

# Public Works Department & Transportation Department

*2019 Utility Construction Season Kickoff Meeting*  
*Friday, March 29th, 2019*  
*Great Faneuil Hall Building 10am - noon*

**B**

# Mayor Martin J. Walsh, City of Boston

*Chris Osgood, Chief of Streets*

*Gina Fiandaca, Commissioner of Transportation*

*Kristen McCosh, Commissioner for the Office of Persons with Disabilities*

*Michael Brohel, Superintendent of Street Operations BPWD*

*Katie Choe, Chief Engineer BPWD*

*Patrick Brophy, Chief of Operations*

*Jerome Smith, Chief of Civic Engagement*

*Edwin McGuire, Chief of Staff, Civic Engagement*

*Rocco Corigliano, Director Bos:311*

*Para Jayasinghe, City Engineer BPWD*

*Rich DiMarzo, Supervisor CIU*

*Michael Somers, Senior Civil Engineer BPWD*

*Ed Hesford, Chief Engineer BTD*

*Anne McNeil, Permitting Office BPWD*

*Paul J. Taylor, Director of Technology BPWD*

*Taylor Smith, Management Analyst BPWD*

*Mark Cardarelli, Supervisor of Utility Coordination & Compliance BPWD*

*CIU : Construction Inspection Unit*

*Special thanks: Anne Schwieger, DoIT*

*Special thanks: Bryan Carroll, DoIT*



*Special thanks: Paul Berkeley, Property Mgmt*

*Special thanks: City of Boston Copy Center*

# WELCOME BOSTON UTILITIES & CONTRACTORS

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## Utility Construction is a Demanding & Difficult Job!

- Dependable utility service is crucial to the quality of life and the growth of the Boston economy.
- Repairs & upgrades are a fact of life.
- Roadway layout & Subsurface conditions complicate work



# WHY WE HAVE THIS MEETING

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- The City acknowledges the busy schedules associated with construction.
- Your work impacts both the residents of Boston and the City's infrastructure.
- Working in Boston comes with higher expectations than working in other cities/ towns.
- There is a need to meet before the start of every construction season. Reinforcement is a “Good Thing”.
- **Attending this meeting ensures that you will fully understand the City's Rules and Specifications, as well as the expectations the City has for everyone during construction.**
- After leaving today's meeting it is **unacceptable** to later state that you did not understand or “**were not aware**” of the City's Rules and Specifications.

# Professionalism

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- We all chose this profession.
- Our work affects the daily lives of everyone in Boston.
- The CIU may need to communicate to you that you have not followed the City's rules from time to time.
- Nobody likes to be told that they are not doing a good job; however, that's when professionalism must come to the forefront.
- We cannot have pushback regarding violations of the City's rules, especially when it comes to the repair of defective/ failed work. Our timelines were established to make sure that defective work does not linger.
- Our rules stipulate that if you do not repair defective work in the time established we have the right to hold up new permit requests.

# PWD's Responsibility

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Our  
Goals



**Ensure Public Safety  
Throughout Construction**

Minimize  
Inconvenience To  
Public

Protect and  
Preserve City  
Infrastructure

# Permittee's Responsibility

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## Be a good temporary neighbor!

Adhering to  
PWD Rules &  
Specs



Following BTD  
Traffic Plan &  
Work Hours



Preserving the  
Quality & Ensuring  
Safety on our  
Right-Of-Ways

# Review of 2018 Updates

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- Must respond to the violation email.
- Must provide up-to-date OSHA rating through affidavit every time you apply for a permit.
- Professional behavior
- Be a good neighbor
- Need to strictly follow sinkhole protocol repairs.
- Working with schools and trying to limit the impact for school bus routes.

# VIOLATION EMAIL NOTIFICATION

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Your company needs to take all violations seriously and investigate why the violation happened and take measures to avoid it in the future.

You are required to acknowledge via email that your company has received this Violation(s) within 1 HOUR.

If you do not rectify the violations in the time set forth by the CIU, your work site will be put on hold until rectified.

All violations could result in the shut down of the work site. Public safety violations will automatically result in a shut down of the work site and the possibility of new permit requests put on hold.

**We will adamantly enforce the timeline requirements and repercussions of the violation.**

# PROFESSIONAL BEHAVIOR

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In your job, you may end up interacting with the public.

When dealing with the public, you can't be rude or unprofessional even if you feel that the person is being rude to you.

Remember you represent your company or an owner and you need to keep that in mind at all times when working in the City.

If we find a crew or a person on that crew treating the public egregiously, PWD/BTD has the right to shut that job down and possibly put new permit requests on hold until a meeting can be scheduled.

This is how seriously PWD/BTD treat your interactions with the public.

Obviously we don't want to take that action but we may if we are forced to.

Let's hope we don't have to do that !

# BE A GOOD NEIGHBOR

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When the City gives you a permit to work on a street, it is for a set period of time

During that time period, the City wants you to think of yourself as one of the neighbors on that street.

Think of a major construction project pulling up on your street.

We want you to be the best neighbor you can be while you are working.

People get overwhelmed with signs and equipment and they sometimes need direction from you.

A polite word or helpful instructions with the local residents goes a long way while you are working.

Make sure you leaflet and post as required. Make sure that the work zone is safe for pedestrians and vehicular traffic. Make sure that the work zone is clean and safe when you leave for the day.

We know you have a job to do, but part of that job is taking into account the impact and inconvenience you cause and doing your best to minimize that impact and inconvenience.



# Sinkhole Proximity to Castings

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- If a sinkhole develops within 30 inches of a casting belonging to a Permittee and testing determines that there is no undermining of the sub-base from underground leaks, that Permittee will be responsible for repairing the sinkhole per City Ordinance 11-6.20.

# Sinkhole Protocol: Less than 3 Yrs

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- If a sinkhole develops within a Permittee's excavation that is less than 3 years old, and testing determines that there is no undermining of the sub-base from underground leaks, that Permittee will be responsible for repairing the sinkhole.
- The City will also notify any other Permittee with a cast iron structure in the affected area. Those Permittees will be responsible for investigating to determine if their infrastructure may be the cause of the sinkhole. Unless the investigation determines otherwise, the owner of the permitted excavation will be considered the responsible party and will be required to perform the repair.
- Contesting Sinkhole Responsibility on Excavation Work Less than 3 Years Old  
If a Permittee feels that previous excavation work is responsible for the sinkhole, then the burden of proof belongs to that Permittee.
- **The City will not be responsible for the repair of any sinkholes that happen within previous or active utility excavation work less than 3 years old .**

# Sinkhole Protocol: Over 3 Yrs

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- The City will only be responsible for a sinkhole in an excavation where the original work is greater than 3 years old, is not within 30 inches of a cast iron structure, and testing determines there are no leaking pipes.
- If during the investigation it is determined that the sinkhole is due to the failure of underground infrastructure, the City will hold the appropriate utility responsible for the repair of the sinkhole and for the costs incurred by the City for the investigation and any temporary repairs undertaken by the City.

# Sinkhole Repair Timelines

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## Public Safety

- **Protect Within 1 Hour of Notification. Start Repairs Under the Emergency Dig Safe Guidelines**
- If the sinkhole is a threat to public safety then your company must treat the repair as an emergency protecting the area within 1 hour, and dispatching a repair crew to be on site within 3 hours ready to perform all necessary repairs.
- All Dig Safe requirements are to be followed. Protection of the site is mandatory until the excavation can proceed.

# Sinkhole Repair Timelines

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## Non - Public Safety

- **Protect Within 4 Hours of Notification. Start Repairs Within 72 Hours of Dig Safe Notification.**
- If the sinkhole is **not** determined to be a public safety concern at the time of notification and/or during your inspection your company must protect the sinkhole with cones, barrels, barricades, sawhorses, tape, etc. and make the necessary repairs within 72 hours.
- This will require your company to notify Dig Safe within the 4 hours of the notification, or at the earliest availability. Your company will be responsible for monitoring the sinkhole until all repairs have been made.
- **If at any time the sinkhole becomes a threat to public safety then you will be required to make repairs in accordance with the Public Safety Protocol.**
- **All Dig Safe requirements are to be followed.** Protection of the site is mandatory until the excavation can proceed.

# Sinkhole Notification for Inspection

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- When your company has assigned a crew to perform sinkhole repairs you must notify the Public Works Department by submitting the work through the online Emergency Call-In Form.
  - \* NOTE: If your crew is unable to connect to the form online and there is no one in the office to submit the emergency you must notify the PWD by calling the office at **617-635-4950** and leave your information with the BOS:311 staff.
- **No crew should hold up repairs awaiting inspection personnel or notification** . It is the responsibility of your company to notify the Public Works Department, preferably before the crews arrive on site.

# Sinkhole Repair Standards

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- The Permittee will be required to *fully expose the sinkhole* to determine the extent of the repair. The Permittee will then be required to assess the condition of the exposed subbase material. Any subbase material found unsuitable (wet, contaminated, etc.) must be removed until a dry, solid, and suitable sub base is found. Then approved processed gravel must be used to fill and compact the sinkhole.
- Permittees are required to match the existing asphalt cross section of the street with use of a mechanical roller. Any street with a concrete or cobblestone base must be restored with approved concrete material to the existing cross section before asphalt is placed.
- All requirements for backfill and asphalt paving in the *Rules and Specifications for Excavation Activity in the City of Boston* must be followed.

# New and Emphasized for 2019

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- Mattocks - Higgins Safety Affidavit
- Sidewalk deposits
- COBUCS 2.0
- Loop detectors
- Bad patches
- Casting repairs
- Report cards are back in 2019
- Occupancy Protocol
- Approved material vendors on city website
- Updating Rules and Specifications in 2019

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# SAFETY AFFIDAVIT

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- Before being issued a 2019 construction season permit, all permittees must fill out a new affidavit for the year (even if you have already filled one out, we need an updated one for this year).
- You are required to fill out an updated Mattocks - Higgins Safety Affidavit any time you receive a OSHA violation, before applying for a permit.
- <https://www.boston.gov/departments/public-works/affidavit-licensed-contractor-violation-history-online-form>

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# SIDEWALK DEPOSITS

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- Anyone doing construction that may impact a sidewalk is required to put up a sidewalk deposit to cover the cost of any potential damage done during construction.
- In the past, the City had to pay out of its own money to repair sidewalks broken and damaged during construction work.
- Permittees requesting an inspection for return of a sidewalk deposit collected by the Public Works Permit branch can now request it by filling out a brief online form.  
[https:// www.boston.gov/ departments/ public-works/ sidewalk-deposits](https://www.boston.gov/departments/public-works/sidewalk-deposits)
- You can also check the status of your request online.
- If you have any questions regarding this process, please call Taylor Smith (617) 635-2686
- Remember you are required to email the City 48 hours before starting your permanent sidewalk restoration work.  
<https://goo.gl/FTFF2M>

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# COBUCS 2.0

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- Since 2010, no utility company, private contractor, or City project work can start without first being entered into our online reservation system.
- With the help of Paul Taylor, the City of Boston Utility Coordination System (COBUCS) was created and is the tool that we have been using ever since.
- **Boston is proud of COBUCS. Since 2010 there have been over 20,000! avoided conflicts which would have resulted in the digging of newly paved streets, at a cost of almost \$70 million dollars!**
- In the City's commitment to making available the latest technologies and most innovative tools, we are currently in the middle of a search for a COBUCS successor which will include automatic emails, mapping, editing, and flexibility which will allow for increased collaboration and coordination. Special events, which affect all of our construction projects, will now be fully implemented in COBUCS 2.0.
- This will be a more robust toolset to provide greater opportunities to coordinate work, prevent conflicting overlaps, navigate moratoriums, and provide all users with a better experience over.
- Most likely, COBUCS 2.0 will not be in place until 2020.

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# LOOP DETECTORS

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- The City has been extremely disappointed in the repair rate of loop detectors damaged by utility work and paving work.
- Loop detectors are a critical tool for allowing traffic to move as smoothly as possible throughout the City.
- One damaged loop for an extended period of time can create unnecessary backup.
- You need to track when your construction damages a loop.
- We acknowledge that sometimes they're underground and you won't be able to see them.
- The City will send you an email that will include the plan to restore along with a vendor list.
- You need to restore the loops in the timelines established by BTM (72 hours).
- BTM may be a little flexible in extending it depending on extenuating circumstances.
- We will hold up permits if you are not repairing in a timely manner.

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# ALL BAD PATCHES MUST BE REPAIRED BEFORE APRIL 16TH

## Bad Patch Response Procedures

Bad Patch Type	Response Time
Public Safety (Shifted Plate, Patch Down 6", etc...)	Protect site within 1 hour; Mobilize crew for repair within 3 hours
2" or Greater Settled	Must repair within 2 business days of notification
Less than 2" settled	Within 7-13 Days of notification
Permanent Sidewalk Repair	Return to existing within 60 days after initial repair City is currently allowing sidewalks to be repaired by neighborhood resulting in some cases of >60 days before repair, but with greater production
Pavement Marking/Loop Detectors	Within 3 days of notification

## **NO PERMITS WILL BE ISSUED IF YOUR BAD PATCHES ARE NOT REPAIRED BY APRIL 16TH**

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**PWD/BTD are issuing neighborhood permits for repairs from April 1-Dec15th**

We have been sending weekly bad patch emails to utility companies all winter long, as well as emails to individual private contractors.

For patches from Mass Ave. in, the April 16th deadline will not apply but the permit date will.

For those with a large amount of bad patch locations, if you allocate enough resources to repair those patches simultaneously while excavating, we will allow you to start work on April 16th.

If the PWD determines that your rate of repair is not acceptable, we will hold up your permits until all the bad patches are repaired.

**PLEASE WORK WITH US AND WE WILL WORK WITH YOU**



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## **NO PERMITS WILL BE ISSUED IF YOUR BAD CASTINGS ARE NOT REPAIRED BY APRIL 16TH**

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**PWD/BTD are issuing neighborhood permits for repairs from April 1-Dec15th**

We have been sending a daily email to the major utility companies that lists casting locations with erosion that need immediate patching.

We have also been sending a weekly summary of all castings needing repair.

For castings from Mass Ave. in, the April 16th deadline will not apply but the permit date will.

For those with a large amount of bad castings locations, if you allocate enough resources to repair those castings simultaneously while excavating, we will allow you to start work on April 16th.

If the PWD determines that your rate of repair is not acceptable, we will hold up your permits until all the bad castings are repaired.

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# REPORT CARDS ARE BACK!

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- By compiling all of the CIU's inspection findings in the field, the Public Works Department created a rating system for each permittee's construction practices.
- The CIU was extremely proud that it sent out weekly report cards to the major utilities for many years.
- It was an important tool used by the utility companies used to improve their construction practices.
- It was extremely disappointing that when we went to the new permit system we could not technically create the report cards.
- It's been a big regret for the CIU.
- In 2019 we finally feel confident that we can be sending out weekly report cards to the major utilities and either monthly or bimonthly ratings for all permittees.
- The report cards and ratings are not meant to embarrass anybody, but to point out your areas for growth when working in the City of Boston.

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# OCCUPANCY PROTOCOL

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- Occupancy work affects traffic flow and BTD needs to know where every crew is while working in the City
- Posting and notification requirements must be followed
- Permittees need to pull an individual permit for each location unless otherwise approved by BTD and Public Works.
- You need to email the City 48 hours prior to the start of work using the Occupancy Notification App  
[https:// docs.google.com/ a/ boston.gov/ forms/ d/ e/ 1FAIpQLSeX9\\_ FXqrXt1x8qi49omUbdRjZ5KYOD8U2gGNXKMKMqQiE4ow/ viewform](https://docs.google.com/a/boston.gov/forms/d/e/1FAIpQLSeX9_FXqrXt1x8qi49omUbdRjZ5KYOD8U2gGNXKMKMqQiE4ow/viewform)
- All the information must be correct including the name of the streets
- The City reserves the right to hold up Occupancy permits if you are not following our requirements

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# APPROVED MATERIAL VENDORS ON OUR WEBSITE

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- All gravel used for backfilling utility excavations, open voids, roadway and sidewalk reconstruction projects must be approved by the City of Boston
- <https://www.boston.gov/departments/public-works/approved-gravel-vendor-list>
- All concrete used for sidewalk restoration, utility casting adjustment and open voids, must be approved by the City of Boston  
<https://www.boston.gov/departments/public-works/approved-concrete-vendor-list>
- We will be adding the approved asphalt plants to our website this spring.
- Vendors not on the approved list can email the Construction Management Division at [cmdoffice@boston.gov](mailto:cmdoffice@boston.gov) and must pass the City's Quality Control Testing to be added to the list.

**THE CONSTRUCTION INSPECTION UNIT AND  
CONSTRUCTION MANAGEMENT DIVISION'S  
RESPONSIBILITIES**

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**CIU & CMD**

# City of Boston and Utility Capital Improvement

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- City: Capital Programs
- Utility Companies: Upgrades, Service Request, Emergency Repairs
- Private Contractors: Residential/ Business
  - Utility and Contractor work occurs throughout Boston.
  - The City wants to pave the streets that are in need of repair.
  - PWD needs to be sure that the streets paved aren't cut into for at least 5 years.

# Coordination is a Must

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- The constant construction can be extremely frustrating to City officials who are responsible for planning, resurfacing, and reconstruction projects in the City.
  - The ability to maintain capital street improvement programs is severely compromised by the frequency of utility construction.
  - The City's pavement structure is weakened with every utility excavation.

*Since 2012 there have been over **40,000** excavation permits activated .*

# Truly Cleared?

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- The goal of the Public Works Department is to improve coordination to the point where each newly paved streets lives to the full extent of its intended lifespan without becoming plagued by utility construction cuts which jeopardize the infrastructure of the City roadways.
  - Resurfaced streets should remain undisturbed for at least 5 years
  - Reconstructed streets should remain undisturbed for at least 10 years
- City recommends identification of trouble mains/ conduits for full replacement before any City resurfacing project takes place.

# COBUCS

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- City developed an online coordination tool in 2010 called the City of Boston Utility Coordination System
- All entities seeking excavation permits must enter all of their proposed work into COBUCS
  - **Over 40,000 conflicts have been coordinated. That's 40,000 fewer potential Guaranteed Street cuts!!!**
  - **The 40,000 coordinated conflicts represent a savings of \$70 Million in unnecessary repaving costs**
  - It is the City's expectation that all utilities, at a minimum, enter their two-year capital plans for work.
    - COBUCS checks all entered work against Guaranteed Street List to determine if the entered data lies on, or intersects, a Guaranteed Street.
    - COBUCS checks all entered work against all City programs in order to determine if the entered data lies on, or intersects, a street proposed for a City of Boston resurfacing or reconstruction program.

**COBUCS Address:** <https://pwdapps.cityofboston.gov/cobucs/>



# USING COBUCS/CAPITAL PLANS

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- Absolutely **NO PERMITS** shall be issued by the Boston Public Works Permit Branch until that Permittee's proposed work has been entered into the COBUCS program.
- The proposed **start date** (also called the "Reserve Date") must always be on the day you become **aware of the project!**Go to the end of the year on your reservation
- The PWD recommends that you extend your proposed **completion date** to the end of the Construction Season, regardless of your actual planned completion date.
  - This allows the City to coordinate with you more efficiently.
  - **Once the reservation date expires your entry is no longer being coordinated and could potentially end up with a needless street cut on a Guaranteed Street.**
- Once work begins you must update the status from "Proposed" to "In Progress."
  - **By not indicating your work is complete even though it is, you're unnecessarily holding up paving projects which is unacceptable**
- Once the work is completed you must change the status to "Complete" and enter in a completion date.
  - If you do not follow these procedures your permits may be placed on hold until all entries are accurately updated.

Street	From	Progress	Hi	Type	Begin	End	Progress
MATFIELD ST	DORCHESTER	Proposed	END	Asphalt Resurfacing	01/20/2011	12/31/2012	Proposed [4]
ST STEPHEN ST	MASSACHUSETTS	On Hold	END	Asphalt Resurfacing	01/20/2011	12/31/2012	Proposed [3]
GREENWICH PK	COLUMBUS AV	Permitted	END	Asphalt Resurfacing	01/20/2011	12/31/2012	Proposed [3]
APPLETON ST	TREMONT ST R	In Progress	70	Asphalt Resurfacing	01/20/2011	12/31/2012	Proposed [3]
EAST FIFTH ST	N ST	Completed	826	Asphalt Resurfacing	01/20/2011	12/31/2012	Proposed [8]
COMMERCIAL ST BP N	CHARTER ST	Cleared	END	Asphalt Resurfacing	01/20/2011	12/31/2012	Cleared

**All entities are required to update the status of their programs on a daily basis !  
(In Progress, Completed, etc.)**

# COBUCS Conflict Notification Protocol

**(Must be emailed as soon as conflict is found in COBUCS)**

**PERMITS WILL BE HELD IF NO EMAIL IS SUBMITTED**

- When you are in conflict with any City of Boston you must provide the following details:
  - What is the type of work? \_\_\_\_\_ (service, maintenance, capital improvement = new mains, conduits, etc.)
  - What is the approximate start date? \_\_\_\_\_
  - What is the approximate end date? \_\_\_\_\_
  - Do you plan on any other work within the proposed paving limits?
  - NOTE: If your work is being done for a new building development, or in preparation for a demolition, please indicate so in the email.
  - The engineers in charge of the paving programs must be included in the conflict email so that they can comment at any time. The COBUCS Conflict will not be released without a response from the Engineers in charge of that program. This could include coordination details.
  - We prefer that conflict emails contain a Print Screen (snapshot of the screen image) of the conflict. If you need instructions on how to create a Print Screen image of your conflict please email [cmdoffice@boston.gov](mailto:cmdoffice@boston.gov) and he will provide you a walk-through.

# Streamlining Email Notifications of COBUCS Conflicts

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*We've consolidated over fifteen e-mail addresses for conflicts down to four.*

- 1. Paving conflicts new e-mail address will be:  
[pavingconflict@boston.gov](mailto:pavingconflict@boston.gov)*
- 2. Special event conflicts new e-mail address will be:  
[specialeventconflict@boston.gov](mailto:specialeventconflict@boston.gov)*
- 3. Guaranteed street conflicts new e-mail address will be:  
[guaranteedstreetconflict@boston.gov](mailto:guaranteedstreetconflict@boston.gov)*
- 4. To inquire if your conflict has been approved:  
[conflictapproval@boston.gov](mailto:conflictapproval@boston.gov)*

*Must e-mail Public Works within 24 hours of conflict.*

*Multiple conflicts will require multiple e-mails.*

***PERMITS WILL BE HELD IF NO EMAIL IS  
SUBMITTED***



# COBUCS Reports

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- COBUCS offers three reports to be reviewed to better aid your company.
  - The Guaranteed Street List
  - City of Boston's Capital Plans
  - Your Company's Capital Plans
    - To view a report, select the Reports icon on the COBUCS starting menu

# Clearance Sign-Off

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- All streets that will be resurfaced or reconstructed in 2019 will have been officially cleared and signed off on by the 20 major utility companies and City agencies.
- Every private contractor outside of the major 20 who performs roadway excavation work in the City of Boston has had access to all proposed streets, and the opportunity to contact the City for possible deferment.

# The Bottom Line...

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- The City's expectations are that all streets to be resurfaced or reconstructed in 2019 are free of any future utility planned or repair work for a minimum of 5 years.
- Your company was given every opportunity to defer City program streets throughout the clearance process.
- The cost of digging into a new street will be severe. It will range from, at a minimum, a curb to curb overlay fee, to the possibility of denial of a work permit for that street.

# Boston's Street Opening Management System

## Utilize the Permitting and Inspection program to Store and Evaluate Permittee Data

- ✓ Tracking Permittee Work & Violations
- ✓ Develop Report Card for Contractors
- ✓ Report Card Helps Educate and Enforce Rule & Specs
- ✓ Benefiting Utilities

## Ensure a “Top-Down” Support Structure

- ✓ Starts with Mayor Walsh and Chief of Streets Chris Osgood
- ✓ City Annual Report

construction inspection unit

### Noncompliance Rating Summary

# Of Site Visits = 1200

KeySpan

7/2008 to 7/31/2008

Inspection Item	# OF INSPECTIONS VIOLATIONS		Period Company RATING		Year-To-Date Company RATING	Year-To-Date City Wide RATING
	# OF	%	2008	2007	2008	2007
<b>1. Critical Permit Present?</b> Submittal correct? Call-in logged? Proper signage?	489	9	1.84%	1.34%	0.73%	0.84%
<b>2. Adherence to Permit Restrictions?</b> Two-way street? Pedestrian? Wheelchair? Bicyclist?	482	3	0.62%	0.55%	0.18%	0.30%
<b>3. Safe Work Zone?</b> General? Qualified workers? Etc. cones, barrels, signs?	476	0	0.00%	0.00%	0.04%	0.16%
<b>4. Suitable Paved Gravel Material?</b> Use the material indicated on spec?	0	0	NO INSP	0.00%	0.00%	0.00%
<b>5. Suitable New Gravel Material?</b> Tested material? Gradation test on site?	142	0	0.00%	0.00%	0.00%	0.07%
<b>6. Compacted to 8" Maximum Lifts?</b> # of lifts, #1 to 3/4" max, type of equipment used, # of passes?	150	0	0.00%	0.25%	0.00%	0.07%
<b>7. Controlled Density Fill (CDF)?</b> Proper Use of CDF?	0	0	NO INSP	0.00%		0.00%
<b>8. Opening Sealed?</b> Weld? Patch? Repaired in Street? Cold Patched? New Hot Gravel?	609	4	0.66%	1.11%	1.35%	1.15%
<b>9. Edges Straight and Vertical?</b> C&G spaced at 1/2" intervals? Call-in? 1/2" gaps? Curbs?	187	0	0.00%	0.25%	0.00%	0.05%
<b>10. Two 1-1/2" Lifts of Hot Mix Asphalt?</b> Cold patches, patch & finish, surface, C&G? Vertical?	77	0	0.00%	0.00%	0.00%	0.00%
<b>11. Roadway Satisfactorily Complete?</b> Closures, Adequately Paved, Adequately Ramped, Sealed, and Covered Street?	194	10	5.15%	5.68%	1.74%	1.88%
<b>12. Temporary Work Complete?</b> Closures, Adequately Paved, Adequately Ramped, Sealed, and Covered Street?	9	0	0.00%	0.00%	0.00%	0.35%
<b>13. Permanent Work Complete?</b> Closures, Adequately Paved, Adequately Sealed, Sealed, and Covered Street?	3	0	0.00%	3.45%	0.00%	1.16%
<b>14. Loop Debris/Crosswalks?</b> Walk to the curb? Hand? Wheelchair?	0	0	NO INSP		0.00%	0.00%
<b>15. Public Safety Issue?</b> Obstruction? Trip Hazard?		1				

2008      2007

Overall Noncompliance Rating = **0.92%** **0.93%**      **0.56%** **0.60%**

**Rating Scale %**

0.00 = GOOD = 0.67

0.67 = FAIR = 1.35

1.35 = NEEDS IMPROVEMENT = 2.00

2.00 = POOR



# CIU - Construction Inspection Unit

A specialized unit created in 2003 to increase oversight personnel to combat poor workmanship.

## *Mayor Walsh Demands Perfection!*

- BWSC CSO initiative
- Electrical infrastructure upgrade
- Telecommunication
- Growth in Boston real estate markets
- Angle of Influence work
- OLD INFRASTRUCTURE
- CIU Assists regular BPWD workforce
- Changing expectation of construction in Boston

 *Education*

 *Inspection*

 *Documentation*

 *Evaluation*

 *Enforcement*

# Violation Sheet

- Issued to crew on active work sites. For inactive sites, the CIU maintains a copy of the Violation and a notice is sent.
- Sites section/ article from City Rules & Specifications
- *CIU violations will be e -mailed to you immediately from the field. This will allow you to make corrections right away. This will also allow you to assess the weak points in your construction practices sooner than later.*



## VIOLATION

**CITY OF BOSTON PUBLIC WORKS DEPARTMENT**  
**RULES AND SPECIFICATIONS FOR EXCAVATION WITHIN THE CITY OF BOSTON**  
February 17<sup>th</sup>, 2006 Edition

□	<b>1. Current Permit Present</b> <ul style="list-style-type: none"> <li>○ Section 4.09, Article A.2</li> <li>○ Section 4.09, Article A.2</li> <li>○ Section 4.09, Article A.2</li> <li>○ Section 1.01, Article L</li> </ul>	Working without a permit Working with an expired permit Curved permit not on site No Call-in	Page 29 Page 29 Page 29 Page 6
□	<b>2. Abiding to Permit Restrictions</b> <ul style="list-style-type: none"> <li>○ Section 3.10, Article M</li> <li>○ Section 3.07, Article C</li> </ul>	No Ground ID sign(s) Not maintaining 2-way traffic No Police Detail Unauthorized stockpiling Working outside ETD time restrictions	Page 16 Page 14 Page 14 Page 14 Page 14
□	<b>3. Safe Work Zone</b> <ul style="list-style-type: none"> <li>○ Section 3.10, Article G</li> <li>○ Section 3.10, Article I</li> <li>○ Section 4.02, Article C</li> </ul>	Unsafe work zone Work zone not clean and/or swept No shoring or inadequate shoring where required	Page 16 Page 16 Page 19
□	<b>4. Suitable Reused Gravel Material</b> <ul style="list-style-type: none"> <li>○ Section 4.04, Article J</li> </ul>	Use of untested excavated material	Page 22
□	<b>5. Suitable New Gravel Material</b> <ul style="list-style-type: none"> <li>○ Section 4.08, Article A</li> </ul>	Not MHD M.1.03.1 approved process gravel for sub-base	Page 27
□	<b>6. Compacted in 8" Maximum Lifts</b> <ul style="list-style-type: none"> <li>○ Section 4.04, Article I</li> <li>○ Section 4.04, Article I</li> <li>○ Section 4.04, Article K</li> </ul>	Not compacting in eight (8") lifts Failure to achieve 95% laboratory maximum dry density No control test site for equipment achieving lifts greater than 8"	Page 22 Page 22 Page 22
□	<b>7. Controlled Density Fill (CDF)</b> <ul style="list-style-type: none"> <li>○ Section 4.02, Article A</li> </ul>	CDF usage is unapproved	Page 23
□	<b>8. Opening Secured</b> <ul style="list-style-type: none"> <li>○ Section 4.03, Article A</li> <li>○ Section 4.03, Article B</li> <li>○ Section 4.03, Article D</li> <li>○ Section 4.03, Article E 1</li> <li>○ Section 4.03, Article E 2</li> <li>○ Section 4.03, Article E 5</li> <li>○ Section 4.06</li> <li>○ Section 4.06</li> <li>○ Section 5.05</li> <li>○ Section 5.05</li> </ul>	Steel plate(s) unsecured; (movement/bending/vibration/loos banging etc.) Steel plate(s) not completely covering open excavation with minimum 18" overlap Steel plate(s) with no company name and/or phone number Steel plate(s) not recessed where required Steel plate(s) not bermed properly No explanation in writing when steel plates cannot be recessed Roadway opening left in gravel Cold patch in street opening not replaced with HMA within 48 hours Sidewalk opening left in gravel Cold patch in sidewalk opening not replaced with HMA within 48 hours	Page 20 Page 20 Page 20 Page 20 Page 20 Page 23 Page 23 Page 40 Page 40

UTILITY NAME: \_\_\_\_\_ PERMIT # \_\_\_\_\_

LOCATION: \_\_\_\_\_

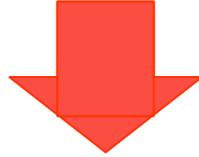
VIOLATION SECT. \_\_\_\_\_ VIOLATION ART. \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

City of Boston Public Works  
Violation Page 1 of 2

# Noncompliance Rating

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Ratings changed to a 100% point Scaling System.



$$\left( \frac{\text{SUM OF VIOLATIONS}}{\text{SUM OF INSPECTION ITEMS}} \right)$$

100.00%  $\leq$  Good < 99.33%

99.33%  $\leq$  Fair < 98.65%

98.65%  $\leq$  Needs Improvement < 98.00%

98.00%  $\leq$  Poor

Scale developed from historical data  
as collected by CIU inspections.

# Improvement in Overall Compliance Rating

---

- Over the past four years the Utility Companies and Private Contractors have been steadily improving their construction practices.
- Improvement seen in:
  - Reduction in stockpiling without approval
  - Temporary Sidewalks left smooth & level
  - Use of suitable gravel material, both recycled and new processed
  - The final paving product, including cutting patches square and following Utility Repair Tag standards.
- Despite an overall improvement in compliance, crews need to focus on how they leave their plates at the end of the day.
  - Opening Secured compliance dropped 1% between 2016 and 2018.
- Permittees need to do a better job repairing their identified bad patches within the timeline specified in the Rules and Specifications.

***KEEP UP THE GOOD WORK!***



# Steps Taken to Improve your Rating

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The City will be strictly employing the following procedures:

- PWD enforces a **0 tolerance** policy on all violations.
- Work zones may be shut down and a meeting scheduled in City Hall to discuss, **no matter what the violation** .
- Emergency Locations in Violation may delay Standard Permit issuance.
- Unacceptable patch/ trench repairs; pavement markings or loop detectors, etc. not restored within 7-13 days; or sidewalks not permanently repaired within 60 days **may result in a suspension of new permits** .
- Multiple violations, or the poor Non Compliance rating of a contractor may result in the **suspension of their ability to work** in the City for a to-be-determined time period.
- A single egregious violation, or hostile behavior by a contractor may result in the **suspension of their ability to work** in the City for a to-be-determined time period.

# Enforcement

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- Zero Tolerance on Individual Work Zone Violations
  - Immediate job site shut down may result, meeting at City Hall scheduled to discuss construction practices
- The City cannot allow mediocre work to continue affect the public ways without repercussion.
  - Overall compliance rating < 98.00% - managers called for a meeting to discuss the crew's construction practices and how to improve.
  - No improvement will result in a citywide non - emergency shutdown of permits and a meeting will be scheduled in City Hall.
  - Continued lack of improvement shall result in another shutdown and require that the highest representatives of the company meet with Chief of Streets Osgood and the Mayor's office to discuss overall construction practices.
  - Elevated individual items (e.g. Plates) will result in similar shutdown procedures.
  - The Permittee shall be held accountable for any actions performed by its personnel. If the personnel of a Permittee is cited for three shutdown meetings for the same inspection item, the Permittee will bear equal responsibility.

***Mayor Walsh takes Public Safety Seriously!***



# Cooperative Effort

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In 2007 the BPWD began weekly transmissions of rating summaries (Report Cards) to major utilities.

- Valuable tool for City & utilities.
- Provides comparison to citywide average.
- We welcome feedback.

**STEPS TO TAKE BEFORE  
STARTING CONSTRUCTION  
IN THE FIELD**

# Major Project Coordination

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## Night & Weekend Work

- Must meet with CIU before commencing work to review:
  - Scope of Work
  - Dates of Work
  - Contact Information
- Asphalt plants may not be open during off-hours and crews may not have the approved asphalt material on hand.
  - Hot mix asphalt tends to cool down in the time between when it was picked up at the plant to when it will be used for the night work, resulting in poor a paving job.
- Will result in mandatory use of a hot -box after hours , unless otherwise authorized by PWD.

# Major Project Notification Procedures

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- Utility major projects take months, or even years, to plan. For that reason it should not be a burden for any utility company to provide adequate advanced notice to the surrounding affected residents and businesses regarding these projects.
- All Permittees are required to contact the Office of Neighborhood Services (ONS) **30** days in advance of major work.
  - ONS will determine whether or not a Community meeting will be necessary before the project is approved.
- All Permittees must contact the BTD a minimum of **30** days in advance of major work (as determined by BTD).
  - Permittees must have their Traffic Management Plan in place for review and approval before obtaining permission to work by the PWD.

# Letters to Constituents for Major Work

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- All Permittees will send letters to all residents two weeks in advance of the start of work.
  - *PDF Emails must be sent to designated City Personnel on the day the letters are distributed.*
  - Letters must explain the reason for the work, the estimated start & complete date, name of the contractor, and 24 hour contact information including the name of Permittee Supervisor, etc.
- All utility companies and private contractors must take into consideration the impact the construction has on the residents of the affected street, and try to the best of their ability to coordinate & cooperate with the neighborhood.
- ONS may require a neighborhood meeting before work starts

## Leafleting & Posting Procedures: New Mains, Conduit Installation, Major Work

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- As per BTD requirements, all Permittees must leaflet affected streets a minimum of 72 hours before the start of any construction.
- Using the new posting template for BTD No Standing signs, posting must be placed 48 hours in advance of work, clearly visible to vehicular and pedestrian traffic.
- On major projects, only post where your crews will be actively working within the next 48 hours.
  - No longer will you be able to post a block or two at a time when you know the work won't take place for a week or longer
- Crews must move the BTD No Standing signs down the road in advance of the progressing active work.

# Be Mindful of Daily City Services

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- The City understands that your company has a job to perform, however throughout the entire project the crew should be mindful of the public.
  - Be aware of Trash and Recycling pickup schedules
  - Be aware of Street Sweeping efforts
  - Work with moving trucks and post delivery
- At all times crews should keep the street as fully functional as possible.
- Boston Groundwater Trust (BGwT)

# **Damaged or Exposed Street Lighting Conduit Protocol**

*Any contractor who accidentally strikes or damages a street lighting conduit must immediately contact the Street Lighting Section.*

- Monday - Friday, 7:00am until Midnight please call 617-635-5810.
- Monday - Friday, 12:00am until 7:00am and on weekends please call 617-635-4500.
- You must not close the excavation until an inspector has reviewed the conduit. An Inspector will be sent to the site to identify the line that was damaged.
- Minor damage shall be repaired by the lighting section.
- Major damage shall be repaired by the contractor. The contractor you hire to repair the City's street lighting conduit needs to have experience in electrical conduit work.
- The conduit must be inspected by the Street Lighting Section prior to backfilling at no cost to the City of Boston.

# Damaged or Exposed Street Lighting Conduit Protocol

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- Any damage that is discovered by the street lighting section after the Contractor has left the location shall be the responsibility of that Contractor for repair.
  - The Street Lighting Section shall bill the appropriate Contractor for all work necessary for the repair and/or replacement of conduit and cables.
- It is to the Contractors benefit to notify the Street Lighting Section of any damage.
  - Damage to conduits and cables could potentially cause stray voltage which could harm the General Public.
- We will thoroughly investigate any incident; and if a Contractor is responsible for the stray voltage, they will be held liable for any and all damage (property as well as personal) sustained by creating this situation.
- Any Permittee who strikes or damages a street lighting conduit and does not follow our protocol will have that job shut down with the possibility of all active work suspended and new permit requests put on hold.

# Damaged or Exposed BTD Conduit Protocol

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- Any contractor who strikes or damages BTD Traffic Signal Conduit must first immediately contact The Boston Transportation Department at:
  - 617-635-4430 (Mon-Fri , 7AM- 8PM; Sat 9AM- 5PM)
  - 617-635-4500 (Weekends except Sat 9AM-5PM, Holidays, and Mon-Fri , 8PM-7AM)
  - The excavation must not be closed until a BTD inspector has assessed the situation and determined which line/ conduit was damaged.
  - Damage that has not been reported to BTD or has been discovered by BTD after the contractor has left the location shall be the responsibility of that contractor to repair.
  - Damage to BTD conduit and/ or cables must be repaired by a BTD approved traffic signal contractor and the work must comply with BTD specifications.

# Damaged or Exposed BTD Conduit Protocol

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- Any damage that is discovered by the BTD after the Contractor has left the location shall be the responsibility of that Contractor for repair.
- Any utility infrastructure that is struck or damaged that directly affects BTD conduit(s) (i.e. Damage to NSTAR electric conduits feeding traffic signal cabinets) must be reported to both NSTAR and BTD.
- To avoid striking BTD conduits please contact BTD to request plans showing the approximate location of BTD owned conduits before performing any excavation near or at a signalized intersection.
- **Any Permittee who strikes or damages a BTD conduit and does not follow our protocol will have that job shut down with the possibility of all active work suspended and new permit requests put on hold.**

# CONTACT PROTOCOL WHEN EXPOSING OR DAMAGING STREET LIGHTING/BOSTON TRANSPORTATION AND NSTAR ELECTRIC INFRASTRUCTURE

## Reporting Exposed or Damaged Street Lighting Conduit

- Monday - Friday, 7:00am until midnight please immediately call **617-635-7501**.
- Monday - Friday, 12:00am until 7:00am, and weekends and holidays, please immediately call **617-635-4500**.

## Reporting that the Repair to the Street Lighting Conduit is Complete

- Monday - Friday, 7:00am until midnight please immediately call **617-635-7501**.

## Reporting Exposed or Damaged Traffic Conduit to BTB

- Monday - Friday, 6:00am until 10:00pm please immediately call **617-635-4430**.
- Saturdays, 9:00am until 5:00pm please immediately call **617-635-4430**.
- Monday - Friday, 10:00pm until 6:00am, weekends except Saturdays 9:00am until 5:00pm, and holidays, please immediately call **617-635-4500**.

## Reporting that the Repair to the BTB Conduit is Complete

- Monday - Friday, 6:00am until 10:00pm please immediately call **617-635-4430**.
- Saturdays, 9:00am until 5:00pm please immediately call **617-635-4430**.

## Reporting Exposed or Damaged NSTAR Electric Conduit

- 24 hours a day, 7 days a week please immediately call **1-800-592-2000**.

## Reporting Exposed or Damaged NSTAR Electric Conduit where you know either BTB or Street Lighting has been affected as well

- NSTAR Electric: 24 hours a day, 7 days a week please immediately call **1-800-592-2000**.
- Street Lighting: Monday - Friday, 7:00am until midnight please immediately call **617-635-7501**.
- Street Lighting: Monday - Friday, 12:00am until 7:00am, and weekends and holidays, please immediately call **617-635-4500**.
- BTB: Monday - Friday, 6:00am until 10:00pm please immediately call **617-635-4430**.
- BTB: Saturdays, 9:00am until 5:00pm please immediately call **617-635-4430**.
- BTB: Monday - Friday, 10:00pm until 6:00am, weekends except Saturdays 9:00am until 5:00pm, and holidays, please immediately call **617-635-4500**.

# Protocol when Construction Damages or Exposes Electrical Conduit

You must never leave your work zone or backfill the excavation until a representative from Street Lighting, BTB, or NSTAR Electric has arrived on site to assess any possible damage done to the infrastructure.

# Know the Schedule

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- It is your responsibility to be aware of scheduled trash and recycling pickup days for the street you are working on.
  - Your crews must provide access for trash and recycling pickup
  - If your work prevents pickup, your crews must bring the trash and recycling to the nearest accessible curb for pickup
- Pickup schedules can be found on the City's web page:
  - <http://www.cityofboston.gov/myneighborhood/>
- Preventing access to trash and recycling pickup is a health and safety concern.

# Boston Groundwater Trust (BGwT)

- BGwT Groundwater Observation Wells in Sidewalk
- In Lower Beacon Hill, Back Bay, South End, Fenway, North End, Bulfinch Triangle, Fort Point Channel, Chinatown, Leather District, Central Waterfront, & East Boston Neighborhoods
- Over 800 wells throughout the City
- Website has Google based map of all well locations at [bostongroundwater.org](http://bostongroundwater.org)
- Preserve like any other utility roadway box
- If destroyed cost is \$4,000 to replace

## QUESTIONS? PLEASE CONTACT BELOW

Christian Simonelli, Executive Director

[csimonelli@bgwt.org](mailto:csimonelli@bgwt.org)

[bostongroundwater.org](http://bostongroundwater.org)

617.859.8439 office

617.913.0712 cell





# Winter Moratorium Ends April 15<sup>th</sup>, 2019

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- Generally extends from November 15<sup>th</sup> through April 15<sup>th</sup>
- Materials & workmanship negatively affected by cold weather.
- All permits must be approved by Moratorium Board.
- Plated locations hazard to City plowing efforts.



# Cold Weather Leads to Repercussions That Last Well Beyond the Winter

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- Castings needing patching
- Sunken castings needing adjustment or full replacement
- Patches and trenches failing
- Frost heaves
- Potholes
- Sinkholes
- Cracking of roadways
- Damaged sidewalks
- Edge stone sinking

# Winter Moratorium Board

---

## In order to obtain permission to work during the Winter Moratorium

- All pending bad patches, sidewalk locations not repaired within 60 days, pavement markings, and loop detectors are fully repaired or restored.
- Your company must be in good standing with the City (Compliance Rating)
- You must bring in a Hardship Letter with your request indicating:
  - Where the work will take place
  - Why the work can't wait until spring
  - How long the work will take
- The Winter Moratorium Board will vote either Yes or No, dependent upon the request and forecasted weather.

# Winter Work Procedures

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- All crews must follow Winter Moratorium Guidelines
  - <http://www.cityofboston.gov/publicworks/construction/excavation.asp>
- All plates must be Recessed unless otherwise approved by the PWD
  - A leveling course of HMA material will be used when recessing the plates
- Crews must fax a copy of the Winter Plate Notification Form to the City Snow Office and the CIU whenever a plate is placed, no matter what time of day or night.
- Crews must be prepared to backfill, pave, and remove all equipment from the work site upon request by the PWD for pending inclement forecasts.
- **All Permittees will be required to provide snow plowing and snow removal of their entire work zone(s) during the Moratorium period.**
- Cold weather should not negatively affect your final product.
- Any repeated Violations or lack of cooperation will result in a suspension in your ability to receive permits during the Winter Moratorium.

# Winter Inspection Requirements

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- Permittees are to perform post -inspection of all permits issued during the Winter Moratorium 14 days after the work has been completed, and 30 days after the 14 day inspection.
- Inspection findings are to be emailed back to the BPWD Construction Management Division reporting the status of the patch/ trench.
- Major utility companies will provide weekly reports summarizing their findings in advance of the Moratorium meetings.
- A failure to submit the required inspection findings will result in suspension of all active work sites, as well as no longer being issued permits during the Winter Moratorium.

# PWD Expanded Its Notification of Work Applications in 2016

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**EMERGENCY CALL INS**

<https://goo.gl/fbz2cg>

**ROADWAY REPAIR CALL IN**

<https://goo.gl/cCo6nN>

**CALL IN (PLANNED  
WORK)**

<https://goo.gl/1LVGP1>

**STREET OCCUPANCY CALL IN**

<https://goo.gl/FTts58>

**SIDEWALK RESTORATION  
CALL IN**

<https://goo.gl/FTFF2M>

**WINTER PLATE NOTIFICATION**

<https://goo.gl/pR6s2Q>

*goo.gl shortcuts are case-sensitive*

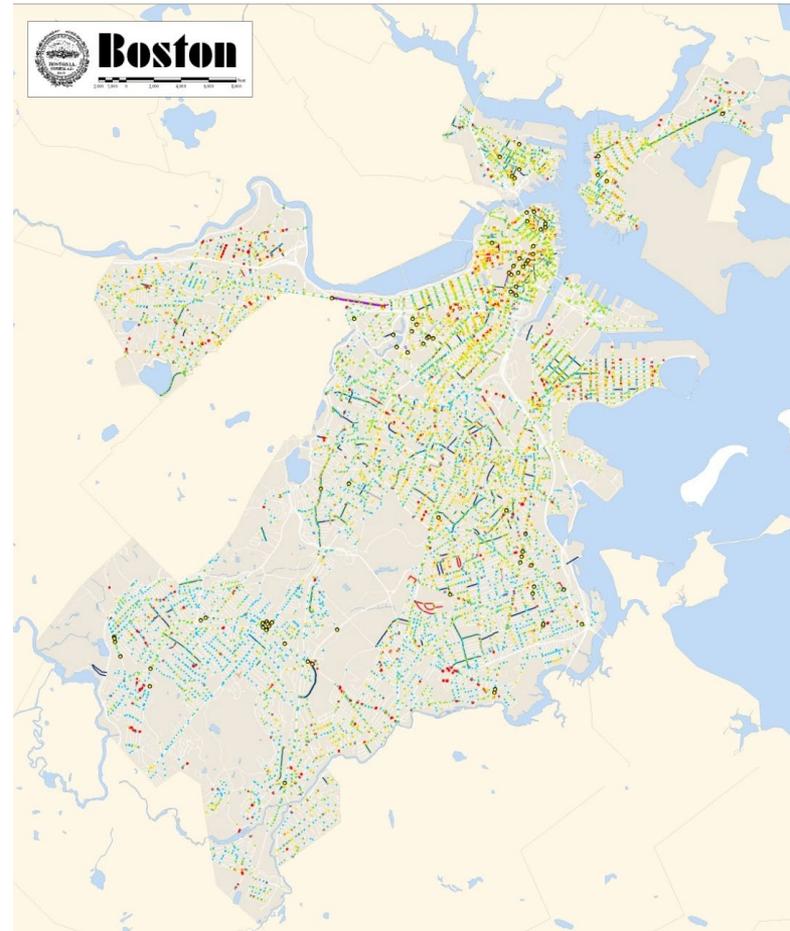
# Boston Utility Worksites

During the 2018 Construction Season there were an average of **150** active worksites and over **275** plates daily.

- Excavating
- Sidewalks
- Pipe/Conduit Installation
- Backfilling
- Plating
- Paving

Between 2012 and 2018, approximately **6000** excavation permits were issued annually.

- 4000 excavation
- 2000 emergency
- (Permit activation average not including extensions)



# Reasons for Street Opening Cuts

---

- Age of Utility Infrastructure
  - Geography
  - Changing Population (New Services and Upgrades)
  - Technological Advancements
- 
- These four independent factors lead to continuous street excavation work throughout the City of Boston.
    - **The bottom line is that the City of Boston is one of the busiest cities in the United States when it comes to utility service and repair work.**

# Doing Your Part

---

- Since 2012 the City has categorized the types of roadway excavation work you perform in the City and the resulting square feet of excavation.
  - **New Conduit and/or Main**      **75%**      (60% when services are included)
  - **Maintenance**      **15%**      (12% when services are included)
  - **Emergency**      **10%**      (8% when services are included)
  - **Service**      (20%)
- In the last 6 years, through mutual coordination, utilities have increased their capital budget to bridge the gap between annual City paving, and old main replacement.
- The City appreciates your cooperation in the upgrade of your aging infrastructure (conduits, mains, etc.)
- Upgrading aging infrastructure improves the quality of life for the residents and is beneficial for street preservation (no emergency cuts on new streets)

# Eliminate Cuts in New Streets

---

- **One of Mayor Walsh's goals is to eliminate utility cuts into Guaranteed Streets.**
- When a recently paved street becomes littered with utility cuts, it gives the appearance of apathy to the general public regarding coordination. This is obviously unacceptable to the Public Works Department.
- COBUCS Reports allows you to see the City's program for the year. In addition it will be on our website.
- **Digging into new streets will not be tolerated!**



To South  
Boston St  
Continued

BOSTON

**GUARANTEED STREET COBUCS CONFLICT DETAILS**

COBUCS GUARANTEED PAVING DATE:					
PERMITTEE INFORMATION					
Company Name:					
Date of COBUCS Entry:		COBUCS #			
Contact Name:					
Contact Phone Number:		Email:			
<b>Place X Next to Appropriate Category of Who is Requesting Work</b>					
Home Owner	<input type="checkbox"/>	Developer	<input type="checkbox"/>	General Contractor	<input type="checkbox"/>
Site Plan Engineer	<input type="checkbox"/>	Business Owner	<input type="checkbox"/>	In-House	<input type="checkbox"/>
<b>(UTILITY COMPANIES ARE NOT REQUIRED TO FILL OUT BELOW DETAILS UNLESS REQUESTED BY CITY)</b>					
Originator Name:					
Company Name:					
Date of Request:					
Contact Phone Number:		Email:			
SCOPE OF WORK INFORMATION					
Neighborhood:					
Street Name:		Address:			
Limits (From-To) If Applicable:					
<b>Explanation of Why Guaranteed Street Needs To Be Cut Into</b>					
<b>Work Type: Place X Next to Appropriate Name</b>					
Service (Existing Structure)	<input type="checkbox"/>	Service (New Building Construction)	<input type="checkbox"/>	Service (Oil to Gas) [Gas Companies Only]	<input type="checkbox"/>
Maintenance	<input type="checkbox"/>	New Main/Conduit	<input type="checkbox"/>	Casting Repair/Replacement	<input type="checkbox"/>
Emergency	<input type="checkbox"/>	Emergency Illegal Sewer Connection (BWSC Only)	<input type="checkbox"/>	Emergency Conversion to EXCA	<input type="checkbox"/>
Emergency (Private Contractors)	Water	<input type="checkbox"/>	Sewer	<input type="checkbox"/>	Sprinkler
					Other
<b>Excavation Area Information (Length X Width)</b>					
Estimated Number of Cuts:					
Cut Size 1:		Cut Size 2:		Cut Size 3:	
Cut Size 4:		Cut Size 5:		Cut Size 6:	
Additional Cut Details:					
<b>Total Estimated Sq Feet Area:</b>					
<b>Estimated Time Table of Work</b>					
Estimated Start Date:		Estimated Completion Date:			

# Guaranteed Street Cut Request Form

- When COBUCS notifies you that your proposed work is in conflict with a Guaranteed Street you must immediately fill out the Guaranteed Street COBUCS Conflict Details form and email it to the Public Works Department (see below).
- In addition to the form, your company must submit a Hardship Letter to Chief Engineer, **Katie Choe**, explaining the need to excavate the Guaranteed roadway and agreeing to pay for the associated cost of restoring the roadway to it's Guaranteed state.

*[guaranteedstreetconflict@boston.gov](mailto:guaranteedstreetconflict@boston.gov)*

# Guaranteed Street Cut Procedures

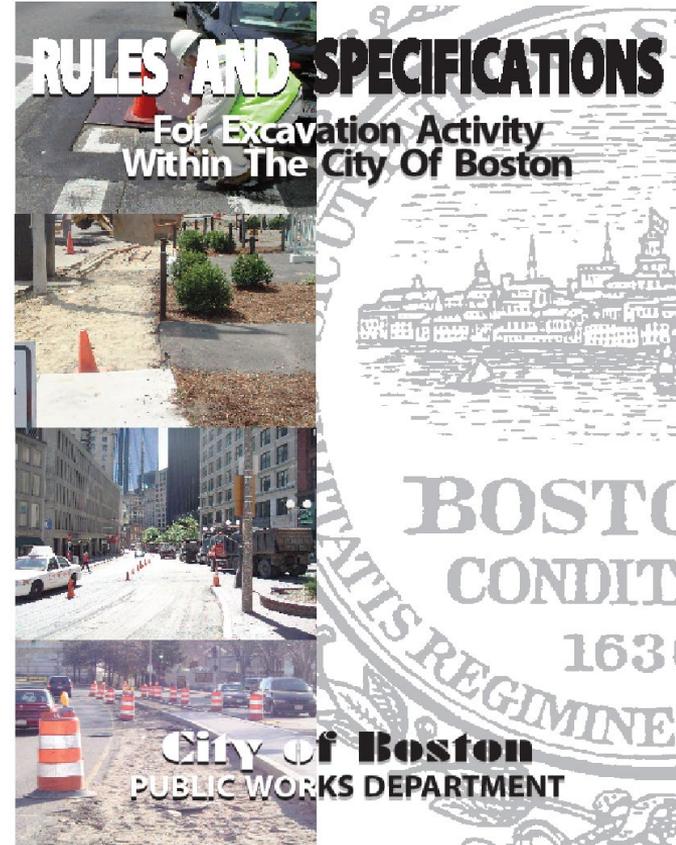
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- Dig Safe must not be called on non -emergency work into a Guaranteed Street until the request has been approved by the City.
- All openings must be saw cut prior to asphalt placement.
- Mandatory CIU inspection for all backfill and paving operations, unless otherwise approved by the PWD .
- Vibratory roller must be used on **ALL** phases of patch/ trench paving.
  - If a vibratory roller is unable to fit within the patching area during the **BINDER** course a plate compactor will be allowed. A vibratory roller is **MANDATORY** for the top course.
- “Average” or even “Good” patches will **NOT** be acceptable!
- All final patches must be “**Excellent** ”!
- Dig Safe marking must be *power-washed* off after OK from Dig Safe or otherwise approved by PWD.

# Rules & Specifications for Excavation Activity within the City of Boston

<http://boston.gov/publicworks>

- Created with input from utilities & various agencies
- In the process of being updated.
- Newest version will be completed by the end of spring.
  - Edits and changes include Utility Repair Tags, Hansen, patch and sidewalk repair, edge stone, casting responsibility, etc.



# “It’s Construction”

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The City acknowledges that construction is difficult and complicated.

Construction is a chain-of-command.

Breakdowns in communication can happen.

However, the CIU will not accept blatant disregard, cutting corners, indifference, or apathy as an excuse for not following the Rules and Specification and state: “It’s Construction”.

# Item 1 – Permitting & Job Start

- Current PWD Permit,
- Jackie’s Law Permit
- BTD Traffic Plan
- Competent Person
- Submit the online Call-In Form at least 24hrs prior to:

**MUST BE  
ON-SITE AT  
ALL TIMES!**

- Start
- Backfill
- Pave
- Completion
- Sidewalk Permanent Repair

■ If batching in field, may require on site testing

- Emergencies must be called in within 1 hour of work

**CITY OF BOSTON - PUBLIC WORKS DEPT  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR  
INSPECTORS REPORT**

Normal CIU Inspection     Other Inspection

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Street:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

**Public Works Department  
Boston Transportation Department**

**Excavation Permit - Extension**

Permit #: EXCA-10044    Anticipated Start Date: 05/01/2012    Anticipated S&T: 0.00  
Work Type: Capital    Anticipated Duration: 30    Issued: 04/11/2012  
District: West Roxbury/Robinson    Expires: 05/30/2012  
Applicant: BOSTON PUBLIC WORKS DEPT    Estimated Fees: \$0.00  
Location: 5A-15B HAMMOND ST    Total Fees: \$0.00  
Roxbury, 02119

**Location Comments:** Hammond St Shared w/ Thurston

**ZMS Description Of Work:** Central Improvement Project (Public Works - 11-32) - street lighting & curb/road - EXTENSION

**BTM Approval Date:** 04/25/2012

**BTM Description Of Work:** Street Construction - Street Lights and Curb Road

**Other Use Notes:** \_\_\_\_\_ **Notes:** Street Construction - Street Lights and Curb Road

**All Work To Be Performed:** 7:00AM TO 4:00PM    **No Work To Be Performed:** \_\_\_\_\_

**Exceptions:** \_\_\_\_\_

**Special Requirements:** Roadway and Sidewalk to be Completely Clear and Available at the End of Each Workday  
Temporary Signs Shall Be Posted a Minimum 48 Hours in Advance of Occupation of Public Way  
No Load Heavy Work Over Cutting/Backfilling After 11 P.M.

**Sign Information:** \_\_\_\_\_

**Police Detail:** \_\_\_\_\_

Page 1 of 2

# Emergency Permits

---

- Used by major utilities for Emergency Situations
- Purchased in blocks from PWD permit office
- Must be called in within 1 hour of commencement of work
- Must apply for EXCA permit after 24hrs of work
- Delay of EXCA permit request unacceptable
- Delay of job requires reason in writing
- **Use of an Emergency permit for non -emergency work will result in an automatic shutdown of all new permit requests .**

# Neighborhood Permitting

---

- Major Utility Companies have had neighborhood permits for permanent sidewalk restoration, unacceptable patch/ trench repair, and cast iron infrastructure repairs for the past year.
- **A proven success in expediting repairs and streamlining the permit process!**
- Individual Permits required for Downtown, Chinatown, North End, Beacon Hill and on Main Arterials in South End and Back Bay.
- BTD determines the day/ time restrictions.
  - All BTD restrictions must be followed; e.g.
    - Major Arterials, 9:30 start
    - Proper police detail
    - TMP signs must be posted 48 hours in advance of work
    - Proper Site delineation
- Permittee must email designated BTD and PWD personnel the locations to be worked on 48 hours in advance.

# Item 2 – Abiding to Permit Restrictions

- BTD Approval Form must be on job site at all time.
- Traffic flow
- Police Detail
- Work Hours
- Stockpiling only where approved
- Site is leafleted 72 hours and posted at least 48 hours in advance
  - Do not extend posting beyond area of active construction
  - All posting dates are accurate with dates and permit information clearly visible
- Utility Repair Tags are installed in every asphalt patch, as required.
  - If there are multiple excavations, each excavation will require a tag.

**CITY OF BOSTON - PUBLIC WORKS DEPT.  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR  
INSPECTORS REPORT**

Normal CIU Inspection       Other Inspection  
please specify completed, RTA, RRRC, etc.  
 Inspection items not performed      Size of Cut on Permit

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_ **Roadway or Sidewalk?** \_\_\_\_\_  
Patch / Trench or Patch / Trench      Patch / Trench / Patch / Trench      Depth?  
**Address:** \_\_\_\_\_ **Street:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
(Insert Time Interval)  
**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_  
Day of the week, Month, A, Year

	YES	NO	Notes	Violation
1. Current Permit Present?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
2. Abiding to Permit Restrictions?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
3. Safe Work Zone?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
4. Suitable Road & Crowd Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
5. Suitable New Gravel Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
6. Compacted in 8" Maximum Lites?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
8. Opening Secured?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
9. Two 4-1/2" Lites of Hot Mix Asphalt?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
10. Final Paving Requirements	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
11. Roadway Satisfactorily Completed?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
12. Temp Sidewalk Accessible?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
13. Permanent Sidewalk Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
14. Pedestrian Ramp Compliant?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Violation Reported?	YES	NO	Photo? YES NO	SHUTDOWN <input type="checkbox"/>
Utility Rep Contacted?	YES	NO		
<b>Comments:</b> _____				

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
If verify verify the date on this report and date on signature record  
\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM

# Leafleting & Posting Procedures

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## Service & Maintenance

- As per BTD requirements, all Permittees must leaflet affected streets a minimum of 72 hours before the start of any construction.
- Posting must be placed 48 hours in advance of work, clearly visible to vehicular and pedestrian traffic.
- Crews must remove signs after work is completed.

# Leafleting & Posting Complaints

---

- The City has received numerous complaints to its Mayors CRM system regarding inadequate postings:
  - Missing dates or Per Numbers
  - Illegible signs
  - Posting beyond work limits
  - No crews showing up on posted dates
    - Extending dates
    - Constituents cooperate by not parking on the street.
    - Frustration grows when crews don't show up on the dates posted.
- We know the project is ultimately good for the Neighborhood you're working in, but it is an inconvenience and accurate posting will go a long way in making the job smoother for everybody.

# 'No Standing' Signage

---

- Template will be provided to Utility Companies and Private Contractors performing major work.
- You'll have the ability to adjust template based on BTM permit restrictions.
- Any handwritten information must be **legible!**
- More professional, easy to understand sign.
- Will be better for everyone affected.



# Steel Plate Ahead Signage

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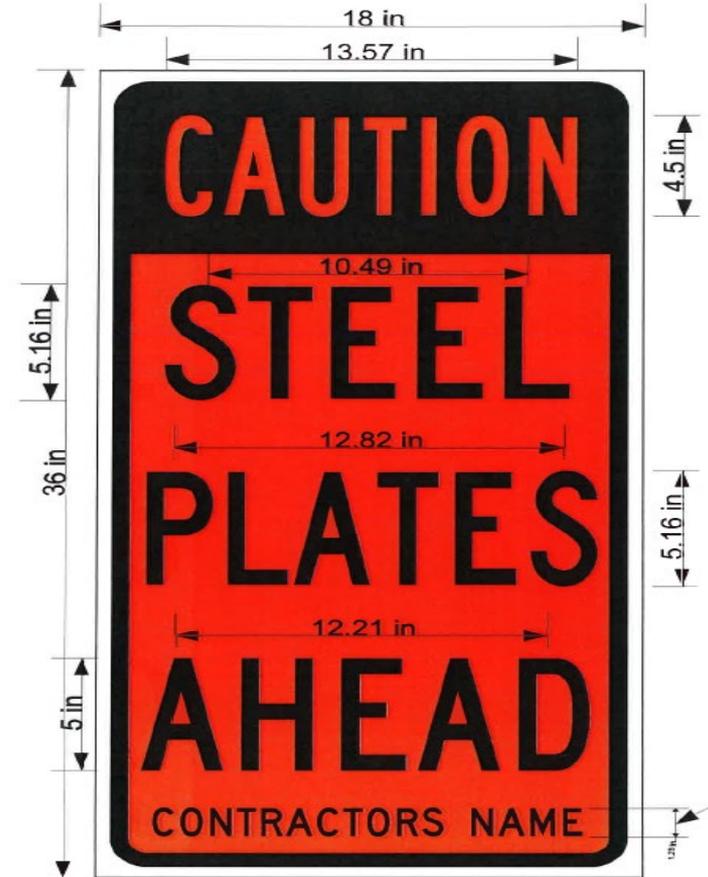
- Plating active excavations comes with the territory.
- Sites are typically plated 16 hours per day which creates a major liability.
- It is so important for the vehicles to be aware the of plates ahead before reaching the work zone.
- Boston will be the leader on notifying the public of steel plates in use.

***Steel Plate Ahead signs will be required throughout both Construction Season and Winter Moratorium.***



# Steel Plate Ahead Specifications

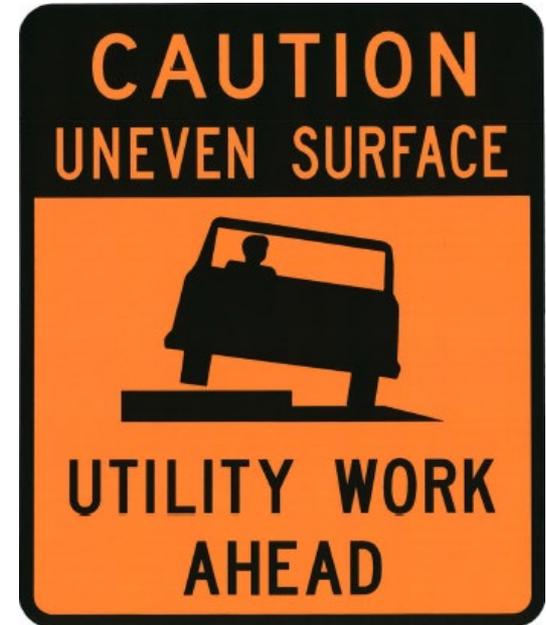
- Retroreflective Florescent Orange (Type 4) Material
- Securely bracketed to pole 6' from bottom of sign to ground.
- Posted 200'-300' in advance of plated area.
- Must be placed in both directions if plates span across centerline.



# Trench Awaiting Final Top Signage

---

- **Mandatory on all projects where binder will be left down for extended period of time.**
- The City understands the best procedure regarding final paving of major trenches is to apply the binder course first, and then wait for the services to be installed before the final top course.
- By doing that, we leave the binder trench course down for extended periods of time.
- This has led to complaints to our mayors hotline, with the feedback being that it's either a bad job or with questions on why the trench is down.



# Remove Signs After Work is Completed

---

- The Public Works Department received many calls in 2017 about signs being left up on streets long after the work was completed.
- Your crews must remove “No Standing” signs immediately upon finishing your work.
- Remember to remove your “Steel Plate Ahead” and “Uneven Surface” signs as well.



# Utility Repair Tags

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*Remember to order your 2019 tags!*

- ALL Permittees working in the City of Boston are required to install 2019 Utility Repair Tags on all asphalt patches.
- Companies without Utility Repair Tags must contact the Construction Management Division of PWD to identify what their company's tag should look like for ordering.
- Any company found to not be installing their Utility Repair Tags, or installing them improperly, may be shut down and have a meeting scheduled in City Hall to discuss proper tag placement technique.

# Utility Repair Tags

---

**Utility Repair Tags** are installed during the final lift of paving. **The tags must be pressed into the asphalt BEFORE compaction of the final lift commences.**

The tags shall be imbedded at zero grade tolerance, or slightly below, and must be of one piece construction.

The use of nails to secure tags is prohibited.

The color - coded Utility Repair Tags are NOT intended to identify underground utility infrastructure. The Utility Repair Tags are only to identify the Permittee who is responsible for maintaining the compliance of a temporary roadway or sidewalk patch/trench.

# Utility Repair Tags

---

Utility Repair Tags must be used on any temporary cold patch, silvex, or asphalt material placed.

Utility Repair Tags should not be placed within 12” from any casting unless space does not allow otherwise.

Utility Repair Tags should be placed away from direct wheel traffic when able.

The Permittee is responsible for replacing damaged or faded identification **Utility Repair Tags** throughout the three year guarantee period of a utility patch/ trench repair.

The Permittees will not be responsible for maintaining their patch/ trench if the excavation is interrupted by another utility, or if the location is permanently repaired.

# Utility Tag Placement Guideline

Patch/Trench Length	Tag Placement	
$X < 50'$	1 tag placed in the center of the patch	<b>ALL LATERALS EXTENDING FROM MAIN PATCH OR TRENCH MUST HAVE THEIR OWN TAG IN THE CENTER OF THE LATERAL!</b>
$50' \leq X \leq 100'$	1 tag placed at each end of the patch/trench approximately 12" from the edge	
$100' \leq X \leq 400'$	1 tag placed in the beginning, center, and end of the trench, with the beginning and end tags approximately 12" from the edge. An additional tag must be placed at every intersecting street	
$X > 400'$	1 tag placed at the beginning and end of the trench approximately 12" from the edge, and at every 200 linear foot intervals. An additional tag must be placed at every intersecting street	

# Item 3 – Safe Work Zone

- OSHA / ADA / AAB / Dig Safe requirements maintained at all times.
- Jackie's Law applicable on unattended trench excavations.
- Safe & Guarded Work Zone
- Continuous Barricades (where required)
- Shoring (where required)
- Sidewalk Closed Signs required at closest ramps. Federal Requirement (ADA)

*Be sure to keep a safe, clean & well defined jobsite!*



CITY OF BOSTON - PUBLIC WORKS DEPT  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR

INSPECTORS REPORT  
 Normal CIU Inspection       Other Inspection  
please specify complete, etc, etc, etc.  
 Inspection items not performed      Size of Cut on Permit? .....

PERMIT #: \_\_\_\_\_      **Permittee:** \_\_\_\_\_      **Contractor:** \_\_\_\_\_  
**Address:** \_\_\_\_\_      **Foreman:** \_\_\_\_\_      **Phone:** \_\_\_\_\_  
**Street:** \_\_\_\_\_      **Time From:** \_\_\_\_\_      **To:** \_\_\_\_\_      **Total Hours:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_  
**Date:** \_\_\_\_\_      **Weather/Temp:** \_\_\_\_\_

	Y/N	YES	NO	Notes	Violation
1. Current Permit Present?	Y/N	YES	NO	.....	<input type="checkbox"/>
2. Abiding to Permit Restrictions?	Y/N	YES	NO	.....	<input type="checkbox"/>
3. Safe Work Zone?	Y/N	YES	NO	.....	<input type="checkbox"/>
4. Suitable Reused Crust Material?	Y/N	YES	NO	.....	<input type="checkbox"/>
5. Suitable New Crust Material?	Y/N	YES	NO	.....	<input type="checkbox"/>
6. Compacted In 2" Maximum Lites?	Y/N	YES	NO	.....	<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	Y/N	YES	NO	.....	<input type="checkbox"/>
8. Opening Secured?	Y/N	YES	NO	.....	<input type="checkbox"/>
9. Two 1-1/2" Lites of Hot Mix Asphalt?	Y/N	YES	NO	.....	<input type="checkbox"/>
10. Final Paving Requirements?	Y/N	YES	NO	.....	<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	Y/N	YES	NO	.....	<input type="checkbox"/>
12. Temp Sidewalk Accessible?	Y/N	YES	NO	.....	<input type="checkbox"/>
13. Permanent Sidewalk Complete?	Y/N	YES	NO	.....	<input type="checkbox"/>
14. Pedestrian Ramp Complete?	Y/N	YES	NO	.....	<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	Y/N	YES	NO	.....	<input type="checkbox"/>
Violation Detected? YES	NO	NO	NO	Photo? YES NO	SHUTDOWN <input type="checkbox"/>
Utility Rep. Contacted? YES	NO	NO	NO	.....	.....

Comments: \_\_\_\_\_  
 Inspected by: \_\_\_\_\_      Signature: \_\_\_\_\_      Date: \_\_\_\_\_  
Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM

# Inventory

---

- Before the start of the Construction season you must check all your equipment to be sure they are in working order. None of us want to have your work stopped suddenly due to equipment breakdown.
- Signage
  - All Permittees must have ALL appropriate signage for utility construction work. Lack of proper signage will result in immediate shutdown.
  - All signage must have lettering that is clearly visible. Damaged signs should be replaced. At no time should a sign be illegible to the public.
  - At a minimum, all companies should own at least two ID signs for every permitted job site they intend to have active at the same time.
  - All companies must have the proper Sidewalk Closed signs for each job.
- Delineation of work site
  - Cones, tape, barrels, interlocking barricades, etc.

# Protecting Your Work Zone

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- Boston is densely populated. Must take care in protecting your work zones.
- The Permittee must surround the excavation with cones, barrels, barricades etc.
- The cones and barrels must be taped or roped to protect the pedestrians, workers and vehicles passing through the work zone.
- Continuous barricades must be used where specified by the BTM
- There will be no exceptions and violations for noncompliance will be issued and the job will be shut down.



# Sidewalk Access During Construction

---

- When working on a public sidewalk, or along the curb in the roadway, it is important for the crew to always maintain a safe, traversable pedestrian path around the work site.
  - The BTD may require, in some instances, that a safe and compliant temporary path of travel be established around the work zone.
- In most instances, working in the sidewalks in Boston means reducing the path of travel to less than the ADA required four foot diameter, and therefore will result in the crew temporarily closing access.
- When a crew must close access to a sidewalk they must notify all pedestrians that the sidewalk is closed by placing “Sidewalk Closed” signs at the closest pedestrian access ramps at either end of the sidewalk being worked on.
  - Sidewalk Closed signs must only be placed where there is both a crosswalk and a corresponding pedestrian access ramp across the street allowing individuals requiring mobility assistance to safely, and successfully cross.
  - If there are no reciprocating ramps across the street from the closed sidewalk the crew must locate the safest accessible route and direct pedestrians along that path.

# Impact of Construction

---

- Your construction work has a real and significant impact on the residents and commuters of Boston.
- The Traffic Management Plan approved by BTD is designed to reduce the inconvenience of construction work to the public.
- Personnel should try and visualize themselves from the perspective of the residents and commuters.
  - How would I feel if I was driving through this work site?
  - What would I think if I was trying to navigate around this work zone?
    - **This is especially important for persons needing mobility assistance such as a walker, white cane, or wheelchair .**
- Your supervisors and crews must keep the public in mind, and how their work is affecting them, when occupying and excavating the public way. It will make you think differently.
- Safety is paramount, both to your crew and to the public.

# Barricades

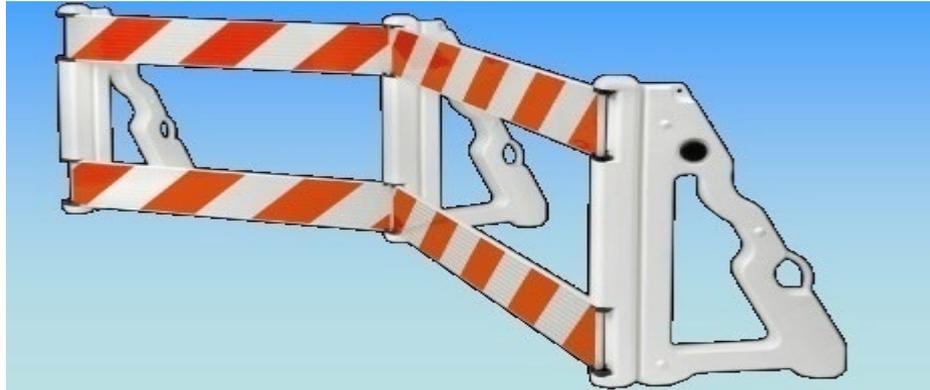
---

- Both the PWD and the BTD have determined that certain locations require more than just tape or rope between cones to secure a work site for the protection of pedestrians and workers
- The BTD & the CIU have determined that certain work zones will require the use of Barricades.
  - Barricades are for delineation of active excavation outside of pedestrian areas sites and are not compliant for pedestrian path of travel.
- These barricades must adhere to OSHA specifications.
- The PWD enlisted the assistance of certain contractors to begin testing the use of Continuous Barricades.
  - Those contractors, along with BPD Detail officers, agreed that the barricades provided superior protection of the workers, motorists, and pedestrians alike.
- **BTD will sign off on the type of barricades to be used based upon location and traffic needs.**

# Temp Pedestrian Path of Travel

---

- Certain BTD Traffic Management Plans may require the application of temporary pedestrian paths of travel (Jersey Barriers, etc).
- The BTD may require an ADA compliant pedestrian barricades and channelizing devices for the visually impaired on a case by case basis.



# MUTCD STATUTES

---

## R302.4

Pedestrian barricades and channelizing devices shall be continuous, stable, and non-flexible and shall consist of a wall, fence, or enclosures specified in section 6F-58, 6F-63, and 6F-66 of the MUTCD (incorporated by reference; see R104.2.4).

### R302.4.1

A continuous bottom edge shall be provided 150 mm (6 in) maximum above the ground or walkway surface.

### R302.4.2

Devices shall provide a continuous surface or upper rail at 0.9 m (3.0 ft) minimum above the ground or walkway surface. Support members shall not protrude into the alternate circulation path

# Foreman's Checklist for Items 1-3

---

- Before excavation begins the Foreman must have performed the following:
  - Checked to be sure the current permit is valid and on site.
  - Made sure that all required signage has been placed properly (ID, sidewalk closed, utility ahead, etc.)
  - Verified that all BTM traffic regulations are being upheld, allowing traffic flow (cones, interlocking barricades, barrels, tape, etc.).
  - Excavation area has been secured and cordoned off.
  - Competent Person is on site.
  - Utility Repair Tag markers are on site for installation in patch/ trench work.

***Only after each of the above requirements has been established can the work take place.***





**Not  
Acceptable!**



**Acceptable.**

# Approved Material Sources

---

- *All material used for roadway and sidewalk construction in the City of Boston must come from an approved source. Materials include:*
  - *Backfill material*
  - *Asphalt*
  - *Concrete*
- *The City will maintain an updated list of approved vendors on the Public Works website.*
- *A Permittee may request to use a vendor not listed on the City's website. The requested source will be subject to testing before approved by the City.*
  - *If approved that vendor will be added to the website.*

# Failed Test Consequences

---

- *The City's position is to allow all vendors to sell or use your material as long as it meets City specifications.*
- *If your company fails a material test, you will automatically be suspended from using or selling that material.*
- *You must reach out to our consultant testing company, **Briggs Engineering** , to schedule a retest of the material.*
- *If the material passes, you will be allowed to resume using or selling that material.*
- *Please respect that the City of Boston must ensure that its roads and side-walks are restored to their original conditions.*

# Item 6 – Compaction

This is a critical step in street opening restoration

- Standard - **6" lifts** sufficient for standard equipment (jumping-jack).
- Control-strip required for equipment capable of greater compaction depth.
- Crowded trench can prohibit standard compaction.
- Poor compaction results in unacceptable patches/ trenches.
- Any Permittee work zone found to be in egregious violation of Item 6 shall be shut down.
- Trust will have been broken!
  - Possibility of all active work zones being shut down (Excluding Emergency work)



**CITY OF BOSTON - PUBLIC WORKS DEPT.  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR  
INSPECTION REPORT**

Normal CMI Inspection       Other Inspection      *Site of Cut or Patch?*

Inspection Route not performed       Inspection Route performed

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Responsible or Subcontractor:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_

**Street:** \_\_\_\_\_ **Longitude:** \_\_\_\_\_ **Latitude:** \_\_\_\_\_

**Subcontractor:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Weather Temp:** \_\_\_\_\_

Code	Description	YES	NO	Notes	Violation
1.	Current Permit Expires?	YES	NO	.....	<input type="checkbox"/>
2.	Adding to Permit Restrictions?	YES	NO	.....	<input type="checkbox"/>
3.	Is the Work Zone?	YES	NO	.....	<input type="checkbox"/>
4.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
5.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
6.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
7.	Controlled Access? (CMI)	YES	NO	.....	<input type="checkbox"/>
8.	Controlled Access? (CMI)	YES	NO	.....	<input type="checkbox"/>
9.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
10.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
11.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
12.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
13.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
14.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
15.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
16.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
17.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
18.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
19.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
20.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
21.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
22.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
23.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
24.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
25.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
26.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
27.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
28.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
29.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
30.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
31.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
32.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
33.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
34.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
35.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
36.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
37.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
38.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
39.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
40.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
41.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
42.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
43.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
44.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
45.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
46.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
47.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
48.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
49.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
50.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
51.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
52.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
53.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
54.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
55.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
56.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
57.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
58.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
59.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
60.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
61.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
62.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
63.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
64.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
65.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
66.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
67.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
68.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
69.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
70.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
71.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
72.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
73.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
74.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
75.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
76.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
77.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
78.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
79.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
80.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
81.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
82.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
83.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
84.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
85.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
86.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
87.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
88.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
89.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
90.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
91.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
92.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
93.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
94.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
95.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
96.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
97.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>
98.	Is the Work Zone Closed to Bicyclist?	YES	NO	.....	<input type="checkbox"/>
99.	Is the Work Zone Closed to Motorist?	YES	NO	.....	<input type="checkbox"/>
100.	Is the Work Zone Closed to Pedestrian?	YES	NO	.....	<input type="checkbox"/>

**Utility Rep. Contacted?** YES NO

**Shut Down?** YES NO

**Shut Down Reason:** \_\_\_\_\_

**Inspector:** \_\_\_\_\_ **Signature:** \_\_\_\_\_

\* Normal CMI Working Hours Monday-Friday 7:30 AM - 4:30 PM





# After-Hours Backfill & Pave

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- Work where the backfill and paving operations are scheduled to take place on weekends or after normal working hours must have prior approval by the BPWD.
- If a company performs emergency work after 4:00pm during the week, or on a weekend, the City may require the location to be plated until such a time that a CIU Inspector can be assigned to witness the backfill and/ or pave on their next scheduled work day.
- The CIU reserves the right to require any Permittee to perform compaction testing (Nuclear Density) at the cost of the Permittee.

# Settlement of 2 or More Inches

---

- Properly backfilling your excavation is the most important step in construction.
- Failure to compact gravel to specifications results in uneven and settled patches.
- Every bad patch that needs to be repaired due to poor construction practices is money out of your company's pocket. Do work right the first time for your own benefit!

# Settlement of 2 or More Inches

---

- Roadway patches and trenches that have settled 2 or more inches must be given the highest priority for repair.
- As a condition of receiving a permit your company has pledged to the City that you will repair any locations found to be unacceptable to the Rules & Specifications.
- This means providing the resources to meet any backlog of repairs as well as newly identified unacceptable locations.
- Any roadway patch identified as settling 2” or more must be repaired by your company prior to the City's patch repair program. This includes placing new gravel to prepare for permanent restoration.

# Improper Compaction is the Leading Cause to Patch Failure



# Reasons for Settlement >2"

---

- Material did not meet City specifications
- Material was too dry at the time of backfill
- Material was frozen at the time of backfill
- Material was too wet at the time of backfill
- Backfilling happened in inclement weather
- Improper backfill compaction equipment was used
- Backfilling in lifts greater than 6 inches with standard equipment
- Backfilling in lifts greater than 2 feet with approved equipment
- Too few passes with approved compaction equipment
- **All of these reasons are unacceptable and can be avoided**

# Gravel Requirements of MassDOT M 1.03.11

## Recycled material for backfill

Sieve Size		Specifications
Standard	Alternate	M1.03.1 Processed Gravel for Subbase
75 mm	3"	100
37.5 mm	1-1/2"	70-100
19 mm	3/4"	50-85
4.75 mm	#4	30-60
0.075 mm	#200	0-10

### Percent Recycled Material

Asphalt, % 5 max

Soil and Natural Gravel, % 50 min

- Boston is allowing the use of recycled material that meets M1.03.11 specifications for utility excavation backfill.
- Boston knew that recycling is the way of the future and we understand that the use of recycled material for utility backfill will be the standard soon.

# Gravel Testing

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- Annual gravel testing and lab -certification of current maximum dry density, and corresponding moisture content (ASTM D 1557) of granular material has been performed and submitted to PWD for approval, as specified in Section 9.01(E).
  - The PWD will periodically test gravel samples throughout the construction season, both in the field and at the vendor's plant.
  - A list of approved vendors is available on our PWD website.
- **We were very disappointed in repeated failures of many of the suppliers to meet the City's Recycled Gravel mix specifications. Some of the failures were major.**
- After last year's test results we expect every gravel supplier to be fully on board with the mix design and not have multiple failures again in 2016.
- Failure to adhere to the City's specs will result in that supplier only being allowed to provide approved processed M 1.03.11 Gravel.
- **The City, depending on the number and degree of failure, will temporarily suspend that supplier from providing or selling gravel to be used in backfilling utility excavations city -wide.**

# Concrete Requirements

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- Concrete shall be air entrained, 4000 psi, and three-quarter ( $\frac{3}{4}$ ) inch maximum size aggregate with 660 lbs of cement per cubic yard of concrete. Entrained air shall be between 5.5% and 7.5% with a slump not to exceed four-and-one ( $4\frac{1}{2}$ ) half inches. ASTM C150 Type 11 cement shall be used. The use of mineral additives or supplements such as Ground Granulated Blast Furnace Slag, Fly Ash, Silica Fume or Micro Silica is prohibited. Normal weight aggregate shall conform to ASTM C33, containing no deleterious substances, which cause surface spalling. The Permittee must certify that no alkali reactivity is produced with the proposed aggregate-cement combinations when tested in accordance with ASTM C227.
  - All concrete shall be produced in accordance with the approved mix designs. The Permittee shall comply with ACI 304 and 309 as herein specified.
  - The Permittee shall be allowed to add water for slump adjustment, but is required to adhere to the standards of ASTM C94. This standard allows for slump adjustment on site if the truck arrives with a concrete slump less than four-and-one-half ( $4\frac{1}{2}$ ) inches. This shall only be allowed if the following conditions are satisfied:
    - The water addition shall not increase the water cement ratio above the maximum permitted by the specification.
    - The water shall be added to the entire batch, not in the middle or end of the batch.
    - Water addition is not allowed to by-pass the  $1\frac{1}{2}$  hour or 300 revolution criteria.
    - Water shall be added into the batch at the head section of the drum or by injection into the head and discharge section of the drum.
    - Water added requires an additional 30 revolutions at mixing speed.
    - The driver's delivery ticket shall document any water withheld at the batching plant.

# Concrete Testing: Ready Mix

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- All suppliers will provide their mix formulas to Briggs Engineering for testing ([sskorohod@briggsengineering.com](mailto:sskorohod@briggsengineering.com))
- Once approved you will be allowed to sell and provide concrete in the City of Boston.
  - A list of approved vendors is available on the PWD website.
- The City will periodically test your material in the field or at your plant.
- The good news is that all of the suppliers in 2016 were approved and tested consistently throughout the construction season.
- Thank you for supplying the City of Boston with the concrete material we need to restore our sidewalks.

# Concrete Testing: Mobile Mixers

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- All suppliers will provide their mix formulas to Briggs Engineering for testing ([sskorohod@briggsengineering.com](mailto:sskorohod@briggsengineering.com))
- All personnel for companies restoring concrete sidewalks must be qualified and experienced in performing sidewalk repair work. The City will require proof of qualification.
- The City may require crews to meet with Briggs Engineering and/ or City Engineers in the field to verify all necessary equipment and materials are on site to properly perform the work.
- Once approved you will be allowed to sell and provide concrete in the City of Boston.
  - A list of approved vendors is available on the PWD website.
- Your company must never tamper with the job mix formula in the field.
  - Need job mix formula with slip on work site at all times.
- The City will periodically test your material in the field.

# BAD PATCH RESPONSE TIMELINES

Bad Patch Type	Response Time
Public Safety (Shifted Plate, Patch Down 6", etc...)	Protection site within <b>1 Hour</b> ; Mobilize crew for repair <b>within 3 Hours</b>
2" or Greater Settled	Must repair within <b>2 business days</b> of notification
Less than 2" Settled	Within <b>7-13 Days</b> of notification

# CASTING REPAIR RESPONSE TIMELINES

Erosion Repairs	Response Time
Public Safety - Erosion	Temp Repair within 3 Hours
	Perm Repair within 14 Days
Non Public Safety - Erosion	IP and 1's Temp Patch within 1 Business Day
	2's & 3's Temp Patch within 2 Business Days
	Perm Repair within 14 Days
Adjustment Repairs	Response Time
Public Safety - Adjustment	Make Safe within 3 Hours
	Repair within 48 Hours
Non Public Safety - Adjustment of 2+"	Make Safe within 24 Hours
	Repair within 7 Days
Non Public Safety - Adjustment under 2"	Repair within 30-60 Days

# Pothole and Eroded Casting Repairs

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- You own 30” around your castings.
- Thank you for allocating resources during the winter to patch your castings.
- However, there is still more to be done!
- More resources will need to be allocated beginning immediately, until the weather becomes consistently warm.
- **We won't hesitate to stop permits if we believe you're ignoring these repairs .**

## **Commitment to Repair Failed Street Cuts or Infrastructure**

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- **Permittees must repair all unrepaired bad patch locations before permits will be issued.**
  - The City will consider approving permits to Permittees who designate crews to simultaneously repairing locations while new work takes place.
  - The PWD will not waiver on that position.
- **The repairs cannot be minimal or superficial. The crews must fully address the roadway issues.**

## \*\*\*VERY IMPORTANT\*\*\*

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- If the CIU determines your crews are only sporadically addressing the problematic locations then the City will reassess whether or not to continue issuing permits for new work.
- The use of milling machines and spreaders may be the only alternative. We know that weather will play a determining factor on when milling and paving can take place. The CIU will make the final determination.
- Until the issues have been addressed the CIU will be sending daily reports of all unacceptable street cut work. In addition we will be sending a casting report as well. This will be your working list. Starting April the list will be sent on a weekly basis.
- Your company should also address any needs you've identified that are not already on the list as well.

# Foreman's Checklist for Items 4-6

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- Before backfilling takes place the Foreman must have performed the following:
  - Is the gravel being supplied from an approved source?
    - Reject any material that is frozen, too wet, too dry, or otherwise visually appearing out of specifications.
    - Even if the gravel is coming from an approved source, if a foreman has what the CIU determines to be unacceptable backfill material, the Foreman is liable.
  - All standing water pumped out of excavation
  - On standard backfill compaction equipment (Jumping-Jacks, plate compactors, etc) the Foreman must perform no more than 6" lifts with at least 5-7 passes each lift.
    - *The maximum allowed lift size for a hoe pack is 2', unless otherwise authorized by PWD.*
    - An Asphalt Plate Compactor is NOT an acceptable tool for gravel compaction during backfill procedures.

# Item 7 – Controlled Density Fill (CDF)

- Flow-Fill to be used only with permission from PWD
- 24” gravel buffer to be provided below pavement structure for drainage
- Min. 24 hr setup



CITY OF BOSTON - PUBLIC WORKS DEPT  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR  
INSPECTORS REPORT

Normal CU Inspection  Other Inspection \_\_\_\_\_  
please specify violation, etc. PWD, etc.  
 Inspection items not performed Size of Cut on Form? \_\_\_\_\_

PERMIT #: \_\_\_\_\_ Permitted: \_\_\_\_\_ Contractor: \_\_\_\_\_  
 Address: \_\_\_\_\_ Patch / Trench or Patch / Trench: \_\_\_\_\_ Depth? \_\_\_\_\_  
 Street: \_\_\_\_\_ Foreman: \_\_\_\_\_ Photo: \_\_\_\_\_  
 Neighborhood: \_\_\_\_\_ Time From: \_\_\_\_\_ To: \_\_\_\_\_ Total Hours: \_\_\_\_\_  
 Date: \_\_\_\_\_ Weather/Temp: \_\_\_\_\_  
Day of the week, Month, & Year

Notes	Violation
1. Current Permits Present?	<input type="checkbox"/>
2. Abiding to Permit Restrictions?	<input type="checkbox"/>
3. Safe Work Zone?	<input type="checkbox"/>
4. Suitable Reused Gravel Material?	<input type="checkbox"/>
5. Suitable New Gravel Material?	<input type="checkbox"/>
6. Compacted in 8" Maximum Lifts?	<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	<input type="checkbox"/>
8. Opening Secured?	<input type="checkbox"/>
9. Two 5-1/2" Lifts of Hot Mix Asphalt?	<input type="checkbox"/>
10. Final Paving Requirements?	<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	<input type="checkbox"/>
12. Temp Sidewalk Acceptable?	<input type="checkbox"/>
13. Permanent Sidewalk Complete?	<input type="checkbox"/>
14. Pedestrian Ramp Complies?	<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	<input type="checkbox"/>
Public Safety Issue?	<input type="checkbox"/>
Violation Detained? YES NO	Photo? YES NO
Utility Rep Contacted? YES NO	SHUTDOWN <input type="checkbox"/>

Comments: \_\_\_\_\_  
 Inspected by: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\* Normal CU working hours Monday-Friday 7:30 AM - 4:00 PM





# Steel Plate Ahead Signage

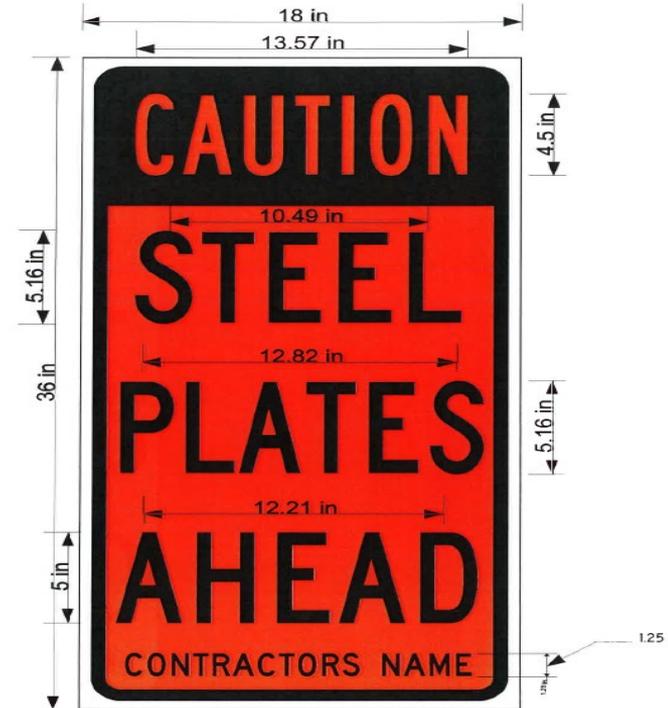
---

- Plating active excavations comes with the territory.
- Sites are typically plated 16 hours/ day which creates a major liability.
- Signs will be secured to existing poles and will remain up until plates are removed.
- Required throughout both Construction Season and Winter Moratorium.
- Signs must be taken down after work is completed.



# Steel Plate Ahead (Spec)

- Retroreflective Fluorescent Orange (Type 4) Material
- Securely bracketed to pole 6' from bottom of sign to ground.
- Posted 200'-300' in advance of plated area.
- Must be placed in both directions if plates span across centerline.



# More on Steel Plates

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- Any steel roadway plate(s) located in a high concern area must have a skid resistant coating applied for the safety of the riders (Mandatory as of November 15<sup>th</sup>, 2013).
- **Absolutely No openings are to be left in gravel, unless otherwise authorized by PWD**
- Cold Patch/ Silvex - Any excavation left to grade in Cold Patch asphalt must be monitored and replaced within 48 hrs unless otherwise approved.
- **Temporary Pedestrian Ramps must be ADA/AAB compliant at the end of each day.**
- The City will not tolerate excavations that have not been secured as specified in the Rules and Specifications.
- **The City will not accept excuses, lack of effort, or a lack of professionalism when it comes to securing job sites in the City of Boston.**
- **Securing the Public's Safety comes before the convenience of doing work.**

# Not Acceptable!



# Acceptable

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# Inactive locations & Jackie's Law

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## Jackie's Law

- Applies to unattended open trenches.
- Any public safety violation on unattended trenches will be cited under “Jackie’s Law” as well as BPWD Rules and Specifications.
- Any public safety violation on attended trenches will be a violation of OSHA as well as BPWD Rules and Specifications.

Any site where the excavation is in excess of 3' below grade and the depth of which is, in general, greater than the width, but the width of the trench, as measured at the bottom, is no greater than 15' will be subject to “Jackie’s Law” and all regulations therein.



# Skid-Resistant Plates

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- In November of 2012 the City began exploring the use of skid -resistant roadway plates for “High Concern” locations that needed a greater amount of protection (bike lanes, bus lanes crosswalks, sidewalks, etc.).
- The City gave you a year notification regarding the use of skid-resistant plates.
- This allowed you to begin to find the best methodology and cost for obtaining skid-resistant plates.
- These plates are currently being used by all contractors throughout the City for the Winter Moratorium, and reports from both the contractors and our City inspectors have indicated that the plates are an improvement.
- **Skid Resistant plates have been mandatory since April 15<sup>th</sup> 2014 for all Permittees in “High Concern” locations throughout the City.**
- The City may decide to expand the use of Skid Resistant plates once it has been given a chance to further review the use and effectiveness of them.

# Skid-Resistant Plates Continued

- Skid Resistant plates are now mandatory for ALL Permittees in 'High Concern' areas throughout the City.
- 'High Concern' areas include:
  - Crosswalks
  - Sidewalks
  - Bike Lanes
  - Bus Lanes
  - Steep Inclines
- Skid resistant plate surface (grip) should be equal to or greater than the adjacent existing street or roadway surface.
- Speak to your fellow contractors for information on where to buy/rent skid resistant plates.
- Make sure these plates are beige in color.
- **If the inspectors determine your skid - resistant plates do not meet our specifications, they will be rejected for use.**
- PWD will require you to provide us your inventory of these plates to ensure compliance.



# Need to Improve Plating

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- You need to be vigilant every time you are properly securing the work zone at the end of the day.
- Crews need to focus on ensuring there is sufficient overlap of steel plates on the roadway (at least 18”) and that there is no movement or bending of the plates from traffic.
- The asphalt or cold patch berm around your plates must be compacted with a plate compactor.
  - The berm ramp should be at least 24” on the driven sides of the plate, and 18” on the non-driven sides of the plate. This provides a smooth ride and reduces the risk of shifting.
- **Failure to properly secure your plates is a serious violation and can result in an immediate shutdown of your active work.**

# Foreman's Check List for Item 8

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- Before the Foreman and crew leave the job site at the end of their shift, they must have performed the following:
  - All paved areas (Cold Patch or HMA) are to grade of the existing roadway.
  - The work zone is swept and clean of debris and ADA/ AAB compliant.
  - The sidewalls of the excavation has been inspected for stability and shored where needed before plating.
  - All plates must have the ID name and emergency contact phone number clearly visible.
  - The crew has observed vehicular traffic traveling over the plates to verify that no banging, bouncing, shifting, warping, vibration, etc. is taking place.
  - All posting dates are accurate with dates and permit information.
  - No equipment or material is stockpiled without the express permission from the BTD.



# Items 9 & 10 – Final Paving Requirements

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- A Tack Coat shall be painted to the pavement sidewalls of the entire excavation to prevent water infiltration.
- The asphalt cross-section is to be applied in two even lifts. **This is critical to have a good smooth level patch** . Leave at least 1.5” of space between the base course and the grade of the road to allow for enough top to be placed.
- The first lift must consist of 1.5” Boston dense binder or Boston modified top unless otherwise approved.
- The last lift must consist of 1.5” Boston top unless otherwise approved.
- Proper compaction equipment must be used.
- **Utility Repair Tags must be installed in any temporary cold patch, silvex, or asphalt material placed in a patch or trench.**

**Not Cut Squared, No Tack Coat, Road Gouged, No Tag... Unacceptable!**



# Cut Squared, Smooth & Level

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# Foreman's Check List for Items 9 & 10

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- Before the final paving has taken place, the Foreman must have performed the following:
  - The pavement cut has been squared off with vertical sidewalls in neat, straight lines.
  - The pavement sidewalls are clear of debris and have had a tack coat applied.
  - The crew has a supply of both HMA Binder and Top.
  - Trench Uneven signs posted for major work.
  - Proper compaction equipment is available, and used (mechanical roller, plate compactor, etc.).
  - Asphalt is compacted in two even lifts with approved material.
  - Utility Repair Tags are updated and enough are on site for every cold patch, silvex, or asphalt patch/ trench.

# Item 11 – Roadway Satisfactorily Complete

- If our procedures are followed, the final result should be (and remain) smooth & level.
- Violations regarding the failure of roadway patches and trenches remain the biggest contributor to the unacceptable compliance rating.
  - Settled patches
  - Patches humped above grade
  - Not cut squared
  - Not smooth and level
  - Improper pavement material, etc.

**CITY OF BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTORS REPORT**

Normal CIU Inspection       Other Inspection \_\_\_\_\_  
 Inspection Base not performed \_\_\_\_\_  
 please specify violation, RTA, BMMC, etc.  
 Size of Cut on Form? \_\_\_\_\_

Roadway or Sidewalk? \_\_\_\_\_  
Patch / Trench or Patch / Trench      Depth? \_\_\_\_\_

PERMIT #: \_\_\_\_\_      Permittee: \_\_\_\_\_  
 Address: \_\_\_\_\_      Contractor: \_\_\_\_\_  
 Street: \_\_\_\_\_      Foreman: \_\_\_\_\_      Phone: \_\_\_\_\_  
 Neighborhood: \_\_\_\_\_      Time From: \_\_\_\_\_ To: \_\_\_\_\_      Total Hours: \_\_\_\_\_  
 Date: \_\_\_\_\_      Weather/Temp: \_\_\_\_\_  
Day of the week, Month, & Year

	YES	NO	Notes	Violation
1. Current Permits Present?	wa	YES NO	.....	<input type="checkbox"/>
2. Abiding to Permit Restrictions?	wa	YES NO	.....	<input type="checkbox"/>
3. Safe Work Zone?	wa	YES NO	.....	<input type="checkbox"/>
4. Suitable Raised Crawl Material?	wa	YES NO	.....	<input type="checkbox"/>
5. Suitable New Crawl Material?	wa	YES NO	.....	<input type="checkbox"/>
6. Compacted In 8" Maximum Lifts?	wa	YES NO	.....	<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	wa	YES NO	.....	<input type="checkbox"/>
8. Opening Secured?	wa	YES NO	.....	<input type="checkbox"/>
9. Two 5-1/2" Lifts of Hot Mix Asphalt?	wa	YES NO	.....	<input type="checkbox"/>
10. Final Paving Requirements?	wa	YES NO	.....	<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	wa	YES NO	.....	<input type="checkbox"/>
12. Ramp Sidewalk Acceptable?	wa	YES NO	.....	<input type="checkbox"/>
13. Permanent Sidewalk Complete?	wa	YES NO	.....	<input type="checkbox"/>
14. Pedestrian Ramp Complies?	wa	YES NO	.....	<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	wa	YES NO	.....	<input type="checkbox"/>
Public Safety Issue?		YES NO	.....	<input type="checkbox"/>
Violation Detained?	NO		Photo? YES NO	<input type="checkbox"/>
Utility Rep Contacted?	YES	NO		<input type="checkbox"/>

Comments: \_\_\_\_\_  
 Inspected by: \_\_\_\_\_      Signature: \_\_\_\_\_      Date: \_\_\_\_\_  
If the city or the contractor is not available for a minimum of 24 hours

\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM



# Unacceptable Final Repair

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- Quality of roadway patches show improvement, but remains unacceptable. Continue improving!
- Final repairs are considered unacceptable when:
  - The loop detectors or pavement markings are not replaced as required
  - The excavation patch is not to grade with the roadway/sidewalk; is not cut squared; or improper material was used
  - Sidewalk locations were not repaired within 60 days as required

# 90-Day ReInspection - CIU's Most Critical Inspection

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- The CIU inspects excavation work a minimum of 90 days after the completion of construction work.
- If your patch or trench patch remains smooth & level at least 90 days after your work is completed it is not likely settle.
- *I consider this to be the most important statistic, and a true indicator of the effectiveness of the CIU.*
- The initial final repair inspection is important, but if this percentage is unacceptable then it's all for naught.
- Compaction is the key to having quality work.
- The Hansen Permitting and Reporting Program will now track 90 day inspection findings.
- In past years the average acceptability rating has been over 98%

# Unacceptable Patch/Trenches

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## *“Bad Patch” – procedure must be followed*

- Identified by CIU as “unacceptable” under Items 11, 12, & 13
- Bad patch locations will be e-mailed to the permittee from the field
- Permittee will also be notified by EMAIL or PHONE as a backup
- Permittee has 48 hrs to confirm or contest
  - Contested patches on hold until field meeting
  - Confirmed have until end of following week to repair
    - No communication results as “confirmation” of ownership
- **Failure to address bad patches result in suspension of permits**
- **Public Safety locations require immediate response**
- Report Card - Tool used for self evaluation
- **No New Permit Requests will be issued until all existing bad patches have been repaired as required.**

# BAD PATCH RESPONSE TIMELINES

Bad Patch Type	Response Time
Public Safety (Shifted Plate, Patch Down 6", etc...)	Protection site within <b>1 Hour</b> ; Mobilize crew for repair <b>within 3 Hours</b>
2" or Greater Settled	Must repair within <b>2 business days</b> of notification
Less than 2" Settled	Within <b>7-13 Days</b> of notification
Permanent Sidewalk Repair	Return to existing within <b>60 Days</b> after initial repair (Alternative - PWD will allow Repairs by Neighborhood = Increases production)
Pavement Marking/Loop Detectors	Within <b>3 Days</b> of notification

# Item 12 – Temporary Sidewalk

- Temporary Sidewalk repairs are to be made immediately
  - MA AAB/ ADA compliant
    - Sidewalk cross slope must not exceed 2% (Strive for 1.5%)
    - Ramp cross slope must not exceed 8.3% (Strive for 7.5%)
  - Maintain a compliant temporary passageway of a minimum of 4' around construction area (See BTM Traffic Management Plan)
  - If unable to maintain minimum 4' passageway the Permittee must provide two (2) *MUTCD R9-10* "Sidewalk Closed – Use Other Side" signs for either side of the site at the nearest intersecting pedestrian ramps.
  - 3" HMA installed in 2 even lifts, smooth and level.

**CITY OF BOSTON - PUBLIC WORKS DEPT.  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR  
INSPECTORS REPORT**

Normal CIU Inspection       Other Inspection \_\_\_\_\_  
please specify complete, RTA, SRM, etc.

Inspection Base not performed      Size of Cut on Permit? \_\_\_\_\_

**Roadway or Sidewalk?** \_\_\_\_\_

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_ **Patch / Trench or Patch / Trench:** \_\_\_\_\_ **Depth?** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Foreman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_

**Date:** \_\_\_\_\_ Day of the week, Month, & Year **Weather/Temp:** \_\_\_\_\_

	YES	NO	Notes	Violation
1. Current Permits Present?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
2. Abiding to Permit Restrictions?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
3. Safe Work Zone?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
4. Suitable Reused Gravel Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
5. Suitable New Gravel Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
6. Compacted In 2" Maximum Lifts?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
8. Opening Secured?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
9. Two 5-1/2" Lifts of Hot Mix Asphalt?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
10. Final Paving Requirements?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
<b>12. Temp Sidewalk Acceptable?</b>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
13. Permanent Sidewalk Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
14. Pedestrian Ramp Complies?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM

**Constituents need to traverse these patches! Uneven patches lead to possible injuries.**



# Not Acceptable!



# Acceptable.



# Items 13 – Permanent Sidewalk

- Permanent repair to be made within 60 days of temporary repair
  - Abide by City material/ installation specs.
  - Edge stone to be reset within area of repair.
  - Entire flag must be replaced
  - Must notify City 24 hours before PCC work takes place.
  - MA AAB/ ADA compliant (see Item 12)
  - If any portion of an existing pedestrian ramp is disturbed by construction, Permittee shall be required to reconstruct the ramp to current ADA/ AAB regulations.
  - Permittee not responsible for AAB reciprocal provision.
  
- Utilities must maintain database of sidewalk restoration locations.

**CITY OF BOSTON - PUBLIC WORKS DEPT  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR**

**INSPECTOR'S REPORT**

Please specify complete, ITS, BMC, etc.  
Size of Cut on Panel: \_\_\_\_\_

Normal CIU Inspection       Other Inspection: \_\_\_\_\_

Inspection items not performed

**Roadway or Sidewalk?**

**Permit #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Push / Trench or Patch / Trench:** \_\_\_\_\_ **Depth?** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_

**Street:** \_\_\_\_\_ **Formman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

Item #	Description	Pass	Fail	Notes	Violation
1.	Current Permits Present?	ya	YES NO	.....	<input type="checkbox"/>
2.	Abiding to Permit Restrictions?	ya	YES NO	.....	<input type="checkbox"/>
3.	Safe Work Zone?	ya	YES NO	.....	<input type="checkbox"/>
4.	Suitable Reused Gravel Material?	ya	YES NO	.....	<input type="checkbox"/>
5.	Suitable New Gravel Material?	ya	YES NO	.....	<input type="checkbox"/>
6.	Compacted in 8" Maximum Lifts?	ya	YES NO	.....	<input type="checkbox"/>
7.	Controlled Density Fill (CDF)?	ya	YES NO	.....	<input type="checkbox"/>
8.	Opening Secure?	ya	YES NO	.....	<input type="checkbox"/>
9.	Two 1-1/2" Lifts of Hot Mix Asphalt?	ya	YES NO	.....	<input type="checkbox"/>
10.	Final Paving Requirements	ya	YES NO	.....	<input type="checkbox"/>
11.	Roadway Satisfactorily Complete?	ya	YES NO	.....	<input type="checkbox"/>
12.	Temp Sidewalk Acceptable?	ya	YES NO	.....	<input type="checkbox"/>
13.	Permanent Sidewalk Complete?	ya	YES NO	.....	<input type="checkbox"/>
14.	Pedestrian Ramp Complies?	ya	YES NO	.....	<input type="checkbox"/>
15.	Reciprocal Provision Complies?	ya	YES NO	.....	<input type="checkbox"/>
16.	Coop Detection? Pavement Markings?	ya	YES NO	.....	<input type="checkbox"/>
17.	Public Safety Issue?	ya	YES NO	.....	<input type="checkbox"/>
18.	Violation Detected?	YES	NO	Phone? YES NO	SHUTDOWN <input type="checkbox"/>
19.	Utility Rep. Consented?	YES	NO		

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM



# Concrete Requirements

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- Concrete shall be air entrained, 4000 psi, and three-quarter ( $\frac{3}{4}$ ) inch maximum size aggregate with 660 lbs of cement per cubic yard of concrete. Entrained air shall be between 5.5% and 7.5% with a slump not to exceed four-and-one ( $4\frac{1}{2}$ ) half inches. ASTM C150 Type 11 cement shall be used. The use of mineral additives or supplements such as Ground Granulated Blast Furnace Slag, Fly Ash, Silica Fume or Micro Silica is prohibited. Normal weight aggregate shall conform to ASTM C33, containing no deleterious substances, which cause surface spalling. The Permittee must certify that no alkali reactivity is produced with the proposed aggregate-cement combinations when tested in accordance with ASTM C227.
  - All concrete shall be produced in accordance with the approved mix designs. The Permittee shall comply with ACI 304 and 309 as herein specified.
  - The Permittee shall be allowed to add water for slump adjustment, but is required to adhere to the standards of ASTM C94. This standard allows for slump adjustment on site if the truck arrives with a concrete slump less than four-and-one-half ( $4\frac{1}{2}$ ) inches. This shall only be allowed if the following conditions are satisfied:
- The water addition shall not increase the water cement ratio above the maximum permitted by the specification.
- The water shall be added to the entire batch, not in the middle or end of the batch.
- Water addition is not allowed to by-pass the  $1\frac{1}{2}$  hour or 300 revolution criteria.
- Water shall be added into the batch at the head section of the drum or by injection into the head and discharge section of the drum.
- Water added requires an additional 30 revolutions at mixing speed.
- The driver's delivery ticket shall document any water withheld at the batching plant.

# Testing Specifications

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- All permittees will be required to notify Public Works 24 hours before pouring concrete sidewalks: <https://goo.gl/FTFF2M>
  - 24 hour requirement will include field batching of concrete.
  - Major utility companies must submit a monthly list of completed sidewalk locations to PWD via email for inspection purposes.
- Materials will be tested at the plant or on site.
  - Material must meet all contract specifications including: strength, 4000 psi, ¾” aggregate, ≤4% slump, etc. (see contract specifications for more details)
- Sidewalks must be poured to meet the depth of adjacent sidewalk, but not less than 6”
- Concrete testing is at the expense of the Permittee.

# Concrete Testing: Mobile Mixers

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- All suppliers will provide their mix formulas to Briggs Engineering for testing: [sskorhod@briggsengineering.com](mailto:sskorhod@briggsengineering.com)
- All personnel for companies restoring concrete sidewalks must be qualified and experienced in performing sidewalk repair work. The City will require proof of qualification.
- The City may require crews to meet with Briggs Engineering and/ or City Engineers in the field to verify all necessary equipment and materials are on site to properly perform the work.
- Once approved you will be allowed to sell and provide concrete in the City of Boston.
- Your company must never tamper with the job mix formula in the field.
  - Need job mix formula with slip on work site at all times.
- The City will periodically test your material in the field.

# Graffiti



**Messy Work**



*Slope must be ADA/AAB compliant or else it will be **REJECTED** by the Public Works Department (<2%)*

# Brick Sidewalk Repairs

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- The CIU reports show that many Permittees performed unacceptable brick work in the past couple of years.
  - Every Permittee must have a competent crew that specializes in brick restoration.
- All Permittees will be responsible for adjusting any edge stone within the limits of the sidewalk repair.
- Proper material and testing requirements must be met.
  - Material and specifications are available on the PWD website.

# Unacceptable Workmanship!

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# Bricks should be wire cut and professionally laid



# Sidewalk Repair Requirements

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- Each month the CIU will provide all Permittees a list of overdue (beyond 60 days) permitted sidewalk locations requiring permanent repair.
- Upon receipt of this list all Permittees will have 7 days to acknowledge ownership (via email) and present a planned schedule for restoration to the PWD.
- If overdue restorations are not completed within 30 days, PWD will deny all new permit requests.
- Repairs by Neighborhood may be an option instead of within the 60 day requirement, pending PWD approval.
  - Approval may result in the above timelines not being enforced for that company.
- All Permittees must be vigilant regarding the impact to, and safety of, pedestrians during construction.

# REMINDER

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- All Permittees will be required to provide the CIU/BTD with the repair schedule of sidewalk locations 48 hours before performing the work.
  - Your company will use the City's Online Sidewalk app notifying the City of your pending construction: <https://goo.gl/FTFF2M>
  - Any e-mail inquiries may be sent to: [cmdoffice@boston.gov](mailto:cmdoffice@boston.gov)
  - Failure to notify the City as required may result in the suspension of new permits or possibly active jobs.
- All concrete testing requirements are at the expense of the Permittee.

# Foreman's Check List for Items 12 & 13

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- Does your permit allow for sidewalk work?
- Has CIU/ BTD been notified at least 48 hours in advance?
- If access to the sidewalk will be affected, do you have approved sidewalk closed signs?
  - Signs must be placed at the nearest pedestrian ramp on either side of the construction.
- For work on the sidewalk where Pedestrian access is not blocked is there at least 4 feet of access?
  - All sidewalk work must have approved MUTCD barricades in place.
- Any edge stone within your permanent restoration limits must be reset, even if it was not damaged due to your work.
- Are you using approved material?
  - All excavated sidewalk material must be repaired in kind.
- All temporary and permanent sidewalk repairs must meet ADA/ AAB slope requirements.

# Item 14 – Permanent Ramp Compliance

- If any portion of a Pedestrian Access Ramp is disturbed, including the landing or abutting edge stone, the ramp becomes the responsibility of the Permittee for repair.
- All unacceptable ramps must be replaced to ADA/ AAB specifications with appropriate cross slope requirements.
  - 8.3% max running slope on ramp with 7.5% or less preferred
  - Max 2% cross slope in all directions of level landing



CITY OF BOSTON - PUBLIC WORKS DEPT  
CONSTRUCTION MANAGEMENT DIVISION  
UTILITY STREET OPENING REPAIR

INSPECTOR'S REPORT  
 Normal CIU Inspection       Other Inspection  
please specify complete, RTD, SRMC, etc.  
 Inspection Sense not performed      Size of Cut on Permit? \_\_\_\_\_

PERMIT #: \_\_\_\_\_      Permittee: \_\_\_\_\_      Contractor: \_\_\_\_\_  
 Address: \_\_\_\_\_      Patch / Trench or Patch / Trench      Depth? \_\_\_\_\_  
 Street: \_\_\_\_\_      Foreman: \_\_\_\_\_      Phone: \_\_\_\_\_  
 Neighborhood: \_\_\_\_\_      Time From: \_\_\_\_\_ To: \_\_\_\_\_      Total Hours: \_\_\_\_\_  
 Date: \_\_\_\_\_      Weather/Temp: \_\_\_\_\_  
Day of the week, Month, A, Year

	YES	NO	Notes	Violation
1. Current Permit Present?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
2. Abiding to Permit Restrictions?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
3. Safe Work Zone?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
4. Suitable Reused Gravel Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
5. Suitable New Crush Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
6. Compacted in 8" Maximum Lifts?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
8. Opening Secured?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
10. Final Paving Requirements?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
12. Temp Sidewalk Accessible?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
13. Permanent Sidewalk Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
14. Pedestrian Ramp Complies?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Public Safety Issues?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Violation Disputed? YES	<input type="checkbox"/>	<input type="checkbox"/>	Photo? YES NO	SHUTDOWN <input type="checkbox"/>
Waiver/Non-Compliance? YES	<input type="checkbox"/>	<input type="checkbox"/>		

Comments: \_\_\_\_\_  
 Inspected by: \_\_\_\_\_      Signature: \_\_\_\_\_      Date: \_\_\_\_\_  
\* Normal CIU working hours Monday-Friday 7:30 AM - 4:00 PM

If in doubt, call the City. Our Engineers will be happy to assist you!

# Item 15 – Pavement Markings & Loop Detectors

- Loop detectors, pavement markings, signage etc.
- Maintain pavement markings during construction (paint).
- Partial damage to crosswalks results in complete restoration.
- **Public's Safety possibly compromised**
- Damaged pavement markings must be replaced no later than 72 hours after completion of work.
- Permittees must internally track locations needing pavement markings and loop detector replacing

**CITY OF BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTORS REPORT**

Normal CIRU Inspection       Other Inspection (please specify complete, RTA, SRMS, etc.)  
 Inspection items not performed       (Size of Cut on Permit)

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_ **Roadway or Sidewalk?** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Forman:** \_\_\_\_\_ **Depth?** \_\_\_\_\_  
**Street:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_  
Day of the week, Month, & Year

	YES	NO	Notes	Violation
1. Current Permit Expires?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
2. Adding to Permit Restrictions?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
3. Solo Work Zone?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
4. Suitable Reused Crust Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
5. Suitable New Crust Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
6. Compacted in 8" Maximum Lifts?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
8. Opening Secured?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
9. Two 1-1/2" Lifts of Hot Mix Asphalt?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
10. Final Paving Requirements	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
12. Temp Sidewalk Accessible?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
13. Permanent Sidewalk Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
14. Pedestrian Ramp Compliance?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

**SHUTDOWN**

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIRU working hours Monday-Friday 7:30 AM - 4:00 PM



# Pavement Markings

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- Pavement Markings on Arterials must have temporary tape applied before the required 72 hour permanent replacement application.
- **The BTD and the CIU have increased their vigilance regarding Disrupted Pavement Markings.**
- Pavement Markings that have been impacted by a Permittee and not repaired within the required period of time may compromise the public's safety.
- When excavation work interrupts a crosswalk, the entire crosswalk must be restored by the Permittee, unless otherwise authorized by the PWD and BTD.
- **Patches or trenches without the required pavement markings are an incomplete product. This conveys to the public that City and the Permittees are not doing the job "right".**
- Disrupted pavement markings are now added to the "Bad Patch" listing.

# Bike Lanes

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- Boston Bikes is part of the Mayor Walsh's vision for a vibrant and healthy city that benefits all its citizens.
  - Since 2007 the City has increased the number of bike lanes throughout Boston dramatically.
  - New bike lanes are added each year.
- All bike lane routes are in COBUCS.
- On any proposed utility or contractor work in conflict with completed bike lanes in the COBUCS, the Permittee **MUST coordinate with the BTD Engineering Department to review plans and determine whether or not the project will disrupt any bike lane markings** .

# Bike Lanes

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The Public Works Department will not release a COBUCS entry in conflict with completed bike lane markings until either receiving confirmation by the BTD that your work does not interrupt the pavement markings, or until your company provides a copy of sketching detailing the replacement of the bike lane(s).

All bike lane markings must be replaced within 3 days of completion of work.

**Any steel roadway plate(s) located within a bike lane must have a skid resistant coating applied for the safety of the riders.**



# Loop Detectors

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- Contractors shall notify the BTD Traffic Management Center (617 - 635-4430), at least 48 hours prior to starting any construction that will impact loop detector/ signal operations.
- Contractors shall replace loop detectors within 72 hours of completion of work, and notify the BTD Traffic Management Center to schedule a traffic signal inspection of the intersection.
- Loop detectors shall be replaced by a BTD approved traffic signal contractor in accordance with BTD specifications.

# Public Safety

- Signals an egregious disregard for City Rules and Specifications
- Will result in meeting/shutdown
- Possibility of all active work zones being shut down (Excluding Emergency work)
- Public Safety violations will be taken into account during Winter Moratorium requests.
- The City of Boston keeps record of ALL violations against the Rules and Specifications.
- Such violations are taken into consideration, especially in regard to public safety, in the Permit Application Process.

**CITY OF BOSTON - PUBLIC WORKS DEPT.**  
**CONSTRUCTION MANAGEMENT DIVISION**  
**UTILITY STREET OPENING REPAIR**  
**INSPECTORS REPORT**

Normal CIRU Inspection       Other Inspection \_\_\_\_\_  
please specify complete, RTA, SRMC, etc.

Inspection Items not performed      Size of Cutout Permit? \_\_\_\_\_

**PERMIT #:** \_\_\_\_\_ **Permittee:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_ **Depth?** \_\_\_\_\_  
**Address:** \_\_\_\_\_ **Street:** \_\_\_\_\_ **Forman:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Neighborhood:** \_\_\_\_\_ **Time From:** \_\_\_\_\_ **To:** \_\_\_\_\_ **Total Hours:** \_\_\_\_\_  
**Date:** \_\_\_\_\_ **Weather/Temp:** \_\_\_\_\_

	Yes	No	Notes	Violation
1. Current Permit Present?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
2. Abiding to Permit Restrictions?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
3. Safe Work Zone?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
4. Suitable Proposed Crawl Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
5. Suitable New Crawl Material?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
6. Compacted In 2" Maximum Lifts?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
7. Controlled Density Fill (CDF)?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
8. Opening Secured?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
9. Two 5-1/2" Lifts of Hot Mix Asphalt?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
10. Final Paving Requirements	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
11. Roadway Satisfactorily Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
12. Temp Side-walk Accessible?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
13. Permanent Sidewalk Complete?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
14. Pedestrian Ramp Compliant?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
15. Loop Detectors / Pavement Markings?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Public Safety Issue?	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Violation Category?	YES	NO	Photo?	YES NO SHUTDOWN <input type="checkbox"/>
Utility P.G. Consented?	YES	NO		

**Comments:** \_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\* Normal CIRU working hours Monday-Friday 7:30 AM - 4:00 PM





# Conclusion

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- Utility network key component in Boston's future.
- Upgrade, repair, and maintenance must be performed in a professional manner.
- Teamwork is critical in delivering shared goal of a superior infrastructure to Boston's Citizens.

**SEE YOU OUT IN THE STREETS**



THANK YOU

