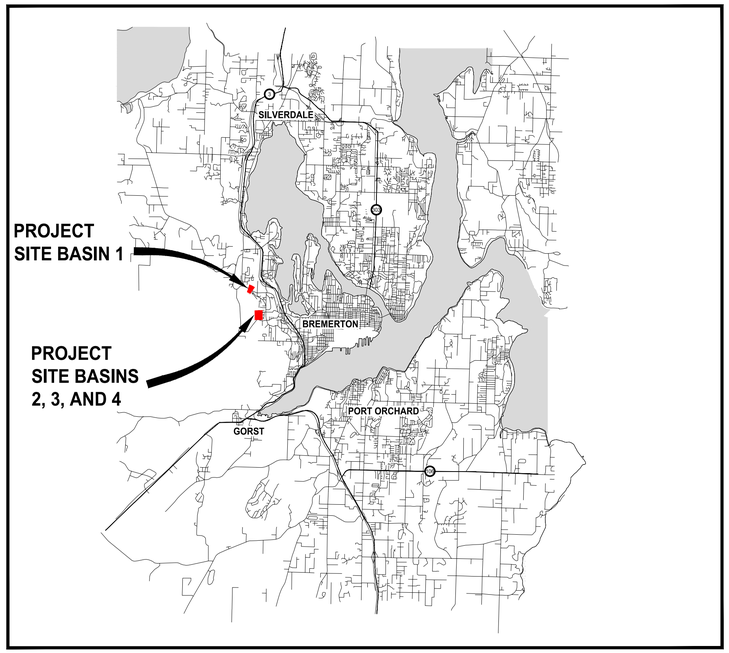
KITSAP LAKE STORMWATER TREATMENT RETROFIT

SECTIONS 08 & 17, TOWNSHIP 24N, RANGE 1E, W.M.

CITY OF BREMERTON PROJECT NO. 879

FUNDED IN PART BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY

JULY 2024



LOCATION MAP

NO SCALE

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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

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

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NO	REVISIONS DESCRIPTION	DATE	BY

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: *C. ODEGARD* DATE: *07/11/2024*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/2024*
CHECKED BY: *J. WRIGHT* WASH. P.E.*#48258* DATE:*07/11/2024*

KITSAP LAKE STORMWATER TREATMENT RETROFIT

COVER SHEET, LOCATION MAP, AND SHEET INDEX

PN: 233-1896-193

DATE 07/11/24

SHEET 1 OF 29

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LK STRTRN\ALDESIGN\99SVCS\CAD\DWG\PS1896193-G1.DWG PLOTTED BY:ODEGACOD DATE:7/11/2024 7:56 AM

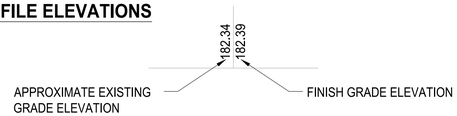
EXISTING LEGEND:

- 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
- FENCE
- 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
- MONUMENT
- TEMPORARY CONSTRUCTION EASEMENT
- PERMANENT EASEMENT

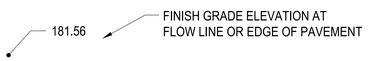
PROPOSED LEGEND:

- CEMENT CONC. SIDEWALK
- CEMENT CONC. DRIVEWAY
- CEMENT CONC. CURB & GUTTER
- COMMERCIAL HMA
- 4" TOPSOIL AND HYDROSEED
- 6" MINUS COBBLES
- 6" CSTC
- CEMENT CONC. PAVEMENT

PROFILE ELEVATIONS

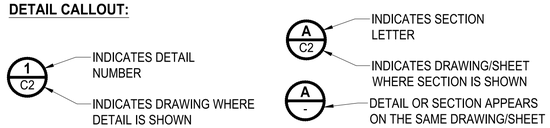


PLAN ELEVATIONS



SECTION AND DETAIL DESIGNATIONS

DETAIL CALLOUT:



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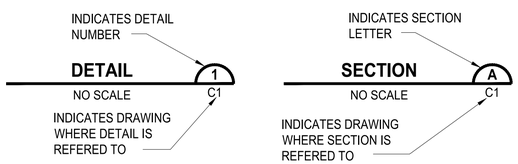


ABBREVIATIONS

Δ	DELTA ANGLE
ALUM	ALUMINUM
AP	ANGLE POINT
B/W	BACK OF WALK
BLDG	BUILDING
C&G	CURB AND GUTTER
CB	CATCH BASIN
CG	CLEARING AND GRUBBING
CI	CAST IRON
CIP	CAST IN PLACE
CL	CENTERLINE
CO	CLEAN OUT
COB	CITY OF BREMERTON
CONC	CONCRETE
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
CULV	CULVERT
DEMO	DEMOLITION
DI	DUCTILE IRON
DIA	DIAMETER
DWG	DRAWING
E	EAST, EASTING
EA	EACH
EL	ELEVATION
EOP	EDGE OF PAVEMENT
ESC	EROSION/SEDIMENTATION CONTROL
EX, EXIST	EXISTING
FL	FLOW LINE
FOC	FACE OF CURB
FT	FOOT, FEET
G	GAS
GA	GAUGE
GV	GATE VALVE
H, HORIZ	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
IE	INVERT ELEVATION
IN	INCH
L	LENGTH
LT	LEFT
LF	LINEAR FOOT
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
N	NORTH, NORTHING
NE	NORTH EAST
NTS	NOT TO SCALE
NW	NORTH WEST
OC	ON CENTER
OHW	ORDINARY HIGH WATER
OP	OVERHEAD POWER
P	POWER
PC	POINT OF CURVATURE
PE	POLYETHYLENE
PI	POINT OF INTERSECTION
PK	SURVEY NAIL
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY, POINT
R	RADIUS
ROW	RIGHT OF WAY
RPMS	RAISED PAVEMENT MARKERS
RP	RADIUS POINT
RT	RIGHT
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAIN
SE	SOUTH EAST
SECT	SECTION
SF	SQUARE FOOT, FEET
SS	SANITARY SEWER
ST	STREET
STA	STATION
STD	STANDARD
SW	SOUTH WEST
S/W	SIDEWALK
TBC	TOP BACK OF CURB
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V, VERT	VERTICAL
W	WIDTH, WATER, WEST
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

GRADING ABBREVIATIONS

AP	ANGLE POINT
BOL	BACK OF LANDING
BOW	BACK OF WALK
BOR	BACK OF RAMP
CP	CURB PAINT
EX	MATCH EXISTING
FL	FLOWLINE
FOL	FRONT OF LANDING
GR	TOP OF GRAVEL
LS	TOP OF LANDSCAPE RESTORATION
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PT	POINT OF TANGENCY
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCP	TOP OF CONCRETE PAD
TOR	TOP OF RAMP

STORM DRAIN GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO CITY STANDARDS AND/OR STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AS APPLICABLE.
2. NO PART OF THE DRAINAGE SYSTEM SHALL BE COVERED, CONCEALED OR PUT INTO USE UNTIL IT HAS BEEN TESTED AND TESTING COVERED BY CITY INSPECTOR.
3. APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF LOCATIONS AND TO AVOID DAMAGE TO ANY ADDITIONAL UTILITIES NOT SHOWN. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO COMMENCEMENT OF THE EFFECTED CONSTRUCTION.
4. ALL STORM DRAIN WORK MUST BE STAKED FOR LINE AND GRADE PRIOR TO STARTING CONSTRUCTION.

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 GENERAL 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.
10. EROSION CONTROL MEASURES ARE NOT LIMITED TO THE ITEMS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES.

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.) ARE GENERALLY NOT SHOWN. 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.

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION

G2

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: 07/11/24
DESIGN BY: B. TUMBLING WASH. P.E. #20123355 DATE:07/11/24
CHECKED BY: J. WRIGHT WASH. P.E. # 48258 DATE:07/11/24

KITSAP LAKE STORMWATER TREATMENT RETROFIT

LEGEND, ABBREVIATIONS, AND GENERAL/TESC NOTES

PN: 233-1896-193

DATE 07/11/24

SHEET 2 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAPLKSTRFINAL\DESIGN\96SVCS\CADD\DWGFS\1896193-G2.DWG PLOTTED BY:ODEGACOO DATE:7/11/2024 9:36 AM

LEGEND:

EXISTING PROPERTY LOT LINE

EXISTING ROW LINE

CONTROL POINT

ALIGNMENT CENTERLINE

HORIZONTAL DATUM:

HORIZONTAL DATUM FOR THIS SURVEY IS NAD 1983(11), WASHINGTON STATE PLANE NORTH ZONE COORDINATE SYSTEM, U.S. SURVEY FEET. THE HORIZONTAL DATUM IS BASED ON PUBLISHED INFORMATION FROM WSDOT, POINT DESIGNATIONS 166 AND 4870.

POINT DESIGNATION 166
NORTHING: 212488.000
EASTING: 1180717.068

POINT DESIGNATION 4870
NORTHING: 218198.963
EASTING: 1180343.033

VERTICAL DATUM:

VERTICAL DATUM IS NAVD88 BASED ON PUBLISHED INFORMATION FROM WSDOT, POINT DESIGNATION PNT.NO.31, MONUMENT ID 166.

POINT DESIGNATION: PNT.NO.31
MONUMENT ID: 166
ELEVATION: 305.514

SURVEY NOTES:

1. THIS MAP CORRECTLY REPRESENTS CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY IN DECEMBER 2021 AND JANUARY 2022.

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

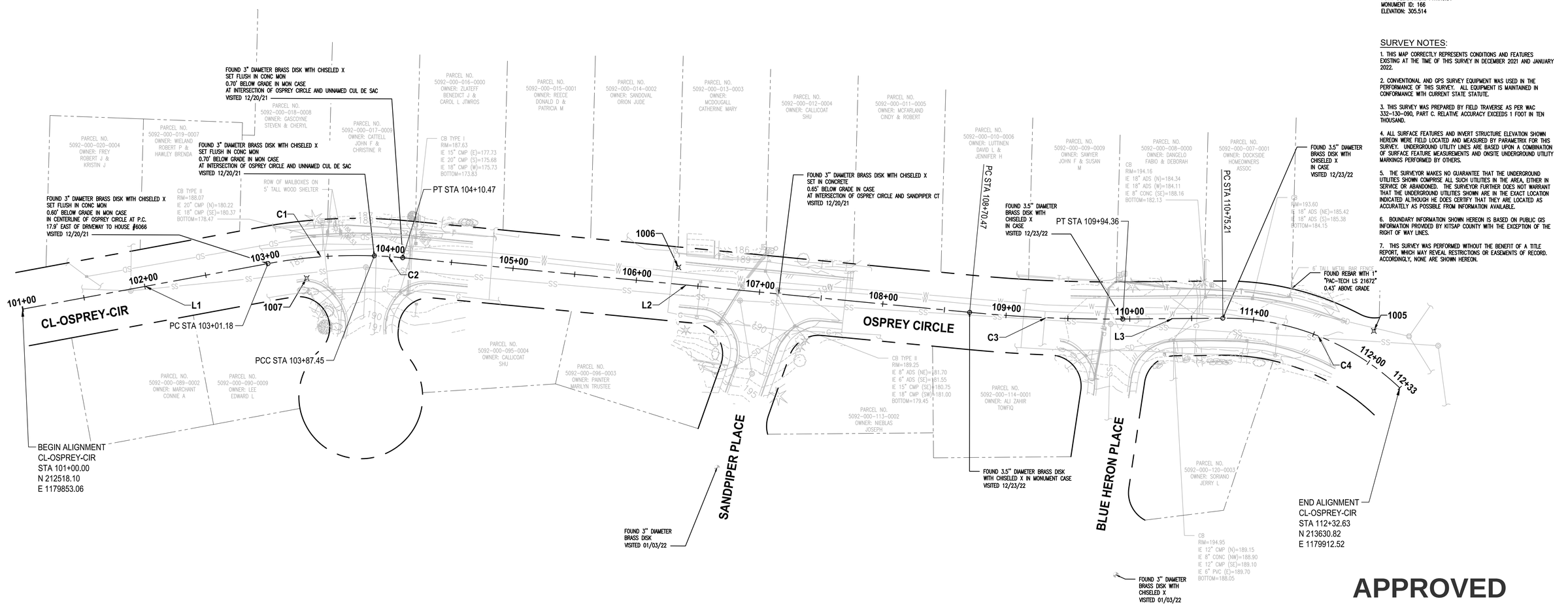
3. THIS SURVEY WAS PREPARED BY FIELD TRAVERSE AS PER WAC 332-130-090, PART C. RELATIVE ACCURACY EXCEEDS 1 FOOT IN TEN THOUSAND.

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 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. BOUNDARY INFORMATION SHOWN HEREON IS BASED ON PUBLIC GIS INFORMATION PROVIDED BY KITSAP COUNTY WITH THE EXCEPTION OF THE RIGHT OF WAY LINES.

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.



LINE TABLE CL-OSPREY-CIR

LINE ID	LENGTH	BEARING	START POINT	END POINT
L1	201.70'	N10° 42' 42"W	(N 212518.10, E 1179853.06)	(N 212716.28, E 1179815.57)
L2	460.00'	N5° 17' 18"E	(N 212825.09, E 1179810.42)	(N 213283.13, E 1179852.82)
L3	80.85'	N0° 42' 42"W	(N 213406.86, E 1179857.76)	(N 213487.71, E 1179856.76)

CURVE TABLE CL-OSPREY-CIR

CURVE ID	LENGTH	RADIUS	DELTA	CHORD LENGTH	CHORD BEARING
C1	86.27'	391.35'	12°37'50"	86.10'	N4°23'47"W
C2	23.01'	391.35'	3°22'10"	23.01'	N3°36'13"E
C3	123.89'	1183.03'	6°00'00"	123.83'	N2°17'18"E
C4	157.43'	205.00'	44°00'00"	153.59'	N21°17'18"E

PARAMETRIX CONTROL TABLE

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1005	213609.71	1179866.64	194.68	SET MAG NAIL
1006	213047.79	1179817.37	188.97	SET MAG NAIL
1007	212747.54	1179827.15	188.44	SET MAP NAIL

PLAN
SCALE IN FEET
0 40 80

APPROVED

LUCAS M. MILLER STATE OF WASHINGTON 52085 REGISTERED PROFESSIONAL LAND SURVEYOR

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: 07/11/24
DESIGN BY: B. TUMBLING WASH. P.E. #20123355 DATE:07/11/24
CHECKED BY: L. MILLER WASH. P.L.S. #52085 DATE:07/11/24

KITSAP LAKE STORMWATER TREATMENT RETROFIT
OSPREY CIRCLE
HORIZONTAL CONTROL AND EXISTING CONDITIONS

PN: 233-1896-193

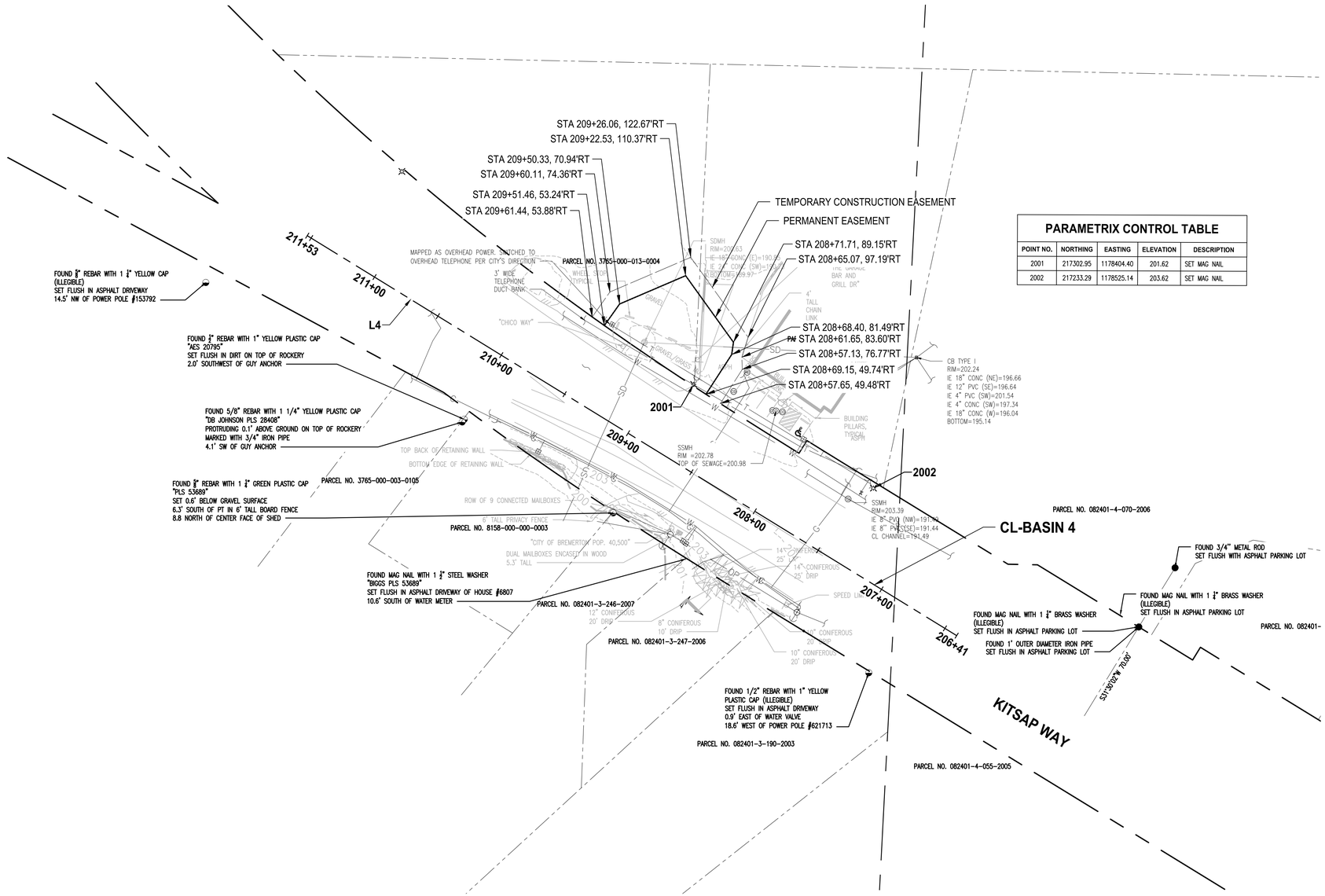
DATE 07/11/24

SHEET 3 OF 29

G3

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LK STRTR\FINAL\DESIGN\95VCS\CAD\DWG\PS1896193-G3.DWG PLOTTED BY:ODEGACOO DATE:7/11/2024 7:19 AM



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VERTICAL DATUM:

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POINT DESIGNATION: PNT.NO.31
MONUMENT ID: 166
ELEVATION: 305.514

PARAMETRIX CONTROL TABLE

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
2001	217302.95	1178404.40	201.62	SET MAG NAIL
2002	217233.29	1178525.14	203.62	SET MAG NAIL

SURVEY NOTES:

1. THIS MAP CORRECTLY REPRESENTS CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY IN DECEMBER 2021 AND JANUARY 2022.

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 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. BOUNDARY INFORMATION SHOWN HEREON IS BASED ON PUBLIC GIS INFORMATION PROVIDED BY KITSAP COUNTY WITH THE EXCEPTION OF THE RIGHT OF WAY LINES.

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.

PLAN
SCALE IN FEET
0 40 80

LEGEND:

- PROPERTY LOT LINE
- ROW LINE
- CONTROL POINT

LINE TABLE CONSTRUCTION CENTERLINE BASIN 4

LINE ID	LENGTH	BEARING	START POINT	END POINT
L4	512.37'	N58° 22' 35"W	(N 217134.20, E 1178581.09)	(N 217402.85, E 1178144.80)

LUCAS M. MILLER
STATE OF WASHINGTON
52085
REGISTERED
PROFESSIONAL LAND SURVEYOR

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: 07/11/24

DESIGN BY: B. TUMBLING
WASH. P.E. #20123355 DATE:07/11/24

CHECKED BY: L. MILLER
WASH. P.L.S. #52085 DATE:07/11/24

KITSAP LAKE STORMWATER TREATMENT RETROFIT
KITSAP WAY
HORIZONTAL CONTROL AND EXISTING CONDITIONS

PN: 233-1896-193

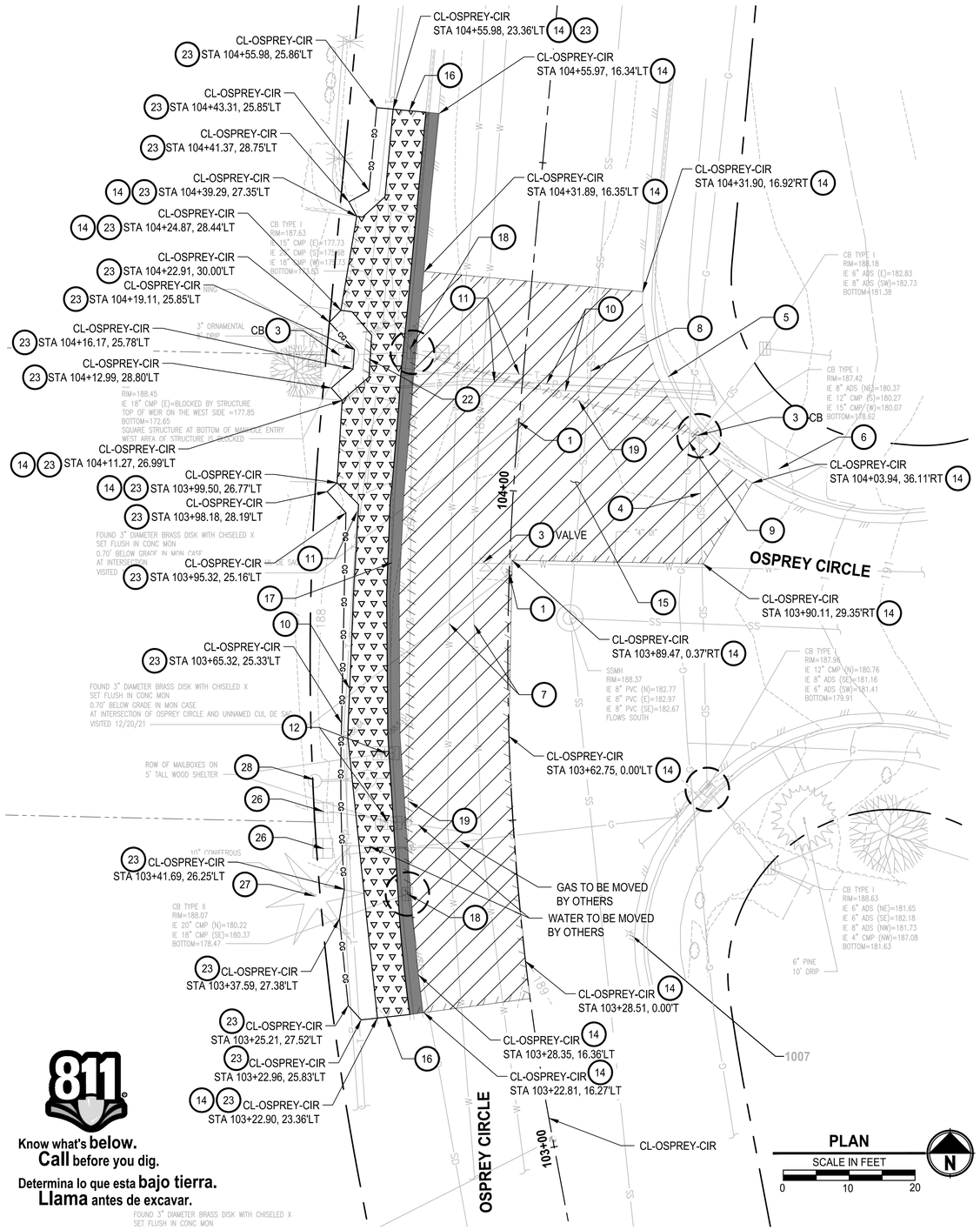
DATE 07/11/24

SHEET 4 OF 29

G4

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LK\STR\FINAL\DESIGN\99SVCS\CAD\DWG\PS1896193-G3.DWG PLOTTED BY:ODEGACOO DATE:7/12/2024 12:07 PM

CITY OF BREMERTON PROJECT NUMBER: 879



LEGEND:

- REMOVE ITEM
- SAWCUT FULL DEPTH
- INLET PROTECTION PER WSDOT STD PLAN I-40.20-00
- REMOVE EXISTING ASPHALT PAVEMENT
- REMOVE EXISTING CEMENT CONCRETE SIDEWALK
- REMOVE EXISTING CURB AND GUTTER
- CLEARING AND GRUBBING LIMITS
- EXISTING RIGHT-OF-WAY
- ALIGNMENT CENTERLINE

SITE PREPARATION AND DEMOLITION NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. REMOVAL LIMITS AND CLEARING AND GRUBBING LIMITS ARE INDICATED BY STATION OFFSET CALLOUTS.
3. CONTRACTOR SHALL COORDINATE WITH BUSINESSES TO MAINTAIN ACCESS DURING BUSINESS HOURS, SEE SPECIFICATIONS.
4. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS TO MAINTAIN ACCESS TO DRIVEWAYS AND HOMES, SEE SPECIFICATIONS.
5. CONTRACTOR SHALL COORDINATE WITH POSTMASTER TO MAINTAIN ACCESS TO MAILBOXES DURING CONSTRUCTION AND FOR RELOCATION OF EXISTING MAILBOX.
6. ALL STORM SEWER INLETS DOWNSTREAM OF SITE SHALL BE PROTECTED PER WSDOT STD PLAN I-40.20-00
7. CONTRACTOR SHALL PRESERVE PROPERTY CORNER MONUMENTS IF FOUND.
8. TEMPORARY CHAIN LINK FENCING SHALL BE PLACED 1 FOOT INSIDE TCE LIMITS.

SITE PREPARATION AND DEMOLITION KEY NOTES:

1. PRESERVE MONUMENT AND ADJUST MONUMENT CASE AND COVER, SEE SPECIFICATIONS
3. PROTECT EXISTING STRUCTURE TO REMAIN
4. PROTECT EXISTING STORM SEWER PIPE TO REMAIN
5. PROTECT EXISTING CURB AND GUTTER TO REMAIN
6. PROTECT EXISTING CURB RAMP TO REMAIN
7. PROTECT EXISTING WATER PIPE TO REMAIN
8. PROTECT EXISTING SANITARY SEWER PIPE TO REMAIN
9. PROTECT EXISTING GAS TO REMAIN
10. PROTECT EXISTING POWER TO REMAIN
11. PROTECT EXISTING TELECOMMUNICATIONS TO REMAIN
12. REMOVE, SALVAGE, AND REINSTALL MAILBOX AT TEMPORARY LOCATION PER POSTMASTER'S DIRECTION, SEE DETAIL 1/D3
14. SAWCUT
15. REMOVE ASPHALT PAVEMENT
16. REMOVE SIDEWALK TO NEAREST JOINT OR AS DIRECTED BY ENGINEER
17. REMOVE CURB AND GUTTER
18. REMOVE DRAINAGE STRUCTURE
19. REMOVE DRAINAGE PIPE
22. REMOVE EXISTING PAVERS
23. CLEARING AND GRUBBING
26. PROTECT METER BOX
27. PROTECT EXISTING TREE
28. PROTECT EXISTING LUMINAIRE

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

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
DM1

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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASIN 1A & 1B
DEMOLITION AND TESC PLAN

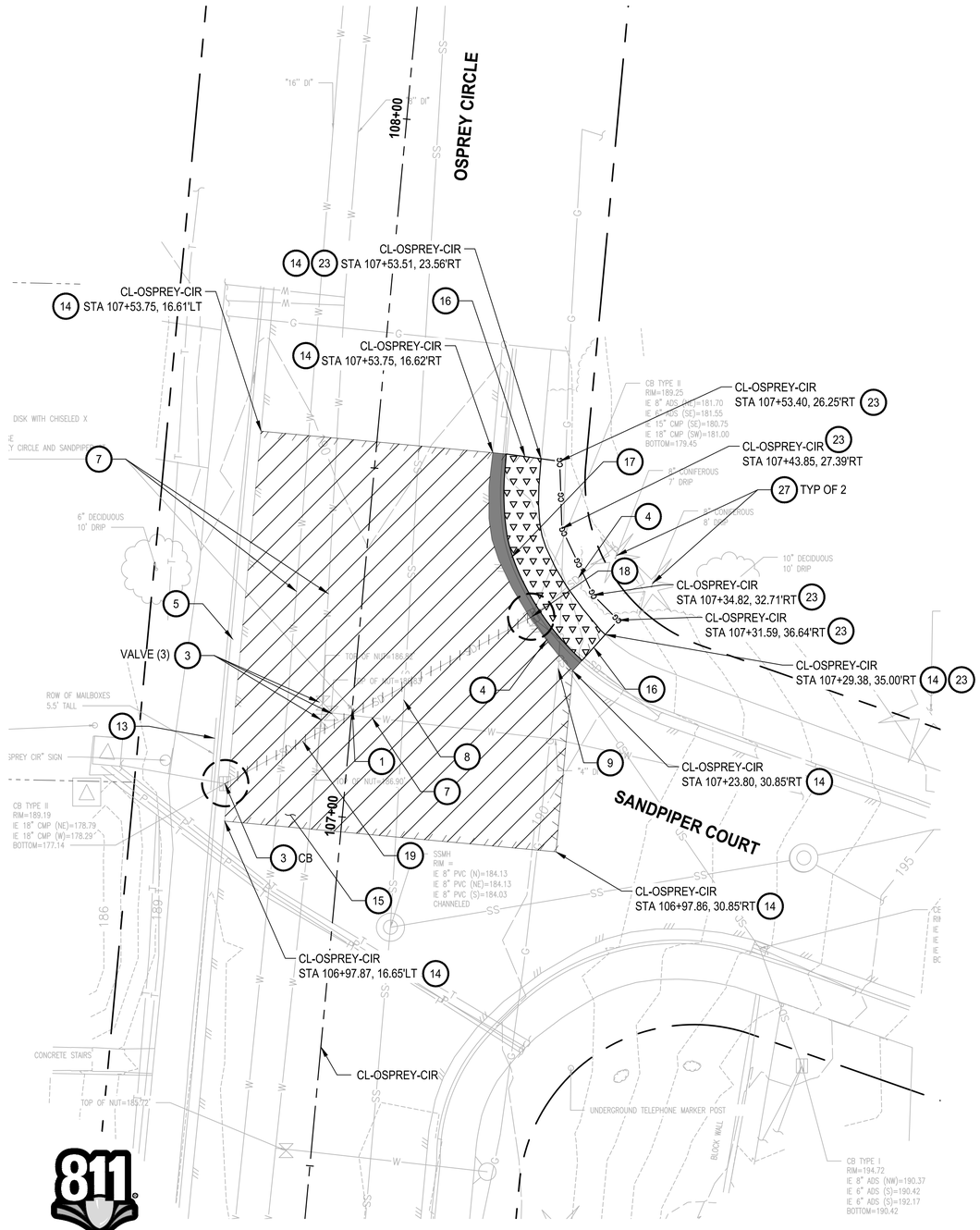
PN: 233-1896-193

DATE 07/11/24

SHEET 5 OF 29

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAPLKSTRFINAL\DESIGN\96VCS\CADD\DWGFIS\1896193-DM1.DWG PLOTTED BY:ODEGACOO DATE:7/12/2024 2:06 PM

CITY OF BREMERTON PROJECT NUMBER: 879



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

PLAN
SCALE IN FEET
0 10 20
N

LEGEND:

- REMOVE ITEM
- SAWCUT FULL DEPTH
- INLET PROTECTION PER WSDOT STD PLAN I-40.20-00
- REMOVE EXISTING ASPHALT PAVEMENT
- REMOVE EXISTING CEMENT CONCRETE SIDEWALK
- REMOVE EXISTING CURB AND GUTTER
- CLEARING AND GRUBBING LIMITS
- EXISTING RIGHT-OF-WAY
- ALIGNMENT CENTERLINE

SITE PREPARATION AND DEMOLITION NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. REMOVAL LIMITS AND CLEARING AND GRUBBING LIMITS ARE INDICATED BY STATION OFFSET CALLOUTS.
3. CONTRACTOR SHALL COORDINATE WITH BUSINESSES TO MAINTAIN ACCESS DURING BUSINESS HOURS, SEE SPECIFICATIONS.
4. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS TO MAINTAIN ACCESS TO DRIVEWAYS AND HOMES, SEE SPECIFICATIONS.
5. CONTRACTOR SHALL COORDINATE WITH POSTMASTER TO MAINTAIN ACCESS TO MAILBOXES DURING CONSTRUCTION AND FOR RELOCATION OF EXISTING MAILBOX.
6. ALL STORM SEWER INLETS DOWNSTREAM OF SITE SHALL BE PROTECTED PER WSDOT STD PLAN I-40.20-00
7. CONTRACTOR SHALL PRESERVE PROPERTY CORNER MONUMENTS IF FOUND.
8. TEMPORARY CHAIN LINK FENCING SHALL BE PLACED 1 FOOT INSIDE TCE LIMITS.

SITE PREPARATION AND DEMOLITION KEY NOTES:

1 PRESERVE MONUMENT AND ADJUST MONUMENT CASE AND COVER, SEE SPECIFICATIONS
3 PROTECT EXISTING STRUCTURE TO REMAIN
4 PROTECT EXISTING STORM SEWER PIPE TO REMAIN
5 PROTECT EXISTING CURB AND GUTTER TO REMAIN
7 PROTECT EXISTING WATER PIPE TO REMAIN
8 PROTECT EXISTING SANITARY SEWER PIPE TO REMAIN
9 PROTECT EXISTING GAS TO REMAIN
13 PROTECT EXISTING SIGN/MAILBOX TO REMAIN
14 SAWCUT
15 REMOVE ASPHALT PAVEMENT
16 REMOVE SIDEWALK TO NEAREST JOINT OR AS DIRECTED BY ENGINEER
17 REMOVE CURB AND GUTTER
18 REMOVE DRAINAGE STRUCTURE
19 REMOVE DRAINAGE PIPE
23 CLEARING AND GRUBBING
27 PROTECT EXISTING TREE

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
DM2

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

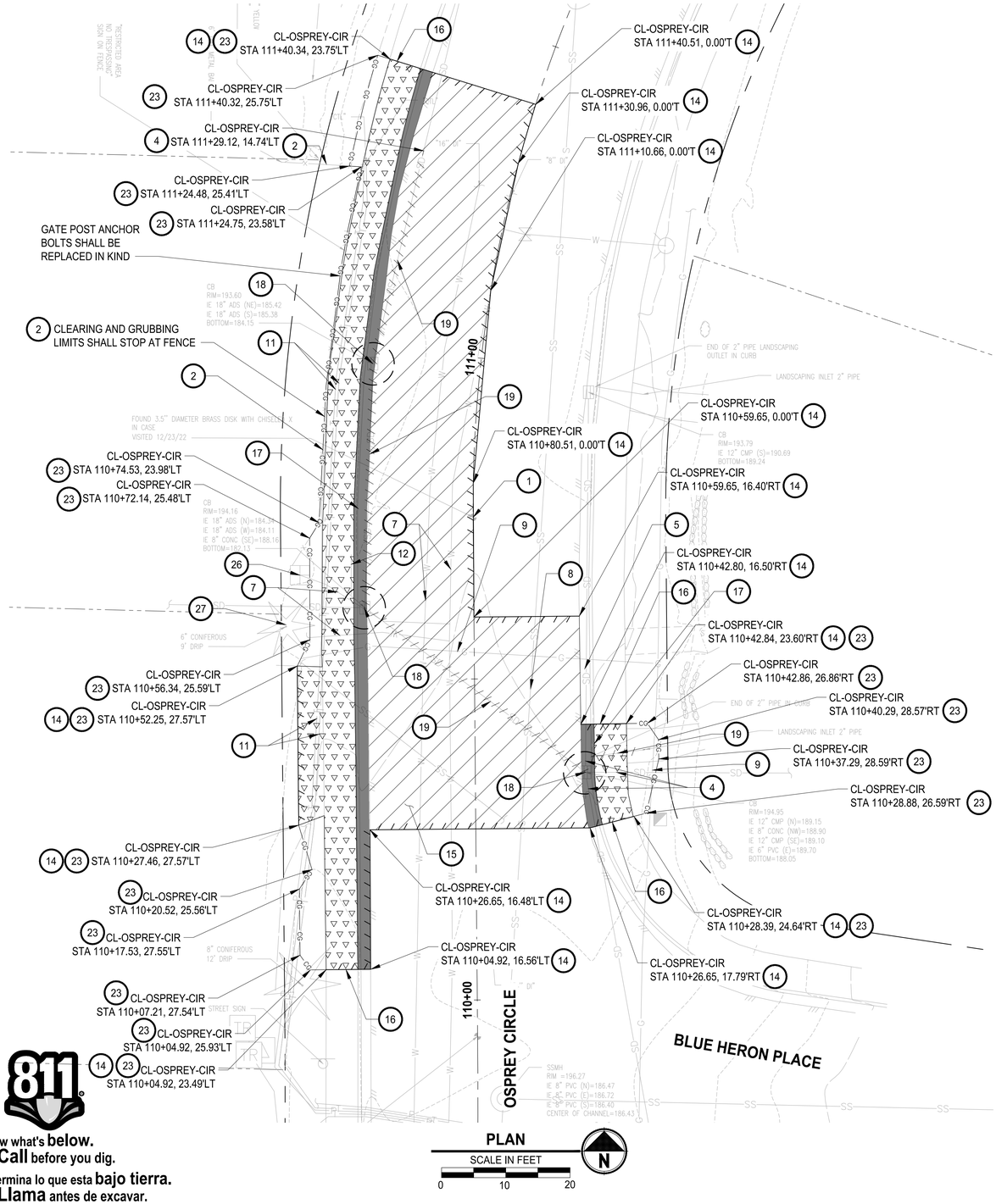
DRAWN BY: *C. ODEGARD* DATE: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASIN 2
DEMOLITION AND TESC PLAN

PN: 233-1896-193
DATE 07/11/24
SHEET 6 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LK STRM\NALDESIGN\09SV\CS\CADD\DWG\PS1896193-DM1.DWG PLOTTED BY:ODEGACOO DATE:7/12/2024 2:06 PM



PLAN

SCALE IN FEET

0 10 20

N

LEGEND:

- REMOVE ITEM
- SAWCUT FULL DEPTH
- INLET PROTECTION PER WSDOT STD PLAN I-40.20-00
- REMOVE EXISTING ASPHALT PAVEMENT
- REMOVE EXISTING CEMENT CONCRETE SIDEWALK
- REMOVE EXISTING CURB AND GUTTER
- CLEARING AND GRUBBING LIMITS
- EXISTING RIGHT-OF-WAY
- ALIGNMENT CENTERLINE

SITE PREPARATION AND DEMOLITION NOTES:

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5. CONTRACTOR SHALL COORDINATE WITH POSTMASTER TO MAINTAIN ACCESS TO MAILBOXES DURING CONSTRUCTION AND FOR RELOCATION OF EXISTING MAILBOX.
6. ALL STORM SEWER INLETS DOWNSTREAM OF SITE SHALL BE PROTECTED PER WSDOT STD PLAN I-40.20-00
7. CONTRACTOR SHALL PRESERVE PROPERTY CORNER MONUMENTS IF FOUND.
8. TEMPORARY CHAIN LINK FENCING SHALL BE PLACED 1 FOOT INSIDE TCE LIMITS.

SITE PREPARATION AND DEMOLITION KEY NOTES:

1. PRESERVE MONUMENT AND ADJUST MONUMENT CASE AND COVER, SEE SPECIFICATIONS
2. PROTECT EXISTING FENCING/GATE TO REMAIN
4. PROTECT EXISTING STORM SEWER PIPE TO REMAIN
5. PROTECT EXISTING CURB AND GUTTER TO REMAIN
7. PROTECT EXISTING WATER PIPE TO REMAIN
8. PROTECT EXISTING SANITARY SEWER PIPE TO REMAIN
9. PROTECT EXISTING GAS TO REMAIN
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14. SAWCUT
15. REMOVE ASPHALT PAVEMENT
16. REMOVE SIDEWALK TO NEAREST JOINT OR AS DIRECTED BY ENGINEER
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19. REMOVE DRAINAGE PIPE
23. CLEARING AND GRUBBING
26. PROTECT METER BOX
27. PROTECT EXISTING TREE

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

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
DM3

BRENA 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

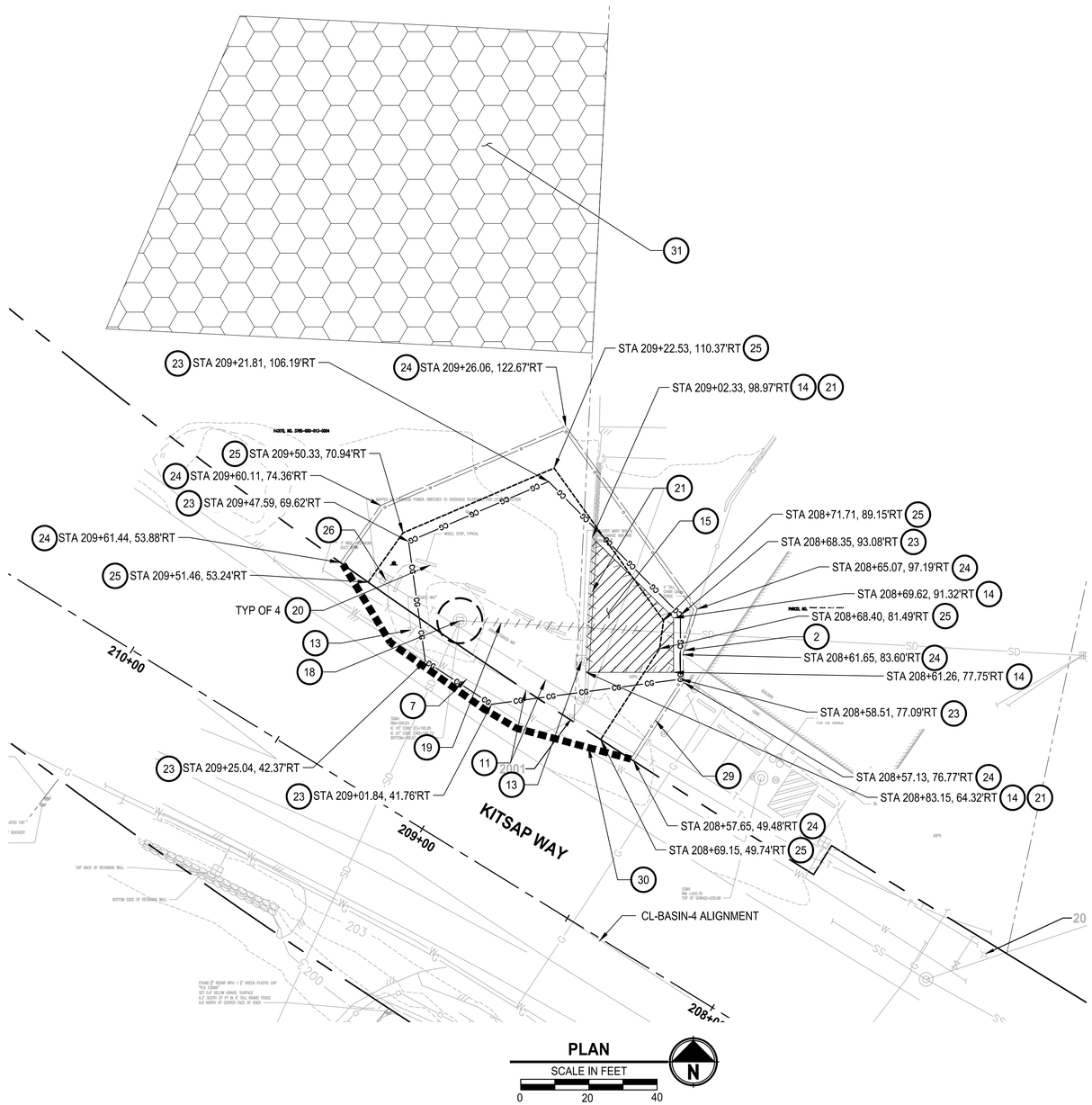
DRAWN BY: C. ODEGARD DATE: 07/11/24
DESIGN BY: B. TUMBLING WASH. P.E. #20123355 DATE:07/11/24
CHECKED BY: J. WRIGHT WASH. P.E. # 48258 DATE:07/11/24

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASIN 3A & 3B
DEMOLITION AND TESC PLAN

PN: 233-1896-193
DATE 07/11/24
SHEET 7 OF 29

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LAKE\TRF\NALDES\GN\965\VCS\CADD\DWGS\1896193-DM1.DWG PLOTTED BY: ODEGACOO DATE:7/12/2024 2:06 PM

CITY OF BREMERTON PROJECT NUMBER: 879



PLAN

SCALE IN FEET

0 20 40

LEGEND:

- REMOVE ITEM
- SAWCUT FULL DEPTH
- INLET PROTECTION PER WSDOT STD PLAN I-40.20-00
- REMOVE EXISTING ASPHALT PAVEMENT
- REMOVE EXISTING CEMENT CONCRETE SIDEWALK
- REMOVE EXISTING CURB AND GUTTER
- CLEARING AND GRUBBING LIMITS
- EXISTING RIGHT-OF-WAY
- ALIGNMENT CENTERLINE
- TEMPORARY CONSTRUCTION EASEMENT
- PERMANENT EASEMENT
- TEMPORARY CHAIN LINK FENCE
- TEMPORARY TYPE 2 CONCRETE BARRIER
- TEMPORARY PARKING AREA

SITE PREPARATION AND DEMOLITION NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. REMOVAL LIMITS AND CLEARING AND GRUBBING LIMITS ARE INDICATED BY STATION OFFSET CALLOUTS.
3. CONTRACTOR SHALL COORDINATE WITH BUSINESSES TO MAINTAIN ACCESS DURING BUSINESS HOURS, SEE SPECIFICATIONS.
4. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS TO MAINTAIN ACCESS TO DRIVEWAYS AND HOMES, SEE SPECIFICATIONS.
5. CONTRACTOR SHALL COORDINATE WITH POSTMASTER TO MAINTAIN ACCESS TO MAILBOXES DURING CONSTRUCTION AND FOR RELOCATION OF EXISTING MAILBOX.
6. ALL STORM SEWER INLETS DOWNSTREAM OF SITE SHALL BE PROTECTED PER WSDOT STD PLAN I-40.20-00
7. CONTRACTOR SHALL PRESERVE PROPERTY CORNER MONUMENTS IF FOUND.
8. TEMPORARY CHAIN LINK FENCING SHALL BE PLACED 1 FOOT INSIDE TCE LIMITS.
9. CONTRACTOR SHALL PROVIDE TEMPORARY PARKING AREA FOR BUSINESSES PER THE DIRECTION OF THE ENGINEER.

SITE PREPARATION AND DEMOLITION KEY NOTES:

2 PROTECT EXISTING FENCING/GATE TO REMAIN
7 PROTECT EXISTING WATER PIPE TO REMAIN
11 PROTECT EXISTING TELECOMMUNICATIONS TO REMAIN
13 PROTECT EXISTING SIGN/MAILBOX TO REMAIN
14 SAWCUT
15 REMOVE ASPHALT PAVEMENT
18 REMOVE DRAINAGE STRUCTURE
19 REMOVE DRAINAGE PIPE
20 REMOVE, SALVAGE, AND REINSTALL WHEEL STOP
21 REMOVE EXISTING EXTRUDED CURB
23 CLEARING AND GRUBBING
24 TEMPORARY CONSTRUCTION EASEMENT
25 PERMANENT EASEMENT
26 PROTECT METER BOX
29 TEMPORARY CHAIN LINK FENCE TYPE 3 PER WSDOT STD PLAN L-20.10-03.
30 TEMPORARY TYPE 2 CONCRETE BARRIER PER TEMPORARY TRAFFIC CONTROL PLANS
31 TEMPORARY PARKING AREA PER THE DIRECTION OF THE ENGINEER

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

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
DM4

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LKSTRFINALDESIGN\99SVCS\CADD\DWGPS\1896193-DM1.DWG PLOTTED BY: ODEGACOD DATE:7/15/2024 2:58 PM

BRENNA ELIZABETH MARIE JIMENEZ — 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

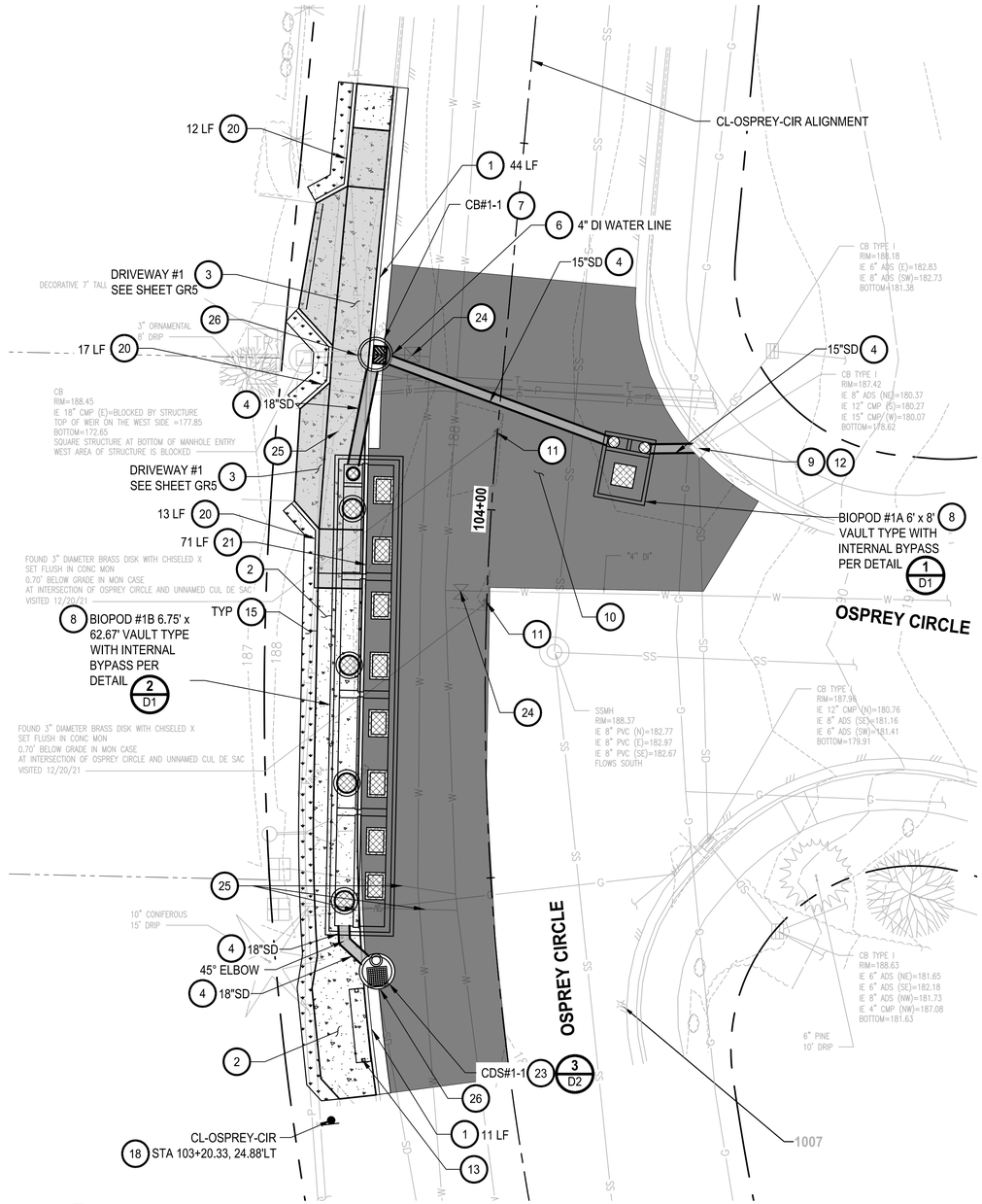
CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: *C. ODEGARD* DATE: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. # *48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASIN 4
DEMOLITION AND TESC PLAN

PN: 233-1896-193
DATE 07/11/24
SHEET 8 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

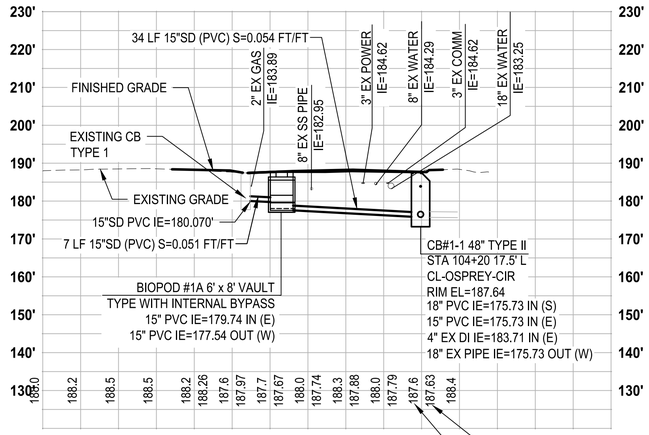


PLAN
SCALE IN FEET
0 10 20

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

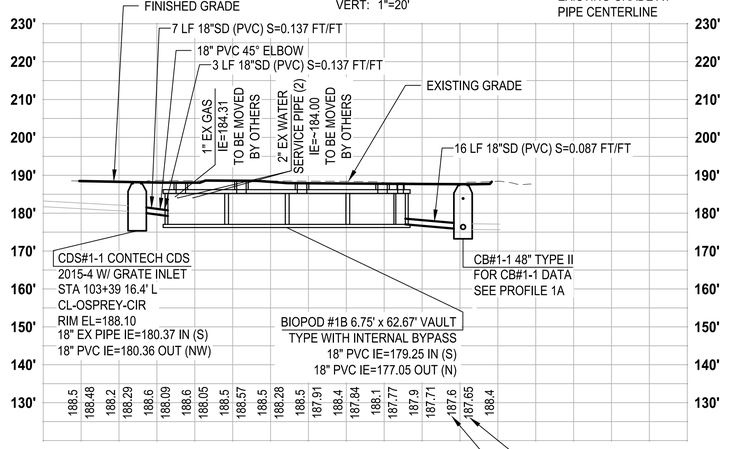
CONSTRUCTION LEGEND:

- CEMENT CONC. PEDESTRIAN CURB
- CEMENT CONC. CURB AND GUTTER
- CEMENT CONC. TRAFFIC CURB
- CEMENT CONC. SIDEWALK
- CEMENT CONC. DRIVEWAY
- CEMENT CONC. PAVEMENT
- COMMERCIAL HMA
- DETECTABLE WARNING SURFACE
- 4" TOPSOIL AND HYDROSEED
- 6" CSTC
- CATCH BASIN TYPE 2 OR CDS STRUCTURE
- STORM SEWER PIPE
- ACCESS COVER/HATCH
- PERMANENT EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT



PROFILE 1A

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



PROFILE 1B

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

GENERAL NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. PROFILES ARE CUT ALONG THE CENTERLINE OF THEIR RESPECTIVE PIPE NETWORK.
3. LIMIT OPEN EXCAVATION TO 25' IN LENGTH.
4. STORM STRUCTURE STATION AND OFFSETS ARE TO THE CENTER OF STRUCTURE.
5. 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.
6. RECTANGULAR FRAMES SHALL BE PER WSDOT STD PLAN B-30.10-03.
7. CONTRACTOR TO INSTALL "DRAINS TO STREAM" PLACARDS PER MANUFACTURER'S SPECIFICATIONS ON ALL NEW STORMWATER INLETS. CONTRACTOR TO PROVIDE PLACARDS.
8. SEE SHEETS D1, D2, D5, AND D6 FOR BIOPOD AND HATCH DETAILS
9. SEE SHEET D2 AND D3 FOR CDS STRUCTURE DETAILS.
10. SEE DM1 - DM4 FOR REMOVALS AND PROTECTIONS.
11. SEE GR5-GR7 FOR SIDEWALK, DRIVEWAY APPROACH, AND RAMP GRADING AND LAYOUT.
12. REPLACE ALL VALVE BOXES WITHIN DISTURBED AREAS. MORE VALVE BOXES MAY BE PRESENT THAN SHOWN IN SURVEY BASE.
13. SEE SHEET DM4 FOR TEMPORARY AND PERMANENT EASEMENT LOCATIONS.

CONSTRUCTION NOTES:

1. CEMENT CONC. CURB & GUTTER TYPE A PER COB STD DETAIL 3131
2. CEMENT CONC. SIDEWALK PER COB STD DETAIL 3101
3. CEMENT CONC. DRIVEWAY APPROACH TYPE III PER COB STD DETAIL 3121
4. INSTALL STORMWATER PIPE PER COB STD DETAILS 4080 AND 4081
5. NOT USED
6. CONNECT EX 4" DI PRESSURE PIPE FROM DUMP VALVE TO CATCH BASIN
7. INSTALL CATCH BASIN TYPE II PER COB STD DETAIL 4004
8. INSTALL BIOPOD, SEE SHEETS D1 AND D2
9. CONNECT PIPE TO EXISTING STRUCTURE
10. TYPICAL ROAD LOCAL ACCESS STREETS STANDARD PAVEMENT PER COB STD DETAIL 3004
11. MONUMENT CASE AND COVER. PER COB STD DETAIL 3401
12. REPLACE FRAME AND GRADE
13. REINSTALL SALVAGED MAILBOX, SEE SHEETS GR5 AND GR7
14. REINSTALL SALVAGED WHEEL STOP
15. NOT USED
16. CURB RAMP TYPE PARALLEL A PER WSDOT STD PLAN F-40.12-03
17. CURB DRAIN, SEE SHEET GR7
18. PROJECT SIGN, PER DETAIL 2 D4
19. INSTALL RECTANGULAR BEEHIVE GRATE, PER DETAIL 2 D3
20. CEMENT CONC. CURB TYPE C-2 PER COD STD DETAIL 3133
21. CEMENT CONC. CURB TYPE C-1 PER COD STD DETAIL 3133
22. CEMENT CONC. EXTRUDED CURB TYPE 6 PER WSDOT STD PLAN F-10.42-00
23. INSTALL CONTECH CDS STRUCTURE, SEE SHEET D2
24. REPLACE VALVE BOX AND ADJUST TO FINISHED GRADE
25. UTILITY TO BE MOVED BY OTHERS
26. CONNECT EXISTING PIPE TO DRAINAGE STRUCTURE
27. GATE POST ANCHOR BOLTS SHALL BE REPLACED IN KIND

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
C1

BRENA ELIZABETH MARIE LUMSDEN — 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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASIN 1A & 1B
DRAINAGE PLAN AND PROFILE

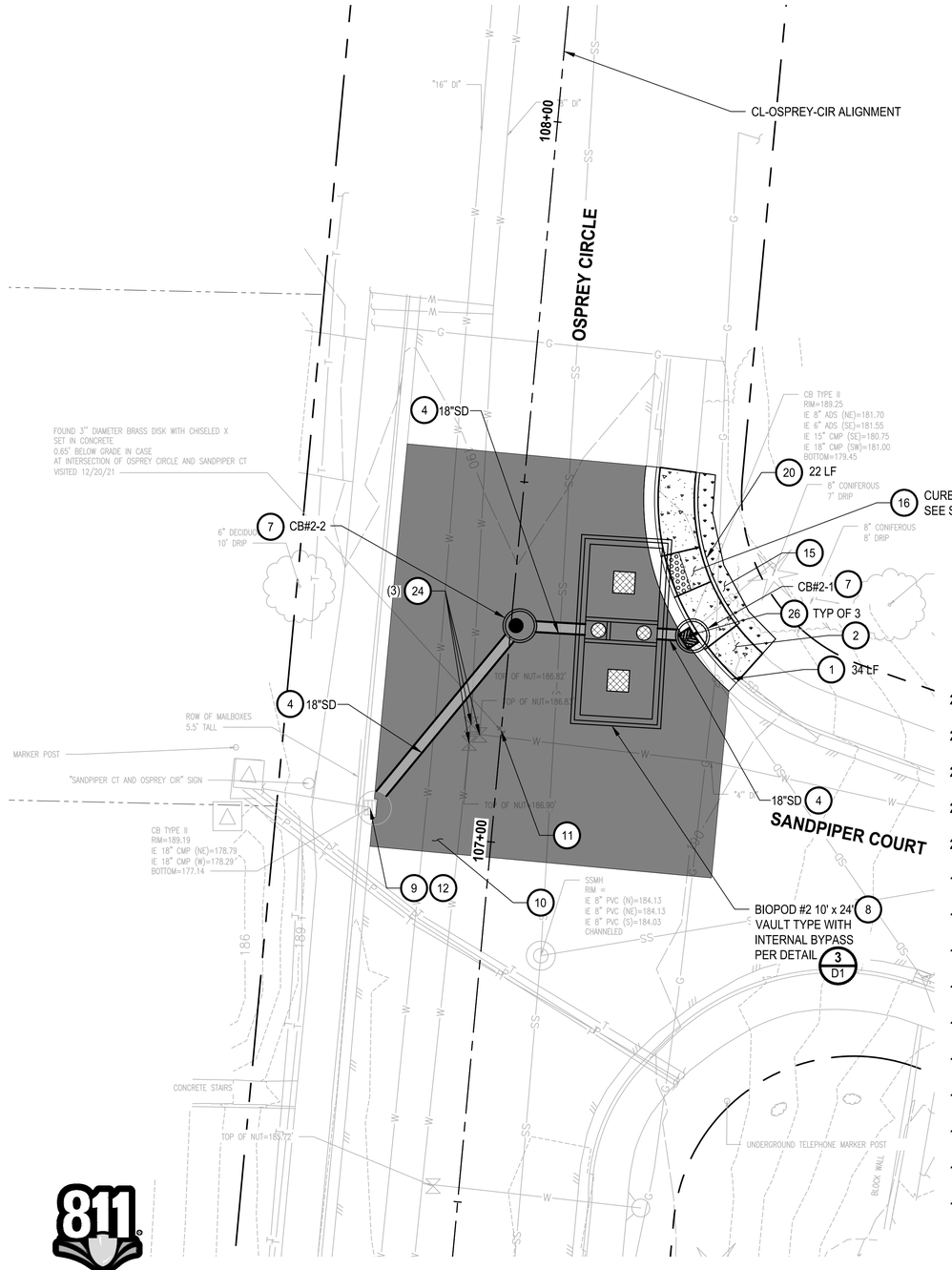
PN: 233-1896-193

DATE 07/11/24

SHEET 9 OF 29

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LAKE STRMWATER\DESIGN\99SV\CS\CAD\DWG\PS1896193-C1.DWG PLOTTED BY: ODEGACOD DATE: 7/12/2024 2:00 PM

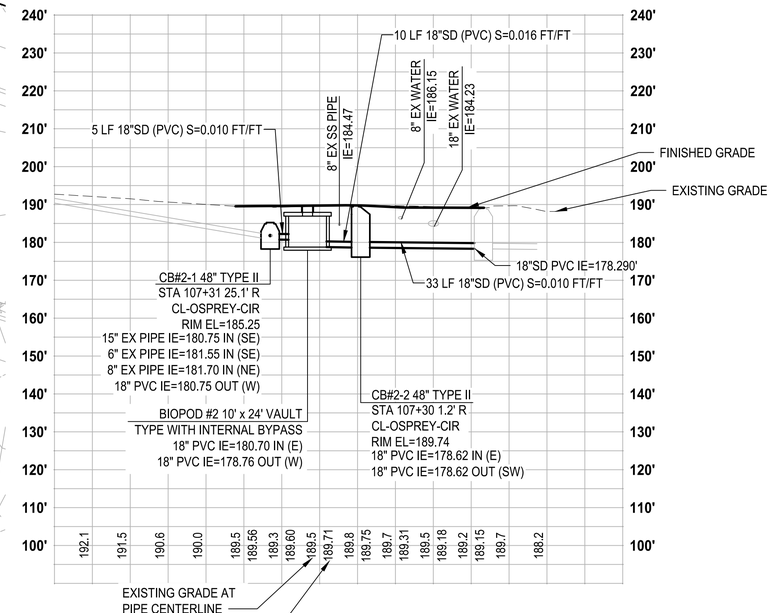
CITY OF BREMERTON PROJECT NUMBER: 879



PLAN
SCALE IN FEET
0 10 20
N

CONSTRUCTION LEGEND:

- CEMENT CONC. PEDESTRIAN CURB
- CEMENT CONC. CURB AND GUTTER
- CEMENT CONC. TRAFFIC CURB
- CEMENT CONC. SIDEWALK
- CEMENT CONC. DRIVEWAY
- CEMENT CONC. PAVEMENT
- COMMERCIAL HMA
- DETECTABLE WARNING SURFACE
- 4" TOPSOIL AND HYDROSEED
- 6" CSTC
- CATCH BASIN TYPE 2 OR CDS STRUCTURE
- STORM SEWER PIPE
- ACCESS COVER/HATCH
- PERMANENT EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT



PROFILE 2
HORIZ: 1"=20'
VERT: 1"=20'

GENERAL NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. PROFILES ARE CUT ALONG THE CENTERLINE OF THEIR RESPECTIVE PIPE NETWORK.
3. LIMIT OPEN EXCAVATION TO 25' IN LENGTH.
4. STORM STRUCTURE STATION AND OFFSETS ARE TO THE CENTER OF STRUCTURE.
5. 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.
6. RECTANGULAR FRAMES SHALL BE PER WSDOT STD PLAN B-30.10-03.
7. CONTRACTOR TO INSTALL "DRAINS TO STREAM" PLACARDS PER MANUFACTURER'S SPECIFICATIONS ON ALL NEW STORMWATER INLETS. CONTRACTOR TO PROVIDE PLACARDS.
8. SEE SHEETS D1, D2, D5, AND D6 FOR BIOPOD AND HATCH DETAILS
9. SEE SHEET D2 AND D3 FOR CDS STRUCTURE DETAILS.
10. SEE DM1 - DM4 FOR REMOVALS AND PROTECTIONS.
11. SEE GR5-GR7 FOR SIDEWALK, DRIVEWAY APPROACH, AND RAMP GRADING AND LAYOUT.
12. REPLACE ALL VALVE BOXES WITHIN DISTURBED AREAS. MORE VALVE BOXES MAY BE PRESENT THAN SHOWN IN SURVEY BASE.
13. SEE SHEET DM4 FOR TEMPORARY AND PERMANENT EASEMENT LOCATIONS.

CONSTRUCTION NOTES:

1. CEMENT CONC. CURB & GUTTER TYPE A PER COB STD DETAIL 3131
2. CEMENT CONC. SIDEWALK PER COB STD DETAIL 3101
3. CEMENT CONC. DRIVEWAY APPROACH TYPE III PER COB STD DETAIL 3121
4. INSTALL STORMWATER PIPE PER COB STD DETAILS 4080 AND 4081
5. NOT USED
6. CONNECT EX 4" DI PRESSURE PIPE FROM DUMP VALVE TO CATCH BASIN
7. INSTALL CATCH BASIN TYPE II PER COB STD DETAIL 4004
8. INSTALL BIOPOD, SEE SHEETS D1 AND D2
9. CONNECT PIPE TO EXISTING STRUCTURE
10. TYPICAL ROAD LOCAL ACCESS STREETS STANDARD PAVEMENT PER COB STD DETAIL 3004
11. MONUMENT CASE AND COVER. PER COB STD DETAIL 3401
12. REPLACE FRAME AND GRATE
13. REINSTALL SALVAGED MAILBOX, SEE SHEETS GR5 AND GR7
14. REINSTALL SALVAGED WHEEL STOP
15. NOT USED
16. CURB RAMP TYPE PARALLEL A PER WSDOT STD PLAN F-40.12-03
17. CURB DRAIN, SEE SHEET GR7
18. PROJECT SIGN, PER DETAIL 2/D4
19. INSTALL RECTANGULAR BEEHIVE GRATE, PER DETAIL 2/D3
20. CEMENT CONC. CURB TYPE C-2 PER COD STD DETAIL 3133
21. CEMENT CONC. CURB TYPE C-1 PER COD STD DETAIL 3133
22. CEMENT CONC. EXTRUDED CURB TYPE 6 PER WSDOT STD PLAN F-10.42-00
23. INSTALL CONTECH CDS STRUCTURE, SEE SHEET D2
24. REPLACE VALVE BOX AND ADJUST TO FINISHED GRADE
25. UTILITY TO BE MOVED BY OTHERS
26. CONNECT EXISTING PIPE TO DRAINAGE STRUCTURE
27. GATE POST ANCHOR BOLTS SHALL BE REPLACED IN KIND

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

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

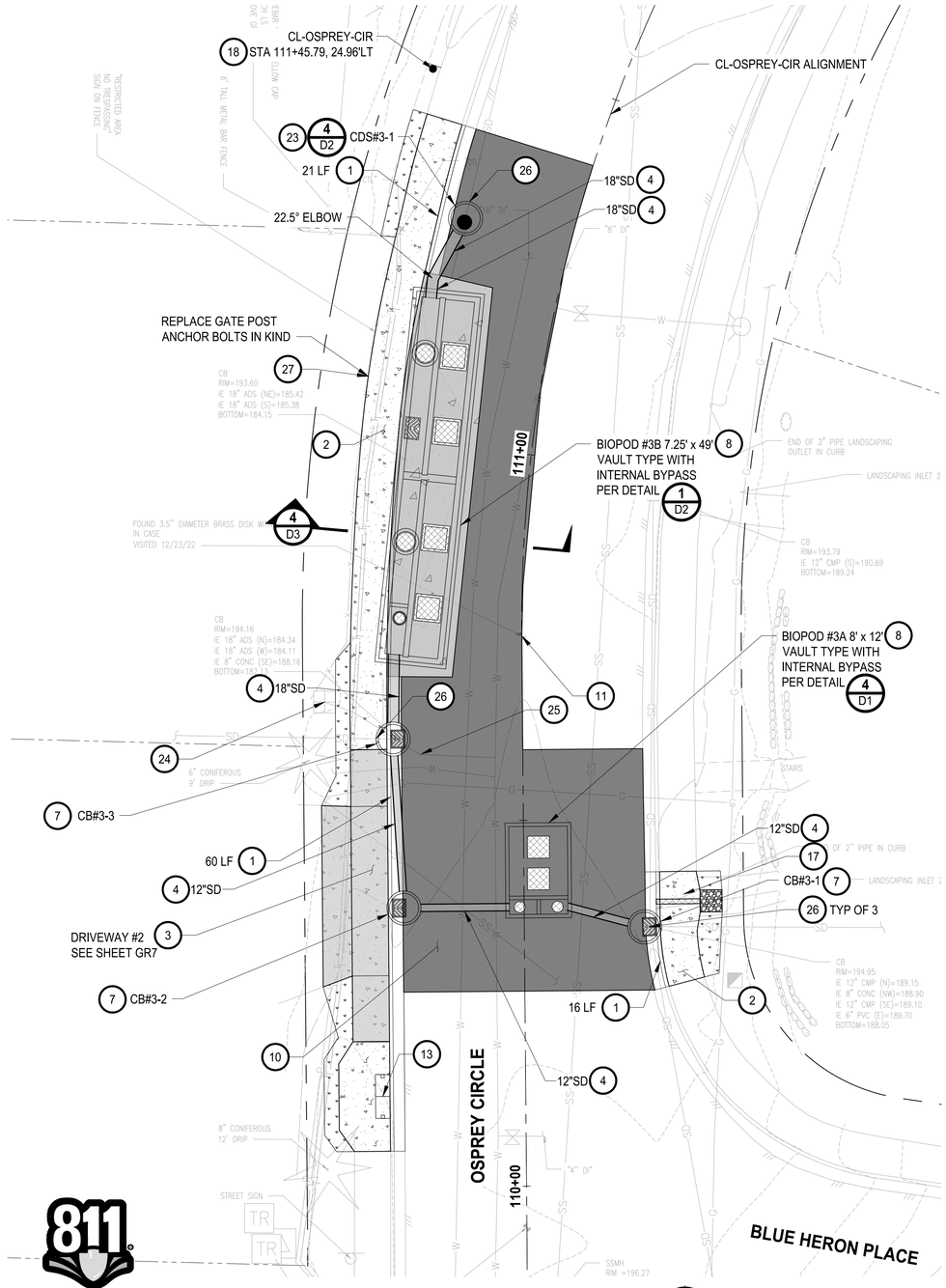
DRAWN BY: C. ODEGARD DATE: 07/11/24
DESIGN BY: B. TUMBLING WASH. P.E. #20123355 DATE:07/11/24
CHECKED BY: J. WRIGHT WASH. P.E. # 48258 DATE:07/11/24

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASIN 2
DRAINAGE PLAN AND PLOT

PN: 233-1896-193
DATE 07/11/24
SHEET 10 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP\LKSTRFINAL\DESIGN\965\VCS\CADD\DWG\PS1896193-C1.DWG PLOTTED BY: ODEGACOO DATE:7/12/2024 2:00 PM



PLAN
SCALE IN FEET
0 10 20

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

CONSTRUCTION LEGEND:

- CEMENT CONC. PEDESTRIAN CURB
- CEMENT CONC. CURB AND GUTTER
- CEMENT CONC. TRAFFIC CURB
- CEMENT CONC. SIDEWALK
- CEMENT CONC. DRIVEWAY
- CEMENT CONC. PAVEMENT
- COMMERCIAL HMA
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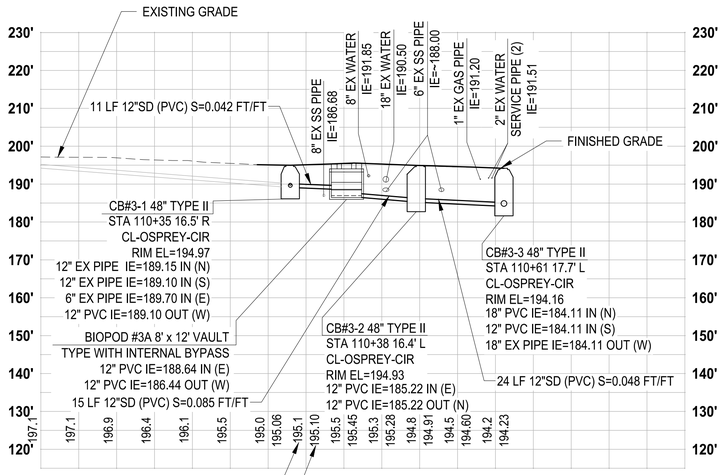
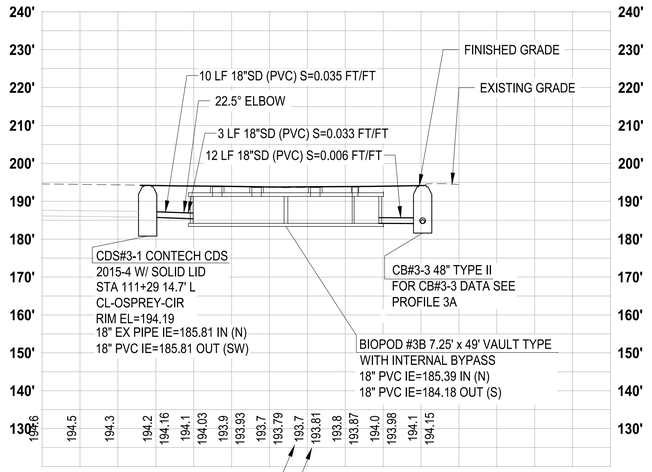
- 6" CSTC
- CATCH BASIN TYPE 2 OR CDS STRUCTURE
- STORM SEWER PIPE
- ACCESS COVER/HATCH
- PERMANENT EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT



EXISTING GRADE AT PIPE CENTERLINE
FINISHED GRADE AT PIPE CENTERLINE

PROFILE 3A
HORIZ: 1"=20'
VERT: 1"=20'



EXISTING GRADE AT PIPE CENTERLINE
FINISHED GRADE AT PIPE CENTERLINE

PROFILE 3B
HORIZ: 1"=20'
VERT: 1"=20'

GENERAL NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. PROFILES ARE CUT ALONG THE CENTERLINE OF THEIR RESPECTIVE PIPE NETWORK.
3. LIMIT OPEN EXCAVATION TO 25' IN LENGTH.
4. STORM STRUCTURE STATION AND OFFSETS ARE TO THE CENTER OF STRUCTURE.
5. 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.
6. RECTANGULAR FRAMES SHALL BE PER WSDOT STD PLAN B-30.10-03.
7. CONTRACTOR TO INSTALL "DRAINS TO STREAM" PLACARDS PER MANUFACTURER'S SPECIFICATIONS ON ALL NEW STORMWATER INLETS. CONTRACTOR TO PROVIDE PLACARDS.
8. SEE SHEETS D1, D2, D5, AND D6 FOR BIOPOD AND HATCH DETAILS
9. SEE SHEET D2 AND D3 FOR CDS STRUCTURE DETAILS.
10. SEE DM1 - DM4 FOR REMOVALS AND PROTECTIONS.
11. SEE GR5-GR7 FOR SIDEWALK, DRIVEWAY APPROACH, AND RAMP GRADING AND LAYOUT.
12. REPLACE ALL VALVE BOXES WITHIN DISTURBED AREAS. MORE VALVE BOXES MAY BE PRESENT THAN SHOWN IN SURVEY BASE.
13. SEE SHEET DM4 FOR TEMPORARY AND PERMANENT EASEMENT LOCATIONS.

CONSTRUCTION NOTES:

1. CEMENT CONC. CURB & GUTTER TYPE A PER COB STD DETAIL 3131
2. CEMENT CONC. SIDEWALK PER COB STD DETAIL 3101
3. CEMENT CONC. DRIVEWAY APPROACH TYPE III PER COB STD DETAIL 3121
4. INSTALL STORMWATER PIPE PER COB STD DETAILS 4080 AND 4081
5. NOT USED
6. CONNECT EX 4" DI PRESSURE PIPE FROM DUMP VALVE TO CATCH BASIN
7. INSTALL CATCH BASIN TYPE II PER COB STD DETAIL 4004
8. INSTALL BIOPOD, SEE SHEETS D1 AND D2
9. CONNECT PIPE TO EXISTING STRUCTURE
10. TYPICAL ROAD LOCAL ACCESS STREETS STANDARD PAVEMENT PER COB STD DETAIL 3004
11. MONUMENT CASE AND COVER. PER COB STD DETAIL 3401
12. REPLACE FRAME AND GRATE
13. REINSTALL SALVAGED MAILBOX, SEE SHEETS GR5 AND GR7
14. REINSTALL SALVAGED WHEEL STOP
15. NOT USED
16. CURB RAMP TYPE PARALLEL A PER WSDOT STD PLAN F-40.12-03
17. CURB DRAIN, SEE SHEET GR7
18. PROJECT SIGN, PER DETAIL 2 D4
19. INSTALL RECTANGULAR BEEHIVE GRATE, PER DETAIL 2 D3
20. CEMENT CONC. CURB TYPE C-2 PER COD STD DETAIL 3133
21. CEMENT CONC. CURB TYPE C-1 PER COD STD DETAIL 3133
22. CEMENT CONC. EXTRUDED CURB TYPE 6 PER WSDOT STD PLAN F-10.42-00
23. INSTALL CONTECH CDS STRUCTURE, SEE SHEET D2
24. REPLACE VALVE BOX AND ADJUST TO FINISHED GRADE
25. UTILITY TO BE MOVED BY OTHERS
26. CONNECT EXISTING PIPE TO DRAINAGE STRUCTURE
27. GATE POST ANCHOR BOLTS SHALL BE REPLACED IN KIND

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
C3

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

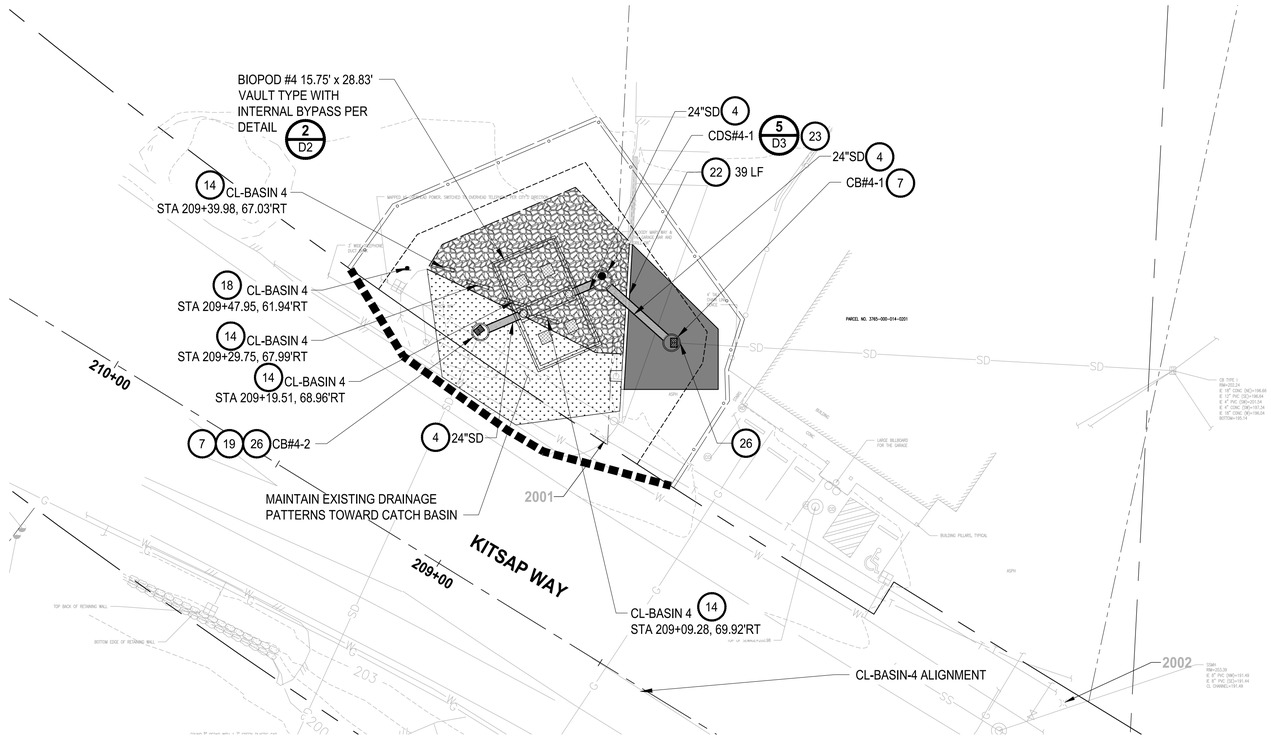
DRAWN BY: C. ODEGARD DATE: 07/11/24
DESIGN BY: B. TUMBLING WASH. P.E. #20123355 DATE:07/11/24
CHECKED BY: J. WRIGHT WASH. P.E. # 48258 DATE:07/11/24

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASIN 3A AND 3B
DRAINAGE PLAN AND PROFILE

PN: 233-1896-193
DATE 07/11/24
SHEET 11 OF 29

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITY OF BREMERTON\233-1896-193 KITSAP LK STRTR FINAL DESIGN\95VS\CS\CAD\DWG\PS1896193-C1.DWG PLOTTED BY: ODEGACOO DATE:7/12/2024 2:00 PM

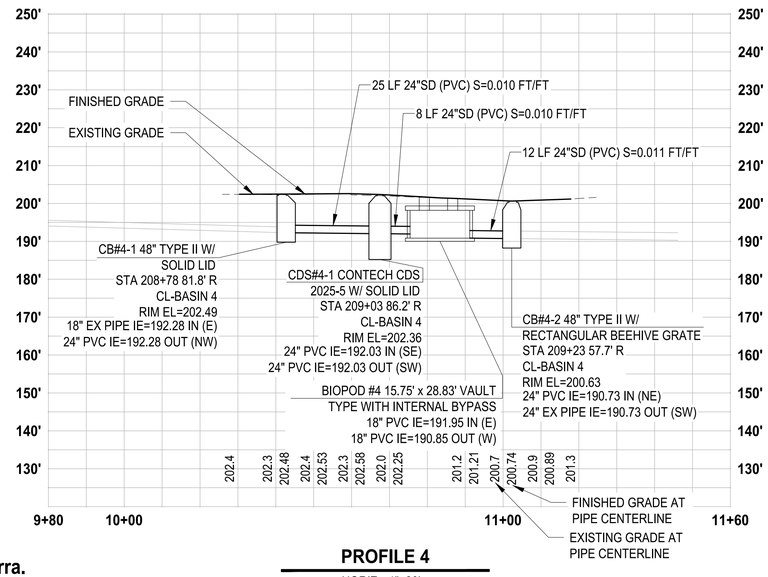
CITY OF BREMERTON PROJECT NUMBER: 879



PLAN

SCALE IN FEET

0 20 40 N



PROFILE 4

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

CONSTRUCTION LEGEND:

- CEMENT CONC. PEDESTRIAN CURB
- CEMENT CONC. CURB AND GUTTER
- CEMENT CONC. TRAFFIC CURB
- CEMENT CONC. SIDEWALK
- CEMENT CONC. DRIVEWAY
- CEMENT CONC. PAVEMENT
- COMMERCIAL HMA
- DETECTABLE WARNING SURFACE
- 4" TOPSOIL AND HYDROSEED
- 6" CSTC
- CATCH BASIN TYPE 2 OR CDS STRUCTURE
- STORM SEWER PIPE
- ACCESS COVER/HATCH
- PERMANENT EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT

GENERAL NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. PROFILES ARE CUT ALONG THE CENTERLINE OF THEIR RESPECTIVE PIPE NETWORK.
3. LIMIT OPEN EXCAVATION TO 25' IN LENGTH.
4. STORM STRUCTURE STATION AND OFFSETS ARE TO THE CENTER OF STRUCTURE.
5. 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.
6. RECTANGULAR FRAMES SHALL BE PER WSDOT STD PLAN B-30.10-03.
7. CONTRACTOR TO INSTALL "DRAINS TO STREAM" PLACARDS PER MANUFACTURER'S SPECIFICATIONS ON ALL NEW STORMWATER INLETS. CONTRACTOR TO PROVIDE PLACARDS.
8. SEE SHEETS D1, D2, D5, AND D6 FOR BIOPOD AND HATCH DETAILS
9. SEE SHEET D2 AND D3 FOR CDS STRUCTURE DETAILS.
10. SEE DM1 - DM4 FOR REMOVALS AND PROTECTIONS.
11. SEE GR5-GR7 FOR SIDEWALK, DRIVEWAY APPROACH, AND RAMP GRADING AND LAYOUT.
12. REPLACE ALL VALVE BOXES WITHIN DISTURBED AREAS. MORE VALVE BOXES MAY BE PRESENT THAN SHOWN IN SURVEY BASE.
13. SEE SHEET DM4 FOR TEMPORARY AND PERMANENT EASEMENT LOCATIONS.

CONSTRUCTION NOTES:

1. CEMENT CONC. CURB & GUTTER TYPE A PER COB STD DETAIL 3131
2. CEMENT CONC. SIDEWALK PER COB STD DETAIL 3101
3. CEMENT CONC. DRIVEWAY APPROACH TYPE III PER COB STD DETAIL 3121
4. INSTALL STORMWATER PIPE PER COB STD DETAILS 4080 AND 4081
5. NOT USED
6. CONNECT EX 4" DI PRESSURE PIPE FROM DUMP VALVE TO CATCH BASIN
7. INSTALL CATCH BASIN TYPE II PER COB STD DETAIL 4004
8. INSTALL BIOPOD, SEE SHEETS D1 AND D2
9. CONNECT PIPE TO EXISTING STRUCTURE
10. TYPICAL ROAD LOCAL ACCESS STREETS STANDARD PAVEMENT PER COB STD DETAIL 3004
11. MONUMENT CASE AND COVER. PER COB STD DETAIL 3401
12. REPLACE FRAME AND GRATE
13. REINSTALL SALVAGED MAILBOX, SEE SHEETS GR5 AND GR7
14. REINSTALL SALVAGED WHEEL STOP
15. NOT USED
16. CURB RAMP TYPE PARALLEL A PER WSDOT STD PLAN F-40.12-03
17. CURB DRAIN, SEE SHEET GR7
18. PROJECT SIGN, PER DETAIL 2/D4
19. INSTALL RECTANGULAR BEEHIVE GRATE, PER DETAIL 2/D3
20. CEMENT CONC. CURB TYPE C-2 PER COD STD DETAIL 3133
21. CEMENT CONC. CURB TYPE C-1 PER COD STD DETAIL 3133
22. CEMENT CONC. EXTRUDED CURB TYPE 6 PER WSDOT STD PLAN F-10.42-00
23. INSTALL CONTECH CDS STRUCTURE, SEE SHEET D2
24. REPLACE VALVE BOX AND ADJUST TO FINISHED GRADE
25. UTILITY TO BE MOVED BY OTHERS
26. CONNECT EXISTING PIPE TO DRAINAGE STRUCTURE
27. GATE POST ANCHOR BOLTS SHALL BE REPLACED IN KIND

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

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION

C4

BRENNA ELIZABETH MARIE TUMBLING — 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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

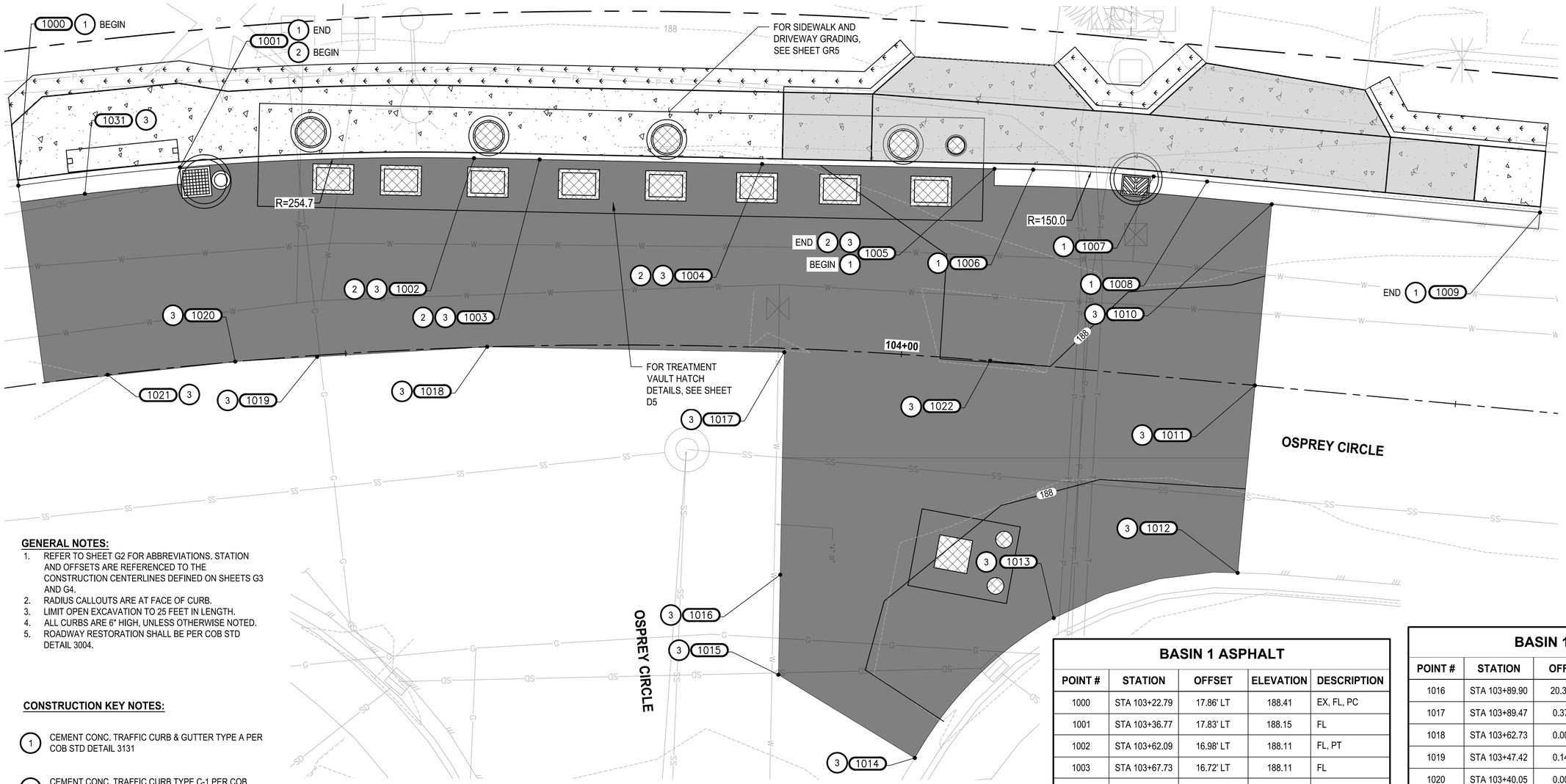
KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASIN 4
DRAINAGE PLAN AND PROFILE

PN: 233-1896-193

DATE 07/11/24
SHEET 12 OF 29

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAPLKSTRFNALDESIGN\06SVCS\CADD\DWG\PS1896193-C1.DWG PLOTTED BY:ODEGACOO DATE:7/12/2024 2:00 PM

CITY OF BREMERTON PROJECT NUMBER: 879



PLAN
SCALE IN FEET
0 5 10

GENERAL NOTES:

1. REFER TO SHEET G2 FOR ABBREVIATIONS. STATION AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. RADIUS CALLOUTS ARE AT FACE OF CURB.
3. LIMIT OPEN EXCAVATION TO 25 FEET IN LENGTH.
4. ALL CURBS ARE 6" HIGH, UNLESS OTHERWISE NOTED.
5. ROADWAY RESTORATION SHALL BE PER COB STD DETAIL 3004.

CONSTRUCTION KEY NOTES:

1. CEMENT CONC. TRAFFIC CURB & GUTTER TYPE A PER COB STD DETAIL 3131
2. CEMENT CONC. TRAFFIC CURB TYPE C-1 PER COB STD DETAIL 3133
3. ROADWAY RESTORATION PER COB STD DETAIL 3004
4. CEMENT CONC. PAVEMENT AND CEMENT CONC. TRAFFIC CURB, PER DETAIL 4/D3
5. 6" CSTC

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

BASIN 1 ASPHALT

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
1000	STA 103+22.79	17.86' LT	188.41	EX, FL, PC
1001	STA 103+36.77	17.83' LT	188.15	FL
1002	STA 103+62.09	16.98' LT	188.11	FL, PT
1003	STA 103+67.73	16.72' LT	188.11	FL
1004	STA 103+86.93	16.46' LT	188.07	FL
1005	STA 104+06.95	17.24' LT	187.79	FL
1006	STA 104+10.27	17.47' LT	187.77	FL, PC
1007	STA 104+21.09	17.86' LT	187.64	FL, PT
1008	STA 104+25.92	17.85' LT	187.67	FL
1009	STA 104+55.97	17.84' LT	187.80	EX, FL
1010	STA 104+31.90	16.35' LT	187.79	AP, EX, TA
1011	STA 104+31.90	0.00' CT	188.32	EX, TA
1012	STA 104+31.90	16.92' RT	187.74	AP, EX, TA
1013	STA 104+15.81	22.49' RT	187.50	AP, EX, TA
1014	STA 104+03.94	36.11' RT	188.35	AP, EX, TA
1015	STA 103+90.11	29.35' RT	188.39	AP, EX, TA

BASIN 1 ASPHALT

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
1016	STA 103+89.90	20.37' RT	188.20	EX, TA
1017	STA 103+89.47	0.37' RT	188.39	AP, EX, TA
1018	STA 103+62.73	0.00' CT	188.71	AP, EX, TA
1019	STA 103+47.42	0.14' RT	188.83	EX, TA
1020	STA 103+40.05	0.00' CT	188.88	AP, EX, TA
1021	STA 103+28.51	0.00' RT	188.99	AP, EX, TA
1022	STA 104+07.99	0.02' LT	187.75	TA

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
GR1

BRENA 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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

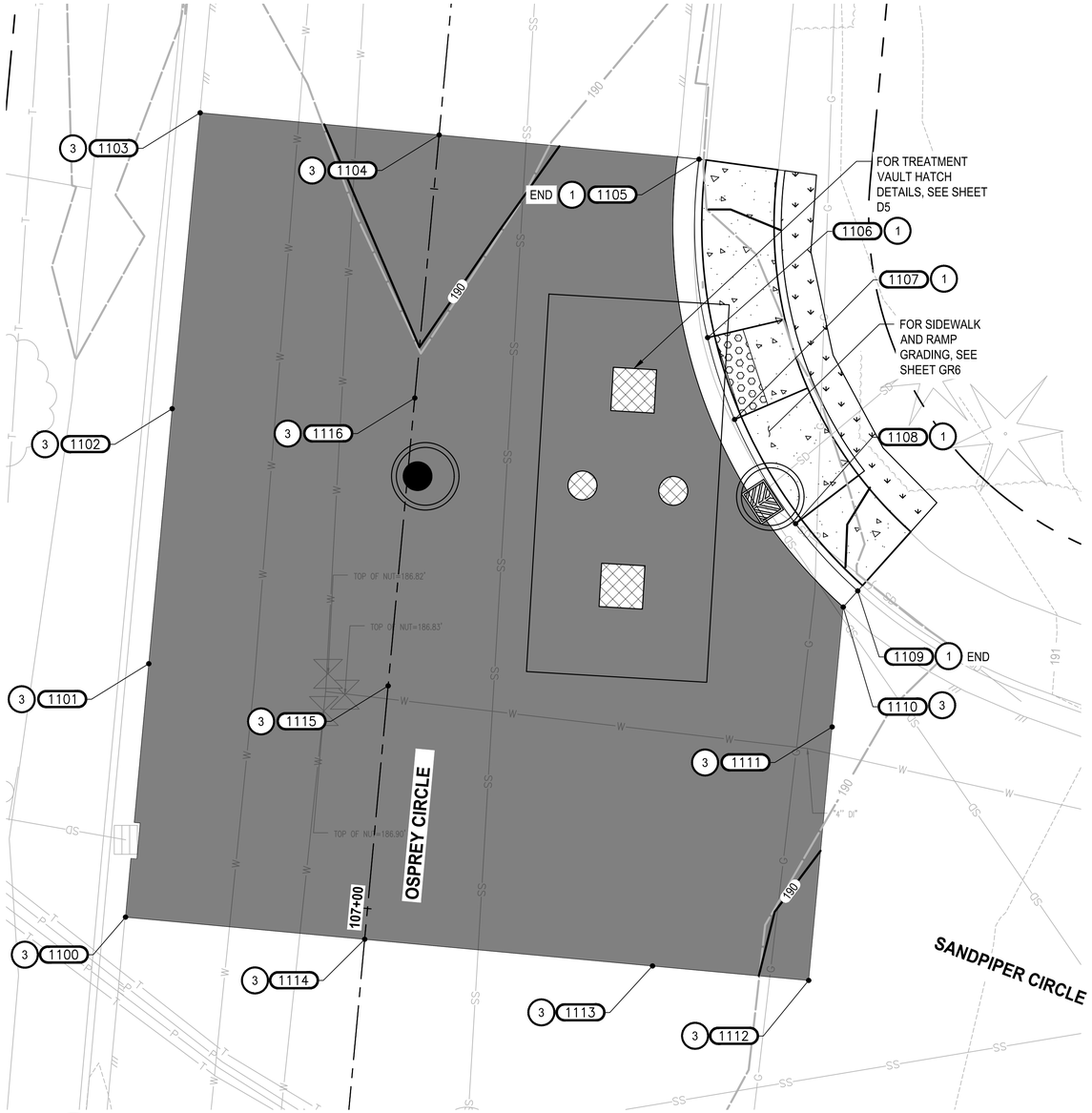
KITSAP LAKE STORMWATER TREATMENT RETROFIT

BASIN 1 ROADWAY GRADING PLAN

PN: 233-1896-193
DATE 07/11/24
SHEET 13 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LAKE\TRFR\NALDES\GN\95\VCS\CAD\DWG\PS1896193-GR1.DWG PLOTTED BY:ODEGACOO DATE:7/11/2024 7:24 AM



PLAN
SCALE IN FEET
0 5 10

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

GENERAL NOTES:

1. REFER TO SHEET G2 FOR ABBREVIATIONS. STATION AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. RADIUS CALLOUTS ARE AT FACE OF CURB.
3. LIMIT OPEN EXCAVATION TO 25 FEET IN LENGTH.
4. ALL CURBS ARE 6" HIGH, UNLESS OTHERWISE NOTED.
5. ROADWAY RESTORATION SHALL BE PER COB STD DETAIL 3004.

CONSTRUCTION KEY NOTES:

1. CEMENT CONC. TRAFFIC CURB & GUTTER TYPE A PER COB STD DETAIL 3131
2. CEMENT CONC. TRAFFIC CURB TYPE C-1 PER COB STD DETAIL 3133
3. ROADWAY RESTORATION PER COB STD DETAIL 3004
4. CEMENT CONC. PAVEMENT AND CEMENT CONC. TRAFFIC CURB, PER DETAIL 4/D3
5. 6" CSTC

BASIN 2 ASPHALT

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
1100	STA 106+97.86	16.62' LT	189.09	AP, EX, TA
1101	STA 107+15.47	16.63' LT	189.25	EX, TA
1102	STA 107+33.18	16.65' LT	189.42	EX, TA
1103	STA 107+53.75	16.61' LT	189.73	AP, EX, TA
1104	STA 107+53.75	0.00' CT	190.25	EX, TA
1105	STA 107+53.73	18.06' RT	189.71	AP, EX, FL
1106	STA 107+41.50	19.79' RT	189.59	FL
1107	STA 107+36.03	22.17' RT	189.43	FL
1108	STA 107+29.24	27.04' RT	189.37	FL
1109	STA 107+25.01	31.75' RT	189.55	EX, FL

BASIN 2 ASPHALT

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
1110	STA 107+23.80	30.85' RT	189.53	AP, EX, TA
1111	STA 107+15.47	30.85' RT	189.79	EX, TA
1112	STA 106+97.86	30.85' RT	190.22	AP, EX, TA
1113	STA 106+97.86	20.00' RT	189.53	EX, TA
1114	STA 106+97.86	0.00' CT	189.46	EX, TA
1115	STA 107+15.47	0.00' CT	189.11	TA
1116	STA 107+35.47	0.00' CT	189.94	TA

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
GR2

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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. # *48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT

BASIN 2 ROADWAY GRADING PLAN

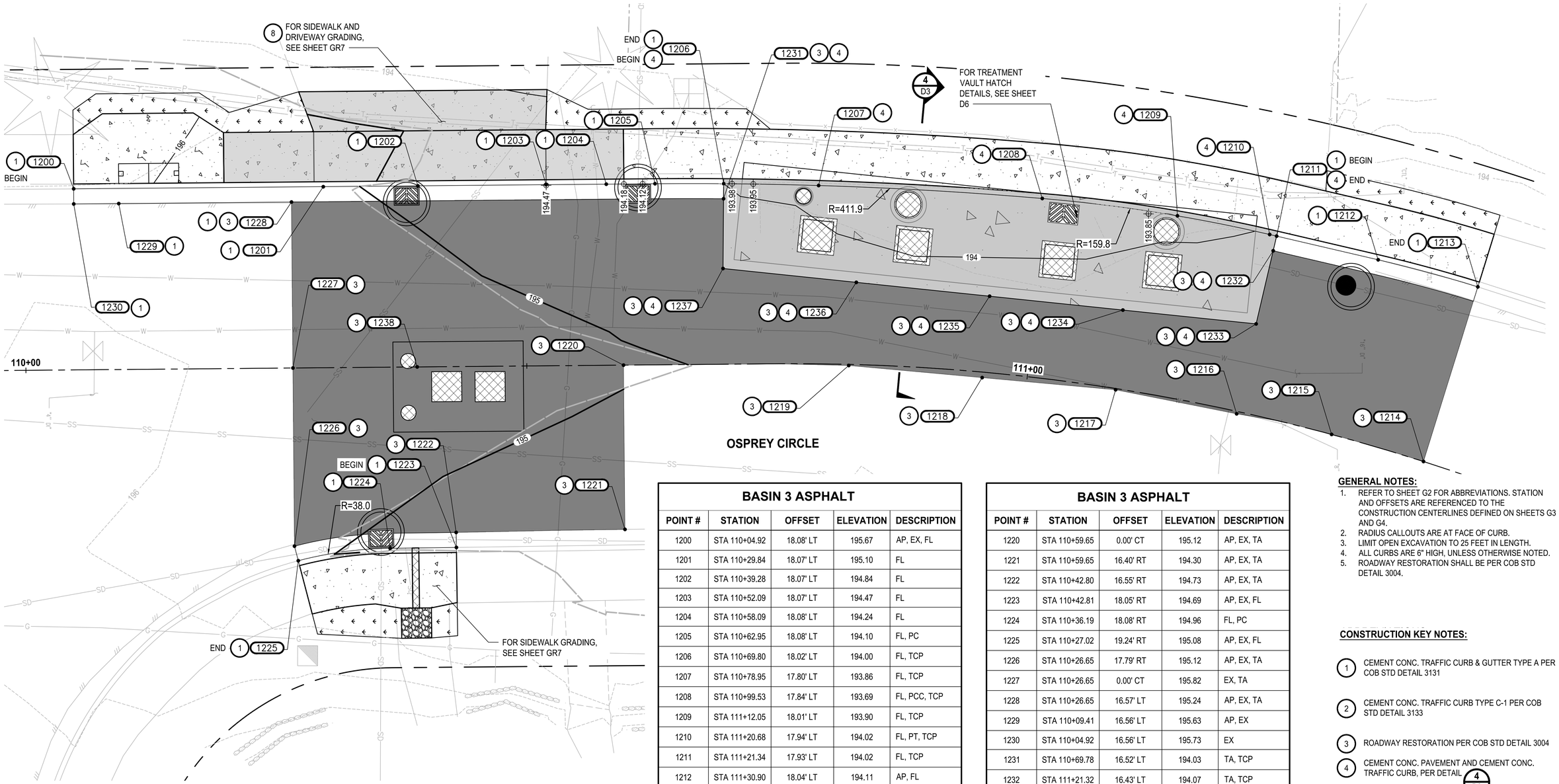
PN: 233-1896-193

DATE 07/11/24

SHEET 14 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LAKE\STRFINAL\DESIGN\GRS\VCS\CAD\DWG\PS1896193-GR1.DWG PLOTTED BY: ODEGACOO DATE:7/11/2024 7:24 AM



PLAN

SCALE IN FEET

0 5 10

811

Know what's **below.**
Call before you dig.

Determina lo que esta **bajo tierra.**
Llama antes de excavar.

BASIN 3 ASPHALT

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
1200	STA 110+04.92	18.08' LT	195.67	AP, EX, FL
1201	STA 110+29.84	18.07' LT	195.10	FL
1202	STA 110+39.28	18.07' LT	194.84	FL
1203	STA 110+52.09	18.07' LT	194.47	FL
1204	STA 110+58.09	18.08' LT	194.24	FL
1205	STA 110+62.95	18.08' LT	194.10	FL, PC
1206	STA 110+69.80	18.02' LT	194.00	FL, TCP
1207	STA 110+78.95	17.80' LT	193.86	FL, TCP
1208	STA 110+99.53	17.84' LT	193.69	FL, PCC, TCP
1209	STA 111+12.05	18.01' LT	193.90	FL, TCP
1210	STA 111+20.68	17.94' LT	194.02	FL, PT, TCP
1211	STA 111+21.34	17.93' LT	194.02	FL, TCP
1212	STA 111+30.90	18.04' LT	194.11	AP, FL
1213	STA 111+40.37	18.25' LT	194.25	AP, EX, FL
1214	STA 111+40.51	0.00' CT	194.72	AP, EX, TA
1215	STA 110+30.95	0.00' CT	194.64	AP, EX, TA
1216	STA 111+21.24	0.25' RT	194.59	EX, TA
1217	STA 111+08.92	0.12' RT	194.59	AP, EX, TA
1218	STA 110+95.52	0.55' RT	194.65	EX, TA
1219	STA 110+82.13	0.11' RT	194.41	AP, EX, TA

BASIN 3 ASPHALT

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
1220	STA 110+59.65	0.00' CT	195.12	AP, EX, TA
1221	STA 110+59.65	16.40' RT	194.30	AP, EX, TA
1222	STA 110+42.80	16.55' RT	194.73	AP, EX, TA
1223	STA 110+42.81	18.05' RT	194.69	AP, EX, FL
1224	STA 110+36.19	18.08' RT	194.96	FL, PC
1225	STA 110+27.02	19.24' RT	195.08	AP, EX, FL
1226	STA 110+26.65	17.79' RT	195.12	AP, EX, TA
1227	STA 110+26.65	0.00' CT	195.82	EX, TA
1228	STA 110+26.65	16.57' LT	195.24	AP, EX, TA
1229	STA 110+09.41	16.56' LT	195.63	AP, EX
1230	STA 110+04.92	16.56' LT	195.73	EX
1231	STA 110+69.78	16.52' LT	194.03	TA, TCP
1232	STA 111+21.32	16.43' LT	194.07	TA, TCP
1233	STA 111+21.23	8.93' LT	194.30	TA, TCP
1234	STA 111+08.42	7.85' LT	194.26	TA, TCP
1235	STA 110+95.53	7.60' LT	194.24	TA, TCP
1236	STA 110+82.66	8.20' LT	194.14	TA, TCP
1237	STA 110+69.66	9.56' LT	194.44	TA, TCP
1238	STA 110+39.05	0.00' CT	195.53	TA

GENERAL NOTES:

1. REFER TO SHEET G2 FOR ABBREVIATIONS. STATION AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. RADIUS CALLOUTS ARE AT FACE OF CURB.
3. LIMIT OPEN EXCAVATION TO 25 FEET IN LENGTH.
4. ALL CURBS ARE 6" HIGH, UNLESS OTHERWISE NOTED.
5. ROADWAY RESTORATION SHALL BE PER COB STD DETAIL 3004.

CONSTRUCTION KEY NOTES:

1. CEMENT CONC. TRAFFIC CURB & GUTTER TYPE A PER COB STD DETAIL 3131
2. CEMENT CONC. TRAFFIC CURB TYPE C-1 PER COB STD DETAIL 3133
3. ROADWAY RESTORATION PER COB STD DETAIL 3004
4. CEMENT CONC. PAVEMENT AND CEMENT CONC. TRAFFIC CURB, PER DETAIL 4 D3
5. 6" CSTC

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION

GR3

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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT

BASIN 3 ROADWAY GRADING PLAN

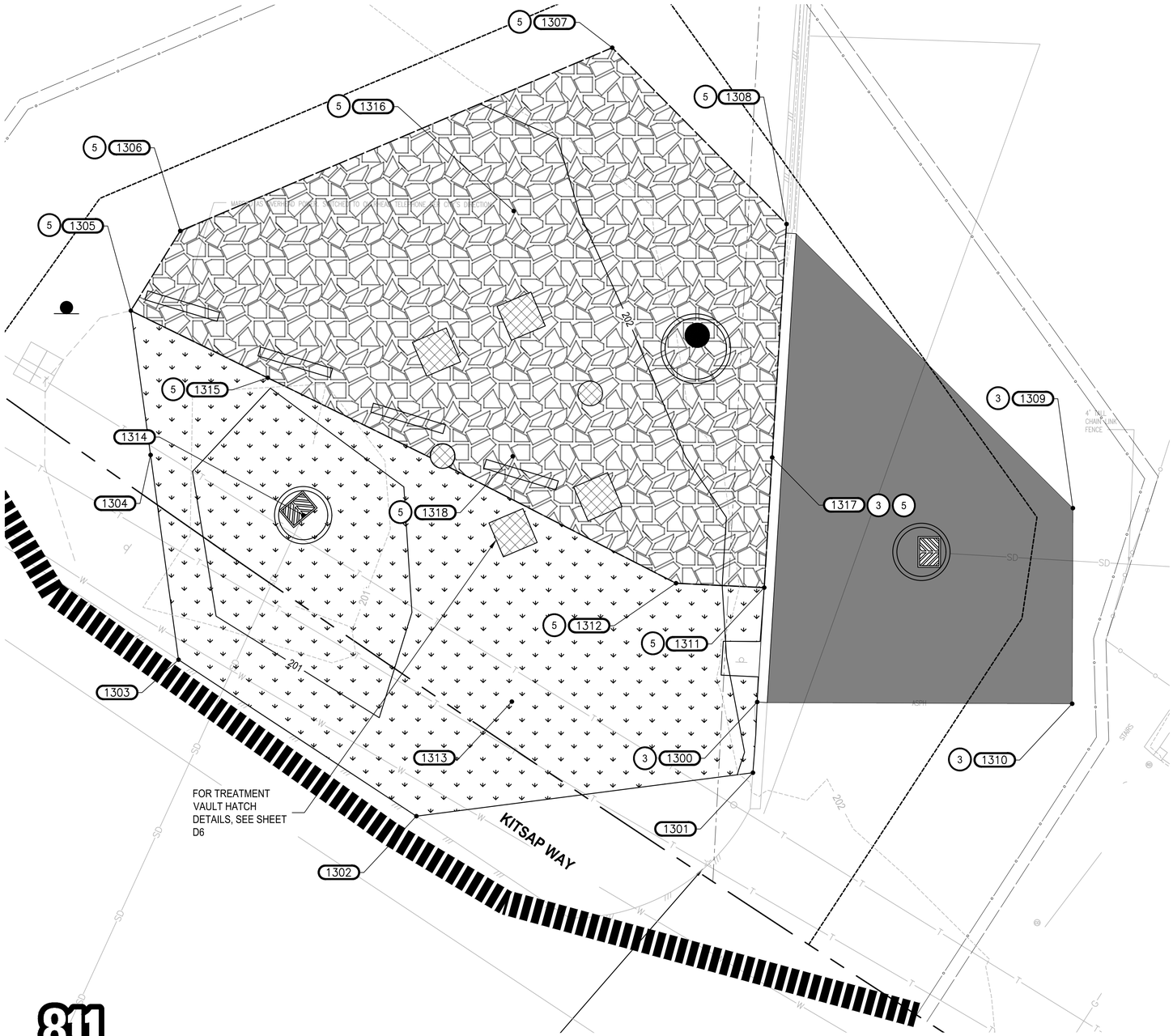
PN: 233-1896-193

DATE 07/11/24

SHEET 15 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LKSTRFNWL\DESIGN\96SVCS\CADD\DWGFIS1896193-GR1.DWG PLOTTED BY:ODEGACOO DATE:7/11/2024 7:24 AM



PLAN
SCALE IN FEET
0 5 10

N

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

GENERAL NOTES:

1. REFER TO SHEET G2 FOR ABBREVIATIONS.
2. STATION AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
3. RADIUS CALLOUTS ARE AT FACE OF CURB.
4. LIMIT OPEN EXCAVATION TO 25 FEET IN LENGTH.
5. ALL CURBS ARE 6" HIGH, UNLESS OTHERWISE NOTED.
6. ROADWAY RESTORATION SHALL BE PER COB STD DETAIL 3004.

CONSTRUCTION KEY NOTES:

1. CEMENT CONC. TRAFFIC CURB & GUTTER TYPE A PER COB STD DETAIL 3131
2. CEMENT CONC. TRAFFIC CURB TYPE C-1 PER COB STD DETAIL 3133
3. ROADWAY RESTORATION PER COB STD DETAIL 3004
4. CEMENT CONC. PAVEMENT AND CEMENT CONC. TRAFFIC CURB, PER DETAIL 4/D3
5. 6" CSTC

BASIN 4 GRADING

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
1300	STA 208+83.15	64.32' RT	202.20	EX,LS, TA
1301	STA 208+80.40	59.24' RT	202.04	AP, EX, LS
1302	STA 209+01.84	41.76' RT	201.18	AP, EX, LS
1303	STA 209+25.04	42.37' RT	201.16	AP, EX, LS
1304	STA 209+35.78	55.35' RT	201.14	EX, LS
1305	STA 209+43.35	64.49' RT	201.21	AP, EX, GR, LS
1306	STA 209+43.36	72.14' RT	201.32	AP, EX, GR
1307	STA 209+21.33	103.41' RT	202.30	AP, EX, GR
1308	STA 209+01.67	98.69' RT	202.75	AP, EX, GR, TA
1309	STA 208+69.62	91.32' RT	202.42	AP, EX, TA
1310	STA 208+61.26	77.75' RT	202.46	AP, EX, TA
1311	STA 208+87.58	72.55' RT	202.30	GR, LS, TA
1312	STA 208+93.88	69.06' RT	201.67	AP, GR, LS
1313	STA 209+00.15	53.80' RT	201.34	LS
1314	STA 209+22.62	57.74' RT	200.63	LS
1315	STA 209+30.99	65.73' RT	201.03	GR, LS
1316	STA 209+21.13	87.86' RT	201.76	GR
1317	STA 208+92.62	81.91' RT	202.30	GR, TA
1318	STA 209+10.64	70.83' RT	201.40	GR

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
GR4

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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT

BASIN 4 ROADWAY GRADING PLAN

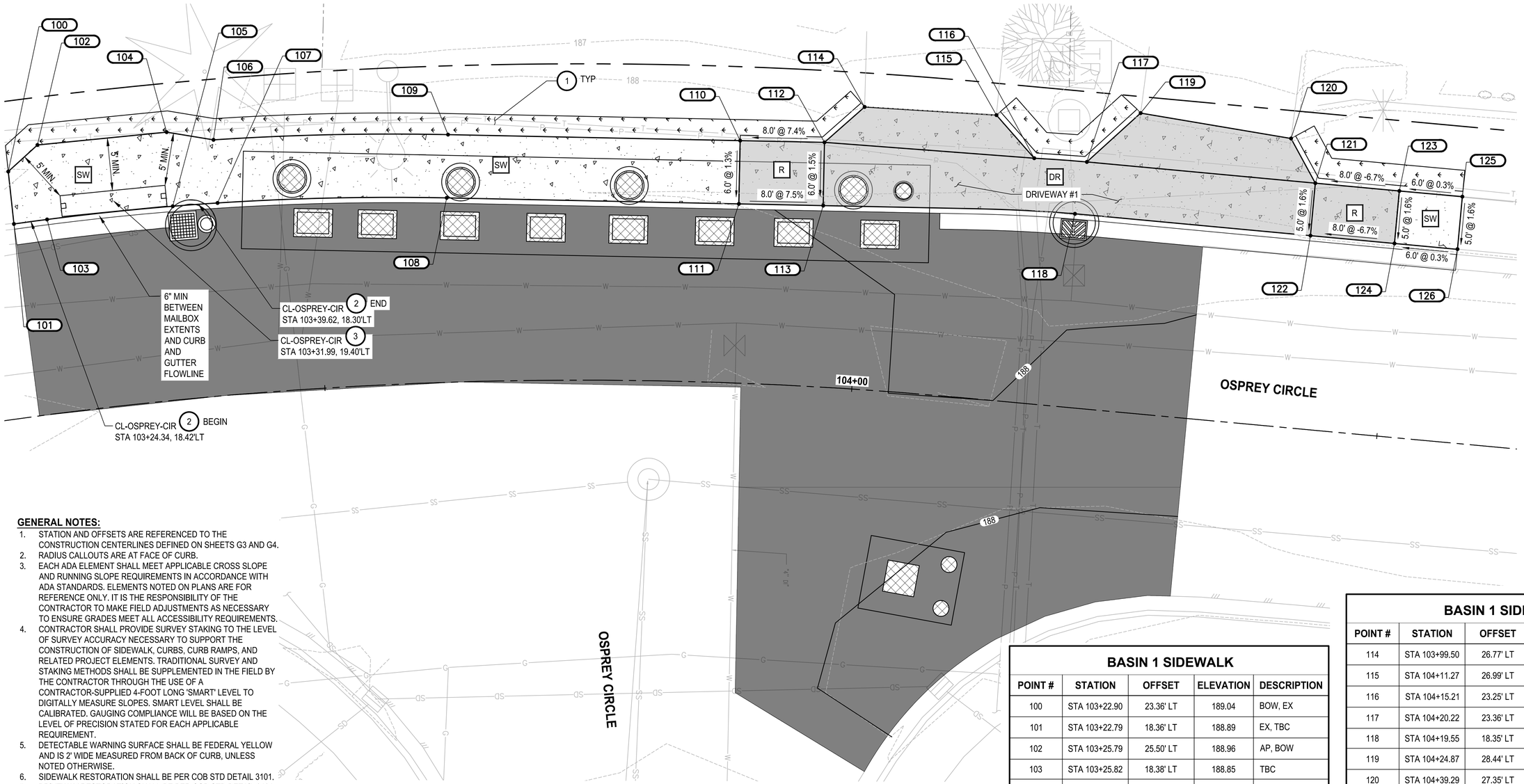
PN: 233-1896-193

DATE 07/11/24

SHEET 16 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LK STRM\NALDESIGN\09SV\CS\CADD\DWG\PS1896193-GR1.DWG PLOTTED BY: ODEGACOO DATE: 7/15/2024 2:45 PM



GENERAL NOTES:

1. STATION AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. RADIUS CALLOUTS ARE AT FACE OF CURB.
3. EACH ADA ELEMENT SHALL MEET APPLICABLE CROSS SLOPE AND RUNNING SLOPE REQUIREMENTS IN ACCORDANCE WITH ADA STANDARDS. ELEMENTS NOTED ON PLANS ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE FIELD ADJUSTMENTS AS NECESSARY TO ENSURE GRADES MEET ALL ACCESSIBILITY REQUIREMENTS.
4. CONTRACTOR SHALL PROVIDE SURVEY STAKING TO THE LEVEL OF SURVEY ACCURACY NECESSARY TO SUPPORT THE CONSTRUCTION OF SIDEWALK, CURBS, CURB RAMPS, AND RELATED PROJECT ELEMENTS. TRADITIONAL SURVEY AND STAKING METHODS SHALL BE SUPPLEMENTED IN THE FIELD BY THE CONTRACTOR THROUGH THE USE OF A CONTRACTOR-SUPPLIED 4-FOOT LONG 'SMART' LEVEL TO DIGITALLY MEASURE SLOPES. SMART LEVEL SHALL BE CALIBRATED. GAUGING COMPLIANCE WILL BE BASED ON THE LEVEL OF PRECISION STATED FOR EACH APPLICABLE REQUIREMENT.
5. DETECTABLE WARNING SURFACE SHALL BE FEDERAL YELLOW AND IS 2' WIDE MEASURED FROM BACK OF CURB, UNLESS NOTED OTHERWISE.
6. SIDEWALK RESTORATION SHALL BE PER COB STD DETAIL 3101.
7. DRIVEWAY RESTORATION SHALL BE PER COB STD DETAIL 3121.
8. MAILBOX STATION AND OFFSET CALLOUTS INDICATE THE APPROXIMATE CENTER OF THE MAILBOX.
9. RESTORATION LIMITS ARE INDICATED BY CLEARING AND GRUBBING LIMITS UNLESS OTHERWISE NOTED. SEE DEMOLITION SHEETS FOR CLEARING AND GRUBBING LIMITS. SEE SPECIAL PROVISIONS FOR TOPSOIL HYDROSEED MIX.

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

LEGEND:

L	LANDING	DR	DRIVEWAY
R	RAMP	SW	SIDEWALK

CONSTRUCTION KEY NOTES:

1. 4" TOPSOIL TYPE A AND HYDROSEED
2. PAINT CEMENT CONC. TRAFFIC CURB RED WITH 3" "NO PARKING" WHITE LETTERING, MATCH EXISTING
3. PERMANENT MAILBOX INSTALLATION PER DETAIL 3/D3

PLAN
SCALE IN FEET
0 5 10

BASIN 1 SIDEWALK

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
100	STA 103+22.90	23.36' LT	189.04	BOW, EX
101	STA 103+22.79	18.36' LT	188.89	EX, TBC
102	STA 103+25.79	25.50' LT	188.96	AP, BOW
103	STA 103+25.82	18.38' LT	188.85	TBC
104	STA 103+37.35	25.38' LT	188.76	AP, BOW
105	STA 103+37.26	18.33' LT	188.65	TBC
106	STA 103+41.44	24.26' LT	188.72	AP, BOW
107	STA 103+41.33	18.26' LT	188.64	TBC
108	STA 103+62.11	17.48' LT	188.60	PT, TBC
109	STA 103+62.41	23.47' LT	188.68	PT, BOW
110	STA 103+88.56	22.99' LT	188.63	BOW, TOR
111	STA 103+88.65	16.99' LT	188.55	TBC, TOR
112	STA 103+96.12	23.19' LT	188.04	AP, BOR, BOW
113	STA 103+96.32	17.19' LT	187.95	BOR, TBC

BASIN 1 SIDEWALK

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
114	STA 103+99.50	26.77' LT	188.00	AP, EX
115	STA 104+11.27	26.99' LT	188.00	AP, EX
116	STA 104+15.21	23.25' LT	187.76	AP, BOW
117	STA 104+20.22	23.36' LT	187.71	AP, BOW
118	STA 104+19.55	18.35' LT	187.65	TBC
119	STA 104+24.87	28.44' LT	187.90	AP, EX
120	STA 104+39.29	27.35' LT	187.90	AP, EX
121	STA 104+41.98	23.35' LT	187.83	AP, BOW, FOR
122	STA 104+41.97	18.35' LT	187.75	TBC, FOR
123	STA 104+49.98	23.34' LT	188.37	BOR, BOW
124	STA 104+49.98	18.34' LT	188.29	BOR, TBC
125	STA 104+55.98	23.36' LT	188.35	EX, BOW
126	STA 104+55.98	18.36' LT	188.27	EX, TBC

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
GR5

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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT

BASIN 1 DRIVEWAY & SIDEWALK GRADING PLAN

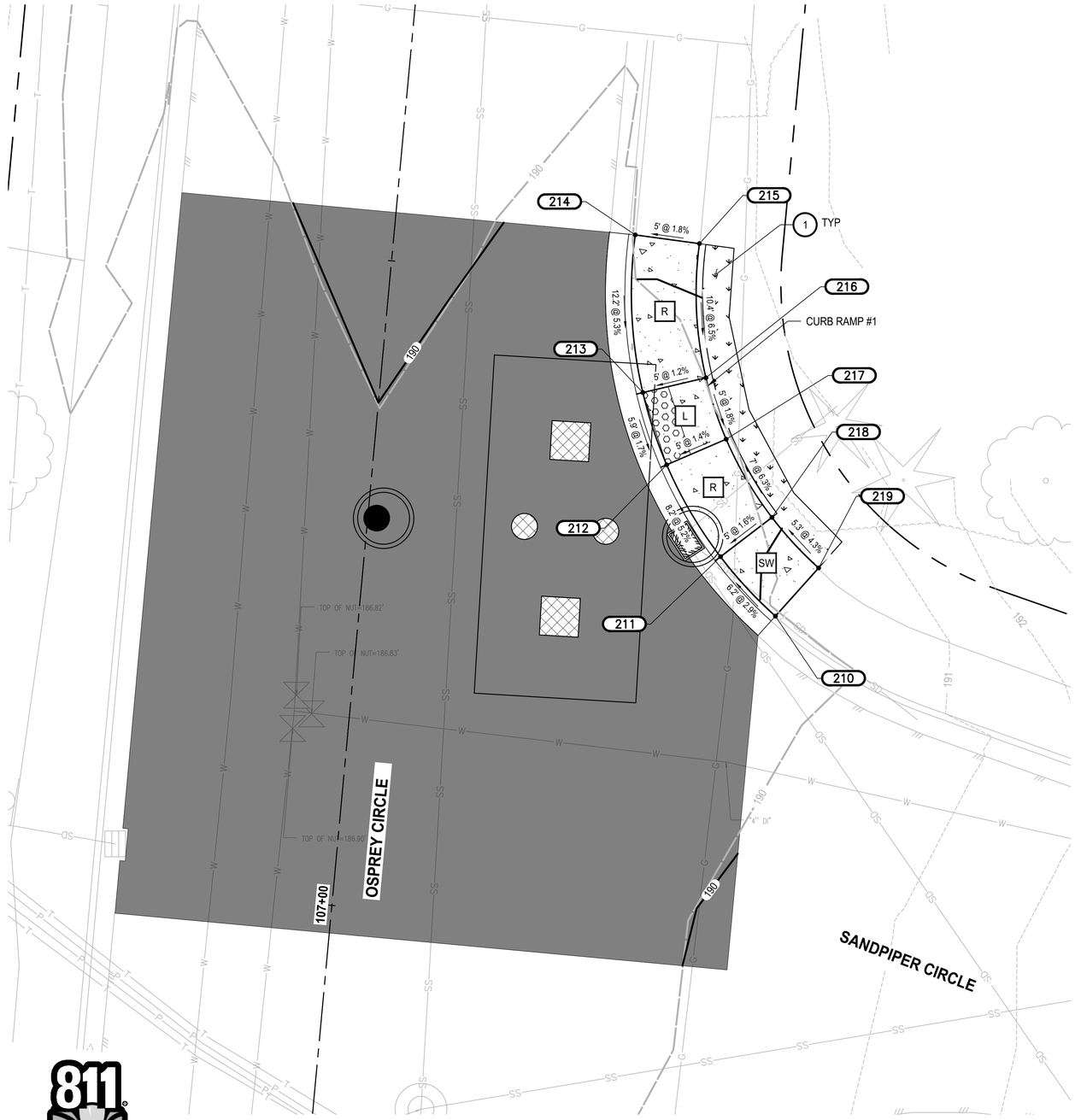
PN: 233-1696-193

DATE 07/11/24

SHEET 17 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1696-CITY OF BREMERTON\233-1696-193 KITSAP LAKE\PRF\NALDESIGN\395VCS\CADD\DWG\PS1696193-GR1.DWG PLOTTED BY: ODEGA\CDO DATE:7/11/2024 7:24 AM



GENERAL NOTES:

1. STATION AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. RADIUS CALLOUTS ARE AT FACE OF CURB.
3. EACH ADA ELEMENT SHALL MEET APPLICABLE CROSS SLOPE AND RUNNING SLOPE REQUIREMENTS IN ACCORDANCE WITH ADA STANDARDS. ELEMENTS NOTED ON PLANS ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE FIELD ADJUSTMENTS AS NECESSARY TO ENSURE GRADES MEET ALL ACCESSIBILITY REQUIREMENTS.
4. CONTRACTOR SHALL PROVIDE SURVEY STAKING TO THE LEVEL OF SURVEY ACCURACY NECESSARY TO SUPPORT THE CONSTRUCTION OF SIDEWALK, CURBS, CURB RAMPS, AND RELATED PROJECT ELEMENTS. TRADITIONAL SURVEY AND STAKING METHODS SHALL BE SUPPLEMENTED IN THE FIELD BY THE CONTRACTOR THROUGH THE USE OF A CONTRACTOR-SUPPLIED 4-FOOT LONG 'SMART' LEVEL TO DIGITALLY MEASURE SLOPES. SMART LEVEL SHALL BE CALIBRATED. GAUGING COMPLIANCE WILL BE BASED ON THE LEVEL OF PRECISION STATED FOR EACH APPLICABLE REQUIREMENT.
5. DETECTABLE WARNING SURFACE SHALL BE FEDERAL YELLOW AND IS 2' WIDE MEASURED FROM BACK OF CURB, UNLESS NOTED OTHERWISE.
6. SIDEWALK RESTORATION SHALL BE PER COB STD DETAIL 3101.
7. DRIVEWAY RESTORATION SHALL BE PER COB STD DETAIL 3121.
8. MAILBOX STATION AND OFFSET CALLOUTS INDICATE THE APPROXIMATE CENTER OF THE MAILBOX.
9. RESTORATION LIMITS ARE INDICATED BY CLEARING AND GRUBBING LIMITS UNLESS OTHERWISE NOTED. SEE DEMOLITION SHEETS FOR CLEARING AND GRUBBING LIMITS. SEE SPECIAL PROVISIONS FOR TOPSOIL HYDROSEED MIX.

LEGEND:

L	LANDING	DR	DRIVEWAY
R	RAMP	SW	SIDEWALK

CONSTRUCTION KEY NOTES:

1. 4" TOPSOIL TYPE A AND HYDROSEED
2. PAINT CEMENT CONC. TRAFFIC CURB RED WITH 3" "NO PARKING" WHITE LETTERING, MATCH EXISTING
3. PERMANENT MAILBOX INSTALLATION PER DETAIL 3/D3

BASIN 2 SIDEWALK

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
210	STA 107+25.41	32.05' RT	190.05	EX, TBC
211	STA 107+29.58	27.40' RT	189.87	TBC, TOR
212	STA 107+36.27	22.61' RT	189.44	BOR, FOL
213	STA 107+41.66	20.26' RT	189.54	BOR, FOL
214	STA 107+53.73	18.56' RT	190.18	EX, TOR
215	STA 107+53.51	23.56' RT	190.27	EX, TOR
216	STA 107+43.25	25.00' RT	189.60	BOL, BOR
217	STA 107+38.66	27.00' RT	189.51	BOL, BOR
218	STA 107+32.97	31.08' RT	189.95	BOW, TOR
219	STA 107+29.42	35.03' RT	190.18	BOW, EX

PLAN
SCALE IN FEET
0 5 10

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

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
GR6

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: 07/11/24
DESIGN BY: B. TUMBLING WASH. P.E. #20123355 DATE:07/11/24
CHECKED BY: J. WRIGHT WASH. P.E. # 48258 DATE:07/11/24

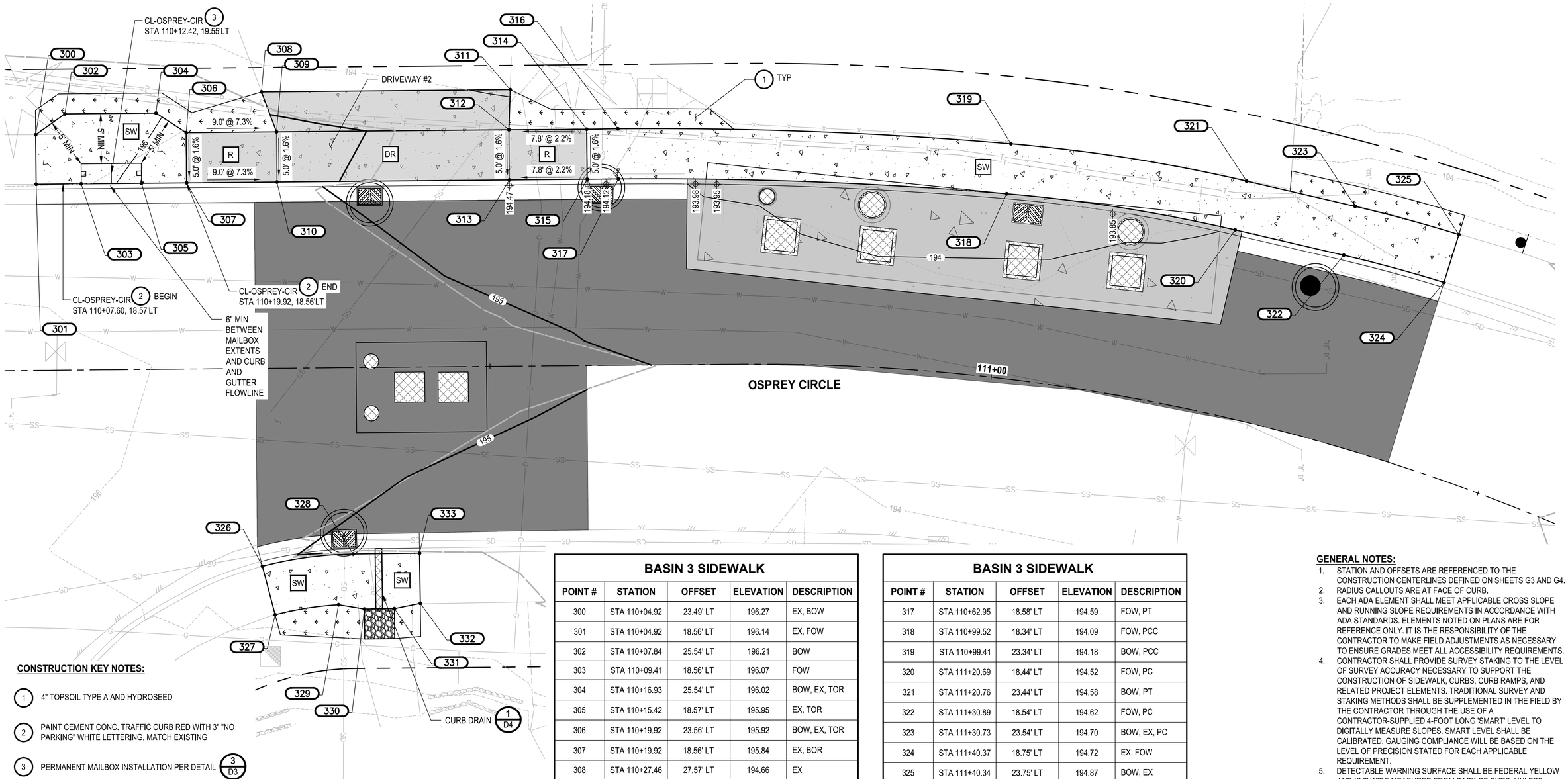
KITSAP LAKE STORMWATER TREATMENT RETROFIT

BASIN 2 DRIVEWAY & SIDEWALK GRADING PLAN

PN: 233-1896-193
DATE 07/11/24
SHEET 18 OF 29

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAPLKSTRFRNALDESIGN\09SV\CS\CADD\DWG\PS1896193-GR1.DWG PLOTTED BY: ODEGACOO DATE:7/11/2024 7:24 AM

CITY OF BREMERTON PROJECT NUMBER: 879



CONSTRUCTION KEY NOTES:

1. 4" TOPSOIL TYPE A AND HYDROSEED
2. PAINT CEMENT CONC. TRAFFIC CURB RED WITH 3" "NO PARKING" WHITE LETTERING, MATCH EXISTING
3. PERMANENT MAILBOX INSTALLATION PER DETAIL 3 D3

LEGEND:

L	LANDING	DR	DRIVEWAY
R	RAMP	SW	SIDEWALK

PLAN
SCALE IN FEET
0 5 10

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

BASIN 3 SIDEWALK

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
300	STA 110+04.92	23.49' LT	196.27	EX, BOW
301	STA 110+04.92	18.56' LT	196.14	EX, FOW
302	STA 110+07.84	25.54' LT	196.21	BOW
303	STA 110+09.41	18.56' LT	196.07	FOW
304	STA 110+16.93	25.54' LT	196.02	BOW, EX, TOR
305	STA 110+15.42	18.57' LT	195.95	EX, TOR
306	STA 110+19.92	23.56' LT	195.92	BOW, EX, TOR
307	STA 110+19.92	18.56' LT	195.84	EX, BOR
308	STA 110+27.46	27.57' LT	194.66	EX
309	STA 110+28.92	23.57' LT	195.26	BOR, EX
310	STA 110+28.92	18.57' LT	195.18	BOR, FOW
311	STA 110+52.25	27.57' LT	193.87	EX
312	STA 110+52.08	23.57' LT	194.59	BOR, EX
313	STA 110+52.09	18.57' LT	194.51	BOR, FOW
314	STA 110+59.84	23.56' LT	194.76	AP, BOW, TOR
315	STA 110+59.85	18.58' LT	194.68	TOR, FOW
316	STA 110+62.95	23.58' LT	194.67	FOW

BASIN 3 SIDEWALK

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
317	STA 110+62.95	18.58' LT	194.59	FOW, PT
318	STA 110+99.52	18.34' LT	194.09	FOW, PCC
319	STA 110+99.41	23.34' LT	194.18	BOW, PCC
320	STA 111+20.69	18.44' LT	194.52	FOW, PC
321	STA 111+20.76	23.44' LT	194.58	BOW, PT
322	STA 111+30.89	18.54' LT	194.62	FOW, PC
323	STA 111+30.73	23.54' LT	194.70	BOW, EX, PC
324	STA 111+40.37	18.75' LT	194.72	EX, FOW
325	STA 111+40.34	23.75' LT	194.87	BOW, EX
326	STA 110+27.14	19.72' RT	195.54	EX, FL
327	STA 110+28.37	24.57' RT	195.77	BOW, EX
328	STA 110+36.20	18.58' RT	195.46	FL, PT
329	STA 110+34.69	23.62' RT	195.55	AP, BOW
330	STA 110+37.26	24.07' RT	195.50	AP, BOW
331	STA 110+40.26	24.06' RT	195.37	AP, BOW
332	STA 110+42.84	23.55' RT	195.35	BOW, EX
333	STA 110+42.81	18.55' RT	195.16	EX, FL

GENERAL NOTES:

1. STATION AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. RADIUS CALLOUTS ARE AT FACE OF CURB.
3. EACH ADA ELEMENT SHALL MEET APPLICABLE CROSS SLOPE AND RUNNING SLOPE REQUIREMENTS IN ACCORDANCE WITH ADA STANDARDS. ELEMENTS NOTED ON PLANS ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE FIELD ADJUSTMENTS AS NECESSARY TO ENSURE GRADES MEET ALL ACCESSIBILITY REQUIREMENTS.
4. CONTRACTOR SHALL PROVIDE SURVEY STAKING TO THE LEVEL OF SURVEY ACCURACY NECESSARY TO SUPPORT THE CONSTRUCTION OF SIDEWALK, CURBS, CURB RAMPS, AND RELATED PROJECT ELEMENTS. TRADITIONAL SURVEY AND STAKING METHODS SHALL BE SUPPLEMENTED IN THE FIELD BY THE CONTRACTOR THROUGH THE USE OF A CONTRACTOR-SUPPLIED 4-FOOT LONG 'SMART' LEVEL TO DIGITALLY MEASURE SLOPES. SMART LEVEL SHALL BE CALIBRATED. GAUGING COMPLIANCE WILL BE BASED ON THE LEVEL OF PRECISION STATED FOR EACH APPLICABLE REQUIREMENT.
5. DETECTABLE WARNING SURFACE SHALL BE FEDERAL YELLOW AND IS 2' WIDE MEASURED FROM BACK OF CURB, UNLESS NOTED OTHERWISE.
6. SIDEWALK RESTORATION SHALL BE PER COB STD DETAIL 3101.
7. DRIVEWAY RESTORATION SHALL BE PER COB STD DETAIL 3121.
8. MAILBOX STATION AND OFFSET CALLOUTS INDICATE THE APPROXIMATE CENTER OF THE MAILBOX.
9. RESTORATION LIMITS ARE INDICATED BY CLEARING AND GRUBBING LIMITS UNLESS OTHERWISE NOTED. SEE DEMOLITION SHEETS FOR CLEARING AND GRUBBING LIMITS. SEE SPECIAL PROVISIONS FOR TOPSOIL HYDROSEED MIX.

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
GR7

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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT

BASIN 3 DRIVEWAY & SIDEWALK GRADING PLAN

PN: 233-1896-193

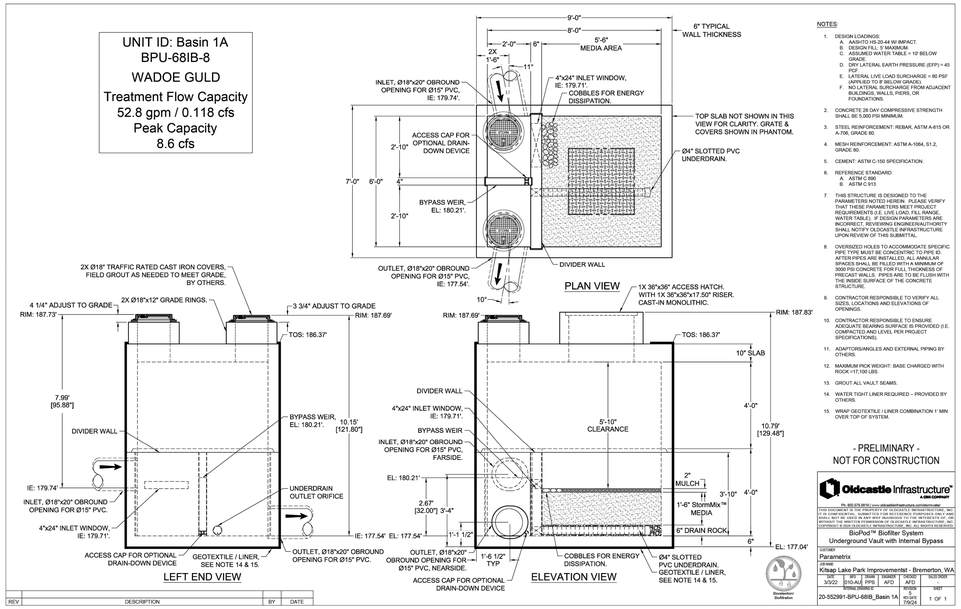
DATE 07/11/24

SHEET 19 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITY OF BREMERTON\233-1896-193 KITSAP LK STRF\FINAL DESIGN\96SVCS\CADD\DWGFS\1896193-GR1.DWG PLOTTED BY:ODEGACOO DATE:7/11/2024 7:24 AM

UNIT ID: Basin 1A
BPU-68IB-8
WADOE GULD
Treatment Flow Capacity
52.8 gpm / 0.118 cfs
Peak Capacity
8.6 cfs



NOTES

1. DESIGN LOADINGS:
   A. AASHTO HS-20-44 W/ IMPACT.
   B. DESIGN FILL: 0' MAXIMUM.
   C. ASSUMED WATER TABLE: 10' BELOW GROUND SURFACE.
   D. DRY LATERAL EARTH PRESSURE (EFP) = 45 PCF.
   E. LATERAL LIVE LOAD SURCHARGE = 80 PSF (APPLIED TO 8' BELOW GRADE).
   F. NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
2. CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 5,000 PSI MINIMUM.
3. STEEL REINFORCEMENT: REBAR, ASTM A-615 OR A-706, GRADE 60.
4. MESH REINFORCEMENT: ASTM A-1064, 51.2, GRADE 80.
5. CEMENT: ASTM C-150 SPECIFICATION.
6. REFERENCE STANDARD:
   A. ASTM C 890
   B. ASTM C 913
7. THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. PLEASE VERIFY THAT THESE PARAMETERS MEET OR EXCEED PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE INFRASTRUCTURE UPON REVIEW OF THIS SUBMITTAL.
8. OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3,000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS. PIPES ARE TO BE FLUSH WITH THE INSIDE SURFACE OF THE CONCRETE STRUCTURE.
9. CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS AND ELEVATIONS OF OPENINGS.
10. CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED AND LEVEL PER PROJECT SPECIFICATIONS).
11. ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.
12. MAXIMUM PICK WEIGHT: BASE CHARGED WITH VAULT, 27,800 LBS.
13. GROUT ALL VAULT SEAMS.
14. WATER TIGHT LINER REQUIRED – PROVIDED BY OTHERS.
15. WRAP GEOTEXTILE / LINER COMBINATION 1' MIN OVER TOP OF SYSTEM.

- PRELIMINARY -
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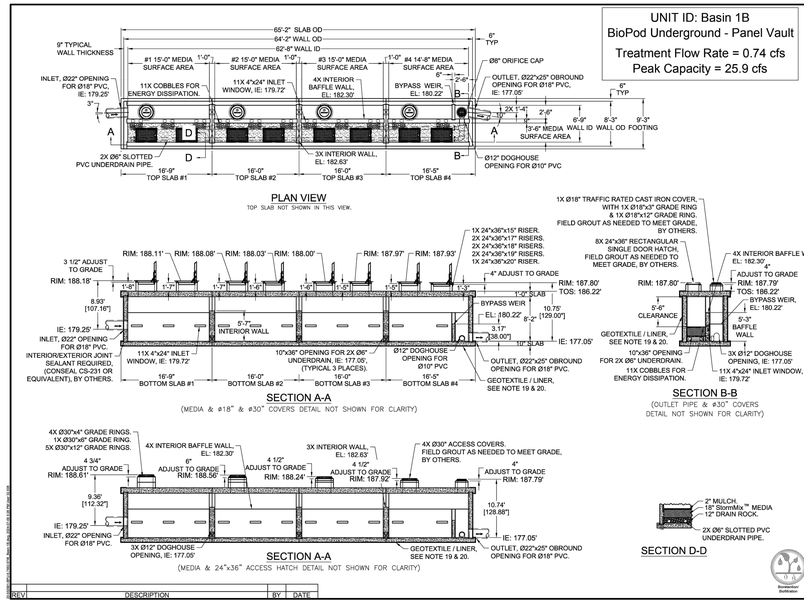
BioPod™ Biofilter System
Underground Vault with Internal Bypass

CUSTOMER: Parametrix
PROJECT NAME: Kitsap Lake Park Improvements - Bremerton, WA

DATE	BY	DRAWN	CHECKED	SALES DESIGN
3/3/22	[ESI-AU] PTS	AFD	AFD	SU21-0628
SHEET NUMBER		REVISION	SHEET	
20-552991-BPU-68IB_Basin 1A		REV DATE: 7/9/24	1 OF 1	

BIOPOD #1A
DETAIL
NO SCALE
1
C1

UNIT ID: Basin 1B
BioPod Underground - Panel Vault
Treatment Flow Rate = 0.74 cfs
Peak Capacity = 25.9 cfs



PLAN VIEW
TOP SLAB NOT SHOWN IN THIS VIEW.

SECTION A-A
(MEDIA & #18" & #30" COVERS DETAIL NOT SHOWN FOR CLARITY)

SECTION A-A
(MEDIA & 24"x36" ACCESS HATCH DETAIL NOT SHOWN FOR CLARITY)

SECTION D-D

NOTES

1. DESIGN LOADINGS:
   A. AASHTO HS-20-44 (WITH IMPACT).
   B. DESIGN SOIL COVER: 5'-0" MAXIMUM.
   C. ASSUMED WATER TABLE: 10' BELOW GRADE SURFACE.
   D. LATERAL EARTH PRESSURE: 45 PCF (DRAINED)
   E. LATERAL LIVE LOAD SURCHARGE: 80 PSF (APPLIED TO 8' BELOW GRADE).
   F. NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
2. CONCRETE 28-DAY MINIMUM COMPRESSIVE STRENGTH: 5,000 PSI MINIMUM.
3. REINFORCING: REBAR, ASTM A615/A706, GRADE 60
4. MESH REINFORCEMENT: ASTM A1064, 51.2, GRADE 80
5. CEMENT: ASTM C150
6. REQUIRED ALLOWABLE SOIL BEARING CAPACITY: 2,500 PSF
7. REFERENCE STANDARD:
   A. ASTM C890
   B. ASTM C913
   C. ACI 318-14
8. THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. PLEASE VERIFY THAT THESE PARAMETERS MEET OR EXCEED PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE INFRASTRUCTURE UPON REVIEW OF THIS SUBMITTAL.
9. OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3,000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS. PIPES ARE TO BE FLUSH WITH THE INSIDE SURFACE OF THE CONCRETE STRUCTURE.
10. CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS, AND ELEVATIONS OF OPENINGS.
11. CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED AND LEVEL PER PROJECT SPECIFICATIONS).
12. ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.
13. SECTION HEIGHTS, SLABWALL THICKNESSES, AND KEYWAYS ARE SUBJECT TO CHANGE AS REQUIRED FOR SITE REQUIREMENTS AND/OR DUE TO PRODUCT AVAILABILITY AND PRODUCTION FACILITY CONSTRAINTS.
14. MAXIMUM PICK WEIGHTS: TOP SLAB #1 = 10,000 LBS.
15. INTERNALS SHALL CONSIST OF UNDERDRAIN PIPE, ROCK, STORMMIX™ MEDIA, MULCH, DIVIDER WALLS, BAFFLE WALLS, BYPASS WEIR AND OPTIONAL DRAIN DOWN.
16. SYSTEM SHIPPED EMPTY. INTERNALS INSTALLED BY CONTRACTOR.
17. CONTRACTOR RESPONSIBLE FOR OFF-LOAD AND INSTALLATION. OLDCASTLE REPRESENTATIVE TO BE ON SITE TO OVERSEE THE INSTALLATION OF ALL INTERNAL COMPONENTS.
18. GROUT ALL VAULT SEAMS.
19. WATER TIGHT LINER REQUIRED – PROVIDED BY OTHERS.
20. WRAP GEOTEXTILE / LINER COMBINATION 1' MIN OVER TOP OF SYSTEM.

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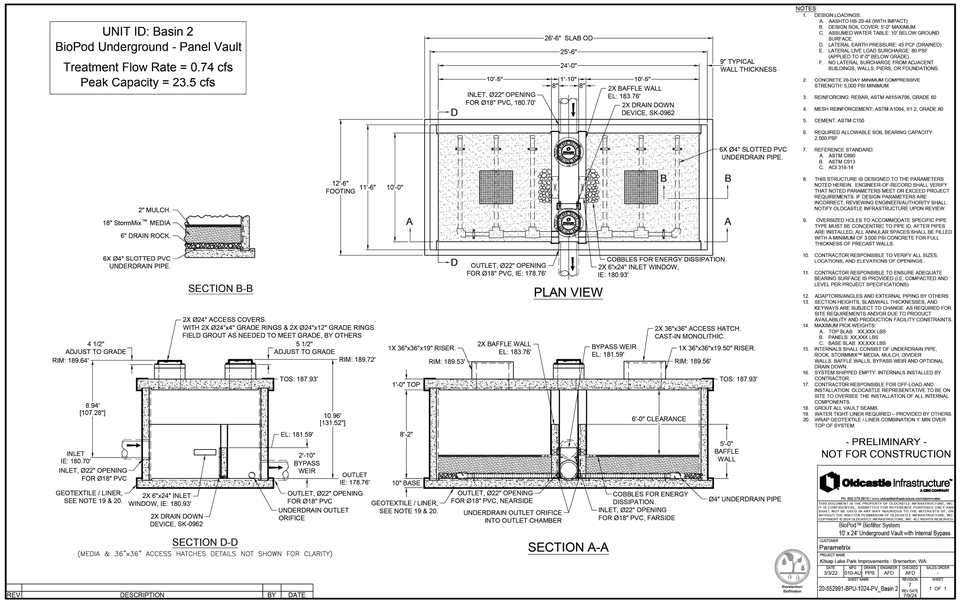
BioPod™ Biofilter System
6'-0"x6'-2" Panel Vault with Internal Bypass

CUSTOMER: Parametrix
JOB NAME: Kitsap Lake Stormwater Treatment Retrofit - Bremerton, WA

DATE	BY	DRAWN	CHECKED	SALES DESIGN
3/3/22	[ESI-AU] PTS	AFD	AFD	SU21-0628
SHEET NUMBER		REVISION	SHEET	
20-552991-BPU-6.75IB_Basin 1B		REV DATE: 7/9/24	1 OF 1	

BIOPOD #1B
DETAIL
NO SCALE
2
C1

UNIT ID: Basin 2
BioPod Underground - Panel Vault
Treatment Flow Rate = 0.74 cfs
Peak Capacity = 23.5 cfs



SECTION B-B

PLAN VIEW

SECTION D-D
(MEDIA & 36"x36" ACCESS HATCHES DETAILS NOT SHOWN FOR CLARITY)

SECTION A-A

NOTES

1. DESIGN LOADINGS:
   A. AASHTO HS-20-44 (WITH IMPACT).
   B. DESIGN FILL: 0' MAXIMUM.
   C. ASSUMED WATER TABLE: 10' BELOW GROUND SURFACE.
   D. DRY LATERAL EARTH PRESSURE: 45 PCF (DRAINED)
   E. LATERAL LIVE LOAD SURCHARGE: 80 PSF (APPLIED TO 8' BELOW GRADE).
   F. NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
2. CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 5,000 PSI MINIMUM.
3. REINFORCING: REBAR, ASTM A615/A706, GRADE 60
4. MESH REINFORCEMENT: ASTM A1064, 51.2, GRADE 80
5. CEMENT: ASTM C150
6. REQUIRED ALLOWABLE SOIL BEARING CAPACITY: 2,500 PSF
7. REFERENCE STANDARD:
   A. ASTM C890
   B. ASTM C913
   C. ACI 318-14
8. THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. PLEASE VERIFY THAT THESE PARAMETERS MEET OR EXCEED PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE INFRASTRUCTURE UPON REVIEW OF THIS SUBMITTAL.
9. OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3,000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS. PIPES ARE TO BE FLUSH WITH THE INSIDE SURFACE OF THE CONCRETE STRUCTURE.
10. CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS, AND ELEVATIONS OF OPENINGS.
11. CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED AND LEVEL PER PROJECT SPECIFICATIONS).
12. ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.
13. SECTION HEIGHTS, SLABWALL THICKNESSES, AND KEYWAYS ARE SUBJECT TO CHANGE AS REQUIRED FOR SITE REQUIREMENTS AND/OR DUE TO PRODUCT AVAILABILITY AND PRODUCTION FACILITY CONSTRAINTS.
14. MAXIMUM PICK WEIGHTS:
   A. TOP SLAB: XX,XXX LBS
   B. PANELS: XX,XXX LBS
   C. BASE SLAB: XX,XXX LBS
15. INTERNALS SHALL CONSIST OF UNDERDRAIN PIPE, ROCK, STORMMIX™ MEDIA, MULCH, DIVIDER WALLS, BAFFLE WALLS, BYPASS WEIR AND OPTIONAL DRAIN DOWN.
16. SYSTEM SHIPPED EMPTY. INTERNALS INSTALLED BY CONTRACTOR.
17. CONTRACTOR RESPONSIBLE FOR OFF-LOAD AND INSTALLATION. OLDCASTLE REPRESENTATIVE TO BE ON SITE TO OVERSEE THE INSTALLATION OF ALL INTERNAL COMPONENTS.
18. GROUT ALL VAULT SEAMS.
19. WATER TIGHT LINER REQUIRED – PROVIDED BY OTHERS.
20. WRAP GEOTEXTILE / LINER COMBINATION 1' MIN OVER TOP OF SYSTEM.

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BioPod™ Biofilter System
10' x 24' Underground Vault with Internal Bypass

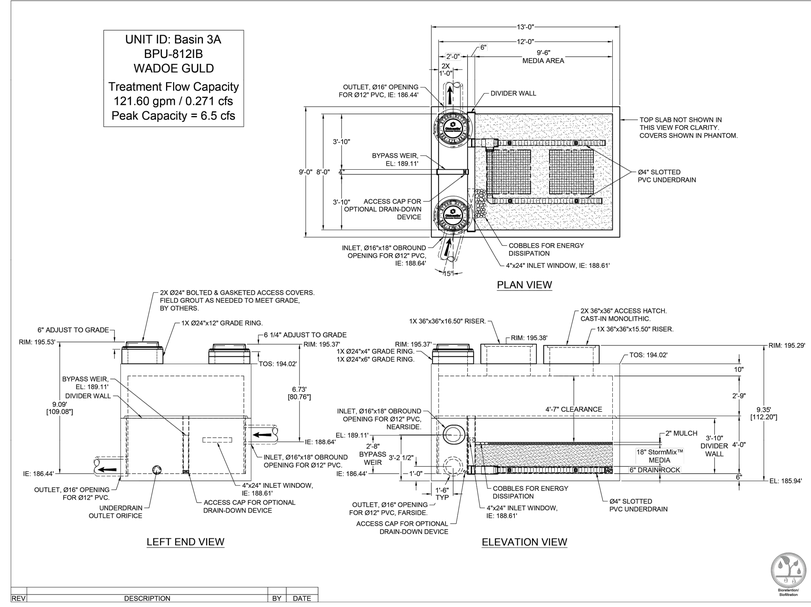
CUSTOMER: Parametrix
PROJECT NAME: Kitsap Lake Park Improvements - Bremerton, WA

DATE	BY	DRAWN	CHECKED	SALES DESIGN
3/3/22	[ESI-AU] PTS	AFD	AFD	SU21-0628
SHEET NUMBER		REVISION	SHEET	
20-552991-BPU-1024-PV_Basin 2		REV DATE: 7/9/24	1 OF 1	

BIOPOD #2
DETAIL
NO SCALE
3
C2

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

UNIT ID: Basin 3A
BPU-812IB
WADOE GULD
Treatment Flow Capacity
121.60 gpm / 0.271 cfs
Peak Capacity = 6.5 cfs



PLAN VIEW

LEFT END VIEW

ELEVATION VIEW

NOTES

1. DESIGN LOADINGS:
   A. AASHTO HS-20-44 W/ IMPACT.
   B. DESIGN FILL: 2' MAXIMUM.
   C. ASSUMED WATER TABLE: 1' BELOW GRADE SURFACE.
   D. LATERAL EARTH PRESSURE: 45 PCF (DRAINED)
   E. LATERAL LIVE LOAD SURCHARGE = 80 PSF (APPLIED TO 8' BELOW GRADE).
   F. NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
2. CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 5,000 PSI MINIMUM.
3. STEEL REINFORCEMENT: REBAR, ASTM A-615 OR A-706, GRADE 60.
4. MESH REINFORCEMENT: ASTM A-1064, 51.2, GRADE 80.
5. CEMENT: ASTM C-150 SPECIFICATION.
6. REFERENCE STANDARD:
   A. ASTM C890
   B. ASTM C 913
7. THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. PLEASE VERIFY THAT THESE PARAMETERS MEET OR EXCEED REQUIREMENTS (I.E. LIVE LOAD, FILL RANGE, WATER TABLE). IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE INFRASTRUCTURE UPON REVIEW OF THIS SUBMITTAL.
8. OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS. PIPES ARE TO BE FLUSH WITH THE INSIDE SURFACE OF THE CONCRETE STRUCTURE.
9. CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS AND ELEVATIONS OF OPENINGS.
10. CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED AND LEVEL PER PROJECT SPECIFICATIONS).
11. ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.
12. MAXIMUM PICK WEIGHT: BASE CHARGED WITH ROCK = 27,800 LBS.

- PRELIMINARY -
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BioPod™ Biofilter System
Underground Vault with Internal Bypass

CUSTOMER: Parametrix
JOB NAME: Kitsap Lake Stormwater Treatment Retrofit - Bremerton, WA

DATE	BY	DRAWN	CHECKED	SALES DESIGN
3/3/22	[ESI-AU] PTS	AFD	AFD	SU21-0628
SHEET NUMBER		REVISION	SHEET	
20-552991-BPU-812IB_Basin 3A		REV DATE: 7/9/24	1 OF 1	

BIOPOD #3A
DETAIL
NO SCALE
4
C3

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
D1

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

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: C. ODEGARD
DATE: 07/11/24

DESIGN BY: B. TUMBLING
WASH. P.E. # 20123355 DATE: 07/11/24

CHECKED BY: J. WRIGHT
WASH. P.E. # 48258 DATE: 07/11/24

KITSAP LAKE STORMWATER TREATMENT RETROFIT

BIOPOD DETAILS

PN: 233-1896-193

DATE 07/11/24

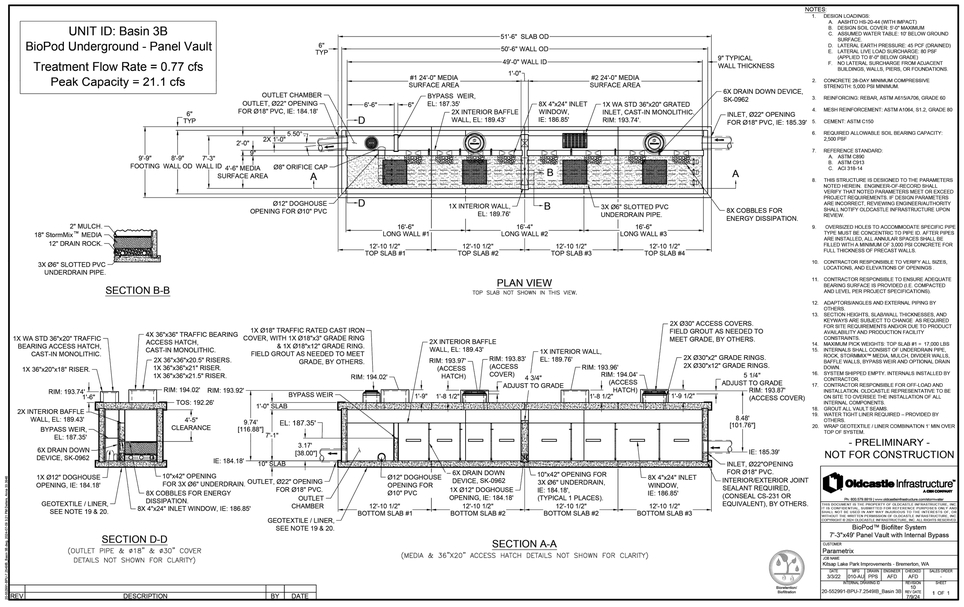
SHEET 20 OF 29

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

PATH: U:\PSD\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LKSTRFRNLA\DESIGN\05SVCS\CAD\DWG\PS1896193-D1.DWG PLOTTED BY: ODEGACOD DATE: 7/12/2024 2:00 PM

CITY OF BREMERTON PROJECT NUMBER: 879

UNIT ID: Basin 3B
BioPod Underground - Panel Vault
Treatment Flow Rate = 0.77 cfs
Peak Capacity = 21.1 cfs



SECTION B-B

PLAN VIEW
TOP SLAB NOT SHOWN IN THIS VIEW.

NOTES:
1. DESIGN LOADINGS:
   A. AASHTO HS-20-44 (WITH IMPACT)
   B. DESIGN SOIL COVER: 0'-0" MAXIMUM
   C. ASSUMED WATER TABLE: 10' BELOW GROUND SURFACE
   D. LATERAL EARTH PRESSURE: 45 PCF (DRAINED)
   E. LATERAL LIVE LOAD SURCHARGE: 80 PSF
   F. NOTE: LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
2. CONCRETE 28-DAY MINIMUM COMPRESSIVE STRENGTH: 5,000 PSI MINIMUM.
3. REINFORCING: REBAR, ASTM A615/A706, GRADE 60
4. MESH REINFORCEMENT: ASTM A1064, S1.2, GRADE 80
5. CEMENT: ASTM C150
6. REQUIRED ALLOWABLE SOIL BEARING CAPACITY: 2,500 PSF
7. REFERENCE STANDARD:
   A. ASTM C890
   B. ASTM C913
   C. ACI 318-14
8. THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. ENGINEER-OF-RECORD SHALL VERIFY THAT NOTED PARAMETERS MEET OR EXCEED PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE INFRASTRUCTURE UPON REVIEW.
9. OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3,000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS.
10. CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS, AND ELEVATIONS OF OPENINGS.
11. CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED AND LEVEL PER PROJECT SPECIFICATIONS).
12. ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.
13. SECTION HEIGHTS, SLAB/WALL THICKNESSES, AND KEYWAYS ARE SUBJECT TO CHANGE AS REQUIRED FOR SITE REQUIREMENTS AND/OR DUE TO PRODUCT AVAILABILITY AND PRODUCTION FACILITY CONSTRAINTS.
14. MAXIMUM PICK WEIGHTS: TOP SLAB #1 = 17,000 LBS
15. INTERNALS SHALL CONSIST OF UNDERDRAIN PIPE, ROCK, STORMMIX™ MEDIA, MULCH, DIVIDER WALLS, BAFFLE WALLS, BYPASS WEIR AND OPTIONAL DRAIN DOWN.
16. SYSTEM SHIPPED EMPTY. INTERNALS INSTALLED BY OTHERS.
17. CONTRACTOR RESPONSIBLE FOR OFF-LOAD AND INSTALLATION. OLDCASTLE REPRESENTATIVE TO BE ON SITE TO OVERSEE THE INSTALLATION OF ALL INTERNAL COMPONENTS.
18. GROUT ALL VAULT BEARS.
19. WATER TIGHT LINER REQUIRED – PROVIDED BY OTHERS.
20. MINIMUM GEOTEXTILE / LINER COMBINATION 1' MIN OVER TOP OF SYSTEM.

- PRELIMINARY -
NOT FOR CONSTRUCTION

SECTION D-D
(OUTLET PIPE & Ø18" & Ø30" COVER DETAILS NOT SHOWN FOR CLARITY)

SECTION A-A
(MEDIA & 36"X20" ACCESS HATCH DETAILS NOT SHOWN FOR CLARITY)

REV	DESCRIPTION	BY	DATE

Oldcastle Infrastructure
A CRH COMPANY
TEL 800.579.8812 | www.oldcastleinfrastructure.com/enviromedia
THIS DRAWING IS THE PROPRIETARY PROPERTY OF OLDCASTLE INFRASTRUCTURE, INC. IT IS CONFIDENTIAL IN NATURE AND IS NOT TO BE REPRODUCED IN ANY WAY, EXHIBITED TO, OR DISCUSSED WITH ANY UNAUTHORIZED PERSON WITHOUT THE EXPRESS WRITTEN PERMISSION OF OLDCASTLE INFRASTRUCTURE, INC. UNDER NO CIRCUMSTANCES SHALL OLDCASTLE INFRASTRUCTURE, INC. ALL RIGHTS RESERVED.

BioPod™ Biofilter System
7'-3"x9' Panel Vault with Internal Bypass

CUSTOMER: Parametrix
JOB NAME: Kitsap Lake Park Improvements - Bremerton, WA

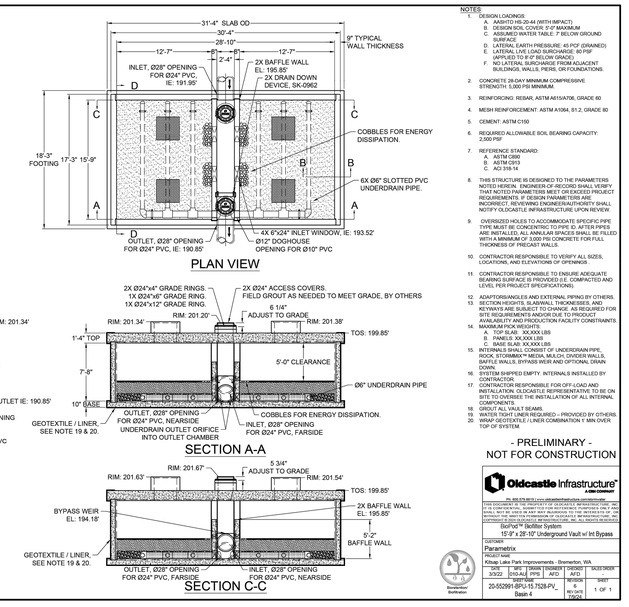
DATE	MFG DRAWN	ENGINEER DRAWN	CHECKED	ACCEPTED
3/3/22	2/25-AJE, PPS	AFD	AFD	

APPROVAL DRAWING ID: | REVISION: | SHEET:
20-552991-BPU-7.25X9ft_Basin 3B | 0 | 1 OF 1

Stormwater Biofiltration

BIOPOD #3B
DETAIL 1 C3
NO SCALE

UNIT ID: Basin 4
BioPod Underground - Panel Vault
Treatment Flow Rate = 1.41 cfs
Peak Flow Rate = 23 cfs



SECTION B-B

PLAN VIEW

NOTES:
1. DESIGN LOADINGS:
   A. AASHTO HS-20-44 (WITH IMPACT)
   B. DESIGN SOIL COVER: 0'-0" MAXIMUM
   C. ASSUMED WATER TABLE: 7' BELOW GROUND SURFACE
   D. LATERAL EARTH PRESSURE: 45 PCF (DRAINED)
   E. LATERAL LIVE LOAD SURCHARGE: 80 PSF
   F. NOTE: LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
2. CONCRETE 28-DAY MINIMUM COMPRESSIVE STRENGTH: 5,000 PSI MINIMUM.
3. REINFORCING: REBAR, ASTM A615/A706, GRADE 60
4. MESH REINFORCEMENT: ASTM A1064, S1.2, GRADE 80
5. CEMENT: ASTM C150
6. REQUIRED ALLOWABLE SOIL BEARING CAPACITY: 2,500 PSF
7. REFERENCE STANDARD:
   A. ASTM C890
   B. ASTM C913
   C. ACI 318-14
8. THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. ENGINEER-OF-RECORD SHALL VERIFY THAT NOTED PARAMETERS MEET OR EXCEED PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE INFRASTRUCTURE UPON REVIEW.
9. OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3,000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS.
10. CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS, AND ELEVATIONS OF OPENINGS.
11. CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED AND LEVEL PER PROJECT SPECIFICATIONS).
12. ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.
13. SECTION HEIGHTS, SLAB/WALL THICKNESSES, AND KEYWAYS ARE SUBJECT TO CHANGE AS REQUIRED FOR SITE REQUIREMENTS AND/OR DUE TO PRODUCT AVAILABILITY AND PRODUCTION FACILITY CONSTRAINTS.
14. MAXIMUM PICK WEIGHTS:
   A. TOP SLAB: XX,XXX LBS
   B. BASE SLAB: XX,XXX LBS
   C. DIVIDER SLAB: XX,XXX LBS
15. INTERNALS SHALL CONSIST OF UNDERDRAIN PIPE, ROCK, STORMMIX™ MEDIA, MULCH, DIVIDER WALLS, BAFFLE WALLS, BYPASS WEIR AND OPTIONAL DRAIN DOWN.
16. SYSTEM SHIPPED EMPTY. INTERNALS INSTALLED BY OTHERS.
17. CONTRACTOR RESPONSIBLE FOR OFF-LOAD AND INSTALLATION. OLDCASTLE REPRESENTATIVE TO BE ON SITE TO OVERSEE THE INSTALLATION OF ALL INTERNAL COMPONENTS.
18. GROUT ALL VAULT BEARS.
19. WATER TIGHT LINER REQUIRED – PROVIDED BY OTHERS.
20. MINIMUM GEOTEXTILE / LINER COMBINATION 1' MIN OVER TOP OF SYSTEM.

- PRELIMINARY -
NOT FOR CONSTRUCTION

SECTION D-D

SECTION A-A

SECTION C-C

REV	DESCRIPTION	BY	DATE

Oldcastle Infrastructure
A CRH COMPANY
TEL 800.579.8812 | www.oldcastleinfrastructure.com/enviromedia
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BioPod™ Biofilter System
15'-9" x 28'-10" Underground Vault w/ Int Bypass

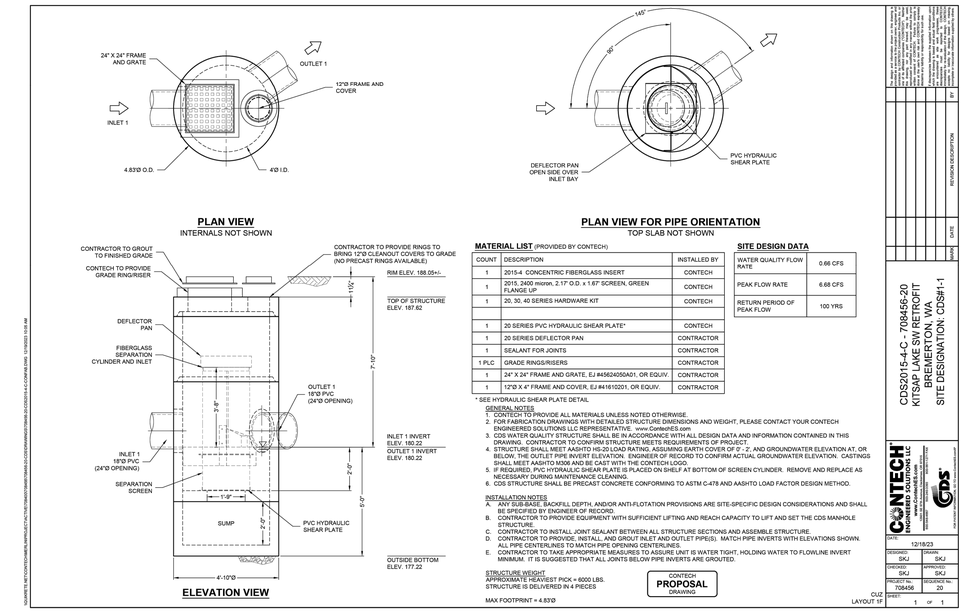
CUSTOMER: Parametrix
PROJECT NAME: Kitsap Lake Park Improvements - Bremerton, WA

DATE	MFG DRAWN	ENGINEER DRAWN	CHECKED	ACCEPTED
3/3/22	2/25-AJE, PPS	AFD	AFD	

PROJECT No.: 20-552991-BPU-15.7528-PV_Basin 4 | REVISION: 0 | SHEET: 1 OF 1

Stormwater Biofiltration

BIOPOD #4
DETAIL 2 C4
NO SCALE



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	2015-4 CONCENTRIC FIBERGLASS INSERT	CONTECH
1	2015, 2400 micron, 2.17' O.D. x 1.67' SCREEN, GREEN FLANGE UP	CONTECH
1	20, 30, 40 SERIES HARDWARE KIT	CONTECH
1	20 SERIES PVC HYDRAULIC SHEAR PLATE*	CONTECH
1	20 SERIES DEFLECTOR PAN	CONTRACTOR
1	SEALANT FOR JOINTS	CONTRACTOR
1 PLC	GRADE RINGS/RISERS	CONTRACTOR
1	24" X 24" FRAME AND GRATE, EJ #4562450A01, OR EQUIV.	CONTRACTOR
1	12"Ø X 4" FRAME AND COVER, EJ #41610201, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY FLOW RATE	0.66 CFS
PEAK FLOW RATE	6.68 CFS
RETURN PERIOD OF PEAK FLOW	100 YRS

* SEE HYDRAULIC SHEAR PLATE DETAIL

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 MAINTENANCE 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 = 6000 LBS.
STRUCTURE IS DELIVERED IN 4 PIECES

MAX FOOTPRINT = 4.83'Ø

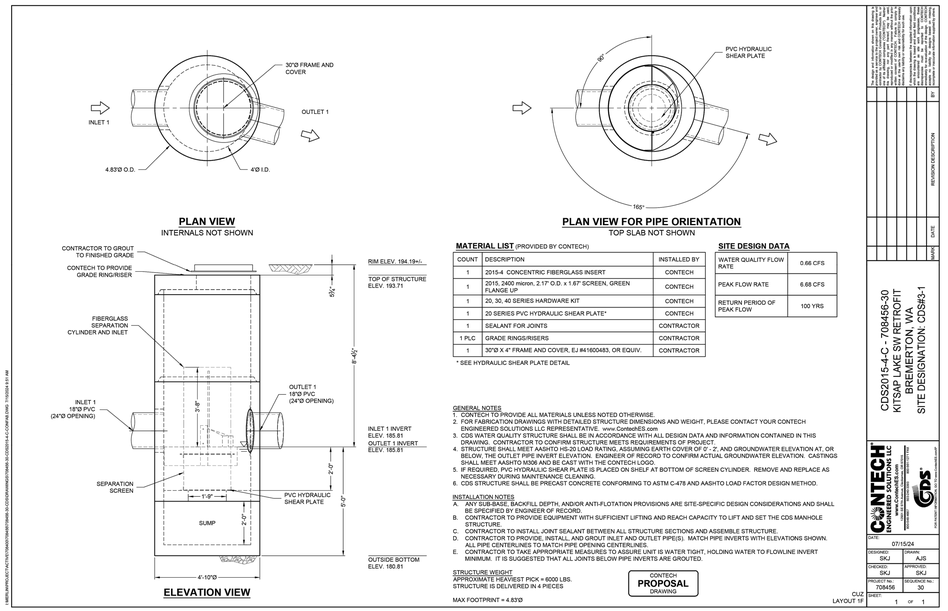
CONTECH PROPOSAL DRAWING

CDS2015-4-C - 708456-20
KITSAP LAKE SW RETROFIT
BREMERTON, WA
SITE DESIGNATION: CDS#1-1

DATE	12/18/23
DESIGNED	SKJ
DRAWN	SKJ
CHECKED	SKJ
APPROVED	SKJ
PROJECT No.	708456
DRAWING No.	20
SHEET	1 or 1
CUZ	
LAYOUT 1F	

CDS #1-1
DETAIL 3 C3
NO SCALE

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



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	2015-4 CONCENTRIC FIBERGLASS INSERT	CONTECH
1	2015, 2400 micron, 2.17' O.D. x 1.67' SCREEN, GREEN FLANGE UP	CONTECH
1	20, 30, 40 SERIES HARDWARE KIT	CONTECH
1	20 SERIES PVC HYDRAULIC SHEAR PLATE*	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

SITE DESIGN DATA

WATER QUALITY FLOW RATE	0.66 CFS
PEAK FLOW RATE	6.68 CFS
RETURN PERIOD OF PEAK FLOW	100 YRS

* SEE HYDRAULIC SHEAR PLATE DETAIL

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 MAINTENANCE 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 = 6000 LBS.
STRUCTURE IS DELIVERED IN 4 PIECES

MAX FOOTPRINT = 4.83'Ø

CONTECH PROPOSAL DRAWING

CDS2015-4-C - 708456-30
KITSAP LAKE SW RETROFIT
BREMERTON, WA
SITE DESIGNATION: CDS#3-1

DATE	07/15/24
DESIGNED	SKJ
DRAWN	AJS
CHECKED	SKJ
APPROVED	SKJ
PROJECT No.	708456
DRAWING No.	30
SHEET	1 or 1
CUZ	
LAYOUT 1F	

CDS #3-1
DETAIL 4 C4
NO SCALE

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
D2

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP\LKSTRFNLALDESIGN\05SVCS\CAD\DWG\PS1896193-D1.DWG PLOTTED BY: ODEGACOO DATE: 7/12/2024 2:00 PM

CITY OF BREMERTON PROJECT NUMBER: 879

BRENA ELIZABETH MARIE TUMBLING — 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

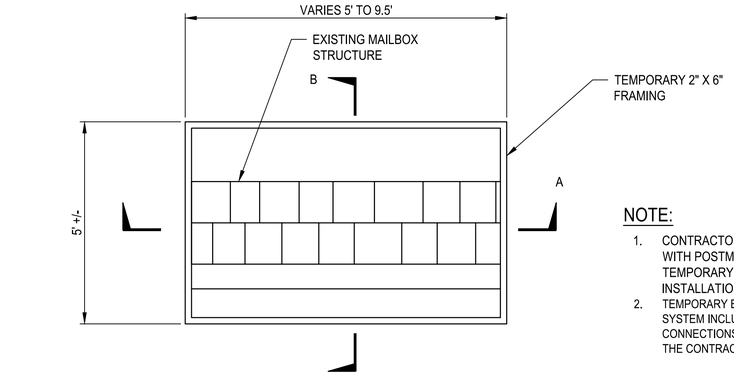
DRAWN BY: *C. ODEGARD* DATE: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BIOPOD DETAILS AND CDS STRUCTURE DETAILS

PN: 233-1896-193

DATE 07/11/24

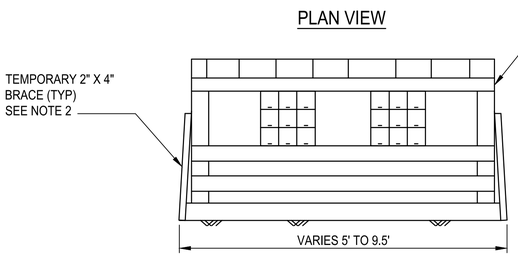
SHEET 21 OF 29



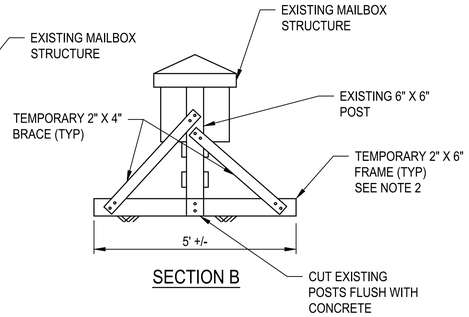
PLAN VIEW

NOTE:

1. CONTRACTOR SHALL COORDINATE WITH POSTMASTER FOR TEMPORARY MAILBOX INSTALLATION LOCATIONS.
2. TEMPORARY BRACE AND FRAME SYSTEM INCLUDING ALL CONNECTIONS SHALL BE DESIGNED BY THE CONTRACTOR

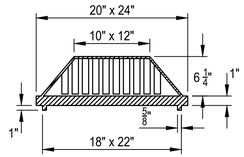


SECTION A



SECTION B

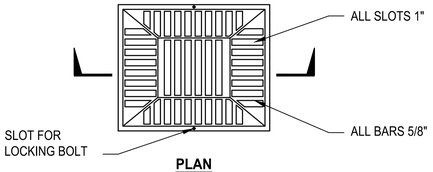
TEMPORARY MAILBOX INSTALLATION
DETAIL 1
NO SCALE



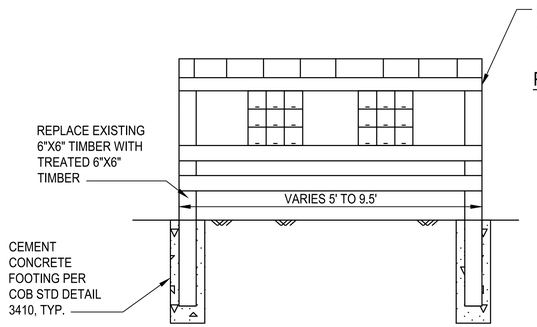
SECTION

BEEHIVE GRATE NOTES:

1. FRAME AND GRATE SHALL BE LOCKING AND GRATE SHALL BE BOLTED TO FRAME. FRAME SHALL CONFORM TO WSDOT STANDARD PLAN B-30.10-03.
2. FRAME AND GRATE TO CONFORM TO WSDOT STANDARD SPECIFICATIONS 9-05.15(2).



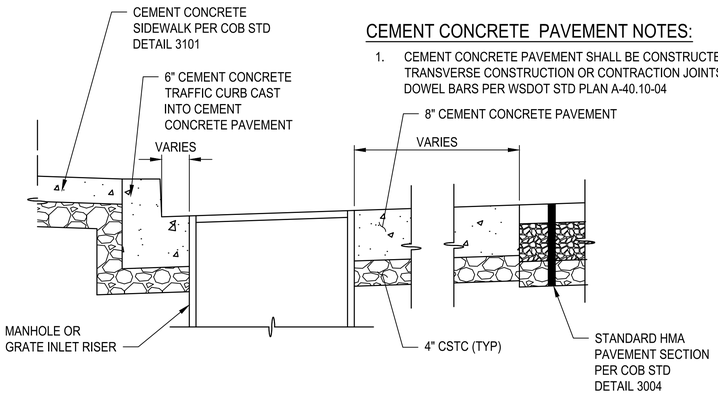
PLAN
RECTANGULAR BEEHIVE GRATE
DETAIL 2
NO SCALE C4



PERMANENT MAILBOX NOTES:

1. CONTRACTOR SHALL REINSTALL OR REPLACE IN KIND ALL REMOVED TRIM.
2. CONTRACTOR SHALL REPAINT MAILBOX WOODEN FRAME WITH LATEX PAINT AND MATCH EXISTING COLOR PER ENGINEER.
3. 6" MIN BETWEEN MAILBOX STRUCTURE EXTENTS AND CURB AND GUTTER FLOWLINE.

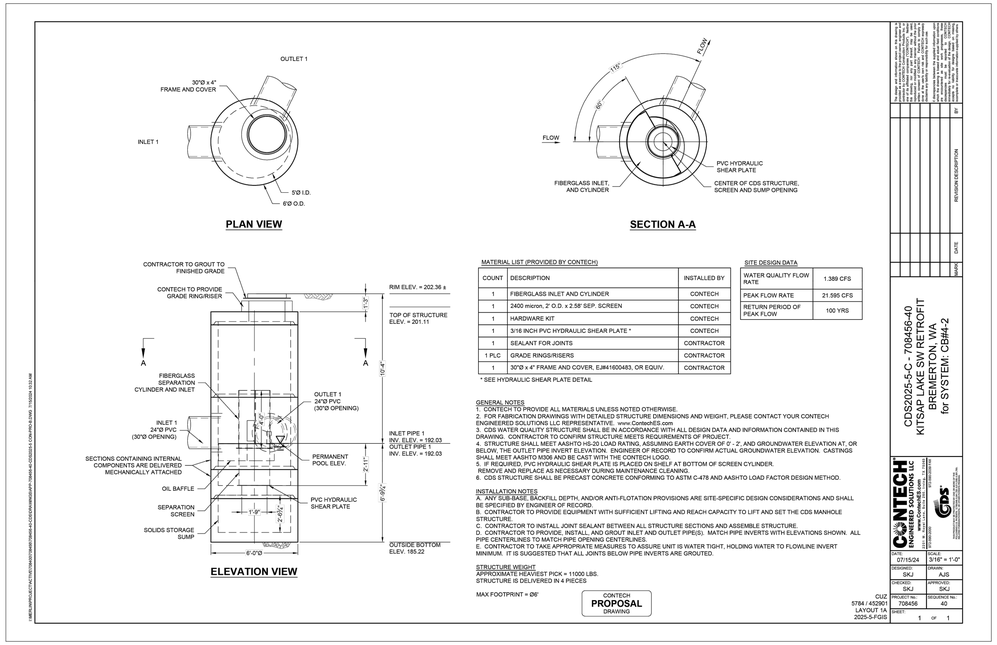
PERMANENT MAILBOX INSTALLATION
DETAIL 3
NO SCALE



CEMENT CONCRETE PAVEMENT NOTES:

1. CEMENT CONCRETE PAVEMENT SHALL BE CONSTRUCTED WITH TRANSVERSE CONSTRUCTION OR CONTRACTION JOINTS WITH DOWEL BARS PER WSDOT STD PLAN A-40.10-04

CEMENT CONCRETE PAVEMENT AND TRAFFIC CURB
DETAIL 4
NO SCALE C3, GR3



MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	FIBERGLASS INLET AND CYLINDER	CONTECH
1	2400 micron, 2' O.D. x 2.58' SEP. SCREEN	CONTECH
1	HARDWARE KIT	CONTECH
1	3/16 INCH PVC HYDRAULIC SHEAR PLATE *	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

* SEE HYDRAULIC SHEAR PLATE DETAIL

SITE DESIGN DATA

WATER QUALITY FLOW RATE	1.389 CFS
PEAK FLOW RATE	21.595 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 MAINTENANCE 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 = 11000 LBS.
STRUCTURE IS DELIVERED IN 4 PIECES

MAX FOOTPRINT = Ø6'

CONTECH **PROPOSAL** DRAWING

CDS2025-5-C - 708456-40
KITSAP LAKE SW RETROFIT
BREMERTON, WA
for SYSTEM: CB44-2

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
800.338.1122

DATE: 07/15/24 | SCALE: 3/16" = 1'-0"
DESIGNED: SKJ | DRAWN: AJS
CHECKED: SKJ | APPROVED: SKJ
CUZ 5784 / 4529011 LAYOUT 1A 2025-5-FGIS
PROJECT No. 708456 | SHEET No. 40
SHEET 1 OF 1

CDS #4-1
DETAIL 5
NO SCALE C4

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
D3

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

BRENNA ELIZABETH MARIE TUMBLING — 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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT

DETAILS

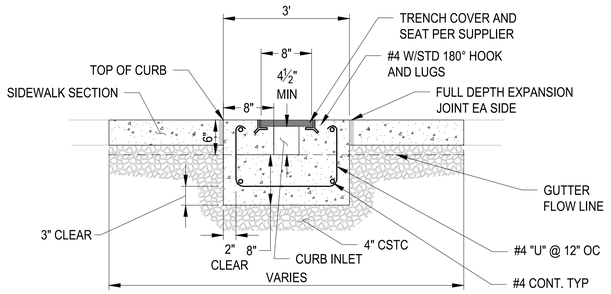
PN: 233-1696-193

DATE 07/11/24

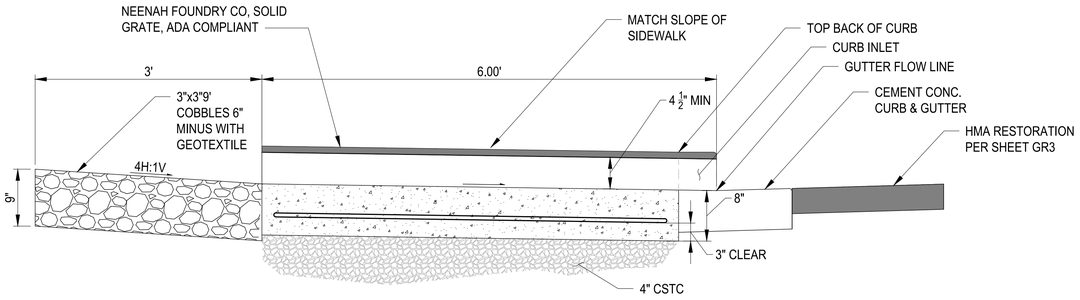
SHEET 22 OF 29

PATH: U:\PSO\PROJECTS\CLIENTS\1696-CITY OF BREMERTON\233-1696-193 KITSAP LKSTRM\LDESIGN\99\CS\CADD\DWGPS\1696193-D1.DWG PLOTTED BY: ODEGACOD DATE:7/12/2024 2:00 PM

CITY OF BREMERTON PROJECT NUMBER: 879



SECTION A



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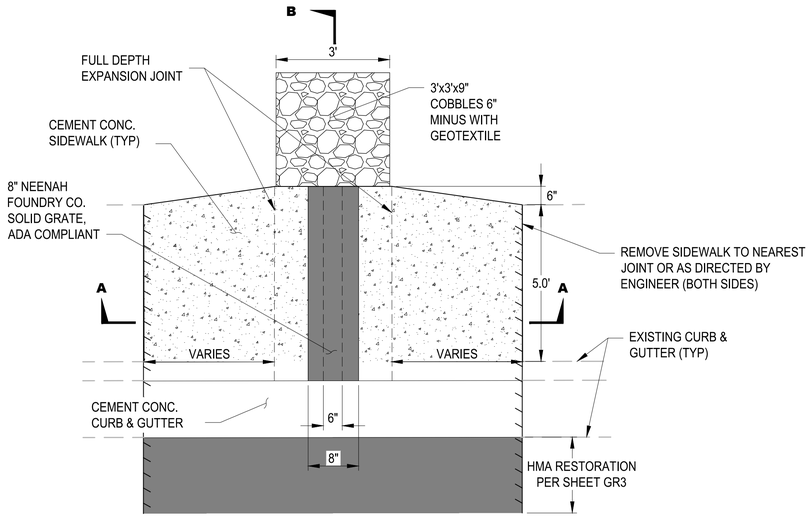


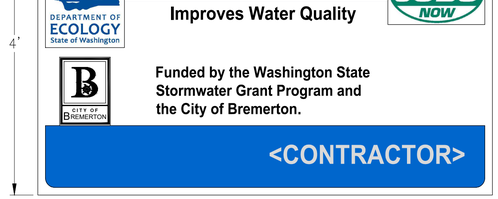
PLAN

B

CURB DRAIN
DETAIL
NO SCALE — 1 / C3, GR7

PROJECT SIGN NOTES:

1. INSTALL 3 EACH PROJECT SIGNS ON TWO 4"x4" TIMBER POSTS PER ENGINEER, SEE C SHEETS.
2. CONTRACTOR SHALL REMOVE SIGNS AFTER COMPLETION OF PROJECT AT THE DIRECTION OF THE ENGINEER.



PROJECT SIGN
DETAIL
NO SCALE — 2 / TYP

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

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
D4

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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. # *20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. # *48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT

DETAILS

PN: 233-1896-193

DATE 07/11/24

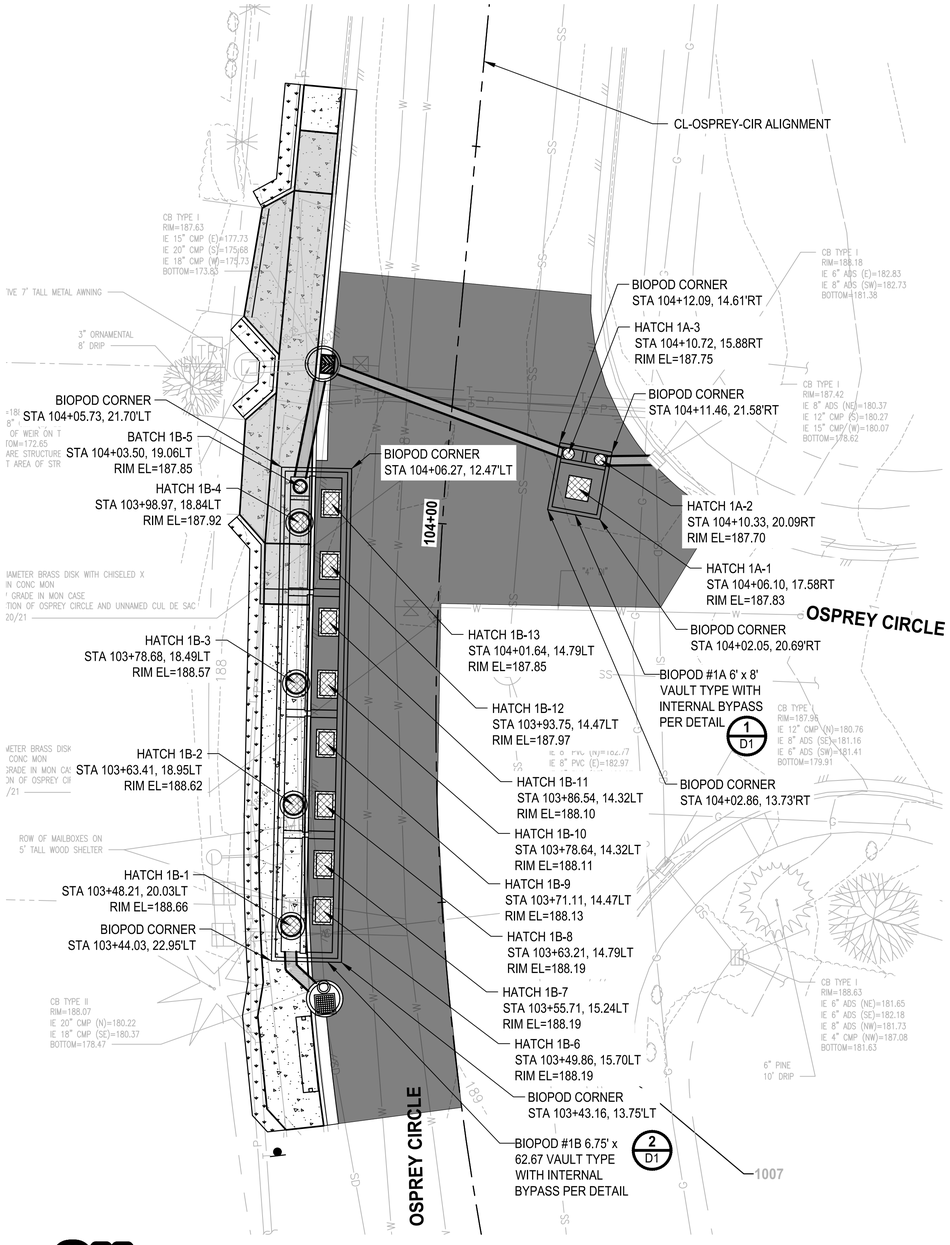
SHEET 23 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LAKE STORMWATER\DESIGN\96SVCS\CADD\DWGFS\1896193-D1.DWG PLOTTED BY:ODEGACOD DATE:7/12/2024 2:00 PM

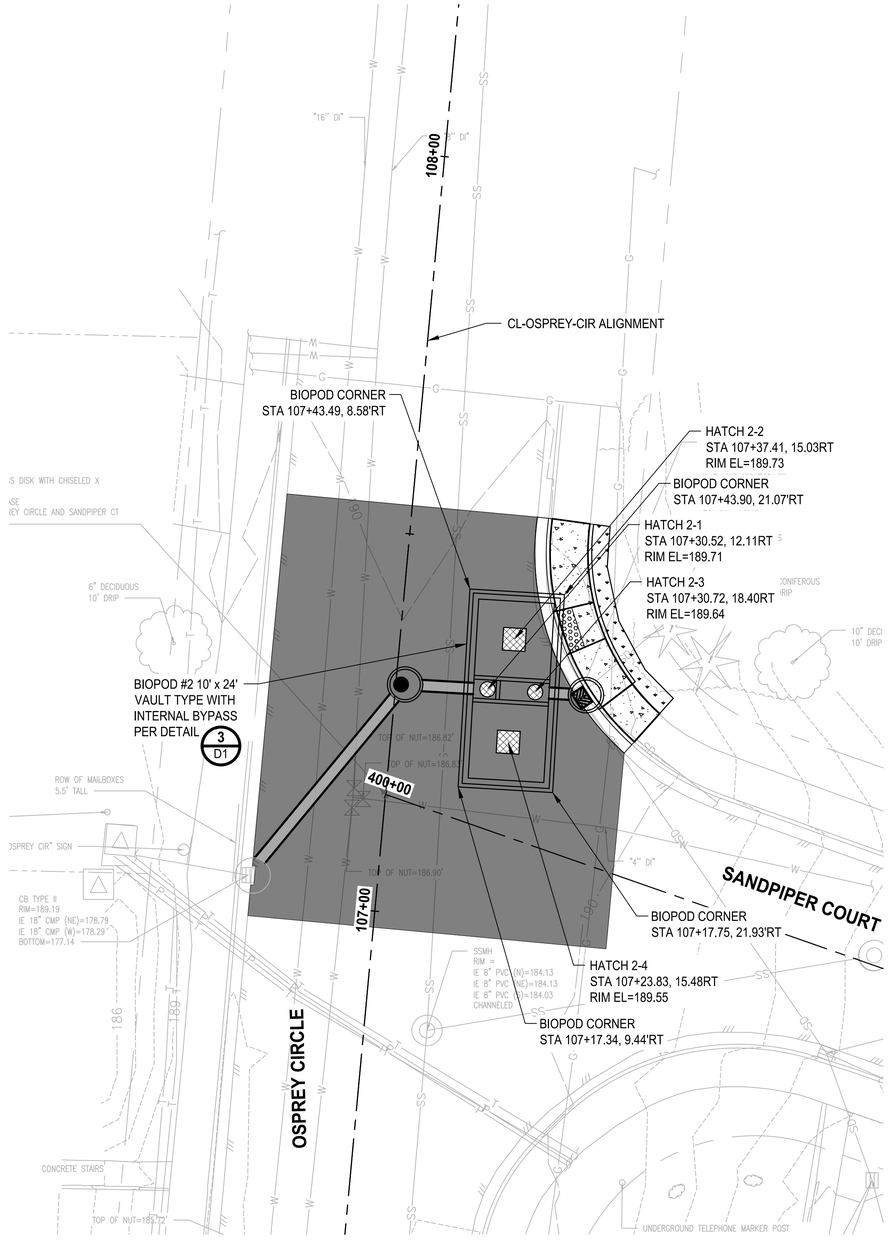
GENERAL NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. FOR STORMWATER PROFILES, SEE SHEETS C1 - C4.
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 SHEETS D1 AND D2 FOR BIOPOD DETAILS.
7. SEE GRADING SHEETS GR1-GR7 FOR SIDEWALK, DRIVEWAY APPROACH, RAMP, CSBC, AND ASPHALT GRADING.



BIOPOD 1A &1B HATCH LOCATIONS

SCALE IN FEET 0 10 20



BIOPOD 2 HATCH LOCATIONS

SCALE IN FEET 0 10 20

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

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
D5

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

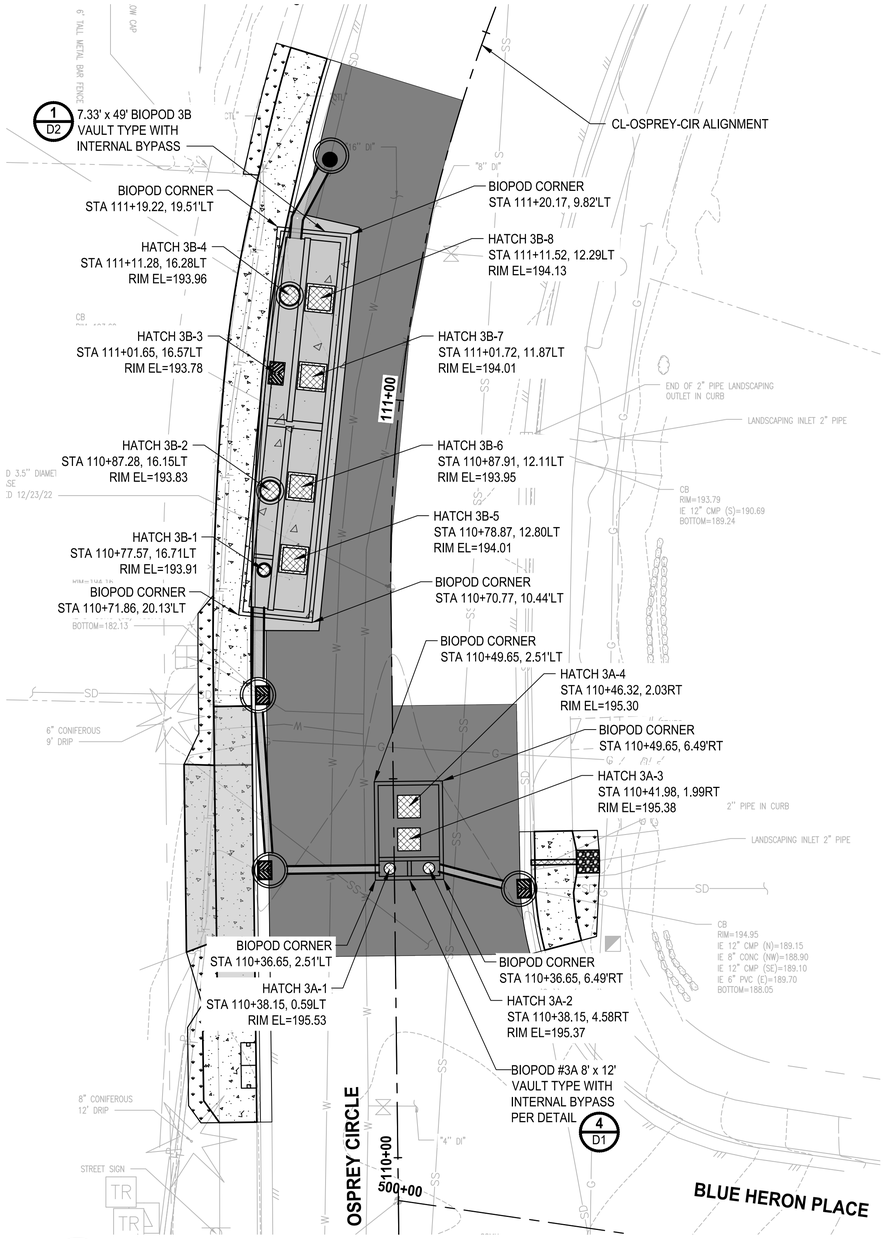
DRAWN BY: *C. ODEGARD* DATE: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASINS 1 AND 2
BIOPOD HATCH DETAILS

PN: 233-1896-193
DATE 07/11/24
SHEET 24 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAPLKSTRFINALDESIGN\98SVCS\CADD\DWG\PS1896193-D1.DWG PLOTTED BY:ODEGAGOO DATE:7/12/2024 2:00 PM

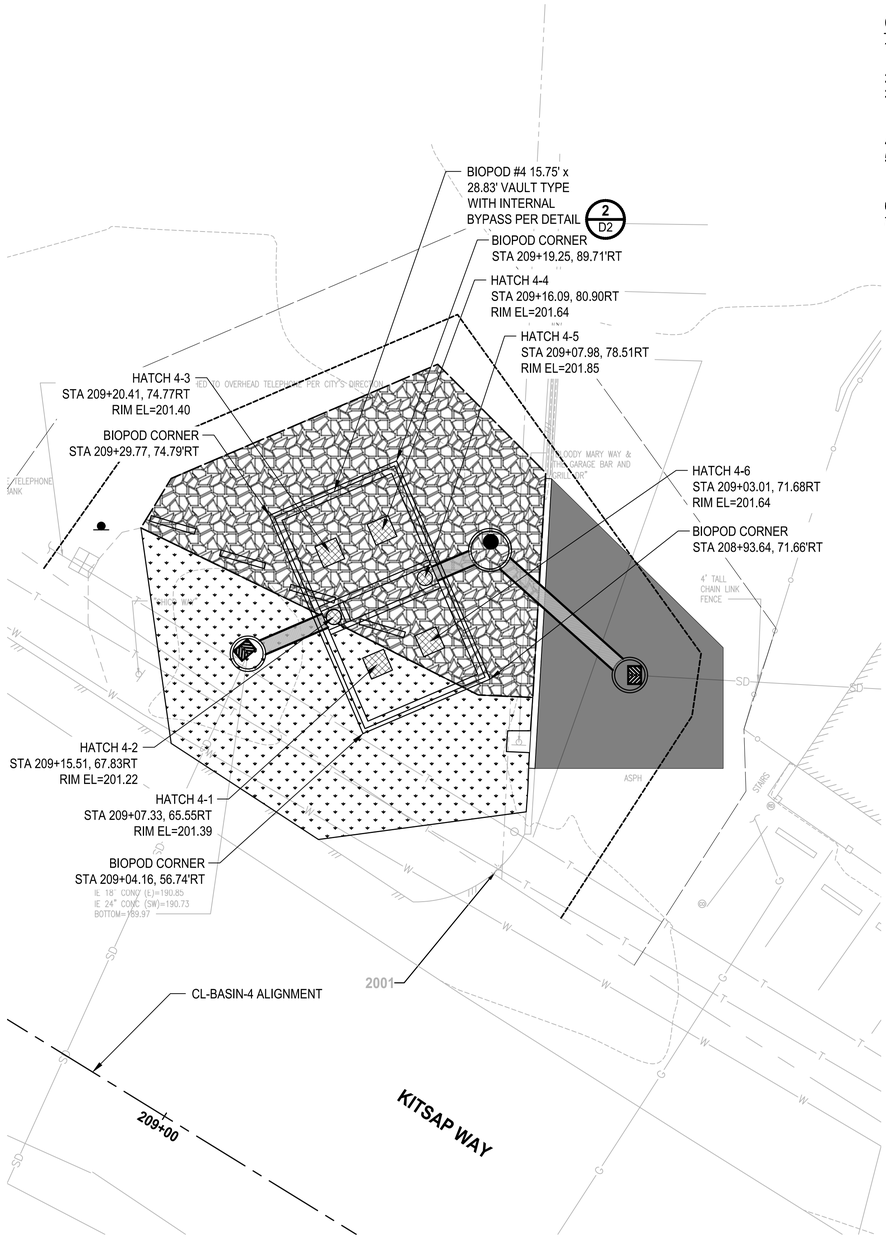


BIOPOD 3A & 3B HATCH LOCATIONS

SCALE IN FEET

0 10 20

N



BIOPOD 4 HATCH LOCATIONS

SCALE IN FEET

0 10 20

N

GENERAL NOTES:

1. STATIONS AND OFFSETS ARE REFERENCED TO THE CONSTRUCTION CENTERLINES DEFINED ON SHEETS G3 AND G4.
2. FOR STORMWATER PROFILES, SEE SHEETS C1 - C4.
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 SHEETS D1 AND D2 FOR BIOPOD DETAILS.
7. SEE GRADING SHEETS GR1-GR7 FOR SIDEWALK, DRIVEWAY APPROACH, RAMP, CSBC, AND ASPHALT GRADING.

811

Know what's **below.**
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Determina lo que esta **bajo tierra.**
Llama antes de excavar.

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
D6

BRENNA ELIZABETH MARIE LIMBERG — 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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASINS 3 & 4
BIOPOD HATCH DETAILS

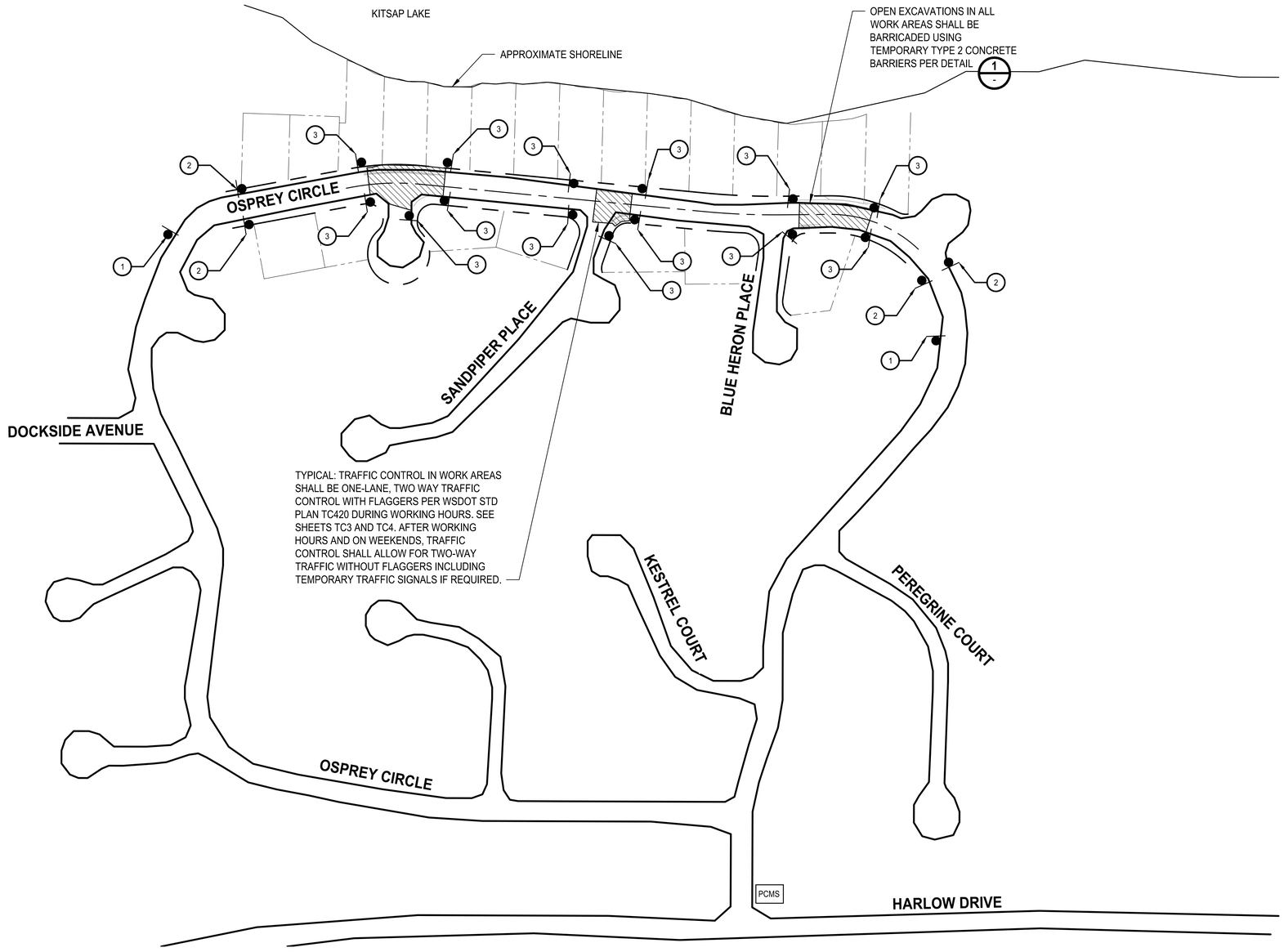
PN: 233-1896-193

DATE 07/11/24

SHEET 25 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LK\STR\FINAL\DESIGN\96SVCS\CADD\DWGPS\1896193-D1.DWG PLOTTED BY: ODEGACOD DATE:7/15/2024 12:43 PM



NOTES:

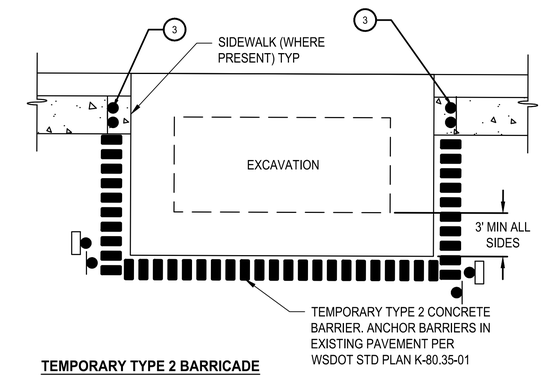
1. CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN FOR APPROVAL MEETING THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION), WSDOT STD SPECIFICATIONS, AND THE MINIMUM REQUIREMENTS SHOWN HERE. SEE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AND BUILDINGS AT ALL TIMES WITH THE EXCEPTION OF 72-HOUR DRIVEWAY CLOSURES AS APPROVED BY THE ENGINEER.
3. CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESSES, PARKING FOR BUSINESSES, AND PEDESTRIAN ACCESS BETWEEN PARKING AND BUSINESSES.
4. ONE ADA ACCESSIBLE PEDESTRIAN PATH THROUGH THE WORK AREA SHALL BE MAINTAINED AT ALL TIMES. TEMPORARY PEDESTRIAN PATHS SHALL BE PROVIDED AS NECESSARY. TEMPORARY PEDESTRIAN PATHS SHALL BE COMPACTED CSTC, MIN 5' WIDE, AND HAVE A MAX CROSS SLOPE OF 1.5%
5. PCMS USAGE WILL BEGIN TWO WEEKS PRIOR TO LANE CLOSURES AND REMAIN IN OPERATION UNTIL PHYSICAL COMPLETION. MESSAGES NEED TO BE COORDINATED WITH AND APPROVED BY THE ENGINEER

SYMBOL LEGEND:

- WORK AREA
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN
- APPROXIMATE ROADWAY EDGE
- TEMPORARY TYPE 2 CONCRETE BARRIER
- TYPE 3 BARRICADE

SIGN KEY:

1	END CONSTRUCTION — G20-2 60"x24"	4	ROAD CLOSED — R11-2 48"x34"
2	SIDEWALK CLOSED AHEAD — CUSTOM 24"x12"	5	TEMPORARY PARKING — CUSTOM 24"x12"
3	SIDEWALK CLOSED — R9-11 24"x12"	6	TEMPORARY PARKING — CUSTOM 24"x12"



TEMPORARY TYPE 2 BARRICADE DETAIL 1/- NO SCALE

PLAN SCALE IN FEET 0 100 200

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NOT FOR CONSTRUCTION

TC1

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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASINS 1, 2, & 3
TEMPORARY TRAFFIC CONTROL

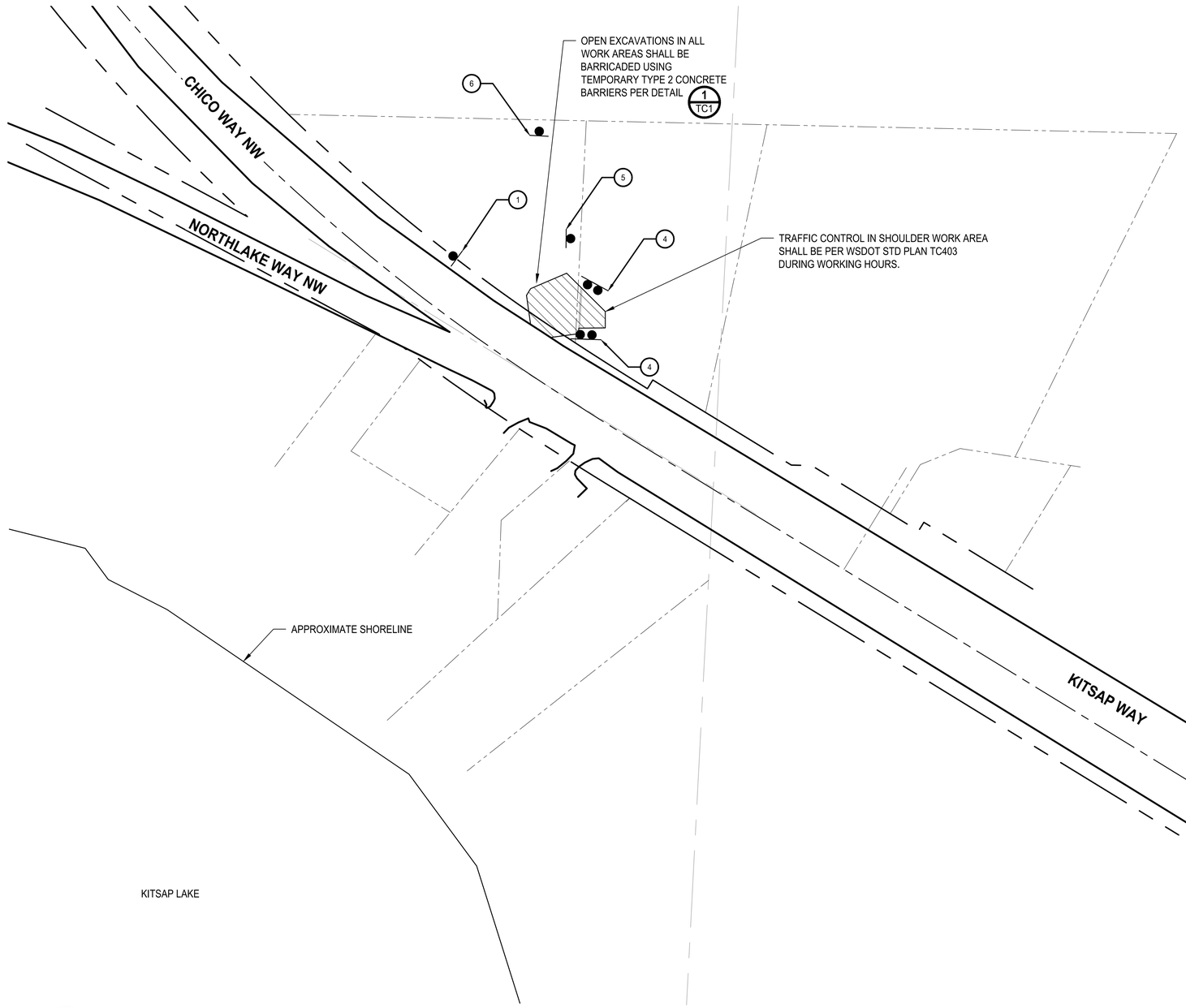
PN: 233-1896-193

DATE 07/11/24

SHEET 26 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LAKSTRFINAL\DESIGN\99\CS\CAD\DWG\PS1896193-TC.DWG PLOTTED BY:ODEGACOO DATE:7/10/2024 1:59 PM



NOTES:

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5. PCMS USAGE WILL BEGIN TWO WEEKS PRIOR TO LANE CLOSURES AND REMAIN IN OPERATION UNTIL PHYSICAL COMPLETION. MESSAGES NEED TO BE COORDINATED WITH AND APPROVED BY THE ENGINEER

SYMBOL LEGEND:

- WORK AREA
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN
- APPROXIMATE ROADWAY EDGE
- TEMPORARY TYPE 2 CONCRETE BARRIER
- TYPE 3 BARRICADE

SIGN KEY:

1	END CONSTRUCTION — G20-2 60"x24"	4	ROAD CLOSED — R11-2 48"x34"
2	SIDEWALK CLOSED AHEAD — CUSTOM 24"x12"	5	TEMPORARY PARKING ← — CUSTOM 24"x12"
3	SIDEWALK CLOSED — R9-11 24"x12"	6	TEMPORARY PARKING — CUSTOM 24"x12"

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Determina lo que esta **bajo tierra.** **Llama** antes de excavar.

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
TC2

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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT
BASIN 4
TEMPORARY TRAFFIC CONTROL

PN: 233-1896-193

DATE 07/11/24

SHEET 27 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LKSTRFRNA\DESIGN\09SV\CS\CADD\DWG\PS1896193-TC.DWG PLOTTED BY:ODEGACOO DATE:7/10/2024 1:59 PM

RECOMMENDED SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	35–40 MPH	350'+/–
RURAL ROADS & URBAN ARTERIALS RESIDENTAL & BUSINESS DISTRICTS	25–30 MPH	200'+/–
URBAN STREETS	25 MPH OR LESS	100'+/–

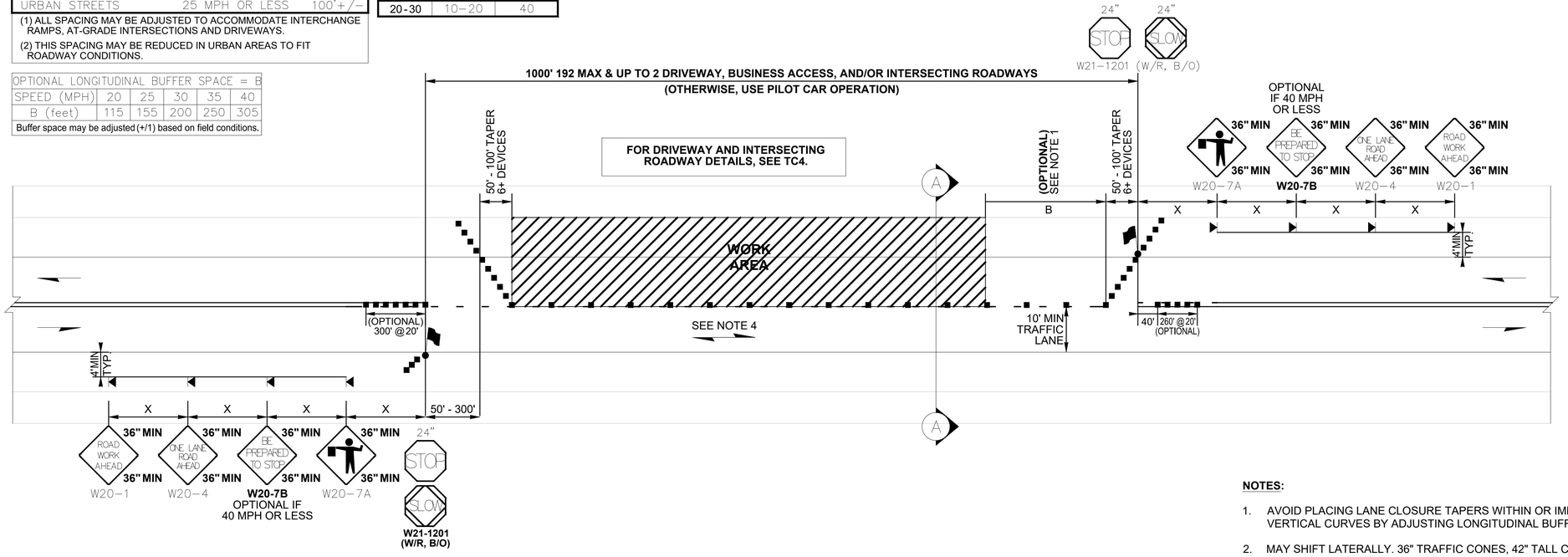
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

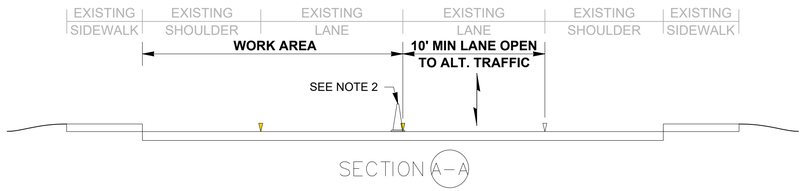
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

OPTIONAL LONGITUDINAL BUFFER SPACE = B					
SPEED (MPH)	20	25	30	35	40
B (feet)	115	155	200	250	305

Buffer space may be adjusted (+/1) based on field conditions.

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
35 - 40	10–20	60
20 - 30	10–20	40





LEGEND:

- TEMPORARY SIGN LOCATION
- CHANNELIZATION DEVICE (SEE NOTE 2)
- OPTIONAL CHANNELIZATION DEVICE
- FLAGGER

NOTES:

1. AVOID PLACING LANE CLOSURE TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL & VERTICAL CURVES BY ADJUSTING LONGITUDINAL BUFFER SPACE.
2. MAY SHIFT LATERALLY. 36" TRAFFIC CONES, 42" TALL CHANNELIZATION DEVICES, OR TRAFFIC SAFETY DRUMS OK. OPEN EXCAVATIONS IN ALL WORK AREAS SHALL BE BARRICADED USING TEMPORARY TYPE 2 CONCRETE BARRIERS. SEE SHEETS TC1 AND TC2.
3. SEE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS:
   1-07.8(1) HIGH-VISIBILITY APPAREL
   1-10.3(1)A FLAGGERS AND NIGHTTIME ILLUMINATION
   1-10.3(2)A TRAFFIC CONTROL PROCEDURES
   9-35.124-INCH STOP/SLOW PADDLE SIZE
4. FOR PROJECT-SPECIFIC REQUIREMENTS, SEE SPECIAL PROVISIONS.
5. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
6. ACTUAL CENTERLINE PAVEMENT MARKINGS MAY VARY.
7. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC1 AND TC2.
8. WORK MAY BRIEFLY OCCUR WITHIN LANE CLOSURE ACROSS INTERSECTING ROADWAY APPROACHES, BUSINESS ACCESSES, OR DRIVEWAYS. **MAY HOLD APPROACH OR ACCESS TRAFFIC FOR 5 MINUTES OR LESS** (ENGINEER MAY ACCEPT HOLDS UP TO 10 MINUTES) WHILE RESTRICTING TURNS FROM MAINLINE. CHANNELIZATION DEVICES DELINEATING APPROACH OR ACCESS MAY BE REMOVED OR RELOCATED AS NEEDED.
9. SINGLE FLAGGER (WITH RED FLAG/ RED GLOW CONE FLASHLIGHT) MAY BE ADDED TO THE INTERSECTING ROADWAY APPROACH TO HELP GUIDE ALTERNATING & TURNING TRAFFIC.
10. CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN FOR APPROVAL MEETING THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION), WSDOT STD SPECIFICATIONS, AND THE MINIMUM REQUIREMENTS SHOWN HERE. SEE SPECIAL PROVISIONS.
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13. PCMS USAGE WILL BEGIN TWO WEEKS PRIOR TO LANE CLOSURES AND REMAIN IN OPERATION UNTIL PHYSICAL COMPLETION. MESSAGES NEED TO BE COORDINATED WITH AND APPROVED BY THE ENGINEER.

ALTERNATING 1-LANE, 2-WAY TRAFFIC: FLAGGER-CONTROLLED (HIGHWAYS, 40 MPH OR LESS)

NOT TO SCALE

100 % REVIEW SUBMITTAL

NOT FOR CONSTRUCTION

TC3

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

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: *07/11/24*

DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*

CHECKED BY: *J. WRIGHT* WASH. P.E. *# 48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT

TEMPORARY TRAFFIC CONTROL DETAILS

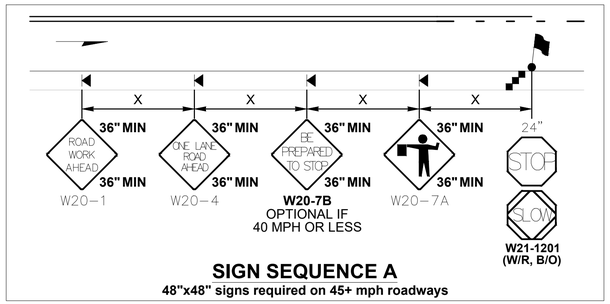
PN: 233-1896-193

DATE 07/11/24

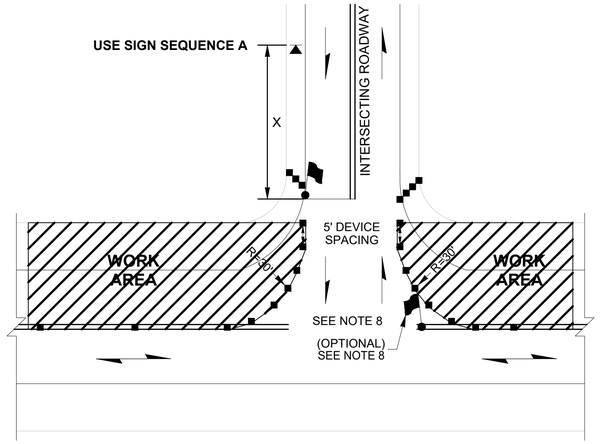
SHEET 28 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

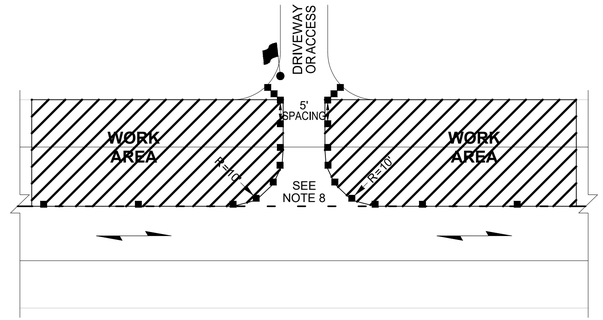
PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAPLKSTRFRNALDESIGN\09SV\CS\CADD\DWG\PS1896193-TC.DWG PLOTTED BY:ODEGACOO DATE:7/10/2024 1:59 PM



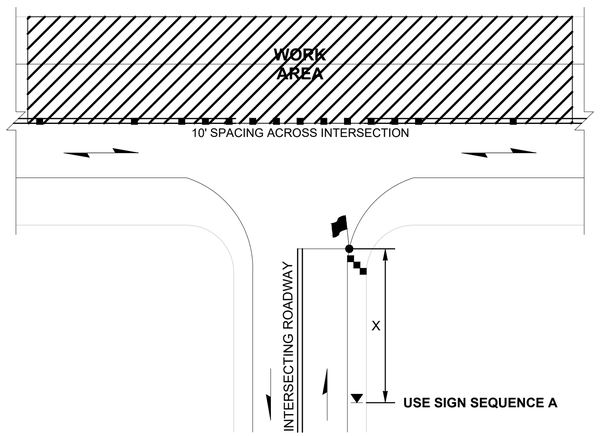
SIGN SEQUENCE A
48"x48" signs required on 45+ mph roadways



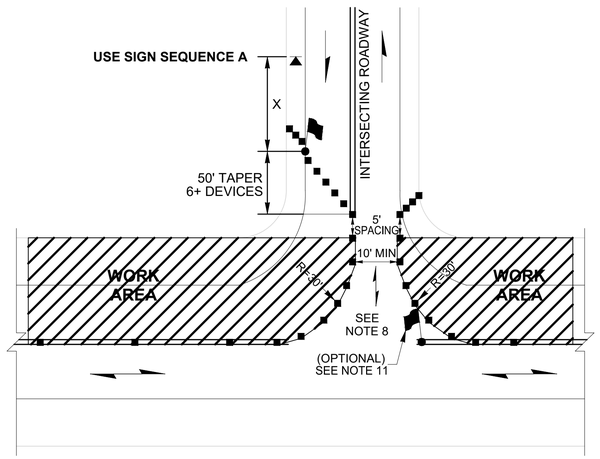
UNSIGNALIZED INTERSECTING ROADWAY DETAIL
SAME SIDE AS LANE CLOSURE (TWO OPEN LANES)



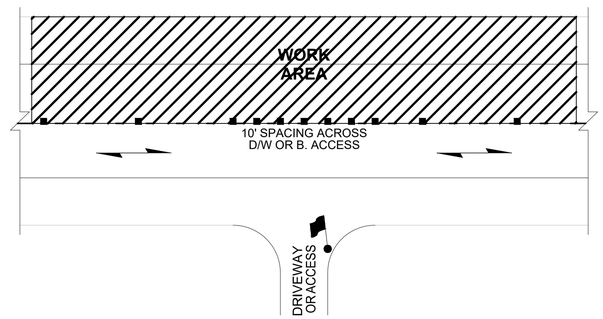
DRIVEWAY OR BUSINESS ACCESS DETAIL
SAME SIDE AS LANE CLOSURE



UNSIGNALIZED INTERSECTING ROADWAY DETAIL
OPPOSITE OF LANE CLOSURE



UNSIGNALIZED INTERSECTING ROADWAY DETAIL
SAME SIDE AS LANE CLOSURE (SINGLE OPEN LANE)



DRIVEWAY OR BUSINESS ACCESS DETAIL
OPPOSITE OF LANE CLOSURE

ALTERNATING 1-LANE, 2-WAY TRAFFIC: FLAGGER-CONTROLLED (HIGHWAYS, 40 MPH OR LESS)

NOT TO SCALE

SEE SHEETS TC1-TC3 FOR NOTES AND LEGENDS.

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

100 % REVIEW SUBMITTAL
NOT FOR CONSTRUCTION
TC4

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: *07/11/24*
DESIGN BY: *B. TUMBLING* WASH. P.E. *#20123355* DATE:*07/11/24*
CHECKED BY: *J. WRIGHT* WASH. P.E. # *48258* DATE:*07/11/24*

KITSAP LAKE STORMWATER TREATMENT RETROFIT

TEMPORARY TRAFFIC CONTROL DETAILS

PN: 233-1896-193

DATE 07/11/24

SHEET 29 OF 29

CITY OF BREMERTON PROJECT NUMBER: 879

PATH: U:\PSO\PROJECTS\CLIENTS\1896-CITYOFBREMERTON\233-1896-193 KITSAP LK STRFNAL\DESIGN\96SV\CSVCADD\DWGFIS1896193-TC.DWG PLOTTED BY:ODEGACOO DATE:7/10/2024 1:59 PM