



ABBREVIATIONS

AB ANCHOR BOLT  
AC ASPHALT CONCRETE  
ACP ACOUSTIC PANEL  
ADJ ADJUSTABLE  
AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION  
ALTR ALTERNATE  
ALUM ALUMINUM  
ANSI AMERICAN NATIONAL STANDARDS INSTITUTE  
ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS  
ASPH ASPHALT  
ASTM AMERICAN SOCIETY OF TESTING AND MATERIALS  
ASSY ASSEMBLY  
AVE AVENUE  
AWS AMERICAN WELDING SOCIETY

BI BLACK IRON  
BLD\_FLG BLIND FLANGE  
BLDG BUILDING  
BLK BLOCK  
BOD BOTTOM OF DUCT  
BOW BOTTOM OF WALL  
BTWN BETWEEN  
BVC BEGIN VERTICAL CURVE

C CONDUIT  
CAP CORRUGATED ALUMINUM PIPE  
CB CATCH BASIN  
CFM CUBIC FEET PER MINUTE  
CI CAST IRON  
CL CLASS  
CL CENTER LINE  
CLR CLEARANCE  
CMP CORRUGATED METAL PIPE  
CMU CONCRETE MASONRY UNIT  
CO CLEANOUT  
CONC CONCRETE  
CONN CONNECTION  
CONT CONTRACTOR  
CONV CONVEYOR  
CPLG COUPLING  
CONTIN CONTINUED  
COP COPPER  
CP CORNER POST  
CSH CONCRETE SURFACE HARDENER  
CTR CENTER

D DRAIN  
DI DUCTILE IRON  
DIA DIAMETER  
DIR DIRECTION  
DISCH DISCHARGE  
DN DOWN  
DP DIFFERENTIAL PRESSURE

E EAST  
EA EACH  
ECC ECCENTRIC  
EL ELEVATION  
ELL ELBOW  
ELEC ELECTRICAL  
EMERG EMERGENCY  
EXIST EXISTING  
EXP EXPANSION  
EW EACH WAY  
EVC END VERTICAL CURVE

FAB FABRICATED  
FCA FLANGED COUPLING ADAPTER  
FD FLOOR DRAIN  
FF FACTORY FINISH, FINISHED FLOOR  
FIG FIGURE  
FIN FINISHED  
FL FLANGE  
FLL FLOW LINE  
FLEX FLEXIBLE  
FLR FLOOR  
FPM FEET PER MINUTE  
FT FEET  
FT2 SQUARE FEET

GA GAUGE  
GALV GALVANIZED  
GEN GENERAL  
GI GALVANIZED IRON  
GOVT GOVERNMENT  
GPD GALLONS PER DAY  
GPM GALLONS PER MINUTE  
GRD GRADE  
GRV GROOVED PIPE OR COUPLING  
GSP GALVANIZED STEEL PIPE  
GV GATE VALVE  
GWB GYPSUM WALL BOARD

H HEIGHT  
HEX HEXAGONAL  
HMA HOT MIX ASPHALT  
HORIZ HORIZONTAL  
HP HORSEPOWER  
HR HOUR  
HDPE HIGH DENSITY POLYETHYLENE

ID INSIDE DIAMETER  
IE INVERT ELEVATION  
INF INFLUENT  
INV INVERT

J BOX JUNCTION BOX

L LENGTH  
LB POUND  
LB/HR POUNDS PER HOUR  
LF LINEAR FEET  
  
MAG MAGNETIC  
MAX MAXIMUM  
MDO MEDIUM DENSITY OVERLAY  
MECH MECHANICAL  
MFR, MFR MANUFACTURER  
MOD MILLION GALLONS PER DAY  
MG/L MILLIGRAM PER LITER  
MH MANHOLE  
MIN MINIMUM  
MJ MECHANICAL JOINT  
MO MID ORDINATE

N NORTH  
No. NUMBER  
NTS NOT TO SCALE

OC ON CENTER  
OD OUTSIDE DIAMETER  
OPNG OPENING  
OPP OPPOSITE  
OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PE PLAIN END  
PERF PERFORATED  
PL PLATE  
PLYWD PLYWOOD  
POT POTABLE  
PRV PRESSURE REDUCING VALVE  
PPG POTASSIUM PERMANGANATE  
PSF POUNDS PER SQUARE FOOT  
PSI POUNDS PER SQUARE INCH  
PSIG POUNDS PER SQUARE INCH GAUGE  
PTS PAINTED SURFACE  
PVC POLYVINYL CHLORIDE  
PVMT PAVEMENT

QT QUARTER  
QUAD QUADRANT

R RADIUS  
RD ROOF DRAIN  
RED REDUCER  
REINF REINFORCE  
REQD REQUIRED  
RECTL REINFORCING STEEL  
RM ROOM  
RO ROUGH OPENING  
R/W RIGHT-OF-WAY

S SOUTH,  
SCH SCHEDULE  
SF SQUARE FEET  
SFN SURVEY FOUND NAIL  
SHC SODIUM HYPOCHLORITE  
SHT SHEET  
SL SLOPE  
SP STATIC PRESSURE  
SPECS SPECIFICATIONS  
SQ SQUARE  
SS STAINLESS STEEL  
SSNT SURVEY SET NAIL/TAG  
STA STATION  
STD STANDARD  
STL STEEL  
STRG STRONG  
SUC SUSPENDED CEILING  
SUP SUPPORT

TAPD TAPERED  
TB TOP AND BOTTOM  
TC TOP OF CURB  
TDH TOTAL DYNAMIC HEAD  
TEL TELEPHONE  
THK THICK  
THRD THREADED  
THRU THROUGH  
TK TANK  
TOC TOP OF CONCRETE  
TOW TOP OF WALL  
TS TOTAL SOLIDS  
TYP TYPICAL

VC VERTICAL CURVE  
VERT VERTICAL  
VFD VARIABLE FREQUENCY DRIVE  
VIS VINYL SHEET  
VS VOLATILE SOLIDS

W WIDTH, WEST  
WITH WITH  
WDE WIDE  
WITHOUT WITHOUT  
WS WATER SURFACE  
WWM WELDED WIRE MESH  
WWF WELDED WIRE FABRIC

GENERAL SYMBOLS

1/4" FT.

FLOW DIRECTION (AIR, WATER)

OPENING

GROUND

ASPHALT SECTION

CONCRETE SECTION

WATER SURFACE

ELEVATION REFERENCE POINT

LEGEND/NOTE CALL OUTS

PIPE SUPPORT

ELECTRICAL MAST

SLOPE 1/4" PER FOOT

FLOW DIRECTION (AIR, WATER)

OPENING

GROUND

ASPHALT SECTION

CONCRETE SECTION

WATER SURFACE

ELEVATION REFERENCE POINT

LEGEND/NOTE CALL OUTS

PIPE SUPPORT

ELECTRICAL MAST

SQUARE SECTION

PIPE SECTION

SPACING CENTER ON CENTER

SIZE OF DEFORMED BAR

DIAMETER

RECTANGULAR SECTION

ANGLE

WIDE-FLANGE SHAPE

CHANNEL

PLATE

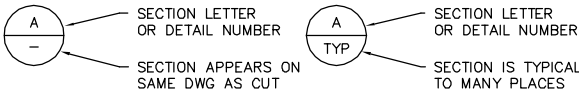
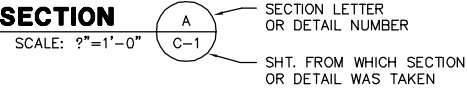
CENTER LINE

EXAMPLE OF SECTION NUMBERING SYSTEM  
AND PLAN/DRAWING TITLES

FOR DETAILS SUBSTITUTE DETAIL NUMBER FOR SECTION LETTER



ON SHT. M-2 THIS SECTION IS IDENTIFIED AS:



DRAWING TITLE IDENTIFICATION :

DRAWING TITLE

SCALE: 9"=1'-0"

GENERAL NOTES:

- IN GENERAL, EXISTING STRUCTURES AND FACILITIES ARE NOTED AS "EXISTING" AND ARE SHOWN IN LIGHT LINE WEIGHTS OR AS SCREENED BACKGROUND. NEW CONSTRUCTION, STRUCTURES, FACILITIES, AND FEATURES ARE SHOWN IN HEAVY LINE WEIGHTS.
- MANY OF THE SYMBOLS SHOWN ON THIS LEGEND ARE USED ONLY WHERE THEY PROVIDE CLARITY AND ARE NOT NECESSARILY USED IN ALL APPLICATIONS. SOME CONTRACT DRAWINGS MAY HAVE ADDITIONAL LEGENDS APPLICABLE FOR THAT SPECIFIC DRAWING. SYMBOLS SHOWN ON SPECIFIC DRAWINGS GOVERN.
- THE CONTRACTOR SHALL VERIFY ALL PLANIMETRIC FEATURES AND DIMENSIONS PRIOR TO STARTING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- ALL DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS REFER TO THE HORIZONTAL AND VERTICAL PROJECTED PLANES, UNLESS OTHERWISE INDICATED.

SYMBOL LEGEND

EXISTING

ASPHALT SURFACING

GRAVEL SURFACING

CONCRETE SURFACING

BURIED ELECTRICAL

BURIED TELEPHONE

WATER MAIN (SIZE AS NOTED)

STORM DRAIN (SIZE & TYPE AS NOTED)

RIGHT OF WAY

CENTERLINE OF ROADWAY

DITCH

CENTER LINE

GATE VALVE

WATER METER

FIRE HYDRANT

ELECTRICAL TRANSFORMER

UTILITY POLE WITH GUY WIRE

UTILITY POLE

LUMINAIRE

JUNCTION BOX (AS NOTED)

FENCE

CULVERT

MAIL BOX

ROAD SIGN

TREES

SHRUBS

BUILDINGS

CONTOUR

MONUMENT

HOUSE ADDRESS

SAMPLING STATION

PROPOSED

ASPHALT SURFACING

GRAVEL SURFACING

CONCRETE SURFACING

BURIED ELECTRICAL

BURIED TELEPHONE

WATER MAIN (SIZE AS NOTED)

STORM DRAIN (SIZE & TYPE AS NOTED)

RIGHT OF WAY

CENTERLINE OF ROADWAY

DITCH

CENTER LINE

GATE VALVE

WATER METER

FIRE HYDRANT

THRUST BLOCK

ELECTRICAL TRANSFORMER

UTILITY POLE WITH GUY WIRE

UTILITY POLE

LUMINAIRE

JUNCTION BOX (AS NOTED)

FENCE

CULVERT

MAIL BOX

ROAD SIGN

TREES

SHRUBS

BUILDINGS

CONTOUR

MONUMENT

HOUSE ADDRESS

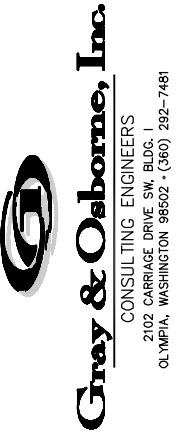
SAMPLING STATION

CONTROL POINT

0 1" 2"

TWO INCHES AT FULL SCALE.

IF NOT, SCALE ACCORDINGLY



DATE: AUG 2013  
SCALE: NOTED  
DRAWN: EWH  
CHECKED: AKK  
APPROVED: MBJ

DATE APPD

REVISION

No.



NORTH BEACH WATER DISTRICT  
PACIFIC COUNTY  
WASHINGTON  
246TH STREET WATER MAIN  
PROJECT  
ABBREVIATIONS, GENERAL SYMBOLS,  
SYMBOL LEGEND AND GENERAL NOTES

SHEET: C-1

OF: 5

JOB NO.: 13254.00

DWG: PIPE\_SYMB

SURVEY REFERENCE

The survey information for:  
THE 245TH STREET WATER  
MAIN PROJECT

shown hereon, was provided by:

PACIFIC COUNTY

TUE AUG 6, 2013

NOTES:

- UTILITY CROSSING: CONTRACTOR SHALL POTHOLE AND FIELD VERIFY LOCATION/ ALIGNMENT/ ELEVATION/ SIZE/ MATERIAL OF EXISTING UTILITY PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOT CAP SYSTEM UNTIL A SUCCESSFUL BACTERIOLOGICAL AND HYDROSTATIC PRESSURE TEST OF THE NEW SYSTEM HAS BEEN WITNESSED BY THE ENGINEER. CONTRACTOR SHALL PROVIDE TEMPORARY BLOW OFF, FITTINGS AND BLOCKING AS NECESSARY TO TEST AND DISINFECT WATER MAIN.
- INSTALL 8-INCH WATER MAIN.
- REMOVE AND REINSTALL SIGN/MAILBOX AS REQUIRED TO CONSTRUCT WATER MAIN IMPROVEMENTS. FURNISH AND INSTALL NEW POST AND CONCRETE ANCHOR.
- CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY TO HOLD POLE DURING WATER MAIN INSTALLATION.

Gray & Osborne, Inc.

CONSULTING ENGINEERS

2102 CARBACE DRIVE SW, BLDG. 1

OLYMPIA, WASHINGTON 98502 • (360) 292-7481

DATE: AUG 2013	SCALE: NOTED	DRAWN: EWH	CHECKED: AKK	APPROVED: MBJ
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REVISION	DATE	APPD
No.		

NORTH BEACH WATER DISTRICT

WASHINGTON

PACIFIC COUNTY

245TH STREET WATER MAIN PROJECT

245TH STREET WATER MAIN PLANS

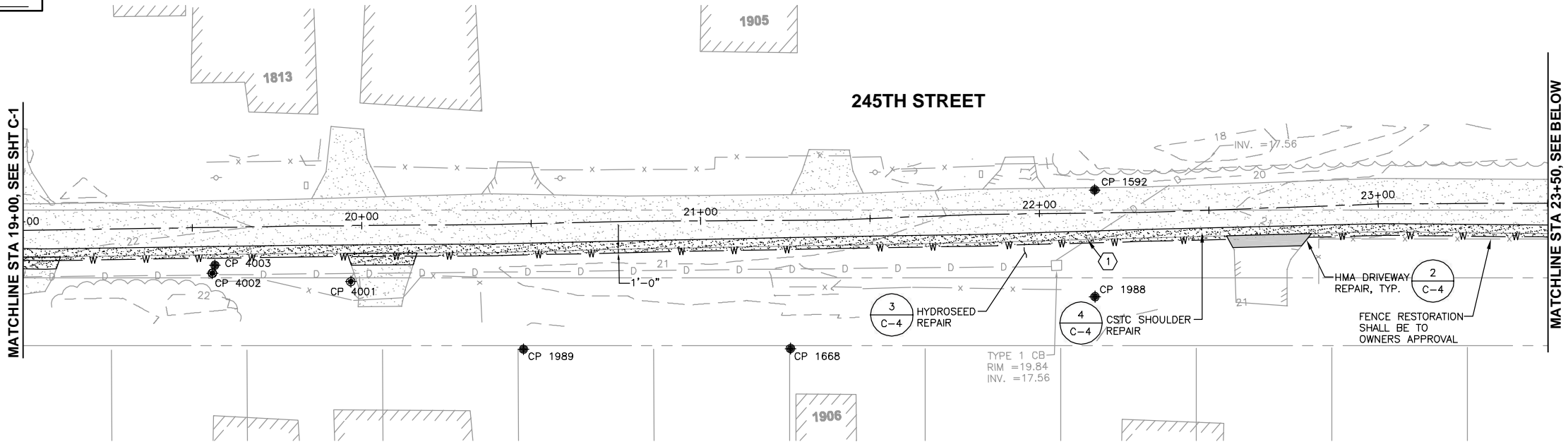
STA 10+00 TO 19+00

SHEET: C-2
OF: 5
JOB NO.: 13254.00
DWG: PLAN1

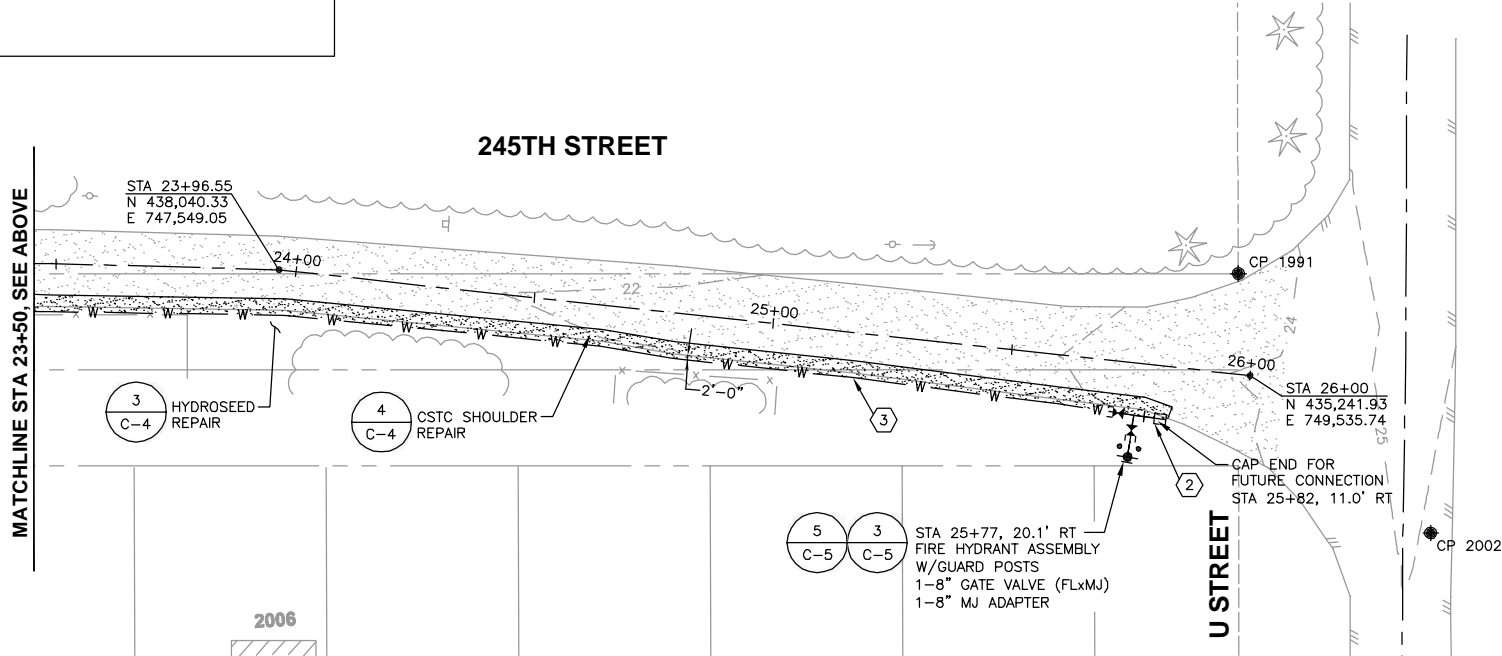
**SURVEY REFERENCE**  
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MAIN PROJECT


shown hereon, was provided by:  
PACIFIC COUNTY

TUE AUG 6, 2013



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DATE: AUG 2013	SCALE: NOTED	DRAWN: EWH	CHECKED: AKK	APPROVED: MBJ
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REVISION	DATE	APPD
No.		



**NORTH BEACH WATER DISTRICT**  
WASHINGTON  
PACIFIC COUNTY

**245TH STREET WATER MAIN PROJECT**  
245TH STREET WATER MAIN PLANS  
STA 19+00 TO END

SHEET: <b>C-3</b>
OF: <b>5</b>
JOB NO.: 13254.00
DWG: PLAN2



DWG: DETAILS2