Bradley Heights

Section 3, Township 19 N, Range 4 E, Willamette Meridian, Pierce County, Washington

PROJECT DESCRIPTION
SITE DEVELOPMENT IMPROVEMENTS, INCLUDING CLEARING, GRADING, RETAINING WALLS, PARKING LOT, STORM DRAINAGE, SANITARY SEWER MAIN, WATER MAIN FOR 236 UNIT MULTI-FAMILY DEVELOPMENT.

SITE ADDRESS:
202 27TH AVE SE

PARCEL NUMBER
041903-6-006

ZONING
RM-CORE

ENGINEER/SURVEYOR
AZURE GREEN CONSULTANTS
409 EAST PIONEER
PUYALLUP, WA 98372
PHONE: 253.770.3144

OWNER:
BRADLEY HEIGHTS SS, LLC
614 BOYLSTON AVE E
SEATTLE, WA 98102

APPLICANT
Timberlane Partners
Contact: Jorden Mellergaard
1816 11th Ave Unit C
Seattle, WA 98122
Phone 509.899.0326
jorden@timerlanepartners.com

DATUM
NAVD88

BENCHMARK
WSDOT BM 27512-17
MON ID 244
PUBLISHED ELEVATION 409.95' NAVD88

TOPOGRAPHIC INFORMATION
FRONTAGE TOPOGRAPHICAL DATA IS PER PER FIELD SURVEY PERFORMED BY AZURE GREEN CONSULTANTS IN MARCH 2022. ONSITE TOPOGRAPHICAL IS PER 2010 LIDAR AS OBTAINED BY PIERCE COUNTY.

100-YEAR FLOOD
THE SITE DOES NOT CONTAIN A 100-YEAR FLOODPLAIN.

EROSION & SEDIMENT INSPECTION
PRIOR TO STARTING SITE WORK, REQUEST AN INSPECTION FOR EROSION AND SEDIMENT. INSPECTION CODE THROUGH THE PERMIT PORTAL OR BY CONTACTING THE INSPECTOR DIRECTLY.

BROKEN CURB, GUTTER, OR SIDEWALK
ANY PUBLIC CURB, GUTTER, OR SIDEWALK BROKEN NOW OR DURING THE COURSE OF CONSTRUCTION SHALL BE REMOVED AND REPLACED PER CITY STANDARDS.

CALL BEFORE YOU DIG
IT IS THE LAW
811

N
W E
S

GRAPHIC SCALE 1"=50'
0 50 100 150

GENERAL NOTES
1. All work in City right-of-way requires a permit from the City of Puyallup. Prior to any work commencing, the general contractor shall arrange for a preconstruction meeting at the Development Services Center to be attended by all contractors that will perform work shown on the approved engineering plans, representatives from all applicable utility companies, the project owner and appropriate city staff. Contact Engineering Services at (253-841-5568) to schedule the meeting. The contractor is responsible to have their own set of approved plans at the meeting.

2. After completion of all items shown on these plans and before acceptance of the project the contractor shall obtain a "punch list" prepared by the City's inspector detailing remaining items of work to be completed. All items of work shown on these plans shall be completed to the satisfaction of the City prior to acceptance of the water system and provision of sanitary sewer service.

3. All materials and workmanship shall conform to the Standard Specifications for Road, Bridge, and Municipal Construction (hereinafter referred to as the "Standard Specifications"), Washington State Department of Transportation and American Public Works Association, Washington State Chapter, latest edition, unless superseded or amended by the City of Puyallup City Standards for Public Works Engineering and Construction (hereinafter referred to as the "City Standards").

4. A copy of these approved plans and applicable city developer specifications and details shall be on site during construction.

5. Any revisions made to these plans must be reviewed and approved by the developer's engineer and the City prior to any implementation in the field. The City shall not be responsible for any errors and/or omissions on these plans.

6. The contractor shall have all utilities verified on the ground prior to any construction. Call (811) at least two working days in advance. The owner and his/her engineer shall be contacted immediately if a conflict exists.

7. Any structure and/or obstruction that requires removal or relocation relating to this project shall be done so at the developer's expense.

8. Locations of existing utilities are approximate. It shall be the contractor's responsibility to determine the true elevations and locations of hidden utilities. All visible items shall be the engineer's responsibility.

9. The contractor shall install, replace, or relocate all signs, as shown on the plans or as affected by construction, per City Standards.

10. Power, street light, cable, and telephone lines shall be in a trench located within a 10-foot utility easement adjacent to public right-of-way. Right-of-way crossings shall have a minimum horizontal separation from other utilities (sewer, water, and storm) of 5 feet.

11. All construction surveying for extensions of public facilities shall be done under the direction of a Washington State licensed land surveyor or a Washington State licensed professional civil engineer.

12. During construction, all public streets adjacent to this project shall be kept clean of all material deposits resulting from on-site construction, and existing structures shall be protected as directed by the City.

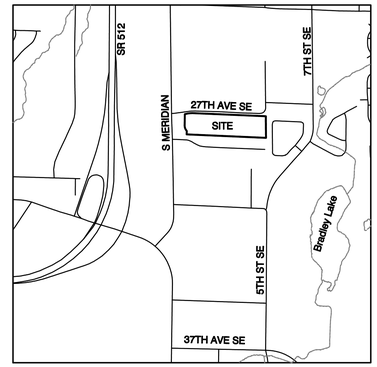
13. Certified record drawings are required prior to project acceptance.

14. A NPDES Stormwater General Permit may be required by the Department of Ecology for this project. For information contact the Department of Ecology, Southwest Region Office at (360)407-6300.

15. Any disturbance or damage to Critical Areas and associated buffers, or significant trees designated for preservation and protection shall be mitigated in accordance with a Mitigation Plan reviewed and approved by the City s Planning Division. Preparation and implementation of the Mitigation Plan shall be at the developer s expense.

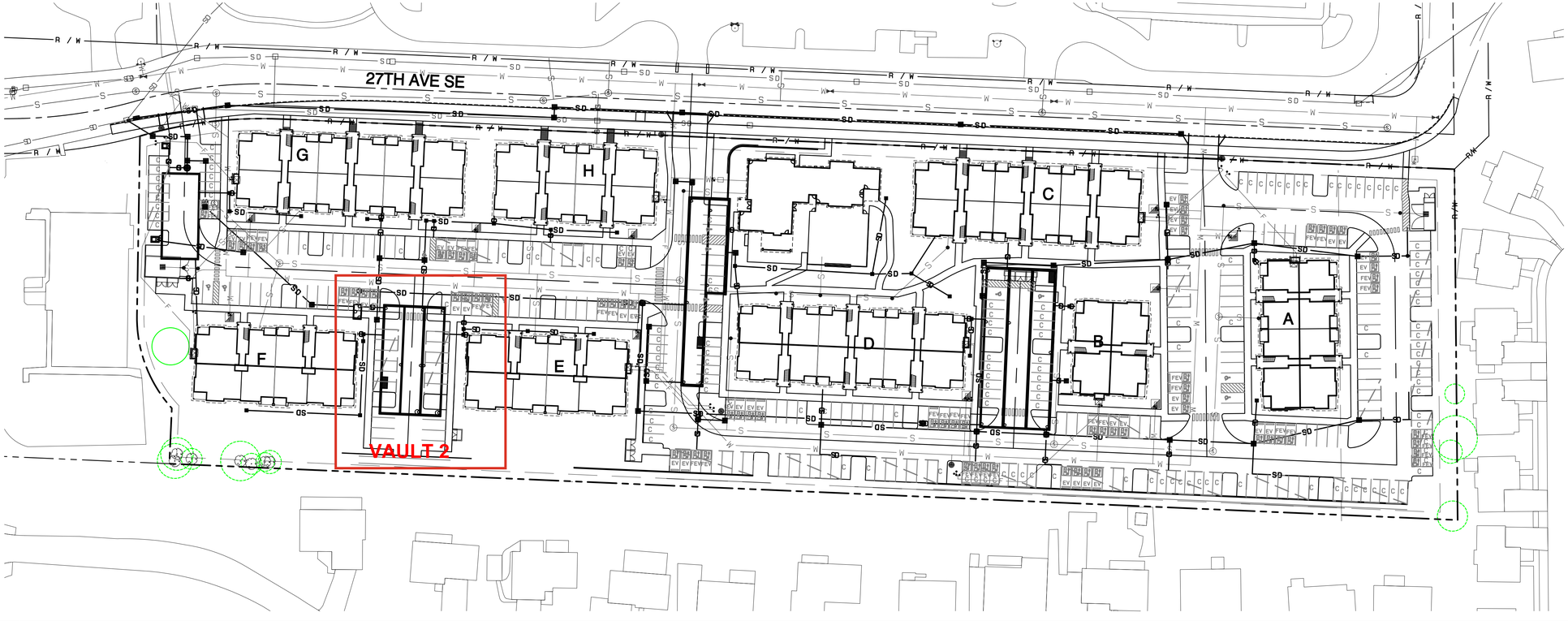
SURVEY MONUMENTS
Contractor is responsibile for protecting all survey monuments within the area of work. If it is necessary to disturb a survey monument, a permit must be requested in advance from the Department of Natural Resources. The developer must pay the cost of repairing or replacing the survey monument and is responsible for all contractors working for them. Reference WAC 332-120.

SHEET INDEX



VICINITY MAP
SCALE: 1"=1000'

LEGEND
350	EX. CONTOUR		EX. HYDRANT
350	DESIGN CONTOUR		EX. STORM MANHOLE
	LEGAL ROAD CENTERLINE		WATER VALVE
R / W	RIGHT-OF-WAY LINE	E	EX. POWER LINE
	EX. PLAIN EDGE OF ASPHALT	T	EX. COMM. LINE
E/P	PROPOSED PLAIN EDGE OF ASPHALT		PROPOSED FIRE HYDRANT OR FDC
	EX. DITCH		WATER METER
	PROJECT BOUNDARY		BACKFLOW PREVENTER
	LOT LINE		AIR/VAC ASSEMBLY
	EX. CATCH BASIN		PIV
SD	EX. STORM		NEW ASPHALT PAVING
	PROPOSED CB-TYPE 1		NEW CONCRETE
	PROPOSED CB-TYPE 2		
SD	PROPOSED STORM		
W	WATER MAIN		
S	SANITARY SEWER		
	SANITARY SEWER MANHOLE		
	STANDARD MONUMENT		
	POWER POLE		



City of Puyallup Development Engineering APPROVED
See permit conditions.
ycharitou
06/25/2025
9:52:03 AM

City of Puyallup Planning Division APPROVED
See permit conditions.
RNBrown
04/14/2025
3:29:03 PM

Refer to civil plan PRCCP20240845 for approved stormwater plans and methods of control.

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

APPROVED

BY: _____
CITY OF PUYALLUP
DEVELOPMENT SERVICES

DATE: _____

NOTE:

THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.

THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.

FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

PRRWF20250233

ROBERT A. TRIVITT
6/6/2025
EXPIRES 4/28/2026
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE
1	10/14
2	1/24
3	4/7/25
4	4/21/25
5	6/6/25
6	
7	
8	
9	
10	

REVISION
1 Revised per City review and Wall A adjustment.
2 Revised per City review.
3 Revised per City & Rush review.
4 Minor revisions, eliminate manholes. Sheets: G-12, -13, & -14; SD-4, -6, -11, & -26 & AD-2 only.

JOB NO. 3227
DATE May 14, 2024
DESIGNED BY: Rob Trivitt
DRAWN BY: Rob Trivitt
CHECKED BY: Paul Green
APPROVED BY: Paul Green

AZURE GREEN CONSULTANTS
409 East Pioneer, Suite A - Puyallup, WA 98372
+feasibility +planning +engineering +surveying
phone: 253.770.3144 fax: 253.770.3142

Cover Sheet

Bradley Heights

Timberlane Partners
1816 11th Ave Unit C
Seattle, WA, 98122
Phone 509.899.0326
Fax jorden@timerlanepartners.com

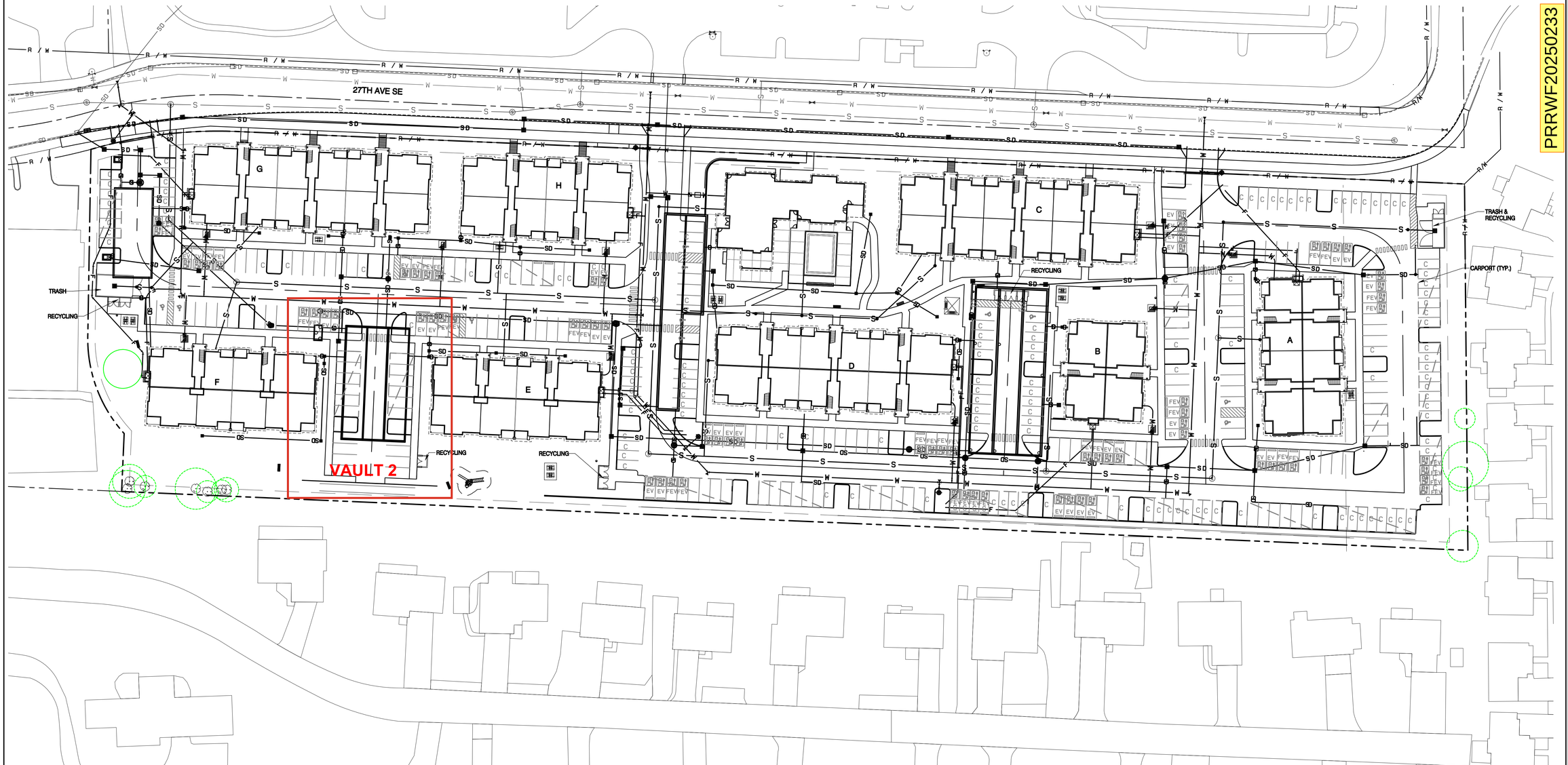
DRAWING
G-1
SHEET 1
OF 60

Bradley Heights

Section 3, Township 19 N, Range 4 E, Willamette Meridian, Pierce County, Washington

N
W E
S

GRAPHIC SCALE 1"=40'
0 40 80 120



PRRWF20250233

ROOF DRAINS
ALL BUILDINGS WILL HAVE PERIMETER ROOF DRAINS CONNECTED TO DOWNSPOUTS ROUTED TO THE ROOF DRAIN LEADERS SHOWN ON THIS PLAN. PERIMETER ROOF DRAINS SHALL BE MINIMUM 4" PVC SDR-35 WITH MIN. SLOPE OF 0.5% FOR UP TO TWO DOWNSPOUTS ON A SINGLE RUN. ONCE MORE THAN TWO DOWNSPOUTS ARE CONNECTED TO A RUN, DRAINS SHALL BE PER TABLE BELOW, UNLESS OTHERWISE DIRECTED/DESIGNED BY MEP.

BUILDING	#	MIN. SLOPE	MATERIAL
REC.	6	0.5%	PVC SDR-35
A	6	0.5%	PVC SDR-35
B	4	1.0%	PVC SDR-35
C	6	0.5%	PVC SDR-35
D	6	0.5%	PVC SDR-35
E	6	0.5%	PVC SDR-35
F	6	0.5%	PVC SDR-35
G	6	0.5%	PVC SDR-35
H	6	0.5%	PVC SDR-35
CARPORT	4	0.5%	DI IN DRIVING AREAS ELSE, PVC SDR-35

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED

BY: _____
CITY OF PUYALLUP
DEVELOPMENT SERVICES

DATE: _____

NOTE:

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FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

ROBERT A. TRIVITT — 4/24/2025 — EXPIRES 9/29/2025 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON

REVISION	DATE
1 Revised per City review and Wall A adjustment.	11/8/24
2 Revised per City review.	3/4/25
3 Revised per City & Rush review.	4/21/25
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JOB NO. 3227
DATE 11/8/2024
DESIGNED BY: Rob Trivitt
DRAWN BY: Rob Trivitt
CHECKED BY: Paul Green
APPROVED BY: Paul Green

AZURE GREEN CONSULTANTS
+feasibility +planning +engineering +surveying
409 East Pioneer, Suite A - Puyallup, WA 98372 phone: 253.770.3144 fax: 253.770.3142

Civil Composite

Bradley Heights

Timberlane Partners
1816 11th Ave Unit C
Seattle, WA, 98122
Phone 509.899.0326
Fax jorden@timberlanepartners.com

DRAWING
SD-1
SHEET 15
OF 60

Bradley Heights

Section 3, Township 19 N, Range 4 E, Willamette Meridian, Pierce County, Washington

PRRWF20250233

27TH AVE SE

DETENTION GALLERY #1 SEE SHEET SD-10

DETENTION VAULT #2 SEE SHEETS SD-11 & SD-12

DETENTION VAULT #3 SEE SHEETS SD-13 & SD-14

VAULT 2

APPROVED

BY: _____
CITY OF PUYALLUP
DEVELOPMENT SERVICES

DATE: _____

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GRAPHIC SCALE 1"=20'
0 20 40 60

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning | Engineering | Public Works | Fire | Traffic

ROBERT A. TRIVITT
6/6/2025
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER

REVISION	DATE
1 Revised per City review and Wall A adjustment.	1/16/25
2 Revised per City review.	3/4/25
3 Revised per City & Rush review.	4/21/25
4 Minor revisions, eliminate weepholes. Sheets G-12, -13, -14, SD-5, -6, -11, -12, -25 & AD-2 only	6/6/25
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JOB NO. 3227
DATE 2024
DESIGNED BY: Rob Trivitt
DRAWN BY: Rob Trivitt
CHECKED BY: Paul Green
APPROVED BY: Paul Green

AZURE GREEN CONSULTANTS
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Storm Plan

Bradley Heights

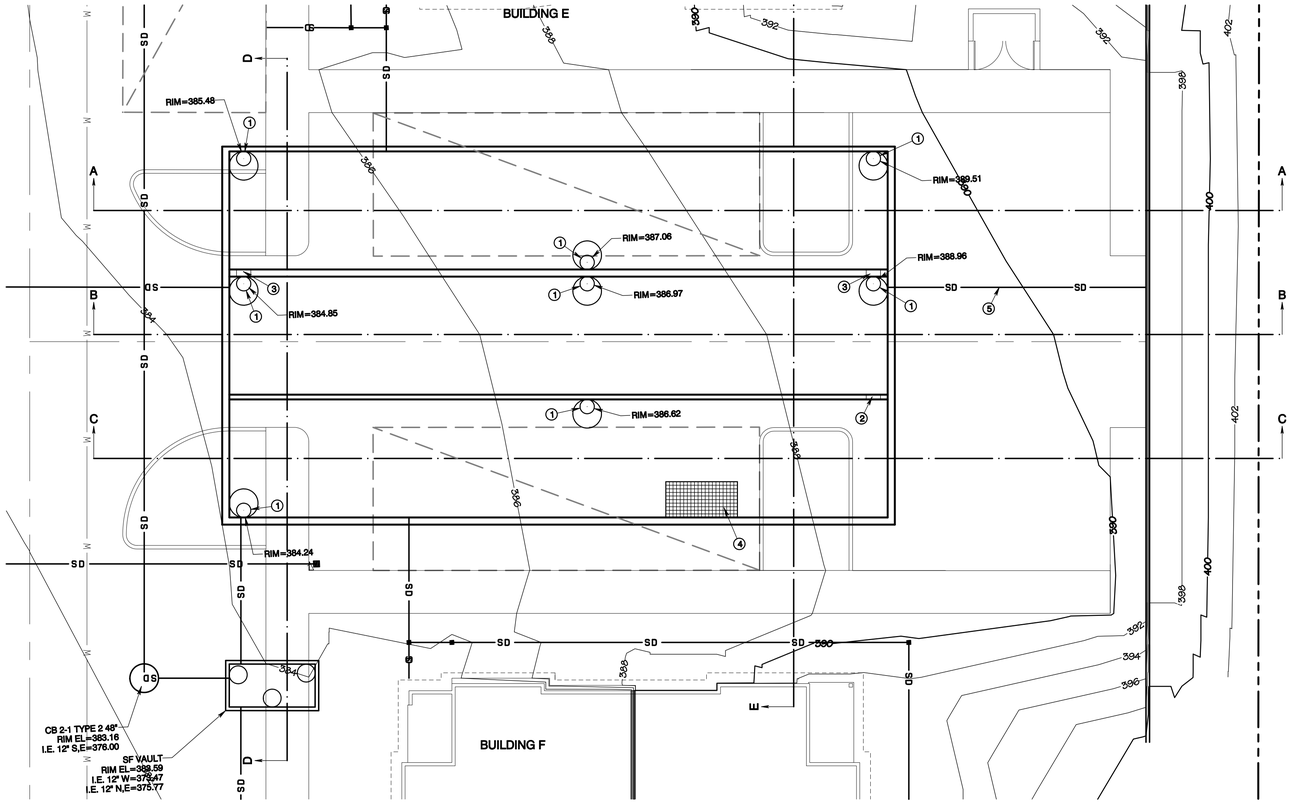
Timberlane Partners
1816 11th Ave Unit C
Seattle, WA, 98122
Phone 509.899.0326
Fax jorden@timerlanepartners.com

DRAWING
SD-5
SHEET 19
OF 60

Bradley Heights

Section 3, Township 19 N, Range 4 E, Willamette Meridian, Pierce County, Washington

PRRWF20250217



GRAPHIC SCALE 1"=10'
0 10 20 30

CONSTRUCTION KEY NOTES

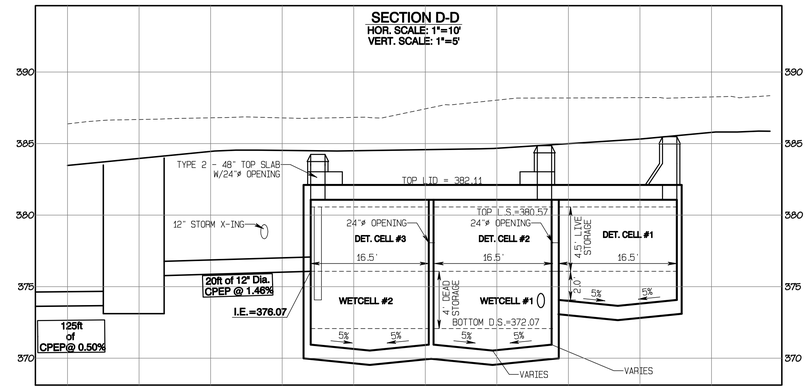
① 24"ø ACCESS LID MARKED "DRAIN" (TYP.) W/LADDER PER STD 06.01.04, SHEET SD-22 & W/OSHA CONFINED ENTRY WARNING SIGN

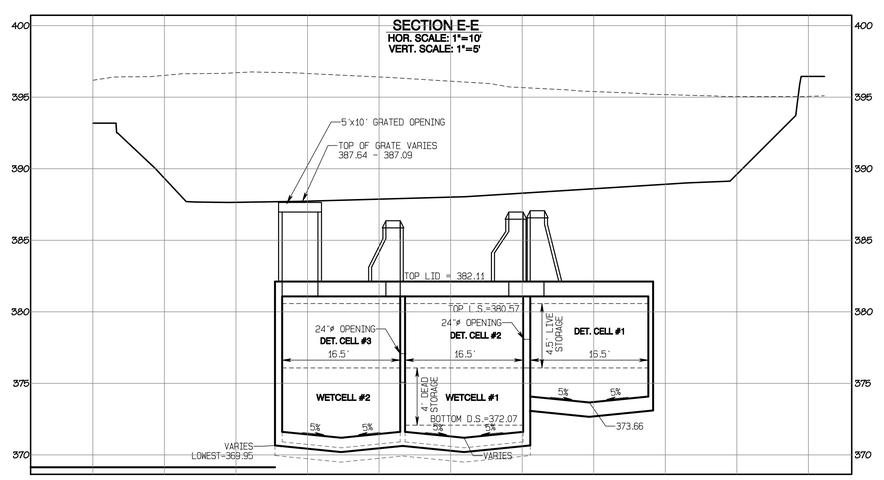
② 24"ø CONNECTION BETWEEN CELLS I.E. = 375.57

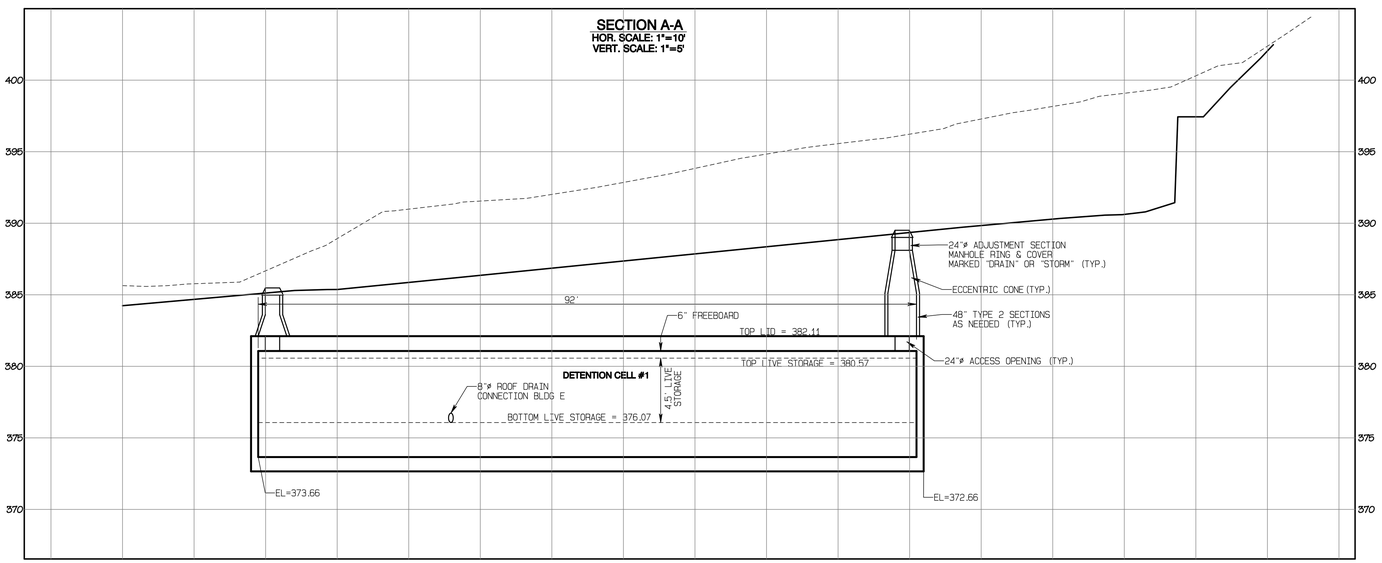
③ 24"ø CONNECTION BETWEEN CELLS I.E. = 376.07

④ 5'x10' GRATED OPENING, TRAFFIC RATED W/LADDER PER STD 06.01.04, SHEET SD-22 & W/ BILCO LADDER-UP & W/OSHA CONFINED ENTRY WARNING SIGN

⑤ 36LF 6" DI S=38% CONNECT TO WALL DRAIN







City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED

BY: _____
CITY OF PUYALLUP
DEVELOPMENT SERVICES

DATE: _____

NOTE:

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ROBERT A. TRIVITT
EXPIRES 6/6/2026
REGISTERED PROFESSIONAL ENGINEER
STATE OF WASHINGTON

	REVISION	DATE
1	Revised per City review and Wall A adjustment.	11/8/24
2	Revised per City review.	3/4/25
3	Revised per City & Rush review.	4/21/25
4	Minor revisions, eliminate manholes. Sheets 6-12, 13, 14, 30-34, 46, 47, 48, 49 & AD-2 only	6/6/25
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JOB NO. 3227
DATE Nov. 2024
DESIGNED BY Rob Trivitt
DRAWN BY Rob Trivitt
CHECKED BY Paul Green
APPROVED BY Paul Green

AZURE GREEN CONSULTANTS
+feasibility +planning +engineering +surveying
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Bradley Heights

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Phone 509.899.0326
Fax jorden@timberlanepartners.com

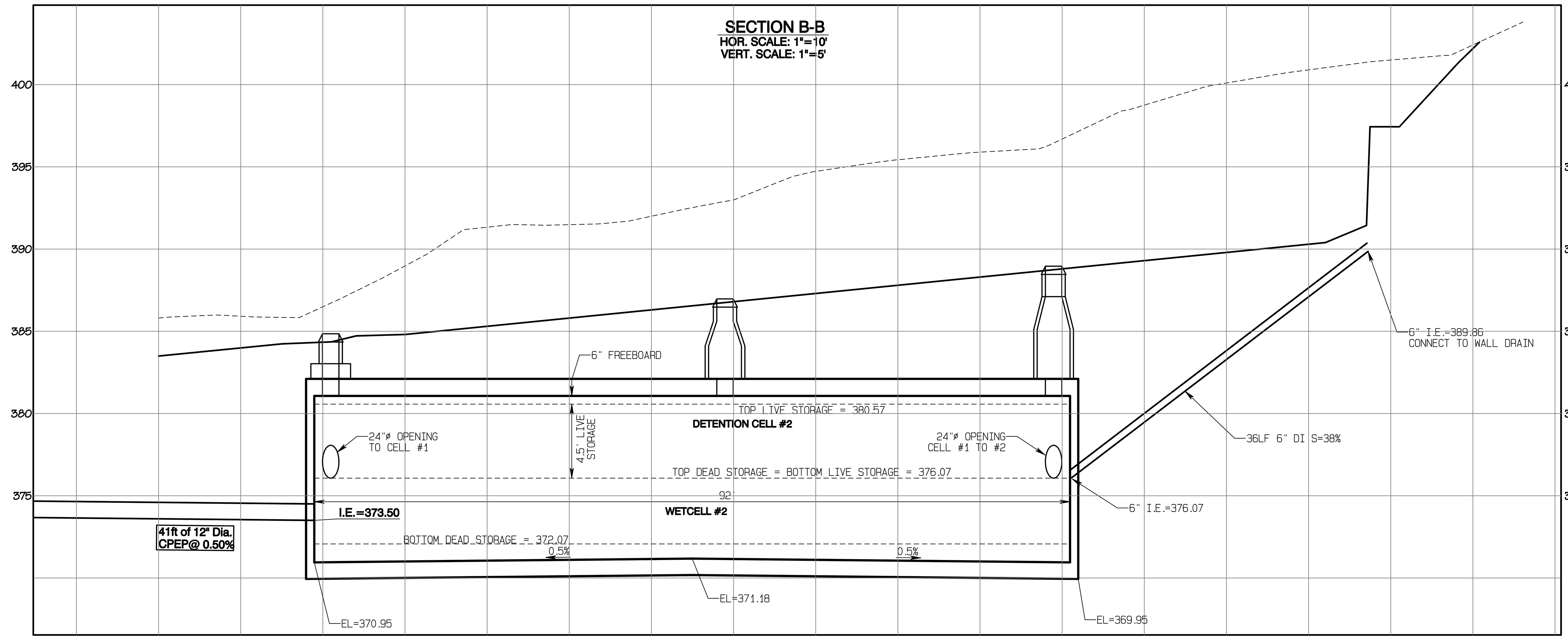
Vault #2 Plan

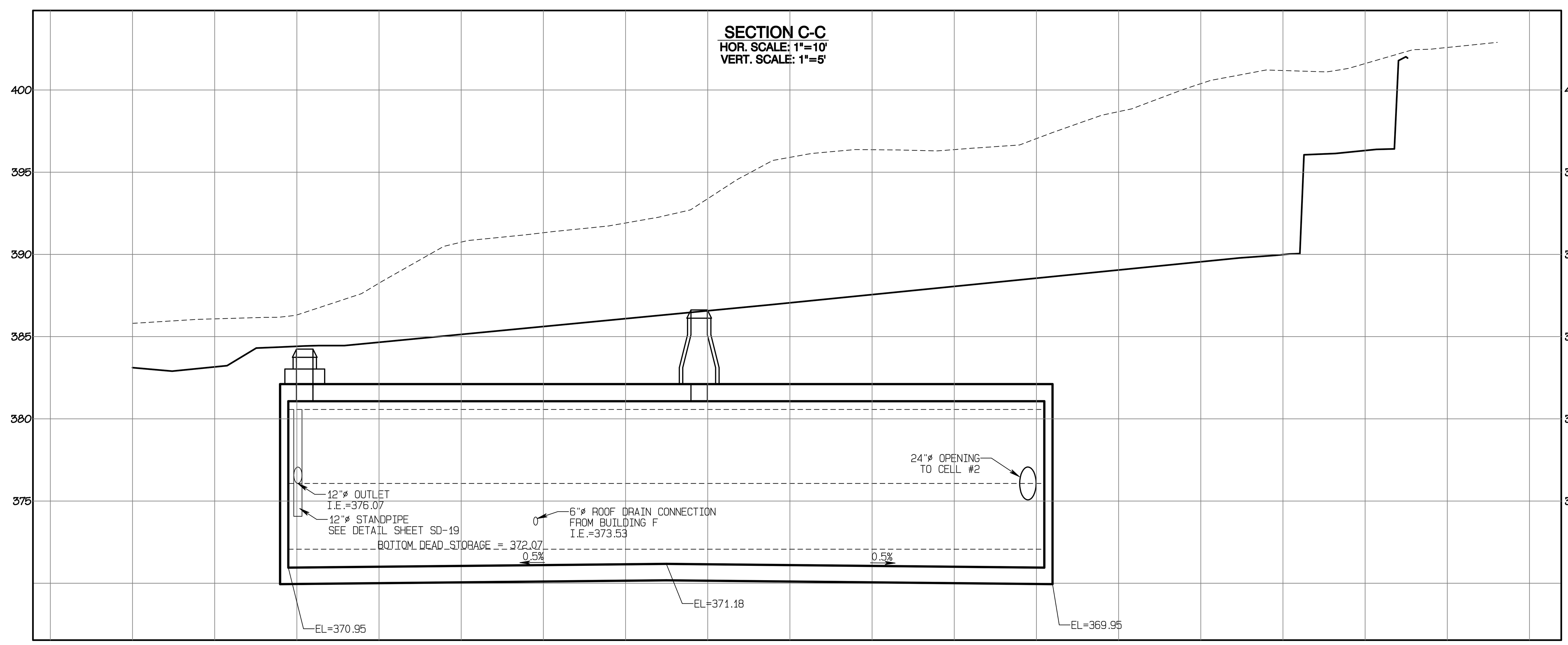
DRAWING
SD-11
SHEET 25
OF 60

Bradley Heights

Section 3, Township 19 N, Range 4 E, Willamette Meridian, Pierce County, Washington

PRRWF20250233





City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED

BY: ______________
CITY OF PUYALLUP
DEVELOPMENT SERVICES

DATE: ______________

NOTE:

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THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.

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ROBERT A. TRIVITT — STATE OF WASHINGTON — 43715 — REGISTERED PROFESSIONAL ENGINEER — 6/6/2025

REVISION	DATE
1 Revised per City review and Wall A adjustment.	11/8/24
2 Revised per City review.	3/4/25
3 Revised per City & Rush review.	4/21/25
4 Minor revisions, eliminate weepholes. Sheets: G-12, -13, -14; SD-5, -6, -11, -12, -23; & AD-2 only.	6/6/25
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JOB NO: 3227
DATE: May 14, 2024
DESIGNED BY: Rob Trivitt
DRAWN BY: Rob Trivitt
CHECKED BY: Paul Green
APPROVED BY: Paul Green

AZURE | GREEN CONSULTANTS
+feasibility +planning +engineering +surveying
409 East Pioneer, Suite A - Puyallup, WA 98372 phone: 253.770.3144 fax: 253.770.3142

Vault #2 Cross-Sections

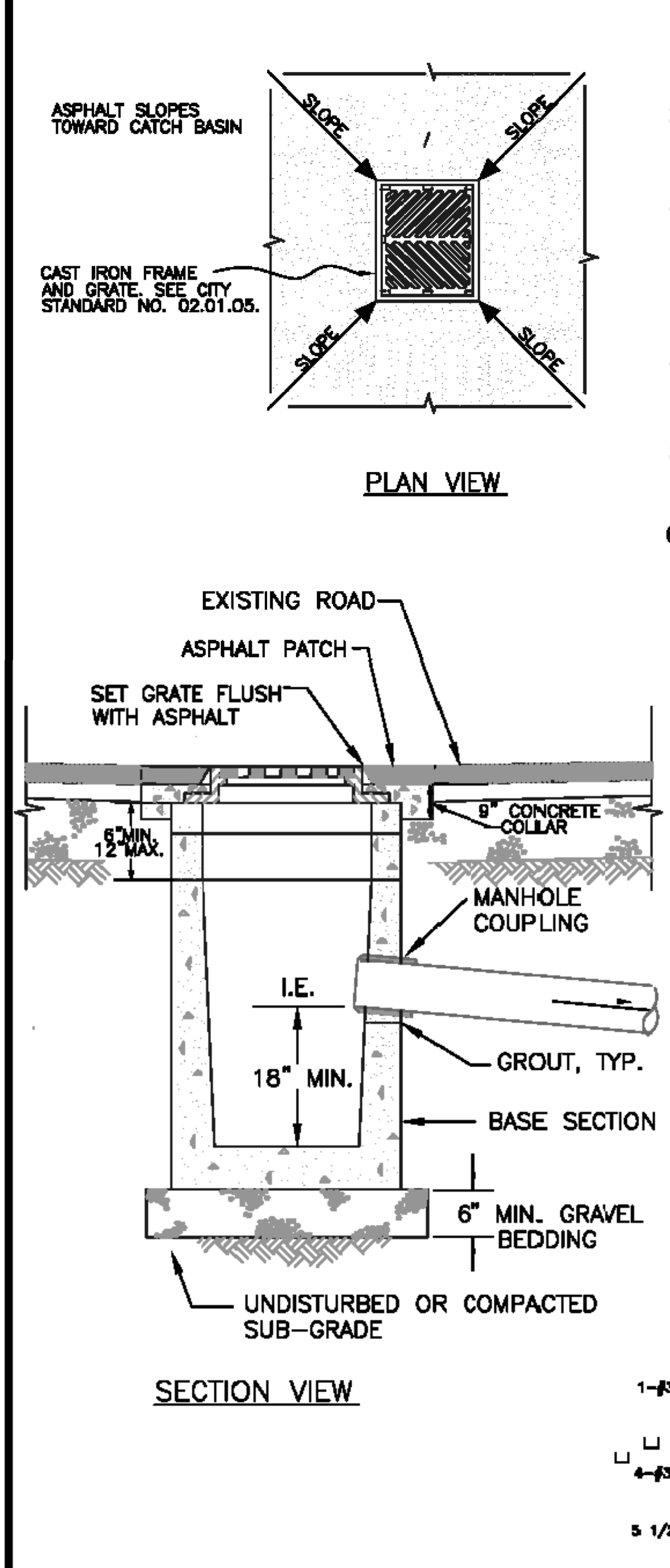
Bradley Heights

Timberlane Partners
1816 11th Ave Unit C
Seattle, WA, 98122
Phone 509.899.0326
Fax jorden@timerlanepartners.com

DRAWING
SD-12
SHEET 26
OF 60

Bradley Heights

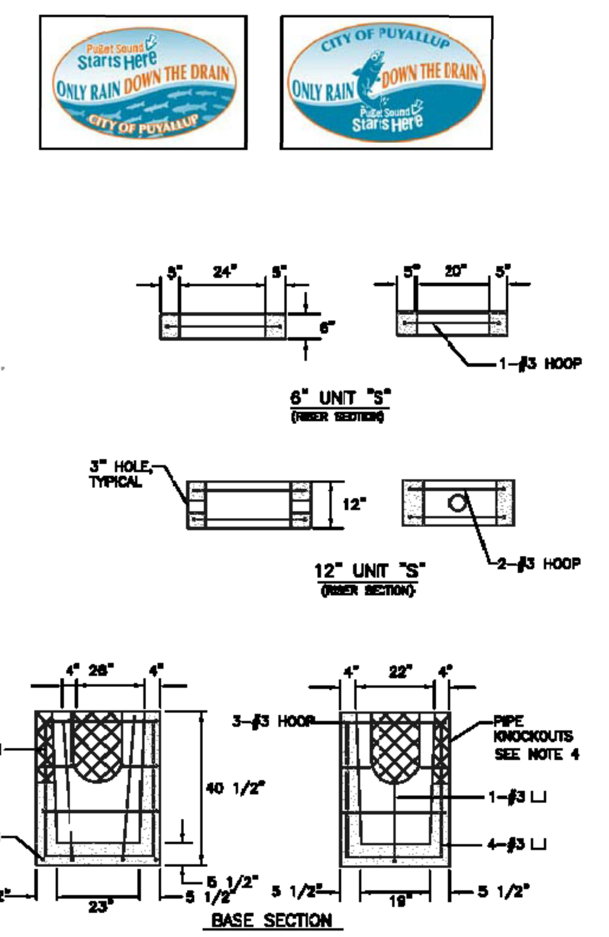
Section 3, Township 19 N, Range 4 E, Willamette Meridian, Pierce County, Washington



ASPHALT SLOPES TOWARD CATCH BASIN
CAST IRON FRAME AND GRATE. SEE CITY STANDARD NO. 02.01.05.
PLAN VIEW
EXISTING ROAD
ASPHALT PATCH
SET GRATE FLUSH WITH ASPHALT
6" CONCRETE COLLAR
MANHOLE COUPLING
GROUT, TYP.
BASE SECTION
6" MIN. GRAVEL BEDDING
UNDISTURBED OR COMPACTED SUB-GRADE
SECTION VIEW

NOTES:

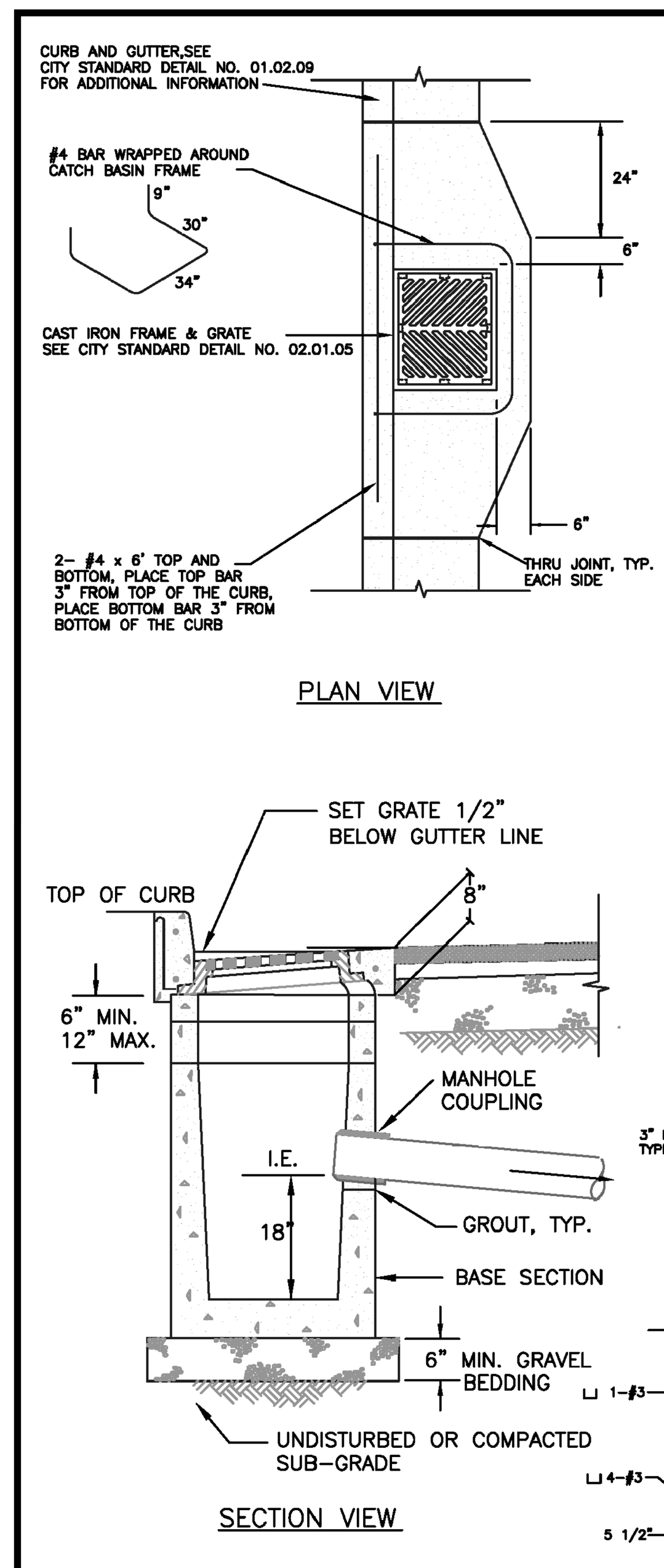
1. MAXIMUM LENGTH OF PIPE BETWEEN CATCH BASINS SHALL BE 400'.
2. TYPE I CATCH BASIN IS USED FOR DEPTHS LESS THAN 5'–0" FROM TOP OF GRATE TO I.E.(PIPE INVERT).
3. PRECAST BASE SECTION SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. KNOCKOUTS SHALL BE ON 4 SIDES WITH A MAXIMUM DIAMETER OF 20" TO PROVIDE FOR A MINIMUM SUMP DEPTH OF 18".
4. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION SHALL NOT EXCEEED 1/2" PER FOOT.
5. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) AND ASTM C 890 UNLESS OTHERWISE NOTED.
6. CATCH BASIN MARKER WILL BE AFFIXED WITH MANUFACTURER'S EPOXY IN DRY WEATHER, 40 DEGREES OR WARMER. IF CURB EXISTS MARKER IS PLACED ON TOP OF CURB, IF A RAISED EDGE PLACE MARKER ON THE WEDGE, IF NO CURB PLACE ON PAVEMENT ON SIDE LEAST EXPOSED TO TRAFFIC



CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

CATCH BASIN TYPE 1 (AREA DRAIN)

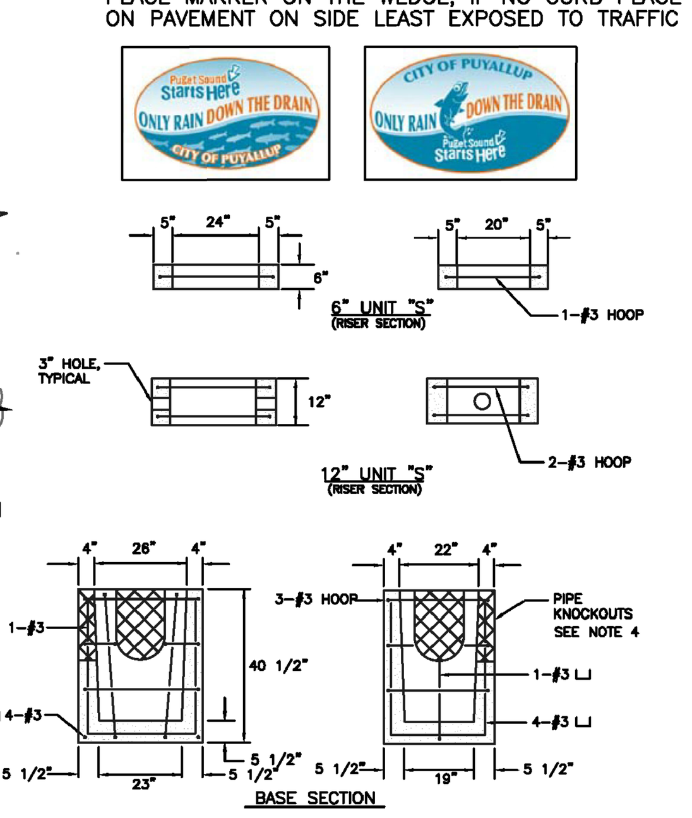
CITY STANDARD 02.01.02



CURB AND GUTTER,SEE CITY STANDARD DETAIL NO. 01.02.09 FOR ADDITIONAL INFORMATION
CAST IRON FRAME & GRATE SEE CITY STANDARD DETAIL NO. 02.01.05
PLAN VIEW
SET GRATE 1/2" BELOW GUTTER LINE
TOP OF CURB
MANHOLE COUPLING
GROUT, TYP.
BASE SECTION
6" MIN. GRAVEL BEDDING
UNDISTURBED OR COMPACTED SUB-GRADE
SECTION VIEW
THRU JOINT, TYP. EACH SIDE

NOTES:

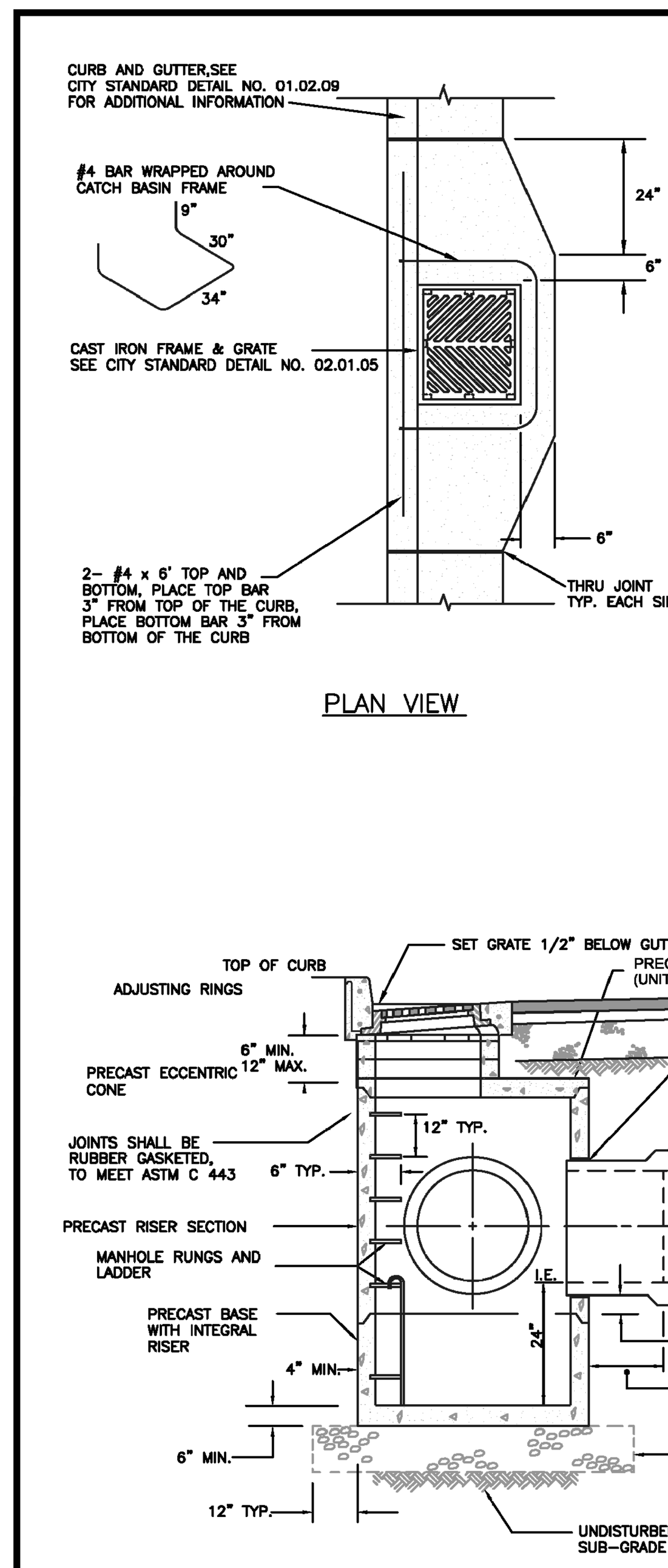
1. MAXIMUM LENGTH OF PIPE BETWEEN CATCH BASINS SHALL BE 400'.
2. MAXIMUM GUTTER LINE FLOW LENGTH SHALL BE 300'.
3. TYPE I CATCH BASIN IS USED FOR DEPTHS LESS THAN 5'–0" FROM TOP OF GRATE TO I.E.(PIPE INVERT).
4. PRECAST BASE SECTION SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. KNOCKOUTS SHALL BE ON 4 SIDES WITH A MAXIMUM DIAMETER OF 20" TO PROVIDE FOR A MINIMUM SUMP DEPTH OF 18".
5. REINFORCING BARS SHALL BE CUT OR BENT AS REQUIRED TO CLEAR CUTOUTS.
6. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION SHALL NOT EXCEEED 1/2" PER FOOT.
7. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) AND ASTM C 890 UNLESS OTHERWISE NOTED.
8. THE APRON SHALL BE 8" IN DEPTH.
9. CATCH BASIN MARKER WILL BE AFFIXED WITH MANUFACTURER'S EPOXY IN DRY WEATHER, 40 DEGREES OR WARMER. IF CURB EXISTS MARKER IS PLACED ON TOP OF CURB, IF A RAISED EDGE PLACE MARKER ON THE WEDGE, IF NO CURB PLACE ON PAVEMENT ON SIDE LEAST EXPOSED TO TRAFFIC



CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

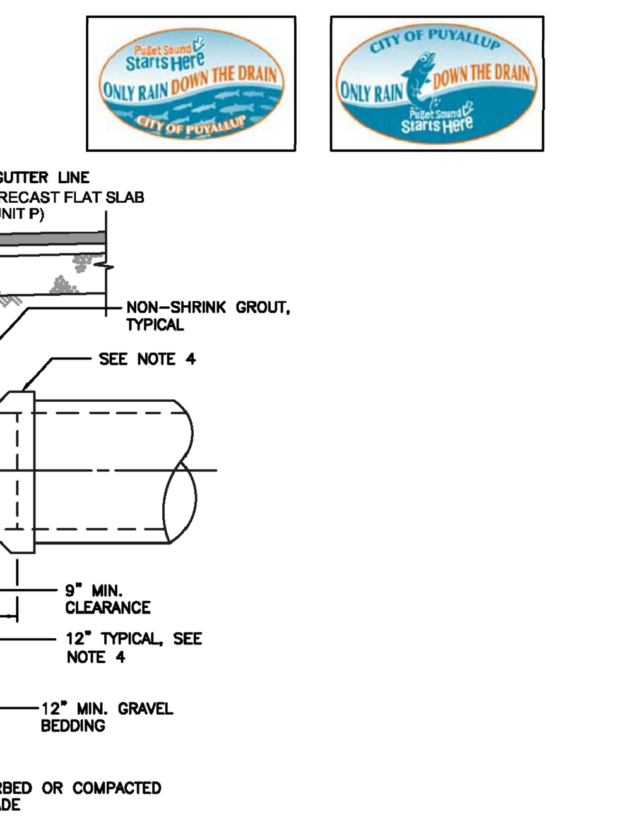
CATCH BASIN TYPE 1 (GUTTER DRAIN)

CITY STANDARD 02.01.03



NOTES:

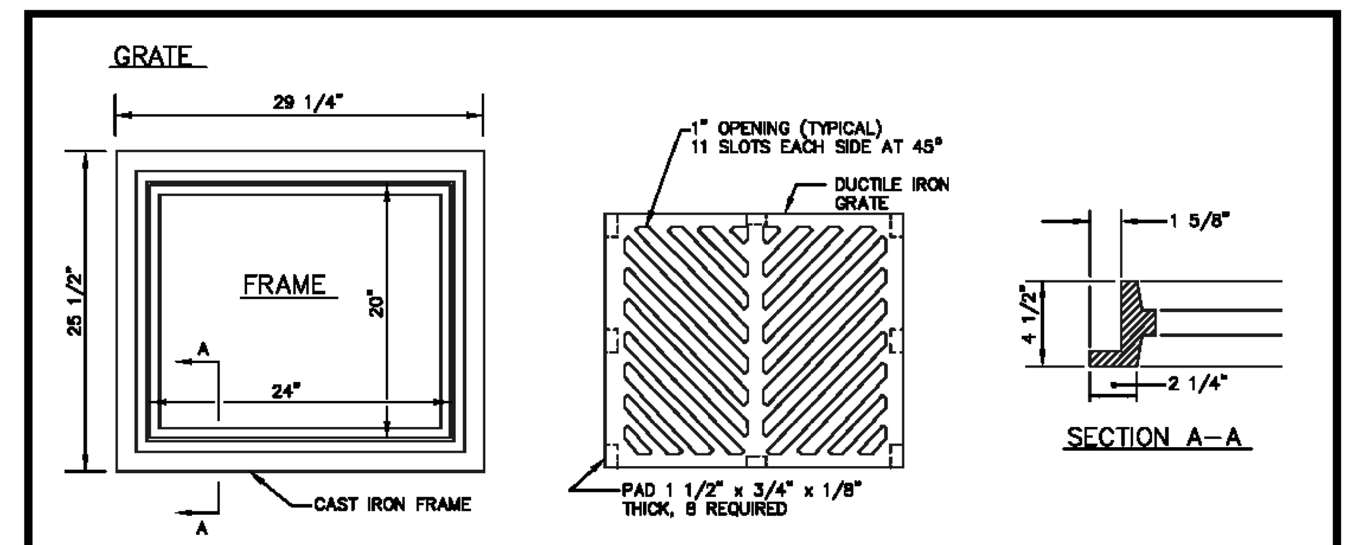
1. MAXIMUM LENGTH OF PIPE BETWEEN CATCH BASINS SHALL BE 400'.
2. MAXIMUM GUTTER LINE FLOW LENGTH SHALL BE 300'.
3. TYPE II CATCH BASIN IS USED FOR DEPTHS GREATER THAN 5'–0" FROM TOP OF GRATE TO I.E.(PIPE INVERT).
4. PRECAST BASE SECTION SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. KNOCKOUT OR CUTOUT HOLE SIZE SHALL EQUAL THE PIPE OUTER DIAMETER PLUS THE MANHOLE WALL THICKNESS.
5. SEE CITY STANDARD DETAIL NO. 02.01.01 FOR ADDITIONAL INFORMATION REGARDING INSTALLATION OF MANHOLE SECTION.
6. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) AND ASTM C 890 UNLESS OTHERWISE NOTED.
7. CATCH BASIN MARKER WILL BE AFFIXED WITH MANUFACTURER'S EPOXY IN DRY WEATHER, 40 DEGREES OR WARMER. IF CURB EXIST MARKER IS PLACED ON TOP OF CURB, IF A RAISED EDGE PLACE MARKER ON THE WEDGE, IF NO CURB PLACE ON PAVEMENT ON SIDE LEAST EXPOSED TO TRAFFIC



CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

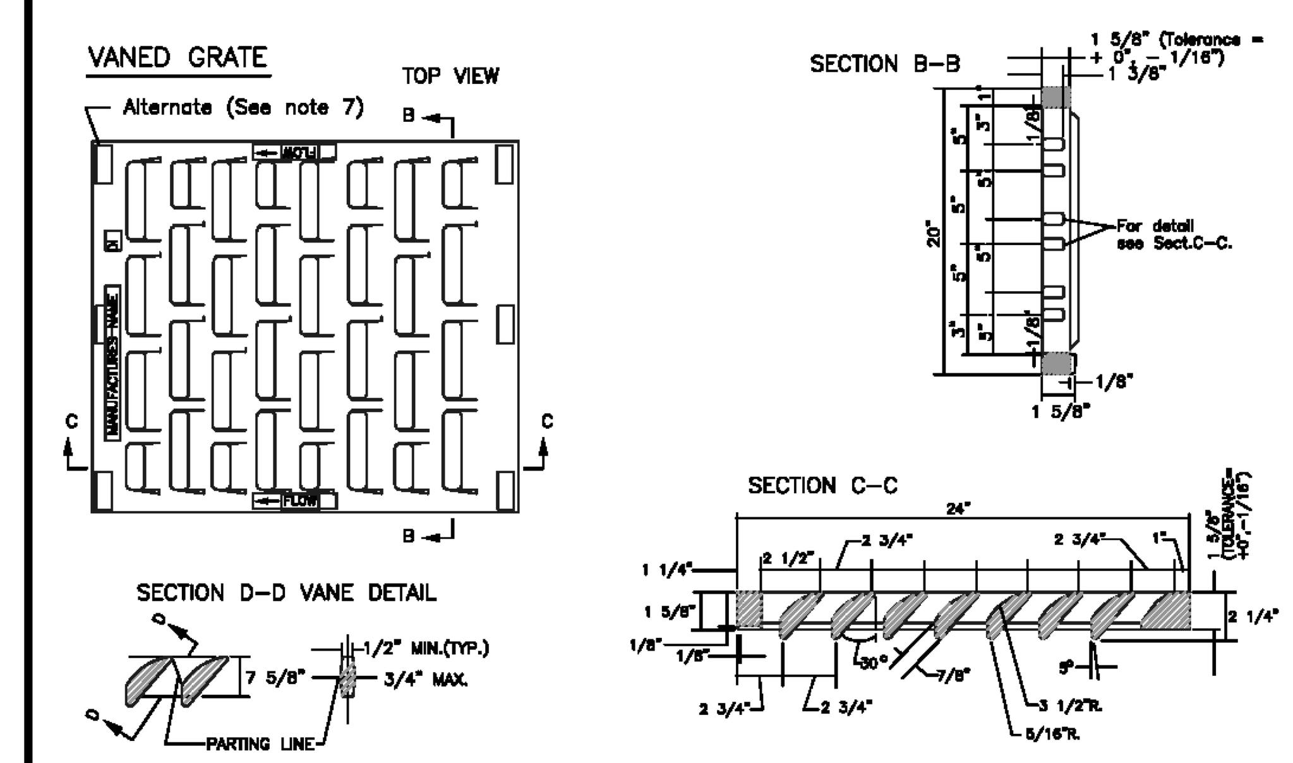
CATCH BASIN TYPE II

CITY STANDARD 02.01.04



NOTES:

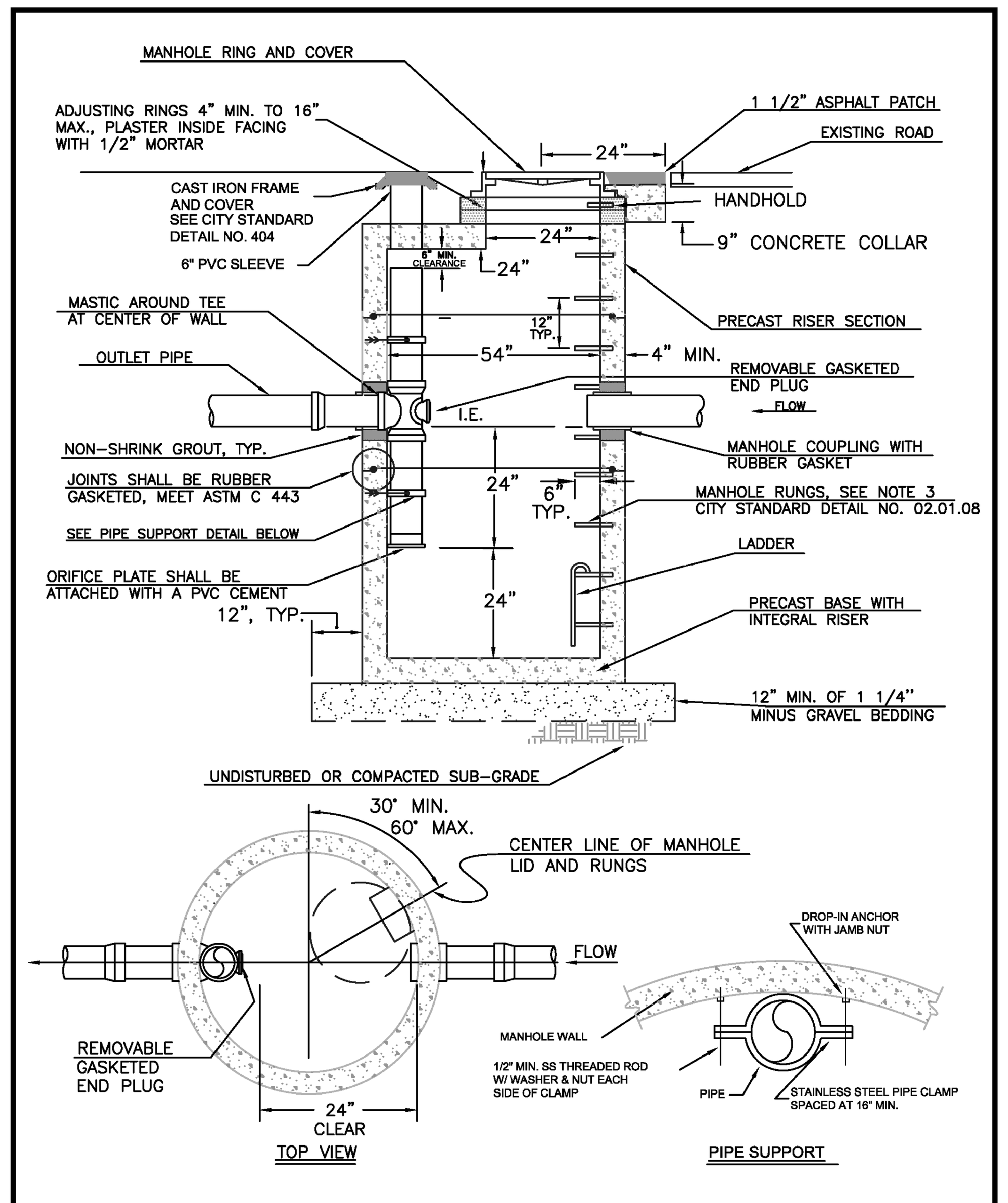
1. MATERIAL SHALL CONFORM TO SECTION 9–05.15 "METAL CASTINGS" OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" PUBLISHED BY THE STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER.
2. THE NAME OF THE MANUFACTURE AND DIRECTION OF FLOW SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED 1/16".
3. THE MATERIAL USED FOR THE GRATE SHALL BE DESIGNATED BY EMBASSING EITHER DI (FOR DUCTILE IRON) OR CS (FOR CAST STEEL) NEAR THE NAME OF THE MANUFACTURER.
4. DIMENSIONS SHALL HAVE A +/– 1/16" TOLERANCE, EXCEPT AS NOTED.
5. EDGES SHALL HAVE 1/8" RADIUS.
6. WELDING IS NOT PERMITTED.
7. AS AN ALTERNATE, 8 PADS 1 1/2" X 3/4" X 1/8", INTEGRALLY CAST WITH THE GRATE, MAY BE USED.



CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

CATCH BASIN FRAME AND GRATE/VANED GRATE

CITY STANDARD 02.01.05



MANHOLE RING AND COVER
ADJUSTING RINGS 4" MIN. TO 16" MAX., PLASTER INSIDE FACING WITH 1/2" MORTAR
1 1/2" ASPHALT PATCH
EXISTING ROAD
CAST IRON FRAME AND COVER SEE CITY STANDARD DETAIL NO. 404
HANDHOLD
9" CONCRETE COLLAR
6" PVC SLEEVE
MASTIC AROUND TEE AT CENTER OF WALL
PRECAST RISER SECTION
OUTLET PIPE
REMOVABLE GASKETED END PLUG
FLOW
NON-SHRINK GROUT, TYP.
MANHOLE COUPLING WITH RUBBER GASKET
JOINTS SHALL BE RUBBER GASKETED, MEET ASTM C 443
MANHOLE RUNGS, SEE NOTE 3 CITY STANDARD DETAIL NO. 02.01.08
SEE PIPE SUPPORT DETAIL BELOW
LADDER
ORIFICE PLATE SHALL BE ATTACHED WITH A PVC CEMENT
PRECAST BASE WITH INTEGRAL RISER
12" MIN. OF 1 1/4" MINUS GRAVEL BEDDING
UNDISTURBED OR COMPACTED SUB-GRADE
CENTER LINE OF MANHOLE LID AND RUNGS
REMOVABLE GASKETED END PLUG
TOP VIEW
DROP-IN ANCHOR WITH JAMB NUT
MANHOLE WALL
1/2" MIN. SS THREADED ROD W/ WASHER & NUT EACH SIDE OF CLAMP
PIPE
STAINLESS STEEL PIPE CLAMP SPACED AT 16" MIN.
PIPE SUPPORT

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

FLOW CONTROL MANHOLE WITH FLAT TOP

CITY STANDARD 02.01.07

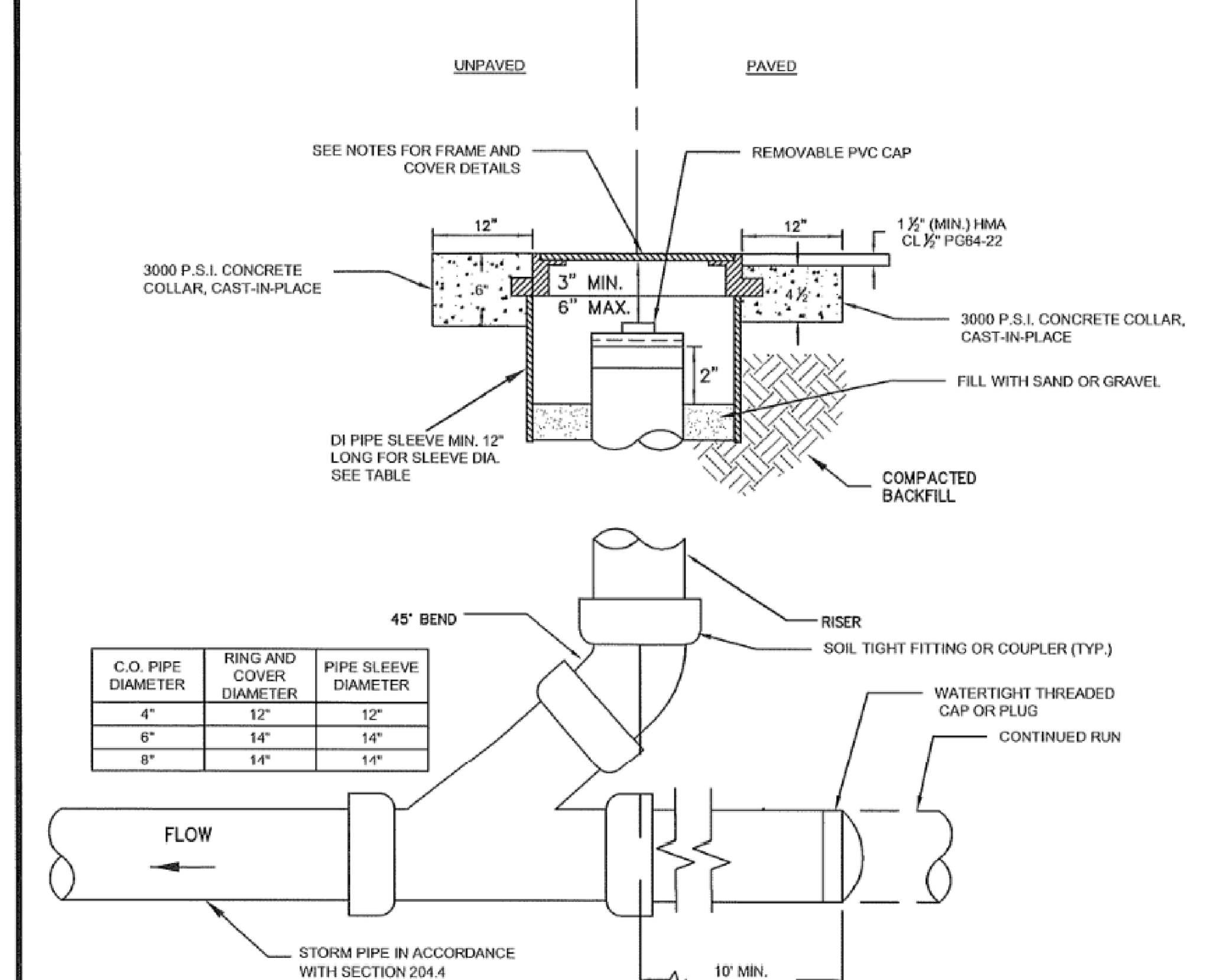
NOTES FOR FLOW CONTROL MANHOLE:

1. NEAT LINE CUTS SHALL BE AT TOP WITH A HOT PAVING GRADE ASPHALT AND FACE OF CUT TACKED.
2. FLOW CONTROL MANHOLES SHALL BE USED AS A SINGLE USE STRUCTURE.
3. MANHOLE RUNG SHALL CONFORM TO SECTION R, ASTM C 478 (ASSHTO M–199) AND MEET ALL WISHA REQUIREMENTS. MANHOLE RUNGS SHALL BE PARALLEL OR APPROXIMATELY RADIAL AT THE OPTION OF THE MANUFACTURER, EXCEPT THAT ALL STEPS IN ANY MANHOLE SHALL BE SIMILAR. PENETRATION OF OUTER WALL BY A RUNG LEG IS PROHIBITED. SEE MANHOLE STEP AND LADDER DETAIL, CITY STANDARD DETAIL NO. 06.01.04.
4. PRECAST RISER SECTION SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE WALL THICKNESS OF TWO (2) INCHES MINIMUM. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS MANHOLE WALL THICKNESS. MINIMUM DISTANCE BETWEEN HOLES IS EIGHT (8) INCHES.
5. PRECAST CONCRETE MANHOLE COMPONENTS SHALL CONFORM TO ASTM C 478.
6. FLEXIBLE JOINTS SHALL BE RUBBER GASKETED IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS. MORTARED, DRY–PACKED, OR CAST–IN–PLACE JOINTS WILL BE PERMITTED FOR CONNECTIONS TO OR THROUGH MANHOLES. A FLEXIBLE GASKETED JOINT SHALL BE INSTALLED WITHIN ONE (1) FOOT OF EACH CONNECTION TO OR THROUGH SAID MANHOLES. CONNECTIONS TO MANHOLE WITH PVC PIPE SHALL UTILIZE A MANHOLE COUPLING AND RUBBER GASKET.
7. THE COVER ON THE MANHOLE SHALL BE MARKED WITH "STORM" OR "DRAIN" IN TWO (2) INCH RAISED LETTERS. SEE MANHOLE RING AND COVER DETAIL, CITY STANDARDS DETAIL NO. 06.01.02 AND 06.01.03.
8. STAINLESS STEEL PIPE CLAMP WITH 1/2" DIAMETER STAINLESS STEEL THREADED ROD WITH WASHER AND NUT EACH SIDE OF CLAMP. PROVIDE 1/2" DIAMETER DROP–IN ANCHOR WITH JAMB NUT AT WALL. PIPE CLAMPS SHALL BE PLACED AT SIXTEEN (16) INCHES ON CENTER.
9. FLOW CONTROL UNIT SHALL BE MADE FROM PVC PIPE AND SHALL CONFORM TO THE STANDARD PIPE SPECIFICATIONS.

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

FLOW CONTROL MANHOLE NOTES

CITY STANDARD 02.01.08



UNPAVED
PAVED
SEE NOTES FOR FRAME AND COVER DETAILS
REMOVABLE PVC CAP
3000 P.S.I. CONCRETE COLLAR, CAST-IN-PLACE
3000 P.S.I. CONCRETE COLLAR, CAST-IN-PLACE
FILL WITH SAND OR GRAVEL
DI PIPE SLEEVE MIN. 12" LONG FOR SLEEVE DIA. SEE TABLE
COMPACTED BACKFILL
45° BEND
RISER
SOIL TIGHT FITTING OR COUPLER (TYP.)
WATERTIGHT THREADED CAP OR PLUG
CONTINUED RUN
FLOW
STORM PIPE IN ACCORDANCE WITH SECTION 204.4
10' MIN. SEE NOTE 9

C.O. PIPE DIAMETER	RING AND COVER DIAMETER	PIPE SLEEVE DIAMETER
4"	12"	12"
6"	14"	14"
8"	14"	14"

NOTES:

1. CAST IRON COVER MARKED "FDCO" FOR FOOTING DRAINS OR "SDCO" FOR STORM LINES.
2. CAST IRON FRAME AND COVER SHALL BE DRILLED AND TAPPED WITH ⅝"-11 NC STAINLESS STEEL TYPE 304 ALLEN HEAD BOLTS, 2" LONG.
3. BOLT-LOCKING CAST IRON FRAME AND COVER SHALL BE HS-20 RATED IF USED IN RIGHT-OF-WAY OR EASEMENTS.
4. 14" BOLT-LOCKING CAST IRON FRAME AND COVER SHALL BE EQUAL TO OLYMPIC FOUNDRY PART # M1060.
5. CAST IRON FRAME AND COVER SHALL BE FLUSH WITH FINISHED GRADE.
6. CLEANOUTS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90 DEGREE BEND.
7. STORM PIPE BEDDING AND BACKFILL SHALL CONFORM TO STD DETAIL 06.01.01.
8. FINAL JOINTS SHALL BE SAW CUT, FACE OF CUT TACKED AND ALL JOINTS SEALED WITH SEALANT (AR4000W).
9. STORM DRAIN STUB SHALL EXTEND 10' BEYOND THE PROPERTY LINE OR EASEMENT LINE TO PREVENT DAMAGE AND MINIMIZE CONFLICT WITH FUTURE UTILITIES.
10. EACH CLEANOUT ASSEMBLY SHALL CONSIST OF: ONE CLEANOUT ADAPTOR, (HUB x FEMALE INSIDE PIPE THREAD, PVC SLIP IN), AND ONE CLEANOUT PLUG (MALE OUTSIDE THREAD WITH RAISED NUT, PVC).
11. FOR LANDSCAPED AREAS (OUTSIDE OF CITY ROW, EASEMENTS AND FACILITIES) A GREEN "CARSON" MODEL 910 YARD BOX MAY BE USED FOR C.O. PIPE DIA. LESS THAN OR EQUAL TO 6". YARD BOX SHALL BE FASTENED WITH ⅜" HEX BOLTS, THE COVER MARKED "STORM" AND FLUSH WITH FINISHED GRADE.

CITY OF PUYALLUP
PUBLIC WORKS AND DEVELOPMENT ENGINEERING

APPROVED FOR PUBLICATION

STORM DRAIN CLEANOUT

SCALE: NTS | DATE REVISED: 01/06/2023 | CITY STANDARD 02.01.09

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED

BY: CITY OF PUYALLUP DEVELOPMENT SERVICES

DATE:

NOTE:

THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.

THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.

FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

PRRWF20250233

REVISION	DATE
1 Revised per City review and Wall A adjustment.	11/8/24
2 Revised per City review.	3/4/25
3 Revised per City & Rush review.	4/21/25
4	
5	
6	
7	
8	
9	
10	

JOB NO: 3227
DATE: May 14, 2024
DESIGNED BY: Rob Trivitt
DRAWN BY: Rob Trivitt
CHECKED BY: Paul Green
APPROVED BY: Paul Green

AZURE GREEN CONSULTANTS
+feasibility +planning +engineering +surveying
409 East Pioneer, Suite A - Puyallup, WA 98372 phone: 253.770.3144 fax: 253.770.3142

Storm Details

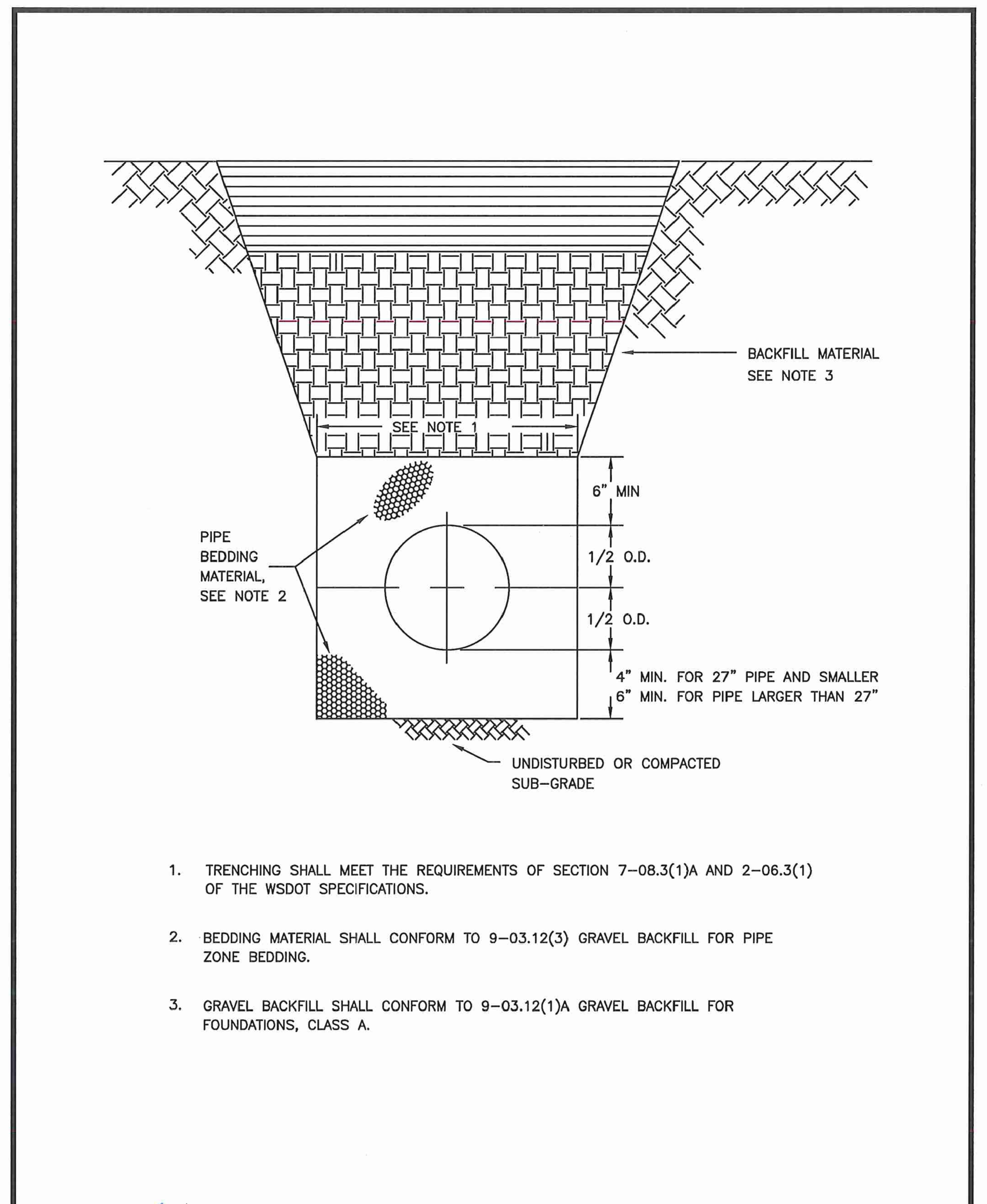
Bradley Heights

Timberlane Partners
1816 11th Ave Unit C
Seattle, WA 98122
Phone 509.899.0326
Fax jorden@timberlanepartners.com

DRAWING
SD-18
SHEET 32 OF 60

Bradley Heights

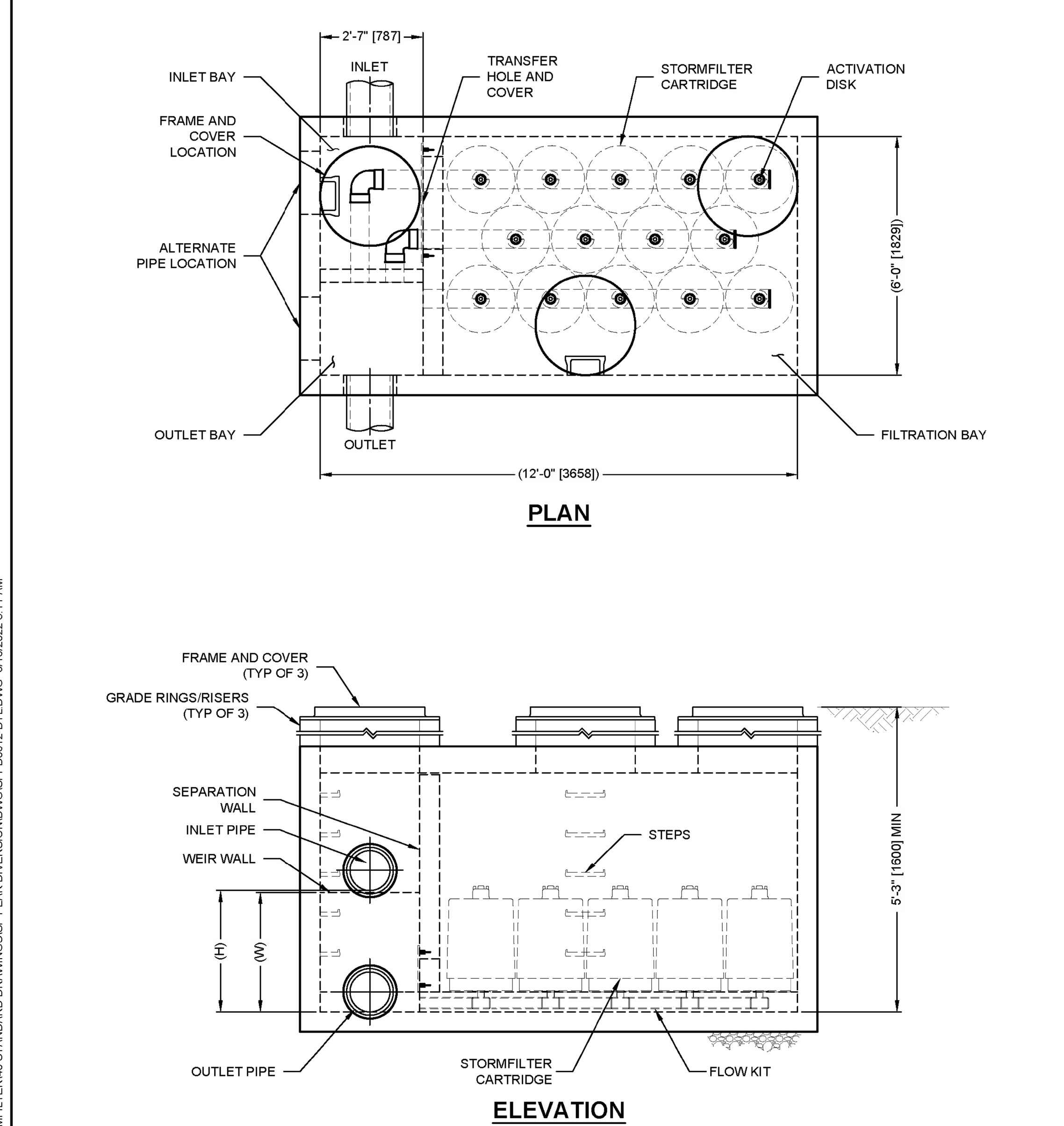
Section 3, Township 19 N, Range 4 E, Willamette Meridian, Pierce County, Washington



1. TRENCHING SHALL MEET THE REQUIREMENTS OF SECTION 7-08.3(1)A AND 2-06.3(1) OF THE WSDOT SPECIFICATIONS.
2. BEDDING MATERIAL SHALL CONFORM TO 9-03.12(3) GRAVEL BACKFILL FOR PIPE ZONE BEDDING.
3. GRAVEL BACKFILL SHALL CONFORM TO 9-03.12(1)A GRAVEL BACKFILL FOR FOUNDATIONS, CLASS A.

CITY OF PUYALLUP — OFFICE of THE CITY ENGINEER

PIPE TRENCHING BEDDING AND BACKFILL — CITY STANDARD 06.01.01



INLET BAY
INLET
TRANSFER HOLE AND COVER
STORMFILTER CARTRIDGE
ACTIVATION DISK
FRAME AND COVER LOCATION
ALTERNATE PIPE LOCATION
OUTLET BAY
OUTLET
FILTRATION BAY
(12'-0" [3658])
PLAN
FRAME AND COVER (TYP OF 3)
GRADE RINGS/RISERS (TYP OF 3)
SEPARATION WALL
INLET PIPE
WEIR WALL
STEPS
OUTLET PIPE
STORMFILTER CARTRIDGE
FLOW KIT
ELEVATION

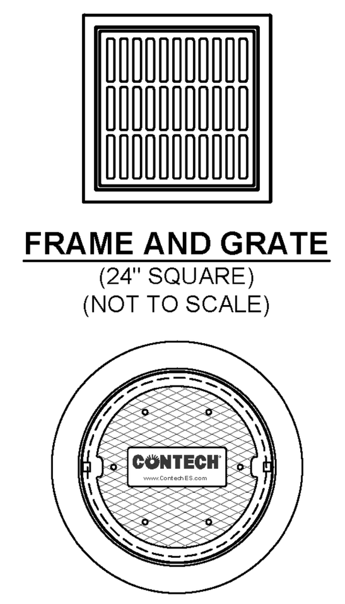
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,322,629; 5,524,576; 5,707,527; 5,985,157; 6,027,639; 6,649,048; RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.

STORMFILTER DESIGN NOTES

- STORMFILTER TREATMENT CAPACITY VARIES BY CARTRIDGE COUNT AND LOCALLY APPROVED SURFACE AREA SPECIFIC FLOW RATE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD
- A 6' x 12' [1829 x 3658] PEAK DIVERSION STYLE STORMFILTER IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (14) AND IS AVAILABLE IN A LEFT INLET (AS SHOWN) OR A RIGHT INLET CONFIGURATION
- ALL PARTS AND INTERNAL ASSEMBLY PROVIDED BY CONTECH UNLESS NOTED OTHERWISE

CARTRIDGE SIZE (in. [mm])	27 [686]			18 [457]			LOW DROP		
RECOMMENDED HYDRAULIC DROP (H) (ft. [mm])	3.05 [930]			2.3 [701]			1.8 [549]		
HEIGHT OF WEIR (W) (ft. [mm])	3.00 [914]			2.25 [686]			1.75 [533]		
SPECIFIC FLOW RATE (gpm/sf [L/s/m²])	2 [1.36]	1.67* [1.13]*	1 [0.68]	2 [1.36]	1.67* [1.13]*	1 [0.68]	2 [1.36]	1.67* [1.13]*	1 [0.68]
CARTRIDGE FLOW RATE (gpm [L/s])	22.5 [1.42]	18.79 [1.19]	11.25 [0.71]	15 [0.95]	12.53 [0.79]	7.5 [0.47]	10 [0.63]	8.35 [0.53]	5 [0.32]

* 1.67 gpm/sf [1.13 L/s/m²] SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY



FRAME AND GRATE
(24" SQUARE)
(NOT TO SCALE)

FRAME AND COVER
(30" ROUND)
(NOT TO SCALE)

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
WATER QUALITY FLOW RATE (cfs [L/s])	0.2872
PEAK FLOW RATE (cfs [L/s])	1.5944
RETURN PERIOD OF PEAK FLOW (yrs)	100
CARTRIDGE FLOW RATE	12.53
CARTRIDGE SIZE (27, 18, LOW DROP (LD))	18
MEDIA TYPE (PERLITE, ZPG, PSORB)	PSORB
NUMBER OF CARTRIDGES REQUIRED	11
INLET BAY RIM ELEVATION	383.59
FILTER BAY RIM ELEVATION	383.87

PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1	375.77	CPEP	12"
INLET PIPE 2	375.77	CPEP	12"
OUTLET PIPE	373.47	CPEP	12"

NOTES/SPECIAL REQUIREMENTS:

PERFORMANCE SPECIFICATION
FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. **RADIAL MEDIA DEPTH SHALL BE 7" [178].** FILTER MEDIA CONTACT TIME SHALL BE AT LEAST **38 SECONDS**. SPECIFIC FLOW RATE SHALL BE **2 GPM/SF [1.36 L/s/m²] (MAXIMUM)**. SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE **6 GPM/CF [13.39 L/s/m³] OF MEDIA (MAXIMUM).**

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. ALTERNATE DIMENSIONS ARE IN MILLIMETERS [mm] UNLESS NOTED OTHERWISE.
4. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH REPRESENTATIVE. www.ContechES.com
5. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
6. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 10' [3048] 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.

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

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-526-3999 513-645-7000 513-645-7993 FAX

SFPD0612 (6' x 12')
PEAK DIVERSION STORMFILTER
STANDARD DETAIL

STORMWATER NOTES:

1. All work in City right-of-way requires a permit from the City of Puyallup. Prior to any work commencing, the general contractor shall arrange for a preconstruction meeting at the Development Services Center to be attended by all contractors that will perform work shown on the engineering plans, representatives from all applicable Utility Companies, the project owner and appropriate City staff. Contact Engineering Services to schedule the meeting (253) 841-5568. The contractor is responsible to have their own approved set of plans at the meeting.

2. After completion of all items shown on these plans and before acceptance of the project, the contractor shall obtain a "punch list" prepared by the City's inspector detailing remaining items of work to be completed. All items of work shown on these plans shall be completed to the satisfaction of the City prior to acceptance of the water system and provision of sanitary sewer servIce.

3. All materials and workmanship shall conform to the Standard Specifications for Road, Bridge, and Municipal Construction (hereinafter referred to as the "Standard Specifications"), Washington State Depatiment of Transpoliation and American Public Works Association, Washington State Chapter, latest edition, unless superseded or amended by the City of Puyallup City Standards for Public Works Engineering and Construction (hereinafter referred to as the "City Standards").

4. A copy of these approved plans and applicable city developer specifications and details shall be on site during construction.

5. Any revisions made to these plans must be reviewed and approved by the developer's engineer and the Engineering Services Staff prior to any implementation in the field. The City shall not be responsible for any errors and/or omissions on these plans.

6. The contractor shall have all utilities verified on the ground prior to any construction. Call (811) at least two working days in advance. The owner and his/her engineer shall be contacted immediately if a conflict exists.

7. Any structure and/or obstruction which require removal or relocation relating to this project, shall be done so at the developer's expense.

8. During construction, all existing and newly installed drainage structures shall be protected from sediments.

9. All storm manholes shall conform to City Standard Detail No. 02.01.01. Flow control manhole/oil water separator shall conform to City Standard Detail No. 02.01.06 and 02.01.07.

10. Manhole ring and cover shall conform to City Standard Detail 06.01.02.

11. Catch basins Type I shall conform to City Standard Detail No.02.01.02 and 02.01.03 and shall be used only for depths less than 5 feet from top of the grate to the invert of the storm pipe.

12. Catch basins Type II shall conform to City Standard Detail No.02.01.04 and shall be used for depths greater than 5 feet from top of the grate to the inveli of the storm pipe.

13. Cast iron or ductile iron frame and grate shall conform to City Standard Detail No.02.01.05. Grate shall be marked with drains to stream . Solid catch basin lids (square unless noted as round) shall conform to WSDOT Standard Plan B-30.20-04 (Olympic Foundry No. SM60 or equal). Vaned grates shall conform to WSDOT Standard Plan B-30.30-03 (Olympic Foundry No. SM60V or equal).

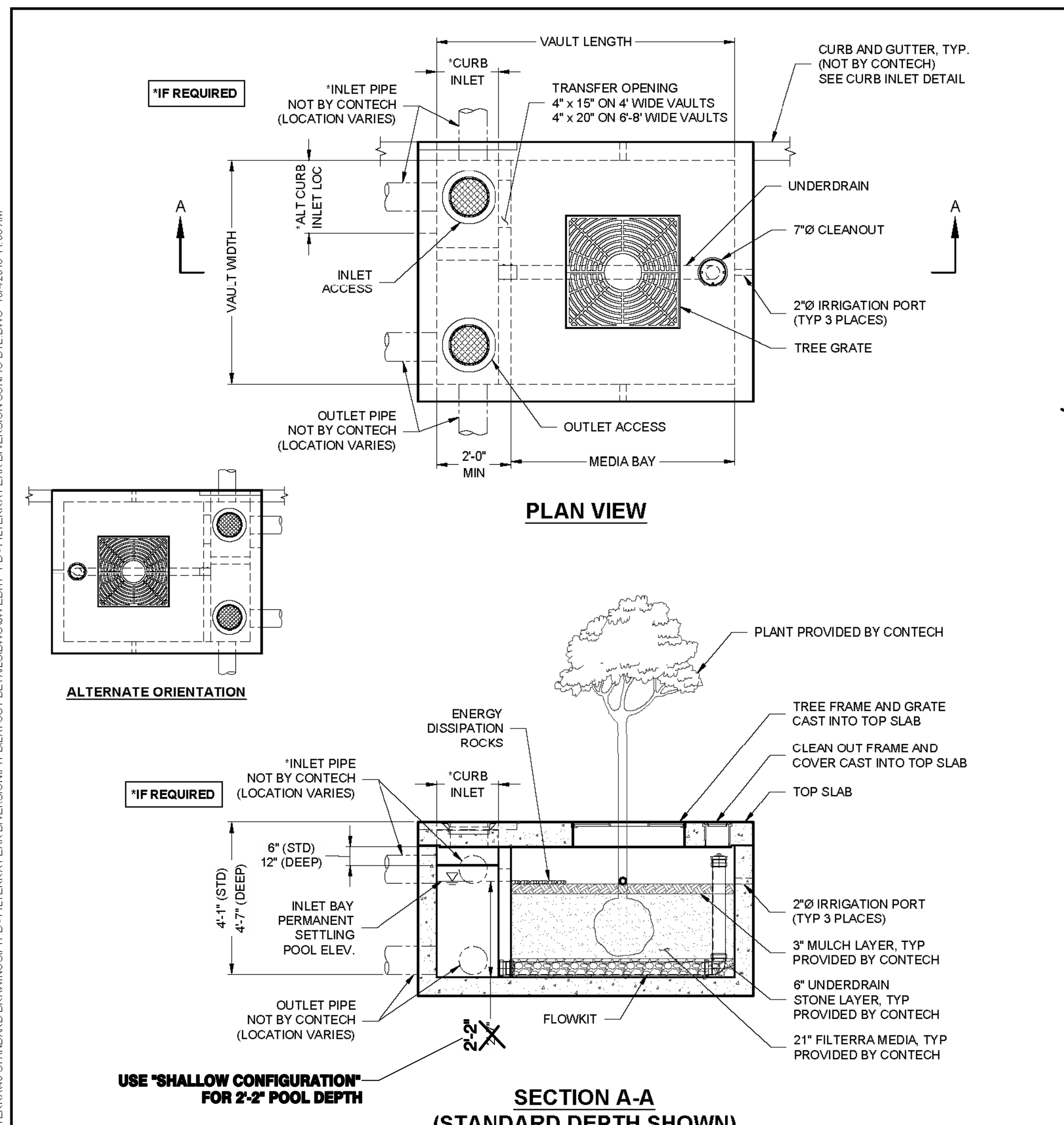
14. Stormwater pipe shall be only PVC, concrete, ductile iron pipe, or dual walled Polypropylene pipe.
   a. The use of any other type shall be reviewed and approved by the Engineering Services Staff prior to installation.
   b. PVC pipe shall be per ASTM D3034, SDR 35 for pipe size I5-inch and smaller and F679 for pipe sizes 18 to 27 inch. Minimum cover on PVC pipe shall be 3.0 feet.
   c. Concrete pipe shall conform to the WSDOT Standard Specifications for concrete underdrain pipe. Minimum cover on concrete pipe shall not less than 3.0 feet.
   d. Ductile iron pipe shall be Class 50, conforming to AWWA C151. Minimum cover on ductile iron pipe shall be 1.0 foot.
   e. Polypropylene Pipe (PP) shall be dual walled, have a smooth interior and exterior corrugations and meet WSDOT 9-05.24(1). 12-inch through 30-inch pipe shall meet or exceed ASTM F2736 and AASHTO M330, Type S, or Type D. 36-inch through 60-inch pipe shall meet or exceed ASTM F2881 and AASHTO M330, Type S, or Type D. Testing shall be per ASTM F1417. Minimum cover over Polypropylene pipe shall be 3-feet.

15. Trenching, bedding, and backfill for pipe shall conform to City Standard Detail No. 06.01.01.

16. Storm pipe shall be a minimum of 10 feet away from building foundations and/or roof lines.

17. All storm drain mains shall be tested and inspected for acceptance as outlined in Section 406 of the City of Puyallup Sanitary Sewer System Standards.

18. All temporary sedimentation and erosion control measures, and protective measures for critical areas and significant trees shall be installed prior to initiating any construction activities.



VAULT LENGTH
CURB AND GUTTER, TYP. (NOT BY CONTECH) SEE CURB INLET DETAIL
*IF REQUIRED
*INLET PIPE NOT BY CONTECH (LOCATION VARIES)
*CURB INLET
TRANSFER OPENING
UNDERDRAIN
7"Ø CLEANOUT
INLET ACCESS
2"Ø IRRIGATION PORT (TYP 3 PLACES)
TREE GRATE
OUTLET PIPE NOT BY CONTECH (LOCATION VARIES)
OUTLET ACCESS
MEDIA BAY
PLAN VIEW
ALTERNATE ORIENTATION
PLANT PROVIDED BY CONTECH
ENERGY DISSIPATION ROCKS
TREE FRAME AND GRATE CAST INTO TOP SLAB
CLEAN OUT FRAME AND COVER CAST INTO TOP SLAB
TOP SLAB
INLET BAY PERMANENT SETTLING POOL ELEV.
3" MULCH LAYER, TYP PROVIDED BY CONTECH
6" UNDERDRAIN STONE LAYER, TYP PROVIDED BY CONTECH
21" FILTERRA MEDIA, TYP PROVIDED BY CONTECH
FLOWKIT
USE "SHALLOW CONFIGURATION" FOR 2'-2" POOL DEPTH
SECTION A-A
(STANDARD DEPTH SHOWN)
INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING UPON OUTLET LOCATION.

FTPD STANDARD HEIGHT CONFIGURATION

DESIGNATION (OPTIONS: -P, -T, -PT)	AVAILABILITY	MEDIA BAY SIZE	VAULT SIZE (W x L)	WEIR LENGTH/ MAX CURB OPENING	*MAX BYPASS FLOW (CFS)	INLET/ OUTLET ACCESS DIA	TREE GRATE QTY & SIZE
FTPD0404	N/A CA	4 x 4	4 x 6	1'-8"	1.4	12"/12"	(1) 3' x 3'
FTPD04045	CA ONLY	4 x 4.5	4 x 6.5	1'-8"	1.4	12"/12"	(1) 3' x 3'
FTPD0406	N/A MID-ATL	4 x 6	4 x 8	1'-8"	1.4	12"/12"	(1) 3' x 3'
FTPD045058	MID-ATL ONLY	4.5 x 5.83	4.5 x 7.83	1'-8"	1.4	12"/12"	(1) 3' x 3'
FTPD0604	ALL	6 x 4	6 x 6	1'-8"	1.4	12"/12"	(1) 3' x 3'
FTPD0606	ALL	6 x 6	6 x 8	1'-8"	1.4	12"/12"	(1) 3' x 3'
FTPD0608	ALL	6 x 8	6 x 10	1'-8"	1.4	12"/12"	(1) 4' x 4'
FTPD0610	ALL	6 x 10	6 x 12	1'-8"	1.4	12"/12"	(1) 4' x 4'
FTPD0710	ALL	7 x 10	7 x 13	2'-6"	2.1	24"/24"	(1) 4' x 4'
FTPD08105	ALL	8 x 10.5	8 x 14	3'-0"	2.5	24"/24"	(1) 4' x 4'
FTPD08125	ALL	8 x 12.5	8 x 16	3'-0"	2.5	24"/24"	(2) 4' x 4'

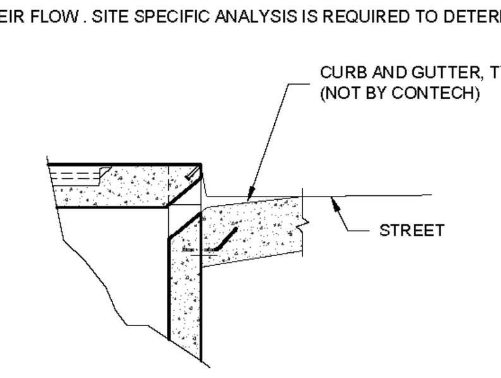
N/A = NOT AVAILABLE

FTPD-D DEEP OPTION CONFIGURATION

DESIGNATION (OPTIONS: -P, -T, -PT)	AVAILABILITY	MEDIA BAY SIZE	VAULT SIZE (W x L)	WEIR LENGTH/ MAX CURB OPENING	*MAX BYPASS FLOW (CFS)	INLET/ OUTLET ACCESS DIA	TREE GRATE QTY & SIZE
FTPD0404-D	N/A CA	4 x 4	4 x 6	1'-8"	4.6	12"/12"	(1) 3' x 3'
FTPD04045-D	CA ONLY	4 x 4.5	4 x 6.5	1'-8"	4.6	12"/12"	(1) 3' x 3'
FTPD0406-D	N/A MID-ATL	4 x 6	4 x 8	1'-8"	4.6	12"/12"	(1) 3' x 3'
FTPD045058-D	MID-ATL ONLY	4.5 x 5.83	4.5 x 7.83	1'-8"	4.6	12"/12"	(1) 3' x 3'
FTPD0604-D	ALL	6 x 4	6 x 6	1'-8"	4.6	12"/12"	(1) 3' x 3'
FTPD0606-D	ALL	6 x 6	6 x 8	1'-8"	4.6	12"/12"	(1) 3' x 3'
FTPD0608-D	ALL	6 x 8	6 x 10	1'-8"	4.6	12"/12"	(1) 4' x 4'
FTPD0610-D	ALL	6 x 10	6 x 12	1'-8"	4.6	12"/12"	(1) 4' x 4'
FTPD0710-D	ALL	7 x 10	7 x 13	2'-6"	6.8	24"/24"	(1) 4' x 4'
FTPD08105-D	ALL	8 x 10.5	8 x 14	3'-0"	8.2	24"/24"	(1) 4' x 4'
FTPD08125-D	ALL	8 x 12.5	8 x 16	3'-0"	8.2	24"/24"	(2) 4' x 4'

N/A = NOT AVAILABLE

*MAX BYPASS FLOW IS INTERNAL WEIR FLOW . SITE SPECIFIC ANALYSIS IS REQUIRED TO DETERMINE CURB INLET FLOW CAPACITY



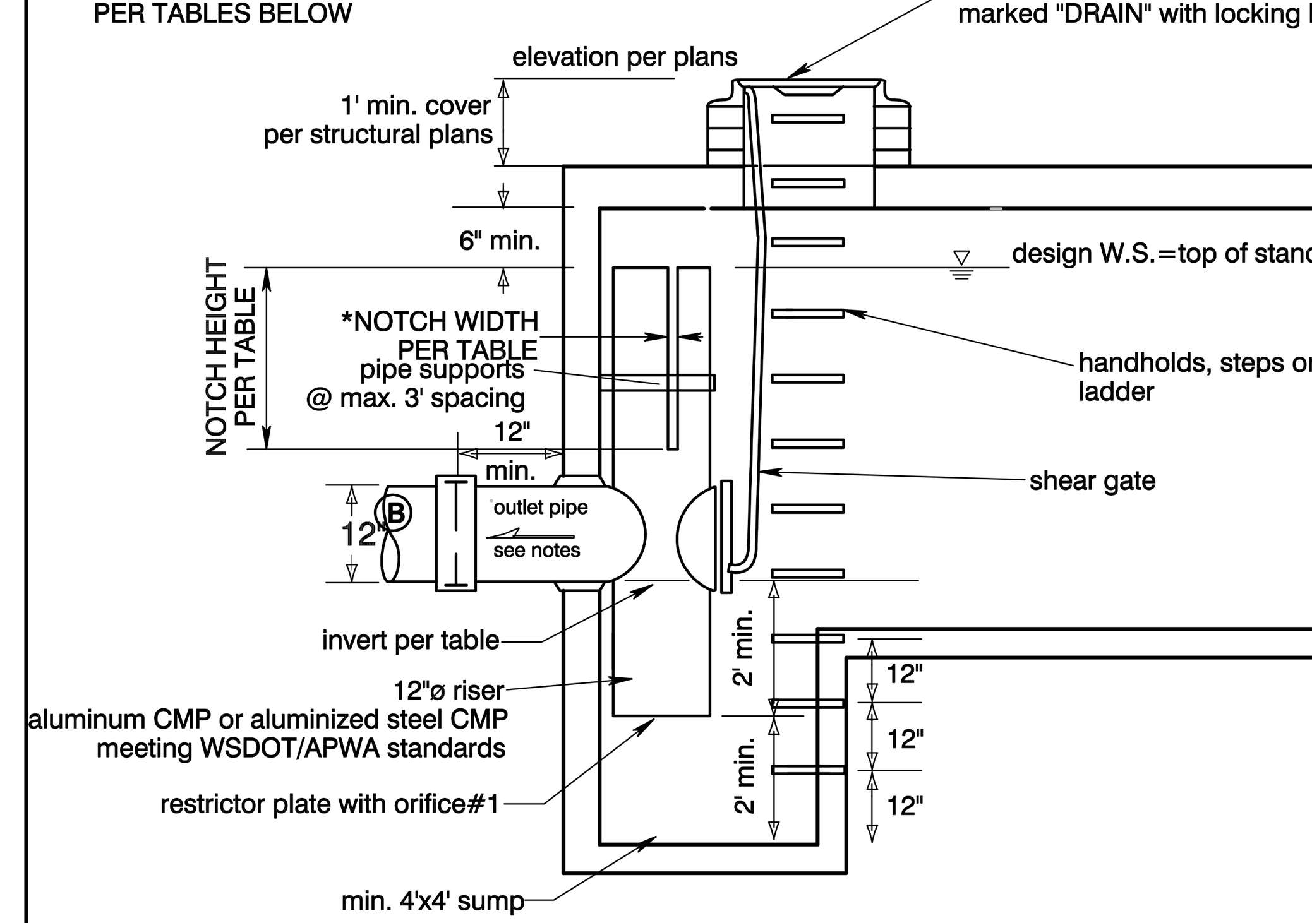
CURB INLET DETAIL

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069

FILTERRA PEAK DIVERSION (FTPD)
CONFIGURATION DETAIL

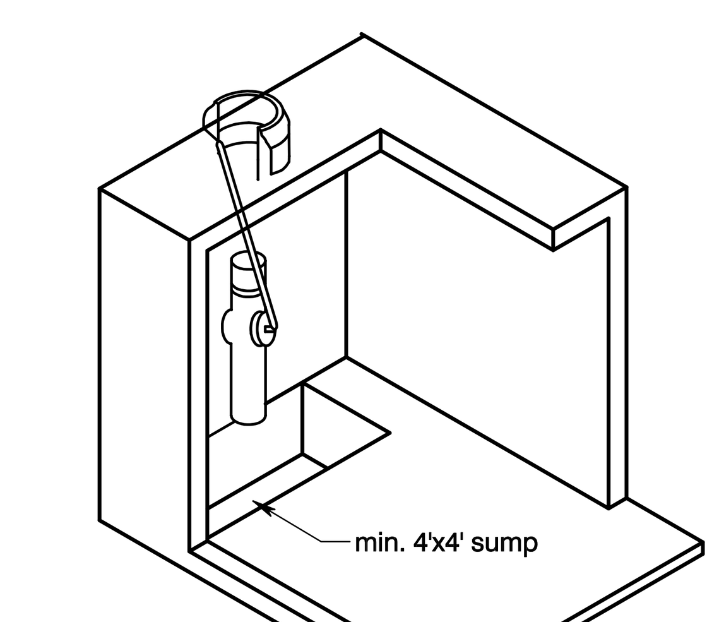
DETENTION VAULT OUTLET RISER DETAILS

*=NOTCH OR MULTIPLE ORIFICES PER TABLES BELOW



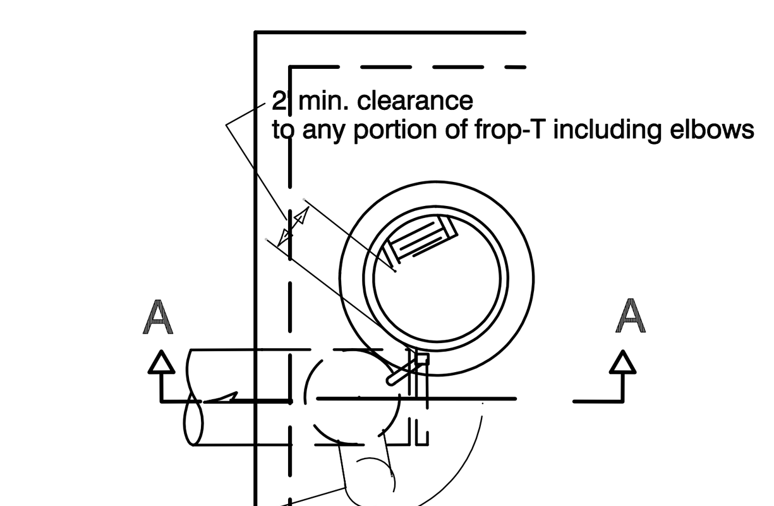
frame & solid cover marked "DRAIN" with locking bolts
elevation per plans
1' min. cover per structural plans
6" min.
design W.S.=top of standpipe, per table
NOTCH HEIGHT PER TABLE
*NOTCH WIDTH PER TABLE
pipe supports @ max. 3' spacing
handholds, steps or ladder
12" min.
shear gate
outlet pipe see notes
invert per table
12"ø riser aluminum CMP or aluminized steel CMP meeting WSDOT/APWA standards
restrictor plate with orifice#1
2' min.
12"
min. 4'x4' sump

SECTION A-A
NTS

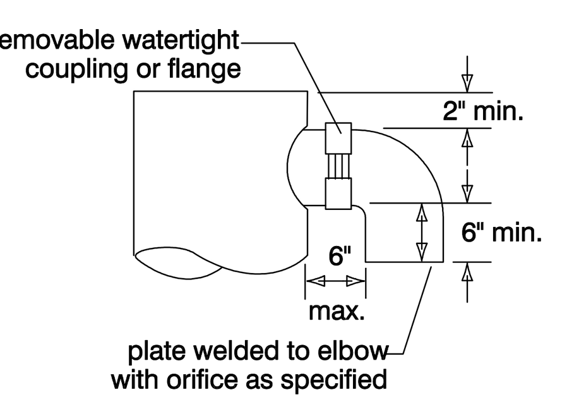


ISOMETRIC
NTS

NOTES:
1. See separate structural plans for additional vault information.
2. See detail 02.01.07 & 02.01.08 for standard notes and additional detail.



PLAN VIEW
NTS



ELBOW RESTRICTOR DETAIL
NTS

VAULTS WITH NOTCH

VAULT #	I.E. OUT	ORIFICE #1 DIA.	NOTCH HEIGHT	NOTCH WIDTH	TOP OF RISER	RISER DIA.
ST1	372.41	1"	6"	6"	374.41	12"
2	376.07	1-5/16"	N/A	N/A	379.67	12"
3	377.80	3/4"	1'-6"	3/16"	383.80	12"

VAULT WITH 3 ORIFICES

VAULT #	I.E. OUT	ORIFICE #1 DIA.	ORIFICE #2 DIA.	ORIFICE #2 HT	ORIFICE #3 DIA	ORIFICE #3 HT	TOP OF RISER	RISER DIA.
4	392.00	2"	3/4"	2.75'	2"	4.75'	398.00	12"

PRRWF20250233

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

APPROVED
BY: CITY OF PUYALLUP DEVELOPMENT SERVICES
DATE:

NOTE:
THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

REVISION	DATE
1 Revised per City review and Wall A adjustment.	11/8/24
2 Revised per City review.	3/4/25
3 Revised per City & Rush review.	4/21/25

JOB NO: 3227
DATE: May, 2024
DESIGNED BY: Rob Trivitt
DRAWN BY: Rob Trivitt
CHECKED BY: Paul Green
APPROVED BY: Paul Green

AZURE GREEN CONSULTANTS
+feasibility +planning +engineering +surveying
409 East Pioneer, Suite A - Puyallup, WA 98372 phone 253.770.3144 fax 253.770.3142

Storm Details

Bradley Heights

Timberlane Partners
1816 11th Ave Unit C
Seattle, WA 98122
Phone 509.899.0326
Fax jorden@timberlanepartners.com

DRAWING
SD-19
SHEET 33 OF 60