

FORMS AND CALCULATIONS



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- *Link to file on phillywaterdesign.com

PWD

WATER RELAY QUANTITY SHEETS

PREPARED BY:

PROJECT #:

DATE:

LOCATION:

SHEET #:

DI PIPE

EXCAVATION IN CITY STREETS

EXCAVATION IN STATE ROUTES

CITY 8" CONCRETE BASE

STATE 10" CONCRETE BASE

CITY PAVING

STATE ROUTE PAVING

PIPE SIZE

LF.

FACTOR

C.Y.

LF.

FACTOR

C.Y.

LF.

FACTOR

S.Y.

LF.

FACTOR

S.Y.

LF.

FACTOR

S.Y.

LF.

FACTOR

S.Y.

REMOVALS

#

FCT

#

FCT

CONCRETE FOOTWAY

TOPSOIL & SOD

CONCRETE DRIVEWAY

CURB

FIRE HYDRANT

CUT-IN VALVE

FRAME AND COVER

LENGTH (L.F.)

WIDTH (L.F.)

S.Y.

LENGTH (L.F.)

WIDTH (L.F.)

S.Y.

LENGTH (L.F.)

WIDTH (L.F.)

S.Y.

CONCRETE GRANITE

ADA RAMP

EACH

MILLING

TOTAL CITY STREETS: CY

TOTAL STATE ROUTES: CY

SY

SY

SY

SY

SY

SY

TON

PAVING AT INTERSECTIONS

TEMPORARY PAVING

QUANTIFY CURB CUTBACKS

FULL WIDTH RECONSTRUCTION - CITY STANDARD PAVING

FULL WIDTH RECONSTRUCTION - POROUS PAVING

NEW SERVICES

3/4" LEAD SERVICES REPLACEMENT

BILL OF MATERIALS

VALVE S

FULL WIDTH RECONSTRUCTION - CITY STANDARD PAVING

FULL WIDTH RECONSTRUCTION - POROUS PAVING

NEW SERVICES

3/4" LEAD SERVICES REPLACEMENT

1. Hydrants (W/ CCL)

2. Valve Boxes

3. Valves

4. Crosses

5. Tees

6. Bends

7. Offsets

8. Reducers

9. Sleeves

10. Caps

11. Plugs

MISCELLANEOUS


Appendix IIIa: Water Quantities Input Sheet - Page 1 of X

CITY
STREET

STATE
ROUTE

FULL WIDTH RECONSTRUCTION - POROUS PAVING			
BINDER COURSE (SY)			
WEARING COURSE (SY)			
	TOTAL S.Y.	WATER	SEWER
CHOKER COURSE (CY)			
	TOTAL C.Y.	WATER	SEWER

SEWER LINING			
?	SIZE	MATERIAL	LF
Lining of			
Lining of			
Lining of			
Lining of			
Lining of			


MANHOLE REHABILITATION

	EACH
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[illegible]

LATERALS									MANHOLES		INLETS	
6" VCP LATERAL RECONNECTION			LATERAL REPLACEMENT WITH 6" DUCTILE IRON PIPE						TYPE	QTY.	TYPE	QTY.
#	LENGTH	TOTAL	#	LENGTH	TOTAL	# RISERS	V. LENGTH	TOTAL				
									FOR PIPES 30" & UNDER		4" OMG	
									FOR PIPES 36" & OVER		6" OMG	
									TRANSIT. FOR 30" & UNDER		4" CITY	
									TRANSIT. FOR 36" & OVER		6" CITY	
									JUNCTION		4" HIGHWAY	
									6" JUNCTION MANHOLE		6" HIGHWAY	
									WELLHOLE		ABANDON INLET	
LF			LF			VF						

[illegible]

PWD	GREEN INFRASTRUCTURE PRELIMINARY ESTIMATE			PROPOSED SW TRENCH #	Trench Construction Cost per Drainage Area Acre	50.00	Trench Construction Cost per Greened Acre	50.00
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scroll over for cost breakdown

SYSTEM FOOTPRINT (S.F.)
DEPTH OF RUNOFF MANAGED (IN)

SYSTEM DRAINAGE AREA (S.F.)

Item Description	Item #	Approx. Quantity	Average Unit Cost	Unit	Total
Excavation and Earthwork					
Excavation and disposal for green infrastructure work including sheathing and shoring (without classification)	G1001	0	\$50.00	CY	50.00
Trap removal	G9102	0	\$500.00	Each	50.00
Piping					
HDPE anti-seep collars	G3000	0	\$500.00	Each	50.00
8 inch solid HDPE pipe	G3008	0	\$75.00	LF	50.00
8 inch perforated HDPE pipe	G3009	0	\$75.00	LF	50.00
12 inch solid PP pipe	G3112	0	\$50.00	LF	50.00
12 inch perforated PP pipe	G3113	0	\$50.00	LF	50.00
8 inch DI pipe	G3708	0	\$100.00	LF	50.00
Storage Media					
Furnish and place ASG-170 A67 stone wrapped in jacobsite/impermeable liner	G4057	0	\$90.00	CY	50.00
Furnish and place sand filter layer	G4100	0	\$80.00	CY	50.00
Modular Storage Units	G4200	5	-	Lump Sum	50.00
Drainage Structures					
15 inch inlet connections	G7215 or S7215	0	\$200.00	LF	50.00
Junction Box	G8055	0	\$5,000.00	Each	50.00
Water Level Control Structure	G8056	0	\$10,000.00	Each	50.00
4 foot green city inlet	G8104	0	\$5,000.00	Each	50.00
4 foot green highway grate inlet	G8106	0	\$7,900.00	Each	50.00
Filling abandoned inlets	G8112	0	\$740.00	Each	50.00
4 foot green dual catch basin city inlet	G8124	0	\$40,000.00	Each	50.00
6 foot green dual catch basin highway grate inlet	G8146	0	\$60,000.00	Each	50.00
4 foot OMG inlet with orifice	G8150 or G8150	0	\$7,400.00	Each	50.00
4 foot city inlet with orifice	G8154 or G8154	0	\$8,000.00	Each	50.00
4 foot highway grate inlet with orifice	G8156 or G8156	0	\$7,300.00	Each	50.00
Underdrain connection to existing inlet	G8159	0	\$1,000.00	Each	50.00
Geotechnical Testing and Monitoring					
Double string infiltrometer tests	G1500	0	\$1,300.00	Each	50.00
Observation well	G8215	0	\$1,360.00	Each	50.00
Paving					
Concrete curbs	G9000	0	\$50.00	LF	50.00
Reset stone curbs	G9002	0	\$60.00	LF	50.00
Concrete footway paving	G9003	0	\$95.00	SY	50.00
Concrete driveway paving, 6in depth	G9009	0	\$100.00	SY	50.00
Plain concrete concrete base course, 8 inch depth (including subgrading)	G9400	0	\$85.00	SY	50.00
High early strength concrete base course, 10 inch depth (including subgrading)	G9402	0	\$110.00	SY	50.00
Superpave 64-22 PG, Type A, (1-1/2 inch binder course and 1-1/2 inch wearing course)	G9447	0	\$34.00	SY	50.00
Allowance for PennDOT inspection fees for paving in state routes	G9496	0	-	Allowance	50.00
Construction and as-built of ADA ramps	G9511	0	\$5,510.00	Each	50.00
Site Work					
Maintenance and protection of traffic during work	G9500	0	\$5,000.00	Lump Sum	50.00
As-built survey and drafting	G9705	0	\$2,000.00	Lump Sum	50.00
Landscaping and Vegetation / Backfill					
Soil	G9302	0	\$20.00	SY	50.00
Mulch	G9304	0	\$50.00	CY	50.00
Trees, 2-2.5 inch cal. B&B	G9307	0	\$600.00	Each	50.00
Planting Soil	G9310	0	\$85.00	CY	50.00
Backfill, 2A	G4002	0	\$50.00	CY	50.00
Total					50.00

EXCAVATION		EXCAVATION FOR PIPE				
SYSTEM ELEVATION CHANGE (LF)	TOTAL (CY)	PIPE	LENGTH (LF)	TRENCH WIDTH (LF)	DEPTH (LF)	TOTAL (CY)
		8" DIP		2.0		0.00
		8" DIP		2.0		0.00
		15" VCP		2.5		0.00
						0.00

ANTI-SEEP COLLAR / ROOT COLLAR (EA)	8" SOLID HDPE PIPE (LF)	8" PERFOR. HDPE PIPE (LF)	12" SOLID PP PIPE (LF)	12" PERFOR. PP PIPE (LF)	8" DUCTILE IRON PIPE (LF)

STONE STORAGE		SAND		SYSTEM BACKFILL		MODULAR STORAGE UNITS	
DEPTH (LF)	TOTAL (CY)	DEPTH (LF)	TOTAL (CY)	SYSTEM ELEVATION CHANGE (LF)	TOTAL (CY)		
				0			
Pipe/Modular Units Volume in Stone							Lump Sum

INLET S		GEOTECH & MONITORING		LANDSCAPING		SEED AND SOO	
TYPE	QTY (EA)	ITEM	QTY (EA)	ITEM	QTY (EA / CY)	LENGTH (LF)	WIDTH (LF)
JUNCTION BOX		INFILTRATION TEST		TREE REMOVAL			
WATER LEVEL CONTROL STRUCTURE		OBSERVATION WELL		TREE PLANTING			
4' GREEN CITY				PLANTING SOIL			
4' GREEN HWY				MULCH			
ABANDONED AND FILL		6" GREEN-DUAL CATCH BASIN-HIGHWAY		6" GREEN-DUAL CATCH BASIN-CITY		4' OMG WITH ORIFICE	
4' CITY WITH ORIFICE		4' HWY WITH ORIFICE		CONNECTION TO EXIST.			

CONCRETE CURB (LF)		GRANITE CURB (LF)		CONCRETE FOOTWAY			CONCRETE DRIVEWAY			ADA RAMP (EA.)
LENGTH (LF)	WIDTH (LF)	LENGTH (LF)	WIDTH (LF)	LENGTH (LF)	WIDTH (LF)	TOTAL (SY)	LENGTH (LF)	WIDTH (LF)	TOTAL (SY)	

8" CONCRETE BASE			PAVING			12" CONCRETE BASE		
LENGTH (LF)	WIDTH (LF)	TOTAL (SY)	LENGTH (LF)	WIDTH (LF)	TOTAL (SY)	LENGTH (LF)	WIDTH (LF)	TOTAL (SY)
	3.5			4.5			4	
	4.0			5.0			4.5	

ALLOWANCE FOR PENNDOT INSPECTION				
Qty:	NO. OF DAYS	\$ PER DAY	ALLOWANCE	
	30	\$	240.00	\$
				\$0.00

Additional Items & Notes:



**PHILADELPHIA WATER DEPARTMENT
DESIGN BRANCH**

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Final Design Package Checklist

Note: This form must accompany final design package.

PWD Work Number and Project Description:	Date:		
Information required for final submittal	Provided		
	Yes	No	N/A
• Memo or e-mail from Design Supervisor approving final plans & specs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• 1 set of mylar drawings (signed & rolled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• 1 copy of PGW response letter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• 1 copy of Philadelphia Streets Department paving letter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• GPIS forms completed on web application, see PWD Project Engineer for procedure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronic Submittals on CD or DVD:			
• Specifications in Microsoft Word format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Design Drawings in AutoCAD or Micro-Station format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Design Drawings in PDF format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Engineer's Estimate of Construction Cost and PWD's Water, Sewer, and Green Quantities Spreadsheets (as needed) in Microsoft Excel format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• 1 copy of each utility response letter in PDF format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• PWD GSI Design Report as a single PDF. Additionally, supporting files in the formats below shall be provided as separate attachments <ul style="list-style-type: none"> ○ Written Report documenting design approach and assumptions (.PDF) ○ GreenIT Data Entry Application Metrics Report (.CSV, .PDF) ○ "Shared" GreenIT Data Entry Application Project(s) with PWD Project Engineer ○ Supporting design calculations and modeling files (XLSX and modeling original files) ○ Drainage area maps (.PDF and .DWG) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Approved Roadway Grading Plans in PDF format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Approved Curb Ramp Designs in PDF format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Quantities Certification in PDF format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Project Summary in Microsoft Word and PDF format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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PWD Design Branch
Monthly Project Contract Summary Sheet

Date: May 31, 2013

Consultant:	PWD Consulting
PWD Work Order No.	P-16xx
Contract No.	12-202xx
Contract Expiration Date:	30-Sep-13
Contract Amount:	\$1,000,000
Amount Encumbered:	\$300,000
Amount Invoiced:	\$200,000
Unbilled Amount Remaining:	\$800,000

						Contract P-16xx Summary							
Work No.	Project Description	Total Design Budget (All Contracts)	Construction Estimate	% Des/Con	Amount Invoiced (P-15xx)	Design Budget (P-16xx)	Amount Invoiced (To Date)	MBE Payments (To Date)	WBE Payments (To Date)	Invoice No.	Invoice Date	Invoice Amount	% Invoiced (To Date)
S-XXXXX-R	A Street	\$200,000.00	\$2,000,000.00	10%	\$100,000.00	\$100,000.00	\$50,000.00	\$7,500.00	\$5,000.00	No. 1	1/31/2013	\$25,000.00	50%
										No. 2	2/28/2013	\$25,000.00	
S-XXXXX-R	B Street	\$150,000.00	\$1,500,000.00	10%	\$50,000.00	\$100,000.00	\$100,000.00	\$15,000.00	\$10,000.00	No. 1	1/31/2013	\$25,000.00	100%
										No. 2	2/28/2013	\$25,000.00	
										No. 3	3/31/2013	\$25,000.00	
										No. 4	4/30/2013	\$25,000.00	
S-XXXXX-R	C Street	\$100,000.00	\$1,000,000.00	10%	\$0.00	\$100,000.00	\$50,000.00	\$7,500.00	\$5,000.00	No. 1	1/31/2013	\$25,000.00	50%
										No. 2	2/28/2013	\$25,000.00	
					Totals	\$300,000.00	\$200,000.00	\$30,000.00	\$20,000.00				

SAMPLE



**CITY OF PHILADELPHIA
OFFICE OF ECONOMIC OPPORTUNITY
INSTRUCTIONS FOR THE POST AWARD COMPLIANCE REVIEW FORM
FOR MINORITY, WOMEN, AND DISABLED BUSINESS ENTERPRISES**

The purpose of this form is to provide the City of Philadelphia, and the Office of Economic Opportunity with a monthly update on the activities and expenditures between the prime contractors and their subcontractors including: Minority, Women, and Disabled Business Enterprises (M/W/DSBEs).

This form will be provided to the Prime contractor at the beginning of each contract and must be included with each invoice submittal and for each sub-contractor, supplier, or consultant identified as a participant on each contract. It is the responsibility of the prime contractor/vendor to keep accurate and up-to-date documentation of all invoice submittals by their subcontractors, and all payments to these subcontractors.

The Form:

Date, bid number, bid opening date, project name, contract number, contract amount (base bid only) are self-explanatory.

Commitments To:

M, W, and DS are as per your solicitation and commitment form submitted with your bid e.g., percentage of base and actual dollar amount of your commitment, which ever is greater.

Prime Contractor:

☐ Name, address, phone number, and contract person are self-explanatory.

Subcontractor name:

☐ A separate form must be prepared for each certified vendor for each monthly invoice on a given contract.

COMPLIANCE REVIEW FORM

Check the Appropriate Selection:

☐ M, W, or DS. Then put the complete address, phone number and contact person of the subvendor.

Type of Service or Purchase:

☐ Specify scope of work and/or materials and supplies to be provided by the subvendor.

Payments to Firm:

☐ Invoices from the subvendor to the prime contractor must reference this project only. Payments from the prime to the subvendor must reference the project only, e.g., one invoice, one check. Fill in the ____ information in the appropriate box for that month.

Only indicate a payment(s) in the month that the check is actually written and given, to the subvendor. Note: These reports are cumulative.

Example:

A subvendor invoices you for work done on January 19, 2000. The City pays the prime contractor on March 19, 2000. Five calendar days after the prime has been paid, the subvendor should be issued a check for the work completed in January, 2000.

Estimate total (service or purchase) subcontract value is the total of payments to date.

For example, work was performed and invoiced on January 19, 2000, payment is made in March, 2000, then February, 2000, work is invoiced and paid in April, 2000. Post Award Compliance Review for May, will indicate the March and April 2000, payments. June's report will indicate the sum of March, April and May payments.

All Post Award Compliance Review forms are to be submitted no later than ten (10) calendar days after the billing period to the City.



**OFFICE OF ECONOMIC OPPORTUNITY
POST AWARD COMPLIANCE REVIEW
FOR M/W/DSBE PARTICIPATION ON
CITY OF PHILADELPHIA BIDS AND CONTRACTS**

DATE: __/__/__	BID#	BID OPENING DATE:	REPORT NO. _____ (i.e. 1,2 or 3)
PROJECT NAME:		CONTRACT#	CONTRACT AMOUNT
COMMITMENT TO MBE	COMMITMENT TO WBE	COMMITMENT TO DSBE	
PRIME CONTRACTOR NAME:			DATE WORK BEGINS __/__/__
ADDRESS:			
PHONE#		CONTACT:	
SUBCONTRACTOR NAME:			DATE WORK COMPLETED
			____/____/____
MBE _____	WBE _____	DSBE _____	(PLEASE SPECIFY)
ADDRESS:			
PHONE#		CONTACT:	
SCOPE OF WORK:			
M/Y	PAYMENTS TO FIRM	% OF TOTAL PAYMENT	Year to Date Amount Paid
JAN	\$	%	
FEB	\$	%	
MAR	\$	%	
APR	\$	%	
MAY	\$	%	
JUN	\$	%	
JUL	\$	%	
AUG	\$	%	
SEP	\$	%	
OCT	\$	%	
NOV	\$	%	
DEC	\$	%	
ESTIMATE TOTAL (SERVICE OR PURCHASE) SUBCONTRACT VALUE IS:		\$ _____	
Attach copies of: 1. Invoices, 2. Cancelled checks, 3. Copy of PO Use one sheet per subcontractor (copy as needed)			
SIGNATURE			Date

Contract No. P-xxxx

Date:

Design Submittals

[illegible]

Work No. _____

Date _____

Sheet Nos. _____

If all sheets, write all. If specific sheets, write sheet numbers.

Independent Quantity Verification

I hereby certify that I have calculated the initial set of quantities for the sheets indicated.

Print Name

Signature

I hereby certify that I have calculated an additional independent set of quantities for the sheets indicated and that any discrepancies between the two (2) sets of quantities have been resolved. Both sets of calculations will be supplied to the Water Department if requested.

Print Name

Signature