



DPW Order No: 187005

Regulations for Excavating and Restoring Streets in San Francisco

London Breed
Acting Mayor

Article 2.4 of the Public Works Code requires any person excavating in the Public Right-of-Way to obtain an excavation permit and comply with Orders and Regulations of the Public Works. This Order establishes rules and regulations for excavating and restoring streets in San Francisco which are under the jurisdiction of Public Works.

Mohammed Nuru
Director

This Order supersedes:

San Francisco Public Works
1 Dr. Carlton B. Goodlett Pl.
Room 348
San Francisco, CA 94102
tel 415-554-6920

Order 135,595 "Street Opening and Pavement Restoration Regulations for Non Moratorium City Streets"
Order 135,596 "Street Opening and Pavement Restoration Regulations for Newly Renovated City Streets"

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twitter.com/mrcleansf

Order 154,501 "Rules and Regulations for Cutting Pavement in the City and County of San Francisco"
Order 171,442 "Rules and Regulations for Cutting Pavement in the City and County of San Francisco"
Order 176,707 "Rules and Regulations for Cutting Pavement in the City and County of San Francisco"
Order 178,940 "Regulations for Excavating and Restoring Streets in San Francisco"

This Order takes precedence over the latest San Francisco Public Works Standard Specifications and Standard Plans and when differences arise, the more stringent regulation shall apply. Otherwise, the Standard Specifications and Standard Plans shall govern excavation and restoration of City streets.

The Department acknowledges the need to upgrade, maintain, replace and install new utility services. The Department also recognizes the disruptive impact these excavations have on neighborhoods and the traveling public. These rules and regulations are designed to balance these competing needs and to preserve and maintain the public health, safety, welfare and convenience.

Regulations for Excavating and Restoring Streets in San Francisco

ALL applicable laws, regulations and procedures must be complied with and include but are not limited to:

Article 2.4 of the Public Works Code: Excavation in the Public Right-of-Way, California Government Code 4216, CalOSHA, CalOSHA Title 8, Section 1541, California Labor Code 6500 and 6705

This manual has been prepared as a reference for city agencies, utility companies, contractors and others excavating in the streets of San Francisco. Its main purpose is to collect the various specifications, rules and regulations governing excavations in the public right-of-way into a single document. Before excavating in any street in San Francisco, excavators are encouraged to familiarize themselves with the requirements of this manual. If you have any questions or would like to arrange a training session on this manual please contact San Francisco Public Works Bureau of Street Use and Mapping.

1/29/2018

1/29/2018

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Signed by: Sanquinetti, Jerry

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2/6/2018

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Public Works Director
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SECTION 1 DEFINITION OF TERMS

For purposes of this Order, the following terms shall have the following meanings:

"**ACWS**" shall mean asphalt concrete wearing surface.

"**Applicant**" shall mean any Owner or duly authorized agent of such Owner who has submitted an application for a permit.

"**Article**" shall mean Article 2.4 of the Public Works Code.

"**AWSS**" shall mean the Auxiliary Water Supply System, the City's high-pressure fire suppression system.

"**Block**" shall mean that part of the Public Right-of-Way that includes the street area from the property line to the parallel property line in width and extending from the property line of an intersecting street to the nearest property line of the next intersecting street in length. For purposes of this definition, an intersection shall also be considered a "Block".

"**City**" shall mean the City and County of San Francisco.

"**Department**" shall mean San Francisco Public Works.

"**Deposit**" shall mean any bond, cash deposit, or other security provided by the Applicant in accordance with Section 2.4.40 of this Article.

"**Director**" shall mean the Director of the Public Works or designee.

"**Excavation**" shall mean any work in the surface or subsurface of the Public Right-of Way, including, but not limited to opening the Public Right-of-Way; installing, servicing, repairing or modifying any Facility(ies) in or under the surface or subsurface of the Public Right-of-Way; and restoring the surface and subsurface of the Public Right-of-Way. Depth shall be measured from the bottom of the base to the bottom of the trench.

"**Facility**" or "**Facilities**" shall include, but not be limited to, any and all cables, cabinets, ducts, conduits, converters, equipment, drains, handholds, manholes, pipes, pipelines, splice boxes, surface location markers, tracks, tunnels, utilities, transformers, vaults, and other appurtenances or tangible things owned, leased, operated, or licensed by an Owner or Person, that are located or are proposed to be located in the Public Right-of-Way.

"**Inspector**" or "**Public Works Inspector**" shall mean inspectors employed by Public Works.

"**Major Work**" shall mean any reasonably foreseeable Excavation that will affect the Public Right-of-Way for more than 15 consecutive calendar days.

"**Moratorium Street**" shall mean any Block that has been reconstructed, repaved, or resurfaced by the Department or any other Owner or Person in the preceding five year period.

"**SFMTA**" shall mean the San Francisco Municipal Transportation Agency

"**Municipal Excavator**" shall mean any agency, board, commission, department, or subdivision of the City that owns, installs, or maintains a Facility or Facilities in the Public Right-of-Way.

"**Owner**" shall mean any Person, including the City, who owns any Facility or

Facilities that are installed or are proposed to be installed or maintained in the Public Right-of Way.

"**Permit**" or "**Permit to Excavate**" shall mean a Permit to perform an Excavation as it has been approved, modified, or extended by the Department.

"**Permittee**" shall mean the Applicant to whom a Permit to Excavate has been granted by the Department in accordance with this Article.

"**Person**" shall mean any natural person, corporation, partnership, any Municipal Excavator, or any governmental agency, including the State of California or United States of America.

"**Public Right-of-Way**" shall mean the area across, along, beneath, in, on, over, under, upon, and within the dedicated public alleys, boulevards, courts, lanes, roads, Sidewalks, spaces, streets, and ways within the City, as they now exist or hereafter will exist and which are or will be under the permitting jurisdiction of Public Works.

"**Rockwheel**" shall mean an automatic pavement breaker/trencher.

"**Sidewalk**" shall mean the area between the fronting property line and the face of the nearest curb.

"**USA**" shall mean Underground Service Alert, the regional "One-Call Center" for Northern California.

"**Utility Excavator**" shall mean any Owner whose Facility or Facilities in the Public Right-of-Way are used to provide electricity, gas, information services, sewer service, steam, telecommunications, traffic controls, transit service, video, water, or other services to customers regardless of whether such Owner is deemed a public utility by the California Public Utilities Commission.

SECTION 2 EXCAVATION PERMITS

2.1 Requirements for an Excavation Permit

- A. Anyone doing excavation work in the City's Public Right-of-Way that is under the jurisdiction of the Public Works is required to take out an Excavation Permit including city agencies. There are exceptions. Excavation Permits are not required for:
 - 1. Excavations completed within 24-hours to install;
 - a. Parking meters;
 - b. Street lights;
 - c. Traffic signs or signals;
 - d. Trees;
 - e. Utility poles;
 - 2. Sidewalk utility box repairs;
 - 3. Pothole repairs, crack sealing or slurry sealing of roadways.
- B. Although Excavation Permits are not required for the work described above, other permits, such as building permits, may be required based on the scope of work.
- C. This Order does not apply to excavation in streets outside the jurisdiction of Public Works. For the latest information, contact:
 - 1. For State Routes: California Department of Transportation
 - 2. For streets under Port of San Francisco jurisdiction: Port of San Francisco
 - 3. For streets under Recreation and Park jurisdiction: Recreation and Park Department

2.2 Emergency Excavation

- A. When an excavator suddenly and unexpectedly finds it necessary to make an excavation to preserve life or property and/or to restore interrupted essential services, the excavator may begin work before obtaining an Excavation Permit. However, the Excavator must submit an Emergency Confirmation Number (ECN) form to the Department and immediately notify SFMTA Department of Parking and Traffic. If the excavation will interrupt SFMTA service, call SFMTA Street Supervision and/or SFMTA Central Control.
- B. The excavator must apply for an Excavation Permit within 4 hours after the Department's offices open the following business day.
- C. An application for an Emergency Permit shall include:
 - 1. Reference to the associated ECN;
 - 2. Explanation of the basis for the emergency action;
 - 3. Description of the excavation work being performed;
 - 4. Description of any work remaining to be performed.

2.3 Damages to Other Facilities and Additional Permit Requirements

- A. An additional Excavation Permit will not be required if:
 - 1. No additional excavation is required;
 - 2. The original Permittee maintains the excavation site and restores the trench.
- B. An additional Excavation Permit will be required if:
 - 1. A new excavation (another trench) is required to repair the damaged facility;
 - 2. The owner of the damaged facility will be responsible for the restoration of the trench.
- C. Excavation Permits are not transferable.

2.4 Permit Application Procedure

- A. Before applying for an Excavation Permit, applicants must register with the Department.

Applicants must provide or have on record with the Department the following:

1. A hard copy of the legal document (such as a franchise, license, or Utility Conditions Permit (UCP)) authorizing Utility Excavator to occupy and use the Public Right-of-Way for the purpose stated in the Excavation Permit application if the Applicant is a Utility Excavator;
2. A current San Francisco Business Tax Registration Certificate;
3. Current evidence of insurance (as defined in Section 2.4.23 of the Public Works Code);
4. A \$25,000 Deposit (as defined in Section 2.4.40 of the Public Work; Code);
5. A 24-hour phone number and name of a person who will respond to emergencies;
6. The name, telephone and facsimile numbers and the mailing and email addresses of the person who will receive all official correspondence from the Department;
7. Written acknowledgement that the Owner of the facility to be installed is a member of Underground Service Alert.

2.5 Applicability to City Agencies

- A. Each Municipal Excavator (City Department), excluding the Department and agencies within the City and County of San Francisco with specific rights under the Charter to install and maintain facilities in the Public Right-of-Way without obtaining permits, is required to maintain the same records on file, including:
 1. 24-hour emergency number;
 2. \$25,000 deposit (work order) from each City Department.
- B. The City is self-insured, but major excavation work is usually done by a private contractor through a City contract. The insurance requirements of the contract must meet the permit requirements.

2.6 Authorized Agents Pulling Excavation Permits.

- A. The Owner of the facility may authorize another party to act as the Applicant for the Excavation Permit. When the Applicant is not the Owner of the facility to be installed, maintained, or repaired, the Applicant must provide written and signed documentation, in a form acceptable to the Department, that the Applicant is authorized to act on behalf of the Owner.
- B. The Permittee (either the Owner or the Applicant) must maintain a minimum \$25,000 deposit with the Department. A single \$25,000 deposit may be used for multiple permits by the same Permittee.
- C. The Permittee (either the Owner or the Applicant) must provide the required insurance. However, if the Owner is a Municipal Excavator, and the work is being done by contract, the contractor must provide the insurance.
- D. Both the Owner and the Applicant must provide current business tax registration certificates, unless the Owner is a Municipal Excavator.

2.7 How to Obtain a Permit Application

- A. Application forms can be obtained through the following methods:
 1. Visit the website and download forms at www.sfpwpublicworks.org;
 2. Contact San Francisco Public Works Bureau of Street Use and Mapping to obtain and application via mail or FAX.
- B. Apply via the online portal at bsm.sfdpw.org if authorized to do so through an online account. For more information on qualifying to obtain an online account, please contact the office at the below listed address.
- C. Write to Public Works Bureau of Street Use and Mapping/.

2.8 Required Application Information

A. The following information must be provided:

1. The Applicant's contact information including name, mailing address, telephone, facsimile number if available, and Internet email address if available;
2. The Owner's contact information including name, mailing address, telephone, facsimile number if available, and Internet email address if available;
3. When the Applicant is not the Owner of the facility to be installed, maintained or repaired, the applicant must provide written and signed documentation, in a form acceptable to the Department, from the Owner;
4. The purpose of the excavation;
5. The purpose of the facility to be installed maintained or repaired;
6. The method of excavation;
7. The proposed construction start date and end dates and the proposed days of construction;
8. The location of the proposed excavation, including:
 - a. Specific address(s);
 - b. Street number(s)
 - c. Street name(s);
9. The size of the excavation (length, width, and depth);
10. The square footage of asphalt wearing surface, concrete, or other material to be excavated in each block;
11. A scaled and dimensioned plan or plans in a form acceptable to the Department. The plans shall include the location of the proposed excavation indicating:
 - a. Name of street to be excavated and the cross streets;
 - b. distance from the face of curb;
 - c. distance from intersection;
12. Existing Conditions showing the following:
 - a. Existing street furniture and facilities;
 - b. Existing underground and above-ground utilities;
 - c. Existing roadway and sidewalk widths;
 - d. Existing Material within roadway and sidewalk;
13. The location of any above ground facilities to be installed:
 - a. Distance from curb, and any street furniture;
 - b. Labeling of the facility(ies);
 - c. The size (length, width, and height);
 - d. Locations of doors and door swing;
 - e. Locations of other encroachments or appurtenances;
14. The location of underground facilities to be installed:
 - a. Conduit, pipes, manholes, vaults, etc.;
 - b. Structural details and additional information for the installation of structure such as manholes or vaults must accompany the application and include:
 1. The construction method of the structure to be installed;
 2. Construction details, location, size, design criteria;
 3. Labeling of facility(ies);
 4. An explanation as to why the facility cannot be placed on private property for all non-Utility Excavators;
15. Cross section of a typical trench indicating:
 - a. The depth of the facility to be installed (top of pipe to bottom of concrete base);
 - b. The size of the facility to be installed;
 - c. Thickness of the concrete base;
 - d. Thickness of the asphalt concrete wearing surface.
16. Plans, structural details, and the trench cross section must be signed and stamped by a licensed civil engineer, when legally required.

2.9 Excavations on Newly Paved streets and other Specially Designated Streets

- A. The Excavation Code establishes a 5-year moratorium on excavating in streets that have been reconstructed, repaved or resurfaced in the preceding 5-years. Facility owners should determine alternative methods of making necessary repairs to avoid excavating in newly paved streets.

- B. However, waivers to the moratorium may be granted by the Director for “good cause” such as:
 - 1. To repair leaks;
 - 2. To respond to emergencies;
 - 3. To provide services to buildings where no other reasonable means of providing service exists;
 - 4. For deployment of new technology as directed pursuant to official City policy;
 - 5. Other situations deemed by the Director to be in the best interest of the general public.

- C. To request a waiver, the Applicant must request permission in writing to excavate in a moratorium street. The request must include:
 - 1. The location of the excavation;
 - 2. Description of work to be performed;
 - 3. Why the work was not performed before the street was paved;
 - 4. Why the work cannot be deferred until after the moratorium;
 - 5. Why the work cannot be performed at a different location.

- D. Permits to excavate in moratorium streets will include extra fees for mandatory inspections and to recover the costs related to the diminishment in value of the pavement wearing surface due to the excavation and will include special conditions, such as:
 - 1. Special coordination with other excavations;
 - 2. Special paving requirements;
 - 3. Additional soil compaction test reports;
 - 4. Mandatory Inspections;
 - 5. Other requirements.

- E. A decision concerning a request to excavate in a moratorium street will be provided to the Applicant as part of the Department’s response to the permit application.

2.10 Permit Duration

- A. A permit is valid from the construction start date specified on the approved permit until the specified expiration date on the approved permit.

- B. Excavation Permits are not valid if all required approvals (such as a Special Traffic or Night Noise Permits or SFMTA approval) have not been obtained or required notifications given (such as public notifications or USA).

- C. Excavation permits are not valid during the hours of 8:00PM to 7:00AM, unless a Night Noise Permit is obtained.

2.11 Permit Expiration

- A. Permits expire and become void:
 - 1. On the 31st day after the approved construction start date stated on the permit, if work has not begun;
 - 2. Or when the excavation, including the trench restoration is completed and the permit is signed off;
 - 3. Or on the date specified on the permit as the expiration date.

2.12 Diligent Prosecution of Work Required

- A. Once a project begins, work must continue on a daily basis, except for weekends, holidays, inclement weather or labor disputes.
- B. Once a project begins, the work must continue uninterrupted until such work no longer affects public convenience, health or safety.
- C. The Permittee is responsible for ensuring that all necessary materials and supplies are on hand and ready for use so as not to delay the excavation and the prompt restoration of the Public Right-of-Way.

2.13 Permit Extensions

- A. Request an extension 72-hours prior to the expiration date listed on the approved permit. Send a letter to the Director of Public Works specifying the dates you wish to change, and explaining why you need an extension.
- B. Requests for extensions will be treated and processed in the same manner as a new application. An Administrative and appropriate Inspection Fees will be charged to recover the cost of processing the request. An extension may not be granted if there is a conflict with another approved project or to maintain and preserve public health, safety, welfare and convenience. An extension may be approved with special conditions to require coordination and to maintain and preserve public health, safety, welfare and convenience.

2.14 Permit Revisions

- A. An approved permit may be revised if:
 - 1. Changes to the excavation are a continuation of the same project;
 - 2. The revision to the excavation occurs in the block approved in the original permit.
 - 3. The changes are directly related to work required to complete the originally permitted scope of work.
- B. To revise an approved permit:
 - 1. Indicate changes on the approved permit and plan;
 - 2. Submit the revision for approval;
 - 3. Pay all additional administrative and inspection fees to cover the cost of processing the request.
- C. A new permit is needed when:
 - 1. The revision to the excavation is not related to the permitted project;
 - 2. The revision to the excavation extends into blocks that were not approved in the original permit.

2.15 New Application Required Upon Expiration of Permit

- A. Following expiration of a permit, the Applicant must submit a new permit application and cannot request an extension or modification.
- B. The application will be reviewed and processed as a new application.

2.16 Permit Coordination

- A. Permits may be approved at the same locations during overlapping dates. In the case of multiple permits approved at the same location(s) during the same date(s), it shall be the responsibility of the Permittee who received approval at a later time to contact all exiting Permittees for coordination. It shall be the responsibility of all Permittees to ensure coordination of all work.

SECTION 3 EXCAVATION FEES

3.1 Types of Fees

- A. An Administrative Fee will be charged to cover the cost of processing applications, issuing Excavation Permits and administering the Excavation Code and related regulations.

	SMALL	MEDIUM	LARGE
Square Footage	100 or less	101-1000	1001 or greater
Admin Fee	\$90/permit	\$113/block	\$151/block
Inspection Fee	\$21/permit	\$75/day	\$110/day
Board of Appeals Surchage	\$6.50	\$6.50	\$6.50
Parking Plan Fee (if required)	\$509	\$509	\$509
Permit Extension or Revision Admin Fee	\$90/permit	\$90/block	\$90/block

*Fees as of July 2017 and are adjusted each year to reflect changes in the relevant Consumer Price Index

- B. Inspection Fee will be charged to cover the cost of inspection, except:
1. When the excavation is to construct, replace or repair SFMTA Railway tracks within SFMTA jurisdictional area or when the project is inspected by Public Works staff as part of a City issued contract. Public Works staff includes personnel from IDC, BDC, BSSR, and BUF.
- C. Fees adjusted each year to reflect changes in the relevant Consumer Price Index in accordance to Public Works Order 175, 537.

3.2 Payment of Permit Fees

- A. All permit fees are due with the submission of an application. Checks should be made out to Public Works. Make sure to put on the checks the application number and the fee(s) being paid (Administrative and Inspection).
- B. All fees and penalties may be billed to the permit holder on a monthly basis if the Department determines the applicant is qualified for monthly billings.
- C. Accounts will become delinquent after 30 calendar days. The applicants will be notified when their account is 10 days past due. Once delinquent, financial penalties will be imposed on the outstanding balance at a rate of 0.5% per month or fraction thereof. If payment is not made by the 60th day new permits will not be issued until the account is brought current.

3.3 Permit Fee Refunds upon Cancellation or Withdrawal of Application

- A. Inspection Fees may be refunded upon consultation with the Inspection Manager. The Administrative Fee is non-refundable and will be retained. An additional Administrative fee of \$110 and an inspection fee of \$157.22 will be charged to process a request for refund of an approved permit (total of \$267.32).
- B. To request a refund or account credit, please submit the appropriate Refund Request

Form to the Bureau of Street Use and Mapping.

- C. The request should include:
1. Request for cancellation or withdrawal of a permit;
 2. Permit number;
 3. State if you would like a refund or a credit applied to your account;
 4. A letter acknowledging the request and specifying the amount refunded or credited to your account will be provided.

SECTION 4 PERMITTEE'S OBLIGATIONS

4.1 Permittee Obligations

- A. By accepting an Excavation Permit, the Permittee and the Owner of the facility(ies) for which the permit was obtained agree:
1. To follow all rules, regulations, special conditions, and code requirements;
 2. To assure that their employees, contractors, and subcontractors comply with all rules, regulations, permit conditions, and code requirements;
 3. To indemnify the City per Section 2.4.23 of the Public Works Code;
 4. That the permit may create a possessory interest subject to property taxation.

4.2 Protection of Underground Facilities

- A. State and federal laws require excavators to notify a regional "one call" center before digging. The law also requires owners of underground facilities to join the one call center for the region in which they have underground facilities. When an owner of underground facilities is notified of a proposed excavation in the area of their facilities, the owner must "locate and mark" its facilities.
- B. Owners of facilities in City streets must join USA North 811, San Francisco's regional one call center at 811 or at <http://usanorth811.org/>
- C. USA North 811 will provide the caller with an inquiry identification number (Ticket Number) and will inform registered facility owners of proposed excavations.
- D. Excavation Permittees must call USA North 811 two business days before beginning construction, provide USA their Excavation Permit number, and follow all USA North 811 requirements.
- E. Excavation permits are not valid unless a USA ticket number is obtained.
- F. Excavation Permittees are responsible for the removal of all markings upon completion of work.

4.3 Survey Monuments

- A. As prescribed in the Section 8773.3 of the State Business and Professions Code a licensed land surveyor or qualified licensed civil engineer shall verify a survey monument has not been disturbed due to construction.
- B. Prior to the commencement of any construction project within 20-feet of any survey monument a corner record shall be prepared and filed with the City and County Surveyor.
- C. The permittee can either request the County Surveyor's office reference the monument or hire their own licensed Land Surveyor to perform the work.
1. If the work is performed by the County Surveyor:
 - a. A minimum of two weeks prior to construction, an application for monument preservation and the associated referencing fee shall be provided to Public Works at Monument.Preservation@sfdpw.org;
 - b. A fee of \$3,488 (as of July 2017) per monument shall be paid to cover the field and office-related costs of the standard referencing process. The fee is adjusted each year to reflect changes in the relevant Consumer Price Index;
 - c. Monument referencing will be scheduled once the application and funding have been received. The County Surveyor will then notify the applicant once the referencing and pre-construction corner record has been prepared and field so that construction may proceed;
 - d. It is the responsibility of the applicant to inform the county surveyor's office when construction is complete so that the post construction

referencing may be performed and the corner record is prepared and filed.

2. If the work is performed by a private licensed Land Surveyor:
 - a. Prior to the start of work, a pre-construction corner record shall be prepared and filed with the County Surveyor;
 - b. Within 1 month after completion of construction, a post-construction corner record shall be prepared and filed with the County Surveyor.
- D. If any monuments are covered, disturbed, destroyed or removed any costs incurred to re-establish the monument will be in addition to the initial application fee and may vary due to time and methods required.
- E. If a monument is removed, the monument, monument well, and monument cap shall be delivered to the County Surveyor's Office.
- F. If construction proceeds without standard monument referencing having been performed, a comprehensive field survey and office analysis shall be required to reestablish the monument position. The comprehensive field survey and office analysis are based upon time and materials estimated to be at least \$10,000. The comprehensive field survey and office analysis fee may vary due to time and methods required to reestablish said monument
- G. Other monuments may exist, including those set by federal agencies: e.g. USGS, U.S. Army, U.S. Navy, BART, private surveyors for subdivisions, et al. These monuments must also be preserved where they are located.
- H. The City and County Surveyor may issue a waiver for small and medium permitted projects if the applicant submits a suitable monument preservation plan.

4.4 Marking of Visible Facilities

- A. All visible facilities in the Public Right-of-Way must be marked so that the facility Owner can be readily identified. Each Owner will mark its facilities and notify the Department of the marking used.

4.5 Permits to be Available at Excavation Sites

- A. Permits are required to be available at all times at the excavation site for the entire duration of the excavation, including the period of final paving. Permits must be shown to any City employees on request.

4.6 Responsibility for Roadway Defects appearing after the Permittee Restores the Trench

- A. The Owner of the facility repaired, maintained, or installed is responsible for maintaining, repairing, or reconstructing the site of the excavation until subsequent excavation work is performed in the same location by a different excavator or the Department reconstructs, repaves, or resurfaces the block.

4.7 Department to Notify the Person(s) Responsible for Roadway Defects

- A. It is the responsibility of the Owner to maintain trenches and repair any defects that appears.
- B. When the Department becomes aware of a roadway defect, the Director will determine who is responsible for the defect, notify that person of the defect, and order its repair. The responsible person(s) may receive a hard copy of the notice if they are present at the time of the inspection and will receive a copy of the Correction Notice or Notice to Repair by mail and via email (where possible). A "Notice to Repair Roadway Defect" commonly referred to as an X-1104 may also be sent electronically to persons who have accounts set up with the Department. The notice will include:

1. The location of the defect;
 2. Description of the defect;
 3. The required remedy; and
 4. The date by which the defect must be repaired.
- C. Permittees (either the Owner or the Applicant) that fail to maintain a trench within the time allocated in the X-1104 will be subject to monetary fines and may be required to forfeit their deposit or portions thereof in order for the Department to make necessary repairs. The cost of such work will be deducted from permittees deposit as described in Section 2.4.72 (a) of the Public Works Code.
- D. City Agencies must maintain a work order with the Department that will be charged to make repairs noted during inspections. The responsible City Department will receive an X-1104 including a summary of charges made to the work order.

4.8 Failure of Person(s) Responsible for the Roadway Defects to make Repairs

- A. If the person responsible for the roadway defect does not make the required repairs, the Department will make the repairs and the responsible person(s) will be charged for all actual costs of the repair, including administration, construction, consultants, equipment, inspection, notification, remediation, repair and restoration.
- B. Repair or restoration by the Department does not relieve the responsible person(s) from liability for future pavement failures.
- C. If the responsible person fails or refuses to pay the cost of the repair, the cost will be.
- D. The Director's determination of the costs is final.

4.9 When an Excavation Site or Defect is considered a Hazard

- A. When the Department determines that an excavation or a defect is hazardous or constitutes a public nuisance or other imminent threat to the public health, safety, or welfare, the Director may order the responsible person to remedy the condition immediately.
- B. If the responsible person fails to make the needed repairs immediately, the Department will make the repairs as prescribed in Section 4.8.

SECTION 5 PLANNING AND COORDINATION

5.1 Requirement of Five Year Plans

- A. Five year plans of major work anticipated to be done in the Public Right of-Way must be submitted by Utility and Municipal Excavators on the first day of April and October of each year.
- B. After receipt of five year plans from Utility and Municipal Excavators, the Department will prepare a five year paving plan. The Department will coordinate the plans to identify conflicts and opportunities for joint work.

5.2 Coordination of Excavation Work

- A. The Department utilizes the following methods to coordinate excavations prior to paving a block:
 - 1. Utility and Municipal Excavators' 5-year plans are compared with the Department's 5-year paving plan. Paving is scheduled after excavation occurs;
 - 2. 120-days prior to paving, Utility and Municipal Excavators are notified of the paving construction start date and given another opportunity to coordinate excavations before the street is paved;
 - 3. The Committee on Utility Coordination for Construction and Other Projects (CULCOP) meets monthly to discuss issues affecting the City and Excavators and to coordinate major projects;
 - 4. The Street Construction Coordination Center has been formed to coordinate all work in City streets;
- B. Prior to the issuance of an Excavation Permit, the application is checked against 5-year plans and scheduled paving:
 - 1. When there is a conflict with scheduled paving, the permit will be conditioned:
 - a. To coordinate work with the scheduled paving,
 - b. To complete the work before the paving start date;
 - 2. When more than one excavation will occur in a block within a five year period, the Excavators are asked to coordinate their work.

5.3 Joint Excavations

- A. When two or more Municipal Excavators propose work in the same block within a 5-year period, one Municipal Excavator must perform all the Excavation work.
- B. When two or more Utility Excavators propose work in the same block within a 5-year period, one Utility Excavator must perform all the Excavation work.
- C. When a Municipal Excavator(s) and a Utility Excavator(s) propose work in the same block within a 5-year period, the Excavation Permits will be conditioned to maximize coordination and minimize the total period of construction.
- D. Waivers of joint excavation requirements may be granted by the Director for good cause. The Director shall consider the following factors in deciding whether to grant a waiver:
 - 1. Impact of the proposed excavation on the neighborhood;
 - 2. The Applicant's need to provide service;
 - 3. Facilitating the deployment of new technology as directed pursuant to official City policy;
 - 4. Public health, safety, welfare, and convenience.

SECTION 6 PUBLIC NOTIFICATION

6.1 Public Notice Requirements for Emergency Work

- A. Post and maintain notices every 100-feet along the block being excavated as soon as possible, but no later than 24-hours after start of construction. Notices shall include:
1. The name, 24/7 contact and telephone number of the Owner and/or the Permittee;
 2. A description of the emergency project;
 3. The start and completion dates of the project;
 4. Notices must be printed on 11-inch by 17-inch paper in letters at least 1-inch high.

6.2 Public Notice Requirements for Minor Projects (2-calendar days to 14-calendar days)

- A. Post and maintain notices every 100-feet along the block in which excavation will take place 72-hours prior to starting construction. Notices must contain:
1. The name, address, and telephone number of the Owner and the Permittee;
 2. A description of the project;
 3. The start and completion dates of the project;
 4. If cars will be towed during the entire construction period or during a specific time period;
 5. Notices must be printed on 11-inch by 17-inch paper in letters at least 1-inch high.

6.3 Public Notice Requirements for Major Projects (15-calendar days or longer)

- A. Mail notices at least 30-calendar days but not more than 60-calendar days before the start of work to the following person(s), group(s), and organization(s). For projects spanning multiple blocks, notice shall be given at least 30-calendar days but not more than 60-calendar days before the start of work on each block.
1. Property owners on each of the blocks affected by the excavation using the latest City-wide assessor's roll for names and addresses of owners;
 2. Affected neighborhood and merchant organizations listed in the City Planning Department's "Directory of Neighborhood Organization and Service Agencies";
 3. San Francisco Bicycle Coalition and the San Francisco Bicycle Advisory Committee, when excavations occur on designated bicycle routes;
 4. Provide the Department with a copy of the mailing list;
 5. For projects spanning multiple blocks, notices shall be provided to each block at least 30-calendar days but not more than 60-calendar days before the start of work on each block.
- B. At least 10 calendar days but not 15 calendar days prior to starting construction, post and maintain notices every 100 feet along the block to be excavated and deliver the same notices to each dwelling unit on the block.
- C. If work does not occur for 45-day or longer on a block, that block shall be re-noticed at least 30-calendar days but not more than 60-calendar days before the start of work.
- D. Notices must contain:
1. The name, address and telephone number of the Owner and the Permittee;
 2. A description of the project;
 3. The Start and completion dates of the project;
 4. The name, address and 24-hour telephone number of a contact person.

6.4 Project Signs

- A. Before starting work on a major project lasting more than 45-days and/or spanning 3 or more contiguous blocks, post and maintain project sign(s):

1. At the site of a single block excavation;
2. At the beginning and end of excavation(s) affecting several blocks;
3. In additional locations as directed by the Public Works Inspector;
4. The project sign shall contain the same information using letters at least 2-inch high;
5. The size and the minimum information depicted on the project signs shall meet the following criteria:
 - a. 60-inch width by 36-inch height minimum
 - b. Permittee's Name
 - c. Permittee's 24/7 contact phone number
 - d. Description of Project
 - e. Project limits
 - f. Start date and completion date
 - g. Information on signs shall be legible and shall not be handwritten

SECTION 7 GENERAL CONDITIONS

7.1 Street Closures during Excavations

- A. Rules for traffic routing are contained in the Department of Parking and Traffic's (SFMTA) "Regulations for Working in San Francisco Streets" commonly referred to as the "Blue Book" because of its blue cover. The Blue Book shows how to divert traffic around construction zones, shows how many lanes may be closed on which streets, and provides maps of bicycle routes, holiday restrictions, and other special areas. The book may be purchased from SFMTA and is also available online at www.sfmta.com/bluebook.
- B. Excavation work that complies with the Blue Book does not need any other traffic permits.
- C. Excavators who want to restrict traffic more than the Blue Book allows must obtain a Special Traffic Permit (STP) from the Department of Parking and Traffic.
- D. Procedures, fees and applications for an STP can be found in the Blue Book or online.

7.2 Working at Night

- A. Construction is prohibited from 8:00PM until 7:00AM by the Police Code, unless a special Night Noise Permit is obtained from Public Works.
- B. To obtain a Night Noise Permit application, contact San Francisco Public Works Bureau of Street Use and Mapping or visit the website and download forms.

7.3 Cal-OSHA Permits Requirements

- A. A State Industrial Safety Permit from Cal OSHA is required when a person is required to descend into an excavation 5-feet or deeper.

7.4 Pre-Construction Meeting Requirements

- A. Pre-Construction Meetings with a Public Works Inspector are required for all major projects (i.e., those anticipated to last 15-calendar days or longer).
- B. The purpose of the Pre-Construction Meeting is to:
 - 1. Establish a construction schedule;
 - 2. Review special conditions;
 - 3. Confirm proper notification(s);
 - 4. Review site specific issues;
 - 5. Introduce the Public Works Inspector to the Permittee's field personnel.
- C. To schedule a Pre-Construction Meeting, contact San Francisco Public Works Bureau of Street Use and Mapping at least 5-business days in advance of the planned construction start date.

7.5 Project Close-Out Meeting Requirements

- A. Project Close-Out Meetings are required at the end of all major work.
- B. The purpose of the Project Close-Out Meeting is to assure all required work has been properly completed.
- C. The Permittee for any major work must contact the assigned Public Works Inspector, inform him/her that work is complete, and arrange for an on-site Project Close-out Meeting.

7.6 Requirements and Procedures to be followed when working near SFMTA Facilities

- A. The permittee must obtain a clearance permit from SFMTA Central Control before performing any work within 48-inches (measured transversely) from the outside edge of SFMTA track (the "Safety Envelope"). If workers will be within the Safety Envelope, the contractor shall comply and train workers per the SFMTA Rail Safety Program, in addition to a clearance permit. Contact the SFMTA Health and Safety Manager for specifics.
- B. For work that permanently changes or alters SFMTA facilities, approval must be obtained from the SFMTA Change Control Board.
- C. Special pavement requirements are mandated for all work within 12-inches of SFMTA tracks.
- D. The Contractor shall not block or impede bus movements into and out of any bus stop, including any bus zone, boarding island, bus bulb, and flag stop. In certain cases, SFMTA may authorize the temporary relocation of bus zones if requested at least 10-days in advance.
- E. For additional details and requirements on working near SFMTA Facilities, refer to the SFMTA Blue Book.

SECTION 8 SITE PROTECTION AND HOUSEKEEPING

8.1 Site Protection

- A. The Permittee is responsible for the safety of the excavation site.
- B. At a minimum, the Permittee shall comply with Section 700.02 "Safety Requirements" of the Standard Specifications of Public Works and the traffic requirements of SFMTA's "Regulations for Working in San Francisco Streets" (the "Blue Book").
- C. Steel plates shall be used to bridge excavations.
 - 1. Plates shall be coated with a non-skid product that has a friction factor of 0.35 or greater as measured by the California Department of Transportation California Test 342;
 - 2. Plates shall be installed and maintained in a way, which will prevent the plate from bouncing and shifting;
 - 3. Plates must be flush with the roadway, or have edges beveled from the top of the plate to the roadway, or be ramped to the elevation of the adjacent pavement. Temporary ramps shall be constructed of asphalt and shall have gradual slopes;
 - 4. Extra attention is necessary to prepare and secure plates installed along pedestrian paths of travel and designated bicycle routes.

8.2 Safe and Accessible Path-of-Travel Required

- A. Americans with Disabilities Act (ADA) path-of-travel requirements must be observed at all times.
- B. The permittee shall provide a safe and accessible path-of-travel with a minimum clearance of 4-feet at all times for pedestrians, including those with disabilities, to pass around and/or through the excavation site.
- C. A minimum clearance of 4-feet, 6-inches must be maintained at all times between the materials and equipment and the outer rail of any railroad track.
- D. Clearance of materials from fire hydrants, fire alarm boxes and valve covers shall be as required by the San Francisco Fire Department.
- E. Clearance of materials from traffic signal controllers and pull boxes shall be as required by the Department. The path must be properly delineated in accordance with the current Public Works Order concerning "Guidelines for the Placement of Barricades at Construction Sites".

8.3 Mitigation of Dust and Airborne Construction Emissions

- A. Permittees must comply with the current Public Works Order concerning "Dust Control".
- B. Excavation sites shall be swept and cleaned at the completion of each work day.

8.4 Storage of Materials, Supplies, and Equipment

- A. Material, supplies, and equipment may be stored at the excavation site only if they will be used within 7-calendar days.
- B. Fill material (sand, aggregate, and asphalt coated materials) may be stored at the excavation site only if it will be used within 7-calendars days and only in covered, locked containers. The use of the public right-of-way for the storage of any materials, supplies, or equipment must comply with all applicable traffic regulations.
- C. Material and equipment shall not occupy more than the designated lane width. Excavated material shall be removed from the site of the excavation no later than the end of each work day.

8.5 Housekeeping Requirements

- A. Permittees shall keep the area surrounding the excavation site clean and free of loose dirt or other debris in a manner deemed satisfactory to the Department.
- B. Permittees shall be responsible for maintaining the excavation sites in a reasonable clean and litter-free condition, including the removal of all refuse blown or deposited upon the site. Any debris found at the excavation site upon arrival each day, regardless of the source, must be removed immediately.
- C. Permittee shall provide a sufficient number of refuse receptacles or bulk containers for the disposal of loose debris, excavation materials, and other refuse and shall maintain the site in such a manner as to prevent dispersal by the wind or other elements.
- D. Gutters shall not be obstructed and catch basins must be protected.
- E. Permittees shall maintain the site, equipment, fences, and signs free of graffiti. Graffiti shall be removed daily or at more frequent intervals if directed by the City representative.

SECTION 9 EXCAVATION REQUIREMENTS

9.1 Requirements for Excavating in City Streets

- A. All excavations shall be made in accordance with the applicable parts of the most current San Francisco Public Standard Specifications. An excavation site may not exceed 1,200-linear feet at any time. This footage does not include service trenches. The 1,200-linear foot limit does include:
 - 1. Partially or completely backfilled but unpaved trench;
 - 2. Partially or completely excavated trench;
 - 3. Areas where pavement has been removed.
- B. Whenever caving occurs in the sides of any excavation, the pavement above, including the concrete base and the asphalt concrete wearing surface, shall be cut away until the sides of the trench are vertical.
- C. Excavation in concrete pavement, sidewalk, and parking strips shall be in accordance with Section 701.03 of the Standard Specifications, except that excavation in concrete pavement and parking strips, transit stops, and bicycle lanes shall require removal of concrete to an existing joint. Excavation and restoration in these areas shall not result in any new joints in the concrete.
- D. All excavations greater than 6-feet in depth shall require a compaction test report.
- E. Excavated material shall be removed from the job site daily.
- F. If a gas line is struck and/or suspect a gas leak, excavator shall immediately inform 911 and PG&E.

9.2 Excavation Methods

- A. The preferred method of excavation in the Public right-of-Way is “cut and cover”.
- B. All trenches shall have vertical sides. Benching and sloping of trenches shall not be allowed within the ROW.
- C. Use of alternative trenching methods or equipment such as; tunneling, drilling, jacking, rock wheel, trench-less technology, etc. are unlawful without prior written permission of the Director. Requests to use special equipment and methods must be submitted to the Director in writing. Requests must contain:
 - 1. Proposed method of excavation;
 - 2. Reason for proposing alternate method;
 - 3. Location;
 - 4. Supporting documentation (equipment, processes, prior results, etc.)
- D. Excepting asphalt spreading equipment metal tracked equipment shall not be allowed on the public right-of-way unless the Director grants written approval. The gross vehicle weight of any equipment shall not exceed 500-pounds per square inch whose surface is in direct contact with the roadway.
- E. All excavations shall protect areas outside of the excavation site. Permit holders shall be responsible for any collateral damage associated with the excavation and will be required

to make repairs as necessary.

- F. Trench and excavation support, including sheeting, shoring, bracing, dewatering (if necessary), etc., or equivalent methods for the protection of life and limb, and conforming to applicable safety orders of OSHA and the State of Californian Division of Industrial Safety shall be deployed.

9.3 Location of Utility Pipes

- A. The top of new conduit or pipes must be placed at least 18-inches below the bottom of the concrete base.
- B. New conduit or pipe shall not be placed closer than 24-inch horizontal to an existing pipe or outside wall of an underground utility access vault or structure, except for pipe crossings.
- C. An Owner may not place his facilities inside another Owner's facilities without prior written approval of the Director and the other Owner.
- D. In case of conflict between the above requirements and rules of the California State Public Utilities Commission, the more restrictive requirements will prevail.

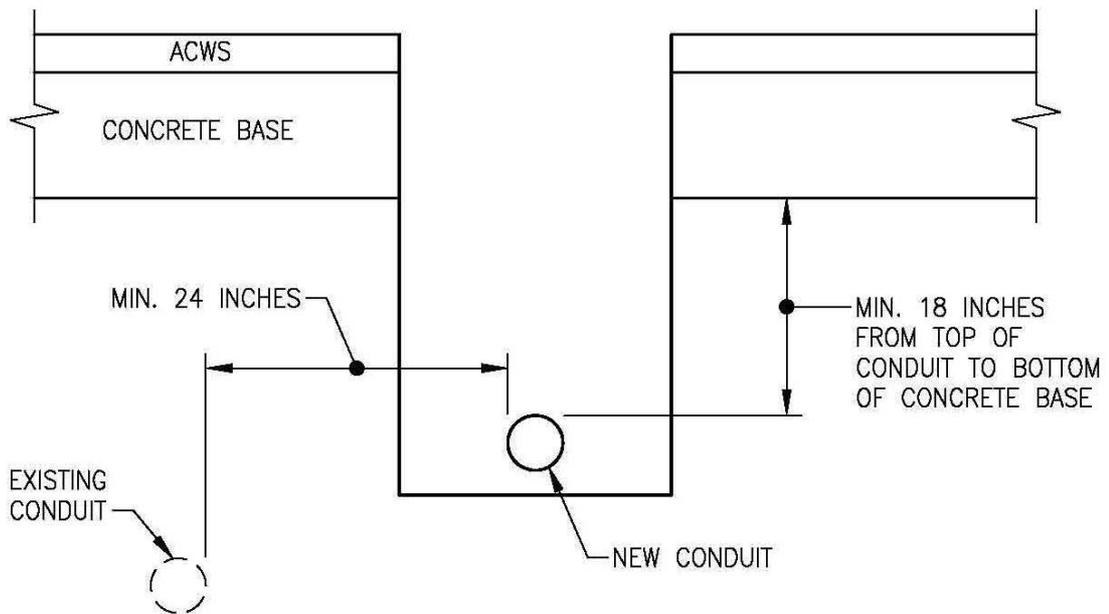


FIGURE 9.1

Depicts the minimum distances that must be maintained from underground utilities

- E. Warning/identification tape shall be installed to identify location of underground utilities and to act as a warning against accidental excavation of buried utilities. Warning/identification tape shall be used on all underground utilities.
- F. Warning/identification tape shall consist of a minimum 5 Mil overall thickness, with a minimum 0.35 Mil (0.00035-inches) solid aluminum foil core. Construction is 0.8 Mil clear film, reverse print laminated to aluminum foil to 3.75 Mil clear film, making the film permanently printed.
- G. Underground marking tape shall be installed using standard APWA color codes as

follows:

APWA Uniform Colors	
Color	Application
<u>Red</u>	Electric Power Lines, Cables, Conduit, Lighting Cables
<u>Yellow</u>	Gas, Oil, Steam, Petroleum
<u>Orange</u>	Fiber Optic Lines, Telecommunication, Signal lines, Cables, Conduit
<u>Blue</u>	Water Lines, Portable Water
<u>Green</u>	Sewers, Drain Lines

Use of standard legends on tape such as follows:
 CAUTION WATER LINE BURIED BELOW
 CAUTION SEWER LINE BURIED BELOW
 CAUTION SANITARY SEWER BURIED BELOW
 CAUTION GAS LINE BURIED BELOW

Detectable Tape Placement Guidelines
 2-inch width up to 12-inch deep
 3-inch width up to 24-inch deep
 6-inch width up to 36-inch deep

9.4 Excavation near Auxiliary Water Supply System (AWSS)

- A. The City has an Auxiliary Water Supply System, a separate fire suppression system that operates under very high pressure. Use extreme caution in the vicinity of AWSS lines. The following special rules apply to work in streets containing AWSS lines:
1. Contact the San Francisco Public Utilities Commission before digging;
 2. Exposed AWSS must be supported and protected;
 3. Maintain a minimum clearance of 5-feet around each high pressure, fire hydrant and 3-feet around other fire hydrants;
 4. New trenches extending 10-feet or more parallel to an existing AWSS must be constructed so that an area defined by 45-degree lines projected from both sides of the bottom of the new trench to the surface clears any AWSS lines.

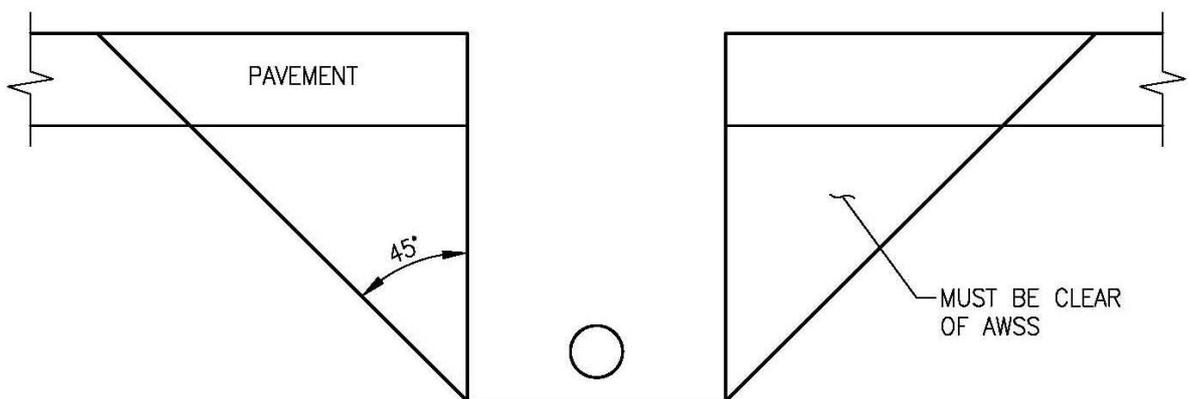


FIGURE 9.2
 Depicts the minimum distance from a AWSS line

9.5 Excavation Affecting Curb Returns

- A. Any excavation (including trenchless technology) encroaching upon any part of an angular corner requires the installation or reconstruction of curb ramp(s) at the affected corner to current standards by the Permittee. Permittee's are encouraged to contact BSM Inspection Division to determine if curb ramps within a project are compliant or must be replaced at least 45-days prior to the commencement of any work.

- B. Curb ramps must be constructed in accordance with current City standards. Any questions should be directed to Public Works permitting staff.

- C. If a standard curb ramp cannot be installed, a request may be made to vary from the standard plan. The request must be submitted in writing to Public Works Excavation Permit Coordinator. The request must include:
 - 1. Explanation of the reason(s) for the variance;
 - 2. Type of variance requested;
 - 3. Plans and drawings of the proposed modifications;
 - 4. Alternative studies.

9.6 Excavation in Areas Potentially Containing Hazardous Waste

- A. Excavations which involve the disturbance of at least 50-cubic yards of soil may be subject to the San Francisco Maher Ordinance: Article 22A of the San Francisco Health Code. Additional information can be found on the Department of Public Health web site at www.sfdph.org.

- B. Excavation in areas potentially containing hazardous waste shall conform to Article 2.4 of the Excavation Code:
 - 1. Each owner and its agent shall be subject to hazardous material guidelines for date collection; disposal, handling, release, and treatment of hazardous material; site remediation; and worker safety and training. The Department, in consultation with the Department of Public Health, shall develop, prescribe, and update such hazardous material guidelines. The guidelines shall require the owner and its agent to comply with all federal, state, and local laws regarding hazardous material. For purposes of this subsection, "hazardous materials" shall mean any gas, material, substance, or waste which, because of its quantity, concentration, or physical or chemical characteristics, is deemed by any federal, state, or local governmental authority to pose a present or potential hazard to human health or safety or to the environment.

SECTION 10 TRENCH BACKFILL REQUIREMENTS

10.1 Backfilling of Trenches

- A. Backfill and compaction shall be in accordance with the applicable parts of the most current San Francisco Public Standard Specifications.
- B. Backfill and compaction shall be completed within 72-hours after the installation or repair of facilities.

10.2 Backfill Materials

- A. The preferred material for backfill is clean native fill 100% free of organic and deleterious material and meets minimum gradation specifications (Section 706 of the Standard Specifications). The Director may require a report verifying compliance with backfill specifications.
- B. Other types of fill such as Class II AB, controlled density fill (CDF) or concrete slurry may be used, provided prior written approval is obtained from the Department. Requests for approval shall be submitted to the Department in writing for review and approval and shall include:
 - 1. Material to be used;
 - 2. Mix design (aggregate, concrete, PSI);
 - 3. Trench detail indicating the width and depth of the trench;
 - 4. Distance from the top of pipe or conduit to the bottom of the concrete base;
 - 5. Controlled density fill or concrete slurry may NOT be used for the concrete base.

10.3 Compaction Requirements

- A. The backfill material must be compacted to a relative compaction of not less than 95% in the top 3-feet of the excavation and 90% in the remainder of the excavation. The depth of excavation shall not include the thickness of existing or future roadway pavement sections.
- B. Compaction tests by a certified material testing laboratory shall be taken as prescribed in these regulations, or as specified by the Public Works Inspector. Test results will be provided to BSM and/or City Inspector(s) in charge of the project.
- C. For those trenches greater than 6-feet in depth as defined in the regulations, a compaction test shall be required at 50% and 100% of the backfill height. For trenches parallel to the center line of the roadway and exceeding 25% of the block face length, shall require a test every 50-feet with a minimum of three compaction tests. For trenches crossing intersections, a minimum of 2 compaction tests are required within the intersection.
- D. The number of tests required shall increase if test results are poor and decrease if good compaction results are maintained, as determined by the Inspector.

10.4 Compaction Methods

- A. Sand jetting or flooding will not be permitted.
- B. Native material used as backfill shall be mechanically compacted by means of tamping rollers, vibrating rollers, stompers (impact-type pavement breakers), whackers, or other hand held mechanical tampers.

- C. All backfill other than sand, controlled density fill, and concrete slurry shall be placed in horizontal layers not more than 8-inches thick before compaction, and each layer shall be satisfactorily compacted by mechanical means. Use of controlled low strength material and controlled density fill shall have a maximum long-term compressive strength of 150 PSI.

- D. Prior to mechanically compacting backfill, determine proper moisture content of soil. Optimum moisture in all soil types is necessary to obtain required compaction. Soil curve data to be provided to the City.

SECTION 11 PAVEMENT BASE RESTORATION REQUIREMENTS

11.1 Pavement Base Restoration Over Trenches Requirements

- A. "T" trench shall be the standard restoration practice for all trenches. For all trenches, the base restoration shall be a minimum of 1-foot from the undisturbed edge of the excavation. Pavement base shall be portland cement concrete.

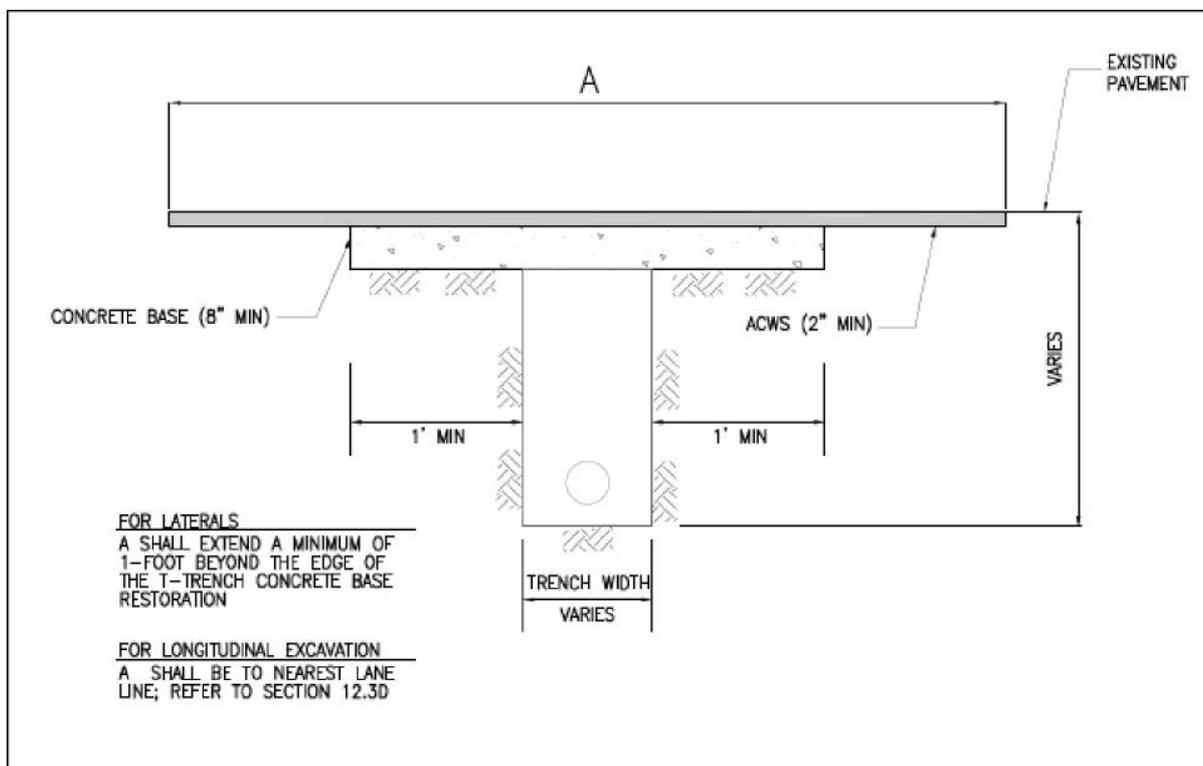


FIGURE 11.1

Standard "T" trench restoration design

- B. Concrete base shall be restored in accordance with applicable parts of Section 207 of the Standard Specifications.
- C. When "T" trench base restorations are 3-feet or less from a concrete curb, track rail, track slab, ties or ballast section, concrete gutter, parking strip, or other concrete joint then the remaining portion of the road base shall also be removed and replaced as part of trench restoration unless waived by the Director.

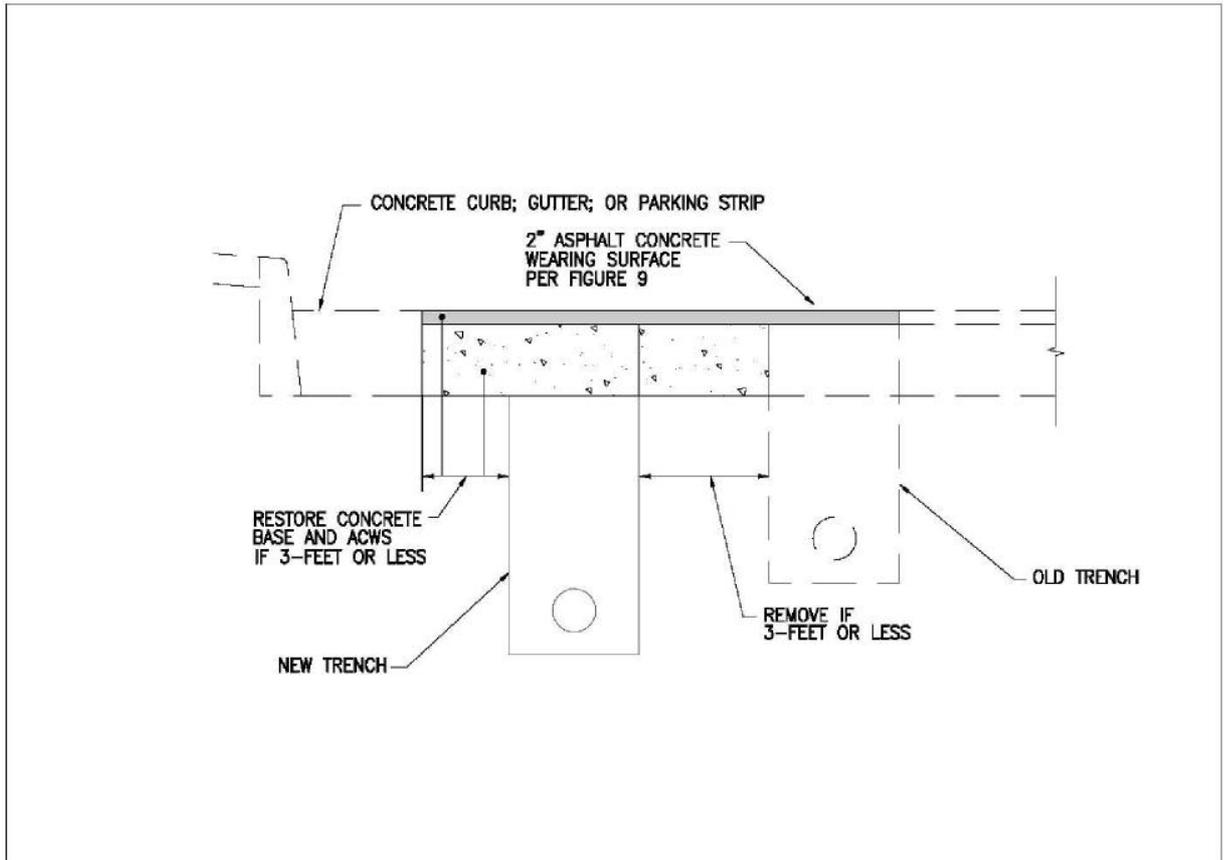


FIGURE 11.2

The restoration area for excavations less than 3-feet from a concrete gutter, parking strip, or other road base joint including a previously restored excavation

- D. Placement of concrete base must be completed within 120- hours after the placement and compaction of backfill. The compaction of backfill shall be certified in writing by an American Standard Testing Method (ASTM) certified laboratory and submitted to Public Works Bureau of Street Use and Mapping (BSM). The date and time of the base installation shall be spray-painted on the base.
- E. Concrete base shall be restored to the same thickness as adjacent pavement, but shall be no less than 8-inches in thickness and placed within 2-inches of the finished wearing surface.
- F. Concrete base shall be vibrated and leveled so that no lumps or uneven areas will reflect through the new asphalt concrete wearing surface.
- G. All concrete base shall contain accelerants or other admixtures in accordance with Section 207 of the Standard Specifications (unless waived by the Director), shall be designed to accelerate setting and shall be cured for at least 4-hours and/or per the manufacture's recommendations.
- H. Concrete base with admixtures, shall be cured for a minimum of 4-hours and per the manufacture's recommendations by either closing the area to traffic or plating as described in Section 8.1.C unless waived by the Director. If authorized by the Director

concrete base without accelerants shall be cured for a minimum of 7- days or in the case of Bus Stops for 14-days by either closing the area to traffic or plating as described in Section 8.1.C.

- I. Concrete base shall not be allowed as a temporary wearing surface. Temporary wearing surfaces shall be hot patch asphalt wearing surface unless waived by the Director or if the base is within SFMTA track right-of-way.

11.2 Concrete Base Restoration on SFMTA Routes Requirements

- A. Streets designated as SFMTA bus routes shall have special restoration requirements that include the installation of minimum 10-inch thick concrete base for the entire width of the travel lane at locations adjacent to bus bulb outs for the full length of the bus bulb out. Concrete used for concrete base shall have a minimum compressive strength of 5,000 PSI at 28-days.
- B. Bus Stops shall be restored with a minimum of 10-inch thick concrete pavement on 12-inch thick Class 2 aggregate base per current Bus Pad Standard. There shall be no new joints in the Bus Pad. Concrete used for concrete bus pads shall have a minimum compressive strength of 6,000 psi at 28-days.

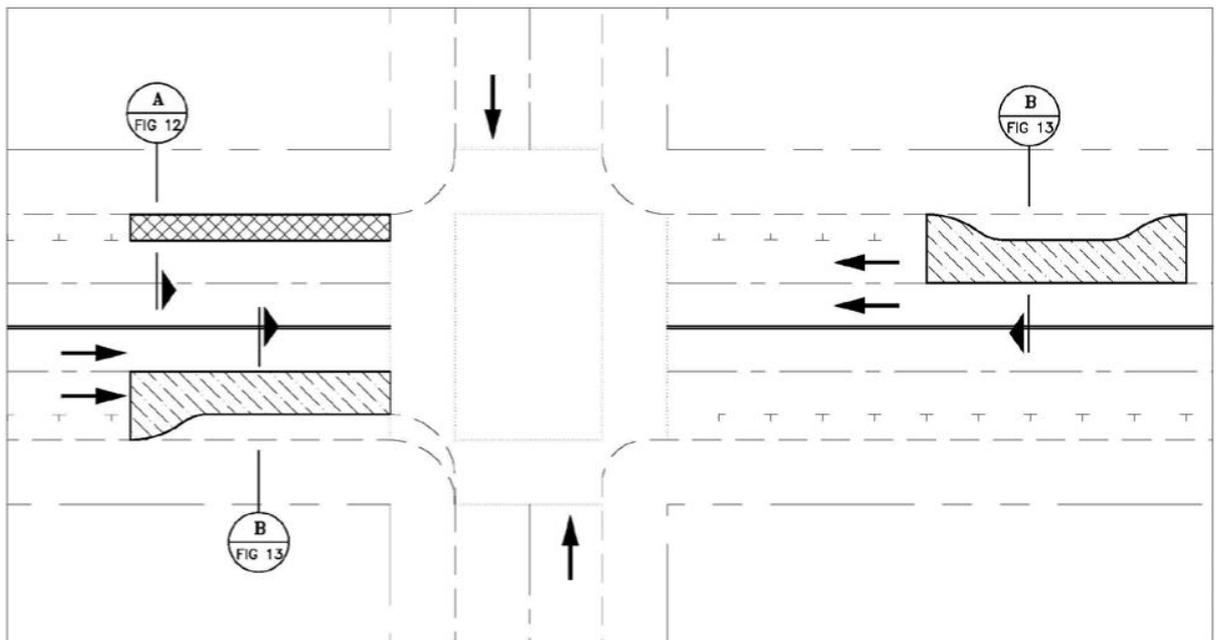


FIGURE 11.3
SFMTA bus routes adjacent to a bus bulb out

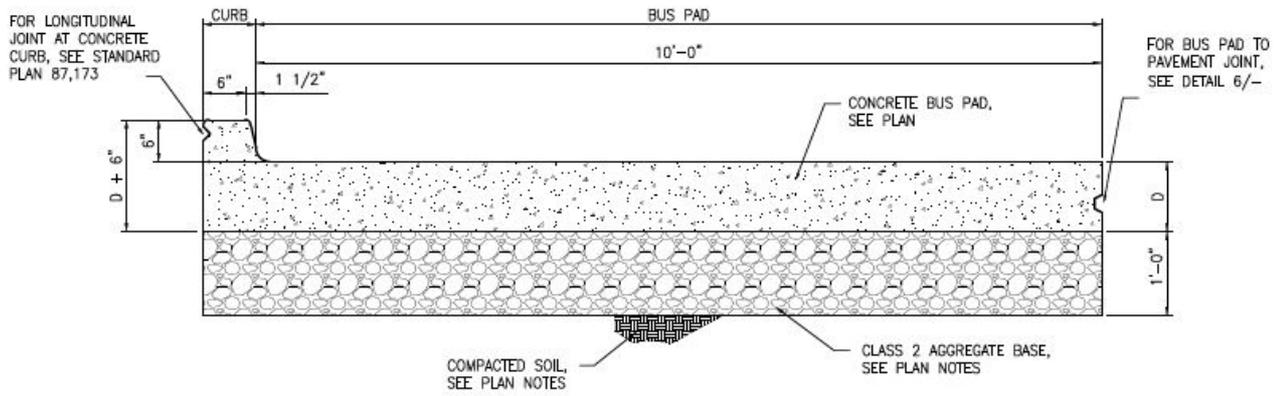
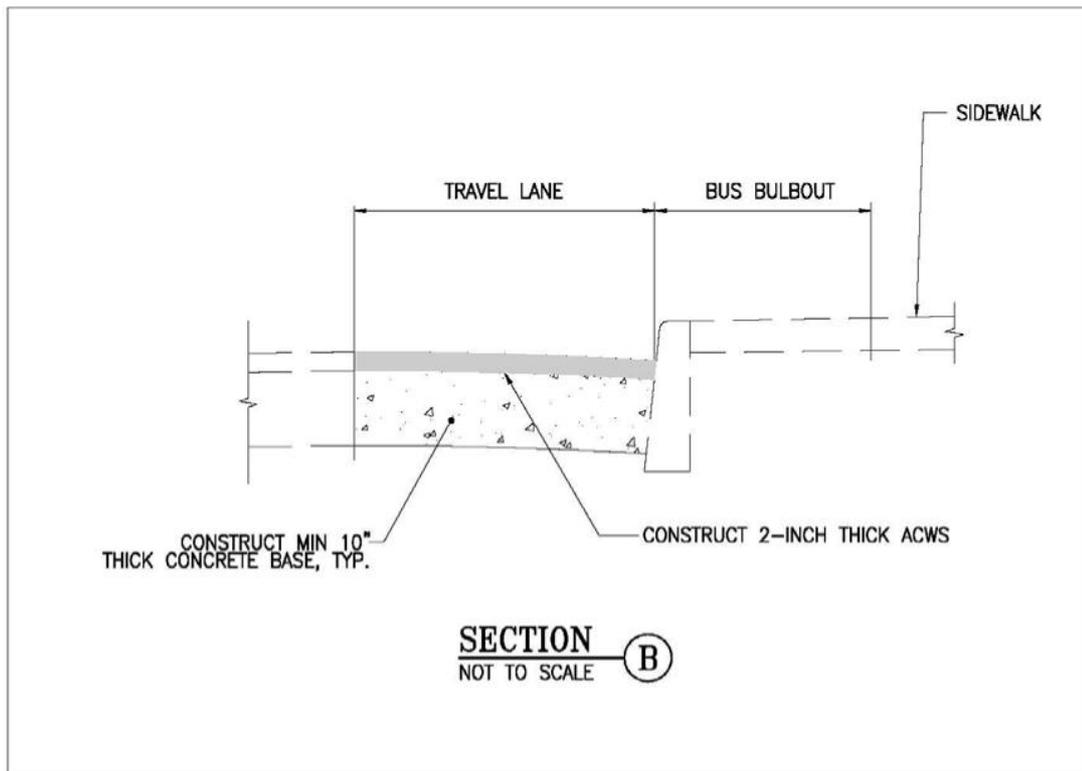


FIGURE 11.4

Special Bus Stop Pavement restoration requirements for excavations – full panel restorations will be required for all affected concrete panels. Refer to Standard Plan 96,607 for further details.

FIGURE 11.5



SFMTA bus routes adjacent to a bus bulb out

SECTION 12 PAVING RESTORATION REQUIREMENTS

12.1 Concrete Pavement Restoration Requirements

- A. Concrete pavement shall be restored in accordance with applicable parts of Section 210 of the Standard Specifications. Placement of concrete pavement must be completed within 120-hours after the completion of backfill and compaction.

12.2 Concrete Sidewalk Restoration Requirements

- A. Concrete sidewalks shall be restored in accordance with applicable parts of Section 204 of the Standard Specifications.
- B. The Permittee acknowledges/accepts replacing sidewalk in kind, including special surfaces at the sole cost of the Permittee.

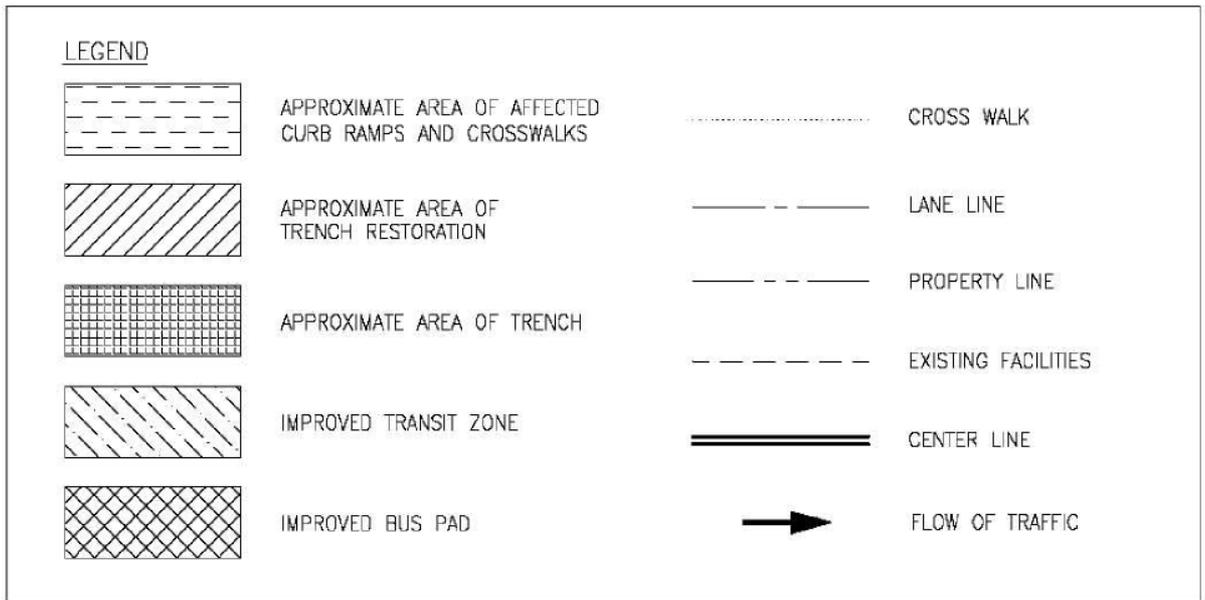
12.3 Asphalt Concrete Wearing Surface Restoration Requirements

- A. The restored Asphalt Concrete Wearing Surface (ACWS) shall be installed in accordance with applicable parts of Section 212 of the Standard Specifications and shall:
 - 1. Be 2-inches minimum thickness;
 - 2. Be applied by a paving machine or spreader box in order to eliminate uneven, washboard effects that result from hand spreading unless the machine cannot effectively access or service the area. The permittee shall provide documentation where the paving machine or spreader box is not used;
 - 3. Provide a smooth wearing surface such that there are no irregularities greater than 5/16-inches for 10-feet in any direction;
 - 4. Achieve a minimum relative compaction of 93%;
 - 5. Have edges which have been hot ironed.
- B. Placement of the restored ACWS must be completed within 120-hours after placement of concrete base.
- C. The length of the restored ACWS shall be determined based on the trench excavation.
 - 1. If the total length of the trench excavation on the street is less than 25% the length of the street, the ACWS shall be restored 2-feet minimum beyond the edge of the trench and shall be rectangular. Exception: if the edge of trench excavation is less than 2-feet to a crosswalk, the ACWS shall conform at the crosswalk;
 - 2. If the total length of the trench excavation on the street is more than 25% the length of the street, the ACWS shall be for the entire length of the street for all affected lanes and shall be rectangular. If the edge of trench excavation is less than 6-feet to a crosswalk, the ACWS shall conform at the crosswalk;
 - 3. Prior to restoration of the ACWS, the limits of ACWS restoration shall be trimmed by cutting the existing ACWS in neat straight lines perpendicular and parallel to the curb. Saw cuts shall not extend into the concrete base;
 - 4. The existing ACWS shall have a vertical face in a neat line so that the new ACWS can be constructed with a butt joint. No feathering of the new ACWS to the existing ACWS is allowed;
 - 5. The base surface shall be blown or swept clean and a tack coat of Type SS-1 or SS-1h applied.
- D. The width of the restored ACWS shall be to the nearest lane line.

1. Bicycle, transit or parking delineations are not to be considered lane lines.
Exception: Dedicated cycle tracks separated with a concrete band;
 2. For non-delineated streets, the lane line shall be considered the center, or half of the width of the street;
 3. Prior to restoration of the ACWS, the limits of ACWS restoration shall be trimmed by cutting the existing ACWS in neat straight lines perpendicular and parallel to the curb. Saw cuts shall not extend into the concrete base;
 4. The existing ACWS shall have a vertical face in a neat line so that the new ACWS can be constructed with a butt joint. No feathering of the new ACWS to the existing ACWS is allowed;
 5. The base surface shall be blown or swept clean and a tack coat of SS-1 applied.
- E. Lateral (service connection) ACWS restorations less than 50-feet apart (as measured from the center line of each trench), the restoration shall be contiguous for all affected lanes. If at least 8 laterals (service connections) and 50% or more of laterals (service connections) are excavated, the ACWS restoration shall be the entire width and length of the affected lane(s).
- F. Intersection ACWS restorations shall be determined based on the trench excavation. The inner portion of the intersection shall be broken into 4 quadrants. Any quadrant affected by the trench shall be restored with ACWS. If 3 quadrants are affected by the trench, the entire intersection shall be restored with ACWS.
- G. Evaluation of all affected curb ramps and crosswalks are subject to the Public Works Curb Ramp Order 184,350 or subsequent revisions.

12.4 Other Restoration Requirements

- A. ACWS on designated bicycle routes must be removed and restored for its full affected width.
- B. Pavement made of special materials shall be restored in kind. Public Works shall be contacted for specifications; if specifications are not available, excavator shall submit in kind material submittals for Public Works approval.
- C. Traffic striping and markings including colored lane applications shall be restored in kind upon completion of paving.
- D. Bus Stops and designated streets will require special restoration.



SECTION 12 LEGENDS FOR REFERENCE FIGURES

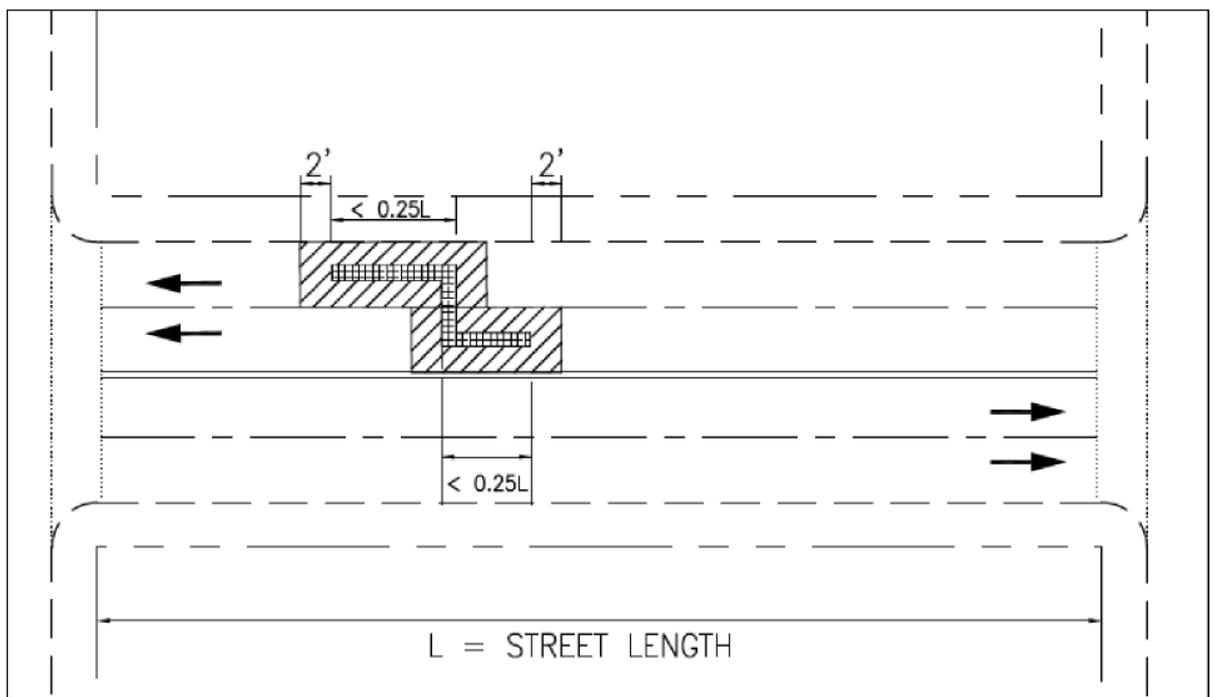


FIGURE 12.1

ACWS restoration for trenches with total length less than 25% of the street length on a lane delineated street

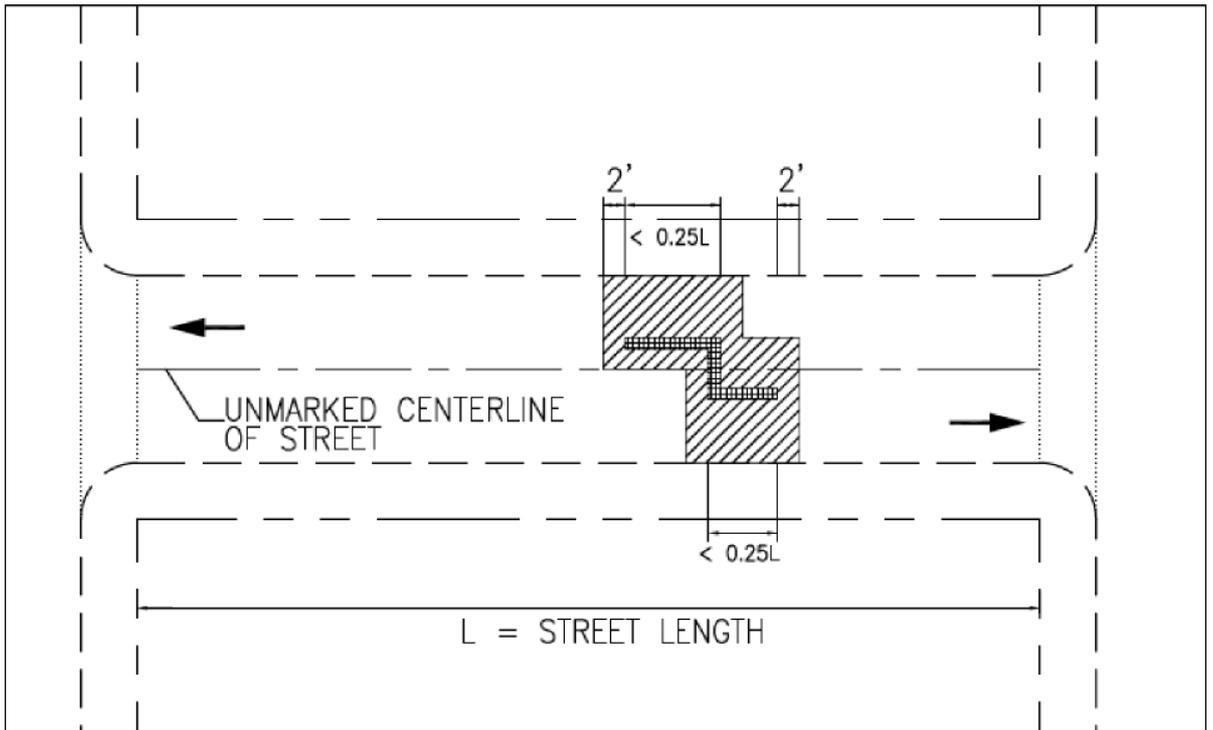


FIGURE 12.2

ACWS restoration for trenches with total length less than 25% of the street length on an unmarked street

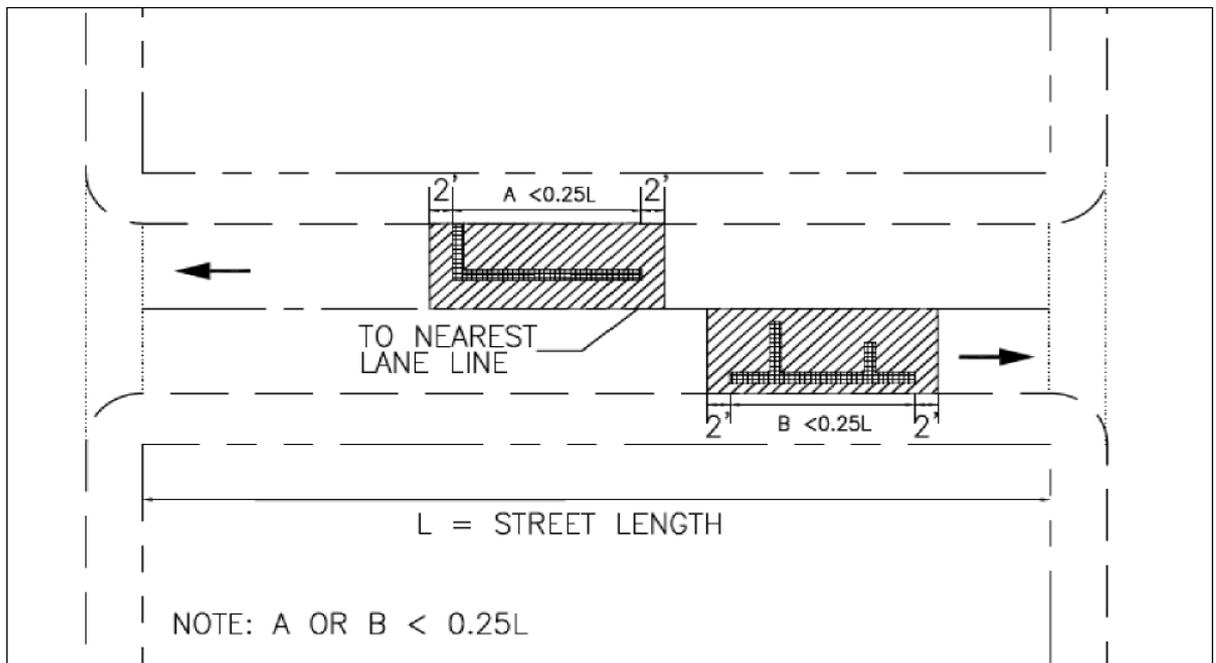


FIGURE 12.3

ACWS restoration for multiple trenches with total length less than 25% of the street length of street

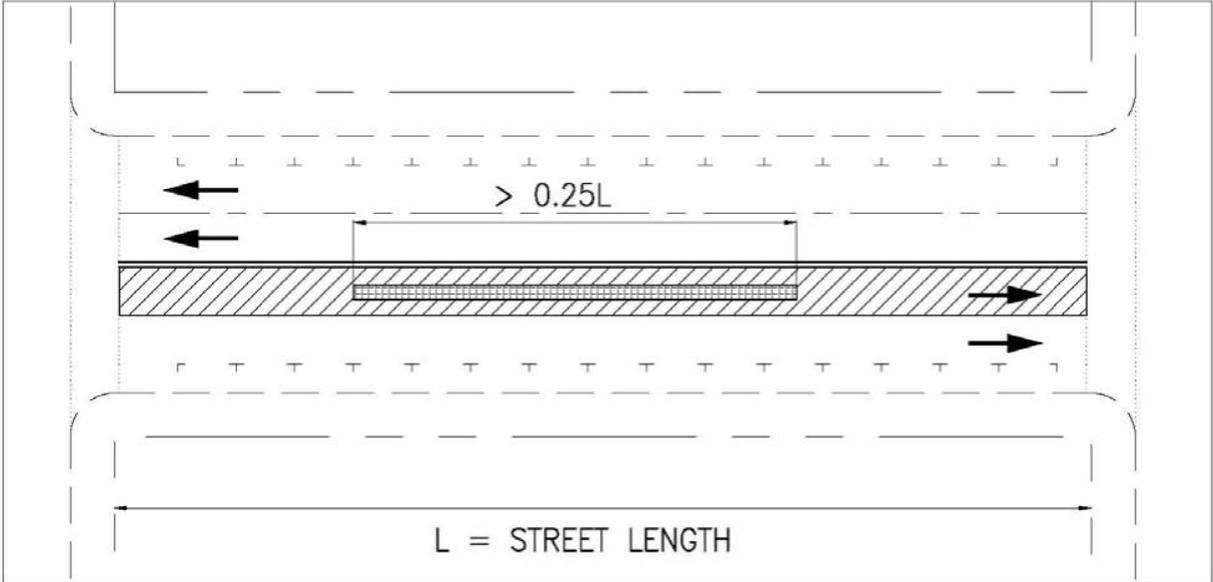


FIGURE 12.4

ACWS restoration for trenches with total length greater than 25% of the street length on a lane delineated street with trench wholly in one delineated lane

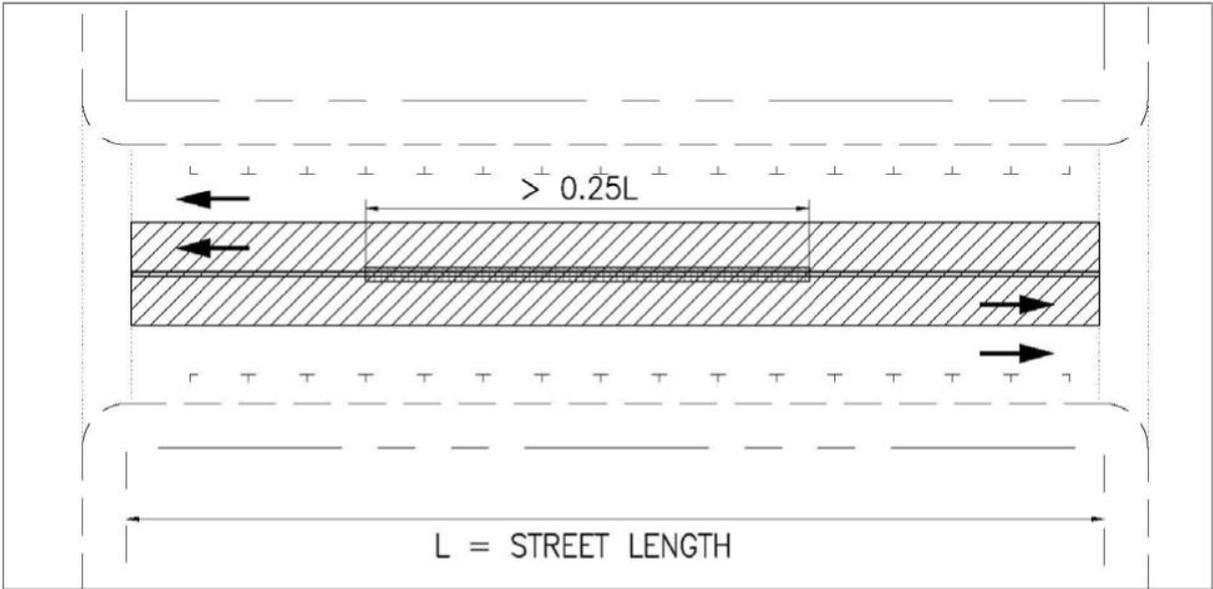


FIGURE 12.5

ACWS restoration for trenches with total length greater than 25% of the street length on a lane delineated street with trench in more than one delineated lane

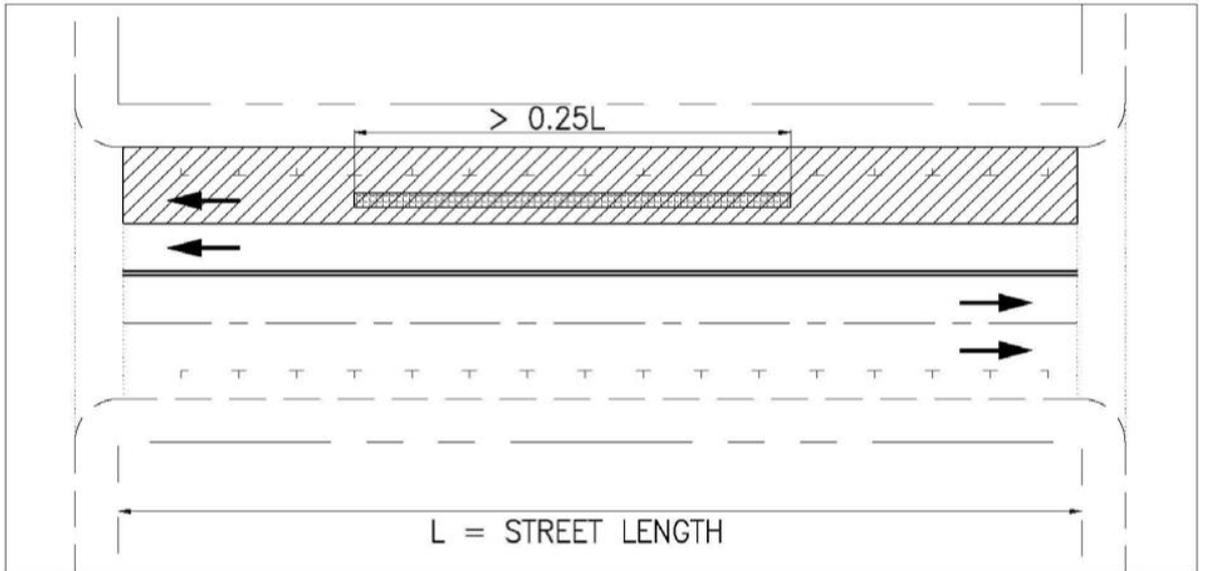


FIGURE 12.6

ACWS restoration for trenches with total length greater than 25% of the street length on a lane delineated street with trench wholly in one delineated lane with one side of restoration to the edge of concrete surface

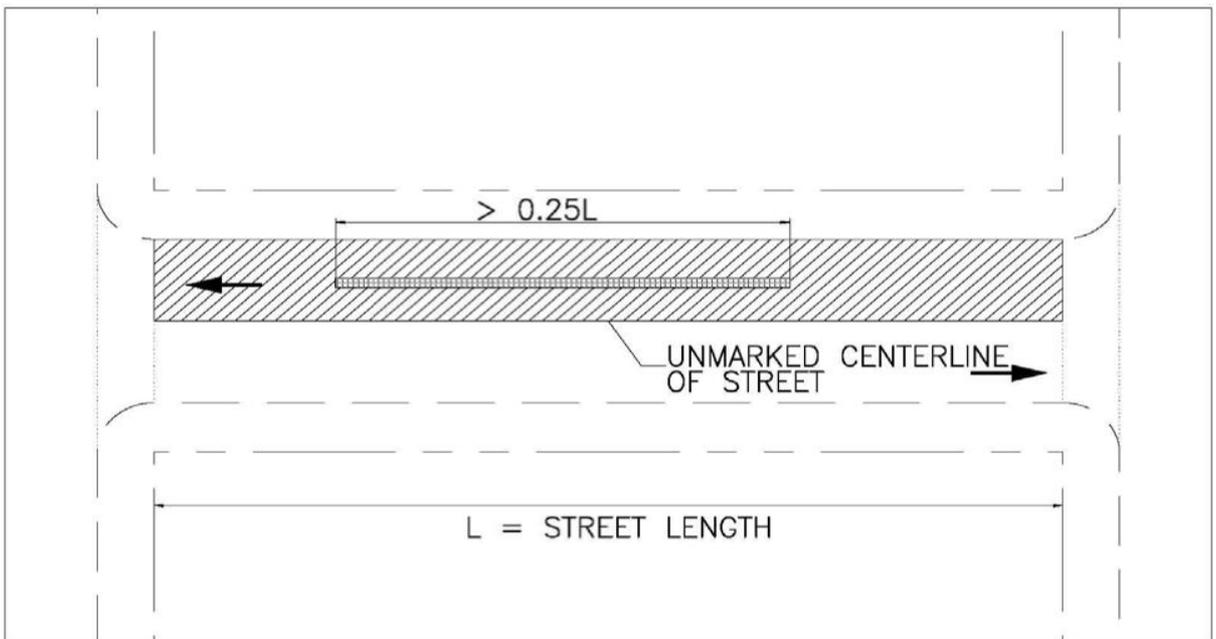


FIGURE 12.7

ACWS restoration for trenches with total length greater than 25% of the street length on an unmarked street

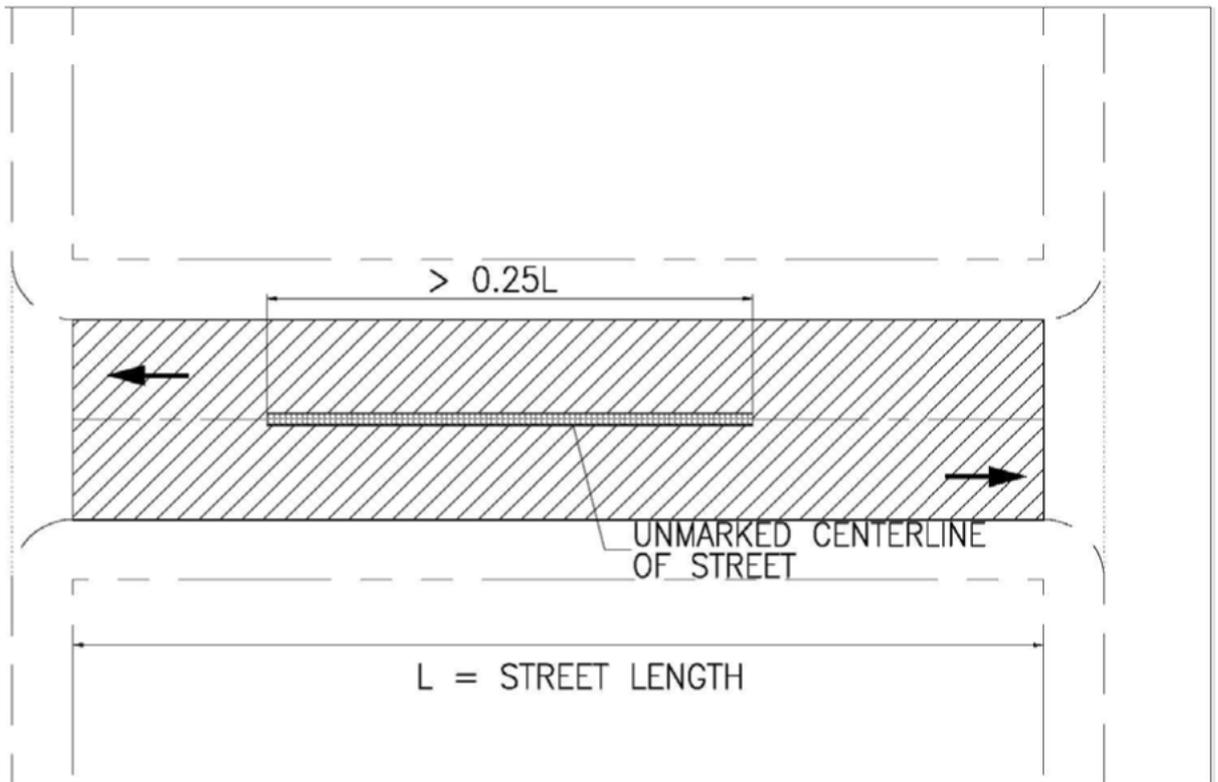


FIGURE 12.8

ACWS restoration for trenches with total length greater than 25% of the street length on an unmarked Street

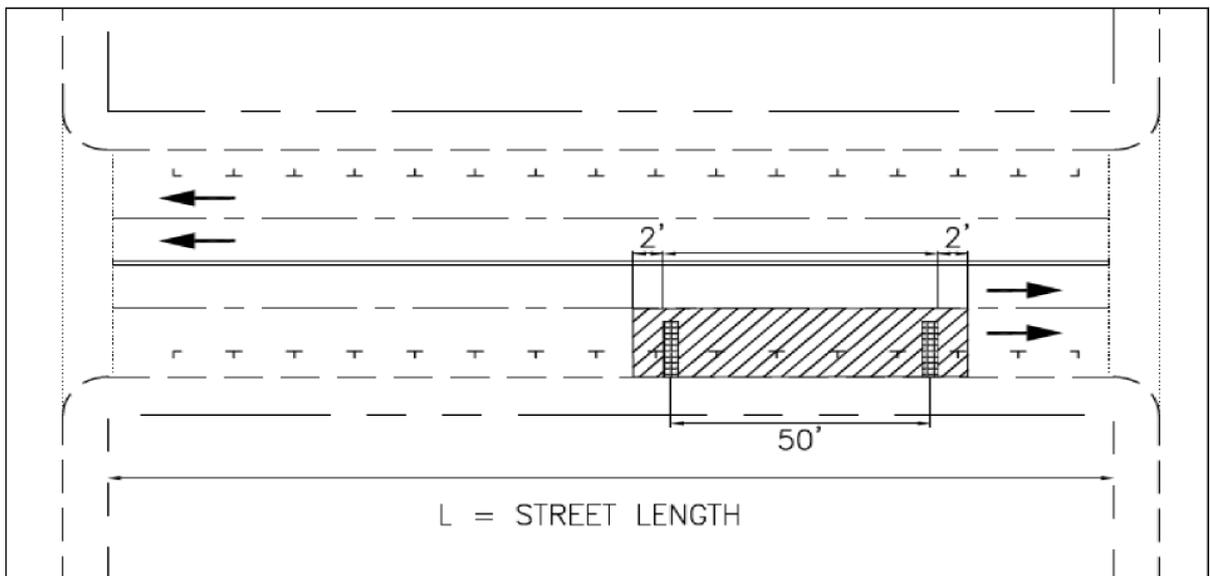


FIGURE 12.9

ACWS restoration for lateral trenches fifty feet or less apart

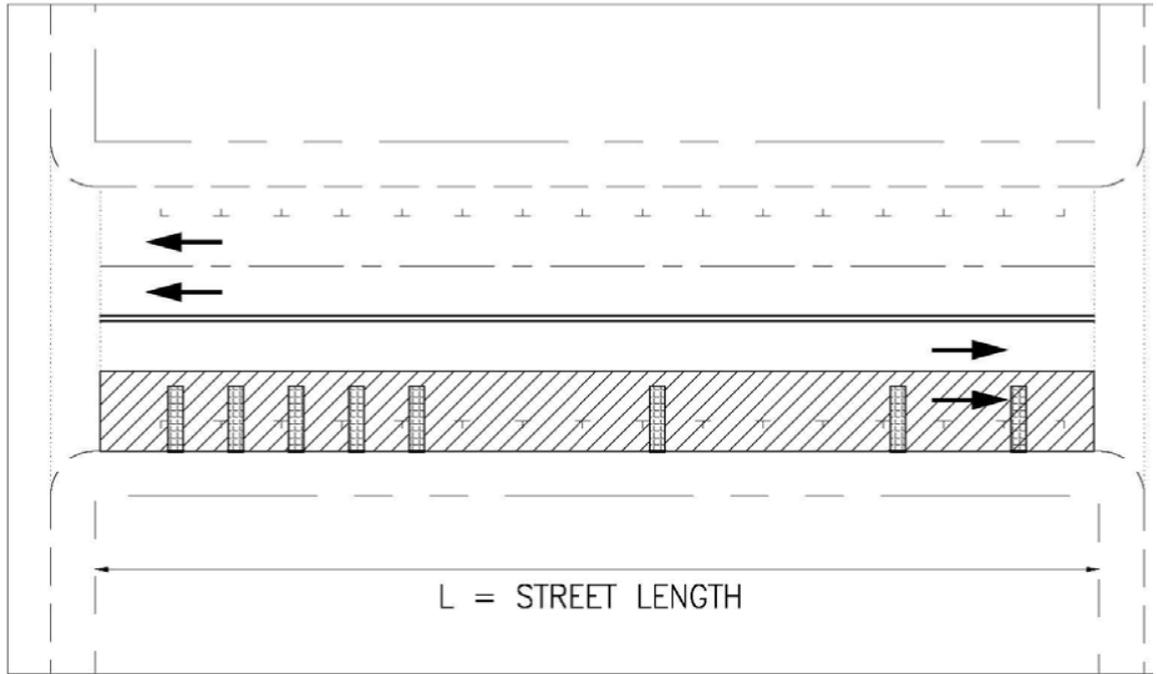


FIGURE 12.10

ACWS restoration for eight or more laterals (service connections) and fifty percent (50%) or more of laterals (service connections)

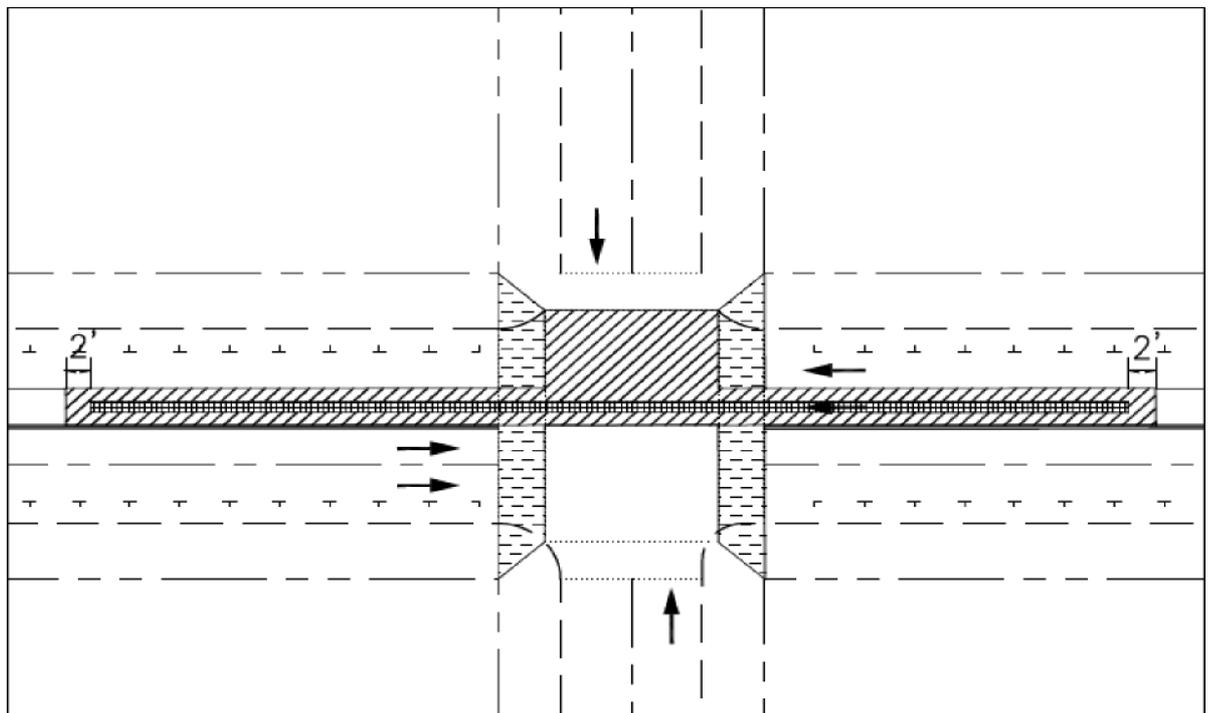


FIGURE 12.11

ACWS restoration for trenches in two quadrants. All affected curb ramps and crosswalks are subject to evaluation

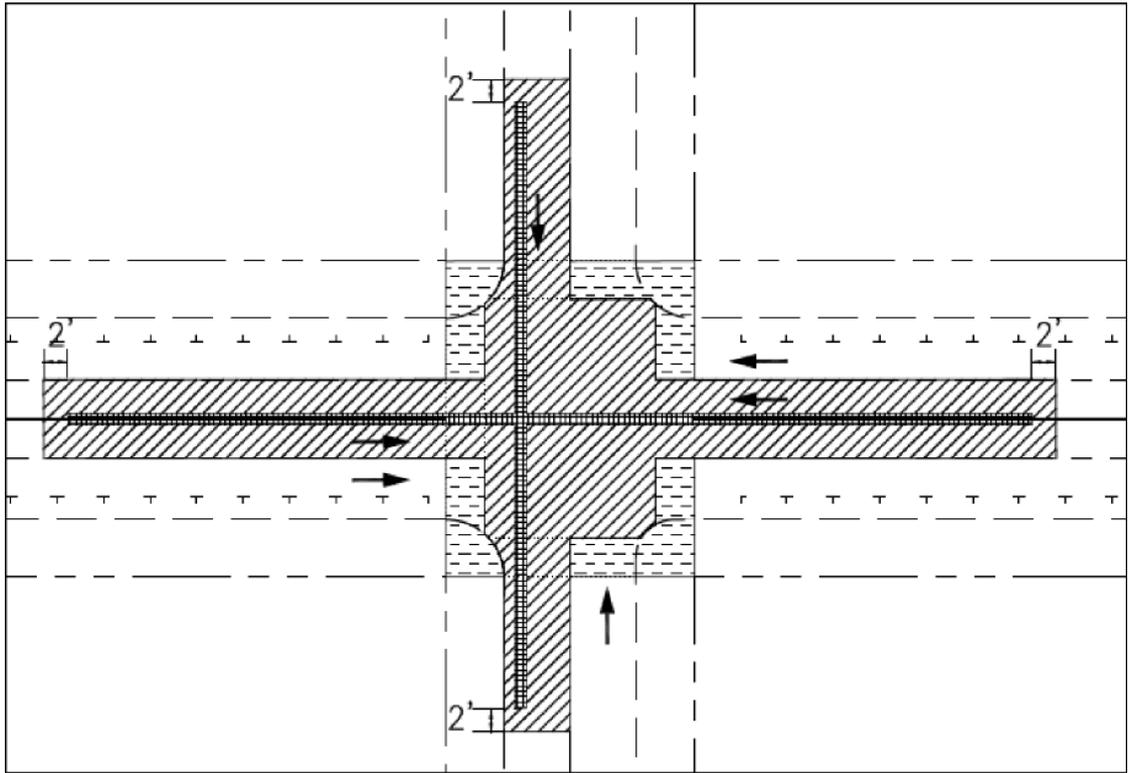


FIGURE 12.12

ACWS restoration for trenches in four quadrants. All affected curb ramps and crosswalks are subject to evaluation

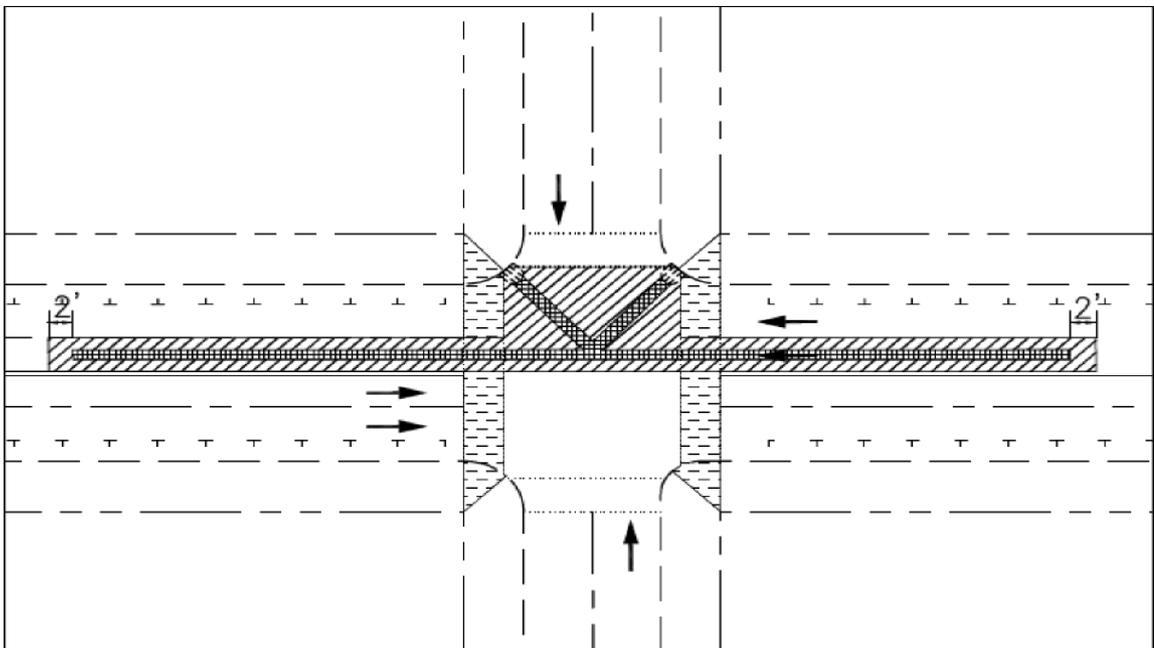


FIGURE 12.13

ACWS restoration for trenches in two quadrants. All affected curb ramps and crosswalks are subject to evaluation

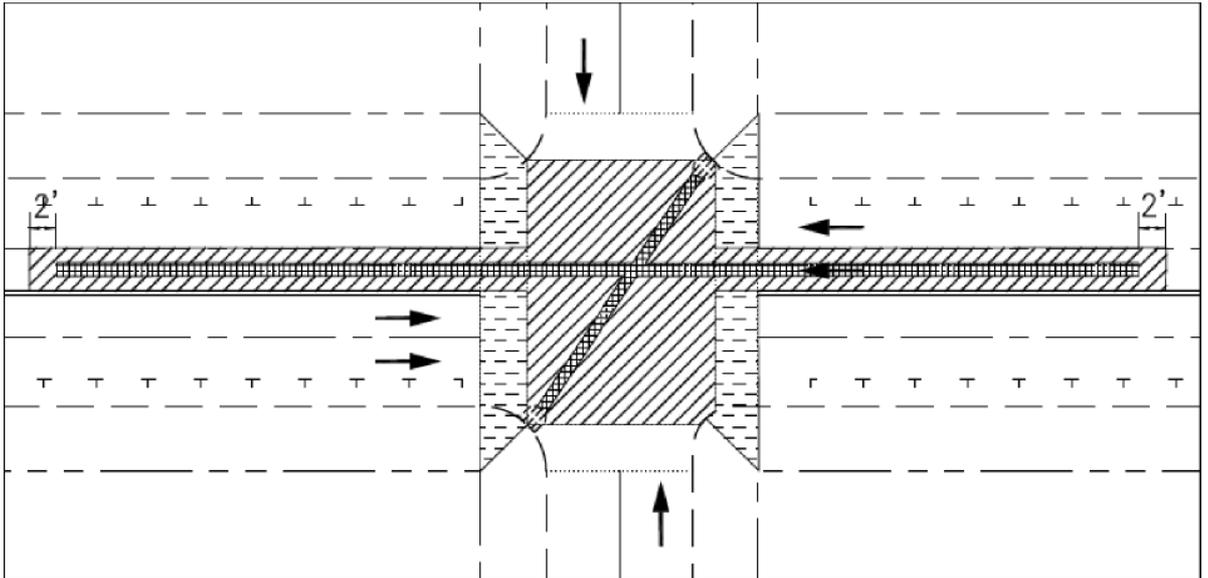


FIGURE 12.14

ACWS restoration for trenches in four quadrants. All affected curb ramps and crosswalks are subject to evaluation

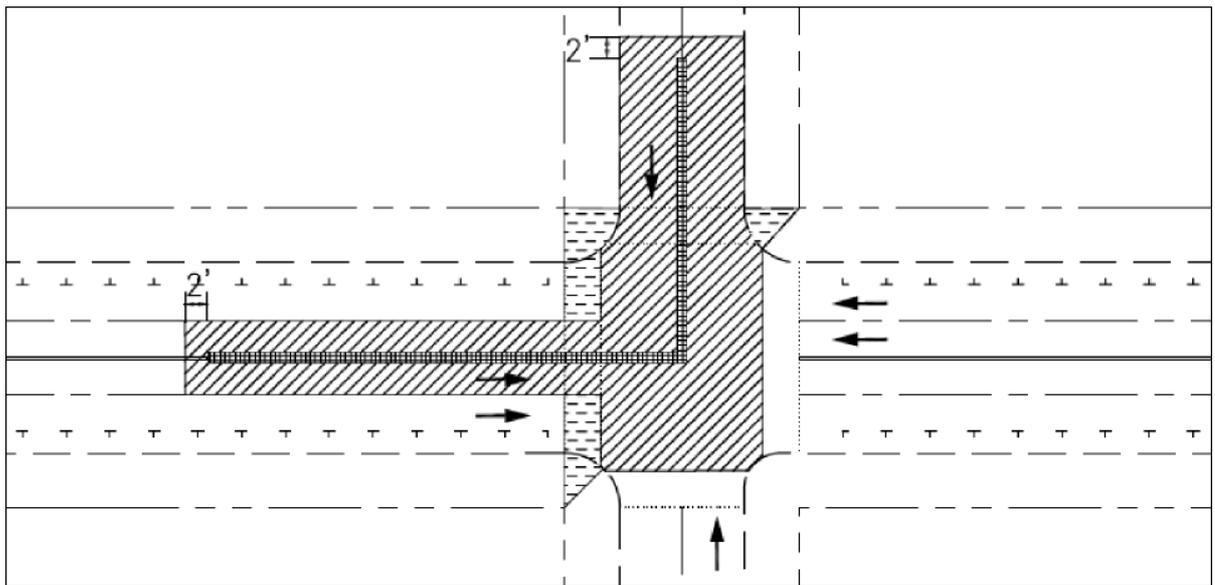


FIGURE 12.15

ACWS restoration for trenches in four quadrants. All affected curb ramps and crosswalks are subject to evaluation

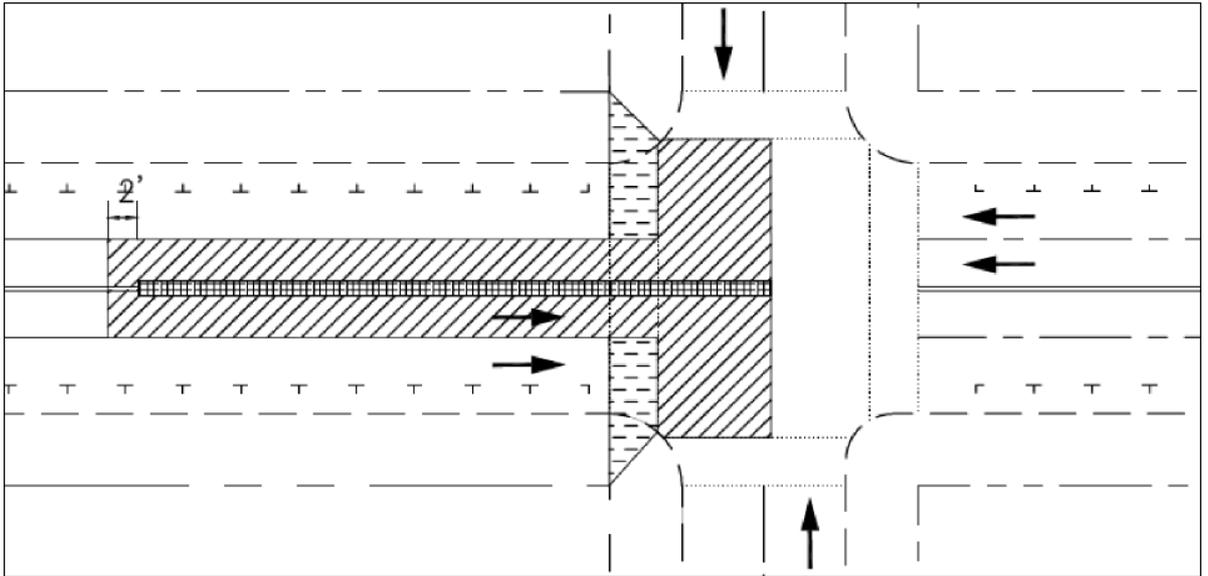


FIGURE 12.16

ACWS restoration for trenches in two quadrants. All affected curb ramps and crosswalks are subject to evaluation

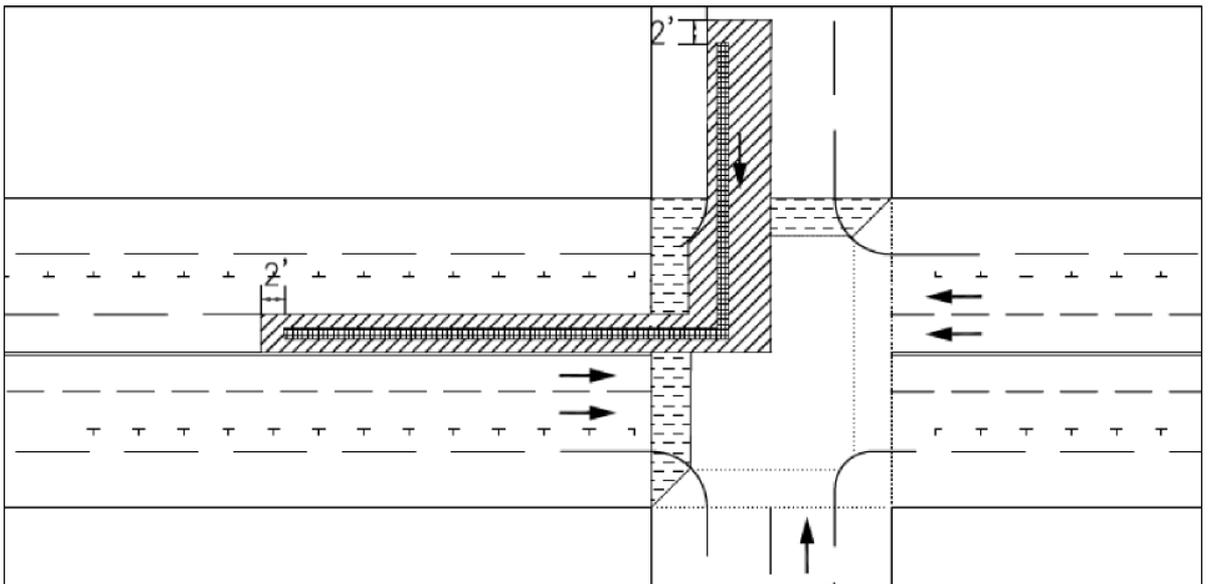


FIGURE 12.17

ACWS restoration for trenches in one quadrant. All affected curb ramps and crosswalks are subject to evaluation

SECTION 13 ENFORCEMENT

13.1 Types of Violations

- A. Performing work without a permit.
- B. Performing operations that are not included in the permit.
- C. Failure to comply with provisions of the Excavation Code.
- D. Failure to comply with requirements of this Order.
- E. Failure to comply with permit requirements.

13.2 Issuance of Violations

A. Administrative Penalties

- 1. A "Notice of Violation" (NOV) may be issued when a violation has been observed.
- 2. The NOV will specify:
 - a. The nature of the violation;
 - b. The time by which the violation must be corrected;
 - c. The section of the Public Works Code or Order violated, and whether or not a penalty is imposed.
- 3. Penalties shall not exceed \$1,000 per day, per violation commencing with the first day of the violation. However, a person who excavated without a valid permit may be assessed a penalty not to exceed \$10,000 per day, per violation commencing with the first day.
- 4. In assessing the amount of the penalty, the Director may consider:
 - a. The nature and seriousness of the misconduct;
 - b. The number of violations;
 - c. The persistence of the conduct;
 - d. The length of time over which the misconduct occurred;
 - e. The willfulness of the violator's misconduct;
 - f. The violator's assets, liabilities, and net worth.
- 5. In addition to the administrative penalty assessed, the Director may assess enforcement costs to cover the reasonable costs incurred in enforcing the administrative penalty, including reasonable attorney's fees.

B. Appealing an Administrative Penalty

- 1. An appeal of an Administrative Penalty must be made in writing within 10-days of the date imposed;
- 2. Appeals must be addressed to the Director of Public Works;
- 3. The appeal must state the basis for the appeal:
 - a. Why an Administrative Penalty should not have been imposed;
 - b. Why the amount of the penalty should be reduced or is incorrect.
- 4. The appeal will be considered at a Director's Hearing. The hearing officer will make a recommendation to the Director;
- 5. The Director's decision on the hearing officer's recommendation shall be final.

- C. Enforcement by SFPD. As part of the "Unclog the Streets" program Police officers may issue \$271 citations for blocking traffic. Permittees are urged to limit their work in the Public Right-of-Way to permitted times.

D. Other Enforcement Methods

1. The Director is authorized to enforce the criminal provision of the Excavation Code, to call upon the Chief of Police and authorized agents to assist in enforcement, or both.
2. Any person who violates a provision of the Excavation Code shall be deemed guilty of an infraction.

SECTION 14 CONTACT INFORMATION

14.1 Addresses and Phone Numbers

- A. Information is as of July 2017

- B. San Francisco Public Works
 - 1. Bureau of Street Use and Mapping
1155 Market Street, 3rd floor
San Francisco, CA 94103
Telephone: (415) 554-5810
www.sfpublicworks.org.

- C. San Francisco Municipal Transportation Agency
 - 1. Central Control
(415) 759-4396
 - 2. Health and Safety Manager
(415) 701-4679
 - 3. Track Work
(415) 701-4500

- D. San Francisco Port
 - 1. Port Engineering Section
Pier 1, The Embarcadero
San Francisco, CA 94111
Telephone: (415) 274-0565

- E. San Francisco Recreation and Park
 - 1. Recreation and Park Department
McLaren Lodge, Golden Gate
Park 501 Stanyan Street
San Francisco, CA 94117
Telephone: (415) 837-2740

- F. San Francisco County Surveyor
 - 1. San Francisco County Surveyor
1155 Market Street, 3rd Floor
San Francisco, CA 94103

- G. California Department of Transportation
 - 1. District 4, Permits Unit
III Grand Avenue, P.O. Box 23600
Oakland, CA 94623
Telephone: (510) 285-4402
FAX: (510) 286-4712