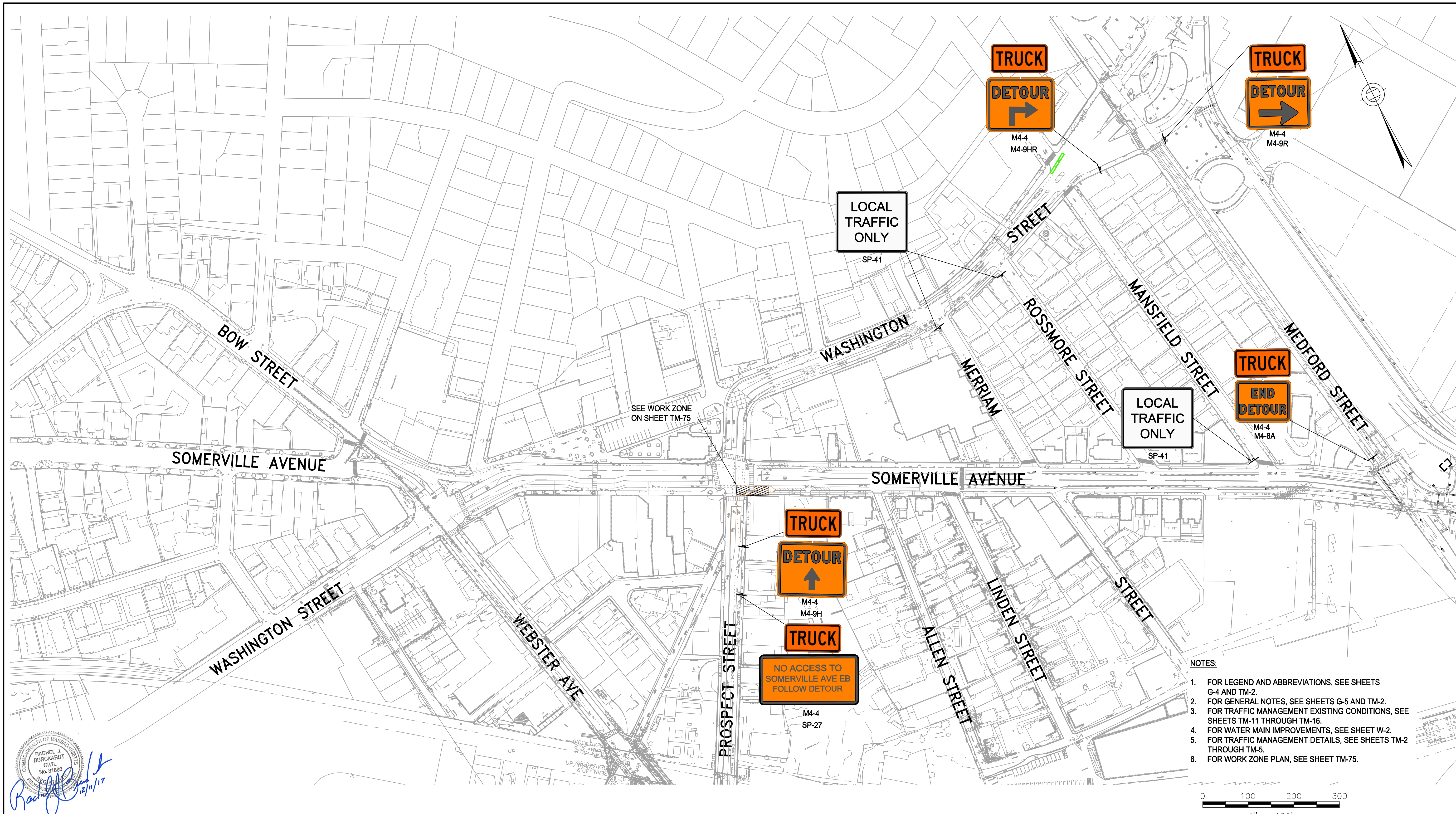
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-1 SHEET 2 OF 3

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-75
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



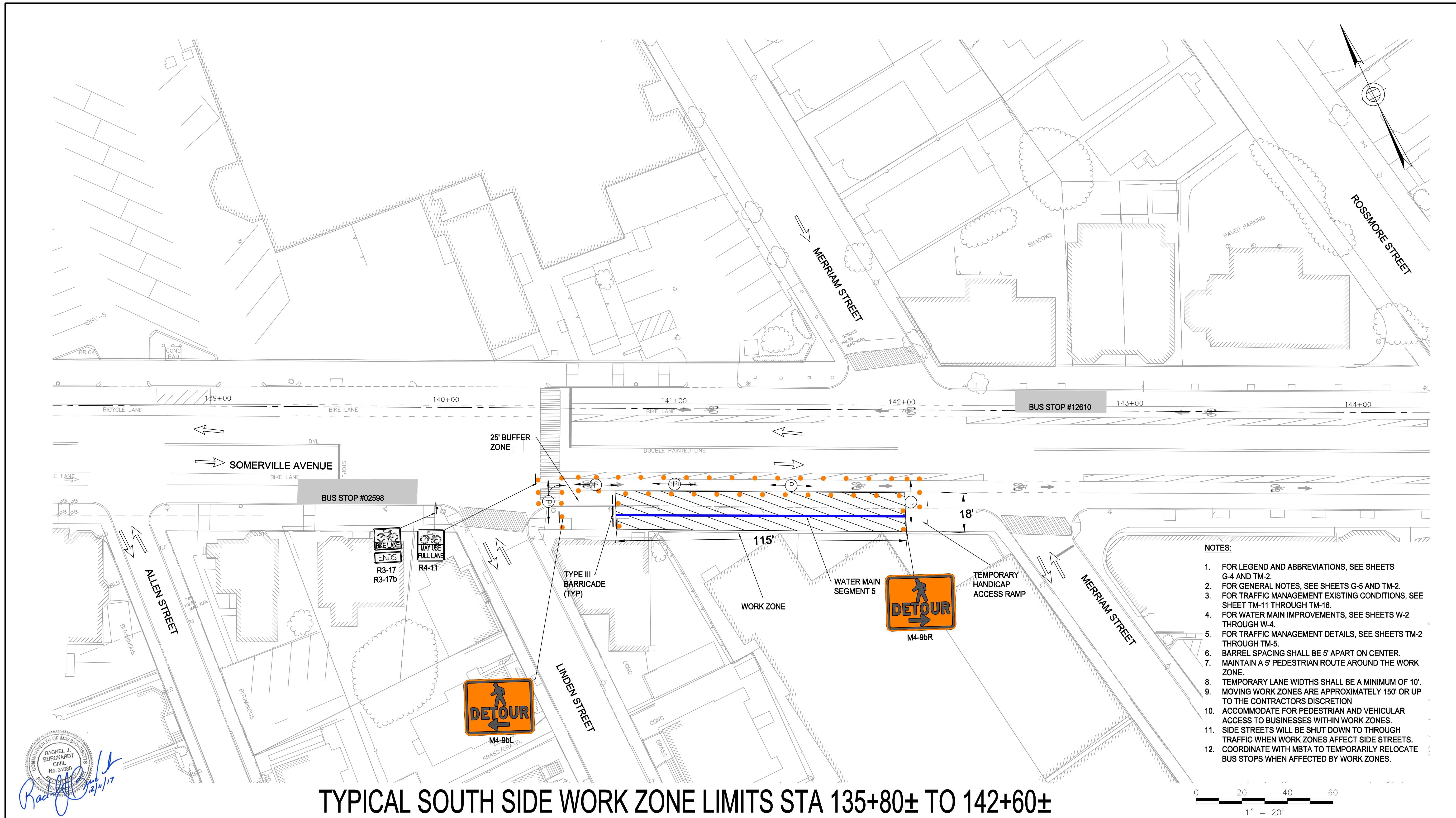
- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-2.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. FOR WORK ZONE PLAN, SEE SHEET TM-75.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT DETOUR PLAN
SEGMENT 5-1 SHEET 3 OF 3

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
CHECKED: JC			<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> <td>SCALE: 1"=100'</td> </tr> <tr> <td>ACC.</td> <td> </td> <td>DATE: DEC 2017</td> </tr> </table>	REF.	CONT.	SCALE: 1"=100'	ACC.
REF.	CONT.	SCALE: 1"=100'					
ACC.		DATE: DEC 2017					
DRAWN: DY	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143	TM-76					
CHECKED: JC							



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEET TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-2 THROUGH W-4.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. MAINTAIN A 5' PEDESTRIAN ROUTE AROUND THE WORK ZONE.
 8. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 9. MOVING WORK ZONES ARE APPROXIMATELY 150' OR UP TO THE CONTRACTORS DISCRETION.
 10. ACCOMMODATE FOR PEDESTRIAN AND VEHICULAR ACCESS TO BUSINESSES WITHIN WORK ZONES.
 11. SIDE STREETS WILL BE SHUT DOWN TO THROUGH TRAFFIC WHEN WORK ZONES AFFECT SIDE STREETS.
 12. COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS WHEN AFFECTED BY WORK ZONES.

TYPICAL SOUTH SIDE WORK ZONE LIMITS STA 135+80± TO 142+60±

RACHEL J. BURCKARDT
 CIVIL
 No. 31590
 REGISTERED PROFESSIONAL ENGINEER
 State of Massachusetts
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

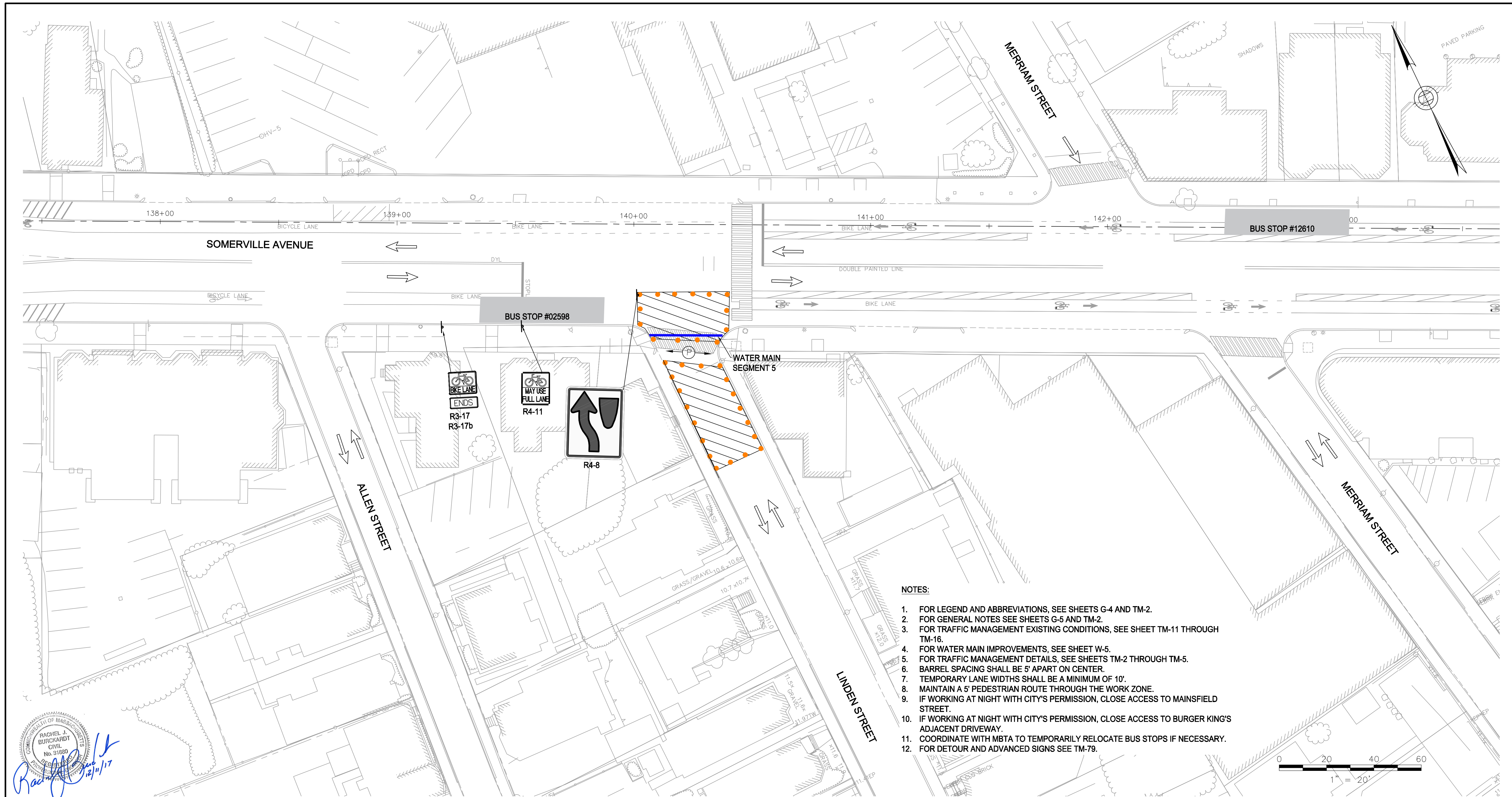
CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

WATER MAIN REPLACEMENT TMP PLAN

SEGMENT 5-2 SHEET 1 OF 1

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
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ACC.		DATE: DEC 2017					
DRAWN: DY	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143	TM-77					
CHECKED: JC							



NOTES:

1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
2. FOR GENERAL NOTES SEE SHEETS G-5 AND TM-2.
3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEET TM-11 THROUGH TM-16.
4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-5.
5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
6. BARREL SPACING SHALL BE 5' APART ON CENTER.
7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
8. MAINTAIN A 5' PEDESTRIAN ROUTE THROUGH THE WORK ZONE.
9. IF WORKING AT NIGHT WITH CITY'S PERMISSION, CLOSE ACCESS TO MAINSFIELD STREET.
10. IF WORKING AT NIGHT WITH CITY'S PERMISSION, CLOSE ACCESS TO BURGER KING'S ADJACENT DRIVEWAY.
11. COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS IF NECESSARY.
12. FOR DETOUR AND ADVANCED SIGNS SEE TM-79.

TYPICAL SOUTH SIDE SIDE STREET WORK ZONE LIMITS STA 138+45± TO 138+80± AND STA 140+00± TO 140+40± AND STA 142+35± TO 143+00±

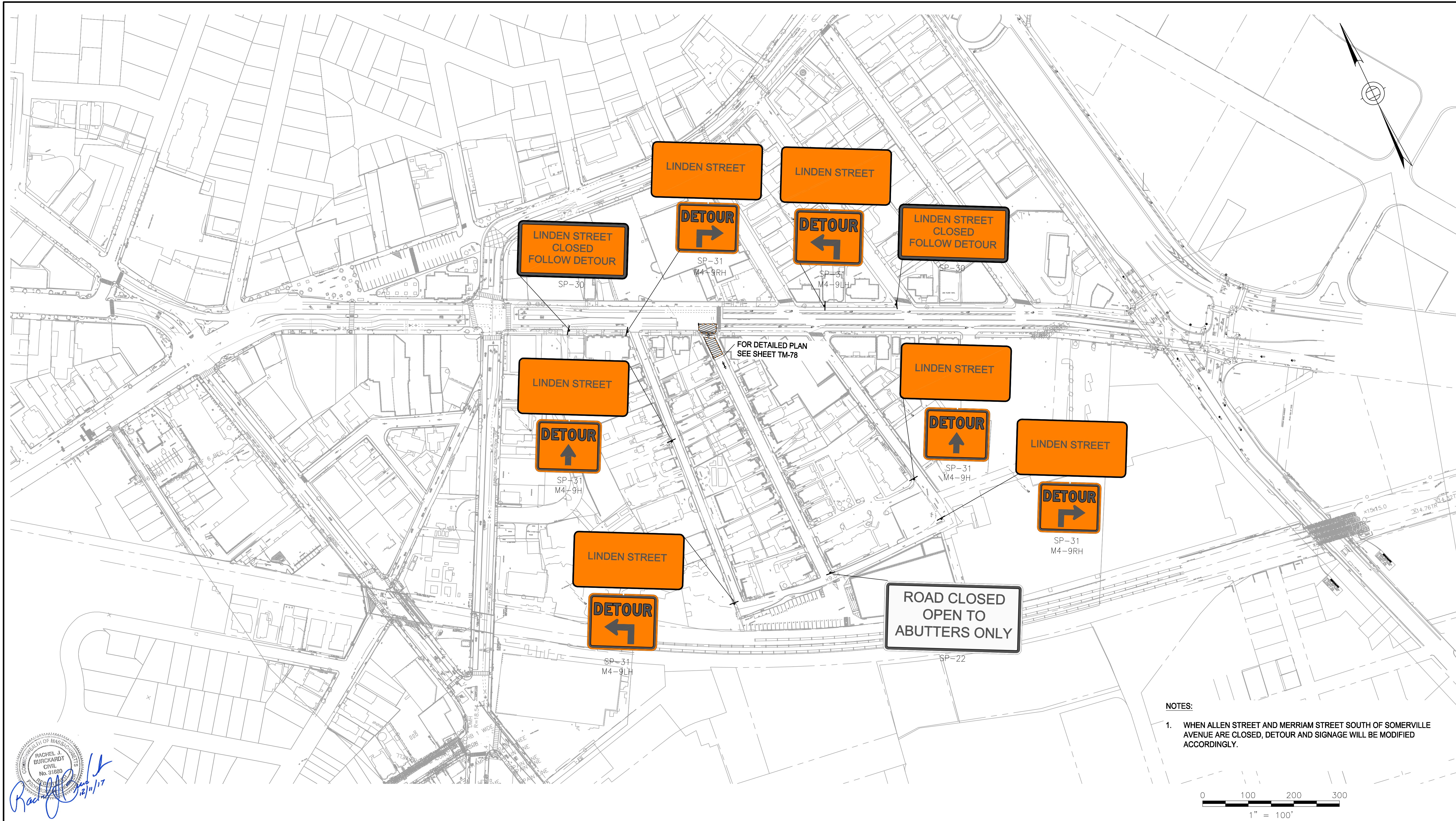
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-3 SHEET 1 OF 1

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET						
CHECKED: JC			<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> <td>SCALE: 1"=20'</td> </tr> <tr> <td>ACC.</td> <td> </td> <td>DATE: DEC 2017</td> </tr> </table>	REF.	CONT.	SCALE: 1"=20'	ACC.	
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ACC.		DATE: DEC 2017						
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ACC.		DATE: DEC 2017						
CHECKED: JC	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143							

Rachel J. Burckardt
 12/11/17



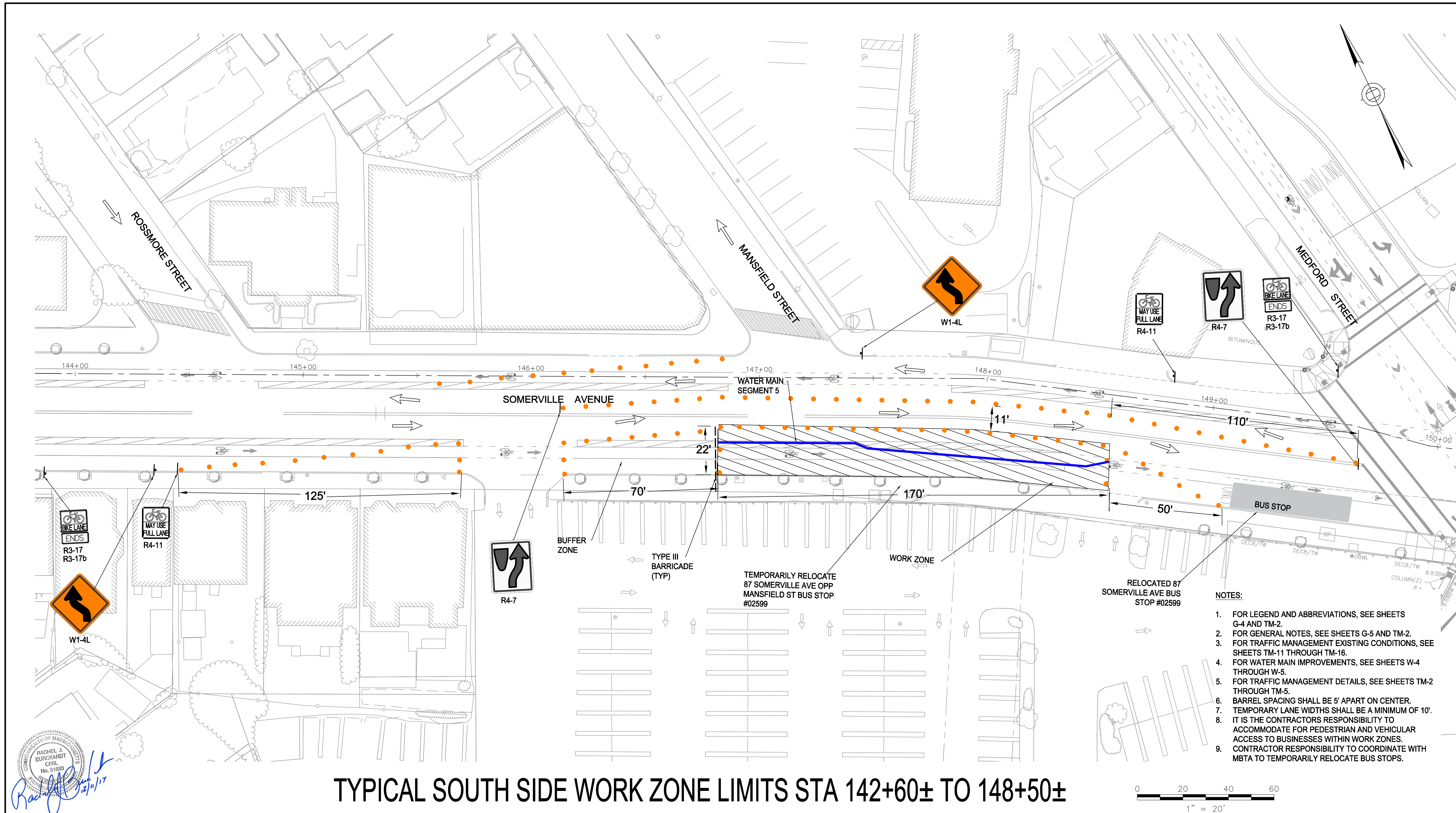
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT DETOUR PLAN
SEGMENT 5-3 SHEET 2 OF 2

DESIGNED: DY		Parsons Brinckerhoff, Inc.		SHEET
CHECKED: JC		75 Arlington St. Boston, MA 02116		
DRAWN: DY	REF.	CONT.	SCALE: 1"=100'	TM-79
CHECKED: JC	ACC.		DATE: DEC 2017	

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY



TYPICAL SOUTH SIDE WORK ZONE LIMITS STA 142+60± TO 148+50±

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-4 THROUGH W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. IT IS THE CONTRACTORS RESPONSIBILITY TO ACCOMMODATE FOR PEDESTRIAN AND VEHICULAR ACCESS TO BUSINESSES WITHIN WORK ZONES.
 9. CONTRACTOR RESPONSIBILITY TO COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS.

Rachel J. Burckardt

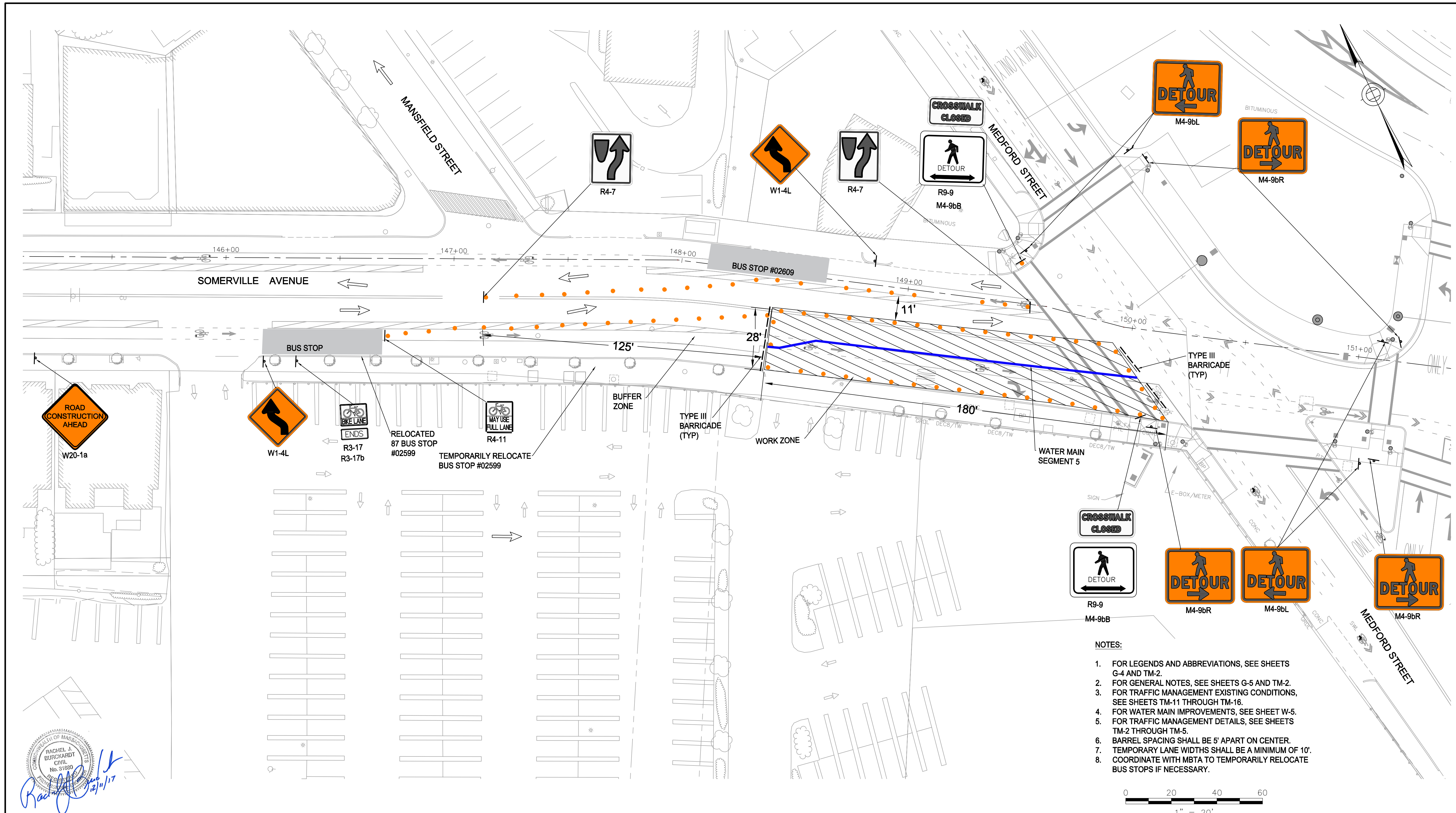
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NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-4 SHEET 1 OF 1

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-80
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



- NOTES:**
1. FOR LEGENDS AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS IF NECESSARY.

Rachel J. Burckardt

 CIVIL ENGINEER

 No. 31880

 State of Massachusetts

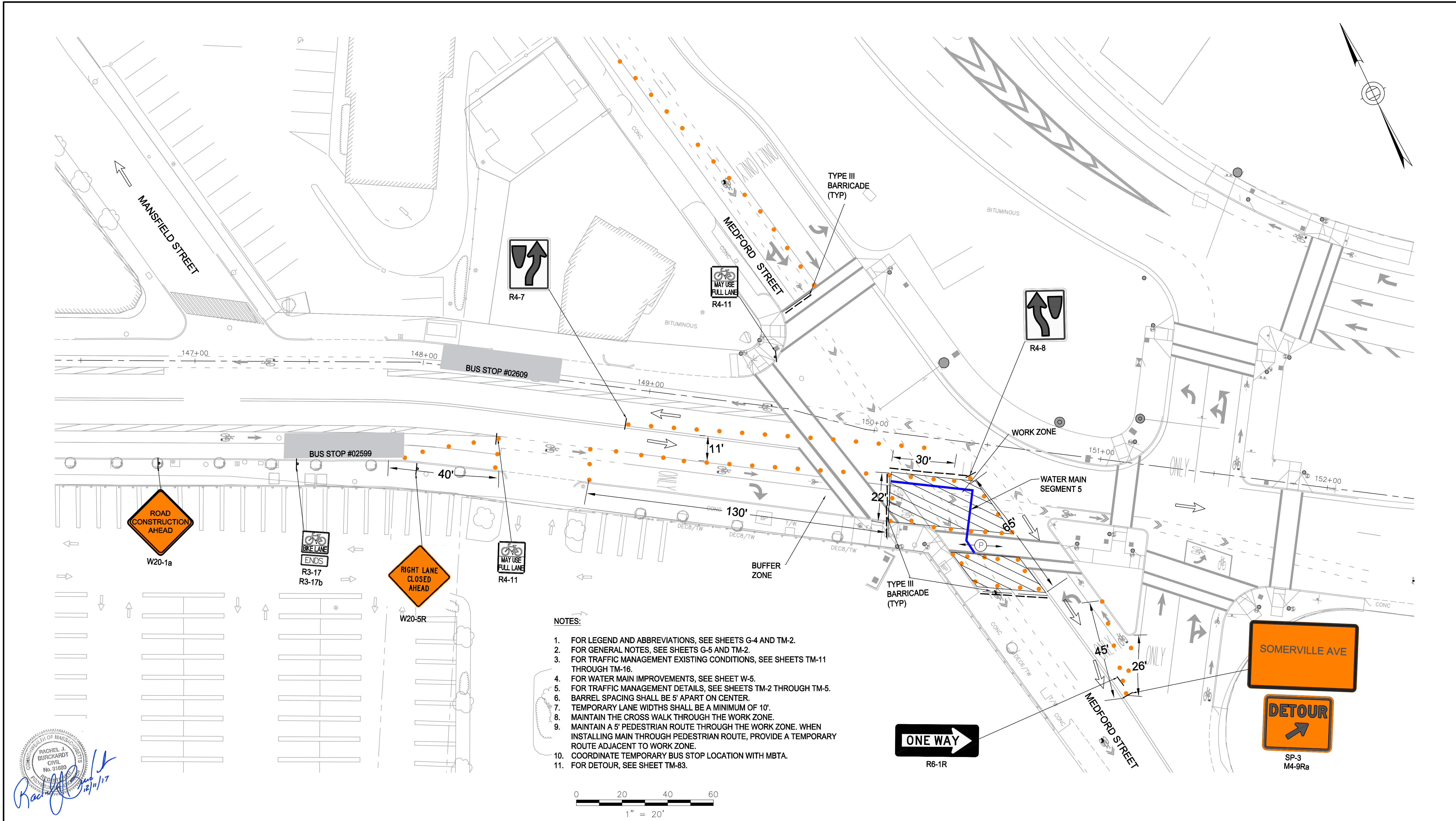
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ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

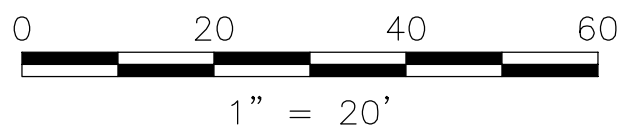
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-5 SHEET 1 OF 1

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-81
REF. ACC. CONT.	SCALE: 1"=20' DATE: DEC 2017	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. MAINTAIN THE CROSS WALK THROUGH THE WORK ZONE.
 9. MAINTAIN A 5' PEDESTRIAN ROUTE THROUGH THE WORK ZONE. WHEN INSTALLING MAIN THROUGH PEDESTRIAN ROUTE, PROVIDE A TEMPORARY ROUTE ADJACENT TO WORK ZONE.
 10. COORDINATE TEMPORARY BUS STOP LOCATION WITH MBTA.
 11. FOR DETOUR, SEE SHEET TM-83.



Rachel J. Burckardt
 CIVIL ENGINEER
 No. 31890
 State of Massachusetts
 12/17

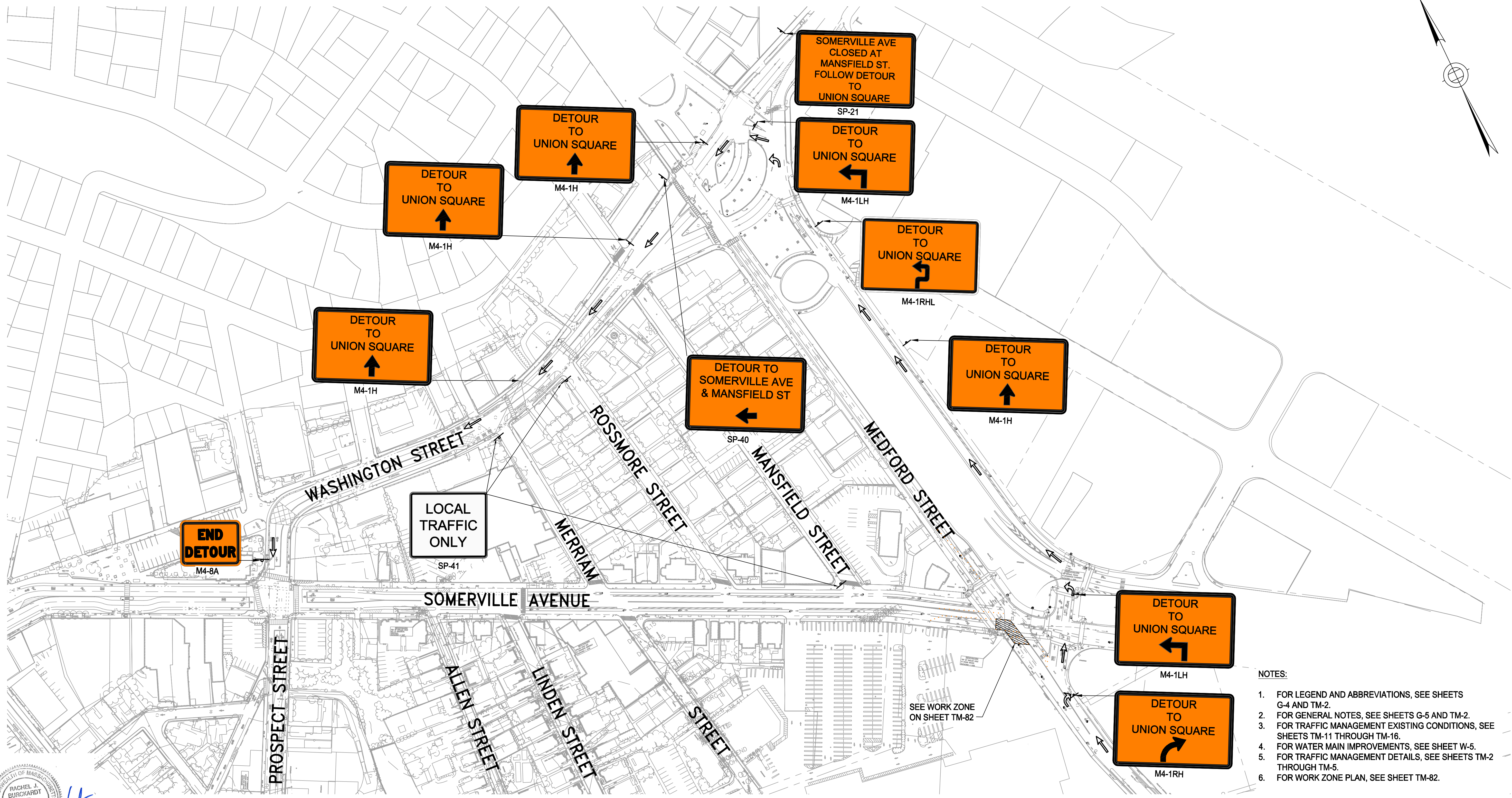
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NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-6 SHEET 1 OF 2

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-82
REF. ACC. CONT.	SCALE: 1"=20' DATE: DEC 2017	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143

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- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. FOR WORK ZONE PLAN, SEE SHEET TM-82.

RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 REG. 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT DETOUR PLAN
SEGMENT 5-6 SHEET 2 OF 2

DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
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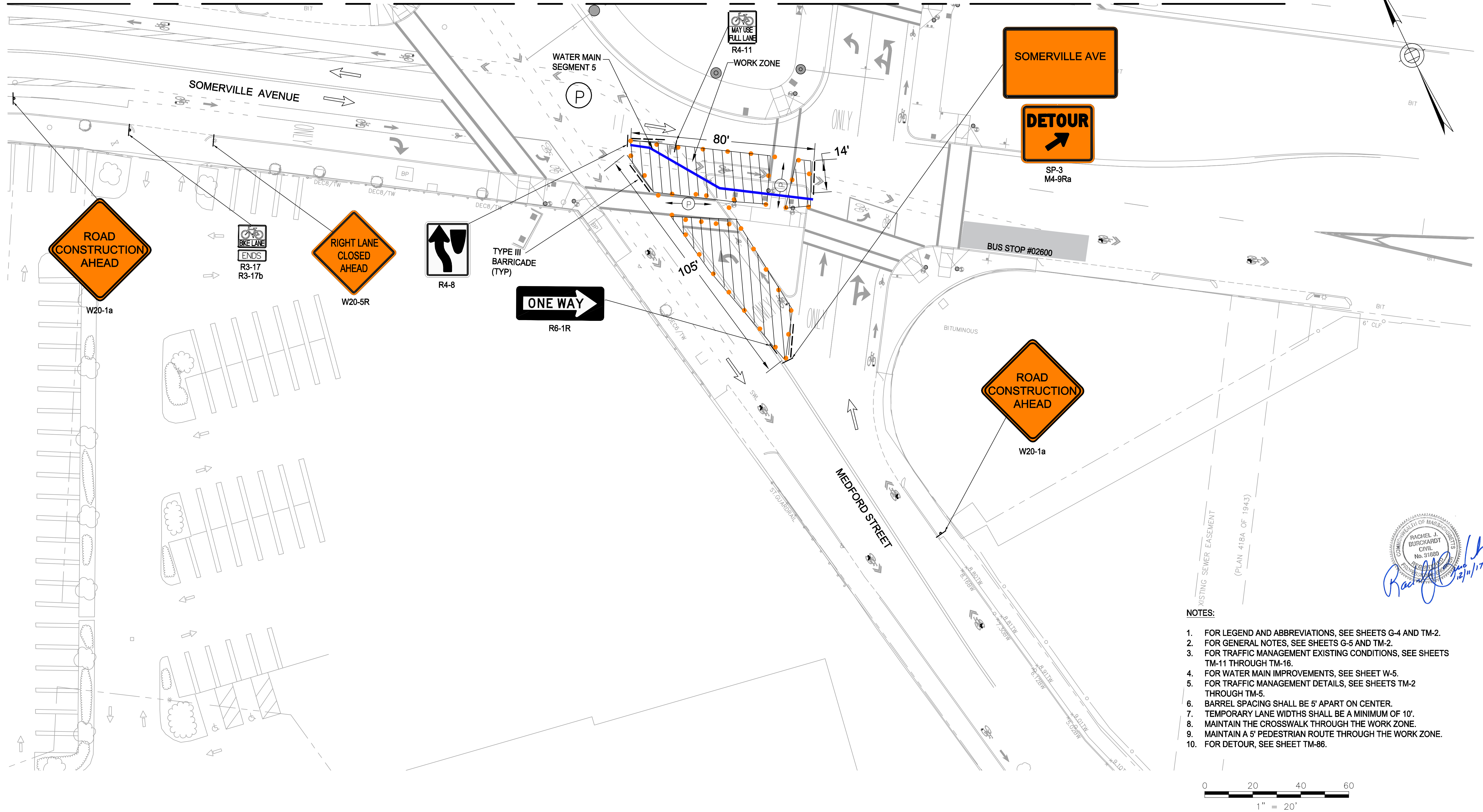
NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

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MATCHLINE

SEE SHEET TM-85



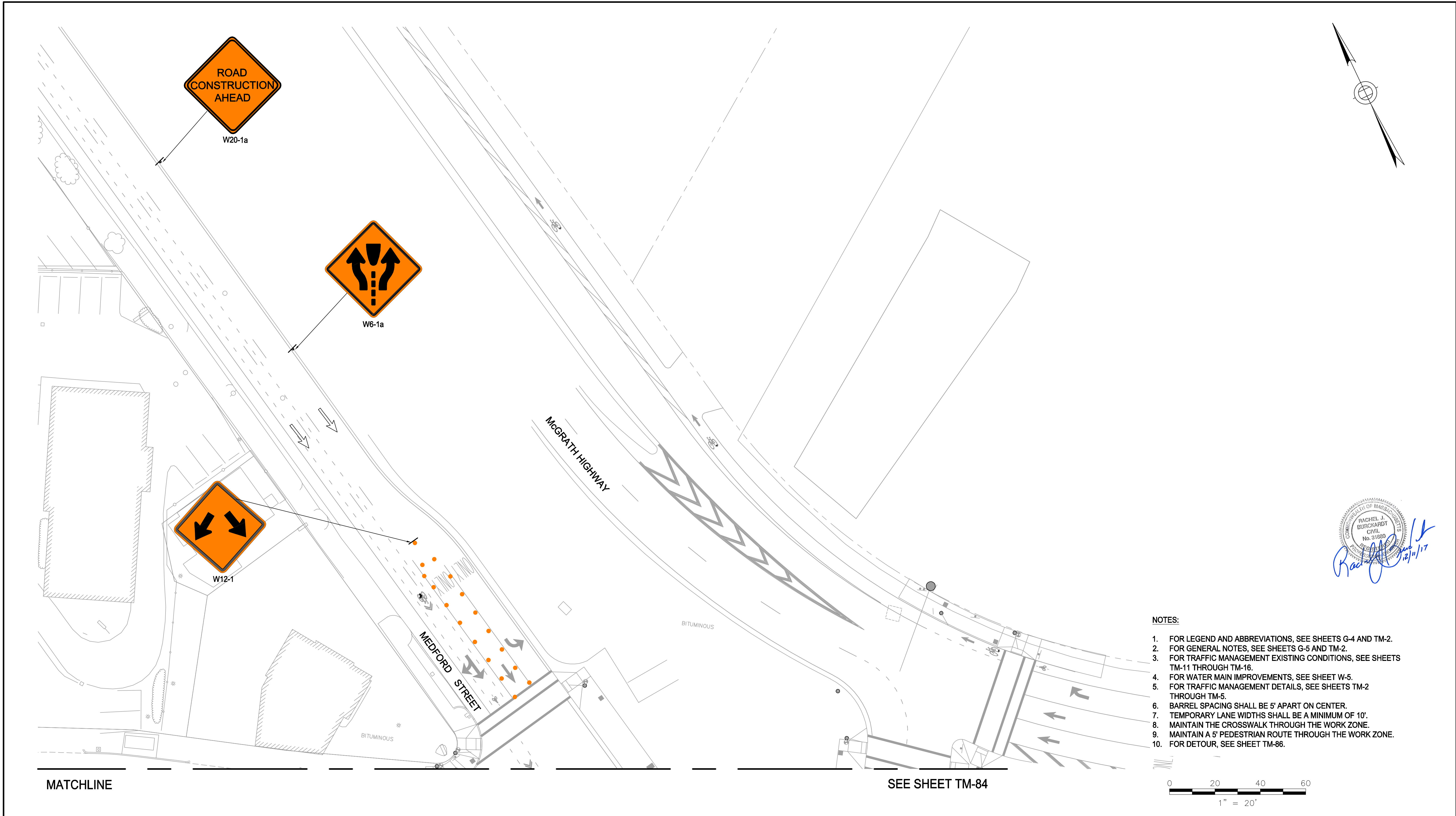
- NOTES:**
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 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. MAINTAIN THE CROSSWALK THROUGH THE WORK ZONE.
 9. MAINTAIN A 5' PEDESTRIAN ROUTE THROUGH THE WORK ZONE.
 10. FOR DETOUR, SEE SHEET TM-86.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-7 SHEET 1 OF 3

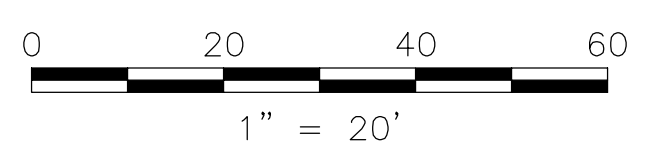
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93 HIGHLAND AVENUE								
SOMERVILLE, MA 02143								
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TM-84								

NO.	DATE	REVISIONS	BY



Rachel J. Burckardt

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. TEMPORARY LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 8. MAINTAIN THE CROSSWALK THROUGH THE WORK ZONE.
 9. MAINTAIN A 5' PEDESTRIAN ROUTE THROUGH THE WORK ZONE.
 10. FOR DETOUR, SEE SHEET TM-86.



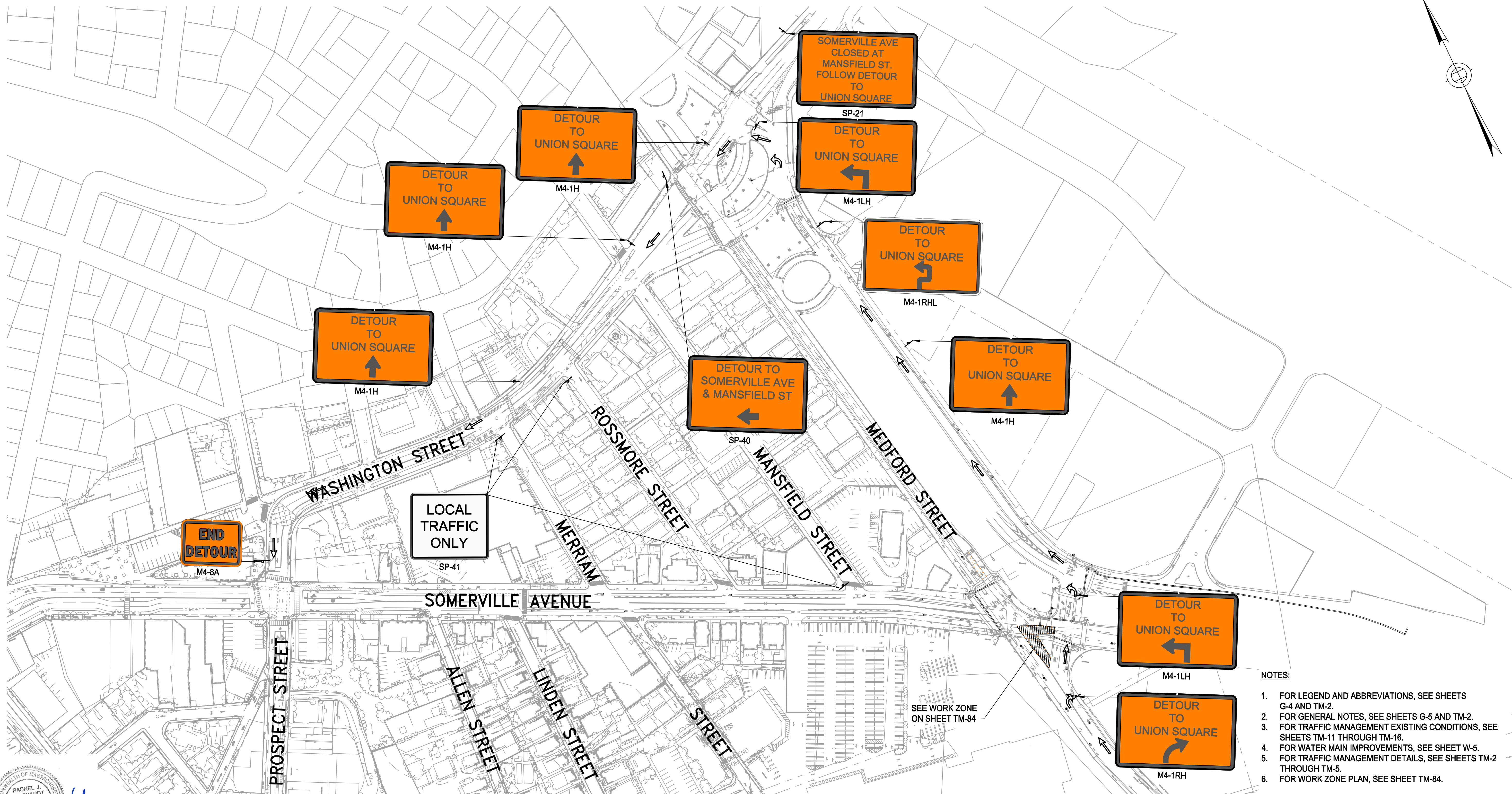
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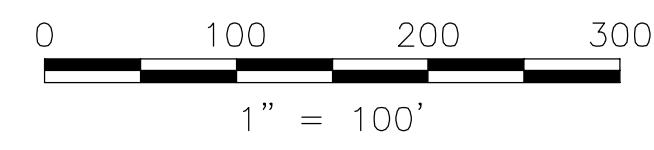
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-7 SHEET 2 OF 3

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-85
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-5.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. FOR WORK ZONE PLAN, SEE SHEET TM-84.



Rachel J. Burckardt
 CIVIL
 No. 31880
 STATE OF MASSACHUSETTS
 12/11/17

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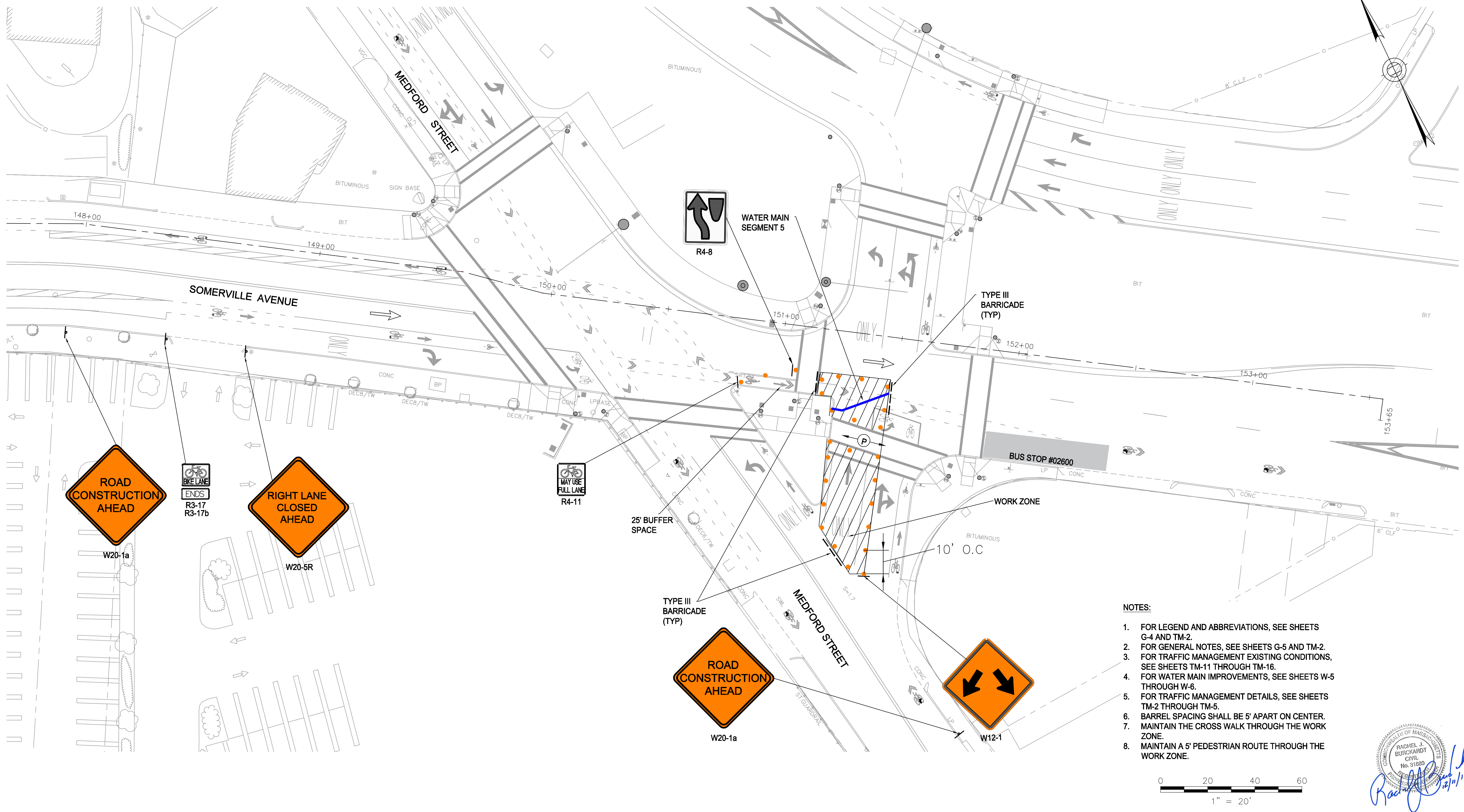
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT DETOUR PLAN
SEGMENT 5-7 SHEET 3 OF 3

DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET			
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CHECKED: JC					

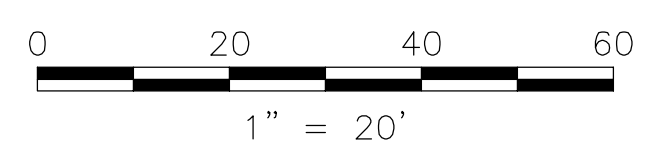
CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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- NOTES:**
- FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 - FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 - FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 - FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-5 THROUGH W-6.
 - FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 - BARREL SPACING SHALL BE 5' APART ON CENTER.
 - MAINTAIN THE CROSS WALK THROUGH THE WORK ZONE.
 - MAINTAIN A 5' PEDESTRIAN ROUTE THROUGH THE WORK ZONE.



Rachel J. Burckhardt
 Civil No. 81980
 State of Massachusetts
 12/11/17

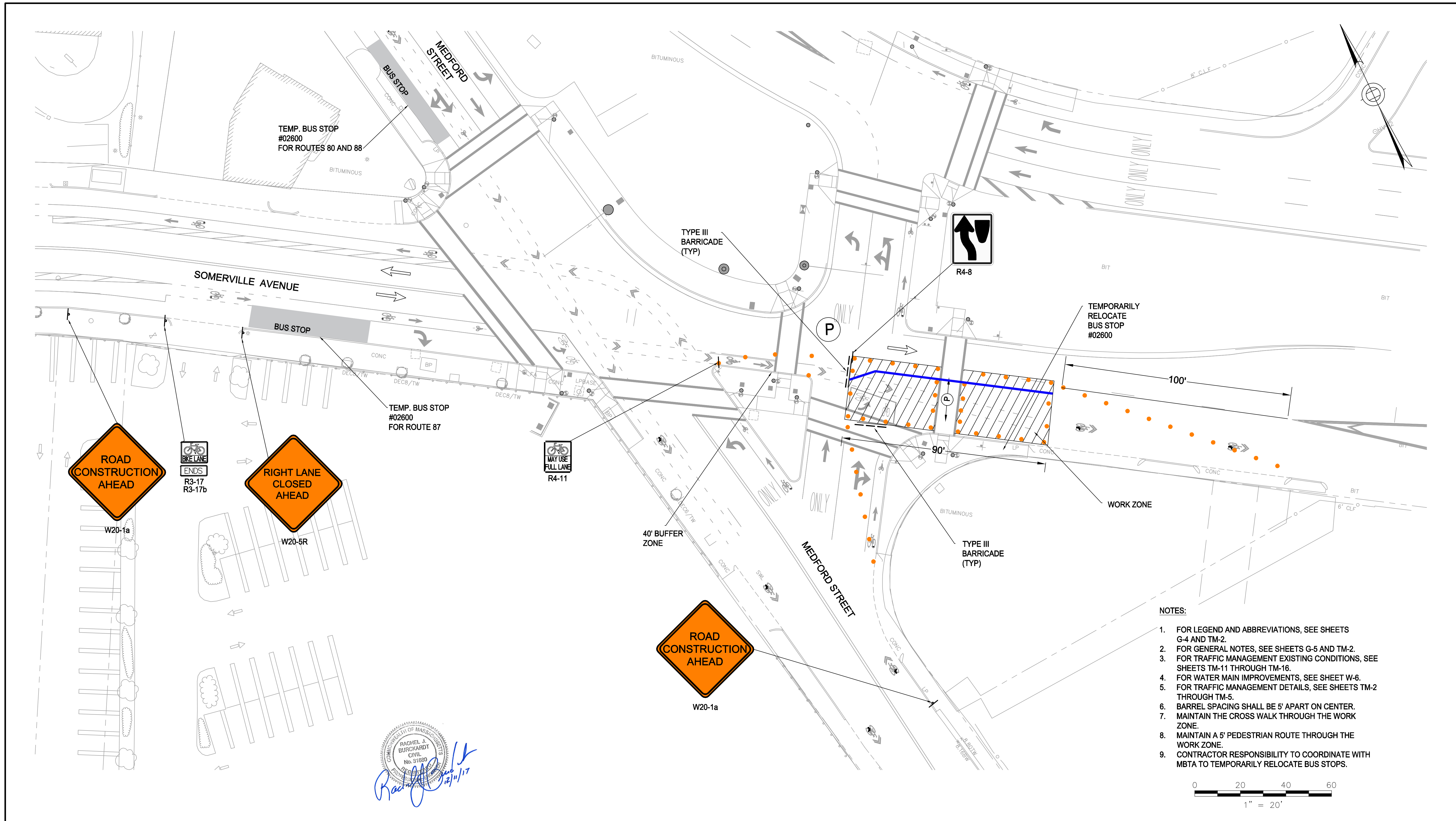
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-8 SHEET 1 OF 1

DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
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CHECKED: JC							

NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143



- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-6.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. MAINTAIN THE CROSS WALK THROUGH THE WORK ZONE.
 8. MAINTAIN A 5' PEDESTRIAN ROUTE THROUGH THE WORK ZONE.
 9. CONTRACTOR RESPONSIBILITY TO COORDINATE WITH MBTA TO TEMPORARILY RELOCATE BUS STOPS.

Rachel J. Burckardt

 CIVIL

 No. 31880

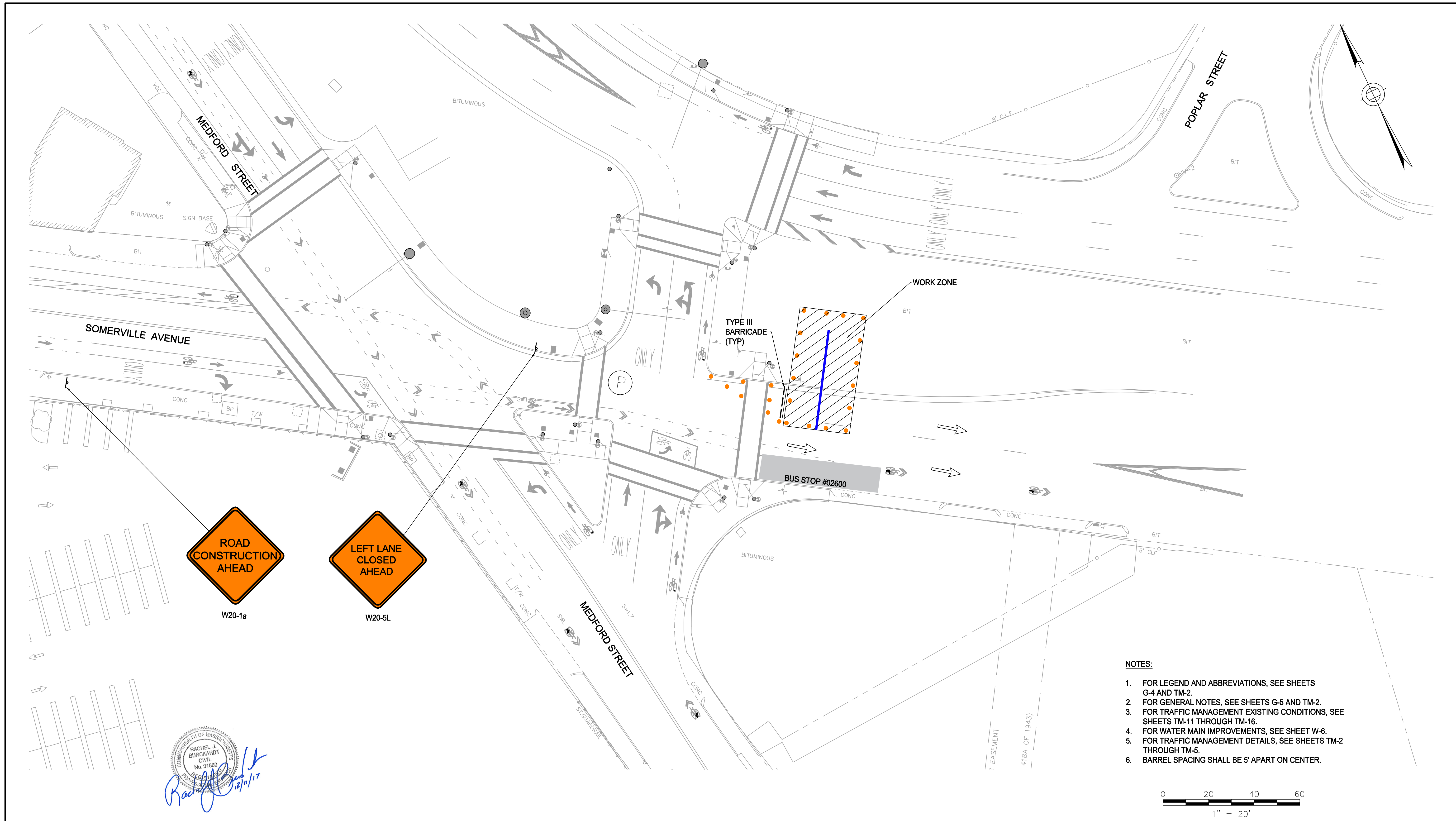
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-9 SHEET 1 OF 1

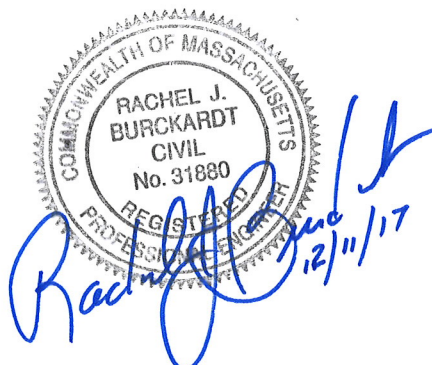
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REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		



W20-1a

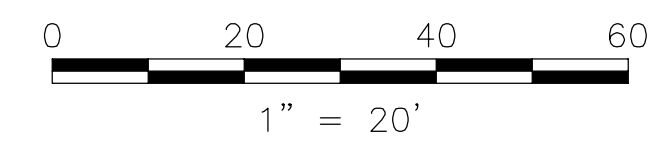


W20-5L



NOTES:

1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
4. FOR WATER MAIN IMPROVEMENTS, SEE SHEET W-6.
5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
6. BARREL SPACING SHALL BE 5' APART ON CENTER.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

**CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-10 SHEET 1 OF 1**

DESIGNED: DY
CHECKED: JC

DRAWN: DY
CHECKED: JC

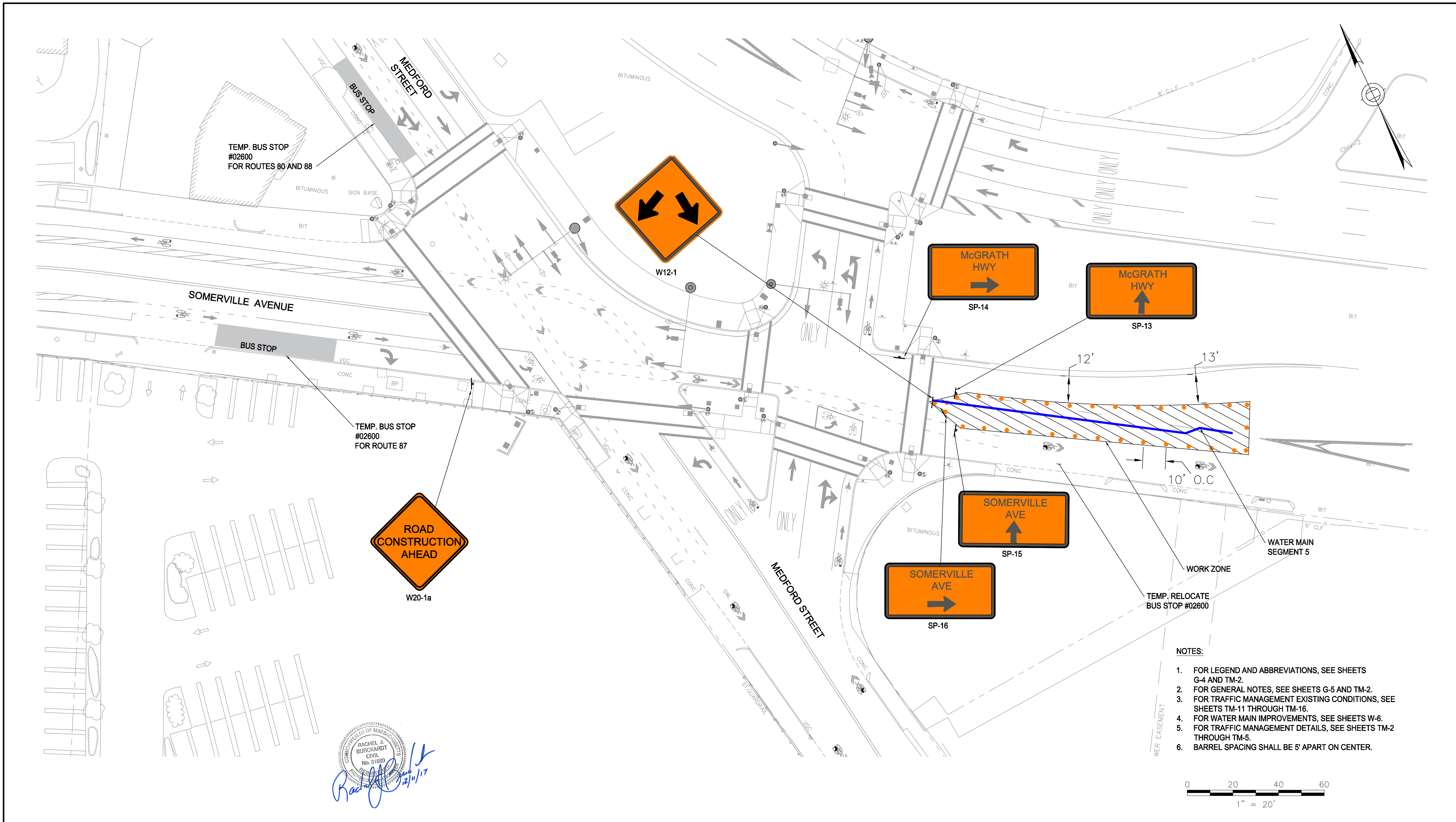
WSP | **PARSONS BRINCKERHOFF**
Parsons Brinckerhoff, Inc.
75 Arlington St. Boston, MA 02116
PH. (617)426-7330 FAX (617)482-8487

SHEET
TM-89

REF.	CONT.	SCALE: 1"=20'
ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY



- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEETS G-4 AND TM-2.
 2. FOR GENERAL NOTES, SEE SHEETS G-5 AND TM-2.
 3. FOR TRAFFIC MANAGEMENT EXISTING CONDITIONS, SEE SHEETS TM-11 THROUGH TM-16.
 4. FOR WATER MAIN IMPROVEMENTS, SEE SHEETS W-6.
 5. FOR TRAFFIC MANAGEMENT DETAILS, SEE SHEETS TM-2 THROUGH TM-5.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.

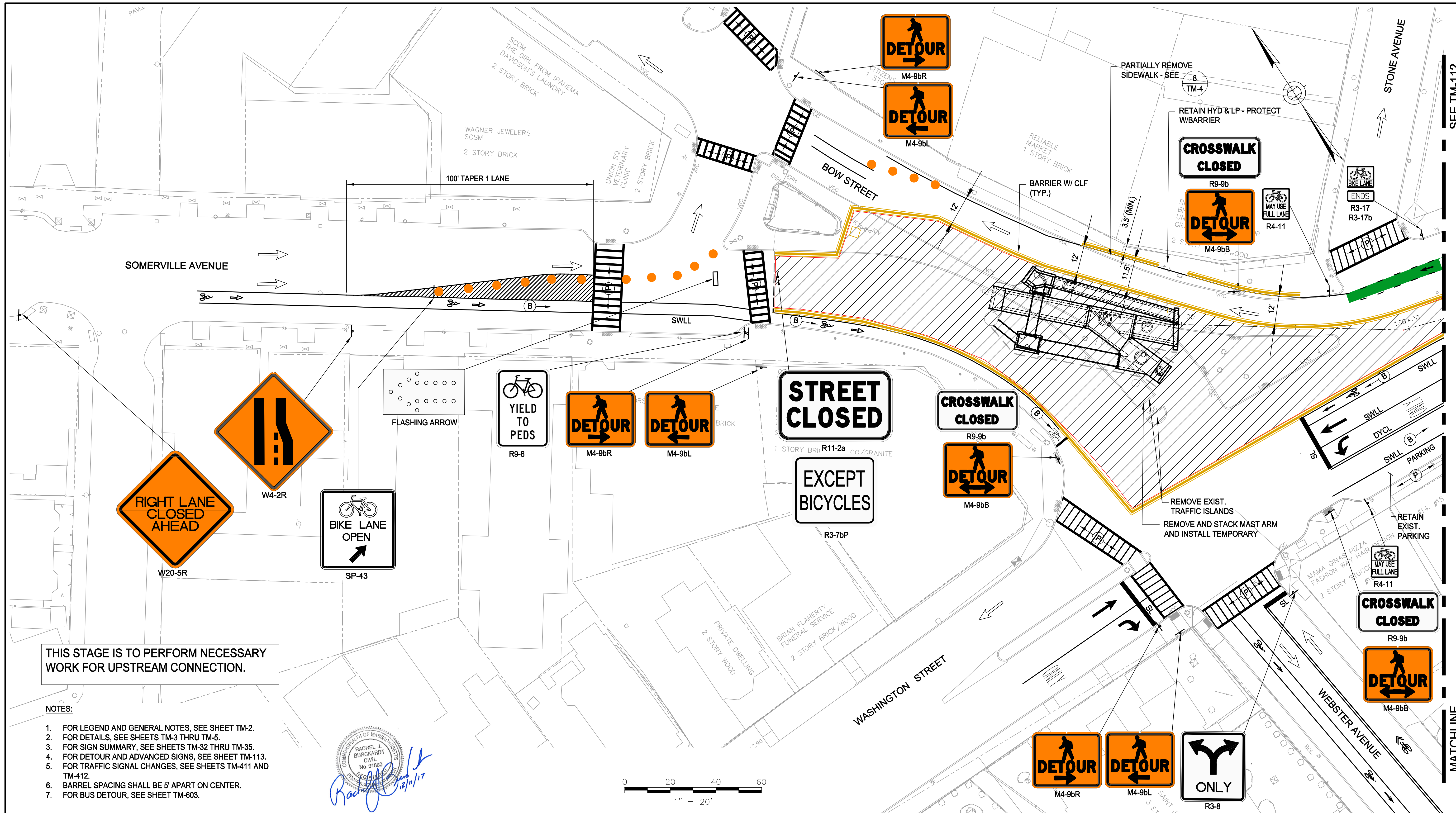
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WATER MAIN REPLACEMENT TMP PLAN
SEGMENT 5-11 SHEET 1 OF 1

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
CHECKED: JC			<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> <td>SCALE: 1"=20'</td> </tr> <tr> <td>ACC.</td> <td> </td> <td>DATE: DEC 2017</td> </tr> </table>	REF.	CONT.	SCALE: 1"=20'	ACC.
REF.	CONT.	SCALE: 1"=20'					
ACC.		DATE: DEC 2017					
DRAWN: DY	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143	TM-90					
CHECKED: JC							

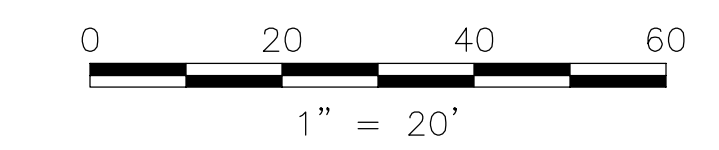
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THIS STAGE IS TO PERFORM NECESSARY WORK FOR UPSTREAM CONNECTION.

- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCED SIGNS, SEE SHEET TM-113.
 5. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-411 AND TM-412.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. FOR BUS DETOUR, SEE SHEET TM-603.

RACHEL J. BURCKARDT
 CIVIL
 No. 31580
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF MASSACHUSETTS
 12/11/17



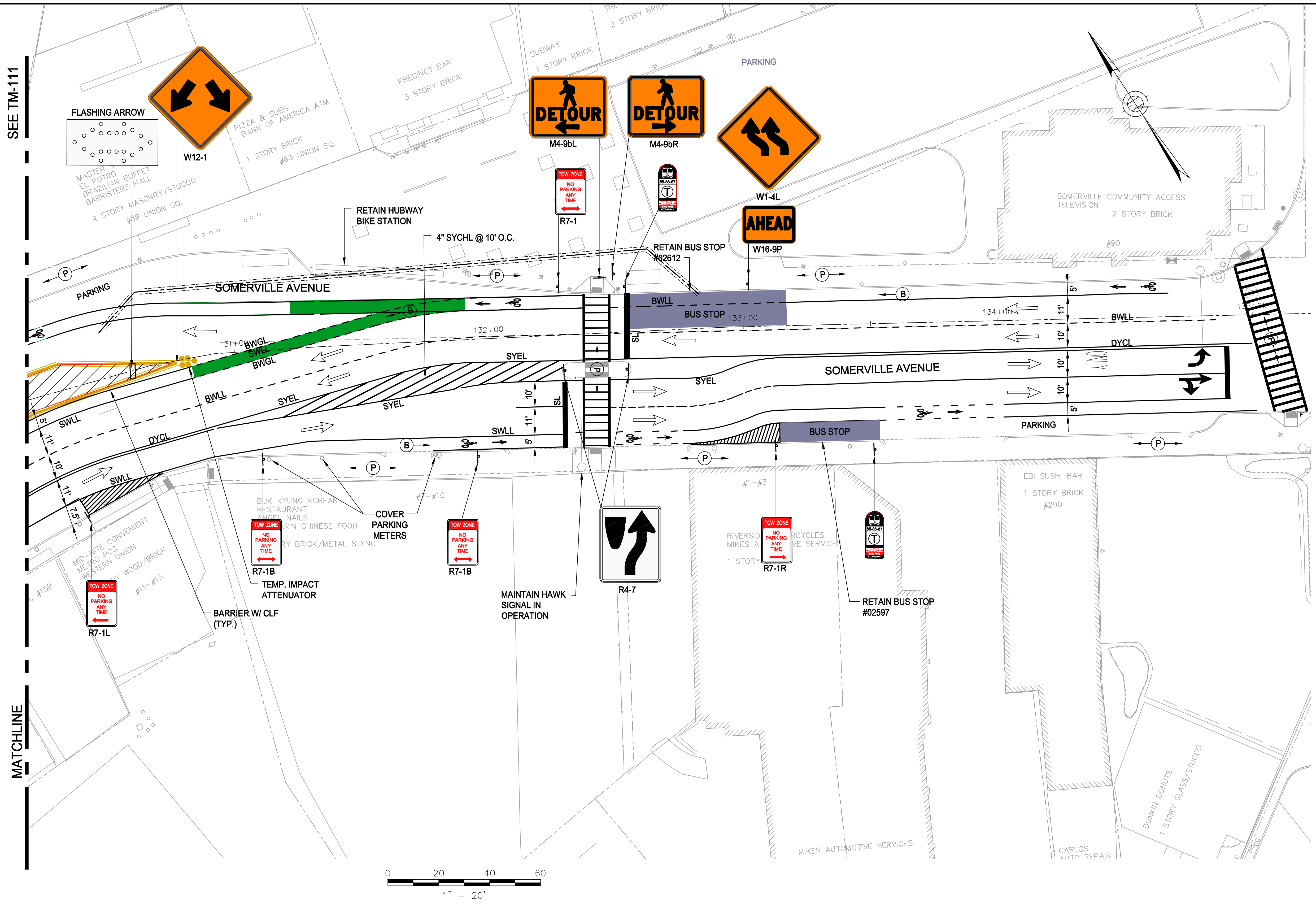
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1A-1 SHEET 1 OF 2

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-111
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

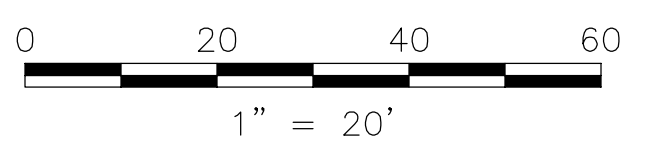
NO.	DATE	REVISIONS	BY

2017-11-15 1:53 PM T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-111 -STAGE-1A-PLAN.dwg



RACHEL J. BURCKARDT
 CIVIL
 No. 31820
 12/11/17

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCED SIGNS, SEE SHEET TM-113.
 5. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-411 AND TM-412.
 6. FOR BUS DETOUR, SEE SHEET TM-603.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

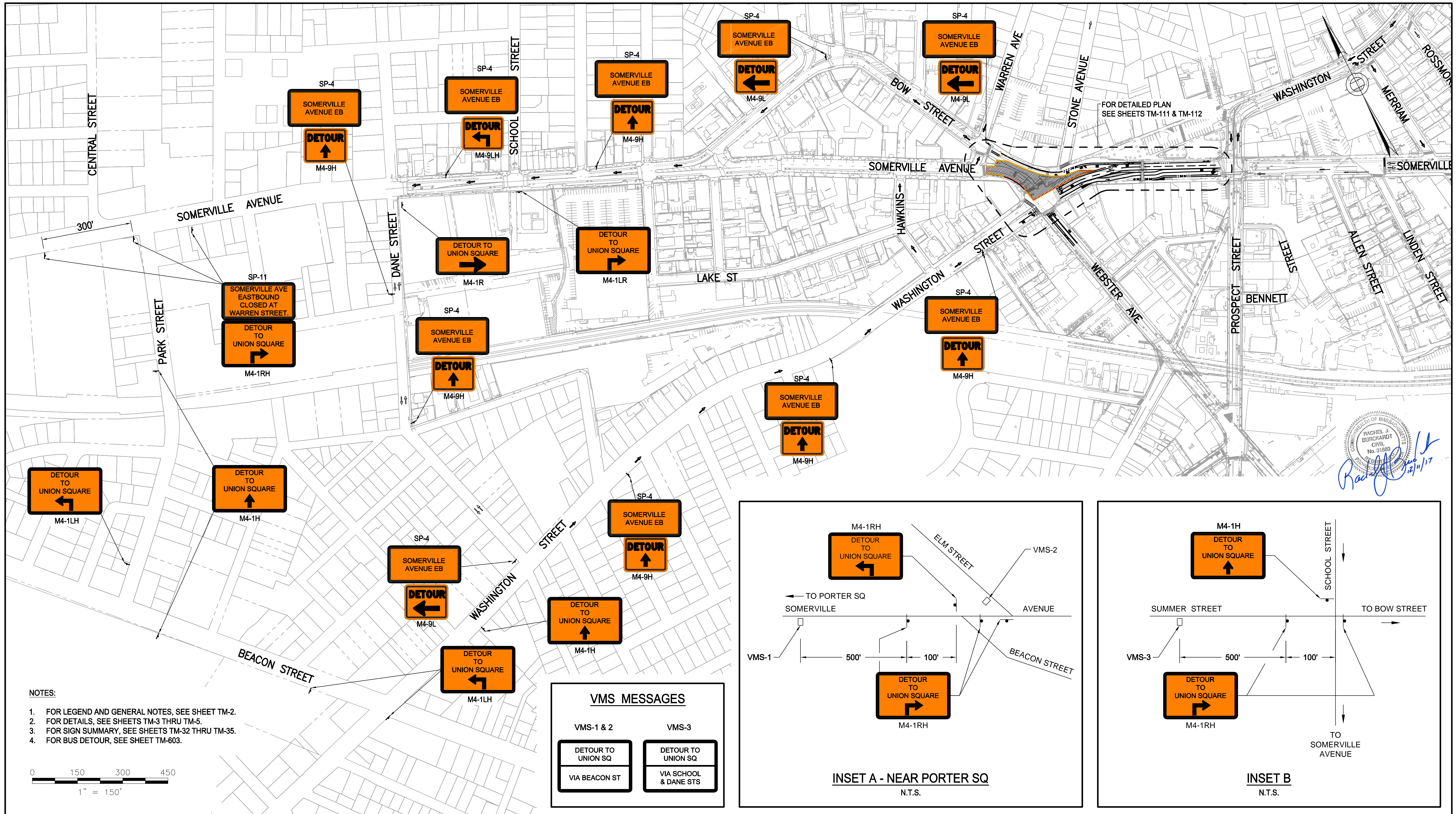
SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1A-1 SHEET 2 OF 2

DESIGNED: LAC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-112
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017

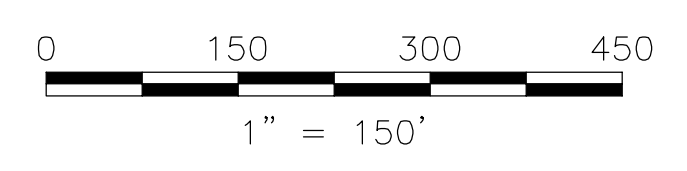
NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

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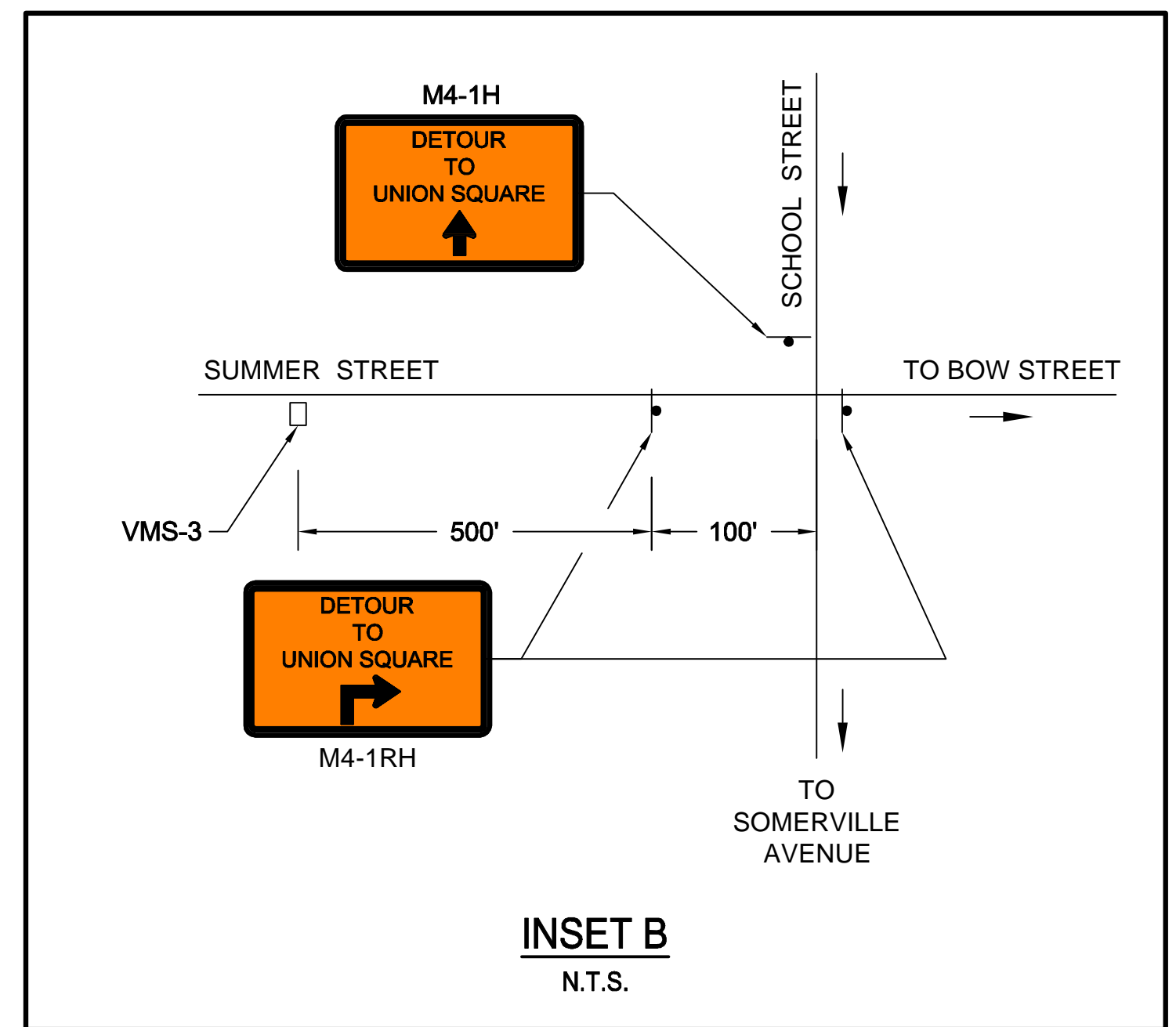
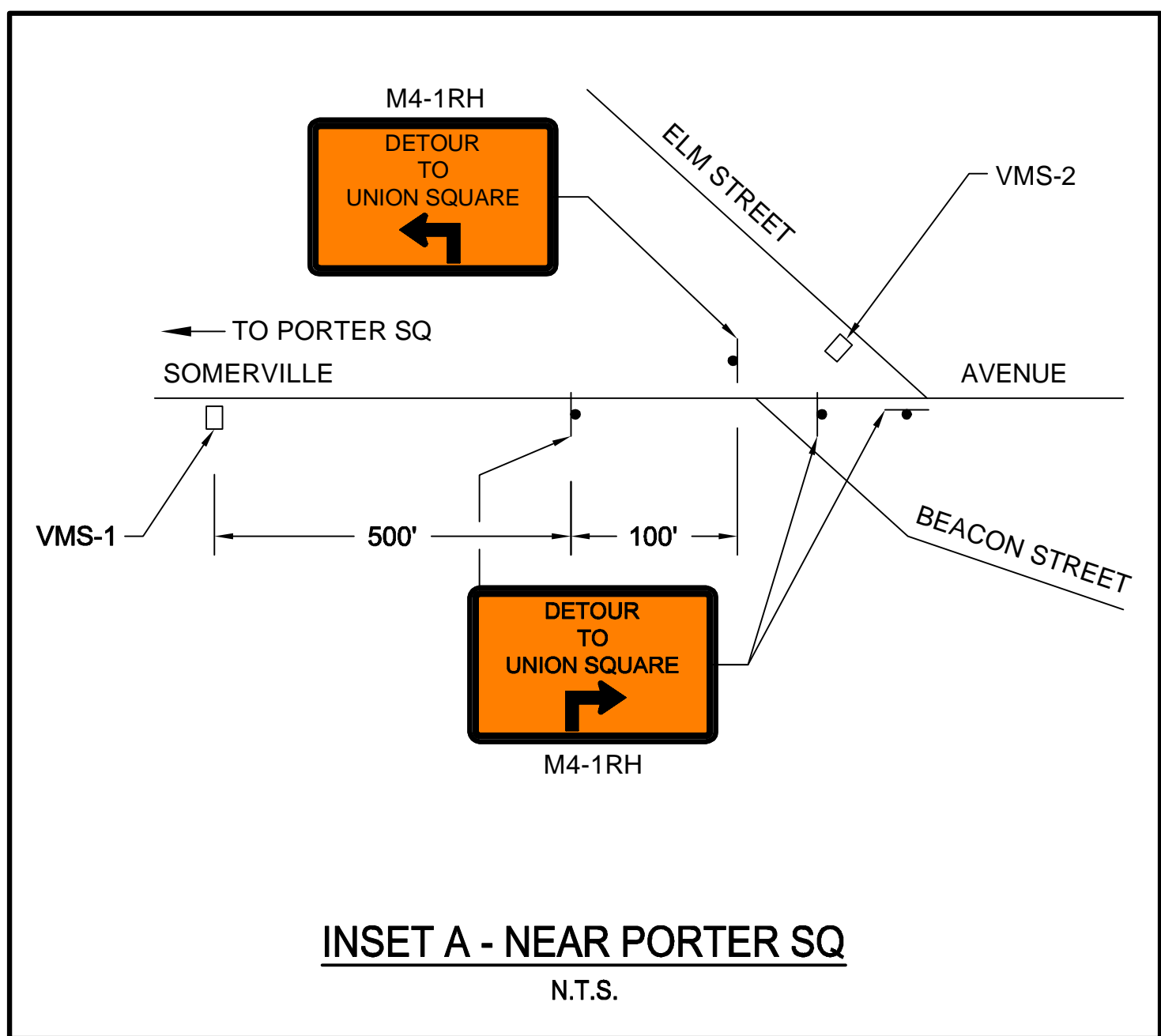
- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-603.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

VMS MESSAGES

VMS-1 & 2	VMS-3
DETOUR TO UNION SQ	DETOUR TO UNION SQ
VIA BEACON ST	VIA SCHOOL & DANE STS



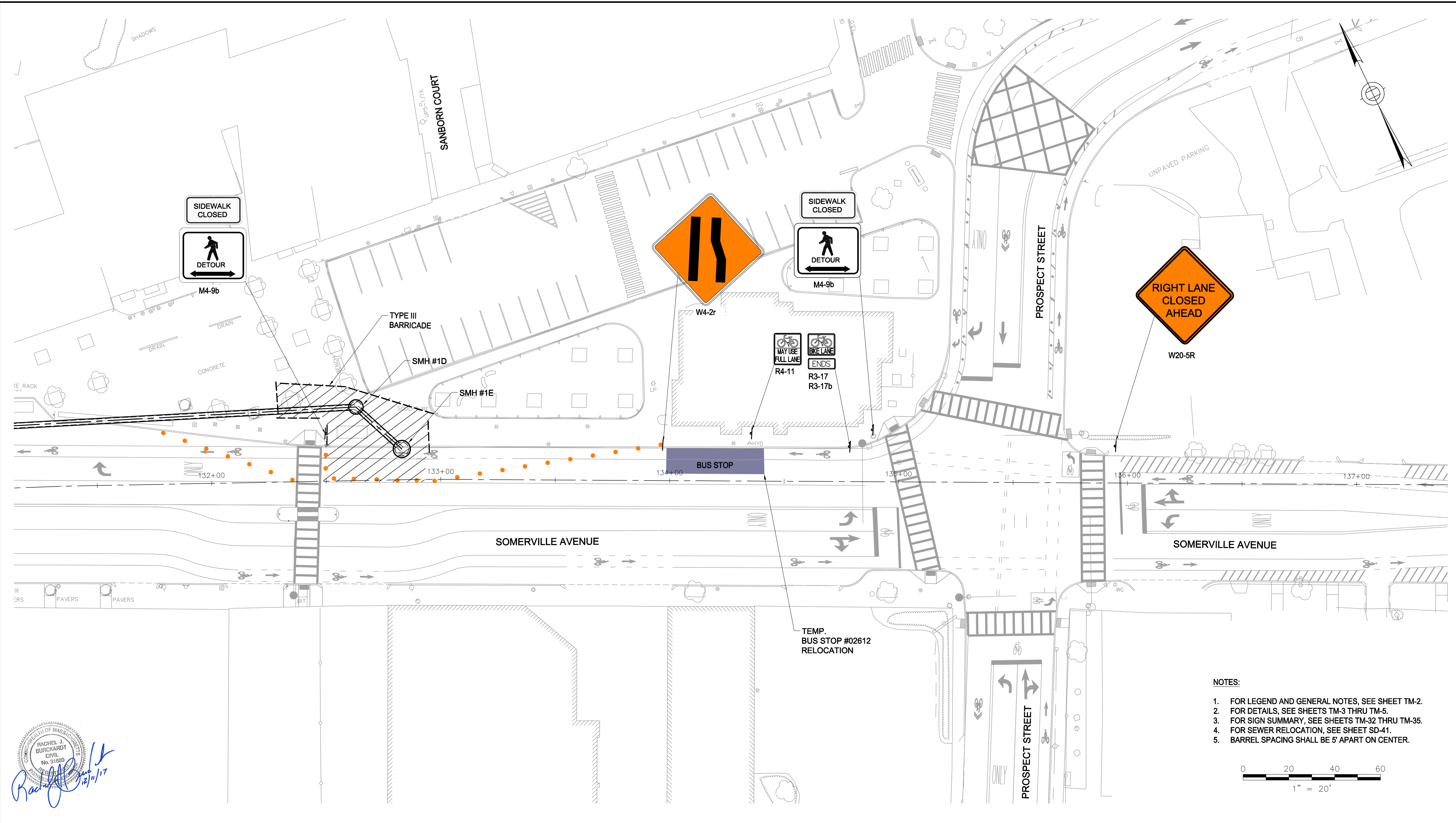
COMMONWEALTH OF MASSACHUSETTS
RACHEL J. BURCKARDT
CIVIL
No. 31880
Professional Seal
12/11/17

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 1A-1 - DETOUR PLAN

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-113
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=150'
CITY OF SOMERVILLE		DATE: DEC 2017
93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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 2017-09-29 7:33 PM



Rachel J. Burckhardt
 12/11/17

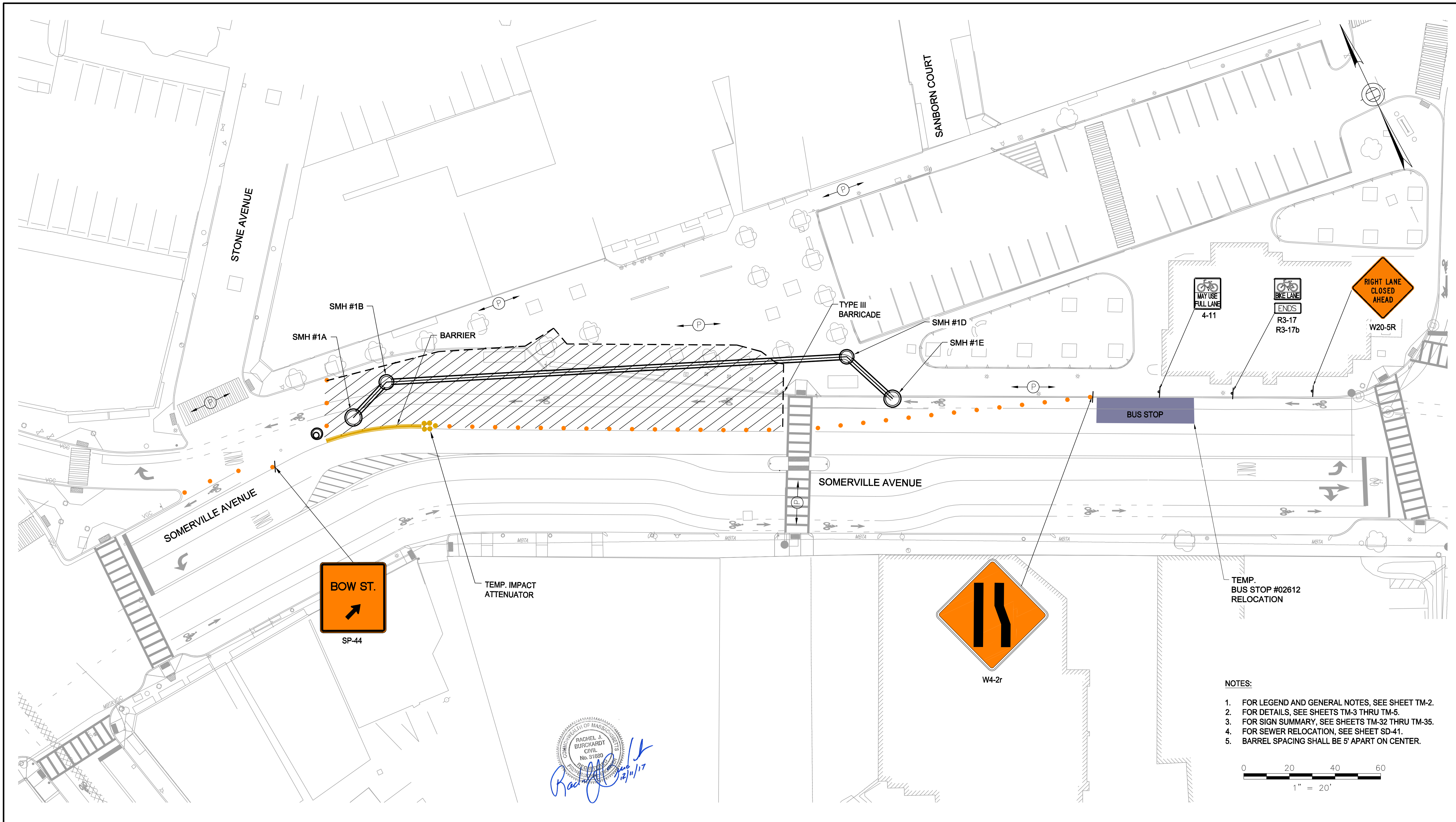
- NOTES:**
- FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 - FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 - FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 - FOR SEWER RELOCATION, SEE SHEET SD-41.
 - BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
UPSTREAM SEWER CONNECTION
STAGE 1A-2 SHEET 1 OF 1

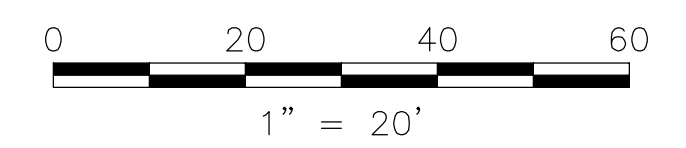
DESIGNED: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-114
DRAWN: DY CHECKED: RJB		
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY



Rachel J. Burckardt
 12/11/17

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR SEWER RELOCATION, SEE SHEET SD-41.
 5. BARREL SPACING SHALL BE 5' APART ON CENTER.



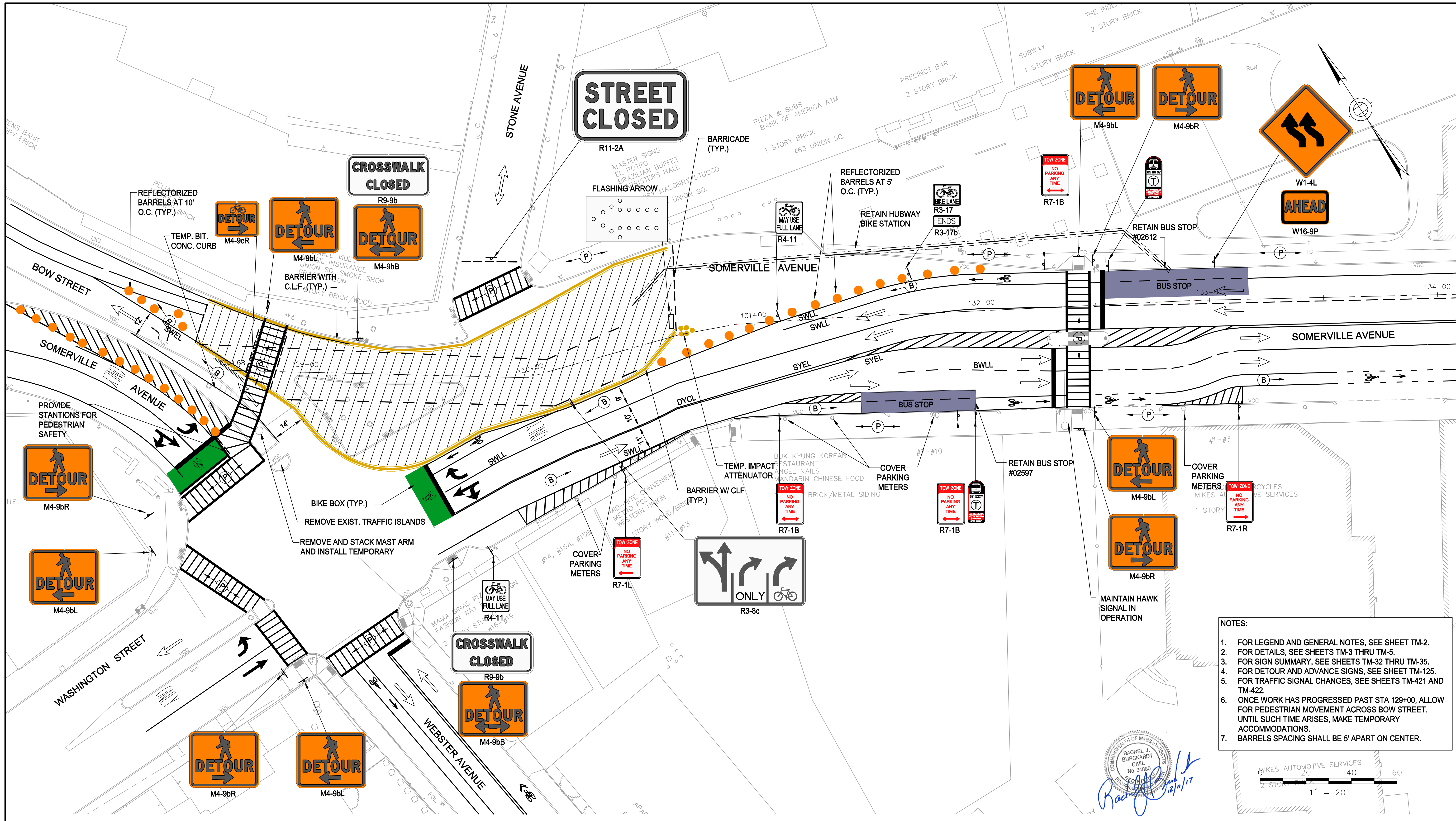
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
UPSTREAM SEWER CONNECTION
STAGE 1A-3 SHEET 1 OF 1

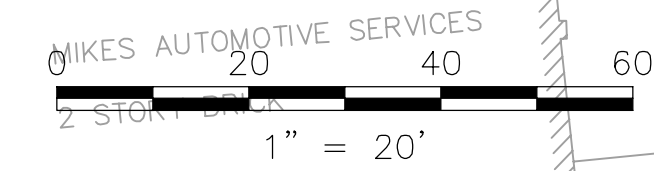
DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-115
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-125.
 5. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-421 AND TM-422.
 6. ONCE WORK HAS PROGRESSED PAST STA 129+00, ALLOW FOR PEDESTRIAN MOVEMENT ACROSS BOW STREET. UNTIL SUCH TIME ARISES, MAKE TEMPORARY ACCOMMODATIONS.
 7. BARRELS SPACING SHALL BE 5' APART ON CENTER.

RACHEL J. BURKARDT
 CIVIL
 No. 31590
 REGISTERED PROFESSIONAL ENGINEER
 State of Massachusetts
 12/11/17



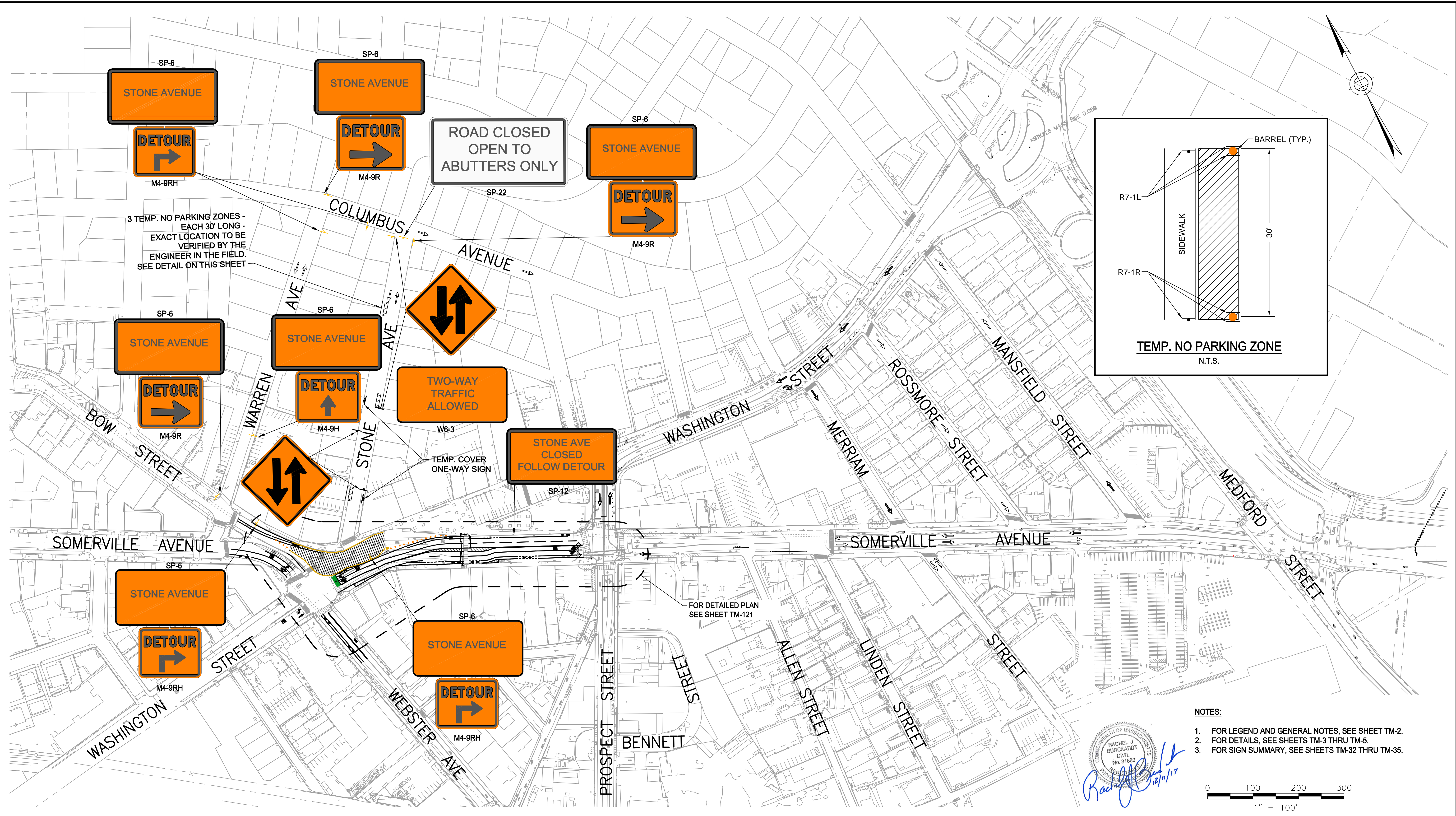
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1B

NO.	DATE	REVISIONS	BY

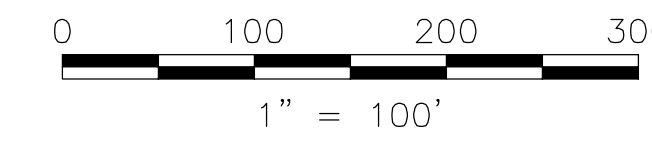
DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-121
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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 2017-08-03 8:14 PM



Rachel J. Burckardt
 12/11/17

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.



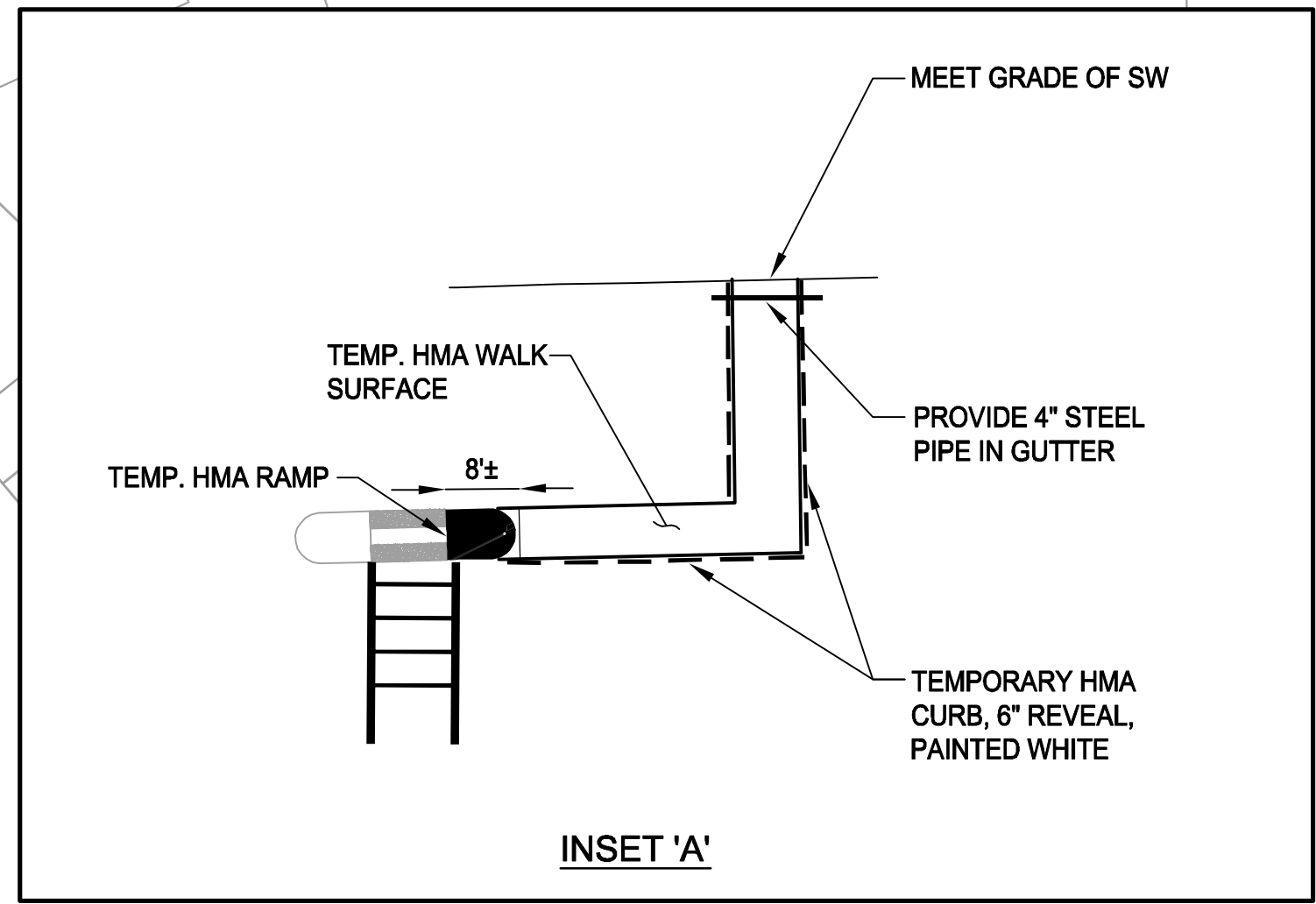
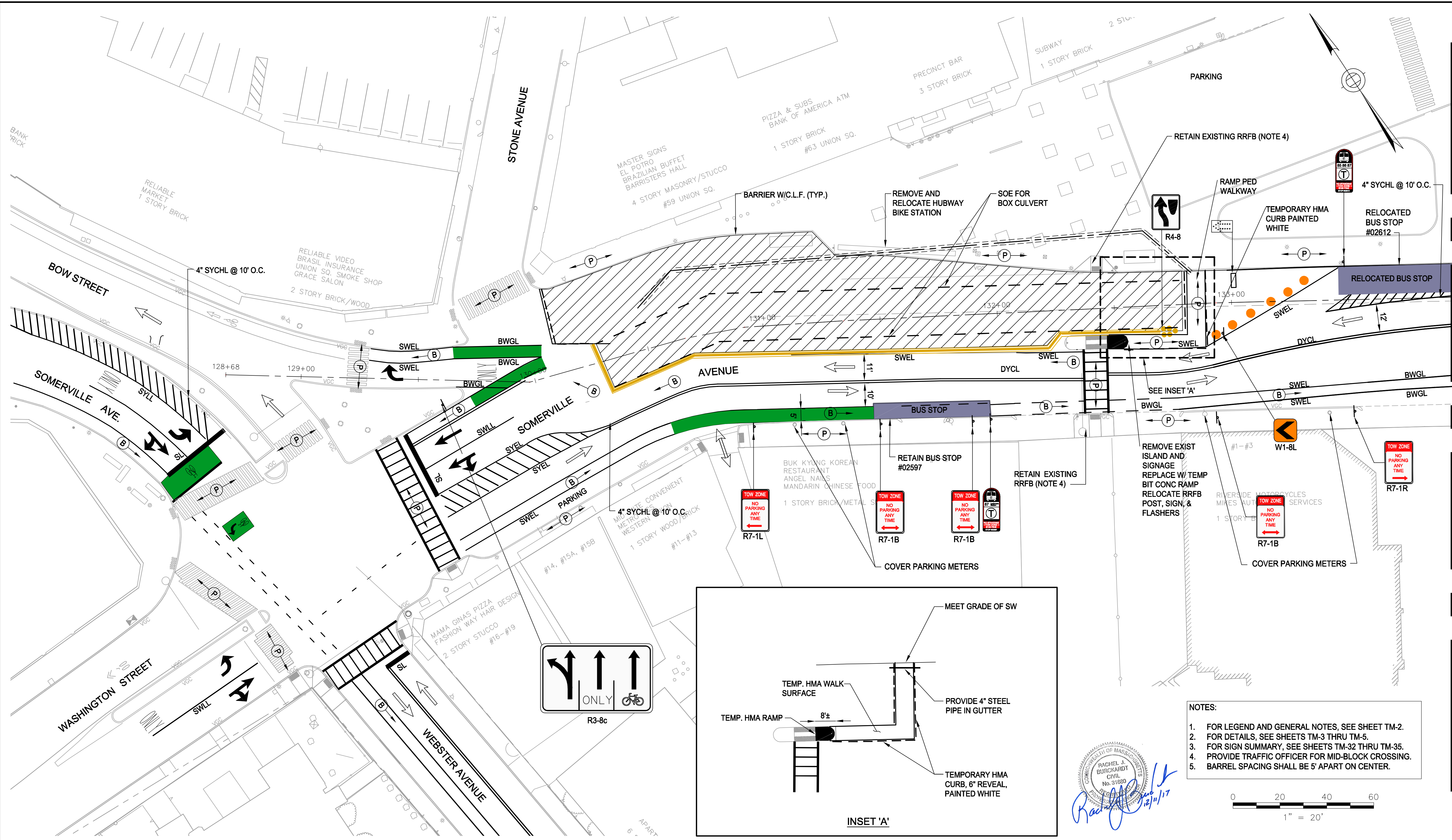
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 1B - DETOUR PLAN

DESIGNED: RJB CHECKED: LAC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-125
DRAWN: JLM CHECKED: RJB		
REF. ACC.	CONT.	SCALE: 1"=100' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

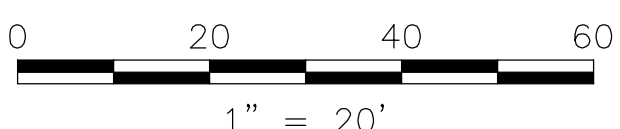
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- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. PROVIDE TRAFFIC OFFICER FOR MID-BLOCK CROSSING.
 5. BARREL SPACING SHALL BE 5' APART ON CENTER.

Rachel J. Burckardt

 12/11/17



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1C SHEET 1 OF 2

DESIGNED: RJB CHECKED: LAC DRAWN: JLM CHECKED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-131
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

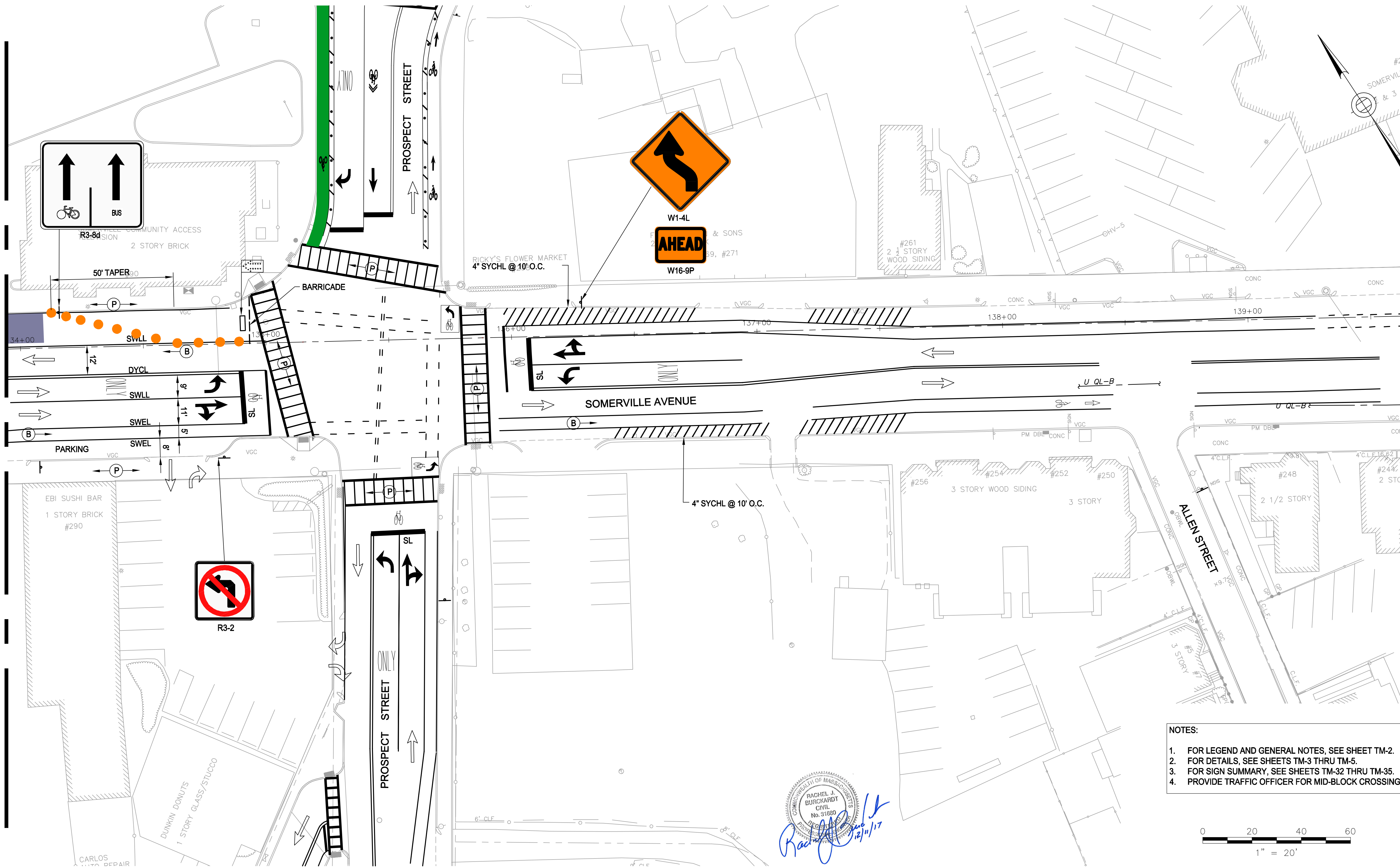
SEE TM-132

MATCHLINE

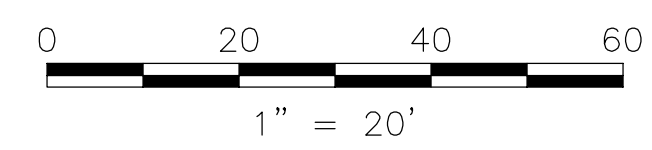
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SEE TM-131

MATCHLINE



- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. PROVIDE TRAFFIC OFFICER FOR MID-BLOCK CROSSING.



Professional Engineer Seal for Rachel J. Burckardt, Civil No. 31880, State of Massachusetts. Signature and date: Rachel J. Burckardt, 12/11/17.

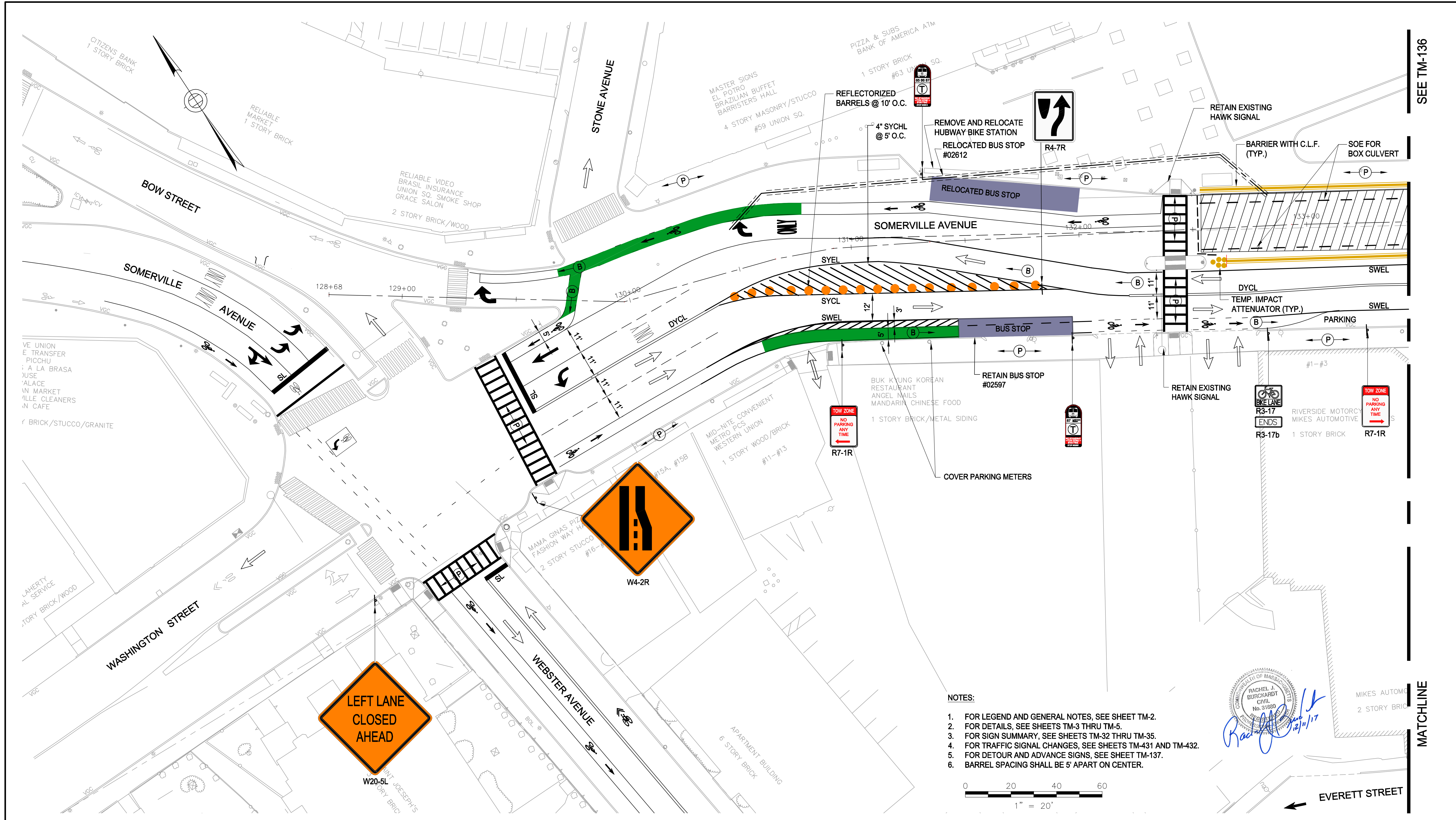
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1C SHEET 2 OF 2

DESIGNED: RJB CHECKED: LAC	<p>Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487</p>	<p>SHEET TM-132</p>
DRAWN: JLM CHECKED: RJB		
REF.	CONT.	SCALE: 1"=20'
ACC.		DATE: DEC 2017
<p>CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143</p>		

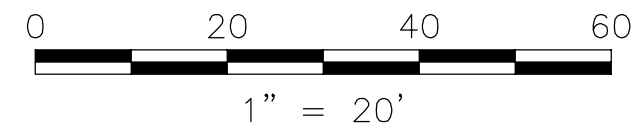
NO.	DATE	REVISIONS	BY

2017-12-04 3:11 PM T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-135 - STAGE-1D-PLAN.dwg



NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-431 AND TM-432.
5. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-137.
6. BARREL SPACING SHALL BE 5' APART ON CENTER.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1D-1 SHEET 1 OF 2

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET
CHECKED: LAC			TM-135
DRAWN: JLM	REF.	CONT.	SCALE: 1"=20'
CHECKED: RJB	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

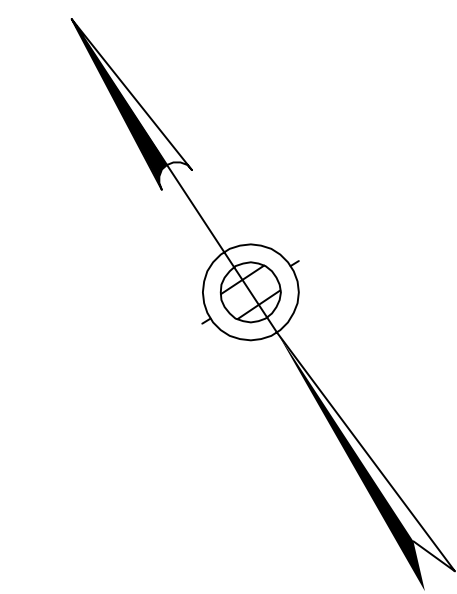
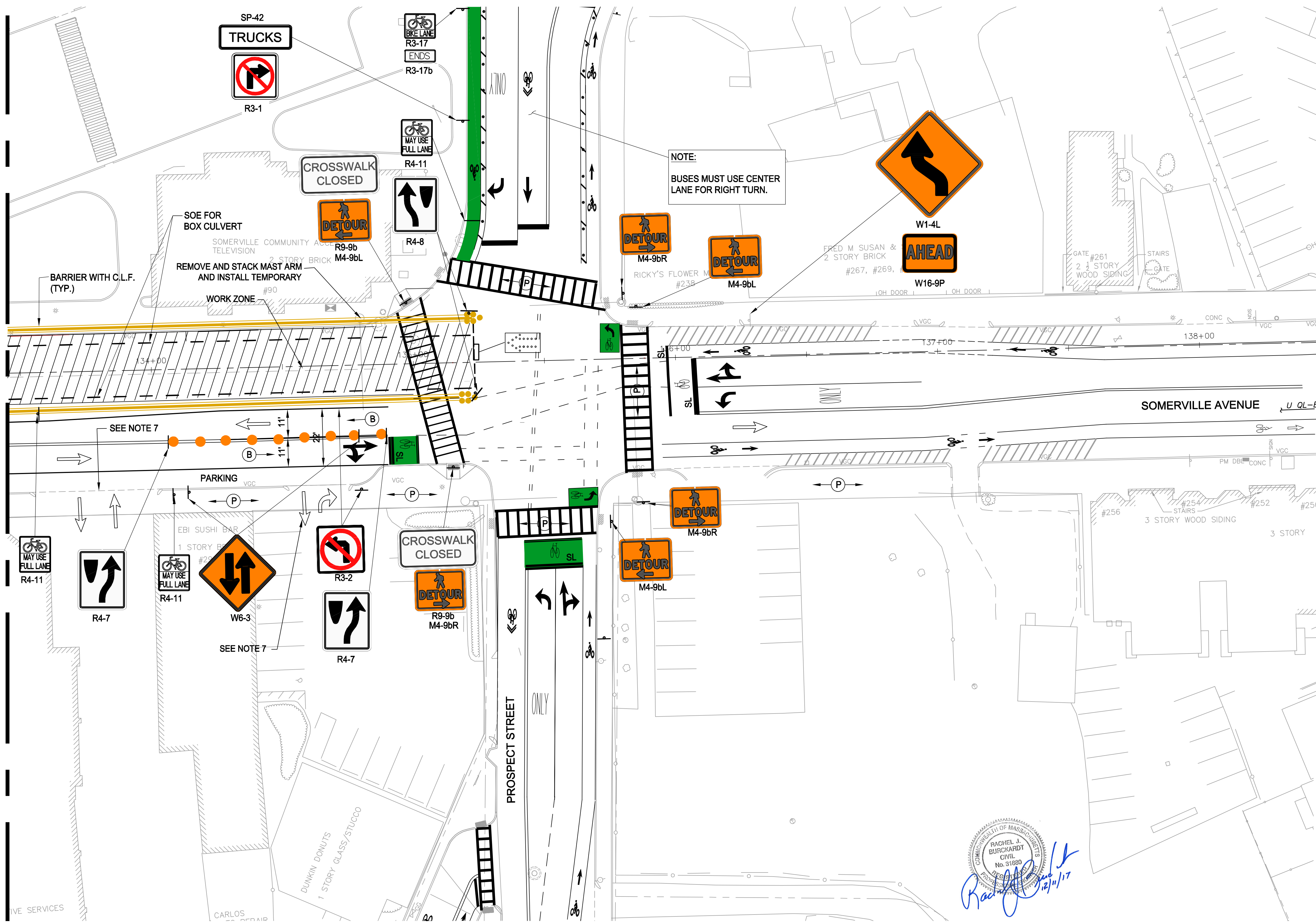
SEE TM-136

MATCHLINE

2017-12-04 3:11 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-135 - STAGE-1D-PLAN.dwg

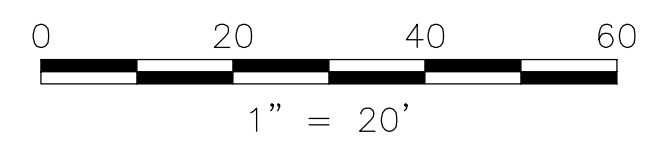
SEE TM-135

MATCHLINE



NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-431 AND TM-432.
5. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-137.
6. BARREL SPACING SHALL BE 5' APART ON CENTER.
7. MAINTAIN RIGHT IN, RIGHT OUT ACCESS TO DRIVEWAYS.



Rachel J. Burckardt

 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

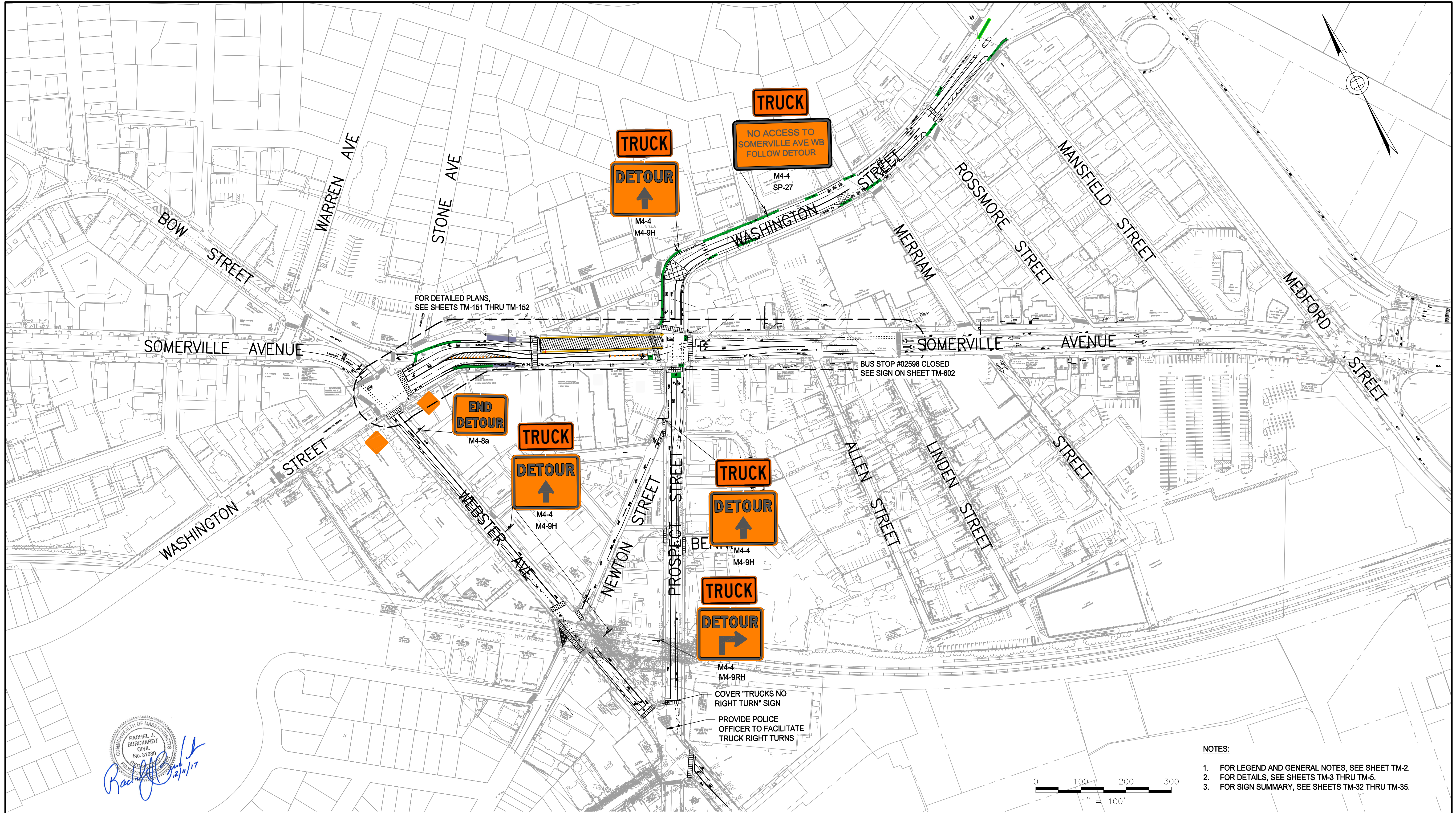
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1D-1 SHEET 2 OF 2

DESIGNED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET
CHECKED: LAC			TM-136
DRAWN: JLM	REF.	CONT.	SCALE: 1"=20'
CHECKED: RJB	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

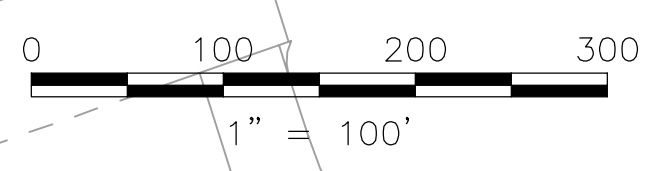
NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-137 -STAGE-1D-DETOUR.dwg
 2017-10-19 4:01 PM



RACHEL J. BURCKARDT
 CIVIL
 No. 31820
 12/11/17

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

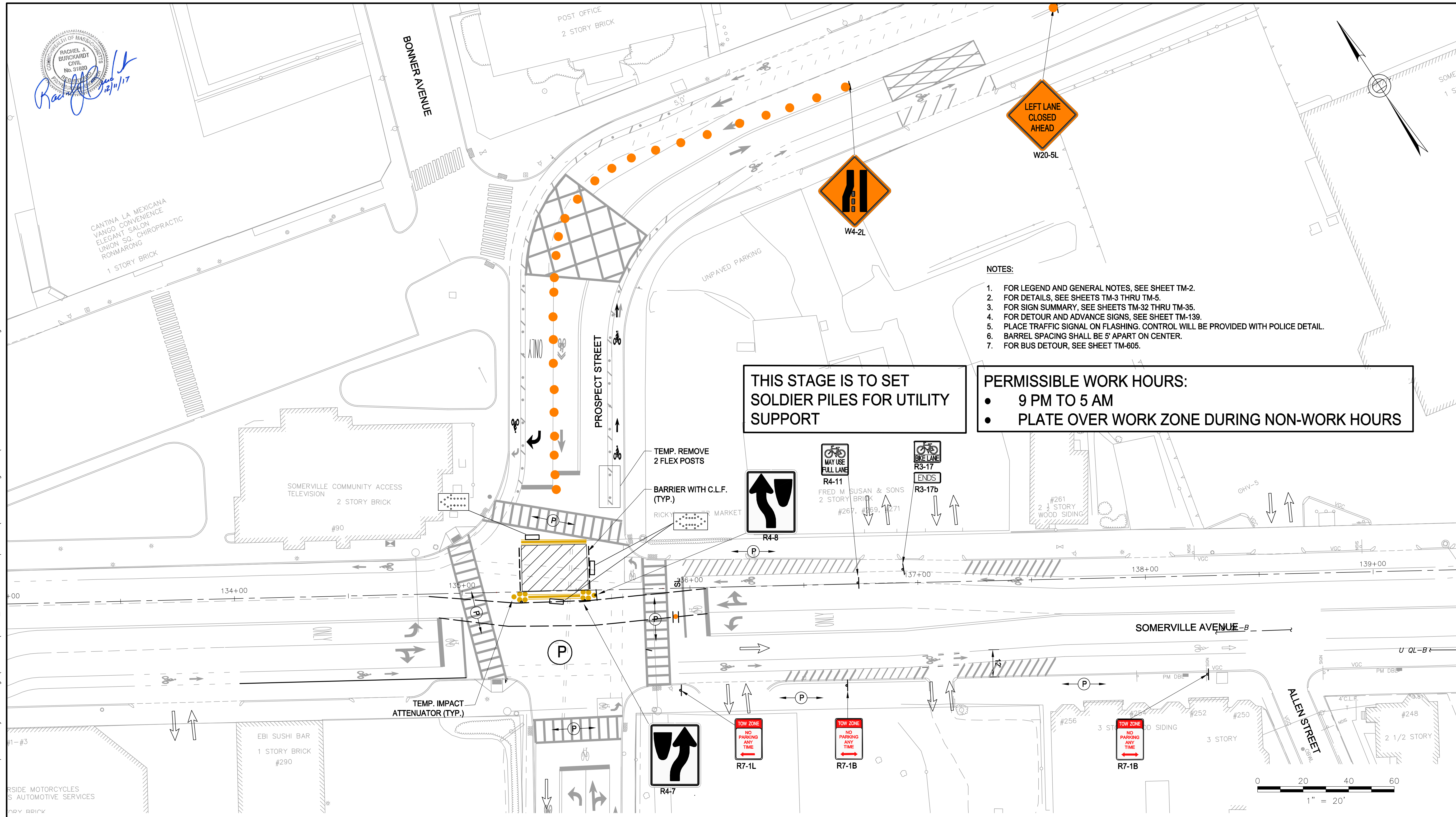
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 1D-1 - DETOUR PLAN

DESIGNED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-137
CHECKED: LAC		
DRAWN: JLM	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=100'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

T:\52647LS Union Square Study and Design\SH\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-138 -STAGE-1D-2-PLAN.dwg 2017-10-19 3:45 PM

RACHEL J. BURCKARDT
CIVIL
No. 31890
12/11/17



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-139.
 5. PLACE TRAFFIC SIGNAL ON FLASHING. CONTROL WILL BE PROVIDED WITH POLICE DETAIL.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.
 7. FOR BUS DETOUR, SEE SHEET TM-605.

THIS STAGE IS TO SET SOLDIER PILES FOR UTILITY SUPPORT

PERMISSIBLE WORK HOURS:

- 9 PM TO 5 AM
- PLATE OVER WORK ZONE DURING NON-WORK HOURS

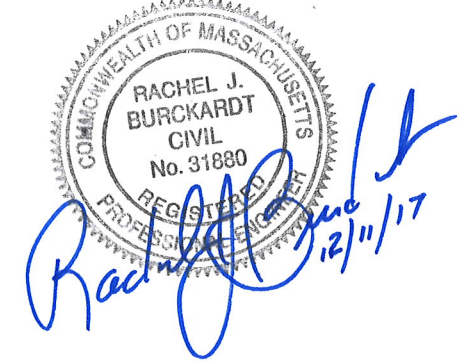
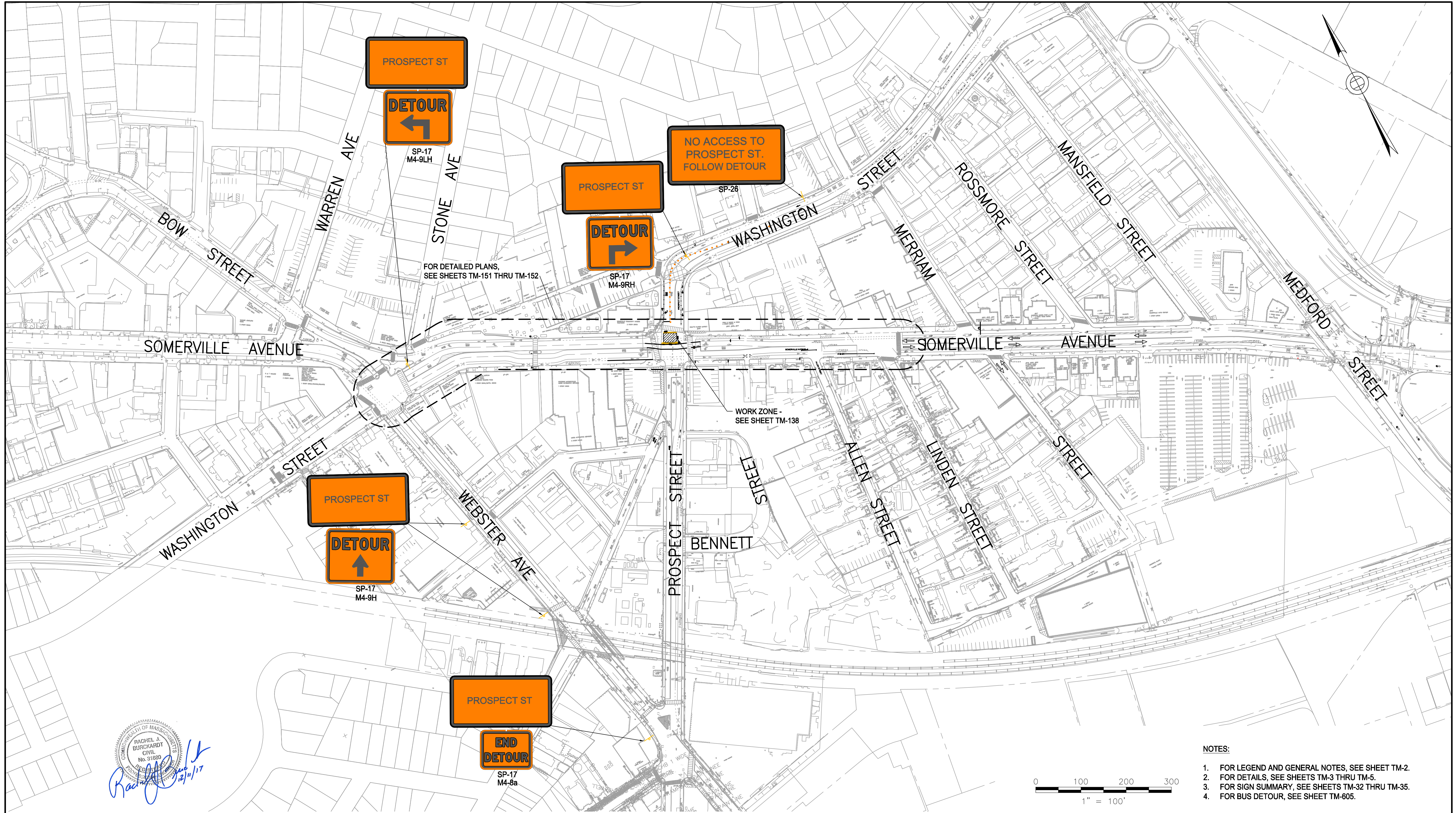
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1D-2 SHEET 1 OF 1

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-138
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-139 - STAGE-1D-2 - DETOUR.dwg 2017-09-06 8:46 PM



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-605.

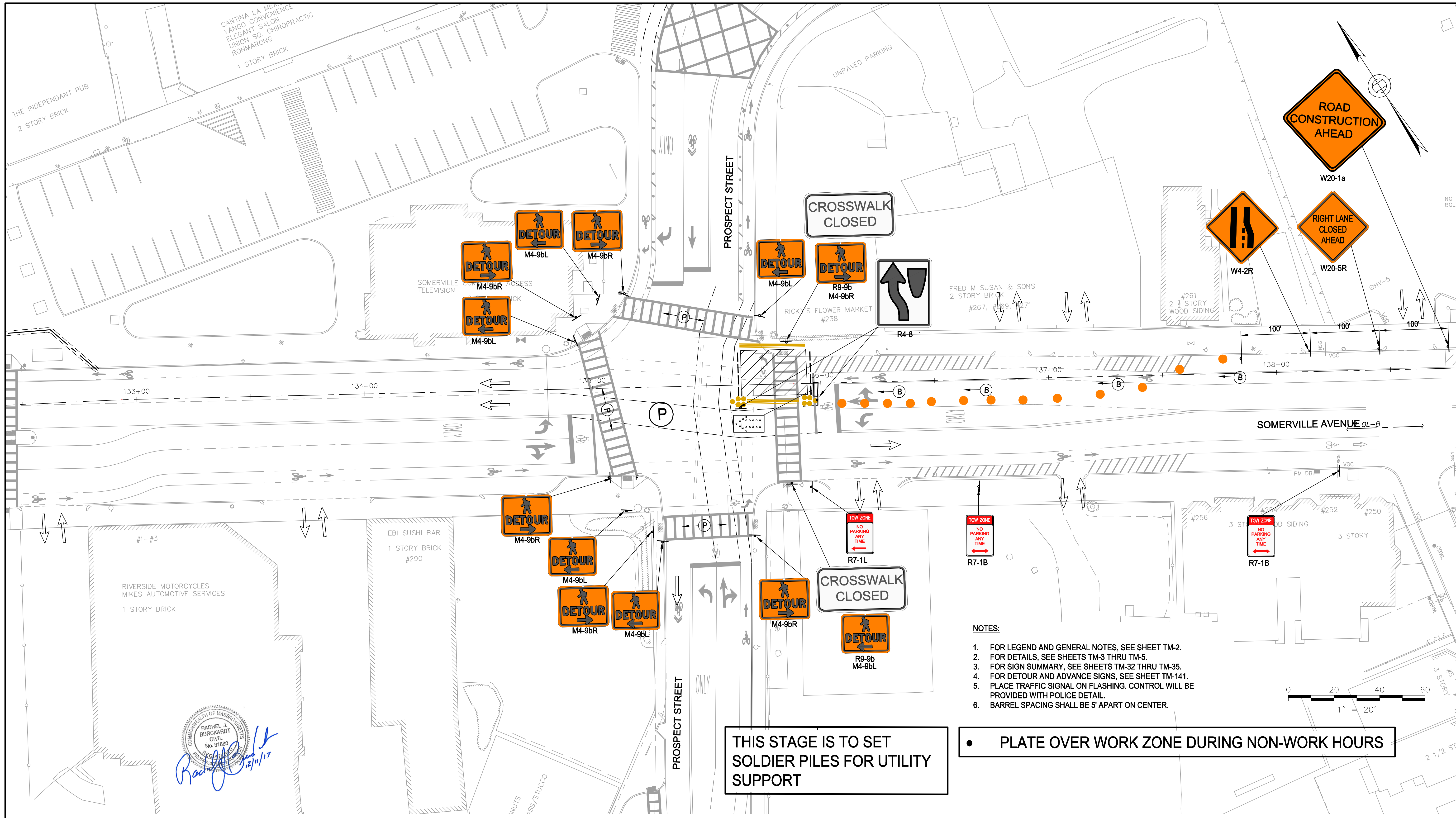
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 1D-2 - DETOUR PLAN

DESIGNED: RJB CHECKED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-139
DRAWN: JLM CHECKED: RJB		
REF.	CONT.	SCALE: 1"=100'
ACC.		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-140 -STAGE-1D-3-PLAN.dwg 2017-10-19 3:41 PM



- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-141.
 5. PLACE TRAFFIC SIGNAL ON FLASHING. CONTROL WILL BE PROVIDED WITH POLICE DETAIL.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.

THIS STAGE IS TO SET SOLDIER PILES FOR UTILITY SUPPORT

● PLATE OVER WORK ZONE DURING NON-WORK HOURS

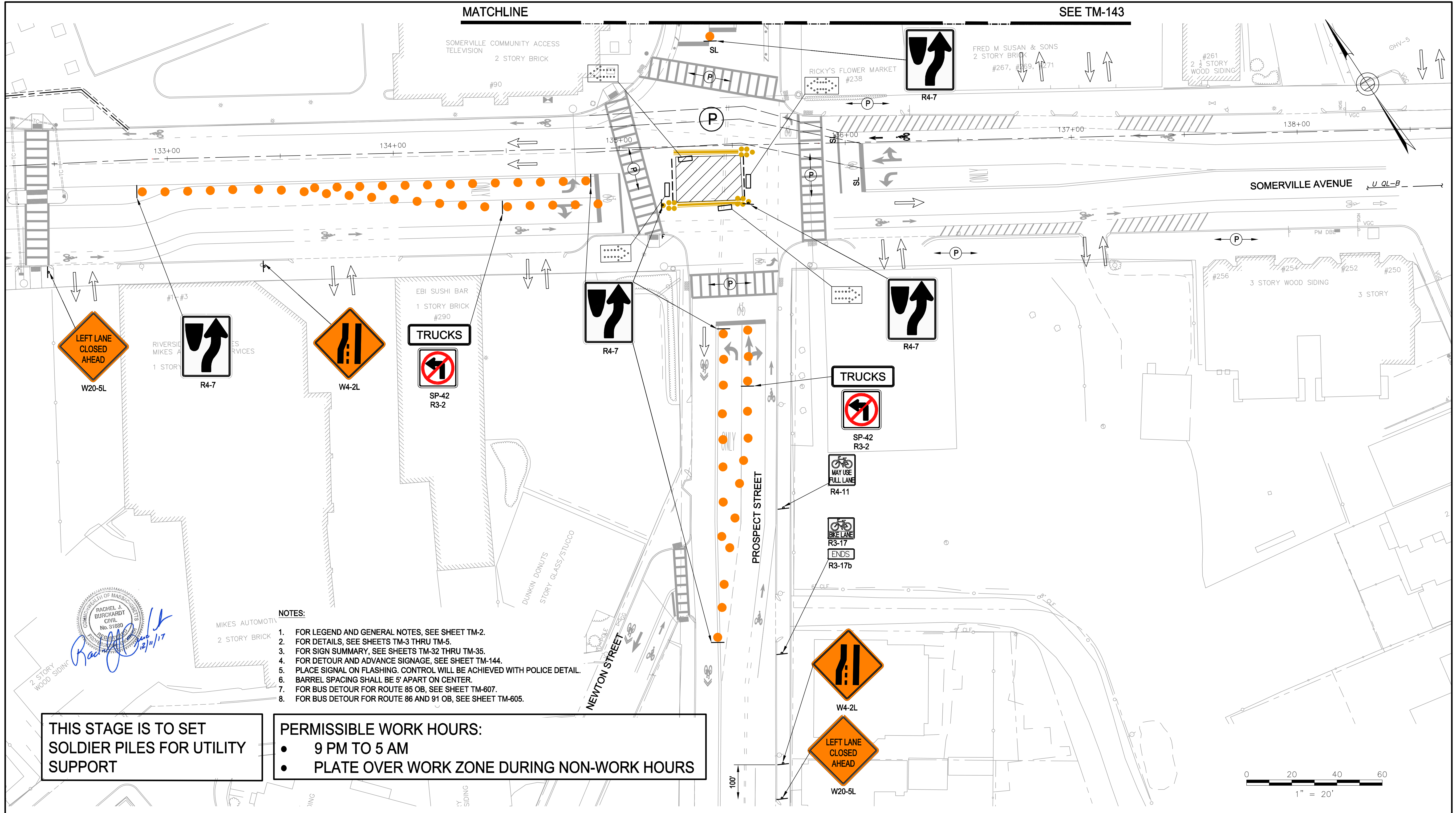
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1D-3 SHEET 1 OF 1

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-140
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-142 -STAGE-1D-4-PLAN.dwg 2017-10-24 3:06 PM



NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. FOR DETOUR AND ADVANCE SIGNAGE, SEE SHEET TM-144.
5. PLACE SIGNAL ON FLASHING. CONTROL WILL BE ACHIEVED WITH POLICE DETAIL.
6. BARREL SPACING SHALL BE 5' APART ON CENTER.
7. FOR BUS DETOUR FOR ROUTE 85 OB, SEE SHEET TM-607.
8. FOR BUS DETOUR FOR ROUTE 86 AND 91 OB, SEE SHEET TM-605.

THIS STAGE IS TO SET SOLDIER PILES FOR UTILITY SUPPORT

PERMISSIBLE WORK HOURS:

- 9 PM TO 5 AM
- PLATE OVER WORK ZONE DURING NON-WORK HOURS

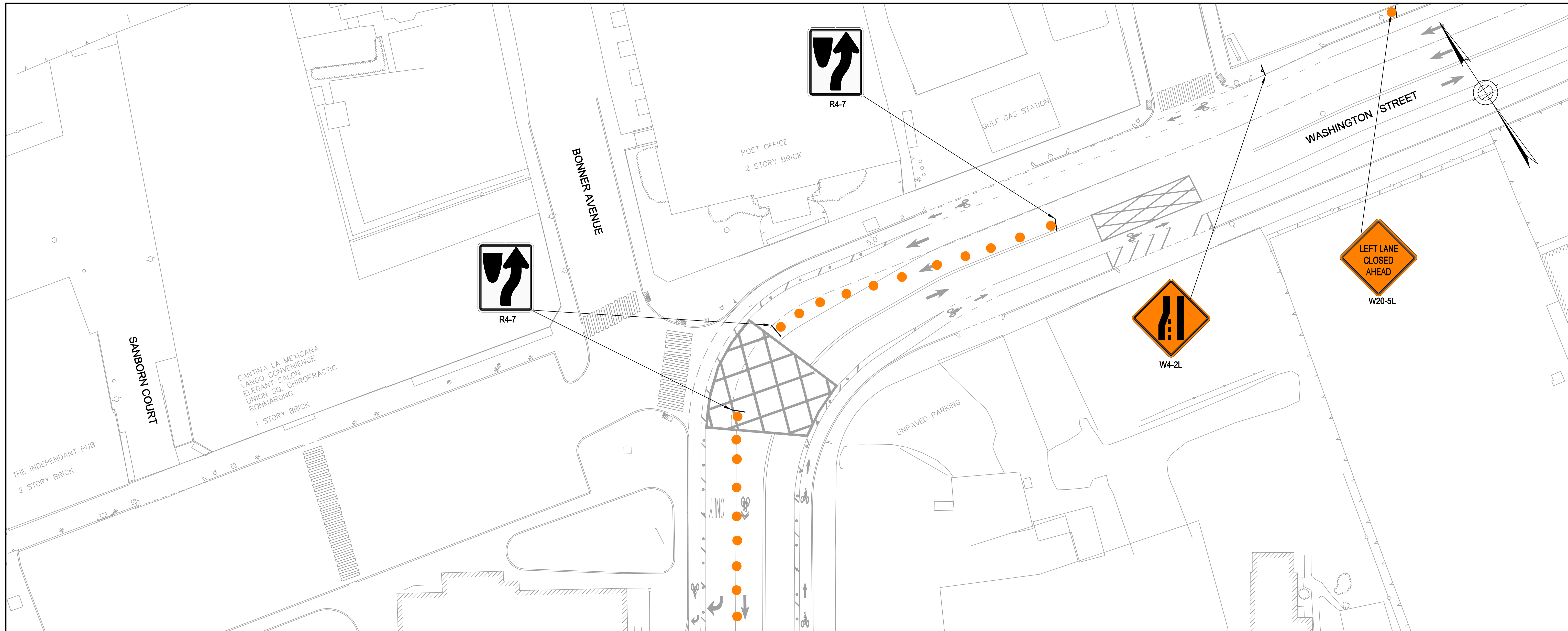
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1D-4 SHEET 1 OF 2

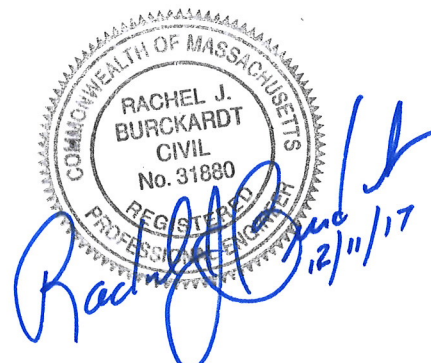
DESIGNED: LAC		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-142
CHECKED: RJB		REF.	CONT.	
DRAWN: LAC	ACC.	DATE: DEC 2017		CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143
CHECKED: RJB				

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MATCHLINE

SEE TM-142



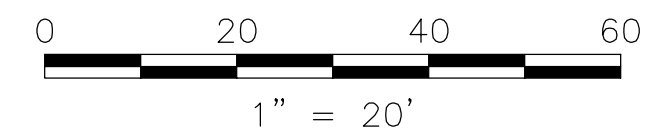
NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. FOR DETOUR AND ADVANCE SIGNAGE, SEE SHEET TM-144.
5. PLACE SIGNAL ON FLASHING. CONTROL WILL BE ACHIEVED WITH POLICE DETAIL.
6. BARREL SPACING SHALL BE 5' APART ON CENTER.

**THIS STAGE IS TO SET
SOLDIER PILES FOR UTILITY
SUPPORT**

PERMISSIBLE WORK HOURS:

- 9 PM TO 5 AM
- PLATE OVER WORK ZONE DURING NON-WORK HOURS



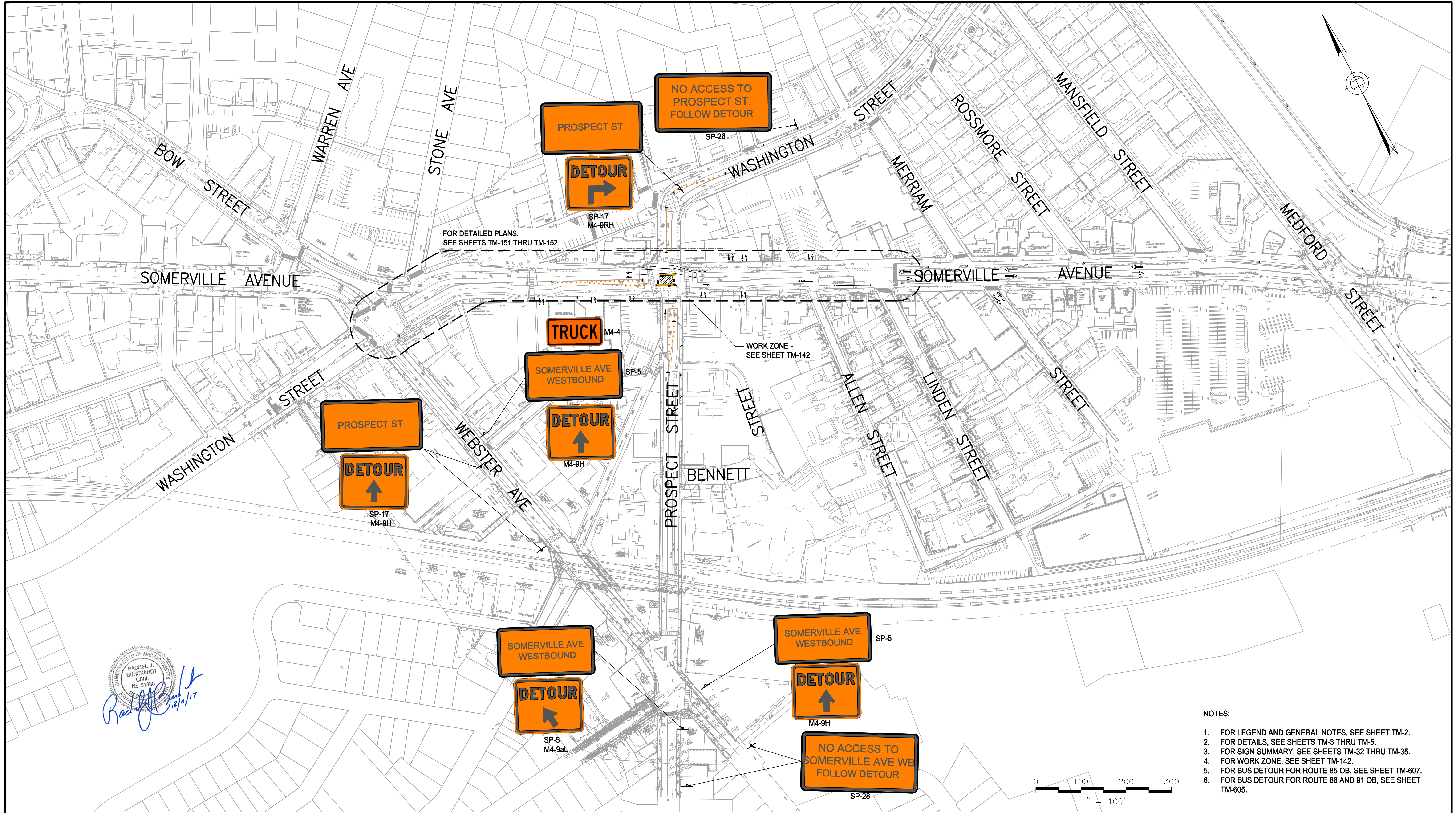
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1D-4 SHEET 2 OF 2

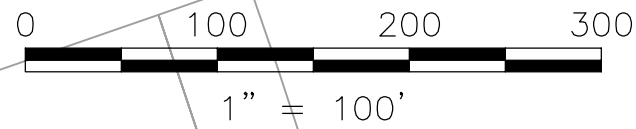
DESIGNED: LAC CHECKED: RJB	<p>Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487</p>	<p>SHEET TM-143</p>
DRAWN: LAC CHECKED: RJB		
REF.	CONT.	SCALE: 1"=20'
ACC.		DATE: DEC 2017
<p>CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143</p>		

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Rachel J. Burckardt
 12/11/17

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR WORK ZONE, SEE SHEET TM-142.
 5. FOR BUS DETOUR FOR ROUTE 85 OB, SEE SHEET TM-607.
 6. FOR BUS DETOUR FOR ROUTE 86 AND 91 OB, SEE SHEET TM-605.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 1D-4 - DETOUR PLAN

DESIGNED: RJB
 CHECKED: LAC
 DRAWN: JLM
 CHECKED: RJB

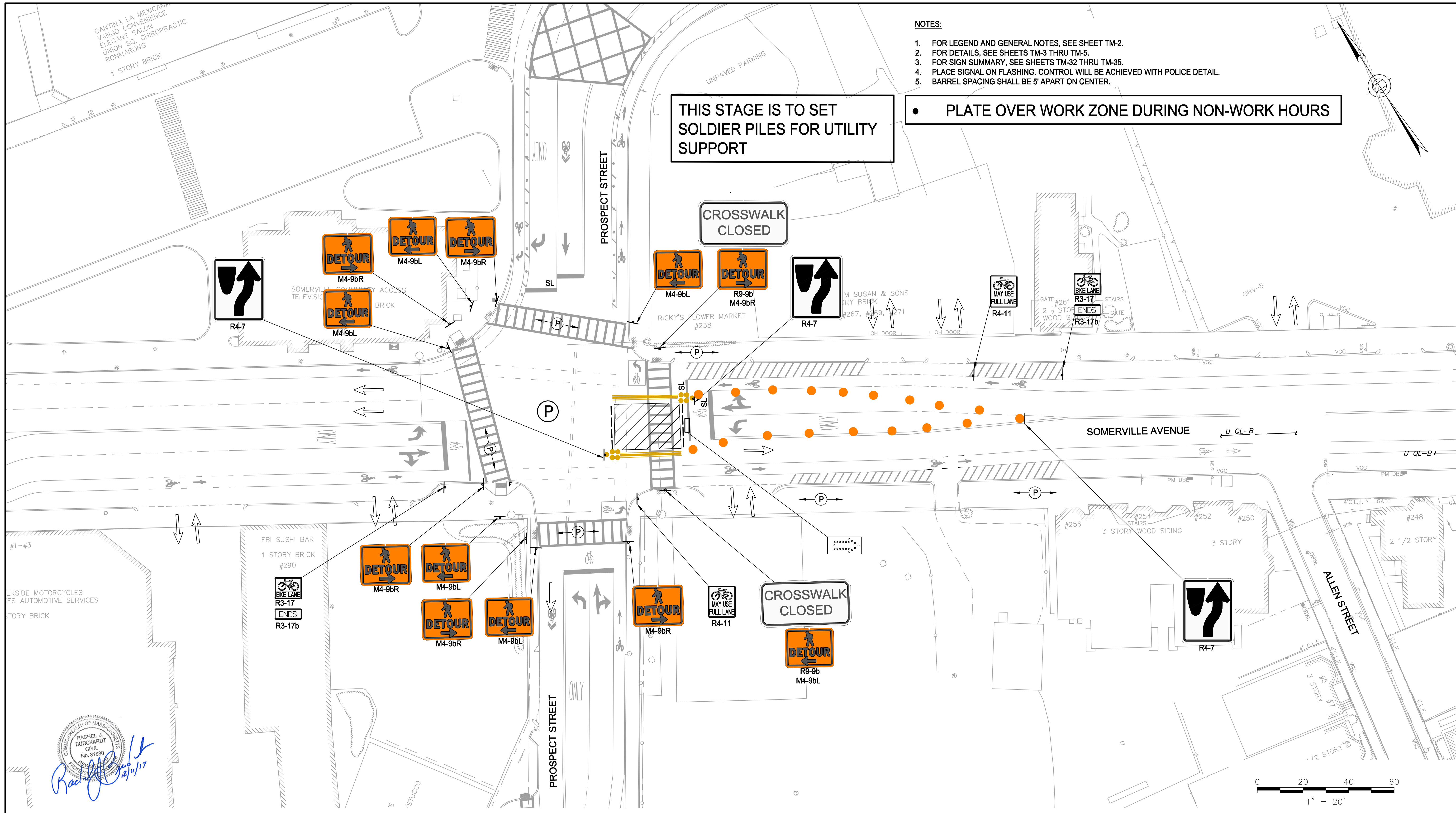
Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

REF.	CONT.	SCALE: 1"=100'
ACC.		DATE: DEC 2017

SHEET
TM-144

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

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NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. PLACE SIGNAL ON FLASHING. CONTROL WILL BE ACHIEVED WITH POLICE DETAIL.
5. BARREL SPACING SHALL BE 5' APART ON CENTER.

THIS STAGE IS TO SET SOLDIER PILES FOR UTILITY SUPPORT

• PLATE OVER WORK ZONE DURING NON-WORK HOURS

Rachel J. Burckardt

 CIVIL ENGINEER

 No. 31590

 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

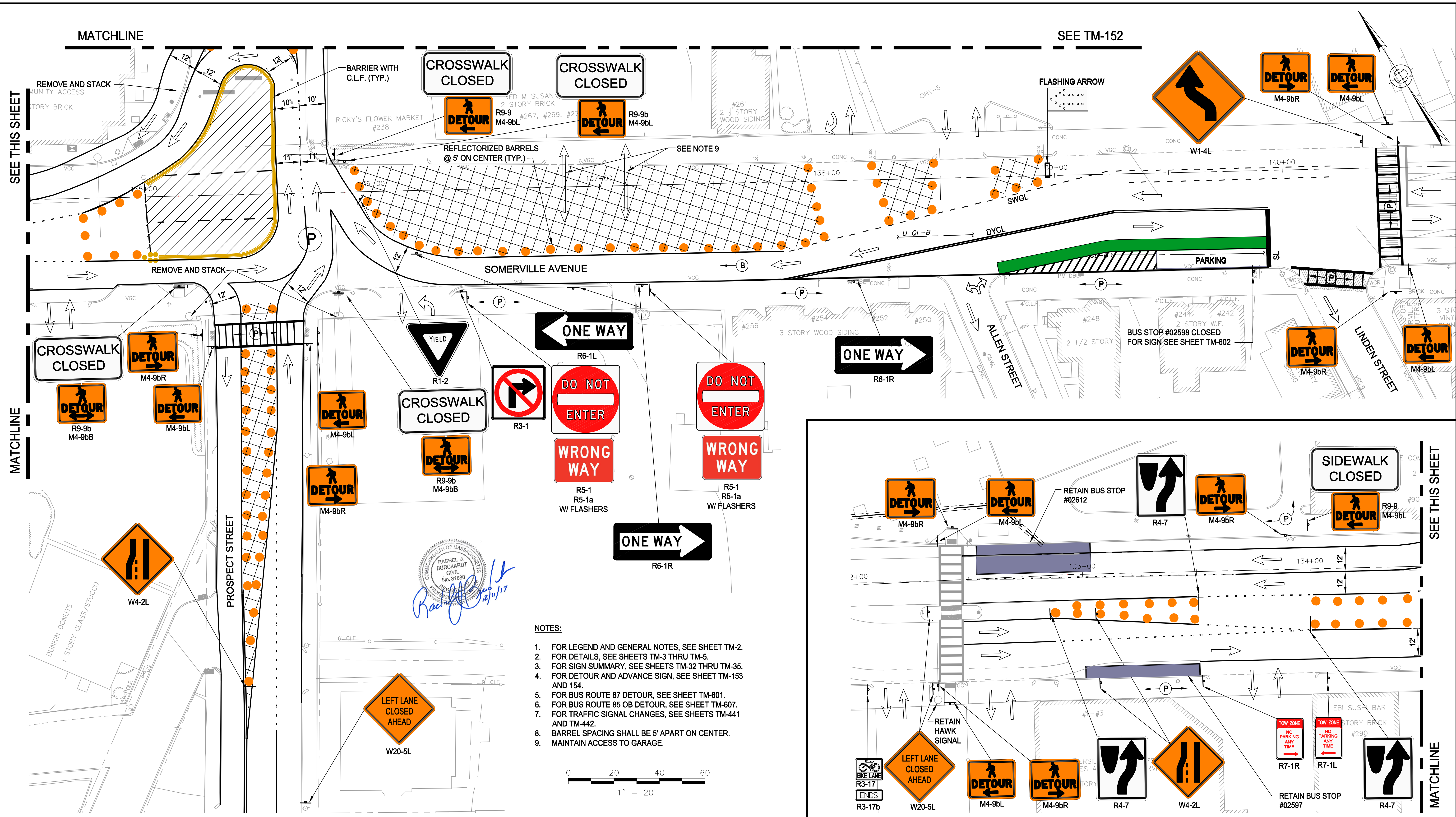
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1D-5 SHEET 1 OF 1

DESIGNED: LAC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-145
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017

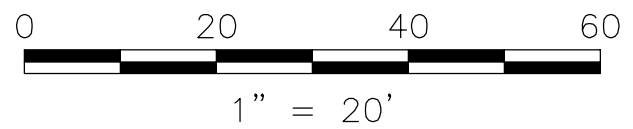
CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-12-05 10:35 AM T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-151 - STAGE-1E1-PLAN.dwg



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCE SIGN, SEE SHEET TM-153 AND 154.
 5. FOR BUS ROUTE 87 DETOUR, SEE SHEET TM-601.
 6. FOR BUS ROUTE 85 OB DETOUR, SEE SHEET TM-607.
 7. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-441 AND TM-442.
 8. BARREL SPACING SHALL BE 5' APART ON CENTER.
 9. MAINTAIN ACCESS TO GARAGE.



Rachel J. Burckardt

 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1E-1 SHEET 1 OF 2

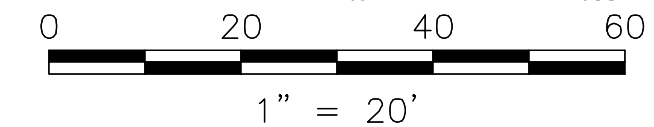
DESIGNED: RJB CHECKED: LAC DRAWN: JLM CHECKED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-151
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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Rachel J. Burckardt

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCE SIGN, SEE SHEET TM-153 AND 154.
 5. FOR BUS ROUTE 87 DETOUR, SEE SHEET TM-601.
 6. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-441 AND TM-442.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

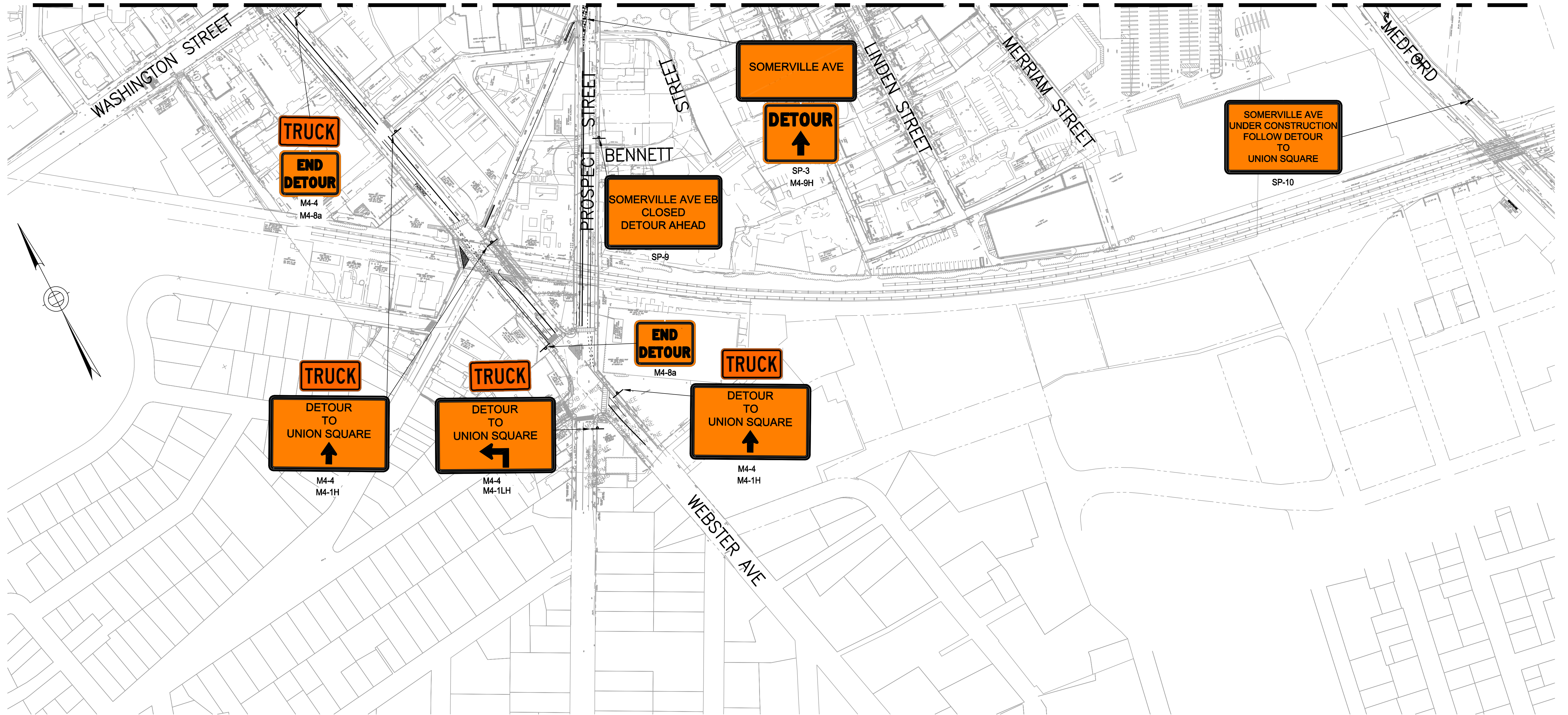
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1E-1 SHEET 2 OF 2

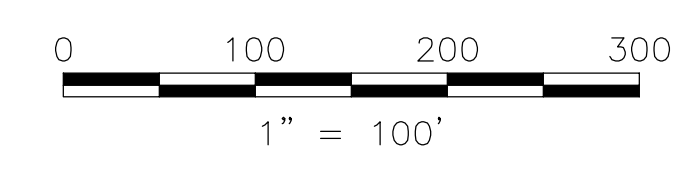
DESIGNED: RJB CHECKED: LAC DRAWN: JLM CHECKED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-152
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

MATCHLINE

SEE TM-154



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS ROUTE 87 DETOUR, SEE SHEET TM-601.
 5. FOR BUS ROUTE 85 OB DETOUR, SEE SHEET TM-607.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 1E-1 - DETOUR PLAN SHEET 1 OF 2

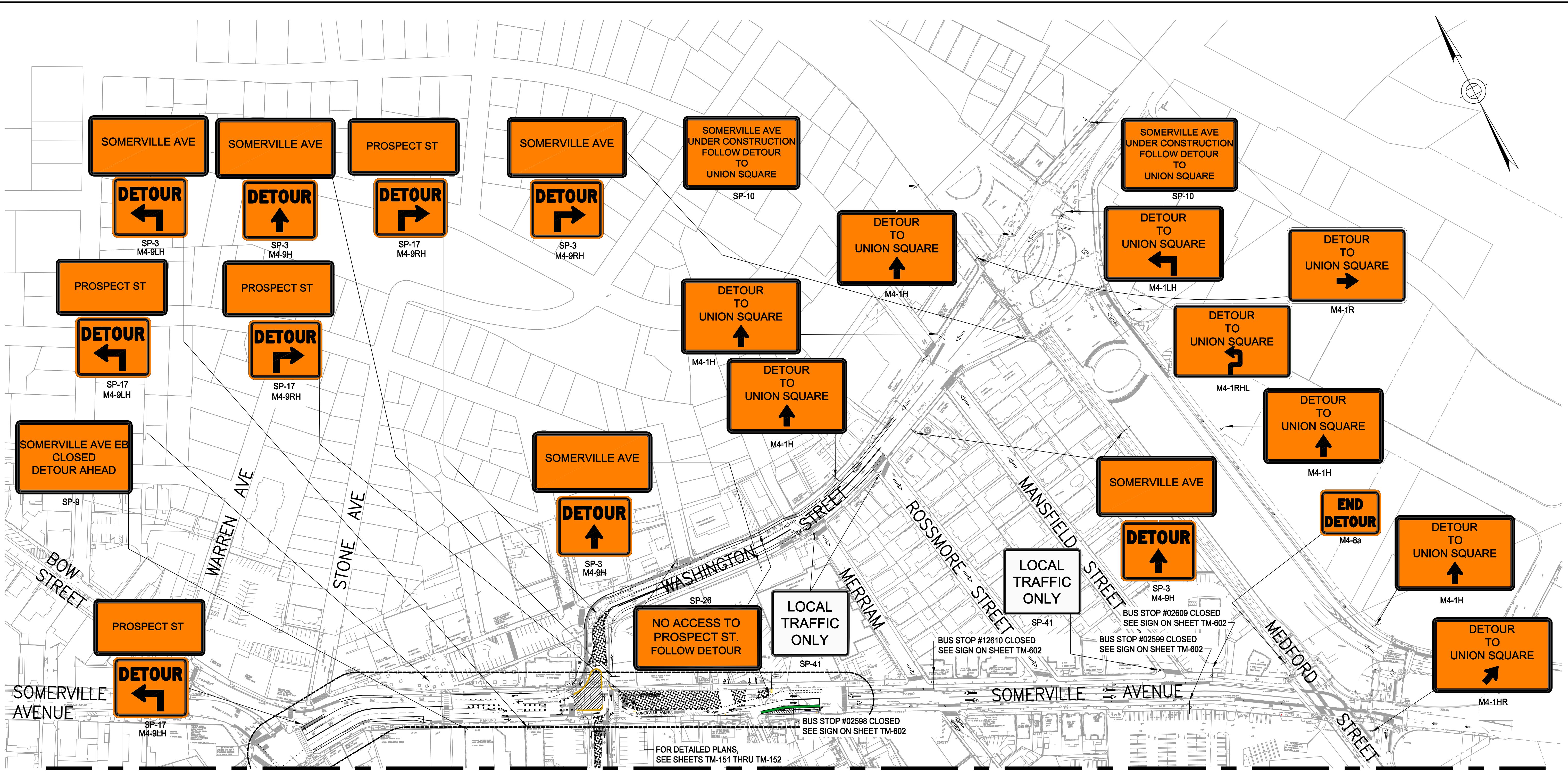
DESIGNED: RJB		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-153
CHECKED: LAC		REF.	CONT.	
DRAWN: JLM		ACC.		DATE: DEC 2017
CHECKED: RJB				

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

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NO.	DATE	REVISIONS	BY

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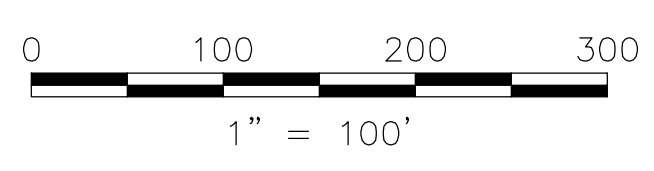
MATCHLINE

SEE TM-153

Rachel J. Burckardt

 12/11/17

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS ROUTE 87 DETOUR, SEE SHEET TM-601.
 5. FOR BUS ROUTE 85 OB DETOUR, SEE SHEET TM-607.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 1E-1 - DETOUR PLAN SHEET 2 OF 2

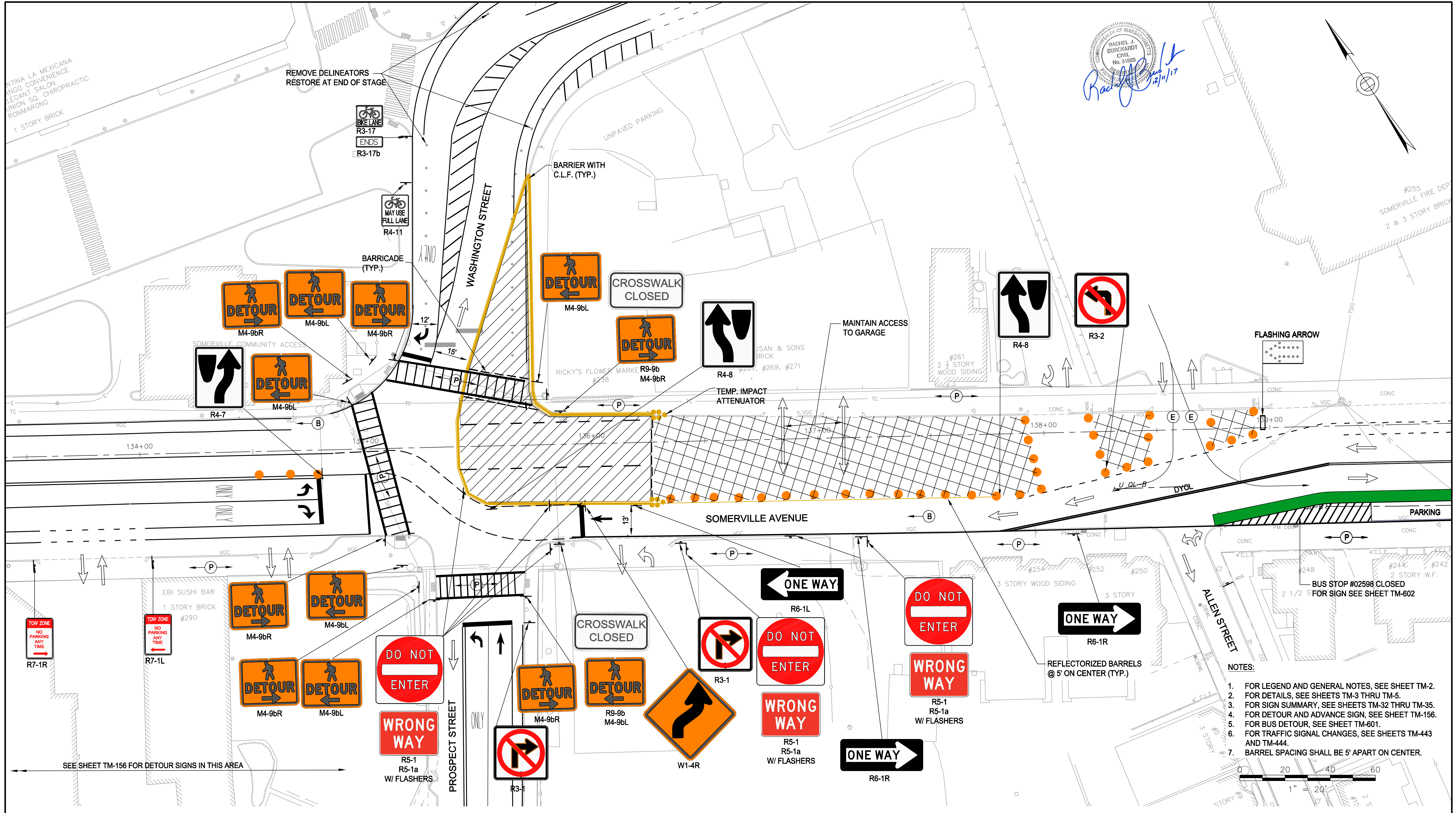
DESIGNED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-154
CHECKED: LAC		
DRAWN: JLM	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=100' DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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2017-12-05 10:39 AM



Rachel J. Burckardt
Civil Engineer
No. 31880
DEC 11/17

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCE SIGN, SEE SHEET TM-156.
 5. FOR BUS DETOUR, SEE SHEET TM-601.
 6. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-443 AND TM-444.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

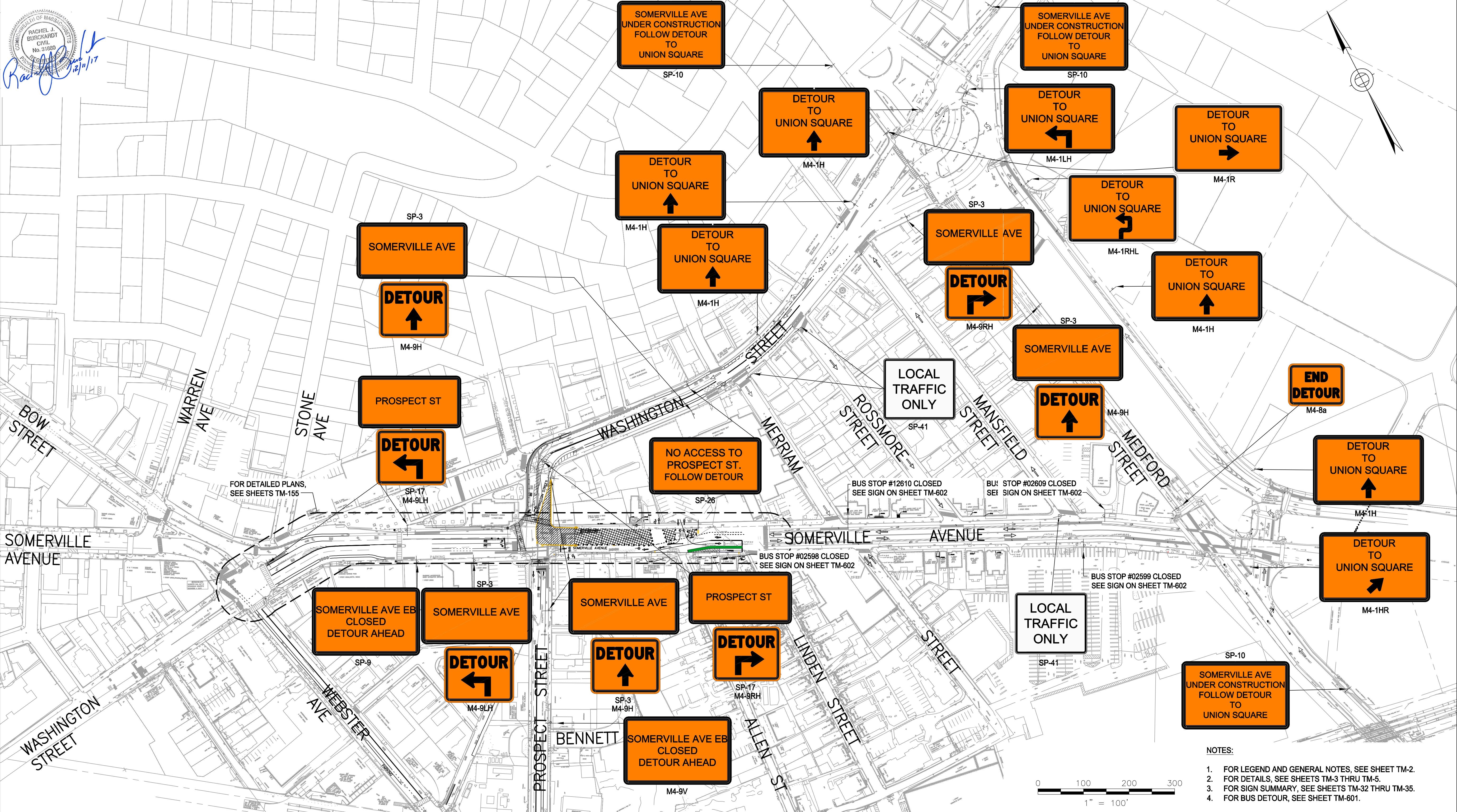
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1E-2 SHEET 1 OF 1

DESIGNED: RJB		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-155
CHECKED: LAC		REF.	CONT.	
DRAWN: JLM	ACC.		DATE: DEC 2017	
CHECKED: RJB	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143			

NO.	DATE	REVISIONS	BY

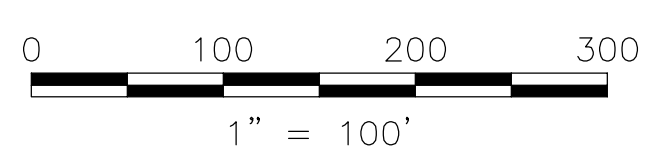


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FOR DETAILED PLANS, SEE SHEETS TM-155

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-601.



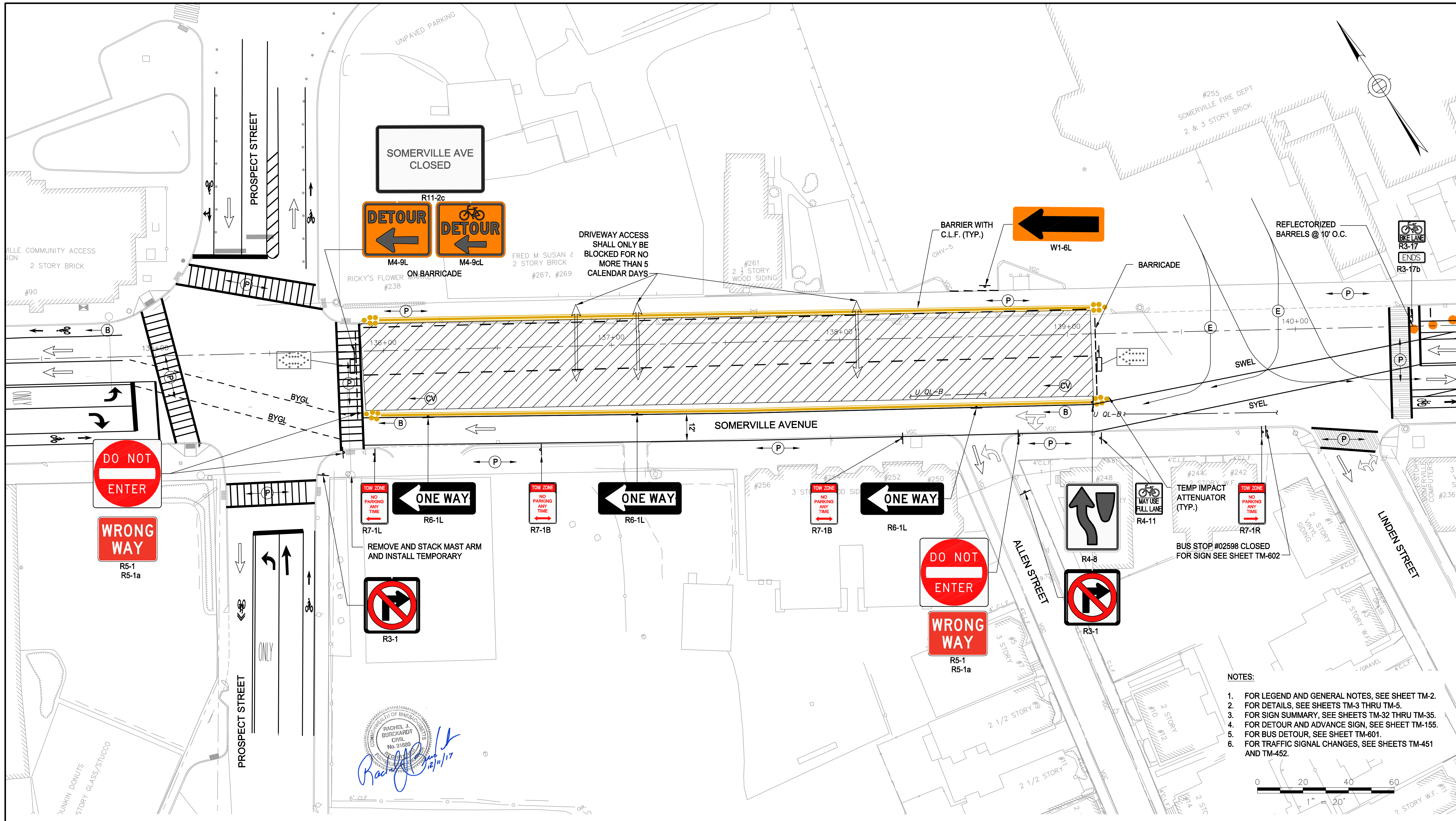
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

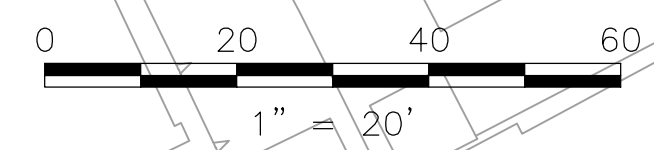
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 1E-2 - DETOUR PLAN

DESIGNED: RJB		Parsons Brinckerhoff, Inc.		SHEET
CHECKED: LAC		75 Arlington St. Boston, MA 02116		
DRAWN: JLM	REF.	CONT.	SCALE: 1"=100'	CITY OF SOMERVILLE
CHECKED: RJB	ACC.		DATE: DEC 2017	
SOMERVILLE, MA 02143				

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- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCE SIGN, SEE SHEET TM-155.
 5. FOR BUS DETOUR, SEE SHEET TM-601.
 6. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-451 AND TM-452.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

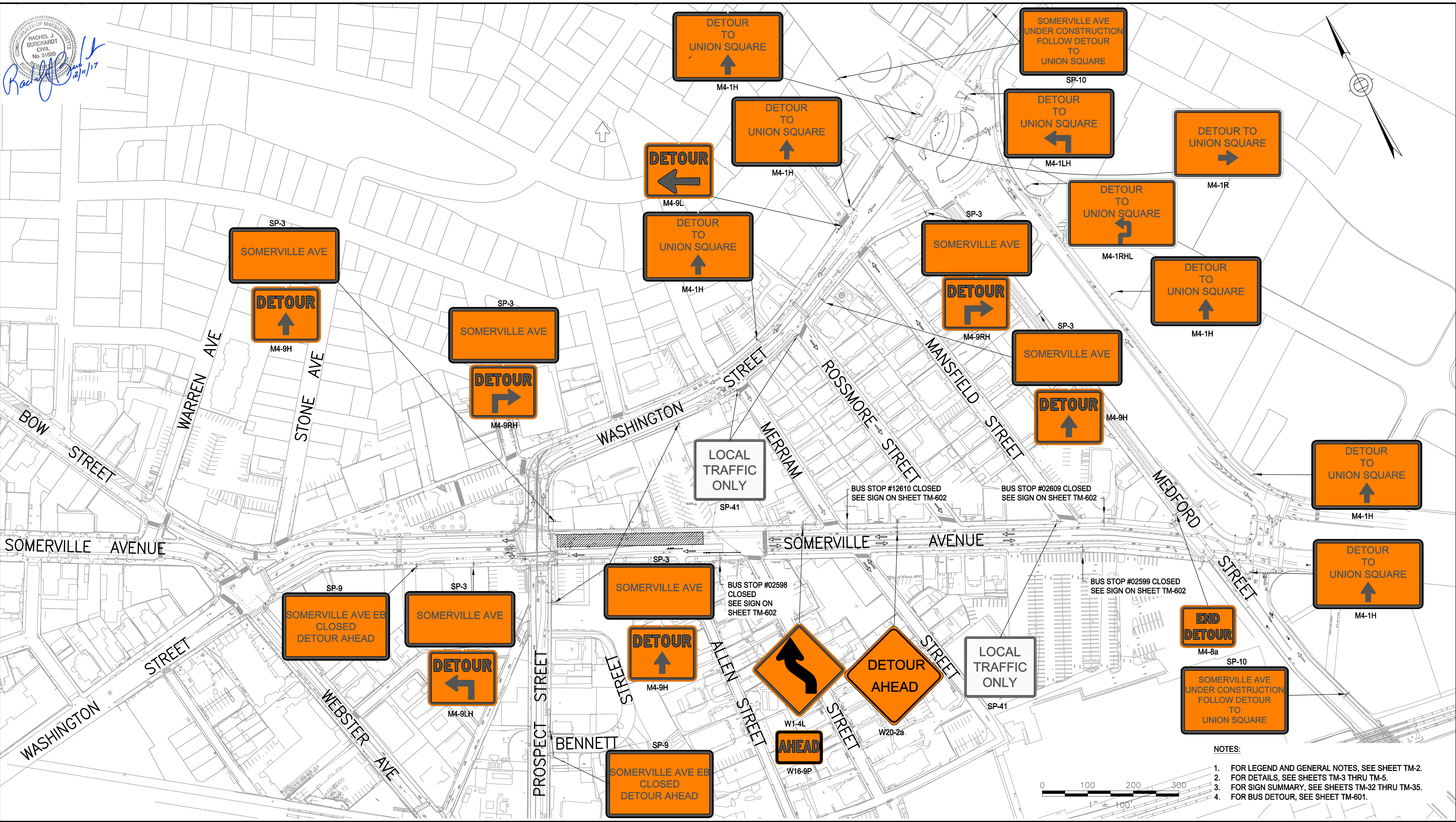
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 1F

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-161
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

COMMISSION OF MASS. REGISTERED PROFESSIONAL ENGINEERS
 RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 REG. 12/11/17

T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-165 - STAGE-1F-DETOUR.dwg 2017-12-11 9:19 AM



- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-601.

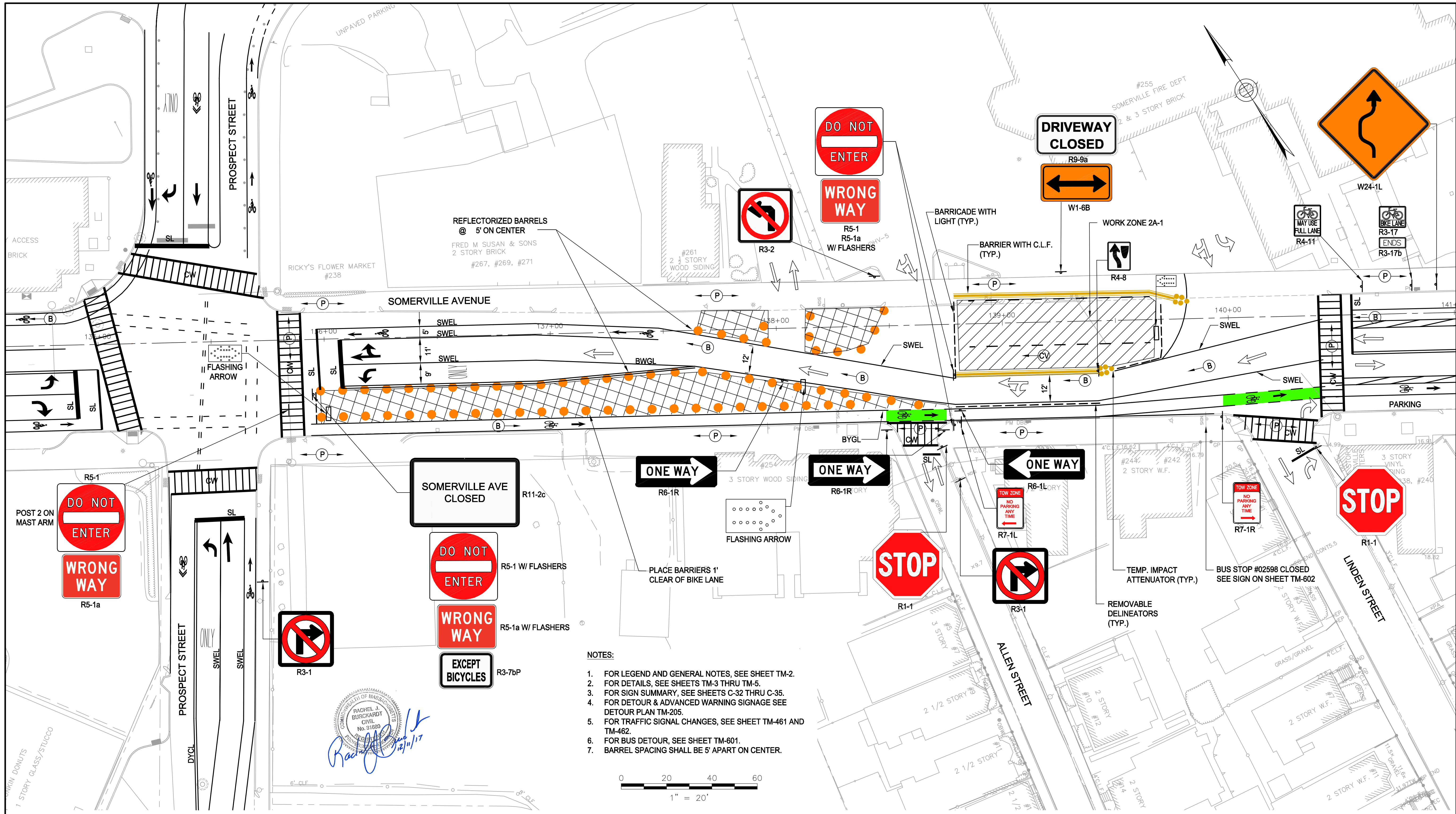
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

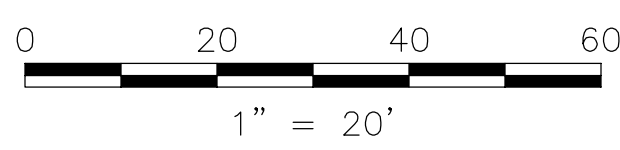
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 1F - DETOUR PLAN

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
CHECKED: LAC		TM-165
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=100'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-201 -STAGE-2A-PLAN_1.dwg
 2017-11-08 3:22 PM



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS C-32 THRU C-35.
 4. FOR DETOUR & ADVANCED WARNING SIGNAGE SEE DETOUR PLAN TM-205.
 5. FOR TRAFFIC SIGNAL CHANGES, SEE SHEET TM-461 AND TM-462.
 6. FOR BUS DETOUR, SEE SHEET TM-601.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

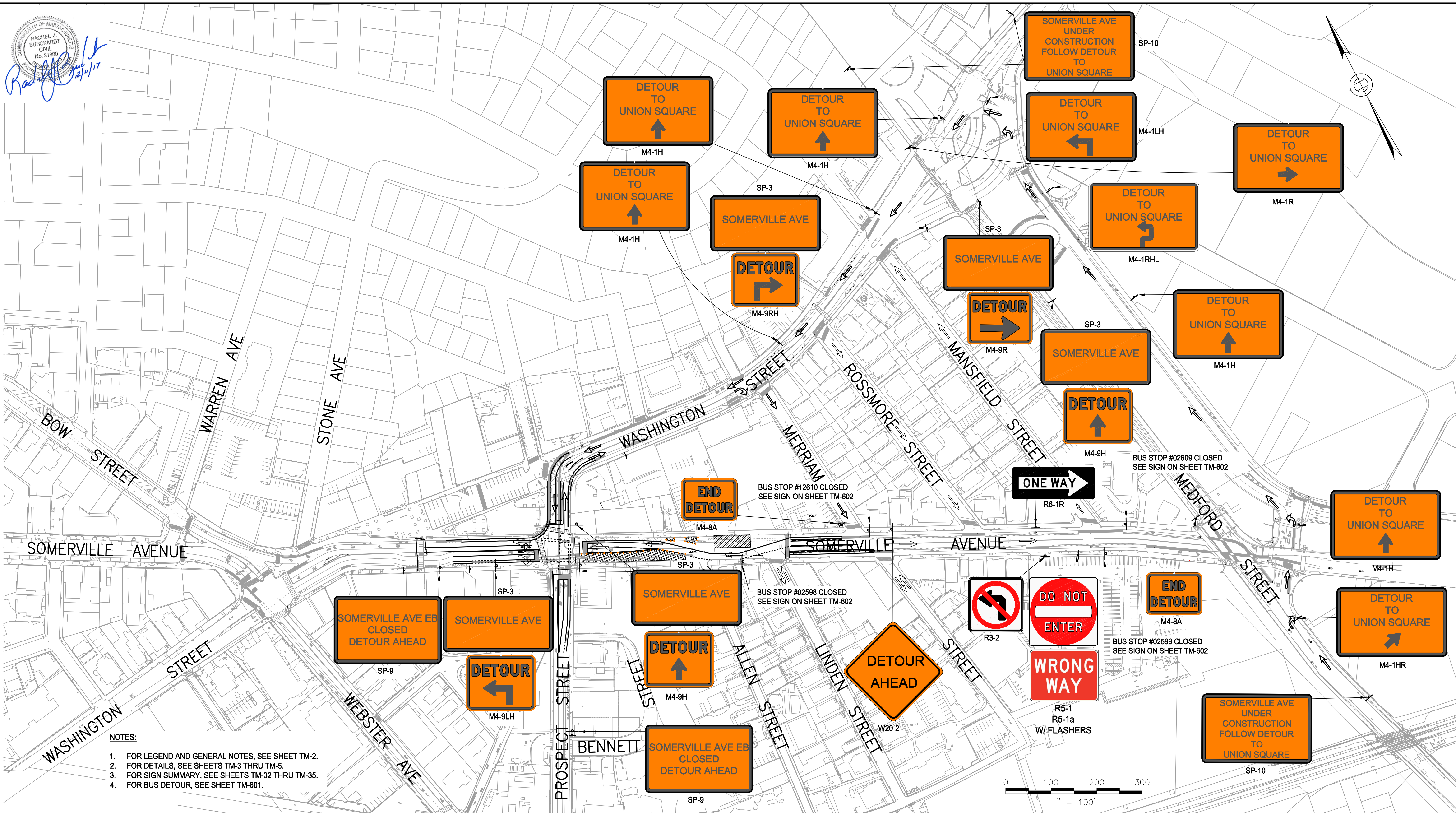
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2A

DESIGNED: RJB CHECKED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-201
DRAWN: LAC CHECKED: RJB		
REF.	CONT.	SCALE: 1"=20'
ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

Rachel J. Burckardt
 CIVIL
 No. 31680
 REGISTERED PROFESSIONAL ENGINEER
 State of Massachusetts
 12/11/17

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-205 - STAGE-2A-DETOUR.dwg 2017-10-24 1:58 PM



- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-601.

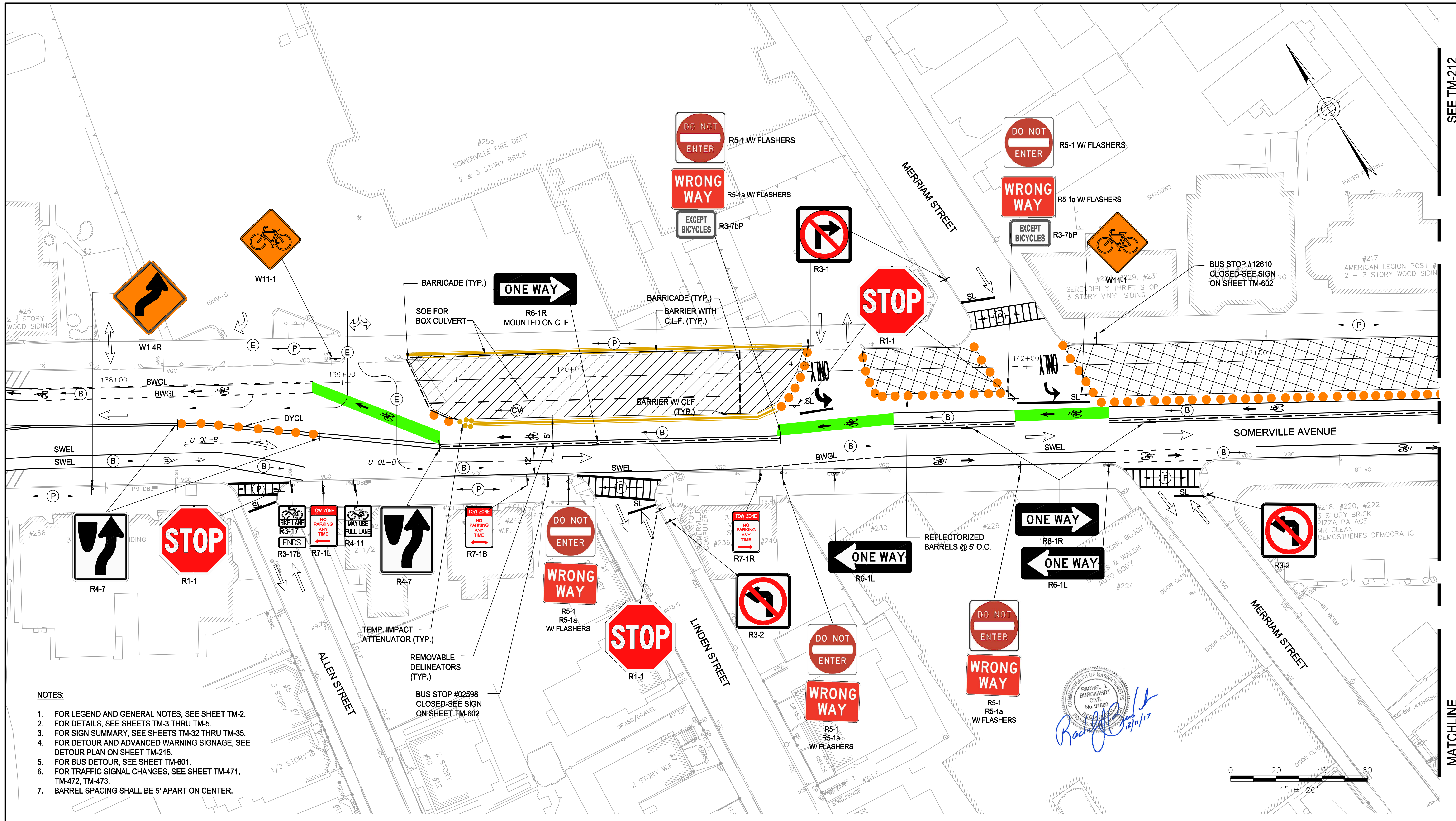
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 2A - DETOUR PLAN

DESIGNED: RJB		Parsons Brinckerhoff, Inc.		SHEET
CHECKED: LAC		75 Arlington St. Boston, MA 02116		
DRAWN: LAC	REF.	CONT.	PH. (617)426-7330 FAX (617)482-8487	
CHECKED: RJB	ACC.		SCALE: 1"=100'	
			DATE: DEC 2017	
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143				

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-211 -STAGE-2B-PLAN.dwg 2017-10-09 1:47 PM



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCED WARNING SIGNAGE, SEE DETOUR PLAN ON SHEET TM-215.
 5. FOR BUS DETOUR, SEE SHEET TM-601.
 6. FOR TRAFFIC SIGNAL CHANGES, SEE SHEET TM-471, TM-472, TM-473.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS

**CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2B SHEET 1 OF 2**

DESIGNED: RJB
CHECKED: LAC
DRAWN: LAC
CHECKED: RJB

WSP | PARSONS BRINCKERHOFF
Parsons Brinckerhoff, Inc.
75 Arlington St. Boston, MA 02116
PH. (617)426-7330 FAX (617)482-8487

REF. CONT. SCALE: 1"=20'
ACC. DATE: DEC 2017

SHEET
TM-211

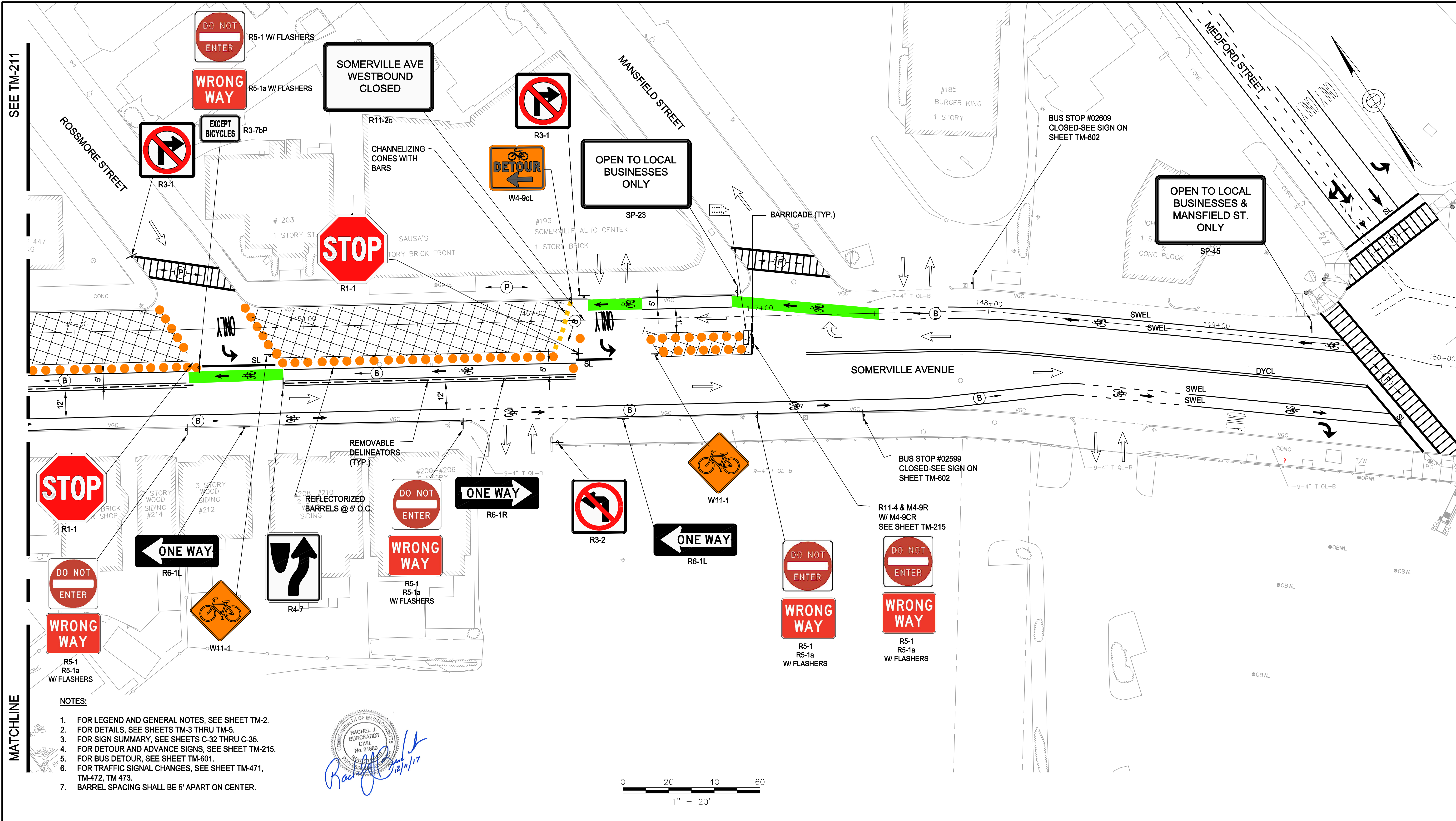
CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

SEE TM-212

MATCHLINE

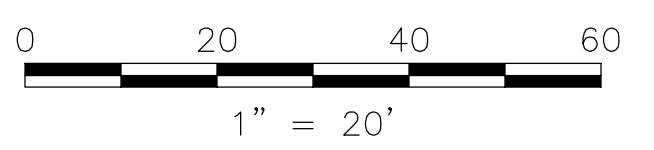
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MATCHLINE

- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS C-32 THRU C-35.
 4. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-215.
 5. FOR BUS DETOUR, SEE SHEET TM-601.
 6. FOR TRAFFIC SIGNAL CHANGES, SEE SHEET TM-471, TM-472, TM 473.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.

RACHEL J. BURCKARDT
 CIVIL
 No. 31820
 12/11/17



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

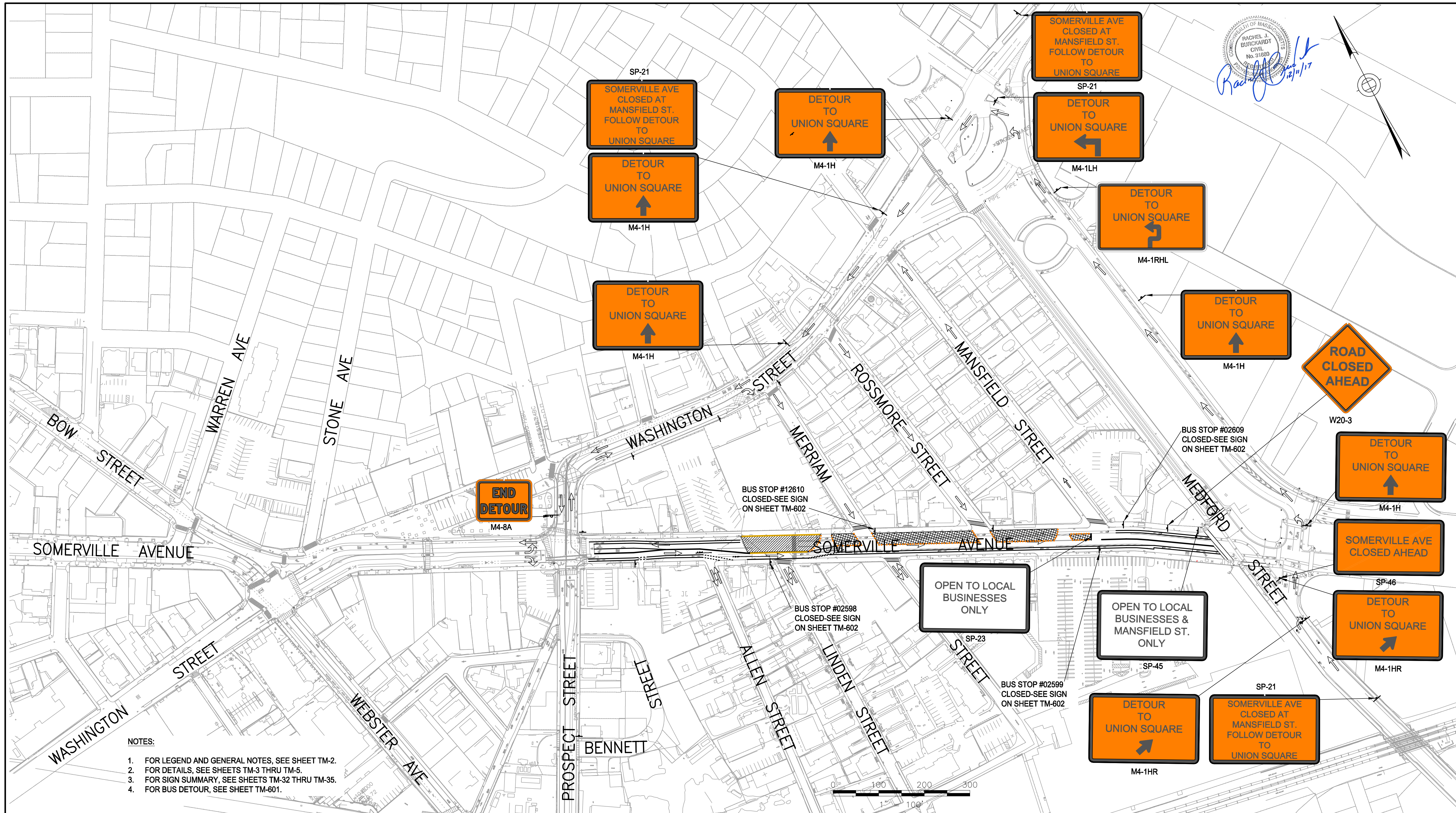
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2B SHEET 2 OF 2

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-212
CHECKED: LAC		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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 Rachel J. Burckardt
 12/11/17



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-601.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

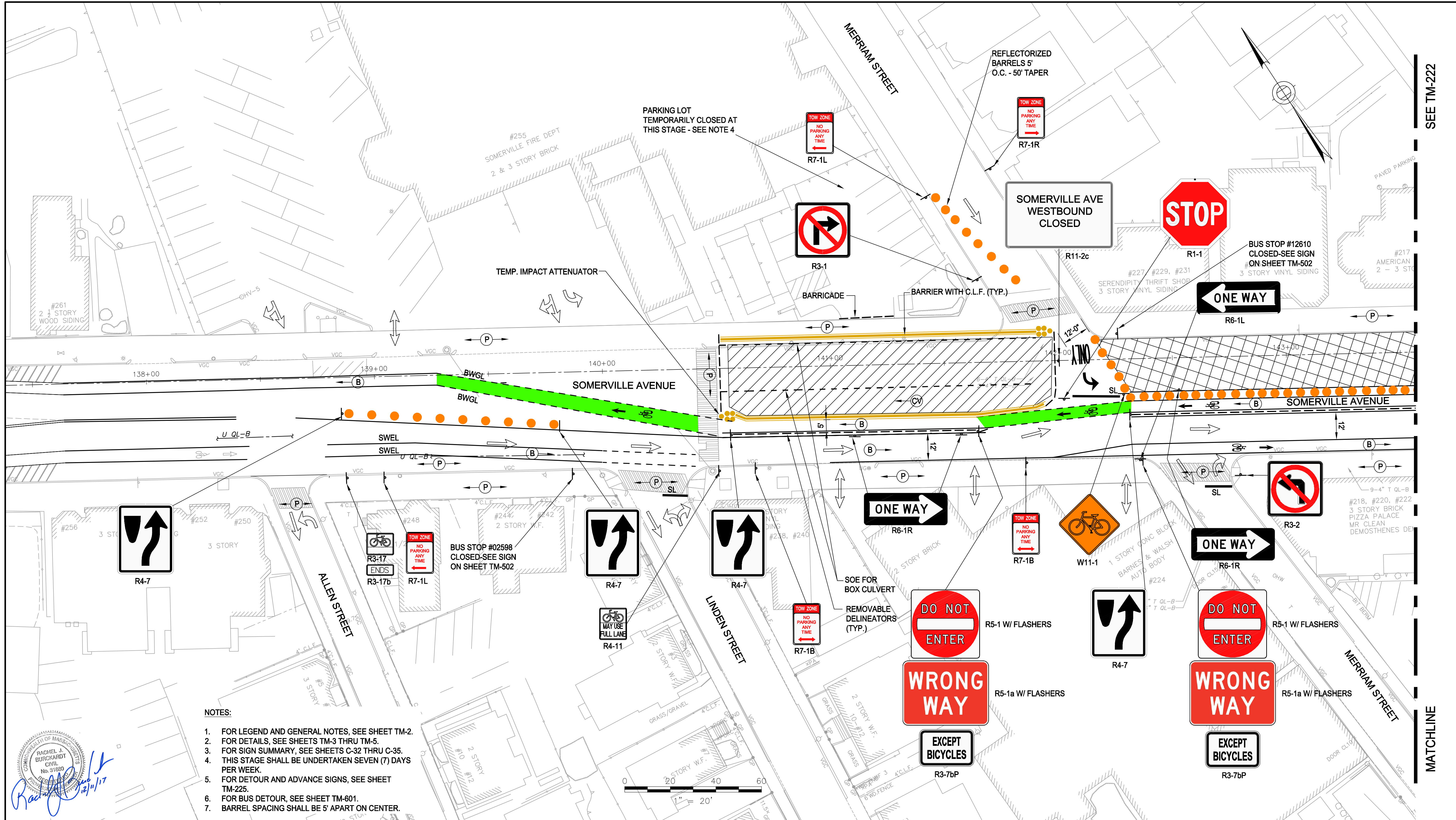
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 2B - DETOUR PLAN

DESIGNED: RJB		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET
CHECKED: LAC		TM-215		
DRAWN: LAC	REF.	CONT.	SCALE: 1"=100'	
CHECKED: RJB	ACC.		DATE: DEC 2017	

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS C-32 THRU C-35.
 4. THIS STAGE SHALL BE UNDERTAKEN SEVEN (7) DAYS PER WEEK.
 5. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-225.
 6. FOR BUS DETOUR, SEE SHEET TM-601.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.

Rachel J. Burckardt

 CIVIL

 No. 31980

 State of Massachusetts

 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2C SHEET 1 OF 2

DESIGNED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-221
CHECKED: LAC		
DRAWN: JLM	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

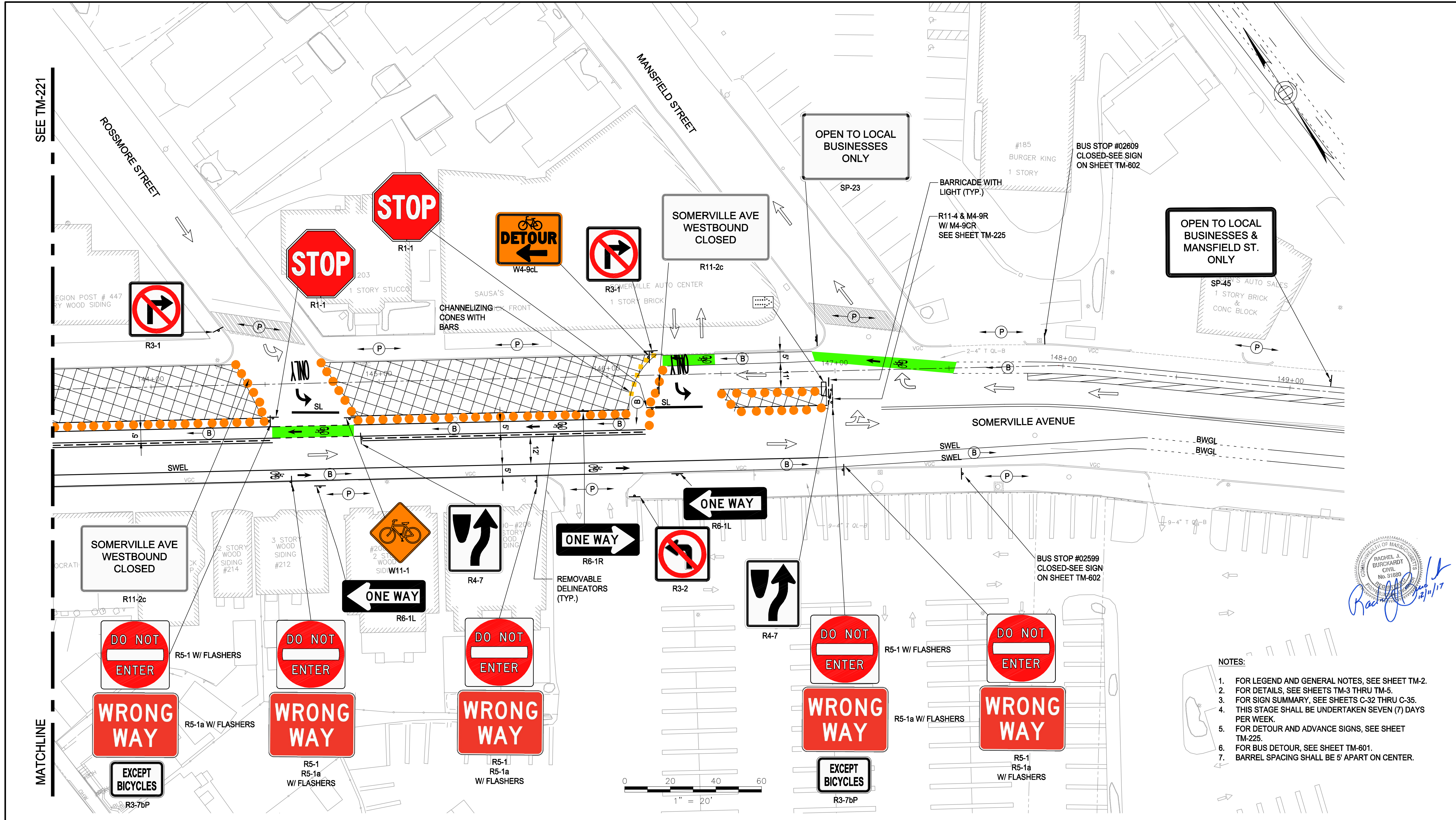
NO.	DATE	REVISIONS	BY

SEE TM-222

MATCHLINE

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2017-11-15 2:11 PM



RACHEL J. BURCKARDT
 CIVIL
 NO. 91880
 STATE OF MASSACHUSETTS

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS C-32 THRU C-35.
 4. THIS STAGE SHALL BE UNDERTAKEN SEVEN (7) DAYS PER WEEK.
 5. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-225.
 6. FOR BUS DETOUR, SEE SHEET TM-601.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2C SHEET 2 OF 2

DESIGNED: RJB
 CHECKED: LAC
 DRAWN: JLM
 CHECKED: RJB

Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

SHEET
TM-222

REF.
 ACC.

CONT.

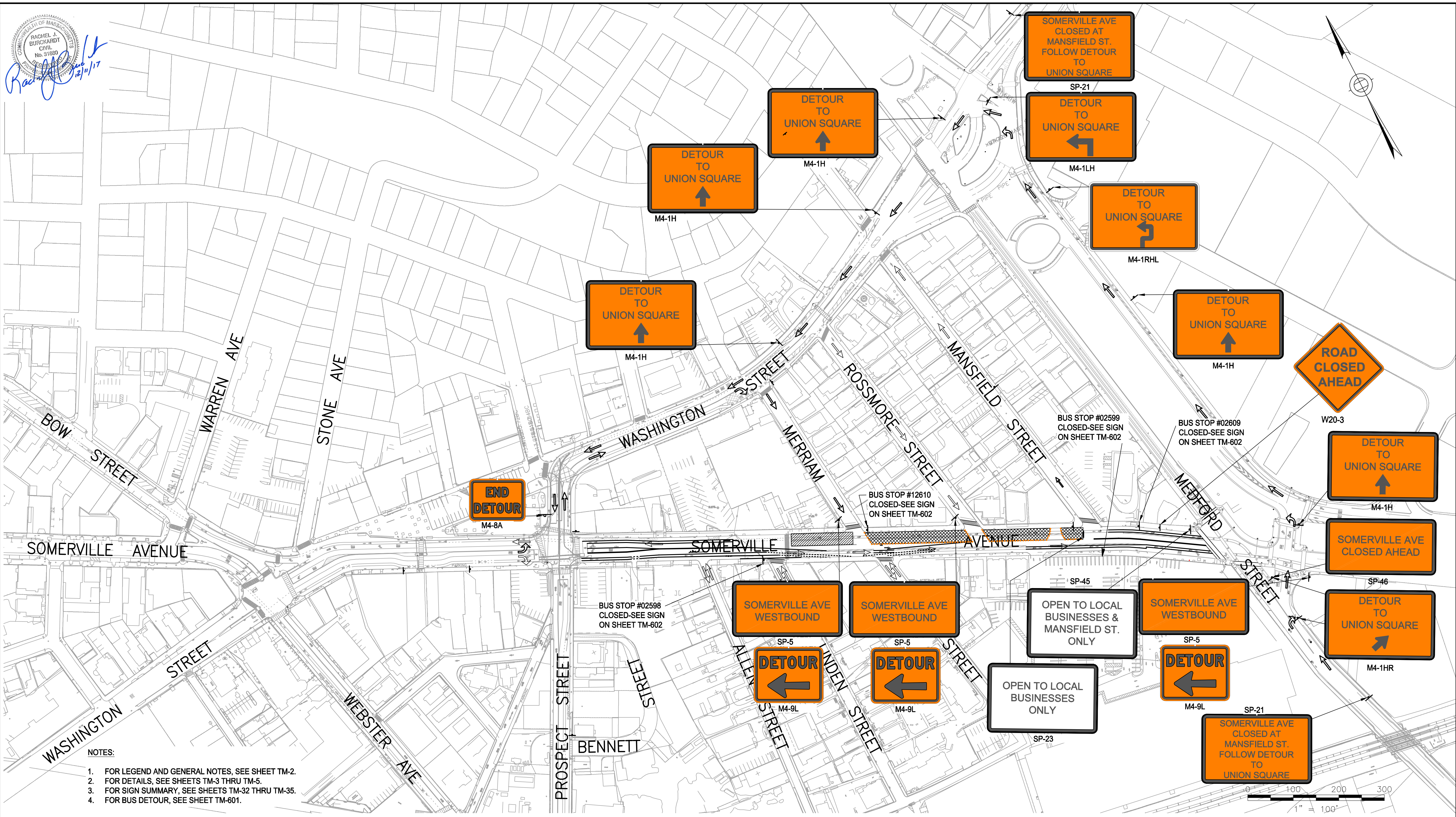
SCALE: 1"=20'
 DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 STATE OF MASSACHUSETTS
 12/11/17

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-225 - STAGE-2C-DETOUR.dwg
 2017-10-09 4:03 PM



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-601.

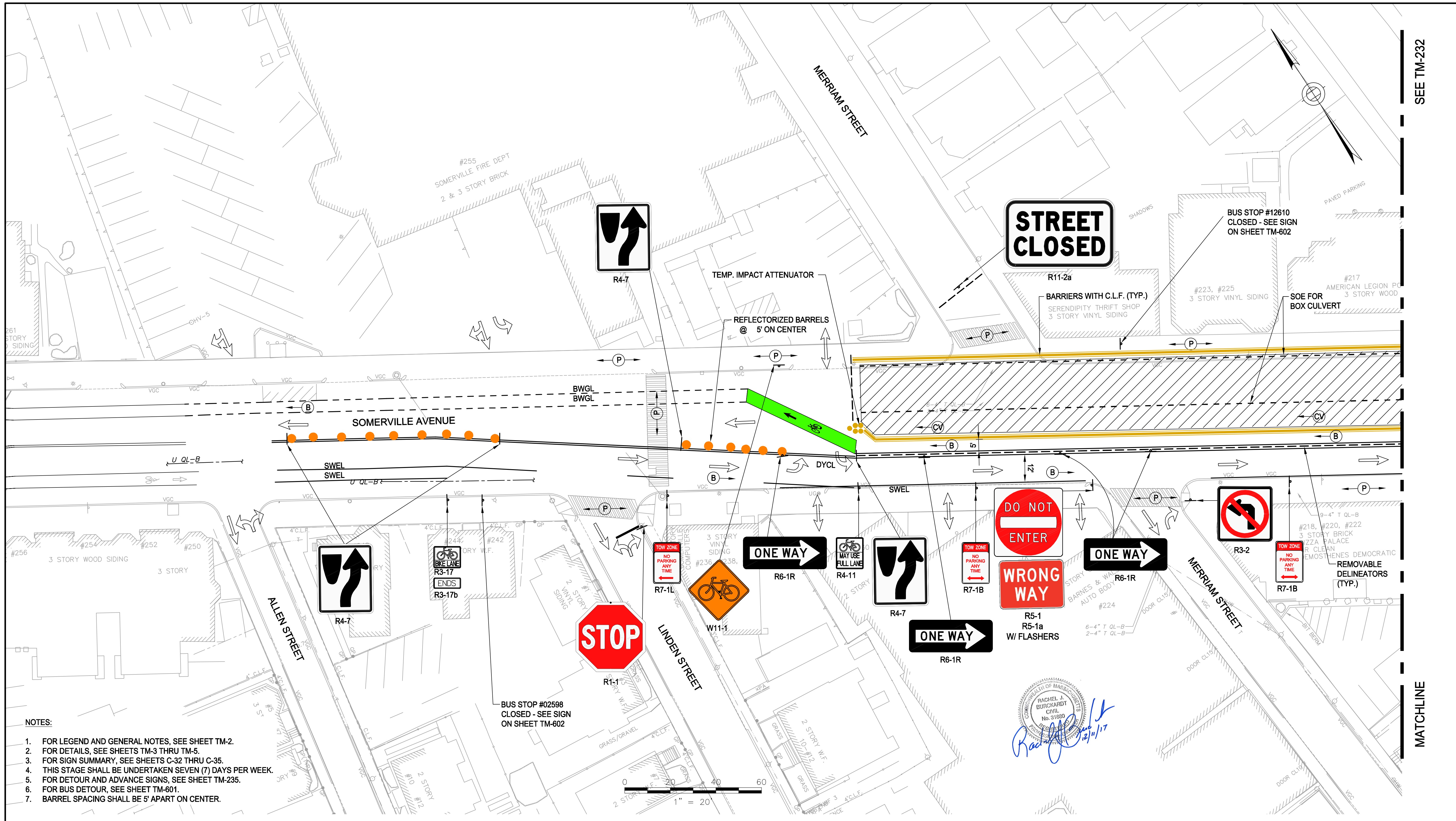
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 2C - DETOUR PLAN

DESIGNED: RJB CHECKED: LAC DRAWN: JLM CHECKED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-225
REF. ACC.	CONT.	SCALE: 1"=100' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

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NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS C-32 THRU C-35.
4. THIS STAGE SHALL BE UNDERTAKEN SEVEN (7) DAYS PER WEEK.
5. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-235.
6. FOR BUS DETOUR, SEE SHEET TM-601.
7. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2D SHEET 1 OF 2

DESIGNED: RJB
 CHECKED: LAC
 DRAWN: JLM
 CHECKED: RJB

WSP | **PARSONS BRINCKERHOFF**
 Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

REF.	CONT.	SCALE: 1"=20'
ACC.		DATE: DEC 2017

SHEET
TM-231

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

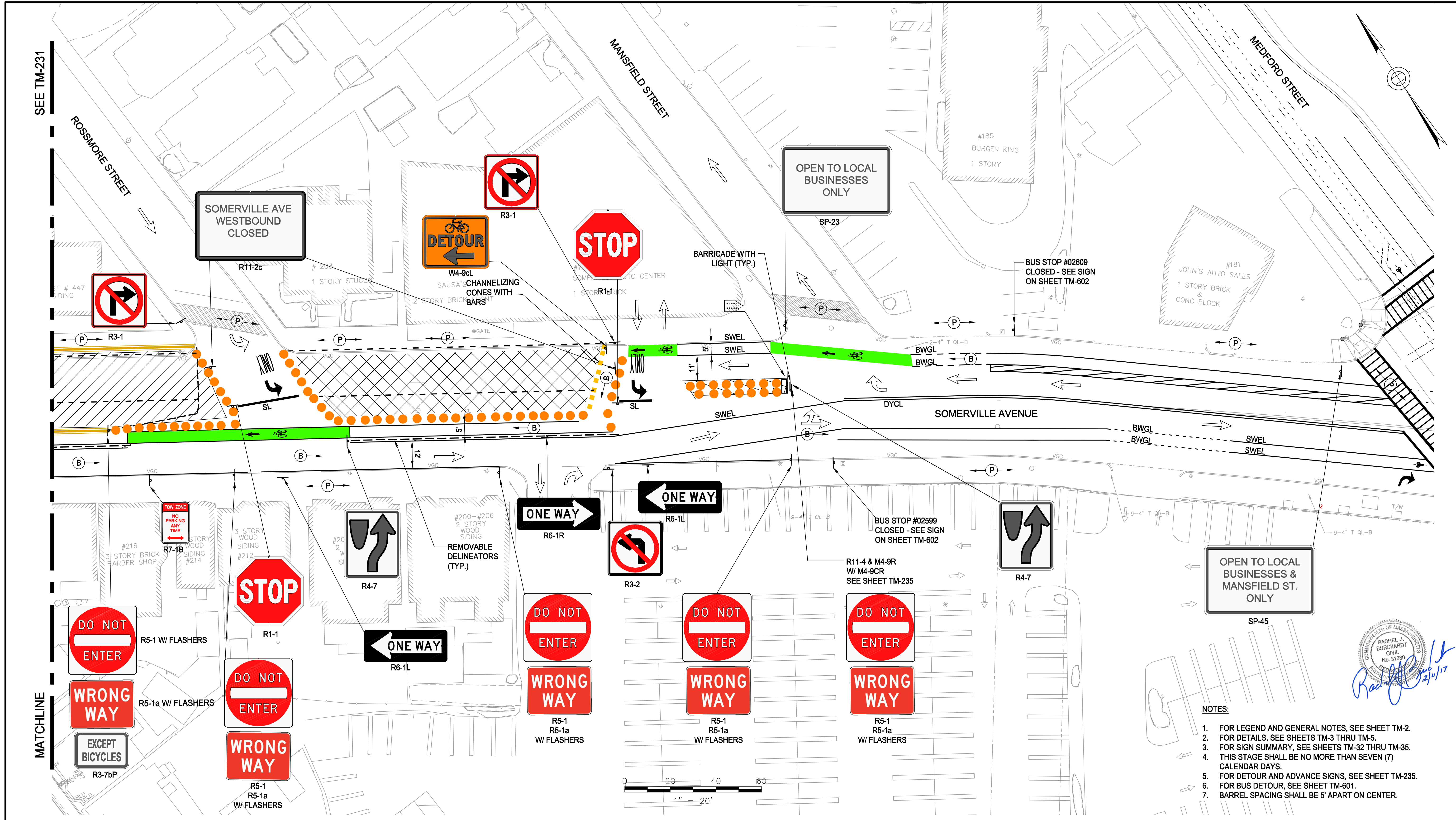
NO.	DATE	REVISIONS	BY

SEE TM-232

MATCHLINE

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2017-10-09 3:36 PM



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. THIS STAGE SHALL BE NO MORE THAN SEVEN (7) CALENDAR DAYS.
 5. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-235.
 6. FOR BUS DETOUR, SEE SHEET TM-601.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2D SHEET 2 OF 2

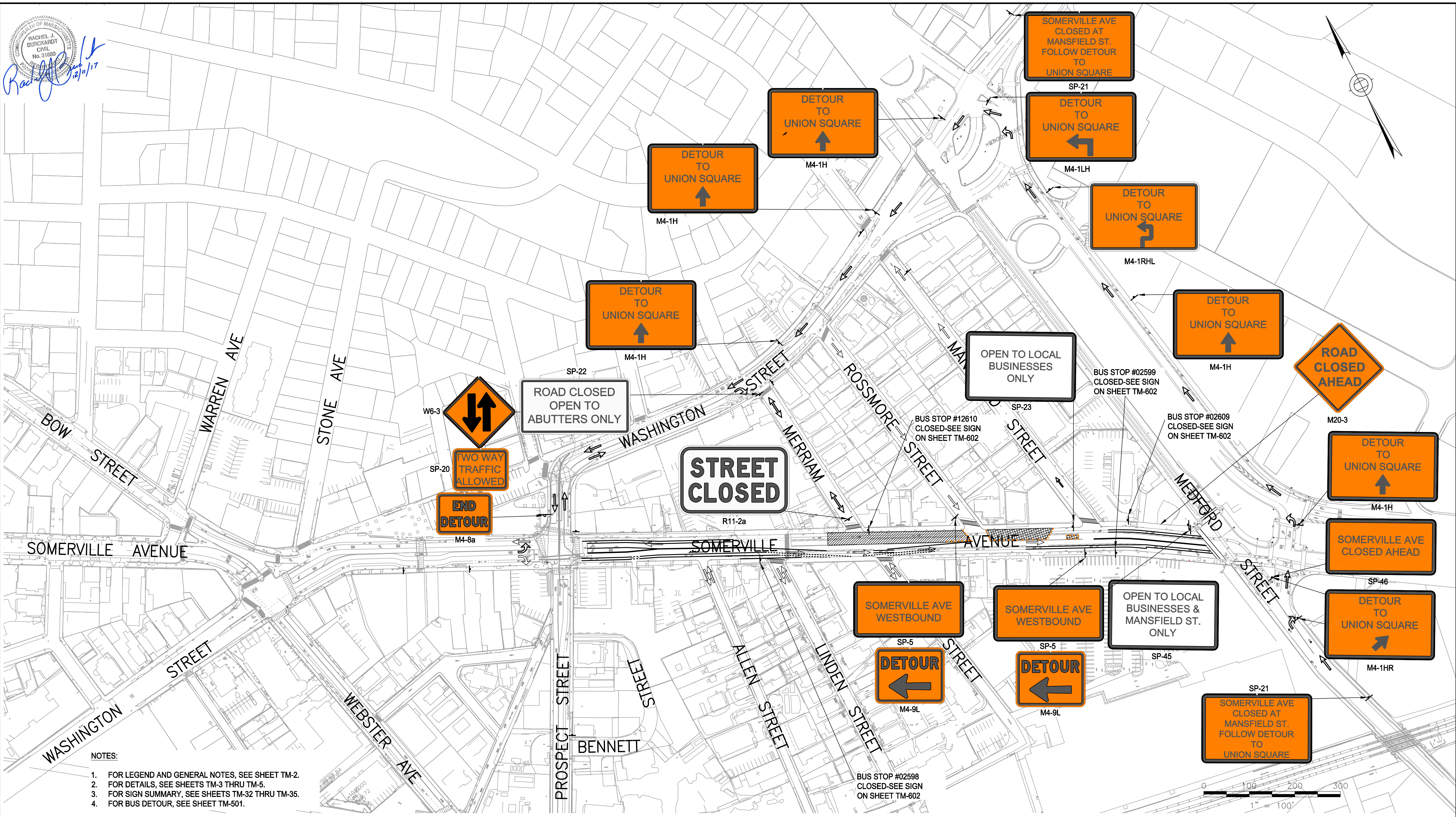
DESIGNED: RJB		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-232
CHECKED: LAC		REF.	CONT.	
DRAWN: JLM		ACC.		
CHECKED: RJB				

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

Rachel J. Burckardt
 No. 31880
 State of Massachusetts
 12/11/17

T:\52647LS Union Square Study and Design\SH Traffic Management\CP-2_CP-3 Sewer Separation\Traffic Management\TM-235 - STAGE-2D-DETOUR.dwg
 2017-10-09 4:00 PM



- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-501.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

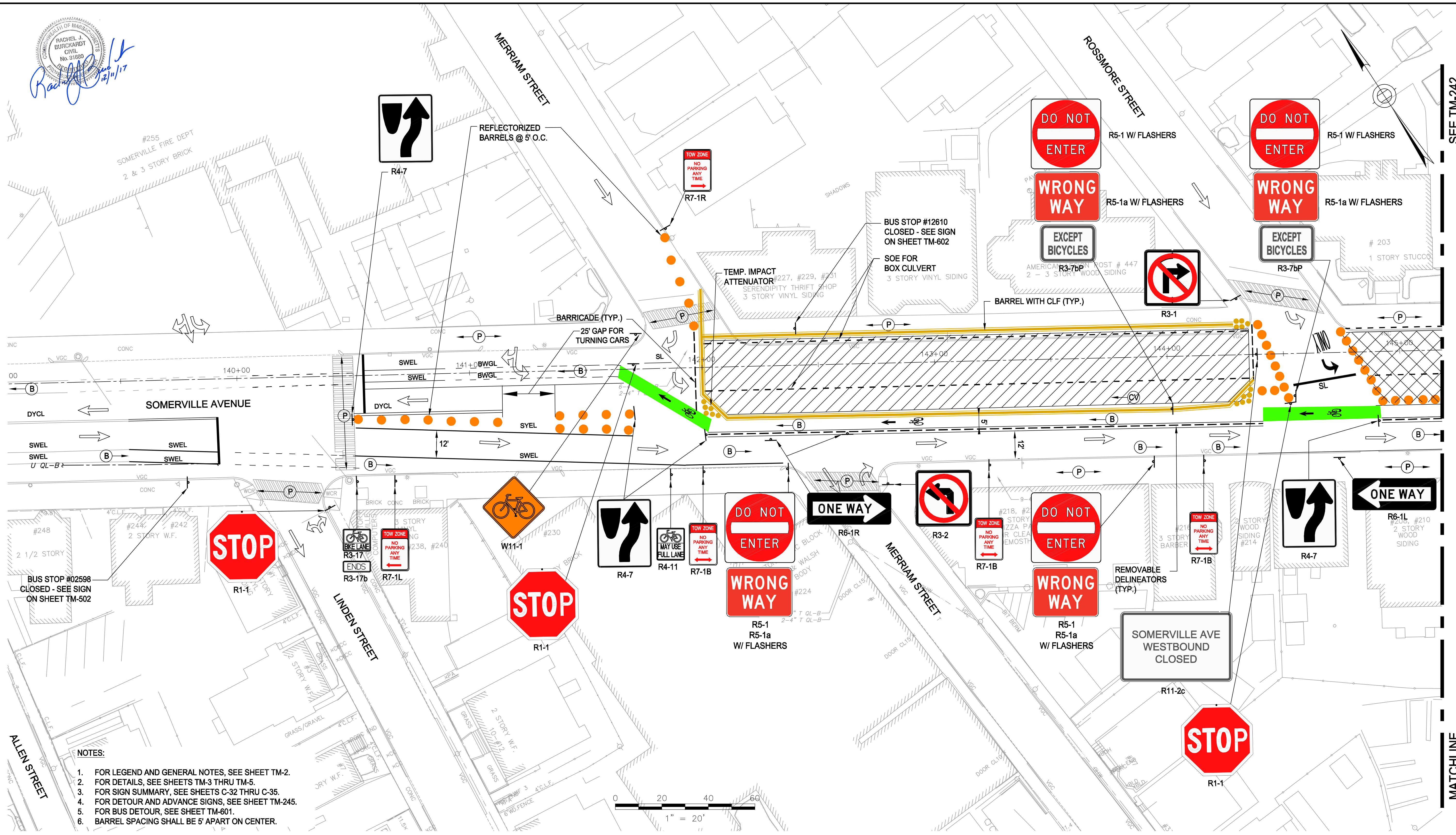
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 2D - DETOUR PLAN

DESIGNED: RJB CHECKED: LAC DRAWN: JLM CHECKED: LAC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-235
REF. _____ ACC. _____	CONT. _____ SCALE: 1"=100' DATE: DEC 2017	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143

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RACHEL J. BURCKARDT
CIVIL
No. 31680
12/11/17



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS C-32 THRU C-35.
 4. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-245.
 5. FOR BUS DETOUR, SEE SHEET TM-601.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2E SHEET 1 OF 2

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-241
CHECKED: LAC		
DRAWN: JLM	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

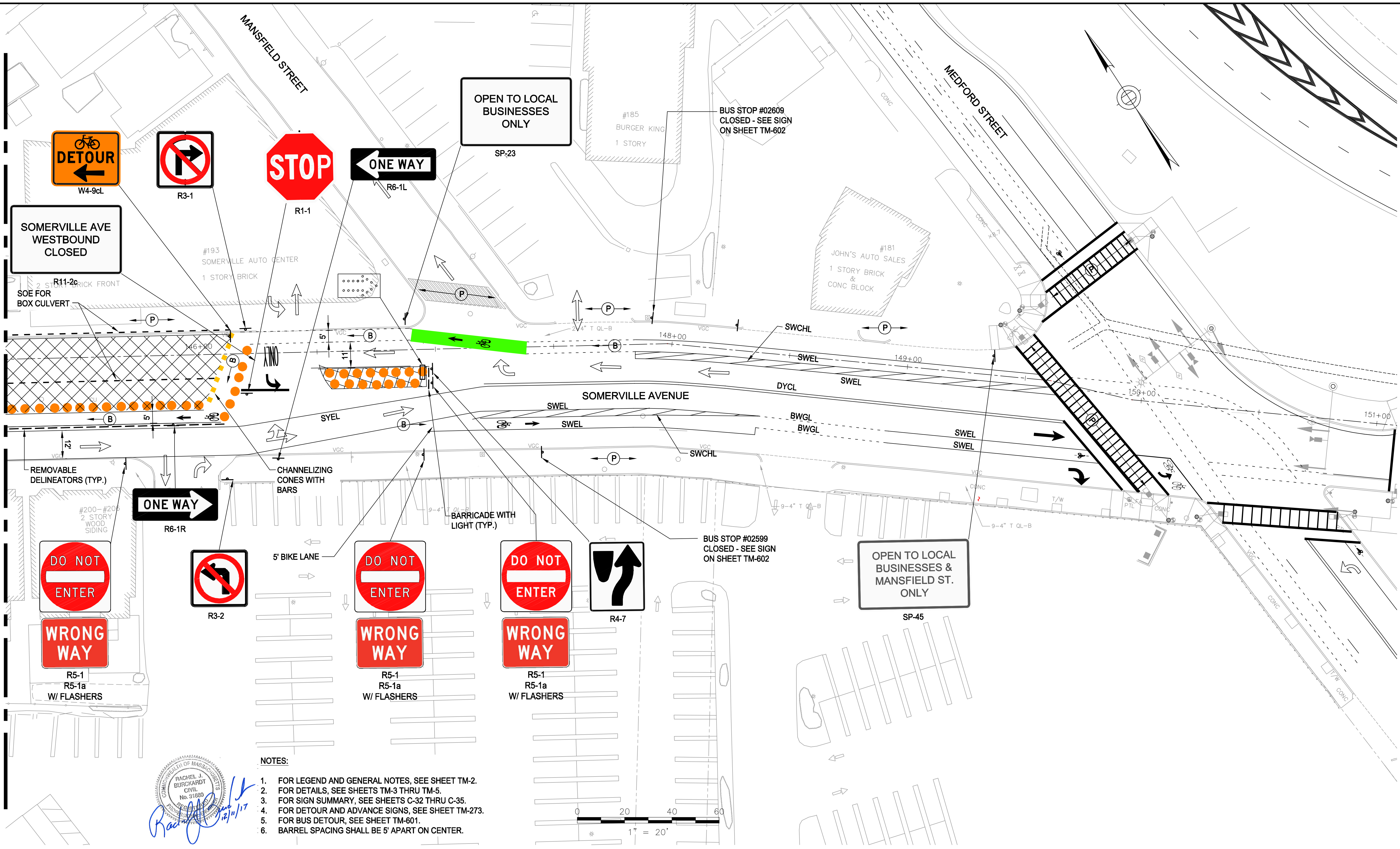
SEE TM-242

MATCHLINE

2017-10-20 9:42 AM T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-241 -STAGE-2E-PLAN.dwg

MATCHLINE

SEE TM-241



Rachel J. Burckardt

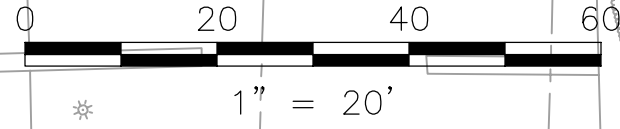
 CIVIL

 No. 31980

 STATE OF MASSACHUSETTS

 12/11/17

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS C-32 THRU C-35.
 4. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-273.
 5. FOR BUS DETOUR, SEE SHEET TM-601.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.



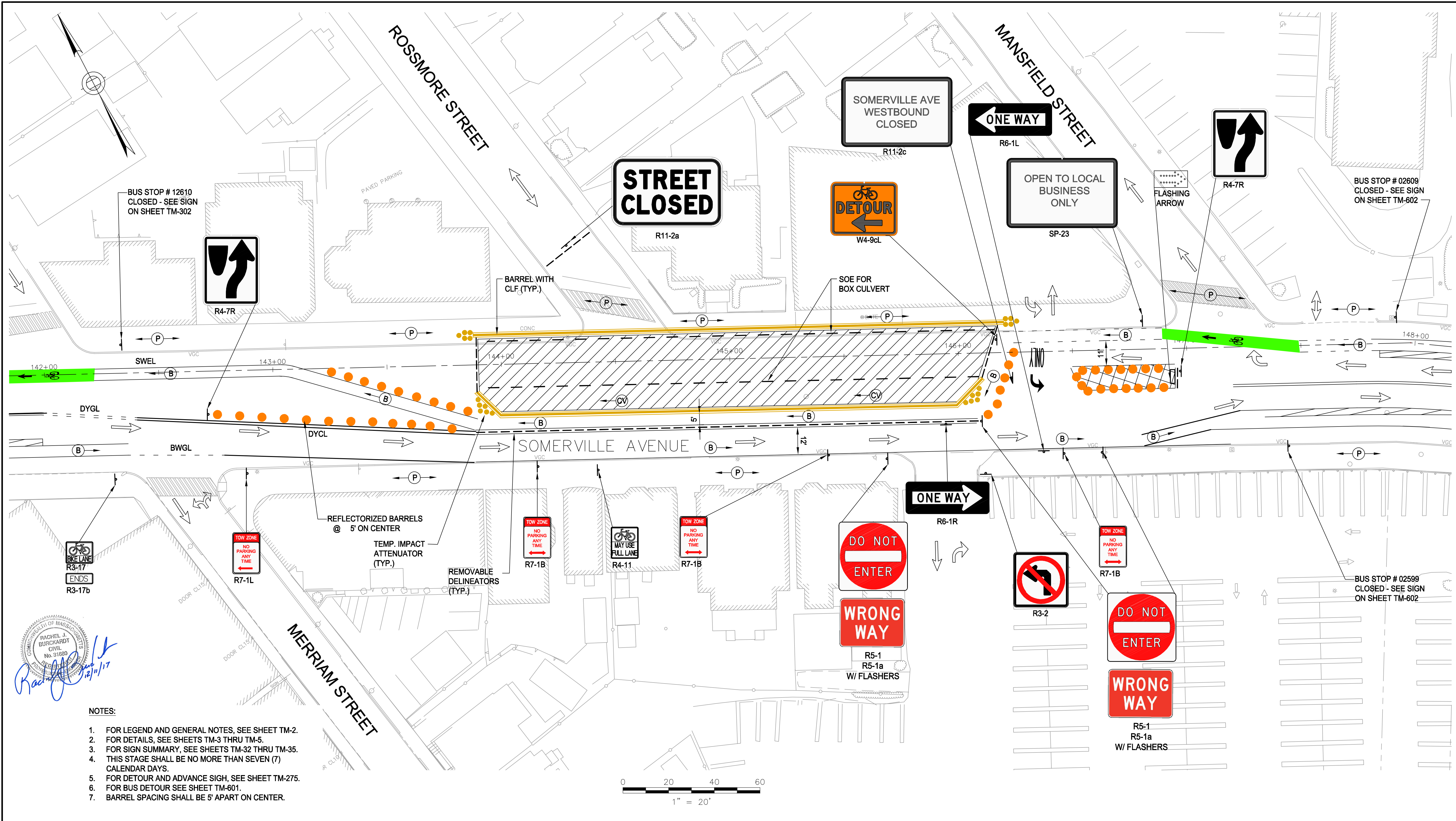
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2E SHEET 2 OF 2

DESIGNED: RJB CHECKED: LAC DRAWN: JLM CHECKED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-242
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-251 -STAGE-2F-PLAN.dwg 2017-10-20 9:43 AM



NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. THIS STAGE SHALL BE NO MORE THAN SEVEN (7) CALENDAR DAYS.
5. FOR DETOUR AND ADVANCE SIGH, SEE SHEET TM-275.
6. FOR BUS DETOUR SEE SHEET TM-601.
7. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2F

DESIGNED: RJB
 CHECKED: LAC
 DRAWN: JLM
 CHECKED: RJB



Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

SHEET
TM-251

REF. CONT.
 ACC.

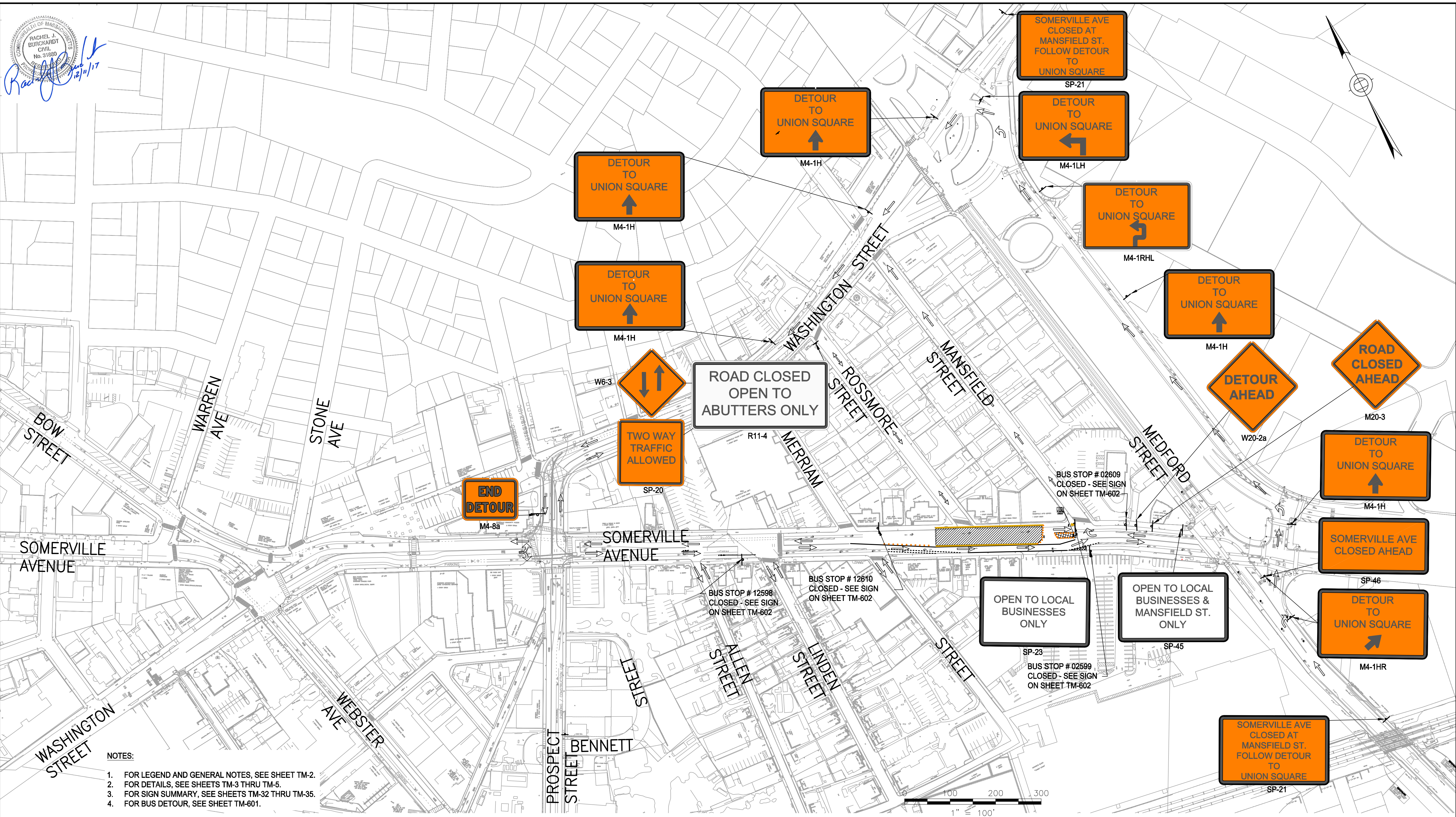
SCALE: 1"=20'
 DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

RACHEL J. BURKARDT
CIVIL
No. 31680
REG.
12/11/17

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-255 - STAGE-2F-DETOUR.dwg



- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-601.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

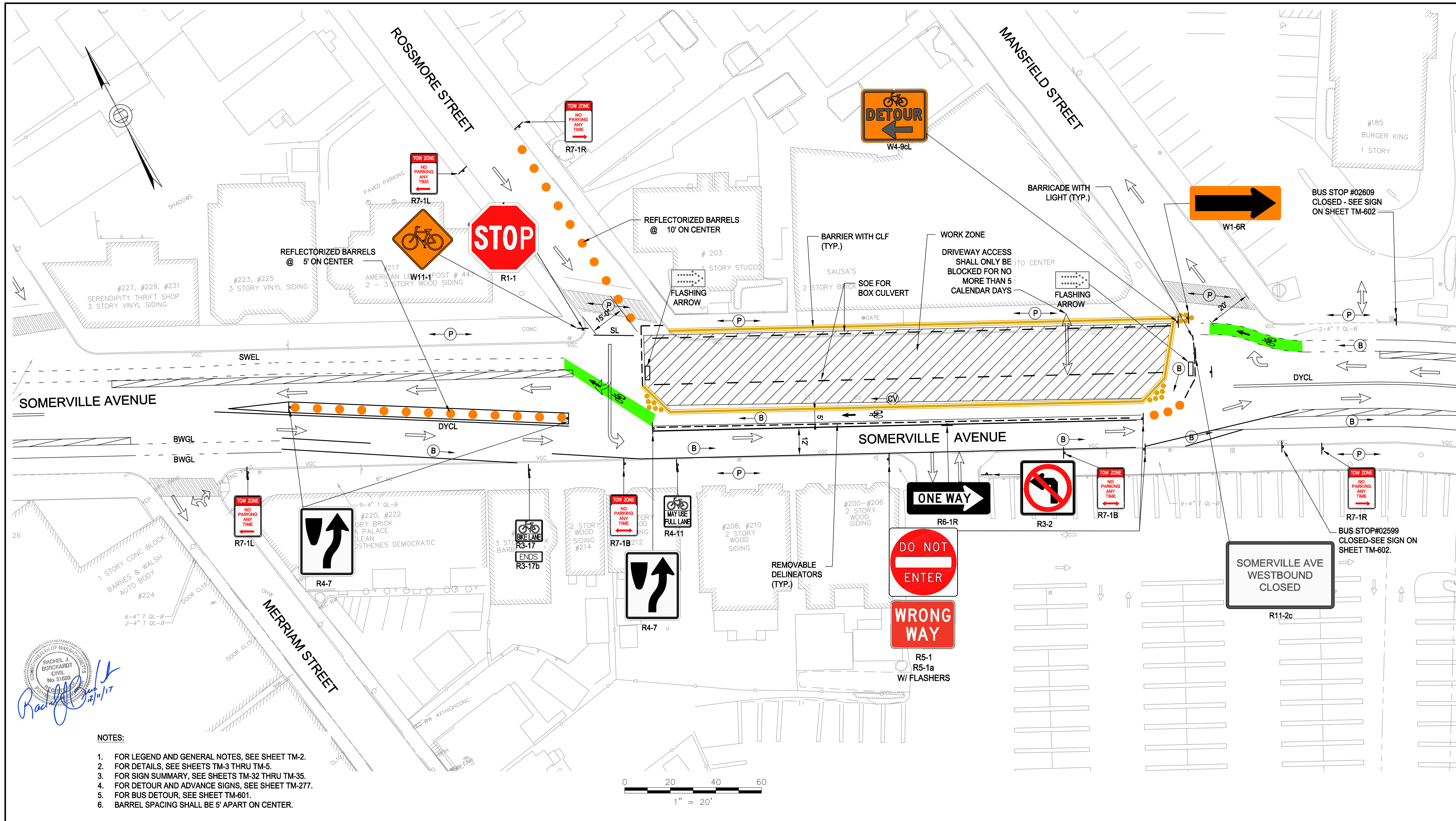
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 2F - DETOUR PLAN

DESIGNED: RJB		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-255
CHECKED: LAC		REF.	CONT.	
DRAWN: LAC			DATE: DEC 2017	
CHECKED: RJB				

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-261 -STAGE-2G-PLAN.dwg 2017-10-10 9:47 AM



NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-277.
5. FOR BUS DETOUR, SEE SHEET TM-601.
6. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

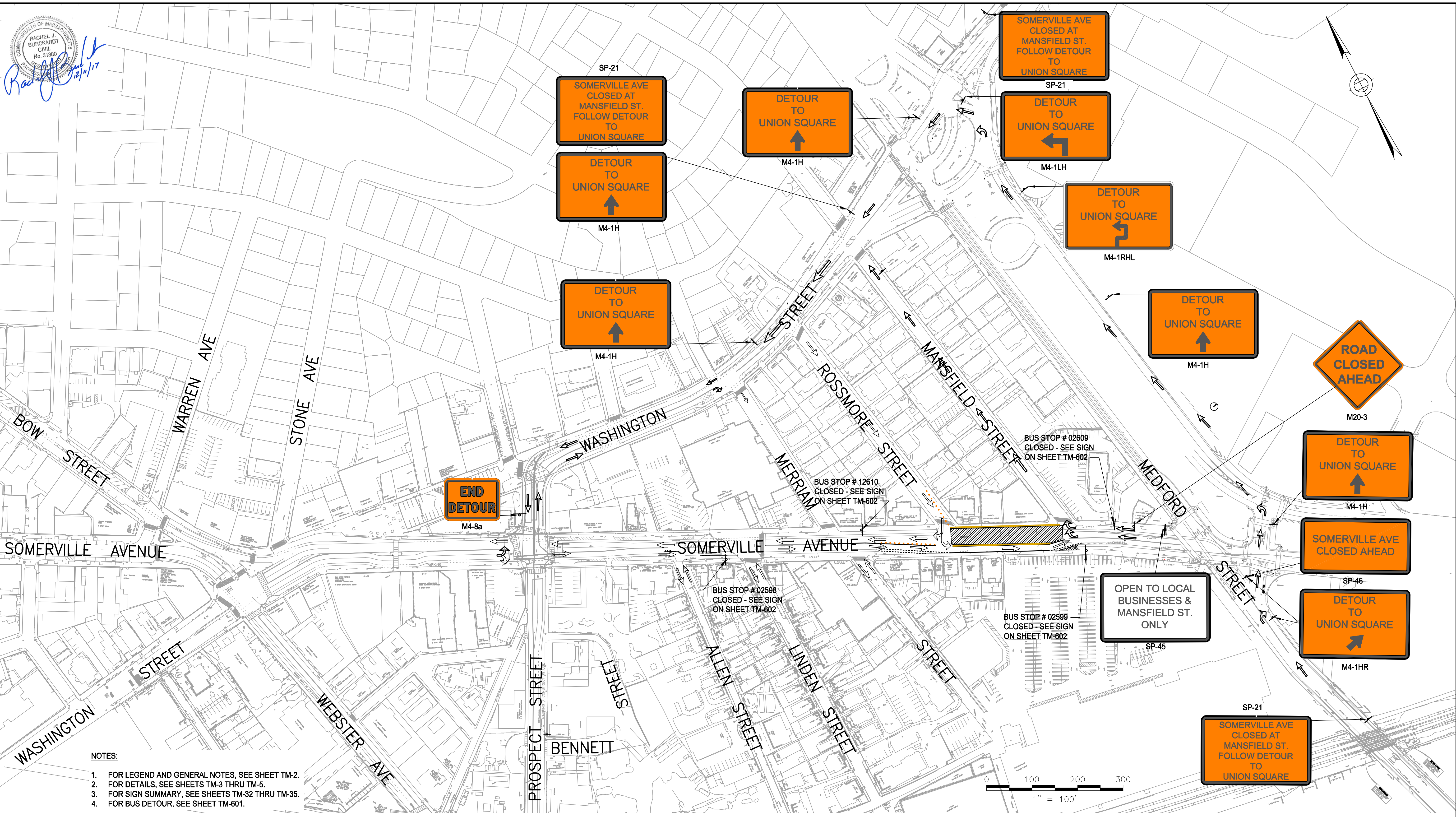
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2G

DESIGNED: x	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-261
CHECKED: x		
DRAWN: JLM	REF.	CONT.
CHECKED: x	ACC.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

Rachel J. Burckardt
 12/11/17

Rachel J. Burkardt
 No. 31880
 REG.
 12/11/17

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-265 -STAGE-2G-DETOUR.dwg



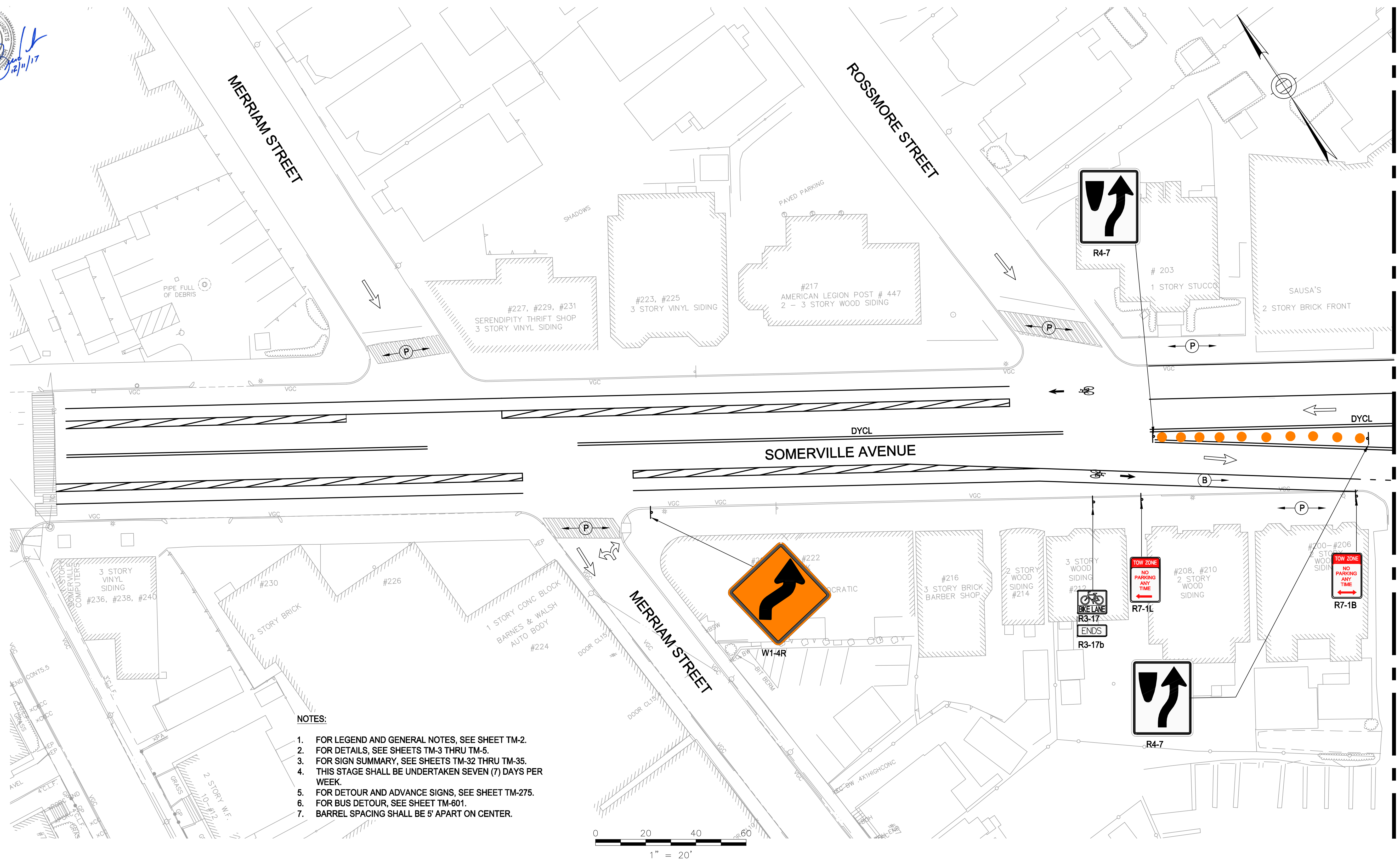
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 2G - DETOUR PLAN

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-265
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=100'
CITY OF SOMERVILLE		DATE: DEC 2017
93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-271 -STAGE-2H-PLAN.dwg 2017-08-11 3:37 PM

Rachel J. Burckardt
 No. 31890
 State of Massachusetts
 02/21/17



SEE SHEET TM-272

MATCHLINE

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. THIS STAGE SHALL BE UNDERTAKEN SEVEN (7) DAYS PER WEEK.
 5. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-275.
 6. FOR BUS DETOUR, SEE SHEET TM-601.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2H SHEET 1 OF 2

DESIGNED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-271
CHECKED: LAC		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

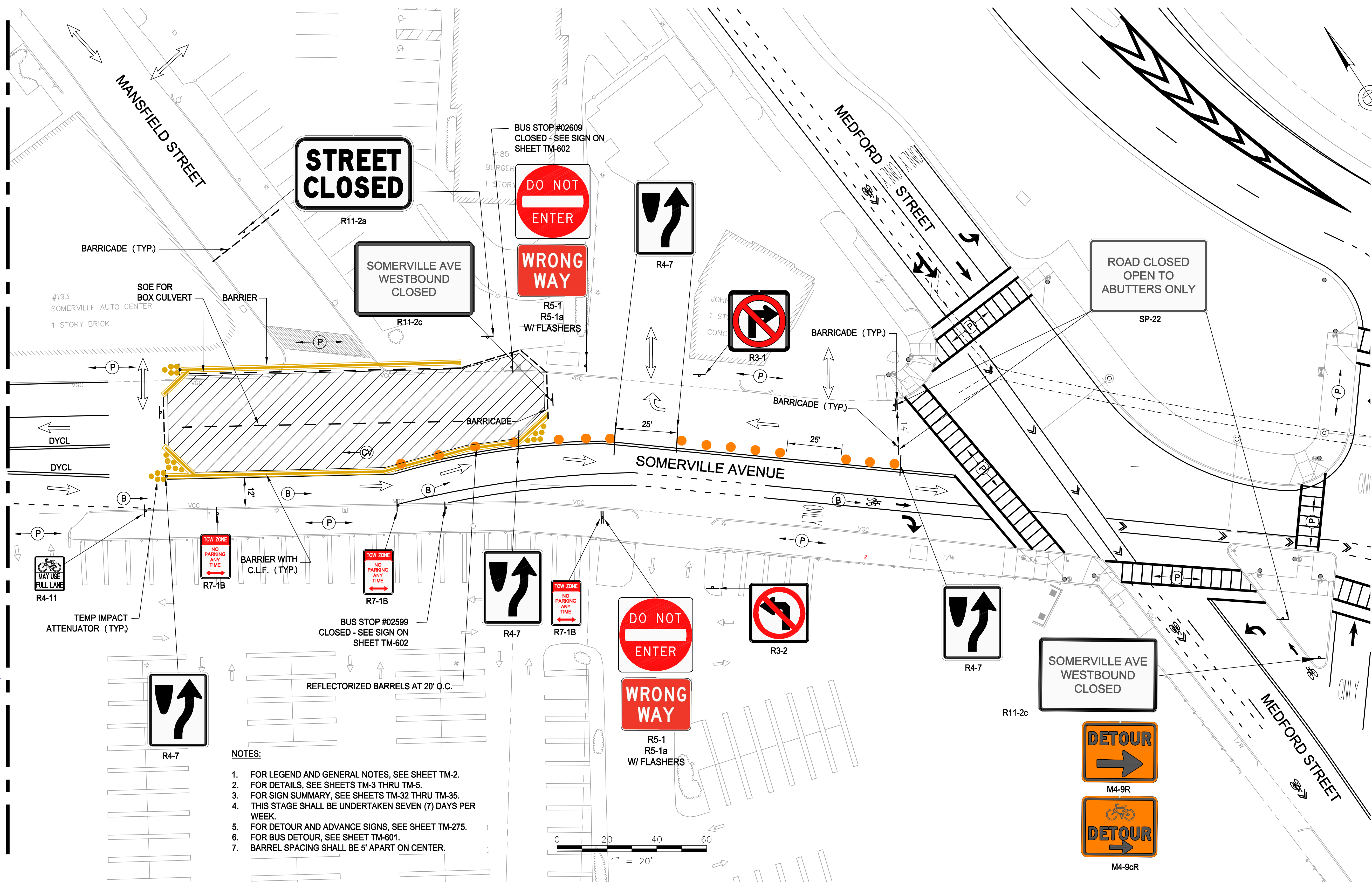
NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\SH-T DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-271 -STAGE-2H-PLAN.dwg 2017-08-11 3:37 PM

Rachel J. Burckhardt
 CIVIL
 No. 31880
 12/11/17

SEE SHEET TM-271

MATCHLINE



- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. THIS STAGE SHALL BE UNDERTAKEN SEVEN (7) DAYS PER WEEK.
 5. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-275.
 6. FOR BUS DETOUR, SEE SHEET TM-601.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

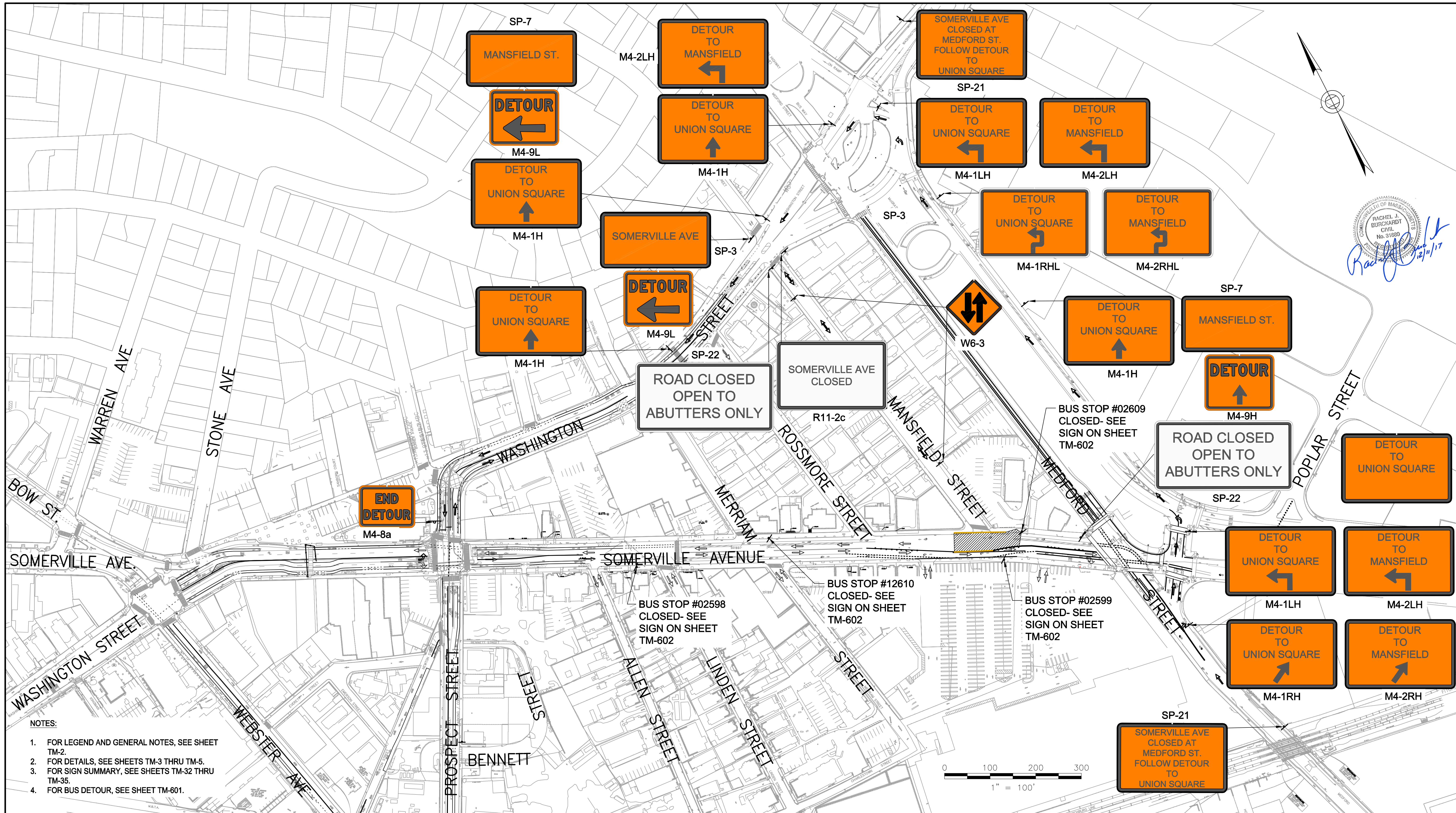
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2H SHEET 2 OF 2

DESIGNED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-272
CHECKED: LAC		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-275 -STAGE-2H-DETOUR.dwg
 2017-08-09 4:55 PM



RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 12/11/17

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-601.

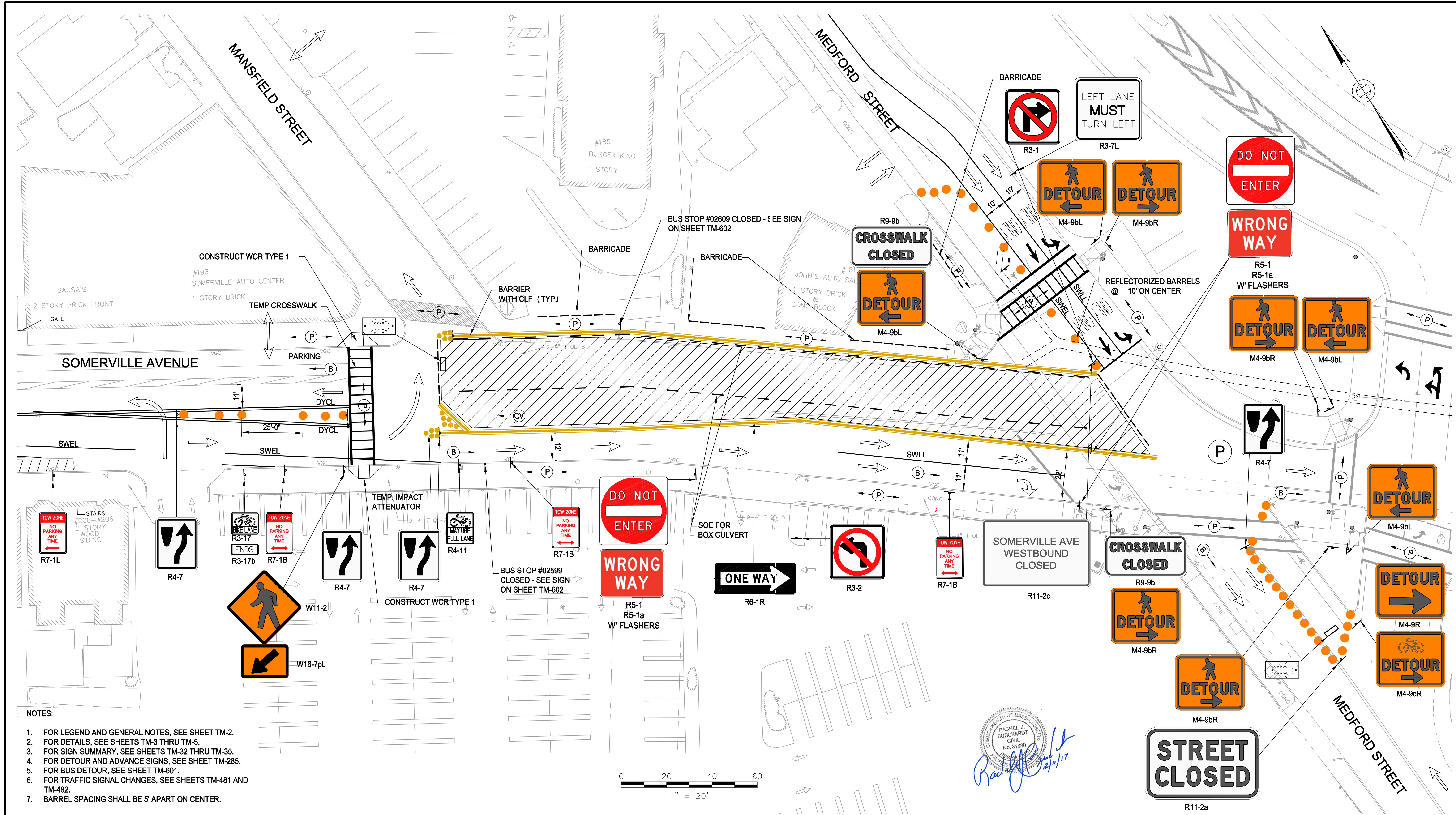
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 2H - DETOUR PLAN

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-275
CHECKED: LAC		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=100' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

2017-08-11 4:14 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-281 -STAGE-2-PLAN.dwg



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-285.
 5. FOR BUS DETOUR, SEE SHEET TM-601.
 6. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-481 AND TM-482.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

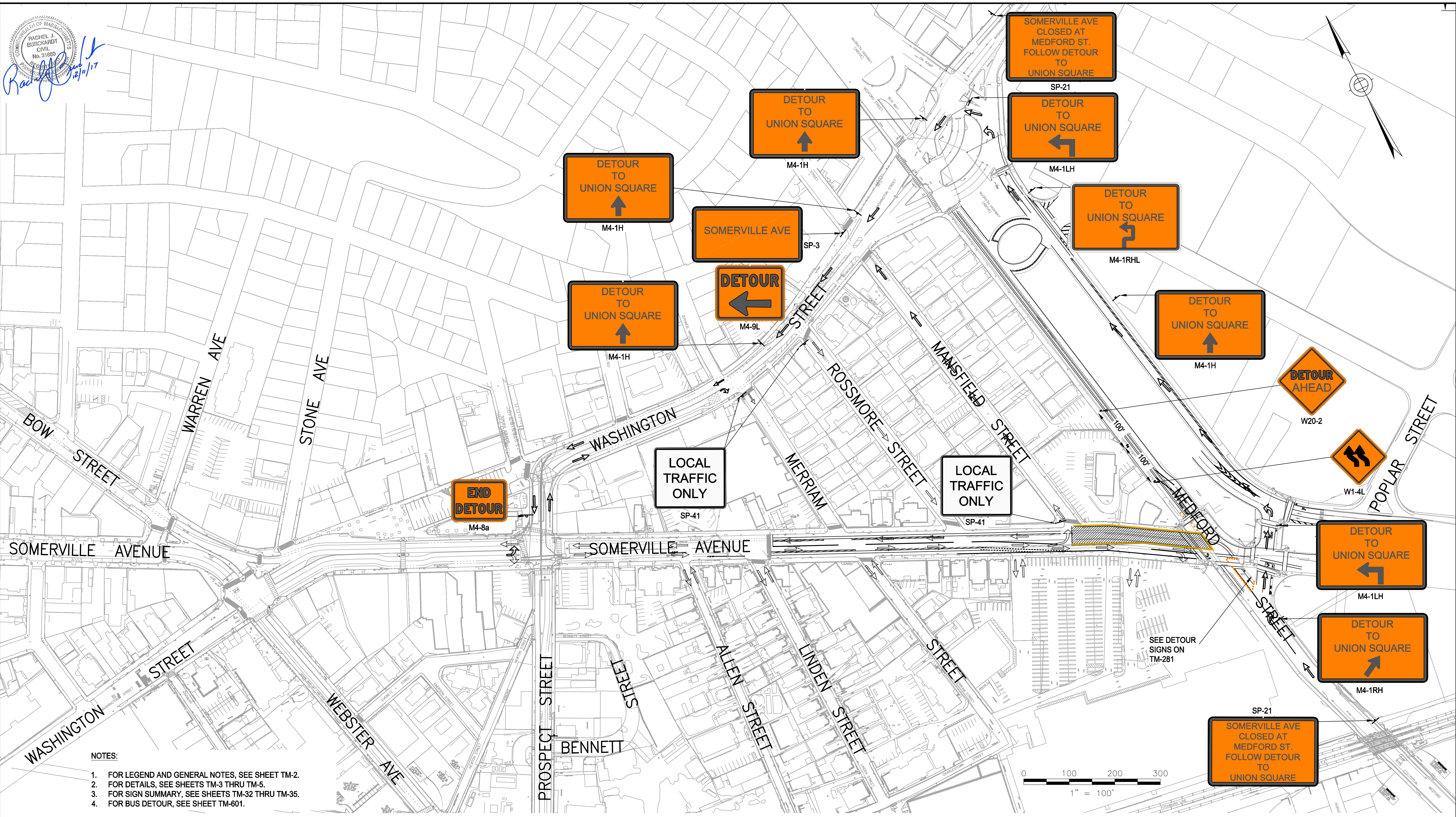
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2I

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-281
CHECKED: LAC		
DRAWN: LAC	REF. _____	CONT. _____
CHECKED: RJB	ACC. _____	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 REG. ENG.
 2/11/17

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-285 - STAGE-21-DETOUR.dwg



- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. FOR BUS DETOUR, SEE SHEET TM-601.

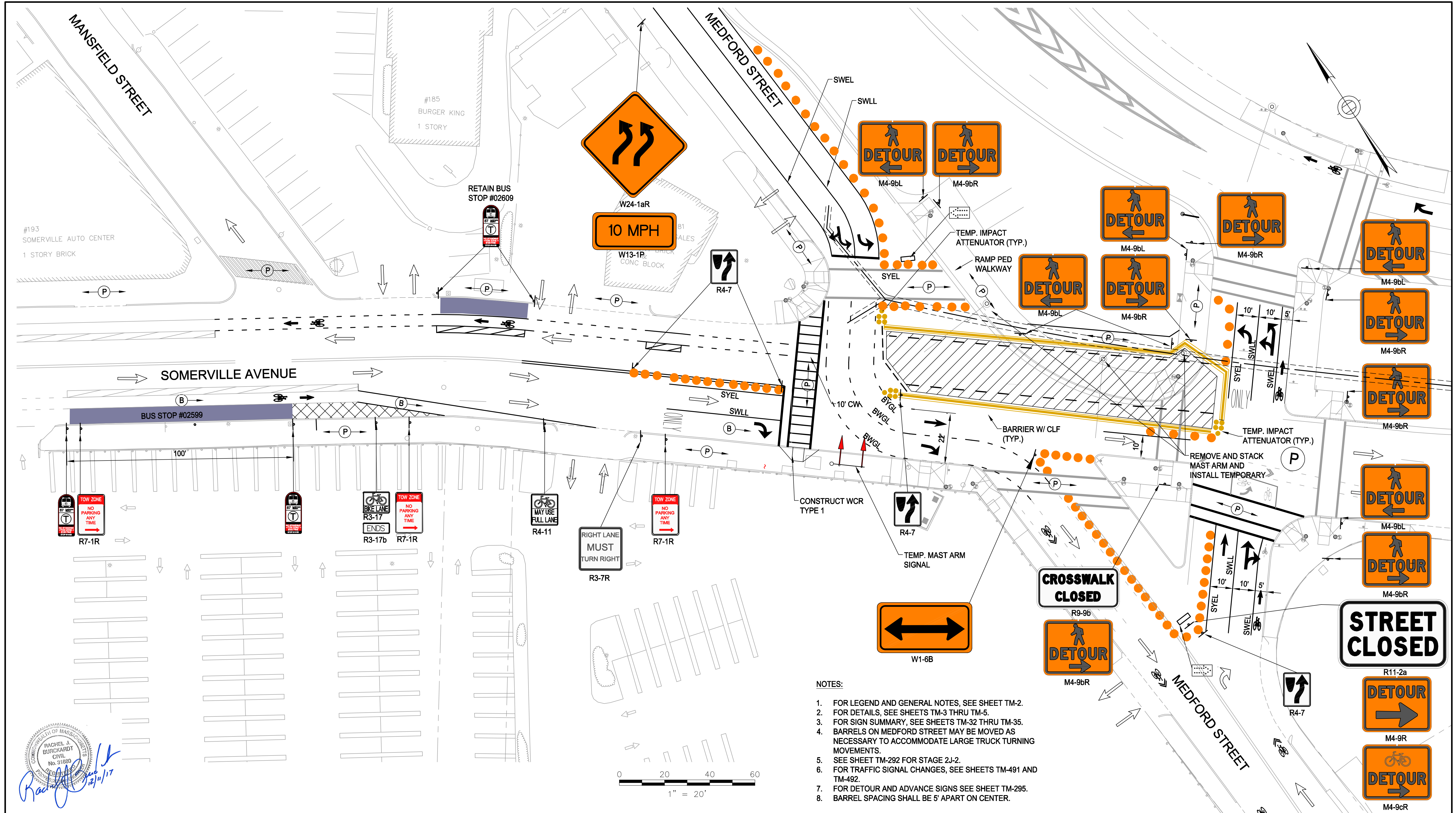
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 21 - DETOUR PLAN

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-285
CHECKED: LAC		
DRAWN: JLM	REF.	CONT.
CHECKED: LAC	ACC.	SCALE: 1"=100'
CITY OF SOMERVILLE		DATE: DEC 2017
93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

2017-08-17 10:10 AM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-291 -STAGE-2J-PLAN.dwg



Rachel J. Burckardt

 CIVIL ENGINEER

 No. 31590

 State of Massachusetts

 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

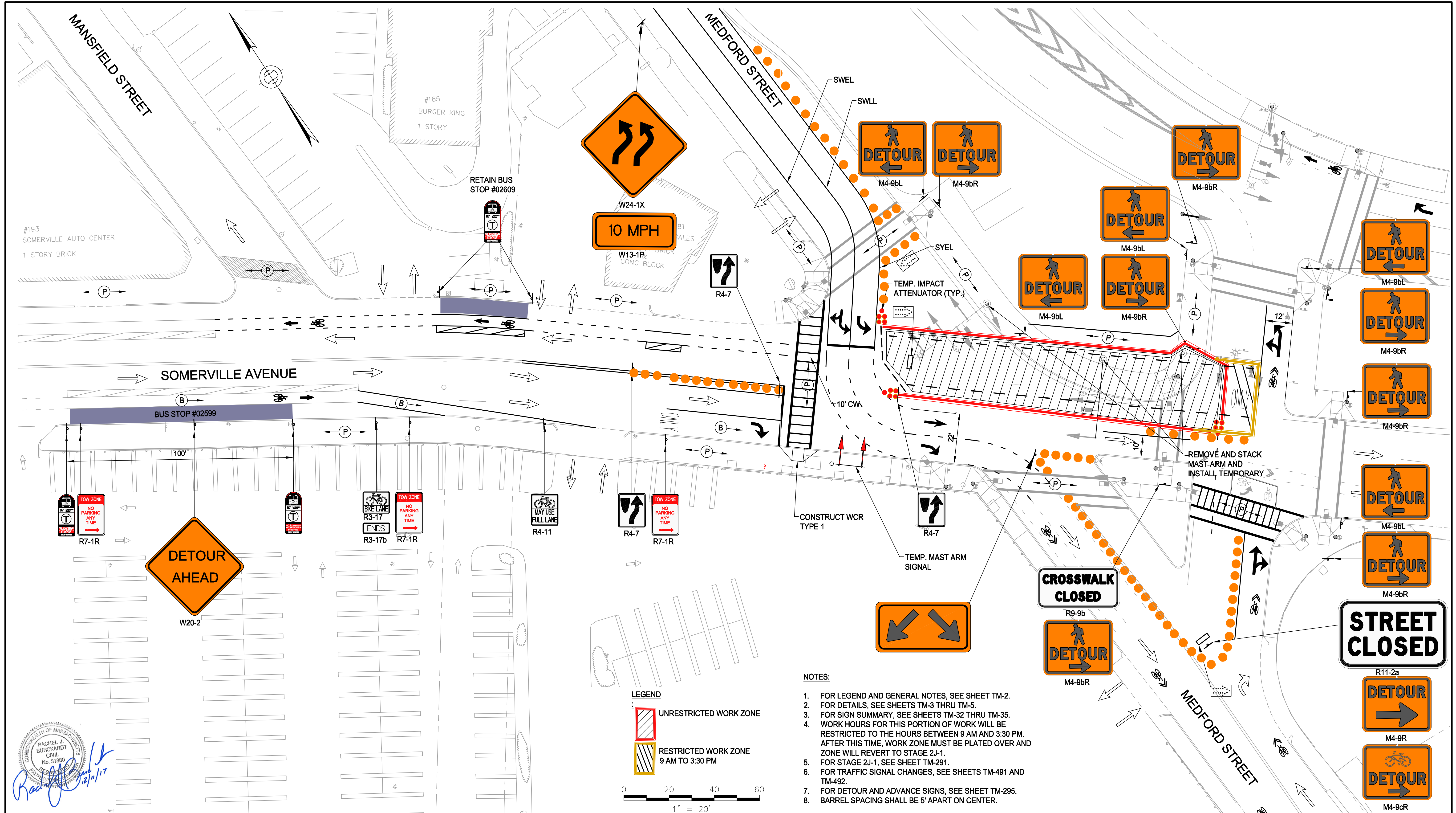
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2J-1

DESIGNED: LAC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-291
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-08-16 3:44 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-292 - STAGE-2J2-PLAN.dwg



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. WORK HOURS FOR THIS PORTION OF WORK WILL BE RESTRICTED TO THE HOURS BETWEEN 9 AM AND 3:30 PM. AFTER THIS TIME, WORK ZONE MUST BE PLATED OVER AND ZONE WILL REVERT TO STAGE 2J-1.
 5. FOR STAGE 2J-1, SEE SHEET TM-291.
 6. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-491 AND TM-492.
 7. FOR DETOUR AND ADVANCE SIGNS, SEE SHEET TM-295.
 8. BARREL SPACING SHALL BE 5' APART ON CENTER.

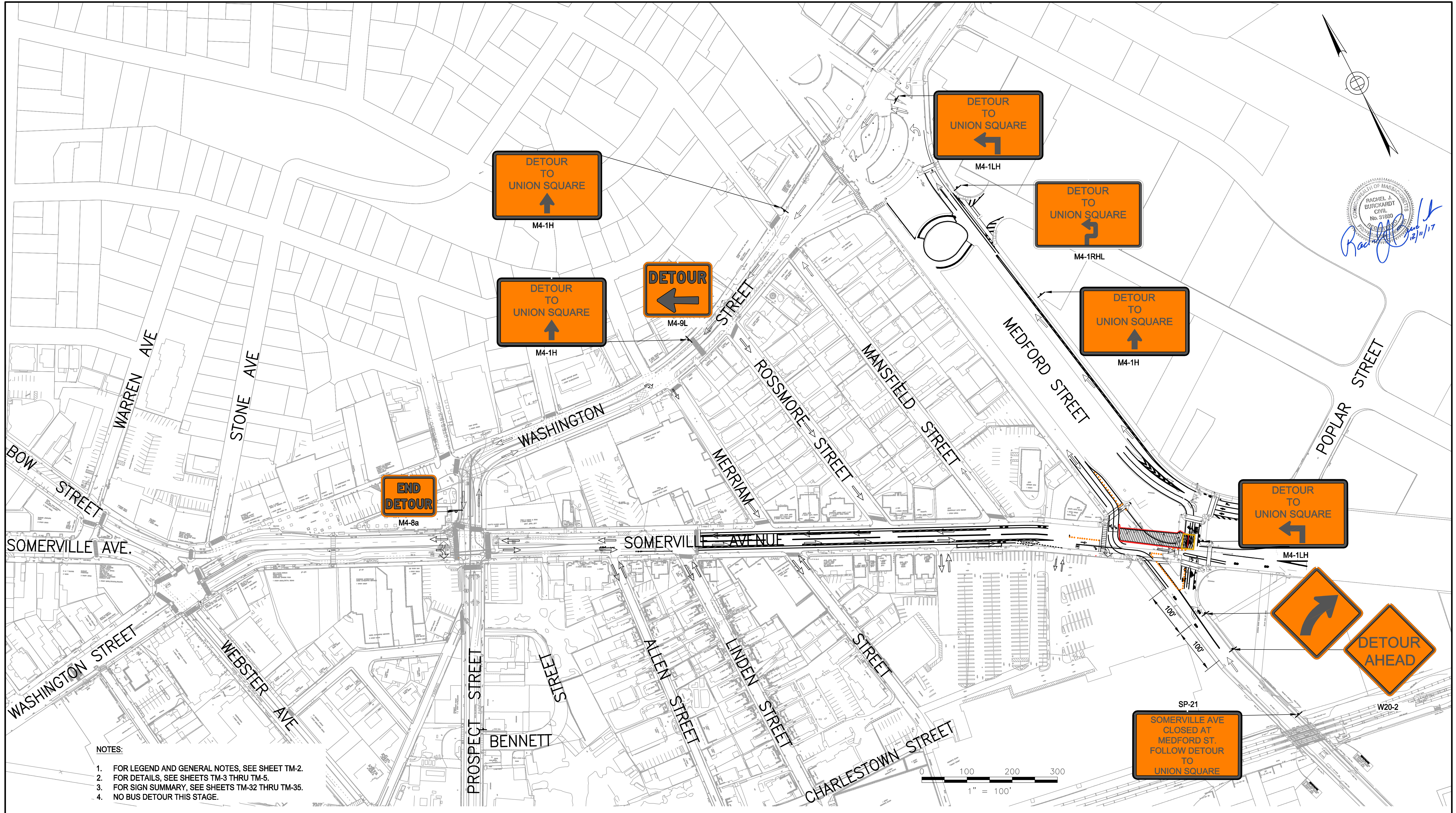
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2J-2

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-292
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

2017-08-01 1:42 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-295 -STAGE-2J-DETOUR.dwg



NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. NO BUS DETOUR THIS STAGE.

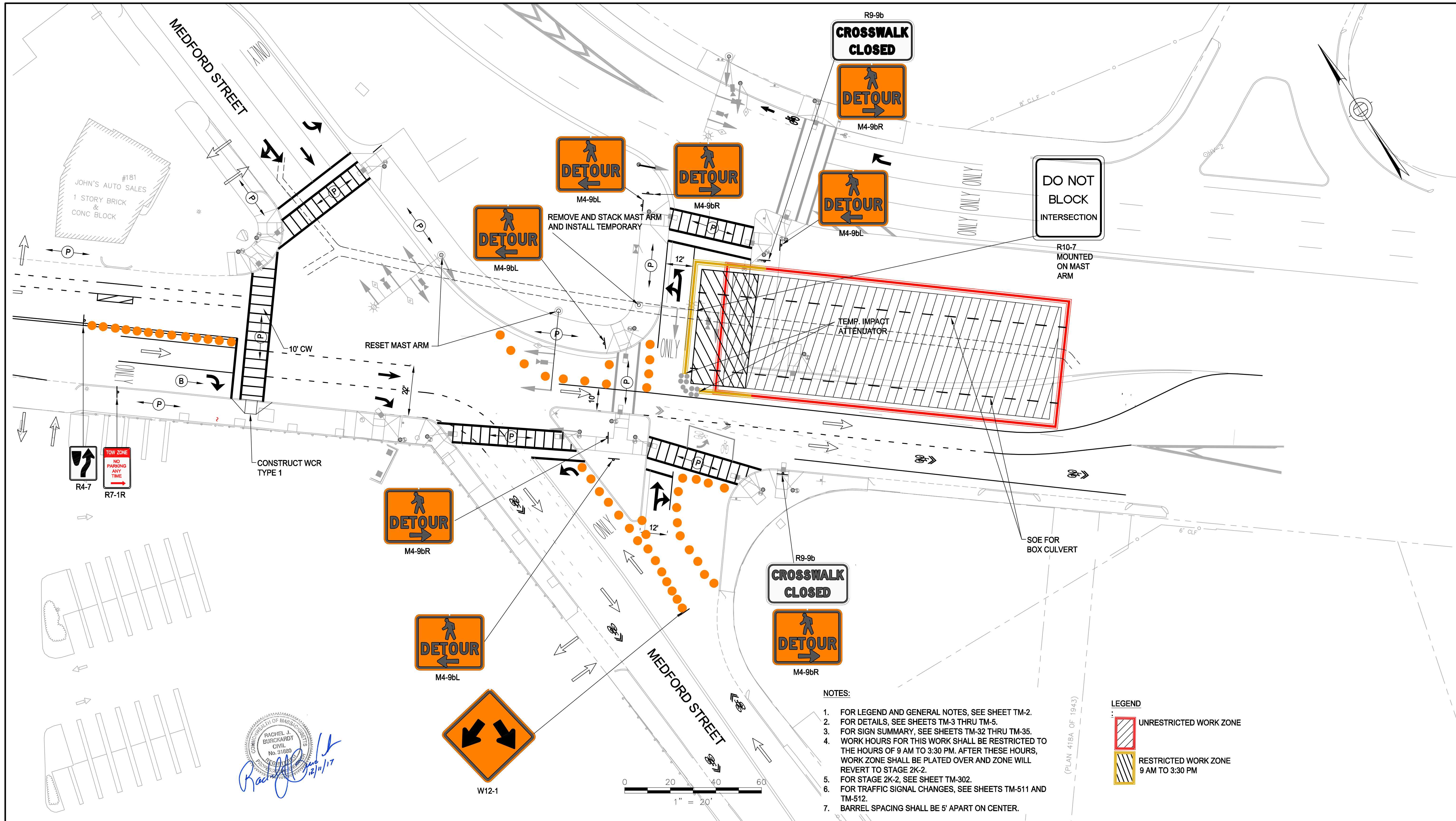
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT
STAGE 2J - DETOUR PLAN

DESIGNED: RJB CHECKED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-295
DRAWN: JLM CHECKED: LAC		REF. _____ CONT. _____ ACC. _____
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

2017-08-11 4:59 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-301 -STAGE-2K1-PLAN.dwg



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. WORK HOURS FOR THIS WORK SHALL BE RESTRICTED TO THE HOURS OF 9 AM TO 3:30 PM. AFTER THESE HOURS, WORK ZONE SHALL BE PLATED OVER AND ZONE WILL REVERT TO STAGE 2K-2.
 5. FOR STAGE 2K-2, SEE SHEET TM-302.
 6. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-511 AND TM-512.
 7. BARREL SPACING SHALL BE 5' APART ON CENTER.

LEGEND

- [Red Hatched Box] UNRESTRICTED WORK ZONE
- [Yellow Hatched Box] RESTRICTED WORK ZONE 9 AM TO 3:30 PM

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

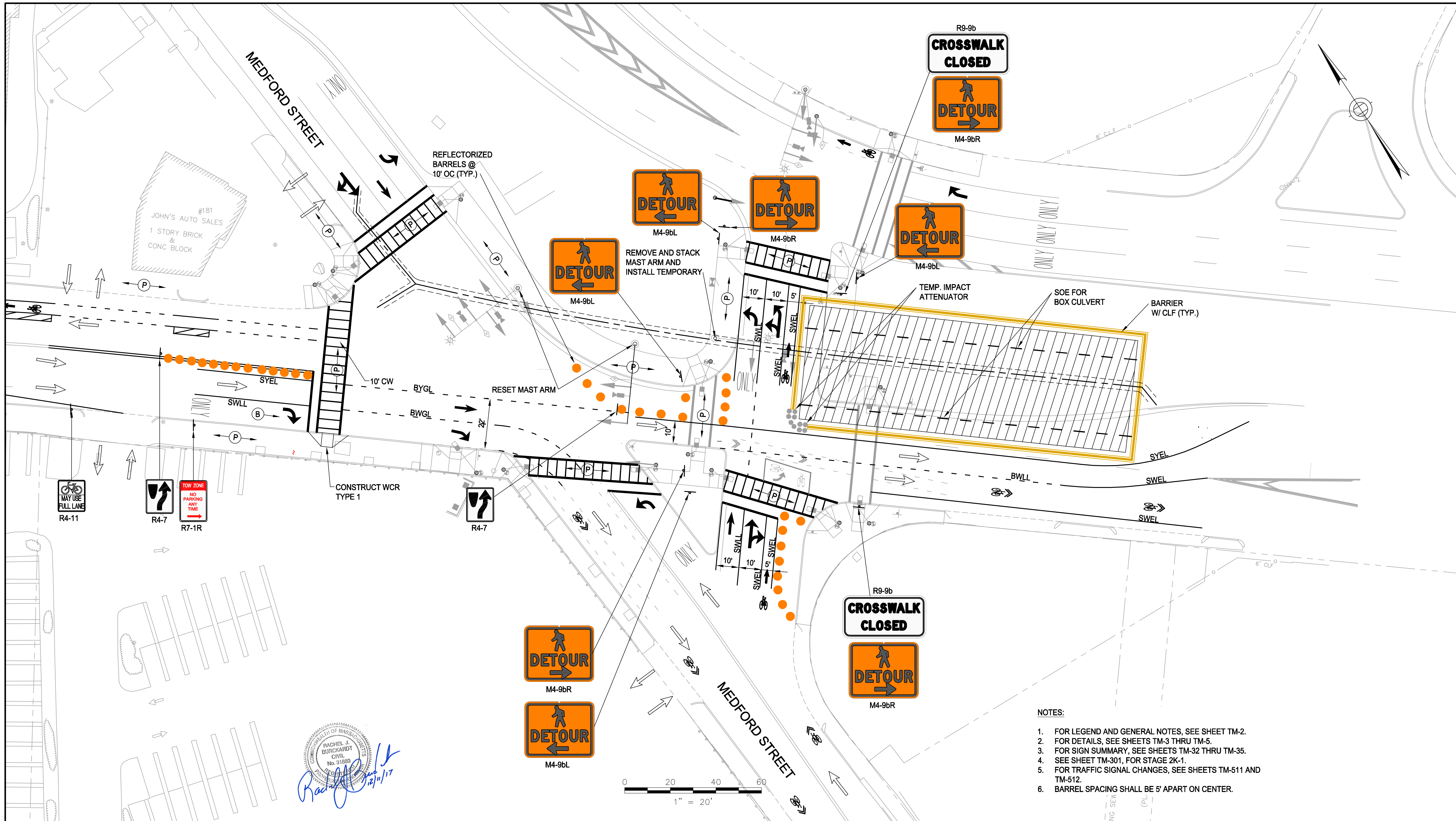
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2K-1

DESIGNED: LAC		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-301
CHECKED: RJB		REF.	CONT.	
DRAWN: LAC		ACC.		DATE: DEC 2017
CHECKED: RJB				

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-08-11 5:23 PM T:\52647LS Union Square Study and Design\SHIT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-302 -STAGE-2K2-PLAN.dwg



- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. SEE SHEET TM-301, FOR STAGE 2K-1.
 5. FOR TRAFFIC SIGNAL CHANGES, SEE SHEETS TM-511 AND TM-512.
 6. BARREL SPACING SHALL BE 5' APART ON CENTER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

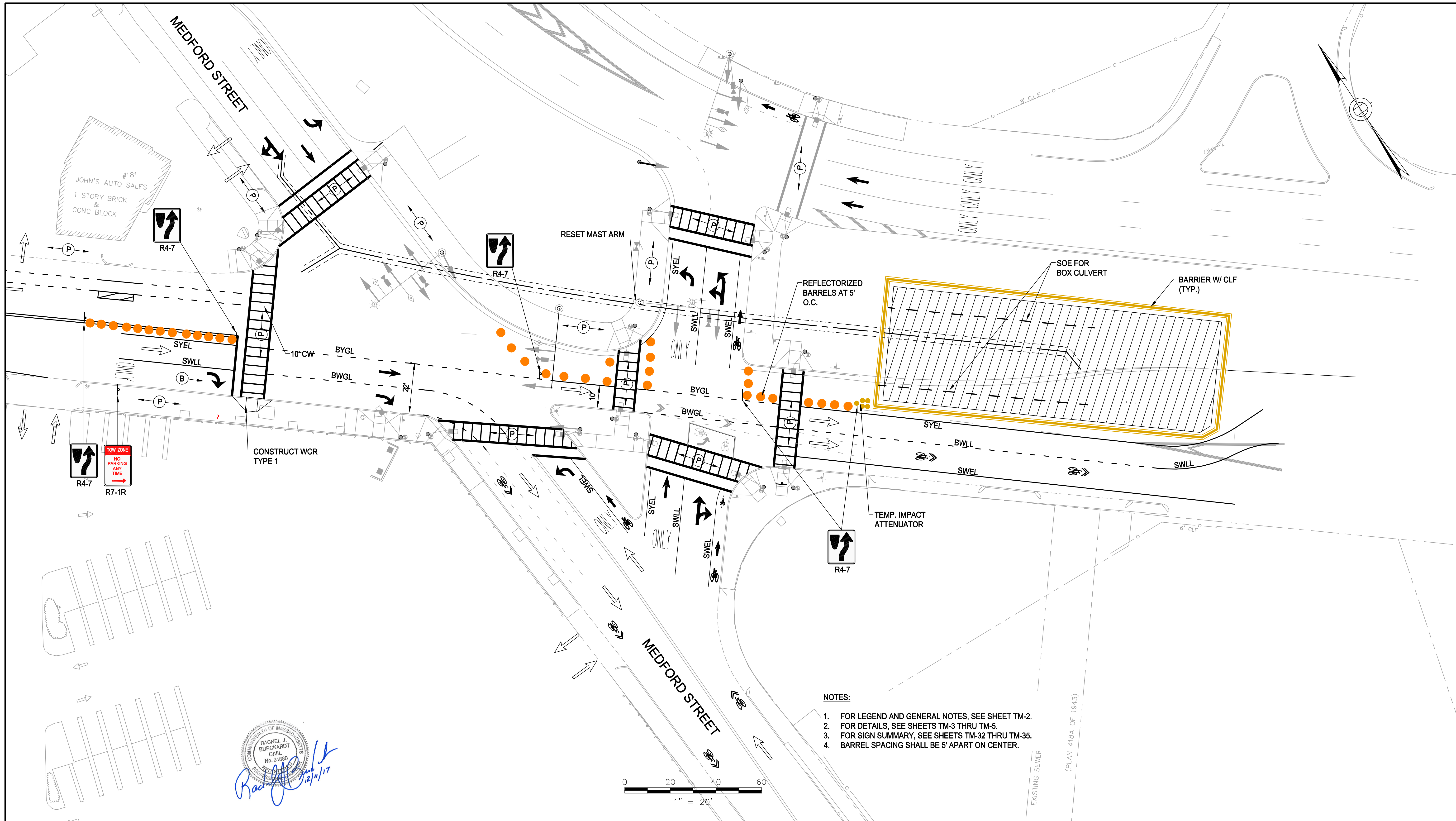
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2K-2

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-302
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20' DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-311 -STAGE-2L-PLAN.dwg 2017-08-11 5:30 PM



- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. BARREL SPACING SHALL BE 5' APART ON CENTER.

RACHEL J. BURCKARDT
 CIVIL
 No. 51680
 REGISTERED PROFESSIONAL ENGINEER
 State of Massachusetts
 Rachel J. Burckardt
 12/11/17

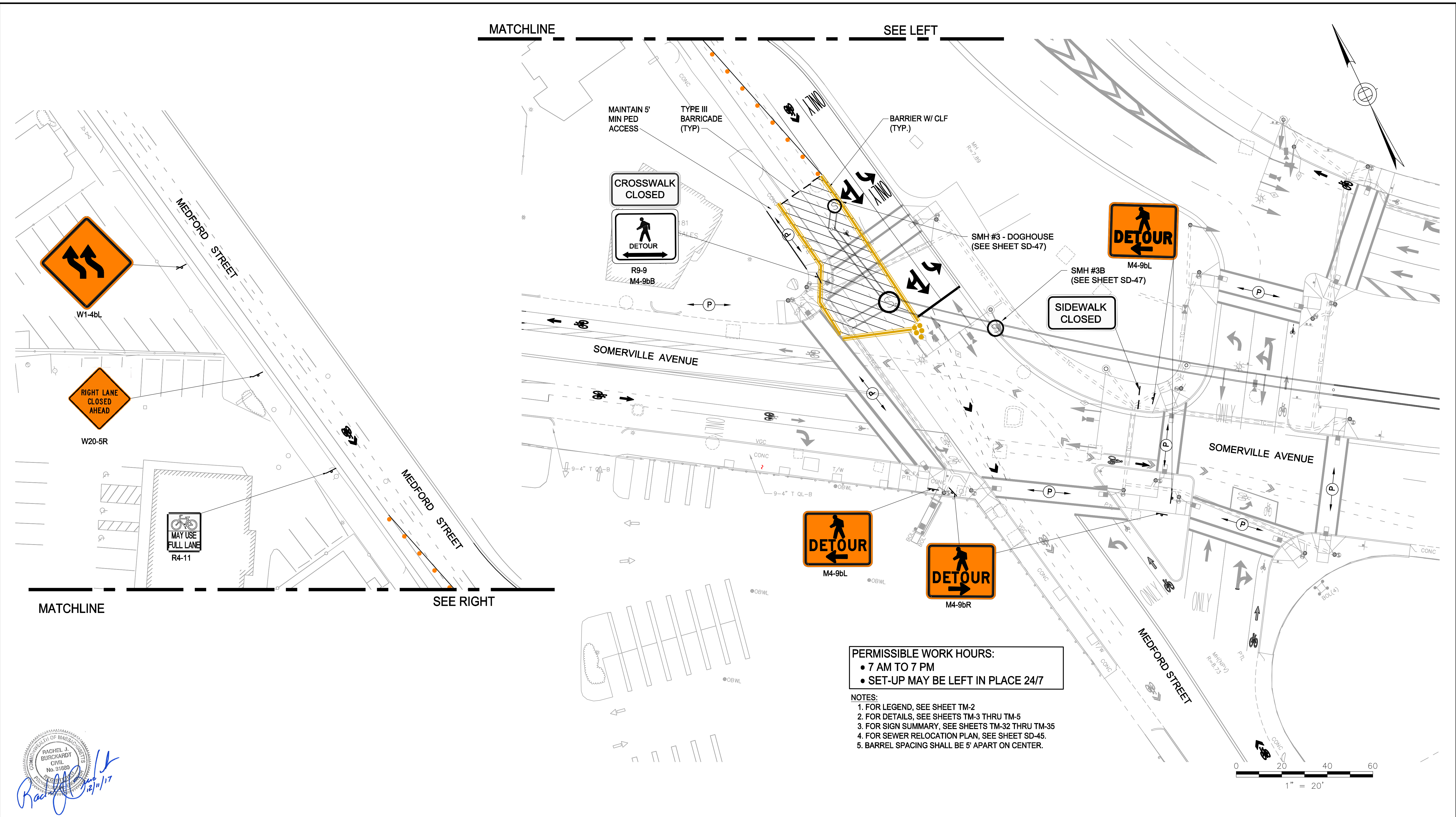
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC MANAGEMENT PLAN
STAGE 2L

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-311
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

2017-09-15 4:58 PM T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-340 -STAGE-SD-46-Adwg



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

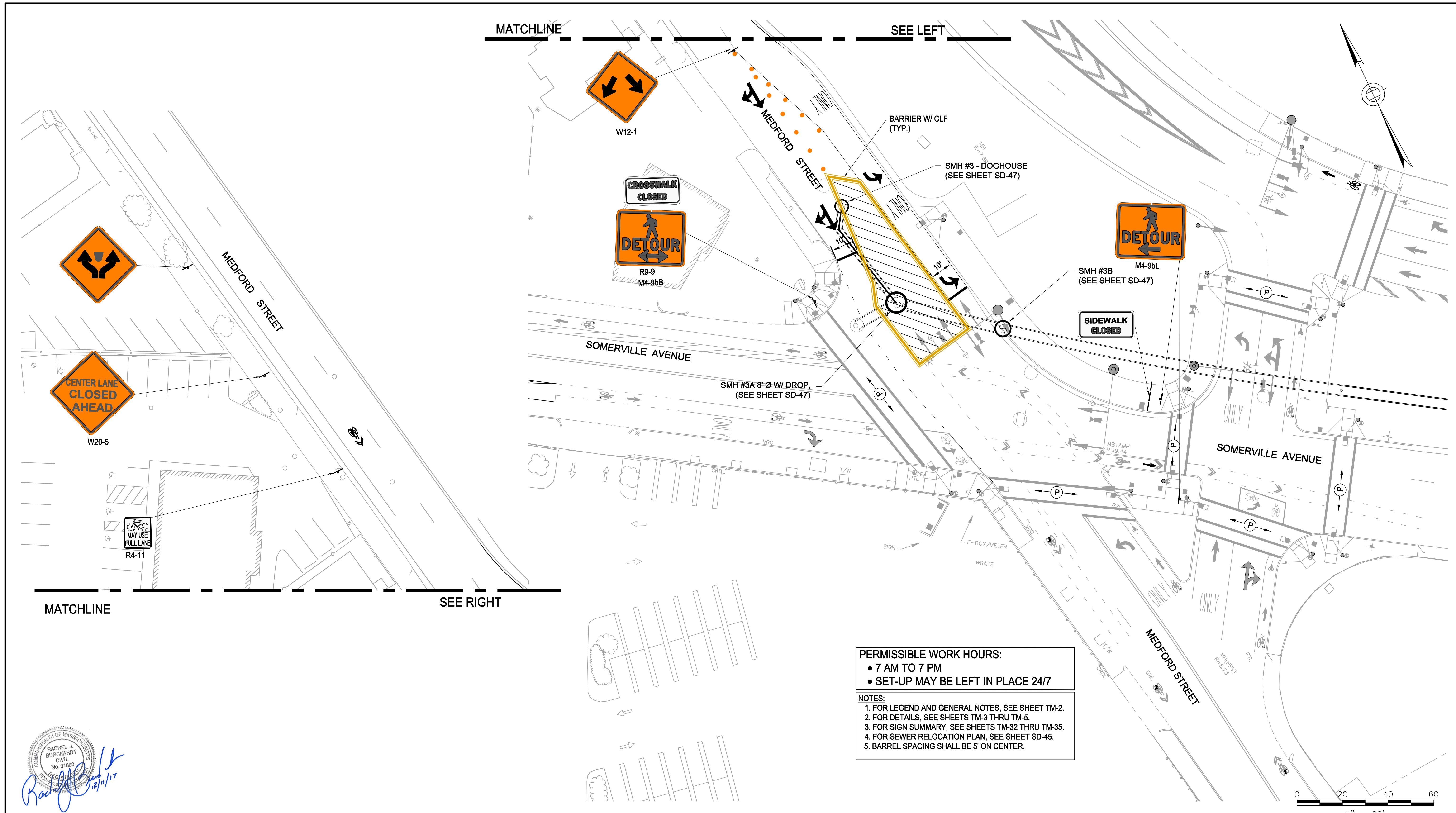
CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

DOWNSTREAM SEWER CONNECTION

TYPICAL SETUP 'A'

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET				
CHECKED: JC		<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> </tr> <tr> <td>ACC.</td> <td> </td> </tr> </table>	REF.	CONT.	ACC.	
REF.	CONT.					
ACC.						
DRAWN: LAC	SCALE: 1"=20'					
CHECKED: RJB	DATE: DEC 2017	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143				



PERMISSIBLE WORK HOURS:

- 7 AM TO 7 PM
- SET-UP MAY BE LEFT IN PLACE 24/7

NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. FOR SEWER RELOCATION PLAN, SEE SHEET SD-45.
5. BARREL SPACING SHALL BE 5' ON CENTER.

COMMISSIONER OF MASSACHUSETTS
 RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 REGISTERED PROFESSIONAL ENGINEER
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

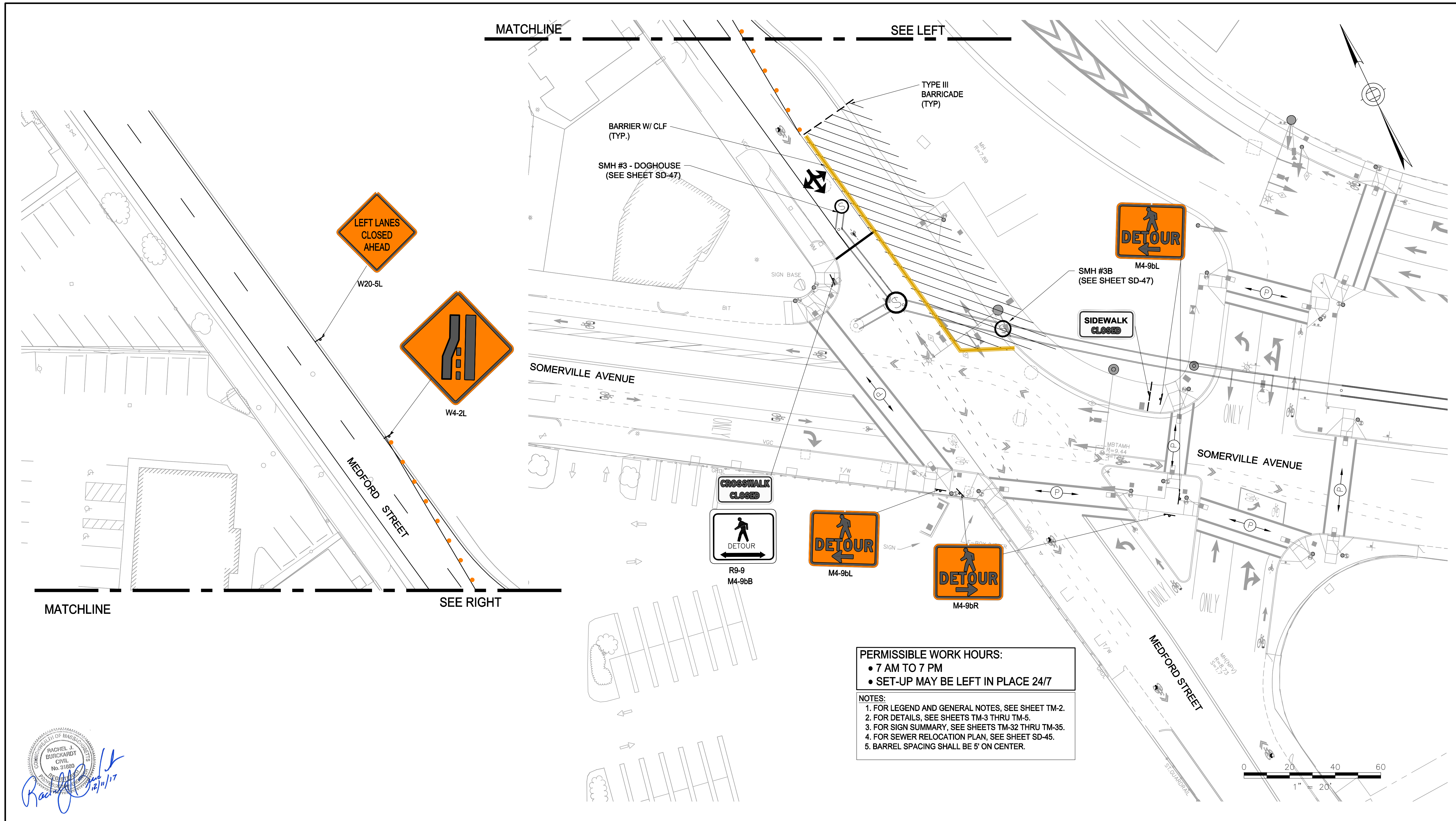
CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

DOWNSTREAM SEWER CONNECTION

TYPICAL SETUP 'B'

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
CHECKED: JC		REF. CONT. ACC. DATE: DEC 2017
DRAWN: LAC	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143	
CHECKED: RJB	SCALE: 1"=20'	DATE: DEC 2017



PERMISSIBLE WORK HOURS:

- 7 AM TO 7 PM
- SET-UP MAY BE LEFT IN PLACE 24/7

NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. FOR SEWER RELOCATION PLAN, SEE SHEET SD-45.
5. BARREL SPACING SHALL BE 5' ON CENTER.

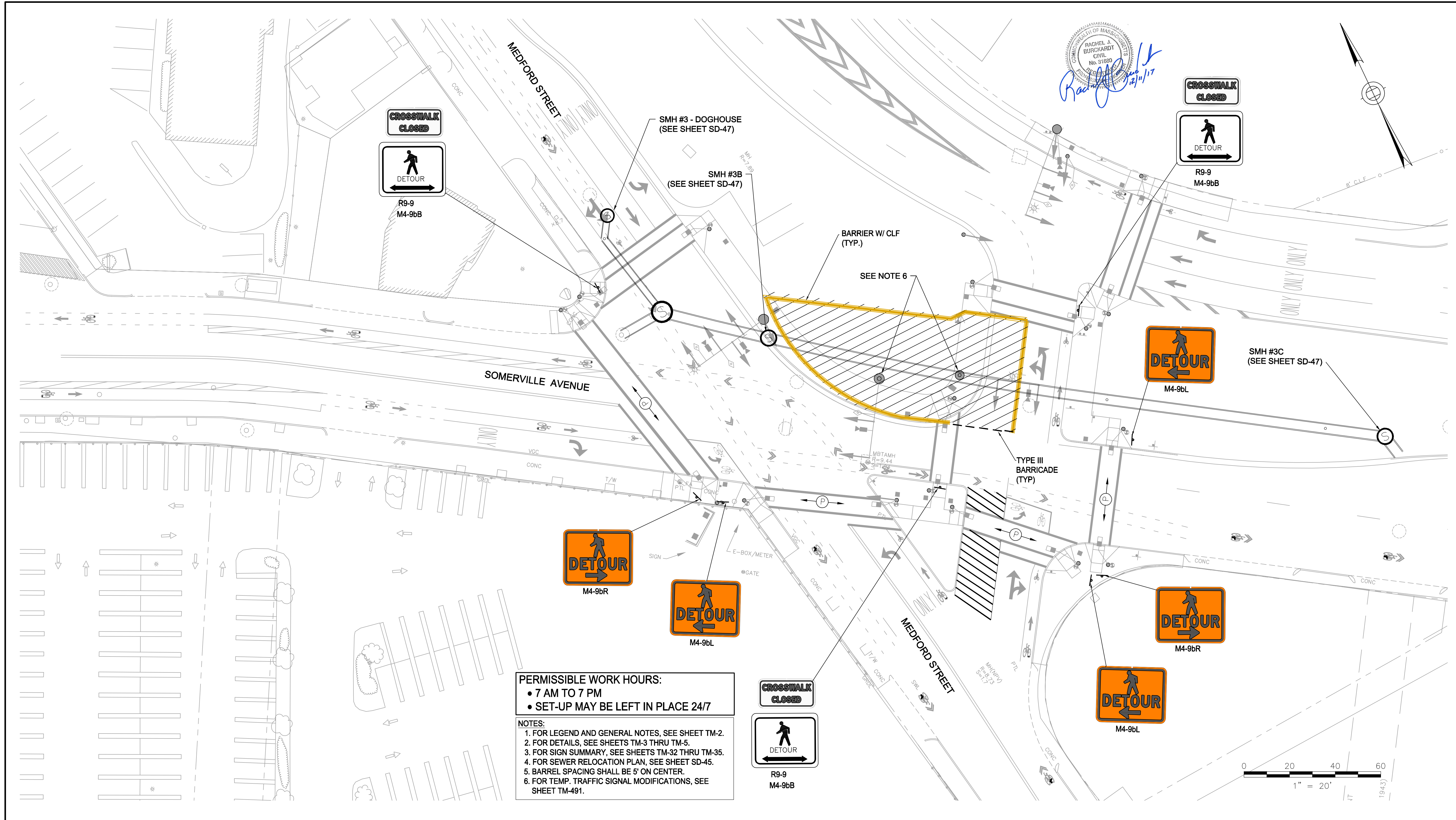
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
DOWNSTREAM SEWER CONNECTION
TYPICAL SETUP 'C'

DESIGNED: DY CHECKED: JC DRAWN: LAC CHECKED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-342
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

2017-07-28 5:51 PM T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-343 -STAGE-SD-46-D.dwg



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

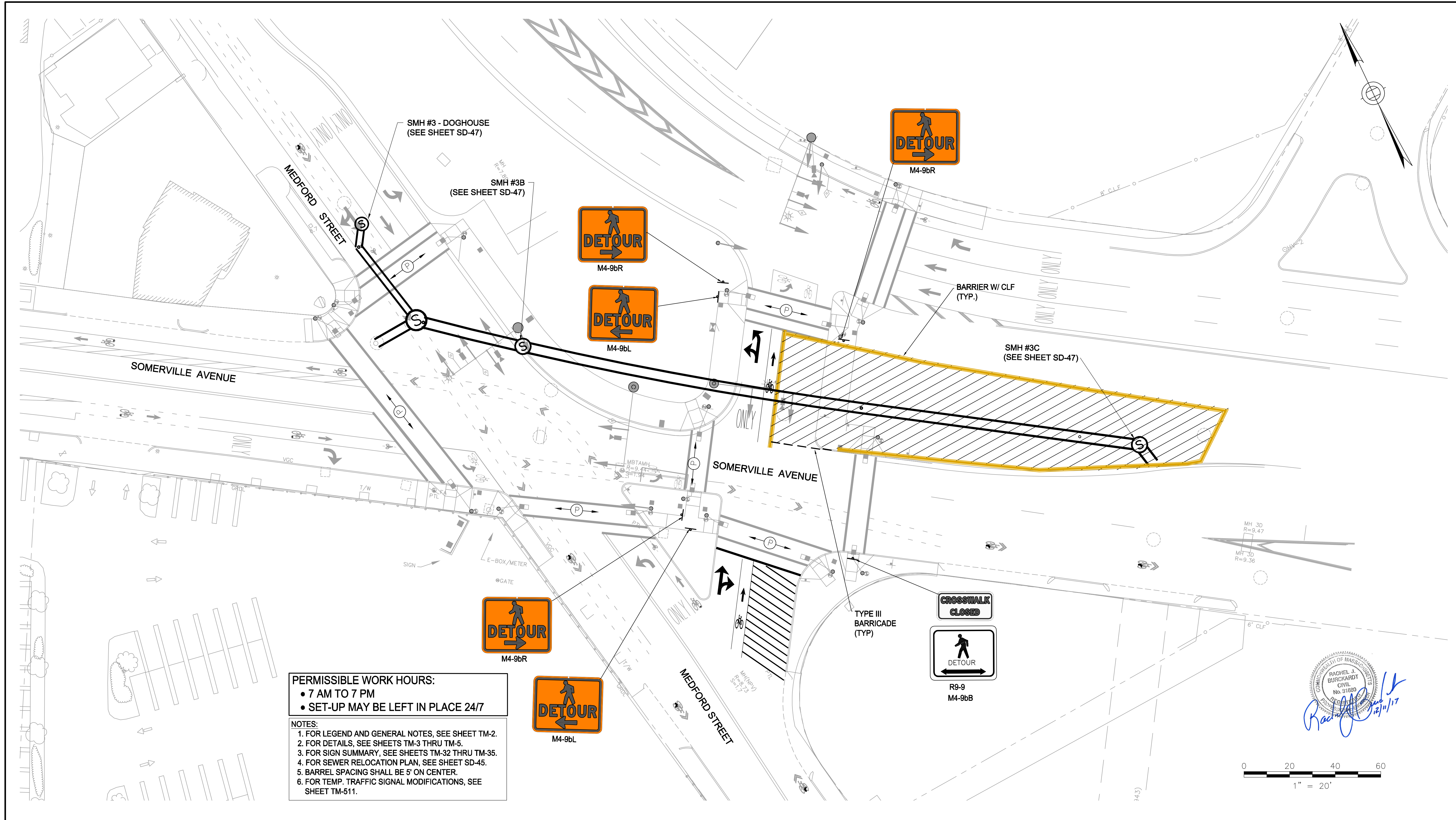
SEWER SEPARATION AND WATER REPLACEMENT

DOWNSTREAM SEWER CONNECTION

TYPICAL SETUP 'D'

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
CHECKED: JC			<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> <td>SCALE: 1"=20'</td> </tr> <tr> <td>ACC.</td> <td> </td> <td>DATE: DEC 2017</td> </tr> </table>	REF.	CONT.	SCALE: 1"=20'	ACC.
REF.	CONT.	SCALE: 1"=20'					
ACC.		DATE: DEC 2017					
DRAWN: LAC	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143	TM-343					
CHECKED: RJB							

T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-344 -STAGE-SD-46-E.dwg 2017-07-28 6:24 PM



PERMISSIBLE WORK HOURS:

- 7 AM TO 7 PM
- SET-UP MAY BE LEFT IN PLACE 24/7

NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
4. FOR SEWER RELOCATION PLAN, SEE SHEET SD-45.
5. BARREL SPACING SHALL BE 5' ON CENTER.
6. FOR TEMP. TRAFFIC SIGNAL MODIFICATIONS, SEE SHEET TM-511.

Rachel J. Burckardt

 2/11/17

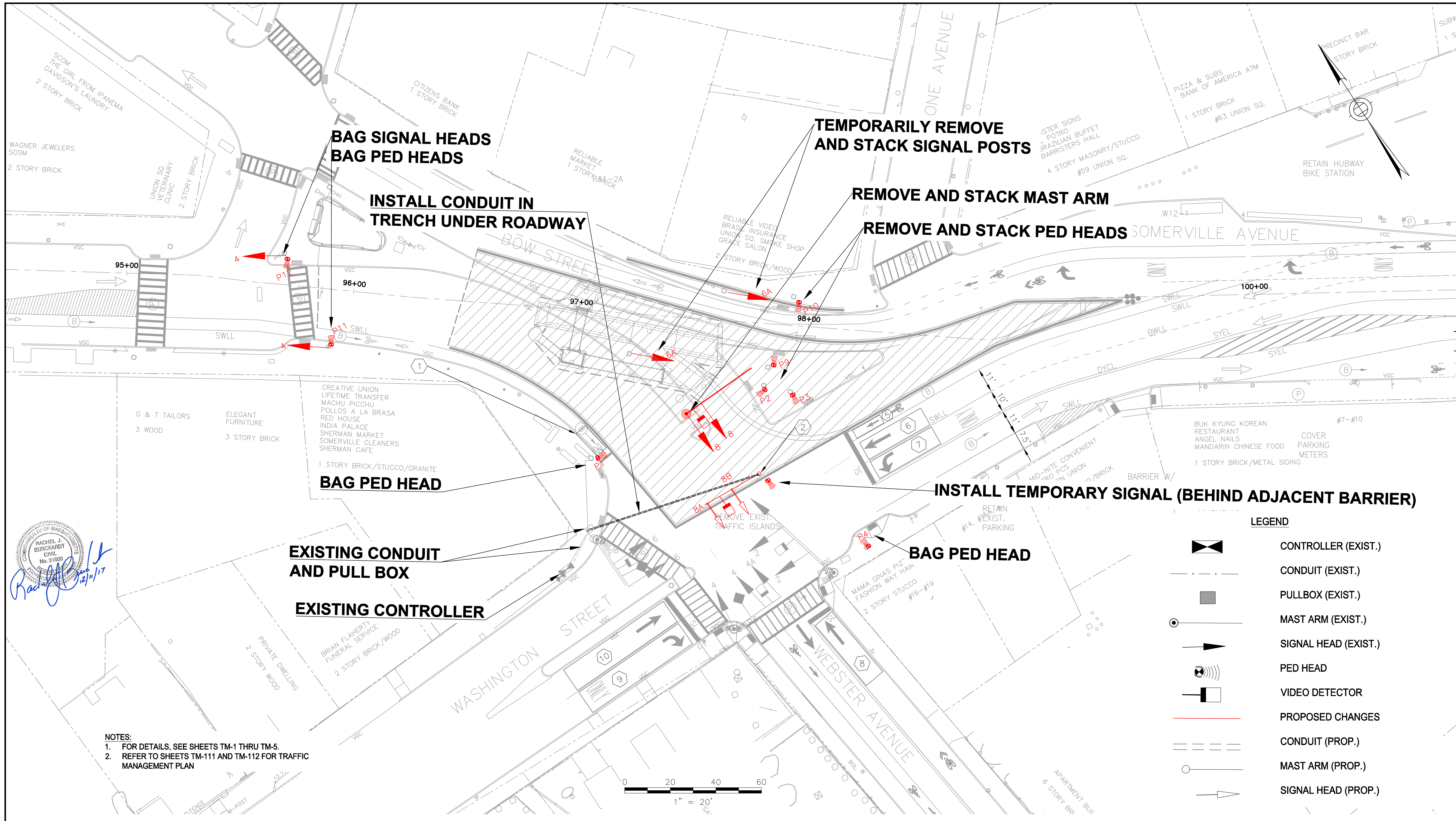
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
DOWNSTREAM SEWER CONNECTION
TYPICAL SETUP 'E'

DESIGNED: DY CHECKED: JC DRAWN: LAC CHECKED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-344
REF. ACC.	CONT.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

2017-10-27 3:59 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-411 SIGNAL CHANGES-1A.dwg



Rachel J. Burckardt

NOTES:
 1. FOR DETAILS, SEE SHEETS TM-1 THRU TM-5.
 2. REFER TO SHEETS TM-111 AND TM-112 FOR TRAFFIC MANAGEMENT PLAN

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGE 1A SHEET 1 OF 2

DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-411
REF. _____ ACC. _____	CONT. _____	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

REMOVE MOVEMENT

TIMING AND SEQUENCE CHART

STREET/DIRECTION/FACE	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL									
WASHINGTON ST/EB/2	G	Y	R	R	R	R	R	R	R									
SOMERVILLE AVE/SB/4+4A	R	R	R	G-GL	Y-YL	R-RL	R	R	R									
SOMERVILLE AVE/WB/6	G	Y	R	R	R	R	R	R	R									
SOMERVILLE AVE/WB RT/6A	R	R	R	G	Y	R	R	R	R									
WEBSTER AVE/NB/8 A+8B	RR-RL	RR-RL	RR-RL	RR-RL	RR-RL	RR-RL	GR-GL	YR-YL	RR-RL									
C.W./E-W/P1-P2	W	FDW	DW	DW	DW	DW	DW	DW	DW									
C.W./E-W/P5-P6	W	FDW	DW	DW	DW	DW	DW	DW	DW									
C.W./N-S/P7-P8	DW	DW	DW	W	FDW	DW	DW	W	FDW									
C.W./N-S/P3-P4	DW	DW	DW	DW	DW	DW	W	FDW	DW									
C.W./N-S/P9-P10	DW	DW	DW	DW	DW	DW	W	FDW	DW									

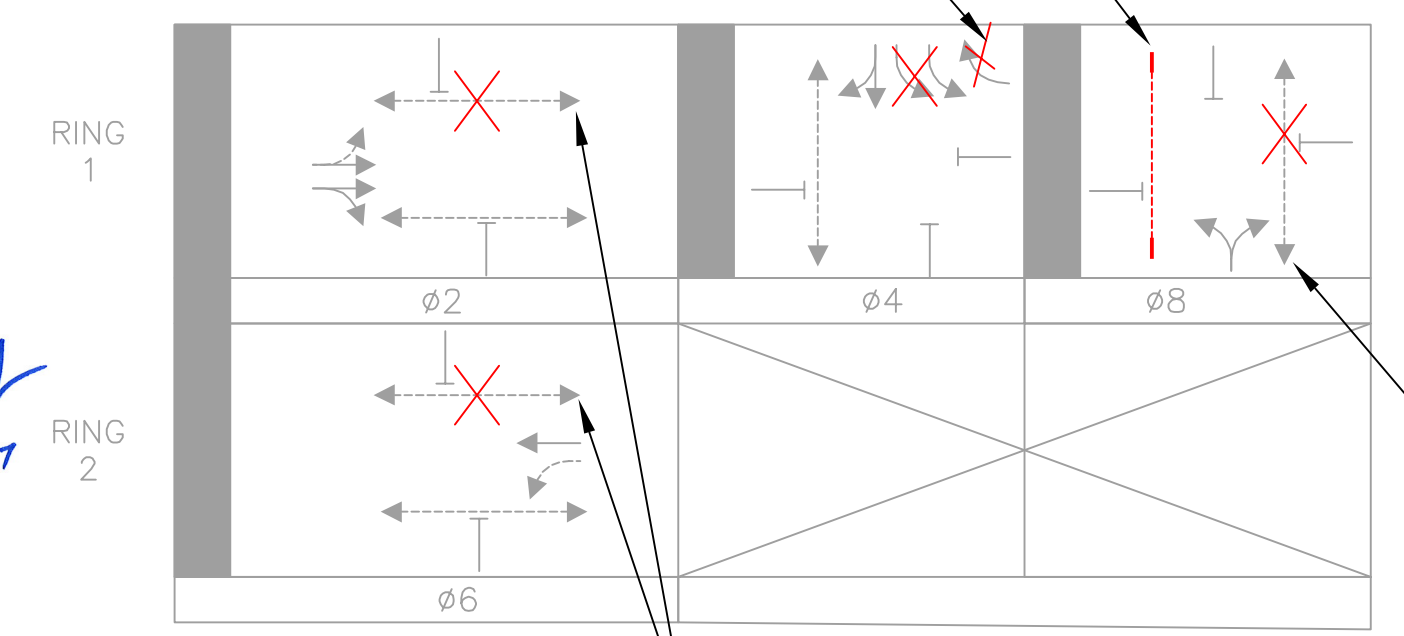
MAJOR ITEMS REQUIRED

QUANTITY	MAJOR ITEMS REQUIRED
1	4DW CONTROLLER WITH INTERNAL RCU IN TYPE 'CB' CABINET,
	FOUNDATION, MMU, BUS INTERFACE UNITS, FLASHER LOAD SWITCHES
8	12"- 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
3	12"- 3 SECTION (R,Y,G LEFT) L.E.D. VEHICLE SIGNAL INDICATION
10	16"- PEDESTRIAN L.E.D. SIGNAL COUNTDOWN INDICATION
10	AUDIBLE PEDESTRIAN PUSHBUTTON, SIGN & SADDLE
4	VIDEO DETECTION CAMERA CAPABLE OF REMOTE DATA COLLECTION (OR 1 GRIDSMART 360 CAMERA WITH TRAFFIC COUNT MODULE)
1	OPTICOM PRE-EMPTION SYSTEM (4 DETECTORS, 2 STROBES, 1 4-CHANNEL PHASE SELECTOR)
1	35-FT STEEL MAST ARM AND POLE
1	CABINET POWER SUPPLY
1	RADIO FOR WIRELESS ETHERNET
1	SERVICE CONNECTION AND METER POST
NOTES:	
LS	REMOVE AND REINSTALL VIDEO DETECTION, ANTENNA, OPTICOM DETECTOR, AND OPTICOM STROBE TO TEMPORARY MAST ARM (2)
PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL	

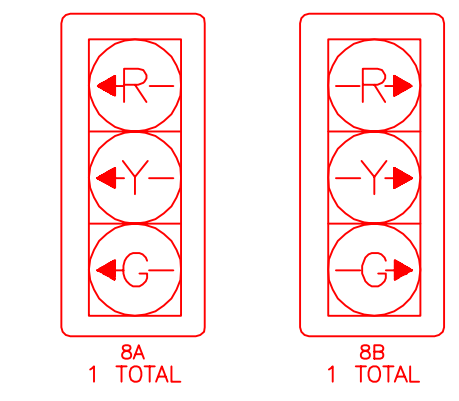
NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

REMOVE MOVEMENT ADD PED MOVEMENT

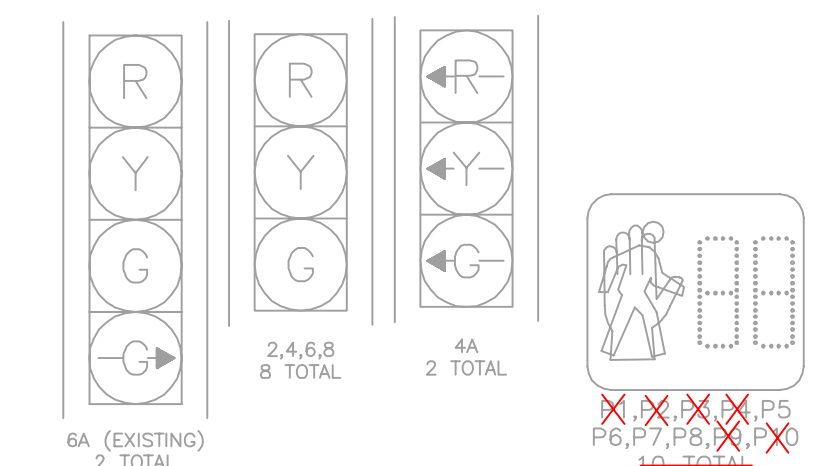
PHASING DIAGRAM



REMOVE PED MOVEMENT



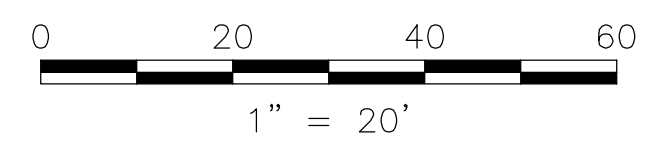
SIGNAL FACES



- NOTE:
- ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH TUNNEL VISORS.
 - ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
 - ALL VEHICLE INDICATIONS MOUNTED ON MAST ARMS SHALL BE RIGID MOUNTED AND BE EQUIPPED WITH 5" NON-LOUVERED BACKPLATES.
 - PEDESTRIAN WALK AND DON'T WALK SYMBOLS SHALL BE SOLID-TYPE L.E.D. OUTLINED SYMBOLS SHALL NOT BE USED PER BTD SPECS.
 - DETECTION FOR PHASE 4 MUST BE SET TO BIKE LANE ONLY.
 - CONTRACTOR TO RESTORE THE EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

CYCLE NO.		CYCLE LENGTH	OFFSET (SEC.)	PROGRAM/COORDINATION PHASE SPLITS IN SECONDS			HOURS OF OPERATION	
				02 06	04	08		
1		120	67	87 87	44	33	6:00 A.M. TO 10:00 A.M.	
2		120	47	103 103	37	17 17	3:00 P.M. TO 7:00 P.M.	
COORDINATED OPERATION								
PROGRAMMED FLASH								

LOOP DETECTOR DATA							CLEARANCES				TECHNICAL NOTES						
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	ØCALL	ØEXT.	CHNL.	FROM	TO							
1	1	3X20	-	-	PRES	2+6	4	2+6	4	G	G-GL	R	-	-	W	DW	1. WIRELESS ETHERNET INTERCONNECT TO SOMERVILLE AVENUE/ PROSPECT STREET INTERSECTION AND WARREN STREET PEDESTRIAN SIGNAL.
2	1	6X40	-	-	PRES	4	4	4	G	G	-	Y	-	-	-	-	
3	1	6X40	-	-	PRES	4	4	4	G-GL	-	G-GL	G-YL	-	-	-	-	
4	1	6X40	-	-	PRES	4	4	4	-	-	-	-	-	-	-	-	
5	1	3X20	-	-	PRES	2+6	2+6	4	-	-	-	-	-	-	-	-	
6	1	6X40	-	-	PRES	2+6	2+6	1	R	-	-	-	-	-	-	-	
7	1	6X40	-	-	PRES	2+6	2+6	2	W	-	-	-	-	-	W	FDW	
8	1	6X40	-	-	PRES	8	8	1	DW	-	-	-	-	-	-	DW	
9	1	6X40	-	-	PRES	2+6	2+6	1	-	-	-	-	-	-	-	-	
10	1	6X40	-	-	PRES	2+6	2+6	2	-	-	-	-	-	-	-	-	



*TRAFFIC SIGNAL CHANGES SHEET REVISIONS NOTED IN RED

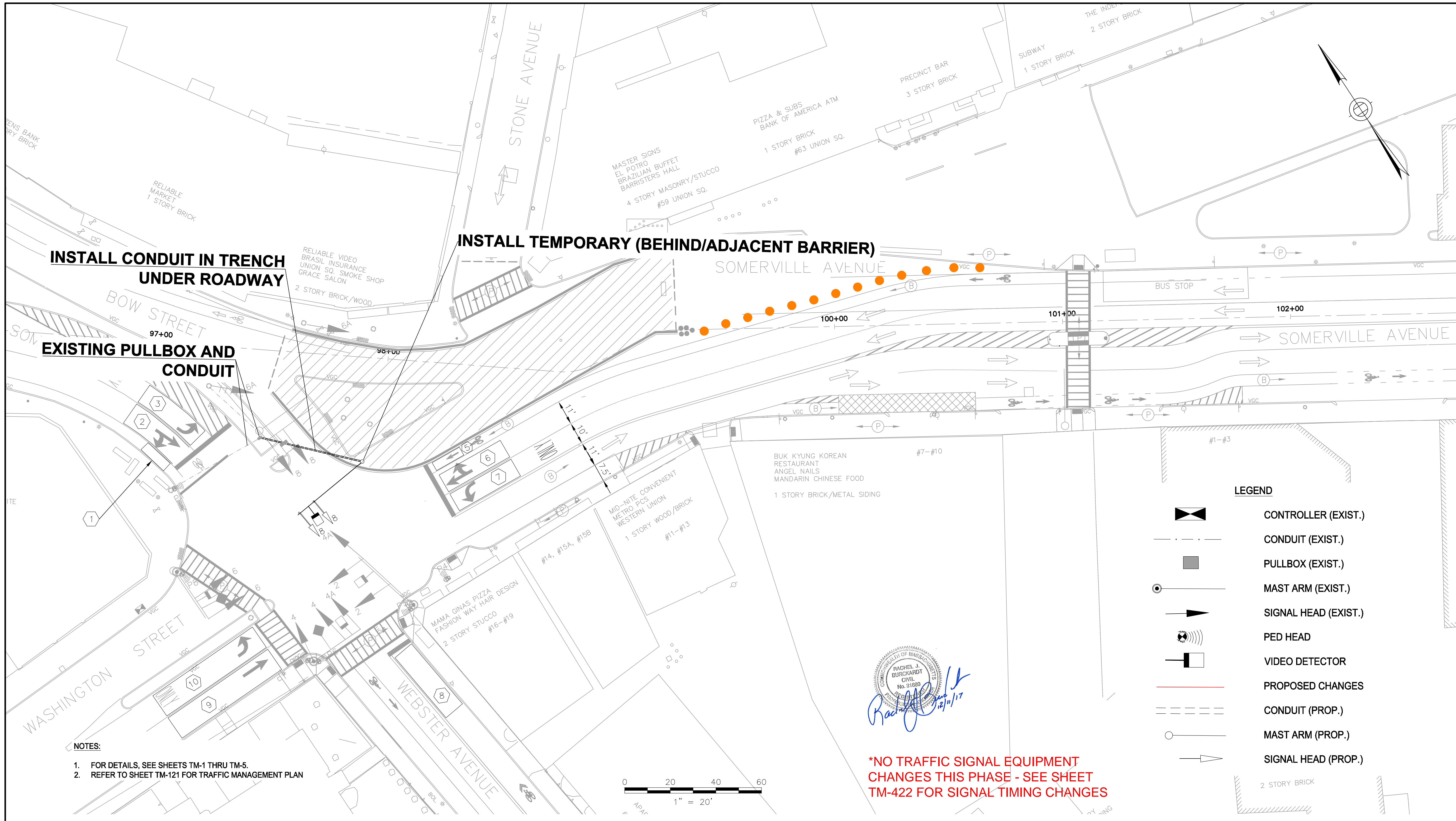
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
 CONTRACT CP-2/CP-3
 SEWER SEPARATION AND WATER REPLACEMENT
 TRAFFIC SIGNAL CHANGES
 STAGE 1A SHEET 2 OF 2

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-412
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-421 SIGNAL CHANGES-1B.dwg 2017-10-26 1:14 PM



INSTALL CONDUIT IN TRENCH UNDER ROADWAY

EXISTING PULLBOX AND CONDUIT

INSTALL TEMPORARY (BEHIND/ADJACENT BARRIER)

- LEGEND**
- CONTROLLER (EXIST.)
 - CONDUIT (EXIST.)
 - PULLBOX (EXIST.)
 - MAST ARM (EXIST.)
 - SIGNAL HEAD (EXIST.)
 - PED HEAD
 - VIDEO DETECTOR
 - PROPOSED CHANGES
 - CONDUIT (PROP.)
 - MAST ARM (PROP.)
 - SIGNAL HEAD (PROP.)

- NOTES:**
- FOR DETAILS, SEE SHEETS TM-1 THRU TM-5.
 - REFER TO SHEET TM-121 FOR TRAFFIC MANAGEMENT PLAN

***NO TRAFFIC SIGNAL EQUIPMENT CHANGES THIS PHASE - SEE SHEET TM-422 FOR SIGNAL TIMING CHANGES**

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC SIGNAL CHANGES

STAGE 1B SHEET 1 OF 2

DESIGNED: DY		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-421
CHECKED: JC		REF.	CONT.	
DRAWN: DY		ACC.		
CHECKED: JC				

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

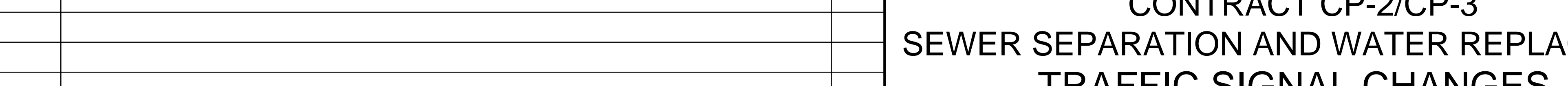
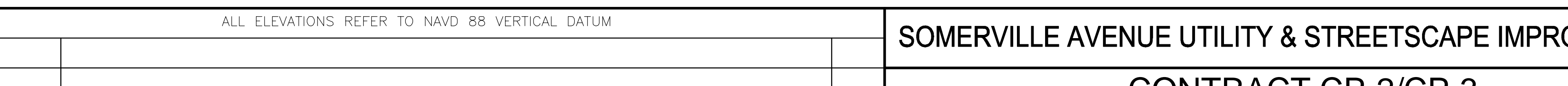
TIMING AND SEQUENCE CHART

STREET/DIRECTION/FACE	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL							
WASHINGTON ST/EB/2	G	Y	R	R	R	R	R	R	R							
SOMERVILLE AVE/SB/4+4A	R	R	R	G-GL	Y-YL	R-RL	R	R	R							
SOMERVILLE AVE/WB/6	G	Y	R	R	R	R	R	R	R							
SOMERVILLE AVE/WB RT/6A	R	R	R	G	Y	R	R	R	R							
WEBSTER AVE/NB/8	R	R	R	R	R	R	G-GL	Y-YL	R-RL							
C.W./E-W/P1-P2	W	FDW	DW	DW	DW	DW	DW	DW	DW							
C.W./E-W/P5-P6	W	FDW	DW	DW	DW	DW	DW	DW	DW							
C.W./N-S/P7-P8	DW	DW	DW	W	FDW	DW	DW	DW	DW							
C.W./N-S/P3-P4	DW	DW	DW	DW	DW	DW	W	FDW	DW							
C.W./N-S/P9-P10	DW	DW	DW	DW	DW	DW	W	FDW	DW							

I N T E R V A L	SECONDS	MINIMUM GREEN	25		23		22									
		VEHICLE EXTENSION	3		3		3									
MAXIMUM 1 GREEN	53		52		43											
MAXIMUM 2 GREEN	57		45		45											
YELLOW CLEARANCE		3		3		3										
RED CLEARANCE			3		3			3								
WALK INTERVAL	9		9		9			9								
PED. CLEARANCE		22		20		19										
MEMORY		NON-LOCK		NON-LOCK		NON-LOCK										
RECALL (VEH./PED.)		MAX/ON		OFF/ON		OFF/ON										

CYCLE NO.		CYCLE LENGTH	OFFSET (SEC.)	PHASE SPLITS IN SECONDS			HOURS OF OPERATION
1	120	67		35 46	44 46	35 28	6:00 A.M. TO 10:00 A.M.
2	120	47		48 41	37 44	37 35	3:00 P.M. TO 7:00 P.M.

LOOP DETECTOR DATA									CLEARANCES				TECHNICAL NOTES			
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	ØCALL	ØEXT.	CHNL.	FROM	TO						
1	1	3X20	-	-	PRES	2+6	2+6	3	G	G-GL	R	-	-	W	DW	1. WIRELESS ETHERNET INTERCONNECT TO SOMERVILLE AVENUE/ PROSPECT STREET INTERSECTION AND WARREN STREET PEDESTRIAN SIGNAL.
2	1	6X40	-	-	PRES	4	4	1	G	-	Y	-	-	-	-	
3	1	6X40	-	-	PRES	4	4	2	G-GL	-	G-GL	G-YL	-	-	-	
4	1	6X40	-	-	PRES	4	4	3	-	-	-	-	-	-	-	
5	1	3X20	-	-	PRES	4	4	4	-	-	-	-	-	-	-	
6	1	6X40	-	-	PRES	2+6	2+6	1	R	-	-	-	-	-	-	
7	1	6X40	-	-	PRES	2+6	2+6	2	W	-	-	-	-	W	FDW	
8	1	6X40	-	-	PRES	8	8	1	DW	-	-	-	-	-	DW	
9	1	6X40	-	-	PRES	2+6	2+6	1	-	-	-	-	-	-	-	
10	1	6X40	-	-	PRES	2+6	2+6	2	-	-	-	-	-	-	-	



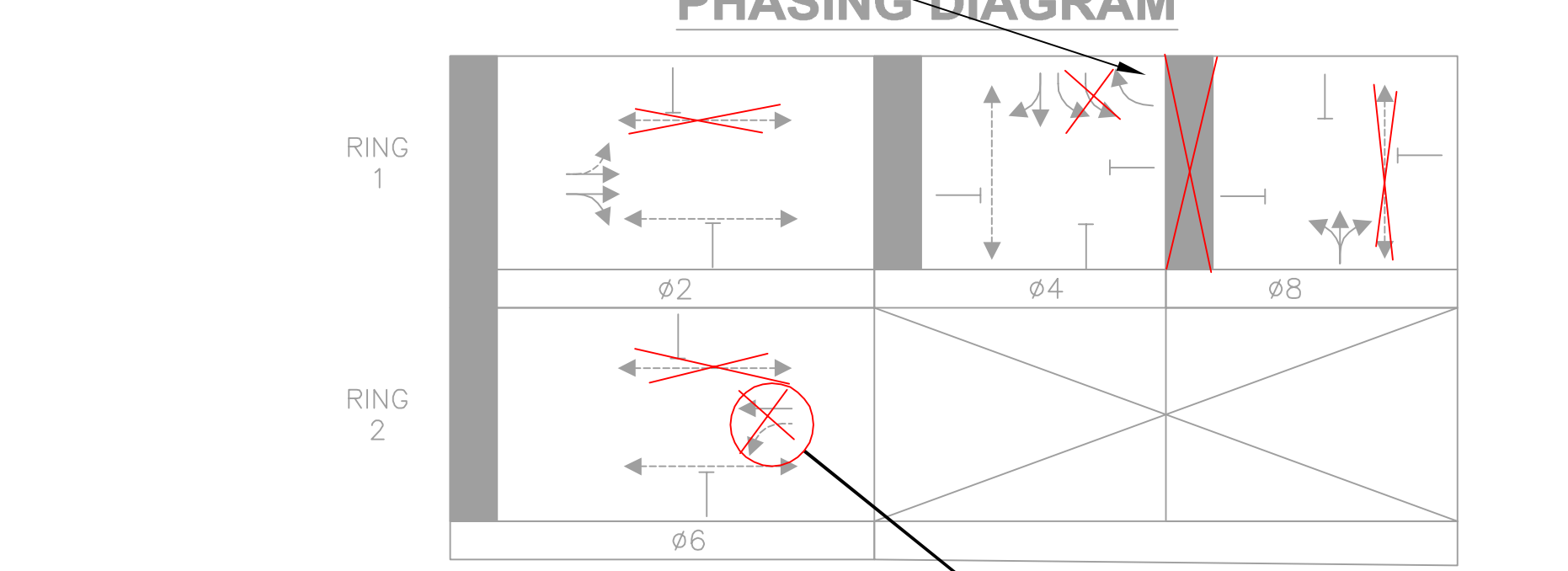
NO.	DATE	REVISIONS	BY

MAJOR ITEMS REQUIRED

QUANTITY	MAJOR ITEMS REQUIRED
1	4DW CONTROLLER WITH INTERNAL RCU IN TYPE 'CB' CABINET,
1	FOUNDATION, MMU, BUS INTERFACE UNITS, FLASHER LOAD SWITCHES
8	12"- 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
3	12"- 3 SECTION (R,Y,G LEFT) L.E.D. VEHICLE SIGNAL INDICATION
10	16"- PEDESTRIAN L.E.D. SIGNAL COUNTDOWN INDICATION
10	AUDIBLE PEDESTRIAN PUSHBUTTON, SIGN & SADDLE
4	VIDEO DETECTION CAMERA CAPABLE OF REMOTE DATA COLLECTION (OR 1 GRIDSMART 360 CAMERA WITH TRAFFIC COUNT MODULE)
1	OPTICOM PRE-EMPTION SYSTEM (4 DETECTORS, 2 STROBES, 1 4-CHANNEL PHASE SELECTOR)
1	35-FT STEEL MAST ARM AND POLE
1	CABINET POWER SUPPLY
1	RADIO FOR WIRELESS ETHERNET
1	SERVICE CONNECTION AND METER POST
NOTES:	
LS	REMOVE AND REINSTALL VIDEO DETECTION, ANTENNA, OPTICOM DETECTOR, AND OPTICOM STROBE TO TEMPORARY MAST ARM
PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL	

NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

REMOVE PED MOVEMENT PHASING DIAGRAM



- NOTE:**
- ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH TUNNEL VISORS.
 - ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
 - ALL VEHICLE INDICATIONS MOUNTED ON MAST ARMS SHALL BE RIGID MOUNTED AND BE EQUIPPED WITH 5" NON-LOUVERED BACKPLATES.
 - PEDESTRIAN WALK AND DON'T WALK SYMBOLS SHALL BE SOLID-TYPE L.E.D. OUTLINED SYMBOLS SHALL NOT BE USED PER BTD SPECS.
 - CONTRACTOR TO RESTORE TO EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

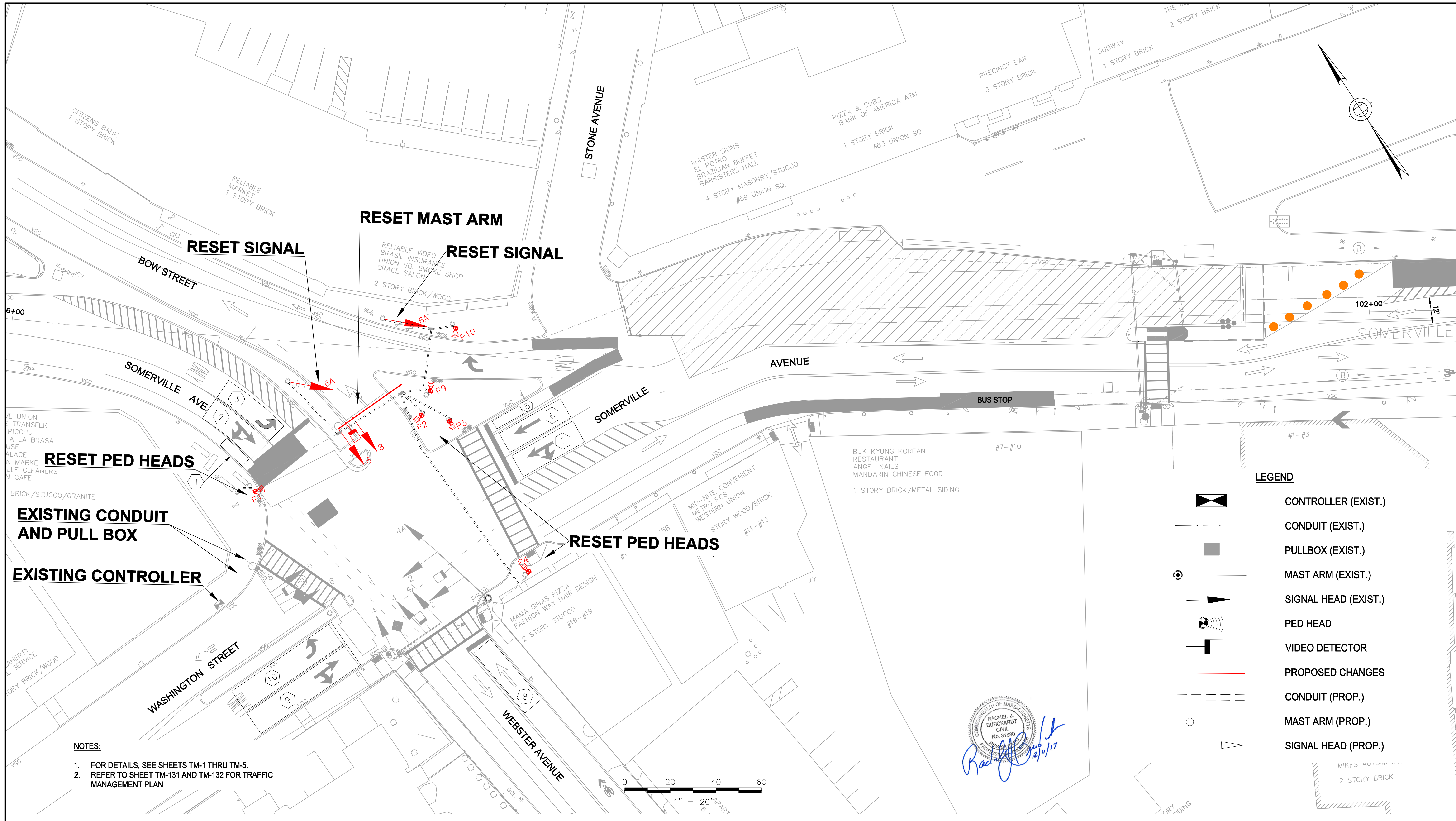
TRAFFIC SIGNAL CHANGES

STAGE 1B SHEET 2 OF 2

DESIGNED: DY		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-422
CHECKED: JC		REF.	CONT.	
DRAWN: DY		ACC.	DATE: DEC 2017	
CHECKED: JC				

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

T:\52647LS Union Square Study and Design\SH1 DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-425 SIGNAL CHANGES-1C.dwg 2017-10-20 10:59 AM



RESET PED HEADS

EXISTING CONDUIT AND PULL BOX

EXISTING CONTROLLER

RESET MAST ARM

RESET SIGNAL

RESET PED HEADS

- NOTES:**
- FOR DETAILS, SEE SHEETS TM-1 THRU TM-5.
 - REFER TO SHEET TM-131 AND TM-132 FOR TRAFFIC MANAGEMENT PLAN

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC SIGNAL CHANGES

STAGE 1C SHEET 1 OF 2

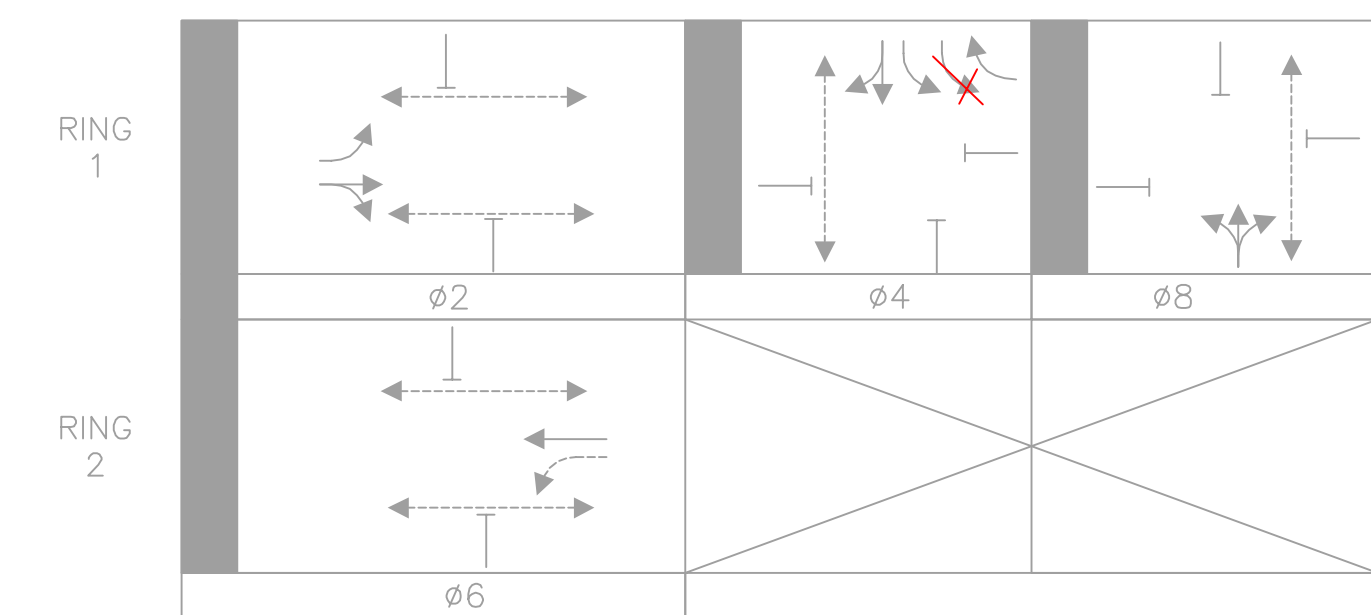
DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-425
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=20'
CITY OF SOMERVILLE		DATE: DEC 2017
93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

MAJOR ITEMS REQUIRED

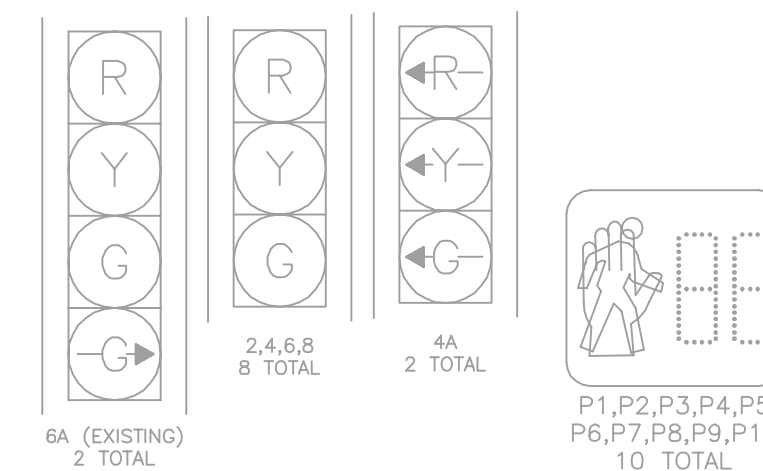
QUANTITY	MAJOR ITEMS REQUIRED
1	4DW CONTROLLER WITH INTERNAL RCU IN TYPE 'CB' CABINET, FOUNDATION, MMU, BUS INTERFACE UNITS, FLASHER LOAD SWITCHES
8	12"- 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
3	12"- 3 SECTION (R,Y,G LEFT) L.E.D. VEHICLE SIGNAL INDICATION
10	16"- PEDESTRIAN L.E.D. SIGNAL COUNTDOWN INDICATION
10	AUDIBLE PEDESTRIAN PUSHBUTTON, SIGN & SADDLE
4	VIDEO DETECTION CAMERA CAPABLE OF REMOTE DATA COLLECTION (OR 1 GRIDSMART 360 CAMERA WITH TRAFFIC COUNT MODULE)
1	OPTICOM PRE-EMPTION SYSTEM (4 DETECTORS, 2 STROBES, 1 4-CHANNEL PHASE SELECTOR)
1	35-FT STEEL MAST ARM AND POLE
1	CABINET POWER SUPPLY
1	RADIO FOR WIRELESS ETHERNET
1	SERVICE CONNECTION AND METER POST
PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL	

NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

PHASING DIAGRAM



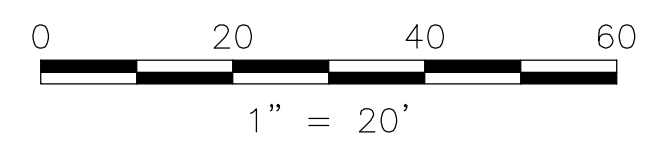
SIGNAL FACES



- NOTE:
- ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH TUNNEL VISORS.
 - ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
 - ALL VEHICLE INDICATIONS MOUNTED ON MAST ARMS SHALL BE RIGID MOUNTED AND BE EQUIPPED WITH 5" NON-LOUVERED BACKPLATES.
 - PEDESTRIAN WALK AND DON'T WALK SYMBOLS SHALL BE SOLID-TYPE L.E.D. OUTLINED SYMBOLS SHALL NOT BE USED PER BTD SPECS.
 - CONTRACTOR TO RESTORE TO EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

TIMING AND SEQUENCE CHART										OCCUPANCY ZONE	
STREET/DIRECTION/FACE	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL		
WASHINGTON ST/EB/2	G	Y	R	R	R	R	R	R	R		
SOMERVILLE AVE/SB/4+4A	R	R	R	G-GL	Y-YL	R-RL	R	R	R		
SOMERVILLE AVE/WB/6	G	Y	R	R	R	R	R	R	R		
SOMERVILLE AVE/WB RT/6A	R	R	R	G	Y	R	R	R	R		
WEBSTER AVE/NB/8	R	R	R	R	R	R	G-GL	Y-YL	R-RL		
C.W./E-W/P1-P2	W	FDW	DW	DW	DW	DW	DW	DW	DW		OFF
C.W./E-W/P5-P6	W	FDW	DW	DW	DW	DW	DW	DW	DW		OFF
C.W./N-S/P7-P8	DW	DW	DW	W	FDW	DW	DW	DW	DW		OFF
C.W./N-S/P3-P4	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF	
C.W./N-S/P9-P10	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF	
INTERSECTIONS	MINIMUM GREEN	25		23		22					
	VEHICLE EXTENSION	3		3		3					
	MAXIMUM 1 GREEN	53		52		43					
	MAXIMUM 2 GREEN	57		45		45					
	YELLOW CLEARANCE		3		3		3				
	RED CLEARANCE			3		3		3			
	WALK INTERVAL	9		9		9		3			
PED. CLEARANCE		22		20		19					
MEMORY		NON-LOCK		NON-LOCK		NON-LOCK					
RECALL (VEH./PED.)		MAX/ON		OFF/ON		OFF/ON					
PROGRAM/COORDINATION											
CYCLE NO.	CYCLE LENGTH	OFFSET (SEC.)	PHASE SPLITS IN SECONDS			HOURS OF OPERATION					
1	120	67	02	06	04	08	6:00 A.M. TO 10:00 A.M.				
2	120	47	02	06	04	08	3:00 P.M. TO 7:00 P.M.				
COORDINATED OPERATION											
PROGRAMMED FLASH											

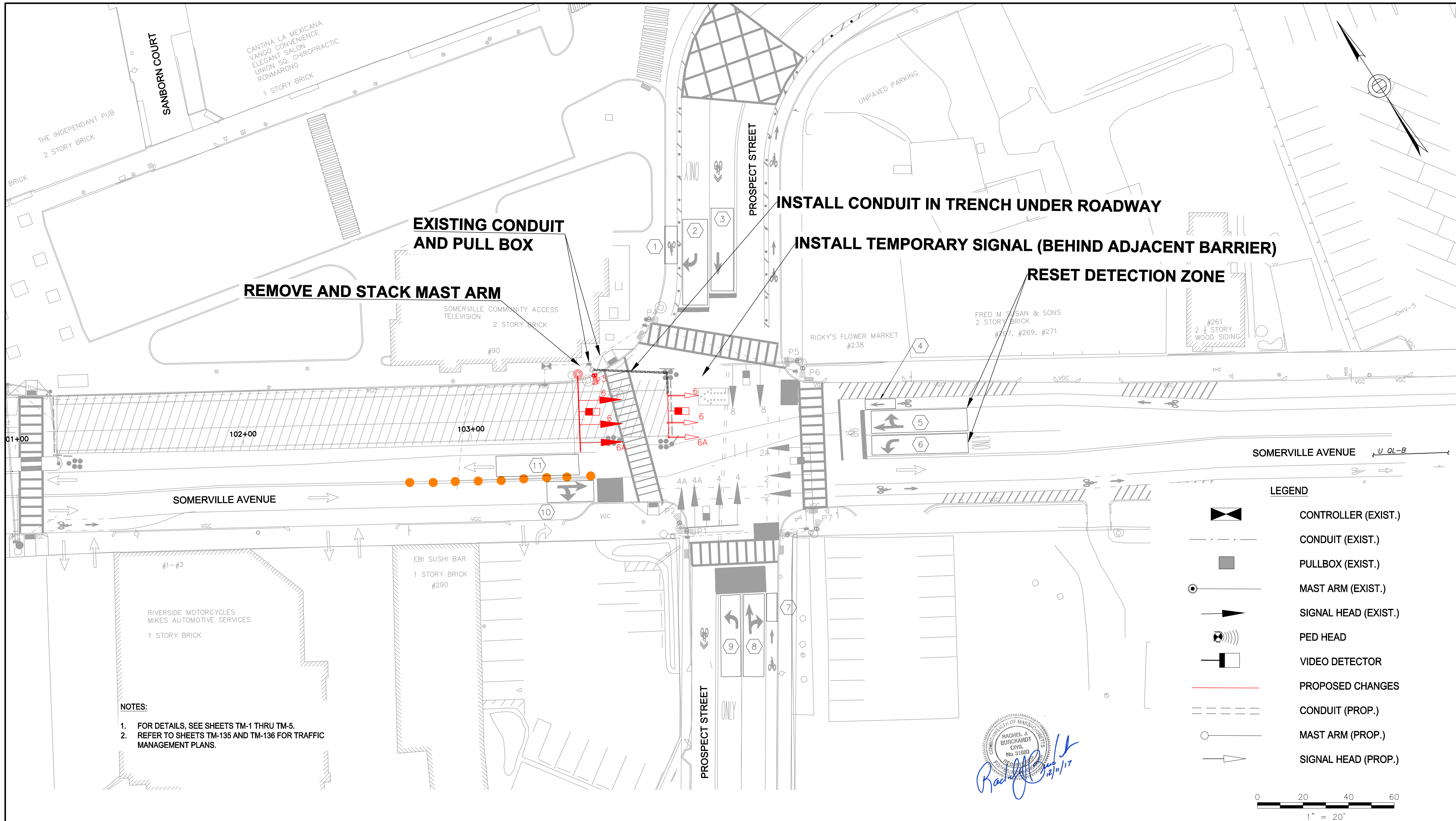
LOOP DETECTOR DATA									CLEARANCES								TECHNICAL NOTES	
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	ØCALL	ØEXT.	CHNL.	FROM	TO								
1	1	3X20	-	-	PRES	4	4	3	G	G-GL	R	-	-	W	DW	1. WIRELESS ETHERNET INTERCONNECT TO SOMERVILLE AVENUE/ PROSPECT STREET INTERSECTION AND WARREN STREET PEDESTRIAN SIGNAL.		
2	1	6X40	-	-	PRES	4	4	1	G	G-GL	-	-	-	-	-			
3	1	6X40	-	-	PRES	4	4	2	G-GL	-	G-GL	G-YL	-	-	-			
4	1	6X40	-	-	PRES	4	4	3	-	-	-	-	-	-	-			
5	1	3X20	-	-	PRES	2+6	2+6	4	-	-	-	-	-	-	-			
6	1	6X40	-	-	PRES	2+6	2+6	1	R	-	-	-	-	-	-			
7	1	6X40	-	-	PRES	2+6	2+6	2	W	-	-	-	-	W	FDW			
8	1	6X40	-	-	PRES	8	8	1	DW	-	-	-	-	-	DW			
9	1	6X40	-	-	PRES	2+6	2+6	1	-	-	-	-	-	-	-			
10	1	6X40	-	-	PRES	2+6	2+6	2	-	-	-	-	-	-	-			



*TRAFFIC SIGNAL CHANGES SHEET REVISIONS NOTED IN RED

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM		<p>SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS</p> <p>CONTRACT CP-2/CP-3</p> <p>SEWER SEPARATION AND WATER REPLACEMENT</p> <p>TRAFFIC SIGNAL CHANGES</p> <p>STAGE 1C SHEET 2 OF 2</p>		DESIGNED: DY CHECKED: JC DRAWN: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-426
NO. DATE REVISIONS BY				REF. CONT. SCALE: 1"=20' ACC. DATE: DEC 2017	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143	

2017-10-23 11:02 AM T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-431 SIGNAL CHANGES-1D.dwg



NOTES:

1. FOR DETAILS, SEE SHEETS TM-1 THRU TM-5.
2. REFER TO SHEETS TM-135 AND TM-136 FOR TRAFFIC MANAGEMENT PLANS.

LEGEND

- CONTROLLER (EXIST.)
- CONDUIT (EXIST.)
- PULLBOX (EXIST.)
- MAST ARM (EXIST.)
- SIGNAL HEAD (EXIST.)
- PED HEAD
- VIDEO DETECTOR
- PROPOSED CHANGES
- CONDUIT (PROP.)
- MAST ARM (PROP.)
- SIGNAL HEAD (PROP.)

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGES 1D1 SHEET 1 OF 2

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-431
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=20'
CITY OF SOMERVILLE		DATE: DEC 2017
93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

Rachel J. Burckardt

 12/11/17

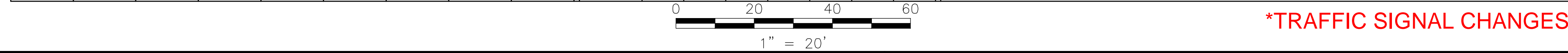
TIMING AND SEQUENCE CHART

STREET/DIRECTION/FACE	ø2			ø6			ø4 ø8			ø4 ø8 ø10			OFF
	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	
SOMERVILLE AVE/EB/2+2A	G-GL	Y-YL	R-RL	R	R	R	R	R	R	R	R	R	FY
SOMERVILLE AVE/WB/6+6A	R	R	R	G-GL	Y-YL	R-RL	R	R	R	R	R	R	FY
PROSPECT ST/NB/8	R	R	R	R	R	R	G	Y	R	G	Y	R	FR
WASHINGTON ST/SB THRU/4	R	R	R	R	R	R	G	Y	R	G	Y	R	FR
WASHINGTON ST/SB RT/4A	GR	YR	RR	R	R	R	R	R	R	GR	YR	RR	
C.W./E-W/P4-P5	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	OFF
C.W./E-W/P1-P8	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
C.W./N-S/P6-P7	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	OFF
C.W./N-S/P2-P3	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	OFF

MINIMUM GREEN	ø2			ø6			ø4 ø8			ø4 ø8 ø10		
	VEHICLE EXTENSION	3			3			3			3	
MAXIMUM 1 GREEN	60			33			39			23		
MAXIMUM 2 GREEN	48			33			43			24		
YELLOW CLEARANCE		3			3			3			3	
RED CLEARANCE			3			3			3			3
WALK INTERVAL	9			9			9					
PED. CLEARANCE		12			17			19				
MEMORY	NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK		
RECALL (VEH./PED.)	MAX/ON			MAX/ON			OFF/ON			OFF/OFF		

CYCLE NO.	CYCLE LENGTH	OFFSET (SEC.)	PHASE SPLITS IN SECONDS				HOURS OF OPERATION
			ø2	ø6	ø4 ø8	ø4 ø8 ø10	
1	120	0	43	27	32	18	6:00 A.M. TO 10:00 A.M.
2	120	0	43 49	27 27	32 28	18 16	3:00 P.M. TO 7:00 P.M.

LOOP DETECTOR DATA								CLEARANCES								TECHNICAL NOTES		
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	øCALL	øEXT.	CHNL.	FROM	TO								THIS LOCATION IS THE MASTER CONTROLLER.
1	1	3X20	-	-	PRES	4+8	4+8	1	G	G-GL	GR	R	-	W	DW			
2	1	6X40	-	-	PRES	4+8+10	4+8+10	2	G	-	-	Y	-	-	-			
3	1	6X40	-	-	PRES	4+8	4+8	3	G-GL	-	G-GL	-	G-YL	-	-			
4	1	3X20	-	-	PRES	6	6	1	GR	-	-	GR	YL	-	-			
5	1	6X40	-	-	PRES	6	6	2	-	-	-	-	-	-	-			
6	1	6X40	-	-	PRES	6	6	3	R	-	-	-	-	-	-			
7	1	3X20	-	-	PRES	4+8+10	4+8+10	1	W	-	-	-	-	W	FDW			
8	1	6X40	-	-	PRES	4+8+10	4+8+10	2	DW	-	-	-	-	-	DW			
9	1	6X40	-	-	PRES	4+8+10	4+8+10	3	-	-	-	-	-	-	-			
10	1	3X20	-	-	PRES	2	2	1	-	-	-	-	-	-	-			
11	1	6X40	-	-	PRES	2	2	2	-	-	-	-	-	-	-			
12	1	6X40	-	-	PRES	2	2	3	-	-	-	-	-	-	-			



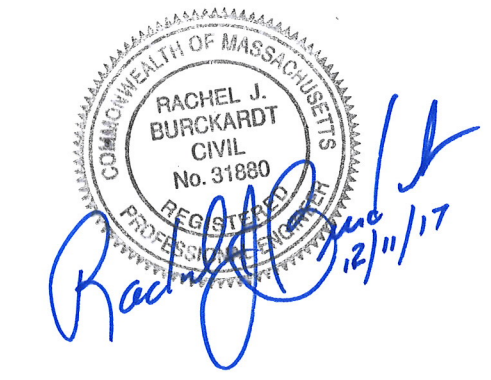
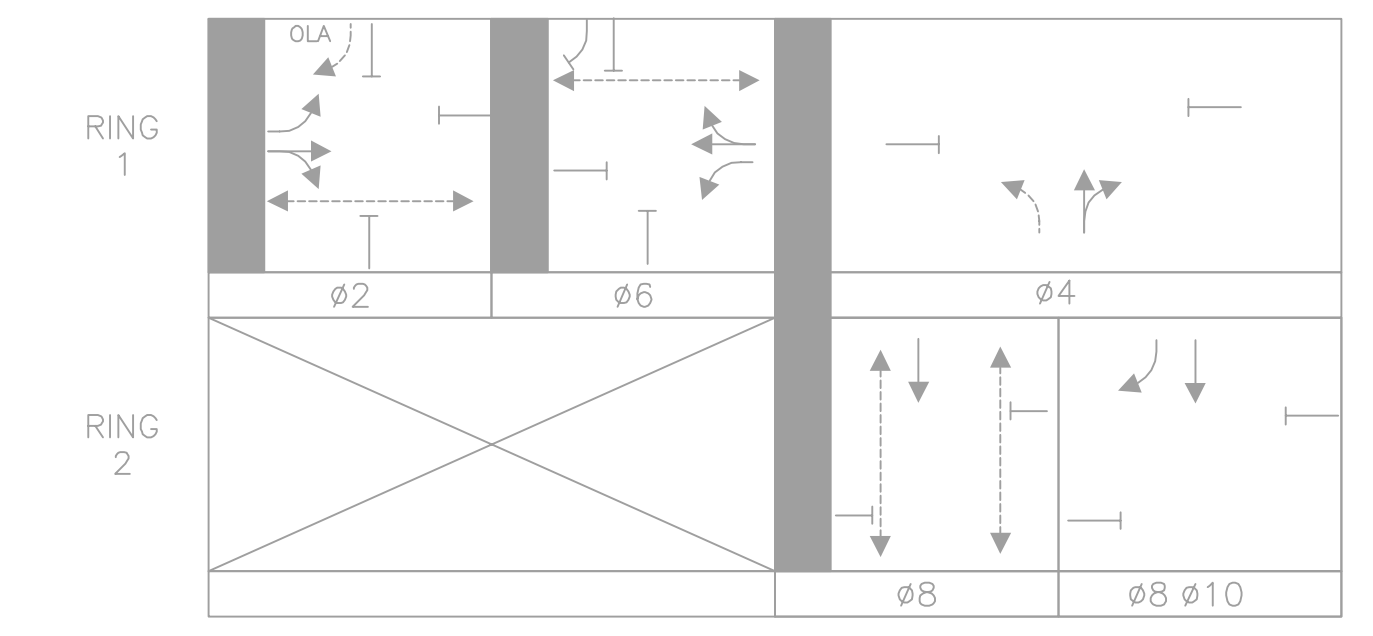
MAJOR ITEMS REQUIRED

QUANTITY	MAJOR ITEMS REQUIRED
1	4DW CONTROLLER WITH INTERNAL RCU IN TYPE 'CB' CABINET, FOUNDATION, MMU, BUS INTERFACE UNITS, FLASHER LOAD SWITCHES
2	8" SIGNAL POST, BASE, PEDESTAL & FOUNDATION
8	12"- 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
2	12"- 3 SECTION (R,Y,G LEFT) L.E.D. VEHICLE SIGNAL INDICATION
2	12"- 3 SECTION (R,Y,G RIGHT) L.E.D. VEHICLE SIGNAL INDICATION
8	16"- PEDESTRIAN L.E.D. SIGNAL COUNTDOWN INDICATION
8	AUDIBLE PEDESTRIAN PUSHBUTTON, SIGN & SADDLE
4	VIDEO DETECTION CAMERA CAPABLE OF REMOTE DATA COLLECTION (OR 1 GRIDSMART 360 CAMERA WITH TRAFFIC COUNT MODULE)
1	OPTICOM PRE-EMPTION SYSTEM (4 DETECTORS, 2 STROBES, 1 4-CHANNEL PHASE SELECTOR)
1	25-FT STEEL MAST ARM AND POLE
1	35-FT STEEL MAST ARM AND POLE
1	CABINET POWER SUPPLY
1	RADIO FOR WIRELESS ETHERNET
1	SERVICE CONNECTION AND METER POST

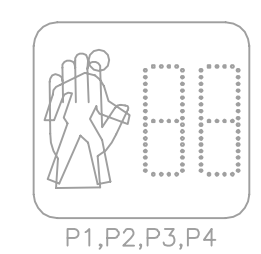
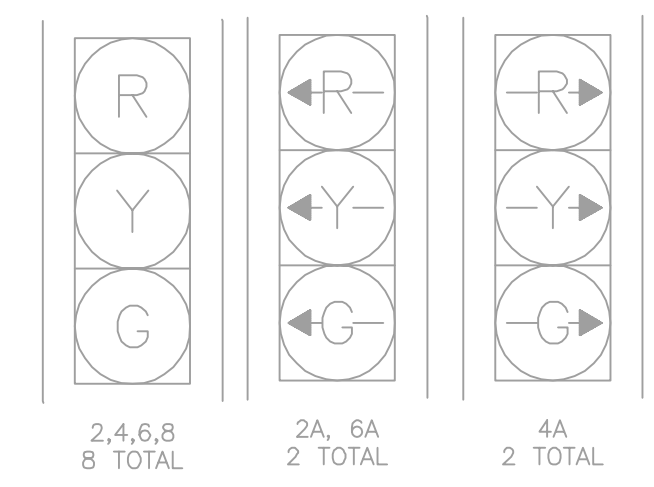
NOTES:
 LS REMOVE AND REINSTALL VIDEO DETECTION, ANTENNA, OPTICOM DETECTOR, AND OPTICOM STROBE TO TEMPORARY MAST ARM ①

PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL
 NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

PHASING DIAGRAM



SIGNAL FACES

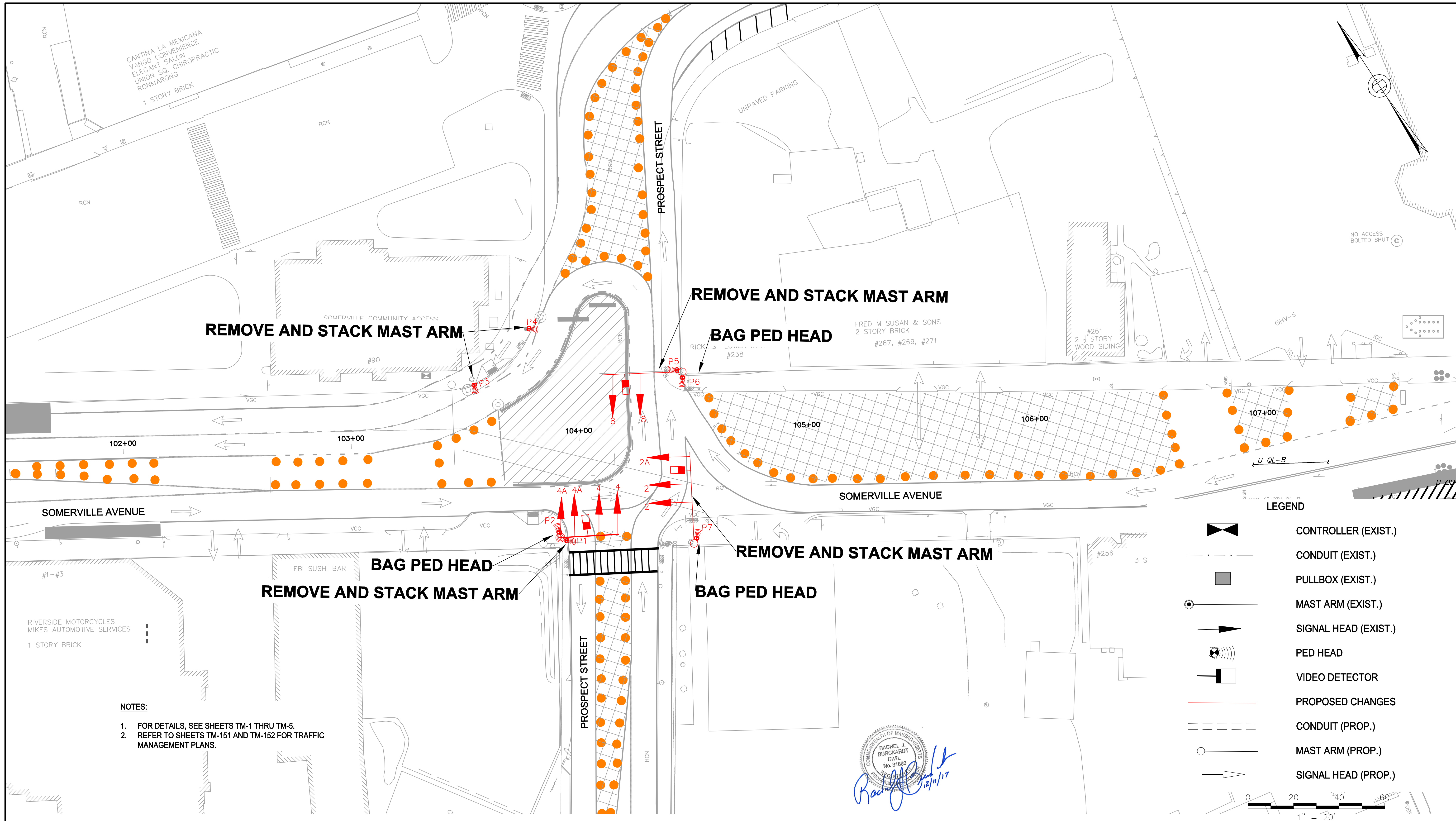


- NOTE:**
- ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH TUNNEL VISORS.
 - ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
 - ALL VEHICLE INDICATIONS MOUNTED ON MAST ARMS SHALL BE RIGID MOUNTED AND BE EQUIPPED WITH 5" NON-LOUVERED BACKPLATES.
 - PEDESTRIAN WALK AND DON'T WALK SYMBOLS SHALL BE SOLID-TYPE L.E.D. OUTLINED SYMBOLS SHALL NOT BE USED PER BTD SPECS.
 - CONTRACTOR TO RESTORE TO EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

*TRAFFIC SIGNAL CHANGES SHEET REVISIONS NOTED IN RED

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM		SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS		DESIGNED: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-432
		CONTRACT CP-2/CP-3		DRAWN: DY CHECKED: JC		
		SEWER SEPARATION AND WATER REPLACEMENT		REF. CONT. SCALE: 1"=20' ACC. DATE: DEC 2017		
		TRAFFIC SIGNAL CHANGES		CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		
		STAGE 1D1 SHEET 2 OF 2				
NO.	DATE	REVISIONS	BY			

2017-10-20 11:48 AM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-441 SIGNAL CHANGES-1E-1.dwg



- NOTES:**
- FOR DETAILS, SEE SHEETS TM-1 THRU TM-5.
 - REFER TO SHEETS TM-151 AND TM-152 FOR TRAFFIC MANAGEMENT PLANS.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGE 1E-1 SHEET 1 OF 2

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-441
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=20' DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-442 STAGE 1E-1 DATA SHEET.dwg

TIMING AND SEQUENCE CHART

STREET/DIRECTION/FACE	Ø2			Ø6			Ø4 Ø8			Ø4 Ø8 Ø10			OFF
	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	
SOMERVILLE AVE/EB/2+2A	G-GL	Y-YL	R-RL	R	R	R	R	R	R	R	R	R	FY
SOMERVILLE AVE/WB/6+6A	R	R	R	G-GL	Y-YL	R-RL	R	R	R	R	R	R	FY
PROSPECT ST/NB/8	R	R	R	R	R	R	G	Y	R	G	Y	R	FR
WASHINGTON ST/SB THRU/4	R	R	R	R	R	R	G	Y	R	G	Y	R	FR
WASHINGTON ST/SB RT/4A	GR	YR	RR	R	R	R	R	R	R	GR	YR	RR	
C.W./E-W/P4-P5	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	OFF
C.W./E-W/P1-P8	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
C.W./N-S/P6-P7	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	OFF
C.W./N-S/P2-P3	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	OFF

MINIMUM GREEN	Ø2			Ø6			Ø4 Ø8			Ø4 Ø8 Ø10		
	VEHICLE EXTENSION	3			3			3			3	
MAXIMUM 1 GREEN	60			33			39			23		
MAXIMUM 2 GREEN	48			33			43			24		
YELLOW CLEARANCE	3			3			3			3		
RED CLEARANCE		3			3			3			3	
WALK INTERVAL	9			9			9					
PED. CLEARANCE		12			17			19				
MEMORY	NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK		
RECALL (VEH./PED.)	MAX/ON			MAX/ON			OFF/ON			OFF/OFF		

CYCLE NO.	CYCLE LENGTH	OFFSET (SEC.)	PHASE SPLITS IN SECONDS				HOURS OF OPERATION
			Ø2	Ø6	Ø4 Ø8	Ø4 Ø8 Ø10	
1	120	0	43	27	32	18	6:00 A.M. TO 10:00 A.M.
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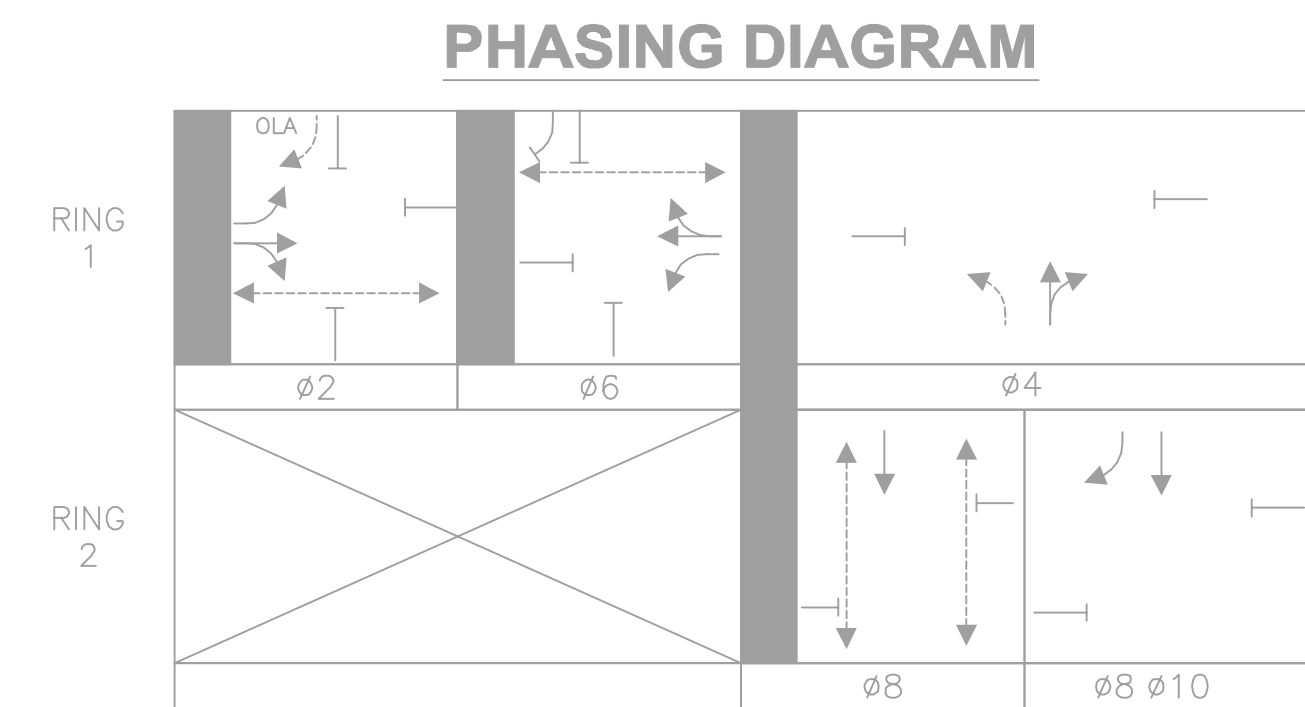
LOOP DETECTOR DATA										CLEARANCES				TECHNICAL NOTES		
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	ØCALL	ØEXT.	CHNL.	FROM	TO						
1	1	3X20	-	-	PRES	2	2	1	G	G-GL	GR	R	-	W	DW	THIS LOCATION IS THE MASTER CONTROLLER.
2	1	6X40	-	-	PRES	2	2	2	G	-	-	Y	-	-	-	
3	1	6X40	-	-	PRES	4+8	4+8	3	G-GL	-	G-GL	-	G-YL	-	-	
4	1	3X20	-	-	PRES	6	6	1	GR	-	-	GR	YL	-	-	
5	1	6X40	-	-	PRES	6	6	2	-	-	-	-	-	-	-	
6	1	6X40	-	-	PRES	6	6	3	R	-	-	-	-	-	-	
7	1	3X20	-	-	PRES	4+8+10	4+8+10	1	W	-	-	-	-	W	FDW	
8	1	6X40	-	-	PRES	4+8+10	4+8+10	2	DW	-	-	-	-	-	DW	
9	1	6X40	-	-	PRES	4+8+10	4+8+10	3	-	-	-	-	-	-	-	
10	1	3X20	-	-	PRES	2	2	1	-	-	-	-	-	-	-	
11	1	6X40	-	-	PRES	2	2	2	-	-	-	-	-	-	-	
12	1	6X40	-	-	PRES	2	2	3	-	-	-	-	-	-	-	

MAJOR ITEMS REQUIRED

QUANTITY	MAJOR ITEMS REQUIRED
1	4DW CONTROLLER WITH INTERNAL RCU IN TYPE 'CB' CABINET,
	FOUNDATION, MMU, BUS INTERFACE UNITS, FLASHER LEAD SWITCHES
2	8" SIGNAL POST, BASE, PEDESTAL & FOUNDATION
8	12"- 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
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1	35-FT STEEL MAST ARM AND POLE
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1	RADIO FOR WIRELESS ETHERNET
1	SERVICE CONNECTION AND METER POST

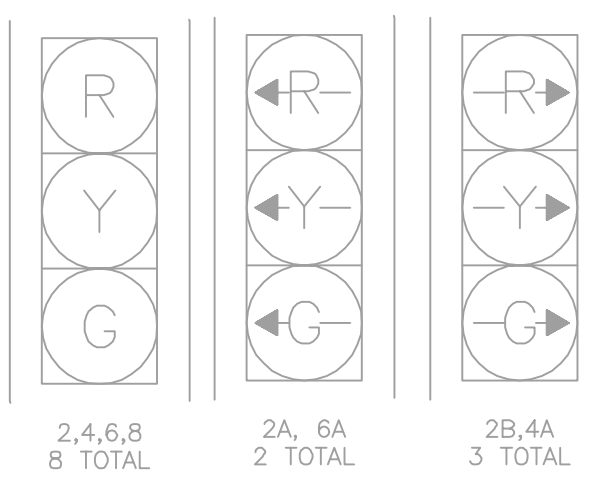
PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL

NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.



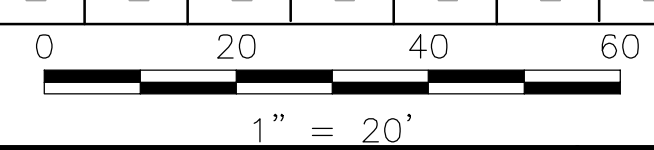
Rachel J. Burckardt
 12/11/17

SIGNAL FACES



- NOTE:
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 - ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
 - ALL VEHICLE INDICATIONS MOUNTED ON MAST ARMS SHALL BE RIGID MOUNTED AND BE EQUIPPED WITH 5" NON-LOUVERED BACKPLATES.
 - PEDESTRIAN WALK AND DON'T WALK SYMBOLS SHALL BE SOLID-TYPE L.E.D. OUTLINED SYMBOLS SHALL NOT BE USED PER BTD SPECS.

**DURING THIS STAGE,
TRAFFIC SIGNAL IS
TURNED OFF**



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

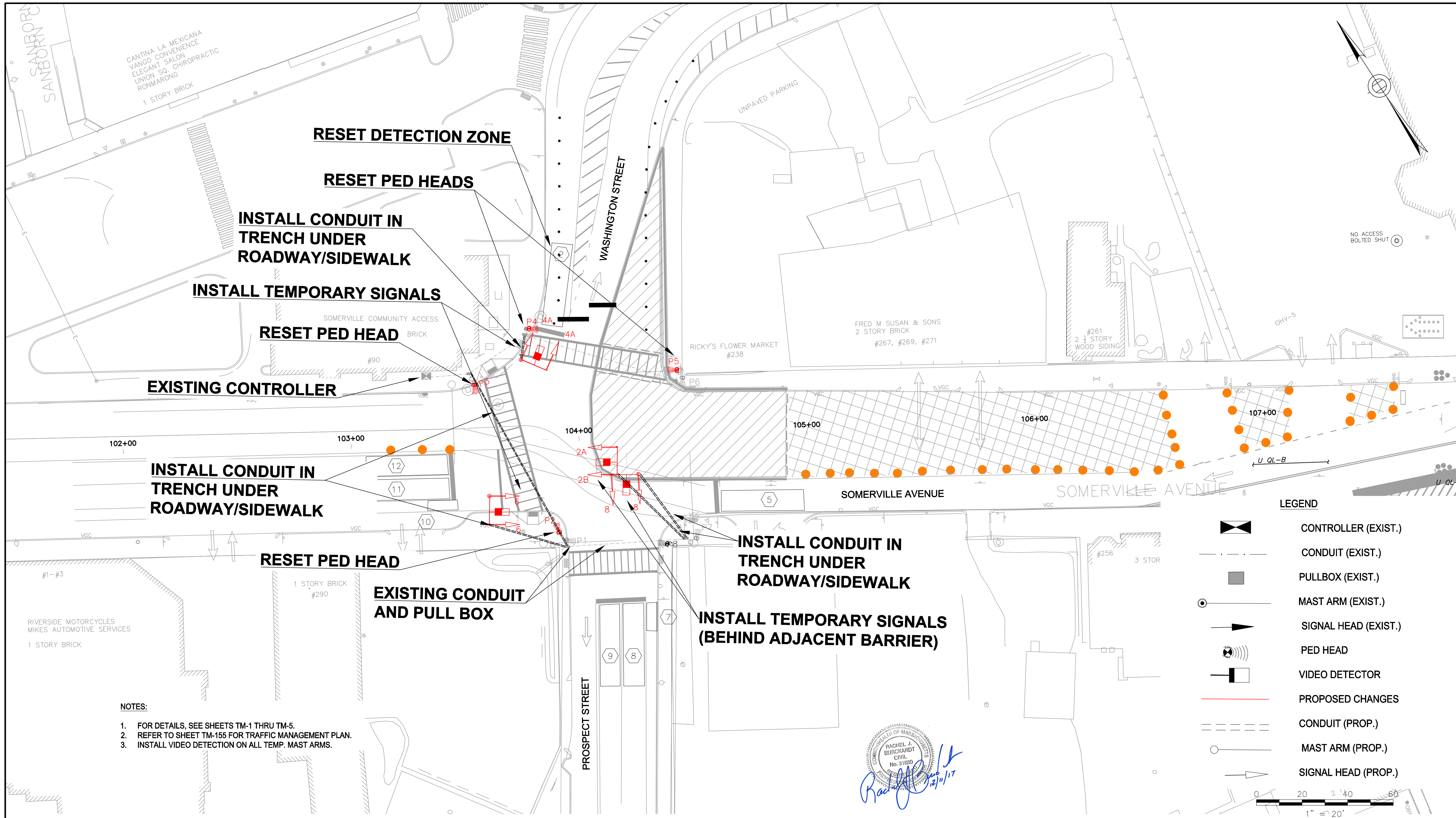
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES - NO SIGNAL
STAGE 1E-1 SHEET 2 OF 2

DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-442
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-10-20 12:09 PM T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-443 SIGNAL CHANGES-1E-2.dwg



NOTES:

1. FOR DETAILS, SEE SHEETS TM-1 THRU TM-5.
2. REFER TO SHEET TM-155 FOR TRAFFIC MANAGEMENT PLAN.
3. INSTALL VIDEO DETECTION ON ALL TEMP. MAST ARMS.

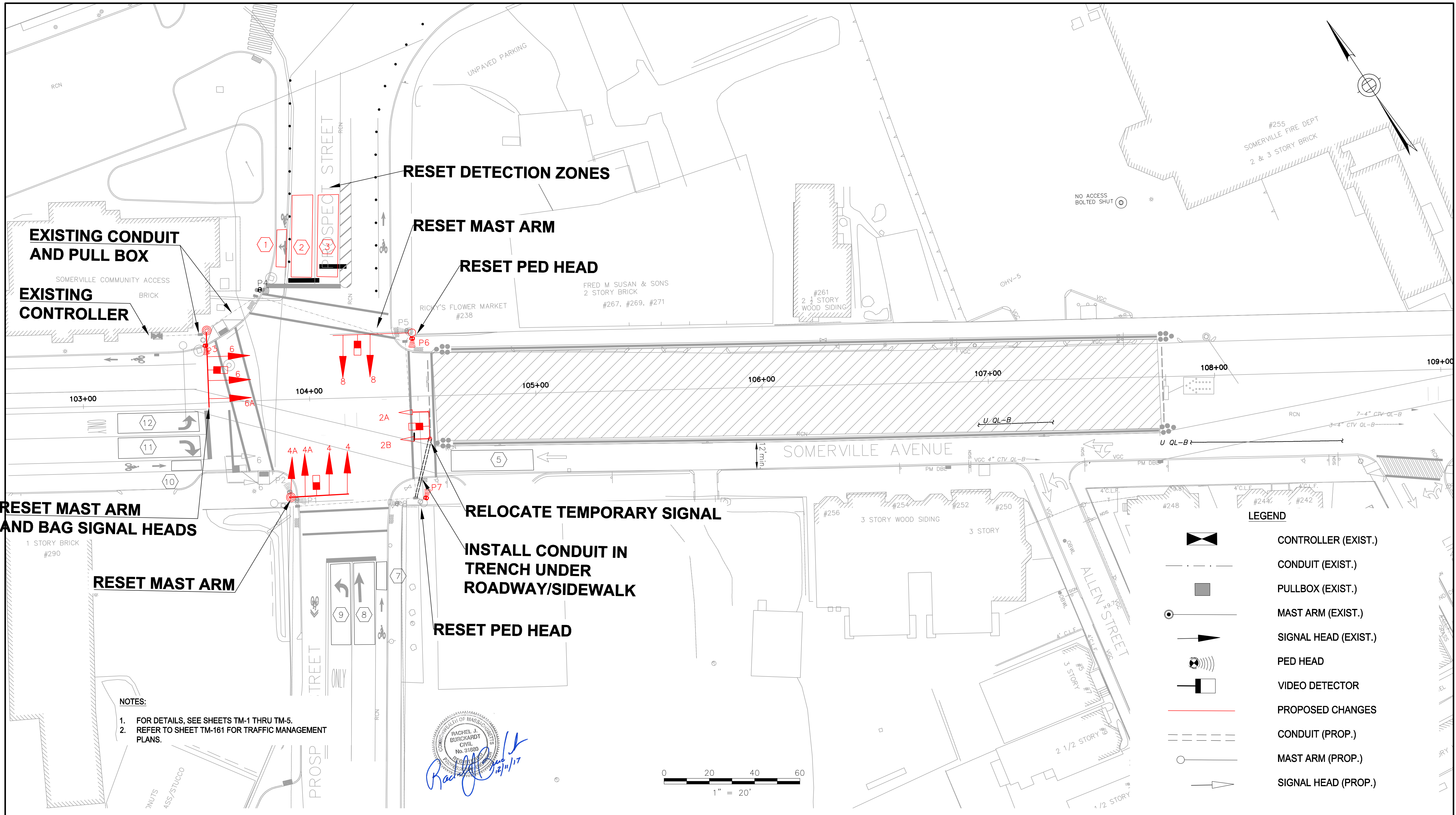
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGES 1E-2 SHEET 1 OF 2

DESIGNED: DY		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET
CHECKED: JC		TM-443		
DRAWN: DY	REF.	CONT.	SCALE: 1"=20'	
CHECKED: JC	ACC.		DATE: DEC 2017	
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143				

NO.	DATE	REVISIONS	BY

2017-10-20 12:45 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-451 SIGNAL CHANGES-1F.dwg



- NOTES:**
1. FOR DETAILS, SEE SHEETS TM-1 THRU TM-5.
 2. REFER TO SHEET TM-161 FOR TRAFFIC MANAGEMENT PLANS.

LEGEND

	CONTROLLER (EXIST.)
	CONDUIT (EXIST.)
	PULLBOX (EXIST.)
	MAST ARM (EXIST.)
	SIGNAL HEAD (EXIST.)
	PED HEAD
	VIDEO DETECTOR
	PROPOSED CHANGES
	CONDUIT (PROP.)
	MAST ARM (PROP.)
	SIGNAL HEAD (PROP.)

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC SIGNAL CHANGES

STAGE 1F SHEET 1 OF 2

DESIGNED: DY		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-451
CHECKED: JC		REF.	CONT.	
DRAWN: DY		ACC.		
CHECKED: JC				

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

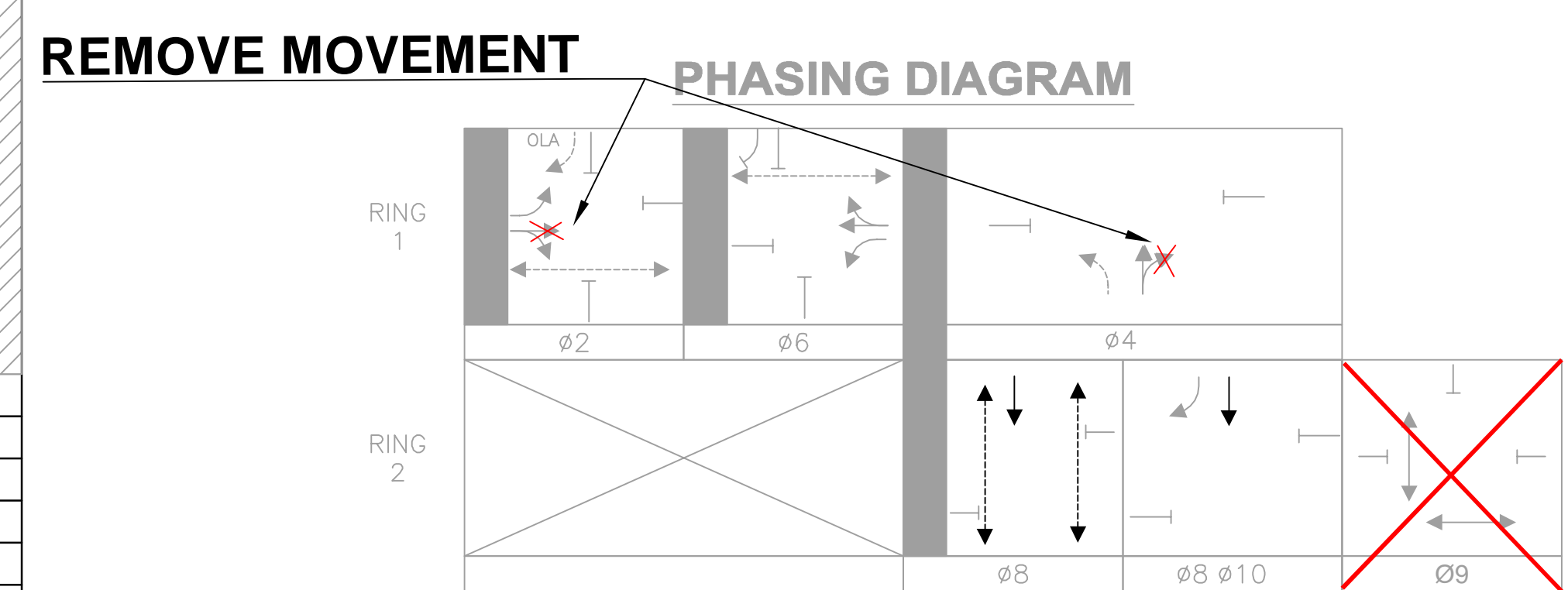
TIMING AND SEQUENCE CHART

STREET/DIRECTION/FACE	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL				
SOMERVILLE AVE/EB/2+2A	G-GL	Y-YL	R-RL	R	R	R	R	R	R	R	R	R				
SOMERVILLE AVE/WB/6+6A	R	R	R	G-GL	Y-YL	R-RL	R	R	R	R	R	R				
PROSPECT ST/NB/8	R	R	R	R	R	R	G	Y	R	G	Y	R				
WASHINGTON ST/SB THRU/4	R	R	R	R	R	R	R	R	R	R	R	R				
WASHINGTON ST/SB RT/4A	GR	YR	RR	R	R	R	R	R	R	GR	YR	RR				
C.W./E-W/P4-P5	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW				
C.W./E-W/P1-P8	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW				
C.W./N-S/P6-P7	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW				
C.W./N-S/P2-P3	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW				

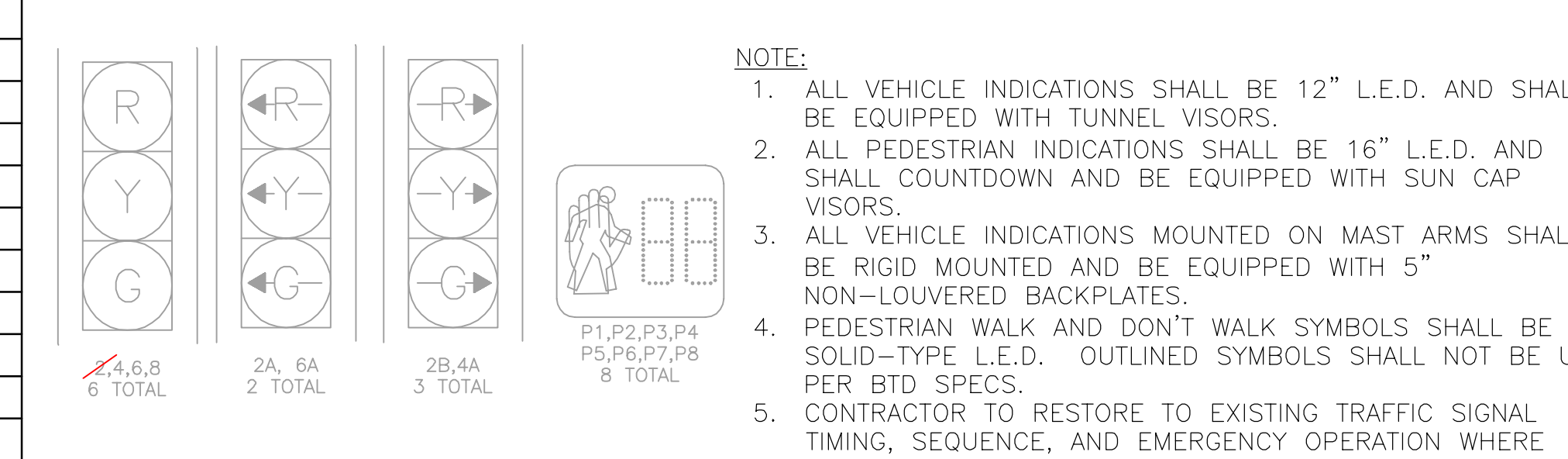
I N T E R V A L	SECONDS	MINIMUM GREEN	15		20		22		7				
		VEHICLE EXTENSION	3		3		3		3				
MAXIMUM 1 GREEN	60		33		39		23						
MAXIMUM 2 GREEN	48		33		43		24						
YELLOW CLEARANCE		3		3		3		3					
RED CLEARANCE			3		3		3						
WALK INTERVAL	9		9		9		9						
PED. CLEARANCE		12		17		19							
MEMORY		NON-LOCK		NON-LOCK		NON-LOCK		NON-LOCK					
RECALL (VEH./PED.)		MAX/ON		MAX/ON		OFF/ON		OFF/OFF					

CYCLE NO.	CYCLE LENGTH	OFFSET (SEC.)	PROGRAM/COORDINATION PHASE SPLITS IN SECONDS				HOURS OF OPERATION
			ø2	ø6	ø4 ø8	ø4 ø8 ø10	
1	120	0		27	32	18	6:00 A.M. TO 10:00 A.M.
2	120	0	43 49	27 27	32 28	18 16	3:00 P.M. TO 7:00 P.M.

LOOP DETECTOR DATA										CLEARANCES				TECHNICAL NOTES		
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	øCALL	øEXT	CHNL.		FROM	TO			THIS LOCATION IS THE MASTER CONTROLLER.		
1	1	3X20	-	-	PRES	4+8+10	4+8+10	1		G	G-GL	GR	R	-	W	DW
2	1	6X40	-	-	PRES	4+10	4+10	2		G	-	-	Y	-	-	-
3	1	6X40	-	-	PRES	4+8+10	4+8+10	3		G-GL	-	G-GL	-	G-YL	-	-
4	1	3X20	-	-	PRES	6	6	1		GR	-	-	GR	YL	-	-
5	1	6X40	-	-	PRES	6	6	2		-	-	-	-	-	-	-
6	1	6X40	-	-	PRES	6	6	3		R	-	-	-	-	-	-
7	1	3X20	-	-	PRES	4+8+10	4+8+10	1		W	-	-	-	-	W	FDW
8	1	6X40	-	-	PRES	4+8+10	4+8+10	2		DW	-	-	-	-	-	DW
9	1	6X40	-	-	PRES	4+8+10	4+8+10	3		-	-	-	-	-	-	-
10	1	3X20	-	-	PRES	2	2	1		-	-	-	-	-	-	-
11	1	6X40	-	-	PRES	2	2	2		-	-	-	-	-	-	-
12	1	6X40	-	-	PRES	2	2	3		-	-	-	-	-	-	-



Rachel J. Burckardt
 Civil No. 31620
 State of Massachusetts
 2/11/17



MAJOR ITEMS REQUIRED

QUANTITY	MAJOR ITEMS REQUIRED
1	4DW CONTROLLER WITH INTERNAL RCU IN TYPE 'CB' CABINET, FOUNDATION, MMU, BUS INTERFACE UNITS, FLASHER LOAD SWITCHES
2	8" SIGNAL POST, BASE, PEDESTAL & FOUNDATION
8	12"- 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
2	12"- 3 SECTION (R,Y,G LEFT) L.E.D. VEHICLE SIGNAL INDICATION
2	12"- 3 SECTION (R,Y,G RIGHT) L.E.D. VEHICLE SIGNAL INDICATION
8	16"- PEDESTRIAN L.E.D. SIGNAL COUNTDOWN INDICATION
8	AUDIBLE PEDESTRIAN PUSHBUTTON, SIGN & SADDLE
4	VIDEO DETECTION CAMERA CAPABLE OF REMOTE DATA COLLECTION (OR 1 GRIDSMART 360 CAMERA WITH TRAFFIC COUNT MODULE)
1	OPTICOM PRE-EMPTION SYSTEM (4 DETECTORS, 2 STROBES, 1 4-CHANNEL PHASE SELECTOR)
1	25-FT STEEL MAST ARM AND POLE
1	35-FT STEEL MAST ARM AND POLE
1	CABINET POWER SUPPLY
1	RADIO FOR WIRELESS ETHERNET
1	SERVICE CONNECTION AND METER POST

NOTES:

LS REMOVE AND REINSTALL VIDEO DETECTION, ANTENNA, OPTICOM DETECTOR, AND OPTICOM STROBE TO TEMPORARY MAST ARM ☺

PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL

NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

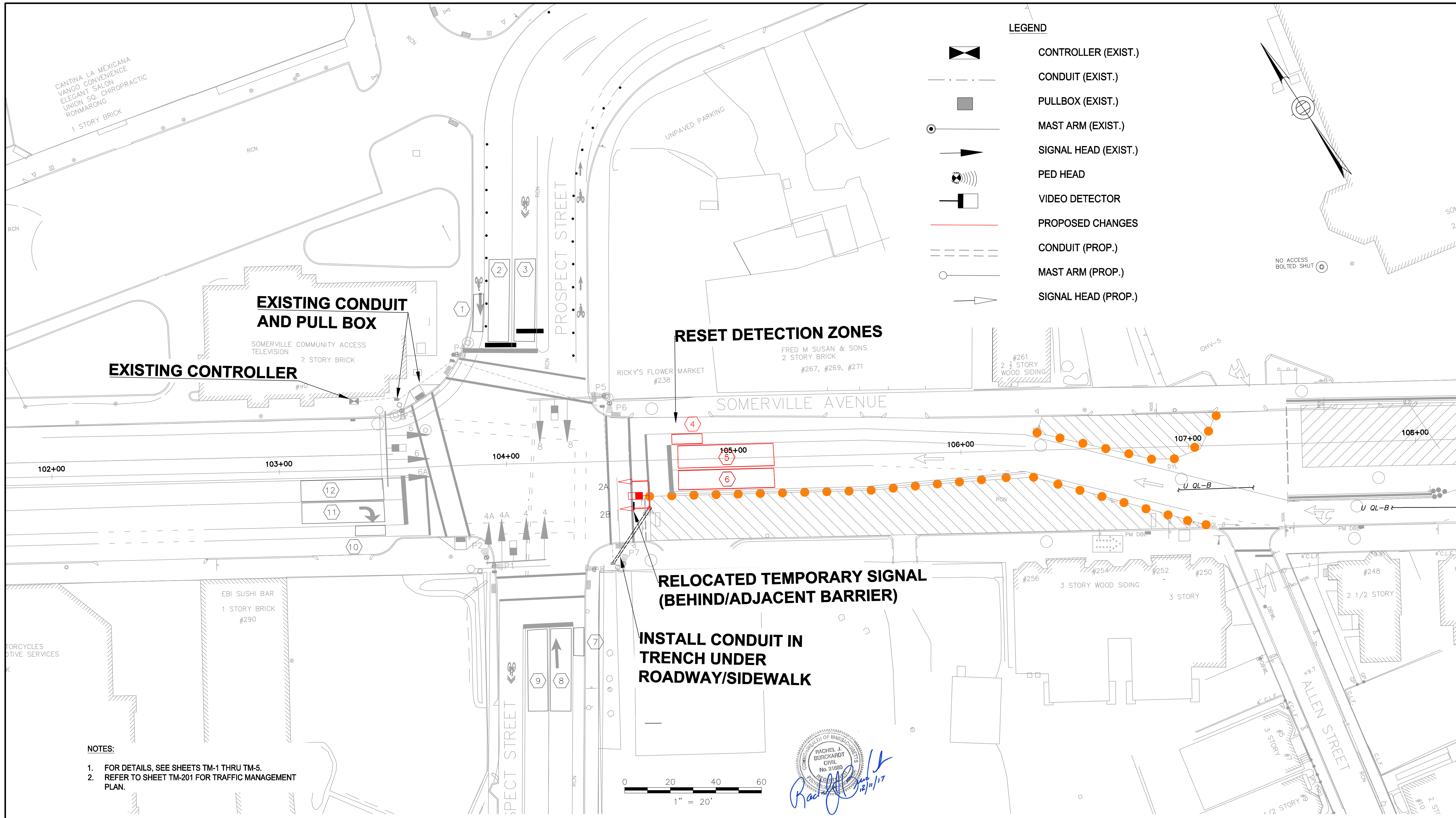
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGE1F SHEET 2 OF 2




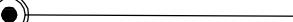
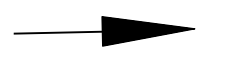






DESIGNED: DY	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-452
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=20'
		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

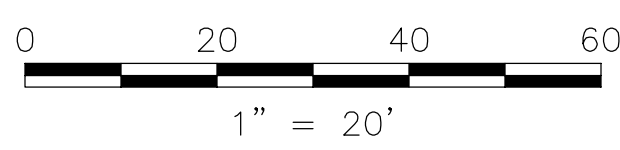
T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-461 SIGNAL CHANGES-2A.dwg 2017-10-20 1:31 PM



LEGEND

-  CONTROLLER (EXIST.)
-  CONDUIT (EXIST.)
-  PULLBOX (EXIST.)
-  MAST ARM (EXIST.)
-  SIGNAL HEAD (EXIST.)
-  PED HEAD
-  VIDEO DETECTOR
-  PROPOSED CHANGES
-  CONDUIT (PROP.)
-  MAST ARM (PROP.)
-  SIGNAL HEAD (PROP.)


- NOTES:**
1. FOR DETAILS, SEE SHEETS TM-1 THRU TM-5.
 2. REFER TO SHEET TM-201 FOR TRAFFIC MANAGEMENT PLAN.




 Rachel J. Burckardt
 CIVIL
 No. 31880
 State of Massachusetts
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGE 2A SHEET 1 OF 2

DESIGNED: DY		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-461
CHECKED: JC		REF.	CONT.	
DRAWN: DY	ACC.		DATE: DEC 2017	
CHECKED: JC	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143			

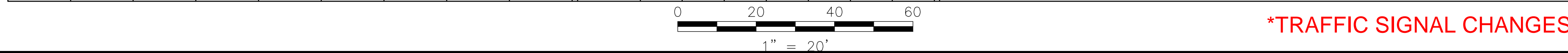
NO.	DATE	REVISIONS	BY

TIMING AND SEQUENCE CHART

STREET/DIRECTION/FACE	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL							
SOMERVILLE AVE/EB/2+2A	G-GL	Y-YL	R-RL	R	R	R	R	R	R	R	R	R							
SOMERVILLE AVE/WB/6+6A	R	R	R	G-GL	Y-YL	R-RL	R	R	R	R	R	R							
PROSPECT ST/NB/8	R	R	R	R	R	R	G	Y	R	G	Y	R							
WASHINGTON ST/SB THRU/4	R	R	R	R	R	R	G	Y	R	G	Y	R							
WASHINGTON ST/SB RT/4A	GR	YR	RR	R	R	R	R	R	R	GR	YR	RR							
C.W./E-W/P4-P5	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW							
C.W./E-W/P1-P8	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW							
C.W./N-S/P6-P7	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW							
C.W./N-S/P2-P3	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW							

CYCLE NO.	CYCLE LENGTH	OFFSET (SEC.)	PHASE SPLITS IN SECONDS				HOURS OF OPERATION
			ø2	ø6	ø4 ø8	ø4 ø8 ø10	
1	120	0	43	27	32	18	6:00 A.M. TO 10:00 A.M.
2	120	0	39	27	35	19	3:00 P.M. TO 7:00 P.M.

LOOP DETECTOR DATA								CLEARANCES								TECHNICAL NOTES		
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	øCALL	øEXT	CHNL.	FROM	TO								THIS LOCATION IS THE MASTER CONTROLLER.
									G	G-GL	GR	R	W	DW				
1	1	3X20	-	-	PRES	4+8+10	4+8+10	1	G	G-GL	GR	R	W	DW				
2	1	6X40	-	-	PRES	4+10	4+10	2	G	G-GL	GR	R	W	DW				
3	1	6X40	-	-	PRES	4+8+10	4+8+10	3	G-GL	G-GL	G-YL	W	DW					
4	1	3X20	-	-	PRES	6	6	1	GR	GR	YL	W	DW					
5	1	6X40	-	-	PRES	6	6	2	R	W	DW							
6	1	6X40	-	-	PRES	6	6	3	R	W	DW							
7	1	3X20	-	-	PRES	4+8+10	4+8+10	1	W	W	FDW							
8	1	6X40	-	-	PRES	4+8+10	4+8+10	2	DW	DW								
9	1	6X40	-	-	PRES	4+8+10	4+8+10	3	DW	DW								
10	1	3X20	-	-	PRES	2	2	1										
11	1	6X40	-	-	PRES	2	2	2										
12	1	6X40	-	-	PRES	2	2	3										



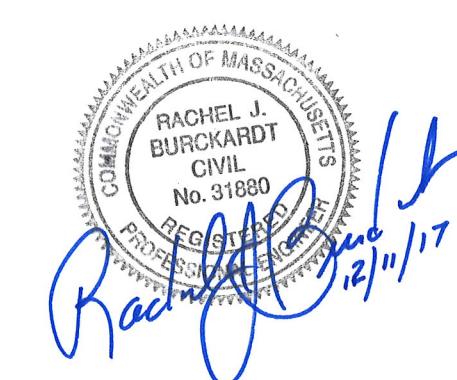
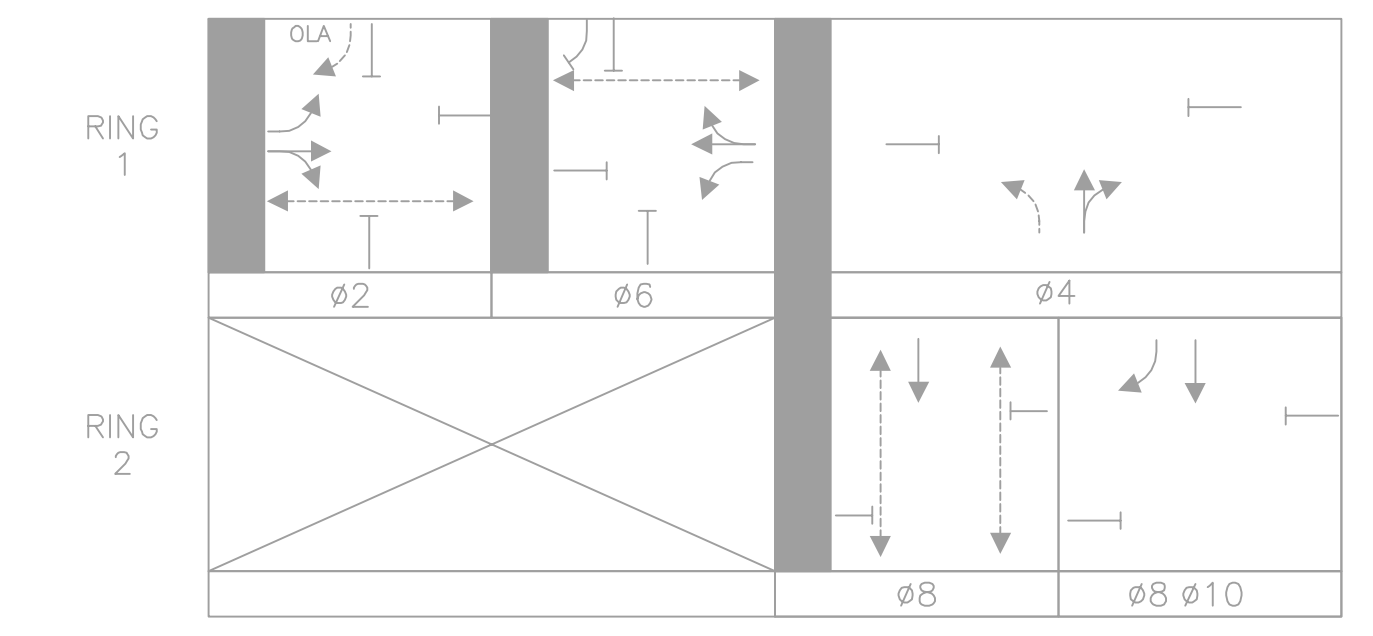
MAJOR ITEMS REQUIRED

QUANTITY	MAJOR ITEMS REQUIRED
1	4DW CONTROLLER WITH INTERNAL RCU IN TYPE 'CB' CABINET, FOUNDATION, MMU, BUS INTERFACE UNITS, FLASHER LOAD SWITCHES
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8	12"- 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
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1	35-FT STEEL MAST ARM AND POLE
1	CABINET POWER SUPPLY
1	RADIO FOR WIRELESS ETHERNET
1	SERVICE CONNECTION AND METER POST

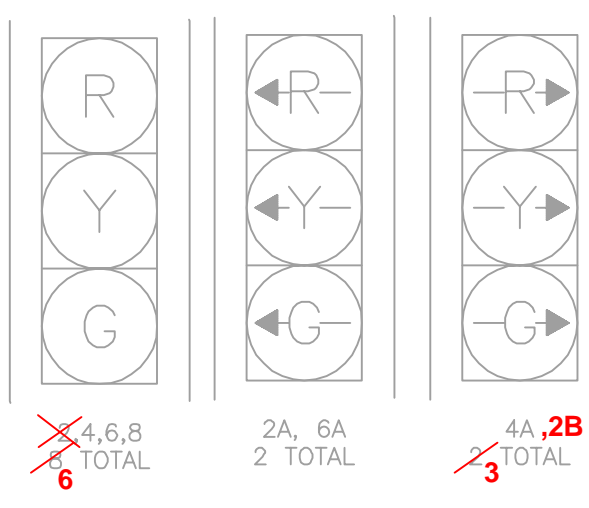
NOTES:
 LS REMOVE AND REINSTALL VIDEO DETECTION, ANTENNA, OPTICOM DETECTOR, AND OPTICOM STROBE TO TEMPORARY MAST ARM ①

PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL
 NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

PHASING DIAGRAM



SIGNAL FACES






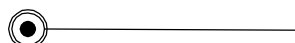
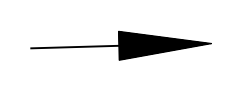


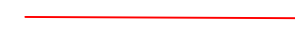
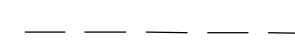

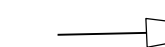
- NOTE:**
- ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH TUNNEL VISORS.
 - ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
 - ALL VEHICLE INDICATIONS MOUNTED ON MAST ARMS SHALL BE RIGID MOUNTED AND BE EQUIPPED WITH 5" NON-LOUVERED BACKPLATES.
 - PEDESTRIAN WALK AND DON'T WALK SYMBOLS SHALL BE SOLID-TYPE L.E.D. OUTLINED SYMBOLS SHALL NOT BE USED PER BTD SPECS.
 - CONTRACTOR TO RESTORE TO EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

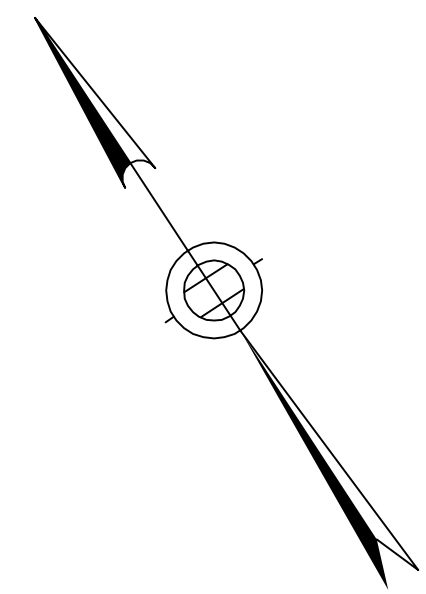
***TRAFFIC SIGNAL CHANGES SHEET REVISIONS NOTED IN RED**

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM		SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS		DESIGNED: DY CHECKED: JC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-462
		CONTRACT CP-2/CP-3		DRAWN: DY CHECKED: JC	REF. CONT. SCALE: 1"=20' ACC. DATE: DEC 2017	
		SEWER SEPARATION AND WATER REPLACEMENT		CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		
		TRAFFIC SIGNAL CHANGES				
		STAGE 2A SHEET 2 OF 2				
NO.	DATE	REVISIONS	BY			

2017-10-26 10:51 AM T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-471 SIGNAL CHANGES-2B.dwg

LEGEND

-  CONTROLLER (EXIST.)
-  CONDUIT (EXIST.)
-  PULLBOX (EXIST.)
-  MAST ARM (EXIST.)
-  SIGNAL HEAD (EXIST.)
-  PED HEAD
-  VIDEO DETECTOR
-  PROPOSED CHANGES
-  CONDUIT (PROP.)
-  MAST ARM (PROP.)
-  SIGNAL HEAD (PROP.)



EXISTING CONDUIT AND PULL BOX

SOMERVILLE COMMUNITY ACCESS TELEVISION
2 STORY BRICK

EXISTING CONTROLLER

#90

PROSPECT STREET

RICKY'S FLOWER MARKET
#238

FRED M SUSAN & SONS
2 STORY BRICK
#267, #269, #271

#2 WOOD

103+00

104+00

105+00

106+00

SOMERVILLE AVENUE

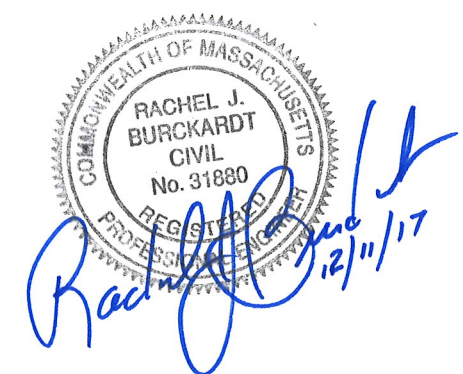
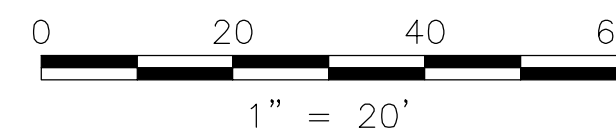
EBI SUSHI BAR
1 STORY BRICK
#290

RESET MAST ARM

INSTALL CONDUIT IN TRENCH UNDER ROADWAY/SIDEWALK

NOTES:

1. FOR DETAILS, SEE SHEETS TM-1 THRU TM 5.
2. REFER TO SHEETS TM-211 AND TM-212 FOR TRAFFIC MANAGEMENT PLAN.




ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

**CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGE 2B SHEET 1 of 3**

DESIGNED: DY
CHECKED: JC

DRAWN: DY
CHECKED: JC

 Parsons Brinckerhoff, Inc.
75 Arlington St. Boston, MA 02116
PH. (617)426-7330 FAX (617)482-8487

SHEET
TM-471

REF. _____ CONT. _____
ACC. _____

SCALE: 1"=20'
DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

TIMING AND SEQUENCE CHART

STREET/DIRECTION/FACE	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL							
SOMERVILLE AVE/EB/2+2A	G-GL	Y-YL	R-RL	R	R	R	R	R	R	R	R	R							FY
SOMERVILLE AVE/WB/6+6A	R	R	R	G-GL	Y-YL	R-RL	R	R	R	R	R	R							FY
PROSPECT ST/NB/8	R	R	R	R	R	R	G	Y	R	G	Y	R							FR
WASHINGTON ST/SB THRU/4	R	R	R	R	R	R	G	Y	R	G	Y	R							FR
WASHINGTON ST/SB RT/4A	GR	YR	RR	R	R	R	R	R	R	GR	YR	RR							
C.W./E-W/P4-P5	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW							OFF
C.W./E-W/P1-P8	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW							OFF
C.W./N-S/P6-P7	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW							OFF
C.W./N-S/P2-P3	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW							OFF

I N T E R V A L	SECONDS	MINIMUM GREEN	15		20		22		7										
		VEHICLE EXTENSION	3		3		3		3		3								
MAXIMUM 1 GREEN	60		33		39		23												
MAXIMUM 2 GREEN	48		33		43		24												
YELLOW CLEARANCE		3		3		3		3		3									
RED CLEARANCE			3		3		3		3										
WALK INTERVAL	9		9		9		9												
PED. CLEARANCE		12		17		19													
MEMORY		NON-LOCK		NON-LOCK		NON-LOCK		NON-LOCK		NON-LOCK									
RECALL (VEH./PED.)		MAX/ON		MAX/ON		OFF/ON		OFF/OFF		OFF/OFF									

CYCLE NO.	CYCLE LENGTH	OFFSET (SEC.)	PHASE SPLITS IN SECONDS				HOURS OF OPERATION
			ø2	ø6	ø4 ø8	ø4 ø8 ø10	
1	120	0	43	27	32	18	6:00 A.M. TO 10:00 A.M.
2	120	0	39	27	35	19	3:00 P.M. TO 7:00 P.M.

LOOP DETECTOR DATA										CLEARANCES								TECHNICAL NOTES
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	øCALL	øEXT	CHNL.		FROM	TO							
1	1	3X20	-	-	PRES	4+8+10	4+8+10	1		G	G-GL	GR	R	-	W	DW	THIS LOCATION IS THE MASTER CONTROLLER.	
2	1	6X40	-	-	PRES	4+10	4+10	2		G	-	-	Y	-	-	-		
3	1	6X40	-	-	PRES	4+8+10	4+8+10	3		G-GL	-	G-GL	-	G-YL	-	-		
4	1	3X20	-	-	PRES	6	6	1		GR	-	-	GR	YL	-	-		
5	1	6X40	-	-	PRES	6	6	2		-	-	-	-	-	-	-		
6	1	6X40	-	-	PRES	6	6	3		R	-	-	-	-	-	-		
7	1	3X20	-	-	PRES	4+8+10	4+8+10	1		W	-	-	-	-	W	FDW		
8	1	6X40	-	-	PRES	4+8+10	4+8+10	2		DW	-	-	-	-	-	DW		
9	1	6X40	-	-	PRES	4+8+10	4+8+10	3		-	-	-	-	-	-	-		
10	1	3X20	-	-	PRES	2	2	1		-	-	-	-	-	-	-		
11	1	6X40	-	-	PRES	2	2	2		-	-	-	-	-	-	-		
12	1	6X40	-	-	PRES	2	2	3		-	-	-	-	-	-	-		



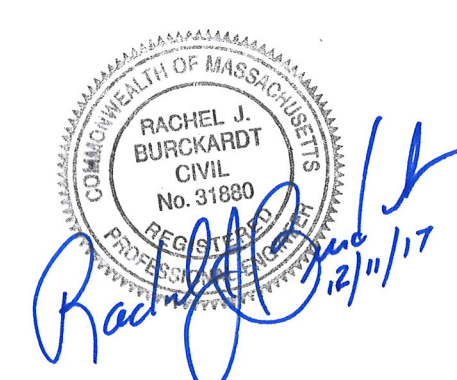
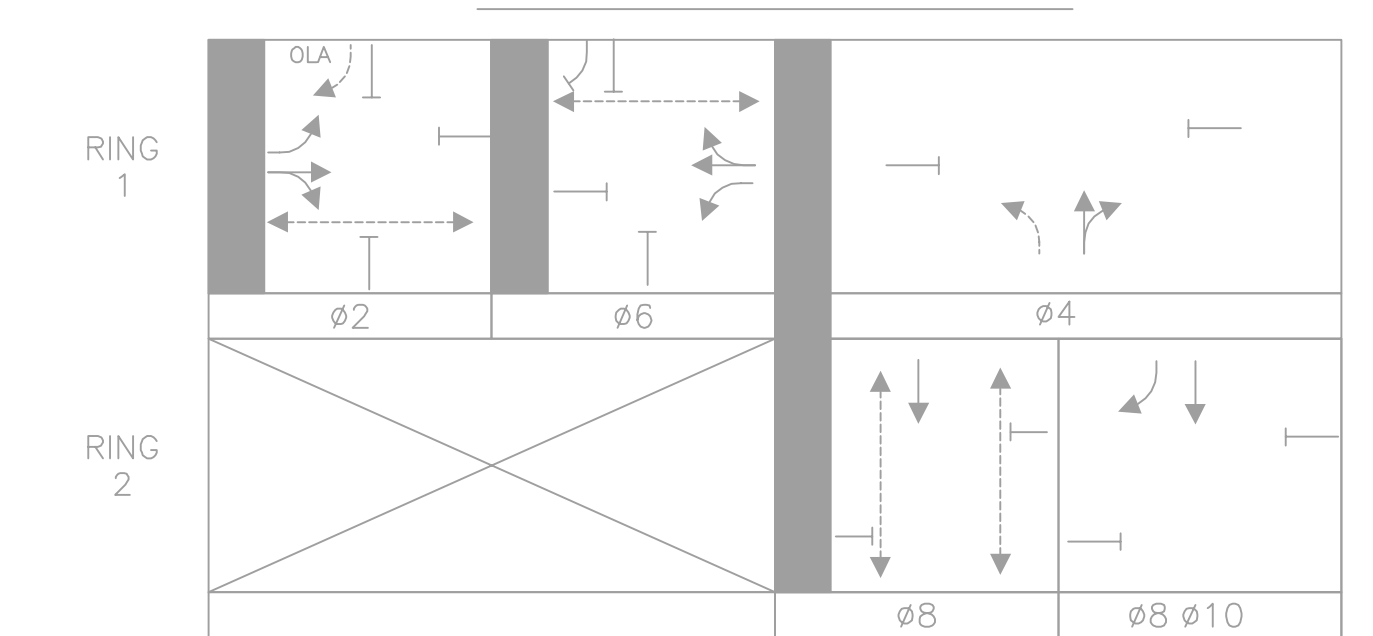
MAJOR ITEMS REQUIRED

QUANTITY	MAJOR ITEMS REQUIRED
1	4DW CONTROLLER WITH INTERNAL RCU IN TYPE 'CB' CABINET, FOUNDATION, MMU, BUS INTERFACE UNITS, FLASHER LOAD SWITCHES
2	8' SIGNAL POST, BASE, PEDESTAL & FOUNDATION
8	12"- 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
2	12"- 3 SECTION (R,Y,G LEFT) L.E.D. VEHICLE SIGNAL INDICATION
2	12"- 3 SECTION (R,Y,G RIGHT) L.E.D. VEHICLE SIGNAL INDICATION
8	16"- PEDESTRIAN L.E.D. SIGNAL COUNTDOWN INDICATION
8	AUDIBLE PEDESTRIAN PUSHBUTTON, SIGN & SADDLE
4	VIDEO DETECTION CAMERA CAPABLE OF REMOTE DATA COLLECTION (OR 1 GRIDSMART 360 CAMERA WITH TRAFFIC COUNT MODULE)
1	OPTICOM PRE-EMPTION SYSTEM (4 DETECTORS, 2 STROBES, 1 4-CHANNEL PHASE SELECTOR)
1	25-FT STEEL MAST ARM AND POLE
1	35-FT STEEL MAST ARM AND POLE
1	CABINET POWER SUPPLY
1	RADIO FOR WIRELESS ETHERNET
1	SERVICE CONNECTION AND METER POST

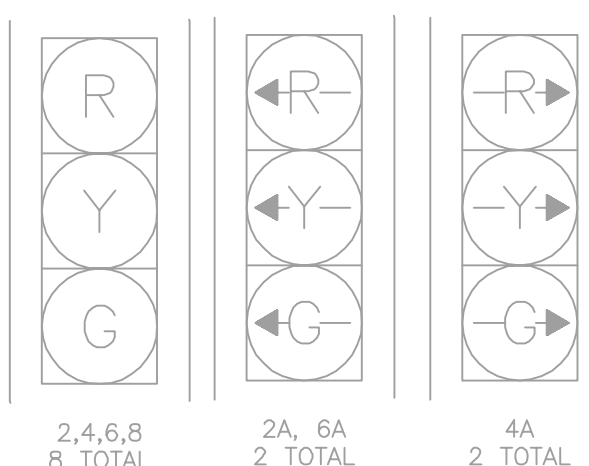
NOTES:
 LS REMOVE AND REINSTALL VIDEO DETECTION, ANTENNA, OPTICOM DETECTOR, AND OPTICOM STROBE TO TEMPORARY MAST ARM ①

PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL
 NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

PHASING DIAGRAM



SIGNAL FACES







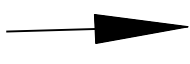





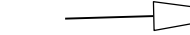
- NOTE:**
- ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH TUNNEL VISORS.
 - ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
 - ALL VEHICLE INDICATIONS MOUNTED ON MAST ARMS SHALL BE RIGID MOUNTED AND BE EQUIPPED WITH 5" NON-LOUVERED BACKPLATES.
 - PEDESTRIAN WALK AND DON'T WALK SYMBOLS SHALL BE SOLID-TYPE L.E.D. OUTLINED SYMBOLS SHALL NOT BE USED PER BTD SPECS.
 - CONTRACTOR TO RESTORE TO EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

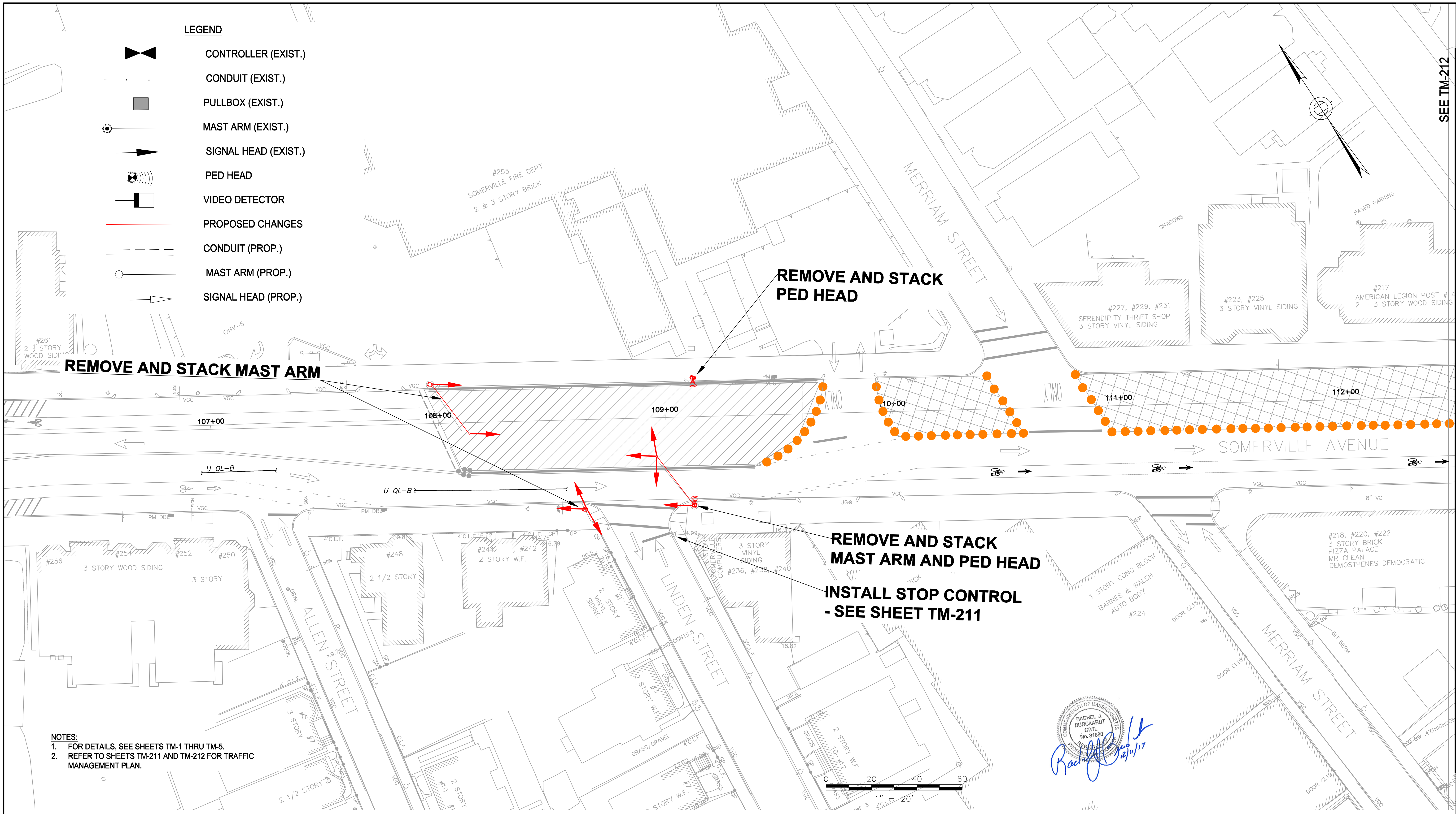
*TRAFFIC SIGNAL CHANGES SHEET REVISIONS NOTED IN RED

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM		SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS		DESIGNED: DY CHECKED: JC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-472
		CONTRACT CP-2/CP-3		DRAWN: DY CHECKED: JC		
		SEWER SEPARATION AND WATER REPLACEMENT		REF. CONT. SCALE: 1"=20'		
		TRAFFIC SIGNAL CHANGES		ACC. DATE: DEC 2017		
		STAGE 2B SHEET 2 OF 3		CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		
NO.	DATE	REVISIONS	BY			

2017-10-26 10:51 AM T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-471 SIGNAL CHANGES-2B.dwg

LEGEND

-  CONTROLLER (EXIST.)
-  CONDUIT (EXIST.)
-  PULLBOX (EXIST.)
-  MAST ARM (EXIST.)
-  SIGNAL HEAD (EXIST.)
-  PED HEAD
-  VIDEO DETECTOR
-  PROPOSED CHANGES
-  CONDUIT (PROP.)
-  MAST ARM (PROP.)
-  SIGNAL HEAD (PROP.)



- NOTES:**
1. FOR DETAILS, SEE SHEETS TM-1 THRU TM-5.
 2. REFER TO SHEETS TM-211 AND TM-212 FOR TRAFFIC MANAGEMENT PLAN.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGE 2B SHEET 3 of 3

DESIGNED: DY
 CHECKED: JC
 DRAWN: DY
 CHECKED: JC



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 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

SHEET
TM-473

REF.
 ACC.

CONT.

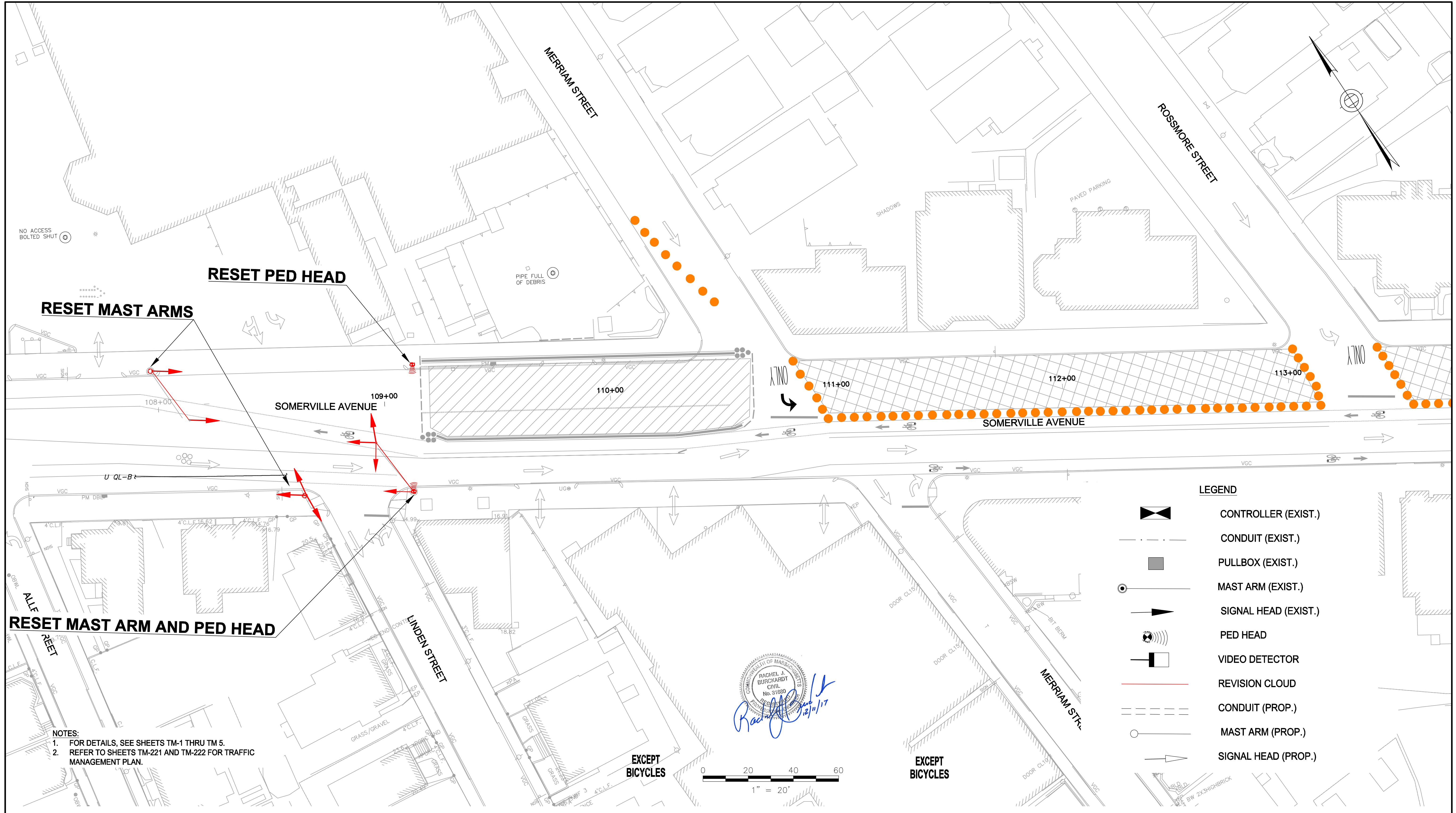
SCALE: 1"=20'
 DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

SEE TM-212

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-475 SIGNAL CHANGES-2C.dwg 2017-10-25 3:40 PM



RESET PED HEAD

RESET MAST ARMS

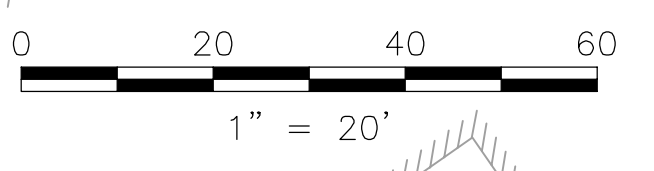
RESET MAST ARM AND PED HEAD

- NOTES:**
- FOR DETAILS, SEE SHEETS TM-1 THRU TM 5.
 - REFER TO SHEETS TM-221 AND TM-222 FOR TRAFFIC MANAGEMENT PLAN.

LEGEND

- CONTROLLER (EXIST.)
- CONDUIT (EXIST.)
- PULLBOX (EXIST.)
- MAST ARM (EXIST.)
- SIGNAL HEAD (EXIST.)
- PED HEAD
- VIDEO DETECTOR
- REVISION CLOUD
- CONDUIT (PROP.)
- MAST ARM (PROP.)
- SIGNAL HEAD (PROP.)

Rachel J. Burckardt
 12/11/17



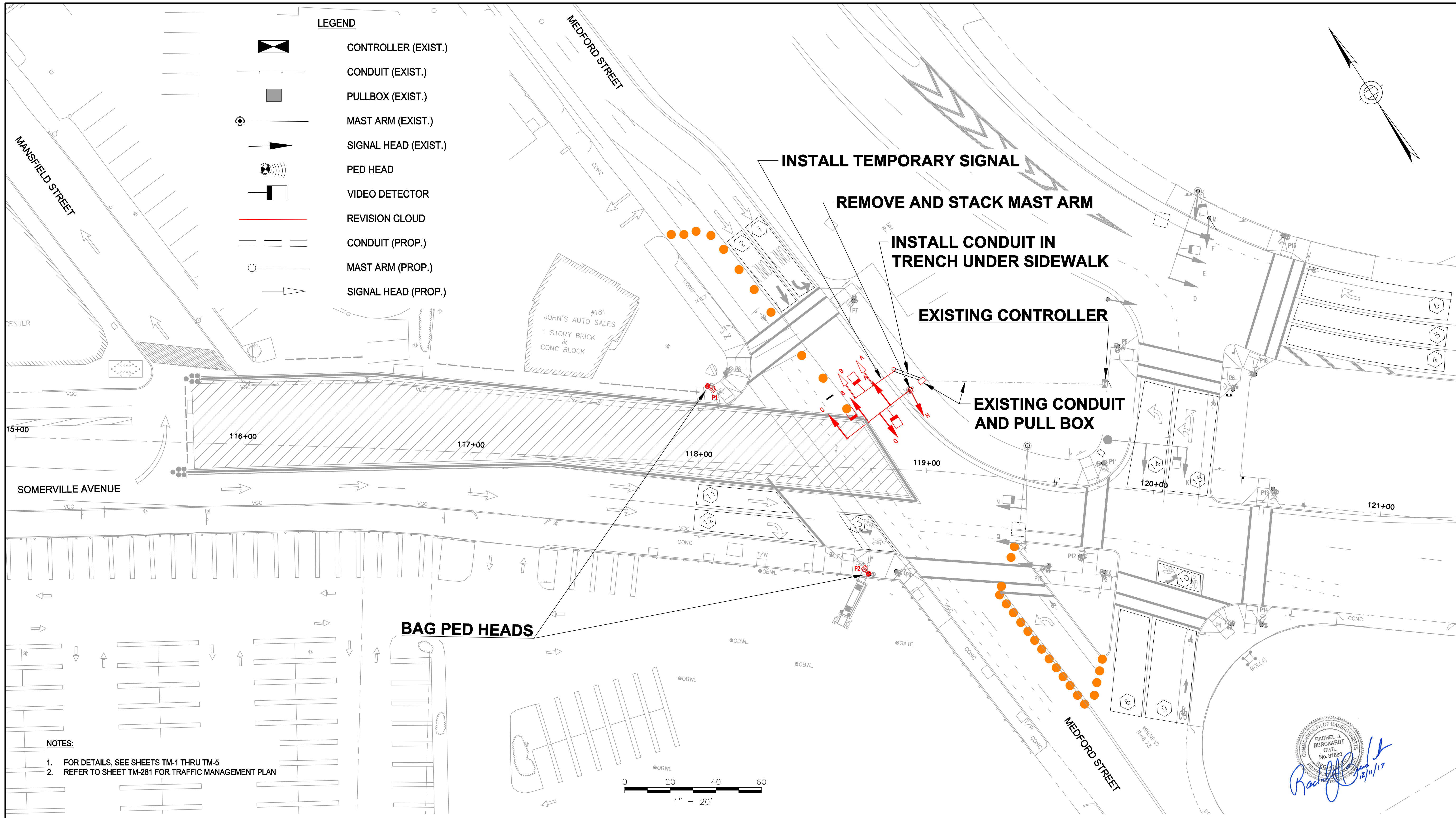
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGE 2C SHEET 1 of 1

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CHECKED: JC		TM-475
DRAWN: DY	REF. CONT.	SCALE: 1"=20'
CHECKED: JC	ACC.	DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

2017-10-20 2:05 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-481 SIGNAL CHANGES-21.dwg



LEGEND

	CONTROLLER (EXIST.)
	CONDUIT (EXIST.)
	PULLBOX (EXIST.)
	MAST ARM (EXIST.)
	SIGNAL HEAD (EXIST.)
	PED HEAD
	VIDEO DETECTOR
	REVISION CLOUD
	CONDUIT (PROP.)
	MAST ARM (PROP.)
	SIGNAL HEAD (PROP.)

- NOTES:**
- FOR DETAILS, SEE SHEETS TM-1 THRU TM-5
 - REFER TO SHEET TM-281 FOR TRAFFIC MANAGEMENT PLAN

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

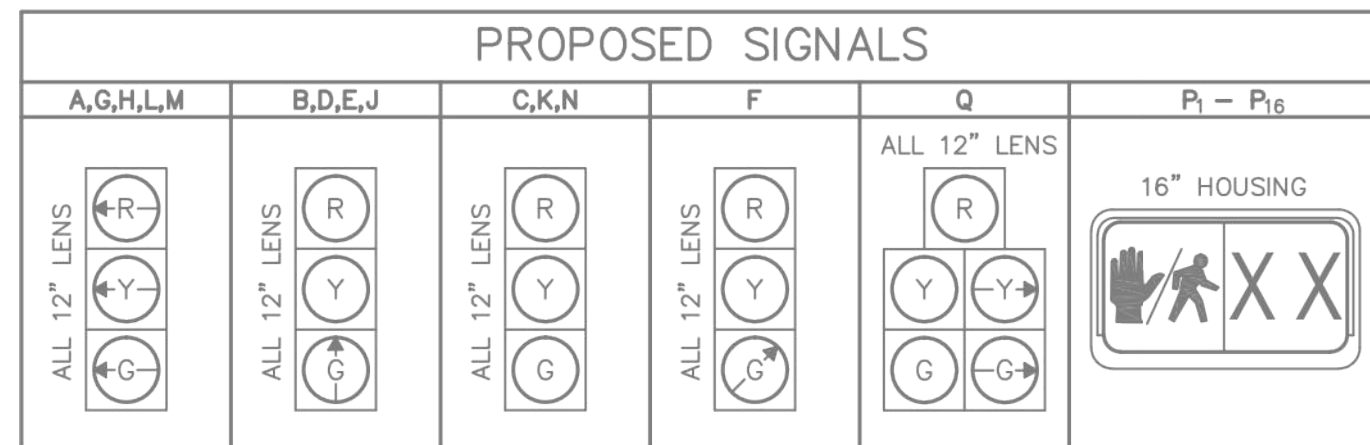
SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC SIGNAL CHANGES

STAGE 2I SHEET 1 OF 2

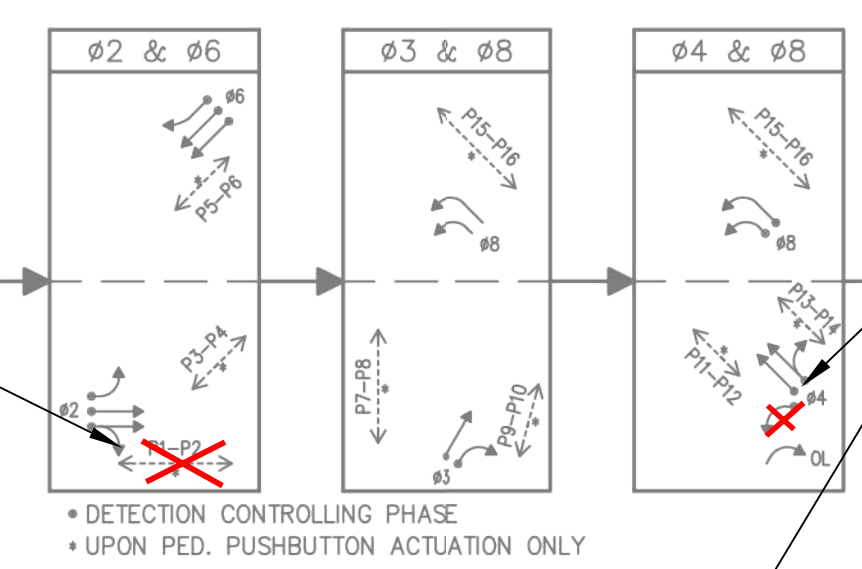
DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-481
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

Rachel J. Burckardt
 12/11/17



- NOTES:**
- ALL INDICATIONS SHALL BE "LED" TYPE LENS IN ACCORDANCE WITH THE SPECIAL PROVISIONS..
 - ALL OVERHEAD SIGNALS SHALL BE RIGIDLY MOUNTED. ALL SIGNAL HEADS SHALL HAVE CUT TUNNEL VISORS AND BE EQUIPPED WITH 5" LOUVERED BACKPLATES.
 - ALL BACKPLATES SHALL INCLUDE A 3" RETROREFLECTIVE BORDER IN ACCORDANCE WITH THE SPECIAL PROVISIONS
 - ALL PEDESTRIAN DISPLAY SHALL BE "FULL" DISPLAYS. NO OUTLINE SYMBOL SHALL BE PERMITTED.
 - CONTRACTOR TO RESTORE TO EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

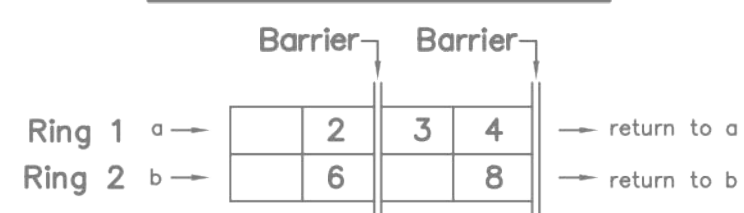
PREFERENTIAL PHASE SEQUENCE



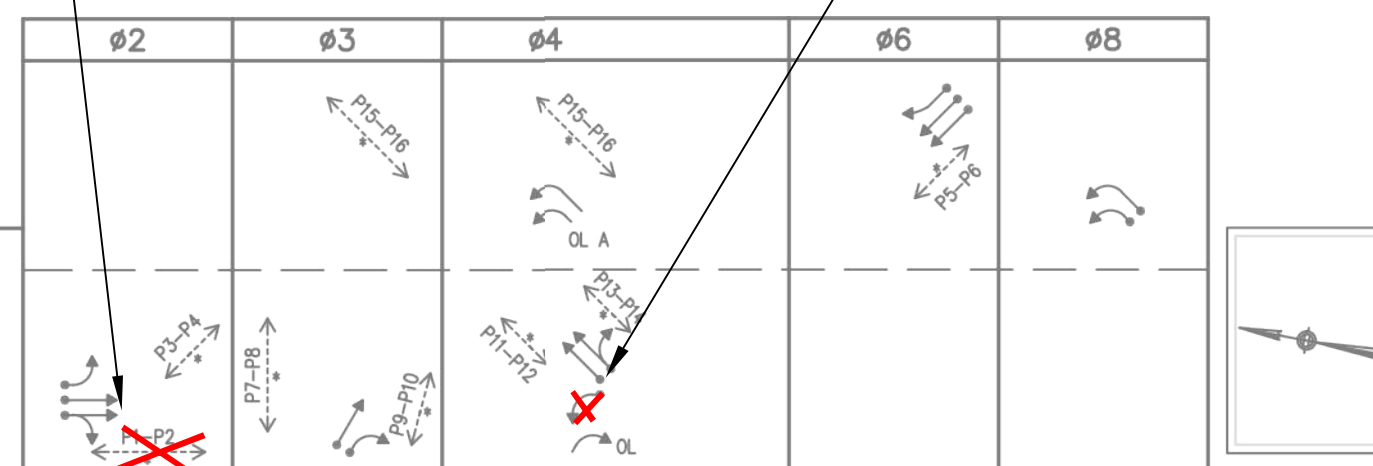
REMOVE PED MOVEMENT

REMOVE MOVEMENT

RING STRUCTURE



- FULLY-ACTUATED ISOLATED
 SEMI-ACTUATED COORDINATED
 PRE-TIMED WIRE TBCU



SEQUENCE AND TIMING

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	FLASH OPER.
MEDFORD STREET	SB	A	GL	YL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
MEDFORD STREET	SB	B	GV	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
MEDFORD STREET	SB	C	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
McGRATH HIGHWAY NORTHBOUND	NWB	D,E,F*	R	R	R	R	R	R	R	R	R	R	R	GV	Y*	R	R	R	R	FY
MEDFORD STREET	NB	S,H	R	R	R	R	R	R	OL	YL	R	R	R	R	R	R	R	R	R	FRL
MEDFORD STREET	NB	J	R	R	R	R	R	R	GV	Y	R	R	R	R	R	R	R	R	R	FR
MEDFORD STREET	NB	K	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	FR
CUT-THROUGH ROAD	EB	L,M	R	R	R	R	R	R	GL	GL	YL	R	R	R	R	R	GL	YL	R	FR
SOMERVILLE AVENUE	SEB	N	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	FR
SOMERVILLE AVENUE	SEB	Q	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	FR
PEDESTRIAN		P3-P4	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P5-P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P7-P10	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P11-P14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P15-P16	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
			TIMING IN SECONDS																	
MINIMUM INITIAL PASSAGE			10		6				10					10				10		
MAXIMUM 1 (M-F: 6AM-10AM)			44		20				20					44				20		
MAXIMUM 2 (ALL OTHER TIMES)			40		20				20					40				20		
CHANGE					4.0	2.0			4.0	3.0				4.5	1.0			4.5	1.0	
PEDESTRIAN RECALL			7/17		7/13				7/13					7/13				7/13		
MEMORY			NON-LOCKING		NON-LOCKING				NON-LOCKING					NON-LOCKING				NON-LOCKING		

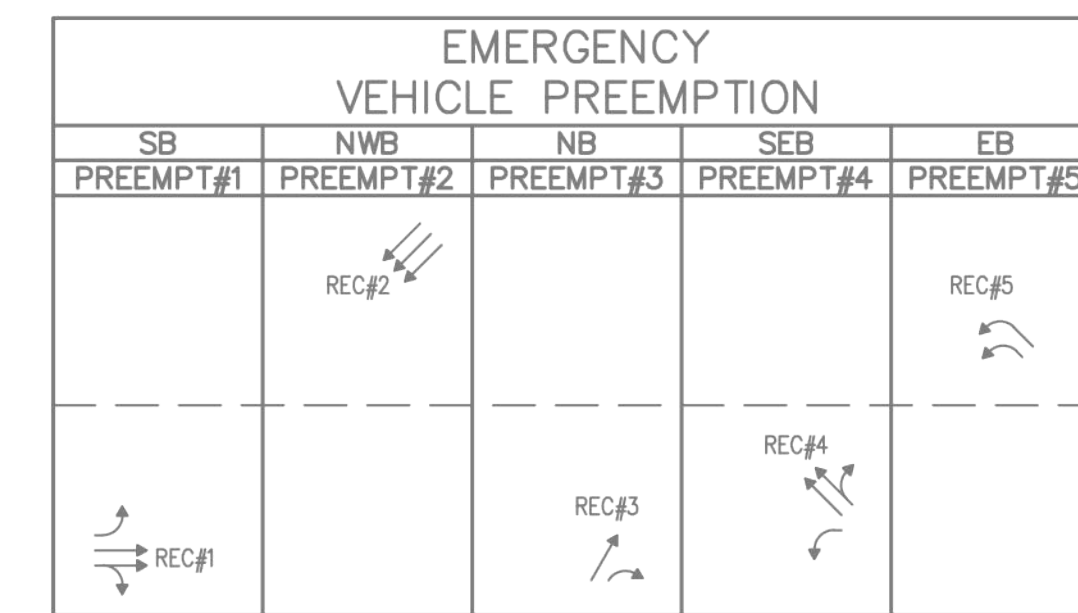
MAJOR ITEMS REQUIRED

QUANTITY	DESCRIPTION
1	TRAFFIC CONTROLLER & CABINET NEMA TS2-TYPE 1 w/FOUNDATION
1	SERVICE CONNECTION (OVERHEAD FROM UTILITY POLE)
1	40' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	35' MAST ARM ASSEMBLY, BASE & FDN. (HEAVY LOADS)
2	35' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	10' SIGNAL POST, BASE & FDN.
15	8" SIGNAL POST, BASE & FDN.
13	SIGNAL HEAD, 3 SECTION
1	SIGNAL HEAD, 5 SECTION
16	PEDESTRIAN HOUSING GRAPHIC LED w/COUNTDOWN TIMER
16	AUDIBLE & VIBRO-TACTILE PEDESTRIAN PUSH BUTTON INTEGRATED SIGN & SADDLE w/LED CONFIRMATION LIGHT
1	VIDEO DETECTION SYSTEM WITH 6 CAMERAS
12	PULL BOX 12"x12" - SD2.031 (PAY SEPARATELY UNDER ITEM 811.31)
2	ELECTRIC HANDHOLE- SD2.022 (PAY SEPARATELY UNDER ITEM 811.22)
5	UNIDIRECTIONAL SINGLE CHANNEL OPTICAL DETECTOR (RECEIVER)
3	PREEMPTION 2-CHANNEL PHASE SELECTOR
3	PREEMPTION CONFIRMATION STROBE (CLEAR)

PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.

TRAFFIC CONTROLLER DATA

PARAMETER	SELECTION
PHASE ASSIGNMENTS	STD. NEMA
OVERLAPS	STD. NEMA
RINGS	DUAL
DUAL ENTRY	ON (#2 & #6)
SIMULTANEOUS GAP OUT DISABLED	YES (#2 & #6)
MINIMUM YELLOW IN SECONDS	3
MAX II BY INTERNAL CLOCK	YES
NIGHT TIME FLASH BY INTERNAL CLOCK	NOT USED



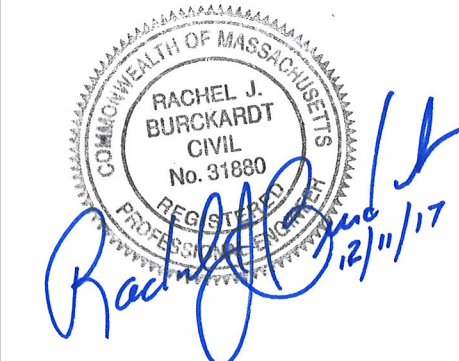
- EMERGENCY VEHICLE PREEMPTION OPERATION**
- EMERGENCY VEHICLE PREEMPTION SIGNAL SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS (RECEIVERS) LOCATED AT THE INTERSECTION.
 - PREEMPTION SIGNALS SHALL BE SERVICED ON A FIRST COME FIRST SERVED BASIS.
 - IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED BY OPTICAL DETECTOR REC#1 (REC#2, REC#3, REC#4 OR REC#5), THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PREEMPTION SIGNAL #1, #2, #3, #4 OR #5 GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME THE RELEVANT CLEARANCE INTERVALS AND SERVICE THE SUBSEQUENT EMERGENCY VEHICLE PREEMPTION SIGNAL IF NECESSARY. NORMAL SIGNAL OPERATION SHALL RESUME PROVIDED THAT ALL PREEMPTION SIGNALS HAVE CEASED.
 - NORMAL VEHICLE CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.
 - PREEMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION SIGNAL IS ON.

* NOTE: DYNAMIC "RED" SIGNAL AHEAD SIGN TO DISPLAY "RED" DURING YELLOW AND RED INTERVAL

*TRAFFIC SIGNAL CHANGES SHEET REVISIONS NOTED IN RED

VIDEO DETECTION DATA

DETECTION ZONE NO.	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	2	2	B	-	-
2	2	2	B	-	-
3	2	2	B	-	-
4	6	6	B	-	-
5	6	6	B	-	-
6	6	6	B	-	-
7	4	4	B	-	-
8	4	4	B	-	-
9	4	4	B	-	-
10	4	4	B	-	-
11	3	3	B	-	-
12	3	3	B	-	-
13	3	3	B	-	-
14	8	8	B	-	-
15	8	8	B	-	-



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

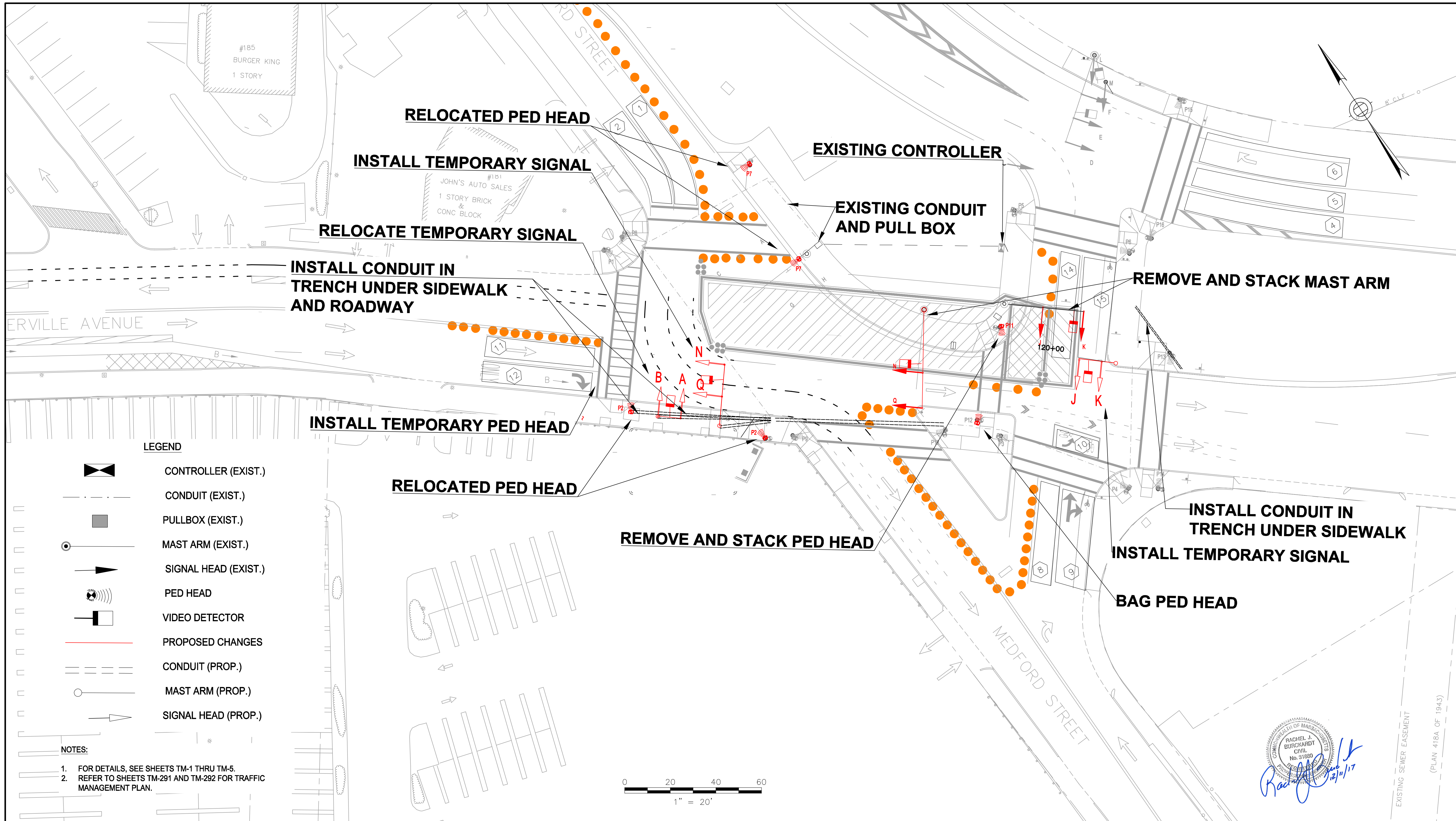
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGE 2I SHEET 2 OF 2









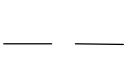

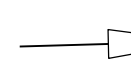
DESIGNED: DY		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-482
CHECKED: DY		REF.	CONT.	
DRAWN: DY		ACC.		DATE: DEC 2017
CHECKED: DY				

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-491 SIGNAL CHANGES-2.dwg 2017-10-20 2:38 PM



- LEGEND**
-  CONTROLLER (EXIST.)
 -  CONDUIT (EXIST.)
 -  PULLBOX (EXIST.)
 -  MAST ARM (EXIST.)
 -  SIGNAL HEAD (EXIST.)
 -  PED HEAD
 -  VIDEO DETECTOR
 -  PROPOSED CHANGES
 -  CONDUIT (PROP.)
 -  MAST ARM (PROP.)
 -  SIGNAL HEAD (PROP.)

- NOTES:**
1. FOR DETAILS, SEE SHEETS TM-1 THRU TM-5.
 2. REFER TO SHEETS TM-291 AND TM-292 FOR TRAFFIC MANAGEMENT PLAN.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY


SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

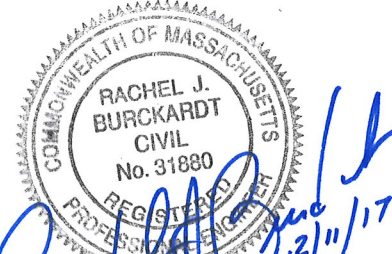
CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

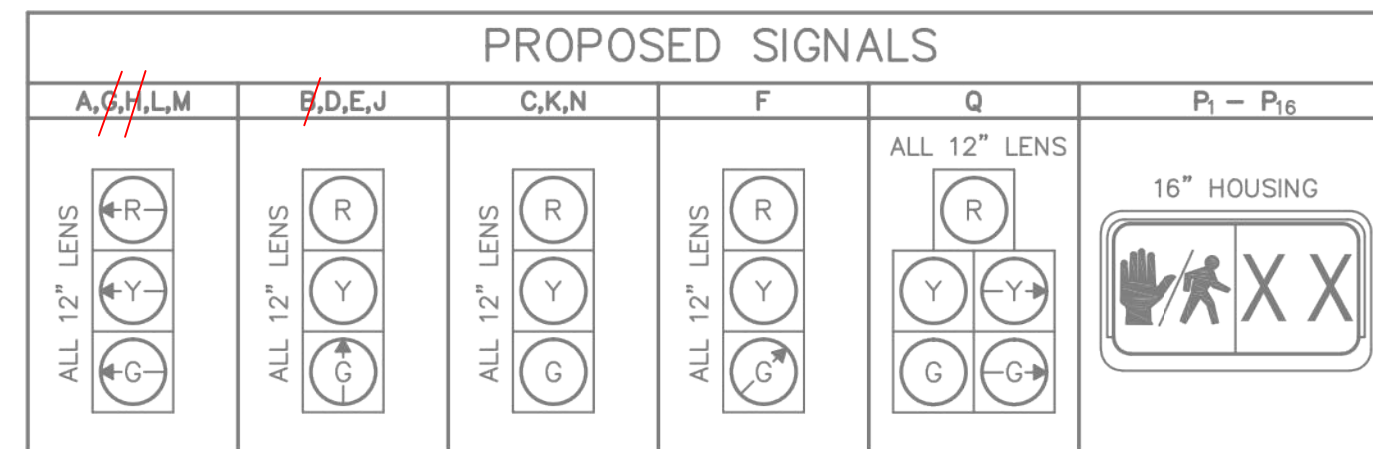
TRAFFIC SIGNAL CHANGES

STAGES 2J-1 AND 2J-2 SHEET 1 OF 2

DESIGNED: DY		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-491
CHECKED: JC		REF.	CONT.	SCALE: 1"=20'
DRAWN: DY	ACC.		DATE: DEC 2017	
CHECKED: JC	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143			

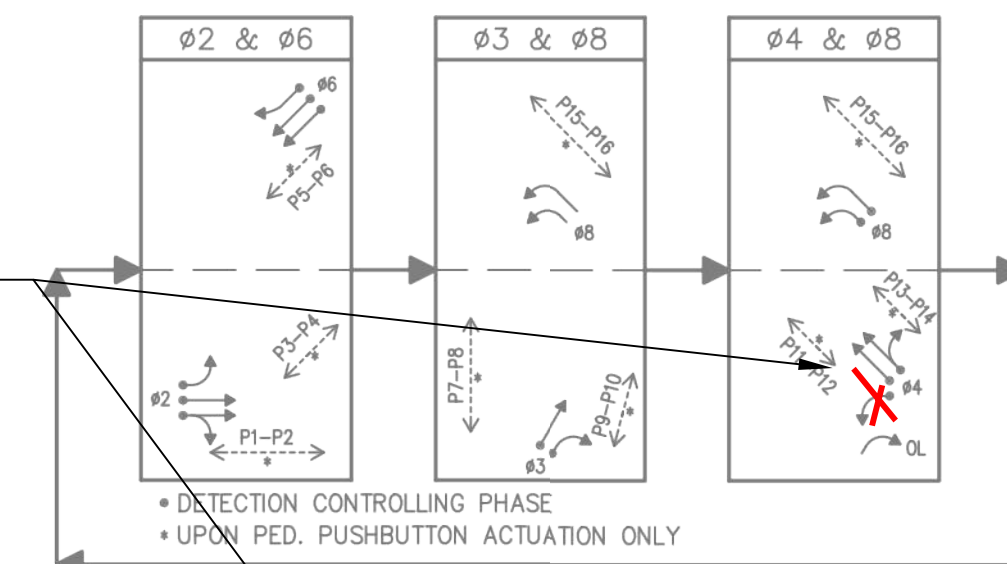

Rachel J. Burckardt
 12/11/17

EXISTING SEWER EASEMENT (PLAN 418A OF 1943)



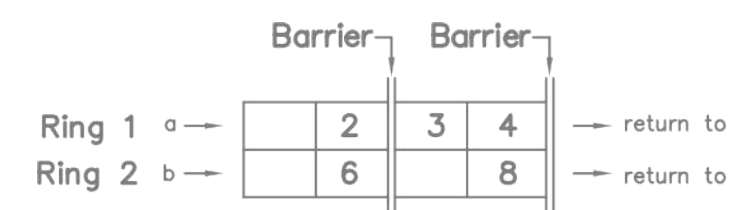
- NOTES:
- ALL INDICATIONS SHALL BE "LED" TYPE LENS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
 - ALL OVERHEAD SIGNALS SHALL BE RIGIDLY MOUNTED. ALL SIGNAL HEADS SHALL HAVE CUT TUNNEL VISORS AND BE EQUIPPED WITH 5" LOUVERED BACKPLATES.
 - ALL BACKPLATES SHALL INCLUDE A 3" RETROREFLECTIVE BORDER IN ACCORDANCE WITH THE SPECIAL PROVISIONS
 - ALL PEDESTRIAN DISPLAY SHALL BE "FULL" DISPLAYS. NO OUTLINE SYMBOL SHALL BE PERMITTED.
 - CONTRACTOR TO RESTORE TO EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

PREFERENTIAL PHASE SEQUENCE

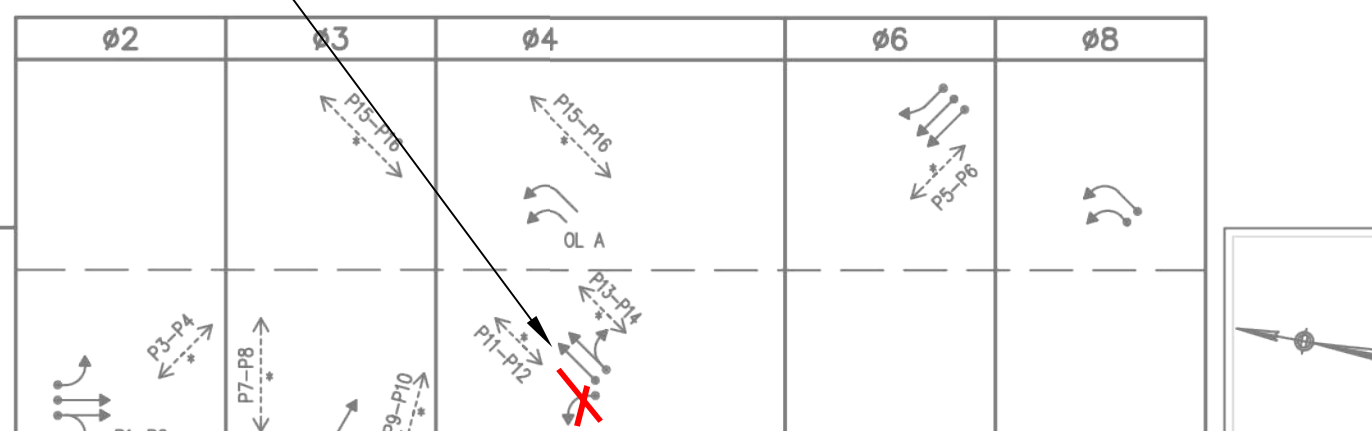


REMOVE MOVEMENT

RING STRUCTURE



- FULLY-ACTUATED ISOLATED
 SEMI-ACTUATED COORDINATED
 PRE-TIMED WIRE TBCU



SEQUENCE AND TIMING

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	FLASH OPER.		
MEDFORD STREET	SB	A	GL	YL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY	
MEDFORD STREET	SB	D	OV	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY	
MEDFORD STREET	SB	C	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY	
McGRATH HIGHWAY NORTHBOUND	NWB	D,E,F*	R	R	R	R	R	R	R	R	R	R	R	GV	Y*	R	R	R	R	R	FY	
MEDFORD STREET	NB	S,T	R	R	R	R	R	R	OL	YL	R	R	R	R	R	R	R	R	R	R	FR	
MEDFORD STREET	NB	J	R	R	R	R	R	R	GV	Y	R	R	R	R	R	R	R	R	R	R	FR	
MEDFORD STREET	NB	K	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR	
CUT-THROUGH ROAD	EB	LM	R	R	R	R	R	R	GL	GL	YL	R	R	R	R	R	R	R	R	R	FR	
SOMERVILLE AVENUE	SEB	N	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	FR	
SOMERVILLE AVENUE	SEB	Q	R	R	R	G	Y	R	R/GR	R/YR	R	R	R	R	R	R	R	R	R	R	FR	
PEDESTRIAN		P1-P4	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT	
PEDESTRIAN		P5-P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	OUT	
PEDESTRIAN		P7-P10	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT	
PEDESTRIAN		P11-P14	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT	
PEDESTRIAN		P15-P16	DW	DW	DW	W/FDW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT	
MINIMUM INITIAL			10			6			10					10			10					
PASSAGE			2			2			2					2			2					
MAXIMUM 1 (M-F: 6AM-10AM)			44			20			20					44			20					
MAXIMUM 2 (ALL OTHER TIMES)			40			20			20					40			20					
CHANGE						4.0	2.0		4.0	3.0				4.5	1.0	4.5	1.0				3.0	1.0
PEDESTRIAN			7/17			7/13			7/13					7/13								
RECALL			SOFT			OFF			OFF					SOFT			OFF					
MEMORY			NON-LOCKING			NON-LOCKING			NON-LOCKING					NON-LOCKING			NON-LOCKING					

*TRAFFIC SIGNAL CHANGES SHEET REVISIONS NOTED IN RED

* NOTE: DYNAMIC "RED" SIGNAL AHEAD SIGN TO DISPLAY "RED" DURING YELLOW AND RED INTERVAL

MAJOR ITEMS REQUIRED	
QUANTITY	DESCRIPTION
1	TRAFFIC CONTROLLER & CABINET NEMA TS2-TYPE 1 w/FOUNDATION
1	SERVICE CONNECTION (OVERHEAD FROM UTILITY POLE)
1	40' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	35' MAST ARM ASSEMBLY, BASE & FDN. (HEAVY LOADS)
2	35' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	10' SIGNAL POST, BASE & FDN.
15	8" SIGNAL POST, BASE & FDN.
13	SIGNAL HEAD, 3 SECTION
1	SIGNAL HEAD, 5 SECTION
16	PEDESTRIAN HOUSING GRAPHIC LED w/COUNTDOWN TIMER
16	AUDIBLE & VIBRO-TACTILE PEDESTRIAN PUSH BUTTON INTEGRATED SIGN & SADDLE w/LED CONFIRMATION LIGHT
1	VIDEO DETECTION SYSTEM WITH 6 CAMERAS
12	PULL BOX 12"x12" - SD2.031 (PAY SEPARATELY UNDER ITEM 811.31)
2	ELECTRIC HANDHOLE- SD2.022 (PAY SEPARATELY UNDER ITEM 811.22)
5	UNIDIRECTIONAL SINGLE CHANNEL OPTICAL DETECTOR (RECEIVER)
3	PREEMPTION 2-CHANNEL PHASE SELECTOR
3	PREEMPTION CONFIRMATION STROBE (CLEAR)

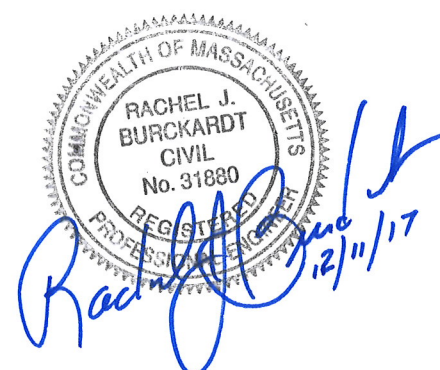
PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.

TRAFFIC CONTROLLER DATA	
PARAMETER	SELECTION
PHASE ASSIGNMENTS	STD. NEMA
OVERLAPS	STD. NEMA
RINGS	DUAL
DUAL ENTRY	ON (02 & 06)
SIMULTANEOUS GAP OUT DISABLED	YES (02 & 06)
MINIMUM YELLOW IN SECONDS	3
MAX II BY INTERNAL CLOCK	YES
NIGHT TIME FLASH BY INTERNAL CLOCK	NOT USED

EMERGENCY VEHICLE PREEMPTION				
SB	NWB	NB	SEB	EB
PREEMPT#1	PREEMPT#2	PREEMPT#3	PREEMPT#4	PREEMPT#5
	REC#2			REC#5
REC#1		REC#3	REC#4	

EMERGENCY VEHICLE PREEMPTION OPERATION

- EMERGENCY VEHICLE PREEMPTION SIGNAL SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS (RECEIVERS) LOCATED AT THE INTERSECTION.
- PREEMPTION SIGNALS SHALL BE SERVICED ON A FIRST COME FIRST SERVED BASIS.
- IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED BY OPTICAL DETECTOR REC#1 (REC#2, REC#3, REC#4 OR REC#5), THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PREEMPTION SIGNAL #1, #2, #3, #4 OR #5 GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME THE RELEVANT CLEARANCE INTERVALS AND SERVICE THE SUBSEQUENT EMERGENCY VEHICLE PREEMPTION SIGNAL IF NECESSARY. NORMAL SIGNAL OPERATION SHALL RESUME PROVIDED THAT ALL PREEMPTION SIGNALS HAVE CEASED.
- NORMAL VEHICLE CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.
- PREEMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION SIGNAL IS ON.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS

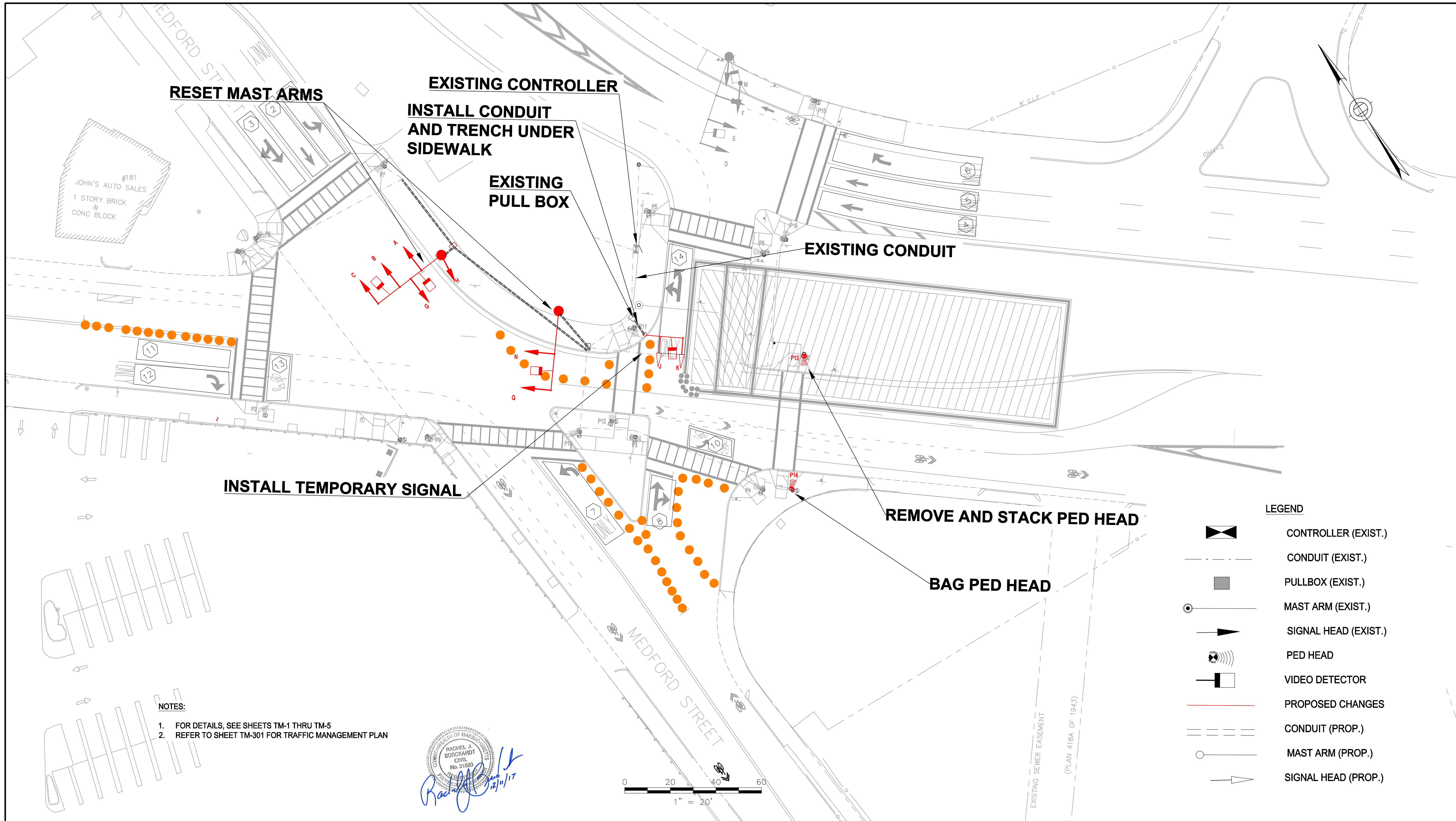
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGES 2J-1 AND 2J-2 SHEET 2 OF 2

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-492
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=20'
		DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\5HT DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-511 SIGNAL CHANGES-2K1.dwg



- NOTES:**
1. FOR DETAILS, SEE SHEETS TM-1 THRU TM-5
 2. REFER TO SHEET TM-301 FOR TRAFFIC MANAGEMENT PLAN

LEGEND

	CONTROLLER (EXIST.)
	CONDUIT (EXIST.)
	PULLBOX (EXIST.)
	MAST ARM (EXIST.)
	SIGNAL HEAD (EXIST.)
	PED HEAD
	VIDEO DETECTOR
	PROPOSED CHANGES
	CONDUIT (PROP.)
	MAST ARM (PROP.)
	SIGNAL HEAD (PROP.)

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

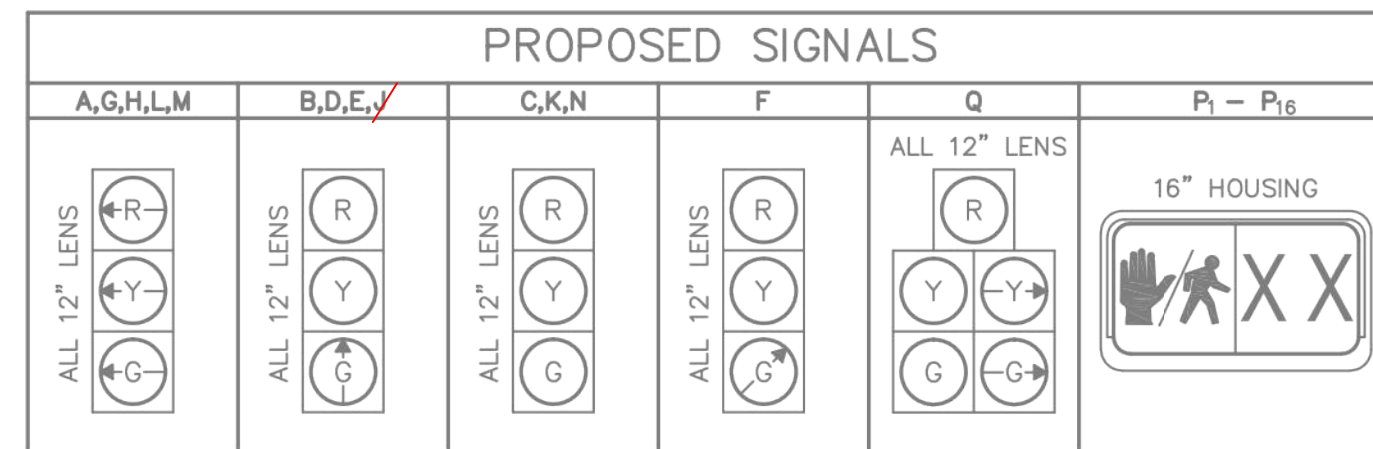
CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC SIGNAL CHANGES

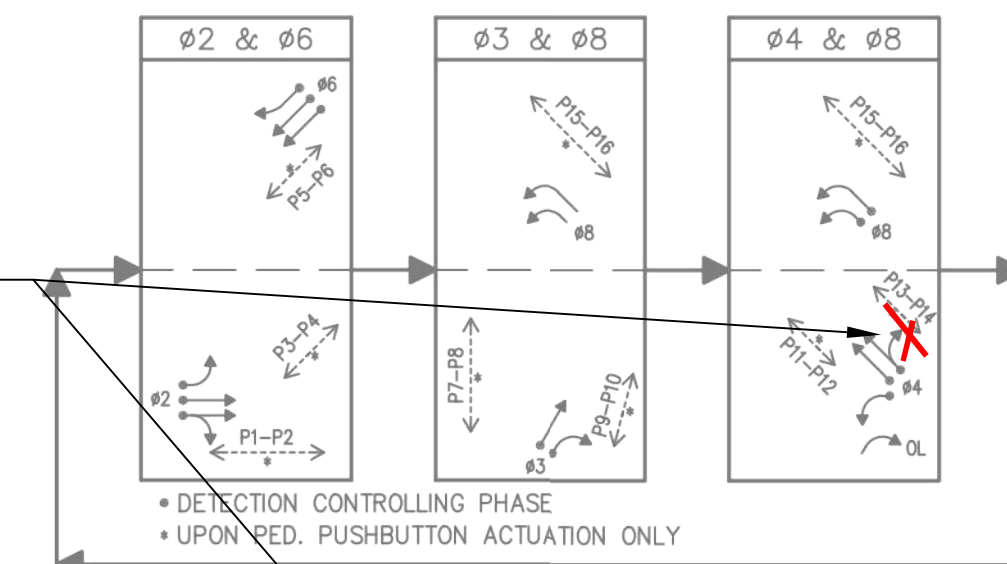
STAGE 2K-1 SHEET 1 OF 4

DESIGNED: DY		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-511
CHECKED: JC		REF.	CONT.	
DRAWN: DY	ACC.	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		
CHECKED: JC				



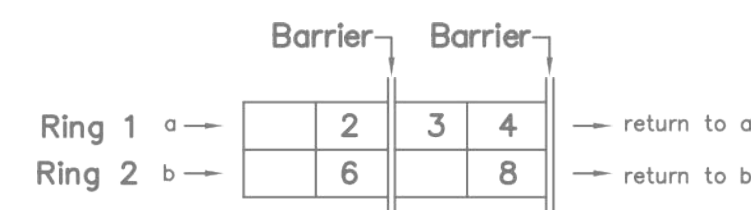
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 - ALL OVERHEAD SIGNALS SHALL BE RIGIDLY MOUNTED. ALL SIGNAL HEADS SHALL HAVE CUT TUNNEL VISORS AND BE EQUIPPED WITH 5" LOUVERED BACKPLATES.
 - ALL BACKPLATES SHALL INCLUDE A 3" RETROREFLECTIVE BORDER IN ACCORDANCE WITH THE SPECIAL PROVISIONS
 - ALL PEDESTRIAN DISPLAY SHALL BE "FULL" DISPLAYS. NO OUTLINE SYMBOL SHALL BE PERMITTED.
 - CONTRACTOR TO RESTORE TO EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

PREFERENTIAL PHASE SEQUENCE

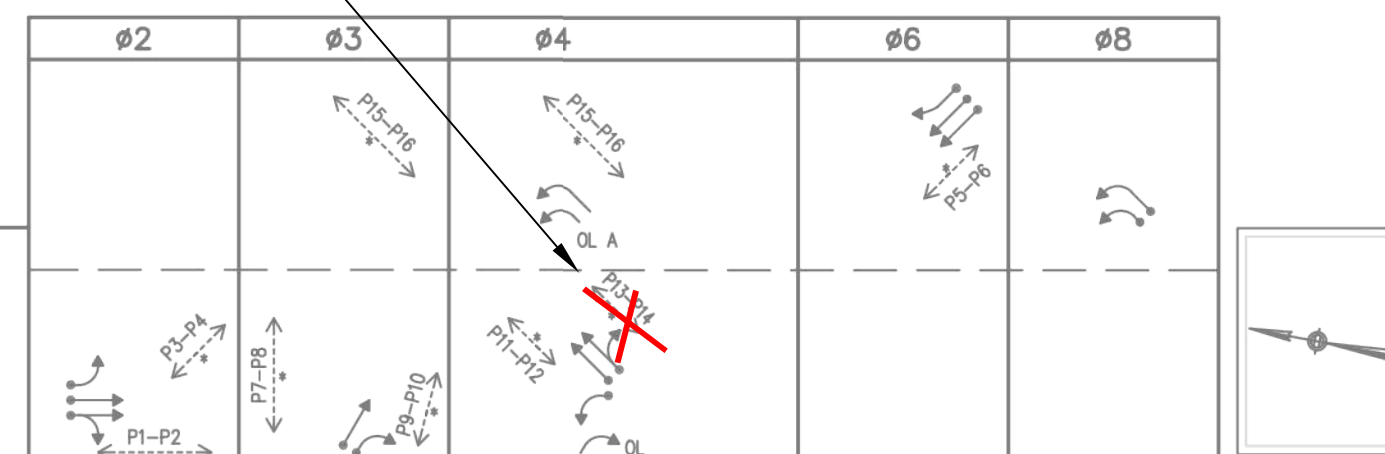


REMOVE PED MOVEMENT

RING STRUCTURE



FULLY-ACTUATED ISOLATED
 SEMI-ACTUATED COORDINATED
 PRE-TIMED WIRE TBCU



SEQUENCE AND TIMING

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	FLASH OPER.
MEDFORD STREET	SB	A	GL	YL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
MEDFORD STREET	SB	C	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
McGRATH HIGHWAY NORTHBOUND	NWB	D,E,F*	R	R	R	R	R	R	R	R	R	R	R	GV	Y*	R	R	R	R	FY
MEDFORD STREET	NB	G,H	R	R	R	R	R	R	GL	YL	R	R	R	R	R	R	R	R	R	FRL
MEDFORD STREET	NB	J	R	R	R	R	R	R	GV	Y	R	R	R	R	R	R	R	R	R	FR
MEDFORD STREET	NB	K	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	FR
CUT-THROUGH ROAD	EB	LM	R	R	R	R	R	R	GL	GL	YL	R	R	R	R	GL	YL	R	R	FR
SOMERVILLE AVENUE	SEB	N	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	FR
SOMERVILLE AVENUE	SEB	Q	R	R	R	G	Y	R	R/GR	YR	R	R	R	R	R	R	R	R	R	FR
PEDESTRIAN		P1-P4	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P5-P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P7-P10	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P11-P12	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P15-P16	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
MINIMUM INITIAL			10			6								10						
PASSAGE			2			2								2						
MAXIMUM 1 (M-F: 6AM-10AM)			44			20								44						
MAXIMUM 2 (ALL OTHER TIMES)			40			20								40						
CHANGE				4.0	2.0		4.0	3.0		4.5	1.0	4.5	1.0		4.5	1.0		3.0	1.0	
PEDESTRIAN			7/17			7/13			7/13					7/13						
RECALL			SOFT			OFF			OFF					SOFT						
MEMORY			NON-LOCKING			NON-LOCKING			NON-LOCKING					NON-LOCKING						

MAJOR ITEMS REQUIRED

QUANTITY	DESCRIPTION
1	TRAFFIC CONTROLLER & CABINET NEMA TS2-TYPE 1 w/FOUNDATION
1	SERVICE CONNECTION (OVERHEAD FROM UTILITY POLE)
1	40' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	35' MAST ARM ASSEMBLY, BASE & FDN. (HEAVY LOADS)
2	35' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	10' SIGNAL POST, BASE & FDN.
15	8' SIGNAL POST, BASE & FDN.
13	SIGNAL HEAD, 3 SECTION
1	SIGNAL HEAD, 5 SECTION
16	PEDESTRIAN HOUSING GRAPHIC LED w/COUNTDOWN TIMER
16	AUDIBLE & VIBRO-TACTILE PEDESTRIAN PUSH BUTTON INTEGRATED SIGN & SADDLE w/LED CONFIRMATION LIGHT
1	VIDEO DETECTION SYSTEM WITH 6 CAMERAS
12	PULL BOX 12"x12" - SD2.031 (PAY SEPARATELY UNDER ITEM 811.31)
2	ELECTRIC HANDHOLE- SD2.022 (PAY SEPARATELY UNDER ITEM 811.22)
5	UNIDIRECTIONAL SINGLE CHANNEL OPTICAL DETECTOR (RECEIVER)
3	PREEMPTION 2-CHANNEL PHASE SELECTOR
3	PREEMPTION CONFIRMATION STROBE (CLEAR)

PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.

TRAFFIC CONTROLLER DATA

PARAMETER	SELECTION
PHASE ASSIGNMENTS	STD. NEMA
OVERLAPS	STD. NEMA
RINGS	DUAL
DUAL ENTRY	ON (ø2 & ø6)
SIMULTANEOUS GAP OUT DISABLED	YES (ø2 & ø6)
MINIMUM YELLOW IN SECONDS	3
MAX II BY INTERNAL CLOCK	YES
NIGHT TIME FLASH BY INTERNAL CLOCK	NOT USED

EMERGENCY VEHICLE PREEMPTION

SB	NWB	NB	SEB	EB
PREEMPT#1	PREEMPT#2	PREEMPT#3	PREEMPT#4	PREEMPT#5
	REC#2			REC#5
REC#1		REC#3	REC#4	

- EMERGENCY VEHICLE PREEMPTION OPERATION
- EMERGENCY VEHICLE PREEMPTION SIGNAL SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS (RECEIVERS) LOCATED AT THE INTERSECTION.
 - PREEMPTION SIGNALS SHALL BE SERVICED ON A FIRST COME FIRST SERVED BASIS.
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 - NORMAL VEHICLE CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.
 - PREEMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION SIGNAL IS ON.

VIDEO DETECTION DATA

DETECTION ZONE NO.	ø CALLED	ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	2	2	B	-	-
2	2	2	B	-	-
3	2	2	B	-	-
4	6	6	B	-	-
5	6	6	B	-	-
6	6	6	B	-	-
7	4	4	B	-	-
8	4	4	B	-	-
9	4	4	B	-	-
10	4	4	B	-	-
11	3	3	B	-	-
12	3	3	B	-	-
13	3	3	B	-	-
14	8	8	B	-	-
15	8	8	B	-	-

*TRAFFIC SIGNAL CHANGES SHEET REVISIONS NOTED IN RED

* NOTE: DYNAMIC "RED" SIGNAL AHEAD SIGN TO DISPLAY "RED" DURING YELLOW AND RED INTERVAL



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
 CONTRACT CP-2/CP-3
 SEWER SEPARATION AND WATER REPLACEMENT
 TRAFFIC SIGNAL CHANGES
 STAGE 2K-1 SHEET 2 OF 4

DESIGNED: DY
 CHECKED: JC
 DRAWN: DY
 CHECKED: JC

WSP | PARSONS BRINCKERHOFF
 Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

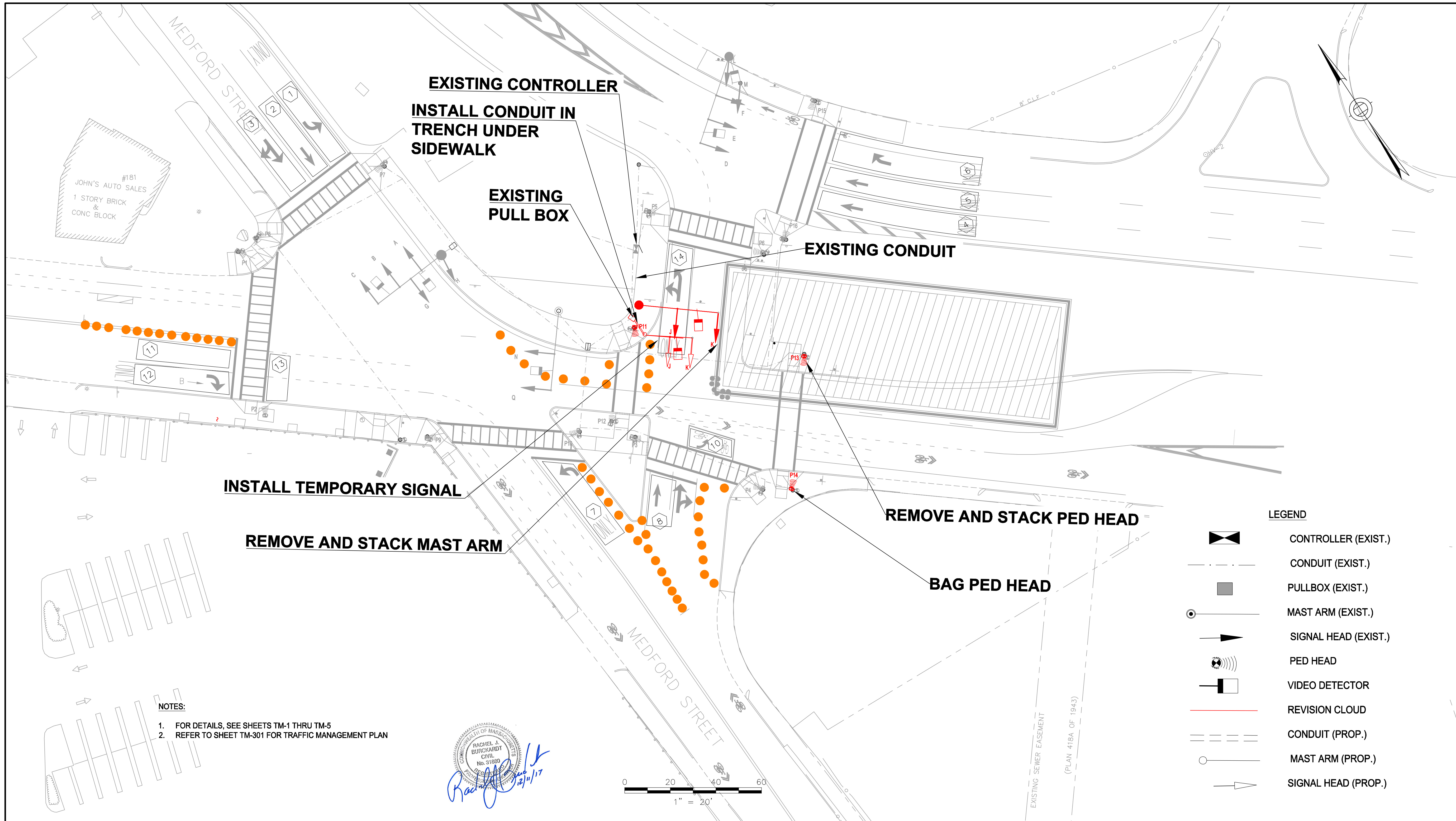
REF. CONT.
 ACC. DATE: DEC 2017

SCALE: 1"=20'
 DATE: DEC 2017

SHEET
TM-512

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

2017-10-20 3:07 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-513 SIGNAL CHANGES-2K2.dwg

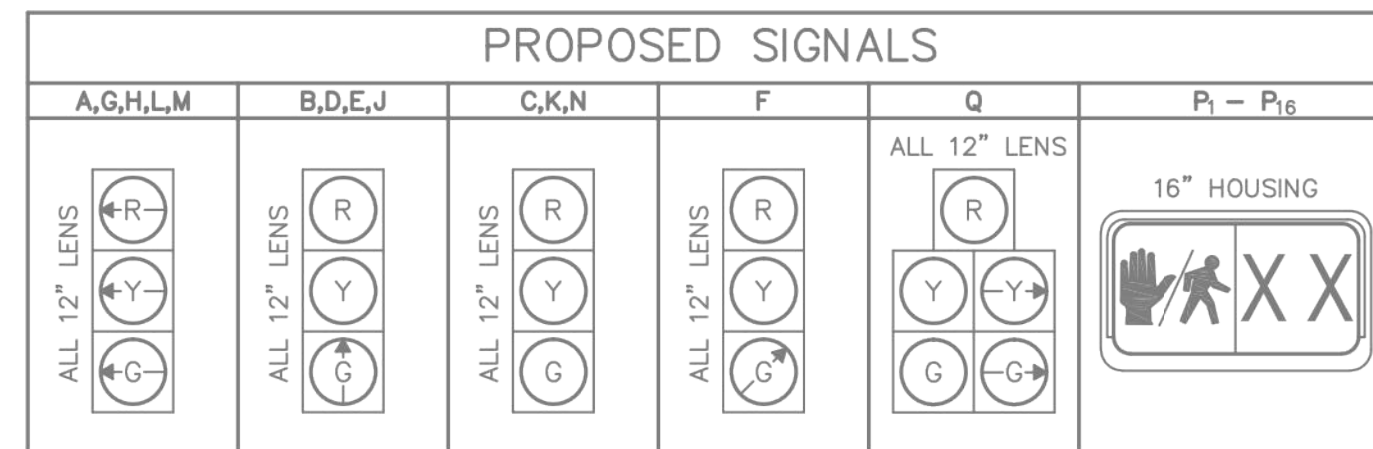


ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGE 2K-2 SHEET 1 OF 4

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-513
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=20' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

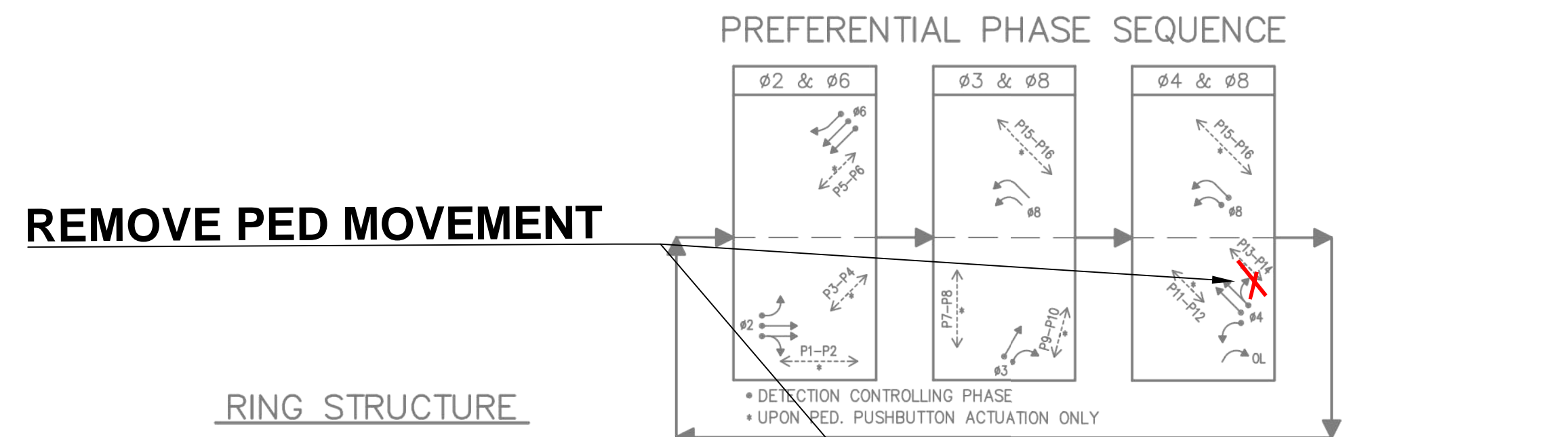
NO.	DATE	REVISIONS	BY



- NOTES:
1. ALL INDICATIONS SHALL BE "LED" TYPE LENS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
 2. ALL OVERHEAD SIGNALS SHALL BE RIGIDLY MOUNTED. ALL SIGNAL HEADS SHALL HAVE CUT TUNNEL VISORS AND BE EQUIPPED WITH 5" LOUVERED BACKPLATES.
 3. ALL BACKPLATES SHALL INCLUDE A 3" RETROREFLECTIVE BORDER IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
 4. ALL PEDESTRIAN DISPLAY SHALL BE "FULL" DISPLAYS. NO OUTLINE SYMBOL SHALL BE PERMITTED.
 5. CONTRACTOR TO RESTORE TO EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

MAJOR ITEMS REQUIRED	
QUANTITY	DESCRIPTION
1	TRAFFIC CONTROLLER & CABINET NEMA TS2-TYPE 1 w/FOUNDATION
1	SERVICE CONNECTION (OVERHEAD FROM UTILITY POLE)
1	40' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	35' MAST ARM ASSEMBLY, BASE & FDN. (HEAVY LOADS)
2	35' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	10' SIGNAL POST, BASE & FDN.
15	8" SIGNAL POST, BASE & FDN.
13	SIGNAL HEAD, 3 SECTION
1	SIGNAL HEAD, 5 SECTION
16	PEDESTRIAN HOUSING GRAPHIC LED w/COUNTDOWN TIMER
16	AUDIBLE & VIBRO-TACTILE PEDESTRIAN PUSH BUTTON INTEGRATED SIGN & SADDLE w/LED CONFIRMATION LIGHT
1	VIDEO DETECTION SYSTEM WITH 6 CAMERAS
12	PULL BOX 12"x12" - SD2.031 (PAY SEPARATELY UNDER ITEM 811.31)
2	ELECTRIC HANDHOLE- SD2.022 (PAY SEPARATELY UNDER ITEM 811.22)
5	UNIDIRECTIONAL SINGLE CHANNEL OPTICAL DETECTOR (RECEIVER)
3	PREEMPTION 2-CHANNEL PHASE SELECTOR
3	PREEMPTION CONFIRMATION STROBE (CLEAR)

PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.



TRAFFIC CONTROLLER DATA	
PARAMETER	SELECTION
PHASE ASSIGNMENTS	STD. NEMA
OVERLAPS	STD. NEMA
RINGS	DUAL
DUAL ENTRY	ON (02 & 06)
SIMULTANEOUS GAP OUT DISABLED	YES (02 & 06)
MINIMUM YELLOW IN SECONDS	3
MAX II BY INTERNAL CLOCK	YES
NIGHT TIME FLASH BY INTERNAL CLOCK	NOT USED

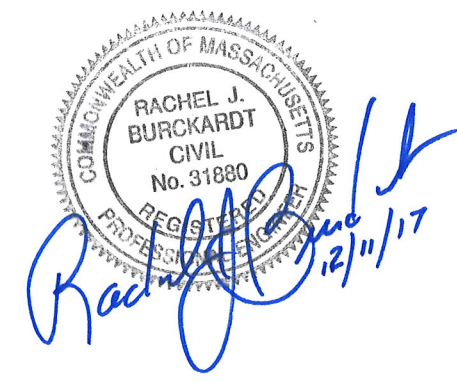
VIDEO DETECTION DATA					
DETECTION ZONE NO.	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	2	2	B	-	-
2	2	2	B	-	-
3	2	2	B	-	-
4	6	6	B	-	-
5	6	6	B	-	-
6	6	6	B	-	-
7	4	4	B	-	-
8	4	4	B	-	-
9	4	4	B	-	-
10	4	4	B	-	-
11	3	3	B	-	-
12	3	3	B	-	-
13	3	3	B	-	-
14	8	8	B	-	-
15	8	8	B	-	-

FULLY-ACTUATED ISOLATED
 SEMI-ACTUATED COORDINATED
 PRE-TIMED WIRE TBCU

SEQUENCE AND TIMING																				
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	FLASH OPER.
MEDFORD STREET	SB	A	GL	YL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
MEDFORD STREET	SB	B	GV	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
MEDFORD STREET	SB	C	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
McGRATH HIGHWAY NORTHBOUND	NWB	D,E,F*	R	R	R	R	R	R	R	R	R	R	R	GV	Y*	R	R	R	R	FY
MEDFORD STREET	NB	G,H	R	R	R	R	R	R	GL	YL	R	R	R	R	R	R	R	R	R	FRL
MEDFORD STREET	NB	J	R	R	R	R	R	R	GV	Y	R	R	R	R	R	R	R	R	R	FR
MEDFORD STREET	NB	K	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	FR
CUT-THROUGH ROAD	EB	LM	R	R	R	R	R	R	GL	GL	YL	R	R	R	R	R	GL	YL	R	FR
SOMERVILLE AVENUE	SEB	N	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	FR
SOMERVILLE AVENUE	SEB	Q	R	R	R	G	Y	R	R	R/R	R/YR	R	R	R	R	R	R	R	R	FR
PEDESTRIAN		P1-P4	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P5-P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P7-P10	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P11-P14	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P15-P16	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
TIMING IN SECONDS																				
MINIMUM INITIAL			10			6				10				10			10			
PASSAGE			2			2				2				2			2			
MAXIMUM 1 (M-F: 6AM-10AM)			44			20				20				44			20			
MAXIMUM 2 (ALL OTHER TIMES)			40			20				20				40			20			
CHANGE						4.0	2.0			4.0	3.0			4.5	1.0		4.5	1.0		
PEDESTRIAN			7/17			7/13				7/13				7/13			7/13			
RECALL			SOFT			OFF				OFF				SOFT			OFF			
MEMORY			NON-LOCKING			NON-LOCKING				NON-LOCKING				NON-LOCKING			NON-LOCKING			

EMERGENCY VEHICLE PREEMPTION				
SB	NWB	NB	SEB	EB
PREEMPT#1	PREEMPT#2	PREEMPT#3	PREEMPT#4	PREEMPT#5
	REC#2			REC#5
		REC#3	REC#4	
REC#1				

- EMERGENCY VEHICLE PREEMPTION OPERATION
1. EMERGENCY VEHICLE PREEMPTION SIGNAL SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS (RECEIVERS) LOCATED AT THE INTERSECTION.
 2. PREEMPTION SIGNALS SHALL BE SERVICED ON A FIRST COME FIRST SERVED BASIS.
 3. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED BY OPTICAL DETECTOR REC#1 (REC#2, REC#3, REC#4 OR REC#5), THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PREEMPTION SIGNAL #1, #2, #3, #4 OR #5 GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME THE RELEVANT CLEARANCE INTERVALS AND SERVICE THE SUBSEQUENT EMERGENCY VEHICLE PREEMPTION SIGNAL IF NECESSARY. NORMAL SIGNAL OPERATION SHALL RESUME PROVIDED THAT ALL PREEMPTION SIGNALS HAVE CEASED.
 4. NORMAL VEHICLE CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.
 5. PREEMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION SIGNAL IS ON.



*TRAFFIC SIGNAL CHANGES SHEET REVISIONS NOTED IN RED

* NOTE: DYNAMIC "RED" SIGNAL AHEAD SIGN TO DISPLAY "RED" DURING YELLOW AND RED INTERVAL

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

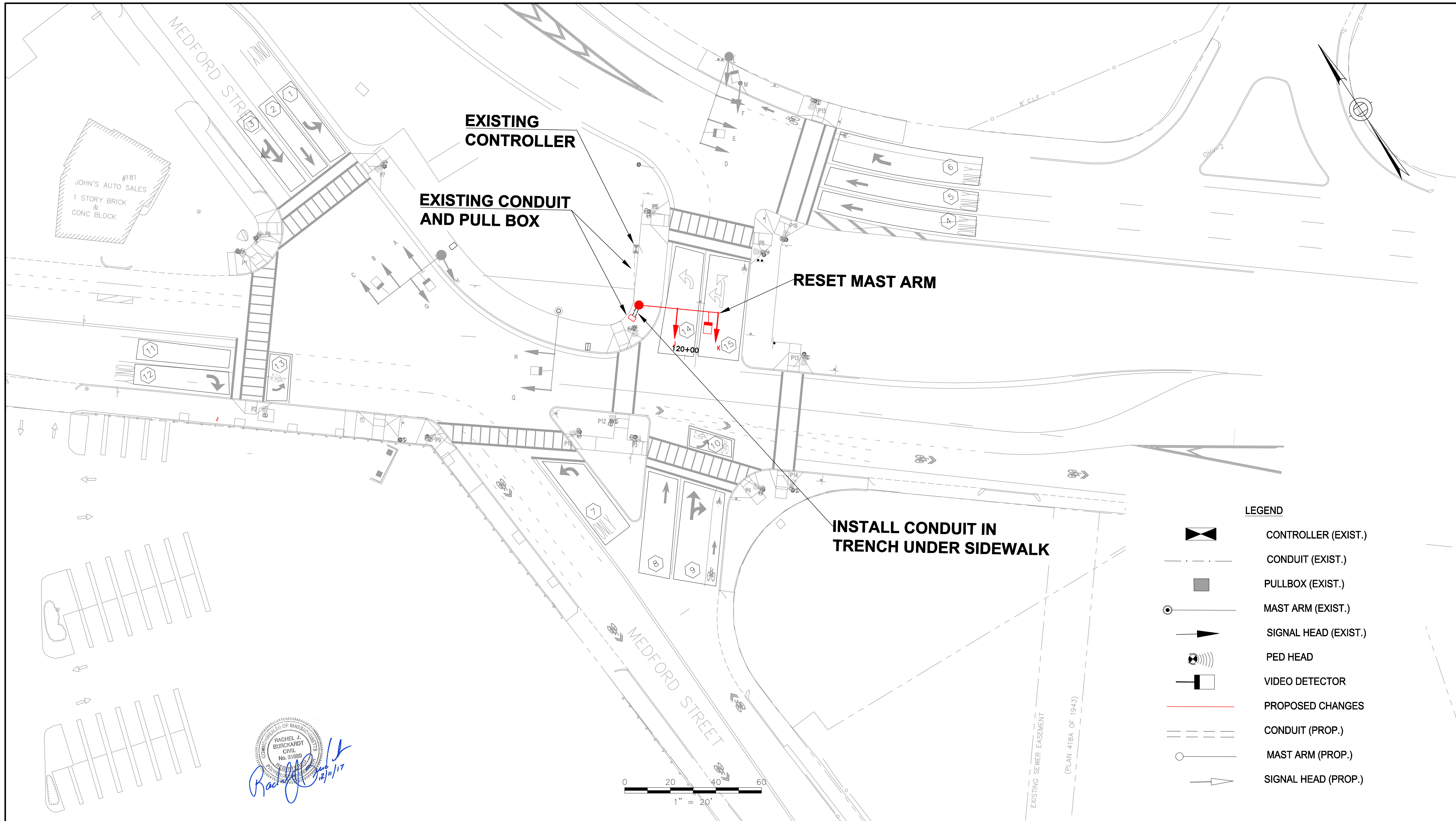
SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC SIGNAL CHANGES




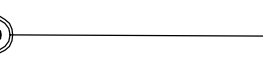
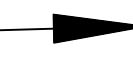



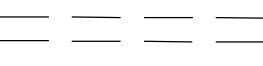

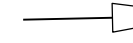
STAGE 2K-2 SHEET 4 OF 4

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
CHECKED: JC		TM-514
DRAWN: DY	REF.	SCALE: 1"=20'
CHECKED: JC	CONT.	DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

2017-10-20 3:35 PM T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-521 SIGNAL CHANGES-2L.dwg



LEGEND


-  CONTROLLER (EXIST.)
-  CONDUIT (EXIST.)
-  PULLBOX (EXIST.)
-  MAST ARM (EXIST.)
-  SIGNAL HEAD (EXIST.)
-  PED HEAD
-  VIDEO DETECTOR
-  PROPOSED CHANGES
-  CONDUIT (PROP.)
-  MAST ARM (PROP.)
-  SIGNAL HEAD (PROP.)

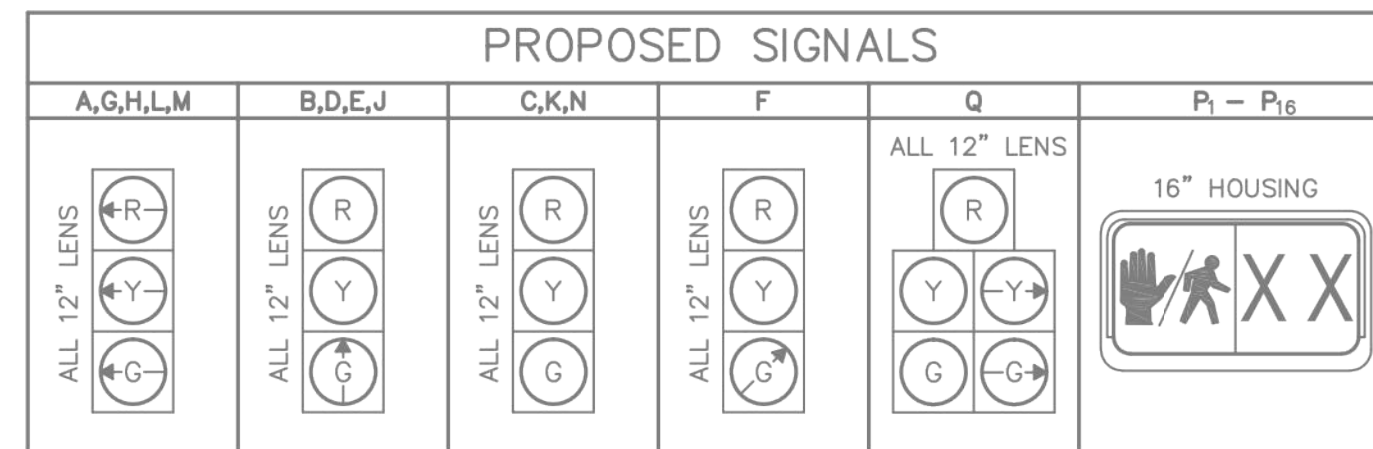

 Rachel J. Burckardt
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

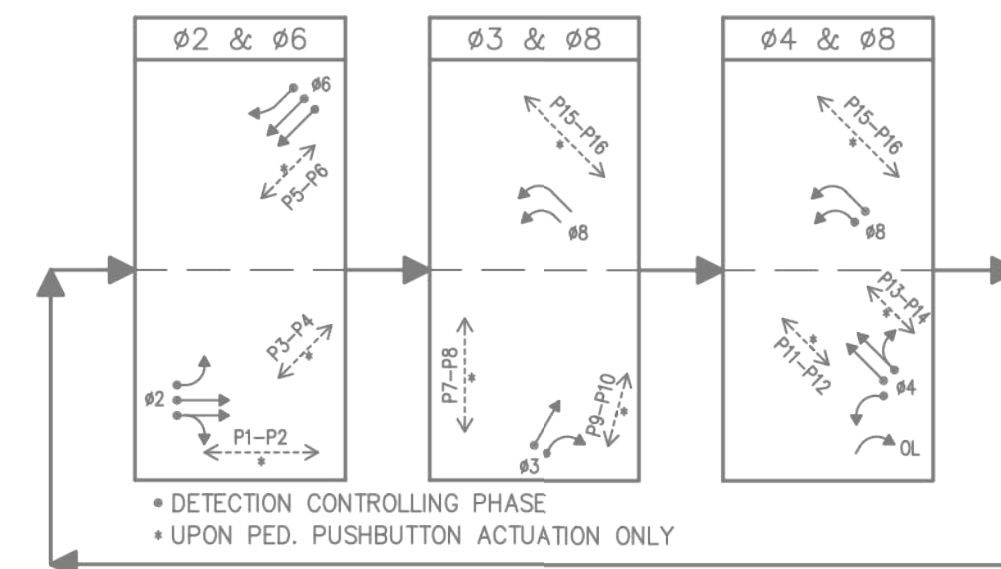
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
TRAFFIC SIGNAL CHANGES
STAGE 2L SHEET 1 OF 2

DESIGNED: DY		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET			
CHECKED: JC		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">REF.</td> <td style="width: 50%;">CONT.</td> </tr> <tr> <td>ACC.</td> <td> </td> </tr> </table>	REF.	CONT.	ACC.		SCALE: 1"=20' DATE: DEC 2017
REF.	CONT.						
ACC.							
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143							

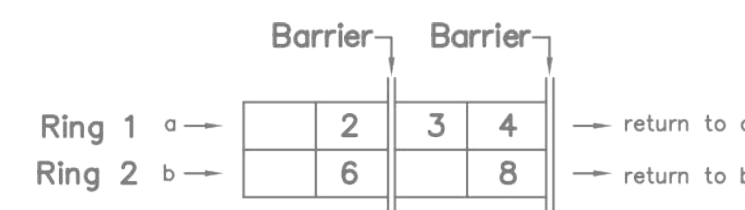


- NOTES:
- ALL INDICATIONS SHALL BE "LED" TYPE LENS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
 - ALL OVERHEAD SIGNALS SHALL BE RIGIDLY MOUNTED. ALL SIGNAL HEADS SHALL HAVE CUT TUNNEL VISORS AND BE EQUIPPED WITH 5" LOUVERED BACKPLATES.
 - ALL BACKPLATES SHALL INCLUDE A 3" RETROREFLECTIVE BORDER IN ACCORDANCE WITH THE SPECIAL PROVISIONS
 - ALL PEDESTRIAN DISPLAY SHALL BE "FULL" DISPLAYS. NO OUTLINE SYMBOL SHALL BE PERMITTED.
 - CONTRACTOR TO RESTORE TO EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION WHERE CHANGES ARE NOT NOTED.

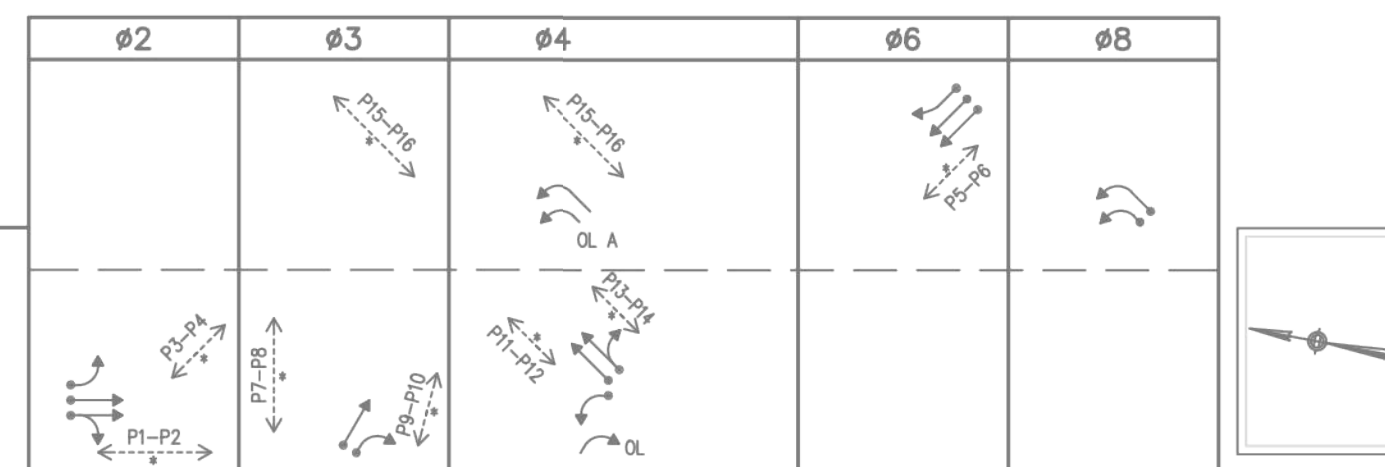
PREFERENTIAL PHASE SEQUENCE



RING STRUCTURE



FULLY-ACTUATED ISOLATED
 SEMI-ACTUATED COORDINATED
 PRE-TIMED WIRE TBCU



VIDEO DETECTION DATA					
DETECTION ZONE NO.	ø CALLED	ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	2	2	B	-	-
2	2	2	B	-	-
3	2	2	B	-	-
4	6	6	B	-	-
5	6	6	B	-	-
6	6	6	B	-	-
7	4	4	B	-	-
8	4	4	B	-	-
9	4	4	B	-	-
10	4	4	B	-	-
11	3	3	B	-	-
12	3	3	B	-	-
13	3	3	B	-	-
14	8	8	B	-	-
15	8	8	B	-	-

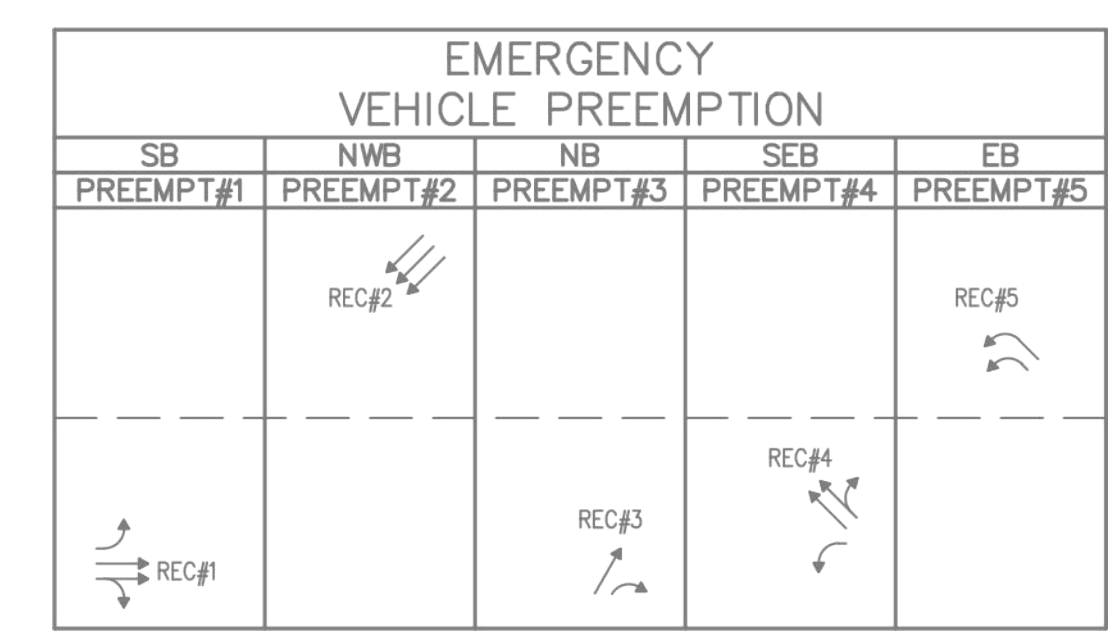
SEQUENCE AND TIMING																				
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	FLASH OPER.
MEDFORD STREET	SB	A	GL	YL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
MEDFORD STREET	SB	B	GV	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
MEDFORD STREET	SB	C	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
McGRATH HIGHWAY NORTHBOUND	NWB	D,E,F*	R	R	R	R	R	R	R	R	R	R	R	GV	Y*	R	R	R	R	FY
MEDFORD STREET	NB	G,H	R	R	R	R	R	R	GL	YL	R	R	R	R	R	R	R	R	R	FRL
MEDFORD STREET	NB	J	R	R	R	R	R	R	GV	Y	R	R	R	R	R	R	R	R	R	FR
MEDFORD STREET	NB	K	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	FR
CUT-THROUGH ROAD	EB	LM	R	R	R	R	R	R	GL	GL	YL	R	R	R	R	R	GL	YL	R	FR
SOMERVILLE AVENUE	SEB	N	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	FR
SOMERVILLE AVENUE	SEB	Q	R	R	R	G	Y	R	R/GR	R/YR	R	R	R	R	R	R	R	R	R	FR
PEDESTRIAN		P1-P4	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P5-P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P7-P10	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P11-P14	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIAN		P15-P16	DW	DW	DW	W/FDW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
MINIMUM INITIAL PASSAGE			10			6					10					10				
MAXIMUM 1 (M-F: 6AM-10AM)			44			20					20					44				
MAXIMUM 2 (ALL OTHER TIMES)			40			20					20					40				
CHANGE						4.0	2.0			4.0	3.0				4.5	1.0				
PEDESTRIAN			7/17			7/13				7/13					7/13					
RECALL			SOFT			OFF				OFF					SOFT					
MEMORY			NON-LOCKING			NON-LOCKING				NON-LOCKING					NON-LOCKING					

* NOTE: DYNAMIC "RED" SIGNAL AHEAD SIGN TO DISPLAY "RED" DURING YELLOW AND RED INTERVAL

MAJOR ITEMS REQUIRED	
QUANTITY	DESCRIPTION
1	TRAFFIC CONTROLLER & CABINET NEMA TS2-TYPE 1 w/FOUNDATION
1	SERVICE CONNECTION (OVERHEAD FROM UTILITY POLE)
1	40' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	35' MAST ARM ASSEMBLY, BASE & FDN. (HEAVY LOADS)
2	35' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	10' SIGNAL POST, BASE & FDN.
15	8' SIGNAL POST, BASE & FDN.
13	SIGNAL HEAD, 3 SECTION
1	SIGNAL HEAD, 5 SECTION
16	PEDESTRIAN HOUSING GRAPHIC LED w/COUNTDOWN TIMER
16	AUDIBLE & VIBRO-TACTILE PEDESTRIAN PUSH BUTTON INTEGRATED SIGN & SADDLE w/LED CONFIRMATION LIGHT
1	VIDEO DETECTION SYSTEM WITH 6 CAMERAS
12	PULL BOX 12"x12" - SD2.031 (PAY SEPARATELY UNDER ITEM 811.31)
2	ELECTRIC HANDHOLE- SD2.022 (PAY SEPARATELY UNDER ITEM 811.22)
5	UNIDIRECTIONAL SINGLE CHANNEL OPTICAL DETECTOR (RECEIVER)
3	PREEMPTION 2-CHANNEL PHASE SELECTOR
3	PREEMPTION CONFIRMATION STROBE (CLEAR)

PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.

TRAFFIC CONTROLLER DATA	
PARAMETER	SELECTION
PHASE ASSIGNMENTS	STD. NEMA
OVERLAPS	STD. NEMA
RINGS	DUAL
DUAL ENTRY	ON (ø2 & ø6)
SIMULTANEOUS GAP OUT DISABLED	YES (ø2 & ø6)
MINIMUM YELLOW IN SECONDS	3
MAX II BY INTERNAL CLOCK	YES
NIGHT TIME FLASH BY INTERNAL CLOCK	NOT USED



- EMERGENCY VEHICLE PREEMPTION OPERATION
- EMERGENCY VEHICLE PREEMPTION SIGNAL SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS (RECEIVERS) LOCATED AT THE INTERSECTION.
 - PREEMPTION SIGNALS SHALL BE SERVICED ON A FIRST COME FIRST SERVED BASIS.
 - IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED BY OPTICAL DETECTOR REC#1 (REC#2, REC#3, REC#4 OR REC#5), THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PREEMPTION SIGNAL #1, #2, #3, #4 OR #5 GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME THE RELEVANT CLEARANCE INTERVALS AND SERVICE THE SUBSEQUENT EMERGENCY VEHICLE PREEMPTION SIGNAL IF NECESSARY. NORMAL SIGNAL OPERATION SHALL RESUME PROVIDED THAT ALL PREEMPTION SIGNALS HAVE CEASED.
 - NORMAL VEHICLE CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.
 - PREEMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION SIGNAL IS ON.

*NO SIGNAL TIMING CHANGES THIS PHASE.

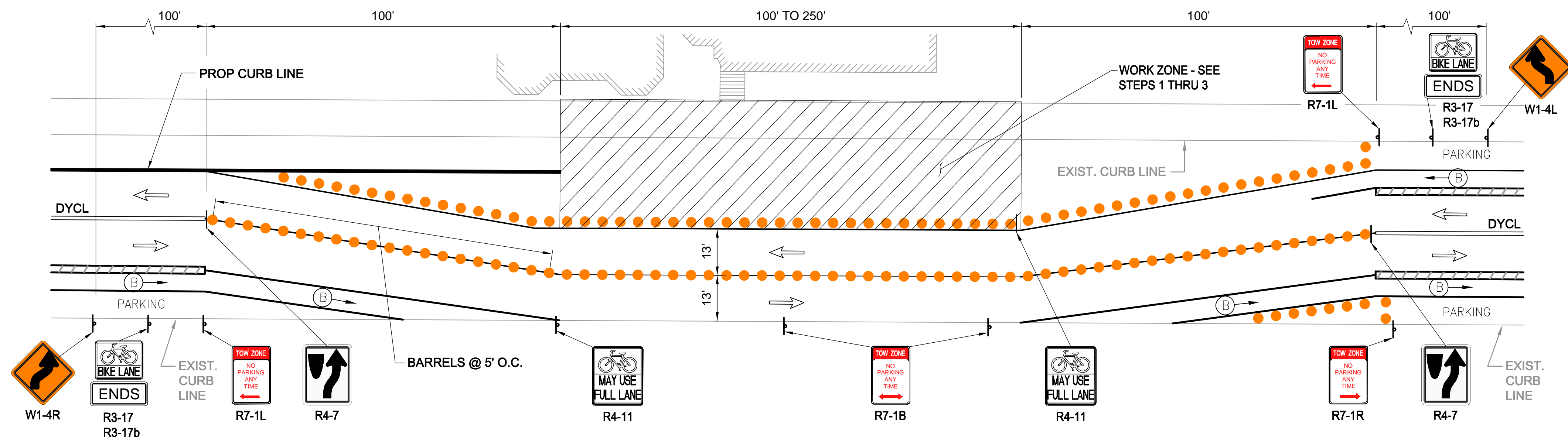
RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 12/11/17

NO.	DATE	REVISIONS	BY

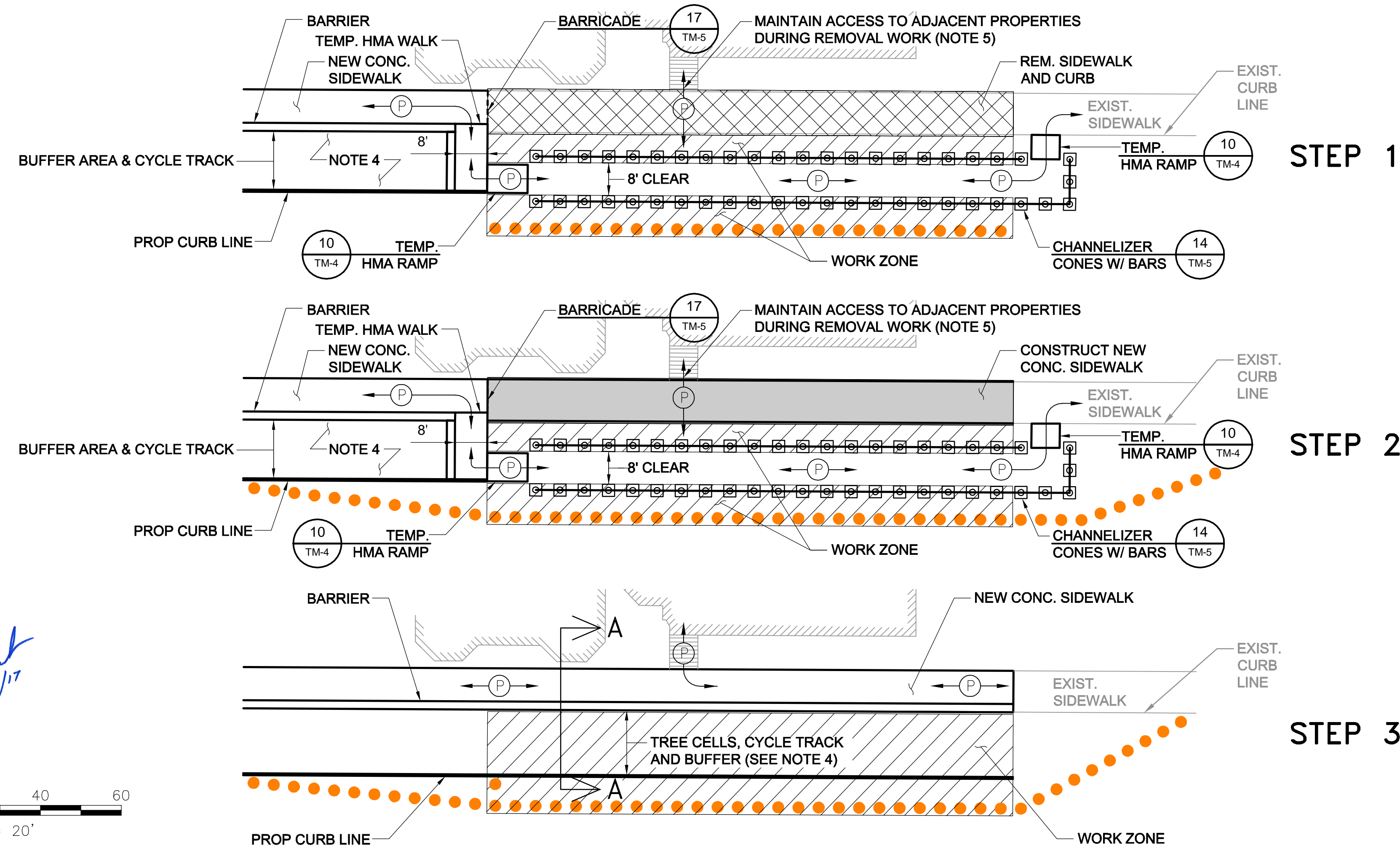
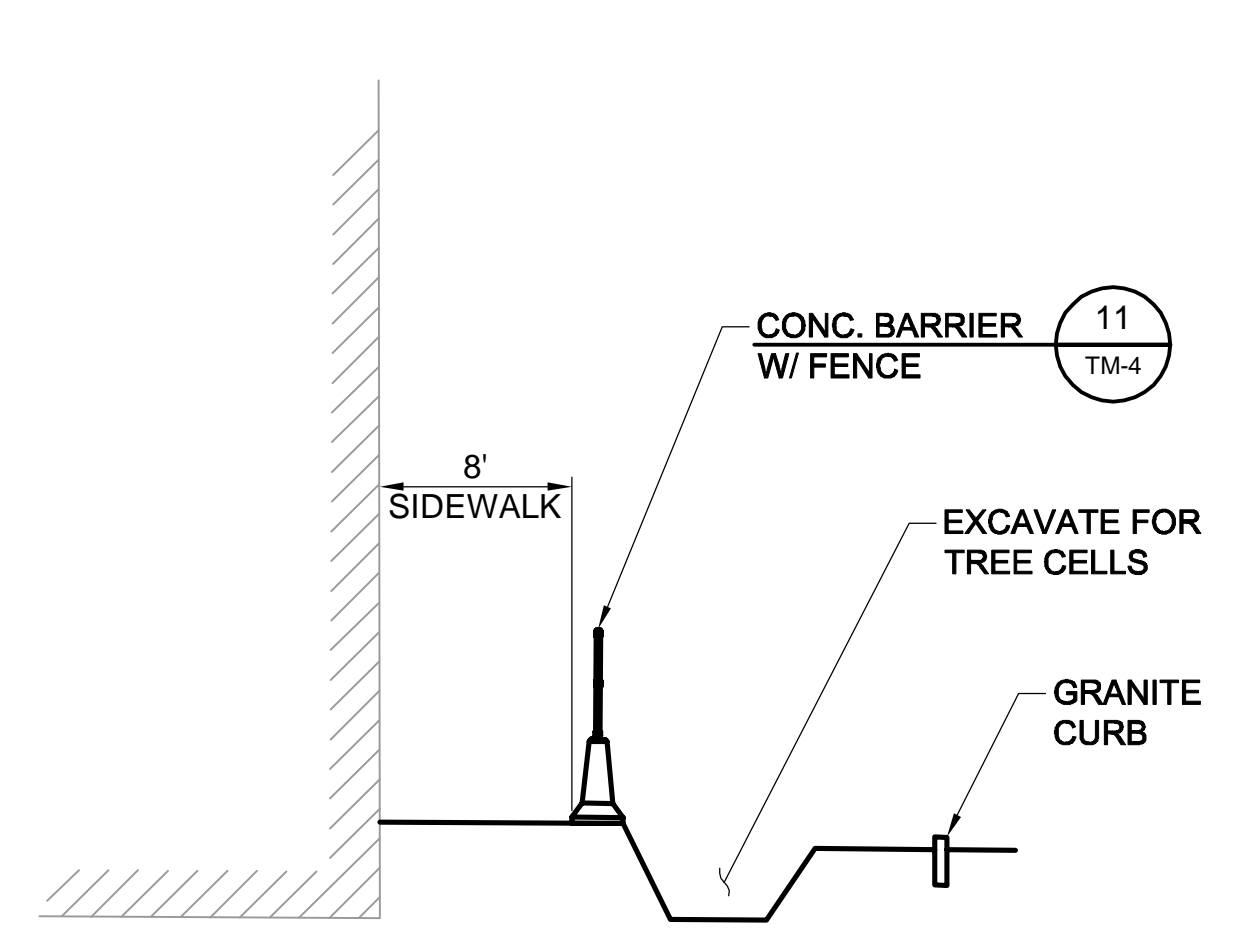
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
 CONTRACT CP-2/CP-3
 SEWER SEPARATION AND WATER REPLACEMENT
 TRAFFIC SIGNAL CHANGES
 STAGE 2L SHEET 2 OF 2

DESIGNED: DY	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-522
CHECKED: JC		
DRAWN: DY	REF.	CONT.
CHECKED: JC	ACC.	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

2017-11-13 4:39 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-560 TYP TMP PL SEC streetscape East of Prospect.dwg



TYPICAL SIDEWALK CONSTRUCTION – PROSPECT ST. TO MEDFORD ST.



NOTES:

- FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
- FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
- FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
- PROTECT TREE CELLS AND PROVIDE MATERIALS FROM SEDIMENTS AND POST. COVER WITH TARP OR APPROVED MATERIAL.
- MAINTAIN ACCESS TO ABUTTING RESIDENCES AND BUSINESSES AT ALL TIMES.

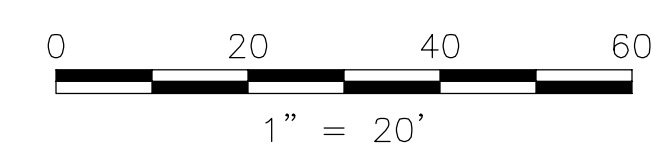
SUGGESTED SEQUENCE:

- SET UP PEDESTRIAN DETOUR INTO STREET. REMOVE SIDEWALK AND CURB.
- INSTALL NEW CONCRETE SIDEWALK WITH BASE.
- RESTORE PEDESTRIAN TRAFFIC TO NEW CONCRETE SIDEWALK. CONSTRUCT TREE CELLS, LIGHTING SYSTEM, IRRIGATION SYSTEM, CYCLE TRACK AND ASSOCIATED WORK.

PERMISSIBLE WORK HOURS FOR SEGMENT 5 TMP PLANS ARE:

- WEEKDAYS 9 AM TO 5 PM
- OTHER TIME ONLY IF AUTHORIZED IN WRITING BY THE CITY OF SOMERVILLE.

RACHEL J. BURCKARDT
CIVIL
No. 31680
12/11/17



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

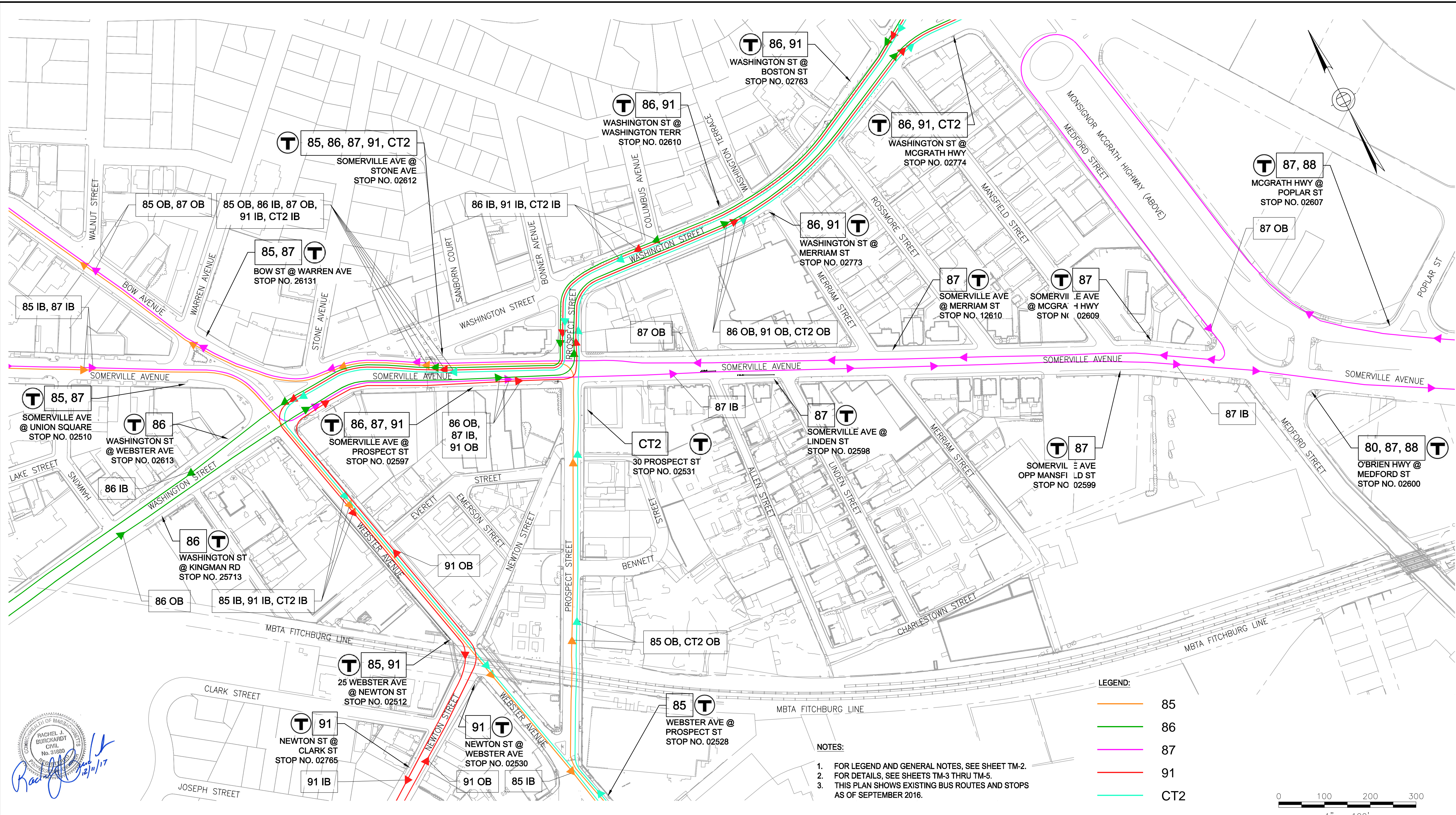
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape EAST OF PROSPECT
TYPICAL TMP PLANS AND SECTION

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET TM-560
CHECKED: LAC		
DRAWN: KLN	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: NONE DATE: DEC 2017

NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Traffic Management\TM-600_Existing Bus Routes.dwg
 2017-08-21 3:40 PM



Rachel J. Burckhardt
 RACHEL J. BURCKHARDT
 CIVIL
 No. 31880
 12/11/17

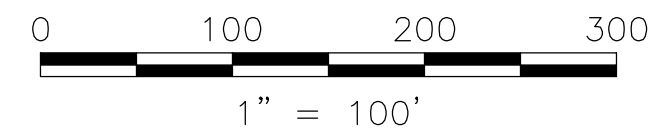
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
EXISTING BUS ROUTES
PLAN

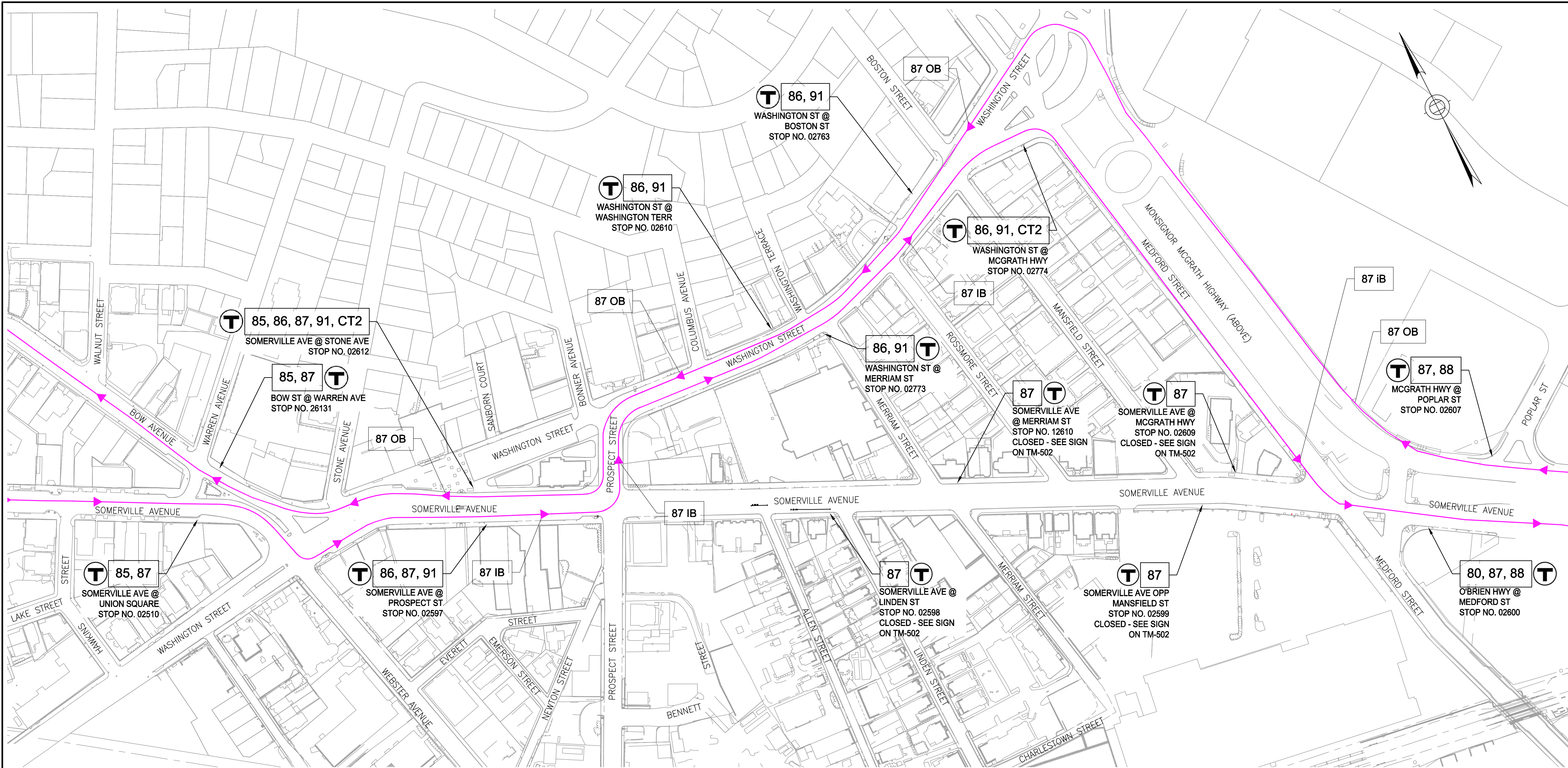
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CHECKED: LAC		TM-600	
DRAWN: KW	REF.	CONT.	SCALE: 1"=100'
CHECKED: RJB	ACC.		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143			

NO.	DATE	REVISIONS	BY

- NOTES:
- FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 - FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 - THIS PLAN SHOWS EXISTING BUS ROUTES AND STOPS AS OF SEPTEMBER 2016.

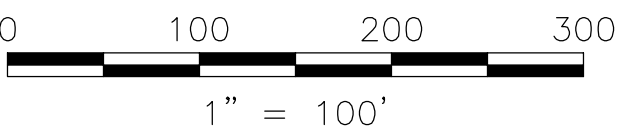


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NOTE: THIS BUS DETOUR PERTAINS TO STAGES 1E THRU 2I.

- NOTES:
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. FOR SIGN SUMMARY, SEE SHEETS TM-32 THRU TM-35.
 4. BUS STOP CLOSURE SIGNS WILL BE PROVIDED BY THE MBTA.



Professional Engineer Seal for Rachel J. Burckardt, Civil No. 31880, State of Massachusetts. Includes a signature and date 12/11/17.

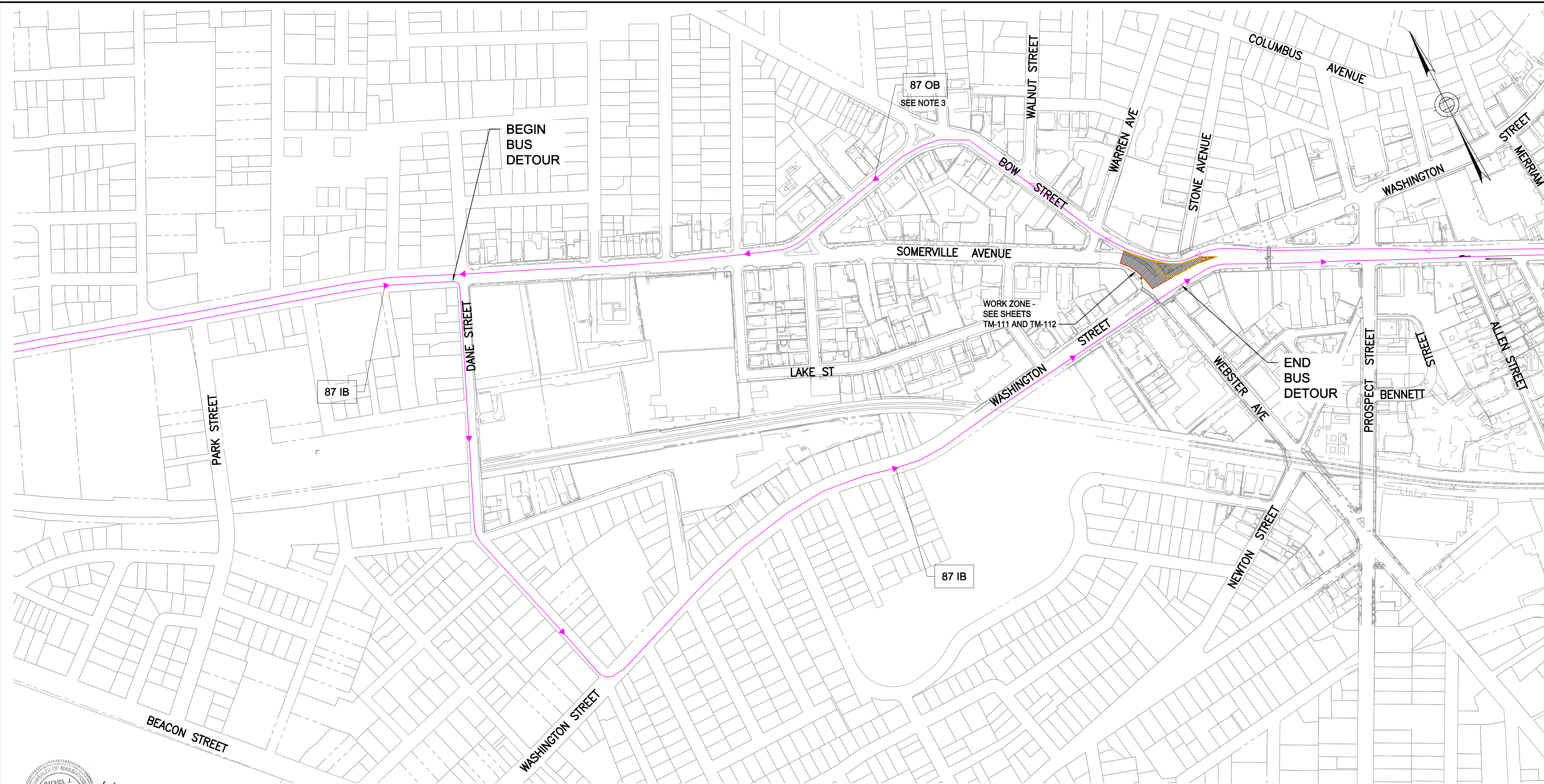
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
BUS ROUTE 87 DETOUR
PLAN

DESIGNED: RJB CHECKED: LAC	<p>Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487</p>	SHEET TM-601
DRAWN: KW CHECKED: RJB		
REF. ACC.	CONT.	SCALE: 1"=100' DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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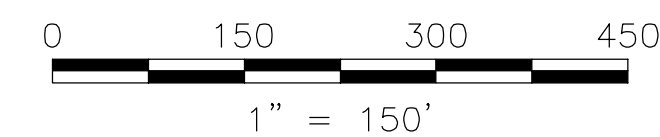
Rachel J. Burckardt
 CIVIL
 No. 31820
 State of Massachusetts
 11/17

NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. BUS STOP CLOSURE SIGNS WILL BE PROVIDED BY THE MBTA.
4. FOR GENERAL TRAFFIC DETOUR, SEE SHEET TM-113.
5. FOR WORK ZONE, SEE SHEETS TM-111 AND TM-112.
6. NO CHANGE TO RT. 87 OB.

LEGEND:

— 87



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

**CONTRACT CP-2/CP-3
 SEWER SEPARATION AND WATER REPLACEMENT
 BUS ROUTE 87 INBOUND DETOUR
 PLAN**

DESIGNED: LAC
 CHECKED: RJB
 DRAWN: LAC
 CHECKED: RJB

Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

SHEET
TM-603

REF.
 ACC.

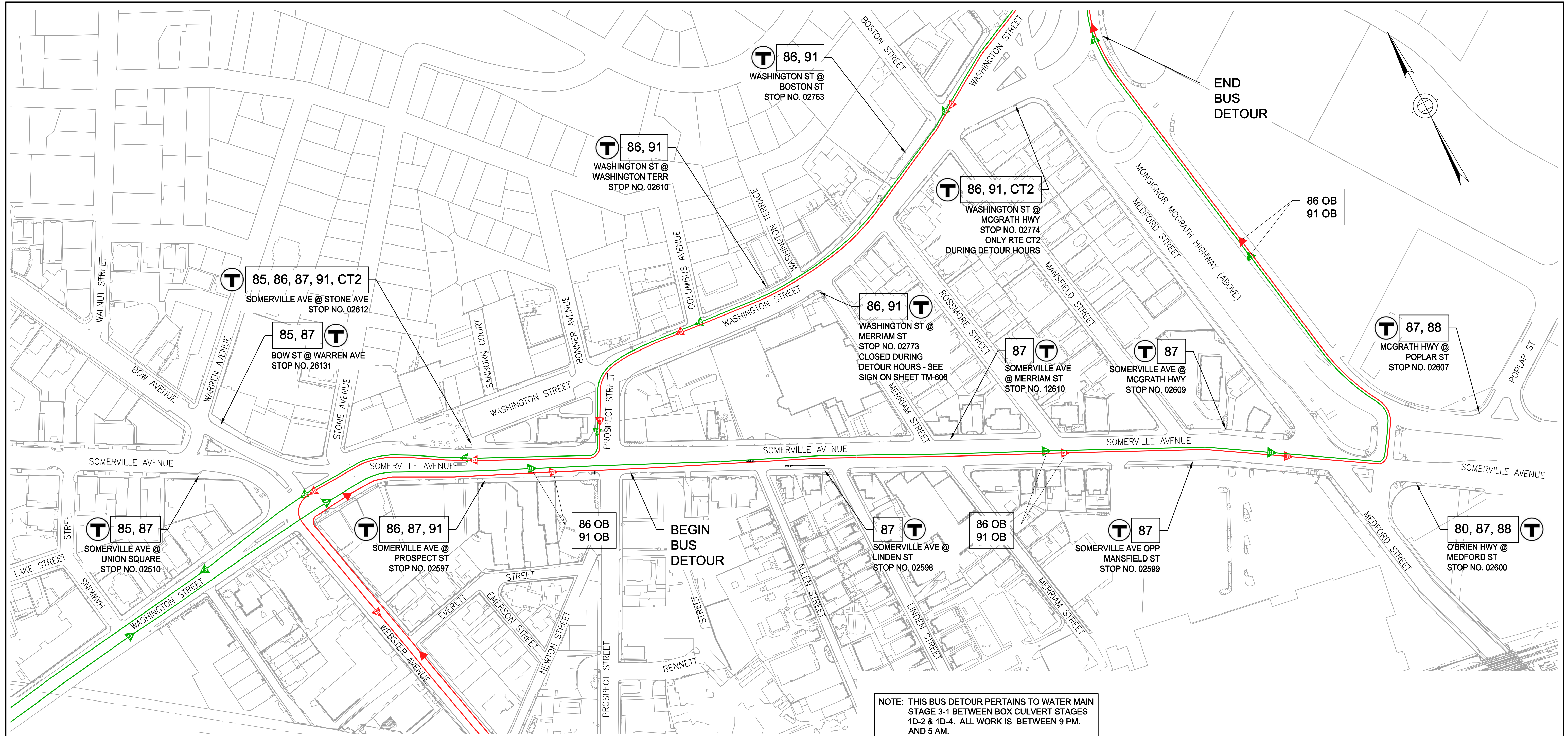
CONT.

SCALE: 1"=150'
 DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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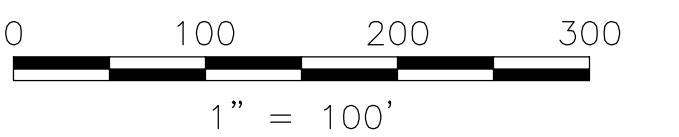
NOTE: THIS BUS DETOUR PERTAINS TO WATER MAIN STAGE 3-1 BETWEEN BOX CULVERT STAGES 1D-2 & 1D-4. ALL WORK IS BETWEEN 9 PM. AND 5 AM.

NOTES:

1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
3. BUS STOP CLOSURE SIGNS WILL BE PROVIDED BY THE MBTA.
4. FOR WATER MAIN STAGE 3-1, SEE SHEETS TM-56 TO TM-58.
5. FOR BOX CULVERT STAGE 1D-2, SEE SHEETS TM-138 AND TM-139.
6. FOR BOX CULVERT STAGE 1D-4, SEE SHEET TM-142.

LEGEND:

- 86
- 91



Rachel J. Burckhardt
 RACHEL J. BURCKHARDT
 CIVIL ENGINEER
 No. 31880
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

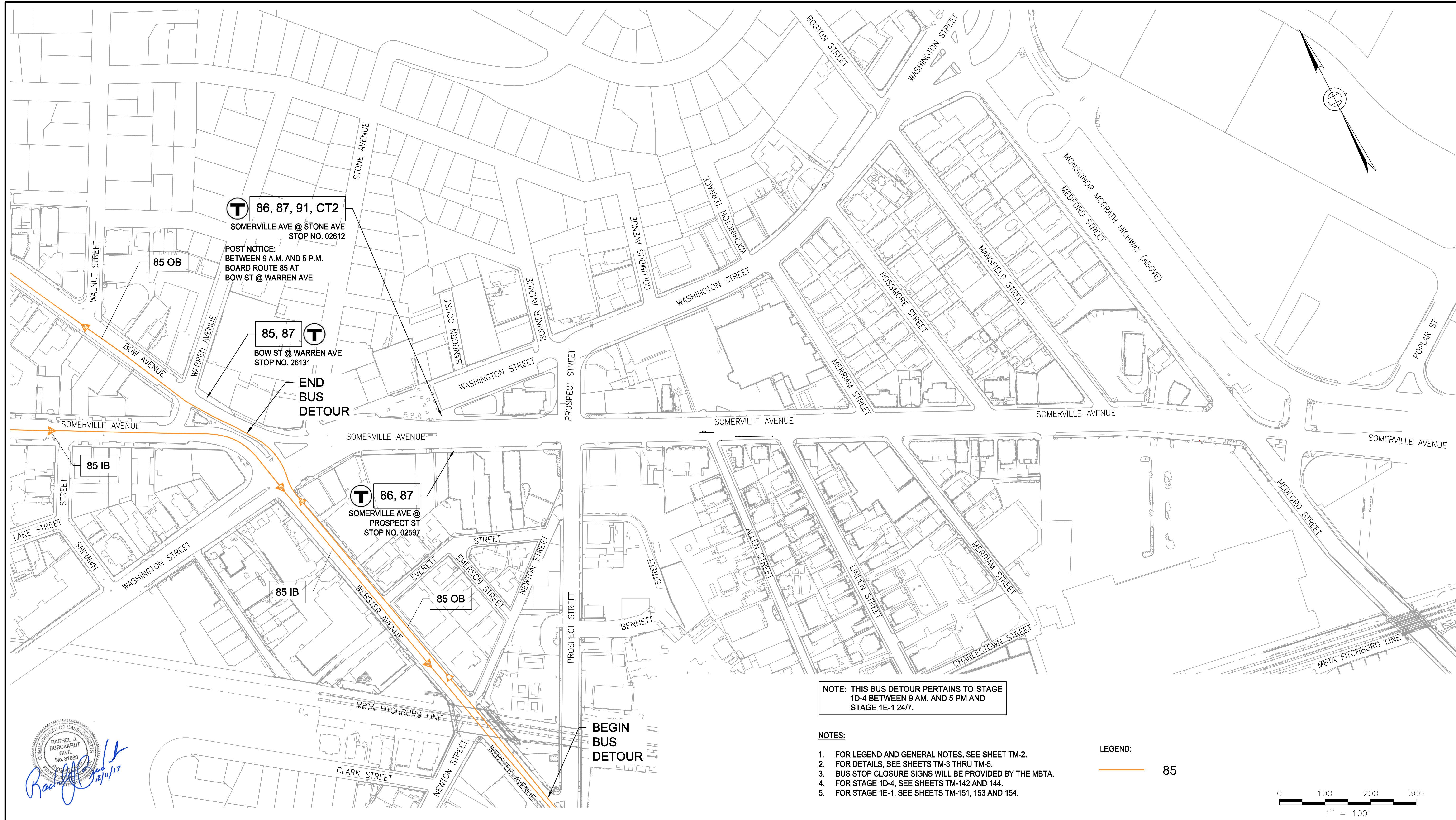
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
BUS ROUTES 86 OB & 91 OB DETOUR
PLAN

DESIGNED: RJB		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET TM-605
CHECKED: LAC		REF.	CONT.	
DRAWN: KW		ACC.		DATE: DEC 2017

NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

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T 86, 87, 91, CT2
SOMERVILLE AVE @ STONE AVE
STOP NO. 02612

POST NOTICE:
BETWEEN 9 A.M. AND 5 P.M.
BOARD ROUTE 85 AT
BOW ST @ WARREN AVE

85, 87 **T**
BOW ST @ WARREN AVE
STOP NO. 26131

**END
BUS
DETOUR**

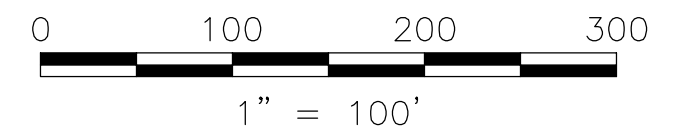
T 86, 87
SOMERVILLE AVE @
PROSPECT ST
STOP NO. 02597

**BEGIN
BUS
DETOUR**

**NOTE: THIS BUS DETOUR PERTAINS TO STAGE
1D-4 BETWEEN 9 AM. AND 5 PM AND
STAGE 1E-1 24/7.**

- NOTES:**
1. FOR LEGEND AND GENERAL NOTES, SEE SHEET TM-2.
 2. FOR DETAILS, SEE SHEETS TM-3 THRU TM-5.
 3. BUS STOP CLOSURE SIGNS WILL BE PROVIDED BY THE MBTA.
 4. FOR STAGE 1D-4, SEE SHEETS TM-142 AND 144.
 5. FOR STAGE 1E-1, SEE SHEETS TM-151, 153 AND 154.

LEGEND:
85



Seal of Rachel J. Burckhardt, Civil Engineer, No. 31580, dated 12/11/17.

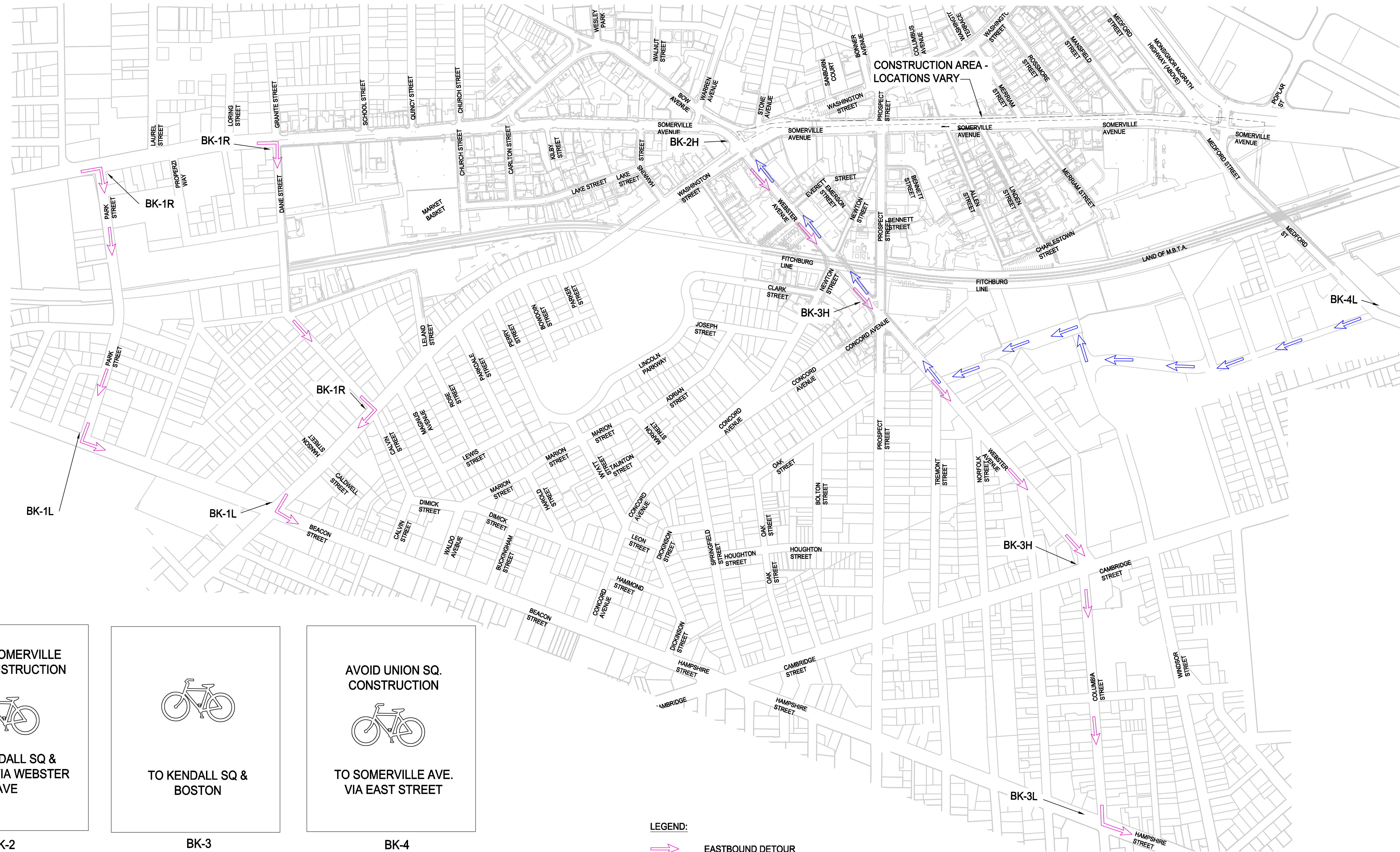
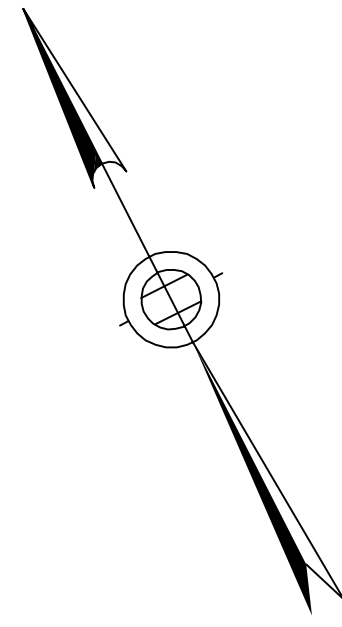
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
BUS ROUTE 85 OB DETOUR
PLAN

DESIGNED: RJB CHECKED: LAC	<p>Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487</p>	<p>SHEET TM-607</p>
DRAWN: KW CHECKED: RJB		
REF.	CONT.	SCALE: 1"=100'
ACC.		DATE: DEC 2017
<p>CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143</p>		

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AVOID UNION SQ. CONSTRUCTION

TO KENDALL SQ & BOSTON VIA BEACON STREET

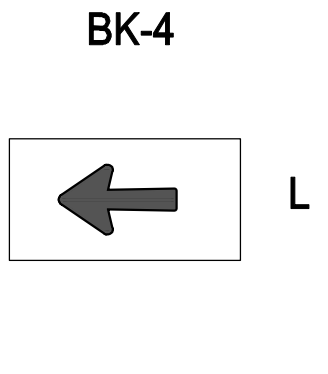
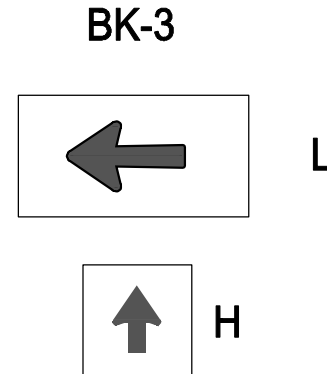
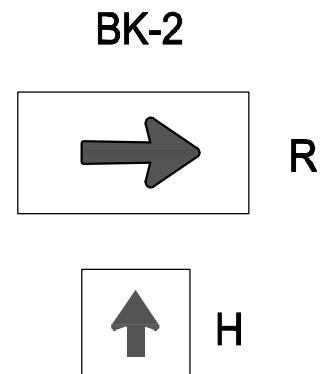
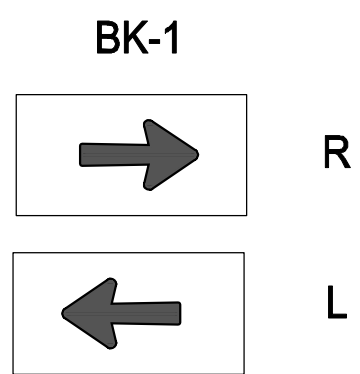
AVOID SOMERVILLE AVE. CONSTRUCTION

TO KENDALL SQ & BOSTON VIA WEBSTER AVE

TO KENDALL SQ & BOSTON

AVOID UNION SQ. CONSTRUCTION

TO SOMERVILLE AVE. VIA EAST STREET



LEGEND:

EASTBOUND DETOUR

WESTBOUND DETOUR

0 100 200 300
1" = 100'



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC MANAGEMENT

BICYCLE DETOUR PLAN

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
CHECKED: LAC		
DRAWN: LAC	REF. CONT.	SCALE: 1"=200'
CHECKED: RJB	ACC.	DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY