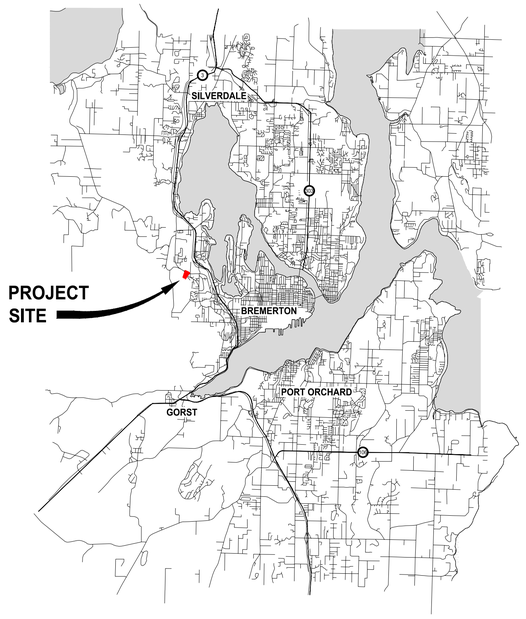
CITY OF BREMERTON FRANCIS STREET OUTFALL STORMWATER TREATMENT PROJECT

SECTIONS 17, TOWNSHIP 24N, RANGE 1E, W.M.

CITY OF BREMERTON PROJECT NO. 878

FUNDED IN PART BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY

NOVEMBER 2024



LOCATION MAP

NO SCALE

INDEX TO DRAWINGS

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GENERAL		
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10	GR1	FRANCIS STREET ASPHALT, LANDSCAPE, AND GRADING PLAN
11	S1	FRANCIS STREET STRUCTURAL PLAN AND SECTION
TRAFFIC CONTROL		
12	TC1	FRANCIS STREET TEMPORARY TRAFFIC CONTROL PLAN

811 Know what's **below.** **Call** before you dig.
Determina lo que esta **bajo tierra.** **Llama** antes de excavar.

APPROVED BY _____
DAVID DINKUHN, P.E.
STORMWATER PROJECT MANAGER

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION

G1

Parametrix
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
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NO	REVISIONS DESCRIPTION	DATE	BY

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: *C. ODEGARD*	DESIGN BY: *B. TUMBLING*	CHECKED BY: *C. BUITRAGO*
DATE: *11/13/2024*	WASH. P.E. # *20123355* DATE: *11/13/2024*	WASH. P.E.#*49427* DATE:*11/13/2024*

CITY OF BREMERTON FRANCIS STREET OUTFALL STORMWATER TREATMENT PROJECT

COVER SHEET, VICINITY MAP, AND SHEET INDEX

PN: 233-1896-189

DATE 11/20/24

SHEET 1 OF 12

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-189 FRANCIS OUTFALL DESIGN\95SVCS\CADD\DWGPS\1896189-G1.DWG PLOTTED BY:ODEGACOO DATE:11/14/2024 12:00 PM

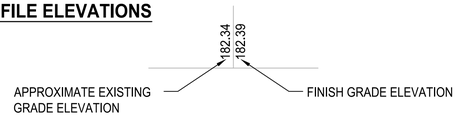
EXISTING LEGEND:

- SEWER CLEAN OUT
- MANHOLE SEWER
- SEWER LOCATES
- FIRE HYDRANT
- WATER METER
- WATER VALVE
- WATER LOCATES
- CATCH BASIN
- AREA BASIN
- CATCH BASIN SOLID
- STORM LOCATES
- DITCH CENTERLINE
- PROPERTY LINE
- TELEPHONE RISER
- CABLE TV RISER
- CABLE TV JUNCTION BOX
- COMMUNICATIONS LOCATES
- MAIL BOX
- SIGN
- BIKE PAINT STENCIL
- CONIFER TREE
- DECIDUOUS TREE
- SHRUB
- HEDGE
- ROCKERY
- EDGE OF PAVEMENT
- POWER

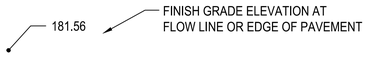
PROPOSED LEGEND:

- QUARRY SPALLS
- HYDROSEED AND 8" TOPSOIL TYPE A
- CATCH BASIN TYPE 2
- 72" CDS STRUCTURE
- 96" STORMGATE FLOW SPLITTER
- STORM SEWER PIPE
- ACCESS COVER/HATCH

PROFILE ELEVATIONS

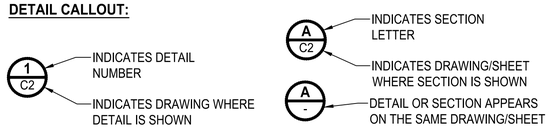


PLAN ELEVATIONS



SECTION AND DETAIL DESIGNATIONS

DETAIL CALLOUT:



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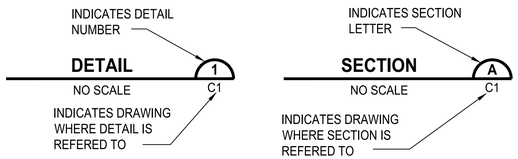

ABBREVIATIONS

Δ	DELTA ANGLE	MISC	MISCELLANEOUS
ALUM	ALUMINUM	MON	MONUMENT
AP	ANGLE POINT	N	NORTH, NORTHING
B/W	BACK OF WALK	NE	NORTH EAST
BLDG	BUILDING	NIB	NO INLET BAY
C&G	CURB AND GUTTER	NTS	NOT TO SCALE
CB	CATCH BASIN	NW	NORTH WEST
CDF	CONTROLLED DENSITY FILL	NTS	NOT TO SCALE
CDS	CONTINUOUS DEFLECTIVE SEPARATION	OAE	OR APPROVED EQUAL
CFS	CUBIC FEET PER SECOND	OC	ON CENTER
CG	CLEARING AND GRUBBING	OD	OUTER DIAMETER
CI	CAST IRON	OHWM	ORDINARY HIGH WATER MARK
CIP	CAST IN PLACE	OP	OVERHEAD POWER
CL	CENTERLINE	P	POWER
CLSM	CONTROLLED LOW-STRENGTH MATERIAL	PC	POINT OF CURVATURE
CO	CLEAN OUT	PCC	PRE CAST CONCRETE
COB	CITY OF BREMERTON	PE	POLYETHYLENE
CONC	CONCRETE	PI	POINT OF INTERSECTION
CSBC	CRUSHED SURFACING BASE COURSE	PK	SURVEY NAIL
CSTC	CRUSHED SURFACING TOP COURSE	PSI	POUNDS PER SQUARE INCH
CULV	CULVERT	PSORB	PHOSPHOSORB TREATMENT MEDIA
DEMO	DEMOLITION	PT	POINT OF TANGENCY, POINT
DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
DIA	DIAMETER	R	RADIUS
DWG	DRAWING	RCP	REINFORCED CONCRETE PIPE
E	EAST, EASTING	RESP	ROCK FOR EROSION AND SCOUR PROTECTION
EA	EACH		
ECB	EROSION CONTROL BLANKET	ROW	RIGHT OF WAY
EL, ELEV	ELEVATION	RPMS	RAISED PAVEMENT MARKERS
EOP	EDGE OF PAVEMENT	RP	RADIUS POINT
EX, EXIST	EXISTING	RT	RIGHT
EQUIV.	EQUIVALENT	S	SOUTH, SLOPE
FL	FLOW LINE	SCH	SCHEDULE
FOC	FACE OF CURB	SD	STORM DRAIN
FT	FOOT, FEET	SE	SOUTH EAST
G	GAS	SECT	SECTION
GA	GAUGE	SF	SQUARE FOOT, FEET
GPM	GALLONS PER MINUTE	SG	STORMGATE
GV	GATE VALVE	SS	SANITARY SEWER
H, HORIZ	HORIZONTAL	ST	STREET
HDPE	HIGH DENSITY POLYETHYLENE	STA	STATION
HMA	HOT MIX ASPHALT	STD	STANDARD
ID	INNER DIAMETER	SW	SOUTH WEST
IE	INVERT ELEVATION	S/W	SIDEWALK
INV	INVERT	TBC	TOP BACK OF CURB
IN	INCH	TCE	TEMPORARY CONSTRUCTION EASEMENT
L	LENGTH		
LBS	POUNDS	TYP	TYPICAL
LT	LEFT	UNO	UNLESS NOTED OTHERWISE
LF	LINEAR FOOT	V, VERT	VERTICAL
MAX	MAXIMUM	W	WIDTH, WATER, WEST
MIN	MINIMUM	WHT	WHITE
		WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
		YRS	YEARS

GENERAL NOTES

1. THE CONTRACTOR SHALL CALL THE UTILITY LOCATION REQUEST CENTER PRIOR TO ANY EXCAVATION WORK. NO EXCAVATION SHALL BEGIN UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED.
2. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION/APWA STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST EDITION, AND CITY OF BREMERTON STANDARDS.
3. THE CONTRACTOR SHALL MEET THE CONDITIONS OF ALL PROJECT PERMITS AND LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.
4. THE CONTRACTOR SHALL LIMIT THE AREA OF CLEARING TO ONLY THAT WHICH IS SHOWN IN THE PLANS. ALL DISTURBED AREAS SHALL BE GRADED TO MATCH THE EXISTING GROUND AND PROMPTLY HYDROSEEDED.
5. PROTECTION OF THE ENVIRONMENT: NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUND WATERS, OR ALLOW PARTICULATE EMISSIONS TO THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY. SEE SPECIAL PROVISIONS SECTION 1-07.15.

SEDIMENT / EROSION CONTROL NOTES

1. PROTECT EXISTING STORM WATER INFRASTRUCTURE ON EXISTING ROADS NEAR CONSTRUCTION ENTRANCES FROM SEDIMENT-LADEN RUNOFF.
2. WHEN TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ARE NO LONGER NEEDED, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THEM AND RESTORE OR FINISH THE AREAS UNLESS OTHERWISE DIRECTED BY THE CITY.
3. THE TEMPORARY EROSION CONTROL SYSTEM SHALL BE INSTALLED PRIOR TO ALL OTHER CONSTRUCTION.
4. WHERE POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
5. AS CONSTRUCTION PROGRESSES AND SEASONAL CONDITIONS DICTATE, THE EROSION CONTROL FACILITIES SHALL BE MAINTAINED AND/OR ALTERED AS REQUIRED BY THE ENGINEER TO INSURE CONTINUING EROSION/SEDIMENTATION CONTROL.
6. ALL TEMPORARY SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL AND THE POTENTIAL FOR EROSION HAS PASSED.
7. ALL DISTURBED LAND AREAS LEFT FOR 30 DAYS OR MORE SHALL BE SEEDED WITH A MIX AND BY A METHOD APPROVED BY THE CITY AND MAINTAINED UNTIL SEED GERMINATION IS ASSURED.
8. THE PUBLIC RIGHT-OF-WAY SHALL BE KEPT CLEAN. TRACKING OF MUD AND DEBRIS FROM THE SITE ONTO THE PUBLIC RIGHT-OF-WAY WILL NOT BE ALLOWED. FAILURE TO COMPLY WITH THIS CONDITION WILL RESULT IN ALL WORK ON THE SITE BEING STOPPED.
9. CLEANUP AND RESTORATION. THE FOLLOWING PROCEDURES SHALL BE FOLLOWED IN CLEANING AND RESTORING THE CONSTRUCTION SITE:
   - A. STREET SHALL BE SWEPT EACH DAY AS NEEDED.
   - B. DISTURBED SOILS SHALL BE FINAL GRADED, SEEDED, AND MULCHED; OR SODDED AFTER THE INSTALLATION OF THE UTILITY.
   - C. DITCHES SHALL BE SEEDED, JUTE MATTED, NETTED, SODDED, OR ROCK LINED TO CONTROL EROSION.
   - D. ANY DEBRIS INCLUDING ROCKS, COBBLES, DIRT, AND SILT OF DOWNSTREAM DRAINAGE FACILITIES, WHETHER DITCHES OR PIPE AND CATCH BASINS, WHICH RESULTS FROM THE CONSTRUCTION, SHALL BE CLEANED OUT.

CONSTRUCTION NOTES

1. MAINTAIN CONVEYANCE OF STORM DRAINAGE, SEWAGE FLOWS, AND WATER SERVICE DURING THE CONSTRUCTION. WHEN AN OUTAGE IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE CITY 72 HOURS AHEAD OF THE OUTAGE, THE OUTAGE SHALL NOT EXCEED 4 HOURS UNLESS APPROVED BY THE CITY.
2. ALL FLOWS FROM CUT UTILITIES SHALL BE BYPASSED. SUPPLY AND MAINTAIN ALL EQUIPMENT FOR BYPASSING STORMWATER AND WASTEWATER FLOW. ALL BYPASSING METHODS SHALL BE REVIEWED BY THE CITY PRIOR TO IMPLEMENTATION. ALL COSTS FOR BYPASSING FLOW SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
3. VERIFY LOCATIONS, ELEVATIONS, DIAMETERS, MATERIALS, STRUCTURE TYPES, AND OTHER PARAMETERS OF EXISTING FACILITIES TO WHICH NEW STRUCTURES/PIPING WILL CONNECT BEFORE ORDERING MATERIALS.
4. SURVEY AND FIELD STAKE ALL ALIGNMENTS PRIOR TO EXCAVATION. SUBMIT RECORD DRAWINGS BASED ON FIELD SURVEY UPON COMPLETION OF PROJECT.
5. HORIZONTAL DIMENSIONS AND STATION OFFSETS ON PLAN AND PROFILE SHEETS TO PIPELINES, MANHOLES, AND OTHER FACILITIES UNLESS SPECIFICALLY NOTED OTHERWISE. INVERT ELEVATIONS IN MANHOLES AND OTHER STRUCTURES IDENTIFIED IN THE PLANS REFERS TO THE ELEVATIONS AT THE INVERT OF THE PIPE.
6. MANHOLES AND STRUCTURES ARE SHOWN ON THE PLANS SYMBOLICALLY. CONSTRUCT MANHOLES AND STRUCTURES AS SHOWN ON THE DETAILED DRAWINGS AND AS SPECIFIED.
7. UTILITY CROSSINGS ARE GENERALLY SHOWN ON THE PLAN AND PROFILE DRAWINGS WHEN KNOWN. IF DEPTH IS NOT SHOWN, THE CITY MAY DIRECT THE CONTRACTOR TO POTHOLE THE UTILITY TO CONFIRM THE ELEVATION PRIOR TO CONSTRUCTION. POTHOLING IS PAID AS A UNIT BID ITEM.
8. WHERE KNOWN, RESIDENTIAL WATER SERVICE LINES ARE SHOWN ON THE PLAN AND PROFILE SHEETS. WATER SERVICE LINE DEPTHS AND LOCATIONS ARE NOT KNOWN WITH CERTAINTY. THE CONTRACTOR SHALL CAREFULLY WORK IN THE VICINITY OF WATER SERVICE LINES. NOTIFY THE CITY WHEN NEARING A WATER SERVICE LINE.
9. USE EXTREME CAUTION WHEN EXCAVATING NEAR GAS MAINS. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE GAS COMPANY WHEN WORKING IN THE VICINITY OF GAS MAINS, WHICH MAY INCLUDE HAVING A REPRESENTATIVE FROM THE GAS COMPANY ON-SITE DURING CONSTRUCTION AND POTHOLING.
10. OVERHEAD UTILITY CABLES (E.G. POWER, CABLE, ETC.) MAY NOT BE SHOWN ON THE PLANS. DETERMINE THE EXTENT OF HAZARDS OR IMPACTS ON CONSTRUCTION ACTIVITIES DURING THE BIDDING PROCESS AND PRIOR TO MOBILIZATION. FOLLOW LAWFUL AND SAFE PROCEDURES DURING CONSTRUCTION FOR WORKING AROUND OVERHEAD POWER. COORDINATE WITH THE RESPECTIVE FRANCHISE UTILITY (I.E. GAS, CABLE, POWER, TELEPHONE) FOR LOCATING PIPING OR CONDUIT.
11. COORDINATE WITH UTILITY PROVIDERS AS NEEDED WHILE WORKING IN THE VICINITY OF UTILITY POLES OR BURIED UTILITIES TO ENSURE UTILITIES ARE NOT DAMAGED OR UNDERMINED DURING SUBSURFACE CONSTRUCTION.
12. PLACE AND MAINTAIN TEMPORARY PAVEMENT PATCHING (COLD MIX ASPHALT) IF FINAL PAVEMENT RESTORATION DOES NOT OCCUR IMMEDIATELY AFTER BACKFILLING.
13. PRIOR TO FINAL SAWCUTTING IN PREPARATION FOR SURFACE RESTORATION, THE CONTRACTOR SHALL WALK AREAS DESIGNATED FOR RESTORATION WITH THE ENGINEER TO DETERMINE SAWCUT LINES.

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G2

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-189 FRANCIS OUTFALL DESIGN\96SVCS\CADD\DWGFS1896189-G2.DWG PLOTTED BY: ODEGACOO DATE:11/19/2024 11:31 AM

BRIANA ELIZABETH MARIE TUMBLING — STATE OF WASHINGTON — 20123355 — REGISTERED PROFESSIONAL ENGINEER

REVISIONS			
NO	DESCRIPTION	DATE	BY

0 1" 2"
TWO INCHES AT FULL SCALE
IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. AS NOTED VERT. AS NOTED

FIELD BOOK

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: C. ODEGARD DATE: 11/13/2024
DESIGN BY: B. TUMBLING WASH. P.E. # 20123355 DATE: 11/13/2024
CHECKED BY: C. BUITRAGO WASH. P.E.# 49427 DATE:11/13/2024

CITY OF BREMERTON FRANCIS STREET OUTFALL
STORMWATER TREATMENT PROJECT

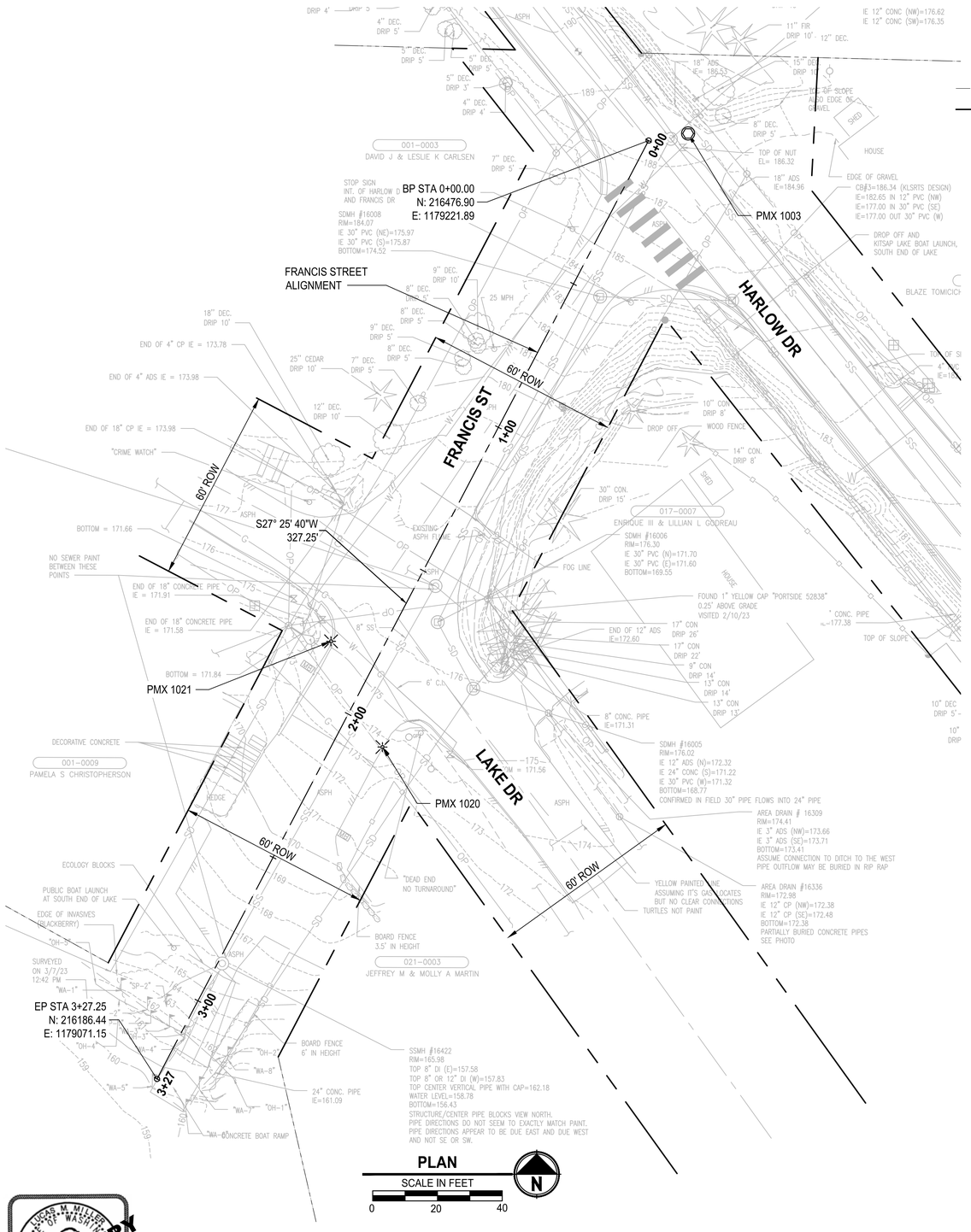
LEGEND, ABBREVIATIONS, AND GENERAL/TESC NOTES

PN: 233-1896-189

DATE 11/20/24

SHEET 2 OF 12

CITY OF BREMERTON PROJECT NUMBER: 878



PLAN

SCALE IN FEET

0 20 40

N

LEGEND:

- PROPERTY LOT LINE
- ROW LINE
- CONTROL POINT
- PROPERTY INFORMATION

LOT #
OWNER NAME

SURVEY NOTES:

1. THIS MAP CORRECTLY REPRESENTS CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY IN 2018, WITH AN UPDATED TOPOGRAPHIC SURVEY INFORMATION ALONG FRANCIS DRIVE IN FEBRUARY 2023. THE DATA WAS THEN MERGED WITH THE EXISTING BASE MAP COMPLETED IN 2018.

2. CONVENTIONAL AND GPS SURVEY EQUIPMENT WAS USED IN THE PERFORMANCE OF THIS SURVEY. ALL EQUIPMENT IS MAINTAINED IN CONFORMANCE WITH CURRENT STATE STATUTE.

3. THIS SURVEY WAS PREPARED BY FIELD TRAVERSE AS PER WAC 332-130-090, PART C. RELATIVE ACCURACY EXCEEDS 1 FOOT IN TEN THOUSAND.

4. ALL SURFACE FEATURES AND INVERT STRUCTURE ELEVATION SHOWN HEREON WERE FIELD LOCATED AND MEASURED BY PARAMETRIX FOR THIS SURVEY. UNDERGROUND UTILITY LINES ARE BASED UPON A COMBINATION OF ASBUILT PLANS, SURFACE FEATURE MEASUREMENTS AND ONSITE UNDERGROUND UTILITY MARKINGS PERFORMED BY OTHERS.

5. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

6. RIGHT OF WAY INFORMATION SHOWN HEREON IS BASED ON PUBLIC RECORD INFORMATION FROM KITSAP COUNTY AUDITOR'S AND FIELD TIES TO MONUMENTATION.

7. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT, WHICH MAY REVEAL RESTRICTIONS OR EASEMENTS OF RECORD. ACCORDINGLY, NONE ARE SHOWN HEREON.

8. CONTOURS DERIVED FROM DIRECT FIELD OBSERVATIONS AND SHOWN AT 1' INTERVALS.

HORIZONTAL DATUM:

HORIZONTAL DATUM FOR THIS SURVEY IS NORTH AMERICAN DATUM 1983 REALIZATION 2011 (NAD83/11) BASED ON PUBLISHED INFORMATION FROM WASHINGTON DEPARTMENT OF TRANSPORTATION (WSDOT), POINT DESIGNATIONS PNT NO. 31 AND AUSTIN

PROJECTION IS WASHINGTON PLANE NORTH ZONE, U.S. SURVEY FEET

PNT NO. 31 NORTHING: 212488.00 EASTING: 1180717.07
POINT AUSTIN: NORTHING: 217897.54 EASTING: 1181107.62

VERTICAL DATUM:

VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88) BASED ON PUBLISHED INFORMATION FROM WSDOT, POINT DESIGNATION PNT NO. 31 AND AUSTIN

POINT DESIGNATION: PNT NO. 31
ELEVATION: 159.242

POINT DESIGNATION: AUSTIN
ELEVATION: 305.514

PARAMETRIX CONTROL TABLE

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1003	216479.15	1179234.08	188.30	SET REBAR AND CAP
1020	216289.23	1179140.38	173.72	SET MAG NAIL
1021	216321.84	1179124.39	175.19	SET MAG NAIL

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G3

LUCAS M. MILLER — STATE OF WASHINGTON — 52085 — REGISTERED PROFESSIONAL LAND SURVEYOR
PRELIMINARY
11/20/2024

REVISIONS			
NO	DESCRIPTION	DATE	BY

0 1" 2"
TWO INCHES AT FULL SCALE
IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. AS NOTED VERT. AS NOTED

FIELD BOOK

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: C. ODEGARD DATE: 11/13/2024
DESIGN BY: B. TUMBLING WASH. P.E. # 20123355 DATE: 11/13/2024
CHECKED BY: L. MILLER WASH. PLS# 52085 DATE: 11/19/2024

CITY OF BREMERTON FRANCIS STREET OUTFALL
STORMWATER TREATMENT PROJECT

FRANCIS STREET
HORIZONTAL CONTROL AND EXISTING CONDITIONS

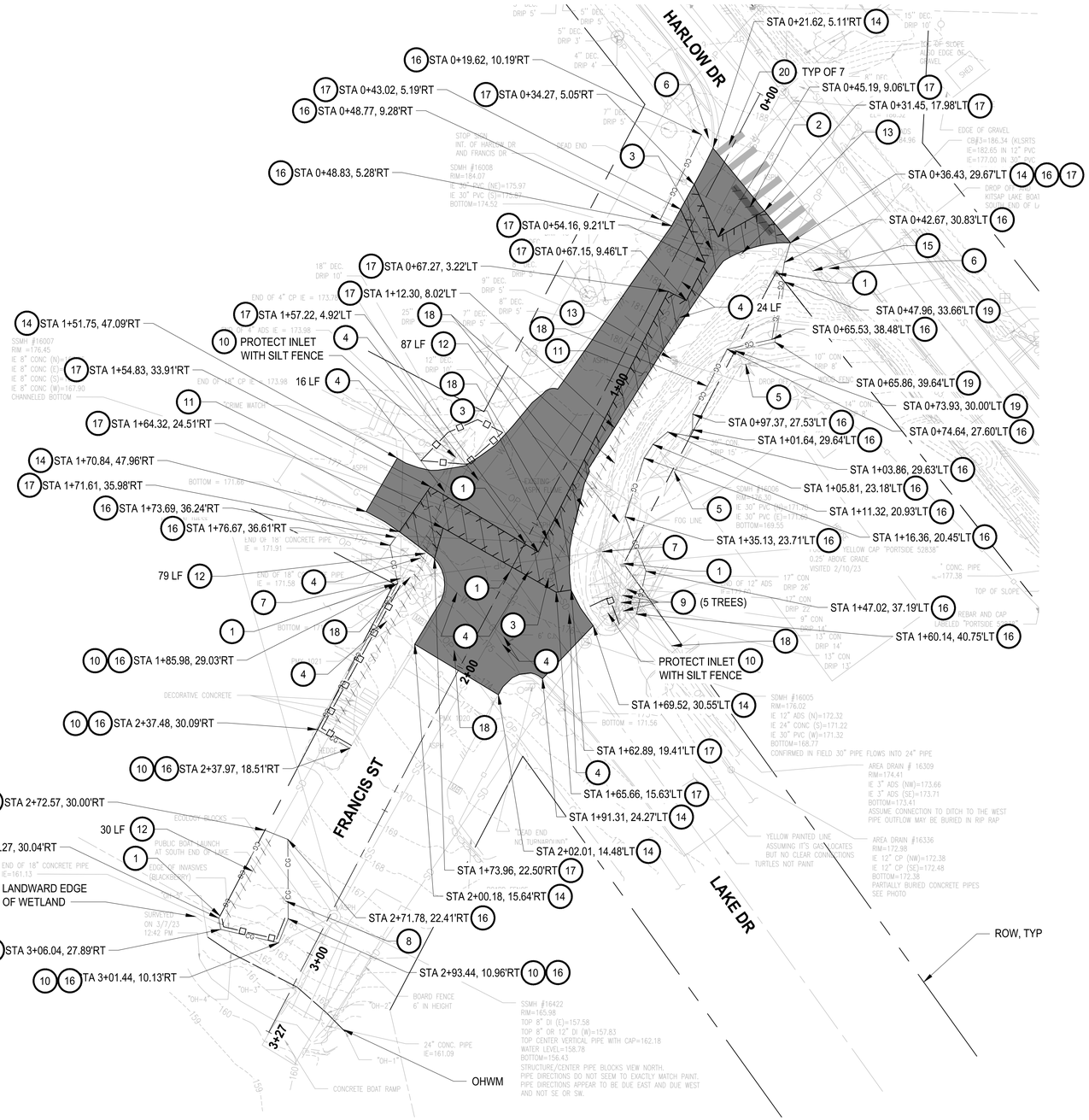
PN: 233-1896-189

DATE 11/20/24

SHEET 3 OF 12

CITY OF BREMERTON PROJECT NUMBER: 878

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-189 FRANCIS OUTFALL DESIGN\99SVCS\CADD\DWGFS1896189-G3.DWG PLOTTED BY:ODEGACOO DATE:11/19/2024 11:33 AM



SITE PREPARATION AND DEMOLITION NOTES:

1. REMOVAL LIMITS AND CLEARING AND GRUBBING LIMITS ARE INDICATED BY STATION OFFSET CALLOUTS.
2. SILT FENCE SHALL BE PLACED AT CLEARING AND GRUBBING LIMITS, UNLESS OTHERWISE NOTED
3. COORDINATE WITH HOMEOWNERS TO MAINTAIN ACCESS TO DRIVEWAYS AND HOMES.
4. CONTRACTOR SHALL PRESERVE PROPERTY CORNER MONUMENTS IF FOUND.

SITE PREPARATION AND DEMOLITION KEY NOTES:

1. PRESERVE PROPERTY CORNER/MONUMENT OR REPLACE IN KIND IF DAMAGED
2. REMOVE PAVEMENT MARKINGS
3. PROTECT STRUCTURE TO REMAIN
4. PROTECT UTILITY PIPE TO REMAIN
5. PROTECT TREE TO REMAIN
6. PROTECT CURB RAMP TO REMAIN
7. PROTECT AND SUPPORT POWER POLE AS NEEDED. COORDINATE WITH UTILITY OWNER.
8. PROTECT SIGN TO REMAIN
9. REMOVE TREE
10. SILT FENCE PER WSDOT STD PLAN I-30.15-02
11. REMOVE ASPHALT PAVEMENT
12. REMOVE STORM SEWER PIPE
13. REMOVE SIGN
14. 1.5" PLANING BITUMINOUS PAVEMENT
15. PROTECT WALL TO REMAIN
16. CLEARING AND GRUBBING LIMITS
17. SAWCUT ASPHALT CONC. PAVEMENT
18. PROTECT OVERHEAD POWER
19. TEMPORARY CONSTRUCTION EASEMENT
20. PROTECT PAVEMENT MARKINGS

LEGEND:

- REMOVE ITEM
- SAWCUT FULL DEPTH
- FULL DEPTH ASPHALT PAVEMENT REMOVAL
- CG — CG — CLEARING AND GRUBBING LIMITS
- SILT FENCE
- OHWM
- TEMPORARY CONSTRUCTION EASEMENT
- 1.5" PLANING BITUMINOUS PAVEMENT

100 % REVIEW SUBMITTAL

NOT FOR CONSTRUCTION

DM1

BRENNA ELIZABETH MARIE TUMBLING — STATE OF WASHINGTON — 20123355 — REGISTERED PROFESSIONAL ENGINEER

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CITY OF BREMERTON FRANCIS STREET OUTFALL
STORMWATER TREATMENT PROJECT

FRANCIS STREET
DEMOLITION AND TESC PLAN

PN: 233-1896-189

DATE 11/20/24

SHEET 4 OF 12

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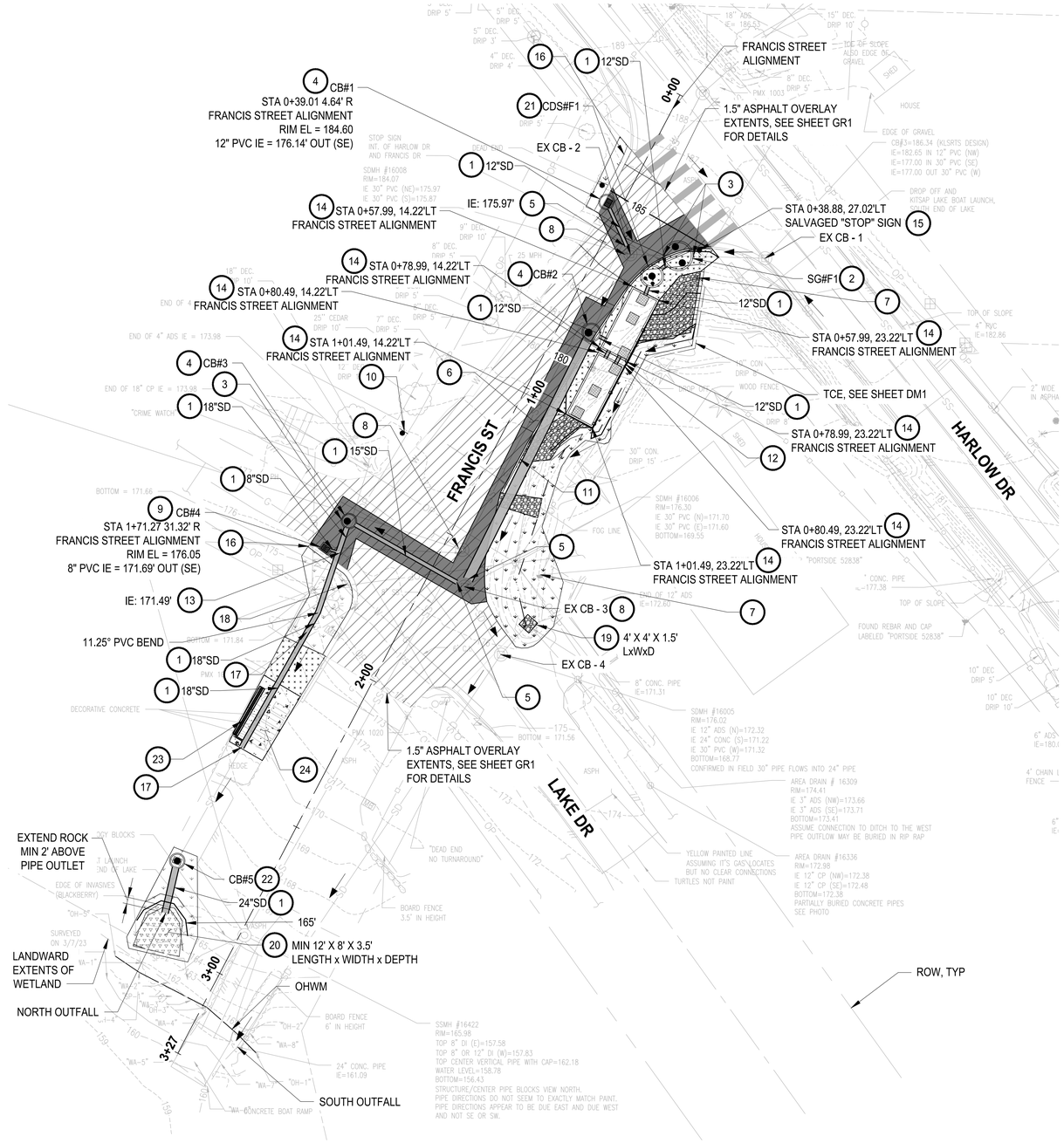
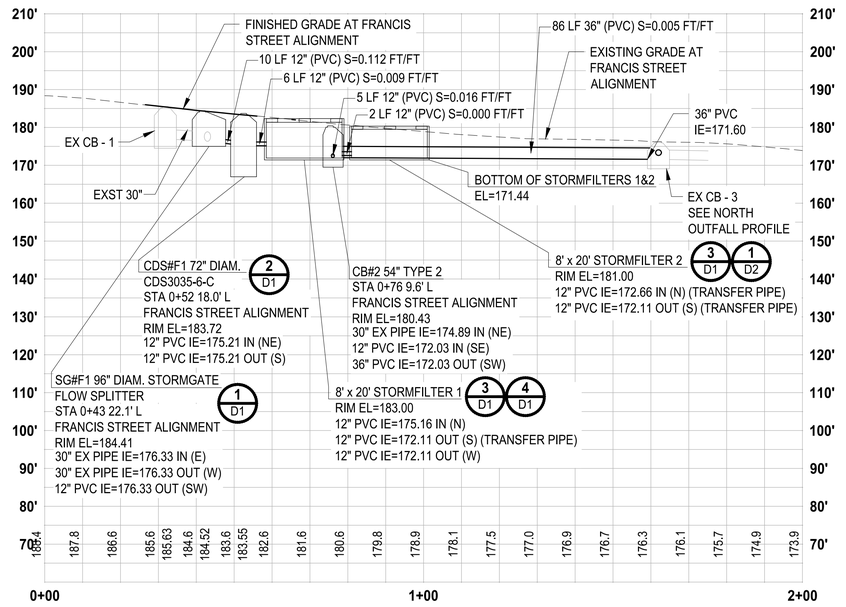
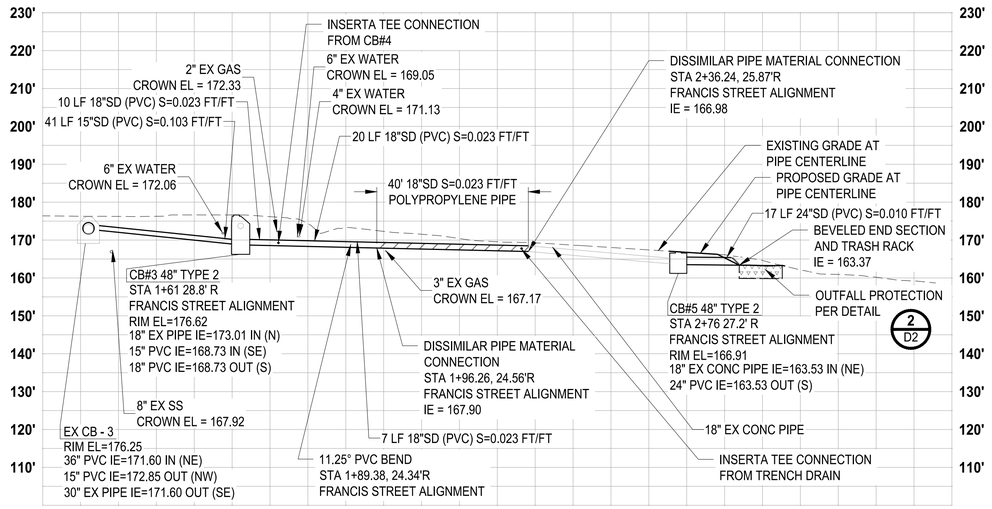

FRANCIS ST
HARLOW DR
LAKE DR
FRANCIS STREET ALIGNMENT
0+00
1+00
2+00
3+00
3+27
4 CB#1
STA 0+39.01 4.64' R
FRANCIS STREET ALIGNMENT
RIM EL = 184.60
12" PVC IE = 176.14' OUT (SE)
16 1 12"SD
21 CDS#F1
EX CB - 2
1 12"SD
14 STA 0+57.99, 14.22'LT
FRANCIS STREET ALIGNMENT
IE: 175.97' 5
8
14 STA 0+78.99, 14.22'LT
FRANCIS STREET ALIGNMENT
4 CB#2
14 STA 0+80.49, 14.22'LT
FRANCIS STREET ALIGNMENT
1 12"SD
14 STA 1+01.49, 14.22'LT
FRANCIS STREET ALIGNMENT
4 CB#3
3
1 18"SD
8
1 15"SD
10
6
1 8"SD
9 CB#4
STA 1+71.27 31.32' R
FRANCIS STREET ALIGNMENT
RIM EL = 176.05
8" PVC IE = 171.69' OUT (SE)
16
IE: 171.49' 13
18
11.25° PVC BEND
1 18"SD
17
1 18"SD
23
17
24
1.5" ASPHALT OVERLAY
EXTENTS, SEE SHEET GR1
FOR DETAILS
3
185
1.5" ASPHALT OVERLAY
EXTENTS, SEE SHEET GR1
FOR DETAILS
STA 0+38.88, 27.02'LT
SALVAGED "STOP" SIGN 15
EX CB - 1
SG#F1 2
12"SD 1
7
STA 0+57.99, 23.22'LT 14
FRANCIS STREET ALIGNMENT
TCE, SEE SHEET DM1
12"SD 1
STA 0+78.99, 23.22'LT 14
FRANCIS STREET ALIGNMENT
12
11
STA 0+80.49, 23.22'LT 14
FRANCIS STREET ALIGNMENT
5
STA 1+01.49, 23.22'LT 14
FRANCIS STREET ALIGNMENT
7
EX CB - 3 8
19 4' X 4' X 1.5'
LxWxD
EX CB - 4
5
1.5" ASPHALT OVERLAY
EXTENTS, SEE SHEET GR1
FOR DETAILS
EXTEND ROCK
MIN 2' ABOVE
PIPE OUTLET
20Y BLOCKS
CB#5 22
24"SD 1
165'
20 MIN 12' X 8' X 3.5'
LENGTH x WIDTH x DEPTH
LANDWARD
EXTENTS OF
WETLAND
OHWM
NORTH OUTFALL
SOUTH OUTFALL
ROW, TYP
SDMH #16006
RIM=176.30
IE 30" PVC (N)=171.70
IE 30" PVC (E)=171.60
BOTTOM=169.55
SDMH #16005
RIM=176.02
IE 12" ADS (N)=172.32
IE 24" CONC (S)=171.22
IE 30" PVC (W)=171.32
BOTTOM=168.77
CONFIRMED IN FIELD 30" PIPE FLOWS INTO 24" PIPE
AREA DRAIN # 16309
RIM=174.41
IE 3" ADS (NW)=173.66
IE 3" ADS (SE)=173.71
BOTTOM=173.41
ASSUME CONNECTION TO DITCH TO THE WEST
PIPE OUTFLOW MAY BE BURIED IN RIP RAP
AREA DRAIN #16336
RIM=172.98
IE 12" CP (NW)=172.38
IE 12" CP (SE)=172.48
BOTTOM=172.38
PARTIALLY BURIED CONCRETE PIPES
SEE PHOTO
YELLOW PAINTED LINE
ASSUMING IT'S GAS LOCATES
BUT NO CLEAR CONNECTIONS
TURTLES NOT PAINT
SSMH #16422
RIM=165.98
TOP 8" DI (E)=157.58
TOP 8" OR 12" DI (W)=157.83
TOP CENTER VERTICAL PIPE WITH CAP=162.18
WATER LEVEL=158.78
BOTTOM=156.43
STRUCTURE/CENTER PIPE BLOCKS VIEW NORTH.
PIPE DIRECTIONS DO NOT SEEM TO EXACTLY MATCH PAINT.
PIPE DIRECTIONS APPEAR TO BE DUE EAST AND DUE WEST
AND NOT SE OR SW.
"DEAD END
NO TURNAROUND"
STOP SIGN
INT. OF HARLOW DR
AND FRANCIS DR
SDMH #16008
RIM=184.07
IE 30" PVC (NE)=175.97
IE 30" PVC (S)=175.87
HOUSE
EDGE OF GRAVEL
CB#3=186.34 (KLSRTS DESIGN)
IE=182.65 IN 12" PVC (NW)
IE=177.00 IN 30" PVC (SE)
IE=177.00 OUT 30" PVC (W)
DROP OFF AND
KITSAP LAKE BOAT LAUNCH,
SOUTH END OF LAKE
TOP OF SLOPE
4" PVC
IE=182.86
2" WIDE
IN ASPHA
"PORTSIDE 52838"
FOUND REBAR AND CAP
LABELLED "PORTSIDE 52838"
TOP OF SLOPE
10" DEC
DRIP 5'
10" DEC
DRIP 10'
6" ADS
IE=180.(
4' CHAIN L
FENCE
6"
IE:
TOE OF SLOPE
ALSO EDGE OF
GRAVEL
SHED
8" DEC.
DRIP 5'
PMX 1003
15" DEC.
DRIP 10'
18" ADS
IE= 186.53
5" DEC.
DRIP 5'
5" DEC.
DRIP 3'
4" DEC.
DRIP 4'
DRIP 5'
9" DEC.
DRIP 10'
8" DEC.
DRIP 5'
25 MPH
10" DEC.
DRIP 10'
7" DEC.
DRIP 5'
60" CEDAR
DRIP 10'
DRIP 5'
END OF 4" ADS IE = 173.98
END OF 18" CP IE = 173.98
"CRIME WATCH"
BOTTOM = 171.66
BOTTOM = 171.84
PMX
DECORATIVE CONCRETE
WEDGE
ASPH
PMX 1020
BOTTOM = 171.56
8" CONC. PIPE
IE=171.31
END OF 12" ADS
IE=172.60
FOG LINE
"PORTSIDE 52838"
7" CONC. PIPE
IE=177.38
TOP OF SLOPE
FOUND REBAR AND CAP
LABELLED "PORTSIDE 52838"
10" DEC
DRIP 5'
10" DEC
DRIP 10'
6" ADS
IE=180.(
4' CHAIN L
FENCE
6"
IE:
T. LAUNCH
2ND T. LAKE
EDGE OF INVASIVES
(BLACKBERRY)
"OH-3"
SURVEYED
ON 3/7/23
"WA-1"
"WA-2"
"WA-3"
"WA-4"
"OH-2"
"WA-8"
"WA-5"
"WA-7"
"OH-1"
"WA-6"CONCRETE BOAT RAMP
BOARD FENCE
3.5' IN HEIGHT
BOARD FENCE
6' IN HEIGHT
24" CONC. PIPE
IE=161.09
WOOD FENCE
30" CON.
DRIP 15"
WOOD FENCE
30" CON.
DRIP 15"
SHED
OHWM
OHWM
OHWM



FRANCIS STREET PROFILE

HORIZ: 1"=20'
VERT: 1"=20'



FRANCIS STREET NORTH OUTFALL PROFILE

HORIZ: 1"=20'
VERT: 1"=20'

GENERAL NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO FRANCIS STREET ALIGNMENT.
2. STORM STRUCTURE STATION AND OFFSETS ARE TO THE CENTER OF STRUCTURE.
3. RECTANGULAR BI-DIRECTIONAL VANED GRATES SHALL BE PER WSDOT STD PLAN B-30.40-03. RECTANGULAR VANED GRATES SHALL BE PER WSDOT STD PLAN B-30.30-03.
4. RECTANGULAR FRAMES SHALL BE PER WSDOT STD PLAN B-30.10-03.
5. CONTRACTOR TO INSTALL "DRAINS TO STREAM" PLACARDS PER MANUFACTURER'S SPECIFICATIONS ON ALL NEW STORMWATER INLETS. CONTRACTOR TO PROVIDE PLACARDS.
6. SEE SHEET DM1 FOR TCE AND CLEARING AND GRUBBING DETAILS.
7. CLEARING AND GRUBBING LIMITS DEMARCATE THE TOPSOIL TYPE A AND HYDROSEED RESTORATION LIMITS.
8. SEE SHEETS D1 AND D2 FOR STORMFILTER, STORMGATE, AND CDS DETAILS.
9. SEE SHEET GR1 FOR POINTS DEFINING TRENCH RESTORATION, ASPHALT OVERLAY, LANDSCAPE, AND CHANNELIZATION.
10. UTILITY CROSSINGS RESULTING IN LESS THAN 2 FEET OF SEPARATION SHALL BE BACKFILLED WITH CDF BACKFILL.
11. STORMWATER PIPE MATERIAL SHALL BE SOLID WALL PVC UNLESS OTHERWISE NOTED.

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION

C2

BRENNA ELIZABETH MARIE TUMBLING — STATE OF WASHINGTON — 20123355 — REGISTERED PROFESSIONAL ENGINEER

REVISIONS			
NO	DESCRIPTION	DATE	BY

0 1" 2"
TWO INCHES AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. AS NOTED VERT. AS NOTED

FIELD BOOK

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: C. ODEGARD DATE: 11/13/2024
DESIGN BY: B. TUMBLING WASH. P.E. # 20123355 DATE: 11/13/2024
CHECKED BY: C. BUITRAGO WASH. P.E.# 49427 DATE: 11/13/2024

CITY OF BREMERTON FRANCIS STREET OUTFALL STORMWATER TREATMENT PROJECT

FRANCIS STREET DRAINAGE PROFILES

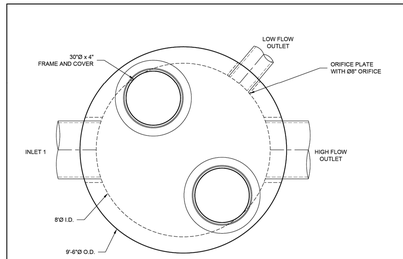
PN: 233-1896-189

DATE 11/20/24

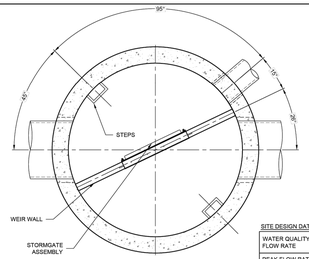
SHEET 6 OF 12

CITY OF BREMERTON PROJECT NUMBER: 878

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-189 FRANCIS OUTFALL DESIGN\969VCS\CAD2D\VIGPS1896189-C1.DWG PLOTTED BY:ODEGACOO DATE:11/19/2024 11:11 AM



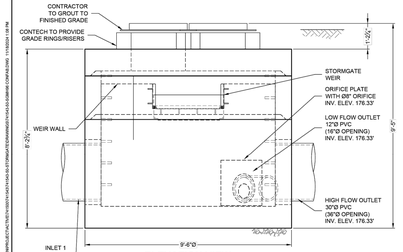
TOP SLAB PLAN VIEW



PLAN VIEW
TOP SLAB NOT SHOWN FOR CLARITY

SITE DESIGN DATA

WATER QUALITY FLOW RATE	3.58 CF
PEAK FLOW RATE	52.96 CFS
RETURN PERIOD OF PEAK FLOW	100 YRS



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	STORMGATE WEIR ASSEMBLY	CONTECH
1	30" x 30" LOW FLOW ORIFICE PLATE WITH 10" ORIFICE	CONTRACTOR
6	STEPS, P1OCTS, LANE LADDER, OR EQUIV.	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
1 PLC	GRADE RINGS/RISERS	CONTRACTOR
1	30"Ø x 4" FRAME AND COVER, EJ#41600483, OR EQUIV.	CONTRACTOR

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. BYPASS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ENGINEER OF RECORD RESPONSIBLE FOR CONFIRMING ELEVATION OF ADJUSTABLE WEIR PANEL AND PRECAST WALL ACCORDING TO PRODUCTS TO BE INSTALLED ON THE PROJECT.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S).
E. CONTRACTOR TO INSTALL GRADE RINGS/RISERS OR BLOCK REQUIRED BETWEEN THE TOP OF THE STRUCTURE AND THE BASE OF THE MANHOLE FRAMES.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 25500 LBS.
OF 3 PIECES

MAX FOOTPRINT = Ø9'-6"

CONTECH **PROPOSAL** DRAWING

452901
LAYOUT 1A
5784 / CUZ

DIVERSION BYPASS SGMH96 - 741543-50
FRANCIS STREET OUTFALL - CITY OF BREMERTON
BREMERTON, WA
for SYSTEM: SGMF1

StormGate

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
800.338.1122 | 513.645.7000 | 513.645.7993 Fax
9025 Centre Pointe Drive, Suite 400, West Chester, OH 45069

DATE: 4/9/24
DESIGNED: SKJ
DRAWN: SKJ
CHECKED:
APPROVED:
PROJECT No.: 741543
SEQUENCE No.: 50
SHEET: 1 OF 1

BY	REVISION DESCRIPTION	DATE
SKJ	FLOWS UPDATED	4/9/24
SKJ	ORIFICE TO 8" AND WEIR RAISED 2.25"	4/9/24
SKJ	DGN FILE CREATED	4/9/24

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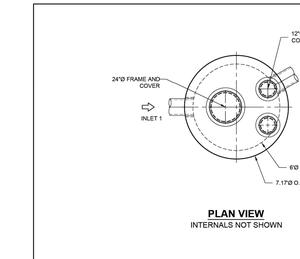
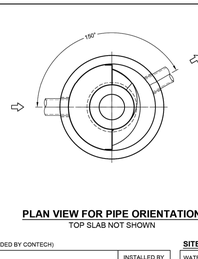
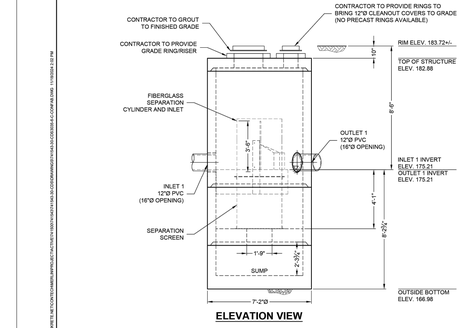
STORMGATE FLOW SPLITTER
DETAIL 1 C2



PLAN VIEW
INTERNALS NOT SHOWN



PLAN VIEW FOR PIPE ORIENTATION
TOP SLAB NOT SHOWN



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	3035-6 CONCENTRIC FIBERGLASS INSERT	CONTRACTOR
1	3035, 2400 micron, 3.1' O.D. x 3.58' SCREEN, GREEN FLANGE UP	CONTRACTOR
1	20, 30, 40 SERIES HARDWARE KIT	CONTRACTOR
1	SEALANT FOR JOINTS	CONTRACTOR
1	24"Ø X 4" FRAME AND COVER, EJ #41600369, OR EQUIV.	CONTRACTOR
2	12"Ø X 4" FRAME AND COVER, EJ #41612201, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY FLOW RATE	3.58 CFS
PEAK FLOW RATE	3.58 CFS
RETURN PERIOD OF PEAK FLOW	100 YRS

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTANANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 15000 LBS.
STRUCTURE IS DELIVERED IN 4 PIECES

MAX FOOTPRINT = 7.17'Ø

CONTECH **PROPOSAL** DRAWING

CUZ
LAYOUT 1A

CDS3035-6-C - 741543-30
FRANCIS STREET OUTFALL - CITY OF BREMERTON
BREMERTON, WA
SITE DESIGNATION: CDS #1

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
800.338.1122 | 513.645.7000 | 513.645.7993 Fax
9025 Centre Pointe Drive, Suite 400, West Chester, OH 45069

DATE: 11/18/24
DESIGNED: AJS
DRAWN: AJS
CHECKED: AJS
APPROVED: AJS
PROJECT No.: 741543
SEQUENCE No.: 30
SHEET: 1 OF 1

BY	REVISION DESCRIPTION	DATE

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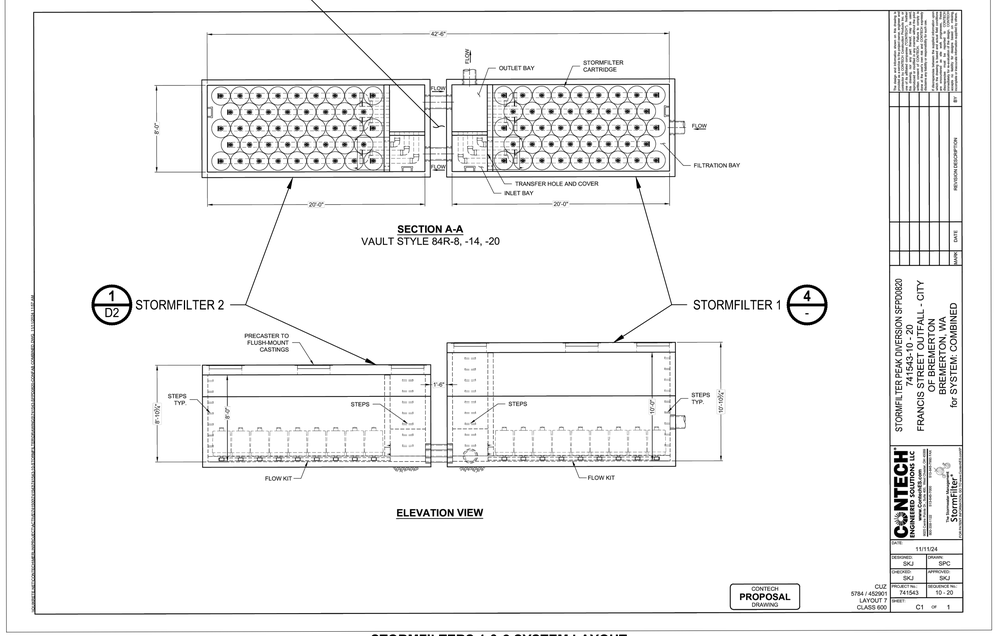
CDS
DETAIL 2 C2

CDF BACKFILL OR APPROVED EQUAL BETWEEN THE STORMFILTERS



SECTION A-A
VAULT STYLE 84R-8, -14, -20

ELEVATION VIEW

STORMFILTERS 1 & 2 SYSTEM LAYOUT
DETAIL 3 C2

STORMFILTER PEAK DIVERSION SFPD0820
741543-10 - 20
FRANCIS STREET OUTFALL - CITY OF BREMERTON
BREMERTON, WA
for SYSTEM: COMBINED

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
800.338.1122 | 513.645.7000 | 513.645.7993 Fax
9025 Centre Pointe Drive, Suite 400, West Chester, OH 45069

StormFilter

DATE: 11/11/24
DESIGNED: SKJ
DRAWN: SPC
CHECKED: SKJ
APPROVED: SKJ
PROJECT No.: 741543
SEQUENCE No.: 10 - 20
SHEET: C1 OF 1

CUZ
5784 / 452901
LAYOUT 7
CLASS 600

CONTECH **PROPOSAL** DRAWING

BY	REVISION DESCRIPTION	DATE

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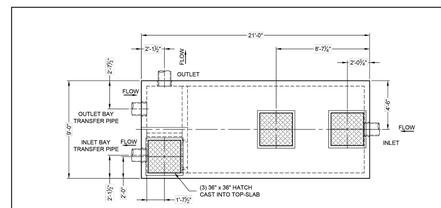
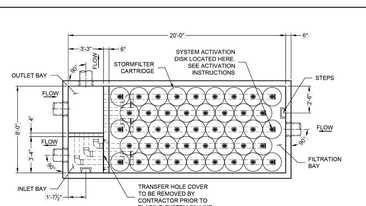
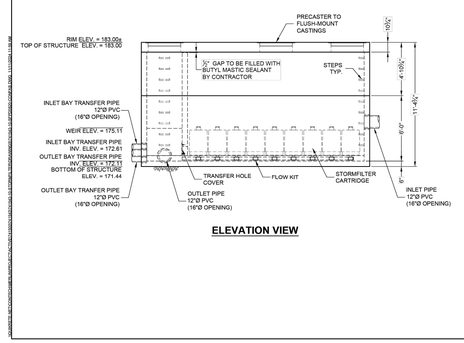


PLAN VIEW



PLAN VIEW (TOP SLAB NOT SHOWN)



ELEVATION VIEW

MATERIAL LIST - PROVIDED BY CONTECH

COUNT	DESCRIPTION	INSTALLED BY
43	27", PHOSPHOSORB CARTRIDGE	CONTECH
43	RESTRICTOR DISK (WHT), 18.79 GPM	CONTECH
1	FLOW KIT (84L-8)	CONTECH
1	36" X 14" TRANSFER HOLE COVER	CONTECH
1	JOINT SEALANT	CONTRACTOR
3	36" x 36" HATCH, EJ #00821721B02, OR EQUIV.	CONTRACTOR
18	STEPS, P10CTS LANE LADDER, OR EQUIVALENT	CONTECH
1	STORMFILTER ACTIVATION DISK	CONTECH

SITE DESIGN DATA

WATER QUALITY FLOW RATE	1.79 CFS
RETURN PERIOD OF PEAK FLOW	100 YRS
FILTER MEDIA TYPE	PHOSPHOSORB

PERFORMANCE SPECIFICATION
FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. **RADIAL MEDIA DEPTH SHALL BE 7-INCHES**. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST **38 SECONDS**. SPECIFIC FLOW RATE SHALL BE **2 GPM/SF (MAXIMUM)**. SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE **6 GPM/CF OF MEDIA (MAXIMUM).**

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING WITH ASTM C-857 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH OUTLET PIPE INVERT WITH OUTLET BAY FLOOR.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
F. CONTRACTOR TO REMOVE THE TRANSFER HOLE COVER WHEN THE SYSTEM IS BROUGHT ONLINE.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = TBD LBS OF 3 PIECES
BASE SECTION SHIPPED WITH CARTRIDGES INSTALLED

MAX FOOTPRINT = 9.50' x 21.50'

CONTECH **PROPOSAL** DRAWING

CUZ
5784 / 452901
LAYOUT 7
CLASS 600

STORMFILTER PEAK DIVERSION SFPD0820
741543-010
FRANCIS STREET OUTFALL - CITY OF BREMERTON
BREMERTON, WA
SYSTEM: 1 OF 2

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
800.338.1122 | 513.645.7000 | 513.645.7993 Fax
9025 Centre Pointe Drive, Suite 400, West Chester, OH 45069

StormFilter

DATE: 11/11/24
DESIGNED: SKJ
DRAWN: SPC
CHECKED: SKJ
APPROVED: SKJ
PROJECT No.: 741543
SEQUENCE No.: 010
SHEET: C1 OF 1

BY	REVISION DESCRIPTION	DATE

The ideas and designs shown on this drawing are the property of CONTECH ENGINEERED SOLUTIONS LLC. Any use or disclosure, without the written consent of CONTECH, other than that which is solely for the purpose for which it was prepared, is prohibited. Title to the drawing is retained by CONTECH. Any use or disclosure, without the written consent of CONTECH, other than that which is solely for the purpose for which it was prepared, is prohibited. Title to the drawing is retained by CONTECH.

STORMFILTER 1
DETAIL 4 C2

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
D1

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-189 FRANCIS OUTFALL DESIGN\99\CIVIL\CADD\DWG\PS1896189-D1.DWG PLOTTED BY: ODEGACOO DATE:11/19/2024 11:27 AM

CITY OF BREMERTON PROJECT NUMBER: 878

BRENNA ELIZABETH MARIE LUMBARD — STATE OF WASHINGTON — 20123355 — REGISTERED PROFESSIONAL ENGINEER

NO	REVISIONS DESCRIPTION	DATE	BY

0 1" 2"
TWO INCHES AT FULL SCALE
IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. *AS NOTED* VERT. *AS NOTED*

FIELD BOOK

CITY OF BREMERTON

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: *C. ODEGARD* DATE: *11/13/2024*
DESIGN BY: *B. TUMBLING* WASH. P.E. *# 20123355* DATE: *11/13/2024*
CHECKED BY: *C. BUITRAGO* WASH. P.E.*# 49427* DATE: *11/13/2024*

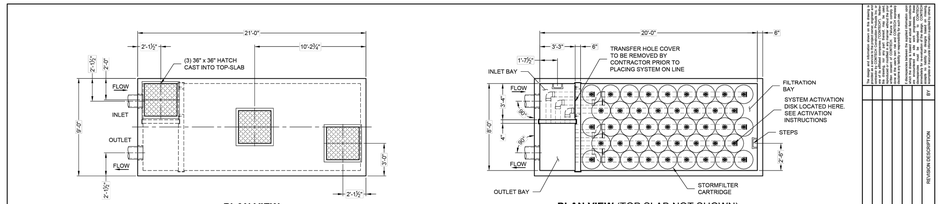
CITY OF BREMERTON FRANCIS STREET OUTFALL
STORMWATER TREATMENT PROJECT

FRANCIS STREET DETAILS

PN: 233-1896-189

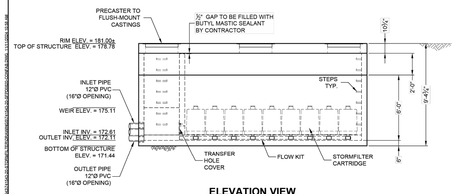
DATE 11/20/24

SHEET 7 OF 12



PLAN VIEW

PLAN VIEW (TOP SLAB NOT SHOWN)



ELEVATION VIEW

MATERIAL LIST - PROVIDED BY CONTECH

COUNT	DESCRIPTION	INSTALLED BY
43	27", PHOSPHOSORB CARTRIDGE	CONTECH
43	RESTRICTOR DISK (WHT), 18.79 GPM	CONTECH
0	2" PVC SLIP PLUG	CONTECH
1	FLOW KIT (6kL-8)	CONTECH
1	36" X 14" TRANSFER HOLE COVER	CONTECH
1	JOINT SEALANT	CONTRACTOR
3	36" x 36" HATCH, EJ #00821721B02, OR EQUIV.	CONTRACTOR
14	STEPS, P10CTS LANE LADDER, OR EQUIVALENT	CONTECH
1	STORMFILTER ACTIVATION DISK	CONTECH

SITE DESIGN DATA

WATER QUALITY FLOW RATE	1.79 CFS
RETURN PERIOD OF PEAK FLOW	100 YRS
FILTER MEDIA TYPE	PHOSPHOSORB

PERFORMANCE SPECIFICATION
FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. **RADIAL MEDIA DEPTH SHALL BE 7-INCHES.** FILTER MEDIA CONTACT TIME SHALL BE AT LEAST **30 SECONDS.** SPECIFIC FLOW RATE SHALL BE **2 GPM/SF (MAXIMUM).** SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE **6 GPM/CF OF MEDIA (MAXIMUM).**

GENERAL NOTES
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2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE, www.ContechES.com.
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BASE SECTION SHIPPED WITH CARTRIDGES INSTALLED

MAX FOOTPRINT = 9.50' x 21.50'

CONTECH **PROPOSAL** DRAWING

CUZ 5784 / 452901 LAYOUT 7 CLASS 600

STORMFILTER PEAK DIVERSION SFP08020
741543-020
FRANCIS STREET OUTFALL - CITY OF BREMERTON
BREMERTON, WA
for SYSTEM: 2 OF 2

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
800.338.1122 513.645.7000 513.645.7993 FAX
9025 Centre Pointe Drive, Suite 400, West Chester, OH 45069
StormFilter® STORMWATER QUALITY MANAGEMENT

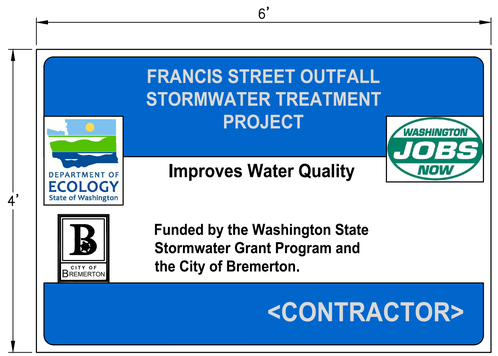
DATE: 11/11/24
DESIGNED: SKJ DRAWN: SPC
CHECKED: SKJ APPROVED: SKJ
PROJECT No.: 741543 SEQUENCE No.: 020
SHEET: C1 OF 1

MARK	DATE	REVISION DESCRIPTION	BY

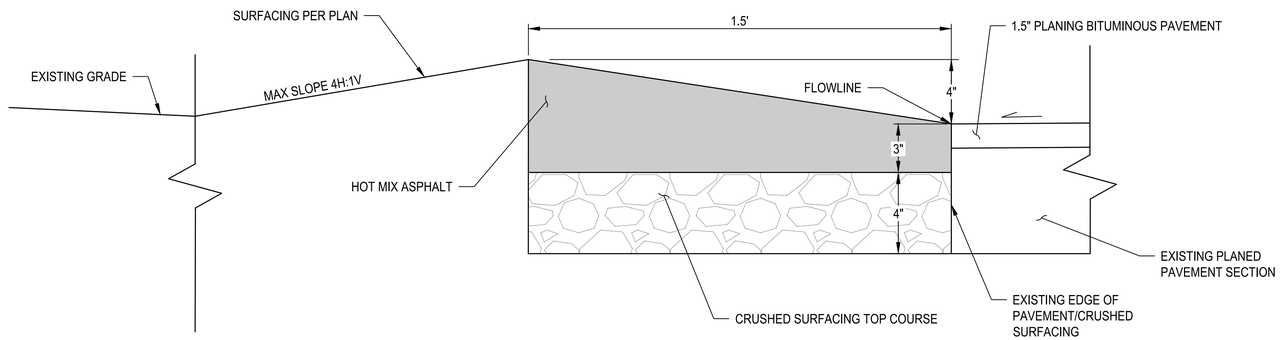
The CONTECH® STORMFILTER® system is protected by one or more of the following U.S. patents: 5,322,629; 5,707,527; 5,759,415; 5,782,574; 5,814,220; 5,863,433; 6,027,639; 6,350,374; 6,649,048; 6,991,724; 7,186,333; 7,296,692; 7,297,266; 7,297,267; 7,390,410; 7,425,262; 7,470,366; 7,563,363; 7,857,966; 8,002,973; 8,268,172; 8,277,651; 8,431,008; 8,512,561; 8,673,151; 8,858,795; 8,945,396; 9,039,897; 9,352,260; 9,352,261; 9,352,262; 9,352,263; 9,352,264; 9,352,265; 9,352,266; 9,352,267; 9,352,268; 9,352,269; 9,352,270; 9,352,271; 9,352,272; 9,352,273; 9,352,274; 9,352,275; 9,352,276; 9,352,277; 9,352,278; 9,352,279; 9,352,280; 9,352,281; 9,352,282; 9,352,283; 9,352,284; 9,352,285; 9,352,286; 9,352,287; 9,352,288; 9,352,289; 9,352,290; 9,352,291; 9,352,292; 9,352,293; 9,352,294; 9,352,295; 9,352,296; 9,352,297; 9,352,298; 9,352,299;

PROJECT SIGN NOTES:

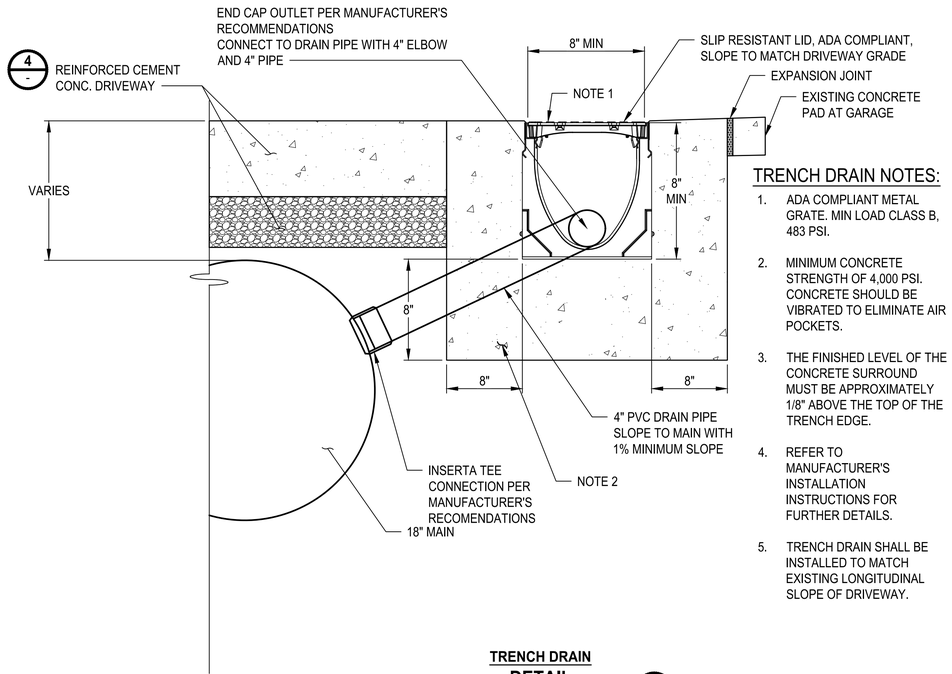
1. INSTALL PROJECT SIGN ON TWO 4"x4" TIMBER POSTS PER ENGINEER.



PROJECT IDENTIFICATION SIGN DETAIL 1 C1
NO SCALE



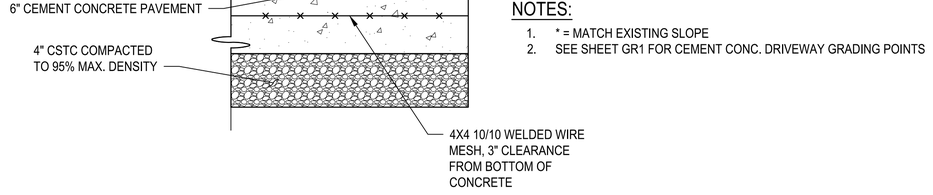
ASPHALT WEDGE CURB DETAIL 2 C1
NO SCALE



TRENCH DRAIN NOTES:

1. ADA COMPLIANT METAL GRATE. MIN LOAD CLASS B, 483 PSI.
2. MINIMUM CONCRETE STRENGTH OF 4,000 PSI. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
3. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROXIMATELY 1/8" ABOVE THE TOP OF THE TRENCH EDGE.
4. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.
5. TRENCH DRAIN SHALL BE INSTALLED TO MATCH EXISTING LONGITUDINAL SLOPE OF DRIVEWAY.

TRENCH DRAIN DETAIL 3 C1
NOT TO SCALE



NOTES:

1. * = MATCH EXISTING SLOPE
2. SEE SHEET GR1 FOR CEMENT CONC. DRIVEWAY GRADING POINTS

REINFORCED CEMENT CONC. DRICVEWAY DETAIL 4 GR1
NOT TO SCALE

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
D3

BRENNA ELIZABETH MARIE TUMBLING — STATE OF WASHINGTON — 20123355 — REGISTERED PROFESSIONAL ENGINEER

REVISIONS NO	DESCRIPTION	DATE	BY

0 1" 2" — TWO INCHES AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE — HORIZ. *AS NOTED* VERT. *AS NOTED*

FIELD BOOK

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: *C. ODEGARD* DATE: *11/13/2024*
DESIGN BY: *B. TUMBLING* WASH. P.E. # *20123355* DATE: *11/13/2024*
CHECKED BY: *C. BUITRAGO* WASH. P.E.# *49427* DATE: *11/13/2024*

CITY OF BREMERTON FRANCIS STREET OUTFALL
STORMWATER TREATMENT PROJECT

FRANCIS STREET DETAILS

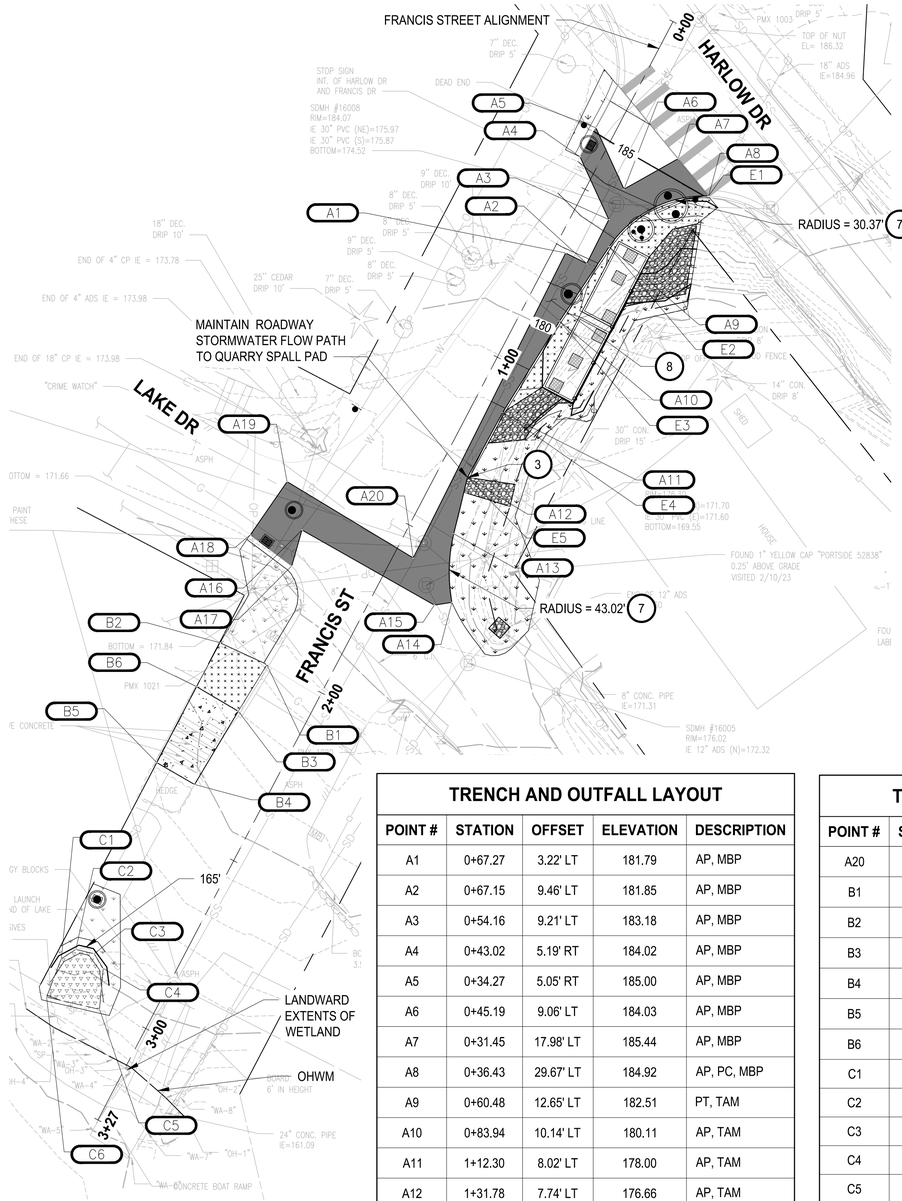
PN: 233-1896-189

DATE 11/20/24

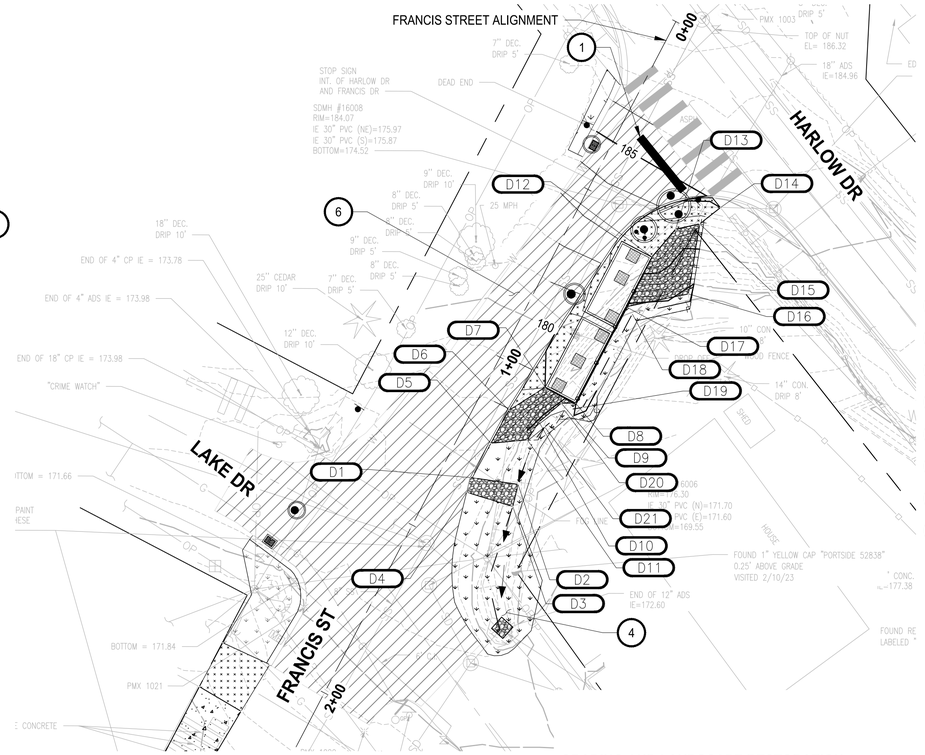
SHEET 9 OF 12

CITY OF BREMERTON PROJECT NUMBER: 878

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-189 FRANCIS OUTFALL DESIGN\595\VCS\CADD\DWGPS\189189-D1.DWG PLOTTED BY: ODEGA\COO DATE:11/19/2024 11:27 AM



ASPHALT AND OUTFALL RESTORATION
PLAN
SCALE IN FEET
0 20 40



GRADING AND LANDSCAPE RESTORATION
PLAN
SCALE IN FEET
0 20 40

GRADING AND CHANNELIZATION NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO FRANCIS STREET ALIGNMENT.
2. CONTRACTOR TO PROVIDE AND MAINTAIN TEMPORARY TRAFFIC CONTROL MARKINGS, SEE SHEET TC1.
3. ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES UNLESS OTHERWISE NOTED.
4. ENGINEER TO FIELD VERIFY ALL SIGN LOCATIONS AND CHANNELIZATION LIMITS PRIOR TO INSTALLATION.
5. RADIUS CALLOUTS ARE AT FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CONC. CURBS ARE 6" HIGH, UNLESS OTHERWISE NOTED.
7. SEE SHEET DM1 FOR TCE LIMITS.
8. SEE SHEET DM1 FOR CLEARING AND GRUBBING LIMITS. CLEARING AND GRUBBING LIMITS DEMARCATE THE TOPSOIL TYPE A, COIR ECB, AND HYDROSEED RESTORATION LIMITS, UNLESS OTHERWISE NOTED.
9. 1.5" ASPHALT OVERLAY SHALL MATCH BITUMINOUS PLANING EXTENTS, SEE SHEET DM1.

GRADING AND CHANNELIZATION KEYNOTES:

1. PLASTIC STOP LINE PER COB STANDARD DETAIL 3265
2. NOT USED
3. TAPER CURB 1' LENGTH
4. HYDROSEED, COIR ECB, AND 6" TOPSOIL TYPE A
5. NOT USED
6. 1.5" HMA OVERLAY
7. CEMENT CONCRETE TRAFFIC CURB PER WSDOT STD PLAN F-10.12-04
8. TRENCH RESTORATION PER DETAIL 3/D2

ABBREVIATIONS

AP	ANGLE POINT
CFL	CURB FLOWLINE
CSTC	CRUSHED SURFACING TOP COURSE
CONC	CONCRETE DRIVEWAY
DFL	DITCH FLOW LINE
EX	MATCH EXISTING
H	HYDROSEED
MBP	MATCH BITUMINOUS PLANING ELEVATION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
QS	QUARRY SPALLS
RESP	ROCK FOR EROSION AND SCOUR PROTECTION TYPE A
TAM	TOP OF ASPHALT MINUS 1.5" PLANING

CONSTRUCTION LEGEND:

- QUARRY SPALLS
- RESP CLASS A
- 6" CSTC
- REINFORCED CEMENT CON. DRIVEWAY
- HYDROSEED, COIR ECB, AND 6" TOPSOIL TYPE A
- 1.5" HMA OVERLAY
- TRENCH RESTORATION
- ASPHALT WEDGE CURB
- FILL LINE
- CUT LINE
- OWHM
- TCE
- PLASTIC STOP LINE PER COB STD DETAIL 3265
- FLOW DIRECTION

TRENCH AND OUTFALL LAYOUT

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
A1	0+67.27	3.22' LT	181.79	AP, MBP
A2	0+67.15	9.46' LT	181.85	AP, MBP
A3	0+54.16	9.21' LT	183.18	AP, MBP
A4	0+43.02	5.19' RT	184.02	AP, MBP
A5	0+34.27	5.05' RT	185.00	AP, MBP
A6	0+45.19	9.06' LT	184.03	AP, MBP
A7	0+31.45	17.98' LT	185.44	AP, MBP
A8	0+36.43	29.67' LT	184.92	AP, PC, MBP
A9	0+60.48	12.65' LT	182.51	PT, TAM
A10	0+83.94	10.14' LT	180.11	AP, TAM
A11	1+12.30	8.02' LT	178.00	AP, TAM
A12	1+31.78	7.74' LT	176.66	AP, TAM
A13	1+46.61	11.43' LT	176.42	TAM, PT
A14	1+62.89	19.41' LT	176.28	AP, MBP
A15	1+65.66	15.63' LT	176.23	AP, MBP
A16	1+64.32	24.51' RT	176.33	AP, MBP
A17	1+73.96	22.50' RT	175.73	AP, MBP
A18	1+71.79	36.00' RT	175.95	AP, MBP
A19	1+54.83	33.91' RT	176.64	AP, MBP

TRENCH AND OUTFALL LAYOUT

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
A20	1+57.22	4.92' LT	176.42	AP, MBP
B1	2+00.15	16.23' RT	172.93	CSTC, EX, H
B2	2+00.73	29.87' RT	171.31	CSTC, EX, H
B3	2+14.49	17.23' RT	171.52	CONC, CSTC, EX
B4	2+36.97	18.47' RT	169.64	CONC, EX
B5	2+36.48	30.00' RT	168.89	CONC, EX
B6	2+13.85	30.00' RT	170.45	CONC, CSTC, EX
C1	2+94.05	28.30' RT	164.50	RESP
C2	2+90.07	26.05' RT	164.70	RESP
C3	2+88.82	21.21' RT	164.70	RESP
C4	2+91.19	17.30' RT	164.50	RESP
C5	3+01.19	13.18' RT	163.54	RESP
C6	3+04.79	27.05' RT	162.86	RESP
E1	0+36.43	29.67' LT	185.05	CFL
E2	0+60.48	12.65' LT	182.64	CFL
E3	0+83.94	10.14' LT	180.24	CFL
E4	1+12.30	8.02' LT	177.89	CFL
E5	1+31.78	7.74' LT	176.66	CFL

LANDSCAPE GRADING

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
D1	1+31.78	7.74' LT	176.66	H, QS
D2	1+27.54	19.76' LT	172.84	DFL, H, QS
D3	1+33.35	21.23' LT	172.95	DFL, H, QS
D4	1+35.66	8.71' LT	176.61	H, QS
D5	1+21.24	8.39' LT	177.60	H, QS
D6	1+11.29	8.60' LT	178.45	CSTC, QS
D7	1+01.48	14.22' LT	179.00	CSTC, QS
D8	1+01.49	23.22' LT	175.00	H, QS
D9	1+03.26	19.90' LT	174.72	H, QS
D10	1+10.35	17.01' LT	174.36	H, QS
D11	1+15.98	16.47' LT	173.36	H, QS
D12	0+57.99	23.22' LT	183.00	CSTC, QS
D13	0+48.58	25.37' LT	183.00	CSTC, QS
D14	0+38.04	33.21' LT	185.00	CSTC, EX
D15	0+44.38	30.35' LT	183.00	CSTC, QS
D16	0+62.14	36.29' LT	174.98	H, QS

LANDSCAPE GRADING

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
D17	0+72.80	23.22' LT	175.00	H, QS
D18	0+73.70	25.60' LT	174.73	DFL, H
D19	1+01.61	25.52' LT	174.25	DFL, H
D20	1+04.53	21.54' LT	174.00	DFL, H
D21	1+10.84	18.97' LT	173.00	DFL, H

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION

GR1

BRENA ELIZABETH MARIE THOMPSON — STATE OF WASHINGTON — 20123355 — REGISTERED PROFESSIONAL ENGINEER

NO	REVISIONS DESCRIPTION	DATE	BY

0 1" 2"
TWO INCHES AT FULL SCALE
IF NOT SCALE ACCORDINGLY
SCALE
HORIZ. AS NOTED VERT. AS NOTED

FIELD BOOK

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: C. ODEGARD DATE: 11/13/2024
DESIGN BY: B. TUMBLING WASH. P.E. # 20123355 DATE: 11/13/2024
CHECKED BY: C. BUITRAGO WASH. P.E.# 49427 DATE: 11/13/2024

CITY OF BREMERTON FRANCIS STREET OUTFALL
STORMWATER TREATMENT PROJECT

FRANCIS STREET
ASPHALT, LANDSCAPE, AND GRADING PLAN

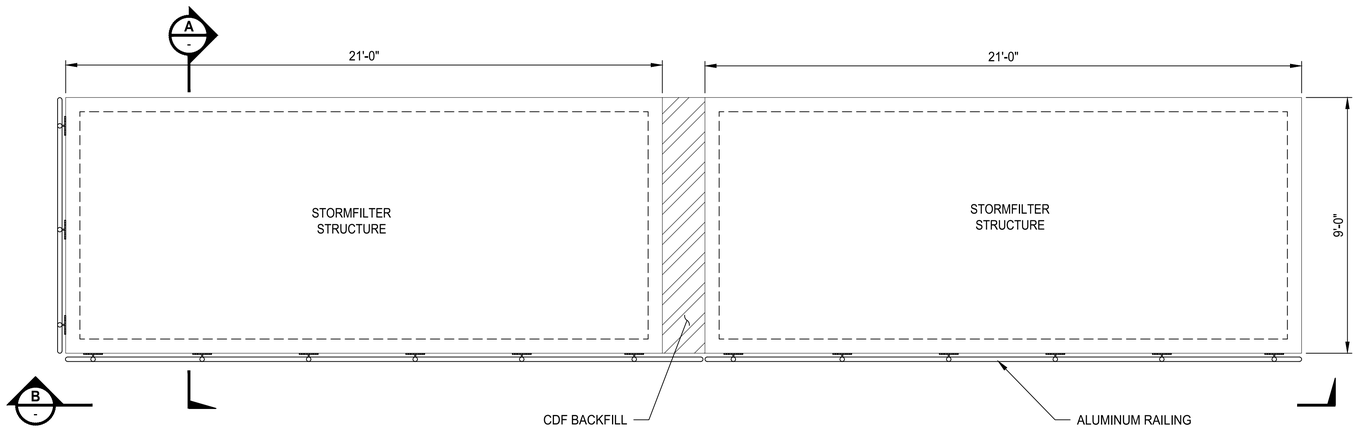
PN: 233-1896-189

DATE 11/20/24

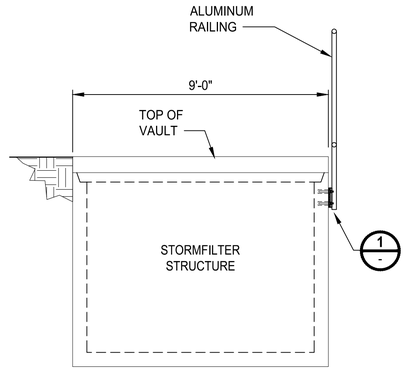
SHEET 10 OF 12

CITY OF BREMERTON PROJECT NUMBER: 878

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-189 FRANCIS OUTFALL DESIGN\99SIV\CSCAD\DWGS\PS1896189-GR1.DWG, PLOTTED BY: ODEGAKOO DATE:11/19/2024 11:08 AM



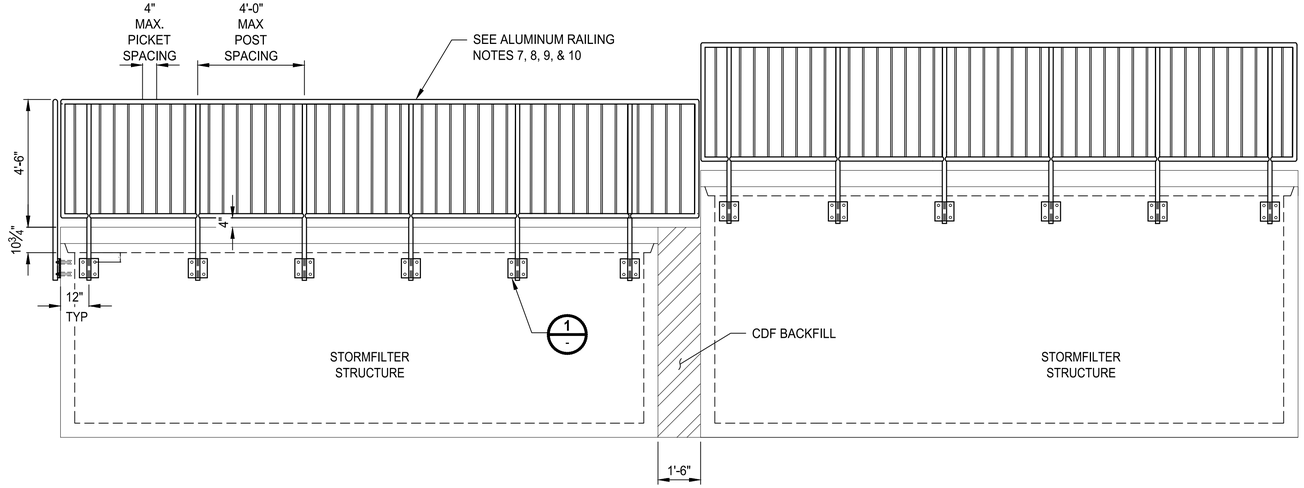
STORMFILTER RAILING
PLAN
SCALE: 3/8" = 1'-0"



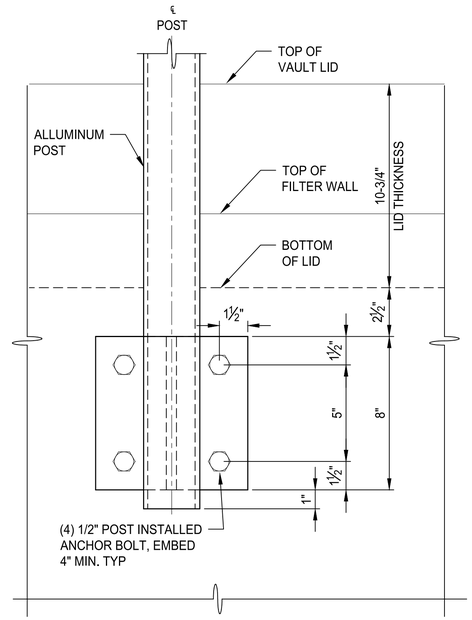
RAILING
SECTION A
SCALE: 3/8" = 1'-0"

ALUMINUM RAILING NOTES:

1. ALUMINUM PIPE RAILING AND POSTS SHALL BE MADE OF 6063 T-6 ALUMINUM WITH AN OUTSIDE DIAMETER OF 1.9".
2. ALUMINUM PICKETS SHALL BE MADE OF 6063 T-6 ALUMINUM WITH AN OUTSIDE DIAMETER OF 0.64".
3. WALL THICKNESS OF RAILINGS SHALL BE SCH. 80.
4. ALL WELDS SHALL BE SMOOTH.
5. RAILING SHALL BE ERECTED AND ADJUSTED, IF NECESSARY, TO ASSURE A CONTINUOUS LINE AND GRADE.
6. PROVIDE SLIP JOINTS AT EVERY 24 FEET ON CENTER MAXIMUM.
7. STAINLESS STEEL ANCHORAGE, FOLLOW MANUFACTURER'S DETAILS AND SPECIFICATIONS.
8. SUPPLIER SHALL VERIFY COMPLIANCE WITH 2021 IBC SECTION 1014 FOR LAYOUT AND GEOMETRY AND SECTION 1607.8 FOR STRENGTH AND ATTACHMENT REQUIREMENTS.
9. APPLY 15 MILLS OF COAL TAR EPOXY TO ALUMINUM SURFACES WHICH WILL COME IN CONTACT WITH CONCRETE.

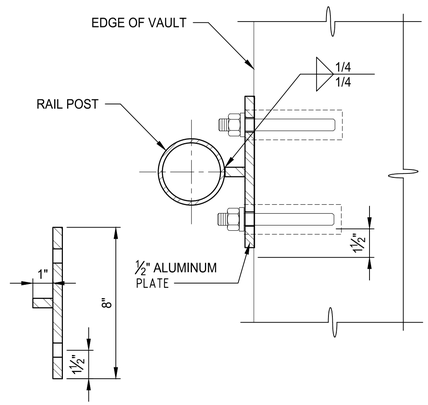


STORMFILTER RAILING
SECTION B
SCALE: 3/8" = 1'-0"



TYPICAL FRONT
ELEVATION

RAILING POST
DETAIL 1
NO SCALE



TYPE A CONNECTION
DETAIL 2
NO SCALE

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
S1

JACOB WATSON LINKE — STATE OF WASHINGTON — 56738 — REGISTERED PROFESSIONAL ENGINEER

NO	REVISIONS DESCRIPTION	DATE	BY

0 1" 2"
TWO INCHES AT FULL SCALE
IF NOT SCALE ACCORDINGLY
SCALE
HORIZ. *AS NOTED* VERT. *AS NOTED*

FIELD BOOK

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: *D. PETERSON* DATE: *11/11/2024*
DESIGN BY: *J. LINKE* WASH. P.E. *#56738* DATE: *11/11/2024*
CHECKED BY: *S. WAGNER* WASH. P.E.*#18711* DATE:*11/11/2024*

CITY OF BREMERTON FRANCIS STREET OUTFALL
STORMWATER TREATMENT PROJECT

FRANCIS STREET
STRUCTURAL PLAN AND SECTION

PN: 233-1896-189

DATE 11/20/24

SHEET 11 OF 12

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-189 FRANCIS OUTFALL DESIGN\99\CVS\CADD\DWGPS\1896189-S1.DWG PLOTTED BY:ODEGACOD DATE:11/19/2024-11:27 AM

CITY OF BREMERTON PROJECT NUMBER: 878

MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)

LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

CHANNELIZATION DEVICE SPACING (FT)

MPH	TAPER	TANGENT
50 / 65	10 TO 20	80
35 / 45	10 TO 20	60
25 / 30	10 TO 20	40

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5 L
SHOULDER TAPER	AT LEAST 0.33 L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN, 100 FT MAX
DOWNSTREAM TAPER	50 FT MIN, 100 FT MAX

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)

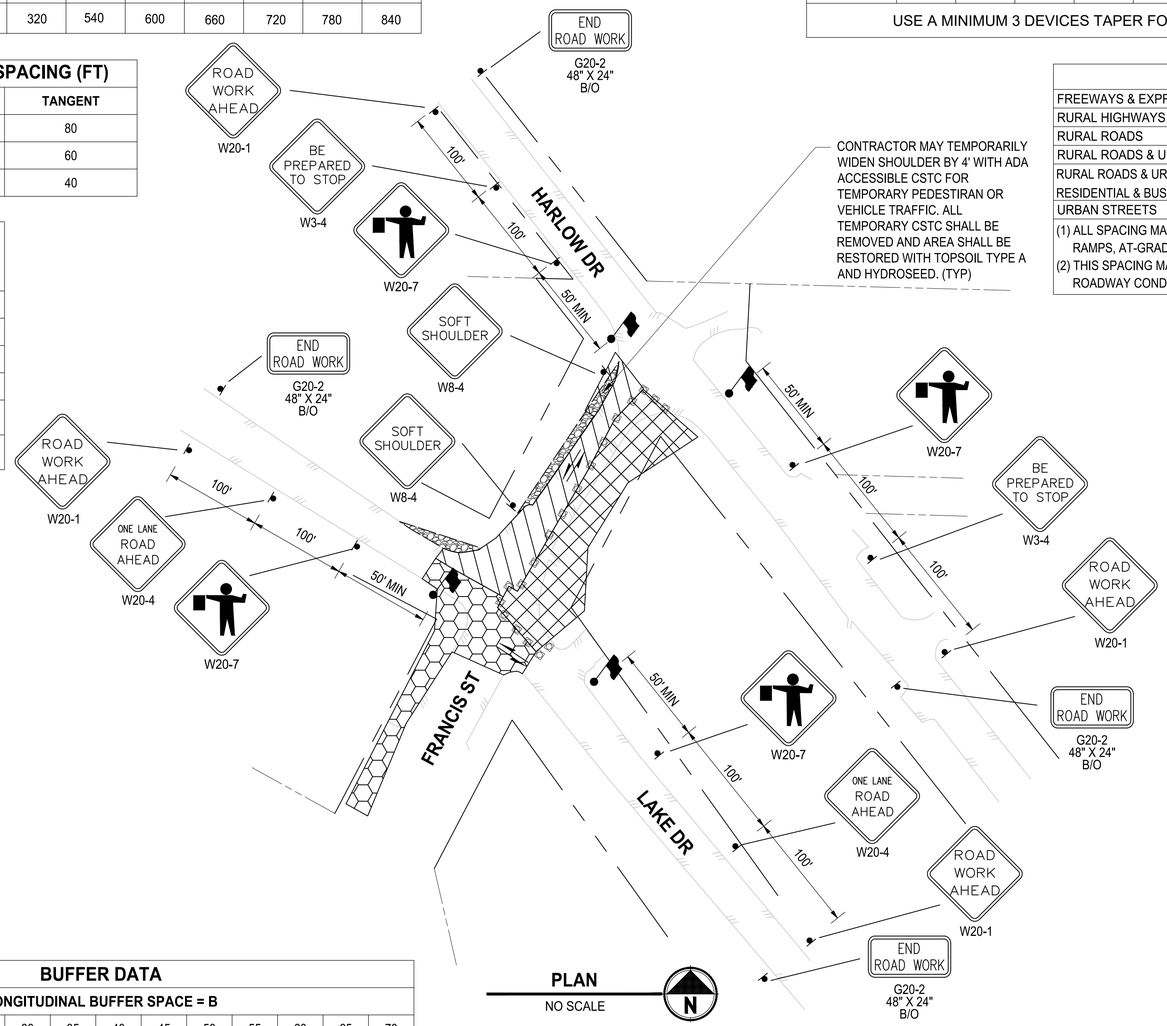
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240

USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.

SIGN SPACING = X (1)

FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' +/-
RURAL HIGHWAYS	60 / 65 MPH	800' +/-
RURAL ROADS	45 / 55 MPH	500' +/-
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' +/-
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' +/- (2)
URBAN STREETS	25 MPH OR LESS	100' +/- (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



BUFFER DATA

LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (FEET)	155	200	250	305	360	425	495	570	645	730

TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R					
HOST VEHICLE WEIGHT 9,900 TO 22,000 LBS			HOST VEHICLE WEIGHT > 22,000 LBS		
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH
100'	123'	172'	74'	100'	150'

PROTECTIVE VEHICLE (WORK VEHICLE) = R
NO SPECIFIED DISTANCE REQUIRED

NO PARKING
6:00 AM TO 7:00 PM
R7-2a
12"x18"

* INSTALL ON TYPE II BARRICADES THROUGHOUT THE WORK AREA 24 HOURS PRIOR TO IMPLEMENTING TRAFFIC CONTROL. PRIOR NOTIFICATION OF LOCAL LAW ENFORCEMENT REQUIRED.

SPACING OF "NO PARKING" SIGNS SHALL BE EVERY 100' MINIMUM IN AREAS WHERE PARKING WILL BE CLOSED OR AS DIRECTED BY ENGINEER.

FOR PROJECT INFORMATION
1-XXX-XXX-XXXX
CITY OF BREMERTON
G24-501
48" X 36"
PHONE NUMBER TO BE SUPPLIED BY ENGINEER

* PROJECT INFORMATION SIGNS TO BE PROVIDED BY THE CITY SHALL BE PLACED AT THE BEGINNING AND END OF THE PROJECT CORRIDOR. COORDINATE LOCATION AND QUANTITY WITH ENGINEER.

NOTES:

1. CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN FOR APPROVAL MEETING THE MINIMUM REQUIREMENTS SHOWN HERE. TRAFFIC CONTROL FOR PHASE 1 IS PROVIDED AS AN ILLUSTRATION. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS FOR ALL PHASES PER SPECIAL PROVISIONS SECTION 1-07.
2. PLANS SHOW MINIMUM SIGNAGE TO DIRECT VEHICULAR TRAFFIC AROUND THE CONSTRUCTION AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PHASING AND FURNISHING AND INSTALLING ALL ADDITIONAL SIGNAGE AND OTHER DEVICES NECESSARY TO SAFELY DIRECT VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH AND AROUND THE CONSTRUCTION AREAS AS NECESSARY TO ACCOMMODATE CONSTRUCTION ACTIVITIES.
3. A MINIMUM 48" WIDE PEDESTRIAN ROUTE SHALL BE MAINTAINED AT ALL TIMES OR AN EQUIVALENT DETOUR ROUTE SHALL BE PROVIDED. ROUTE SHALL BE IN ACCORDANCE WITH WSDOT FIELD GUIDE FOR ACCESSIBLE PUBLIC RIGHT OF WAY.
4. SIGN SPACING SHOWN ON THE PLANS MAY BE ADJUSTED IN THE FIELD TO ACCOMMODATE INTERSECTIONS, DRIVEWAYS, VISIBILITY AND OTHER FEATURES. SIGN SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.
5. CHANNELIZATION DEVICE SPACING: 10' TO 20' ON TAPER SECTIONS, 40' ON TANGENT SECTIONS.
6. TRAFFIC CONTROL REQUIREMENT TABLES ARE INCLUDED IN THIS SHEET FOR CONTRACTOR REFERENCE ONLY IN DEVELOPMENT OF TRAFFIC CONTROL PLAN.
7. ALL SIGNS NOT MOUNTED ON BARRICADES MAY BE MOUNTED ON TRIPODS IF CLEARLY VISIBLE TO TRAFFIC. OTHERWISE SIGNS SHALL BE MOUNTED ON 4"x4" WOOD POSTS.
8. ALL CHANNELIZATION DEVICES SHALL BE CONES OR TUBULAR MARKERS.
9. SINGLE LANE CLOSURES ONLY ARE ALLOWED ON FRANCIS STREET AND LAKE DRIVE WITHIN THE FOLLOWING TIME LIMITS:
   - FRANCIS STREET & LAKE DRIVE: 8:00 AM TO 5:00 PM MONDAY THROUGH FRIDAY
10. CONTRACTOR SHALL STAGE WORK TO MAINTAIN ACCESS TO AND EGRESS FROM ALL PROPERTIES WITHIN THE PROJECT LIMITS AT ALL TIMES. AT NO TIME SHALL A COMPLETE ROAD CLOSURE OF FRANCIS STREET OR LAKE DRIVE BE ALLOWED.
11. PRIOR TO IMPLEMENTING TRAFFIC CONTROL, CONTRACTOR SHALL INSTALL "NO PARKING" SIGNS ON TYPE II BARRICADES THROUGHOUT THE WORK AREA 24 HOURS IN ADVANCE.
12. ALL SIGNS SHALL BE 48" X 48", UNLESS OTHERWISE SHOWN. ALL SIGNS SHALL BE BLACK ON ORANGE, UNLESS OTHERWISE SHOWN.
13. PROTECTIVE VEHICLE - FOR SPEEDS 40 MPH OR LESS, MAY USE A WORK VEHICLE STRATEGICALLY PLACED TO PROTECT WORK AREA.
14. EXTEND CHANNELIZING DEVICE TAPER ACROSS SHOULDER.
15. CONTACT AND COORDINATE WITH IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES. SEE SPECIAL PROVISIONS SECTION 1-07.

LEGEND

- TEMPORARY TRAFFIC CONTROL SIGN
- TRAFFIC CONE OR TUBULAR MARKER
- FLAGGING STATION
- TRAVEL DIRECTION OF OPEN LANE
- PHASE 1 WORK AREA
- PHASE 2 WORK AREA
- PHASE 3 WORK AREA
- TEMPORARY CSTC SHOULDER
- ROW LINE
- PARCEL LINE
- EXISTING ROADWAY EDGE

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION

TC1

BRENNA ELIZABETH MARIE TUMBLING
STATE OF WASHINGTON
20123355
REGISTERED PROFESSIONAL ENGINEER

REVISIONS

NO	DESCRIPTION	DATE	BY

0 1" 2"
TWO INCHES AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. AS NOTED VERT. AS NOTED

FIELD BOOK

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: C. ODEGARD DATE: 11/13/2024
DESIGN BY: B. TUMBLING WASH. P.E. # 20123355 DATE: 11/13/2024
CHECKED BY: C. BUITRAGO WASH. P.E.# 49427 DATE: 11/13/2024

CITY OF BREMERTON FRANCIS STREET OUTFALL
STORMWATER TREATMENT PROJECT

FRANCIS STREET
TEMPORARY TRAFFIC CONTROL PLAN

PN: 233-1896-189

DATE 11/20/24

SHEET 12 OF 12

CITY OF BREMERTON PROJECT NUMBER: 878

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-189 FRANCIS OUTFALL DESIGN\96SVCS\CADD\DWGFS\1896189-TC1.DWG PLOTTED BY:ODEGACOO DATE:11/19/2024 11:13 AM