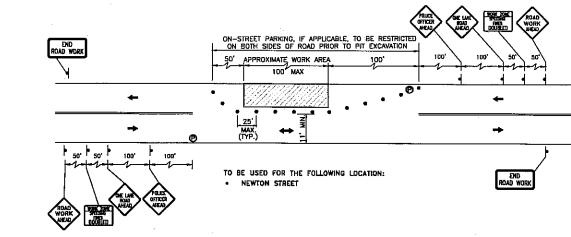
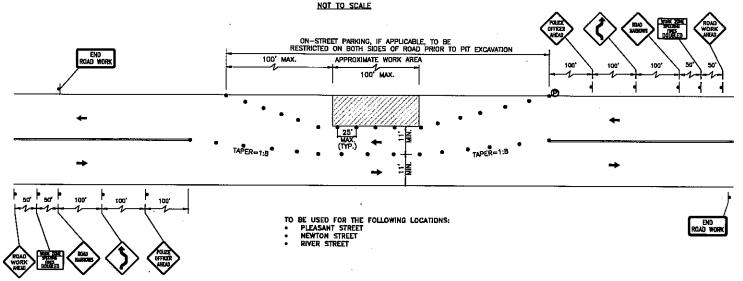
### CONSTRUCTION ZONE SAFETY PLAN GENERAL NOTES:

- THESE PLANS ARE NOT INTENDED TO LIMIT THE CONTRACTOR'S APPROACH TO SCHEDULE THE WORK BUT TO DUTLINE ONE WAY OF PROCRESSING. THE CONTRACTOR IS EXPECTED TO USE KNOWLEGGE AND EXPERIENCE TO PERFORM THE WORK IN THE MOST EFFICIENT AND SAFE MANNER IN COMPULANCE WITH THE DRAWINGS AND SPECIFICATIONS AND MEETING THE REQUIREMENTS OF THE ABUTTERS AND APPLICABLE STATE AND LOCAL ASPENCIES AND SHALL CONFIRM WITH THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS AMENDED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS/EGRESS AT ALL CURB CUTS, BUSINESS ENTRANCES, RESIDENTIAL ENTRANCES LOCATED WITHIN THE WORK ZONES, CONTRACTOR SHALL MAINTAIN EMERGENCY PASSAGE AT ALL TIMES TO BUILDINGS WITHIN AND ADJACENT TO THE PROJECT LIMITS AS WELL AS A LARGER AREA IF AFFECTED BY CONSTRUCTION CONDITIONS. CONTRACTOR SHALL MAINTAIN 24 HOUR EMERGENCY VEHICLE ACCESS TO CONSTRUCTION AREAS.
- 3. CONTRACTOR SHALL PROVIDE AND MAINTAIN A TEMPORARY PEDESTRIAN ROUTE ACCESSIBLE TO DISABLED PERSONS ARQUIND BLOCKAGES TO AN EXISTING PEDESTRIAN ROUTE (E.G., SIDEWALKS, CROSSWALKS, PEDESTRIAN CURB RAMPS, ETC.) BLOCKAGES INCLUDE, BUT ARE NOT LIMITED TO, CONSTRUCTION WORK, EXCAVATIONS, EQUIPMENT AND VEHICLES, TEMPORARY WATER AND UTILITY LINES PLACED ON THE SURFACE, TRAFFIC DIVERTERS, ETC.
- CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF THE WORK THAT WILL REQUIRE TEMPDRARY CLOSURE OF ACCESS.
- 5. CONTRACTOR SHALL PROVIDE DETAILS FOR TRAFFIC CONTROL AS REQUIRED BY THE AUTHORITY AND APPLICABLE STATE AND LOCAL AGENCIES AND IN ACCORDANCE WITH THE PLANS. CONTRACTORS SHALL BE QUIOED BY TRAFFIC WANAGEMENT LAYOUTS WHERE PROVIDED FOR SPECIFIC LOCATIONS, AND BY TYPICAL LAYOUTS AT ALL DITHER LOCATIONS.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC DEVICES SHALL BE IN PLACE PRIOR TO THE START OF THE WORK.
- SAFETY SIGNS PROPOSED FOR LOCATIONS OTHER THAN ERECTED ON TEMPORARY BARRICADES SHALL BE ERECTED
  ON EXISTING LIGHT POLES, AND SIGN POSTS, AND OTHER EXISTING FEATURES AS APPROVED BY THE AUTHORITY
  AND APPLICABLE STATE AND LOCAL AGENCIES.
- LOCATIONS OF SIGNS ARE APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD, THE CONTRACTOR SHALL INSURE THAT SIGNS ARE PLACED SO THAT MAXIMUM VISIBILITY IS OBTAINED.
- 9. EXISTING SIGNING WHICH CONFLICTS WITH PROPOSED SIGNING SHALL BE REMOVED AND STACKED OR COVERED AND RESTORED AT THE END OF THE WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES AND ALL OTHER NECESSARY WORK ZONE TRAFFIC DEVICES SHALL BE REMOVED FROM THE ROADWAY WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- UNLESS OTHERWISE NOTED, ALL PAVEMENT MARKINGS, SIGNS AND OTHER TRAFFIC EQUIPMENT REMOVED OR DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN CONFORMANCE WITH THE STANDARDS OF APPLICABLE STATE AND LOCAL AGENCIES.
- 12. CONTRACTOR SHALL INSTALL, RENEW AND MAINTAIN ALL TRAFFIC CONTROL DEVICES. AS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS REQUIRED BY APPLICABLE STATE AND LOCAL AGENCIES.
- 13. ALL CONSTRUCTION SIGNING, DRUMS, BARRICADES, LANE TAPERS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM WITH MUTCH AND "STANDARD HIGHWAY SIGNS" CURRENT EDITION.
- 14. "FLASHING ARROW PANEL", IF USED, SHALL BE PLACED AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE TAPER AS FIELD CONDITIONS WILL ALLOW.
- 15. 11' MINIMUM LANE WIDTHS SHALL BE MAINTAINED UNLESS OTHERWISE NOTED, MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR PRECAST CONCRETE BARRIER FACING THE TRAYEL LANE.
- 16. ALL ROADWAY CLOSURE DETAILS SHALL BE SUBMITTED IN WRITING TO THE AUTHORITY 3D DAYS PRIOR TO IMPLEMENTATION AND SHALL BE PRE-APPROVED BY THE AUTHORITY AND APPLICABLE STATE AND LOCAL AGENCIES PRIOR TO IMPLEMENTATION, CHANGES SHALL NOT BE IMPLEMENTED WITHOUT THE APPROVAL OF THE AUTHORITY AND APPLICABLE STATE AND LOCAL AGENCIES.
- 17. FOR CLOSURES OF DEAD END STREETS, THE CONTRACTOR SHALL MAINTAIN ACCESS TO ABUTTERS AT ALL TIMES.
- 18. THE CONTRACTOR, THROUGH THE AUTHORITY SHALL NOTIFY APPLICABLE STATE AND LOCAL AGENCIES TWO (2) WEEKS IN ADVANCE OF PLACING TRAFFIC MANAGEMENT SIGNS.
- CHANNELIZATION WILL BE ACCOMPLISHED THROUGH THE USE OF REFLECTORIZED PLASTIC DRUMS, CONES OR BARRIERS IN ACCORDANCE WITH THE MUTCH.
- 20. CONTRACTOR SHALL RECORD EXISTING PAVEMENT MARKINGS AND RESTORE ALL PAVEMENT MARKINGS TO EXISTING CONDITIONS AT THE CONCLUSION OF CONSTRUCTION AT EACH LOCATION.
- THE CONTRACTOR SHALL LOCATE W20-1 SIGNS ALONG THE ROUTE IN ACCORDANCE WITH THE MUTCO DEPENDING ON THE RELATIVE LOCATION OF ADJACENT CONSTRUCTION WORK ZONES.
- 22. CONTRACTOR SHALL PROVIDE ANY NECESSARY CONSTRUCTION DETAILS FOR TEMPORARY WIDENING (IF USED) TO THE AUTHORITY FOR APPROVAL.
- 23. CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS AND EGRESS AT ALL POSTED MBTA BUS STOPS, WHICH MAY BE AFFECTED DURING CONSTRUCTION. THESE AREAS MUST REMAIN ACCESSIBLE TO HANDICAP PERSONS PER ADA REQUIREMENTS. CONTRACTOR MUST COORDINATE WITH THE MBTA BUS OPERATIONS DIVISION FOR ALL ACCESS/EGRESS, TEMPORARY BUS STOP RELOCATIONS.
- 24. It is the contractor's responsibility to verify the location of all signal equipment, including conduit and inductive loops, and maintain this equipment throughout construction. Any damage as a result of construction activity shall be replaced in kind by the contractor,
- 25. THE CONTRACTOR SHALL LOCATE ALL PRECAST CONCRETE BARRIERS (IF USED) SO THERE ARE NO EXPOSED BLUINT ENDS WHICH WILL CAUSE HAZARDOUS CONDITIONS TO APPROACHING TRAFFIC. IN SUCH CASES, THE CONTRACTOR SHALL PROMDE AND LOCATE PRECAST CONCRETE BARRIER TAPERED END SECTIONS TO PROTECT VEHICULAR TRAFFIC AND THE WORK AREA.
- 26. ALL WORK AREAS SHALL BE SECURED DURING NON-WORK HOURS, AND TRAFFIC PASSAGE PROVIDED AS SPECIFIED BY THE USE OF PLATING OVER EXCAVATIONS, REMOVAL OF UNNECESSARY MATERIALS AND EQUIPMENT, AND BY RESTORATION OF TRAFFIC CONTROLS.
- ALL TEMPORARY HANDICAP RAMPS SHALL MEET MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) AND AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS.
- 28. THE FIRST THREE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE 9 WARNING LIGHTS.
- 29. APPROXIMATE WORK AREA SHALL NOT EXCEED 100' OF OPEN TRENCH AND BUFFER AREAS AT ANY ONE TIME DURING WORK HOURS,
- 30. IF APPLICABLE, THE CONTRACTOR SHALL COORDINATE WITH ANY ABUTTING PROJECTS.
- 31. CONTRACTOR SHALL COORDINATE WITH MBTA IF ANY RELOCATIONS OF BUS STOPS ARE REQUIRED.
- 3Z. TYPICAL WORK HOURS ARE FROM 9:00 AM TO 4:00 PM UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL RESTORE THE NORMAL TRAFFIC OPERATIONS AT THE END OF EACH WORK DAY.
- 33. ONE LANE ALTERNATING CAN ONLY BE DVERNIGHT WITH TYPICAL WORK HOURS ARE FROM 9:00 PM TO 4:00 AM UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL RESTORE THE MORMAL TRAFFIC OPERATIONS AT THE END OF EACH WORK DAY.



## TYPICAL CONSTRUCTION ZONE SAFETY PLAN ONE LANE ALTERNATING TRAFFIC



#### TYPICAL CONSTRUCTION ZONE SAFETY PLAN LANE SHIFT ON TWO LANE ROAD NOT TO SCALE

#### TRAFFIC CONTROL SETUP PROCEDURES

THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING POLICE DETAILS. FLAGGERS SHALL NOT BE USED IN PLACE

THE CONTRACTOR SHALL FOLLOW THE FOLLOWING PROCEDURES FOR THE SETUP OF TRAFFIC CONTROL:

- USE A MOBILE TRUCK WITH A FLASHING ARROW PANEL SET TO CAUTION MODE AS A SHADOW VEHICLE BEHIND WORKERS OR WORK VEHICLES.
- 2. INSTALL TRAFFIC CONTROL SIGNS ON THE SIDE OF THE ROADWAY.
- 3. USE TRAFFIC CONTROLLER AT BEGINNING OF LOCATION FOR TRAFFIC CONTROL DEVICES.
- SETUP TRAFFIC CONTROL DEVICES IN ROADWAY INCLUDING BUT NOT LIMITED TO TRAFFIC CONES, DRUMS, ARROW PANELS, ETC.

## TRAFFIC DEVICE LEGEND

WORK AREA

REFLECTORIZED DRUM

PROPOSED VEHICULAR TRAFFIC FLOW

EXISTING VEHICULAR TRAFFIC FLOW

SIGN

POLICE OFFICER

FLAGGER

--- EXISTING PAVENENT MARKINGS

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

→ DETOUR ROUTE

CONTRACT NO. : 7222 CAD FILE NO. : CZSP+1,2 - Typicals ACCESSION NO - 523 266 SECTION NO. : WATERTOWN SECTION DATE: MARCH, 2D13 DRAWN BY: EAV CHECKED BY: SMS NO. DATE BY CHK'D REVISION





MASSACHUSETTS WATER RESOURCES AUTHORITY GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL & STRUCTURAL ENGINETER

239 LITTLETON ROAD, SUITE 3

WESTFORD, MASSACHUSETTS

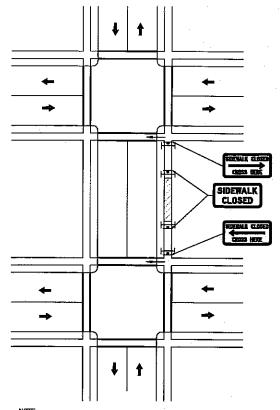
WATERTOWN SECTION REHABILITATION

CZSP-1

CONSTRUCTION ZONE SAFETY PLAN TYPICAL DETAILS 1

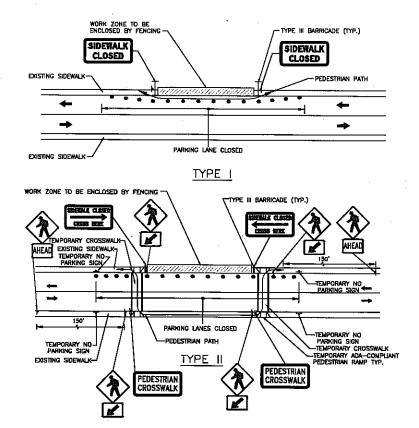
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DRAWING NO



Note:
1. Controls only for pedestrian traffic are shown.
Vehicular traffic should be handled as shown elsewhere.
2. For general notes and legends, see sheet czsp—1.

# TYPICAL CONSTRUCTION PATTERN AND CONSTRUCTION SIGNING FOR PEDESTRIAN SIDEWALK CLOSURE NOT TO SCALE

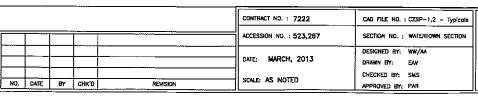


NOTE:

1. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.

2. FOR GENERAL NOTES AND LEGENDS, SEE SHEET CZSP-1.

## TYPICAL CONSTRUCTION PATTERN AND CONSTRUCTION SIGNING FOR SIDEWALK CLOSURE AND BYPASS NOT TO SCALE









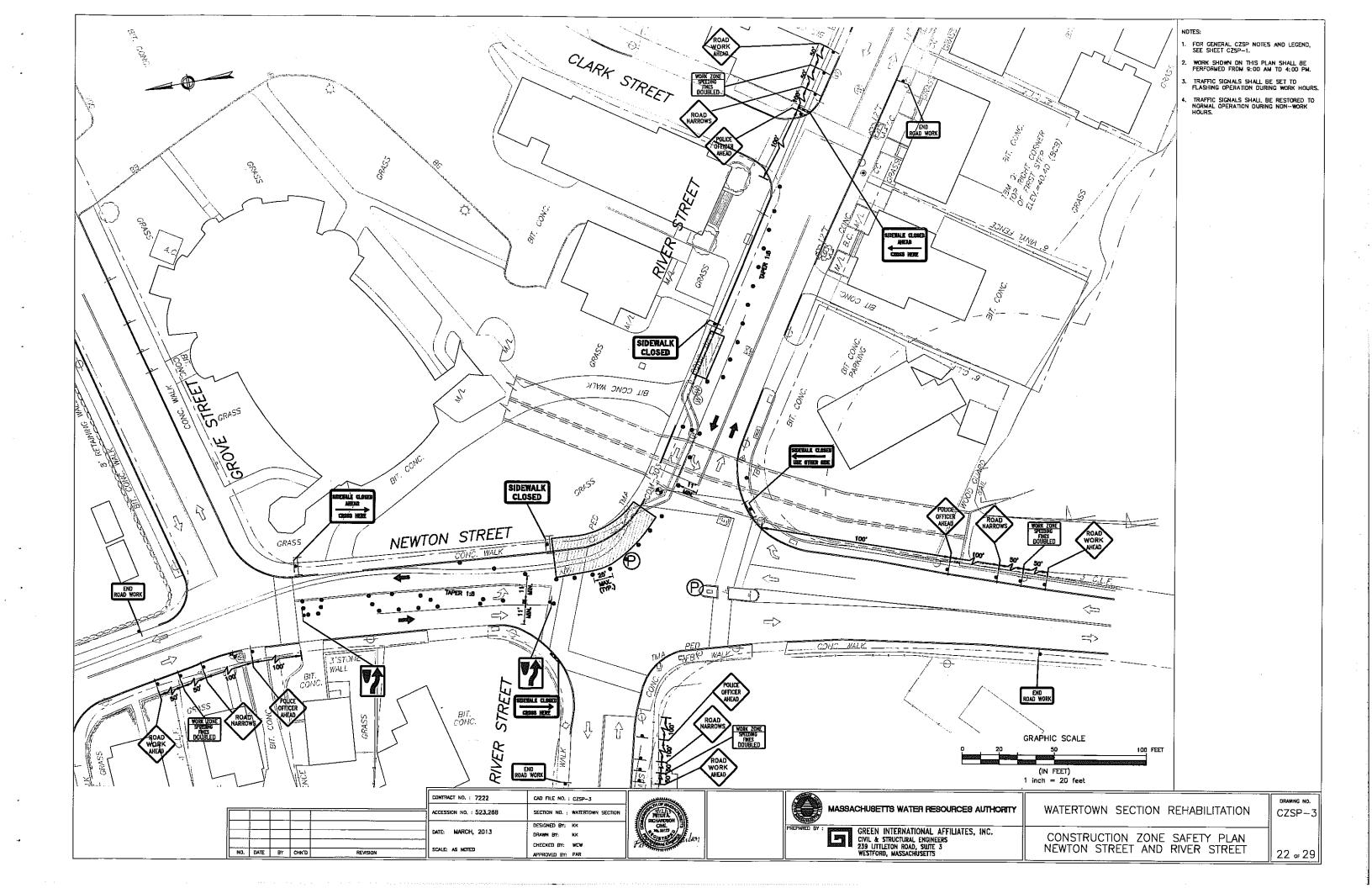
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
239 LITTLETON ROAD, SUITE 3
WESTFORD, MASSACHUSETTS

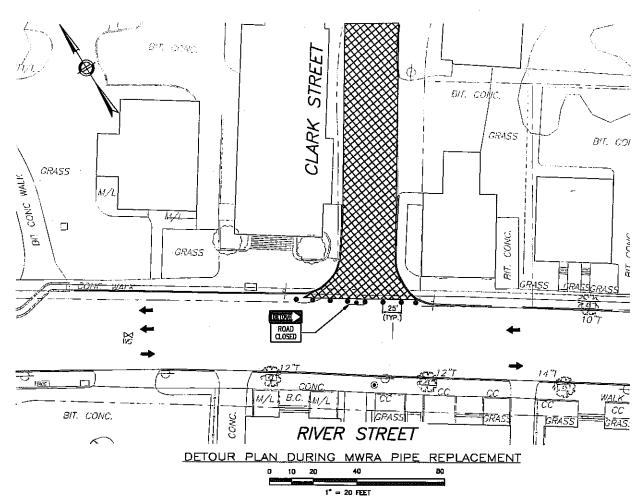
WATERTOWN SECTION REHABILITATION

CZSP-2

CONSTRUCTION ZONE SAFETY PLAN
TYPICAL DETAILS 2

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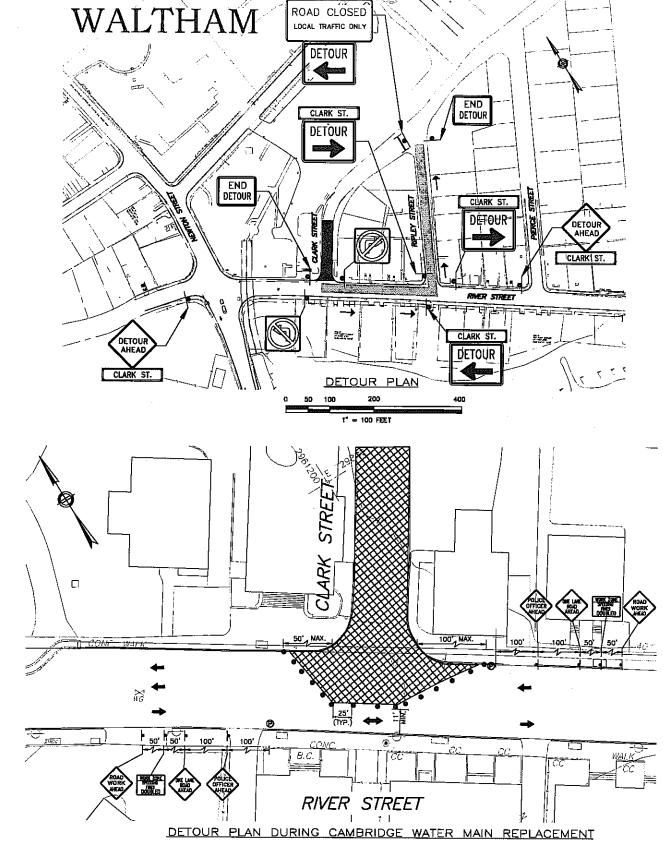
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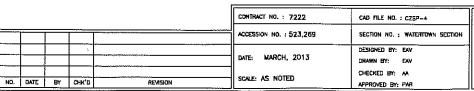
- 1. FOR GENERAL CZSP NOTES AND LEGEND, SEE SHEET CZSP-1.
- 2. FOR TYPICAL CZSP DETAILS, SEE SHEET CZSP-1 AND CZSP-2.
- FOR DETOUR AND ADDITIONAL SIGNAGE REQUIREMENTS SEE DETOUR PLAN ON THIS SHEET.
- SCHEDULE THE CONSTRUCTION WORK TO PROVIDE PHASED WORK ZONES SUCH THAT
  PEDESTRIAN ACCESS IS MAINTAINED ALONG AT LEAST ONE SIDE OF RIVER STREET
  DURING WORK HOURS. REFER TO SHEET CZSP—2 FOR TYPICAL PEDESTRIAN DETOUR
  DETAILS.
- ALL SIDEWALK ADJACENT TO EXCAVATION SHALL BE PROTECTED BY SAFETY FENCE FOR THE ENTIRE LENGTH OF WORK ZONE.
- 6. ACCESS TO ABUTTERS WITHIN THE WORK ZONE SHALL BE MAINTAINED AT ALL TIMES,
- RESTORE NORMAL TRAFFIC PASSAGE, ON STREET PARKING, PEDESTRIAN ACCESS, AND TRAFFIC CONTROL AT THE END OF EACH WORK DAY. PROVIDE STEEL PLATING OVER EXCAVATION FLUSH WITH EXISTING GRADE.
- 8. CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS FROM THE ROADWAY AT THE END OF EACH WORK DAY.

## LEGEND:

DETOUR ROUTE

ROAD CLOSURE









MASSACHUSETTS WATER RESOURCES AUTHORITY

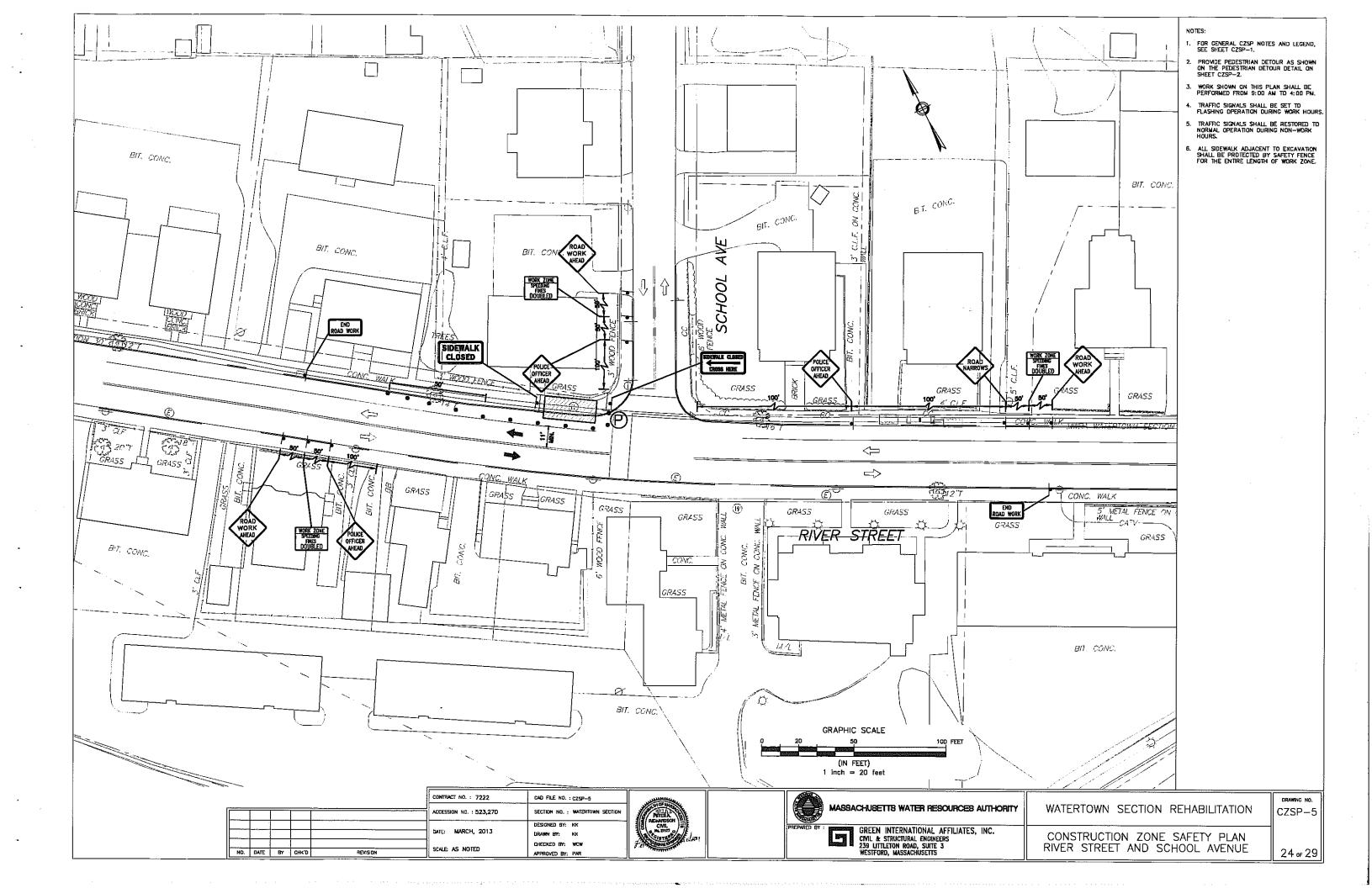
1" = 20 FEET

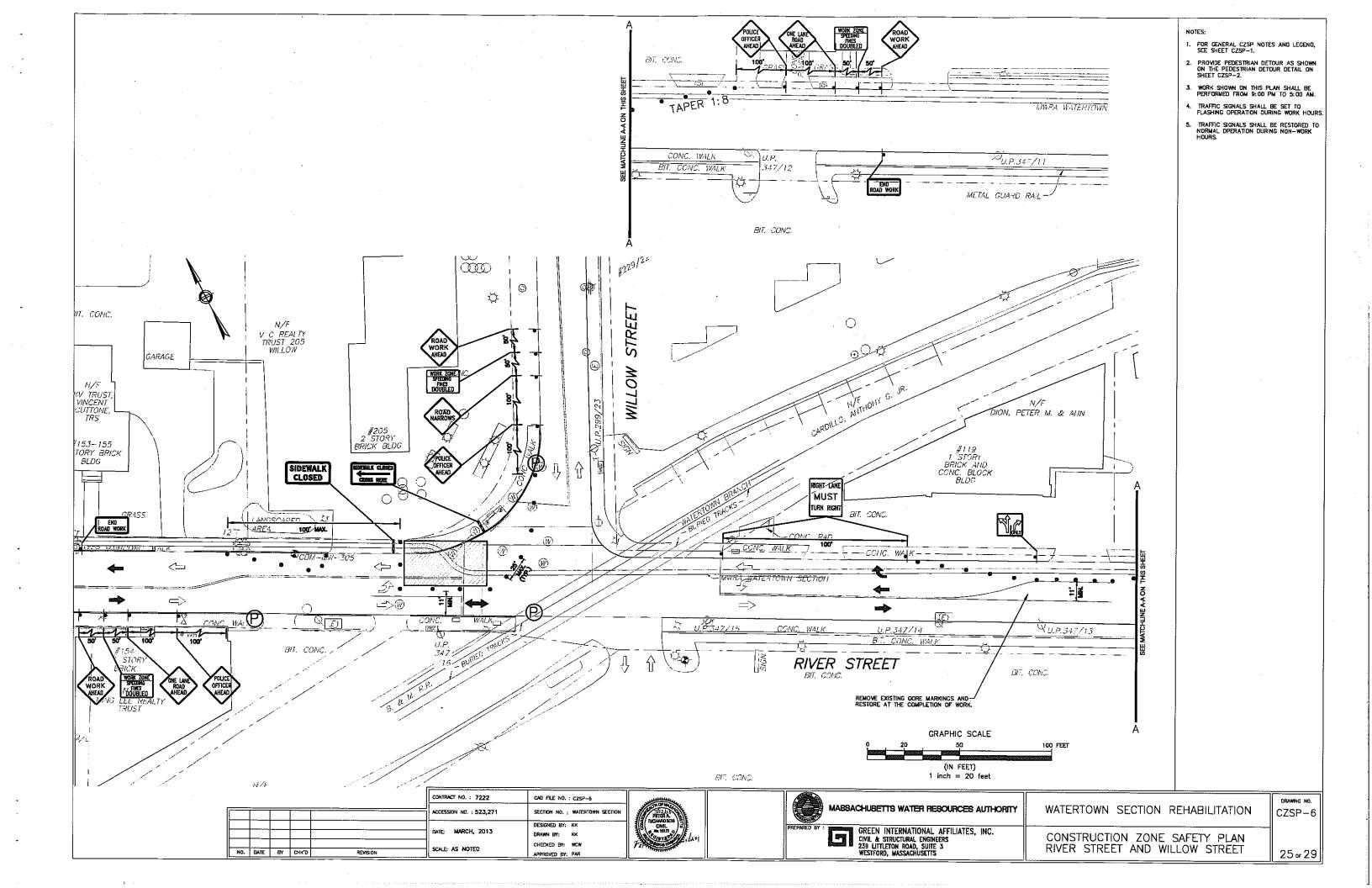
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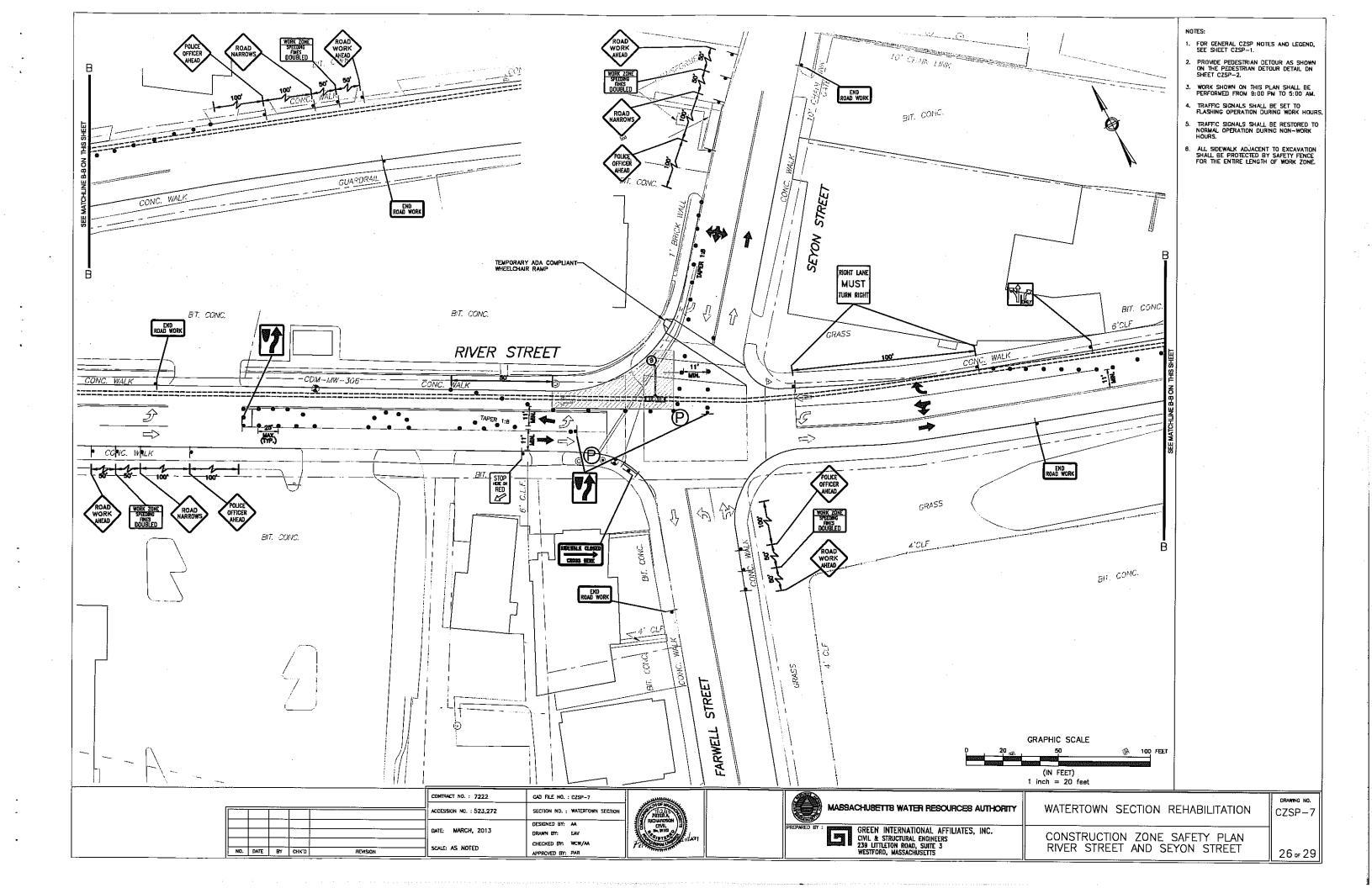
WATERTOWN SECTION REHABILITATION

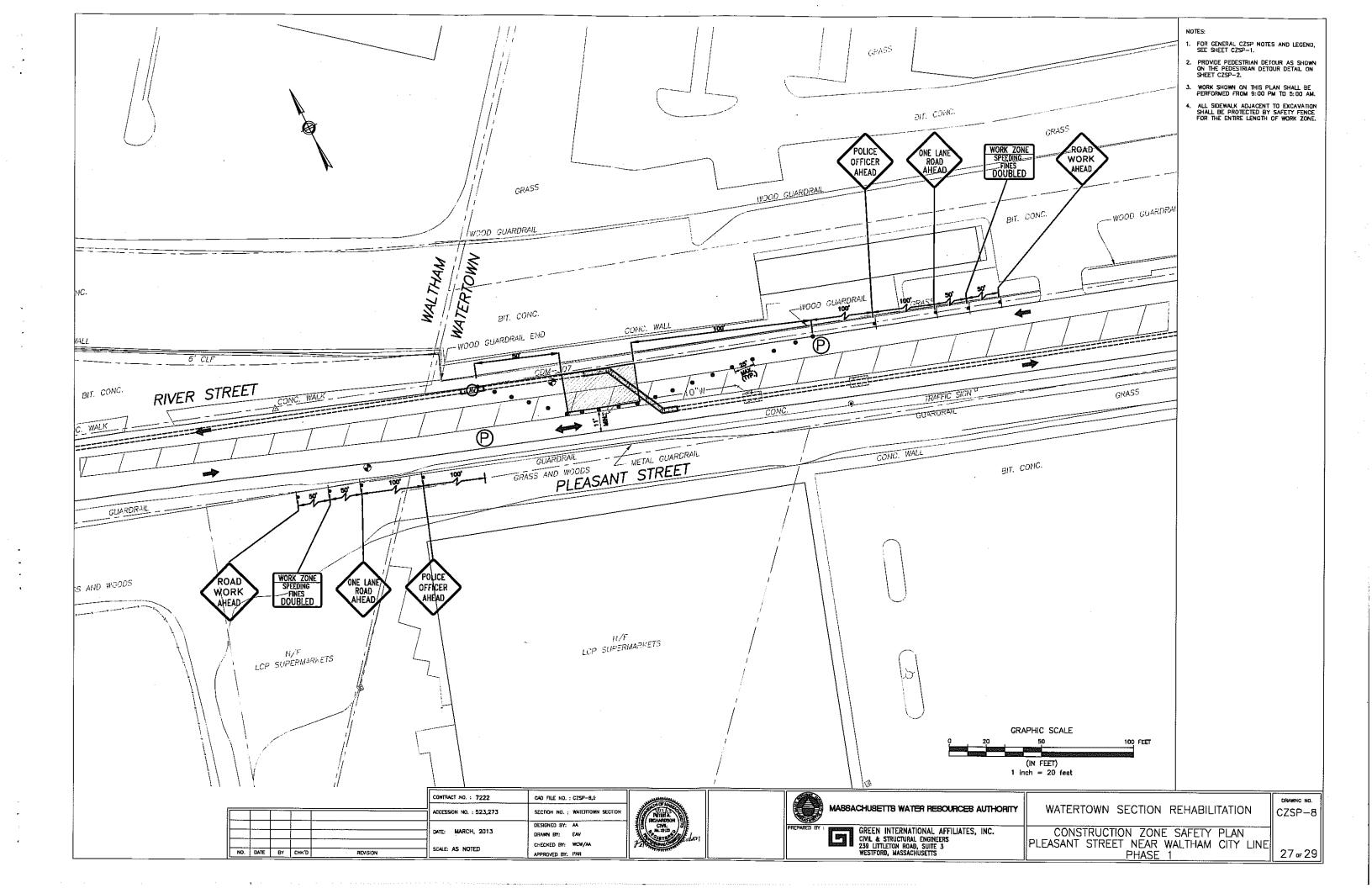
CONSTRUCTION ZONE SAFETY PLAN RIVER STREET AND CLARK STREET CZSP-4

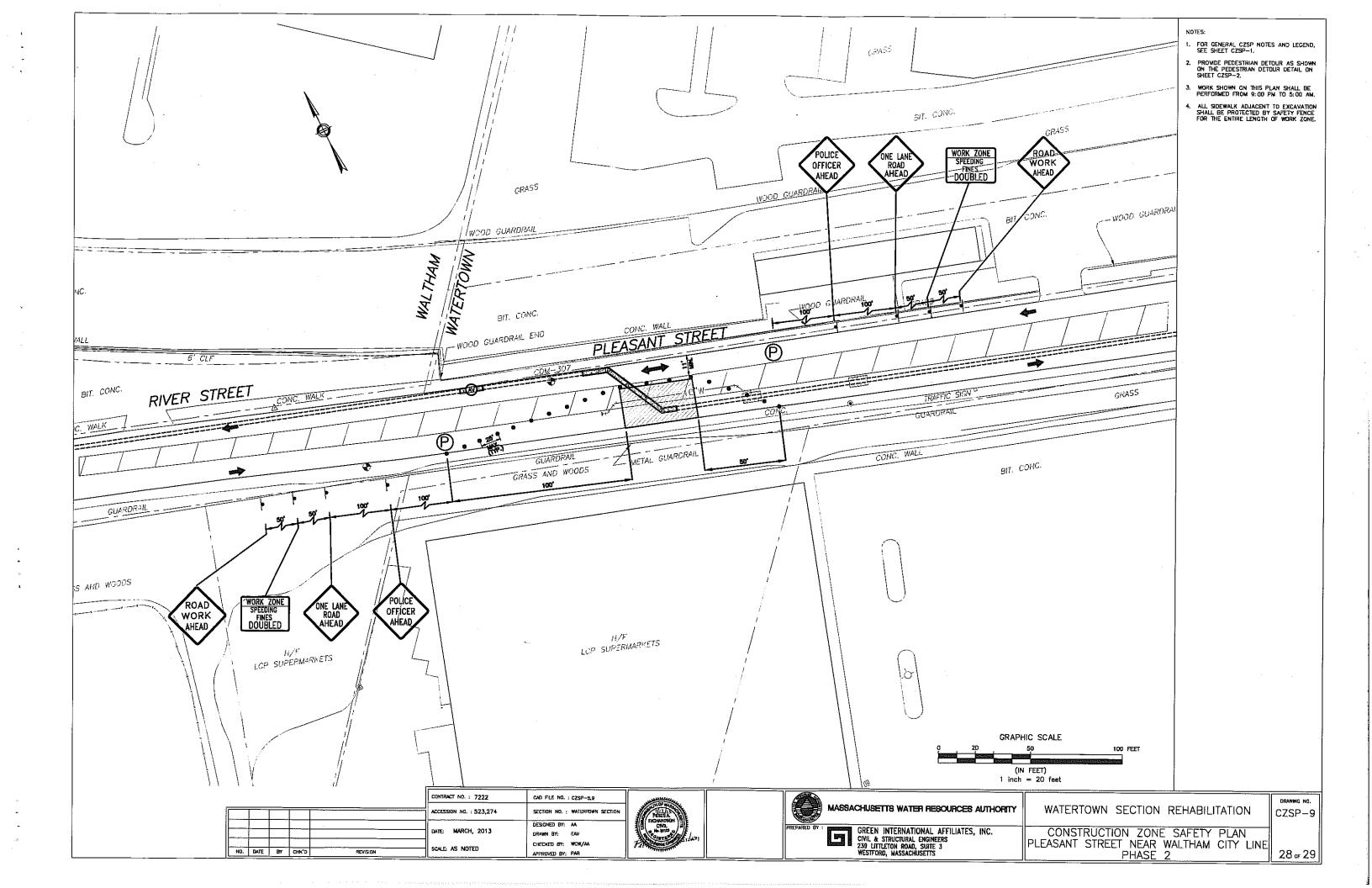
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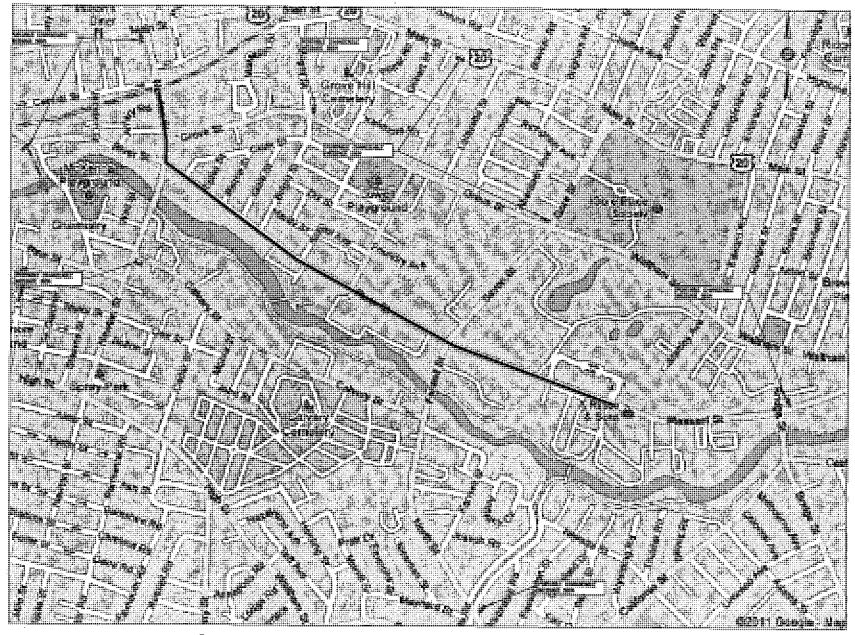












PORTABLE CHANGEABLE MESSAGE SIGN LOCATION DURING CONSTRUCTION

NOTE: PORTABLE CHANGEABLE MESSAGE SIGNS SHALL READ:

PHASE I

PHASE II

UTILITY WORK AT RIVER ST

SEEK ALTERNATE ROUTES

	CONTRACT NO. : 7222	CAD FILE NO. : CZSP-10
	ACCESSION NO. : 523,275	SECTION NO. : WATERTOWN SECTION
	DATE: MARCH, 2013	DESIGNED BY: TJR/EAV
	B-1011, 2010	DRAWN BY: TJR/EAV
NO. DATE BY CHK'D REVISION	SCALE: NOT TO SCALE	CHECKED BY: SMS APPROVED BY: PAR





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GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
239 LITTLETON ROAD, SUITE 3
WESTFORD, MASSACHUSETTS

WATERTOWN SECTION REHABILITATION

CZSP-10

CONSTRUCTION ZONE SAFETY PLAN ALTERNATIVE ROUTE SIGNS

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