

# NORTH BEACH WATER DISTRICT

PACIFIC COUNTY

WASHINGTON



## WATER MAIN PROJECT

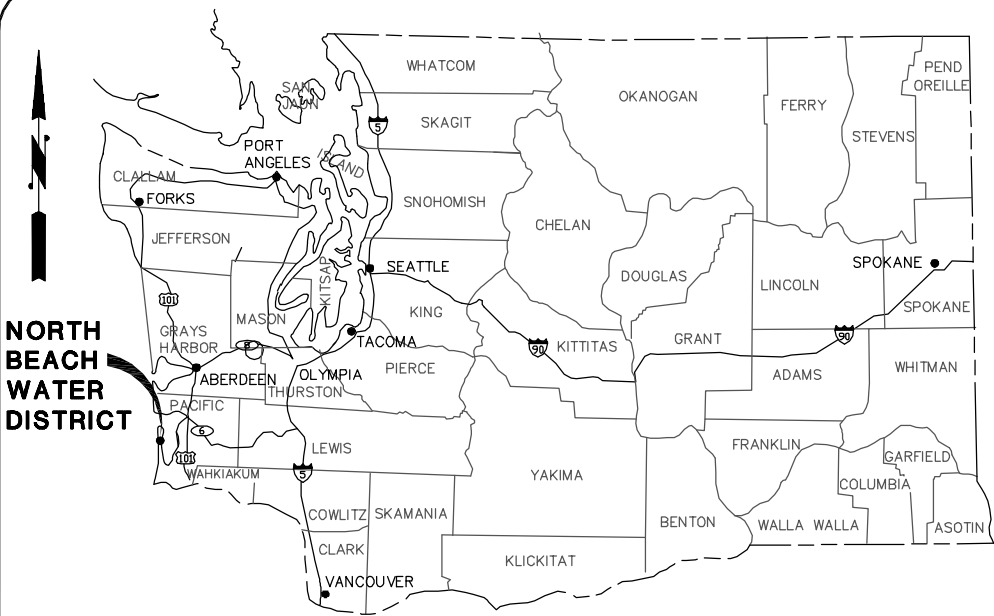
NORTH BEACH WATER DISTRICT  
25902 VERNON AVE.  
POST OFFICE BOX 618  
OCEAN PARK, WA 98640  
PHONE NO. (360) 665-4144

### NBWD OFFICIALS

BRIAN SHELDON	COMMISSIONER-POSTION 1
GWEN BRAKE	COMMISSIONER-POSTION 2
R.D. WILLIAMS	COMMISSIONER-POSTION 3
WILLIAM NEAL	GENERAL MANAGER
JACK McCARTY	OFFICE MANAGER
KRISTIN GALOUIN	BILLING CLERK
BOB HUNT	FIELD SUPERVISOR
NICK MORRISON	TREATMENT PLANT OPERATOR

### CONTACT INFORMATION

NAME	AGENCY	PHONE No.
WILLIAM NEAL	NBWD MANAGER	(360) 665-4144
MIKE COLLINS	PACIFIC COUNTY PUBLIC WORKS	(360) 875-9368
PACIFIC COUNTY PUD NO. 2	POWER	(360) 642-3191
CENTURY LINK	TELEPHONE	(855) 742-8062
CHARTER COMMUNICATIONS	CABLE	(425) 392-6412



VICINITY MAP  
NOT TO SCALE

THIS PROJECT IS FUNDED IN PART BY  
A DRINKING WATER STATE  
REVOLVING FUND LOAN (DWSRF)

### SHEET LIST

SHEET	SHEET DESCRIPTION
<b>GENERAL SHEETS</b>	
C-1	PROJECT LOCATION MAP
C-2	ABBREVIATIONS, GENERAL SYMBOLS, SYMBOL LEGEND AND GENERAL NOTES
C-3	PROJECT MAP AND CONTROL
C-4	SCHEDULE A - BIRCH LANE WATER MAIN PLANS STA 10+00 TO 20+00
C-5	SCHEDULE A - BIRCH LANE WATER MAIN PLANS STA 20+00 TO END
C-6	SCHEDULE B - U STREET WATER MAIN PLANS STA 30+00 TO 40+00
C-7	SCHEDULE B - U STREET WATER MAIN PLANS STA 40+00 TO END
C-8	SCHEDULE C - Z STREET WATER MAIN PLANS STA 50+00 TO 60+00
C-9	SCHEDULE C - Z STREET WATER MAIN PLANS STA 60+00 TO 70+00
C-10	SCHEDULE C - Z STREET WATER MAIN PLANS STA 70+00 TO END
C-11	MISCELLANEOUS DETAILS
C-12	MISCELLANEOUS DETAILS
C-13	MISCELLANEOUS DETAILS
C-14	EROSION CONTROL DETAILS

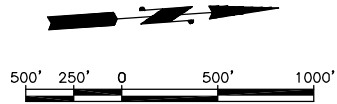
G&O JOB No.: 13223.00  
SEPTEMBER 2013

  
**Gray & Osborne, Inc.**  
CONSULTING ENGINEERS  
2102 CARRIAGE DRIVE SW, BLDG. 1,  
OLYMPIA, WASHINGTON 98502 (360) 292-7461



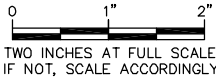
RIGHT-OF-WAY DISCLAIMER

The right-of-way and/or property lines shown hereon are based on available information, not on a surveyed location and are only approximate.



PROJECT LOCATION

SCALE: 1"=500'





**Gray & Osborne, Inc.**  
CONSULTING ENGINEERS  
2102 CARRIDGE DRIVE, SW, BLDG. 1  
OLYMPIA, WASHINGTON 98502 • (360) 292-7481

DATE: AUG 2013	SCALE: 1"=20'-0"	DRAWN: EWH	CHECKED: AKK	APPROVED: MBJ
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90% SUBMITTAL	REVISION	DATE	APPD
	No.		



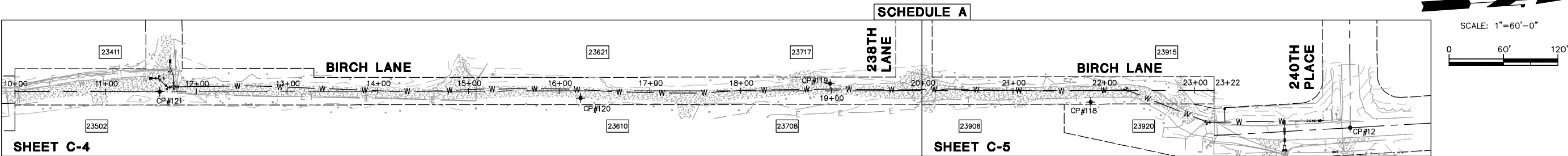
**NORTH BEACH WATER DISTRICT**  
PACIFIC COUNTY  
**WATER MAIN PROJECT**  
PROJECT LOCATION MAP

SHEET: <b>C-1</b>
OF: <b>14</b>
JOB NO.: 13223.00
DWG: VIC_LOC_MAP



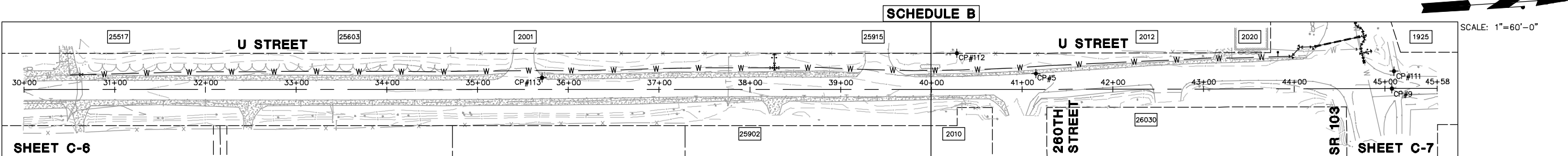






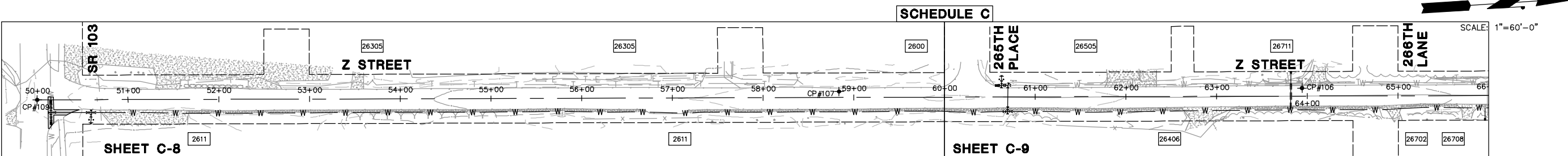
SHEET C-4

SHEET C-5



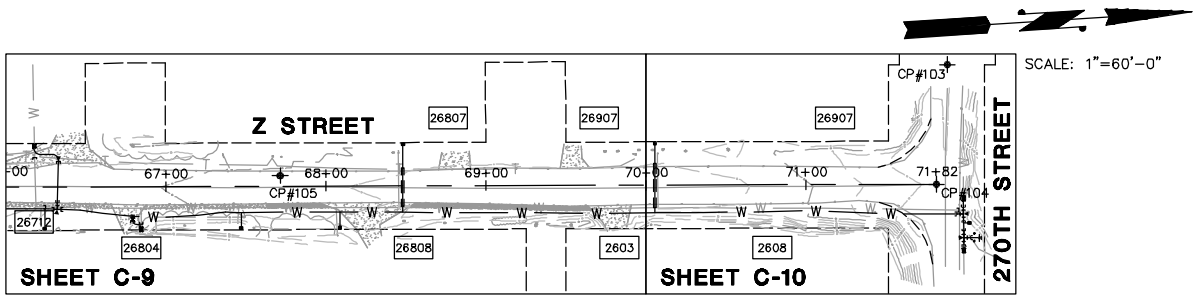
SHEET C-6

SHEET C-7



SHEET C-8

SHEET C-9

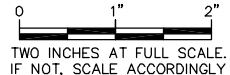


SHEET C-9

SHEET C-10

<b>Horizontal Datum:</b> NAD83/07				
WSPCS S. ZONE, GRID COORDINATES				
<b>Vertical Datum:</b> NAVD88				
PROJECT BENCHMARK #8= NGS PD SD0320		DESIGNATION (U 537)		
		SURVEYED 2013		
5	442052.74	748030.12	25.00	MAG NAIL/TAG "G&O CONTROL", W. FOG LINE "U" ST. ACROSS FROM N. ENTRANCE "TAYLOR OCEAN PARK CEMETERY"
9	442443.25	748071.93	24.63	CASED MON, 3" BRASSY w/ "X" IN CONC., N. BOUND LANE "U" ST., +/- 40' N. OF C/L OF BAY AVE.
12	436708.04	749670.38	21.28	2" IRON PIPE w/ CONC., 0.7' BELOW GRADE @ INTX 240th PL. & BIRCH PL.
103	444547.72	749487.17	27.47	CASED MON, 3" BRASSY w/ PUNCH IN C/L 270th ST.
104	444536.13	749561.15	27.86	RxRx SPIKE w/ PUNCH C/L "Z" ST. IN LINE w/ S. SIDE OF 270th ST.
105	444127.36	749529.26	30.47	MAG NAIL/TAG "G&O CONTROL", 3' E. OF W. EP "Z" ST., 11.5' E. OF PWR POLE #028-212/287463
106	443750.72	749503.90	30.30	MAG NAIL/TAG "G&O CONTROL", 6' E. OF NE COR. VAULT @ INTX "Z" ST. & 268th LN
107	443241.25	749474.72	31.55	MAG NAIL/TAG "G&O CONTROL", 4' E. OF W. EP "Z" ST., +/-150' S. OF 265th PL.
109	442358.72	749426.82	28.51	CASED MON, 3" BRASSY w/ "X" IN CONC., @ INTX OF BAY AVE. & "Z" ST.
111	442446.76	748052.84	24.59	MAG NAIL/TAG "G&O CONTROL", IN SWALK @ NW COR INTX "U" ST. & BAY AVE., 5.5' W. OF FOG LINE, 15' S. OF 265th PL.
118	436424.52	749623.79	23.64	HUB & TACK, 4' E OF E. EDGE OF GRAVEL BIRCH PL., 10.5' SW FROM 6" MAPLE TREE
119	436139.19	749585.08	25.74	HUB & TACK, W. SIDE OF BIRCH PL. @ N. SIDE OF D/WAY TO RED HOUSE
120	435863.72	749583.05	25.92	HUB & TACK,
121	435401.20	749546.20	28.24	HUB & TACK, E. SIDE OF BIRCH PL. @ INTX w/ ST. FOR HSE #23505

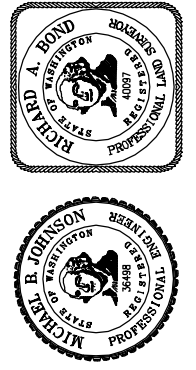
NOTE:  
1. IF MONUMENTS ARE DISTURBED  
REFER TO DETAIL 1 SHEET C-13



**Gray & Osborne, Inc.**  
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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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<b>90% SUBMITTAL</b>	REVISION	DATE	APPD
	No.		



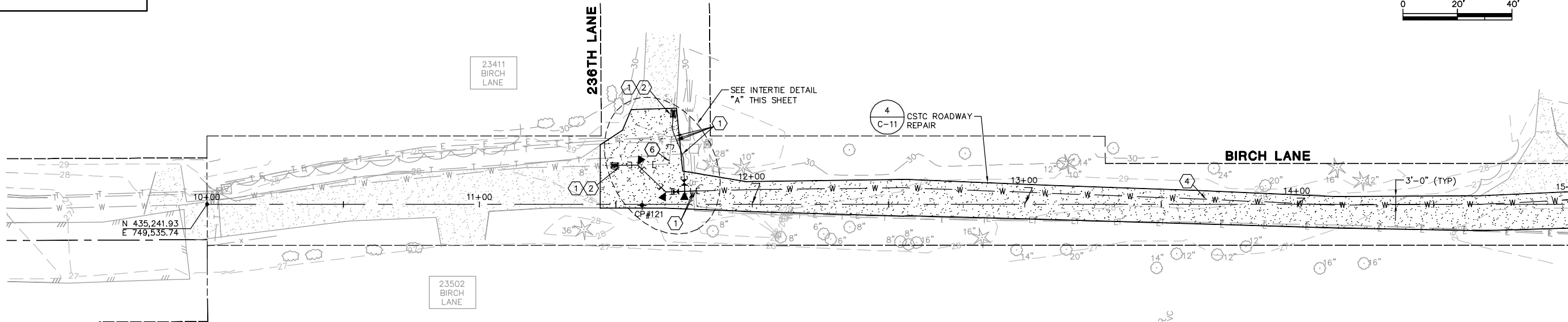
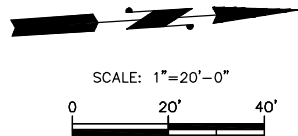
**NORTH BEACH WATER DISTRICT**  
PACIFIC COUNTY  
WASHINGTON  
**WATER MAIN PROJECT**  
PROJECT MAP AND CONTROL

SHEET: <b>C-3</b>
OF: <b>14</b>
JOB NO.: 13223.00
DWG: PROJECT MAP



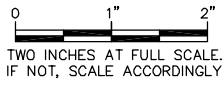
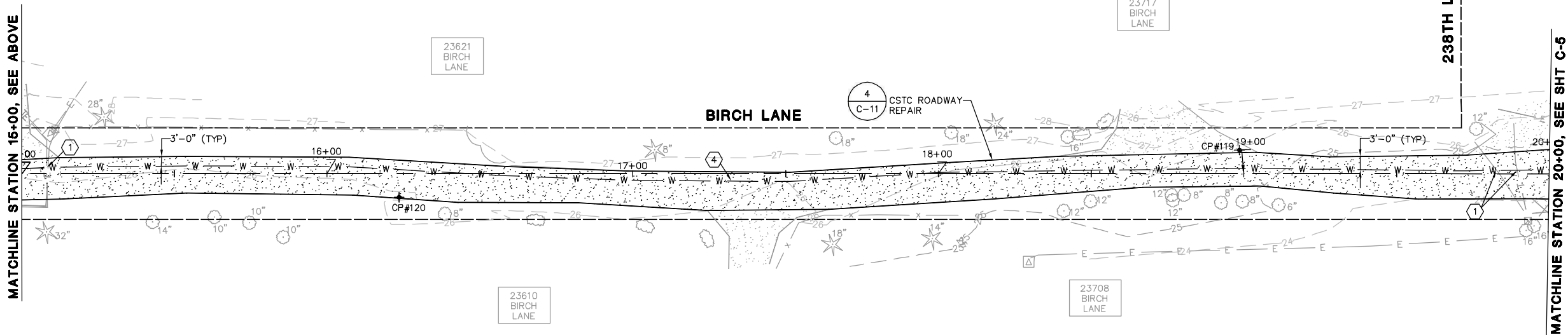
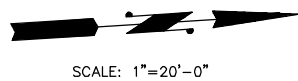
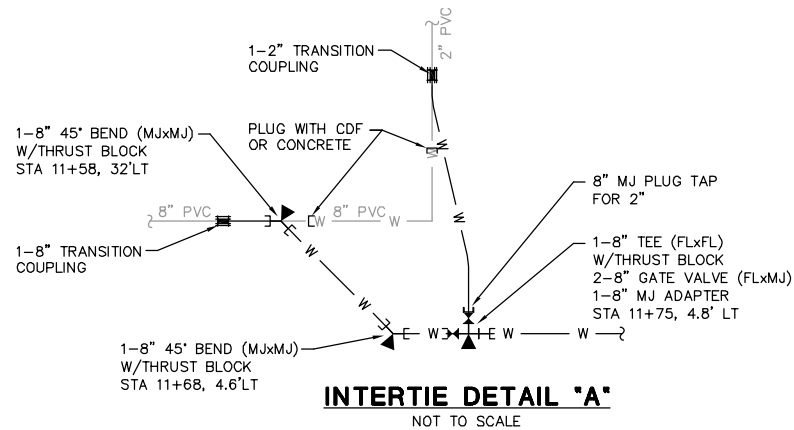
RIGHT-OF-WAY DISCLAIMER

The right-of-way and/or property lines shown hereon are based on available information, not on a surveyed location and are only approximate.



NOTES:

- |   |  |    |   |
|---|--|----|---|
| 1 | UTILITY CROSSING OR CONNECTION: CONTRACTOR SHALL POTHOLE AND FIELD VERIFY LOCATION/ ALIGNMENT/ ELEVATION/ SIZE/ MATERIAL OF EXISTING UTILITY PRIOR TO CONSTRUCTION.  | 7  | REMOVE AND REINSTALL SIGN/MAILBOX AS REQUIRED TO CONSTRUCT WATER MAIN IMPROVEMENTS. FURNISH AND INSTALL NEW POST AND CONCRETE ANCHOR.                                 |
| 2 | CONTRACTOR SHALL NOT MAKE CONNECTION TO EXISTING 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. | 8  | CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY TO HOLD POLE DURING WATER MAIN INSTALLATION.   |
| 3 | INSTALL 6-INCH WATER MAIN.   | 9  | THE CONTRACTOR SHALL CLOSE EXISTING VALVE ONCE THE EXISTING WATER MAIN IS ABANDONED. THE EXISTING VALVE BOX SHALL THEN BE REMOVED, WASTEHAULED AND BACKFILL WITH CDF. |
| 4 | INSTALL 8-INCH WATER MAIN.   | 10 | INSTALL NEW WATER SERVICE. WATER SERVICE LOCATIONS ARE APPROXIMATE. SEE DETAIL 5 SHEET C-12.  |
| 5 | INSTALL 12-INCH WATER MAIN.  | 11 | REMOVE EXISTING BLOW-OFF ASSEMBLY AND SALVAGE TO NBWD. PLUG WITH CDF OR CONCRETE  |
| 6 | PROTECT EXISTING WATER MAIN DURING CONSTRUCTION. ABANDON IN PLACE ONCE NEW WATER MAIN IS IN SERVICE.   | 12 | TREES AND SHRUBS REMOVE AND WASTEHAUL   |



DATE: AUG 2013	SCALE: 1"=20'-0"	EAH	AKK	MBJ
DRAWN:	CHECKED:	APPROVED:		

90% SUBMITTAL	DATE	APPD
REVISION		
No.		



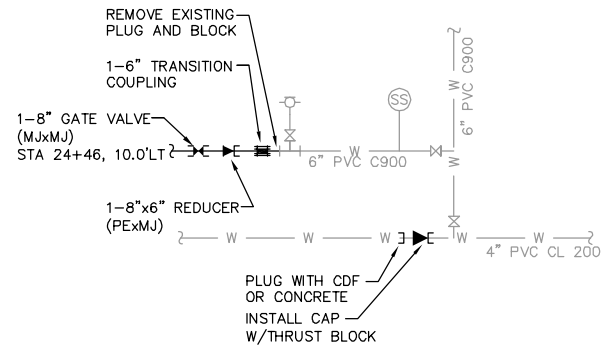
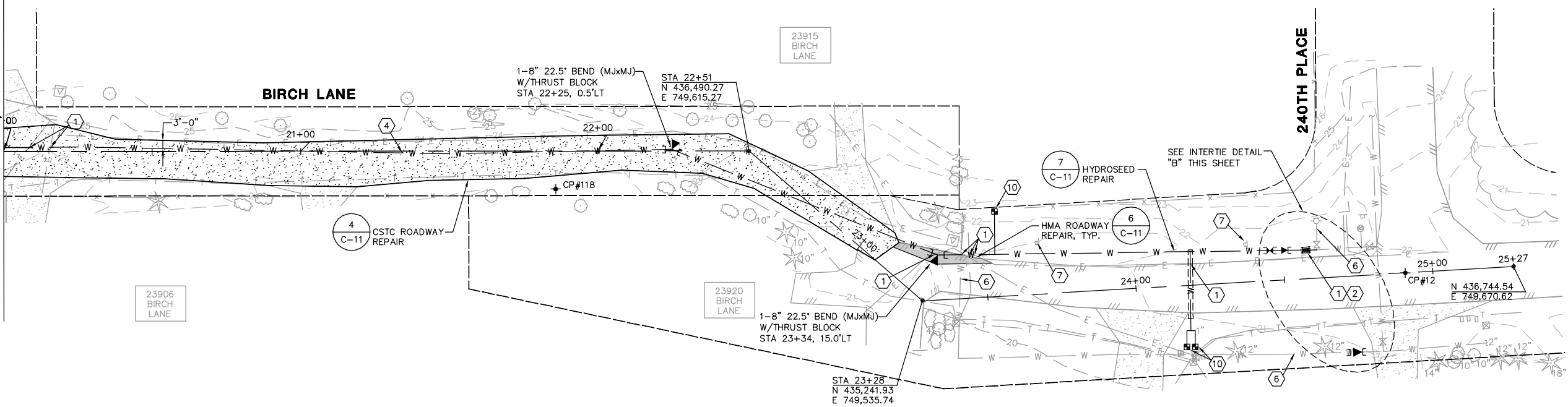
SHEET:	<b>C-4</b>
OF:	<b>14</b>
JOB NO.:	13223.00
DWG:	PLAN1



RIGHT-OF-WAY DISCLAIMER

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MATCHLINE STATION 20+00, SEE SHEET C-4



INTERTIE DETAIL 'B'  
NOT TO SCALE

NOTES:

- |   |  |    |   |
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0 1" 2"  
TWO INCHES AT FULL SCALE.  
IF NOT, SCALE ACCORDINGLY



**Gray & Osborne, Inc.**  
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2102 CARRAGE DRIVE SW, BLDG. 1  
OLYMPIA, WASHINGTON 98502 • (360) 292-7481

DATE: AUG 2013	SCALE: 1"=20'-0"	EAH	AKK	MBJ
DRAWN:	CHECKED:	APPROVED:		

90%  
SUBMITTAL



**NORTH BEACH WATER DISTRICT**  
WASHINGTON  
PACIFIC COUNTY  
**WATER MAIN PROJECT**  
SCHEDULE A  
BRCH LANE WATER MAIN PLANS  
STA 20+00 TO END

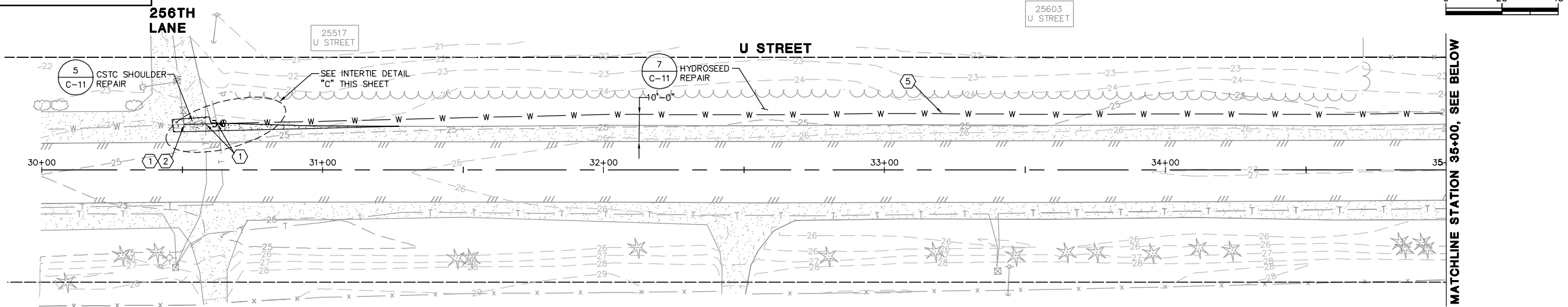
SHEET: **C-5**  
OF: **14**

JOB NO.: 13223.00  
DWG: PLAN2



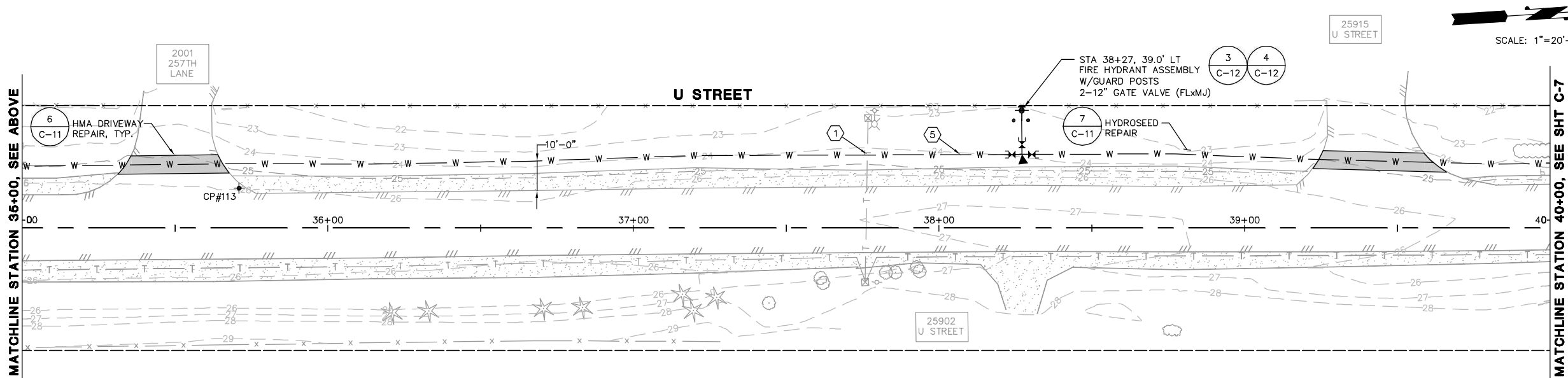
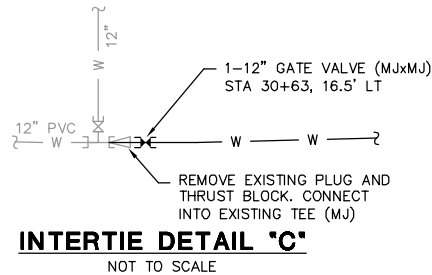
RIGHT-OF-WAY DISCLAIMER

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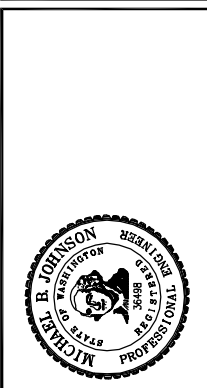
NOTES:

- UTILITY CROSSING OR CONNECTION: CONTRACTOR SHALL POTHOLE AND FIELD VERIFY LOCATION/ ALIGNMENT/ ELEVATION/ SIZE/ MATERIAL OF EXISTING UTILITY PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOT MAKE CONNECTION TO EXISTING 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 6-INCH WATER MAIN.
- INSTALL 8-INCH WATER MAIN.
- INSTALL 12-INCH WATER MAIN.
- PROTECT EXISTING WATER MAIN DURING CONSTRUCTION. ABANDON IN PLACE ONCE NEW WATER MAIN IS IN SERVICE.
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- INSTALL NEW WATER SERVICE. WATER SERVICE LOCATIONS ARE APPROXIMATE. SEE DETAIL 5 SHEET C-12.
- REMOVE EXISTING BLOW-OFF ASSEMBLY AND SALVAGE TO NBWD. PLUG WITH CDF OR CONCRETE
- TREES AND SHRUBS REMOVE AND WASTEHAUL



DATE: AUG 2013	SCALE: 1"=20'-0"	DRAWN: EWH	CHECKED: AKK	APPROVED: MBJ
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90% SUBMITTAL	DATE	APPD
	REVISION	No.

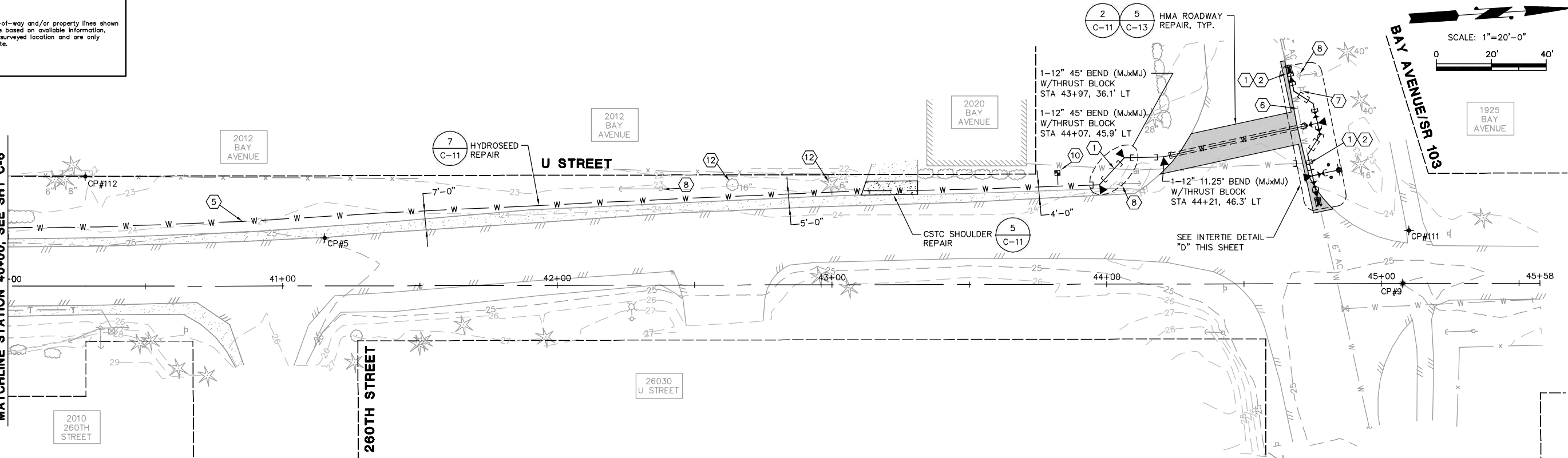




RIGHT-OF-WAY DISCLAIMER

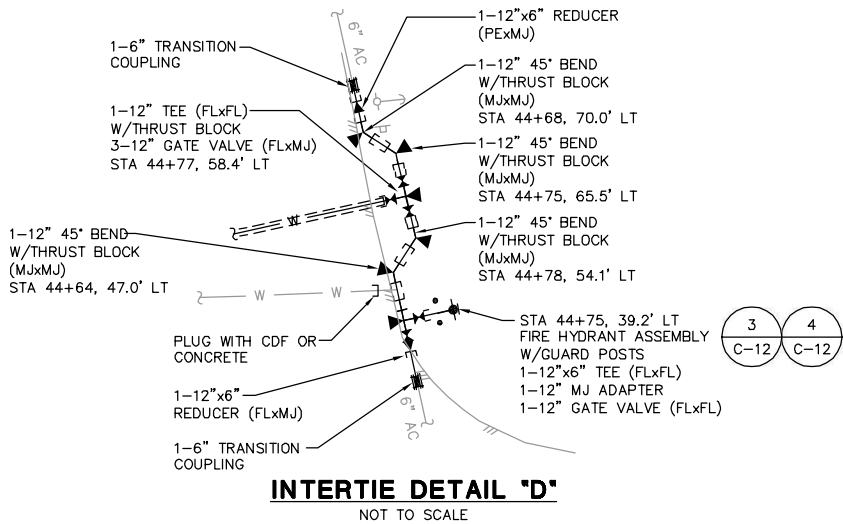
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MATCHLINE STATION 40+00, SEE SHT C-6



NOTE:

1. CONTRACTOR SHALL MAKE A VERTICAL CUT OF 0.15' AT EDGE OF ROADWAY AND GRIND EXISTING PAVEMENT BEFORE OVERLAY TO MATCH EXISTING GRADE.
2. CONTRACTOR SHALL MAINTAIN 60" DEPTH OF PROPOSED PIPE IN WSDOT R-O-W WHERE POSSIBLE.



NOTES:

- |  |   |
|--|---|
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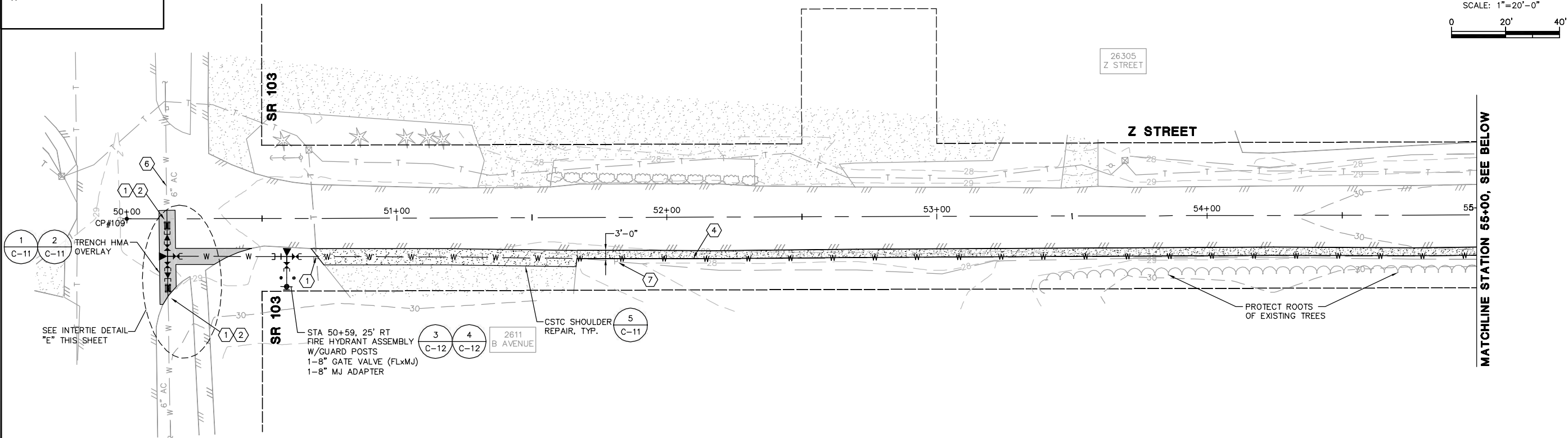
**NORTH BEACH WATER DISTRICT**  
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**WATER MAIN PROJECT**  
SCHEDULE B  
U STREET WATER MAIN PLANS  
STA 40+00 TO END

SHEET: <b>C-7</b>
OF: <b>14</b>
JOB NO.: 13223.00
DWG: PLAN4



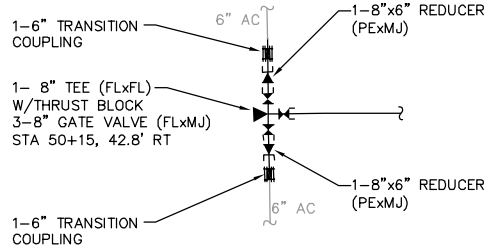
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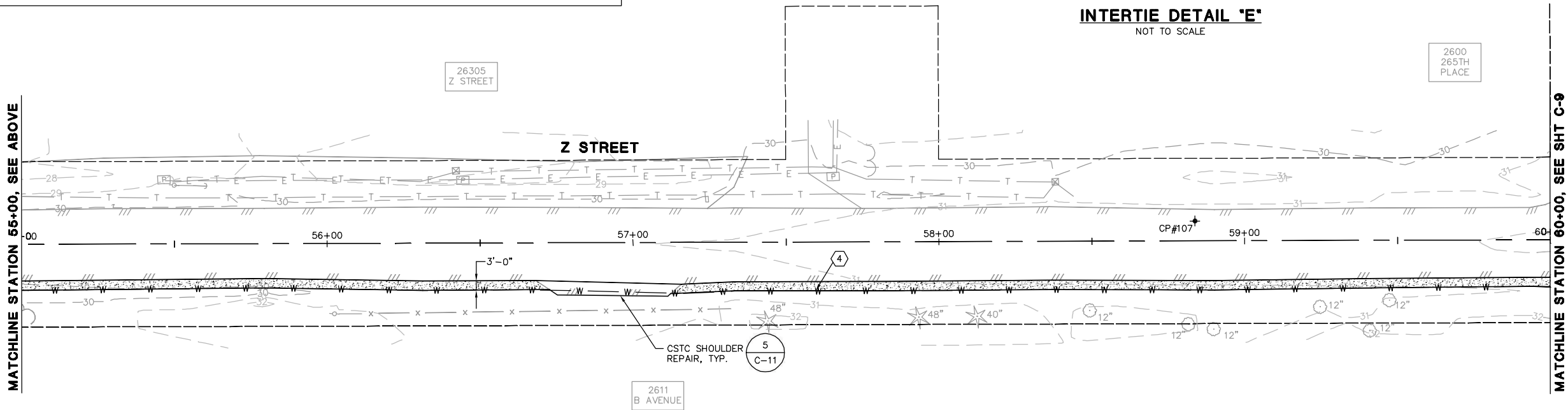


NOTES:

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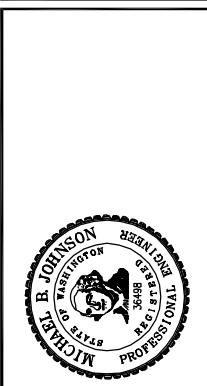


INTERTIE DETAIL 'E'  
NOT TO SCALE



DATE: AUG 2013  
SCALE: 1"=20'-0"  
DRAWN: EWH  
CHECKED: AKK  
APPROVED: MBJ

REVISION	DATE	APPD
No.		



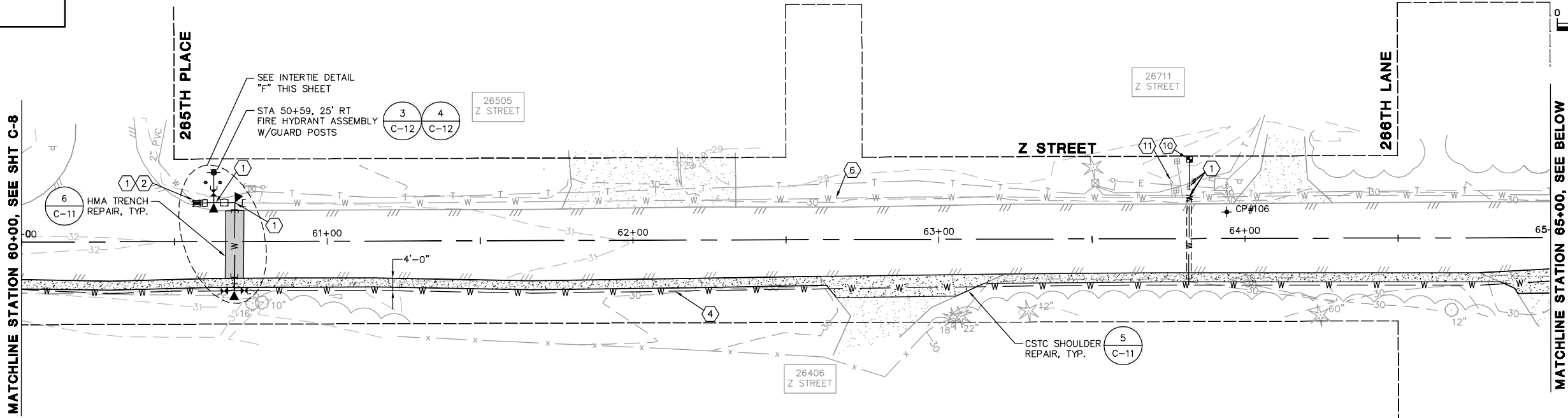
**NORTH BEACH WATER DISTRICT**  
WASHINGTON  
PACIFIC COUNTY  
**WATER MAIN PROJECT**  
SCHEDULE C  
Z STREET WATER MAIN PLANS  
STA 50+00 TO 60+00

SHEET: **C-8**  
OF: **14**  
JOB NO.: 13223.00  
DWG: PLAN5



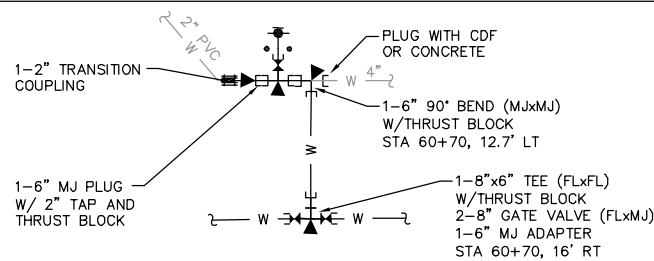
RIGHT-OF-WAY DISCLAIMER

The right-of-way and/or property lines shown hereon are based on available information, not on a surveyed location and are only approximate.



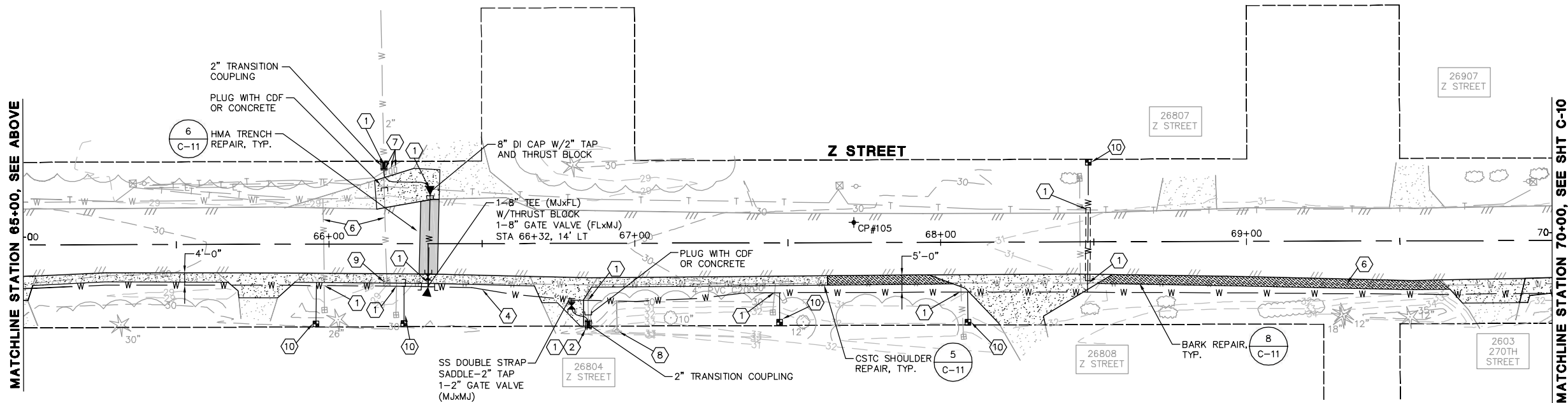
NOTES:

- 1 UTILITY CROSSING OR CONNECTION: CONTRACTOR SHALL POTHOLE AND FIELD VERIFY LOCATION/ ALIGNMENT/ ELEVATION/ SIZE/ MATERIAL OF EXISTING UTILITY PRIOR TO CONSTRUCTION.
- 2 CONTRACTOR SHALL NOT MAKE CONNECTION TO EXISTING 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.
- 3 INSTALL 6-INCH WATER MAIN.
- 4 INSTALL 8-INCH WATER MAIN.
- 5 INSTALL 12-INCH WATER MAIN.
- 6 PROTECT EXISTING WATER MAIN DURING CONSTRUCTION. ABANDON IN PLACE ONCE NEW WATER MAIN IS IN SERVICE.
- 7 REMOVE AND REINSTALL SIGN/MAILBOX AS REQUIRED TO CONSTRUCT WATER MAIN IMPROVEMENTS. FURNISH AND INSTALL NEW POST AND CONCRETE ANCHOR.
- 8 CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY TO HOLD POLE DURING WATER MAIN INSTALLATION.
- 9 THE CONTRACTOR SHALL CLOSE EXISTING VALVE ONCE THE EXISTING WATER MAIN IS ABANDONED. THE EXISTING VALVE BOX SHALL THEN BE REMOVED, WASTEHAULED AND BACKFILL WITH CDF.
- 10 INSTALL NEW WATER SERVICE. WATER SERVICE LOCATIONS ARE APPROXIMATE. SEE DETAIL 5 SHEET C-12.
- 11 REMOVE EXISTING BLOW-OFF ASSEMBLY AND SALVAGE TO NBWD. PLUG WITH CDF OR CONCRETE
- 12 TREES AND SHRUBS REMOVE AND WASTEHAUL



INTERTIE DETAIL 'F'  
NOT TO SCALE

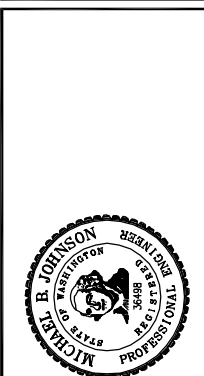
SCALE: 1"=20'-0"



TWO INCHES AT FULL SCALE.  
IF NOT, SCALE ACCORDINGLY

DATE: AUG 2013  
SCALE: 1"=20'-0"  
DRAWN: EWH  
CHECKED: AKK  
APPROVED: MBJ

90%  
SUBMITTAL



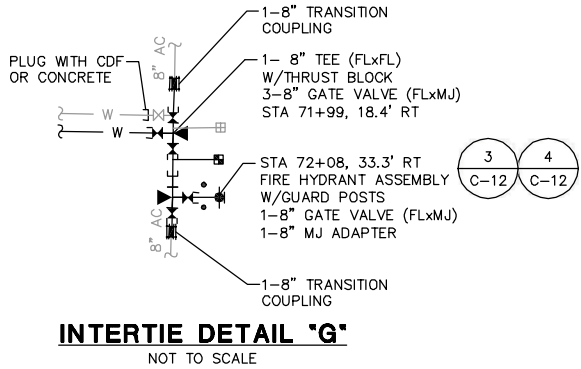
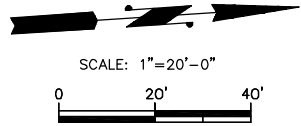
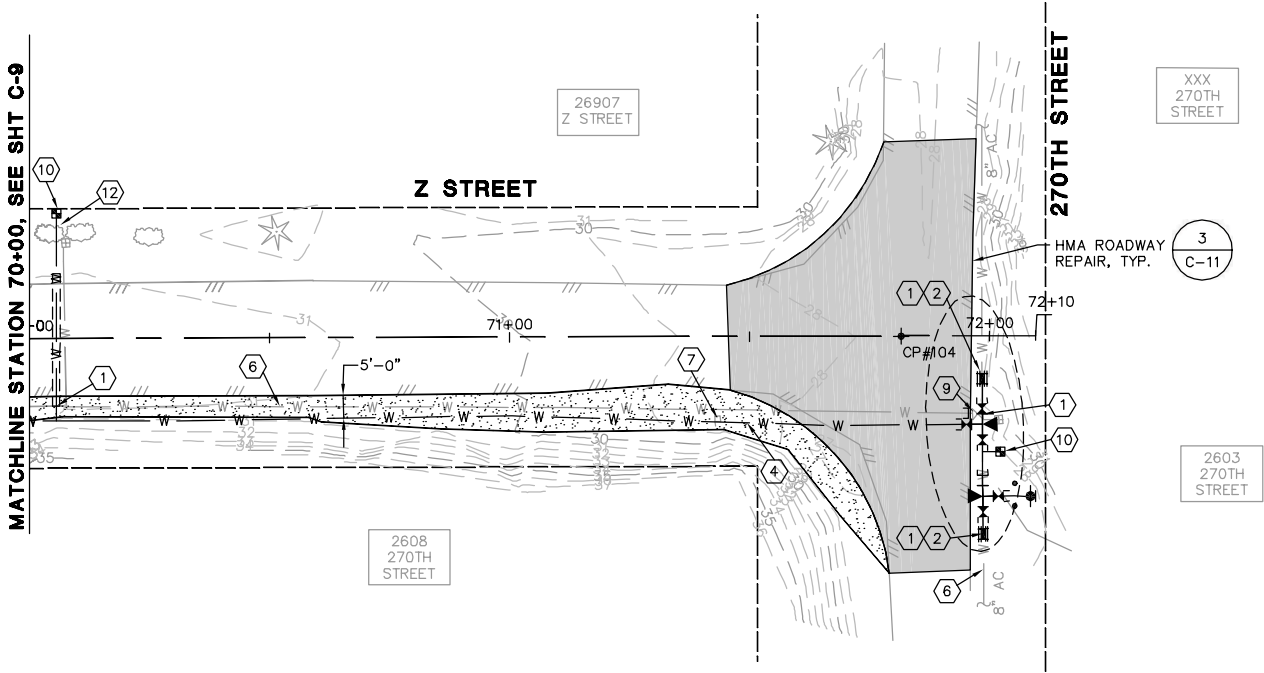
**NORTH BEACH WATER DISTRICT**  
WASHINGTON  
PACIFIC COUNTY  
**WATER MAIN PROJECT**  
SCHEDULE C  
Z STREET WATER MAIN PLANS  
STA 60+00 TO 70+00

SHEET: **C-9**  
OF: **14**  
JOB NO.: 13223.00  
DWG: PLAN6



RIGHT-OF-WAY DISCLAIMER

The right-of-way and/or property lines shown hereon are based on available information, not on a surveyed location and are only approximate.



- NOTES:
- |   |  |    |   |
|---|--|----|---|
| 1 | UTILITY CROSSING OR CONNECTION: CONTRACTOR SHALL POTHOLE AND FIELD VERIFY LOCATION/ ALIGNMENT/ ELEVATION/ SIZE/ MATERIAL OF EXISTING UTILITY PRIOR TO CONSTRUCTION.  | 7  | REMOVE AND REINSTALL SIGN/MAILBOX AS REQUIRED TO CONSTRUCT WATER MAIN IMPROVEMENTS. FURNISH AND INSTALL NEW POST AND CONCRETE ANCHOR.                                 |
| 2 | CONTRACTOR SHALL NOT MAKE CONNECTION TO EXISTING 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. | 8  | CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY TO HOLD POLE DURING WATER MAIN INSTALLATION.   |
| 3 | INSTALL 6-INCH WATER MAIN.   | 9  | THE CONTRACTOR SHALL CLOSE EXISTING VALVE ONCE THE EXISTING WATER MAIN IS ABANDONED. THE EXISTING VALVE BOX SHALL THEN BE REMOVED, WASTEHAULED AND BACKFILL WITH CDF. |
| 4 | INSTALL 8-INCH WATER MAIN.   | 10 | INSTALL NEW WATER SERVICE. WATER SERVICE LOCATIONS ARE APPROXIMATE. SEE DETAIL 5 SHEET C-12.  |
| 5 | INSTALL 12-INCH WATER MAIN.  | 11 | REMOVE EXISTING BLOW-OFF ASSEMBLY AND SALVAGE TO NBWD. PLUG WITH CDF OR CONCRETE  |
| 6 | PROTECT EXISTING WATER MAIN DURING CONSTRUCTION. ABANDON IN PLACE ONCE NEW WATER MAIN IS IN SERVICE.   | 12 | TREES AND SHRUBS REMOVE AND WASTEHAUL   |



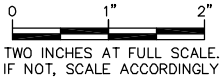
DATE: AUG 2013	SCALE: 1"=20'-0"	DRAWN: EWH	CHECKED: AKK	APPROVED: MBJ
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90% SUBMITTAL	REVISION	DATE	APPD

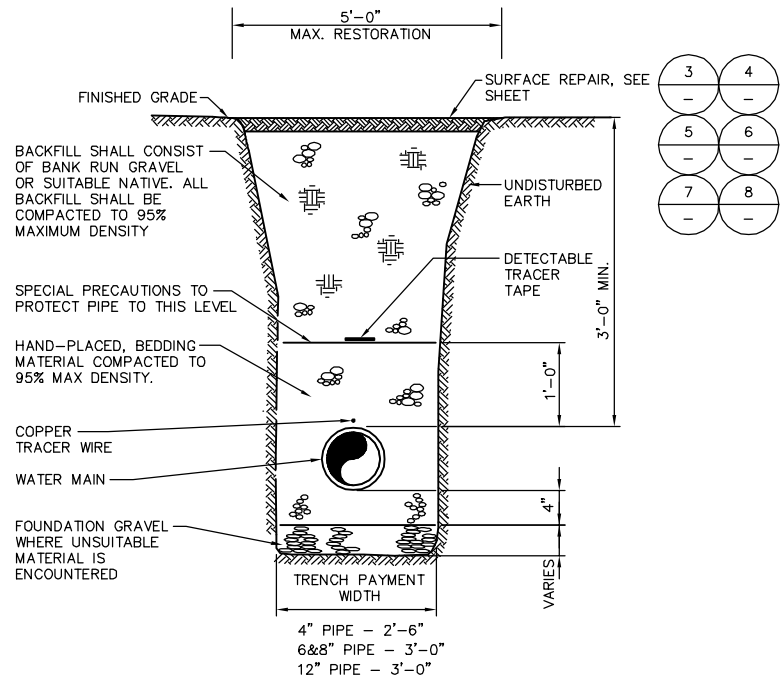


NORTH BEACH WATER DISTRICT  
PACIFIC COUNTY  
WASHINGTON  
WATER MAIN PROJECT  
SCHEDULE C  
Z STREET WATER MAIN PLANS  
STA 70+00 TO END

SHEET: C-10
OF: 14
JOB NO.: 13223.00
DWG: PLAN7

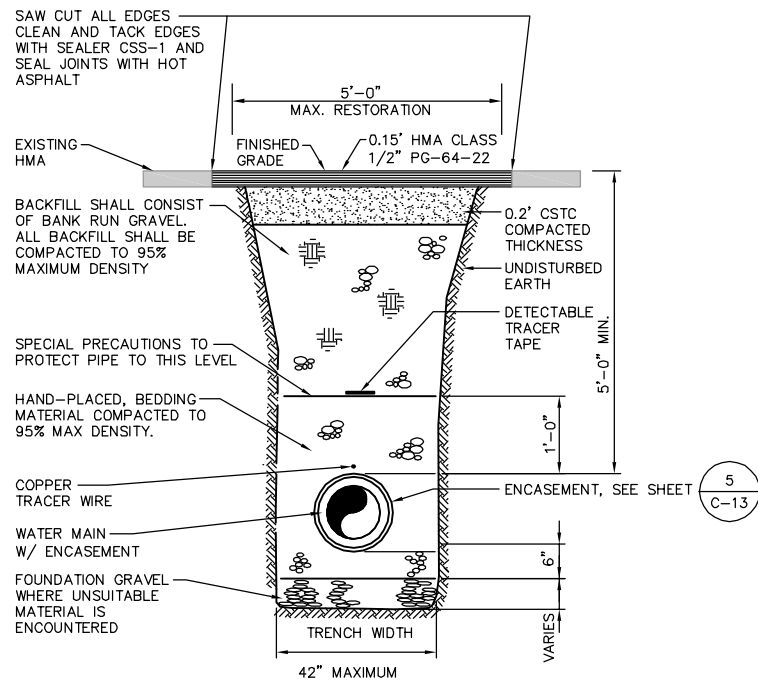






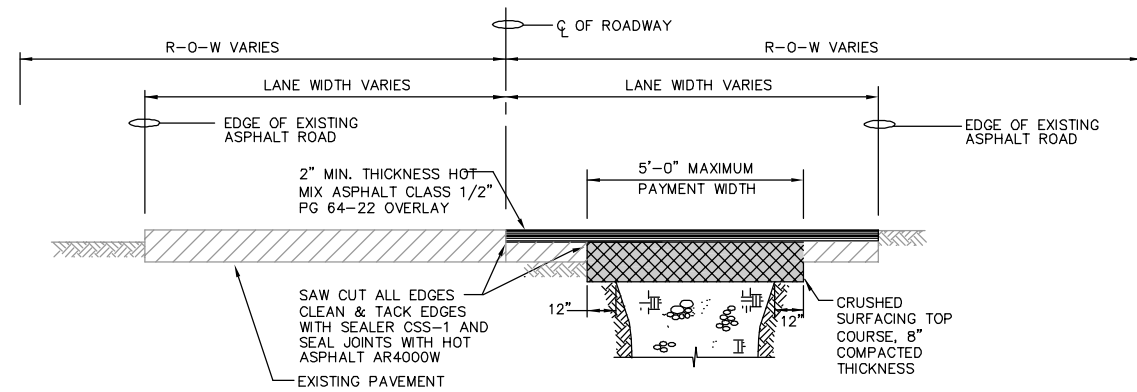
**TYPICAL PIPE TRENCH SECTION**  
NOT TO SCALE

1  
TYP



**WSDOT R-O-W TYPICAL PIPE TRENCH SECTION**  
NOT TO SCALE

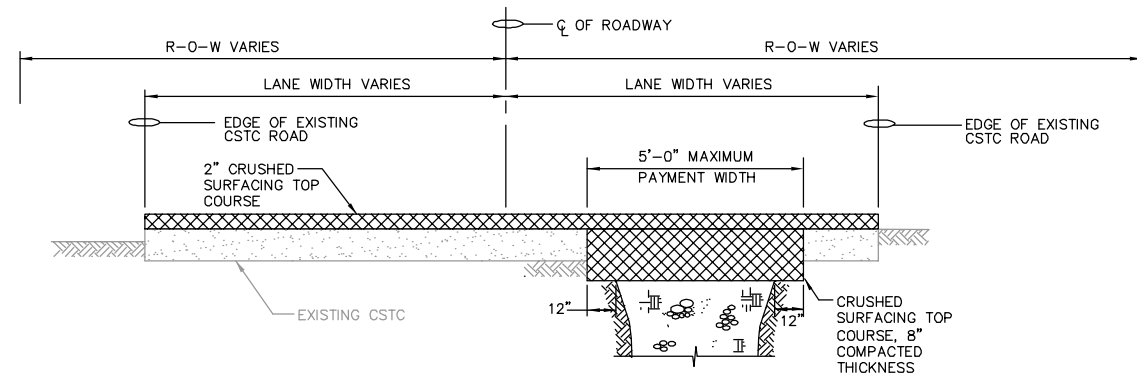
2  
-



NOTE:  
1. CONTRACTOR SHALL MAKE A VERTICAL CUT OF 2" AT CENTER OF ROADWAY AND GRIND EXISTING PAVEMENT BEFORE OVERLAY TO MATCH EXISTING GRADE.

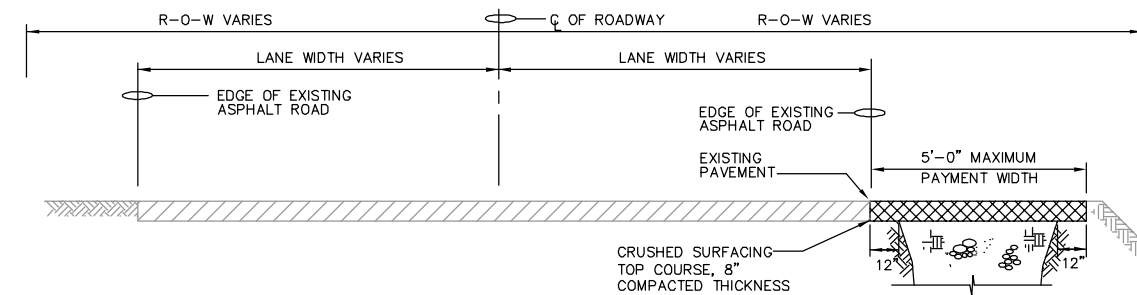
**HMA INTERSECTION REPAIR**  
NOT TO SCALE

3  
TYP



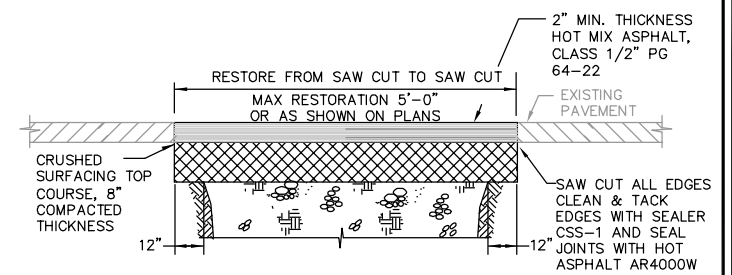
**CSTC ROADWAY REPAIR**  
NOT TO SCALE

4  
TYP



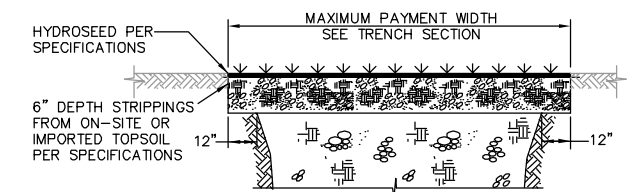
**CSTC SHOULDER REPAIR**  
NOT TO SCALE

5  
TYP



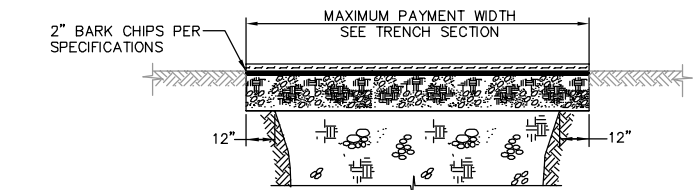
**HMA TRENCH REPAIR**  
NOT TO SCALE

6  
TYP



**HYDROSEED RESTORATION**  
NOT TO SCALE

7  
TYP

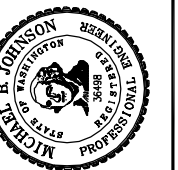


**BARK RESTORATION**  
NOT TO SCALE

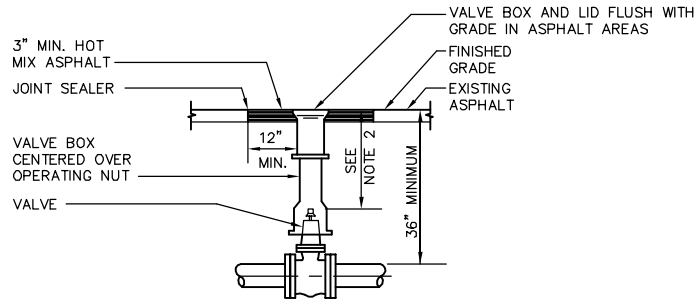
8  
TYP

DATE: AUG 2013	SCALE: NOTED	DRAWN: EWH	CHECKED: AKK	APPROVED: MBJ
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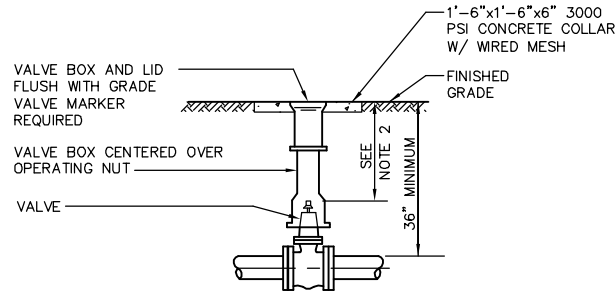
	APPD
	DATE
90% SUBMITTAL	REVISION
	No.







VALVE BOX IN  
ASPHALT AREA

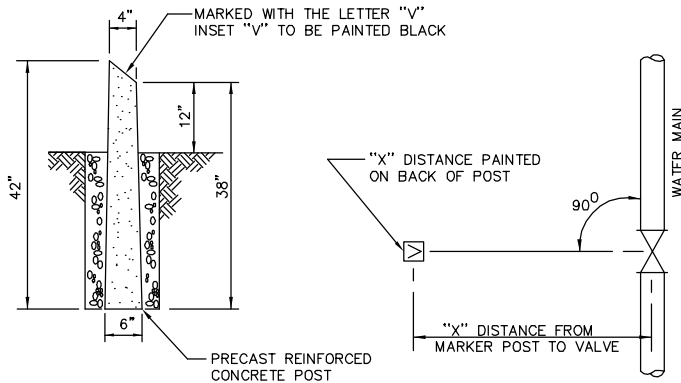


VALVE BOX IN  
UNIMPROVED AREA (VALVE MARKER REQUIRED)

NOTES:

1. EACH VALVE SHALL BE PROVIDED WITH AND ADJUSTABLE CAST IRON VALVE BOX OF 5 INCHES (5") INSIDE DIAMETER. VALVE BOXES SHALL HAVE A TOP SECTION WITH AN EIGHTEEN INCH (18") MIN. LENGTH. THE VALVE BOX SHALL BE RICH No. 940 OR SATHER MANUFACTURE, OR EQUAL. VALVE BOX EARS SHALL BE PLACED IN LINE WITH PIPE IT SERVES.
2. 18" MINIMUM, 24" MAXIMUM DEPTH TO OPERATOR NUT. PROVIDE VALVE STEM EXTENSION AS REQUIRED.

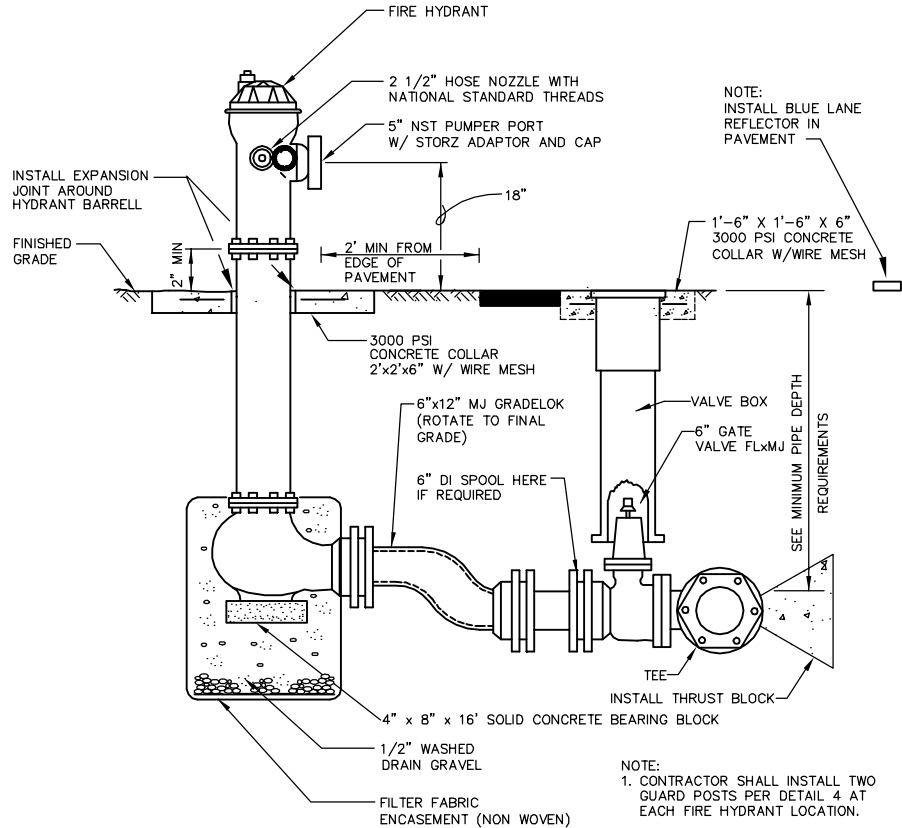
VALVE BOX  
NOT TO SCALE



NOTES:

1. PRECAST REINFORCED POST TO BE PAINTED FLAT TRAFFIC YELLOW #2612 OR SAFETY YELLOW #1063.
2. THE DISTANCE FROM THE MARKER POST TO THE WATER MAIN SHALL BE PAINTED ON THE BACKSIDE OF THE MARKER POST IN BLACK WITH A 2" HIGH NUMBER.
3. VALVE MARKER POST SHALL BE REQUIRED WHENEVER THE WATER VALVE IS LOCATED IN AN UNPAVED AREA.
4. THE POST WILL ALSO BE REQUIRED FOR BLOW-OFF IN THE SAME CONDITION AS WATER VALVES.

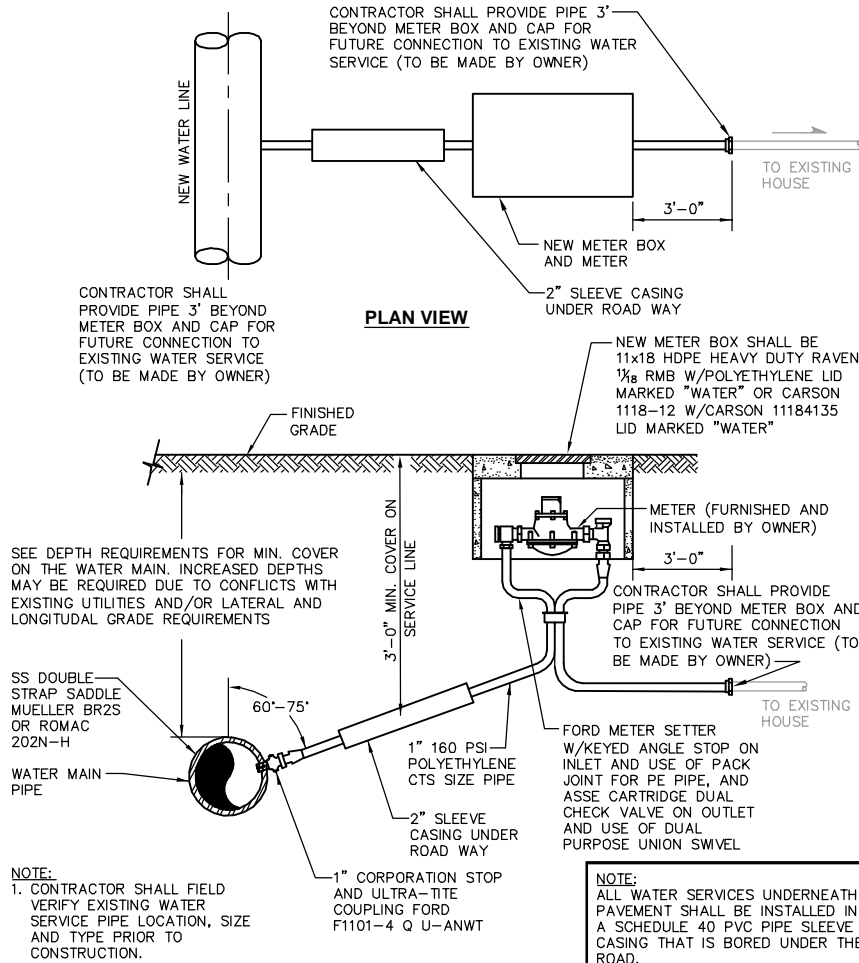
VALVE MARKER POST  
NOT TO SCALE



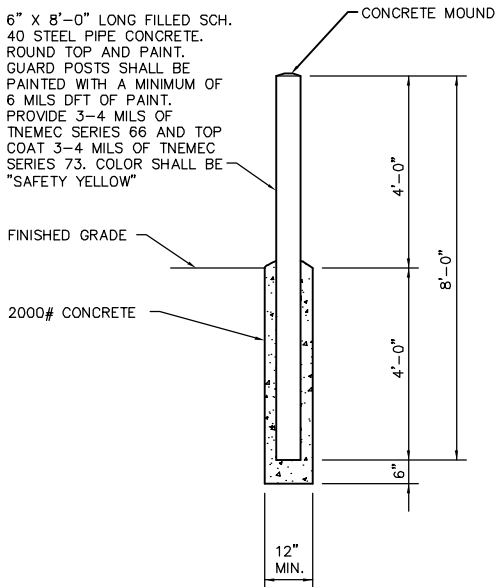
\* PAINT FIRE HYDRANT RUSTOLEUM SAFETY YELLOW  
BASE No. 288-14, COLOR CODE  
AX-6732, T-4432

- NOTE:
1. CONTRACTOR SHALL INSTALL TWO GUARD POSTS PER DETAIL 4 AT EACH FIRE HYDRANT LOCATION.
  2. HYDRANT SHALL BE MUELLER CENTURION A423 OR APPROVED EQUAL.
  3. ALL MECHANICAL JOINTS SHALL BE PROVIDED W/ JOINT RESTRAINT GLANDS (MEGA-LUG, OR EQUAL)

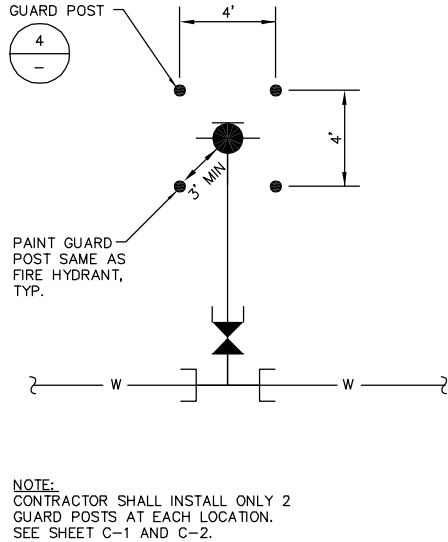
FIRE HYDRANT DETAIL  
NOT TO SCALE



WATER SERVICE  
CONNECTION DETAIL  
NOT TO SCALE



GUARD POST DETAIL  
SCALE: 1/2"=1'-0"



NOTE:  
CONTRACTOR SHALL INSTALL ONLY 2  
GUARD POSTS AT EACH LOCATION.  
SEE SHEET C-1 AND C-2.

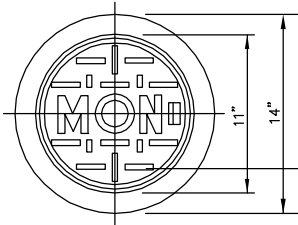
HYDRANT LAYOUT  
NOT TO SCALE

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

	DATE	APPD
	REVISION	
	No.	

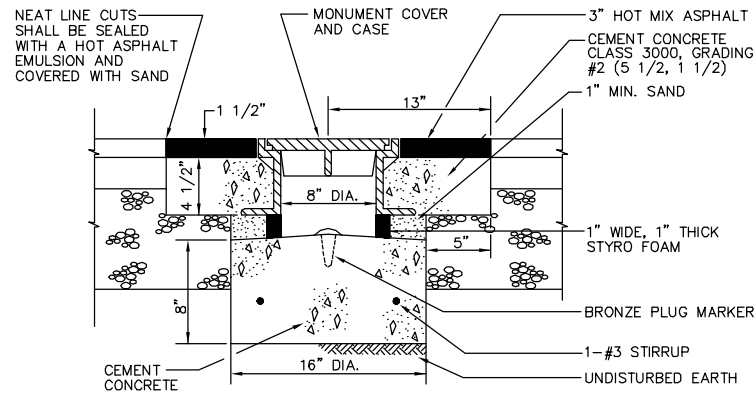






NOTES:

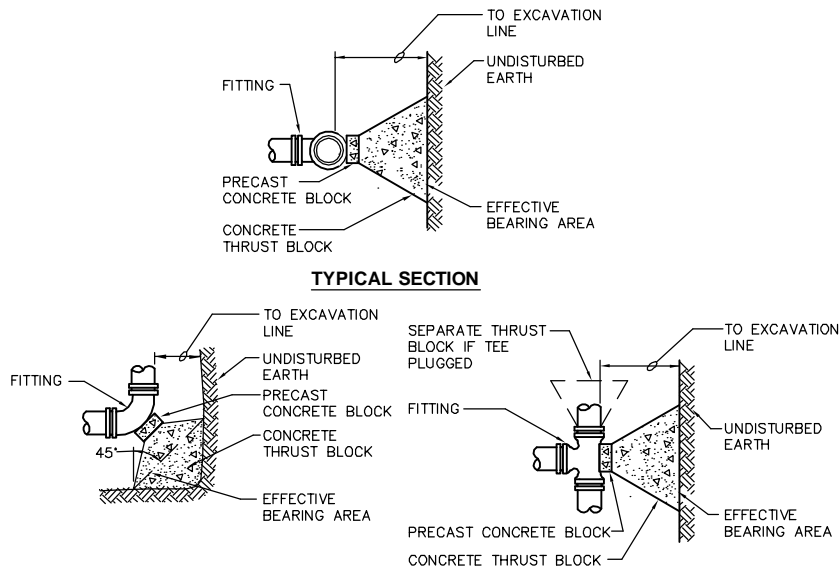
1. ALL EXISTING SURVEY MONUMENTS SHALL BE PRESERVED IN ACCORDANCE WITH WAC 332-120. SHOULD A MONUMENT NEED TO BE DISTURBED IN ORDER TO CONSTRUCT THE IMPROVEMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER AND SHALL NOT DISTURB THE MONUMENT UNTIL THE CONTRACTOR HAS SUBMITTED AN APPLICATION TO THE DEPARTMENT OF NATURAL RESOURCES. ALL MONUMENTS SHALL BE REESTABLISHED PER THIS DETAIL.
2. CASTINGS FOR MONUMENT CASES, COVERS, AND RISERS SHALL BE GRAY IRON CASTINGS CONFORMING TO THE REQUIREMENTS OF AASHTO M 105, CLASS 30B.
3. THE COVER AND SEAT SHALL BE MACHINED SO AS TO HAVE PERFECT CONTACT AROUND THE ENTIRE CIRCUMFERENCE AND FULL WIDTH OF BEARING SURFACE.



**SURVEY MONUMENT DETAIL**

NOT TO SCALE

1  
TYP



**90° EL PLAN**

**TEE PLAN**

**EFFECTIVE BEARING AREA REQUIRED**

FITTING D	TEE	90°	45°	22 1/2°	11 1/4°
4" & 6"	4 SQ.FT.	6 SQ.FT.	3 SQ.FT.	2 SQ.FT.	2 SQ.FT.
8"	7 SQ.FT.	10 SQ.FT.	6 SQ.FT.	3 SQ.FT.	2 SQ.FT.
12"	14 SQ.FT.	22 SQ.FT.	12 SQ.FT.	6 SQ.FT.	4 SQ.FT.

TYPICAL FOR SANDY SOIL WITH 2,000 P.S.F. BEARING STRENGTH & 100 P.S.I. WORKING PRESSURE. ADJUST BEARING AREA BY PRESSURE & SOIL BEARING CAPACITY. USE TEE FOR DEAD ENDS

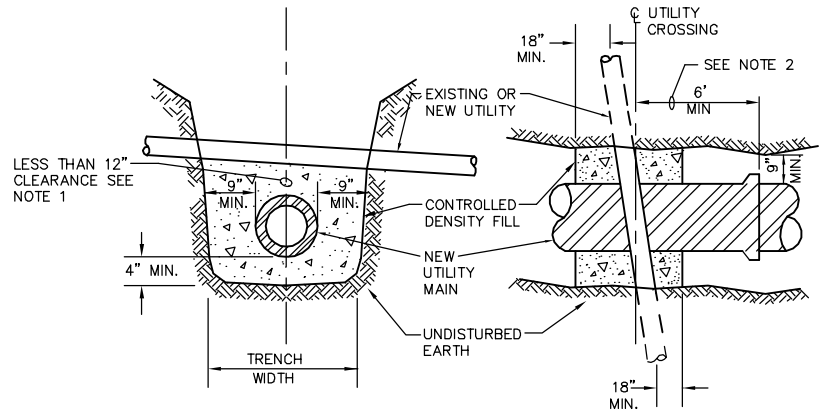
NOTES:

1. BLOCKING SHALL BE TO SOLID BEARING SURFACE.
2. FITTING SHALL BE PROTECTED WITH A POLYTHLENE ENCASEMENT.
3. BEARING AREA SHALL BE PROPORTIONALLY INCREASED WITH PRESSURES IN EXCESS OF 100 P.S.I. OR IN SOIL CONDITIONS WITH LESS THAN 2,000 P.S.F. BEARING STRENGTH.
4. ALL BLOCKS ON TEES SHALL BE SEPARATED FOR DIRECTION OF THRUST.

**THRUST BLOCKING**

NOT TO SCALE

2  
-



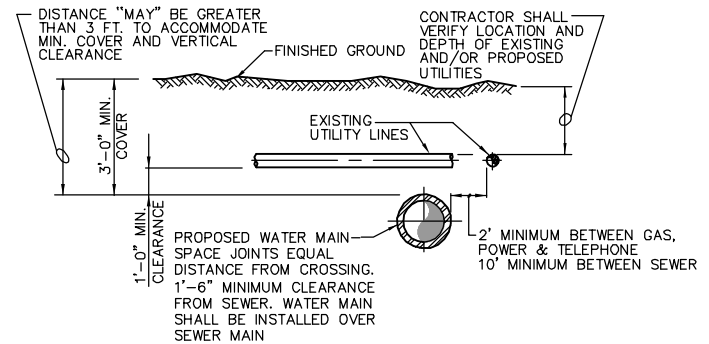
NOTES:

1. CONTRACTOR SHALL PROVIDE CDF PIPE ENCASEMENT AT ALL EXISTING UTILITY CROSSINGS IN THE EVENT THAT A 12" SEPARATION CANNOT BE PROVIDED. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE SITE UTILITIES TO ANTICIPATE PROVIDING AND INSTALLING CDF ENCASEMENTS WHERE NECESSARY.
2. CONTRACTOR SHALL NOT CONSTRUCT ANY NEW PIPE JOINT WITHIN 6 FEET OF THE EXISTING CENTERLINE OF THE UTILITY CROSSING.

**CONCRETE PIPE ENCASEMENT DETAIL**

NOT TO SCALE

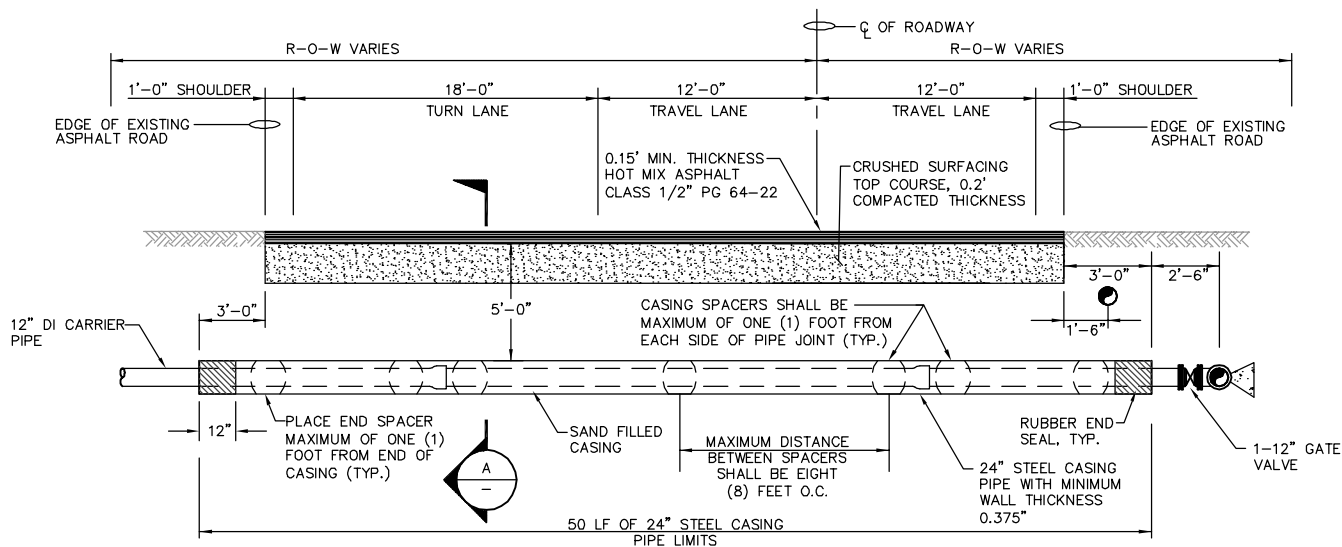
3  
-



**TYPICAL UTILITY CROSSING**

NOT TO SCALE

4  
-



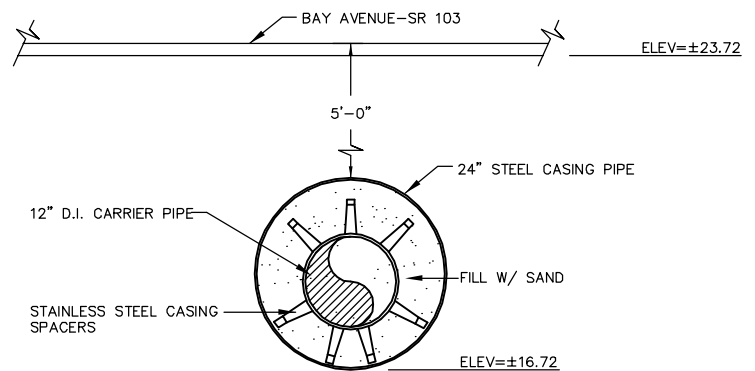
**BAY AVENUE-SR 103  
WSDOT ENCASEMENT PIPE**

NOT TO SCALE

5  
-

NOTES:

1. CASING SPACERS SHALL BE STANDARD TYPE.
2. MINIMUM RUNNER WIDTH SHALL BE 2 INCHES.
3. RUNNER HEIGHT SHALL BE SIZED TO PROVIDE:  
A. MINIMUM 0.75" BETWEEN CARRIER PIPE BELL & CASING PIPE WALL AT ALL TIMES.  
B. MINIMUM 1" CLEARANCE BETWEEN RUNNERS AND TOP OF CASING WALL TO PREVENT JAMMING DURING INSTALLATION.
4. THE CASING PIPE SHALL BE COATED WITH BLACK BITUMINOUS COATING.



**SECTION**

NOT TO SCALE

A  
-



**Gray & Osborne, Inc.**  
CONSULTING ENGINEERS  
2102 CARRAGE 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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		DATE	APPD
<b>90% SUBMITTAL</b>	REVISION	DATE	APPD
	No.		



**NORTH BEACH WATER DISTRICT**  
WASHINGTON  
PACIFIC COUNTY  
**WATER MAIN PROJECT**  
MISCELLANEOUS DETAILS

SHEET: **C-13**

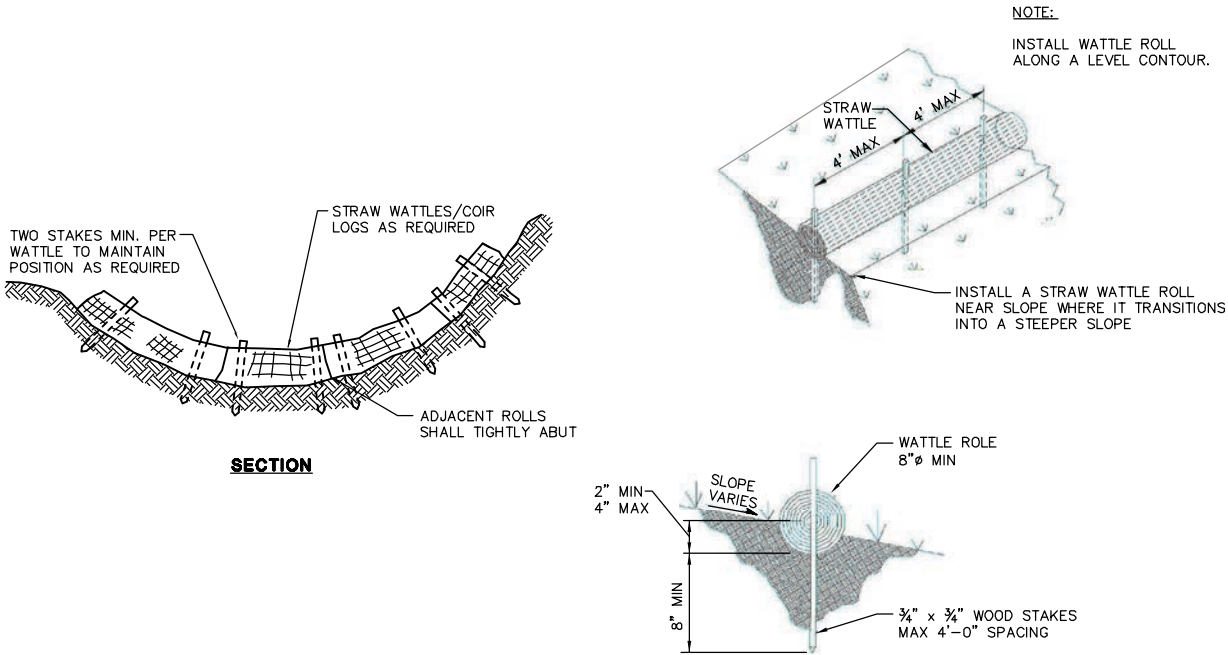
OF: **14**

JOB NO.: 13223.00  
DWG: DETAILS1

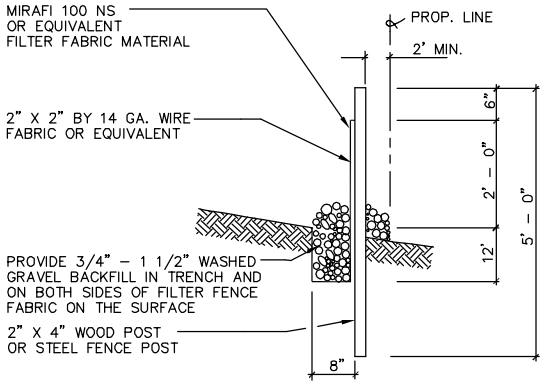


EROSION/SEDIMENTATION CONTROL NOTES

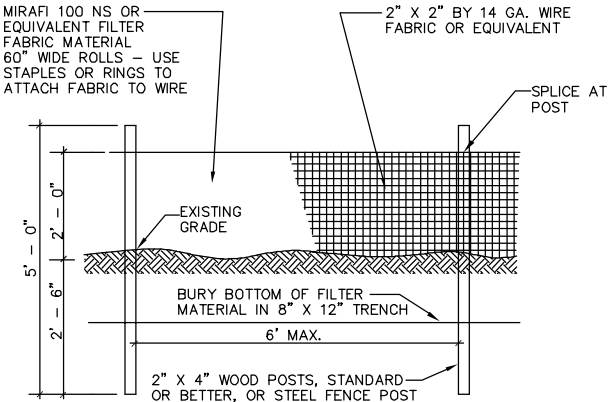
1. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION SHALL BE OBSERVED DURING CONSTRUCTION.
2. ALL REQUIRED SEDIMENTATION/EROSION CONTROL FACILITIES MUST BE IN OPERATION PRIOR TO LAND CLEARING AND/OR OTHER CONSTRUCTION TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND /OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT AND ADDITIONS TO EROSION/SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE EROSION AND SEDIMENTATION CONTROL SYSTEMS DEPICTED ON THE DRAWINGS ARE IDENTIFIED IN SENSITIVE AREAS. NOT ALL EROSION CONTROL MEASURE ARE DEPICTED ON THE DRAWINGS. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF THE BMPs THROUGHOUT THE ENTIRE WATER MAIN PROJECT. AS CONSTRUCTION PROGRESSES AND AS UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE CONTRACTOR SHOULD ANTICIPATE THAT MORE EROSION AND SEDIMENTATION CONTROL FACILITIES WILL BE NECESSARY TO INSURE COMPLETE SILTATION CONTROL ON THE PROPOSED SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES AND THE WATER QUALITY OF THE RECEIVING DRAINAGE SYSTEM.
4. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF THE SEDIMENT. ALL CATCH BASINS, CONVEYANCE LINES AND DITCHES SHALL BE CLEANED PRIOR TO PAVING.
5. THE CONTRACTOR SHALL REMOVE MATERIAL DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO THE COUNTY RIGHT-OF-WAY OR INTO THE EXISTING STORM DRAINAGE SYSTEM. DEBRIS SHALL NOT BE WASHED INTO THE STORM DRAINAGE SYSTEM.
6. TEMPORARY EROSION CONTROL FACILITIES SHALL BE INSPECTED WEEKLY AND MAINTAINED WITHIN 24 HOURS FOLLOWING A STORM EVENT. SEDIMENT SHALL BE REMOVED TO INSURE THE FACILITIES WILL FUNCTION PROPERLY. THE FACILITIES SHALL BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
7. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORMWATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
8. NO DISTURBED SOIL SHALL REMAIN UNSTABILIZED FOR MORE THAN TWO DAYS.



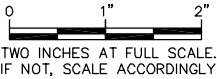
STRAW WATTLE ROLL DETAIL 3 TYP  
NOT TO SCALE



FILTER FABRIC FENCE SECTION 1 TYP  
NOT TO SCALE



FILTER FABRIC FENCE ELEVATION 2 TYP  
NOT TO SCALE





**Gray & Osborne, Inc.**  
CONSULTING ENGINEERS  
2102 CARRIDGE DRIVE SW, BLDG. 1  
OLYMPIA, WASHINGTON 98502 • (360) 292-7481

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

	DATE	APPD
90% SUBMITTAL	REVISION	
	No.	



**NORTH BEACH WATER DISTRICT**  
PACIFIC COUNTY  
WASHINGTON  
**WATER MAIN PROJECT**  
EROSION CONTROL DETAILS

SHEET: <b>C-14</b>
OF: <b>14</b>
JOB NO.: 13223.00
DWG: EROSION CONTROL