

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE PROJECT MANAGEMENT ADMINISTRATION



SPECIFICATIONS



INVITATION NO. DCKA-2013-B-0035

PROJECT: REHABILITATION/REPAIR OF SIX (6) BRIDGES OVER WATTS BRANCH (BRIDGE NO'S. 0129 (44TH STREET NE), 0132 (58TH STREET NE), 0196 (55TH STREET NE), 0199 (48TH PLACE NE), 0204 (DIVISION AVENUE NE), AND 0222 (GAULT PLACE NE))

F.A.P. NO.: BH # 8888 (427) AND STP # 8888 (427)

Bids Will Be Publicly Opened by The Office Of Contracting and Procurement Bid Room located at DDOT, 55 M Street, S.E., 4th Floor, Washington, D.C. 20003

Bids Will Be Opened On _____ At 2:00 P.M.

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**GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION**

TITLE PAGE - SPECIFICATIONS

ISSUING OFFICE:

Office of Contracting and Procurement-Bid Room
Located at DDOT
55 M Street, S.E., 4th Floor
Washington, D.C. 20003

REQUESTS FOR CLARIFICATION OR INTERPRETATION OF BID DOCUMENTS

PRIOR TO DATE OF BID OPENING SHOULD BE ADDRESSED TO:

Chief Transportation Engineer
Infrastructure Project Management Administration
Department of Transportation
55 M Street, S.E.
Washington DC 20003

PROSPECTIVE BIDDERS:

To bid this contract, detach the Bid Form package which is bound to the back of this book, fill out all forms along with Bid Guaranty as required, and submit it to the Issuing Officer prior to the time of bid opening.

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The “STANDARD SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES, 2009” is incorporated herein by reference and is made a part of the requirements of this contract.

SPECIAL PROVISIONS

This document contains provisions, requirements, and instructions pertaining to this contract:

REHABILITATION/REPAIR OF SIX (6) BRIDGES OVER WATTS BRANCH (BRIDGE NO'S. 0129 (44TH STREET, NE), 0132 (58TH STREET, NE), 0196 (55TH STREET, NE), 0199 (44TH PLACE, NE), 0204 (DIVISION AVENUE, NE), AND 0222 (GAULT PLACE, NE))

INVITATION NO.: **DCKA-2013-B-0035**

F.A.P. NO. : BH # 8888 (427) AND STP # 8888 (427)

This document consists of:

- **SPECIFICATIONS:** Pages a thru f, pages 1 thru 82 and Appendices (with number of pages in parentheses) listed on page e and f.
- **BID FORMS AND PROPOSALS:** 56 Pages, including **PAY ITEM SCHEDULE**.
- **CONTRACT PLANS:** Consisting of pages 1 thru 194, Utility Details and Existing Plans.

Bidders should satisfy themselves that they have a complete document. Missing pages will not constitute the basis for a valid claim.

This is a Federal-Aid Contract; **FEDERAL-AID PROJECT PROVISIONS, apply.**

ADDENDA, issued prior to bid opening date, further supplement and modify the proposed contract.

This document supplements and modifies **STANDARD CONTRACT PROVISIONS** for use with specifications for District of Columbia Government Construction Projects, and District of Columbia, Department of Transportation, **STANDARD SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES, 2009**, and **STANDARD DRAWINGS, 2009** incorporated herein by reference.

Reference to Division Numbers, Section Numbers, and Article Numbers refers to the **STANDARD SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES, 2009**.

In **PAY ITEM SCHEDULE**, the first three-digit portion for each pay item number refers to the section of the **STANDARD SPECIFICATIONS** in which the item is described. The S.P. number refers to the section of these **SPECIAL PROVISIONS** in which the item is further described.

Reference made to the DC Department of Public Works (DCDPW) in the contract plans and in this document is one and the same as the District of Columbia Department of Transportation (DDOT).

1. SCOPE OF WORK:

Work under this contract consists of the rehabilitation/repair of Six (6) bridges over Watts Branch (Bridge Nos. 0129 (44th Street, NE), 0132 (58th Street, NE), 0196 (55th Street, NE), 0199 (48th Place, NE), 0204 (Division Ave, NE), 0222 (Gault Place, NE), for the purpose of improving traffic safety. All work on the bridge and roadways shall be performed within the existing right-of-way.

The following list provides a general description of the work for this project. The individual Special Provisions provide a detailed description of the work. The work includes, but is not limited to, the following items:

Superstructure and substructure elements to be replaced or modified as discussed in the following.

1. New superstructure on Bridge Nos. 0129, 0132, 0204 and 0222.
2. New wearing Surface for Bridge Nos. 0196 and 0199.
3. New deck joints for six bridges.
4. Rehabilitation (replacement) of backwalls for deck extension/approach slab details.
5. Rehabilitation of abutment beam seats on bridges with new superstructure.
6. New approach slabs for bridges on 58th Street, Division Avenue and Gault Place NE.
7. New pedestrian railing on all the Bridges.
8. Repairs to existing substructure concrete and masonry.
9. Scour protection for several bridges.
10. New approach roadway.
11. New sidewalk and ADA ramps in some areas.
12. Improved lighting near bridge.

13. Installation, maintenance and removal of temporary support systems and protection shields under the bridge during all phases of construction and demolition.
14. Installation of new double water catch basins with piping on 58th Street, 55th Street, Division Avenue and Gault Place NE.
15. Installation of utilities for DC Water and Pepco, including sewer and water lines, and duct banks, respectively.

Work also includes all other work and various incidentals required as shown in the contract plans and/or as specified in the Specifications and Special Provisions.

The contractor shall obtain all necessary permits and approvals of all agencies and/or utility companies towards obtaining their permits, approvals and inspections.

The contractor shall obtain necessary permits related to the removal and disposal of lead and asbestos materials in the project at no additional cost to the district.

The contractor is also required to produce design calculations and shop drawings in connection with his chosen systems for temporary support structures or devices, protection shields, and other significant temporary work affecting the safety of the traveling public or workers on the project.

The contractor shall be fully responsible for protection against damage for the duration of the contract of all the utility structures within the contract limits and adjacent thereto. The utilities include but are not limited to public and/or private water, sewer, electricity, gas, electric and communication lines. No separate measurement or payment will be made. Cost of this protective work will be covered and distributed among the contract pay items.

2. CONTRACT TYPE:

In accordance with Title 27 DCMR, Chapter 24, the contract type shall be a fixed-price contract.

3. SPECIFICATIONS AND DRAWINGS:

The District of Columbia Department of Transportation Standard Specifications for Highways and Structures 2009, and amendments thereto are incorporated by referenced into this contract.

Any adjustment by the Contractor without a prior determination by the Contracting Officer shall be at his own risk and expense. The Contracting Officer will furnish from time-to-time, such detail drawings and other information as he may consider necessary, unless otherwise provided.

4. COORDINATION WITH OTHERS:

This S.P. supplements 103.01, Article 18 of the Standard Specifications.

The Contractor is alerted that other contracts either associated with this project or of different scope either have been, will be, or may be let for work in, or in the vicinity of the project area.

The Contractor shall coordinate his work and cooperate fully with all others in order to eliminate or curtail delays and interference of any kind. Particular attention shall be made with regard to proper maintenance of vehicular and pedestrian traffic through the project areas. The Contractor shall perform his lane closings and openings so as not to cause interference with others or to be in conflict with performance of traffic maintenance by others.

The District assumes no liability, other than authorized time extensions, for contract delays or damages resulting from delays or lack of progress by others.

5. DDOT TITLE VI ASSURANCE:

During the performance of this Contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

(1) COMPLIANCE WITH REGULATIONS

The contractor shall comply with the Regulations relative to Non-Discrimination in Federally Assisted Programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, (hereinafter referred to as the “Regulations”), as they may be amended from time to time, which are incorporated by reference and made a part of this contract.

(2) NON-DISCRIMINATION

The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, gender or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. A contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) SOLICITATIONS FOR SUBCONTRACTORS, INCLUDING PROCUREMENTS OF MATERIALS AND EQUIPMENT

In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor’s obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, gender, or national origin.

(4) INFORMATION AND REPORTS

The contractor shall provide all information and reports required by the Regulations or directives

issued pursuant thereto, and shall permit access to its books, records, accounts and other sources of information, and its facilities as may be determined by DDOT or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to DDOT, or the Federal Highway Administration, as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) SANCTIONS FOR NON-COMPLIANCE

In the event of the contractor's non-compliance with non-discrimination provisions of this contract, DDOT shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- withholding of payments to the contractor under the contract until the contractor complies, and/or
- cancellation, termination, or suspension of the contract, in whole or in part.

(6) INCORPORATION OF PROVISIONS

The Contractor shall include the provisions of paragraphs (1) through (6) of this Assurance in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontract or procurement as DDOT or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of this direction, the contractor may request DDOT to enter into such litigation to protect the interests of DDOT, and in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

6. CONTRACTOR IDENTIFICATION:

All contractors doing business with the District of Columbia Government shall have a Federal Tax Identification Number.

Please refer any question regarding this matter to Office of the Chief Financial Officer, 202-671-2300, of the DC Department of Transportation.

7. EQUITABLE ADJUSTMENT OF CONTRACT TERMS:

Provisions of 103.01, Article 4, Significant Changes In The Character Of Work, paragraph 4(b), replace 125 percent with 200 percent and replace 75 percent with 50 percent.

This provision should only apply to the following major pay items:

311027	Replace Existing Basin With Dual Throat Water Quality Double Basin
402012	Superpave Surface Course, 12.5 mm
506004	Repair PCC Base
703006	PCC Pier-Abutment-Wall
703008	PCC Superstructure
703014	PCC Approach Slab
704004	Epoxy Coated Reinforcement Bars
706007	Structural Steel – ASTM A588, Grade 50W
709003	Pedestrian Railing
709004	Historic Bridge Railing
714004	Latex-Modified Concrete Overlay
717002	Armored Joint with Neoprene Strip Seal

8. BID GUARANTY:

This S.P. supplements Article 12.A of the **INSTRUCTION TO BIDDERS, STANDARD CONTRACT PROVISIONS.**

The bid guaranty period shall be **ninety (90) calendar days** after bid opening. An Irrevocable Letter of Credit or United States government securities that are assigned to the District which pledge the full faith and credit of the United States are acceptable.

9. PROTESTS:

Any actual or prospective bidder, offeror or contractor who is aggrieved in connection with the solicitation or award of a contract, must file with the DC Contract Appeals Board (Board) a protest no later than ten (10) business days after the basis of protest is known or should have been known, whichever is earlier. A protest based on alleged improprieties in a solicitation which are apparent prior to bid opening or the time set for receipt of initial proposals shall be filed with the Board prior to bid opening or the time set for receipt of initial proposals. In procurements in which proposals are requested, alleged improprieties which do not exist in the initial solicitation, but which are subsequently incorporated into this solicitation, must be protested no later than the next closing time for receipt of proposals following the incorporation. The protest shall be filed in writing, with the Contract Appeals Board, 441 4th Street, N.W., Suite 350N, Washington, D.C. 20001. The aggrieved person shall also mail a copy of the protest to the Contracting Officer for the solicitation.

10. DISPUTES:

This S.P. supplements and modifies Article 7 of the General Provisions 103.01.

Claims by the District against a Contractor

- (a) Claim as used in Section A of this clause, means a written demand or written assertion by the District seeking, as a matter of right, the payment of money in a sum certain, the adjustment of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant.

- (b) (1) All claims by the District against a Contractor arising under or relating to a contract shall be decided by the Contracting Officer.

- (2) The Contracting Officer shall send written notice of the claim to the Contractor. The Contracting Officer's written decision shall do the following:
 - a) Provide a description of the claim or dispute;
 - b) Refer to the pertinent contract terms;
 - c) State the factual areas of agreement and disagreement;

 - d) State the reasons for the decision, including any specific findings of fact, although specific findings of fact are not required and, if made, shall not be binding in any subsequent proceeding;

 - e) If all or any part of the claim is determined to be valid, determine the amount of monetary settlement, the contract adjustment to be made, or other relief to be granted;

 - f) Indicate that the written document is the Contracting Officer's final decision; and

 - g) Inform the Contractor of the right to seek further redress by appealing the decision to the Contract Appeals Board.

- (3) The decision shall be supported by reasons and shall inform the Contractor of his or her rights as provided herein.

- (4) The authority contained in this clause shall not apply to a claim or dispute for penalties or forfeitures prescribed by statute or regulation which another District agency is specifically authorized to administer, settle, or determine.

- (5) This clause shall not authorize the Contracting Officer to settle, compromise, pay, or otherwise adjust any claim involving fraud.

(c) The decision of the Contracting Officer shall be final and not subject to review unless an administrative appeal or action for judicial review is timely commenced by the District as authorized by D.C. Official Code §2-309.04.

(d) Pending final decision of an appeal, action, or final settlement, the Contractor shall proceed diligently with performance of the contract in accordance with the decision of the Contracting Officer.

11. APPLICABLE WAGE DECISION/WAGE RATES:

In accordance with the applicable provisions of 29 CFR, Part 1, which requires that the correct wage determination and the appropriate wage rates therein be incorporated into this contract, General Decision No. DC13-0001 is bound herein and contains the specific applicable wage rates, which are:

Heavy Construction (Including Sewer and Water Lines)

Further, as set forth in 29 CFR, Part 1, Section 1.6(c)(3)(IV), if the intent to award letter is not issued within ninety (90) days of bid opening, all intervening modifications (or new wage decision) are made a part of this contract. The Contractor will be reimbursed this added labor cost.

12. PRE-AWARD APPROVAL:

Pursuant to Title XXII of the "Fiscal Year 2003 Budget Support Amendment Act of 2002", D.C. Law 14-307, effective June 5, 2003, the Mayor must submit to the Council for approval any contract action over one million dollars.

13. CONSTRUCTION COMPLETION TIME:

This S.P. supplements 108.03 and 108.06 of the Standard Specifications and is referenced to the S.P. entitled "Construction Scheduling."

The following bridges can be started and constructed simultaneously:

Gault Place bridge

48th Place bridge

Division Avenue bridge

58th Street bridge

The 44th Street bridge should only be started and constructed once the Gault Place bridge is substantially complete and usable or vice versa.

The 55th Street bridge should only be started and constructed once the 58th Street bridge is substantially complete and usable or vice versa.

The completion of the entire project and final acceptance by the District shall be accomplished in **285 consecutive calendar days** from the Notice to Proceed date. No one bridge's construction, under this contract, shall exceed **105 consecutive calendar days** for completion, except the bridge at Division Avenue. The bridge at Division Avenue should be completed within 180 days. Failure to Complete on Time, as shown elsewhere in these SPECIAL PROVISIONS, shall apply to the completion of the project as specified below.

Because time is important in completing the contract work in this project, the payment provisions set forth in this project in the contract documents are supplemented by the following:

The Contractor shall, fifteen (15) calendar days prior to the start of construction, submit to the Engineer for approval a detailed plan for accomplishing the work specified.

As a minimum, the plan shall identify in narrative, graphic and tabular form all major tasks necessary to complete the work, and the number of calendar days required to complete that portion of the contract. The plan shall also indicate the time for each contract element.

In order to complete construction within the contract stipulated potential time, the Contractor may have to utilize multiple shifts and/or overtime work (including Saturdays and Sundays). A written request should be sent to the Engineer and approved 48 hours prior to working outside of the normal construction hours of Monday through Friday, 7am to 7pm. The cost of multiple shifts and/or overtime work shall be included in the bid prices for the various items of work on the project and no additional compensation will be allowed.

In developing the plan, the Contractor shall consider time lost due to inclement weather and during the period between December 1 and April 1. The District will not consider any requests for partial suspension or time extension for time lost due to inclement weather or any limitations of working over the stream.

An evaluation of progress is to be completed after each 10 percent increment of the contract time has elapsed. Whenever performance falls behind the approved plan schedule by 10% or more, the Contractor shall within 15 calendar days submit to the District for review a revised plan for completing the project within the remaining time.

The Contractor must be aware that part of his/her work may include coordination with various Government agencies. Delay by any outside sources will not constitute grounds for waiving of this S.P.

In determining contract time, the Contractor shall consider the location of existing utilities. The Contractor is warned that delays of a minor nature encountered through required utility adjustments by others or imprecise utility location information has been considered, and delays resulting therefrom are not a basis for time extensions.

14. CONSTRUCTION SCHEDULING:

This S.P. supplements 108.03 of the Standard Specifications and is referenced to the S.P. entitled "Construction Completion Time".

The Contractor shall submit a construction schedule at least fifteen (15) calendar days prior to the start of construction. CPM Scheduling shall be required, as described in 108.03(B), for this project. Contractor shall use Primavera or the latest version of Microsoft Project to develop the baseline and subsequent schedules. A hard copy of the schedule, as well as a CD-ROM containing the data files used to develop the schedule, shall be provided with each submittal.

A Two Week Look Ahead activity schedule (Gantt chart) should be submitted every two (2) weeks to the Engineer prior to regularly scheduled progress meetings. Activities should be measureable and Activity ID Nos. should match those in the accepted CPM construction schedule.

The Contractor shall schedule his work so that the requirements of MAINTENANCE OF TRAFFIC are satisfied.

Construction sequencing must be accomplished in accordance with the stages as shown in the contract plans. Scheduling shall include ordering of materials, preparation of shop and working drawings and all other work as indicated on the contract plans and as directed by the Engineer.

The Contractor shall schedule his work in accordance with the prioritized work site list provided by the Engineer. To avoid excessive traffic delays, work shall not begin at any location until submittals have been approved and sufficient materials have been obtained.

The Contractor shall furnish to the Engineer the names, addresses and phone numbers of two key staffs (principals) in the firm who shall be experienced in this type of work as described in these Special Provisions and who can be contacted by the Engineer in event of emergency. These names should be provided at the project's pre-construction meeting. One of the two key staff shall be available at all times to be contacted within a maximum time period of two (2) hours. Approval of these key staffs by the Engineer is required.

15. WORK AND STORAGE SPACE:

This S.P. supplements 103.01 Article 17.B. of the Standard Specifications.

No work and storage area is being designated. The Contractor shall be fully responsible for seeking necessary space and undergoing all required negotiations with the owner of the property to secure its use and for restoring the area to its original condition and to the satisfaction of the Engineer.

Certain work of this contract may require the Contractor to work in the Watts Branch Stream. The US Army Corps of Engineers, DDOE and the National Park Service shall be contacted to

obtain the necessary permits to occupy portions of the stream. The Contractor shall be responsible for any fees that are required to obtain the permits. The Contractor shall be responsible for repairing any damage that might occur to the stream bottom, the stream banks, and any structures that are in the stream at his own expense.

The Contractor shall arrange for employee parking and storage space, if necessary, at no additional expense to the District. Inability of the Contractor to obtain additional parking and/or storage space will not serve as a basis of claim for delay. Street parking in public, business or residential areas adjacent to the project site is subject to local regulations.

16. UTILITY PROTECTIVE ALERT:

This S.P. supplements and modifies 107.16.

<u>NAME</u>	<u>TELEPHONE NO.</u>	<u>FACILITIES</u>
“Miss Utility” for Wash. Gas Light Co., Verizon, PEPCO, AT&T	800-257-7777	Gas lines; telephone, electric and communication conduits and cables.
Washington Gas	703-750-4391	Emergency.
DC Water	202-698-3400	Water mains and Sewers.
PEPCO	877-737-2662	Emergency.
DDOT	202-905-6059	Traffic Signal System
	202-671-3368	Emergency. Street Lighting Inspection.

17. COOPERATION WITH UTILITY RELOCATION:

This S.P. supplements 105.05 of the Standard Specifications.

For any underground utility or vault encountered, the Contractor shall immediately notify the Engineer and take necessary measures to protect the utility or vault and maintain its service until if necessary relocation by owner is accomplished.

18. UTILITY STATUS:

The District of Columbia Department of Transportation maintains coordination with the public utility companies during the preliminary engineering and the construction phases of the project. The Contractor shall be required to maintain and continue this coordination throughout the construction of the project. Construction delays as a result of inadequate coordination shall be the Contractor's responsibility.

Except for PEPCO, no utility company work outside the scope of the project is anticipated. However, it will be necessary for utility companies to perform work during construction related to the contract work being performed. Such work consists of inspection of furnished materials and utility supports installed by the Contractor and being present during any demolition or concrete placement in the vicinity of their facilities.

The Contractor's involvement and coordination with utility companies includes, but is not restricted to, the following:

DC Water

- a.** Adjustment and resetting of utility manholes and manhole frames, respectively, to new grades.
- b.** Location and verification of existing utility lines (as shown on the plans).
- c.** Within project limits, remove the existing utility lines to the limits necessary for placement of new utility lines, while ensuring proper alignment between the new utility line segment and the remaining existing utility lines, as per details on the plans for:
 1. Proposed 160' min. long for 12" D.I. water main on 44th Street, NE.
 2. Proposed 110' min. long for 12" D.I. water main on Division Avenue, NE.
 3. Proposed 105' min. long 8" D.I. water main on Gault Place, NE.

This work includes but is not limited to placement according to the survey alignment, trench excavation for pipe bedding and manholes/ inlets, trench shoring.

Additional work includes curb cut for new double catch basins, etc.

- d.** Maintenance, protection and assurance of continuous service for the duration of the project within the project limits.
- e.** Furnishing and conversion of existing fire hydrants.

Washington Gas

The existing gas lines shall be permanently abandoned by Washington Gas prior to bridge rehabilitation construction. The abandonment shall occur only after obtaining Permits from the proper authorities for:

1. Existing gas line of 130' of 4" WRPD-20# and 48' of 4" STL-20# including the connection devices and caps on 44th Street, NE.

2. Existing gas line of 178' of 4" WRPD-20# including the connection devices and caps on Division Ave, NE.

The Contractor shall not proceed with work until utility facilities involved have been located, disconnected or otherwise adjusted by utility representatives.

19. CONTRACTOR'S SUBMITTALS:

This Special Provision supplements 105.02 (B)

Shop and working drawings and calculations of working drawings shall be submitted to the Engineer. Every effort will be made to respond to these submittals within twenty one (21) days of receipt of the submittal by the Contractor. All other submittals shall be transmitted to the DC DDOT office responsible for their approval. The Contractor shall transmit six (6) copies and one (1) reproducible copy of the shop and working drawings and calculations of working drawings submittals to the following office:

1. **Mr. Dawit Muluneh, P.E., Program Manager, Team 4
Infrastructure Project Management Administration
D. C. Department of Transportation
55 M Street, S.E., 4th Floor
Washington, D.C. 20003**
2. **D.C. Department of Transportation
Field Engineer's Office**

Materials certifications and laboratory test reports shall be submitted to:

1. **Chief, Quality Assurance/Quality Control Division
Infrastructure Project Management Administration
D. C. Department of Transportation
55 M Street, S.E., 4th Floor
Washington, D.C. 20003**
2. **D.C. Department of Transportation
Field Engineer's Office**

Shop and working drawings and calculations of working drawings for sewers and water mains shall be submitted to:

1. **Chief, Office of Engineering Services
D.C. Water
5000 Overlook Avenue, S.W.
Washington, D.C. 20032**

**2. D.C. Department of Transportation
Field Engineer's Office**

Catalog cuts for roadway lighting shall be submitted to:

- 1. Mr. Dawit Muluneh, P.E., Program Manager, Team 4
Infrastructure Project Management Administration
D. C. Department of Transportation
55 M Street, S.E., 4th Floor
Washington, D.C. 20003**
- 2. D.C. Department of Transportation
Field Engineer's Office**

20. FAILURE TO COMPLETE ON TIME:

Replace 108.07 of the Standard Specifications with the following:

For each calendar day that contract works, or main part thereof, remains incomplete after the specified construction completion time in S.P. 13 Construction Completion Time, the sum of \$1,100.00 per calendar day has been set by the Contracting Officer to be deducted as liquidated damages from any money due the Contractor.

The Contractor's operation after expiration of construction completion time as extended will in no way waive the District's rights under the contract.

21. WORK HOURS:

This S.P. supplements and modifies 105.10, 105.11 and Article 17.C of the Standard Specifications.

Work may be performed outside of the following hours only when required or allowed by contract specifications or with the advanced notice to and approval by the Contracting Officer or his technical representative:

Monday through Friday 7:00 AM to 7:00 PM

An extension of this time period may be granted with written approval by the Contracting Officer or his technical representative. However, work hours beyond these limits may be granted for only maintenance of traffic activities, emergencies, work stipulated to be performed at night and other activities specifically granted in writing by the Contracting Officer or his technical representative.

22. NIGHT WORK:

This S.P. supplements 105.11 of the Standard Specifications.

A. DESCRIPTION

The Contractor shall be subjected to area noise ordinances for night work from 7 P.M. to 5 A.M. and to the restrictions on equipment as indicated below except as permitted by a variance. The Department will support the Contractor's efforts in applying for a variance permitting reasonable day and nighttime noise levels. The Department gives no guarantee concerning the noise levels granted in any waiver, nor whether or not a variance will be granted.

D.C. MAXIMUM PERMITTED NOISE LEVEL*

<u>Zone</u>	<u>Maximum Noise Level, dBA</u>	
	<u>Daytime</u>	<u>Nighttime</u>
Residential, Special Purpose or Waterfront Zone	60	55
Commercial or Light Manufacturing Zone	65	60
Industrial Zone	70	65

* D.C. Law 2-53, District of Columbia Noise Control Act of 1977.

For this project, the area will be classified as residential. The Contractor shall also maintain sufficient light illumination levels for safe operations in all active work areas during evening and night work. Temporary lighting for the Contractor's operations shall comply with OSHA regulations, Section 1926.56, task requirements.

B. RESTRICTIONS

The use of all mechanical impact demolition equipment will be absolutely prohibited between the hours of 7:00 PM and 8:00 AM.

C. MEASURE AND PAYMENT

No separate measure or additional payment will be made for Night Work or Night Lighting.

23. PROJECT SECURITY:

A. DESCRIPTION

Portions of the general project site will be open to the public during construction. The Contractor shall be responsible for adequate protection of the entire project site during performance of his contract. The Contractor shall take the necessary measures to prevent vandalism and theft of materials, equipment and tools on the project site. The D.C. Department of Transportation shall not be held liable for any loss or damage resulting therefrom.

B. MEASURE AND PAYMENT

No direct measures or payment will be made. The cost of project security shall be reflected, and distributed among the various contract Pay Items.

24. INSURANCE:

This Special Provision modifies Section 107.13 of the Standard Specifications for Highways and Structures, 2005

A. GENERAL REQUIREMENTS

The Contractor shall procure and maintain, during the entire period of performance under this contract, the types of insurance specified below. The Contractor shall have its insurance broker or insurance company submit a Certificate of Insurance to the Contracting Officer giving evidence of the required coverage prior to commencing performance under this contract. In no event shall any work be performed until the required Certificates of Insurance signed by an authorized representative of the insurer(s) have been provided to, and accepted by, the Contracting Officer. All insurance shall be written with financially responsible companies authorized to do business in the District of Columbia or in the jurisdiction where the work is to be performed and have an A.M. Best Company rating of A-VIII or higher.

The Contractor shall require all of its subcontractors to carry the same insurance required herein. The Contractor shall ensure that all policies provide that the Contracting Officer shall be given thirty (30) days prior written notice in the event the stated limit in the declarations page of the policy is reduced via endorsement or the policy is canceled prior to the expiration date shown on the certificate. The Contractor/Insurance Company shall provide the Contracting Officer with ten (10) days prior written notice in the event of non-payment of premium.

1. Commercial General Liability Insurance. The Contractor shall provide evidence satisfactory to the Contracting Officer with respect to the services performed that it carries \$1,000,000 per occurrence limits; \$2,000,000 aggregate; Bodily Injury and Property Damage including, but not limited to: premises-operations; broad form property damage; Products and

Completed Operations; Personal and Advertising Injury; contractual liability and independent contractors. The policy coverage shall include the District of Columbia as an additional insured, shall be primary and non-contributory with any other insurance maintained by the District of Columbia, and shall contain a waiver of subrogation. The Contractor shall maintain Completed Operations coverage for five (5) years following final acceptance of the work performed under this contract.

2. Automobile Liability Insurance. The Contractor shall provide automobile liability insurance to cover all owned, hired or non-owned motor vehicles used in conjunction with the performance of this contract. The policy shall provide a \$1,000,000 per occurrence combined single limit for bodily injury and property damage.

3. Workers' Compensation Insurance. The Contractor shall provide Workers' Compensation insurance in accordance with the statutory mandates of the District of Columbia or the jurisdiction in which the contract is performed.

4. Employers' Liability Insurance. The Contractor shall provide employers' liability insurance as follows: \$500,000 per accident for injury; \$500,000 per employee for disease; and \$500,000 for policy disease limit. If projects hereunder include water operations, the U.S. Longshoremen and Harbor Workers' Compensation Act and Maritime endorsements must be purchased and attached to employers' liability insurance policy.

5. Installation-Floater Insurance. For projects not involving structures, the contractor shall provide an installation floater policy with a limit equal to the full contract value. The policy shall cover property while located at the project site, at temporary locations, or in transit; deductibles will be the sole responsibility of the contractor; and name the District of Columbia as the loss payee on the policy, as its interests may appear. A waiver of subrogation in favor of the District of Columbia shall be included.

6. Umbrella or Excess Liability Insurance. The Contractor shall provide umbrella or excess liability (which is excess over employer's liability, general liability, and automobile liability) insurance as follows: \$10,000,000 per occurrence, including the District of Columbia as additional insured.

7. Environmental Liability Insurance. The Contractor shall provide a policy to cover costs associated with bodily injury, property damage and remediation expenses associated with pollution incidents including, but not limited to, mold, asbestos or lead removal. The policy shall provide a minimum of \$1,000,000 in coverage per incident and \$2,000,000 aggregate.

B. DURATION

The Contractor shall carry all required insurance until all contract work is accepted by the District, and shall carry the required General Liability; and any required Professional Liability for five (5) years following final acceptance of the work performed under this contract.

C. LIABILITY

These are the required minimum insurance requirements established by the District of Columbia. HOWEVER, THE REQUIRED MINIMUM INSURANCE REQUIREMENTS PROVIDED ABOVE, WILL NOT IN ANY WAY LIMIT THE CONTRACTOR'S LIABILITY UNDER THIS CONTRACT.

D. CONTRACTOR'S PROPERTY

Contractor and subcontractors are solely responsible for any loss or damage to their personal property, including but not limited to tools and equipment, scaffolding and temporary structures, rented machinery, or owned and leased equipment. A waiver of subrogation shall apply in favor of the District of Columbia.

E. MEASURE OF PAYMENT

The District shall not make any separate measure or payment for the cost of insurance and bonds. The Contractor shall include all of the costs of insurance and bonds in the contract price.

F. NOTIFICATION

The Contractor shall immediately provide the Contracting Officer with written notice in the event that its insurance coverage has or will be substantially changed, canceled or not renewed, and provide an updated certificate of insurance to the Contracting Officer.

G. CERTIFICATES OF INSURANCE

The Contractor shall submit certificates of insurance giving evidence of the required coverage as specified in this Insurance Section prior to commencing work. Evidence of insurance shall be submitted to:

Jerry M. Carter, Contracting Officer,
DDOT,
55 M Street SE 7th Floor
Washington, DC 20003.

25. CONTRACT ADMINISTRATION DATA:

Contracting Officer: Contracts may be entered into and signed on behalf of the District Government only by contracting officers. The Contracting Officer is the only District official authorized to contractually bind the District. The Contracting Officer is the Agency Chief Contracting Officer (ACCO), Department of Transportation, 55 M Street Washington D.C. 20003, telephone number (202) 671-2200.

AUTHORIZED CHANGES BY THE CONTRACTING OFFICER:

- a. The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract.
- b. The Contractor shall not comply with any order, directive or request that changes or modifies the requirements of this contract, unless issued in writing and signed by the Contracting Officer.
- c. In the event the Contractor effects any change at the discretion of any person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any cost increase incurred as a result thereof.

CONTRACTING OFFICERS TECHNICAL REPRESENTATIVE (COTR): The term COTR is synonymous with the term District's Engineer. The District's Engineer for this contract is:

Name: Mr. Dawit Muluneh, P.E.
Title: Program Manager, Wards 7 & 8
Agency: District Department of Transportation
Address: 55 M Street, S.E., 4th Floor
Washington DC 20003
Telephone: (202) 671-4556

The COTR will have the responsibility of ensuring that the work conforms to the requirements of this contract and such other responsibilities and authorities as may be specified in the contract. The COTR will act as the Contracting Officer's representative for technical matters, providing technical direction and discussion, as necessary with respect to the specifications or statement of work, and monitoring the progress and quality of the Contractor's performance. Other responsibilities include the following:

- a. Keeping the CO fully informed of any technical or contractual difficulties encountered during the performance period and advising the ACCO of any potential problem areas under the contract;
- b. Coordinating site entry for Contractor personnel, if applicable;
- c. Reviewing and approving invoices for fixed-price deliverables to ensure receipt of goods and services. This includes the timely processing of invoices and vouchers in accordance with the District's Payment provisions; and
- d. Maintaining a file that includes all contract correspondence, modifications, records of inspections (site, data, equipment) and invoices/vouchers.

It is understood and agreed, in particular, that the COTR is not a contracting officer and does not have the authority to:

- a. Award, agree to, or sign any contract, delivery order or task order. Only the ACCO shall make contractual agreements, commitments, or modifications;
- b. Grant deviations from or waive any of the terms and conditions of the contract;
- c. Direct the accomplishment of effort, which is beyond the scope of the statement of work in the contract;
- d. Increase the dollar limits of the contract or authorize work beyond the dollar limit of the contract, or authorize the expenditure of funds by the Contractor;
- e. Change the period of performance; and
- f. Authorize the furnishing of District property, except as specified under the contract.

When in the opinion of the Contractor, the COTR requests effort outside the existing scope of the contract, the Contractor shall promptly notify the Contracting Officer in writing. The Contractor under such direction shall take no action until the Contracting Officer has issued a modification to the contract or until the issue has been otherwise resolved.

ORDERING AND PAYMENT

The contractor shall not accept orders for items under this contract unless a purchase order has been issued. The participating agency shall be the District of Columbia Department of Transportation.

Invoices shall be submitted in duplicate to the District Department of Transportation, Office of the Chief Financial Officer, Customer Care Division, 55 M Street Washington D.C. 20003, Telephone (202) 671-2300.

Each invoice must provide the following minimum information:

1. Contractor's name, address, invoice number and date;
2. Contract line item number (CLIN) being billed for payment and total amount due;
3. Purchase order and contract number;
4. Addressee's name and address;
5. Period of service;
6. Description of services and deliverables provided;
7. Name, title, signature and phone number of preparer; and
8. Name of the contracting officer's technical representative.

Payment may be delayed for improperly prepared invoices.

26. RECORDS OF MATERIALS, SUPPLIES AND LABOR (FHWA 47 SUBMISSION):

This S.P. supplements REQUIRED CONTRACT PROVISIONS, FEDERAL AID CONSTRUCTION CONTRACTS.

Under Section VI, Record of Materials, Supplies and Labor, delete the first paragraph and replace it with:

The provisions of this section are applicable to all contracts for Federal-aid primary, urban and Interstate highway projects involving construction performed under contract awarded by competitive bidding, except projects for which the total final construction cost of roadway and bridge is less than \$1,000,000, and projects consisting primarily of:

- a. The installation of protective devices at railroad grade crossings, or
- b. Highway beautification

For contracts of \$1,000,000.00 or more, the completion and submission of the FHWA 47 report is a contract requirement. The form must be completed and submitted as soon as field work is completed. Final payment will not be made until the contractor files this report.

27. UNDERGROUND VAULTS:

This S.P. supplements Article 17(E) of the General Provisions 103.01 of the Standard Specifications.

The Contractor shall take necessary measures to prevent damage to existing underground vaults within or adjacent to the project. It shall be the Contractor's responsibility to determine exact locations for all underground vaults in the field.

In case of damage to underground vaults by the Contractor, the Contractor shall restore such underground vaults to a condition equivalent to that which existed prior to the damage by repairing, rebuilding, waterproofing or as may be directed by the Engineer, at the Contractor's expense.

28. SALVAGED MATERIALS:

Existing light standards and other appurtenances designated to be removed and replaced shall be delivered by the Contractor to a designated DDOT storage yard. Prior to delivery, the Contractor shall contact the Traffic Operations at (202) 671-2700 to make arrangements. Payment for delivery of this salvaged material shall be included in the various bid items for electrical work.

Any salvaged materials considered by the Engineer to be useful to the District shall be delivered to a designated storage yard. All other materials shall be removed from the job site and be

disposed of properly by the Contractor. No direct measure will be made for this work. Payment for this work shall be reflected in the unit prices for the appropriate pay items for removal.

29. PUBLIC SAFETY AND CONVENIENCE:

The Contractor shall take every measure necessary to ensure the protection of personnel and property. When in the opinion of the Engineer, construction operations constitute a hazard to traffic in any area, the Contractor may be required to suspend operations during certain hours to remove equipment from the roadway.

30. REFERENCE DRAWINGS (INFORMATIONAL DRAWINGS):

A full set of plans for the six project structures (Bridge Nos. 0129, 0132, 0196, 0199, 0204 and 0222), within the limits of the contract are available for examination in the office of IPMA Program Manager, Team 4, District Department of Transportation, 55 M Street, SE, 4th Floor, Washington, D.C. 20003 during normal business hours.

Subsequent to the plan construction, undocumented modifications or additions may have been made to the facility. It is the Contractor's responsibility to verify the actual configuration of the facility.

Prior to demolition and preparation of shop drawings, the Contractor shall check the dimensions of the existing structure. If these dimensions do not agree with those shown on the contract plans, the Contractor shall make the necessary adjustment to dimensions and profile grades shown on the contract plans to insure that new construction will properly fit the existing environs. The District assumes no expense or liability for the accuracy of or interpretations made from the contract plans or from the inspection survey report.

31. VALUE ENGINEERING CHANGE PROPOSALS:

This S.P. modifies 104.03 of the Standard Specifications.

A. GENERAL

This contract allows the use of Value Engineering Change Proposals (VECP's) which are initiated and developed by the Contractor to change the Contract plans and specifications, or other requirements of this Contract for the purpose of reducing the total cost of construction without reducing design capacity or quality of the finished product.

32. PRE-BID CONFERENCE:

Prospective bidders are invited to attend a meeting to discuss the proposed work under this contract. The meeting will be held at 55 M Street S.E. 4th Floor, Washington DC 20003. Bidders will be notified of the room number, date and time by Addendum.

Representatives of the Department will be available to answer questions relative to the work. Bidders who expect to attend should inform the Department prior to the meeting date. Any pertinent date or change resulting from the conference will be included in any addendum issued to all perspective bidders after the conference; however, the importance of attending the meeting is stressed. Any questions or conflicts identified prior to bid should be brought out during this meeting.

33. ADDITIONAL LABORATORY/FIELD EQUIPMENTS:

This S.P. supplements requirements of Article 106.02 and 106.06 of the Standard Specifications.

The Contractor shall provide the Project Engineer with supply containers and molds to obtain samples (specimen) for the duration of the contract.

Examples of containers and molds are cure boxes, molds for beams and concrete cylinders, jars for tack coat sampling, labels and other miscellaneous supplies. The Project Engineer may request some special containers and molds at his discretion. The Quality Assurance/ Quality Control Division may request additional containers and molds.

The Contractor should schedule the delivery of these containers and molds to the Project Engineer to insure that this delivery will not disrupt the work in progress.

No measure and payment will be made. The cost of providing containers and molds shall be included in the unit price of the material sampled.

For the concrete phase of the contract, the Contractor shall also furnish, maintain and replace as necessary, the following equipment.

<u>No.</u>	<u>Description</u>
1	Air Meter, Type B, for regular, conforming to requirements of AASHTO T-152-86 Test Method (Air Content of Freshly Mixed Concrete by the Pressure Method), including all necessary accessories.
1	Roller Meter for air content of fresh Lightweight Concrete.
2	Mold and Tamping Rod for testing the slump of plastic concrete, conforming to requirements of AASHTO T-119-82 (Slump of Portland Cement Concrete).
1	Pressure Pot for Air Entrainment Testing.
2	Concrete Thermometers.

The above air meters shall be properly calibrated by an independent laboratory and their certification furnished to the Engineer.

All equipment included under this item shall become the property of the Contractor at the end of the contract.

No separate measure will be made for this work. Payment for Additional Laboratory Equipment will be included under ENGINEERS' FIELD FACILITIES, Item 624 002.

34. EMPLOYEE TRAINING, Item: 000 003

Requirements of 103.04 of the Standard Specifications apply.

35. PROGRESS PHOTOGRAPHS, Item: 108 002

This S.P. supplements and modifies 108.08 of the Standard Specifications.

A. GENERAL

Ninety (90) original photographs will be required per each Bridge. Approximately thirty (30) photographs shall be taken prior to beginning of any work and thirty (30) photographs will be required after construction. In addition, Photographs shall be taken of the adjacent properties including walls, copings, concrete stairs, foundations, or any other related items prior to construction. The remainder shall be taken throughout the construction work on a monthly basis. The Contractor shall submit the photographs in digital format.

B. MEASURE AND PAYMENT

The requirements of 108.08 apply. Unit of payment will be lump sum.

36. OPTIONAL MATERIALS

The District will not consider any alternate to the following items, and the materials or items involved shall be supplied by the Contractor exactly as shown on the plans and as described in the Standard Specifications and these SPECIAL PROVISIONS:

Electrical Conduits

Lighting Standards (Fluted poles and bases)

For all other finished or semi-finished materials or items, an optional equivalent will be permitted by the accepted bidder only, provided this alternate meets in all respects the requirements of the pertinent ASTM, AASHTO, District of Columbia or Federal Specifications and results in no additional cost to the District nor additional Contract time. The proposal for an equivalent item shall be submitted for review by the District immediately after bids have been opened in order that approval or rejection can be determined.

37. SPECIALTY ITEMS

The following items as listed in the PAY ITEM SCHEDULE are designated SPECIALTY ITEMS.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
617	Traffic Signal Work
618	Electrical Work – Street Lighting

38. CONSTRUCTION SURVEY

This S.P. replaces the first paragraph of Section 108.11 - PRECONSTRUCTION SURVEY with the following:

Prior to starting and after completion of any work, and during the progress of both concrete and asphalt operations, the contractor shall make a detailed inspection of buildings, structures, roadways, sidewalks, retaining walls, landscaping and related surface improvements adjacent to and in the vicinity of the proposed work, wherever located. The inspection shall include notes, measurements and DVD recording, or any other approved method by the Engineer with audio soundtrack of all facilities. The audio description of the inspection shall include the date, time, weather conditions, address/stationing/location, brief description of the facility with contract name and number and description of physical conditions encountered.

39. CONTRACT PLANS

Certain detail drawings for specific items are included in the SPECIAL PROVISIONS, and these detail drawings may not be included in the PLANS.

40. COMMON EXCAVATION, Item: 202 002

This S.P. supplements 202.02 of the Standard Specifications.

A. GENERAL

Work under this item shall include excavation of all materials described in 202.03 to the lines and grades indicated in the contract plans or within the limits prescribed by the Engineer.

Work under this item also includes undercutting to remove soft and/or unsuitable material, which may be encountered within the limits directed by the Engineer. Also included shall be special or hand excavation, as necessary, over, around and under support for existing or new utility lines and related appurtenances uncovered from such base undercutting.

The replacement of the undercut material shall be furnished, placed and compacted under Item 209 002, Aggregate Base Course.

B. MEASURE AND PAYMENT

Supplementing 202.05, payment will be made to include performance of work specified herein. Unit of payment will be cubic yard.

41. STRUCTURE EXCAVATION, Item: 205 002

This S.P. supplements 205.01 of the Standard Specifications.

A. GENERAL

The Contractor shall take all necessary precautions to avoid damage to existing utilities during excavation. Any portion of remaining structure or existing facilities damaged as a result of negligence on the part of the Contractor shall be repaired or replaced by the Contractor at his expense.

B. MEASURE AND PAYMENT

The requirements of 205.04 and 205.05, respectively, shall apply. Unit of payment will be cubic yard.

42. DEMOLITION, Item: 205 008

This S.P. supplements 205.02 of the Standard Specifications.

A. GENERAL

Work under this item consists of removal, salvage and disposal of various materials from the existing structures that are not specified otherwise. Prior to commencement of this work the Contractor shall comply with the requirements of Section 626 of the Standard Specifications for Protection Shield, Item 626 002. The demolition work shall comply with Sections 205 of the Standard Specifications.

In addition, the existing steel beams and other related steel with lead paint shall be demolished and removed from the job site in compliance with EPA/DDOE requirements. Work shall be completed in conformance with section 707.04 of the Standard Specifications when Lead-based paint *particles* and *dust* are encountered during any work activity.

Per DDOE requirements, the Contractor is responsible for obtaining all necessary permits required for the transportation and disposal of all materials including, but not limited to, the beams containing lead paint.

Work under this item includes, but is not limited to the following items:

1. Removal and disposal of existing asphalt overlay, reinforced concrete bridge deck slab, steel beams, sidewalks and approach slabs for Bridge Nos 0129, 0132, 0204 and 0222.
2. Removal and disposal of metalwork, including expansion joints, drainage, lighting standards, wires, hand boxes, bridge railings and traffic barriers of all the bridges.
3. Removal and disposal of portions of reinforced substructure concrete including abutment backwalls as shown on the contract plans or as directed by the Engineer.
4. Demolition of all or portions of the reinforced concrete deck.
5. Clearing of existing debris from the project site.

B. DESCRIPTION

The existing concrete deck, steel beams in (4) Bridges, and portions of substructure shall be demolished by the Contractor to the limits shown in the contract plans or as laid out in the Special Provisions. When required for construction, stone masonry units shall be carefully removed as a whole to clear the limits of removal for the concrete. Any material removed beyond authorized limits, or any portion of remaining structure damaged as a result of negligence on part of the Contractor, shall be replaced or repaired by the Contractor at his own expense. All existing reinforcing steel shall be protected and left in place to be reused in the reconstruction of the various bridge elements unless noted otherwise in the contract plans and/or special provisions.

When portions of existing bridge are removed, care shall be taken that the remaining utilities and the remaining parts of the structure are not damaged. The Contractor is responsible for any and all damages to the structure during construction/demolition. Should the bridge be allowed to fail due to the Contractor's negligence, the Contractor, at his expense, shall remove the fallen structure and replace it according to the contract plans.

Removal of the existing expansion joints on bridge 0196 (55th Street) shall be accomplished in a manner that will preserve the existing reinforcing. All reinforcing damaged during removal will be replaced at the expense of the Contractor.

All material permanently removed except lighting standards and parapet railings shall become the property of the contractor and shall be disposed of away from the site.

REINFORCING STEEL - All reinforcing steel encountered shall be removed and disposed of unless otherwise shown on the contract plans, which shall be cleaned, and repositioned as called for on the contract plans. New steel shall be spliced to existing steel as per AASHTO LRFD Bridge Design Specifications, 6th Ed. 2012, requirements.

When existing reinforcing steel to remain is damaged during demolition, the Contractor shall, at his own expense, substitute a bar of equal size drilled in and grouted to the required lap as per AASHTO LRFD Bridge Design Specifications, 6th Ed. 2012, requirements.

Where projecting bars are not to extend into the new construction, they shall be cut off flush with the surface to which the concrete has been removed. Cleaning reinforcing steel and removal of excessive length of bars shall be included as part of this work. All material removed shall be disposed of outside the construction area.

PROTECTION OF UTILITIES - The Contractor shall be responsible for the maintenance, protection, safety and continuation of service of all existing utilities on the bridge for the life of the contract.

C. MEASURE AND PAYMENT

The unit of measure will be the job. No actual measure will be made. Payment for Demolition will be made at the contract lump sum price, which payment will include removal and disposal of all materials and furnishing all labor, tools, equipment and incidentals needed to complete all the above specified work.

43. REMOVE VEGETATION, Item: 201 005

This S.P. supplements 201.

A GENERAL

This work is the removal of the existing excess vegetation along the wingwalls of the bridge abutments, as indicated on the plans at the location indicated on the plans. The work will also include seeding of the areas which have been left bare due to the removal of the excess vegetation. Seeding will be per section 610 of the specifications.

B. MATERIALS

None.

C. MEASURE AND PAYMENT

No measure will be made for this work. Payment for REMOVE VEGETATION will be made at the contract lump sum price, which will include all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals required for completing the work as required herein.

44. AGGREGATE BASE COURSE, Item: 209 002

This S.P. modifies and supplements 209.

A. GENERAL

Supplementing 209.01, work under this item shall also include special or hand compaction, if necessary, under, around and over existing or new utility lines and appurtenances uncovered during excavation. The work **does not include** furnishing, placing and compacting the replacement material at locations where undercutting was performed as approved by a Geotechnical Engineer, to remove soft and unsuitable material from below the proposed aggregate base course as described in 202.02.

Modifying 209.02, materials for this work shall be Crushed Stone meeting requirements of 804.04(A).

B. MEASURE AND PAYMENT

Supplementing 209.07, payment will be made to include performance of work specified herein. Unit of payment will be cubic yard.

45. CONVERT FIRE HYDRANTS, Item: 307 010

This S.P. supplements 307.01(E) as follows:

A. GENERAL

Work under this item also includes furnishing and installation of necessary tees, elbows, other fittings, and other incidental materials to complete the work.

B. MEASURE AND PAYMENT

The requirements of 307.05 shall apply. Unit of payment will be each.

46. D.C. WATER, Items: 307 010, 310 008, 310 004, 311 026, 311 028, 315 002

The DC Water Specifications shall be used only for the items listed below. Specifications are included in the Appendix of these Special Provisions. These Specifications supersede the District of Columbia Standard Specifications for Highways and Structures 2009 and amendments thereto:

<u>DESCRIPTION / ITEM NO.</u>	<u>SECTION</u>
Convert Fire Hydrant, Item 307 010	02642
Double Type S Basin, Item 310 018	02720
Basin Connect PCC Pipe, Class III, 15 Inch Item 310 008	02720
Replace Existing Basin with Dual Throat Water Quality Basin, Item 311 027	
Pipe Sewer Television Inspection, Item 315 002	02732

47. CLEAN SEWER STRUCTURE, Item: 311 063

A. GENERAL

Work consists of cleaning selected sewer structure (storm sewer) within the limits of the project.

The sewer structures shall be cleaned of all silt and deposits (leaves, trash, etc.) by either manual or mechanical means. Work shall also include removing debris to a distance of 2 ft. into the attached connecting pipe. Debris extracted from the inlet must be removed from the work site by the end of the workday.

B. MEASURE

The unit of measure for Clean Sewer Structure will be each and this measure shall include the elongated section, catchment chamber and the connecting pipe as specified.

C. PAYMENT

Payment for Clean Sewer Structure will be made at the contract unit price per each, which payment will include all labor, equipment, tools, materials, and incidentals necessary to complete the work as specified herein.

**48. REPLACE EXISTING BASIN WITH WATER QUALITY BASINS, Item: 311 027 –
Replace Existing Basin With Dual Throat Water Quality Basin**

This S.P. modifies and supplements 311.

A. GENERAL

Work consists of complete removal of existing standard or elongated basins, excavation and backfill, disposal of excess excavated material, furnishing all materials and constructing triple and quadruple water quality catch basins at the same location according to the details shown in the contract documents or as directed by the engineer.

B. SUBMITTALS

The requirements of 310.02 apply.

C. MATERIALS

The requirements of 310.03 apply.

D. CONSTRUCTION REQUIREMENTS

The requirements of 310.04 apply.

E. MEASURE AND PAYMENT

The unit of measure for **Replace Existing Basin With Dual Throat Water Quality Basin** will be each.

Payment for **Replace Existing Basin With Dual Throat Water Quality Basin** will be made at the Contract unit price per each, for which payment will include all labor, excavation and backfill, materials, tools, equipment and incidentals needed to complete the work specified.

49. CLEAN PCC PIPE, Item: 311 065

A. GENERAL

Work consists of cleaning PCC Pipe (inlet connection pipe) within the project limits.

If, during the sewer structure cleaning process, the Engineer determines that a connecting pipe is clogged or requires cleaning, he shall direct the Contractor to clean the connecting pipe.

The connecting pipe shall be cleaned of all debris and thoroughly flushed by use of high-pressure hose. All work to be performed must meet the requirements of Water and Sewer Authority.

Any material extracted from the pipe during cleaning operations must be removed from the site by the end of the working day.

B. MEASURE

The unit of measure for Clean PCC Pipe will be Linear Foot and this measure shall be the horizontal distance, along the surface from the attached wall of the inlet to the center of the connecting sewer structure minus 2 feet.

C. PAYMENT

Payment for Clean PCC Pipe will be made at the contract unit price per Linear Foot, for which payment will include all labor, equipment, tools, materials and incidentals necessary to complete the work as specified herein.

50. SAW CUTTING:

This S.P. modifies and supplements 202.03 and applies to all excavation and Repair/Replace Items.

A. CONSTRUCTION METHODS

During removal of existing roadways, sidewalks, curbs, gutters, alleys, driveways, concrete traffic barriers and wheelchair ramps, the portion to be removed shall be saw cut one-third (1/3) depth or as directed and/or approved by the Engineer, such that the existing materials can be removed to a neat line with minimum damage to adjacent structures that are to remain in place. Any excessive damage done at these locations shall be repaired and restored by the Contractor at no cost to the District.

B. MEASURE AND PAYMENT

No measure and payment shall be made; the cost of saw cutting shall be reflected and distributed among the various bid pay items.

51. ANTI-STRIP ADDITIVE - BITUMINOUS MIXTURE:

A. GENERAL

All bituminous mixtures shall include an anti-strip additive.

B. MEASURE AND PAYMENT

No measure or payment will be made. Cost for **Anti-Strip Additive - Bituminous Mixtures** shall be included in the prices bid per ton of asphalt.

52. SUPER PAVE SURFACE COURSE 12.5 MM, Item: 402 012

This S.P. supplements 401.14

The Contractor shall constantly check the surface with a straightedge perpendicular to the center line while the pavement is being placed and rolled. Straightedging and backpatching shall be done immediately after initial compaction and while the material is still workable.

If the Contractor prefers to use Recycled Asphalt Pavement (RAP), in lieu of, Superpave Surface Course, 12.5 mm, the Contractor will provide a \$10 discount on the unit price. The Contractor should provide this request to the Engineer in writing and shall not begin this work until the request has been approved in writing by the Engineer.

53. ARCHITECTURAL TREATMENT

A. GENERAL

This work shall consist of providing architectural treatment on structures such as bridge facades and parapets. The type of architectural treatment shall be as specified in the Contract Documents. Form release agents, form stripping methods, patching materials, and construction procedures shall be mutually compatible with the surface finish and concrete stain to be applied.

Architectural treatments not requiring form liners or stain shall conform to all applicable requirements including sample panels.

Contractor Uniformity Responsibility. When a project specifies that the same architectural treatment be applied to multiple structures and portions of various structures such as parapets, abutments, piers, retaining walls, and noise barriers that will be in close proximity of each other, the Contractor shall be responsible for ensuring that the same architectural treatment or manufacturer's form liner is used by all subcontractors and that any staining requirements are uniform throughout those structures. The district's form liner approval process ensures that the specific form liner produces a product that conforms to the specified results; it does not relieve the Contractor of the responsibility for uniformity throughout the project. When exposed aggregate is specified as the architectural treatment, the same coarse aggregate shall be used in the production of these elements. Supplying all plants with the same coarse aggregate shall be at no additional cost to the district.

Form Liner. The form liner finish shall match the textured finish specified in the Contract Documents.

The form liner shall attach easily to the forming system, and shall not compress more than 0.021 ft when poured vertically at a rate of 10 ft/hr. The liners shall be capable of withstanding anticipated concrete pour pressures without leakage causing physical or visual defects. The liners shall be removable without causing concrete surface deterioration or weakness in the substrate.

Form liner butt joints shall be carefully blended into the approved pattern and finished off the final concrete surface. There shall be no visible vertical or horizontal seams or conspicuous form marks created by butt joining form liners. The finished texture, pattern, and color shall conform to the approved sample panel, and shall be continuous without visual disruption. The Engineer may reject portion of the structure for failure to comply with these requirements. Rejected portions of the structure shall be completely removed from the project at no additional cost to the district.

Prior to each pour, the form liners shall be cleaned and free of build-up. Each liner shall be visually inspected for blemishes and tears. Repairs shall be made in conformance with the manufacturer's recommendations, and shall not change the appearance of the final product.

Form liners shall be securely attached to forms in conformance with the manufacturer's recommendations, and with less than a 1/4 in. seam.

Form or Wall Ties. When form or wall ties are used that result in a portion of the tie permanently embedded in the concrete, the Contractor shall submit the type of form ties to the Engineer for approval prior to use in this work.

Form Release Agent. The release agent shall be compatible with the surface finish and concrete stain to be applied. The release agent shall be applied in conformance with the manufacturer's recommendations.

Concrete Stain. The color of the concrete stain shall conform to Federal Standard 595, for the Color No. specified in the Contract Documents. The coloring agent shall be a penetrating stain mix, compatible color finish designed for exterior application on new or old concrete with field evidence of resistance to moisture, alkali, acid, mildew, mold and fungus discoloration or degradation. The coloring agent shall be breathable, allowing moisture and vapor transmission. Concrete stain shall be selected from a list of prequalified concrete stains that is maintained by the Quality Assurance/Quality Control Division. Unless otherwise specified, two coats of concrete stain shall be applied in conformance with the manufacturer's recommendations and as directed by the Engineer.

When the concrete is at least 28 days old, surfaces to be stained shall be pressure washed with a pressure washer set at 3000 psi to remove laitance. The fan nozzle shall be held perpendicular to the surface at a distance of 1 to 2 ft. Abrasive blasting is prohibited. The completed surface shall be free of blemishes, discolorations, surface voids, latency, efflorescence, dirt, other foreign material, and conspicuous form marks as approved by the Engineer. The Contractor shall correct any surface problems at no additional cost to the district.

Expansion Joint Material. When the Contract Documents include expansion joints, the joint material shall be finished so as to visually continue the simulated stone pattern uninterrupted. A sample of the colored expansion joint material shall be included in the sample panel for approval.

Sample Panels. The Contractor's workmanship shall be demonstrated by constructing an approved sample panel for the form liner type specified using approved form lining materials and surface coloring. Formwork including form or wall ties proposed for use and concrete placement for the sample panel shall be the same as that used for the finished structure.

The form liner used shall produce the same pattern that is intended for use on the finished structure. When the finished structure will contain vertical or horizontal form liner seams/joints, the sample panel shall include the same appropriate seams/joints. The sample panel shall be unreinforced concrete cast in the same position (vertically or horizontally) as will be the finished product to determine the surface texture resulting by use of the form liner. The minimum size of concrete sample panel shall be 6 in. thick, 2 ft wide and 2 ft high.

The sample panel approved by the Engineer shall remain on the site as a basis for comparison to the structure. Samples rejected by the Engineer shall be removed from the project and a new sample be submitted at no additional cost to the district.

Samples. Form ties, sample and description, showing method of separation when forms are removed shall be provided by the Contractor.

Sample Panel Digital Photograph Inspection. The Contractor shall provide digital photographs of the small sample panel (24 x 24 in. or 4 x 4 ft as specified in the Contract Documents). The photographs shall be supplied by e-mail or CD Rom at the time the Quality Assurance/Quality Control Division is notified of panel delivery to the project site. The

photographs will be used in evaluating the acceptance of the finish, but will not replace or supersede the delivery of sample panels as required in the Specifications. The district reserves the right to make an onsite inspection at any time, or to request additional photographs.

The digital camera shall have a minimum resolution of 3.1 megapixels, and all photographs shall be taken without the use of the camera's zoom features. All photographs shall be taken with the camera's line of sight being approximately perpendicular on the horizontal to the surface of the sample panel. This requirement shall be heeded throughout this procedure regardless of the orientation of the sunlight. Multiple photographs shall be taken with variations in the angle of the sunlight shining on the sample panel. This may be accomplished by rotating the sample panel so that the sunlight shines from almost directly behind the camera (90 degrees from the sample panel face), to a side lighting view where the sunlight shines on the surface from about 170 degrees from the sample panel face. Photographs shall be taken in approximately 15 degree increments, and be free of shadows from the camera and other foreign objects. The camera may be required to be plus or minus perpendicular to accomplish this requirement when the sun is shining on the sample panel at a 90 degree angle.

Additional photographs depicting the relief, colors, etc., may also be submitted provided that they conform to these requirements.

Photographs shall be taken so that the top and bottom of the sample panel takes up the full top and bottom of the camera's view screen without the use of the zoom feature. Included in each photograph shall be a card placed adjacent to the sample panel identifying the district's Contract Number, the supplier, the casting date for each panel; and a 1 x 6 in. black bar, a ruler, or other means of showing scale that is legible when viewing the photograph.

All photographs shall be taken in the presence and at the direction of the district's Inspector, and electronic copies made directly from the camera's memory device shall be submitted to them at the time of the inspection (enhancing or modifying the photographs in any way is prohibited). The Inspector will forward the information to the Quality Assurance/Quality Control Division. The certification with the photographs shall contain the following information:

- (a) Casting date.
- (b) Contract Number.
- (c) Description of the sample with file names for each sample.
- (d) Number of images sent.
- (e) Date and time the images were shot.
- (f) Panel serial numbers, or other identifying markings.

- (g) A certification that the panel has not been used on a previous project, that the panel is uniquely marked, and that the photographs were taken in their presence.

Failure to produce legible electronic photographs in conformance with these requirements will be cause to delay the evaluation of sample panels/posts, which shall be at no additional cost to the district on or any Contract time extension.

Architectural Treatment Type and Location. The type of architectural treatment and its location shall be as follows:

ARCHITECTURAL TREATMENT			
STRUCTURE	TREATMENT	COLOR	LOCATION
Concrete Façade	Match Existing Stone Pattern	†	Outside Face of Arch on Bridge 204.
Concrete Parapet	Match Existing Stone Pattern	†	Outside and Inside faces of parapets on Bridge 222, and inside face of parapets on Bridge 204

† Color shall match the natural material of existing stone subject to approval of the Engineer.

Shop Drawings. Plan, elevation, and details to show overall pattern, joint locations, form tie locations, and end, edge and other special conditions shall be submitted by the Contractor.

B. MEASURE AND PAYMENT

No measurement or payment will be made for this item.

54. SIMULATED STONE MASONRY

A. GENERAL

This work shall consist of constructing a simulated stone surface on the concrete locations specified in the Contract Documents. This work shall include developing, furnishing and placing form liners and applying a color system to the finished concrete surface as shown on the Plans or directed by the Engineer.

B. PATTERNS

The form liner shall replicate the actual existing stone pattern; the completed colored and formed concrete surface shall match the natural material of existing stone as closely as possible. Patterning of simulated stone masonry shall appear natural and non-repeating. Seam lines or match lines caused from two of more molds coming together will not be apparent when viewing final surface. Final coloration of cast stone concrete surface shall accurately simulate the appearance of existing real stone including the multiple colors, shades, flecking, and veining that

is apparent in real stone. It shall also demonstrate the colors that may be apparent from aging, such as staining from oxidation, rusting and/or organic staining from soil and /or vegetation. Note that in Item 601 003, a sample is required. Upon approval by the Quality Assurance/Quality Control Division, mockup shall serve as quality standard for the project.

C. MATERIALS.

Refer to 601 003.

D. CONSTRUCTION

Refer to 601 003.

Concrete Stain. The concrete stain colors shall include the required base color, surface color and highlight colors to achieve a finished look that will simulate the existing natural stone. The base color shall be applied to the entire surface (stones and grout pattern joints) and may be sprayed. The surface color shall be applied to 80 percent of the surface of simulated stones (front face and edges). Each highlight color shall be applied to 2 to 5 percent of the surface of the simulated stones (front face only). The surface and highlight colors shall be applied to the front face of the simulated stones using a sponge. The surface color shall be applied by brush to the edges of the simulated stones. The surface and highlight colors shall not be applied to the grout pattern joints.

E. MEASURE AND PAYMENT

Development and preparation of working drawings, the development and furnishing of all form liners, the construction and finishing of all sample panels, the application of the rustic coursed ashlar stone form liner finish including application of colors, and all material, labor, equipment, tools, and incidentals necessary to complete the work will not be measured but the cost will be incidental to the Contract price for the Lightweight Concrete item.

55. RIPRAP FOR SCOUR PROTECTION, ITEM: 604 009

A. DESCRIPTION

This work consists of placement in the channel and slopes a covering of geotextile and stone for the purpose of scour protection at bridge 132, 58th Street.

B. MATERIALS

Stone for Riprap. Ensure that stone for riprap is uniformly graded from the smallest to the largest pieces. The median stone diameter (D50) of the riprap shall be 2.8 ft.

Optimum gradation is 50 percent of the stone being above and 50 percent below the midsize. Reasonable visual tolerances will apply. Riprap stone shall be sound, durable, and free from seams, cracks, and other structural defects.

Geotextile. The requirements for 213 shall apply.

C. CONSTRUCTION

Excavation. Excavate for riprap to the specified lines and grades. Ensure that the subgrade is smooth and firm, free from protruding objects that would damage the geotextile, and constructed in an acceptable manner.

Geotextile. Place the geotextile on the prepared subgrade with the adjacent edges overlapping at least 2 ft. Replace or repair damaged geotextile as directed.

Riprap Placement. Ensure that the underlying surface is free of brush, trees, and stumps, and is acceptable to the Engineer. Place the first section of riprap consisting of at least 5 tons, which will be inspected by the Engineer for conformance to gradation and placement requirements. If approved, this section will be used to evaluate quality control for the remainder of the project. If the material is rejected, remove it from the project and place additional sections, each at least 5 tons.

Begin the placement of the riprap with toe sections. Place the larger stones along the outside edges of the limits of slope and channel protection. Place the riprap with equipment that produces a uniformly graded mass of stones. Ensure that the surface elevation of completed riprap installations is flush with adjacent channel bed or bank slope elevations, and does not create an obstacle to the flow. Ensure that the outer riprap surfaces are even and present a generally neat appearance. The plus or minus tolerance of the surface of the finished riprap installation is 6 in. from the lines and grades shown on the Contract Plans when measured perpendicular to the exterior surface of the stonework. Place and distribute the stone so the resulting layer will contain a minimum of voids and there will be no pockets of same size material. Place the stone to its full course thickness in one operation in a manner that the underlying material is not displaced or worked into the course of riprap being placed.

Backfill. Backfill any excavation voids existing along the edges of the completed slope and channel protection, and compact it in an acceptable manner.

D. MEASURE AND PAYMENT

The payment will be full compensation for all excavation, geotextile, stone, backfill, compaction, disposal of excess material (including excavated material), prewashing when required, preparation of quality control section, and for all material, labor, equipment, tools and incidentals necessary to complete the work.

Riprap for Scour Protection will be measured and paid for at the Contract unit price per ton.

56. TEMPORARY FENCE, Item: 607 005

A. GENERAL

The requirements of 607.05 apply. Use DDOT standard material such as Snow Fence or other DDOT standard temporary fence material.

B. MEASURE AND PAYMENT

The requirements of 607.05 (E) apply. Unit of pay will be linear foot.

57. DETECTABLE WARNING PAVERS OF NEW WHEELCHAIR/BICYCLE RAMPS

This S.P. supplements 609

A. DESCRIPTION

This work shall consist of furnishing and installing **Detectable Warning Pavers on Construction of New Wheelchair/Bicycle Ramps** or other locations as indicated and in accordance with the details shown on the plans and/or as directed/approved by the Engineer.

Furnishing and placing of materials of **Detectable Warning Pavers on Construction of New Wheelchair/Bicycle Ramps** will be paid for under the pay item for the wheelchair/bicycle ramps.

B. DETECTABLE WARNING PAVERS/TRUNCATED DOMES.

General - Detectable warning pavers shall consist of a surface of truncated domes aligned in a square grid pattern. Contrasting color shall be used and approved by the engineer.

Dome Size - Truncated domes in a detectable warning paver surface shall have a base diameter of 0.9 inches minimum to 1.4 inches maximum, a top diameter of 50% of the base diameter minimum to 65% of the base diameter maximum, and a height of 0.2 inches.

Size - Detectable warning pavers surfaces shall extend 24 inches in the direction of travel from the back of the curb for the entire width of the wheelchair ramp, landing or blended transition.

Rail Crossings - The detectable warning paver surface shall be located so that the edge nearest the rail crossing is 6 inches minimum and 8 inches maximum from the vehicle dynamic envelope.

C. MATERIALS

Pavers will meet Americans with Disabilities Act (ADA) requirements for detectable warning pavers (truncated domes) either ASTM C 902 Pedestrian and Light Traffic Paving Block, Class SX, Type I; or ASTM C 936 Solid Concrete Interlocking Paving Units; or ASTM C 1272 Heavy Vehicular Paving Brick, Type R.

Listed herein are the acceptable manufacturers and products or approved equal for detectable warning pavers and truncated domes pavers.

Manufacturers	Products
Whitacre-Greer Fireproofing Company, 1400 S. Mahoning Ave., Alliance, OH, 44601	ADA Paver, 4"x8"x2-1/4" Clear Red (Rustic) #30.
Hanover Architectural Products 240 Bender Rd., Hanover, PA,17331	Detectable Warning Paver, 11-3/4"x11-3/4"x2" Red or Quarry Red
Endicott Clay Products, PO Box 17, Fairbury, NE, 68352	Handicap Detectable Warning Paver, Nominal 4"x8"x2-1/4" Red Blend

Pavers will be laid on top of a 4" non-reinforced concrete base. Setting bed and joints are to be mortared in accordance with manufacturer's instructions or with a maximum 1/2" thick setting bed of latex modified cement mortar. Mortar the joints to a width not greater than 5/32" and not less than 1/16". Pavers shall not be directly touching each other unless they have spacing bars. Portion of concrete ramp that is thickened to 6" shall be extended such that a minimum 4" of concrete shall be beneath the brick pavers.

Joints are to be flush with top surface and struck so as to give a smooth surface. Pavers shall be laid such that joints are level with adjoining joints so as to provide a smooth transition from brick to brick and brick to concrete surface. The top surface of any two adjacent units should not differ by more than 1/8" in height for mortared brick paving. Bricks shall be placed in a running bond pattern. Pavers that do not conform to the smoothness requirement shall be removed and replaced at the expense of the contractor as determined by the Engineer. Face of all brick shall be clean of cement and protected so as to avoid chipping during construction.

Stamping or imprinting system when used must be capable of uniformly providing the specified texture and pattern, using the Department's standard class of concrete for sidewalks. The minimum dry static coefficient of friction, as defined by ASTM C-1028, shall be 0.80.

D. CONSTRUCTION

The Contractor shall submit literature describing the following to the Engineer at least 30 days prior to the proposed installation.

- The detectable warning paving material
- All associated materials
- Preparation requirements
- In addition, a minimum 12” x 12” sample of the detectable warning paver material shall be submitted.

The manufacturer shall demonstrate in writing and by providing references that the detectable warning paver materials have been satisfactorily used for roadway, path or flooring applications, in high pedestrian use and under weather conditions similar to those experienced in the District, for minimum period of five years.

In no case shall the Contractor permit the application of any materials by the untrained personnel or non-approved installers. The material manufacturer’s certification of compliance with this requirement shall be provided to the Engineer.

Prior to the start of work, the Contractor shall show evidence of successful completion of similar installations and provide a job site sample for the approval of the Engineer. The sample size shall be 4’ x 2’, minimum, and constructed at a location selected by the Engineer.

As many test panels will be constructed as are necessary to achieve a sample panel that meets the satisfaction of the Engineer. All work shall conform to the appearance of the approved sample to the satisfaction of the Engineer. The sample shall not be incorporated into the work and will be removed when ordered by the Engineer.

Follow all applicable manufacturer’s requirements for the environmental conditions, surface preparation, installation procedures, curing procedures, and materials compatibility. The Contractor is responsible for removing any material spatters from areas. The Contractor shall repair any damage that should arise from the installation or the clean-up effort.

E. MEASURE

Detectable Warning Pavers on Construction of New Wheelchair/Bicycle Ramps: No separate measurement will be made for the **Detectable Warning Pavers on Construction of New Wheelchair/Bicycle Ramps.**

F. PAYMENT

Payment for the **Detectable Warning Pavers on Construction of New Wheelchair/Bicycle Ramps** will be included in the contract unit price for the Wheelchair/Bicycle Ramp. Payment will include furnishing and placing all materials, tools, equipment, all labor and incidentals necessary to complete the work. No payment will be made for job site samples and clean-up.

58. ROOT PRUNING, Item: 611 005

This S.P. modifies and supplements 107.12, 609.01 (E)(3) and 611.08.

A. GENERAL

This work consists of root pruning of existing trees within the project limits during construction operations as directed by the Chief Engineer and/or designated representatives of the Urban Forestry Administration.

B. CONSTRUCTION METHODS

The requirement for 611.08 (B) apply.

C. MEASURE AND PAYMENT

The unit of measure for root pruning will be per each. Payment will be made at the contract unit price per each, which payment will include all labor, materials, tools, equipment, and incidentals necessary to complete the work.

59. TREE PROTECTION AND REPLACEMENT, Item: 611 151

A. GENERAL

This S.P. supplements and modifies 611.07.

- Tree protection shall be installed prior to and throughout construction. Fencing shall be removed at the end of the project.
- Install six (6) foot high chain link fencing to protect existing street trees to remain within the limits of disturbance or directly adjacent to.
- For trees within continuous planting strips, protection should extend to the critical root zone which equals one foot of tree protection for every inch in tree diameter (e.g. a tree with a 12-inch DBH, or diameter at breast height, would require 12 ft. of tree protection on every side measured from the base of the tree.)
- For tree boxes, a tree protection frame should be installed and consist of four posts 6 ft. high placed at the four corners of the box with a minimum delineated area of the existing tree box (e.g. 4' x 9', 6' x 10', etc.). The posts shall not extend into the ground.
- If construction cannot be avoided within the critical root zone, the existing tree must be protected with fencing at minimum 2 ft. on all sides from the root flare (crown) and all other unpaved areas must be covered with a protective 10" layer of wood chips.
- None of the following shall occur within the critical root zone: trenching, alteration or disturbance to existing grade; staging/storage of construction

materials, equipment, soil, or debris; disposal of any liquids e.g. concrete, gas, oil, paint, and blacktop.

- Trees that are protected must be watered every 10 days from April through September.
- Section 611.07 Tree Protection and Replacement of the DDOT Standard Specifications April 2009 shall apply should any damage occur to the existing street trees.
- Should there be any questions regarding tree protection the Contractor shall contact the UFA Team 4 Arborist at 202-671-5133.

B. MEASURE AND PAYMENT

The requirements of 611.07(C) apply. Unit of pay will be each.

60. REFLECTIVE MARKERS AND DELINEATORS

- 4 Inch Solid, Item 616040**
- 6 Inch Solid, Item 616044**
- 12 Inch Solid White, Item 616050**
- 4 Inch Double Yellow, 4 Inch Apart, Item 616051**
- 24 Inch Solid, Item 616053**
- Symbol, Item 616057**

This special provision supplements 616.11.

A. DESCRIPTION

Supplementing 616.11 (A). Work under these items consists of furnishing all materials for and installation of permanent reflective marker lane for the project as depicted in the contract drawings or as directed by the Engineer. If the roadway is to be immediately opened to traffic, then the pavement marking shall be installed within 24 hours after placement of the final roadway surface.

C. CONSTRUCTION REQUIREMENTS

Supplementing 616.11 (C). The newly applied markings shall be protected by traffic cones, or other approved measures, until such time as the material have dried sufficiently to bear traffic.

D. MEASURE AND PAYMENT

Supplementing 616.11 (D). Reflective markers and delineators, INCH DASH, will be measured and paid for based on the length of the marking stripe only.

61. MAINTENANCE OF TRAFFIC, Items: 407 002, 614 012, 614 013, 616 004, 616 006, 616 008, 616 012, 616 014, 616 016, 616 020, 616 022, 616 024, 616 028, 616 060, 616 062, 616 071, 616 073, 616 075, 616 080, 616 090, 616 100, 616 110, 616 122, 616 150

This S.P. supplements and modifies 104.02.

Supplementing first paragraph of 104.02, reference to the MUTCD shall be to the 2009 edition, with latest revisions or latest edition.

Traffic Flow Restrictions - First paragraph of 104.02(A) is modified as follows:

All traffic lanes shall be a minimum of 10' – 0" wide, except as shown on the plans. Division Avenue should maintain minimum 11' lanes to accommodate Metro buses.

Vehicular and pedestrian access to all properties shall be maintained at all times during construction. Access to the adjacent multi-use trails shall be maintained. No on-street parking will be allowed within the construction zone. The construction work zone shall be protected with portable precast PCC barriers with attenuators and safety drums as shown on the Contract Plans. The Contractor shall maintain proper construction signage during the construction period. The Contractor shall maintain access to existing driveways, residential and commercial entrances at all times.

Important Note:

Refer to the Contract Plans for details of the construction sequence, detours and maintenance of traffic.

- A. Traffic Flow Restrictions** - The actual duration of construction shall be minimized to reduce exposure to potential hazards. The Contractor's operation shall present no interference to traffic during the peak traffic hours of 6:30 A.M. to 9:30 A.M. and 3:30 P.M. to 7:00 P.M., Monday thru Friday, except holidays. Weekend and holiday work requires DDOT approval.
- B. Flaggers** - The Contractor shall furnish all necessary flaggers that may be required during the course of construction activities. It is the responsibility of the Contractor, utilities and agencies to ensure that trained personnel administer flagging. Flaggers shall be equipped with high visibility safety vests, 24" stop/slow paddles and helmets as per Section 6E of the MUTCD.
- C. Traffic Control Devices** - Approved warning signs, channelizing drums, cones, arrow panels, etc. in good working condition shall be provided to insure motorists of positive guidance in advance of and through the work zone. Erection of regulatory signs such as stop, speed limit and no parking signs must be specifically authorized. Advance Warning signs shall have face sheeting that shall be Fluorescent Orange High Performance Wide Angle Retroreflective material or equal. All temporary traffic control devices shall meet

NCHRP-350 testing requirements. Note: Mesh roll-up signs are not approved. Sign Supports shall be of a spring-loaded type or equivalent. Tripod or A-frame sign stands are not approved.

The temporary signs and markings placed in or adjacent to the work zone shall be consistent and visible at all times. The existing signs and markings may be covered and/or removed temporarily if the intended functions of these signs and markings will not be applicable during construction. However, they shall be replaced promptly when work is completed. All temporary signs no longer applicable to the work zone shall be removed or turned away from traffic. The Contractor shall document all existing pavement markings and signage that is removed due to their work. The Contractor shall place temporary pavement markings at the end of each workday. DDOT-IPMA shall approve all temporary and permanent markings.

- D. Pedestrian Safety** - The Contractor shall provide pedestrians with a minimum of 5' walkway. This walkway should be safe, convenient and replicate as nearly as possible the most desirable characteristics of sidewalks or footpaths. Pedestrians should not be led into direct conflict with the work site operations or mainline traffic moving through or around the work site. All pedestrians including blind, hearing impaired and physically challenged need protection. All necessary signs and supports for closing sidewalks and detouring pedestrians shall be the contractor responsibility and shall direct pedestrians safely. Temporary ADA compliant handicap ramps and or protective walkways are also the responsibility of the contractor and shall not be paid for separately. Cost shall be distributed among the various pay items.
- E. Night Work** - During night time hours, the work site shall be made safe for traffic and installing electronically illuminated traffic control devices such as Flashing Arrow Panels and warning lights shall provide warning. These devices shall be used in conjunction with other traffic control devices, and their flashing sequence and light intensity shall meet the requirements cited in the MUTCD. All traffic control devices shall be reflectorized during night time hours.
- F. Traffic Safety Officer** - The Contractor shall provide a competent, full-time, Traffic Safety Officer in accordance with the requirements of 616.02(B)(1). The Traffic Safety Officer should provide a signed daily safety report checklist.
- G. Traffic Controls** - 104.02(C) applies.
- H. Temporary AC, Superpave Surface Course, 12.5 mm, Item 407 002:**

This S. P. supplements 407 as follows:

Work includes removal and disposal of the asphalt as necessary. Temporary Asphalt shall be per 407.02.

I. Portable Precast PCC Barrier:

Portable Precast PCC Barrier, Item 614 012

If necessary, Contractor shall be paid to install portable traffic barrier once at Gault Place, once at 48th Place, once at 58th Street and once at Division Avenue at the contract unit price per linear foot.

Move Portable PCC Barrier, Item 614 013

Contractor shall be paid to move portable barrier to 44th Street and 55th Street. Additionally, Contractor will be paid to move portable PCC barrier at Division Avenue for each phase of construction.

The requirements of 614.02 apply

J. Sequential Arrow Boards, Item 616 020:

This S.P. modifies 616.08.

In the first paragraph on page 422, first line, insert the word “between” between “provide” and “25”.

K. MEASURE:

Unit of measure will be that as required for the following pay items, which will constitute the payment for Maintenance of Highway Traffic. Estimated quantities will be as listed in the Pay Item Schedule.

DESCRIPTION	UNIT
Temporary AC, Superpave Surface Course, 12.5 mm, Item 407 002	Tons
Portable Precast PCC Barrier, Item 614 012	L.F.
Move Portable PCC Barrier, Item 614 013	L.F.
Construction Lane Closing, Item 616 004	LS
Remove Lane Marking, Item 616 006	S.F.
Temporary Construction Sign Supports, Item 616 008	Each
Construction Warning and Detour Signs, Item 616 012	S.F.
Reflectorized Traffic Cones, Item 616 014	Each
Flashing Amber Warning Lights, Type (B), Item 616 016	Each
Sequential Arrow Boards, Item 616 020	Each
Construction Sign Warning Flags, Item 616 022	Each
Type III PVC Barricade, Item 616 024	Each
Traffic Drums, Item 616 028	Each
Painted Lane Marking, 4 Inch, Item 616 060	L.F.
Painted Lane Marking, 6 Inch, Item 616 062	L.F.

Removable Preformed Pavement Marking Letter, Item 616 071	L.F.
Removable Preformed Pavement Marking Arrow, Item 616 073	L.F.
Removable Preformed Pavement Marking, 12 Inch, Item 616 075	L.F.
Truck Mounted Attenuator, Item 616 080	Each
Construction Zone Attenuator, Item 616 090	Each
Sand-Filled Impact Attenuator Module, Item 616 100	Each
Portable Changeable Message Sign, Item 616 110	Each
Steel Protection Plate, Item 616 122	Each
Repair of Damaged Major Traffic Control Devices, Item 616 150	LS

L. PAYMENT:

1. Payment for pay items listed in (K) above will be made as specified in the Standard Specifications, as modified elsewhere in these Special Provisions and as follows:

Except as provided in the following paragraph, payment will be made at the contract unit price. When the number of a particular traffic control device required for any single phase of work exceeds the quantity specified in the Pay Item Schedule for that device, the Contractor will be paid for additional devices at the contract unit price.

2. Failure to Maintain Traffic - Failure on the part of the Contractor, at any time, to respond to the provisions of 104.02 and 616, will result in the Engineer immediately notifying the Contractor to comply with required maintenance of traffic provisions. In the event that the Contractor fails to proceed with corrections to Maintenance of Traffic deficiencies so as to conform to the provisions of 104.02 and 616.01 within 4 hours after receipt of such notice, the Engineer may notify the Contractor to suspend all other work on the contract until such time that the Maintenance of Traffic deficiencies are corrected.

In the event that the Contractor fails to respond to a notice of Maintenance of Traffic deficiencies within 4 hours after receipt of such notice, the Engineer will immediately proceed with adequate forces and equipment to maintain the project and the entire cost of this maintenance will be deducted from monies due the Contractor on the next monthly estimate.

An appropriate deduction will be made from the Contractor's next Progress Estimate for each day, or portion thereof, that Maintenance of Traffic deficiencies exist and will continue until the deficiencies are corrected and accepted by the Engineer. Any portion of a day will be considered a full day deduction. The amount prorated will be the per diem amount established by using the Calendar Days (based upon Calendar Dates when required) divided into the total value of the bid item. The amount of monies deducted will be a permanent deduction and will not be recoverable. Upon satisfactory correction of the deficiencies, payment

of the Maintenance of Traffic items will resume.

In the event that sufficient funds are not available under the lump sum bid item for Maintenance of Traffic the funds will be deducted from the contract value.

62. FURNISH AND INSTALL WIRELESS COMMUNICATION, Item 617 061

This S.P. supplements 617.

A. GENERAL

This work shall consist of furnishing and installing two Wireless Communications Devices for the communication between the temporary signal at Division Avenue, N.E. and Fitch Place N.E. the signal at Division Avenue, N.E, and Nannie Helen Burroughs Ave N.E. Contractor shall install Wireless Communications devices under the direction of DDOT personnel.

B. MATERIALS

1. Wireless Serial Modem with the following specifications:

Technology	Frequency-hopping spread spectrum technology (FHSS)
Frequency Range	902-928 MHz or 2.400-2.4835 GHz
Output Power	900 MHz: 1mW, 10mW, 100mW, 1000mW 2.4 GHz: 10, 50, 100, 250, 500, 750, 1000mW
Software Programmable	Yes
Available Hop Patterns	900 MHz: 62 2.4 GHz: 44
Number of RF Channels	900 MHz: 139 2.4 GHz: 202
RF Channel Spacing	900 MHz: 200KHz 2.4 GHz: 400KHz
Error Checking	32 bit CRC, ARQ
Error Correction	Forward error correction
Encryption	32 bit
Receiver Sensitivity / ER	-110 dBm @10-6 BER
System Gain	152 dBm
Certification	FCC
Operating Modes	Transceiver

System Configurations	Point to point, point to multipoint, multipoint to multipoint
Input Power	Shelf-mount: 6-30 VDC Rack-mount: Powered by detector rack via edge connector
Power Consumption	900 MHz: Typical <100mA standby 2.4 GHz: <125mA (100MW TX)
Operating Environment	-40°F to 176°F (-40°C to 80°C)
Humidity	0-95% non-condensing
Programming	DB9-F
Data interface	Dip switch selectable
Data Format	None, odd or even parity, 7 or 8 data bits
Data Rate	1200 Baud to 115 Kbps (software selectable)
Data transmission	Key-by-key data or RTS data input framing with programmable RTS/ CTS time delay

2. 20 feet of 3 Pair Communication Cable
3. 7 Conductor for power for radios.

C. MEASURE

The unit of measure will be lump sum.

D. PAYMENT

Payment for Wireless Communications Devices will be made at the contract unit price, which price will include all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals required for completing the work as required herein.

63. STREET LIGHTING: REMOVE ARM FROM STEEL POLE UP TO 8FT IN LENGTH , ITEM 618 669, FURNISH AND INSTALL 135W LIGHT EMITTING DIODE (LED) LUMINAIRE, ITEM 618 765

This Special Provision revises and supplements Sections 618 STREET LIGHTING and 820 STREET LIGHTING AND ELECTRICAL MATERIALS

The following paragraphs are applicable to work indicated on the contract plans and are part of this contract:

618.01 DESCRIPTION

Remove existing High Pressure Sodium (HPS) roadway lighting fixtures and arms where indicated on plans and present to District Inspector for evaluation. If deemed suitable for reuse by the district, deliver fixtures and arms to DDOT at a location designated by the Department. Refer to Standard Specifications 618.29 (A) for details.

Furnish and install new Light Emitting Diode (LED) fixtures and arms as indicated on plans.

Furnish and install new fixture grounding system where indicated on plans and inspect existing grounding systems.

Repair existing grounding systems where required and as directed by the department.

Arrange with PEPCO for the disconnection of existing roadway lighting fixtures from the utility company secondary system.

Arrange with PEPCO for the connection of new roadway lighting fixtures to utility company secondary system.

Clean and refinish existing round fluted steel poles where indicated on plans.

618.02 CODES AND STANDARDS

This paragraph is applicable to all work under this contract.

618.03 MATERIALS

This paragraph is applicable to all work under this contract.

618.04 CONTRACT PLANS AND MANUFACTURER'S DRAWINGS

This paragraph is applicable to all work under this contract.

618.22 INSTALL COPPER GROUND WIRE

A. GENERAL.

This subparagraph is applicable to all work under this contract.

B. CONSTRUCTION REQUIREMENTS

The contractor shall install the ground wire in continuous lengths. All connections to ground rods shall be made with approved connectors. Grounding conductors shall be of the size indicated on plans and installed simultaneously with current carrying conductors. The contractor shall ensure that the ground wire is not damaged or kinked during installation. All damaged wire shall be removed and replaced at no additional cost to the district. The grounding system shall be installed, connected and tested before energizing the current carrying conductors.

C. MEASURE AND PAYMENT.

This subparagraph is applicable to all work under this contract. Unit of payment is linear feet.

618.31 CLEAN AND PAINT STREETLIGHT POLES

This paragraph is applicable to all work under this contract.

618.32 INSTALL ARM ON STREETLIGHT POLE

This paragraph is applicable to all work under this contract.

618.35 INSTALL LUMINAIRES

A. GENERAL.

The contractor shall furnish all labor, materials and equipment necessary to remove the existing fixture and arm and install a new Light Emitting Diode (LED) luminaire of the wattage and type as specified in the contract documents.

Materials shall be as per the contract documents, Section 800 and Special Provisions.

Care must be taken during the installation of the luminaire so that the conductors are not damaged. All conductors damaged by the contractor will be replaced at no cost to the district. The new luminaire shall be attached securely to the supporting arm in accordance with the manufacturer's instructions. All luminaires installed must be leveled during the installation, in accordance with the manufacturer's instructions to level the luminaire.

In the case of luminaires installed on wood poles, the contractor shall provide a new arm of the length and rise required to locate the luminaire at the mounting height and overhang as specified on the plans for each specific location.

All conductors that terminate on the luminaire terminal block will be installed to ensure a good connection without damaging the conductors.

The photoelectric control shall be oriented so that the word NORTH is directed towards true north. The contractor shall check to assure that the eye of the control is not facing a foreign light source and shall cover the photoelectric control and check that the light is operating properly.

B. MEASURE AND PAYMENT

This subparagraph is applicable to all work under this contract. Unit of payment is each.

618.37 REMOVAL OF LUMINAIRES AND ARMS

REMOVE ARM FROM STEEL POLE UP TO 8FT IN LENGTH (ITEM 618 669)

A. DESCRIPTION.

The contractor shall remove luminaires and arms where indicated on the plans using a bucket truck, after the disconnection of the luminaire from the utility company secondary system by PEPCO.

B. MEASURE AND PAYMENT

This subparagraph is applicable to all work under this contract. Unit of payment is each.

618.38 INSTALL SCHEDULE 40 PVC U-GUARD

A. GENERAL

The contractor shall furnish all labor, materials and equipment necessary to furnish and install PVC u-guard on a wood pole owned by the District or any other utility company as shown in the contract documents or when the Contractor receives a work order from the District. The size to be installed will be as indicated in the contract documents or as stated on the work order.

When required by the contract documents or the work order, the Contractor shall install a u-guard (starting from grade level) on each pole, in order to protect grounding conductors. The cost of all mounting hardware shall be included as part of this work.

B. MEASURE AND PAYMENT

This subparagraph is applicable to all work under this contract. Unit of payment is linear feet.

618.39 INSTALL GROUND ROD

A. DESCRIPTION

EXISTING WOOD POLES: This subparagraph is applicable to all work under this contract.

B. MEASURE AND PAYMENT

This subparagraph is applicable to all work under this contract.

618.41 PAYMENT TO PEPCO FOR CONNECTION, DISCONNECTION AND INSPECTION OF SERVICE TO STREETLIGHTS

A. GENERAL.

This subparagraph is applicable to all work under this contract.
After the second subparagraph add a third subparagraph as follows:

In general the scope of PEPCO work will include the disconnection of service to existing roadway luminaires mounted on wood and steel poles as indicated in the contract documents and the connection of new luminaires following installation by the Contractor.

B. MEASURE AND PAYMENT

This subparagraph is applicable to all work under this contract. Unit of payment is per hour of crew.

820 STREET LIGHTING AND ELECTRICAL MATERIALS

This S.P. revises and supplements 820, only the paragraphs and subparagraphs listed below are included in item 820.

820.01 GENERAL

A. Light Emitting Diode (LED) luminaires, arms, ground rods, PVC U-Guard, wire, and other necessary street lighting and electrical materials for complete systems shall meet the requirements herein and as shown on the plans.

B. This subparagraph is applicable to all work under this contract.

820.02 LIGHTING STANDARDS AND ARMS

Arms shall meet the requirements of AASHTO Specifications for the Design and Construction of Structural Supports for Highway Luminaires, shall conform to the District of Columbia Commissioners’ order 60-1090 and be steel or aluminum as specified and shown on Traffic Services Administration Department of Transportation Drawings, and installed at locations in accordance with details shown on the plans.

820.03 LUMINAIRES LAMPS AND GLOBES

A. GENERAL

Luminaires shall be suitable for use in a multiple circuit and shall provide for use of a Light Emitting Diode (LED) light source as indicated in the plans. Luminaires shall consist of housing, reflectors, refractors, slip fitters, LEDs, photocell and socket, and constant current LED driver.

B. DESCRIPTION

The materials for luminaires, LEDs and drivers shall be in accordance with the following:

1. Streetlights

FURNISH AND INSTALL 135W LIGHT EMITTING DIODE (LED) LUMINAIRE (ITEM 618 765)

Provide luminaires as indicated and complete with LED light source and power supply unit. Details, shapes, and dimensions are indicative of the general type desired, but are not intended to restrict selection to luminaires of a particular manufacturer. Luminaires of similar designs, light distribution and brightness characteristics, and of equal finish and quality will be acceptable.

LED Light Source and Optical Requirements

1. Luminaire shall be full cutoff or fully shielded as defined by IESNA RP-8.
2. Correlated color temperature (CCT) $\geq 4500^{\circ}$ K.
3. Color rendering index (CRI): ≥ 70 .
4. Light Distribution shall be Type II, III or IV. It will be as specified in the contact document.
5. Lumen Depreciation of LED Light Source - Must comply with IESNA LM-80. LED module shall deliver at least 70% of initial lumens, when installed for a minimum of 50,000 hours.
6. Minimum Light Output shall be functionally one-to-one replaceable to up to 150, 250, and 400 watt (threshold may change in future) equivalent HPS Cobrahead producing the equal illuminance (fc) and uniformity ratio on the alleyway.
7. Minimum Luminaire Efficacy - 70 lm/W
8. LM-79 Test - Provide Independent Testing according to IES LM-79 that provides efficacy, output, color, and photometric distribution of your product. An Integrating Sphere Test will be required to provide color information. A Goniophotometer test by itself is not adequate.
9. Lifetime - Provide written explanation of how L70 Lifetime of Product is determined using the LM-80 and In-situ temperature tests referenced below.
 - a. LM-80 Test - Provide LED Package Manufacturer IES LM-80 Test Report with results showing relative (%) light output over time at 55°C, 85°C and X°C (a third temperature at the manufacturer's choice).

- b. In-Situ Temperature Test - Provide test report indicating the Temperature of the hottest LED In-Situ in ANSI/UL 1598-04 (hardwired) or ANSI/UL 153-05 (corded) environments. This temperature measurement will be used with LM-80 data to validate lumen maintenance and useful life of product. Note that this temperature measurement should be specially requested by the manufacturer as they are getting their UL testing.
- 10. Where LEDs are connected in series and a single LED failure results in greater than 5% light loss of the overall luminaire output, a bypass circuit shall be utilized. This bypass circuit shall allow the remaining LEDs in the series circuit to remain powered.
- 11. The light must appear to be a single source (regardless of the number of drivers) to the road users.
- 12. The luminaire for alleyway application shall be equivalent to LSG-LSR1 and LSR2 or approved equal. The luminaire for roadway application shall be equivalent to Philips 135W80LED4K and Philips 270W160LED4K or approved equal.

Hardware Requirements

- 1. Housing assembly:
 - a. Shall be primarily constructed of metal.
 - b. Finish shall be grey or black in color, polyester powder coated and resists rust.
 - c. Driver must be internally mounted and replaceable.
 - d. Captive screws are needed on any components that require maintenance after installation.
 - e. No parts shall be constructed of polycarbonate unless it is UV stabilized (Lens Discoloration shall be considered a failure under warranty).
 - f. The luminaire must have a self leveling mechanism.
 - g. The luminaire shall be filtered against entry of insects, rain, dust, and other offending foreign matter.
 - h. The luminaire shall be marked, using standard EE-1 NEMA marking, showing the lamp type and wattage. The marking shall be affixed to the underside of the luminaire housing and to the rear of the reflector.
- 2. Mounting arm connection (for Cobrahead only)
 - a. Luminaire shall mount on 1-1/4-inch to 2-inch arm and shall have not more than 8 inch long nor less than 5 inch horizontal insertion length on the 2 inch bracket arms and shall be adequately equipped with clamping and leveling devices or a similar mechanism to allow proper clamping and positioning of the luminaire on the bracket arms.
 - b. The clamping mechanism shall contain 4 bolts that do not pass through the housing. Clamping with only two bolts is not acceptable. The clamp must be able to accept a 1 1/4 to 2 inch pipe bracket without having to rearrange the clamp.
- 3. Photoelectric (PE) Cell Receptacle

- a. Shall have a 3-prong twist locking ANSI C136.10 photocell receptacle (for Cobrahead).
- b. Photocell adapter must be built into the housing and be directionally adjusted without the use of tools.
4. House Shield - Shall provide option for house side light control
5. Luminaire shall not weigh more than 35 lbs.
6. Dimensions (Approx.) (For Cobrahead) -Luminaire shall not be larger than 30-inch long x 16-inch wide x 6-inch tall.
7. Operating Environment - Luminaire shall be able to operate normally in temperatures from -40°F to 120°F
8. Cooling System - Thermal management shall be passive by design and shall consist of heat sinks with no fans, pumps, or liquids and must be resistant to debris buildup.
9. Luminaires shall be fully assembled and electrically tested prior to shipment from factory.
10. The fixture must not contain any moving parts.
11. The driver must be located inside the housing, but should be easily accessible.
12. For all mast-arm-mounted luminaires, a wildlife shield shall be included on the fixture to prevent wildlife access.
13. Optical system for roadway luminaires, including the driver, shall be sealed and rated for IP65 as defined in IEC 60529. Wiring compartments shall be IP20 compliant, but individual internal electronic components must be rated at a minimum of IP54.
14. The coating shall be capable of surviving ASTM B117 salt fog environment for 500 hours minimum without blistering or peeling.
15. The coating shall demonstrate gloss retention of greater than or equal to 90% for 1000 hours' exposure QUV test per ASTM G53 UVB313, 4 hour UV-B 60°C/4 hour condensation 50 °C.
16. The luminaire shall have been certified compliant with ANSI C136.31 having been subjected to 100,000 cycles of 2G at the resonant frequency of the luminaire applied at the center of gravity of the luminaire on three primary axes without damage to the luminaire. The luminaire shall be fully functional upon completing the test.
17. The luminaire shall be fully functional after testing for thermal shock according to IEC 60068-2-14.
18. The luminaire shall be fully functional after testing for damp heat, steady state, high humidity, and high temperatures according to IEC 60068-2-78.
19. If a lens not integral to the luminaire is used, optical enclosure (lens/window) shall be constructed from clear and UV-resistant acrylic or tempered glass.
20. At least 80% of the luminaire material by weight shall be recyclable at manufacturer's stated end of life.
21. Luminaires shall incorporate modular electrical connections and constructed to allow replacement of all or part of the optics, heat sinks, power supply units, and electrical components using only a simple tool, such as a screwdriver.
22. Luminaires shall have a nameplate bearing the manufacturer's name, 125address, model number, date of manufacture, and serial number securely affixed in a conspicuous place; the nameplate of the distributing agent will not be acceptable.

23. The luminaire fixture weight and effective projected area shall not exceed the poles requirements for wind loading.
24. Roadway and area mast-arm-mounted luminaires shall have an integral tilt adjustment of $\pm 6^\circ$, ANSI C136.3.
25. Driver shall be protected against damage due to either an open circuit or short circuit fault condition on the driver output. The driver shall resume normal operation when the fault is removed.
26. Over-temperature protection shall be provided and cut-off output power if case temperature limit is exceeded.
27. Reduction of hazardous substances (RoHS) compliant.

Power Supply and Driver Requirements

1. Off State Power Consumption - The power draw of the luminaire including PE devices must be zero watts when in the off state.
2. On State Power Consumption - The luminaire must use at least 40% less energy compared to its commercially available High Pressure Sodium counterpart.
3. Power Factor (PF): $\geq 90\%$
4. Operating Voltage - 120-240 volts
5. Operating Temperature - Shall operate between -40°F and 120°F
6. Frequency - Output operating frequency must be ≥ 120 Hz and input operating frequency of 60 Hz.
7. Interference - Shall meet FCC 47 CFR Part 15/18
8. Startup - Must be instant restart
9. The maximum drive current to the LEDs shall not exceed that recommended by the LED manufacturer. Documentation from the LED manufacturer shall be provided showing maximum current allowed and where the current output from the driver is not what is flowing into the LEDs. A schematic with calculations shall be provided to show what driver current does flow to the LEDs.
10. Maximum case temperature and measurement location shall be clearly marked on the driver case.
11. Fluctuations in line voltage up to 15% shall have no visible effect on the luminous output.
12. Operating frequency: $60\text{ Hz} \pm 5\%$.
13. Total current harmonic distortion (THD) for current: $\leq 15\%$.
14. Drivers shall be UL 8750 compliant.

Wiring Requirements

1. All factory electrical connections shall be made using crimp, locking, or latching style connectors. Twist-style wire nuts and tap-style striplless connectors are not acceptable.

2. Local area network (LAN), wireless, radio, modem, power line carrier, and other communication methods other than hard-wired switches for LED light fixture control shall be non-proprietary and compatible with control monitoring system available in the market.

Surge Protection Requirements

1. The luminaire manufacturer shall provide surge protection on each luminaire and certify that it has been tested in accordance with ANSI/IEEE C62.41.2 guidelines. Surge rating 10 kV, 10 kA.

Warranties

LED fixture warranties shall be provided in accordance with Specifications and the following:

1. Luminaire must have a minimum five (5) Year warranty due to any failure. The Warranty shall provide for the repair or replacement of defective electrical parts including but not limited to the light source and power supplies and driver for a minimum of eight (8) years. Shipping shall be included.
2. The LED luminaire warranties shall begin on the date of final acceptance of the installation by the DDOT officer or designated representative. The contractor shall install luminaires in accordance with the design engineer's and manufacturer's requirements and shall obtain written concurrence from the luminaire manufacturer that the installation is compliant with their requirements. The signed memo, including post-installation field measurements, shall become part of the warranty package and be included in the final deliverables to the DDOT.
3. The contractor shall provide to the DDOT contracting officer written documentation of its ability to satisfy a worst-case, catastrophic warranty claim. The documentation shall clearly disclose the country in which the factory of fixture origin is located and the name of the company or organization that owns the factory (including all parent companies and/or organizations and their respective countries of corporate citizenship).

820.10 GROUND RODS

This subparagraph is applicable to all work under this contract.

820.11 WIRES

This subparagraph is applicable to all work under this contract.

820.12 ELECTRICAL CONDUIT AND U-GUARD

Conduit, fittings and U-Guard where specified in Special Provisions and where shown on the plans shall conform to the following:

(B) NON-METALLIC CONDUIT AND U-GUARD

(1) Heavy wall PVC conduit and u-guard, type II or schedule 40, shall conform to Federal Specification 1094A and UL 651 and bear the UL label.

64. EROSION AND SEDIMENT CONTROL, Item: 628 002

This S.P. supplements 628 of the Standard Specifications.

A. DESCRIPTION

Work under this item includes furnishing all materials for and the application of measures throughout the life of the project to control erosion and to minimize siltation of storm sewer facilities, as directed by the Engineer. Refer to the erosion and sediment control notes and details in the contract plans for information concerning this work. Erosion and sediment control measures shall be coordinated with the construction of the permanent drainage facilities, such as pipes, culverts, etc., which shall be constructed concurrent with the commencement of the grading operation to assure economical, effective and continuous erosion and sediment control.

This item shall also include all erosion and sediment control measures taken during the construction of the protection shield, demolition, bridge and approach roadway construction, improvement under the bridge, and other related construction activities.

Work also includes removal and disposal of all materials required for erosion and sediment control when no longer required.

B. MEASURE AND PAYMENT

The unit of measurement will be the job at all six (6) sites. No actual measure will be made.

Payment for EROSION AND SEDIMENT CONTROL will be made at the contract lump sum price, which payment will include all labor, materials, disposal of materials, tools, equipment and incidentals necessary to complete the work.

65. SILT FENCE, Item: 628 003

This S.P. supplements and modifies Section 628.

A GENERAL

This work is the construction of silt barrier fences at locations and to lengths as directed by the Engineer.

B MATERIALS

The material for the silt fence shall be as indicated on Standard Drawing No. 628.04 that is included in the Appendix to these specifications.

C. CONSTRUCTION REQUIREMENTS

The construction requirements for the silt fence shall be as indicated on Standard Drawing No. 628.04. If the silt fence is damaged, a replacement section of stakes and geotextile shall be inserted at no additional cost to the district.

When the silt fence is no longer needed, the silt fence shall be removed and the location of the silt fence shall be restored to nearly the original condition.

The silt fence and the material collected by the silt fence shall be disposed of off-site at an approved location.

D. MEASURE

The unit of measure will be the number of linear feet of silt fence installed with the approval of the Engineer.

E. PAYMENT

Payment for SILT FENCE will be made at the contract unit price, which price will include all material, labor, equipment, tools, disposal of materials away from the site, restoration of the area where the silt fence was installed, and incidentals required for completing the work as required herein.

66. ENGINEER’S FIELD FACILITIES, Item: 624 002

This S.P. supplements 624.01.

A. GENERAL

The Contractor shall provide and maintain a suitable field office within 2 blocks of any of the six project sites for the sole use of the Engineer and his representatives. The field office shall contain 600 square feet in gross area, with electricity, heat, adequate air conditioning, telephone service, running water, acceptable sanitary facilities; and daily janitor service, water connections and water meter cost to be charged to the Contractor. The Contractor shall provide acceptable access to the office. The field office shall include one or more office trailers with a minimum of two separate rooms with a minimum area of 120 square feet each and one conference room with a minimum area of 300 square feet.

The trailers mentioned above may be replaced with an apartment or office space acceptable to the Engineer.

Furniture and equipment for the office shall include two (2) fireproof, locking 4 drawer legal file cabinets, four (4) desks with locking drawers, four (4) swivel chairs, ten (10) folding chairs. one (1) hanging file for full-size drawings, one (1) 36 inch x 72 inch drawing table per trailer, four (4) Nextel radio/telephones communications systems with carrying cases and one (1) FAX machine with dedicated phone line.

The Engineer's field facilities shall include two (2) IBM-compatible Dell latitude laptop computers manufactured by Dell; printers all-in-one (printer, copier, scanner, fax, and e-mail) machine, and software, configured as follows, or approved equal:

Two IBM-compatible Dell latitude laptop computers manufactured by Dell, with Minimum Intel duo core i-5 or i-7 Processor. 8 GB Memory, 250 GB HD, Video Graphic Card with 512 MB Memory, 16 Bit Sound Card, CD-RW/DVD-RW Drive, 15" LCD Color Monitor, 2 Button Optical Mouse..

One HP Laser Printer 10-15 pages per minute, 2 -3 Input Trays - 750 pages, monthly volume of 50,000 pages. Support legal, A4, letter, and 11x17 prints. Remote management and configuration, built-in network card, support laser technology, cables, toner cartridges, developer and fuser kits, as needed.

one (1) new digital camera with a minimum of eight (8) mega pixel resolution and a minimum of 5X optical zoom and the camera shall have a memory card with a minimum of two (2) Giga byte capacity and shall be capable of displaying the date

The following software (new and unopened. latest available version unless a specific version is shown below) with full documentation:

- Microsoft Windows 7 Professional
- Microsoft Office 10 Professional
- MacAfee Virus Scan – latest version
- Microsoft e-mail/calendar
- ADOBE ACROBAT X Suite
- WinZip
- dBase
- Microsoft Fax

The HP printer all-in-one machine shall be connected as network hardware and needs to be accessible from both Dell latitude laptop computers.

Miscellaneous items including all necessary cables, power strip, surge protector and security enclosure with lock for the computer, monitor and printer shall also be provided.

The equipment shall be maintained in such a condition that it is always available for immediate use. An adequate supply of batteries, etc. shall also be readily available.

The engineers field office shall have adequate bathroom facilities with running water and proper drainage shall be maintained all the time. Telephone service shall be supplied including two separate phone lines and one Fax line with a minimum of four (4) telephone instruments. A security alarm system shall be installed.

The Contractor shall be responsible for District equipment placed in Engineers Facilities and shall promptly replace In kind or acceptably repair such equipment removed without permission or damaged.

The field office shall be set up in an acceptable location, equipped and made ready for use three (3) work days prior to start of any work and shall remain until field records printed to the project have been completed, not to exceed thirty (30) consecutive calendar days after acceptable completion of all work. The field office furnitures, computers, printers, cell phones supplied by the Contractor shall be removed by the Contractor from the field office when designated.

In addition the Contractor shall furnish, maintain and replace as necessary for the duration of the contract the following equipment for the exclusive use of the Engineer

- 1 Asphalt thermometers
- 1 Concrete thermometers
- 1 Set of sighting tees
- 1 Slump mold and tamping rod meeting requirements of AASHTO T 119
- 1 Chase indicator meeting requirements of AASHTO T 199
- 1 Pressure type air meter with necessary accessories meeting requirements of AASHTO T 152. The air meter shall be properly calibrated by an independent laboratory with certification furnished to the Engineer
- 1 10' rolling straight edge
- 1 10' static straight edge
- 2 Calibrated measuring wheels

The Contractor shall furnish, construct and maintain walkways, platforms, ladders, stairways and other facilities of suitable character and adequate strength as necessary for all operations of construction inspection.

The Contractor shall pay for equipment, software and other materials mentioned under Engineers' Field Facilities for the duration of the project. The Contractor shall also pay all initial connection fees and cost of all utilities including phone, telephone (cellular) and internet access, for the duration of the project.

At the conclusion of the project, all equipment and inspection facilities furnished under this item shall remain the property of the Contractor.

B. MEASURE

The unit of measure will be the job.

C. PAYMENT

Payment for Engineer's Field Facilities shall be made at the contract lump sum price, which price will include specified requirements stated above and in the contract documents. The first partial payment will not be made to the contractor until all the work under this, ENGINEER'S FIELD FACILITIES pay item number 624 002 and associated lines are installed and operating to the satisfaction of the engineer.

67. CONCRETE REPAIR

This S.P. modifies and supplements 703.

A. GENERAL

The materials and methods specified below apply to the applicable types of structure repairs as shown on the Contract Drawings and specified elsewhere in these SPECIAL PROVISIONS.

The Contractor shall expect that this work may require man-lift equipment and/or scaffolding for high-level access.

All of this work shall be done as shown on the plans and/or as directed by the Engineer. The District does not guarantee the exact locations and quantities (either more or less) of repairs.

Due to the time interval between the field survey and Notice to Proceed, further deterioration may have occurred which would not be reflected in the quantities for the particular bid item; the Engineer will be the sole judge of the extent and total quantity of repairs that are to be made.

B. MATERIALS

- 1. Repair Concrete** - Concrete shall conform to Class C (High early strength with compressive strength not less than 3000 psi after 24 hours) with Low Alkali Portland Cement, but shall contain aggregate no greater than 1/2" nominal size.
- 2. Non-Shrink Grout** - A proprietary formulation with a minimum bond strength of 1500 psi per ASTM C 882, compressive strength of 3000 psi after 24 hours per ASTM C 579, non-shrink per ASTM C 827 and satisfy the requirements of ASTM C 1107. This material is to be used for concrete spall repairs.
- 3. Non-Shrink Mortar** - Mortar shall be cement base non-shrink type meeting the requirements of ASTM C 109 for 3500 psi, 28-day strength. It shall be non-sag, stiff

consistency for vertical surfaces, and capable of adhering to damp concrete surfaces. Mortar is to be used for re-pointing of masonry.

4. **Epoxy resin adhesive (bonding agent)** - Epoxy adhesive shall conform to ASTM C 881, Type IV pr V.
5. **Low Viscosity Epoxy Grout for pressure injection grouting** - high-modulus, moisture insensitive, low-viscosity, for application at not less than 40 degrees F, fast setting, rigid, for grouting both damp and dry cracks. ASTM C 881, Type I , Grade 1, Class B or C. If recommended by the epoxy manufacturer, provide a compatible surface sealer. Pressure injection shall be carried out in strict accordance with manufacturer's instructions.
6. **Surface Sealant** - Epoxy resin used to seal cracks and ports before injection. ASTM C 881, Type I, Grade 3.
7. **Caulking compound** - A one-component, non-sag (gun grade) urethane sealant, color gray, meeting ASTM C 920, Type S, Grade NS.
8. **Non-Shrink Epoxy Grout** - A proprietary formulation, rapid set, flowable epoxy grout (self leveling), for tight clearances meeting applicable AASHTO Specifications for epoxy and cement components, non-shrink per ASTM C 827, compressive strength not less than 3000 psi in 24 hours and satisfy the requirements of ASTM C 1107. This material is to be used for grout pads.
9. **Zinc-Rich Spray Paint** – A commercial grade aerosol paint that may be used as a cold-galvanizing repair material.
10. **Seal Coat** – A clear, water-based acrylic protective coating, such as Sikagard 670W, for concrete that prevents moisture ingress and is water vapor permeable, and can be applied to vertical, overhead and horizontal surfaces.

C. SUBMITTALS

1. Submit certification for all materials.
2. Submit the materials and methods proposed for repair no later than thirty (30) days prior to commencement of work.
3. Submit construction drawings and calculations showing temporary shoring and support systems (if applicable).
4. Shop drawings and construction drawings shall be certified by a Professional Engineer registered in the District of Columbia.

5. As-built drawings shall indicate the type, location and extent of the repairs and the products and methods actually used.

D. CONSTRUCTION METHODS

For concrete repairs, the following is recommended for determining the limits of deterioration:

The extent for removal of deficient concrete shall be as indicated by sounding with a steel hammer. A hollow sound indicates deficiency. Where sounding indicates a deficient area has increased beyond that indicated on Contract Drawings, obtain the Engineer's approval before commencing work. After removing unsound concrete or mortar, clean the affected area free of all laitance and dust using brushes, pressure wash with potable water, and dry with oil-free compressed air. Use bonding agents as specified or as recommended by the manufacturer of the repair material to be used.

E. MEASURE AND PAYMENT

No measurement or payment will be made for this item.

68. PCC PIER-ABUTMENT-WALL, Item: 703 006

This S.P. supplements 703 of the Standard Specifications.

A. GENERAL

Work under this item consists of, but is not limited to constructing new concrete backwalls at five of the six Watts Bridges (Bridge Nos. 129, 132, 196, 204 and 222) required for joint replacement to the limits shown on the contract plans or as directed by the Engineer. If additional concrete repairs are required and approved by the Engineer, the removal and resetting of stone masonry required to provide this work will be paid under item 708 011.

B. DESCRIPTION

As part of the backwall/beam seat construction, anchor bolts for this work shall be installed according to Section 703.20(B) of the Standard Specifications. The Contractor is warned that reinforcing steel or utilities may be encountered while drilling anchor holes or dowels in concrete. Diamond drilling or other special procedures necessary to construct anchorages shall be included as part of this work. The Contractor shall assume responsibility for all damage to utilities or the structure.

Concrete removal and use of existing reinforcing required for new work shall be performed in accordance with 716.04(D) of the Standard Specifications.

C. MEASURE AND PAYMENT

The unit of measurement for PCC Abutment Backwall will be the cubic yard, complete in place. The number of cubic yards will be the actual number taken in the field. PAYMENT will be made at the contract unit price per cubic yard and will include all materials, tools, equipment, labor and incidentals necessary to complete the work as shown on the contract plans and as directed by the Engineer. The cost of drilling and grouting new anchor bolts and reinforcing steel is included in this item. The material cost for anchor bolts will be paid under item 706 004 – Structural Steel.

69. STRUCTURAL STEEL, Item: 706 007

Refer to 706 of the Standard Specifications.

70. STEEL FABRICATOR

The Contractor shall submit the name and location of the steel fabricator at the time of signing the contract.

71. STONE MASONRY, CLASS A, Item: 708 002 , RESET STONE MASONRY, Item: 708 011 REPOINT STONE MASONRY, Item: 708 013

This S.P. supplements 708 of the Standard Specifications.

A. GENERAL

Work includes raking and repointing of existing stone masonry joints on the parapets and retaining walls at the six Watts Branch Bridges (Bridge Nos. 129, 132, 196, 199, 204 and 222). Work also includes removal and resetting stone masonry and sealing of open cracks as shown on the contract plans and/or as directed by the Engineer in accordance with Standard Specifications Section 708 and this Special Provision. New stone panels to be replaced on the south ends of Bridge 199 and southwest end of bridge 204, and be installed in accordance with Standard Specifications Section 708 and this Special Provision.

B. MATERIALS

New stone shall be similar in size, color, texture, pattern and appearance, etc., to the stone facing on existing construction. The selected stone shall be approved by the Engineer before placement.

Caulking compound used to seal open cracks shall conform to Section 807.02(B) of the Standard Specifications. Color used shall match the existing stone mortar and shall be approved by the Engineer prior to performing any work.

C. BEDS AND JOINTS

Shall match the existing average width of beds and joints or otherwise shall be 3/4 inch. The finished beds and joints shall be raked out squarely to a depth of 1/2 inch, except across the top of pedestal, these joints shall be struck flush.

D. REPOINT EXISTING STONE MASONRY

The existing stone masonry walls shall be raked and repointed following the methods specified in 708.10(D) of the Standard Specifications.

E. MEASURE AND PAYMENT

Payment for RESET STONE MASONRY will be made at the contract unit price per cubic feet which payment will include setting of stone masonry, anchors, cramps, dowels and other anchoring devices and all labor, tools, equipment materials and incidentals required to complete the specified work.

Payment for REPOINT STONE MASONRY and SEALING CRACKS will be made at the contract unit price per linear foot which payment will include all material, labor, tools, equipment and incidentals required to complete the specified work.

Payment for STONE MASONRY, CLASS A will be made at the contract unit price per cubic foot which payment will include all labor, materials, equipment and incidentals required to install in place.

72. CLEAN EXISTING STONE MASONRY, Item: 708 014

A. GENERAL

Work consists of the cleaning of stone facing on the bridge parapets and walls on the six Watts Branch Bridges (Bridge Nos. 129, 132, 196, 199, 204 and 222).

B. DESCRIPTION

The Contractor is responsible for the method chosen, with respect to both achieving the required results and adhering to environmental regulations in the governing jurisdiction.

The sequence, objective and suggested method of cleaning shall be as follows:

1. Remove vegetative materials growing in wall cracks and joints. Remove water deposits – calcium/minerals by water-jet blast or water-wash with non-ionic soap or detergents.
2. Remove atmospheric soiling, rust stains and oily deposits using micro-blasting with fine glass powder or chemical methods diluted to the extent that will still be effective. The Contractor’s chosen method shall not damage the color or texture of the existing stone.

3. Spot cleaning using abrasive methods shall only be used in localized areas of severe staining.

C. MEASURE AND PAYMENT

The unit of measure will be the job. CLEANING EXISTING STONE MASONRY will be paid for at the contract lump sum price. Payment will include all preparation and cleaning operations, and furnishing all labor, materials, tools, equipment and incidentals necessary to complete the work as specified herein.

73. CLEAN AND RESEAL EXPANSION JOINTS FOR ABUTMENTS, WALLS AND CURBS, Item: 708 015

A. GENERAL

Work consists of removing and cleaning existing joint material and furnishing and installing new joint filler material, for the six Watts Branch Bridges (Bridge Nos. 129, 132, 196, 199, 202 and 222) at locations shown on the contract plans. The existing joint material shall be removed and the joint shall be blast cleaned with potable water to remove dirt and debris from the joint cavity. Work shall also include resealing longitudinal joints at curbs at Bridge No. 199.

B. MATERIALS

The preformed joint filler to be used for the vertical expansion joints in the walls shall conform to the requirements of 807.01 of the Standard Specifications. The color shall be approved by the Engineer.

The material used for the longitudinal joints at the curbs shall be a ½ inch, One-Component moisture cured Polyurethane Sealant. The Joints shall be installed per manufacturer's recommendations.

Material shall conform to the following specifications:

1. Tensile strength shall be a minimum of 240 psi and a tensile elongation of 800%.
2. Durometer Hardness, Shore A 38.
3. Modulus @100% elongation shall be a minimum of 95 psi.
4. Peel strength shall be 35 pli.
5. Dynamic joint movement of (+/-) 25%.
6. Application temperature 40deg. F to 110 deg F.
7. Service temperature of -40deg. F to 200 deg F.
8. Volatile Organic Content 3.37% by weight.

C. MEASURE AND PAYMENT

The unit of measure will be the linear foot. Payment for CLEAN AND RESEAL EXPANSION JOINTS will be made at the contract unit price per linear foot, complete in place, which payment will include removing existing filler material and cleaning existing joint, furnishing and placing new joint filler material and all labor, tools, materials, equipment and incidentals needed to complete the specified work.

74. PEDESTRIAN RAILING, Item: 709 003

This S.P. supplements 709 of the Standard Specifications.

A. DESCRIPTION

Work consists of installing a pedestrian railing in lengths detailed on the contract drawings for the six Watts Branch Bridges (Bridge Nos. 129, 132, 196, 199, 204 and 222). Also included under this work is the grounding of the pedestrian railing as shown in the contract plans.

B. MEASURE AND PAYMENT

The unit of measure for Pedestrian Railing will be the linear foot. Payment will be made at the contract unit price per linear foot, for which payment will include all material, labor, tools, equipment and incidentals necessary to complete the work including the grounding of the railing.

75. HISTORIC BRIDGE RAILING, Item: 709 005

Not Applicable to this Contract.

76. REMOVE BRIDGE RAILING, Item: 709 020

This S.P. supplements 709 of the Standard Specifications.

A. DESCRIPTION

Work consists of removing sections of both traffic and pedestrian railing on Bridges 129, 132, 196, 199 and 222 as detailed on the contract drawings.

B. MEASURE AND PAYMENT

The unit of measure for Remove Bridge Railing will be the linear foot of railing removed with measurement made along the railing from out to out of end posts or end details excluding any opening exceeding 6 inches. Payment will be made at the contract unit price per linear foot, which payment will include removal, dismantling, stockpiling, disposal of unusable elements, backfill and compaction of post holes, furnishing of all additional required materials, anchoring, shop drawings, galvanizing, field drilling and all labor, tools, equipment and incidentals necessary to complete the work

77. LATEX-MODIFIED CONCRETE OVERLAY, Item: 714 004

This S.P. supplements 714.03, 714.05 and 715.

A. GENERAL

Delete the second sentence of 714.03(A).

This work is the placement of new latex-modified overlay on the existing concrete deck of bridges 196 and 199.

Also included shall be the removal and disposal of all existing overlay materials including bituminous overlays, membranes, coatings, and traffic markings in a manner such that the underlying sound concrete can be prepared to receive the necessary treatment, scarifying the top 1/4" of the concrete bridge deck surface by micro milling and abrasive shot blasting of the finished milled concrete surface to achieve a surface ready for visual inspection prior to deck repair operations. Also included is work required to locate areas of deck deterioration and saw cutting around the perimeter of the deteriorated areas.

For the purpose of this S.P., concrete deck refers to the concrete deck of the bridge.

The Latex-Modified Concrete (LMC) overlay shall be placed by an applicator that is approved by the Latex Modifier manufacturer.

B. MATERIALS

As specified in the Section 714.03(B) with the following exceptions

The Contractor shall prepare and submit an LMC mix design using the indicated mix components which may be modified with the approval of the Engineer. The proposed design mix shall be prepared and tested prior to the initial approval by the Engineer.

A trial batch of a minimum of 3 cubic yards of the proposed LMC mix design shall be prepared and tested prior to the start of the LMC overlay operations and prior to the final approval of the mix by the Engineer. The trial batch shall be placed using the same construction methods to be used on the bridge at a location to be proposed by the Contractor and approved by the Engineer. A representative of the LMC supplier shall attend the placement of the trial batch and the entire LMC placement on the bridge deck.

C. CONSTRUCTION REQUIREMENTS

The Contractor shall propose a schedule for the entire deck overlay construction procedure from the removal of the existing asphalt to curing of the LMC and opening to traffic. This schedule and production detail shall be submitted to the Engineer for review and approval a minimum of twenty one (21) days before this work begins.

The production schedule that is submitted shall include a proposal for the traffic pattern requirements during the placement and curing of the LMC overlay and allowing for additional curing time if the ambient temperature is expected to fall below 55 °F during the curing of the LMC. The additional curing time shall be accounted for by ending the placement at a time adequate to allow the required longer curing time of the LMC. No additional closure time beyond what is allowed in the S.P. for WORK HOURS shall be allowed to account for the required longer curing time.

This work shall be performed with the continual flow of traffic as the utmost concern. If traffic is allowed on the work zone between the time of existing asphalt removal to the time of placement of the LMC, special procedures are required to allow traffic to ride on the existing concrete surface after the removal of the existing asphalt and transition to the final overlay surface and the existing asphalt surface.

The Contractor shall submit detail drawings, proposed procedure, and equipment information and catalog cuts to the Engineer for approval. The existing asphalt wearing surface shall be saw-cut at the existing expansion joint armoring.

Prior to the start of the scarifying operation, the asphalt wearing surface shall be visually inspected for evidence of surface cracks, multi-crack locations (spider webs), and holes. These areas shall be outlined with a light-colored spray paint. A map of these areas shall be prepared by the Contractor to within one-half foot of the exact location.

Three inch deep saw cuts shall outline these deck deteriorations. After the asphalt has been removed, a minimum of one-quarter inch of the existing deck concrete surface shall be scarified. If there are isolated areas of contamination below the top of the scarified surface, additional

concrete shall be removed without damaging the adjacent concrete surface. The scarified surface shall then be abrasive shot blasted.

After the deck has been scarified and shot blast operations are completed, the Contractor will notify the Engineer that the deck is ready for inspection. The Contractor will give the Engineer full access to the areas of the prepared deck. The entire concrete deck shall be tested by the contractor using non-destructive chain drag and other methods to locate areas of deteriorated and delaminated concrete prior to all concrete removal. Chain drag testing shall be performed in the presence of the engineer. The Engineer will perform visual inspection and material testing of the bridge deck in order to identify concrete repair types and locations.

Areas marked by the saw cut operations and areas determined by the chain drag operation to possibly have deteriorated and/or delaminated concrete shall be sounded by the Contractor to search for deteriorated concrete in the presence of the Engineer. Sounding shall be performed with a hammer with a minimum weight of one pound. Boundaries of the areas of concrete removal marked by the Engineer will be saw cut ½” deep by the Contractor. The Contractor will remove all deteriorated concrete in the marked areas using lightweight pneumatic jackhammer and inform the Engineer when those removal areas are ready for inspection. This process will continue until only sound concrete remains or full depth removal is directed by the Engineer. A map of all deck areas requiring repairs shall be prepared by the Contractor to within one-half foot of the exact location and submitted to the Engineer.

The waste from the scarifying operation shall be collected and removed from the site. The entire exposed concrete deck surface shall be blast cleaned after removal of the waste from the scarifying and removal of deteriorated concrete. After the blast cleaning is completed, the debris shall be vacuumed, collected and removed from the site.

The appropriate method of repair shall be applied to the area of deck deterioration as directed by the Engineer. It should also be noted that the bridge on 55th Street, N.E. is a voided slab superstructure bridge with pre-stressing elements. These elements should be located and avoided prior to any concrete repair work.

The three types of concrete deck repair are described and will be paid for under the Items: CONCRETE DECK REPAIR - PARTIAL DEPTH WITH EXPOSED REINFORCEMENT, CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT and CONCRETE DECK REPAIR - FULL DEPTH.

On 55th Street, N.E., the longitudinal keyway joints between voided slabs will need to be resealed prior to placing the overlay. The description of this work will be under item: RESEAL KEYWAY JOINTS.

For partial depth deck repairs directed by the Engineer where the reinforcing bars are not exposed, the cavity shall be prepared the same as the scarified deck. These repairs shall be under the item for “CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT”

For partial depth deck repairs directed by the Engineer where reinforcing bars are exposed during the preparation and cleaning, the repair of these deeper cavities shall be under the item for "CONCRETE DECK REPAIR - PARTIAL DEPTH WITH EXPOSED REINFORCEMENT"

Concrete deck repairs directed by the Engineer where the full depth of the deck is removed and replaced, the repairs shall be under the item for "CONCRETE DECK REPAIR - FULL DEPTH"

Asphalt wedges are permitted to allow traffic to drive from one riding surface level to another riding surface level. The slope of the asphalt wedges shall be as directed by the Engineer in the field. Multiple work zones in the same traffic or travel lane shall not be permitted. The cost of supplying, installing, removing and disposing of asphalt wedges needed after placement of the LMC, or sections of thereof, shall be incidental to the work described herein.

Due to the height of the expansion joints above the top of the exposed existing concrete surface, the work zone shall not be permitted to exist on both sides of an expansion joint such that only one level transition may exist at an expansion joint location at any given time.

A system of transition between the two surface levels shall be required for the full length of the construction work zone where different riding surface levels exist.

These transverse and longitudinal transitions shall conform to the requirements of the DDOT's standard traffic plans and as approved by the Engineer.

Traffic shall not be permitted on the scarified existing concrete surface after the final cleaning of the existing concrete surface prior to LMC overlay placement.

The ends of each length of LMC overlay placement shall be saw cut prior to the next adjoining length of LMC overlay placement. A bond breaker shall be placed under the end portion of the LMC overlay that will be removed.

A form shall be placed along the longitudinal edge of the LMC overlay between adjacent placements of the LMC overlay. If necessary the longitudinal overlay formwork may remain in place to keep the roadway surface level and be removed at the time the adjacent LMC placement.

The joints between adjacent LMC longitudinal placements may be near the mid-width of the permanent lane stripping traffic lanes or as proposed by the Contractor and approved by the Engineer. The proposed LMC placement locations shall be detailed with the proposed schedule and production details.

During the construction time for the preparation, placement, and curing of the LMC overlay for each construction zone, the Contractor shall adhere to the requirements of the S.P. for WORK HOURS. Temporary lane marking shall be used to channelize the operating traffic lanes through the open lanes in the LMC construction area.

The surface of the LMC shall be tested for flatness using a 14 ft long straightedge while the overlay is still workable. The Contractor shall be required to provide the straight edge at no cost to the District.

Wet curing of the LMC overlay is mandatory for 24 hours or until a minimum cylinder compressive strength of 3000 psi is attained, whichever is the longest. At a minimum cylinder compressive strength of 3000 psi or after 24 hours of wet curing, whichever is the longest, the curing can cease and the lane may be opened to traffic.

Three LMC cylinders shall be broken twelve hours after the completion of the delivery of the last delivery vehicle. Three more cylinders shall be broken every six hours thereafter until a minimum cylinder compressive strength of 3000 psi is attained for the cylinders taken from the last delivery truck for each section of each lane of LMC overlay that is placed.

The Contractor shall keep a log of the time of arrival of each concrete mixer truck at the project site, the start of LMC placement from each mixer truck, the completion of the delivery of each concrete mixer truck, and the length of the concrete overlay placement from each truck. The Contractor shall add a plastic sheeting 6 mils in thickness. The plastic sheeting shall be placed on the bridge deck for the LMC mobile mixer to back up and protect the surface from foreign materials.

D. MEASURE

The unit of measurement for LATEX-MODIFIED CONCRETE OVERLAY will be the square yard, as measured on the surface.

E. PAYMENT

Payment for this work will be made at the Contract unit price for the items above, which price will include furnishing all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals to accomplish the work specified and shown.

Cost of preparing and testing of all LMC samples, producing, placing and, if required by the Engineer, removing and disposing of the LMC trial batch, and, supplying, installing, removing and disposing of asphalt wedges, LMC areas to be saw-cut at the end of each placement shall be considered incidental to the LATEX-MODIFIED CONCRETE OVERLAY.

Extra LMC needed to fill the cavities left after removing unsound deck concrete will be placed and paid for under the S.P. for CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT

The removal of the existing asphalt overlay and disposing of the removed overlay, lane markings and underlying membrane, chain drag and sounding the deck, scarification of the existing concrete surface, disposing of the debris from the scarification away from the site, blast cleaning of the entire deck area after scarifying the deck and after the removal of the deteriorated

concrete, cleaning the deck after blast cleaning, saw cutting around the deck areas requiring repairs, and, supplying, installing, removing and disposing of asphalt wedges between existing wearing surface removal and the placement of the new LMC shall be incidental to the placement of the LMC overlay.

78. PCC STRUCTURE FOR JOINT REPAIRS, Item: 715 003

A. GENERAL

Work under this item consists of reconstructing the concrete portions of the bridge deck slab after replacement of the existing expansion joints as shown in the contract plans. Work includes all labor, materials, equipment and incidentals necessary to complete the work.

B. MATERIALS

PCC Concrete shall be Class B with a 28 day compressive strength of 4500 psi. Reinforcing steel shall be Grade 60 epoxy coated.

C. DESCRIPTION

Existing reinforcing steel shall be left in place, cleaned and prepared or replaced per 715.04(D) of the Standard Specifications. Any drilling and grouting to replace unsuitable reinforcing steel is incidental to this item. Demolition of joints is paid under item for Demolition 205 008.

D. MEASURE AND PAYMENT

The unit of measurement for PCC Structure for Joint Repairs will be the cubic yard, complete in place. PAYMENT will be made at the contract unit price per cubic yard and will include all materials, tools, equipment, labor and incidentals necessary to complete the work as shown on the contract plans and as directed by the Engineer.

79. CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT, Item: 715 011

This S.P. supplements 715

A. GENERAL

The work covered by this item includes concrete deck repairs and patching of shallow spalls discovered after the asphalt wearing surface has been removed. This item covers the removal of deteriorated concrete from areas of the deck where the depth of the deteriorated concrete is shallower than the concrete cover over the existing deck reinforcement. It also covers the cleaning of such areas, the disposal of the removed concrete away from the site and the LMC required to replace the removed concrete.

B. MATERIALS

As specified in the LMC For Concrete Overlay, as repair concrete.

C. METHODS

Submit detail drawings and the procedure specified in the S.P. for CONCRETE REPAIR. The submitted drawings and procedures shall be stamped and sealed by DC Professional Engineer (P.E.). Application temperature shall not be less than 50 deg. F or as recommended by the Latex Modifier manufacturer.

The deteriorated concrete at repair locations that are determined during the scarifying operations shall be removed to sound concrete using small jack hammers and the deteriorated concrete shall be disposed of properly. The repair areas shall be cleaned using oil-free compressed air. These areas shall be filled with LMC overlay concrete during the LMC placement operation.

The Engineer shall be asked to verify the area of deck slab repairs before the start of the removal of the deteriorated concrete. Only areas verified by the engineer shall be measured for payment.

D. MEASURE

The unit of measurement for CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT to be done at the direction of the Engineer will be the square foot, as measured on the surface of the exposed scarified concrete deck.

E. PAYMENT

Payment for this work will be made at the Contract unit price for the items above, which price will include furnishing all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals to accomplish the work specified and shown.

80. CONCRETE DECK REPAIR - PARTIAL DEPTH WITH EXPOSED REINFORCEMENT, Item: 715 013

This S.P. supplements 715.

A. GENERAL

The work covered by this item includes concrete deck repairs and patching of deep spalls discovered after the asphalt wearing surface has been removed. This item covers the removal of deteriorated concrete from areas of the deck where the depth of the deteriorated concrete is such that the existing deck reinforcement is exposed. It also covers the cleaning of such areas, the disposal of the removed concrete away from the site and the repair concrete used to patch these areas and the surface preparation of the repair concrete.

B. MATERIALS

Repair Concrete as specified in the S.P. for CONCRETE REPAIR – and approved bonding adhesive.

C. METHODS

The Contractor shall submit detail drawings and the procedure specified in the S.P. for CONCRETE REPAIR. The submitted drawings and procedures shall be stamped and sealed by DC Professional Engineer (P.E.). Deteriorated concrete shall be removed to sound concrete and the removed concrete shall be disposed of away from the site. All exposed reinforcement shall be blast-cleaned to remove all rust and scale. The repair areas shall be cleaned using oil-free compressed air. Paint existing reinforcement with a zinc-rich spray coating per the manufacturer's recommendations. Apply bonding agent and repair concrete. Application temperature shall not be less than 50 deg.F or as recommended by the bonding agent manufacturer.

The repair locations that are prepared during the scarifying operations shall be filled with the Repair Concrete to the level of the scarified existing concrete deck. The surface of the repair concrete shall be finished to provide a rough surface for the concrete overlay placement. Repair Concrete shall be wet-cured for 12 hours or until the repaired areas reach a compressive strength of 2500 psi, whichever is longer. If it is necessary to allow traffic on the repaired areas before the Repair Concrete reaches a compressive strength of 2500 psi, an approved temporary steel deck plate shall be placed over the repaired areas. The temporary steel deck plate shall be anchored on the approaching traffic side of the temporary plate. The approaching traffic side of the temporary steel deck plate shall be tapered from a minimum one quarter inch thickness to the full thickness at a slope of one inch rise per foot. After the removal of the temporary steel deck plate, patch the anchor holes with approved non-shrink grout.

Do not use this repair procedure unless reinforcing bars are exposed during the preparation and cleaning work.

D. MEASURE

The unit of measurement for CONCRETE DECK REPAIR - PARTIAL DEPTH WITH EXPOSED REINFORCEMENT to be done at the direction of the Engineer will be the square foot, as measured on the surface of the exposed existing concrete deck.

E. PAYMENT

Payment for this work will be made at the Contract unit price for the items above, which price will include furnishing all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals to accomplish the work specified and shown. Cost associated with the use of temporary steel deck plates shall be considered incidental to this item.

81. CONCRETE DECK REPAIR – FULL DEPTH, Item: 715 015

This S.P. supplements 715

A. GENERAL

This work is the removal, forming, placement of new reinforcement bars and placement and curing of full depth repairs of the concrete bridge deck in areas as determined and approved by the Engineer, the disposal of the removed concrete away from the site and the surface preparation of the repair concrete.

B. MATERIALS

Repair Concrete as specified in the S.P. for CONCRETE REPAIR – and approved bonding adhesive.

Reinforcing bars shall be in accordance with Section 704.02.

Splicing of new and existing reinforcing steel shall be in accordance with Section 704.07 and shall also be approved by the Engineer.

C. METHODS

The Contractor shall submit detail drawings and the procedure specified in the S.P. for CONCRETE REPAIR. The submitted drawings and procedures shall be stamped and sealed by DC Professional Engineer (P.E.). Deteriorated concrete shall be removed and the removed concrete shall be disposed of away from the site. All exposed reinforcement shall be blast-cleaned to remove all rust and scale. The interface between the repair areas and existing concrete shall be cleaned using oil-free compressed air. Paint existing reinforcement with a zinc-rich spray coating per the manufacturer's recommendations. Install new reinforcing bars as required by the Engineer. Apply bonding agent and repair concrete. Application temperature shall not be less than 50 deg. F or as recommended by the bonding agent manufacturer.

The repair locations shall be filled with the Repair Concrete to the level of the scarified existing concrete deck. The surface of the repair concrete shall be finished to provide a rough surface for the LMC overlay placement. Repair Concrete shall be wet-cured for 12 hours or until the repaired areas reach a compressive strength of 3000 psi, whichever is longer. If it is necessary to allow traffic on the repaired areas before the Repair Concrete reaches a compressive strength of 3000 psi, an approved temporary steel deck plate shall be placed over the repaired areas. The temporary steel deck plate shall be anchored on the approaching traffic side of the temporary plate. The approaching traffic side of the temporary steel deck plate shall be tapered from a minimum one quarter inch thickness to the full thickness at a slope of one inch rise per foot. After the removal of the temporary steel deck plate, patch the anchor holes with approved non-shrink grout.

D. MEASURE

The unit of measurement for CONCRETE DECK REPAIR – FULL DEPTH to be done at the direction of the Engineer will be the square foot, as measured on the surface of the exposed existing concrete deck.

E. PAYMENT

Payment for this work will be made at the Contract unit price for the items above, which price will include furnishing all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals to accomplish the work specified and shown. Cost associated with the use of temporary steel deck plates shall be considered incidental to this item.

82. RESEAL KEYWAY JOINTS, Item: 715 017

A. GENERAL

This work is on 55th street N.E. and includes resealing with grout the keyway joints between voided slabs.

B. MATERIALS

This section supplements Section 806.05 (E) of the specifications.

The grading of sand for use in the grout when the width or depth of the void to be filled is less than 0.75 in. shall be modified so that all material passes the No. 8 sieve.

Type IA, air-entraining, Portland cement shall be used when air entrainment is required for the concrete against which the grout is to be placed.

Unless otherwise specified in the contract documents or ordered by the Engineer, the proportion of cement to sand for the grout shall be one to one. Proportioning shall be by loose volume.

A non-shrink admixture or expansive hydraulic cement conforming to ASTM C845 of a type approved by the Engineer shall be used.

Only sufficient water shall be used to permit placing and packing.

Mixing shall be done by either hand methods or with rotating paddle-type mixing machines and shall be continued until all ingredients are thoroughly mixed. Once mixed, grout shall not be retempered by the addition of water and shall be placed within 1 h.

C. METHODS

Concrete areas to be in contact with the grout shall be scarified to provide a rough surface to allow for adherence to the existing keyway grout. The concrete surfaces shall be flushed with water and allowed to dry to a surface dry condition immediately prior to placing the grout.

The grout shall completely fill and shall be tightly packed into keyway opening between the slab segments. After placing, the grout shall be wet cured until the grout has achieved a compressive strength of 3000psi.

D. MEASURE AND PAYMENT

There is no separate measurement and payment for this item. The cost to reseal keyway joints shall be included in the cost of LATEX-MODIFIED CONCRETE OVERLAY.

83. REPAIR-REPLACE PCC SUBSTRUCTURE –TYPE 1 REPAIR, Item: 716 003
REPAIR-REPLACE PCC SUBSTRUCTURE –TYPE 2 REPAIR, Item: 716 005
REPAIR-REPLACE PCC SUBSTRUCTURE –TYPE 3 REPAIR, Item: 716 007

This S.P. supplements 716 of the Standard Specifications.

A. GENERAL

Work under this item consists of but is not limited to the repair of abutment backwalls and stemwalls of the six Watts Branch bridges to the limits shown on the contract plans or as directed by the Engineer.

B. DESCRIPTION

Due to the time interval between the field survey and notice to proceed, further deterioration may have occurred which would not be reflected in the quantities for the particular bid item; the Engineer will be the sole judge of the extent and total quantity of the repairs that are to be made. The limits of deterioration and concrete removal will be in accordance with 716.04 of the Standard Specifications. Repairs will be Repair Type 1, Type 2 or Type 3 as specified in 716 of the Standard Specifications and as shown on the contract plans.

C. MEASURE AND PAYMENT

The unit of measurement for Repair-Replace PCC Substructure Repair Type 1 and Type 2 will be the square foot, complete in place. PAYMENT will be made at the contract unit price per square foot and will include all materials, tools, equipment, labor and incidentals necessary to complete the work as shown on the contract plans and as directed by the Engineer.

The unit of measurement for Repair-Replace PCC Substructure Repair Type 3 will be the linear foot of crack repaired. PAYMENT will be made at the contract unit price per linear foot and will include all materials, tools, equipment, labor and incidentals necessary to complete the work as shown on the contract plans and as directed by the Engineer.

84. PRESSURE CLEAN EXPANSION JOINTS, Item: 717 007

This S.P. supplements 717.

A. GENERAL

This work is the pressure cleaning of bridge expansion joints at the 48th Place bridge's south and north abutments. Cleaning of other expansion joints shall be incidental to the repair work of respective joints.

B. MATERIALS

Section 822.01.

C. MEASURE

The unit of measure will be the number of linear feet of bridge expansion joint pressure cleaned.

D. PAYMENT

Payment for PRESSURE CLEAN EXPANSION JOINTS will be made at the contract unit price, which price will include all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals required for completing the work as required herein.

85. AS-BUILT DRAWINGS

This Special Provision supplements 108.12 of the Standard Specifications.

A. GENERAL

During the entire construction period, the Contractor shall maintain one complete record set of Contract Drawings on which he shall annotate daily, all deviations, field changes, changes accomplished by change order, as-constructed depths of footings and other structural elements, horizontal and vertical locations of underground electrical and utility facilities referenced to survey data and temporary construction left in place (if permitted).

B. METHODS

The Engineer will furnish to the Contractor electronic files of Contract Drawings for reproduction. The Contractor shall make permanent modifications to the hard copy drawing set by adding the revisions from the annotated record set. The completed set shall be certified As-Built by an officer of the company using a stamp as follows:

AS-BUILT

(Date)

I certify that this drawing accurately depicts the work as constructed.

(An Officer of the Contractor's Company)

Signature Title

CONTRACTOR'S NAME

When the contract is completed and the revisions have all been digitally transcribed to the reproducible set, the Contractor shall copy the electronic files on a CD ROM. The contractor shall then prepare and deliver to DDOT-IPMA two CD ROM copies of the electronic files of the final As-Built drawings, the modified reproducible set, five (5) bound half-size sets on bond paper and one additional CD ROM with As-Built information of street lighting plans only. The as-builts shall be submitted in Microstation, AutoCAD & PDF formats.

The Contractor should submit as-built drawings for DC Water in accordance with the requirements from the DC Water specifications.

C. MEASUREMENT AND PAYMENT

The unit of measure will be lump sum. No measure will be made for this work. Payment for As-Built Drawings will be made at the Contract Lump Sum Price, which payment will include all provisions for completing the work as required herein.

86. FURNISH AND INSTALL 6-5" FRE CONDUITS, Item 618 149

This S.P. supplements 618.12

A. MATERIAL

Conduit material shall be Fiber Reinforced Epoxy (FRE) and not PVC.

B. MEASUREMENT AND PAYMENT

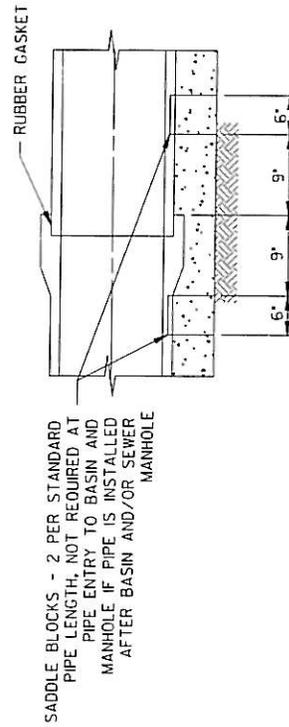
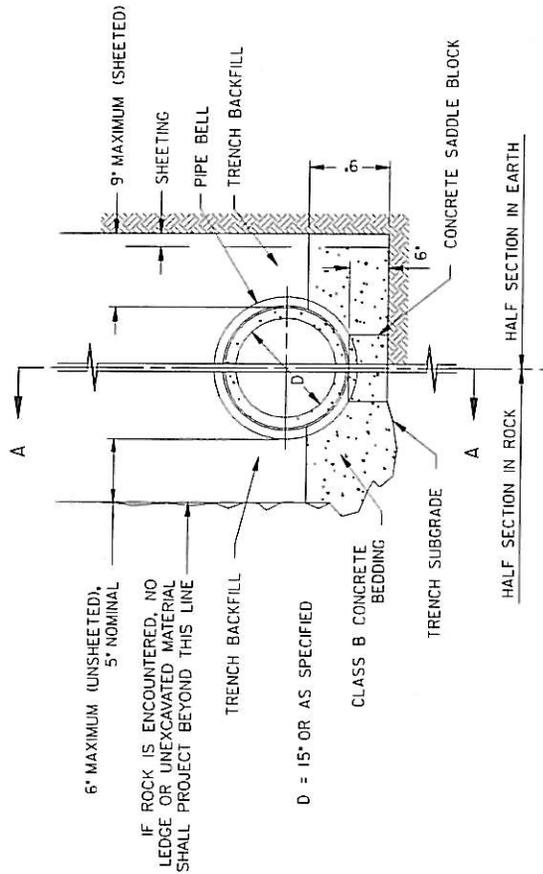
The unit of measure for Install Electrical Conduit (Concrete Encased) will be per linear foot of conduit or duct bank of conduits installed. Payment will be made at the contract unit price per linear foot. The payment will include all labor, tools, materials, equipment, excavation, shoring, de-watering, concrete encasement, penetration of manholes (District-owned), back filling, compaction of fill, temporary patching, maintenance of the cut until the permanent repairs are made, and all incidentals necessary to complete the work specified herein. Steel plating shall be paid for according to 616.19.

APPENDICES

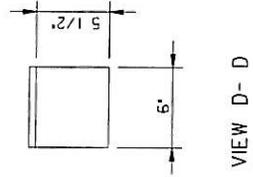
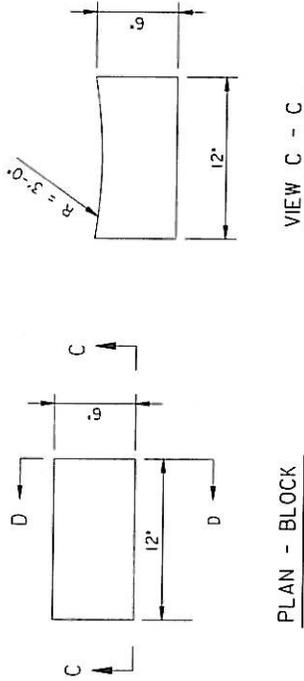
Rehabilitation/Repair of Six (6) Bridges Over Watts
Branch (Bridge No's. 0129 (44TH Street NE), 0132
(58TH Street NE), 0196 (55TH Street NE), 0199
(48TH Place NE), 0204 (Division Avenue NE) and
0222 (Gault Place NE))

SUBCONTRACTOR APPROVAL REQUEST

(1) Project Name		(2) Invitation No.	
(3) Prime Contractor's Name		(4) Address	
(5) Estimated Starting Date		(6) Estimated Completion Date	(7) F.A.P. #
(8) Subcontractor's Name, Address & Phone No.		(9) Number of Subcontractor Employees in Workforce	(10) Number of DC Residents employed
(11) Pay Item	Item Description	Dollars	Cents
Check Items listed below (13-16) that are included in subcontract agreement		(12) See Attached For Additional Descriptions or Remarks	
(13) (All Projects)		Yes	No
Contract Wage Schedule		<input type="checkbox"/>	<input type="checkbox"/>
DBE/MBE Policy Statement		<input type="checkbox"/>	<input type="checkbox"/>
(14) (Federal-Aid Projects) Form FHWA-1273 (Required Contract Provisions)		<input type="checkbox"/>	<input type="checkbox"/>
(Non-Federal Aid Projects) (Required Contract Provisions)		<input type="checkbox"/>	<input type="checkbox"/>
(15) (Federal-Aid Projects When Subcontractor Will Receive Over \$10,000) On-Site Work Force Affirmative Action Requirements for Women and Minorities-Special Conditions		<input type="checkbox"/>	<input type="checkbox"/>
(16) Subcontractor's Certification of Nondiscrimination in Employment (Form Included in Bid Proposal)		<input type="checkbox"/>	<input type="checkbox"/>
(17) FHWA On-The-Job Training (To Be Provided by Subcontractor)		<input type="checkbox"/>	<input type="checkbox"/>
(18) I Request the Contracting Officer's Approval of this Subcontract and Certify that the Organization which will Perform this Work is Capable, has not been Debarred and that the Work will be Performed in Accordance with the Contract Specifications. I Further Certify that all Required Contract Provisions are Physically Included as Part of the Subcontract Agreement.			
_____ PRIME CONTRACTOR'S REPRESENTATIVE		_____ TITLE	_____ DATE
THE INFORMATION BELOW IS COMPLETED BY THE DEPARTMENT			
<u>REVIEW AND DISTRIBUTION AFTER APPROVAL</u>		<u>APPROVAL OF SUBCONTRACT IS HEREBY GIVEN</u>	
_____ CONTRACT COMPLIANCE	_____ DATE	_____ CONTRACTING OFFICER DC DEPARTMENT OF TRANSPORTATION	_____ DATE
_____ PROJECT ENGINEER/MANAGER	_____ DATE		



SADDLE BLOCKS - 2 PER STANDARD PIPE LENGTH, NOT REQUIRED AT PIPE ENTRY TO BASIN AND MANHOLE IF PIPE IS INSTALLED AFTER BASIN AND/OR SEWER MANHOLE



NOTES:

1. SEE DDOT STANDARD SPECIFICATIONS, SECTION 310.
2. CLASS B CONCRETE, AIR ENTRAINED, TYPE II CEMENT.

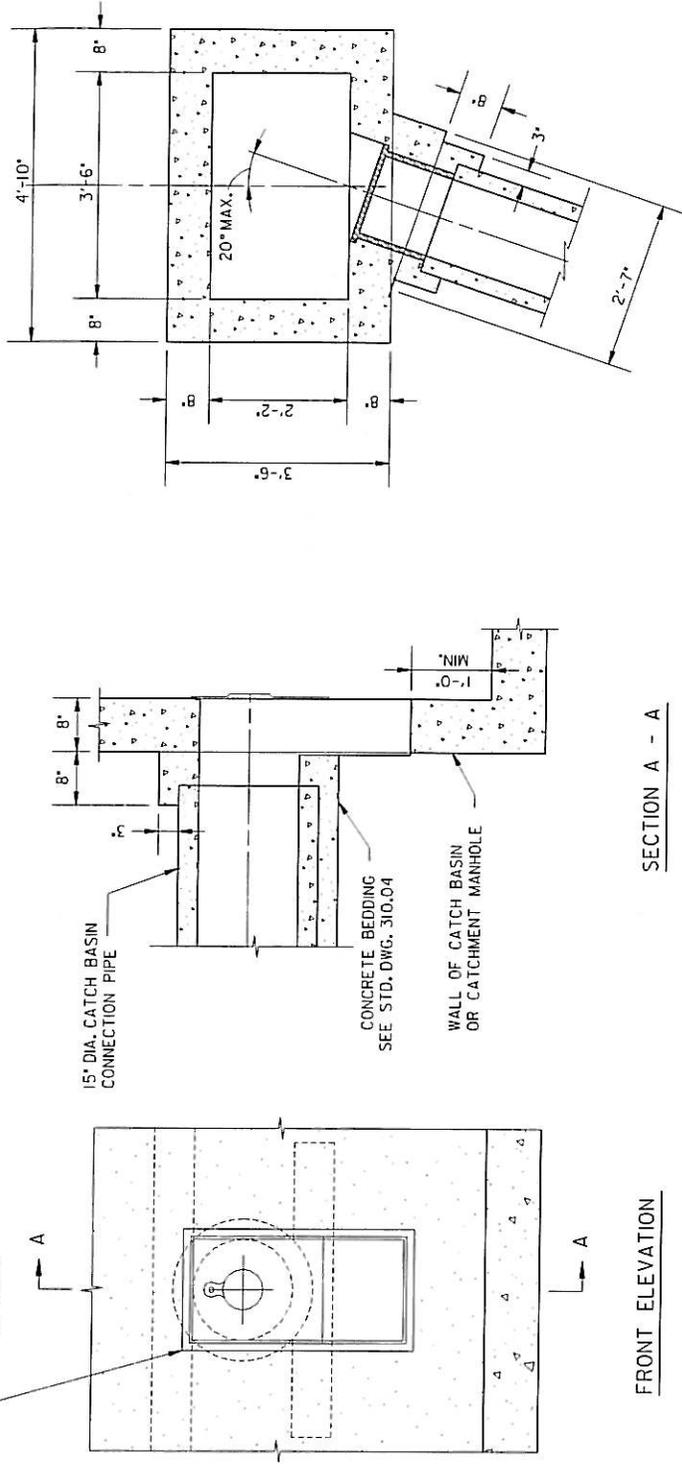
CONCRETE SADDLE BLOCK

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

CATCH BASIN CONNECTION PIPE
TRENCH LAYING CONDITION

RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE ISSUED:	
APPR. / REVISED	
REFERENCE	

METAL WATER SEAL NEENAH
FOUNDRY MODEL #R-3707-15
OR EQUAL



FRONT ELEVATION

SECTION A - A

SECTIONAL PLAN
NON-PERPENDICULAR
CATCH BASIN CONNECTION PIPE

NOTES:

1. GRAY IRON CASTINGS PER AASHTO M105, CLASS 30A.
2. ALL MACHINE FINISH TO BE A.S.A. SPECIFICATION, ROUGHNESS SYMBOL 250, TOLERANCE $-0" +1/16"$.
3. WHEN THE CATCH BASIN CONNECTION PIPE IS NOT PERPENDICULAR TO THE CATCH BASIN WALL, THE WALL SHALL BE MODIFIED TO INSTALL WATER SEAL ON SAME ALIGNMENT AS THE CATCH BASIN PIPE. SEE SECTIONAL PLAN.

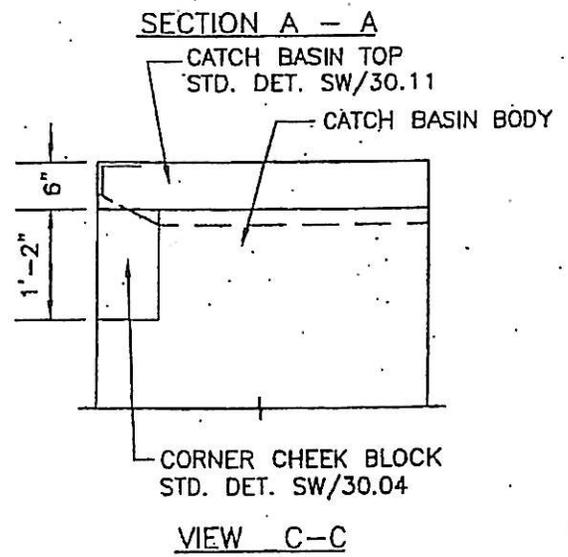
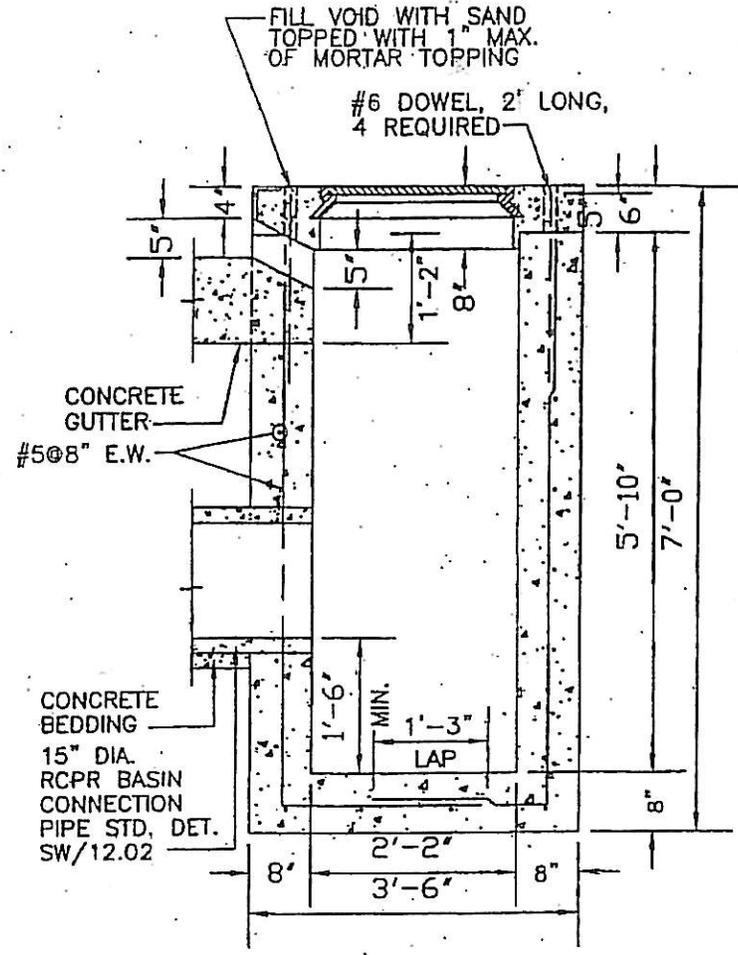
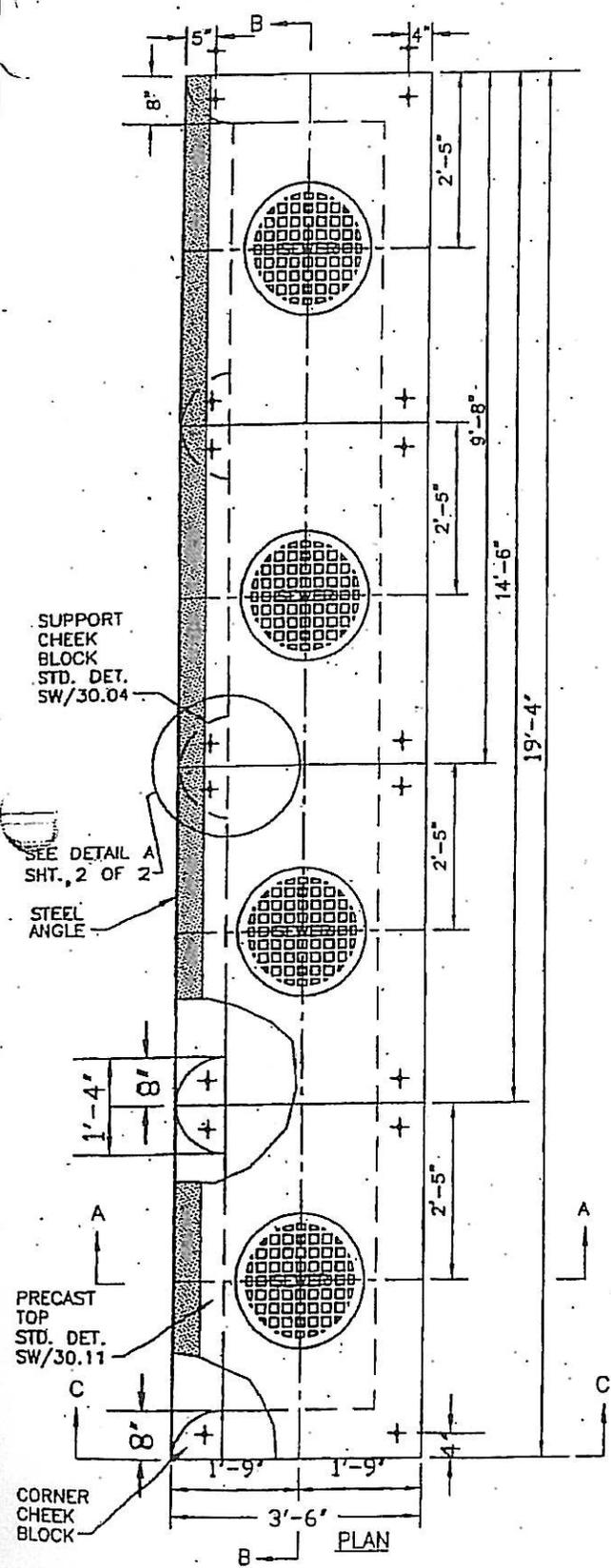
DATE	APPR.	ISSUED:	REFERENCE

RECOMMENDED: *[Signature]*
DEPUTY CHIEF ENGINEER

APPROVED: *[Signature]*
CHIEF TRANSPORTATION ENGINEER

WATER SEAL
FOR 15" DIAMETER CATCH BASIN CONNECTION
(COMBINED SYSTEM ONLY)

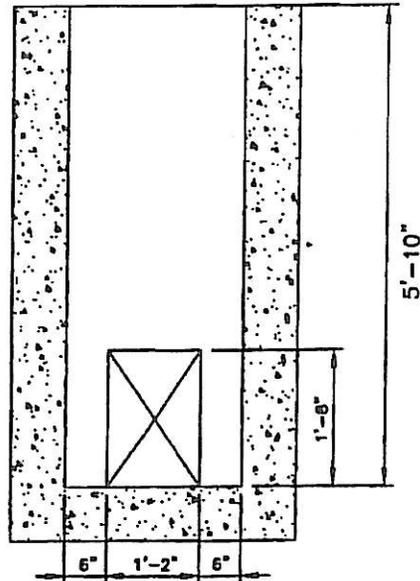
d.
DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION



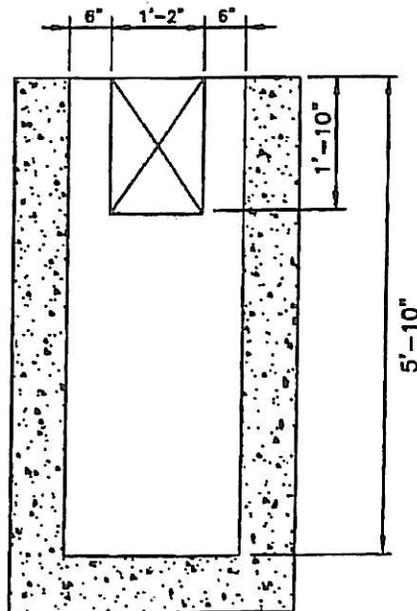
- NOTES:
1. ALL CONCRETE TO BE CLASS 4000, AIR ENTRAINED, TYPE II CEMENT.
 2. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.

STANDARD DETAIL

DUAL THROAT

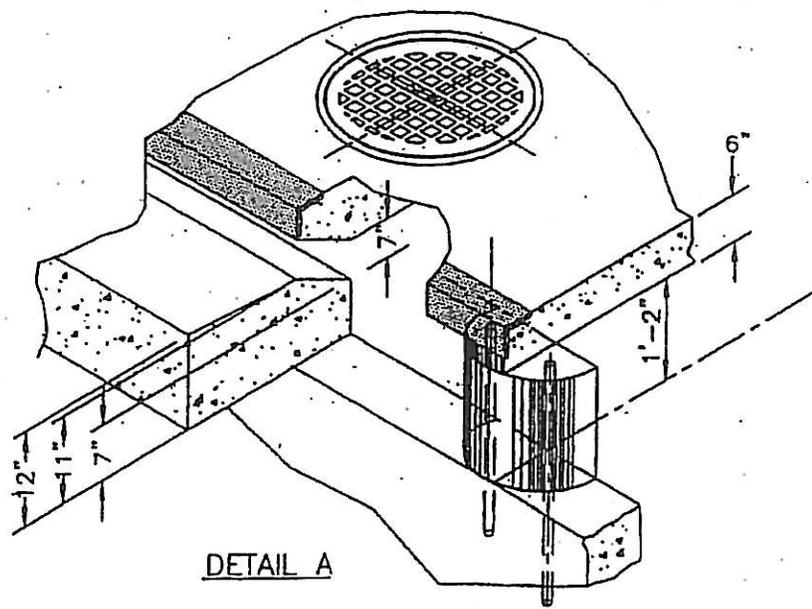
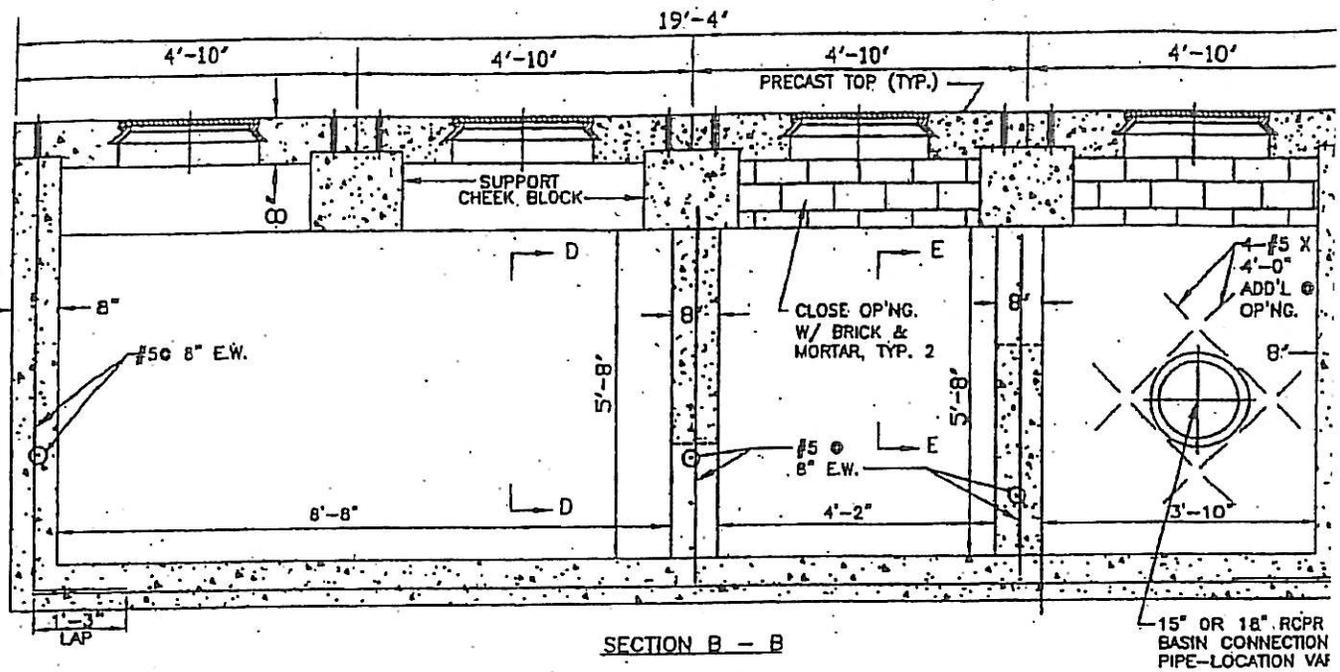


VIEW D-D



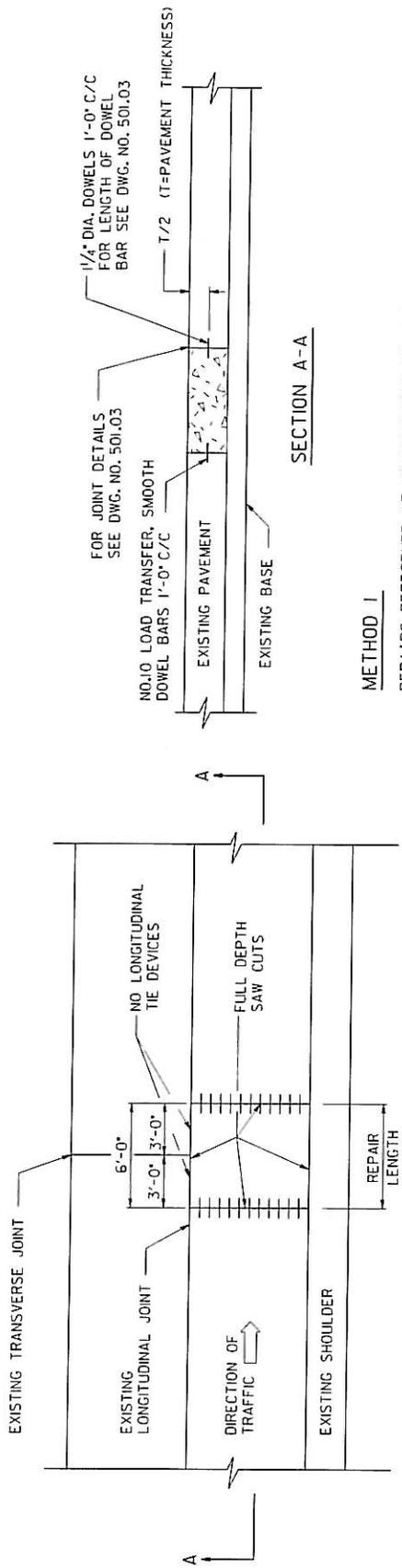
VIEW E-E

STANDARD DETAIL
DUAL THROAT
WATER QUALITY BASIN



STANDARD DETAIL

DUAL THROAT
 WATER QUALITY BASIN



METHOD 1

REPAIRS PERFORMED AT AN EXISTING TRANSVERSE JOINT EVEN THOUGH ONLY ONE SIDE NEEDS REPAIR, THE TOTAL REPAIR LENGTH SHALL BE 6' CENTERED ON THE ADJACENT TRANSVERSE JOINT.

REPAIR GUIDELINES:

1. REPAIRS THAT ARE LESS THAN 15 FT. IN LENGTH REQUIRE NO REINFORCEMENT.
2. REPAIR SLABS AND REMAINS OF EXISTING SLABS SHALL NOT BE LESS THAN 6 FT. IN LENGTH.
3. EXISTING DOWELS AND ASSEMBLIES SHALL BE COMPLETELY REMOVED WHEN A REPAIR IS PERFORMED AT A TRANSVERSE JOINT.
4. ALL REPAIRS OFFSET MORE THAN 3 FT. ON EITHER SIDE OF AN EXISTING TRANSVERSE JOINT SHALL BE EXTENDED TO A MINIMUM OF 6 FT., AND DOWEL ASSEMBLIES SHALL BE PLACED ADJACENT TO THE EXISTING TRANSVERSE JOINTS AS SHOWN IN REPAIR METHOD 3 ON DDOT STANDARD DRAWING 501.08.

NOTES:

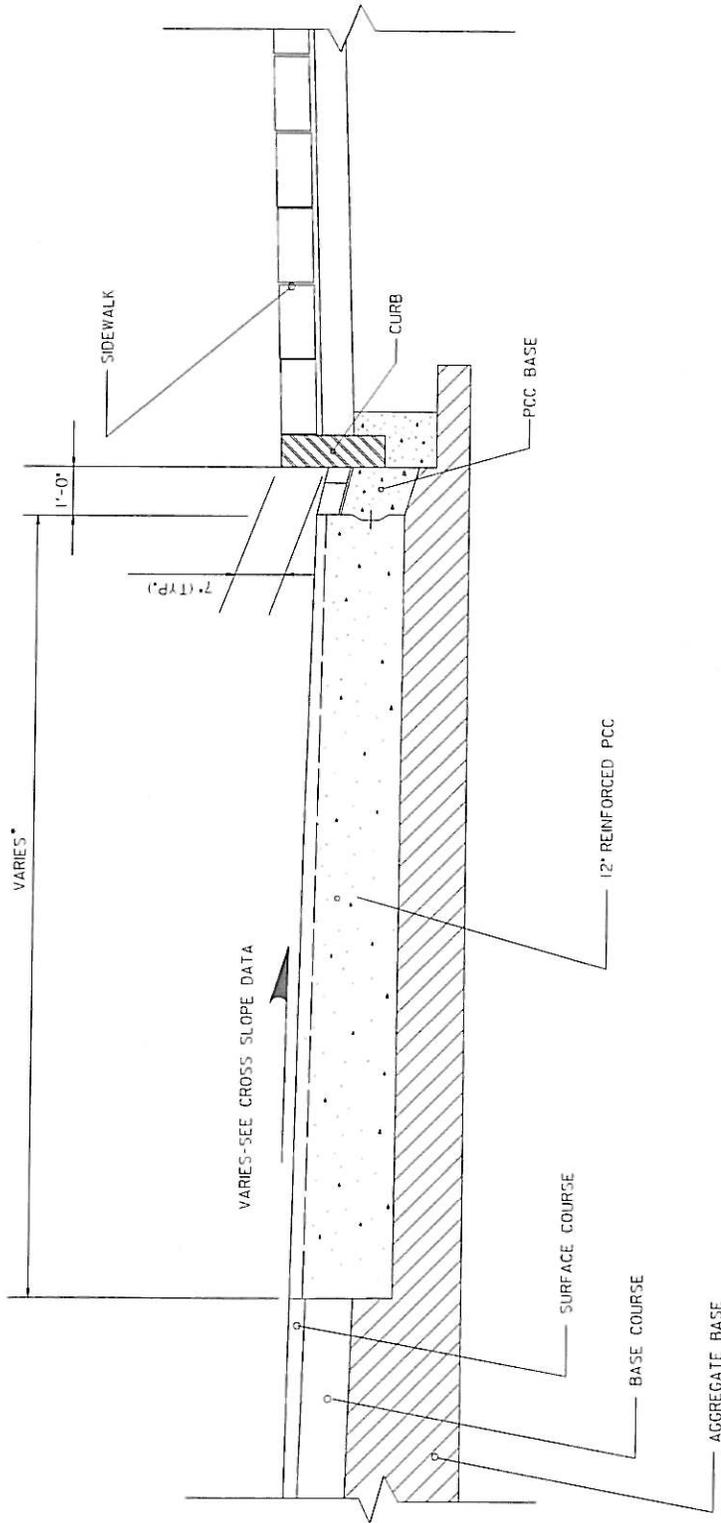
1. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 506 OF THE DDOT STANDARD SPECIFICATIONS.
2. REPAIRS SHALL BE MADE USING CONCRETE MEETING THE REQUIREMENTS OF SECTION 501 OF THE DDOT STANDARD SPECIFICATIONS.
3. SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH SECTIONS 209 AND 501 OF THE DDOT STANDARD SPECIFICATIONS AND MAY REQUIRE ADDITIONAL MATERIAL TO FACILITATE PLACEMENT OF LOAD TRANSFER DEVICES.
4. HOLES FOR THE DOWELS AND LOAD TRANSFER TIE DEVICES SHALL BE DRILLED SIMULTANEOUSLY TO THE REQUIRED DEPTH USING FRAME MOUNTED DRILLS THAT WILL MAINTAIN THE DRILLS IN A LONGITUDINALLY PARALLEL POSITION.
5. ALL LOAD TRANSFER TIE BARS AND DOWELS SHALL BE EPOXY COATED.

DATE	APPR.	ISSUED:	REFERENCE
REVISD			
RECOMMENDED:		CHIEF TRANSPORTATION ENGINEER	
APPROVED:		CHIEF TRANSPORTATION ENGINEER	

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

**PCC PAVEMENT REPAIR
METHOD 1**

DWG. NO. 501.06



* WIDTH DEPENDS ON ROADWAY CONFIGURATION.
 CONSULT WITH DDOT OFFICE OF MASS TRANSIT.

d. DISTRICT OF COLUMBIA
 DEPARTMENT OF TRANSPORTATION

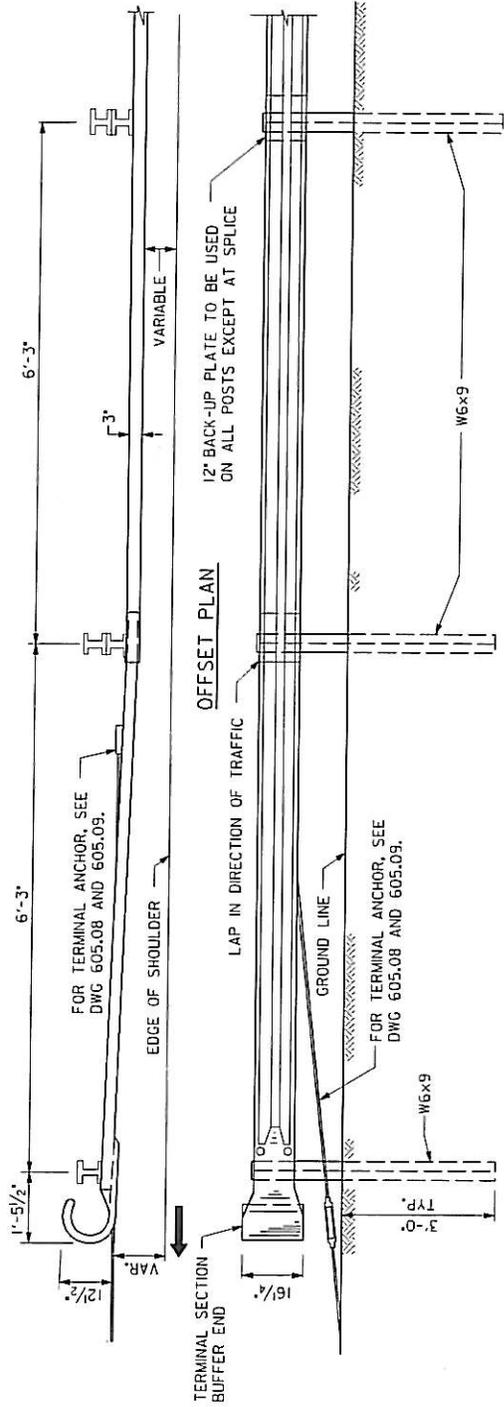
**12" PCC BUS PAD
 TYPICAL SECTION**

DWG. NO. 601.05

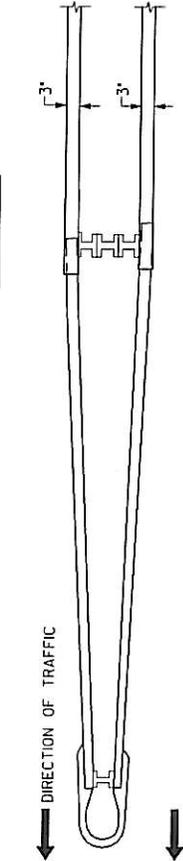
RECOMMENDED: *[Signature]*
 DEPUTY CHIEF ENGINEER

APPROVED: *[Signature]*
 CHIEF TRANSPORTATION ENGINEER

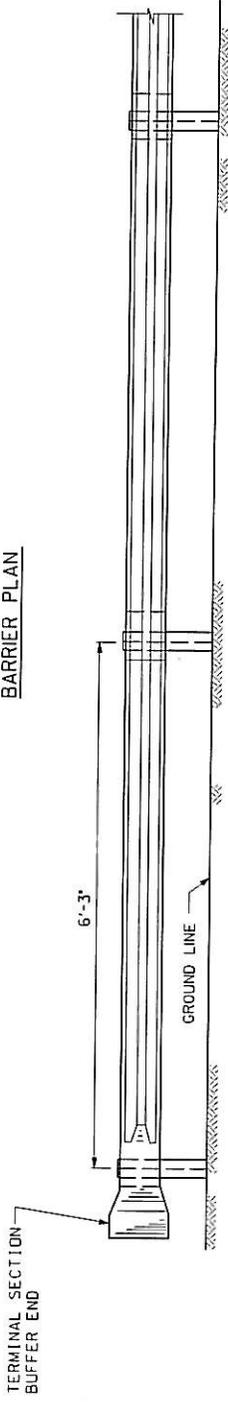
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ELEVATION



BARRIER PLAN



ELEVATION

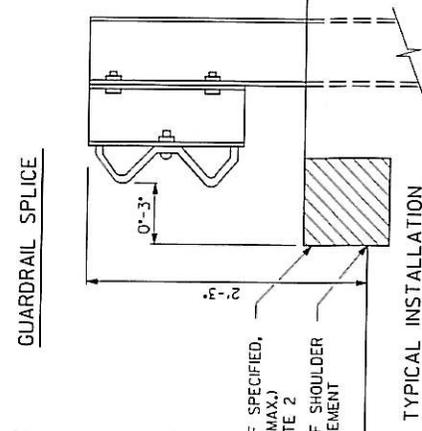
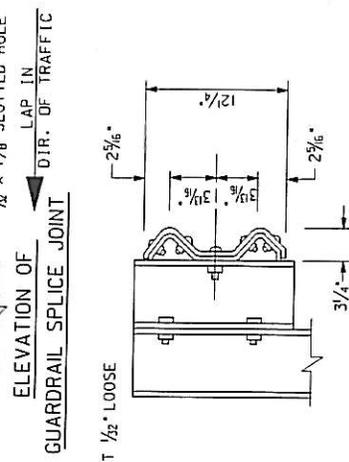
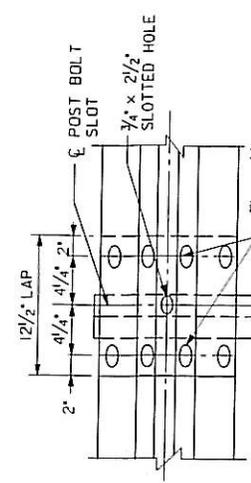
- NOTES:
1. RAIL SECTIONS TO BE 12'-6" LONG, 12 GAUGE (MIN.), ASHTO SPEC. M180 CLASS A (25' LENGTHS OPTIONAL).
 2. STANDARD TERMINALS FOR TRAILING EDGE INSTALLATIONS.
 3. SEE CONTRACT PLANS FOR OFFSETS.

RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	
APPR.	
REVISED	
ISSUED:	
REFERENCE	

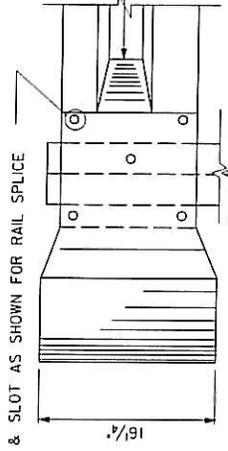
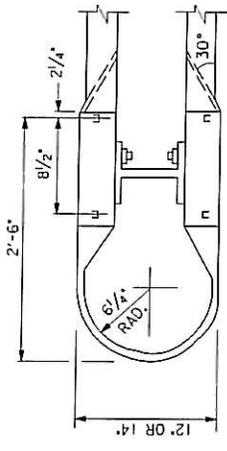
**W-BEAM GUARDRAIL
TRAILING END TERMINAL**

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

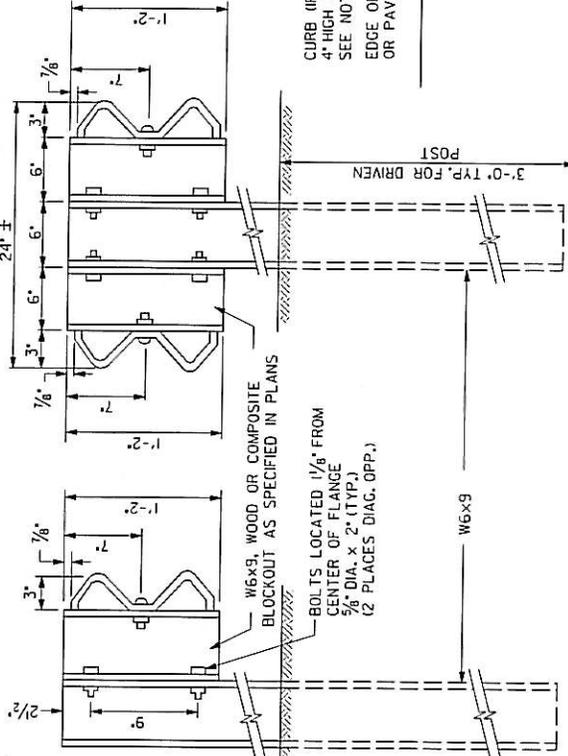
DWG. NO. 605.01



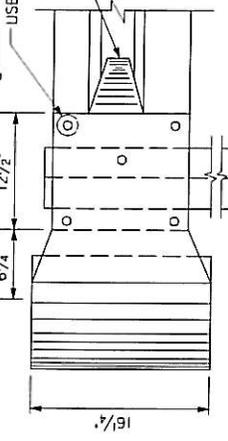
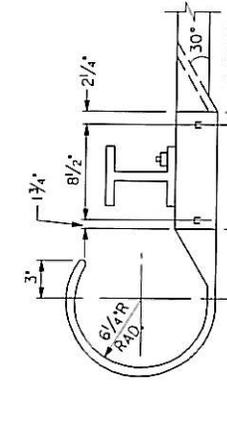
- NOTES:
1. ALL POST RAILS AND FITTINGS SHALL BE GALVANIZED.
2. GUARDRAIL CURB COMBINATION SHALL NOT BE USED ON HIGH SPEED FACILITIES.



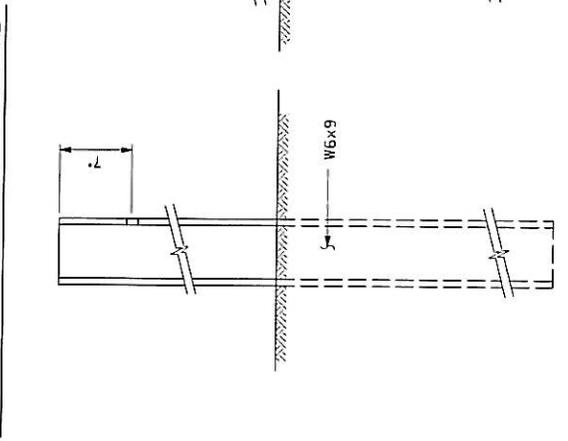
TRAIL END POST DETAIL - BARRIER TYPE WITH STANDARD BUFFER END TERMINAL



LINE POST DETAIL - BARRIER PLAN



TRAILING END POST DETAIL WITH STANDARD BUFFER END TERMINAL



LINE POST DETAIL - OFFSET PLAN

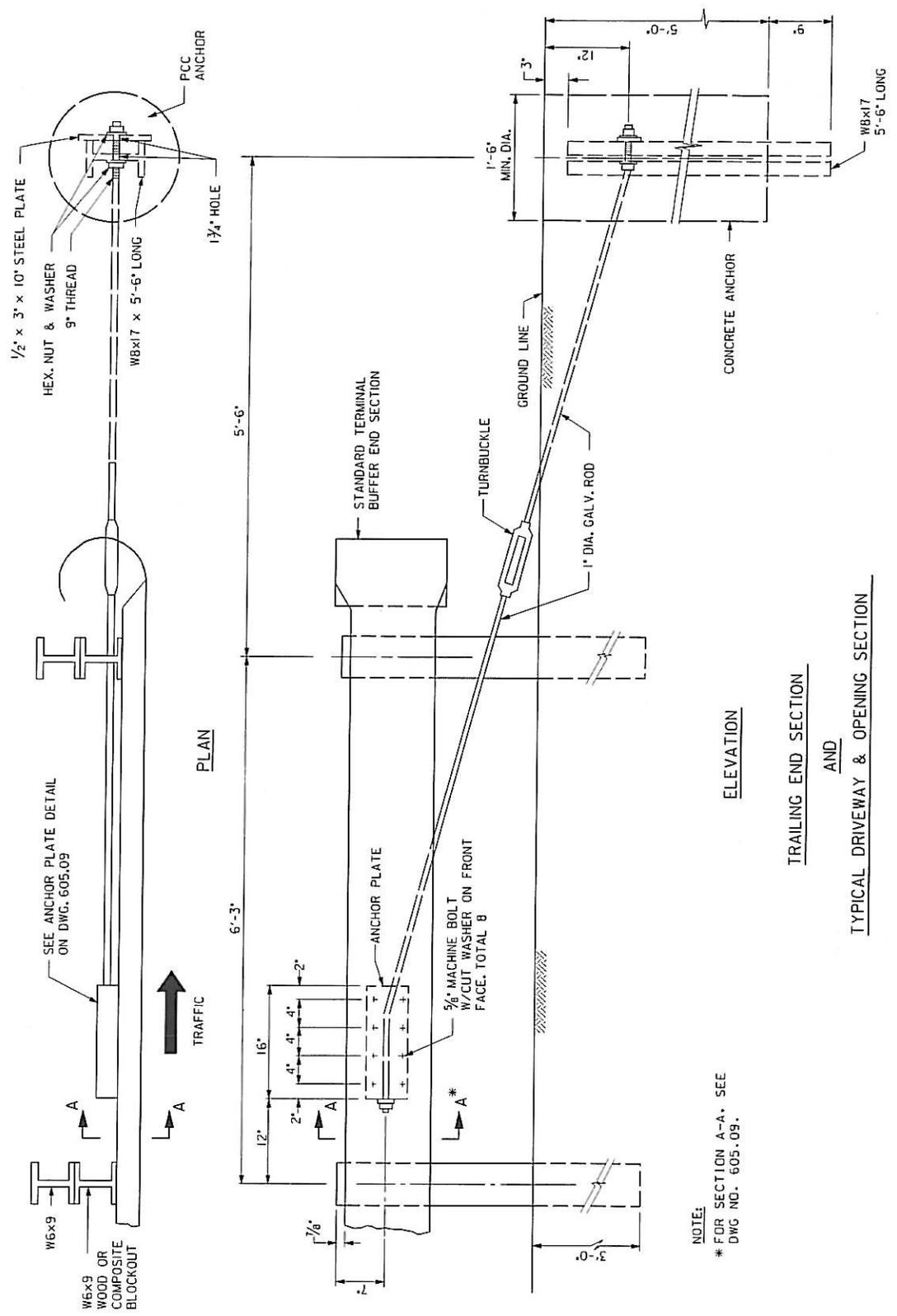
RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	APPR.
REVISED	
ISSUED:	
REFERENCE	

W-BEAM GUARDRAIL DETAILS - 1

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 605.02

14-10215-02 Standard Drawings File (UNCLASSIFIED) 605-022.CAD



NOTE:
 * FOR SECTION A-A, SEE
 DWG NO. 605.09.

TRAILING END SECTION
 AND
 TYPICAL DRIVEWAY & OPENING SECTION

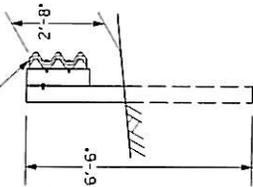
RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	APPR.
REVISED	
ISSUED:	
REFERENCE	

d. DISTRICT OF COLUMBIA
 DEPARTMENT OF TRANSPORTATION

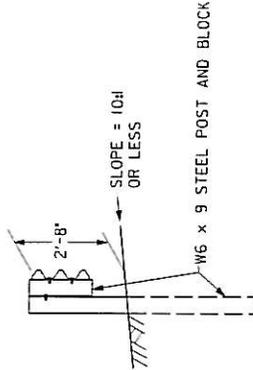
**W-BEAM
 TRAILING TERMINAL
 SECTION ANCHOR**

DWG. NO. 605.08

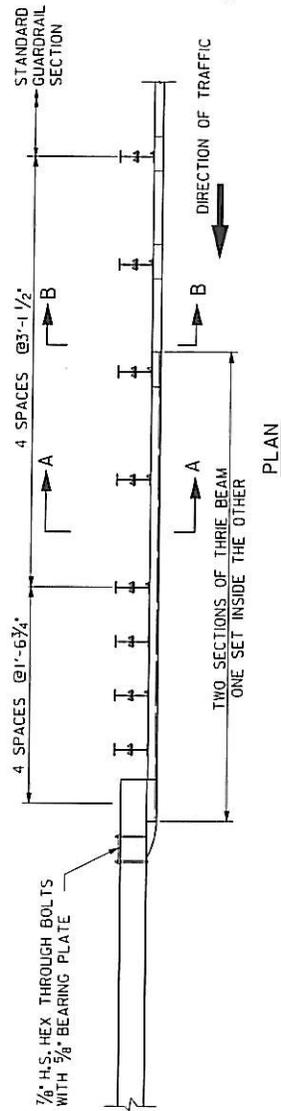
TWO SECTIONS OF THRIE BEAM
ONE SET INSIDE THE OTHER



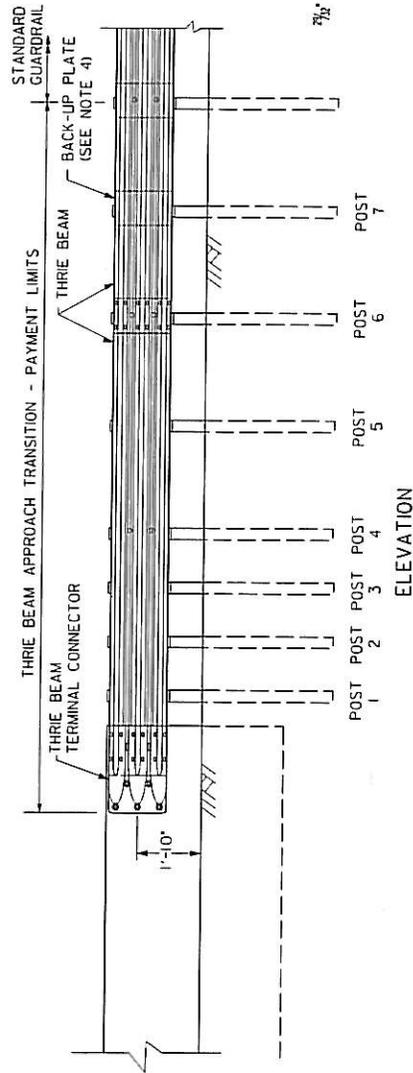
SECTION A-A



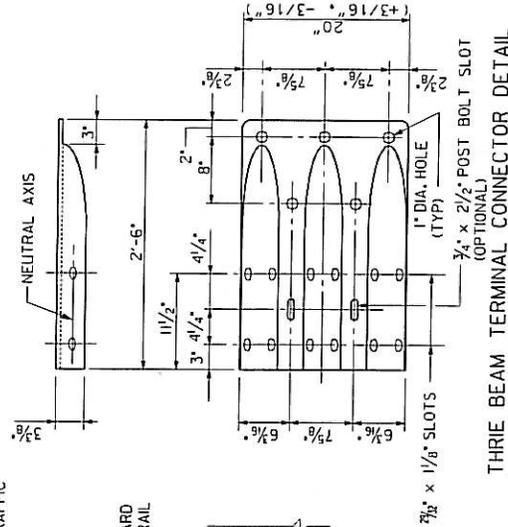
SECTION B-B



PLAN



ELEVATION



THRIE BEAM TERMINAL CONNECTOR DETAIL

NOTES:

1. THIS GUARDRAIL TRANSITION IS APPROPRIATE FOR CONNECTION TO A VERTICAL CONCRETE SHAPE AND SHOULD NOT BE CONNECTED DIRECTLY TO A CONCRETE SAFETY BARRIERS SHOULD BE TRANSITIONED TO A VERTICAL SHAPE AT THE GUIDERAIL CONNECTION.
2. BRIDGE BARRIER ENDS AND BRIDGE PARAPETS SHALL BE OF ADEQUATE STRENGTH TO ACCEPT FULL IMPACT LOADING.
3. STANDARD BARRIER HARDWARE HAS BEEN USED TO DEVELOP THIS GUARDRAIL TRANSITION. SEE THE CURRENT EDITION OF "A GUIDE TO STANDARDIZED BARRIER RAIL HARDWARE", AASHTO-AGC-ARTBA JOINT COOPERATIVE COMMITTEE.
4. AT POST 7, BACK-UP PLATE BOLTED TO BLOCK ONLY.
5. THIS TRANSITION MAY BE CONNECTED TO A STANDARD W-BEAM GUARDRAIL SECTION BY ADDING A W-THRIE BEAM TRANSITION PANEL PER DRAWING NO. 605.12.

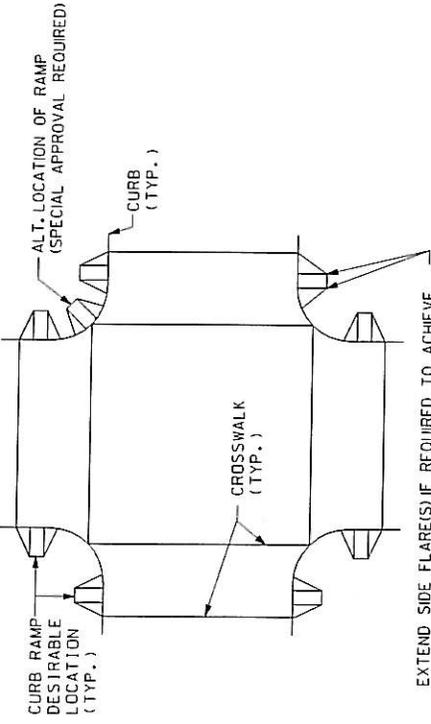
RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
DATE	APPR.
REVISED	ISSUED:
ISSUED:	APPROVED: <i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
REFERENCE	

**THRIE BEAM APPROACH
TRANSITION**
CONCRETE BARRIER END
THRIE BEAM - STEEL POSTS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 605.11

6/15/05 Standard Drawing File: D:\CHIEF\605-11.DWG
Printed: April 03, 2009 11:24:17 PM

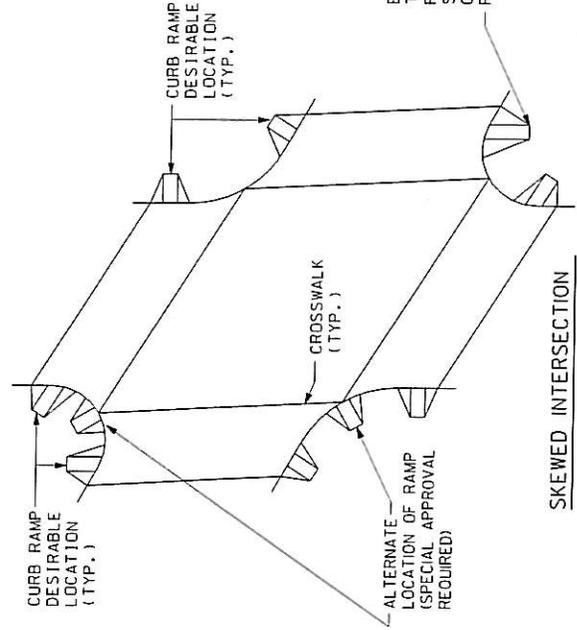


EXTEND SIDE FLARE(S) IF REQUIRED TO ACHIEVE MAXIMUM 12:1 SLOPE IN FLARE(S) WHERE 12:1 LONGITUDINAL SLOPE IN CENTER OF RAMP AND 4'-0" CLEAR SIDEWALK SPACE IN BACK OF RAMP CANNOT BE OBTAINED.

RIGHT-ANGLE INTERSECTION

NOTES:

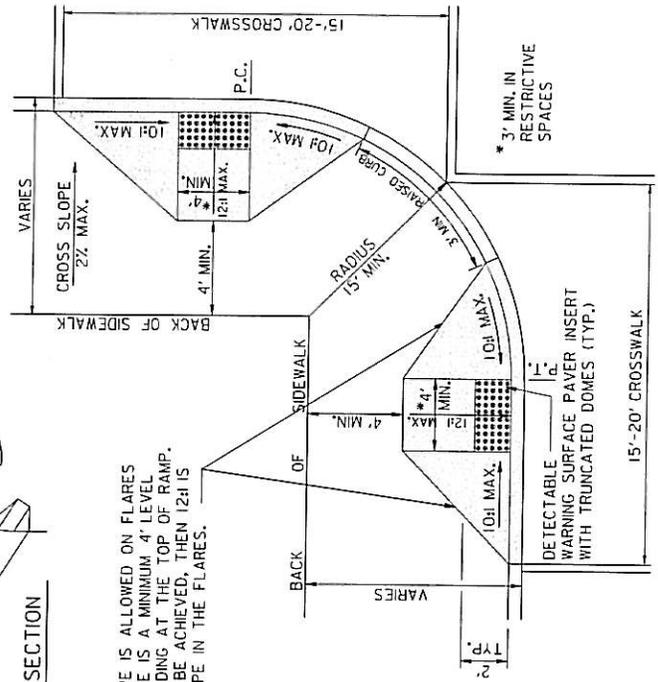
1. AT FOUR LEGGED INTERSECTIONS, IT IS REQUIRED TO CONSTRUCT TWO RAMPS, ONE FOR EACH DIRECTION OF CROSSING. IF THERE ARE SPACE LIMITATIONS THAT DO NOT PERMIT THE CONSTRUCTION OF TWO INDEPENDENT RAMPS, SUCH AS TELEPHONE POLES, FIRE HYDRANTS, STORM DRAIN INLETS, ETC., PROVISIONS SHOULD BE MADE TO RELOCATE THE OBSTRUCTION. IF THE 12:1 LONGITUDINAL SLOPE CANNOT BE ACHIEVED WHERE RAMPS ARE SHOWN, SPECIAL APPROVAL SHALL BE OBTAINED TO CONSTRUCT ONE RAMP AT THE CORNER AND MODIFY THE CROSSWALKS. SEE DRAWINGS 609-06 AND 609-07 FOR DETAILS.
2. RAMP LOCATION SHALL BE GOVERNED BY CROSSWALK WIDTH, 15'-20' AS DIRECTED. ALL RAMPS, INCLUDING SIDE FLARES, SHALL BE LOCATED WITHIN A CROSSWALK. ONE SIDE FLARE SHALL ALIGN WITH THE BACK EDGE LINE OF THE CROSSWALK.
3. FOR SKEWED INTERSECTION, ACUTE CORNER SHALL DETERMINE THE LOCATION OF LIGHT POLES, RAMPS AND CROSSWALKS.
4. ALL RAMPS SHALL CONFORM TO THE LATEST AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) CRITERIA.
5. DIMENSIONS SHOWN ARE FOR NEW CONSTRUCTION. FOR ALTERATIONS WHEN THESE DIMENSIONS ARE IMPRACTICAL, REVIEW ADAAG FOR LESS STRICT DIMENSIONS.
6. INSTALL DETECTABLE WARNING SURFACE PAVERS WITH TRUNCATED DOMES FOR A DISTANCE OF 24" FROM THE BACK OF THE CURB AS SHOWN.
7. THE SURFACE OF THE RAMP SHALL BE BROOM FINISHED (STEEL BRISTLE).
8. RAMP SHALL BE CONSTRUCTED WITH PCC SIDEWALK CONCRETE (NO DARKENING AGENTS).
9. ANY LIGHT POLE FOUNDATION SHALL BE CONSTRUCTED INDEPENDENTLY OF RAMP.
10. DESIGN STORM DRAIN SYSTEMS TO SHED WATER AWAY FROM RAMPS.
11. FINAL LOCATION OF RAMP WILL BE DECIDED BY THE ENGINEER ON SITE.



EXTEND SIDE FLARE(S) IF REQUIRED TO ACHIEVE MAXIMUM 12:1 SLOPE IN FLARE(S) WHERE 12:1 LONGITUDINAL SLOPE IN CENTER OF RAMP AND 4'-0" CLEAR SIDEWALK SPACE IN BACK OF RAMP CANNOT BE OBTAINED.

SKEWED INTERSECTION

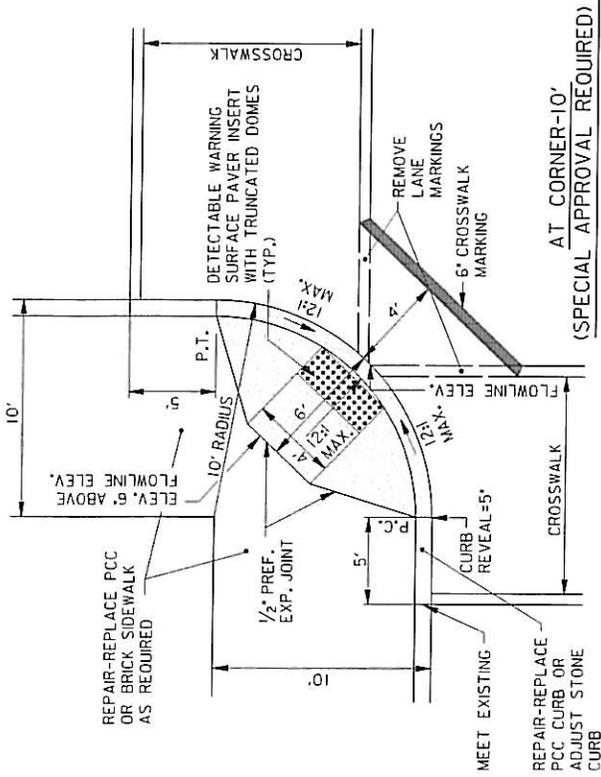
10:1 MAX. SLOPE IS ALLOWED ON FLARES ONLY IF THERE IS A MINIMUM 4' LEVEL (2% MAX.) LANDING AT THE TOP OF RAMP. IF 4' CANNOT BE ACHIEVED, THEN 12:1 IS THE MAX. SLOPE IN THE FLARES.



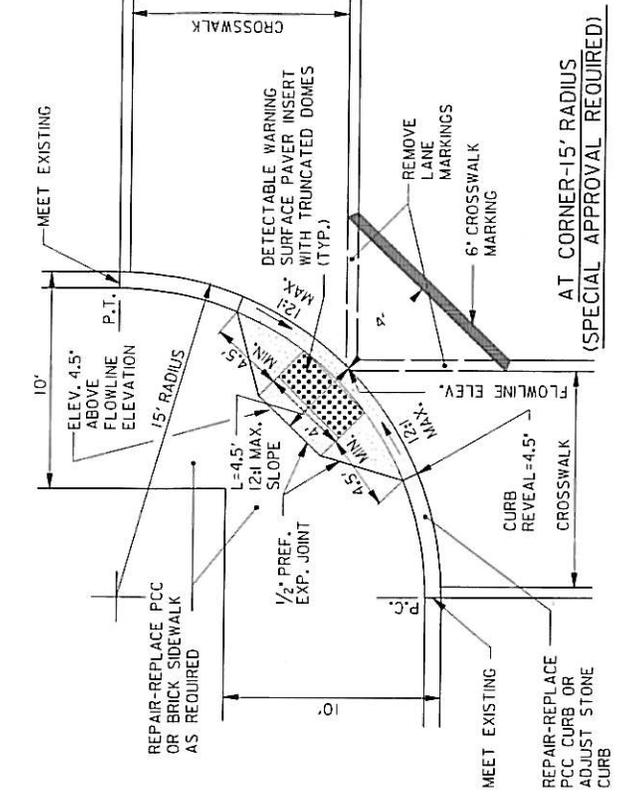
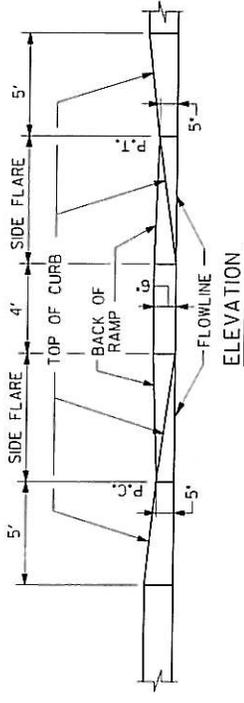
DETAIL: WHEELCHAIR - BICYCLE RAMPS) DESIRABLE LOCATION (TYP.)

WHEELCHAIR - BICYCLE RAMPS LOCATIONS

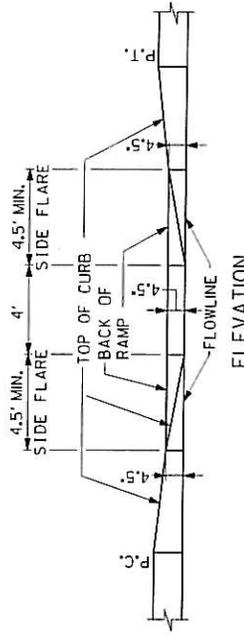
RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	
APPR.	
REVISED	
ISSUED:	
REFERENCE	



AT CORNER-10'
(SPECIAL APPROVAL REQUIRED)



AT CORNER-15' RADIUS
(SPECIAL APPROVAL REQUIRED)



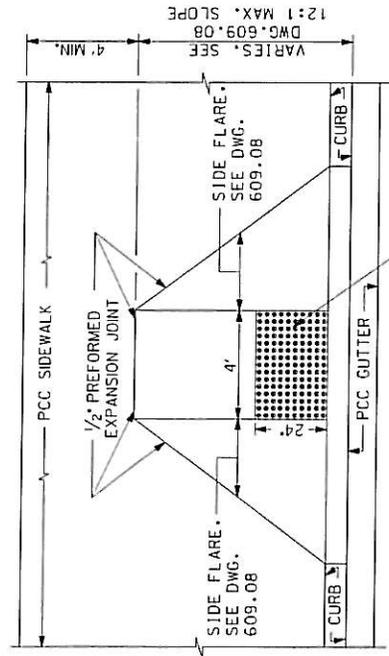
NOTES:

1. FOR SKEWED INTERSECTION, ACUTE CORNER SHALL DETERMINE THE LOCATION OF LIGHT POLES, RAMPS AND CROSSWALKS.
2. ALL RAMPS SHALL CONFORM TO THE LATEST AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) CRITERIA.
3. INSTALL DETECTABLE WARNING SURFACE PAVERS WITH TRUNCATED DOMES FOR A DISTANCE OF 24" FROM THE BACK OF THE CURB AS SHOWN.
4. THE SURFACE OF THE RAMP SHALL BE BROOM FINISHED (STEEL BRISTLE).
5. RAMP SHALL BE CONSTRUCTED WITH PCC SIDEWALK CONCRETE (NO DARKENING AGENTS).
6. ANY LIGHT POLE FOUNDATION SHALL BE CONSTRUCTED INDEPENDENTLY OF RAMP.
7. DESIGN STORM DRAIN SYSTEMS TO SHED WATER AWAY FROM RAMPS.
8. FOR WIDTHS OF SIDEWALK & ANGLES OF INTERSECTION DIF. FROM THAT SHOWN, THE ENGINEER WILL MODIFY RAMP DESIGN ACCORDINGLY SO THAT SLOPE REQUIREMENTS ARE MET.
9. DETAILS SHOWN FOR INSTALLATION OF RAMPS IN EXIST. CONSTRUCTION TO BE USED ONLY WHEN 2 RAMPS AT CORNER CANNOT BE CONSTRUCTED IN ACCORDANCE W/ ADAAG CRITERIA.
10. GUTTER, IF ANY, NOT SHOWN. REPAIR OF GUTTER, IF REQUIRED, SHALL BE DONE UNDER THE APPROPRIATE PAY ITEM.
11. THE FINAL LOCATION OF RAMP WILL BE DECIDED BY THE ENGINEER ON SITE.

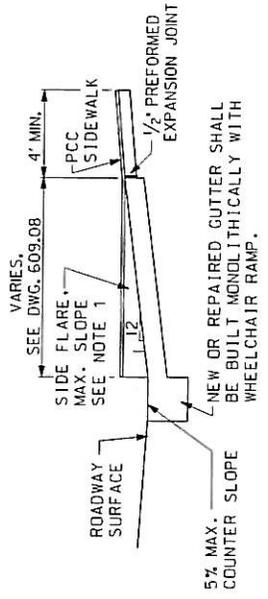
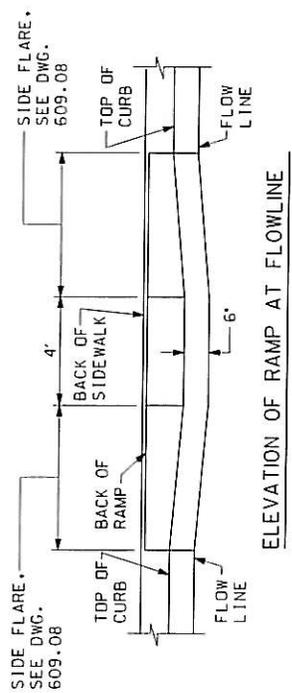
RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	
APPR.	
REVISED	
ISSUED:	
REFERENCE	

WHEELCHAIR-BICYCLE RAMPS
WITHIN CORNER RADIUS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

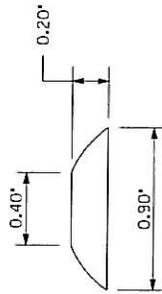
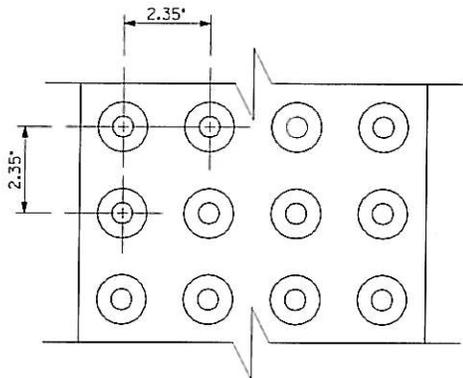


DETECTABLE WARNING SURFACE PAVEMENT INSERT WITH TRUNCATED DOMES (TYP.)



NOTES:

1. EITHER (1) SIDEWALK SLOPE BEHIND RAMP SHALL BE REDUCED, BUT NOT LESS THAN 0.5%, OR (2) IF RIGHT-OF-WAY AND PHYSICAL CONDITIONS PERMIT, SIDEWALK SHALL BE EXTENDED, SO THAT MAXIMUM SLOPE OF 12:1 ALONG CENTERLINE OF RAMP IS ACHIEVED. IF 12:1 SLOPE CANNOT BE ACHIEVED BY (1) OR (2) ABOVE, THEN MAXIMUM SLOPE IN AT LEAST ONE SIDE FLARE SHALL BE 12:1.



DETECTABLE WARNING SURFACE PAVEMENT/TRUNCATED DOME NOTES:

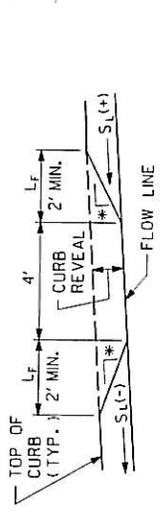
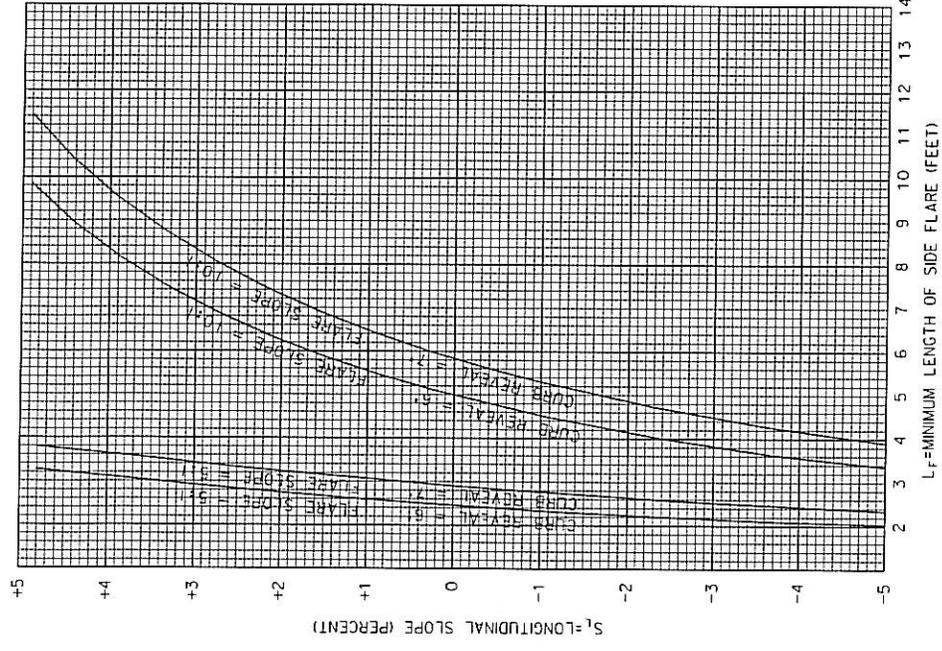
1. DETECTABLE WARNING SURFACE PAVEMENT/TRUNCATED DOME INSERT SHALL BE INSTALLED 24" FROM THE BACK OF THE CURB AS SHOWN.
2. DETECTABLE WARNING SURFACE PAVEMENT SHALL CONSIST OF A SURFACE OF TRUNCATED DOMES ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
3. DETECTABLE WARNING SURFACE PAVEMENT/TRUNCATED DOME INSERT SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES.

RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
ISSUED:	
DATE	
APPR.	
REVIS.	
REFERENCE	

**WHEELCHAIR-BICYCLE RAMPS
DETAILS**

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 609.07



* DESIRABLE SLOPE OF SIDE FLARE AT FLOW LINE SHALL BE 10:1. WHERE RESTRAINTS ARE PRESENT, SLOPE OF SIDE FLARE MAY BE INCREASED TO 5:1 BUT IN NO CASE SHALL LENGTH OF SIDE FLARE BE LESS THAN 2'-0".

ELEVATION OF RAMP AT FLOW LINE

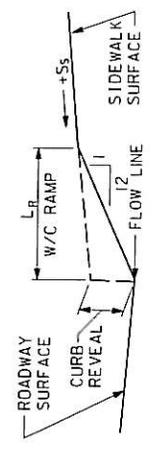
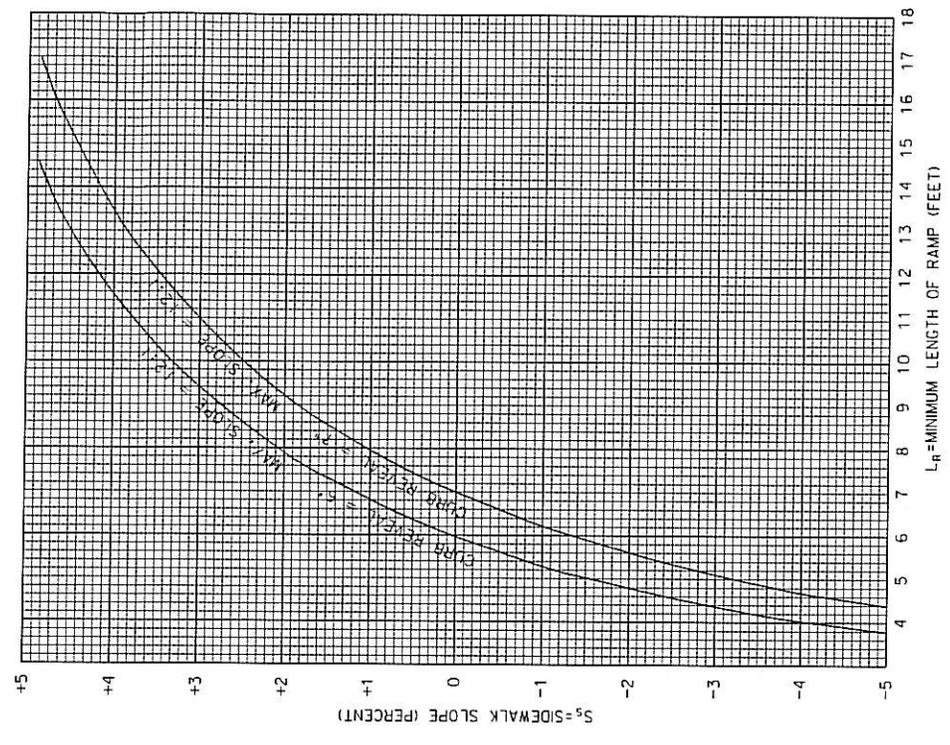
DATE	APPR.	ISSUED:	REFERENCE
REVIS	REVIS		
RECOMMENDED:		DEPUTY CHIEF ENGINEER	
APPROVED:		CHIEF TRANSPORTATION ENGINEER	

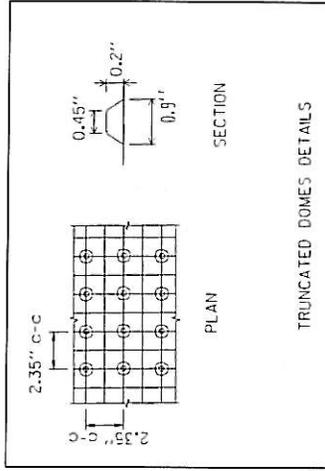
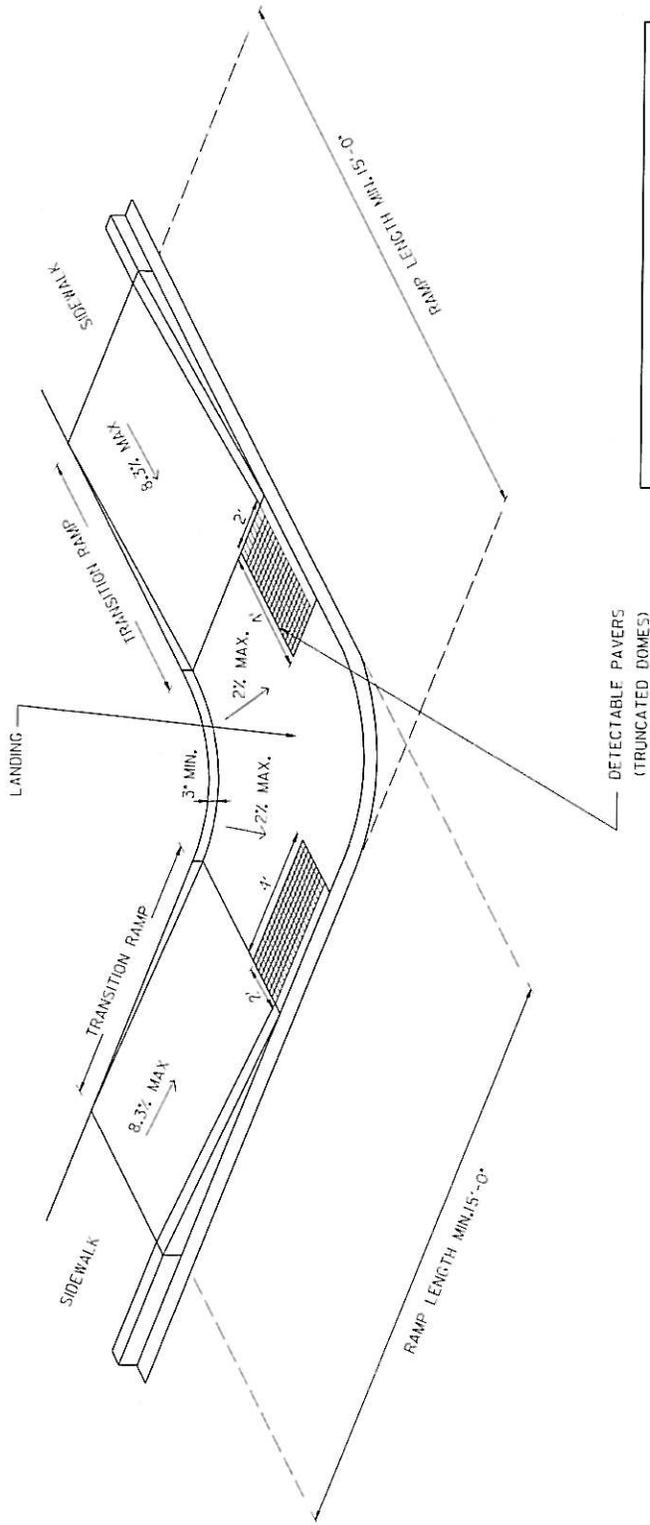
WHEELCHAIR-BICYCLE RAMPS SLOPE NOMOGRAPHS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 609.08

ELEVATION OF RAMP AT CENTERLINE OF RAMP





NOTE:

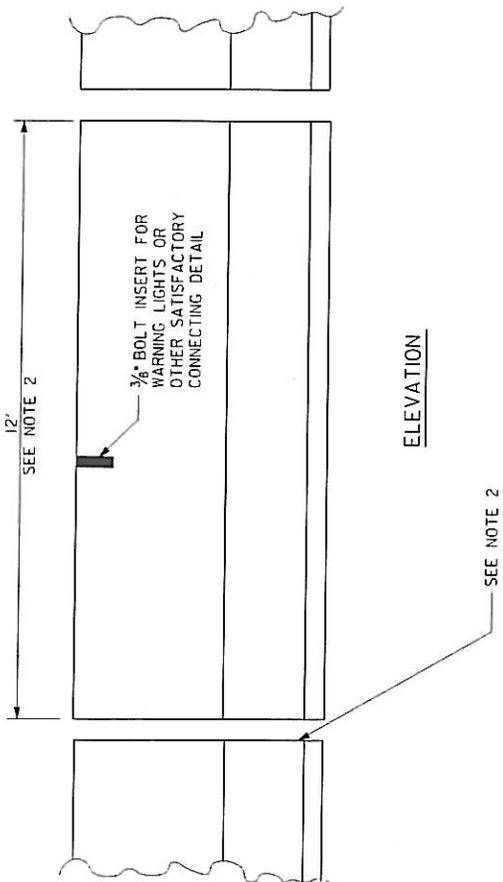
1. TO BE USED ONLY AT LOCATIONS WHERE THERE IS NOT ENOUGH SIDEWALK WIDTH AND WITH THE APPROVAL OF THE PROJECT ENGINEER.
2. RAMP LENGTH MIN DISTANCE = 15'-0" FROM P1 TO START OF TRANSITION RAMP.

ISSUED:	REFERENCE
DATE	APPR.
REVISED	REVIS
RECOMMENDED: <i>[Signature]</i> DEPUTY CHIEF ENGINEER	
APPROVED: <i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER	

PARALLEL WHEELCHAIR RAMPS

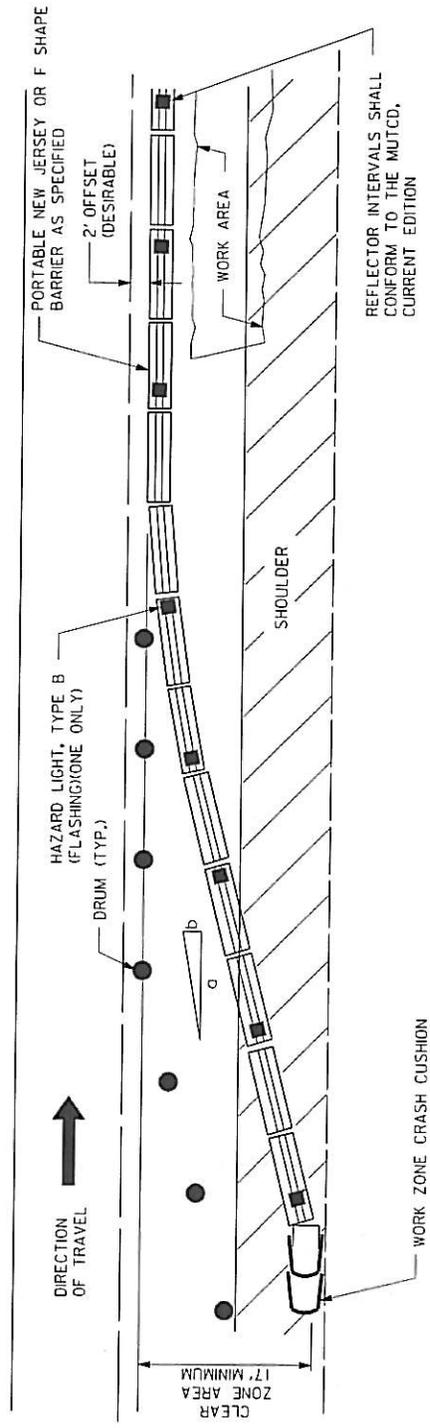
d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 609.09



NOTES:

1. THE SECTION SHALL BE THE NEW JERSEY OR F SHAPE.
2. THE UNIT LENGTH, REINFORCING, CONNECTION AND OTHER DETAILS VARY WITH MANUFACTURERS.
3. BARRIER TO BE USED MUST BE APPROVED BY DDOT PRIOR TO INSTALLATION.
4. CONTRACTOR SHALL SUBMIT NCHRP REPORT 350, TL-3 CERTIFICATION.



MINIMUM BARRIER FLARE RATE, α : β

- 60 MPH = 13:1
- 50 MPH = 11:1
- 40 MPH = 9:1
- 30 MPH = 6:1

TYPICAL INSTALLATION

PRECAST TEMPORARY CONCRETE BARRIER FOR TRAFFIC MAINTENANCE DURING CONSTRUCTION

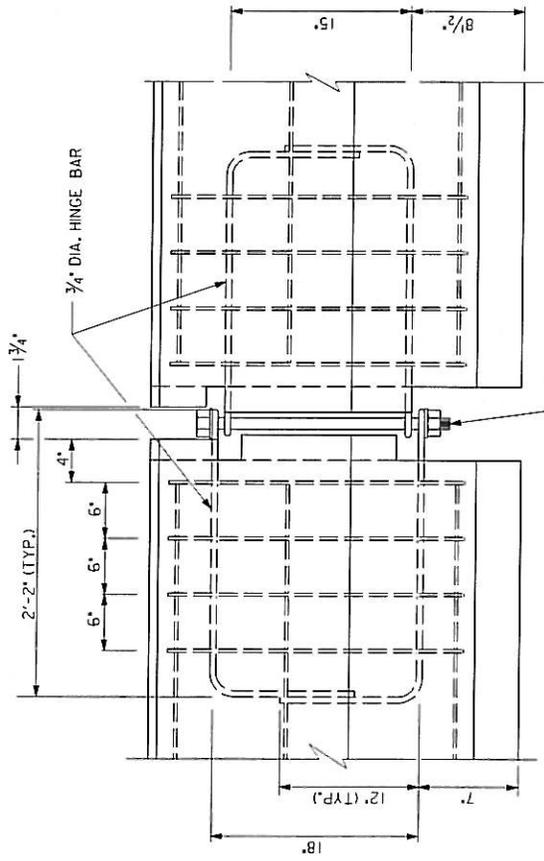
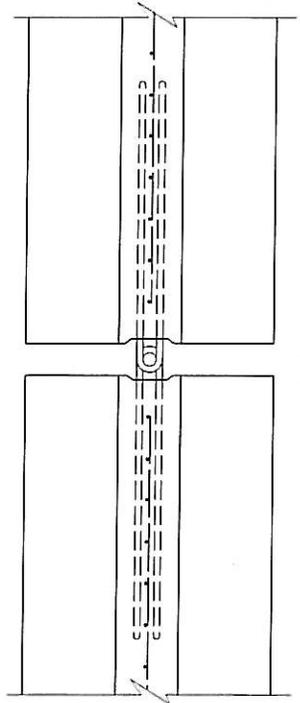
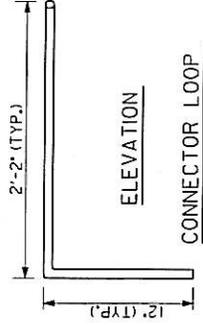
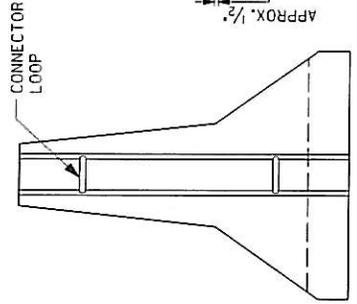
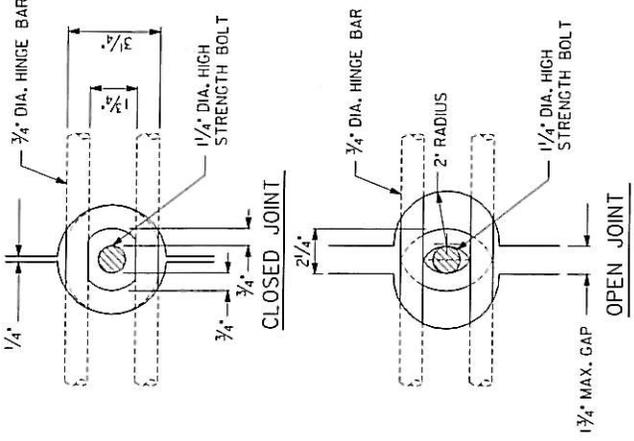
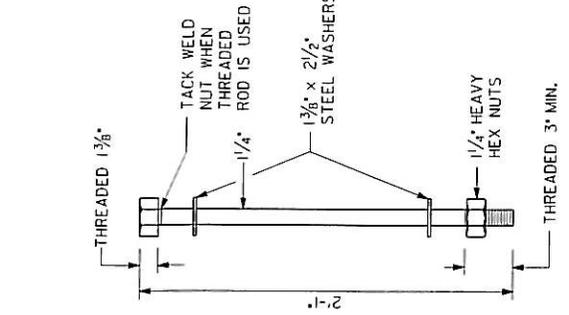
RECOMMENDED: *[Signature]*
DEPUTY CHIEF ENGINEER

APPROVED: *[Signature]*
CHIEF TRANSPORTATION ENGINEER

DATE	APPR.	REVISION	ISSUED:	REFERENCE

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 614.03



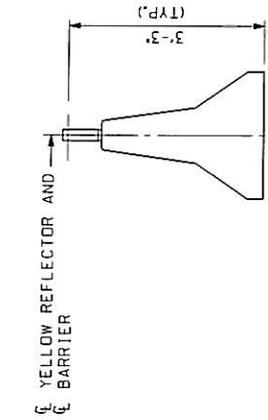
NOTE:
 1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL OF ALL PIN AND LOOP TYPE CONNECTIONS AND NCHRP REPORT 350, TL-3 CERTIFICATIONS.

DATE	APPR.	REVISION	ISSUED	REFERENCE
RECOMMENDED:		DEPUTY CHIEF ENGINEER		
APPROVED:		CHIEF TRANSPORTATION ENGINEER		

TEMPORARY CONCRETE BARRIER
 TYPICAL JOINT CONNECTION DETAILS
 PIN AND LOOP TYPE CONNECTION

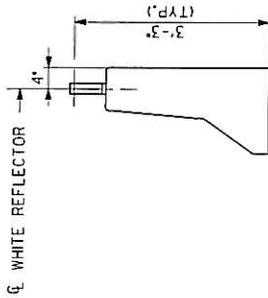
d. DISTRICT OF COLUMBIA
 DEPARTMENT OF TRANSPORTATION

DWG. NO. 614.04



YELLOW REFLECTOR AND BARRIER

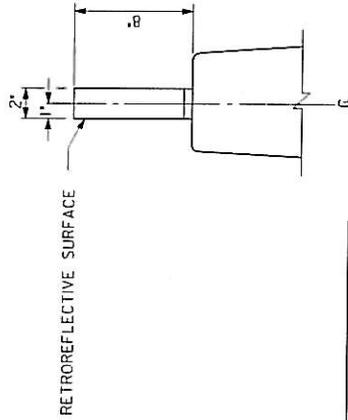
SOLID MEDIAN BARRIER



WHITE REFLECTOR

SINGLE FACE BARRIER

(2) RETROREFLECTIVE SURFACES
(MEDIAN BARRIER ONLY)
SINGLE RETROREFLECTIVE SURFACE
(ALL OTHER BARRIERS)

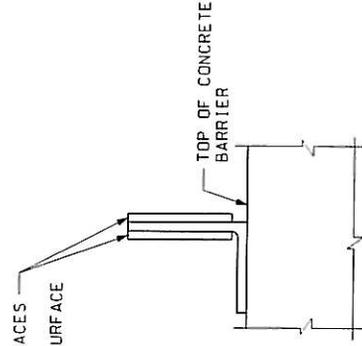


RETROREFLECTIVE SURFACE

END VIEW

SPACING OF REFLECTORS	
RADIUS OF HORIZ. CURVE	C/C DIST. BETWEEN REFLECTORS
LESS THAN 2000'	115'
2000' TO 3000'	130'
3000' TO 5000'	160'
OVER 5000'	200'
TANGENT AREAS	200'

SIDE VIEW



**CONCRETE BARRIER REFLECTORS
TOP MOUNTED**

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 614.07

RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	
APPR. REVIS	
ISSUED:	
REFERENCE	

REFLECTOR BODY

THE REFLECTOR SHALL BE MADE OF A HIGH IMPACT, WEATHERABLE, ENGINEERING THERMO-PLASTIC MATERIAL WHICH CONFORMS TO THE FOLLOWING:

PROPERTY	RESULT	METHOD ASTM TEST
THICKNESS (MIN)	0.90"	D638
TENSILE STRENGTH (MIN)	5,500	D256
IMPACT STRENGTH @ 20°F (FT-LBS/IN AT NOTCH)	3.2	METHOD A
IMPACT STRENGTH @ 73°F (FT-LBS/IN AT NOTCH)	140	D256 METHOD A
FLEXURAL STRENGTH PSI @ 73°F	8,000	D790
FLEXURAL MODULUS PSI @ 73°F	300,000	D790
ELONGATION @ YIELD	30%	D638

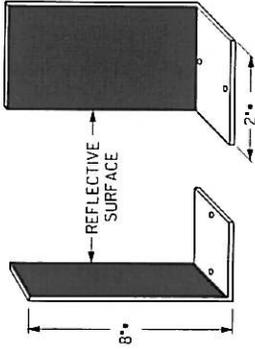
REFLECTIVE SURFACE

THE REFLECTOR SHALL BE A RETRO-REFLECTIVE ACRYLIC MICROPRISM MATERIAL WITH ACRYLIC BACKING, WITH A MINIMUM AREA OF 16 SQ. IN. PROVIDING THE FOLLOWING MINIMUM OPTICAL PERFORMANCE WITH AN OBSERVATION ANGLE OF 0.1° MEASURE IN CANDLEPOWER:

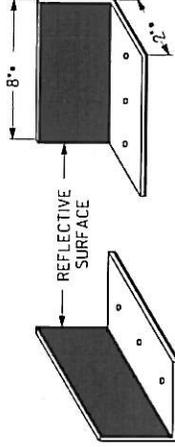
ENTRANCE ANGLE	SPECIFIC INTENSITY
AMBER 4°	75
AMBER 30°	36
WHITE 4°	125
WHITE 30°	55

INSTALLATION

THE REFLECTOR SHALL BE MOUNTED TO THE TOP OF THE CONCRETE BARRIER AS SPECIFIED BY THE MANUFACTURER.



AMBER OR WHITE 1-WAY, REFLECTIVE SHEETING ON SURFACE



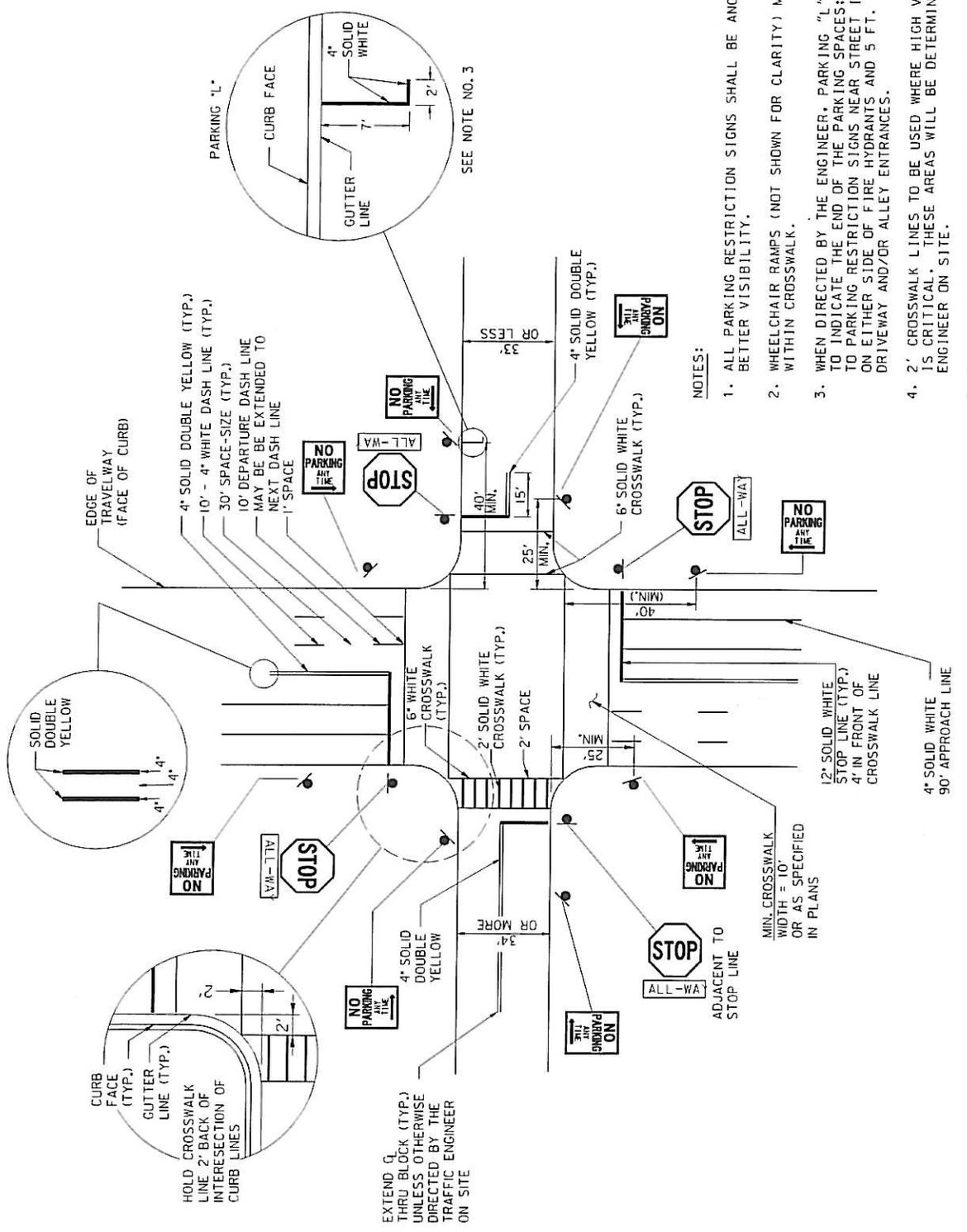
CONCRETE BARRIER REFLECTOR

CONCRETE BARRIER REFLECTORS SPECIFICATIONS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 614.08

RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	APPR.
REVIS	REVISED
ISSUED:	ISSUED
REFERENCE	REFERENCE



SEE NOTE NO. 3

NOTES:

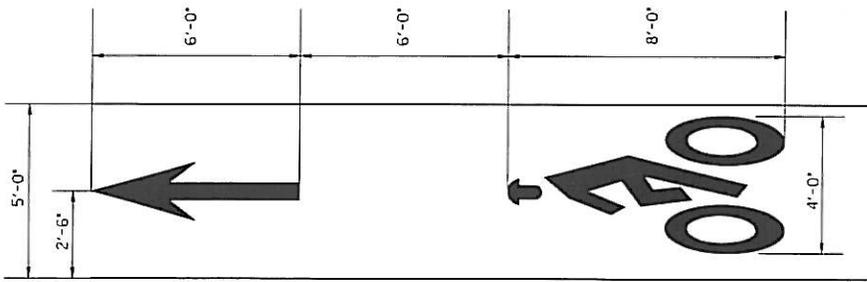
1. ALL PARKING RESTRICTION SIGNS SHALL BE ANGLED @ 45 DEGREES FOR BETTER VISIBILITY.
2. WHEELCHAIR RAMP (NOT SHOWN FOR CLARITY) MUST BE LOCATED WITHIN CROSSWALK.
3. WHEN DIRECTED BY THE ENGINEER, PARKING "L" SHALL BE PLACED TO INDICATE THE END OF THE PARKING SPACES; SPECIFICALLY, ADJACENT TO PARKING RESTRICTION SIGNS NEAR STREET INTERSECTIONS, 10 FT. ON EITHER SIDE OF FIRE HYDRANTS AND 5 FT. ON EITHER SIDE OF DRIVEWAY AND/OR ALLEY ENTRANCES.
4. 2' CROSSWALK LINES TO BE USED WHERE HIGH VISIBILITY OF CROSSWALK IS CRITICAL. THESE AREAS WILL BE DETERMINED BY THE TRAFFIC ENGINEER ON SITE.
5. PAVEMENT MARKINGS SHALL NOT BE APPLIED IN THE GUTTER AREA OR AT OP SURFACE STRUCTURES SUCH AS MANHOLE COVERS, VALVES, VAULTS, ETC.

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

TYPICAL
PAVEMENT MARKING APPLICATIONS
AND INTERSECTION SIGNING

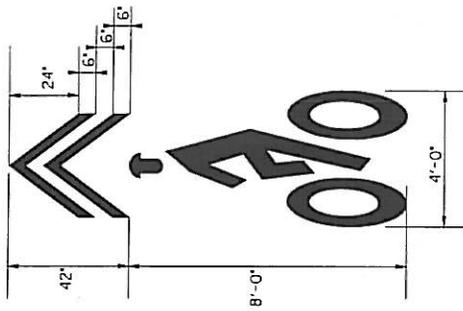
DWG. NO. 616.05

ISSUED:	REFERENCE
DATE	APPR.
REVIS	REVIS
APPROVED:	CHIEF TRANSPORTATION ENGINEER
RECOMMENDED:	DEPUTY CHIEF ENGINEER



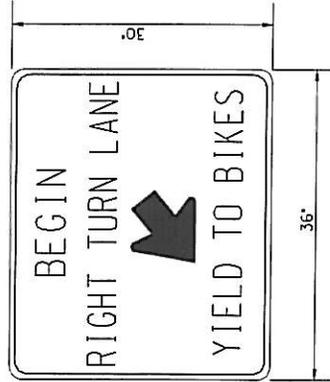
BIKE LANE SYMBOL

BIKE LANE SYMBOL SHALL HAVE A BIKER FACING LEFT OR CENTER OF ROAD

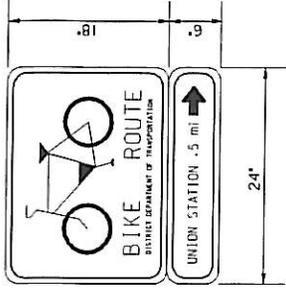


SHARED LANE SYMBOL

R4-4



D11-1 & D1-1A



R4-4 GUIDANCE:
 IF USED, BEGIN RIGHT TURN LANE - YIELD TO BIKES (R4-4) SIGNS SHOULD BE PROVIDED AT THE BEGINNING OF A RIGHT TURN LANE TO INFORM BICYCLISTS AND MOTORISTS OF THE MERGING AREA. THESE SIGNS SHOULD ONLY BE INSTALLED AT LOCATIONS WHERE THERE IS A DEDICATED RIGHT TURN AREA (BUSES MAY BE EXCEPTED). THEY SHOULD ALWAYS BE INSTALLED WHERE THERE IS A DEDICATED BICYCLE FACILITY MARKED AS A BICYCLE LANE OR SHARED ROADWAY.

R4-4 SIGN DESIGN:
 SOURCE: STANDARD MUTCD
 SIZE: 36" x 30"
 COLOR: BLACK LETTERS ON WHITE REFLECTIVE BACKGROUND

D11-1 GUIDANCE:
 BICYCLE ROUTE GUIDE (D11-1) SIGNS SHOULD BE PROVIDED AT DECISION POINTS ALONG DESIGNATED BICYCLE ROUTES, INCLUDING SIGNS TO INFORM BICYCLISTS OF BICYCLE ROUTE DIRECTION CHANGES AND CONFIRMATION SIGNS FOR ROUTE DIRECTION, DISTANCE, AND DESTINATION.

D11-1 SIGN DESIGN:
 SOURCE: MODIFIED MUTCD
 SIZE: 18" x 24"
 COLOR: WHITE LETTERS ON GREEN REFLECTIVE BACKGROUND

D1-1A GUIDANCE:
 DESTINATION (D1-1 AND D1-1A) SIGNS SHALL BE MOUNTED BELOW BICYCLE ROUTE GUIDE SIGNS TO FURNISH ADDITIONAL INFORMATION SUCH AS DIRECTIONAL CHANGES IN ROUTE, OR INTERMITTENT DISTANCE AND DESTINATION INFORMATION.

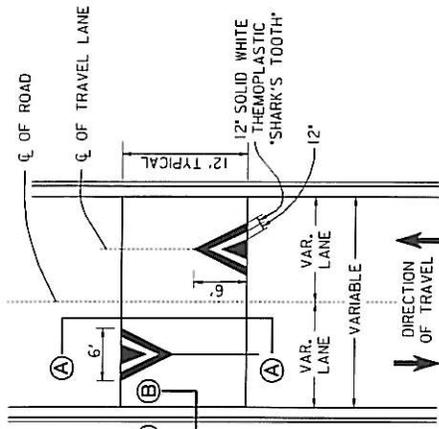
D1-1A SIGN DESIGN:
 SOURCE: STANDARD MUTCD
 SIZE: 6" x 24"
 COLOR: WHITE LETTERS ON GREEN REFLECTIVE BACKGROUND

DETAILS OF BICYCLE SYMBOLS AND SIGNS

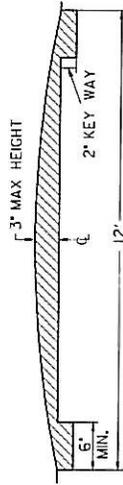
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APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	APPR.
REVISED	REVISED
ISSUED:	ISSUED:
REFERENCE	REFERENCE

d. DISTRICT OF COLUMBIA
 DEPARTMENT OF TRANSPORTATION

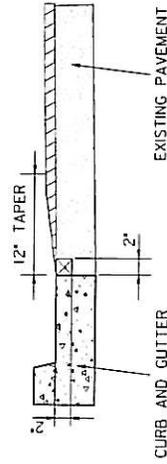
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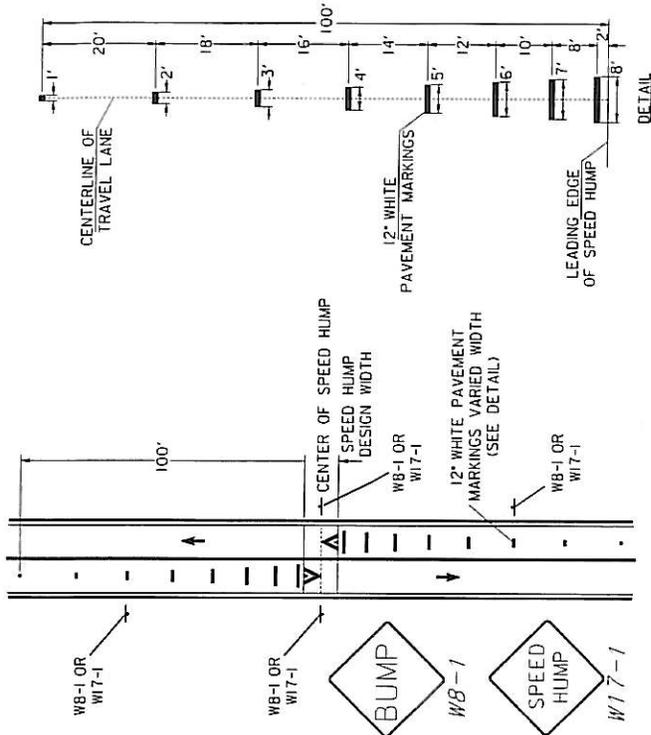
SPEED HUMPS (HORIZONTAL)



SECTION A-A



SECTION B-B



TYPICAL WARNING MARKINGS AND SIGNINGS FOR SPEED HUMPS

NOTE:

1. SPEED BUMPS - NARROW MOUNTABLE OBSTRUCTIONS INSTALLED ON THE PAVEMENT SURFACE, ACROSS THE TRAVELED LANES, AND INTENDED TO CAUSE VEHICLES TO SLOW. SPEED BUMPS ARE USUALLY LESS THAN 14 INCHES WIDE AND 4 INCHES HIGH.
2. SPEED BUMPS - THEY ARE SIMILAR TO SPEED BUMPS, BUT UTILIZE LARGER VERTICAL RADIUS THAT RESULT IN WIDER WIDTHS AND A MORE GENTLE CROSSING BY VEHICLES.
3. SPEED TABLES - WIDE MOUNTABLE OBSTRUCTIONS INSTALLED ON THE PAVEMENT SURFACE ACROSS THE TRAVELED LANES, AND INTENDED TO CAUSE VEHICLES TO SLOW. THEY ARE SIMILAR TO SPEED BUMPS, EXCEPT FOR THE FLAT-TOPPED SECTION LOCATED BETWEEN THE APPROACH AND FAR EDGES. SPEED TABLES ARE GENERALLY WIDER THAN SPEED BUMPS AND ARE MORE GENTLE ON VEHICLES.
4. SPEED BUMPS/HUMPS/TABLES SHOULD NOT BE CONSIDERED ON: EMERGENCY AND EVACUATION ROUTES; ROADWAYS WITH GRADES OF 7% OR MORE; ARTERIALS OR COLLECTOR STREETS AND THROUGH TRUCK ROUTES; AT DRIVEWAY, ENTRANCE AND/OR ALLEY.
5. SPEED BUMPS/HUMPS/TABLES SHOULD NOT BE PLACED WITHIN 150 FEET OF AN UNSIGNALIZED INTERSECTION OR 250 FEET OF A SIGNALIZED INTERSECTION.
6. SPEED BUMPS/HUMPS/TABLES ARE TYPICALLY PLACED 250-350 FEET APART.
7. REFER TO "DESIGN GUIDELINES FOR TRAFFIC CALMING MEASURES FOR RESIDENTIAL STREETS IN THE DISTRICT OF COLUMBIA (JUNE 2005)," FOR ADDITIONAL INFORMATION.

TRAFFIC CALMING
SPEED HUMPS
STANDARD DRAWINGS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 616.28

RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	APPR.
REVISED	
ISSUED:	
REFERENCE	

GENERAL NOTES:

1. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MOST STRINGENT STANDARDS SET FORTH IN THE LATEST EDITIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE DDOT WORK AREA TRAFFIC CONTROL MANUAL AND DDOT STANDARDS SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES.
2. TYPICAL CAN BE USED ONLY IF IT REFLECTS ACTUAL ROADWAY CONFIGURATION.
3. PARKING SHALL BE RESTRICTED 72 HOURS IN ADVANCE UNLESS THERE IS AN EMERGENCY.
4. SIGNS SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF WORK AND REMOVED IMMEDIATELY AFTER COMPLETION OF ACTIVITIES.
5. SIGNS SHALL BE MOUNTED ON SPRING LOADED STANDS.
6. THE GUIDELINES FOR SIGN AND CONE SPACING ARE LISTED IN THE MUTCD.
7. ON ONE-WAY STREETS SIGNS SHALL BE INSTALLED ON BOTH SIDES OF ROADWAY APPROACHING WORK ZONE.
8. FULL VIEW OF ADVANCE WARNING SIGNS SHALL BE CLEAR OF OBSTRUCTION ON APPROACH TO WORK ZONE.
9. ADJACENT WORK ZONES SHALL COORDINATE SIGNAGE TO AVOID CONFUSING MESSAGES.
10. SIGN SPACING SHALL BE ADJUSTED TO AVOID CONFLICT WITH EXISTING PERMANENT SIGNAGE.
11. BUS ROUTE TRAVEL LANES SHALL BE A MINIMUM OF 11 FEET IN WIDTH.
12. WMATA SHALL BE CONTACTED AT (202) 962 - 1811 PRIOR TO ANY WORK ALONG A BUS ROUTE. WMATA MUST APPROVE ALL CLOSURES/MOVING OF BUS STOPS IN ADVANCE. FOR LONGER TERM BUS STOP RELOCATION, CALL WMATA AT (202) 962-5678.
13. MUST OBTAIN A DCRA NOISE PERMIT FOR RESIDENTIAL WEEKEND AND NIGHT-TIME WORK.
14. UNLESS A SIDEWALK IS FULLY OR PARTIALLY CLOSED, A MINIMUM OF 6 FEET WIDTH WITH NO RESTRICTION (FREE OF FIXTURE) SHALL BE MAINTAINED
15. ALL AFFECTED TRAVEL LANES MUST MAINTAIN A 10 FOOT MINIMUM WIDTH UNLESS OTHERWISE APPROVED BY THE CHIEF ENGINEER.
16. A TEMPORARY PEDESTRIAN ACCESS MUST BE PROVIDED FOR A SIDEWALK CONSTRUCTION OVER 2 WEEKS DURATION.
17. EXCAVATION IN THE SIDEWALK SHALL BE PLATED OR TEMPORARILY BACKFILLED AT THE END OF EACH WORK DAY.

SPEED (MPH)	MINIMUM SIGN SPACING (FT)
15	100
20	100
25	150
30	200
35	250
40	350
45	550
50	600
55	700

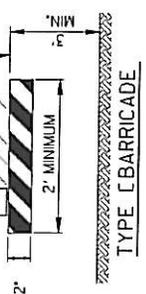
DATE	APPR.	RECOMMENDED:
REVIS		DEPUTY CHIEF ENGINEER
ISSUED:		APPROVED:
		CHIEF TRANSPORTATION ENGINEER
		REFERENCE

TCP GENERAL NOTES

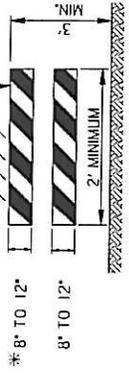
d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 616.00

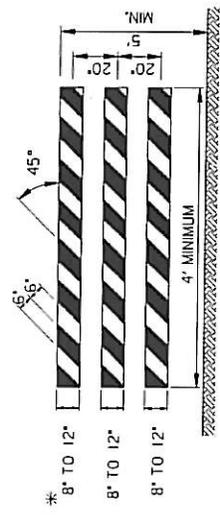
TYPE B
WARNING LIGHT
(OPTIONAL)
ALL BARRICADES
* 8' TO 12'



TYPE C BARRICADE



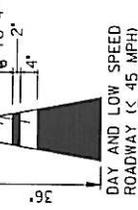
TYPE D BARRICADE



TYPE E BARRICADE



RETROREFLECTIVE BAND



CONE

TUBULAR MARKER



HIGH LEVEL PORTABLE WARNING DEVICE



* FOR WOODEN BARRICADES, NOMINAL LUMBER DIMENSIONS WILL BE SATISFACTORY.
** FOR RAILS LESS THAN 3 FEET LONG, 4 IN. WIDE STRIPES SHALL BE USED.
FOR RAILS MORE THAN 3 FEET LONG, 6 IN. WIDE STRIPES SHALL BE USED.

WARNING LIGHTS

LENS DIRECTIONAL FACES	TYPE B HIGH INTENSITY		TYPE C STEADY BURN (SEE NOTE NO.13)	
	1	55 TO 75 8%	1 OR 2 CONSTANT	2 CONSTANT
FLASHING RATE PER MINUTE				
FLASH DURATION ***				
MINIMUM EFFECTIVE INTENSITY *****				
MINIMUM BEAM CANDLE POWER *****				
HOURS OF OPERATION		24 HRS/DAY		2 CANDELAS DUSK TO DAWN

***** LENGTH OF TIME THAT INSTANTANEOUS INTENSITY IS EQUAL TO OR GREATER THAN EFFECTIVE INTENSITY.

***** THESE VALUES MUST BE MAINTAINED WITHIN A SOLID ANGLE 9 DEGREES ON EACH SIDE OF THE VERTICAL AXIS, AND 5 DEGREES ABOVE AND 5 DEGREES BELOW THE HORIZONTAL AXIS.

NOTES:

- FLASHING WARNING LIGHTS MAY BE USED ON BARRICADES, SIGNS AND HIGH LEVEL WARNING DEVICES, AS DIRECTED.
- MARKING ON WARNING DEVICES SHALL BE REFLECTORIZED ORANGE AND WHITE STRIPES.
- CONES SHALL BE FLUORESCENT ORANGE.
- FLAGS SHALL BE ORANGE.
- STABILITY OF TUBES/CONES MAY BE IMPROVED USING APPROVED ADHESIVE OR SAND BAG RINGS.
- TIMBER BARRICADES SHALL NOT BE USED ON ANY CONSTRUCTION PROJECT AS A POSITIVE BARRIER, AT ANY SPEED.
- WHEN POSITIVE BARRIERS ARE NEEDED, TEMPORARY PRECAST CONCRETE BARRIERS OR METAL BEAM SYSTEMS SHALL BE USED.
- SAFETY DRUMS SHALL BE USED WHEN CHANNELIZATION AND DELINEATION IS THE PRIMARY NEED. DEVICES SUCH AS PORTABLE BARRICADES, CONES, VERTICAL PANELS, ETC., MAY BE USED AS DIRECTED.
- ALIGNMENT OF STRIPING ON SUCCESSIVE BARRICADES SHALL BE CONSISTENT OR DOWN TOWARDS THE DIRECTION OF TRAFFIC FLOW.
- ALL REFLECTORIZED SURFACES ON DRUMS, CONES, BARRICADES, ETC., SHALL BE TYPE III, TYPE VI OR TYPE IX SHEETING, ACCORDING TO STANDARD SPECIFICATION 616.
- WORK ZONE CHANNELIZING DEVICES SHALL MEET THE REQUIREMENTS OF NCHRP REPORT 350, CATEGORIES 1 AND 2.
- BARRICADES INTENDED FOR USE ON EXPRESSWAYS, FREEWAYS, AND OTHER HIGH SPEED ROADWAYS SHALL HAVE A MINIMUM OF 270 SQUARE IN. OF REFLECTIVE AREA FACING TRAFFIC.
- STEADY BURN LIGHTS SHALL ONLY BE USED INDIVIDUALLY AS SPECIFIED IN THE T.C.P.

WORK ZONE
CHANNELIZING DEVICES

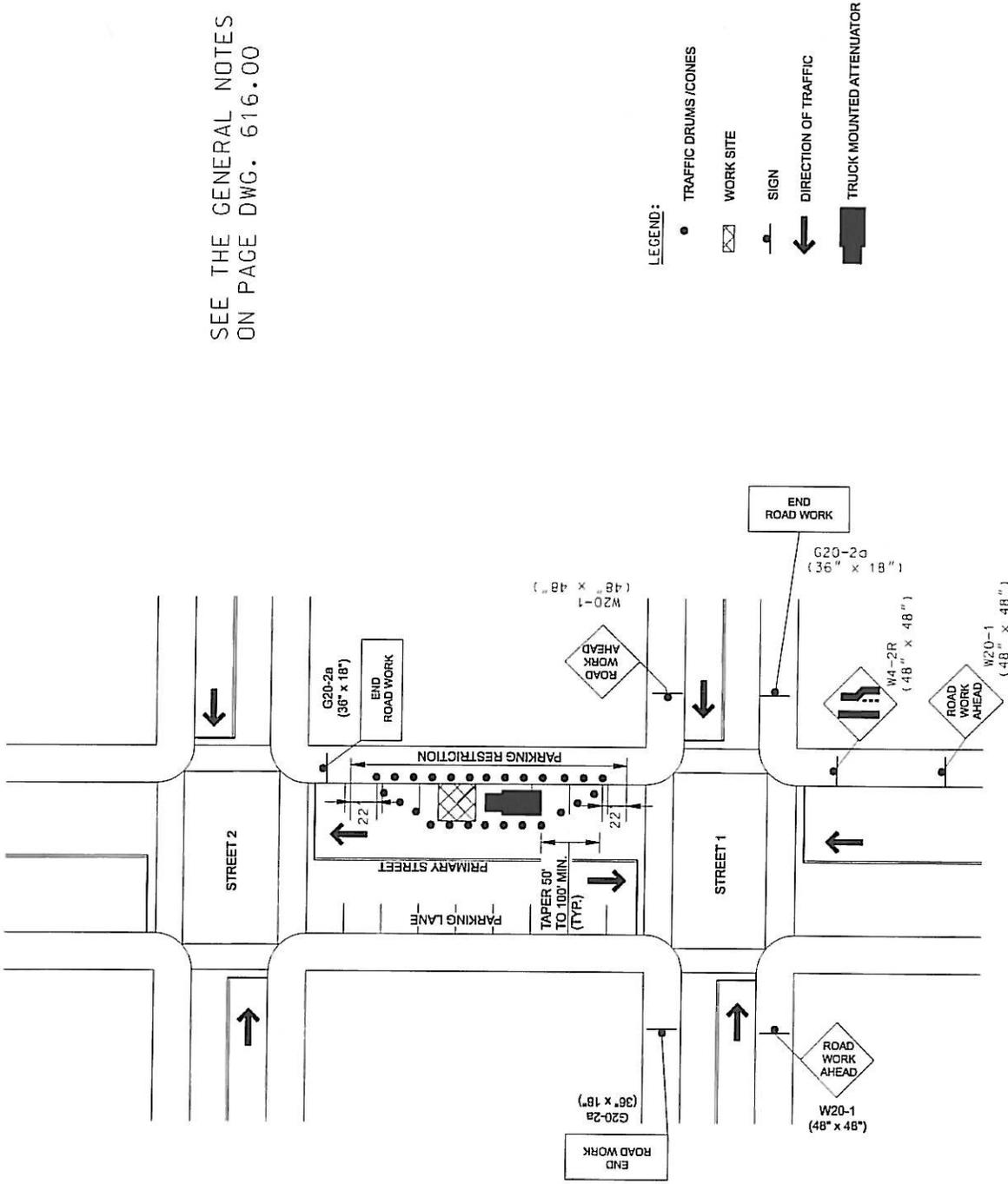
RECOMMENDED: *[Signature]*
DEPUTY CHIEF ENGINEER

APPROVED: *[Signature]*
CHIEF TRANSPORTATION ENGINEER

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DEPARTMENT OF TRANSPORTATION

DWG. NO. 616.06

SEE THE GENERAL NOTES
ON PAGE DWG. 616.00



- LEGEND:**
- TRAFFIC DRUMS / ICONS
 - ⊠ WORK SITE
 - ⬆ SIGN
 - ➔ DIRECTION OF TRAFFIC
 - ▬ TRUCK MOUNTED ATTENUATOR

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

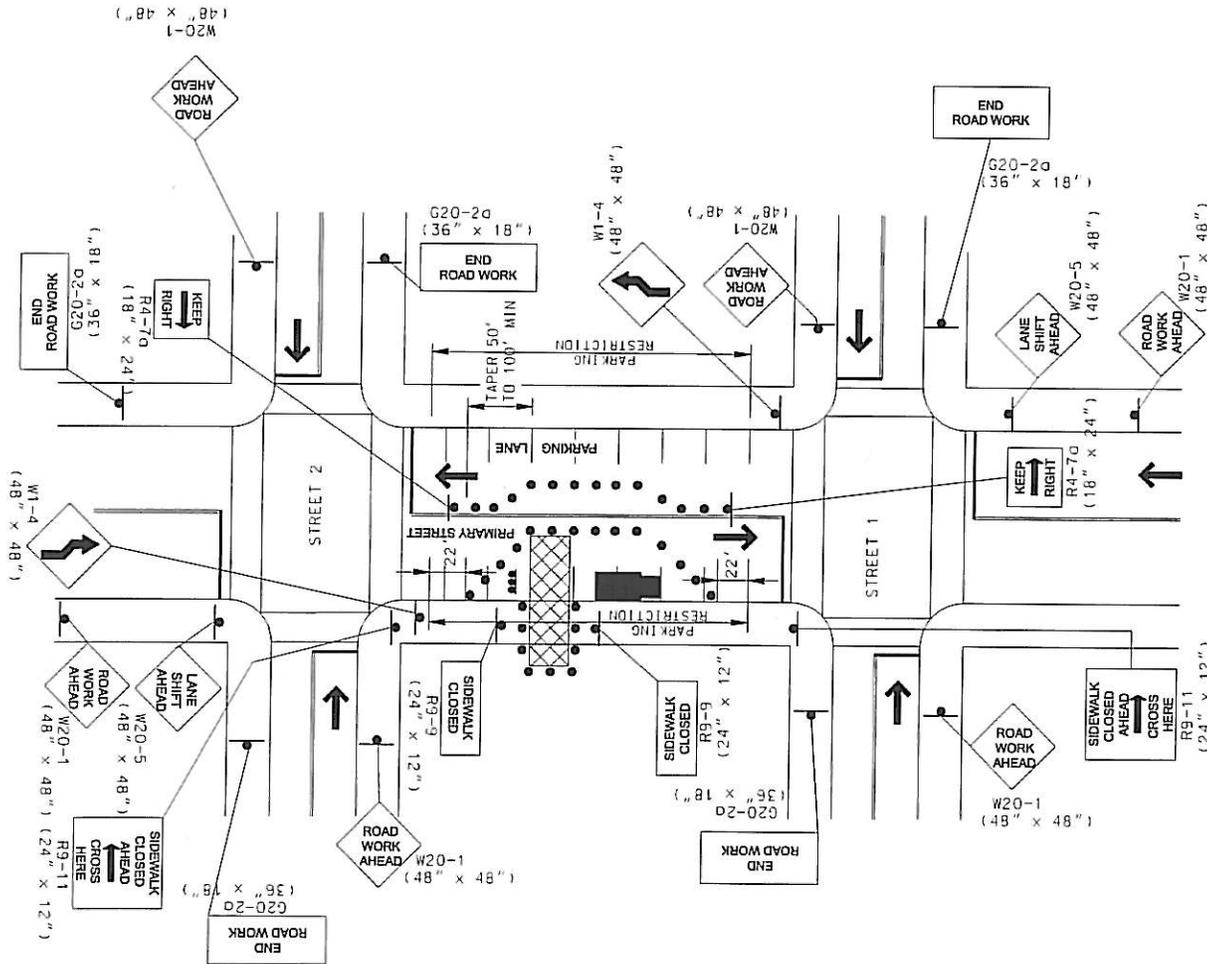
TYPICAL TCP FOR PARKING
LANE CLOSURE

DWG. NO. 616.07

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APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	APPR.
ISSUED:	REVISED
REFERENCE	

11-10-13 (1) Standard drawings / final (16-01) CDM

SEE THE GENERAL NOTES
ON PAGE DWG. 616.00



- LEGEND:**
- ARROW PANEL
 - TRAFFIC DRUMS / CONES
 - WORK SITE
 - SIGN
 - DIRECTION OF TRAFFIC
 - TRUCK MOUNTED ATTENUATOR

RECOMMENDED: *[Signature]*
DEPUTY CHIEF ENGINEER

APPROVED: *[Signature]*
CHIEF TRANSPORTATION ENGINEER

DATE	APPR.	REVISED	ISSUED:	REFERENCE

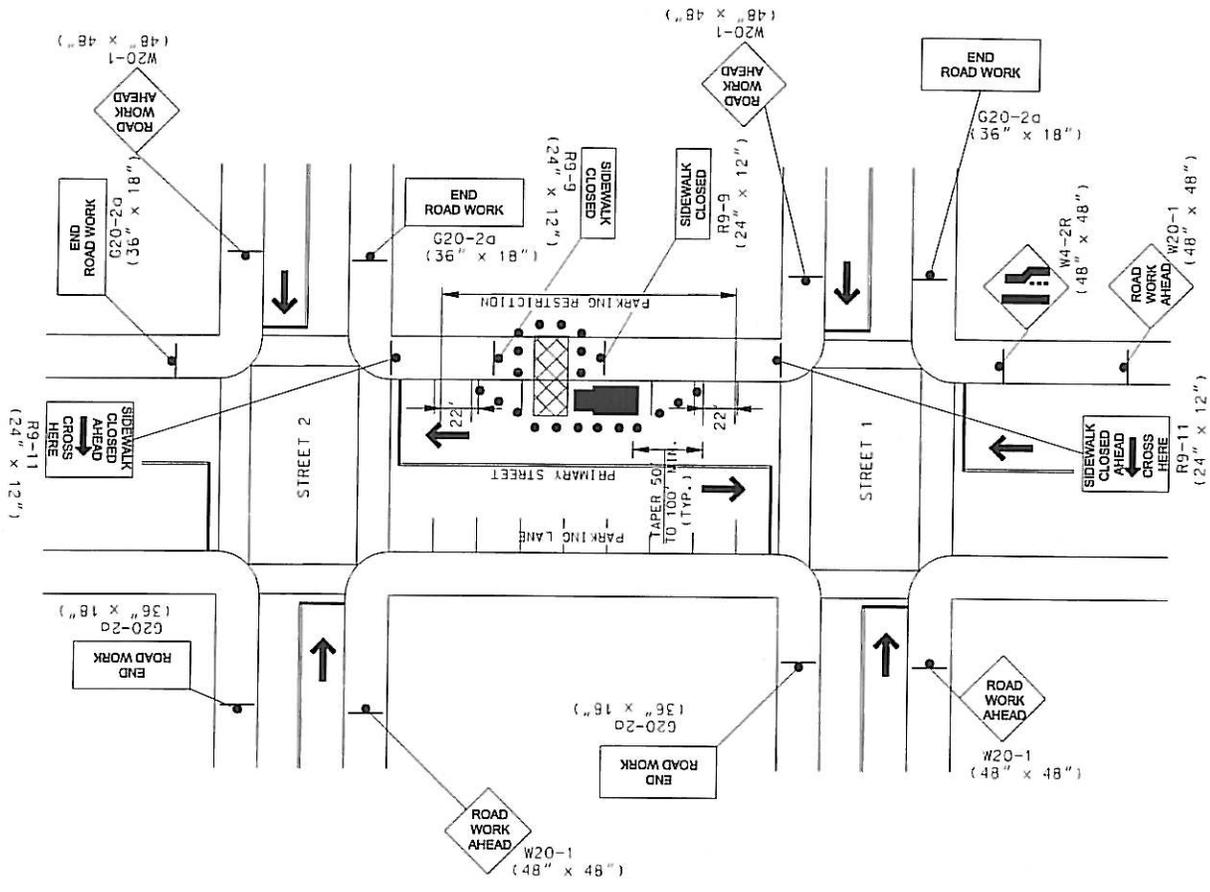
TYPICAL TCP FOR TRAVEL LANE,
PARKING LANE AND
SIDEWALK CLOSURE

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 616.08

FD-1025 (5-05) Standard Symbols from IBE-DOTCA
FD-1025 (Rev. 05-2009) AT 12/09 PL

SEE THE GENERAL NOTES
ON PAGE DWG. 616.00



- LEGEND:**
- TRAFFIC DRUMS / CONES
 - ☒ WORK SITE SIGN
 - ➔ DIRECTION OF TRAFFIC
 - ▬ TRUCK MOUNTED ATTENUATOR

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DATE	ISSUED:
REVISED	REFERENCE
APPR.	

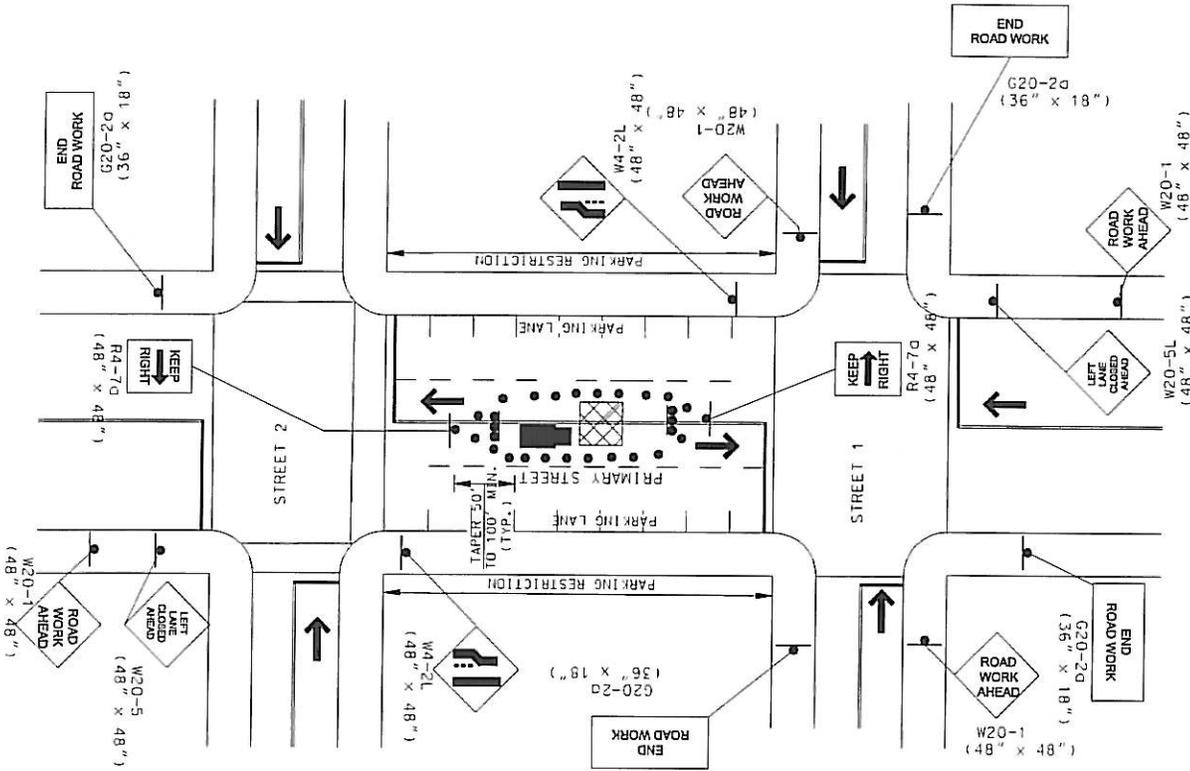
TYPICAL TCP FOR PARKING
LANE/SIDEWALK CLOSURE

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 616.09

61-10315-05 Standard Drawing 03/16/16-05/16
F:\10315-05 Standard Drawing 03/16/16-05/16

SEE THE GENERAL NOTES
ON PAGE DWG. 616.00



- LEGEND:**
- ARROW PANEL
 - TRAFFIC DRUMS / CONES
 - WORK SITE
 - SIGN
 - DIRECTION OF TRAFFIC
 - TRUCK MOUNTED ATTENUATOR

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

TCP FOR INTERIOR LANE
CLOSURE ON MULTI-LANE
TWO WAY STREET

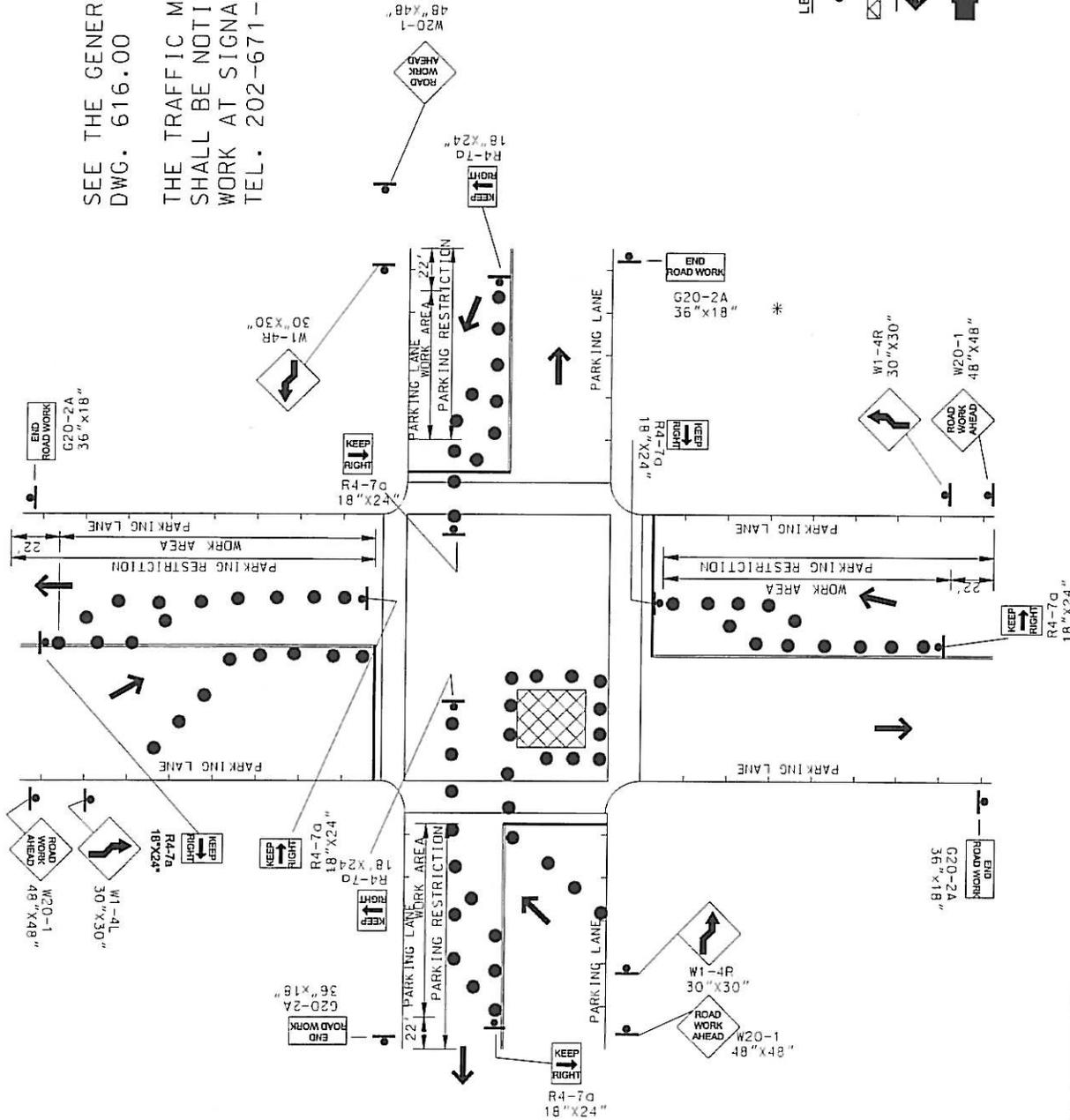
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ISSUED:	
REFERENCE	

PRINTED TO STANDARD GRAPHICS (PLOT) 10/16/2004
Friday, April 03, 2003 11:49 PM

SEE THE GENERAL NOTES ON PAGE
DWG. 616.00

THE TRAFFIC MANAGEMENT CENTER (TMC)
SHALL BE NOTIFIED 48 HRS. PRIOR TO
WORK AT SIGNALIZED INTERSECTIONS.
TEL. 202-671-DDOT (3368)



- LEGEND:**
- TRAFFIC DRUMS / CONES
 - ▣ WORK SITE SIGN
 - ➔ DIRECTION OF TRAFFIC
 - ▬ TRUCK MOUNTED ATTENUATOR

RECOMMENDED:	<i>[Signature]</i> DEPUTY CHIEF ENGINEER
APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	APPR.
REVISED	
ISSUED:	REFERENCE

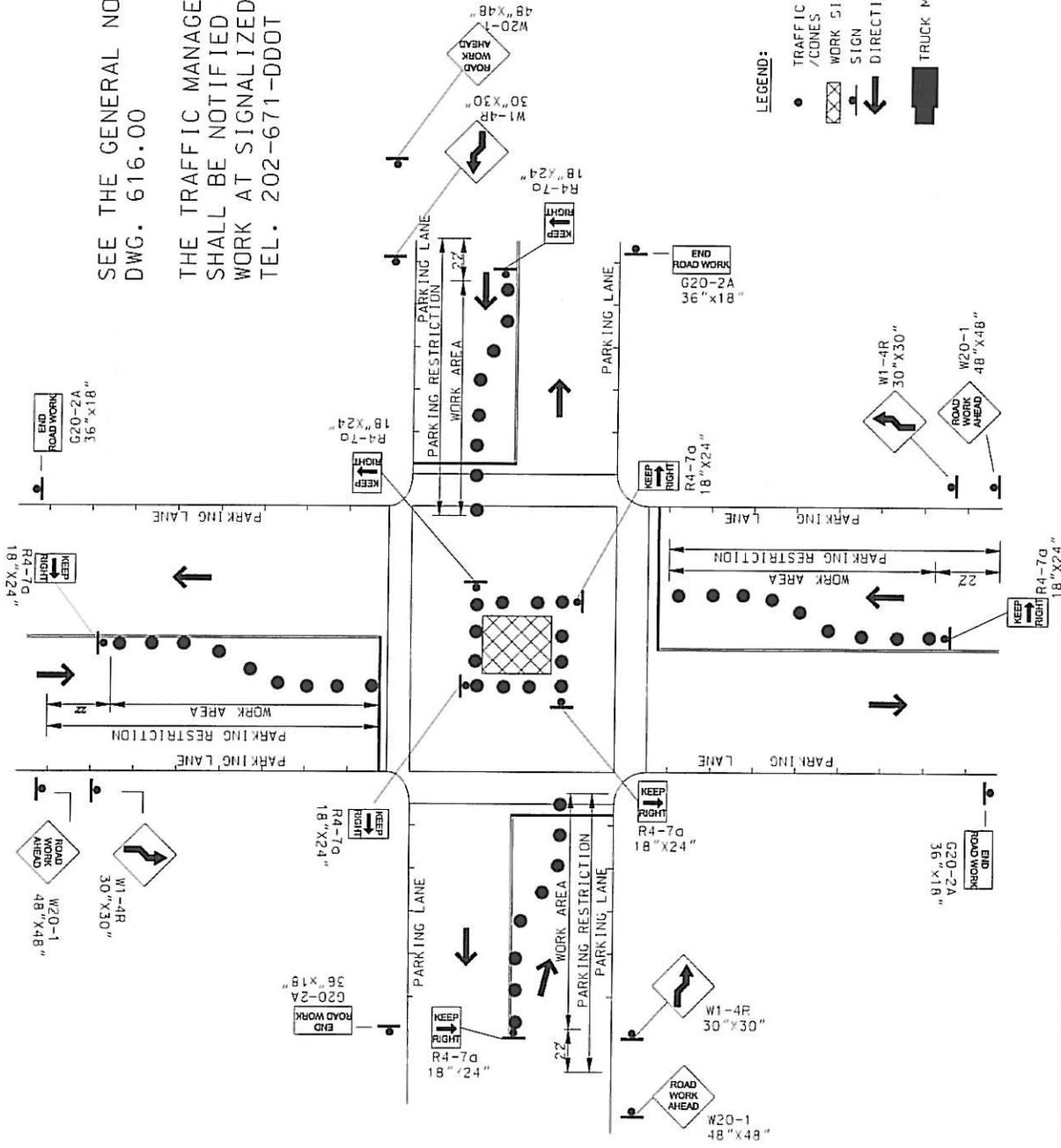
TCP FOR CLOSURE AT
SIDE OF INTERSECTON

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

Printed: 4/27/03, 10:05 AM. 2003 AT 12:20 PM. File: 410751.ctb, 10/16/02

SEE THE GENERAL NOTES ON PAGE
DWG. 616.00

THE TRAFFIC MANAGEMENT CENTER (TMC)
SHALL BE NOTIFIED 48 HRS. PRIOR TO
WORK AT SIGNALIZED INTERSECTIONS.
TEL. 202-671-DDOT (3368)



LEGEND:

- TRAFFIC DRUMS / CONES
- ▣ WORK SITE
- ↔ SIGN
- ⇨ DIRECTION OF TRAFFIC
- ▬ TRUCK MOUNTED ATTENUATOR

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

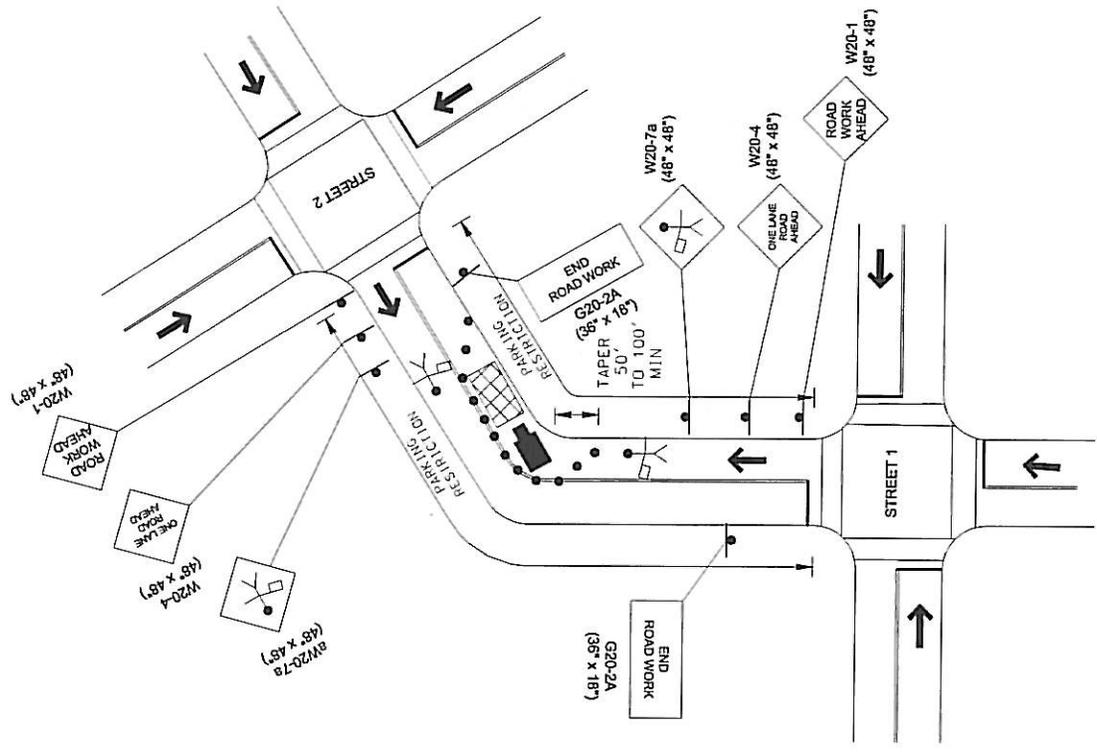
TCP FOR CLOSURE IN
CENTER OF INTERSECTION

DWG. NO. 616.12

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APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	APPR.
REVISED	
ISSUED:	REFERENCE

11-02151-00 11/09/09 07:00:00 AM 11/09/09 07:00:00 AM

SEE THE GENERAL NOTES
 ON PAGE DWG. 616.00



- LEGEND:**
- TRAFFIC DRUMS / CONES
 - ☒ WORK SITE SIGN
 - ➔ DIRECTION OF TRAFFIC
 - ▬ TRUCK MOUNTED ATTENUATOR
 - 🚧 FLAGGER

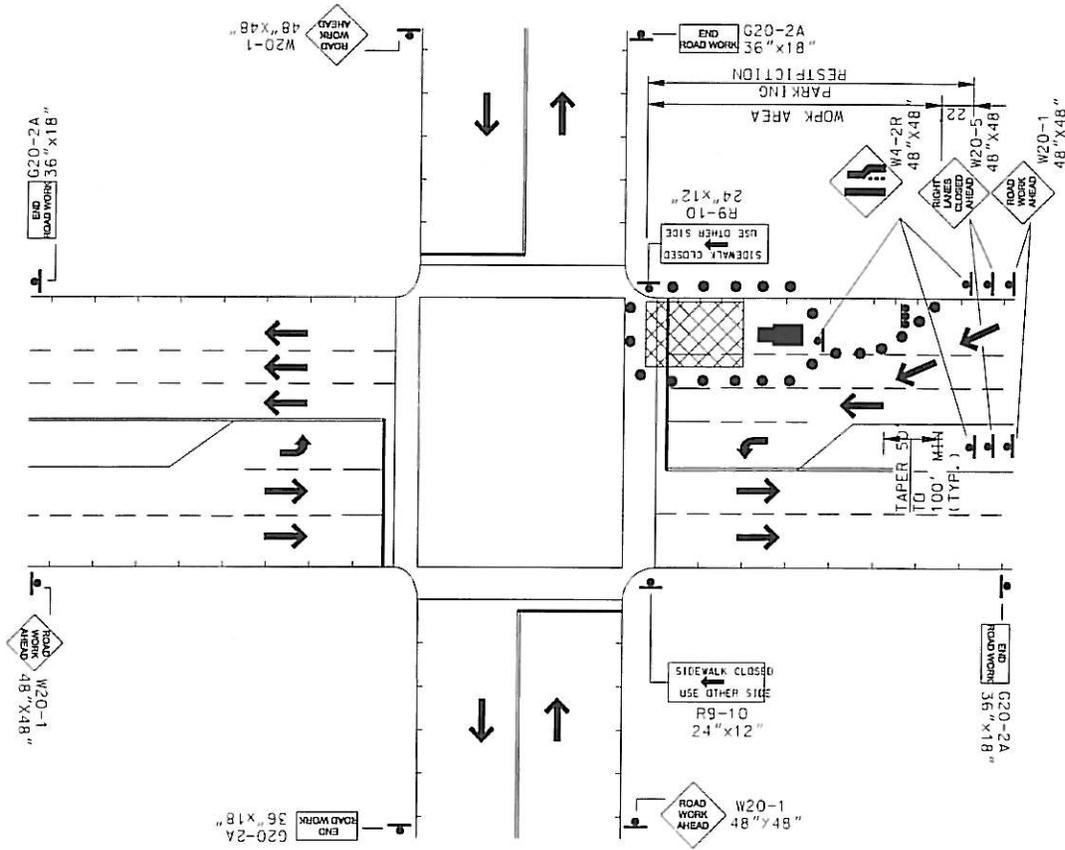
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APPROVED:	<i>[Signature]</i> CHIEF TRANSPORTATION ENGINEER
DATE	APPR.
REVISED	
ISSUED:	
REFERENCE	

TCP FOR LANE CLOSURE ON TWO-WAY ROAD AND NO EXISTING PARKING, WITH FLAGGERS

d. DISTRICT OF COLUMBIA
 DEPARTMENT OF TRANSPORTATION

DWG. NO. 616.13

SEE THE GENERAL NOTES
ON PAGE DWG. 616.00



- LEGEND:**
- ARROW PANEL
 - TRAFFIC DRUMS / CONES
 - WORK SITE
 - SIGN
 - DIRECTION OF TRAFFIC
 - TRUCK MOUNTED ATTENUATOR

RECOMMENDED: *[Signature]*
DEPUTY CHIEF ENGINEER

APPROVED: *[Signature]*
CHIEF TRANSPORTATION ENGINEER

DATE	ISSUED:	REFERENCE

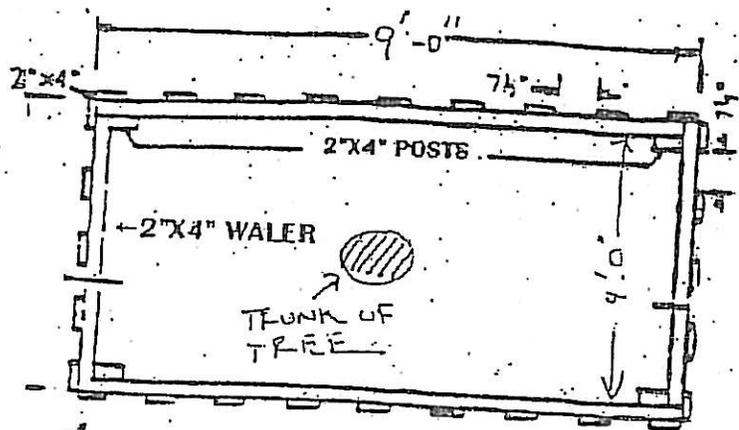
TCP FOR RIGHT LANE CLOSURES
WITH NO PARKING PERMITTED

DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

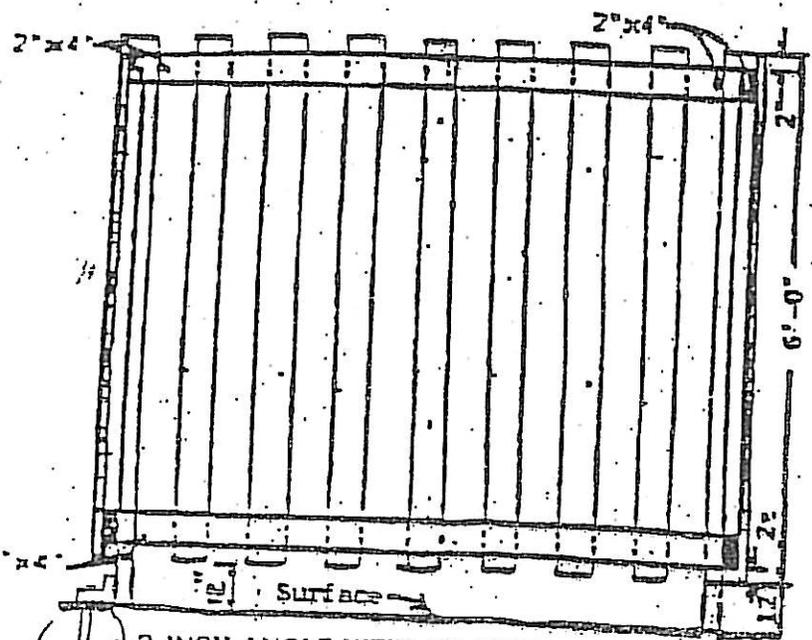
DWG. NO. 616.16

DISTRICT DIVISION OF TRANSPORTATION
TREE AND LANDSCAPE ADMINISTRATION

STANDARD PROTECTION MEASURES FOR
TREES LOCATED IN CONFINED TREE
PITS SURROUNDED BY HARD SURFACE

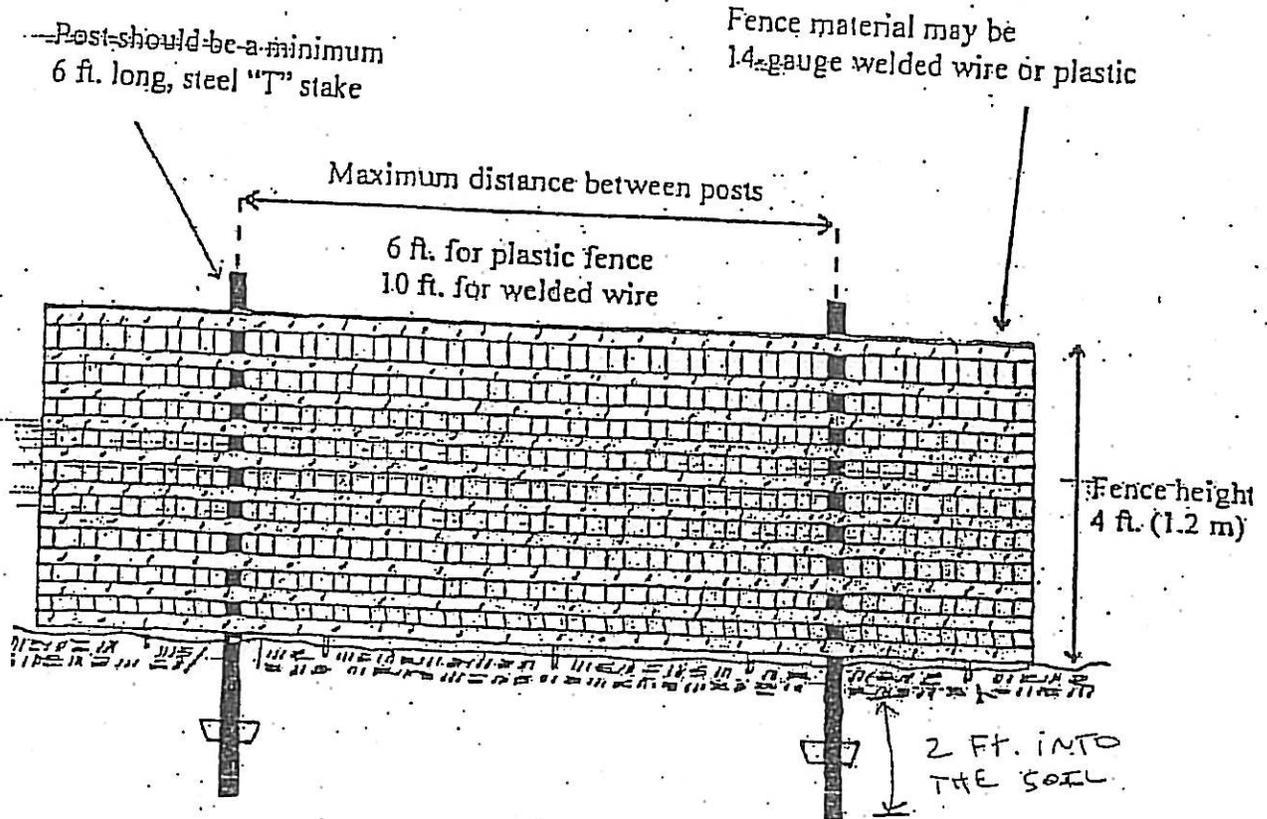


TOP VIEW



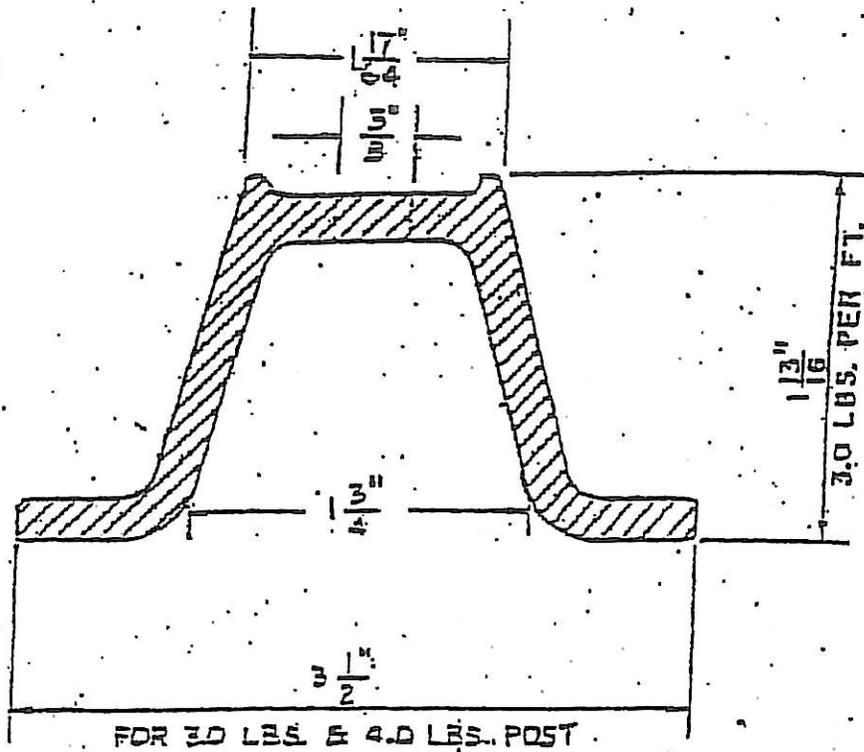
SIDE VIEW

3 INCH ANGLE WITH 12 INCH SPIKE, TYPICAL
OR SURFACE ANCHOR



Note: Tree protection fencing *MUST* be maintained throughout construction

TREE PROTECTION FENCE INSTALLATION DETAIL



NOTE: THE STEEL DRIVE POSTS SHALL BE 12 FEET IN LENGTH AND WEIGH 3 LBS/FT. (BEFORE PUNCHING AND GALVANIZING); POSTS SHALL BE AS MANUFACTURED IN ACCORDANCE WITH ASTM A-499, GRADE 60 WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM A-123.

DETAIL - STEEL DRIVE POST

CHAPTER 6 PARTICULATES

Section

600 Fuel-Burning Particulate Emission
 601 Rotary Cup Burners
 602 Incinerators
 603 Particulate Process Emissions
 604 Open Burning
 605 Control of Fugitive Dust
 606 Visible Emissions
 699 Definitions and Abbreviations
 Appendix 6-1

600 FUEL-BURNING PARTICULATE EMISSION

600.1 The emission of particulate matter from any fuel burning equipment shall not be in excess of the rate determined by the following formula:

$$E = 0.17455 H^{0.23522}$$

Where:

E = Allowable emissions in pounds per million British Thermal Units (BTUs) of heat input; and

H = Heat input to the fuel-burning equipment in millions of BTU per hour;

provided, that:

- (a) Nothing in § 600.1 shall be construed to allow the emission of particulate matter from any fuel-burning equipment in excess of the rate of thirteen hundredths pounds per million (0.13 ppm) BTU of heat input; and
- (b) Nothing herein shall be construed to require the emission of particulate matter from any fuel-burning equipment to be lower than the rate of two-hundredths pounds per million (0.02 ppm) BTU of heat input.

600.2 Compliance with or violation of § 600.1 shall be determined by performance tests conducted when the fuel-burning equipment (from now on referred to as “equipment”) is operating under conditions encountered in normal operation that create the worst emissions in relation to allowable emissions. Tests shall be conducted at the maximum continuous operating capacity of the equipment unless the Mayor has reason to believe that the worst emissions in relation to allowable emissions occur under other conditions.

- 600.3 For equipment equipped for the blowing of soot, the frequency of soot blowing during performance tests shall be proportioned to the frequency of soot blowing during the conditions at which the equipment is tested.
- 600.4 Equipment shall not be specially tuned or optimized immediately before performance testing unless the owner or operator of the equipment represents in writing to the Mayor that the equipment will be maintained in an optimized condition subsequent to performance testing.
- 600.5 The conditions for testing may be modified by the Mayor to suit specified sampling conditions or needs based on good practice, judgment and experience; provided, that no such modification shall have the effect of increasing the stringency of the standard.
- 600.6 When determining compliance with or violation of § 600.1 by performance tests, the test results shall be calculated using the method described in § 60.45(f)(5) of Title 40 CFR, revised as of July 1, 1982.
- 600.7 The blowing of soot from any fuel-burning equipment fired by solid fuels shall be prohibited except during the hours of 10 a.m to 4 p.m.; provided, that the Mayor may allow the blowing of soot during other periods upon a finding that the blowing of soot is desirable for the efficient operation of the fuel-burning equipment or for the safety of personnel or equipment.

AUTHORITY: Unless otherwise noted, the authority for this chapter is § 412 of the District of Columbia Self-Government and Governmental Reorganization Act, as amended, 87 Stat. 790, Pub. L. No. 93-198 codified at D.C. Official Code § 1-204.04(a) (2001); and § 3 of the District of Columbia Air Pollution Control Act of 1984, D.C. Law 5-165 (D.C Act 5-230) codified at D.C. Official Code § 8-101.06 (2001); and Mayor’s Order 93-12 dated February 16, 1993.

SOURCE: Section 3 of the District of Columbia Air Pollution Control Act of 1984, D.C. Law 5-165 (D.C. Act 5-230) published at 32 DCR 565, 607 (February 1, 1985).

601 ROTARY CUP BURNERS

- 601.1 The sale, installation, or use of a rotary cup burner or the replacement of any existing burner with a rotary cup burner shall be prohibited.
- 601.2 The sale for use or use of fuel oil in any rotary cup burner shall be prohibited.

SOURCE: Section 3 of the District of Columbia Air Pollution Control Act of 1984, D.C. Law 5-165 (D.C. Act 5-230) published at 32 DCR 565, 608 (February 1, 1985).

602 INCINERATORS

- 602.1 The use of single chamber and flue-fed incinerators shall be prohibited. No person

shall be permitted to use an incinerator unless it is of multiple chamber design, and is otherwise in compliance with this subtitle.

- 602.2 Operation of any incinerator built after July 7, 1972, shall be prohibited if the incinerator emits more than three hundredths (0.03) grains of particulate matter per dry standard cubic foot of exhaust gas corrected to twelve percent (12%) carbon dioxide, without the contribution of carbon dioxide from auxiliary fuel.
- 602.3 Use of any incinerator which was in existence on July 7, 1972, is prohibited, if the incinerator has a capacity of more than four hundred (400) pounds per hour, or emits more than eight one hundredths (0.08) grains of particulate matter per dry standard cubic foot of exhaust gas corrected to twelve percent (12%) carbon dioxide, without the contribution of carbon dioxide from auxiliary fuel.
- 602.4 The District facility known as Solid Waste Reduction Center No. 1 shall be operated so as not to discharge into the atmosphere particulate matter which is in excess of eight one hundredths (0.08) grains of particulate matter per dry standard cubic foot of exhaust gas corrected to twelve percent (12%) carbon dioxide, without the contribution of carbon dioxide from auxiliary fuel.
- 602.5 No new incinerator shall commence operation except for an incinerator to be operated by or for the District of Columbia Government and except where the Mayor shall find that any other system of waste disposal would endanger the public health. These incinerators shall be subject to § 602.2.
- 602.6 An incinerator shall operate only between the hours of 10 a.m. and 4 p.m. This restriction shall not apply to incinerators with a refuse-burning capacity of five (5) tons per hours or more.

SOURCE: Section 3 of the District of Columbia Air Pollution Control Act of 1984, D.C. Law 5-165, §602, 32 DCR 565, 608 (February 1, 1985).

603 PARTICULATE PROCESS EMISSIONS

- 603.1 The discharge of particulate matter into the atmosphere from any process shall not exceed the emission limits set forth in Appendix 6-1. The allowable limits shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust gas.
- 603.2 Where the process or the design of the equipment permits more than one (1) interpretation of this section, the interpretation that results in the minimum value of allowable emissions shall apply.
- 603.3 Adding diluted air to the exhaust gas stream for the purpose of complying with the provisions of §§ 603.1 through 603.2 shall be prohibited.

SOURCE: Section 3 of the District of Columbia Air Pollution Control Act of 1984, D.C. Law 5-165 (D.C. Act 5-230) published at 32 DCR 565, 609 (February 1, 1985).

604 OPEN BURNING

604.1 Open fires shall be prohibited, except as otherwise provided by § 604.2.

604.2 Open fires may be permitted for one (1) or more of the following reasons or purposes:

- (a) The performance of an official duty by any public health or public safety officer, after notification to the Mayor;
- (b) Prevention of a fire hazard which cannot be abated by other means;
- (c) Instruction of public fire fighters under the supervision of a designated fire marshal;
- (d) Recreational purposes, including the cooking of food for human consumption on other than commercial premises; or
- (e) Providing warmth for construction or other workers by use of Salamander heaters or other heating devices approved by the Mayor.

SOURCE: Section 3 of the District of Columbia Air Pollution Control Act of 1984, D.C. Law 5-165 (D.C. Act 5-230) published at 32 DCR 565, 609 (February 1, 1985).

605 CONTROL OF FUGITIVE DUST

605.1 Reasonable precautions shall be taken to minimize the emission of any fugitive dust into the outdoor atmosphere. The reasonable precautions shall include, but not be limited to, the following:

- (a) In the case of unpaved roads, unpaved roadways, and unpaved parking lots;
 - (1) Use of binders, chemicals, or water in sufficient quantities and at sufficient frequencies to prevent the visible emission of dust due to the movement of vehicles or of the wind; and
 - (2) Prompt clean-up of any dirt, earth, or other material from the vicinity of the road, roadway, or lot which has been transported from the road, roadway, or lot due to anthropogenic activity or due to natural forces.
- (b) In the case of paved roads, paved roadways, and paved parking lots: Maintenance of the road, roadway, lot, or paved shoulder in a reasonably clean condition through reasonably frequent use of water, sweepers, brooms, or other means, through reasonably frequent removal of accumulated dirt

from curb-side gutters, through reasonably prompt repair of pavement, or through any other means;

- (c) In the case of vehicles transporting dusty material or material which is likely to become dusty:
 - (1) Fully covering the material in question, with a tarpaulin or other material; and
 - (2) Operation, maintenance, and loading of the vehicle, distribution of the loaded material on or in the vehicle, and limiting the quantity of material loaded on or in the vehicle, so that there will be no spillage of the material onto the roads;
- (d) In the case of vehicles which accumulate dirt on the wheels, undercarriages, and other parts of the vehicle, due to the movement of the vehicle on dusty, dirty or muddy surfaces: Water washing of all of the dirty parts of the vehicle to thoroughly remove the dirt before or immediately after the vehicle leaves the dusty, dirty, or muddy surface;
- (e) In the case of the demolition of buildings or structures: Use, to the extent possible, of water;
- (f) In the case of removal of demolition debris which is dusty or likely to become dusty: Use of water to thoroughly wet the material before moving or removing the material and keeping it wet or otherwise in a dust-free condition until eventual disposal;
- (g) In the case of loading and unloading of dusty material and in the case where dry sand-blasting or dry abrasive cleaning is necessary: Use of enclosed areas or hoods, vents, and fabric filters. If it is shown to the satisfaction of the Mayor that use of enclosed areas, hoods, vents, and fabric filters is not possible, alternate control techniques acceptable to the Mayor and designed to minimize the emissions to the extent possible shall be utilized; and
- (h) In the case of stockpiles of dusty material: Use, where possible, of closed silos, closed bins or other enclosures which are adequately vented to fabric filters. Where the use of closed silos, closed bins, or other enclosures is not possible, thorough wetting of the material before loading onto the stockpile and keeping the stockpile wetted, covered, or otherwise in a non-dusty condition.

605.2

The emission of fugitive dust from the following is prohibited:

- (a) Any material handling, screening, crushing, grinding, conveying, mixing, or other industrial-type operation or process;

- (b) Heater-planers in repairing asphaltic concrete pavements;
- (c) Portable tar-melters, unless close-fitting lids, in good repair, for the tar-pots are available and are used;
- (d) The ventilation of any tunnelling operation; or
- (e) The cleaning of exposed surfaces through the use of compressed gases.

605.3 All persons shall comply with the provisions of this section and those of the Soil Erosion and Sedimentation Control Act of 1977 (D.C. Law 2-23).

605.4 In those circumstances where it is not possible to comply with specific provisions of both this section and the Soil Erosion and Sedimentation Control Act of 1977 (D.C. Law 2-23), the provisions of the Soil Erosion and Sedimentation Control Act of 1977 (D.C. Law 2-23), shall prevail.

SOURCE: Section 3 of the District of Columbia Air Pollution Control Act of 1984, D.C. Law 5-165 (D.C. Act 5-230) published at 32 DCR 565, 610 (February 1, 1985).

606 VISIBLE EMISSIONS

606.1 Except as otherwise provided in this subtitle, visible emissions shall not be emitted into the outdoor atmosphere from stationary sources (excluding fuel-burning equipment placed in initial operation before January 1, 1977); provided, that discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two (2) minutes in any sixty (60) minute period and for an aggregate of twelve (12) minutes in any twenty-four hour (24 hr.) period during start-up, cleaning, soot blowing, adjustment of combustion controls, or malfunction of equipment.

606.2 Except as otherwise provided in this subtitle, visible emissions whose opacity is in excess of ten percent (10%) (unaveraged), at any time shall not be emitted into the outdoor atmosphere, from any fuel-burning equipment placed in initial operation before January 1, 1977; provided, that:

- (a) Opacity not in excess of forty percent (40%) (unaveraged) shall be permitted for two (2) minutes in any sixty (60) minute period and for an aggregate of twelve (12) minutes in any twenty-four hour (24 hr.) period other than during start-up of equipment;
- (b) During start-up of equipment, opacity not in excess of forty percent (40%) (averaged over six (6) minutes) shall be permitted for an aggregate of five (5) times per start-up; and
- (c) In addition to the emissions permitted under § 606.2(a), during shutdown of equipment, opacity not in excess of fifteen percent (15%) (unaveraged) shall

be allowed and in addition, opacity not in excess of thirty percent (30%) (averaged over three (3) minutes) shall be permitted for an aggregate of three (3) times per shutdown.

- 606.3 At all times, including periods of start-up and malfunction, owners and operators of stationary sources and fuel-burning equipment shall, to the extent practicable, maintain and operate stationary sources and fuel-burning equipment, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.
- 606.4 Violation of standards set forth in this section, as a result of unavoidable malfunction, despite the conscientious employment of control practices, shall constitute an affirmative defense on which the discharger shall bear the burden of proof. Periods of malfunction shall cease to be unavoidable malfunctions if reasonable steps are not taken to eliminate the malfunction within a reasonable time.
- 606.5 Owners and operators of stationary sources and fuel-burning equipment shall ensure that persons actually participating in the maintenance and operation of sources and equipment are adequately trained and supervised so as to minimize the production of emissions during operation.
- 606.6 Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of this section, this section shall not be applicable.
- 606.7 The provisions of this section shall not apply to visible emissions from interior fire places, or from sources set forth in § 604.2, or when steam is used to blow oil from a burner as the last phase of shutting down the burner.
- 606.8 Whoever shall violate any provision of this section shall suffer the criminal sanctions prescribed in § 105; provided, that, where the violation is shown by the discharger to be the result of simple negligence, no criminal sanction other than a fine not exceeding one thousand dollars (\$1,000) and not less than one hundred dollars (\$100) shall be imposed.
- 606.9 In the event of any violation of, or failure to comply with, this section, each day of the violation or failure shall constitute a separate offense and the penalties described shall be applicable to each separate offense. As used in this section, simple negligence does not include the following:
- (a) Willful and wanton actions leading to violations of the requirements of this section; and
 - (b) An extreme want of care and regard or an indifference for the duty to comply with the requirements of this section.

SOURCE: Section 3 of the District of Columbia Air Pollution Control Act of 1984, D.C. Law 5-165 (D.C. Act 5-230) published at 32 DCR 565, 612 (February 1, 1985).

699 **DEFINITIONS AND ABBREVIATIONS**

699.1 The meanings ascribed to the definitions and abbreviations appearing in §§ 199.1 and 199.2 respectively of Chapter 1 shall apply to the terms and abbreviations in this chapter.

SOURCE: Section 3 of the District of Columbia Air Pollution Control Act of 1984, D.C. Law 5-165 (D.C. Act 5-230) published at 32 DCR 565, 614 (February 1, 1985).

APPENDIX 6-1

Process Weight* Per Hour in Pounds	Process Maximum Weight of Parti- culate Discharge Per Hour in Pounds	Process Weight* Per Hour in Pounds	Process Maximum Weight of Parti- culate Discharge Per Hour in Pounds
50	.24	3000	5.10
100	.46	3100	5.18
150	.66	3200	5.27
200	.85	3300	5.36
250	1.03	3400	5.44
300	1.20	3500	5.52
350	1.35	3600	5.61
400	1.50	3700	5.69
450	1.63	3800	5.77
500	1.77	3900	5.85
550	1.89	4000	5.93
600	2.01	4100	6.01
650	2.12	4200	6.08
700	2.24	4300	6.15
750	2.34	4400	6.22
800	2.43	4500	6.30
850	2.53	4600	6.37
900	2.62	4700	6.45
950	2.72	4800	6.52
1000	2.80	4900	6.60
1100	2.97	5000	6.67
1200	3.12	5500	7.03
1300	3.26	6000	7.37
1400	3.40	6500	7.71
1500	3.54	7000	8.05
1600	3.66	7500	8.39
1700	3.79	8000	8.71
1800	3.91	8500	9.03
1900	4.03	9000	9.36
2000	4.14	9500	9.67
2100	4.24	10000	10.00
2200	4.34	11000	10.63
2300	4.44	12000	11.28

Appendix 6-1 (Continued)

Process Weight* Per Hour in Per Pounds	Process Maximum Weight of Parti- culate Discharge Per Hour in Pounds	Process Weight* Per Hour in Per Pound	Process Maximum Weight of Parti- culate Discharge Per Hour in Pounds
2400	4.55	13000	11.89
2500	4.64	14000	12.50
2600	4.74	15000	13.13
2700	4.84	16000	13.74
2800	4.92	17000	14.36
2900	5.02	18000	14.97
19000	15.58	50000	34.30
20000	16.19	60000	40.00
30000	22.22	or more	
40000	28.30		

*Where the process weight per hour falls between two (2) values in the table, the maximum weight per hour shall be determined by linear interpolation.

SOURCE: Section 3 of the District of Columbia Air Pollution Control Act of 1984, D.C. Law 5-165 (D.C. Act 5-230) published at 32 DCR 565, 650-51 (February 1, 1985).

TITLE 20

DISTRICT OF COLUMBIA MUNICIPAL REGULATION

CHAPTER 7 (NOT INCLUDED HEREIN)

Chapter 7 information can be obtained from the internet at:

<http://ddoe.dc.gov/publication/dcmr-title-20-air-pollution-control-act-1984>

APPENDIX A - - SPECIAL PROVISIONS

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES

1. General

- a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract Provisions (FHWA -1273 or 1316, as appropriate) and these Special Provisions which are imposed pursuant to Section 140 of Title 23, U.S.C., as established by Section 22 of the Federal-Aid Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions.
- b. The Contractor will work with the State highway agencies and the Federal Government in carrying out equal employment opportunity obligations and in the review of his/her activities under the contract.
- c. The Contractor and all his/her subcontractors holding subcontracts not including material suppliers, of \$10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal employment requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors). The Contractor will include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make then binding on the subcontractor.

2. **Equal Employment Opportunity Policy.** The Contractor will accept as his/her operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color or national origin. Such action shall include: employment, upgrading, demotion or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training.

3. **Equal Employment Opportunity Officer.** The Contractor will designate and make known to the State highway agency contracting officers and equal employment opportunity officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. **Dissemination of Policy.**

- a. All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees or who recommend such action or who are substantially involve in such action, will be made fully cognizant of, and will implement, the Contractor's equal employment in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
 - (1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the Contractor's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.
 - (2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official, covering all major aspects of the Contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the Contractor.
 - (3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the Contractor's procedures for locating and hiring minority group employees.
- b. In order to make the Contractor's equal employment opportunity policy know to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the Contractor will take the following actions:
 - (1) Notices and posters setting forth the Contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
 - (2) The Contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbook, and other appropriate means.

5. **Recruitment**

- a. When advertising for employees, the Contractor will include all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.
- b. The Contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including, but not limited to, State employment agencies, schools, colleges and minority group organizations. To meet this requirement, the Contractor will, through his EEO

Officer, identify sources of potential minority group applicants may be referred to the Contractor for employment consideration.

In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with equal employment opportunity contract provisions. (The US Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the Contractors to do the same, such implementation violates Executive Order 11246, as amended).

- c. The Contractor will encourage his present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants will be discussed with employees.

6. **Personnel Actions.** Wages, working conditions, and employee benefits shall be established and administered and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex or national origin. The following procedures shall be followed:

- a. The Contractor will conduct periodic inspections of project sites to ensure that working conditions and employees facilities do not indicate discriminatory treatment of project site personnel.
- b. The Contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The Contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The Contractor will promptly investigate all complaints of alleged discrimination made to the Contractor in connection with his obligations under this contract, will attempt to resolve such some complaints, and will take appropriate corrective action within a persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the Contractor will inform every complainant of all of his avenues of appeal.

7. **Training and Promotion.**

- a. The Contractor will assist in locating, qualifying and increasing the skills of minority group and women employees, and applicants for employment.
- b. Consistent with the Contractor's work force requirements and as permissible under Federal and State regulations, the Contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25% of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event the Training Special Provision is provided under this contract, this subparagraph will be superseded as indicated in Attachment 2.

- c. The Contractor will advise employees and applicants for employment of available training programs and entrance requirements of each.
 - d. The Contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employee to apply for such training and promotion.
8. Unions. If the Contractor relies in whole or in part upon unions as a source of employees, the Contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the Contractor either directly or through a Contractor's association acting as agent will include the procedures set forth below:
- a. The Contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
 - b. The Contractor will use best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex or national origin.
 - c. The Contractor is to obtain information as to the referral practices and policies of the labor union except that the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the Contractor, the Contractor shall so certify to the State highway department and shall set forth what efforts have been made to obtain such information.
 - d. In the event the union is unable to provide the Contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the Contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex or national origin; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The US Department of Labor has held that it shall be no excuse that for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such Contractor shall immediately notify the State highway agency.
9. **Subcontracting.**
- a. The Contractor will use his best efforts to solicit bids from and to utilize minority group subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of minority-owned construction firms from State highway agency personnel.
 - b. The Contractor will use his best efforts to ensure subcontractor compliance with their equal employment opportunity obligations.

10. **Records and receipts.**

- a. The Contractor will keep such records as are necessary to determine compliance with the Contractor's equal employment opportunity obligations. The records kept by the Contractor will be designed to indicate.
 - (1) The number of minority and non-minority group members and women employed in each work classification on the project.
 - (2) The progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to Contractors who rely in whole or in part on unions as a source of their workforce).
 - (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and
 - (4) The progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority and female representation among their employees.
- b. All such records must be retained for period of three (3) years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State highway agency and the Federal Highway Administration.
- c. The Contractors will submit an annual report to the State highway agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required on-the-job training is being required by "Training Special Provision", the Contractor will be required to furnish Form FHWA 1409.

(40 FR 28053, July 3, 1975, as amended at 43 FR 19386, May 5, 1978. Correctly redesignated at 46 FR 21156, April 9, 1981.)

Revised 8/88

APPENDIX B - - TRAINING SPECIAL PROVISIONS

This Training Special Provision supersedes subparagraph 7b of the Special Provision entitled Specific Equal Employment Opportunity Responsibilities, (Appendix A), and is in implementation of 23 U.S.C. 140(a).

As part of the Contractors equal employment opportunity affirmative action program training shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeyworkers in the type of trade or job classification involved.

The number of trainees to be trained under the special provision will be 4.

In the event that a Contractor subcontracts a portion of the contract work, he/she shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided, however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also ensure that this training special provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractors needs and the availability of journeyworkers in the various classifications with a reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the State highway agency for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee employed by him/her on the contract work that is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyworker status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that he/she has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employee as a trainee in any classification in which he/she has successfully completed a training course leading to journeyworker status or in which he/she has been employed as a journeyworker. The Contractors should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the State highway agency and the Federal Highway Administration. The State highway agency and the Federal Highway Administration shall approve a program if is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for

journeyworker status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the US Department of Labor, Bureau of Apprenticeship and Training or with a State Apprenticeship Agency recognized by the Bureau and Training programs approved but not necessarily sponsored by the US Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the division office. Some off-site training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

The Contractor will be reimbursed in the amount indicated in the unit price column of the Pay Item Schedule in the Bid Form and Proposals for each hour of training given an employee on this contract in accordance with an approved training program. As verified by the engineer, reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for off-site training indicated above may only be made to the Contractor where he/she does one or more of following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainees wages during the off-site training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyworker, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee will begin his/her training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his/her work classifications or until he/she has completed his training program. It is not required that all trainees be on board for the entire length of the contract. A Contractor will have fulfilled his/her responsibilities under this Training Special Provision if he/she has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyworkers rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Department of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he/she will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The Contractor will provide for the maintenance of records and furnish period reports documenting his/her performance under this Training Special Provision.

(40 FR 28053, July 3, 1975. Correctly redesignated at 46 FR 21156, April 9, 1981.)

Revised 8/88

SECTION 01 78 42
AS-BUILT DRAWINGS

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section covers the requirements for drawings containing information on infrastructure in the constructed or “as-built” state.
- B. As-built Drawings are an official record of the project at the time of construction completion. The original “as-designed” contract drawings are modified to show all additions, deletions and substantial deviations made during construction.
- C. Location and elevation information is field verified and drawings are corrected to match as-built conditions to the accuracy identified in item C. 31 below.
- D. As-built Drawings shall be prepared and certified by an authorized officer of the construction firm.

1.2 RELATED DOCUMENTS

- A. Drawings and Special Provisions and General Requirements of the Contract and other Division 1 Specifications Sections, apply to this section.
- B. DC Water CADD Manual.

1.3 RELATED SECTIONS: Specified elsewhere but not limited to:

- 1. Submittals: Section 01 33 00.
- 2. Project Close Out: Section 01 77 00.

1.4 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Contractor shall maintain at the site, for t DC Water, one (1) record copy of prints of drawings including delineated "As-built" modifications
- B. Store Contract Documents and samples in Contractor's field office apart from documents used for construction.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide secure storage space for storage of samples.
- C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- D. Within 1 day's notice, during the course of the work, current as-builts shall be made available for inspection by DC Water.

1.5 RECORDING "AS-BUILT" MODIFICATIONS

- A. Label each document "AS-BUILT" in neat, large printed letters.

- B. Record information concurrently with construction progress.
1. Do not conceal any work until required information is recorded.
 2. Accurately record information in an understandable drawing technique.
 3. Mark Record Prints to show the actual installation where installation varies from that shown originally.
- C. Drawings shall be: .
1. Legibly marked to record all deviations to current Contract Documents showing actual construction.
 2. Accurately record information in an acceptable drawing technique as stated in DC Water CADD Manual.
 3. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 4. Depths of various elements of foundation in relation to finish first floor datum.
 5. Dimensional changes to Drawings.
 6. The location and dimensions of any major changes within a building structure.
 7. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.
 8. The topography, invert elevations and grades of drainage installed or affected by the project.
 9. Actual location of anchors, construction and control joints, etc. in concrete.
 10. Unusual or uncharted obstructions that are encountered in the contract work area during construction.
 11. Horizontal and vertical location, kinds and sizes of all existing and new underground utilities and appurtenances, referenced to permanent surface improvements.
 12. Measurements shall be shown for all underground utilities change of direction points and all surface or underground components such as valves, bends, manholes, drop inlets, clean outs, wyes, corporation stops, curb stops, inlets, thrust blocks, hydrants, PRV, pipe slope and distances, pressure relief valves, air release valves, fittings, etc.
 13. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 14. Data required for casing pipes: Location, type, material and size
 15. Data station on each water tap and sewer tap: : Location, type (Corp. stop if water wye branch, thimble, z-strap insertion, etc. if sewer) material, diameter, installation

date, DC Water standard tap cards should be used to report this data where applicable.

16. Data required for valves: date set, valve type, size, material, position (open-closed) depth to top of operating nut, manufacturer, number of turns to open, direction of opening, main stem position (horizontal-vertical), operator type if offset or gear reducer, purpose/function (side stop, isolation, blow off, etc) and joint types.
17. Data required for hydrants: date set, manufacturer, depth of bury, distances between main and valve, distance between valve and hydrant and face of curb.
18. Data on manholes, inlets, etc.: rim and invert in and out elevations, diameter of manhole and inlet dimensions, materials of construction (poured in place conc. pre-cast conc., brick, other).
19. Data on gravity pipeline: date installed, slope (determined from end of pipe to end of pipe), size of pipe, pipe material, nominal diameter, pipe class, type of joints, manufacturer. The manhole at the lowest elevation will be station 0+00.
20. Location of underground utilities and appurtenances shall be shown by dimensioning along the utility run from a reference point and by offset dimensions to two permanently fixed surface features, the end of each run including each change in direction.
21. Mark important additional information that was either shown schematically or omitted from original Drawings.
22. Show the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
23. Changes made by addenda. Addenda number shall be noted.
24. Field changes of dimension and detail. Field Order Number shall be noted.
25. Changes made by field order or by change order. Change Order Number shall be noted.
26. Correct dimensions and details transferred from shop drawings.
27. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.
28. Record information on the Work that is shown only schematically.
29. Datum: All plans shall be accurately located in Maryland state plane coordinates. And with datum reference:
 - a. NAD 83 Horizontal
 - b. NAVD 88 Vertical corrected to District Datum or show local conversion to District Datum.

30. Details not on original Contract Drawings.
- a. Record the name of manufacturer, supplier, installer, and other information necessary to provide a record of selections made.
 - b. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
 - c. Layout and schematic drawings of electrical circuits and piping.
31. As-Built Survey Construction Tolerances:
- a. Contractor shall provide measurements and elevations of the following construction elements to within the stated tolerance. Note: All tolerance are plus or minus.

(1)	Manhole Rim	0.10	ft
(2)	Manhole Inverts	0.05	ft
(3)	Inlet-catch basin Rim	0.10	ft
(4)	Inlet-catch basin Invert	0.05	ft
(5)	Gravity Sewer Slope	0.02	%
(6)	Gravity Pipe Location	1.00	ft
(7)	Manhole Location	0.50	ft
(8)	Inlet Location	1.00	ft
(9)	Fire Hydrant Location	1.00	ft
(10)	Valve Location	1.00	ft
(11)	Valve Depth	0.10	ft
(12)	Fitting Locations	0.50	ft
(13)	Fitting Depths	0.10	ft
(14)	Offsets	0.50	ft
(15)	Wye Location	1.00	ft
(16)	Wye Depth	0.50	ft
(17)	Corporation Stop Location	1.00	ft
(18)	Corporation Stop Depth	0.50	ft
(19)	Meter location	1.00	ft
(20)	Blow Off Assembly location	1.00	ft
(21)	PRV location	1.00	ft

(22)	Air Release Pit location	1.00	ft
(23)	Pressure Pipe Location	1.00	ft
(24)	Pressure Pipe Depth	0.50	ft
(25)	Structure – Elevations	0.10	ft
(26)	Structure – Dimensions	0.10	ft

1.6 ELECTRICAL AS BUILT DRAWINGS

- A. “As Built” wiring and interconnection drawings shall be provided for all field installed and applied wiring as part of the Contract for all electrically powered devices.
- B. These drawings shall be supplied in addition to the wiring and interconnection diagrams specified and required in the individual sections of the technical sections.
- C. The drawings shall illustrate electrical control devices, instruments and systems, and all instrumentation and/or control system.
- D. Information on the drawings shall contain sufficient data and be presented in a format, which permits tracing of wires and trouble shooting on all electrically powered and controlled equipment, independent o any other document or drawing.
- E. Information shall be provided for any pneumatically or hydraulically controlled systems, and shall include interconnection drawings serving functions similar to that of electrical equipment and devices.
- F. Information presented, such as connections, terminations, conduit or wire-way members, junction box numbers, terminal block identification, terminal numbers, wire numbers, reference to manuals, etc. shall be verified in the field prior to submission of the drawings.
- G. In addition, references shall be made to the internal wiring of on-field wired devices such as the termination at prefabricated panels, control devices, control stations for electrical and electronic equipment.
- H. These references shall include the terminal block number and/or the device identification, the drawing number of the referenced item and the service or Operation & Maintenance Manual identification in which the drawing is contained. If the connection of a conductor is shown on more than one drawing, the reference shall include all drawing numbers.

1.7 RECORD PRODUCT DATA

- A. Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
- B. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
- C. Include significant changes in the product delivered to Project site and changes in manufacturer’s written instructions for installation.

1.8 CERTIFICATION

- A. Certify as a part of each application for payment that project as-built are current at time application is submitted.
- B. Certification Statement: The following certification shall be placed on the cover sheet of the project drawing set and signed by a District of Columbia registered Professional Civil Engineer or Professional Land Surveyor:

“I certify that these as-builts are accurate and that all information provided is field-verified as-built information and are correct to with the tolerances specified and substantial conformity with the Project Manual.

Date: _____ Name: _____
(Seal) Signed: _____”

PART 2 – PRODUCTS

(Not Applicable)

PART 3 – EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording:
 - 1. Maintain one (1) copy of each submittal during the construction period for Project As-built (Redlined) purposes.
 - 2. Post changes and modifications to Project As-built (Redlined Drawings) as they occur; do not wait until the end of the Project.
- B. Maintenance:
 - 1. Store As-built apart from the Contract Documents used for construction.
 - 2. Do not use As-built for construction purposes.
 - 3. Maintain As-built in good order and in a clean, dry, legible condition, protected from deterioration and loss.
 - 4. Provide access to Project As-built for DC Water’s reference during normal working hours.

3.2 FINAL “AS-BUILTS”

- A. Contractor will transfer the changes on the redlined drawings to the original electronic CADD files.
- B. DC Water shall provide a CD in AutoCAD DWG format for the Contractor’s use for DC Water construction projects. However, if as-built drawings are being prepared for non-DC Water funded work (i.e. developer projects, DDOT projects, etc.) DC Water will not be able to provide the base information.

- C. Contractor shall use standard professional engineering drafting practices in correcting the original electronic CADD drawings to show the as-built information.
- D. All changes shall be made in model space at 1:1 scale.
- E. In general, the letter styles, line thickness, and scale will be the same as the original drawings unless stated otherwise.
- F. When changes are required on small-scale drawings and in restricted areas; large-scale inserts to be drawn with leaders to the location where applicable.
- G. Add and denote in legend, any additional equipment or material facilities, service lines, utilities lines, etc. incorporated under As-built if not already shown in legend.
- H. Use written explanations on As-built to describe changes. Do not rely totally on graphic means to convey the revision.
- I. Whenever a revision is made, make changes to affect related section views, details, legends, profiles, plans and elevation views, schedules, notes and call-out designations to avoid conflicting data on all other sheets.
- J. Legibility of lettering and digit values shall be precise and clear when making changes and clarify ambiguities concerning the nature and application of change involved.
- K. CADD Standards: File Naming Convention, layer, etc. shall be to DC Water CADD Manual Standards unless otherwise noted.
- L. All As-built "Triangle" changes shall be on a separate single layer as stated in DC Water CADD Manual.
- M. Revision Block:
 - 1. Those sheets, which have no changes, will only be labeled "AS-BUILTS" as described above.
 - 2. Those sheets which have changes shown on them will have the label "AS-BUILTS" as described above and will have "REVISED AS-BUILTS" entered in the first available space in the Revision Block. This will be revision one and a number 1 will be entered in the triangle as described. In the event the sheet has already been revised and a number and revision appear in the revision line; the next sequential number will be used.
- N. Place an equilateral triangle (3/8" per side) near the area revised for all changes with the revision number inserted in the center of the triangle. One triangle may be placed near the table or detail title where several items in a table or detail are changed or completely redrawn.

3.3 SUBMITTAL: "AS-BUILTS" DOCUMENTS

- A. At "Beneficial Occupancy" or with the Substantial Completion Inspection request, the Contractor shall submit marked-up Record Prints to the DC Water. Certify to their accuracy and completion. All modifications clearly marked for identification
- B. Within ten (10) days of the Substantial Completion Inspection; Contract shall submit the electronic As-built CDs to DC Water.

- C. Contractor to provide two (2) sets of security protected format digital media (CD or DVD disk); one full set in .pdf format and one full set in .dwg CAD format.
- D. As-built must be submitted and approved by DC Water prior to acceptance of the improvement and prior to final payment to the Contractor,

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Work will not be measured separately for payment.

4.02 PAYMENT

- A. The cost thereof, including incidental work and materials, will be included as part of the lump sum of the project.

~ END OF SECTION 01 78 42 ~

**PARTICIPATION BY DISADVANTAGED BUSINESS ENTERPRISE AND
NON-DISADVANTAGED BUSINESS ENTERPRISE FIRMS**

Policy: It is the policy of the Department of Transportation (DOT) that Disadvantaged Business Enterprises (DBE's) as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this agreement. Consequently, the DBE requirements of 49 CFR Part 26 applies to this agreement.

DBE Obligation: The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and Administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Definitions - The following definitions apply to this contract:

- A. "Disadvantaged business" means a small business concern, (a) which is at least fifty-one percent (51%) owned by one or more socially and economically disadvantaged individuals or in the case of any publicly owned business, at least fifty-one percent (51%) of the stock of which is owned by one or more socially and economically disadvantaged individuals; and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.
- B. "Small business concern" means a small business as defined pursuant to Section (3) of the Small Business Act, as amended, including all applicable and relevant rules and regulations promulgated pursuant thereto.
- C. "Socially and economically disadvantaged individuals" means those individuals who are citizens of the United States (or lawfully admitted permanent residents) and who are:
 - (1) "Black Americans", which includes persons having origins in any of the Black racial groups of Africa;
 - (2) "Hispanic Americans", which includes persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - (3) "Native Americans", which includes persons who are American Indian, Eskimos, Aleuts, or Native Hawaiians;
 - (4) "Asian-Pacific Americans", which includes persons whose origins are from Japan, China, Taiwan, Korea, Vietnam, Laos, Cambodia, Burma, Thailand, the Philippines, Samoa, Guam, the U.S. Trust Territories of the Pacific, and the Northern Marianas;
 - (5) "Asian-Indian Americans", which includes persons, whose origins are from India, Pakistan, and Bangladesh;
 - (6) Women (of all races); and

- (7) "Any other minorities or individuals found to be economically and socially disadvantaged by the Small Business Administration under Section 8(a) and 8(d) of the Small Business Act, as amended, (15 U.S.C. 637(a)).

The Contracting Officer shall make a rebuttable prerogative that individuals in the above groups are socially and economically disadvantaged. This prerogative shall be based on criteria set forth in 49 CFR Part 26. The Contracting Officer also may determine, on a case-by-case basis, that individuals who are not members of one of the above groups are socially and economically disadvantaged.

Prompt Payment: The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract within 7 days from the receipt of each payment the prime contractor receives from DDOT. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the recipient. This clause applies to both DBE and non-DBE subcontractor.

Contract Goals:

The bidder shall subcontract 12% of the dollar value of the total amount of this DOT-assisted contract to qualified DBE subcontractors. A complete DBE plan containing a list of DBE firms to be utilized on this project must be submitted within five (5) working days subsequent to bid opening to DDOT, Office of Contracting and Procurement, 55 M Street SE 7th Floor, Washington, DC 20003.

The DBE plan shall include, but it is not limited to:

1. The names, addresses of DBE firms that will participate in the contract;
2. A description of work that each DBE will perform;
3. The dollar amount of the participation of each DBE firm;
4. Written and signed document of commitment to use the DBE subcontractor whose participation it submits to meet a contract goal;
5. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.
6. If the bidder fails to meet the contract goal, evidence of good faith efforts, as described below shall be submitted.

A bidder who fails to meet these requirements and who cannot show good faith effort will be considered non-responsive.

Good Faith Effort:

The following actions, by the bidder, are generally considered a sign of good faith effort. This list is not exclusive or exhaustive, but should be used as a guide in determining good faith effort.

1. Attendance at pre-bid meetings scheduled to inform DBE's of the project.

2. Advertisement in general circulation, trade association and minority focus media concerning subcontracting opportunities.
3. Written notice to DBE's allowing sufficient time for reply.
4. Follow up of initial solicitation.
5. Selection of portions of the work likely to be performed by DBE's.
6. Provide interested DBE's adequate information for bidding.
7. Negotiation with interested DBE's.
8. Assist interested DBE's with bonding, insurance or credit.
9. Use of minority contractors' groups and minority business assistance offices.

DBE Directory:

Information pertaining to lists of certified DBEs may be obtained by contacting:

Mrs. Glenda Payne, EO Specialist
DC Department of Transportation
Civil Rights Division
55 M Street SE 7th Floor
Washington, DC 20003
Office: (202) 671-0479
Email: glenda.payne@dc.gov

Ms. Tammy Paige-Sterling, DBE Program Assistant
Washington Metropolitan Area Transit Authority (WMATA)
600 Fifth Street, NW
Washington, DC 20001
Office: (202) 962-2409
Email: tpsterling@wmata.com

General Decision Number: DC130001 05/10/2013 DC1

Superseded General Decision Number: DC20120001

State: District of Columbia

Construction Types: Heavy (Heavy and Sewer and Water Line) and Highway

County: District of Columbia Statewide.

HEAVY CONSTRUCTION PROJECTS (Including Sewer and Water Lines); HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	01/04/2013
1	01/18/2013
2	01/25/2013
3	02/22/2013
4	05/10/2013

ASBE0024-001 10/01/2012

	Rates	Fringes
Asbestos Worker/Heat and Frost Insulator Includes the application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.....	\$ 33.13	13.60

ASBE0024-002 10/01/2012

	Rates	Fringes
HAZARDOUS MATERIAL HANDLER Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems.....	\$ 20.86	5.61

ASBE0024-005 10/01/2012

	Rates	Fringes
Fire Stop Technician.....	\$ 26.06	6.05

Includes the application of materials or devices within or around penetrations and openings in all rated wall or floor assemblies, in order to prevent the passage of fire, smoke or other gases. The application includes all components involved in creating the rated barrier at perimeter slab edges and exterior cavities, the head of gypsum board or concrete walls, joints between rated wall or floor components, sealing of penetrating items and blank openings.

 BOIL0193-001 10/01/2009

	Rates	Fringes
Boilermakers:.....	\$ 37.66	16.36

 BRDC0001-001 05/01/2012

	Rates	Fringes
Bricklayer.....	\$ 27.89	7.76

 BRMD0001-004 04/25/2010

	Rates	Fringes
BRICKLAYER		
Refractory (Firebrick).....	\$ 33.55	7.72

 * CARP0132-001 05/01/2013

	Rates	Fringes
Carpenter/Lather.....	\$ 26.81	8.13
Piledriver.....	\$ 26.62	8.15

 CARP1831-001 04/01/2012

	Rates	Fringes
MILLWRIGHT.....	\$ 27.96	12.20

 * CARP2311-002 05/01/2013

	Rates	Fringes
DIVER TENDER.....	\$ 29.00	8.15
DIVER.....	\$ 37.74	8.15

 ELEC0026-001 11/05/2012

	Rates	Fringes
Electricians.....	\$ 40.00	14.30

 ELEC0026-008 07/01/2003

	Rates	Fringes
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Motor Repairmen

Removal and reinstallation
of electrical motors.....\$ 23.69 7.73+3%+a

a. PAID HOLIDAYS:

New Year's Day, Martin Luther King Jr.'s Birthday,
Inauguration Day, Memorial Day, Fourth of July, Labor Day,
Veterans Day, Thanksgiving Day, the day after Thanksgiving
and Christmas Day or days designated as legal holidays by
the Federal Government.

ELEC0070-001 05/07/2012

	Rates	Fringes
Line Construction:		
Cable Splicers.....	\$ 31.82	18.75%+5.00
Equipment Operators.....	\$ 31.82	18.75%+5.00
Groundman.....	\$ 14.78	18.75%+5.00
Linemen.....	\$ 31.82	18.75%+5.00
Truck Driver.....	\$ 16.47	18.75%+5.00

ENGI0077-001 05/01/2012

	Rates	Fringes
Power equipment operators: (HEAVY AND HIGHWAY CONSTRUCTION)		
GROUP 1.....	\$ 32.94	8.23+a+b
GROUP 2.....	\$ 31.91	8.23+a+b
GROUP 3.....	\$ 31.43	8.23+a+b
GROUP 4.....	\$ 30.70	8.23+a+b
GROUP 5.....	\$ 28.61	8.23+a+b
GROUP 6.....	\$ 23.93	8.23+a+b
GROUP 7.....	\$ 33.32	8.23+a+b

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Tower Cranes and Cranes 100 ton and over.

GROUP 2: 35 ton cranes & above, tower & climbing cranes,
derricks, concrete boom pump, drill rigs (equivalent to L &
Double L), mole.

GROUP 3: Backhoes, cableways, cranes, cherry pickers,
elevating graders, hoists, paving mixers, power
shovels, tunnel shovels. batch plants, shields, tunnel
mining machines, gradalls, front end loaders, 3 1/2 cu.
yds. and above, power driven wheel scoops and scrapers (50
cu. yds. struck capacity or above), rail tamper, draglines,
boomcat, mucking machines, graders in tunnels, pile driving
engines.

GROUP 4: Front end loaders below 3 1/2 cu. yds, boom trucks,
hydraulic backhoes 1/2 yds. capacity or below rubber or

track mounted, tug boats, power driven wheel scoops & scrapers, blade graders, motor graders, bulldozers, trenching machines, concrete mixer, speed swing pettibone, ballast regulator, concrete pump, mechanic, welder, mechanic welder, shotcrete machines, Hoeram, locomotive (standard, narrow gauge), tuggers.

GROUP 5: High lifts above 10 feet, boilers (skelton), asphalt spreaders, bullfloat finishing machines, concrete finishing machines, concrete spreaders, fine graders, air compressors, welding machines, pumps, generators, well points, deep wells, hydraulic pumps, elevators, freeze uniits, tunnel motorman or dinky operator, roller, conveyors, well drilling machines, grout pump, fireman.

GROUP 6: Fork lifts, ditch witch, bobcat 1/3 cu. yd. and below, space heaters, sweepers, assistant engineers, oilers.

GROUP 7: Master mechanic.

a. PAID HOLIDAYS: New Years Day, Inaugural Day, Decoration Day, Independence Day, Labor Day, Martin Luther King's Birthday, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving and Christmas Day.

b. PREMIUM PAY:

Tower crane and cranes 100-ton and over to receive \$1.00 per hour premium over Group One.

 ENGI0077-002 06/01/2012

	Rates	Fringes
Power equipment operators: (PAVING AND INCIDENTAL GRADING)		
GROUP 1.....	\$ 26.72	6.87
GROUP 2.....	\$ 23.78	6.87
GROUP 3.....	\$ 20.42	6.87
GROUP 4.....	\$ 18.38	6.87
GROUP 5.....	\$ 27.38	6.67

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Gradall operator, Crane.

GROUP 2: Boom Truck, Milling Machine, Excavator, Rubber Tire Backhoe, Asphalt Paver, Asphalt Plant Engineer, Motor Grader, Track Loader, Rubber Tire Loader, Track Dozer, Concrete Paver.

GROUP 3: Broom Truck, Asphalt Roller.

GROUP 4: Air Compressor, Grade Rollers.

GROUP 5: Mechanic.

 ENGI0077-003 07/01/2012

	Rates	Fringes
Power equipment operators:		

(SEWER, GAS AND WATER LINE
CONSTRUCTION)

GROUP 1.....	\$ 23.65	7.05+a
GROUP 2.....	\$ 23.25	7.05+a
GROUP 3.....	\$ 22.74	7.05+a
GROUP 4.....	\$ 22.42	7.05+a
GROUP 5.....	\$ 21.60	7.05+a

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Excavators, Cranes, Gradalls.

GROUP 2: Backhoes, Front-end Loaders, Fork alift/Lull, Bulldozers, Motor Graders. Qualified Mechanics, Hydraulic Tamper and Hoe Pack, Paving Mixers, Pile Driving Engines, Batch Plant, Concrete Pumps, Low-Boy Driver, Lube Truck.

GROUP 3: Trenching Machine, Well Drilling Machines, Concrete Mixers, Motor Graders, Truck Driver.

GROUP 4. Roller, Air Compressors, Pumps, Welding Machines, Well Points, Firemen.

GROUP 5: Oiler

a. PAID HOLIDAYS: New Year's Day, Inaugural Day, Washington's Birthday, Decoration Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day and Martin Luther King's Birthday.

IRON0005-001 06/01/2012

	Rates	Fringes
Ironworkers:		
Structural, Ornamental and Chain Link Fence.....	\$ 29.55	14.995

IRON0201-001 05/01/2012

	Rates	Fringes
Ironworkers:		
Reinforcing.....	\$ 26.50	16.68

LABO0657-003 06/01/2012

	Rates	Fringes
Laborers: (HEAVY AND HIGHWAY AND SEWER & WATER LINES CONSTRUCTION)		
GROUP 1.....	\$ 22.23	6.83
GROUP 2.....	\$ 22.59	6.83
GROUP 3.....	\$ 22.79	6.83
GROUP 4.....	\$ 22.96	6.83
GROUP 5.....	\$ 23.45	6.83

GROUP 6.....	\$ 24.08	6.83
GROUP 7.....	\$ 24.68	6.83
GROUP 8.....	\$ 25.49	6.83

LABORERS CLASSIFICATIONS:

GROUP 1: Carloaders, choker setter, concrete crewman, crushed feeder, demolition laborers, including salvaging all material, loading, cleaning up, wrecking, dumpmen, flagmen, fence erector and installer (other than chain link), including installation and erection of fence, guard rails, medial rails, reference posts, guide posts and right-of-way markers, form strippers, general laborers, railroad track laborers, riprap man, scale man, stake jumper, structure mover, includes foundation, separation, preparation, cribbing, shoring, jacking and unloading of structures, water nozzleman, timber bucket and faller, truck loader, water boys, tool room men.

GROUP 2: Combined air and water nozzleman, cement handler, dope pot fireman (nonmechanical), form cleaning machine, mechanical railroad equipment (includes spiker, puller, tile cleaner, tamper, pipe wrapper, power driven wheelbarrows, operators of hand derricks, towmasters, scootcretes, buggymobiles and similar equipment), tamper or rammer operator, trestle scaffold builders over one tier high, power tool operator (gas, electric or pneumatic), sandblast or gunnite tailhose man, scaffold erector, (steel or wood), vibrator operator (up to 4 feet), asphalt cutter, mortar men, shorer and lagger, creosote material handler, corrosive enamel or equal, paver breaker and jackhammer operators.

GROUP 3: Multi-section pipe layer, non-metallic clay and concrete pipe layer (including caulker, collarman, jointer, rigger and jacker, thermal welder and corrugated metal culvert pipe layer.

GROUP 4: Asphalt block pneumatic cutter, asphalt roller, walker, chainsaw operator with attachment, concrete saw (walking), high scalers, jackhammer operator (using over 6 feet of steel), vibrator operator (4 feet and over), well point installer, air trac operator.

GROUP 5: Asphalt screeder, big drills, cut of the hole drills (1 1/2 " piston or larger), down the hole drills (3 1/2" piston or larger) gunnite or sandblaster nozzleman, asphalt raker, asphalt tamper, form setter, demolition torch operator, shotcrete nozzlemen and potman.

GROUP 6: Powderman, master form setters.

GROUP 7: Brick paver (asphalt block paver, asphalt block sawman, asphalt block grinder, hastings block or similar type)

GROUP 8: Licensed powdermen.

LABO0657-004 06/01/2012

Rates

Fringes

Laborers: (HAZARDOUS WASTE
REMOVAL, EXCEPT ON MECHANICAL
SYSTEMS:

Preparation for, removing and
encapsulation of hazardous
materials from non-mechanical
systems)

Skilled Asbestos Abatement Laborers.....	\$ 18.21	6.83
Skilled Toxic and Hazardous Waste Removal Laborers.....	\$ 21.53	6.83

LABO0657-005 06/01/2012

	Rates	Fringes
Laborers: (TUNNEL, RAISE & SHAFT (FREE AIR) FOR HEAVY AND SEWER & WATER LINES CONSTRUCTION)		
GROUP 1.....	\$ 23.04	6.83
GROUP 2.....	\$ 23.77	6.83
GROUP 3.....	\$ 25.61	6.83
GROUP 4.....	\$ 26.40	6.83

LABORERS CLASSIFICATIONS:

GROUP 1: Brakeman, Bull Gang, Dumper, Trackmen, Concrete Man.

GROUP 2: Chuck Tender, Powdermen in Prime House, Form Setters
and Movers, Nippers, Cableman, Houseman, Groutman, Bell or
Signalman, Top or Bottom Vibrator Operator.

GROUP 3: Miners, Re-Bar Underground, Concrete or Gunnite
Nozzlemen, Powdermen, Timbermen and Re-Timbermen, Wood Steel
Including Liner plate or Other Support, Material Motorman,
Caulkers, Diamond Drill Operators, Riggers, Cement Finishers-
Underground, Welders and Burners, Shield Driver, Air Trac
Operator, Shotcrete Nozzlemen and Potman.

GROUP 4: Mucking Machine Operator (Air).

LABO0657-006 06/01/2012

	Rates	Fringes
Laborers: (TUNNEL, RAISE AND SHAFT (COMPRESSED AIR) FOR HEAVY CONSTRUCTION ONLY		
Gauge Pressure Work Period		
(Pounds) (Hours)		
1-14 7.....	\$ 30.32	6.83
14-18 6.....	\$ 35.66	6.83

FOOTNOTE: On any requirement for air pressure in excess of 18

PSI, work periods and rates should be negotiated at a pre-bid conference.

LABO0657-007 06/01/2010

	Rates	Fringes
Laborers: (PAVING AND INCIDENTAL GRADING)		
Asphalt Raker & Concrete Saw Operator.....	\$ 18.42	4.90
Asphalt Shoveler.....	\$ 17.84	4.90
Asphalt Tammer & Concrete Shoveler.....	\$ 18.09	4.90
Jack Hammer.....	\$ 18.51	4.90
Laborer.....	\$ 17.70	4.90
Sand Setter & Form Setter...	\$ 19.10	4.90

LABO0657-008 06/01/2012

	Rates	Fringes
LABORERS (BRICK MASONRY WORK)		
Mason Tenders.....	\$ 15.58	6.83
Scaffold Builders, Mortarmen.....	\$ 16.51	6.83

MARB0002-003 05/01/2012

	Rates	Fringes		
Marble & Stone Mason Includes Pointing, Caulking and Cleaning of All Types of Masonry, Brick, Stone and Cement Structures.....			\$ 33.08	14.59

MARB0003-001 05/01/2011

	Rates	Fringes
Mosaic & Terrazzo Worker, Tile Layer		
Marble Mason and Tile Layer..	\$ 25.29	9.89
Terrazzo Worker.....	\$ 26.04	9.89

MARB0003-004 05/01/2011

	Rates	Fringes		
Marble, Tile & Terrazzo Finisher.....			\$ 20.48	8.74

PAIN0051-001 06/01/2012

	Rates	Fringes
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Painters:

All Industrial Work.....	\$ 28.18	8.91
Bridges, Heavy Highway, Lead Abatement and Flame/Thermal Spray.....	\$ 31.86	8.91
Commercial and Mold Remediation, Painters, Wallcovers and Drywall Finishers.....	\$ 24.14	8.91
Metal Polishing and Refinishing.....	\$ 25.14	8.91

PLAS0891-001 05/01/2010

Rates Fringes

Cement Masons:

HEAVY CONSTRUCTION ONLY.....	\$ 27.15	9.58
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PLAS0891-002 06/01/2011

Rates Fringes

Cement Masons: (PAVING &
INCIDENTAL GRADING)

Cement Masons.....	\$ 19.56	5.68
Concrete Saw Operators.....	\$ 19.56	5.68
Form Setters.....	\$ 19.56	5.68

PLUM0005-001 08/01/2012

Rates Fringes

Plumbers.....	\$ 38.17	15.75+a
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a. PAID HOLIDAYS: Labor Day, Veterans' Day, Thanksgiving Day and the day after Thanksgiving, Christmas Day, New Year's Day, Martin Luther King's Birthday, Memorial Day and the Fourth of July.

PLUM0602-005 08/01/2012

Rates Fringes

Steamfitter, Refrigeration & Air Conditioning Mechanic.....	\$ 37.62	18.07+a
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a. PAID HOLIDAYS: New Year's Day, Martin Luther King's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and the day after Thanksgiving and Christmas Day.

SHEE0100-001 07/01/2012

Rates Fringes

Sheet Metal Worker.....\$ 38.39 14.54

TEAM0639-001 06/01/2012

Rates Fringes

Truck drivers: (HEAVY &
HIGHWAY CONSTRUCTION)

Tractor trailer, Low Boy....\$ 21.50 2.00+a
Truck Drivers.....\$ 19.50 2.00+a

a. VACATION: Employees will receive one (1) week's paid
vacation after one (1) year of service.

TEAM0639-005 06/01/2012

Rates Fringes

Truck drivers: (PAVING &
INCIDENTAL GRADING)

All paving projects where
the grading is incidental
to the paving.....\$ 19.50 2.00

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

=====
Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification
and wage rates that have been found to be prevailing for the
cited type(s) of construction in the area covered by the wage
determination. The classifications are listed in alphabetical
order of "identifiers" that indicate whether the particular
rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with
characters other than "SU" denotes that the union
classification and rate have found to be prevailing for that
classification. Example: PLUM0198-005 07/01/2011. The first
four letters , PLUM, indicate the international union and the
four-digit number, 0198, that follows indicates the local union
number or district council number where applicable , i.e.,

Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

EMPLOYEE TRAINING REQUIREMENTS

23 CFR, Part 230, Subpart A, Appendix B applies to this contract, except as modified below. Prior to commencing, the contractor shall submit to the DC Department of Transportation Contracting Officer for approval, the number of trainees to be trained in each selected and classification and providing the prospective trainee's home address(es) and social security number(s). The number of trainees to be trained under this contract is Four (4) and shall be in the following classifications:

<u>CRAFT</u>	<u>NUMBER</u>
Laborer	1
Form Setter	1
Bridge Carpenter	1
Concrete Finisher	1

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Contracting Officer, DC Department of Transportation and the Division Engineer, Federal Highway Administration.

For purposes of this requirement, a trainee is defined as a person who is registered and receiving on-the-job training in a construction or construction management occupation under a program which has been approved and certified in advance by the U.S. Department of Labor, Employment and Training Administration or by the Division Engineer, Federal Highway Administration.

A trainee differs from an apprentice in that an apprentice means (1) a person employed and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or (2) a person in the first 90 days of probationary employment in an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where applicable) to be eligible for probationary employment as an apprentice.

Contractors are encouraged to utilize the resources of the District of Columbia, Department of Employment Services, Employer Services Center and the District of Columbia, Department of Transportation to recruit and hire prospective trainees. Prospective trainees who are not enrolled in any approved program may be selected from among the contractor's construction workforce, subject to the approval of the Contracting Officer.

The District Department of Transportation- will monitor your training program closely during the life of the project to ensure that the training program is being administered in compliance with the applicable Federal regulations and that the assigned number of trainees are enrolled and receiving training. Contractors are reimbursed only for training actually given and carefully documented by the Project Engineer and verified by the District Department of Transportation.

APPRENTICESHIP PROGRAM:

All prime Contractors and subcontractors who contract with the District of Columbia Government to perform construction or renovation work with a single contract or cumulative contracts of at least \$500,000.00, let within a twelve (12) month period, shall be required to register and apprenticeship program with the District of Columbia Apprenticeship Council. (D.C. Code 36-409((1981))).

APPRENTICES AND TRAINEES:

This S.P. supplements APPRENTICES AND TRAINEES, ARTICLE 3 of STANDARD CONTRACT PROVISIONS FOR USE WITH SPECIFICATIONS FOR DISTRICT GOVERNMENT CONSTRUCTION PROJECTS, DATED 1973; as amended by the Transmittal Sheet No. 5.

- (1) In Items A, B and C, except for subparagraph C5, wherever the words "Apprenticeship Council, D.C. Department of Labor" appear, add immediately after: "and/or U.S. Department of Labor."
- (2) In Item B. Trainees, add the following: "Training programs approved under the requirements of Article IV; Section 4 and 5 of Required Contract Provisions, Federal Aid Construction Contracts (Form FHWA-1273) will satisfy the requirements of this item."

The contractor and all subcontractors shall furnish to the Contracting Officer written evidence of the registration of his/her program and apprentices as well as the appropriate ratios and wage rates for the areas of construction, prior to using any apprentice on the contract.

US ARMY CORPS OF ENGINEERS – SPECIAL INSTRUCTIONS



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD, 21203-1715

MAY 17 2013

Operations Division

Subject: CENAB-OP-RMS (44th ST. SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00611; CENAB-OP-RMS (48th PL. SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00639; CENAB-OP-RMS (55th ST. SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00640; CENAB-OP-RMS (58th ST. SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00641; CENAB-OP-RMS (DIVISION AVE SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00642; and CENAB-OP-RMS (GAULT PL. SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00643

District of Columbia Department of Transportation
c/o Mr. Toan Nguyen
55 M Street SE, 4th Floor
Washington, DC 20003

Dear Mr. Nguyen:

This is in reference to your application, dated February 13, 2013, for Department of Army (DA) verification of Nationwide Permit (NWP) authorization to do the following work:

CENAB-OP-RMS (44th ST. SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00611: to temporarily emplace one 15-foot long section and one 11-foot long section of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 78 square feet along 15 linear feet of stream; and to permanently emplace a 3-foot wide by 7-foot long grouted riprap scour pad to repair an existing bridge, permanently impacting approximately 21 square feet along 7 linear feet of stream; all to extend no more than 7 feet channelward of the existing abutment in Watts Branch near the intersection of Grant Street NE and 44th Street NE, Washington, DC.

CENAB-OP-RMS (48th PL. SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00639: to temporarily emplace 47 linear feet of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 141 square feet along 47 linear feet of stream; and to permanently emplace an 18-foot wide by 40-foot long grouted riprap scour pad to repair an existing bridge, permanently impacting approximately 720 square feet along 40 linear feet of stream; all to extend no more than 4 feet channelward of the existing abutment in Watts Branch near the intersection of Foote Street NE and 48th Place NE, Washington, DC;

CENAB-OP-RMS (55th ST. SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00640: to temporarily emplace two 45-foot long sections of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 270 square feet along 45 linear feet of stream; and to permanently emplace an 3-foot wide by 7-foot long grouted riprap scour pad to repair an existing bridge, permanently impacting approximately 21 square feet along 7 linear feet of stream; all to extend no more than seven feet channelward of the existing abutment in Watts Branch on 55th Street NE near the intersection of Dix Street NE and 55th Street NE, Washington, DC.

CENAB-OP-RMS (58th ST. SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00641: to temporarily emplace two 65-foot long sections of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 390 square feet along 65 linear feet of stream; and to permanently emplace 167 cubic yards of riprap in a 13-foot wide by 41-foot long area of stream channel under and on both ends of the bridge, permanently impacting approximately 533 square feet along 41 linear feet of stream in Watts Branch on 58th Street NE near the intersection of Clay Street NE and 58th Street NE, Washington, DC.

CENAB-OP-RMS (DIVISION AVE SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00642: to temporarily emplace two 60-foot long sections of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 360 square feet along 60 linear feet of stream; and to permanently emplace an 3-foot wide by 7-foot long grouted riprap scour pad to repair an existing bridge, permanently impacting approximately 21 square feet along 7 linear feet of stream; all to extend no more than 7 feet channelward of the existing abutment in Watts Branch on Division Avenue north of the intersection of Division Avenue with Fitch Place NE, Washington, DC.

CENAB-OP-RMS (GAULT PL. SIX BRIDGES WATTS BRANCH_REPAIR/DC) 2013-00643: to temporarily emplace 64 linear feet of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 132 square feet along 64 linear feet of stream; and to permanently emplace an 18-foot wide by 40-foot long grouted riprap scour pad to repair an existing bridge, permanently impacting approximately 720 square feet along 40 linear feet of stream; all to extend no more than seven feet channelward of the existing abutment in Watts Branch on Gault Place NE west of the intersection of Gault Place NE and 44th Street NE, Washington, DC.

The Corps received the application on February 13, 2013.

Our evaluation has determined that the proposed work, if accomplished in accordance with the enclosed plan(s), is authorized by Nationwide Permit(s) for purposes of Section 404 of the Clean Water Act as published in the February 21, 2012 Federal Register, Final Notice of Issuance, Reissuance, and Modification of NWP(s) (77 FR 10184), NWP number(s) (3), provided all State authorizations are granted. If any of the information contained in the application and/or plan(s) is later found to be in error, this authorization may be subject to modification, suspension, or revocation.

Enclosed is a list of conditions and management practices which must be followed for purposes of the NWP(s) in performing the work.

These permit verifications, including the computation of impacts and any required compensatory mitigation requirements, are each based on a preliminary jurisdictional determination (JD). This preliminary JD finds that there "may be" waters of the United States within the review area shown on the project plans dated March 19, 2013 and identifies all potential jurisdictional waters and wetlands within the review area that could be affected by the proposed activity. This preliminary JD is not appealable.

If you do not agree with the extent of waters or wetlands and this preliminary JD upon which this permit verification was based, you are hereby advised of your option to request and obtain an approved JD from this office before accepting the terms and conditions of this permit verification. An approved JD is an official, written Corps determination stating the presence or absence of jurisdictional waters of the United States and identifies the limits of waters of the United States on a project site. An approved JD can be relied upon for a period of 5 years and can be appealed through the Corps' administrative appeal process set out at 33 CFR Part 331.

Please note that undertaking any activity in reliance on a Corps permit authorization based on a preliminary JD means that you accept the permit in entirety, and waive all rights to appeal the permit, including its terms and conditions and the preliminary JD associated with this permit.

The use of this NWP is contingent upon obtaining an individual Section 401 Water Quality Certification (WQC) consistency determination. You must furnish the required Section 401 WQC, or waiver thereof, to this office, before the work is authorized and before the work in regulated waters is initiated for this NWP verification to be valid. The conditions of the Section 401 WQC will become conditions of the NWP.

Each permittee who receives a NWP verification from the Corps of Engineers must submit a signed certification regarding completed work and any required mitigation. Therefore, upon completion of the authorized work and required mitigation, you are required to complete the enclosed compliance certification form and return it to the address indicated thereon.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2017. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit.

After you have obtained all required Federal, State, and/or local authorizations, you may proceed with the authorized work.

When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below. A copy of this nationwide permit verification signed by the transferee must be submitted to the Baltimore District to validate the transfer.

A copy of this letter is being furnished to the District Department of Environment. If you have any questions concerning this matter, please call Ms. Vera Jaffe of this office at (410) 962-6144.

Sincerely,



Kathy B. Anderson
Chief, Maryland Section Southern

Enclosures

(Transferee)

To identify how we can better serve you, we need your help. Please take the time to fill out our customer service survey at <http://www.nab.usace.army.mil/Missions/Regulatory.aspx>

Nationwide Permit #3 Maintenance

Permit Specific Regional Conditions –

1. Prior to doing the work, the permittee must submit a pre-construction notification (PCN) to the District Engineer, in accordance with the current Corps permit application procedures (See general condition 31 and regional general condition 31a) for this Nationwide Permit (NWP), as specified below. The Corps review period shall commence with the receipt of a complete permit application at the Corps District Office. A PCN to the District Engineer is required for:
 - a. For NWP 3(a), any regulated discharge of dredged and/or fill material which involves the proposed use of equipment to remove material from or move material across a stream channel as part of the proposed activity for repair, rehabilitation, or replacement. The PCN must clearly describe any activity proposing the use of equipment to move material from or across a stream channel;
 - b. For NWP 3(a), proposed construction and modification of docks, piers, and other structures that will occur along and/or within 150 feet of the horizontal limits of a federally authorized channel within the Baltimore District Civil Works Boundary <http://www.nab.usace.army.mil/Navigation/DepthRpts.htm#017>;
 - c. For work associated with NWP 3(a), regarding the repair, rehabilitation, or replacement of structures or fills destroyed or damaged by storms, floods, fire or other discrete events, that occurs along federally authorized channels. All proposed work shall comply with the most current version of the Baltimore District's setback guidance on the Baltimore District Regulatory website at: <http://www.nab.usace.army.mil/Wetlands%20Permits/> ; or
 - d. Any proposed activity, which would result in impacts, temporary or permanent, to Section 10 waters as defined in 33 CFR 329 in the District of Columbia.
2. The following terms of this authorization apply under NWP 3(b):
 - a. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 50 feet in any direction from the structure, unless specifically authorized by the District Engineer.
3. **Essential Fish Habitat Regional Condition (Applicable to the Delaware River in Pennsylvania):**
 - a. Any activity on the Delaware River associated with this NWP shall comply with the time-of-year restrictions developed in conjunction with the Delaware Basin Fish and

Wildlife Management Cooperative and accepted by the Corps of Engineers, as applicable.

4. Essential Fish Habitat Regional Conditions (Applicable to the District of Columbia, Maryland, and activities affecting the Potomac River watershed within military installations of Northern Virginia in the regulatory geographic boundaries of the Baltimore District):

a. NWP 3(a)-Repair, Rehabilitation, or Replacement Activities:

- i. Prior to doing the work, the prospective permittee shall submit a PCN to the District Engineer (See general condition 31 and regional general conditions 31a) for any proposed activity, where the project affects more than 10,000 square feet of tidal wetlands and/or tidal waters.
- ii. Prior to doing the work, the prospective permittee shall submit a PCN to the District Engineer (See general condition 31 and regional general conditions 31a) for any proposed activity, where:
 - a. The work involves the repair, rehabilitation, or replacement of a permanent culvert within a perennial and/or intermittent coastal plain streams in the above referenced areas; or a perennial and/or intermittent piedmont stream in Harford and/or Cecil Counties, Maryland, and the work does not result in:
 1. A culvert measuring greater than 24 inches in diameter being depressed 12 inches below the stream bottom; or
 2. A culvert measuring 24 inches or less in diameter being depressed 6 inches below the stream bottom.
 3. NOTE: Extensions of existing culverts that are not depressed below the stream bottom do not require a PCN under this Regional Condition.
- iii. A PCN required under 4. a. ii, above shall:
 - a. include a narrative documenting measures evaluated to minimize disruption of the movement of aquatic life, as well as specific documentation concerning site conditions, limitations, or engineering factors that prohibit depressing the culvert. This documentation must also include photographs documenting site conditions. The applicant may find it helpful to contact their regional fishery agency for recommendations about the measures to be taken to allow for migratory fish passage; and
 - b. be forwarded by the Corps (a copy of the PCN, including any provided supporting documentation) to National Marine Fisheries

Service (NMFS) for review and comment pursuant to the Magnuson Stevens Act;

- iv. For culvert replacement and repair activities, work in tidal and nontidal coastal plain streams and nontidal piedmont streams in Harford and Cecil Counties, Maryland, shall be prohibited during the period February 15 through June 15, each year to protect sensitive life stages of anadromous fish, unless specifically waived by the District Engineer in consultation with NMFS.
- b. NWP 3(b)-Removal of Accumulated Sediments and Debris in the Vicinity of and Within Existing Structures and the Placement of New or Additional Riprap to Protect the Structure:**
- i. Prior to doing the work, the prospective permittee shall submit a PCN to the District Engineer for any proposed activity affecting more than 10,000 square feet of tidal wetlands and/or tidal waters or more than 500 linear feet of tidal tributary stream or nontidal stream in the coastal plain region (See general condition 31 and regional general conditions 31a). The Corps shall provide this PCN to NMFS for individual EFH consultation and coordination;
 - ii. Work in tidal tributary streams and nontidal coastal plain streams shall be prohibited during the period of February 15 through June 15, each year, to protect sensitive life stages of anadromous fish, unless specifically waived by the District Engineer in consultation with NMFS; and
 - iii. A low flow channel that permits passage of migratory fish species shall be incorporated into all activities involving the placement of new or additional riprap in tidal tributary streams and nontidal coastal plain streams.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the District Engineer prior to commencing the activity (see general condition 31). The pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Sections 10 and 404)

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

Nationwide Permit (NWP) #3, MAINTENANCE, with specific conditions.

(a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of those structures or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project or within the boundaries of the structure or fill. This NWP also authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the removal of accumulated sediments and debris in the vicinity of and within existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) and/or the placement of new or additional riprap to protect the structure. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an upland area unless otherwise specifically approved by the District Engineer under separate authorization. The placement of riprap must be the minimum necessary to protect the structure or to ensure the safety of the structure. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the District Engineer.

(c) This NWP also authorizes temporary structures, fills, and work necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation. This NWP does not authorize beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

WATER QUALITY CERTIFICATION – SPECIAL CONSTRUCTION

GOVERNMENT OF THE DISTRICT OF COLUMBIA
District Department of the Environment

Natural Resources Administration
Water Quality Division



APR 25 2013

APR 25 2013

Ms. Kathy B. Anderson
Chief, Maryland Section Southern
U.S. Army Corps of Engineers
Baltimore District
Operations Division, Regulatory Branch
P.O. Box 1715
Baltimore, MD 21203-1715

Project: **Water Quality Certification # DC-13-005**
NAB-2013-00611 (201300611) (44th ST BRIDGE REPAIR/WATTS BRANCH)
To repair a bridge in Watts Branch near the intersection of Grant Street, NE and 44th Street, NE, Washington, DC.

Dear Ms. Anderson:

The District Department of the Environment, Water Quality Division (DDOE WQD) has evaluated the permit application for Department of the Army Nationwide Permit (NWP) number 3 to the District Department of Transportation (DDOT) (the permittee). NWP number 3 pertains to *Maintenance*. The permit authorizes the permittee to temporarily emplace one 15-foot long section and one 11-foot long section of 3-foot wide sandbags for stream diversion; temporarily impacting approximately 78 square feet along 15 linear feet of stream; and to permanently emplace a 3-foot wide by 7-foot long grouted riprap scour pad to repair an existing bridge, permanently impacting approximately 21 square feet along 7 linear feet of stream; all to extend no more than seven feet channelward of the existing abutment. The project is located in Watts Branch near the intersection of Grant Street, NE and 44th Street, NE, in Washington, DC.

DDOE WQD hereby certifies that the permit will not violate the Water Pollution Control Act of 1984, D.C. Official Code § 8-103.01 *et seq.*, and will meet the Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR), Chapter 11, and the Water Quality Monitoring Regulations in DCMR, Chapter 19, provided the conditions listed below are followed. The **Water Quality Certification # DC-13-005** is issued to the permittee for the activities described in the project **NAB-2013-00611 (201300611) (44th ST BRIDGE REPAIR/WATTS BRANCH)** and the plans submitted to DDOE WQD, subject to the following:

1. All work must be performed in accordance with the plans and documents provided to DDOE WQD.
2. The permittee shall incorporate best management practices as an integral part of the performance of the work to ensure minimal impact to the waters of the District of Columbia.



3. The permittee shall not disturb the stream restoration work, including the plants in Watts Branch. If the restoration work is disturbed, the permittee shall restore the stream to its original or better conditions. Please contact Josh Burch at (202) 535-2247 or josh.burch@dc.gov for more information and approval.
4. Any water impacted by the project shall be pumped to an appropriate treatment system in order to comply with Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR) Chapter 11, and the Water Quality Monitoring Regulations in DCMR Chapter 19.
5. Any oil sheen or other visible evidence of hydrocarbons or other pollution generated during any of the activities shall be immediately contained/containerized and reported to DDOE WQD at (202) 671-3033.
6. Any process water (such as equipment cooling and wash water) from drinking water sources must be dechlorinated before being discharged to storm drains or directly into the river.
7. Control of turbidity, sediments, waste and work materials in the river:
 - (a) Weighted turbidity curtains must be used if the permittee uses anchored barges or boats, or any anchored equipment.
 - (b) Weighted turbidity curtains must be used in all activity/sampling/pile installation/pile removal/soil boring work areas and around equipment or coffer dams.
 - (c) The turbidity curtains must be properly anchored, must touch the river bottom, and encompass the entire area of activity - coffer dams, barge, boat, plus any equipment in the water. Where possible, the turbidity curtain must be able to withstand normal tidal or stream flow fluctuations.
 - (d) The turbidity curtains must be in place after the equipment is brought into the work area, but before it is anchored (i.e. spuds, etc). This is necessary to prevent any sediments, contaminants, and waste materials from escaping the work area and reintroduced into the water column during the work activity.
 - (e) To minimize sediments from escaping the work area, adequate space must be provided between the work area and the turbidity curtains.
8. To monitor turbidity in the river; the permittee shall:
 - (a) Continuously observe and measure turbidity 50 feet upstream and 50 feet downstream of the work area to ensure that there is no generation of sediment plumes and no sediment plumes escape the work area. Turbidity monitoring must be conducted at different depths, for example, near the bottom, $\frac{1}{4}$ depth from the bottom, $\frac{3}{4}$ depth from the bottom, and near the surface.
 - (b) Establish background turbidity and measure turbidity by using U.S. Environmental Protection Agency (EPA) approved methods in accordance with

- 40 CFR Part 136 procedures and manufacturer's specifications. Background turbidity must be established before starting any work in the water; and
- (c) If a sediment plume is observed coming out of the sediment-disturbing activity/work/sampling location or if the turbidity exceeds the District of Columbia surface water quality standard, the permittee shall:
- i. Immediately stop all activities/operations and notify DDOE WQD at (202) 671-3033;
 - ii. Adjust all activities and implement best management practices until there is no more sediment escaping the sediment-disturbing activity/sampling/soil boring location; and
 - iii. If and when the measured turbidity is less than or equal to the background turbidity, the permittee may resume the work.
9. All pilings, drillings, wells, or borings shall be drilled and installed in a manner that prevents cross-contamination of surface water and groundwater aquifers.
10. All drill cuttings, drilling mud, excavated and sampling sediments (e.g. within cofferdams or excess sediment samples), and wastes (both solid and liquid) shall be contained, sampled, and analyzed for disposal at appropriate disposal sites. The wastes shall not be used as backfill material in the river or on land.
11. The permittee shall obtain all necessary permits and other authorizations from appropriate Federal and local offices, including but not limited to permits for Stormwater Management, and Erosion and Sediment Control from the DDOE. All staging and temporary activity areas not covered by any permit shall have adequate soil erosion and sedimentation measures. Please contact Abdi Musse at (202) 535-2978 for more information.
12. In the District of Columbia, the anadromous fish migration and spawning season is generally considered to occur between March 1st and June 30th. Any proposed activities in the District waters occurring during this period must have the approval of the District Department of the Environment Fisheries and Wildlife Division. Please contact Bryan King at (202) 535-2266 for more information.
13. The permittee must obtain necessary permits and authorizations from the U.S. National Park Service. Please contact Emily Ferguson at Emily.Ferguson@nps.gov or (202) 692-6033.
14. Reporting Requirements:
- (a) The permittee shall submit written notification to DDOE WQD at least five business days before work commences.

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- (b) If the permittee observes any water quality standard exceedances at the site, you must notify DDOE WQD immediately at (202) 671-3033; stop the work; prepare and submit for review and approval, and then implement a corrective action plan.
- (c) The permittee shall submit final reports of the sample analysis and monitoring results. Reports must be submitted to DDOE WQD no later than 45 days after the completion of the work. All data generated during the operation shall be summarized in a final report. The report shall also include any violations, water quality standards exceedances, actions taken or to be taken to remediate those violations, and any other relevant information. The report shall be submitted to me:

Mr. Collin R. Burrell
Associate Director
Water Quality Division
District Department of the Environment
1200 First Street, N.E., 5th Floor
Washington, DC 20002

This certification expires when the permit issued by the U.S. Army Corps of Engineers expires. Failure to comply with these conditions shall constitute reasons for cancellation of this certification. Legal proceedings may be instituted against the permittee in accordance with District of Columbia and/or Federal laws and regulations to control water pollution in the District. DDOE WQD reserves the right to conduct inspections at any time during the construction process to determine if an activity complies with the terms and conditions authorized in this permit.

Please direct your questions or comments on this water quality certification to Adion Chinkuyu at (202) 535-2193.

Sincerely,



for Collin R. Burrell
Associate Director

GOVERNMENT OF THE DISTRICT OF COLUMBIA
District Department of the Environment

Natural Resources Administration
Water Quality Division



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Ms. Kathy B. Anderson
Chief, Maryland Section Southern
U.S. Army Corps of Engineers
Baltimore District
Operations Division, Regulatory Branch
P.O. Box 1715
Baltimore, MD 21203-1715

Project: **Water Quality Certification # DC-13-006**
NAB-2013-00639 (201300639) (48th PLACE BRIDGE REPAIR/WATTS
BRANCH)

To repair a bridge in Watts Branch near the intersection of Foote Street, NE and 48th Place, NE, Washington, DC.

Dear Ms. Anderson:

The District Department of the Environment, Water Quality Division (DDOE WQD) has evaluated the permit application for Department of the Army Nationwide Permit (NWP) number 3 to the District Department of Transportation (DDOT) (the permittee). NWP number 3 pertains to *Maintenance*. The permit authorizes the permittee to temporarily emplace 47 linear feet of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 141 square feet along 47 linear feet of stream; and to permanently emplace an 18-foot wide by 40-foot long grouted riprap scour pad to repair an existing bridge, permanently impacting approximately 720 square feet along 40 linear feet of stream; all to extend no more than four feet channelward of the existing abutment. The project is located in Watts Branch near the intersection of Foote Street, NE and 48th Place, NE, in Washington, DC.

DDOE WQD hereby certifies that the permit will not violate the Water Pollution Control Act of 1984, D.C. Official Code § 8-103.01 *et seq.*, and will meet the Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR), Chapter 11, and the Water Quality Monitoring Regulations in DCMR, Chapter 19, provided the conditions listed below are followed. The **Water Quality Certification # DC-13-006** is issued to the permittee for the activities described in the project **NAB-2013-00639 (201300639) (48th PLACE BRIDGE REPAIR/WATTS BRANCH)** and the plans submitted to DDOE WQD, subject to the following:

1. All work must be performed in accordance with the plans and documents provided to DDOE WQD.
2. The permittee shall incorporate best management practices as an integral part of the performance of the work to ensure minimal impact to the waters of the District of Columbia.



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3. The permittee shall not disturb the stream restoration work, including the plants in Watts Branch. If the restoration work is disturbed, the permittee shall restore the stream to its original or better conditions. Please contact Josh Burch at (202) 535-2247 or josh.burch@dc.gov for more information and approval.
4. Any water impacted by the project shall be pumped to an appropriate treatment system in order to comply with Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR) Chapter 11, and the Water Quality Monitoring Regulations in DCMR Chapter 19.
5. Any oil sheen or other visible evidence of hydrocarbons or other pollution generated during any of the activities shall be immediately contained/containerized and reported to DDOE WQD at (202) 671-3033.
6. Any process water (such as equipment cooling and wash water) from drinking water sources must be dechlorinated before being discharged to storm drains or directly into the river.
7. Control of turbidity, sediments, waste and work materials in the river:
 - (a) Weighted turbidity curtains must be used if the permittee uses anchored barges or boats, or any anchored equipment.
 - (b) Weighted turbidity curtains must be used in all activity/sampling/pile installation/pile removal/soil boring work areas and around equipment or coffer dams.
 - (c) The turbidity curtains must be properly anchored, must touch the river bottom, and encompass the entire area of activity - coffer dams, barge, boat, plus any equipment in the water. Where possible, the turbidity curtain must be able to withstand normal tidal or stream flow fluctuations.
 - (d) The turbidity curtains must be in place after the equipment is brought into the work area, but before it is anchored (i.e. spuds, etc). This is necessary to prevent any sediments, contaminants, and waste materials from escaping the work area and reintroduced into the water column during the work activity.
 - (e) To minimize sediments from escaping the work area, adequate space must be provided between the work area and the turbidity curtains.
8. To monitor turbidity in the river; the permittee shall:
 - (a) Continuously observe and measure turbidity 50 feet upstream and 50 feet downstream of the work area to ensure that there is no generation of sediment plumes and no sediment plumes escape the work area. Turbidity monitoring must be conducted at different depths, for example, near the bottom, $\frac{1}{4}$ depth from the bottom, $\frac{3}{4}$ depth from the bottom, and near the surface.
 - (b) Establish background turbidity and measure turbidity by using U.S. Environmental Protection Agency (EPA) approved methods in accordance with

40 CFR Part 136 procedures and manufacturer's specifications. Background turbidity must be established before starting any work in the water; and

- (c) If a sediment plume is observed coming out of the sediment-disturbing activity/work/sampling location or if the turbidity exceeds the District of Columbia surface water quality standard, the permittee shall:
 - i. Immediately stop all activities/operations and notify DDOE WQD at (202) 671-3033;
 - ii. Adjust all activities and implement best management practices until there is no more sediment escaping the sediment-disturbing activity/sampling/soil boring location; and
 - iii. If and when the measured turbidity is less than or equal to the background turbidity, the permittee may resume the work.
9. All pilings, drillings, wells, or borings shall be drilled and installed in a manner that prevents cross-contamination of surface water and groundwater aquifers.
10. All drill cuttings, drilling mud, excavated and sampling sediments (e.g. within cofferdams or excess sediment samples), and wastes (both solid and liquid) shall be contained, sampled, and analyzed for disposal at appropriate disposal sites. The wastes shall not be used as backfill material in the river or on land.
11. The permittee shall obtain all necessary permits and other authorizations from appropriate Federal and local offices, including but not limited to permits for Stormwater Management, and Erosion and Sediment Control from the DDOE. All staging and temporary activity areas not covered by any permit shall have adequate soil erosion and sedimentation measures. Please contact Abdi Musse at (202) 535-2978 for more information.
12. In the District of Columbia, the anadromous fish migration and spawning season is generally considered to occur between March 1st and June 30th. Any proposed activities in the District waters occurring during this period must have the approval of the District Department of the Environment Fisheries and Wildlife Division. Please contact Bryan King at (202) 535-2266 for more information.
13. The permittee must obtain necessary permits and authorizations from the U.S. National Park Service. Please contact Emily Ferguson at Emily.Ferguson@nps.gov or (202) 692-6033.
14. Reporting Requirements:
 - (a) The permittee shall submit written notification to DDOE WQD at least five business days before work commences.

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- (b) If the permittee observes any water quality standard exceedances at the site, you must notify DDOE WQD immediately at (202) 671-3033; stop the work; prepare and submit for review and approval, and then implement a corrective action plan.
- (c) The permittee shall submit final reports of the sample analysis and monitoring results. Reports must be submitted to DDOE WQD no later than 45 days after the completion of the work. All data generated during the operation shall be summarized in a final report. The report shall also include any violations, water quality standards exceedances, actions taken or to be taken to remediate those violations, and any other relevant information. The report shall be submitted to me:

Mr. Collin R. Burrell
Associate Director
Water Quality Division
District Department of the Environment
1200 First Street, N.E., 5th Floor
Washington, DC 20002

This certification expires when the permit issued by the U.S. Army Corps of Engineers expires. Failure to comply with these conditions shall constitute reasons for cancellation of this certification. Legal proceedings may be instituted against the permittee in accordance with District of Columbia and/or Federal laws and regulations to control water pollution in the District. DDOE WQD reserves the right to conduct inspections at any time during the construction process to determine if an activity complies with the terms and conditions authorized in this permit.

Please direct your questions or comments on this water quality certification to Adion Chinkuyu at (202) 535-2193.

Sincerely,



 Collin R. Burrell
Associate Director

GOVERNMENT OF THE DISTRICT OF COLUMBIA
District Department of the Environment

Natural Resources Administration
Water Quality Division



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Ms. Kathy B. Anderson
Chief, Maryland Section Southern
U.S. Army Corps of Engineers
Baltimore District
Operations Division, Regulatory Branch
P.O. Box 1715
Baltimore, MD 21203-1715

Project: **Water Quality Certification # DC-13-007**
NAB-2013-00640 (201300640) (55th STREET BRIDGE REPAIR/WATTS
BRANCH)
To repair 55th Street Bridge in Watts Branch near the intersection of Dix Street, NE and 55th Street, NE, Washington, DC.

Dear Ms. Anderson:

The District Department of the Environment, Water Quality Division (DDOE WQD) has evaluated the permit application for Department of the Army Nationwide Permit (NWP) number 3 to the District Department of Transportation (DDOT) (the permittee). NWP number 3 pertains to *Maintenance*. The permit authorizes the permittee to temporarily emplace two 45-foot long sections of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 270 square feet along 45 linear feet of stream; and to permanently emplace an 3-foot wide by 7-foot long grouted riprap scour pad to repair an existing bridge, permanently impacting approximately 21 square feet along 7 linear feet of stream; all to extend no more than seven feet channelward of the existing abutment. The project is located on 55th Street Bridge in Watts Branch near the intersection of Dix Street, NE and 55th Street, NE, Washington, DC.

DDOE WQD hereby certifies that the permit will not violate the Water Pollution Control Act of 1984, D.C. Official Code § 8-103.01 *et seq.*, and will meet the Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR), Chapter 11, and the Water Quality Monitoring Regulations in DCMR, Chapter 19, provided the conditions listed below are followed. The **Water Quality Certification # DC-13-007** is issued to the permittee for the activities described in the project **NAB-2013-00640 (201300640) (55th STREET BRIDGE REPAIR/WATTS BRANCH)** and the plans submitted to DDOE WQD, subject to the following:

1. All work must be performed in accordance with the plans and documents provided to DDOE WQD.
2. The permittee shall incorporate best management practices as an integral part of the performance of the work to ensure minimal impact to the waters of the District of Columbia.



3. The permittee shall not disturb the stream restoration work, including the plants in Watts Branch. If the restoration work is disturbed, the permittee shall restore the stream to its original or better conditions. Please contact Josh Burch at (202) 535-2247 or josh.burch@dc.gov for more information and approval.
4. Any water impacted by the project shall be pumped to an appropriate treatment system in order to comply with Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR) Chapter 11, and the Water Quality Monitoring Regulations in DCMR Chapter 19.
5. Any oil sheen or other visible evidence of hydrocarbons or other pollution generated during any of the activities shall be immediately contained/containerized and reported to DDOE WQD at (202) 671-3033.
6. Any process water (such as equipment cooling and wash water) from drinking water sources must be dechlorinated before being discharged to storm drains or directly into the river.
7. Control of turbidity, sediments, waste and work materials in the river:
 - (a) Weighted turbidity curtains must be used if the permittee uses anchored barges or boats, or any anchored equipment.
 - (b) Weighted turbidity curtains must be used in all activity/sampling/pile installation/pile removal/soil boring work areas and around equipment or coffer dams.
 - (c) The turbidity curtains must be properly anchored, must touch the river bottom, and encompass the entire area of activity - coffer dams, barge, boat, plus any equipment in the water. Where possible, the turbidity curtain must be able to withstand normal tidal or stream flow fluctuations.
 - (d) The turbidity curtains must be in place after the equipment is brought into the work area, but before it is anchored (i.e. spuds, etc). This is necessary to prevent any sediments, contaminants, and waste materials from escaping the work area and reintroduced into the water column during the work activity.
 - (e) To minimize sediments from escaping the work area, adequate space must be provided between the work area and the turbidity curtains.
8. To monitor turbidity in the river; the permittee shall:
 - (a) Continuously observe and measure turbidity 50 feet upstream and 50 feet downstream of the work area to ensure that there is no generation of sediment plumes and no sediment plumes escape the work area. Turbidity monitoring must be conducted at different depths, for example, near the bottom, $\frac{1}{4}$ depth from the bottom, $\frac{3}{4}$ depth from the bottom, and near the surface.
 - (b) Establish background turbidity and measure turbidity by using U.S. Environmental Protection Agency (EPA) approved methods in accordance with

40 CFR Part 136 procedures and manufacturer's specifications. Background turbidity must be established before starting any work in the water; and

- (c) If a sediment plume is observed coming out of the sediment-disturbing activity/work/sampling location or if the turbidity exceeds the District of Columbia surface water quality standard, the permittee shall:
 - i. Immediately stop all activities/operations and notify DDOE WQD at (202) 671-3033;
 - ii. Adjust all activities and implement best management practices until there is no more sediment escaping the sediment-disturbing activity/sampling/soil boring location; and
 - iii. If and when the measured turbidity is less than or equal to the background turbidity, the permittee may resume the work.
- 9. All pilings, drillings, wells, or borings shall be drilled and installed in a manner that prevents cross-contamination of surface water and groundwater aquifers.
- 10. All drill cuttings, drilling mud, excavated and sampling sediments (e.g. within cofferdams or excess sediment samples), and wastes (both solid and liquid) shall be contained, sampled, and analyzed for disposal at appropriate disposal sites. The wastes shall not be used as backfill material in the river or on land.
- 11. The permittee shall obtain all necessary permits and other authorizations from appropriate Federal and local offices, including but not limited to permits for Stormwater Management, and Erosion and Sediment Control from the DDOE. All staging and temporary activity areas not covered by any permit shall have adequate soil erosion and sedimentation measures. Please contact Abdi Musse at (202) 535-2978 for more information.
- 12. In the District of Columbia, the anadromous fish migration and spawning season is generally considered to occur between March 1st and June 30th. Any proposed activities in the District waters occurring during this period must have the approval of the District Department of the Environment Fisheries and Wildlife Division. Please contact Bryan King at (202) 535-2266 for more information.
- 13. The permittee must obtain necessary permits and authorizations from the U.S. National Park Service. Please contact Emily Ferguson at Emily.Ferguson@nps.gov or (202) 692-6033.
- 14. Reporting Requirements:
 - (a) The permittee shall submit written notification to DDOE WQD at least five business days before work commences.

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- (b) If the permittee observes any water quality standard exceedances at the site, you must notify DDOE WQD immediately at (202) 671-3033; stop the work; prepare and submit for review and approval, and then implement a corrective action plan.
- (c) The permittee shall submit final reports of the sample analysis and monitoring results. Reports must be submitted to DDOE WQD no later than 45 days after the completion of the work. All data generated during the operation shall be summarized in a final report. The report shall also include any violations, water quality standards exceedances, actions taken or to be taken to remediate those violations, and any other relevant information. The report shall be submitted to me:

Mr. Collin R. Burrell
Associate Director
Water Quality Division
District Department of the Environment
1200 First Street, N.E., 5th Floor
Washington, DC 20002

This certification expires when the permit issued by the U.S. Army Corps of Engineers expires. Failure to comply with these conditions shall constitute reasons for cancellation of this certification. Legal proceedings may be instituted against the permittee in accordance with District of Columbia and/or Federal laws and regulations to control water pollution in the District. DDOE WQD reserves the right to conduct inspections at any time during the construction process to determine if an activity complies with the terms and conditions authorized in this permit.

Please direct your questions or comments on this water quality certification to Adion Chinkuyu at (202) 535-2193.

Sincerely,



 Collin R. Burrell
Associate Director

GOVERNMENT OF THE DISTRICT OF COLUMBIA
District Department of the Environment

Natural Resources Administration
Water Quality Division



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Ms. Kathy B. Anderson
Chief, Maryland Section Southern
U.S. Army Corps of Engineers
Baltimore District
Operations Division, Regulatory Branch
P.O. Box 1715
Baltimore, MD 21203-1715

Project: **Water Quality Certification # DC-13-008**
NAB-2013-00641 (201300641) (58th STREET BRIDGE REPAIR/WATTS
BRANCH)
To repair 58th Street Bridge in Watts Branch near the intersection of Clay Street, NE
and 58th Street, NE, Washington, DC.

Dear Ms. Anderson:

The District Department of the Environment, Water Quality Division (DDOE WQD) has evaluated the permit application for Department of the Army Nationwide Permit (NWP) number 3 to the District Department of Transportation (DDOT) (the permittee). NWP number 3 pertains to *Maintenance*. The permit authorizes the permittee to temporarily emplace two 65-foot long sections of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 390 square feet along 65 linear feet of stream; and to permanently emplace 167 cubic yards of riprap in a 13-foot wide by 41-foot long area of stream channel under and on both ends of the bridge, permanently impacting approximately 533 square feet along 41 linear feet of the stream. The project is located on 58th Street Bridge in Watts Branch near the intersection of Clay Street, NE and 58th Street, NE, Washington, DC.

DDOE WQD hereby certifies that the permit will not violate the Water Pollution Control Act of 1984, D.C. Official Code § 8-103.01 *et seq.*, and will meet the Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR), Chapter 11, and the Water Quality Monitoring Regulations in DCMR, Chapter 19, provided the conditions listed below are followed. The **Water Quality Certification # DC-13-008** is issued to the permittee for the activities described in the project **NAB-2013-00641 (201300641) (58th STREET BRIDGE REPAIR/WATTS BRANCH)** and the plans submitted to DDOE WQD, subject to the following:

1. All work must be performed in accordance with the plans and documents provided to DDOE WQD.
2. The permittee shall incorporate best management practices as an integral part of the performance of the work to ensure minimal impact to the waters of the District of Columbia.



3. The permittee shall not disturb the stream restoration work, including the plants in Watts Branch. If the restoration work is disturbed, the permittee shall restore the stream to its original or better conditions. Please contact Josh Burch at (202) 535-2247 or josh.burch@dc.gov for more information and approval.
4. Any water impacted by the project shall be pumped to an appropriate treatment system in order to comply with Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR) Chapter 11, and the Water Quality Monitoring Regulations in DCMR Chapter 19.
5. Any oil sheen or other visible evidence of hydrocarbons or other pollution generated during any of the activities shall be immediately contained/containerized and reported to DDOE WQD at (202) 671-3033.
6. Any process water (such as equipment cooling and wash water) from drinking water sources must be dechlorinated before being discharged to storm drains or directly into the river.
7. Control of turbidity, sediments, waste and work materials in the river:
 - (a) Weighted turbidity curtains must be used if the permittee uses anchored barges or boats, or any anchored equipment.
 - (b) Weighted turbidity curtains must be used in all activity/sampling/pile installation/pile removal/soil boring work areas and around equipment or coffer dams.
 - (c) The turbidity curtains must be properly anchored, must touch the river bottom, and encompass the entire area of activity - coffer dams, barge, boat, plus any equipment in the water. Where possible, the turbidity curtain must be able to withstand normal tidal or stream flow fluctuations.
 - (d) The turbidity curtains must be in place after the equipment is brought into the work area, but before it is anchored (i.e. spuds, etc). This is necessary to prevent any sediments, contaminants, and waste materials from escaping the work area and reintroduced into the water column during the work activity.
 - (e) To minimize sediments from escaping the work area, adequate space must be provided between the work area and the turbidity curtains.
8. To monitor turbidity in the river; the permittee shall:
 - (a) Continuously observe and measure turbidity 50 feet upstream and 50 feet downstream of the work area to ensure that there is no generation of sediment plumes and no sediment plumes escape the work area. Turbidity monitoring must be conducted at different depths, for example, near the bottom, $\frac{1}{4}$ depth from the bottom, $\frac{3}{4}$ depth from the bottom, and near the surface.
 - (b) Establish background turbidity and measure turbidity by using U.S. Environmental Protection Agency (EPA) approved methods in accordance with

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40 CFR Part 136 procedures and manufacturer's specifications. Background turbidity must be established before starting any work in the water; and

- (c) If a sediment plume is observed coming out of the sediment-disturbing activity/work/sampling location or if the turbidity exceeds the District of Columbia surface water quality standard, the permittee shall:
 - i. Immediately stop all activities/operations and notify DDOE WQD at (202) 671-3033;
 - ii. Adjust all activities and implement best management practices until there is no more sediment escaping the sediment-disturbing activity/sampling/soil boring location; and
 - iii. If and when the measured turbidity is less than or equal to the background turbidity, the permittee may resume the work.
9. All pilings, drillings, wells, or borings shall be drilled and installed in a manner that prevents cross-contamination of surface water and groundwater aquifers.
10. All drill cuttings, drilling mud, excavated and sampling sediments (e.g. within cofferdams or excess sediment samples), and wastes (both solid and liquid) shall be contained, sampled, and analyzed for disposal at appropriate disposal sites. The wastes shall not be used as backfill material in the river or on land.
11. The permittee shall obtain all necessary permits and other authorizations from appropriate Federal and local offices, including but not limited to permits for Stormwater Management, and Erosion and Sediment Control from the DDOE. All staging and temporary activity areas not covered by any permit shall have adequate soil erosion and sedimentation measures. Please contact Abdi Musse at (202) 535-2978 for more information.
12. In the District of Columbia, the anadromous fish migration and spawning season is generally considered to occur between March 1st and June 30th. Any proposed activities in the District waters occurring during this period must have the approval of the District Department of the Environment Fisheries and Wildlife Division. Please contact Bryan King at (202) 535-2266 for more information.
13. The permittee must obtain necessary permits and authorizations from the U.S. National Park Service. Please contact Emily Ferguson at Emily.Ferguson@nps.gov or (202) 692-6033.
14. Reporting Requirements:
 - (a) The permittee shall submit written notification to DDOE WQD at least five business days before work commences.

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- (b) If the permittee observes any water quality standard exceedances at the site, you must notify DDOE WQD immediately at (202) 671-3033; stop the work; prepare and submit for review and approval, and then implement a corrective action plan.
- (c) The permittee shall submit final reports of the sample analysis and monitoring results. Reports must be submitted to DDOE WQD no later than 45 days after the completion of the work. All data generated during the operation shall be summarized in a final report. The report shall also include any violations, water quality standards exceedances, actions taken or to be taken to remediate those violations, and any other relevant information. The report shall be submitted to me:

Mr. Collin R. Burrell
Associate Director
Water Quality Division
District Department of the Environment
1200 First Street, N.E., 5th Floor
Washington, DC 20002

This certification expires when the permit issued by the U.S. Army Corps of Engineers expires. Failure to comply with these conditions shall constitute reasons for cancellation of this certification. Legal proceedings may be instituted against the permittee in accordance with District of Columbia and/or Federal laws and regulations to control water pollution in the District. DDOE WQD reserves the right to conduct inspections at any time during the construction process to determine if an activity complies with the terms and conditions authorized in this permit.

Please direct your questions or comments on this water quality certification to Adion Chinkuyu at (202) 535-2193.

Sincerely,



 Collin R. Burrell
Associate Director

GOVERNMENT OF THE DISTRICT OF COLUMBIA
District Department of the Environment

Natural Resources Administration
Water Quality Division



APR 25 2013

Ms. Kathy B. Anderson
Chief, Maryland Section Southern
U.S. Army Corps of Engineers
Baltimore District
Operations Division, Regulatory Branch
P.O. Box 1715
Baltimore, MD 21203-1715

Project: **Water Quality Certification # DC-13-010**
NAB-2013-00643 (201300643) (GAULT PLACE BRIDGE REPAIR/WATTS
BRANCH)
To repair Gault Place Bridge in Watts Branch west of the intersection of Gault Place
NE and 44th Street NE, Washington, DC.

Dear Ms. Anderson:

The District Department of the Environment, Water Quality Division (DDOE WQD) has evaluated the permit application for Department of the Army Nationwide Permit (NWP) number 3 to the District Department of Transportation (DDOT) (the permittee). NWP number 3 pertains to *Maintenance*. The permit authorizes the permittee to temporarily emplace 64 linear feet of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 132 square feet along 64 linear feet of stream; and to permanently emplace an 18-foot wide by 40-foot long grouted riprap scour pad to repair an existing bridge, permanently impacting approximately 720 square feet along 40 linear feet of stream; all to extend no more than seven feet channelward of the existing abutment. The project is located on Gault Place Bridge in Watts Branch west of the intersection of Gault Place and 44th Street NE, Washington, DC.

DDOE WQD hereby certifies that the permit will not violate the Water Pollution Control Act of 1984, D.C. Official Code § 8-103.01 *et seq.*, and will meet the Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR), Chapter 11, and the Water Quality Monitoring Regulations in DCMR, Chapter 19, provided the conditions listed below are followed. The **Water Quality Certification # DC-13-010** is issued to the permittee for the activities described in the project **NAB-2013-00643 (201300643) (GAULT PLACE BRIDGE REPAIR/WATTS BRANCH)** and the plans submitted to DDOE WQD, subject to the following:

1. All work must be performed in accordance with the plans and documents provided to DDOE WQD.
2. The permittee shall incorporate best management practices as an integral part of the performance of the work to ensure minimal impact to the waters of the District of Columbia.



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3. The permittee shall not disturb the stream restoration work, including the plants in Watts Branch. If the restoration work is disturbed, the permittee shall restore the stream to its original or better conditions. Please contact Josh Burch at (202) 535-2247 or josh.burch@dc.gov for more information and approval.
4. Any water impacted by the project shall be pumped to an appropriate treatment system in order to comply with Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR) Chapter 11, and the Water Quality Monitoring Regulations in DCMR Chapter 19.
5. Any oil sheen or other visible evidence of hydrocarbons or other pollution generated during any of the activities shall be immediately contained/containerized and reported to DDOE WQD at (202) 671-3033.
6. Any process water (such as equipment cooling and wash water) from drinking water sources must be dechlorinated before being discharged to storm drains or directly into the river.
7. Control of turbidity, sediments, waste and work materials in the river:
 - (a) Weighted turbidity curtains must be used if the permittee uses anchored barges or boats, or any anchored equipment.
 - (b) Weighted turbidity curtains must be used in all activity/sampling/pile installation/pile removal/soil boring work areas and around equipment or coffer dams.
 - (c) The turbidity curtains must be properly anchored, must touch the river bottom, and encompass the entire area of activity - coffer dams, barge, boat, plus any equipment in the water. Where possible, the turbidity curtain must be able to withstand normal tidal or stream flow fluctuations.
 - (d) The turbidity curtains must be in place after the equipment is brought into the work area, but before it is anchored (i.e. spuds, etc). This is necessary to prevent any sediments, contaminants, and waste materials from escaping the work area and reintroduced into the water column during the work activity.
 - (e) To minimize sediments from escaping the work area, adequate space must be provided between the work area and the turbidity curtains.
8. To monitor turbidity in the river; the permittee shall:
 - (a) Continuously observe and measure turbidity 50 feet upstream and 50 feet downstream of the work area to ensure that there is no generation of sediment plumes and no sediment plumes escape the work area. Turbidity monitoring must be conducted at different depths, for example, near the bottom, $\frac{1}{4}$ depth from the bottom, $\frac{3}{4}$ depth from the bottom, and near the surface.
 - (b) Establish background turbidity and measure turbidity by using U.S. Environmental Protection Agency (EPA) approved methods in accordance with

40 CFR Part 136 procedures and manufacturer's specifications. Background turbidity must be established before starting any work in the water; and

- (c) If a sediment plume is observed coming out of the sediment-disturbing activity/work/sampling location or if the turbidity exceeds the District of Columbia surface water quality standard, the permittee shall:
 - i. Immediately stop all activities/operations and notify DDOE WQD at (202) 671-3033;
 - ii. Adjust all activities and implement best management practices until there is no more sediment escaping the sediment-disturbing activity/sampling/soil boring location; and
 - iii. If and when the measured turbidity is less than or equal to the background turbidity, the permittee may resume the work.
- 9. All pilings, drillings, wells, or borings shall be drilled and installed in a manner that prevents cross-contamination of surface water and groundwater aquifers.
- 10. All drill cuttings, drilling mud, excavated and sampling sediments (e.g. within cofferdams or excess sediment samples), and wastes (both solid and liquid) shall be contained, sampled, and analyzed for disposal at appropriate disposal sites. The wastes shall not be used as backfill material in the river or on land.
- 11. The permittee shall obtain all necessary permits and other authorizations from appropriate Federal and local offices, including but not limited to permits for Stormwater Management, and Erosion and Sediment Control from the DDOE. All staging and temporary activity areas not covered by any permit shall have adequate soil erosion and sedimentation measures. Please contact Abdi Musse at (202) 535-2978 for more information.
- 12. In the District of Columbia, the anadromous fish migration and spawning season is generally considered to occur between March 1st and June 30th. Any proposed activities in the District waters occurring during this period must have the approval of the District Department of the Environment Fisheries and Wildlife Division. Please contact Bryan King at (202) 535-2266 for more information.
- 13. The permittee must obtain necessary permits and authorizations from the U.S. National Park Service. Please contact Emily Ferguson at Emily.Ferguson@nps.gov or (202) 692-6033.
- 14. Reporting Requirements:
 - (a) The permittee shall submit written notification to DDOE WQD at least five business days before work commences.

- (b) If the permittee observes any water quality standard exceedances at the site, you must notify DDOE WQD immediately at (202) 671-3033; stop the work; prepare and submit for review and approval, and then implement a corrective action plan.
- (c) The permittee shall submit final reports of the sample analysis and monitoring results. Reports must be submitted to DDOE WQD no later than 45 days after the completion of the work. All data generated during the operation shall be summarized in a final report. The report shall also include any violations, water quality standards exceedances, actions taken or to be taken to remediate those violations, and any other relevant information. The report shall be submitted to me:

Mr. Collin R. Burrell
Associate Director
Water Quality Division
District Department of the Environment
1200 First Street, N.E., 5th Floor
Washington, DC 20002

This certification expires when the permit issued by the U.S. Army Corps of Engineers expires. Failure to comply with these conditions shall constitute reasons for cancellation of this certification. Legal proceedings may be instituted against the permittee in accordance with District of Columbia and/or Federal laws and regulations to control water pollution in the District. DDOE WQD reserves the right to conduct inspections at any time during the construction process to determine if an activity complies with the terms and conditions authorized in this permit.

Please direct your questions or comments on this water quality certification to Adion Chinkuyu at (202) 535-2193.

Sincerely,



 Collin R. Burrell
Associate Director

GOVERNMENT OF THE DISTRICT OF COLUMBIA
District Department of the Environment

Natural Resources Administration
Water Quality Division

APR 25 2013



Ms. Kathy B. Anderson
Chief, Maryland Section Southern
U.S. Army Corps of Engineers
Baltimore District
Operations Division, Regulatory Branch
P.O. Box 1715
Baltimore, MD 21203-1715

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Project: **Water Quality Certification # DC-13-009**

NAB-2013-00642 (201300642) (DIVISION AVENUE BRIDGE REPAIR/WATTS BRANCH)

To repair Division Avenue Bridge in Watts Branch north of the intersection of Division Avenue with Fitch Place, NE, Washington, DC.

Dear Ms. Anderson:

The District Department of the Environment, Water Quality Division (DDOE WQD) has evaluated the permit application for Department of the Army Nationwide Permit (NWP) number 3 to the District Department of Transportation (DDOT) (the permittee). NWP number 3 pertains to *Maintenance*. The permit authorizes the permittee to temporarily emplace two 60-foot long sections of 3-foot wide sandbags for stream diversion, temporarily impacting approximately 360 square feet along 60 linear feet of stream; and to permanently emplace an 3-foot wide by 7-foot long grouted riprap scour pad to repair an existing bridge, permanently impacting approximately 21 square feet along 7 linear feet of stream; all to extend no more than seven feet channelward of the existing abutment. The project is located on Division Avenue Bridge in Watts Branch north of the intersection of Division Avenue, NE with Fitch Place NE, Washington, DC.

DDOE WQD hereby certifies that the permit will not violate the Water Pollution Control Act of 1984, D.C. Official Code § 8-103.01 *et seq.*, and will meet the Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR), Chapter 11, and the Water Quality Monitoring Regulations in DCMR, Chapter 19, provided the conditions listed below are followed. The **Water Quality Certification # DC-13-009** is issued to the permittee for the activities described in the project **NAB-2013-00642 (201300642) (DIVISION AVENUE BRIDGE REPAIR/WATTS BRANCH)** and the plans submitted to DDOE WQD, subject to the following:

1. All work must be performed in accordance with the plans and documents provided to DDOE WQD.
2. The permittee shall incorporate best management practices as an integral part of the performance of the work to ensure minimal impact to the waters of the District of Columbia.



3. The permittee shall not disturb the stream restoration work, including the plants in Watts Branch. If the restoration work is disturbed, the permittee shall restore the stream to its original or better conditions. Please contact Josh Burch at (202) 535-2247 or josh.burch@dc.gov for more information and approval.
4. Any water impacted by the project shall be pumped to an appropriate treatment system in order to comply with Water Quality Standards of the District of Columbia in Title 21 of the District of Columbia Municipal Regulations (DCMR) Chapter 11, and the Water Quality Monitoring Regulations in DCMR Chapter 19.
5. Any oil sheen or other visible evidence of hydrocarbons or other pollution generated during any of the activities shall be immediately contained/containerized and reported to DDOE WQD at (202) 671-3033.
6. Any process water (such as equipment cooling and wash water) from drinking water sources must be dechlorinated before being discharged to storm drains or directly into the river.
7. Control of turbidity, sediments, waste and work materials in the river:
 - (a) Weighted turbidity curtains must be used if the permittee uses anchored barges or boats, or any anchored equipment.
 - (b) Weighted turbidity curtains must be used in all activity/sampling/pile installation/pile removal/soil boring work areas and around equipment or coffer dams.
 - (c) The turbidity curtains must be properly anchored, must touch the river bottom, and encompass the entire area of activity - coffer dams, barge, boat, plus any equipment in the water. Where possible, the turbidity curtain must be able to withstand normal tidal or stream flow fluctuations.
 - (d) The turbidity curtains must be in place after the equipment is brought into the work area, but before it is anchored (i.e. spuds, etc). This is necessary to prevent any sediments, contaminants, and waste materials from escaping the work area and reintroduced into the water column during the work activity.
 - (e) To minimize sediments from escaping the work area, adequate space must be provided between the work area and the turbidity curtains.
8. To monitor turbidity in the river; the permittee shall:
 - (a) Continuously observe and measure turbidity 50 feet upstream and 50 feet downstream of the work area to ensure that there is no generation of sediment plumes and no sediment plumes escape the work area. Turbidity monitoring must be conducted at different depths, for example, near the bottom, $\frac{1}{4}$ depth from the bottom, $\frac{3}{4}$ depth from the bottom, and near the surface.
 - (b) Establish background turbidity and measure turbidity by using U.S. Environmental Protection Agency (EPA) approved methods in accordance with

40 CFR Part 136 procedures and manufacturer's specifications. Background turbidity must be established before starting any work in the water; and

- (c) If a sediment plume is observed coming out of the sediment-disturbing activity/work/sampling location or if the turbidity exceeds the District of Columbia surface water quality standard, the permittee shall:
 - i. Immediately stop all activities/operations and notify DDOE WQD at (202) 671-3033;
 - ii. Adjust all activities and implement best management practices until there is no more sediment escaping the sediment-disturbing activity/sampling/soil boring location; and
 - iii. If and when the measured turbidity is less than or equal to the background turbidity, the permittee may resume the work.
- 9. All pilings, drillings, wells, or borings shall be drilled and installed in a manner that prevents cross-contamination of surface water and groundwater aquifers.
- 10. All drill cuttings, drilling mud, excavated and sampling sediments (e.g. within cofferdams or excess sediment samples), and wastes (both solid and liquid) shall be contained, sampled, and analyzed for disposal at appropriate disposal sites. The wastes shall not be used as backfill material in the river or on land.
- 11. The permittee shall obtain all necessary permits and other authorizations from appropriate Federal and local offices, including but not limited to permits for Stormwater Management, and Erosion and Sediment Control from the DDOE. All staging and temporary activity areas not covered by any permit shall have adequate soil erosion and sedimentation measures. Please contact Abdi Musse at (202) 535-2978 for more information.
- 12. In the District of Columbia, the anadromous fish migration and spawning season is generally considered to occur between March 1st and June 30th. Any proposed activities in the District waters occurring during this period must have the approval of the District Department of the Environment Fisheries and Wildlife Division. Please contact Bryan King at (202) 535-2266 for more information.
- 13. The permittee must obtain necessary permits and authorizations from the U.S. National Park Service. Please contact Emily Ferguson at Emily.Ferguson@nps.gov or (202) 692-6033.
- 14. Reporting Requirements:
 - (a) The permittee shall submit written notification to DDOE WQD at least five business days before work commences.

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- (b) If the permittee observes any water quality standard exceedances at the site, you must notify DDOE WQD immediately at (202) 671-3033; stop the work; prepare and submit for review and approval, and then implement a corrective action plan.
- (c) The permittee shall submit final reports of the sample analysis and monitoring results. Reports must be submitted to DDOE WQD no later than 45 days after the completion of the work. All data generated during the operation shall be summarized in a final report. The report shall also include any violations, water quality standards exceedances, actions taken or to be taken to remediate those violations, and any other relevant information. The report shall be submitted to me:

Mr. Collin R. Burrell
Associate Director
Water Quality Division
District Department of the Environment
1200 First Street, N.E., 5th Floor
Washington, DC 20002

This certification expires when the permit issued by the U.S. Army Corps of Engineers expires. Failure to comply with these conditions shall constitute reasons for cancellation of this certification. Legal proceedings may be instituted against the permittee in accordance with District of Columbia and/or Federal laws and regulations to control water pollution in the District. DDOE WQD reserves the right to conduct inspections at any time during the construction process to determine if an activity complies with the terms and conditions authorized in this permit.

Please direct your questions or comments on this water quality certification to Adion Chinkuyu at (202) 535-2193.

Sincerely,

for Collin R. Burrell
Associate Director